Maintenance Commands for Avaya Aura™ Communication Manager, Media Gateways and Servers

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About this Document

This document provides supporting information for the commands used to monitor, test, and maintain hardware components of an Avaya Server or Gateway system. The commands help the user to test and troubleshoot the system, which allow various problems to be addressed before they severely disrupt call processing.

Document set

Although this maintenance book is published separately, it is part of a set:

- *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)* (formerly 03-300190, 555-245-102)
- *Maintenance Commands for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300431) (formerly 03-300191)* (formerly 03-300191, 555-245-101)
- *Maintenance Procedures for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300432) (formerly 03-300192)* (formerly 03-300192, 555-245-103)

Equipment/platforms

This book contains information about the following equipment/platforms

- Avaya S87xx Servers
- Avaya S85xx Servers
- Avaya S8300 Servers
- Avaya Media Gateways

Audience

This document is for use by field technicians, remote service personnel, and user-assigned maintenance personnel, as a command reference to help diagnose and repair Avaya Servers and Media Gateways.

This document may also be used as a training aid for teaching technicians how to maintain the system.

This document assumes that the technician has a working knowledge of telecommunications fundamentals and maintenance practices. This document also assumes that the system was initially installed and tested properly and brought into service with every fault cleared. Adjuncts and other devices external to the switch are covered by their own service documentation.

Organization

- Chapter 1: Maintenance SAT Commands describes existing and modified Avaya Aura™ Communication Manager SAT interface commands. Introductory sections explain the command entries, common command results, and error codes for busyout, release, and reset commands.
- Chapter 2: Linux Bash Commands describes Linux platform commands, executed from the bash shell. These commands are useful for providing server information, or to troubleshoot problems in the switch and other components.
- Chapter 3: IPSI Commands describes the command functionality available to users of the TN2312 IPSI (IP Server Interface) circuit pack. IPSI commands are grouped into functional categories of user access, ipadmin, diagnostics, Control Network Interface Configuration, and Ethernet Services Port Configuration.
- SAT Command Parameters lists Communication Manager SAT interface translation screen titles that are used primarily for administrative tasks. These screens are most often accessed by command actions such as **`add`**, **`change`**, and **`remove`**. The tables contains parameter descriptions of each command.

Conventions

Table 1: Explanation of typefaces ***1 of 2***

To represent...	This typeface and syntax are shown as...	For example...
Specific component information	• Avaya component model number • Indented lines set apart extended information intended for a specific system component.	**S8700 series**: Ensure that the duplication link is securely connected. **G700** Ensure that Media Module is securely seated and latched in the carrier.
SAT commands	• Bold for **`commands`** • Bold italic for ***`variables`*** • Square brackets **[ ]** around optional parameters • "**|**" between exclusive choices	**`refresh ip-route [all | location]`**
SAT screen input and output	• Bold for **input** • Constant width for `output (screens and messages)`	Set the `Save Translation` field to **daily**. The message `Command successfully completed` should appear.
Linux commands	• Constant-width bold for **`literals`** • Constant-width bold italics for **`variables`** • Square brackets `[]` around optional arguments • "Or" sign `|` between exclusive choices	**`testmodem [-s] | [-t arg]`**
Linux output	`Constant width`	Linux returns the message `almdisplay 4: Unable to connect to CommunicaMgr`.

1 of 2

Table 1: Explanation of typefaces ***2 of 2***

To represent...	This typeface and syntax are shown as...	For example...
Web interface	• Bold for **menu selections, tabs, buttons,** and **field names** • Right arrow **>** to separate a sequence of menu selections	Select **Alarms and Notification,** the appropriate alarm, and then click **Clear**. Select **Diagnostics > View System Logs**, then click **Watchdog Logs**.
Keys	Special font for **keyboard keys** and SAT screen **clickable buttons**	Press **Tab**. Click **Next Page**.

2 of 2

Other conventions used in this book:

- Physical dimensions are in English units [Foot Pound Second (FPS)], followed by metric units [Centimeter Gram Second (CGS)] in parentheses.

  Wire-gauge measurements are in AWG, followed by the diameter in millimeters in parentheses.

- Circuit-pack codes (such as TN790B or TN2182B) are shown with the minimum acceptable alphabetic suffix (like the “B” in the code TN2182B).

  Generally, an alphabetic suffix higher than that shown is also acceptable. However, not every vintage of either the minimum suffix or a higher suffix code is necessarily acceptable. The *Avaya Aura™ Communication Manager Hardware Description and Reference (555-245-207)*, contains current information on circuit pack codes and functionality.

Safety labels and security alert labels

Observe all caution, warning, and danger statements to help prevent loss of service, equipment damage, personal injury, and security problems. This book uses the following safety labels and security alert labels:

CAUTION:

A caution statement calls attention to a situation that can result in harm to software, loss of data, or an interruption in service.

WARNING:

A warning statement calls attention to a situation that can result in harm to hardware or equipment.

DANGER:
A danger statement calls attention to a situation that can result in harm to personnel.

SECURITY ALERT:
A security alert calls attention to a situation that can increase the potential for unauthorized use of a telecommunications system.

Useful Terms

Present Terminology	Former Terminology
Communication Manager	MultiVantage, Avaya Call Processing, DEFINITY
S8300 Server	ICC, Internal Call Controller
S87xx Server (could also be a non-co-resident S8300)	ECC, External Call Controller
MGP, Media Gateway Processor	860T Processor
Layer 2 Switching Processor	P330 Stack Processor, Cajun Stack Processor, i960 Processor

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Table 2: Additional document resources lists additional documentation that is available, some of which is referenced within this document.

Table 2: Additional document resources

Document	Number
*Administering Avaya Aura™ Communication Manager (*03-300509)	03-300509
Administration of the Avaya G250 and the G350 Gateways (03-300436)	03-300436
Administering Network Connectivity on Avaya Aura™ Communication Manager (555-233-504)	555-233-504
*Avaya Communication Manager Call Center Software Basic Call Management System (BCMS) Operations (*07-300061)	07-300061
Avaya Call Center Release 4.01 Call Vectoring and Expert Agent Selection (EAS) Guide, 07-600780 (formerly 07-300477, 07-300186, 555-230-714)	07-600780
Avaya Extension to Cellular User's Guide, Avaya Communication Manager Release 4.0 (210-100-700)	210-100-700
GuestWorks® and DEFINITY® Systems Technician Handbook for Hospitality Installations (555-231-743)	555-231-743
Avaya Aura™ Communication Manager Hardware Description and Reference (555-245-207)	555-245-207
Installing and Upgrading the Avaya S8300 Server (555-234-100)	555-234-100
Installing and Upgrading the Avaya G700 Media Gateway (03-603333)	03-603333
Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)	03-300430
Maintenance Commands for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300431) (formerly 03-300191)	03-300431
Maintenance Procedures for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300432) (formerly 03-300192)	03-300432
*Avaya Aura™ Communication Manager Reports (*555-233-505)	555-233-505

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Chapter 1: Maintenance SAT Commands

This chapter contains descriptions of existing and modified SAT commands on Avaya Servers and Gateways. This information is divided into sections:

- New SAT Commands on page 21
- Modified SAT Commands on page 22
- Replaced and removed commands on page 23
- SAT Command-Line Syntax on page 25
- Common Input Parameters on page 25
- Common Command Output Screens on page 28
- Error Messages on page 32
- Busyout and Release Commands on page 33
- Common Error Codes for maintenance commands on page 34
- Alarm and Error Categories on page 36

Many commands can be run from the Communication Manager web interface. For more information on using the web interface, see *Administering Avaya Aura™ Communication Manager (03-300509)*.

A SAT command may apply to a number of servers and media gateways, and it may produce different results depending on the configuration of the system. Some commands apply to certain servers and not others.

New SAT Commands

Table 3: New SAT Commands for Communication Manager 5.2

New SAT command	Screen name
erase announcement [*media gateway number*] [*module number*]	Not available
change integ-annc-brd-loc	CHANGE INTEGRATED ANNOUNCEMENT TRANSLATIONS
	1 of 2

Table 3: New SAT Commands for Communication Manager 5.2

New SAT command	Screen name
`change system-parameters ip-options`	IP-OPTIONS SYSTEM PARAMETERS
`display system-parameters ip-options`	IP-OPTIONS SYSTEM PARAMETERS
`change ip-interface [ cabinet | carrier | slot ]`	IP-INTERFACES
`list measurements ip voice-stats` ***qualifier***	IP VOICE STATISTICS NETWORK REGION ***qualifier*** REPORT
`set fault-thresholds timeslot { none | <% upper-threshold> <%lower-threshold> }`	Not available
	2 of 2

Modified SAT Commands

Table 4: Modified SAT Commands for Communication Manager 5.2

Modified SAT command	Screen name
`add/change media-gateway`	MEDIA GATEWAY
`status mg-announcements`	MEDIA GATEWAY ANNOUNCEMENT STATUS
`status station`	VOICE STATISTICS
`disable nr-registration`	Not available

Replaced and removed commands

Table 5: SAT Commands removed and replaced in 5.2 or earlier

Removed command	Replaced with
None	None

Table 6: Previously removed and replaced SAT commands ***1 of 2***

Previous command	Replaced with	Notes

`add login`
`change login`
`disable login`
`disable login`
`enable login`
`list logins`
`remove login`
	On the Communication Manager Maintenance Web Page, navigate to **Security>Admistrator Accounts**.
	or
	Use the CLI commands:
	`cmuseradd`
	`cmusermod`
	`cmuserdel`
	`cmpasswd`	

`change permissions`		
`change/display communication-interface hop-channels`		
`disable filesystem`	disable filexfer	
`emergency transfer`	removed	In port networks with IPSI circuit packs, there is no maintenance board. Instead, a lead off of the IPSI supports the power supply and fan.
`enable filesystem`	enable filexfer	
`isdn-testcall`	`isdnpri-testcall`	Displays the progress of an outgoing ISDN-PRI test call on the specified trunk.
		1 of 2

Table 6: Previously removed and replaced SAT commands ***2 of 2***

Previous command	Replaced with	Notes
`list communication-interface`	`communication-interface links`	
`list configuration license`	`serialnumber`	See *Administering Avaya Aura™ Communication Manager (03-300509)*
`list measurements security -violations detail`	Security Violations Detail Report	
`monitor security-violations login`	Login Violations Status Report	
`remove license`	removed	Manually delete license files from the operating system
`reset login-session`	`login-ID`	
`restore announcements`		
`status clan-usage`	`status socket-usage` on page 550	Use `status socket-usage` to show a snapshot of the individual socket usage for each C-LAN or Processor Ethernet, and to list the system's: • number of registered IP endpoints • number of registered IP endpoints with TCP signaling sockets established • number of sockets used • number of sockets on the system
`status dlg cti-link`	`status aesvcs cti-link`	
`status dlg interface`	`status aesvcs interface`	
`status system`		
		2 of 2

SAT Command-Line Syntax

Each command consists of an action word, an object upon which the action is performed, and sometimes qualifiers that modify the execution of the command. In the List of SAT Commands on page 36, the syntax of the command appears under the heading at the beginning of each command description. The command syntax is presented in this section as follows:

Action	Object	Required and Optional Qualifiers
`test`	**`station`**	**`extension`** [**`short`** | **`long`**]
`bold`	**`bold`**	***`bold italic`*** if a variable, **`bold`** if entered literally **`[bracketed]`** if optional (|) separates exclusive or choice qualifiers

Command words can be abbreviated. A partially spelled word is recognized when enough letters are entered to distinguish it from other valid entries. Otherwise, the screen displays a selection of command words that match the abbreviation. For example:
`test alarms step long clear` can be entered as **`t al st l c`**.

Drop leading zeroes from numerical entries. For example, cabinet number **`03`** can be entered as **`3`**.

Press the **HELP** key to show every available command, or every valid qualifier for the command.

Common Input Parameters

Characters shown in this section in **`bold`** type are entered literally on the command line. Characters shown in ***`italic bold`*** type are variables. For a description of other typography used in commands, see Table 1: Explanation of typefaces on page 15.

One type of common input parameter is for specifying a hardware location. Table 7: Hardware Location Parameters on page 26 explains the variations of specifying hardware location in a

command. The valid range of each variable differs depending on the type of configuration of the system.

Table 7: Hardware Location Parameters

Parameter	Meaning
UUCSSpp	The full address of a port: Universal cabinet, carrier, slot, port circuit
GGGVMpp	Media gateway, media module, port circuit
Uc	Cabinet number and carrier for the server
UU	Cabinet number (1-2 digits)
C	Letter designation of a carrier
SS	Circuit pack's slot in a carrier (1- or 2-digits)
GGG	Media gateway number
M	Media module number
V	In a slot or port location field (such as **1V4** or **233V132),** indicates a gateway media module or port on a media module
PN	Some MOs, such as TDM-BUS, are addressed by PN number, and PN precedes the number. For example, TDM bus A in port network 5 is **PN 05A**.
pp or ppp	Port circuit on a circuit pack or media module (1-, 2-, or 3-digits)

The length of the hardware location differs for the various types of commands. For example:

- **display cabinet** requires a location entry of ***UU*** (**display cabinet 12**)
- **display media-gateway** requires a gateway number in the form ***GGG***
- **test port** requires a location entry of ***UUCSSpp*** or ***GGGVMpp***
  test port 5c0906 tests cabinet 5, carrier C, slot 9, port 6
  test port 5V906 tests media gateway 5, media module 9, port 6

The **list** and **display** commands are useful in relating hardware locations to information such as PN number, extension, and link numbers.

See Table 8: Common Command Parameters on page 27 for other common input parameters.

Table 8: Common Command Parameters ***1 of 2***

Parameter	Meaning
PN#	1- or 2-digit port network number. Use **list cabinet** to find which port networks are in each cabinet.
schedule	Use **schedule** to specify a start time for the command. The command is placed in the queue and, when executed, sends the output to the system printer. **Schedule** is available for **display**, **list** and **test** commands. **Schedule** used with **display alarms** or **display errors** generates a full report. The usual selection screen for error and alarm reports is suppressed so that it does not interfere with the command's execution when it is issued from the queue. Use **list command-queue** to see what commands are currently queued. Use **remove command-queue** ***job#*** to cancel a queued command. This requires that the system printer is administered on the Feature-Related System Parameters screen.
group#	1- to 3-digit trunk-group number
group#/ member#	Group number followed by a slash and a 1- to 3-digit member number of an individual trunk
extension	The extension number assigned to the port or other maintenance object. The number of digits in an extension is determined by the system dial plan. Use **list** and **display** to see extension numbers, maintenance objects, and other components.
next	Next available number
repeat#	The number of times a test sequence is to be repeated. Use with **test** commands.
short **long**	Type of test sequence run for this maintenance object. The test sequence that is run varies for each maintenance object. Use with **test** commands. **CAUTION:** For some maintenance objects, **long** is destructive to call service. The short sequence is always non-destructive and is the default.

1 of 2

Table 8: Common Command Parameters ***2 of 2***

Parameter	Meaning
`clear`	Used with `test` commands, `clear` repeats the test sequence until any active alarms against the maintenance object are cleared by the passing of tests, or until any test in the sequence fails. If no such alarms are active, the sequence is run once. `Long clear` clears every alarm against the maintenance object if no errors are encountered. `Short clear` clears only alarms pertinent to the tests in the short sequence. **CAUTION:** If every tests passes, `long clear` clears every error counter. If firmware counters are cleared while an actual problem exists, customer service may degrade due to calls being routed over faulty components.
	2 of 2

Common Command Output Screens

Common output can be any of the following information:

- A message or other indication that the command successfully completed, or a message giving a reason for a failure or abort. See Common Error Codes for maintenance commands on page 34.
- An input screen for entering additional information required to complete the command. These commands and screens are described in this section. See Common Input Parameters on page 25.
- A report or log output screen listing one or more lines of results with error codes that indicate the reason for a FAIL or ABORT. See Common Command Output Screens on page 28.

Example Common Output Screen

```
command
                                TEST RESULTS

Port        Maintenance Name  Alt. Name Test No. Result           Error Code

02A         TONE-BD                      53       ABORT               2100
```

Each line on an error report represents one test result.

Field Descriptions for Common Output Fields

Table 9: Field Descriptions for common output fields ***1 of 2***

Port	Port location identifier. See Table 7: Hardware Location Parameters on page 26 for a description of the field. The port length differs for the various types of commands. For example: • a port circuit requires a full-length address such as **`11C1502`** (circuit number 2 on the circuit pack in cabinet 11, carrier C, slot 15) • a control carrier component, such as an IPSI, is designated as **`01B`** (the component in carrier B of cabinet 1) In critical-reliability systems, port network connectivity is duplicated as two independent sets of PNC components: **`A-PNC`** and **`B-PNC`**.
Maintenance Name	The name of the MO as it appears in the alarm and error logs.
Alt. Name	The alternate name depends upon the type of the object. For example: Station MO, Alternate Name = ***`nnnnn`*** (extension) Trunk MO, Alternate Name = ***`nn/n`*** (trunk-group#/member #) Personal CO line MO, Alternate Name = P/23 (P/ personal CO line group #)
Test No.	The number of the test run on the MO as part of a **`test`** command. Descriptions of each test and related error codes appear under each MO. Other commands such as **`clear firmware-counters`** and **`reset`** also report a test number. See *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)* for specific MO information.
	1 of 2

Table 9: Field Descriptions for common output fields ***2 of 2***

Result	One of the following results: • PASS: The command successfully completed. For a **`test`** command, no errors were detected by the test. • ABORT: The command was prevented from completing. See Table 10: Common Error Codes for busyout, release, test, and reset commands on page 34. • FAIL: A serious error was detected by the test. See Table 10: Common Error Codes for busyout, release, test, and reset commands on page 34. • NO BOARD: The system does not detect a circuit pack in the location specified on the command line. • CONFLICT: Another user was testing this maintenance object. • EPN-DOWN: The EPN holding the MO is inaccessible. The expansion archangel (EA) link may be down. • DISABLED: The MO or test was disabled by the **`disable`** command. • NOT ASSIGNED: The location specified does not have a circuit pack administered to it. • EXTRA BOARD: This can appear for these circuit packs: - Maintenance/Test - Announcement - Call Classifier - Tone Detector - Speech Synthesis Each of these circuit packs has restrictions on how many can be in the system or a port network, depending on the system configuration. Remove the extra circuit pack(s).
Error Code	Indicates the reason for a FAIL or ABORT result. For **`test`** commands and other commands that return a test result, consult the tables of test error codes under the relevant MO in the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*. For **`busyout, release,`** and **`reset`** commands, see Common Error Codes for maintenance commands on page 34.
	2 of 2

Contention Between Simultaneous Commands

The following limits apply to maintenance and administration activities:

- Up to 15 users can be logged the system at the same time.
- Up to 5 maintenance commands can run concurrently.
- Up to 10 administration commands can run concurrently.
- In general, you can use only one command at a time on a maintenance object or other system entity. This restriction applies to such action commands as:
  - **busyout**
  - **change**
  - **clear**
  - **recycle**
  - **release**
  - **remove**
  - **set**
  - **test**
- When an action command is acting on a circuit pack, that circuit pack and every maintenance object located on it are unavailable for other commands.
- Most commands require the use of shared system resources in order to run. When required resources are already in use, the command aborts. Only one such command can run at one time.
- Display-only commands such as the following generally do not conflict with any other commands:
  - **display**
  - **status**
  - **get**
  - **monitor**

Error Messages

Examples of error messages and their meanings are listed in the table below.

Error message explanations

Error message	Meaning
All maintenance resources busy; try again later	Every available maintenance resource is currently in use.
Board not inserted	The specified board is not inserted in the system.
Command resources busy; Press CANCEL to clear, and then resubmit	There is a resource problem. Restart the command.
Error encountered; can't complete request	The command cannot be executed, perhaps because of corrupt software. Follow normal escalation procedures.
Hardware-group command aborted with cancel command entered from another terminal	**`test hardware-group`**, running in the foreground, is successfully canceled with **`cancel hardware-group`** from another terminal.
'login id':'command' has a command conflict	The command is in conflict with another currently executing command. The login id of the conflicting user and the conflicting command is shown.
Port/Board invalid	The format for the board location is incorrect.
PN is not available	The PN in which the specified board resides is not available.
save translations has a command conflict	An update of the standby server is in progress.

Busyout and Release Commands

The **busyout** command places the object of the command in a maintenance busy state. In the busyout state:

- The object is removed from active service and is not available for use by call processing.
- Services dependent on the busied out component are dropped. If the component supports a link, the link is dropped.
- No scheduled or periodic background tests are run on the object while it is busied out. Demand maintenance tests can be run on the object, but some tests require that the object be released to complete.
- A warning alarm with error type 18 is logged against each busied out object, so that INADS can determine the state of the object.
- To prevent busyouts of particular buses, technicians should move dedicated tone time slots to another bus (the other half of the duplicated bus).

List every busied-out MO by entering **error type 18** in the **Error Type** field on the Hardware Errors Report screen (see display errors on page 239).

The matching **release** command returns the maintenance object to service, providing the object is not otherwise incapacitated.

Example busyout output screen

The following screen shows a typical result for **busyout board 1c03** (analog line circuit pack in cabinet 1, carrier c, slot 3 with five administered ports). See Field Descriptions for Common Output Fields on page 29 for field descriptions.

```
busyout board 01C03
                              Command Results

 Port          Maintenance Name   Alt.  Name     Result     Error Code

01C03           ANL-BD                          PASS
01C0301         ANL-16-L          5409          PASS
01C0302         ANL-16-L          5416          PASS
01C0303         ANL-16-L          5421          PASS
01C0304         ANL-16-L          5422          PASS
01C0305         ANL-16-L          5411          PASS

Command successfully completed
```

The following screen shows a typical result for most maintenance objects for **busyout link 1**.

```
 busyout link 1
                                COMMAND RESULTS

   Port        Maintenance Name    Alt.  Name     Result      Error Code

   01A0617         ETH-PT                         PASS


Command successfully completed
```

Common Error Codes for maintenance commands

Table 10: Common Error Codes for busyout, release, test, and reset commands on page 34 lists common error codes associated with abort and fail results for **busyout**, **release**, **test**, and **reset** commands. In addition to these, many maintenance objects have other unique error codes.

Table 10: Common Error Codes for busyout, release, test, and reset commands ***1 of 2***

Error Code	Command Result	Description/Recommendation
	ABORT	System resources are unavailable to run command. Try the command again at 1-minute intervals up to 5 times.
0	ABORT	Internal system error. Retry the command at 1-minute intervals up to 5 times.
1005	ABORT	A DS1 interface circuit pack could not be reset because it is currently supplying the on-line synchronization reference. Use **set sync** to designate a new DS1 interface circuit pack as the on-line reference, then try the reset again.
1010	ABORT	Attempt was made to busyout an object that was already busied out.
1011	ABORT	Attempt was made to release an object that was not first busied out.
1015	ABORT	A reset of this circuit pack requires that every maintenance object on it be in the out-of-service state. Use **busyout board** to place every object on the circuit pack in the out-of-service state, and try the reset again.

1 of 2

Table 10: Common Error Codes for busyout, release, test, and reset commands ***2 of 2***

Error Code	Command Result	Description/Recommendation
1026	ABORT	The specified TDM bus cannot be busied out because the control channel or system tones are being carried on it. Use **`set tdm PC`** to switch the control channel and system tones to the other TDM bus.
1426	ABORT	The port cannot be released because the MG has the Emergency Transfer Mode set. The user must use the MG's CLI to clear the mode.
2012 2500	ABORT	Internal system error.
2100	ABORT	System resources to run this command were unavailable. Try the command again at 1-minute intervals up to 5 times.
62524 62525 62526	ABORT	Maintenance is currently active on the maximum number of maintenance objects that the system can support. A common cause is that the system contains a large number of administered stations or trunks with installed circuit packs that are not physically connected. Resolve as many alarms as possible on the station and trunk MOs, or busyout these MOs to prevent maintenance activity on them. Then try the command again.
	NO BOARD	The circuit pack is not physically installed.
	EXTRA BD	This result can appear for: Maintenance/Test, Announcement circuit packs, Call Classifier, Tone Detector, Speech Synthesis circuit packs Each of these circuit packs has restrictions on how many can be installed in the system or in a port network, depending on system configuration. Remove any extra circuit packs.
1	FAIL	For **`reset`** commands, the circuit pack was not successfully halted.
2	FAIL	For **`reset`** commands, the circuit pack was not successfully restarted after being halted. For both results, replace the circuit pack.
	FAIL	See the applicable maintenance object (from the Maintenance Name field) in *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*.
	PASS	The requested action successfully completed. If the command was a **`reset`**, the circuit pack is now running and should be tested.

2 of 2

Alarm and Error Categories

Use display alarms on page 49 and display errors on page 239 to generate reports for certain groups of maintenance objects.

Use the **Category** field of the input screen to restrict the report to maintenance objects in a specific category. The HELP key displays a list of categories. Other fields on the input screen help to further customize the alarm and error report.

List of SAT Commands

aar route-chosen

list aar route-chosen

`list aar route-chosen x [partition n] [schedule]`

Screen name: AAR ROUTE CHOSEN REPORT

Use **`list aar route-chosen`** to see the parameters used by AAR to route a call to a specific number (**`x`**).

See also the AAR Routing Table for more information about the routing of the call.

The following is an example of the results of **`list aar route-chosen`**.

```
 list aar route-chosen 5551234
                                      AAR ROUTE CHOSEN REPORT

    Location:  all                            Partitioned Group Number:  1

      Dialed            Total        Route    Call      Node
      String          Min    Max    Pattern   Type     Number    Location

5                      7     7        2       hnpa                 all
```

list aar route-chosen screen field descriptions

list aar route-chosen field descriptions

Field	Description
Location	Defaults to **all**.
Partitioned Group Number	Partitioned Group Number as entered on the command line or default **1**.
Dialed String	The matched entry in the **AAR Digit Analysis Table**.
Total Min Max	Minimum and maximum length of the string matched in the **AAR Digit Analysis Table**.
Route Pattern	Route pattern used to route the call.
Call Type	The call type as matched on the **AAR Digit Analysis Table**. See **`change aar analysis`** in the *Administering Avaya Aura™ Communication Manager (*03-300509) screen reference for full explanation of this field.
Node Number	Node number as matched on the **AAR Digit Analysis Table**.
Location	Defaults to **all**.

access-endpoint

See:
busyout access-endpoint on page 37
release access-endpoint on page 38
status access-endpoint on page 38
test access-endpoint on page 40

busyout access-endpoint

`busyout access-endpoint` ***`extension`***

Use **busyout access-endpoint** to busyout a specified access endpoint. **busyout access-endpoint is destructive.**

Action/Object	Qualifier	Qualifier Description	Feature Interaction
busyout access-endpoint	***extension***	Extension of endpoint to busyout. Example: **busyout access-endpoint 2501**	An active call on the endpoint is dropped.

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

release access-endpoint

release access-endpoint ***extension***

Use **release access-endpoint** to remove all ports associated with the specified access endpoint from a maintenance busy state. Periodic and scheduled tests subsequently resume on the released ports. Maintenance completes background initialization testing on the released ports.

For more information see Busyout and Release Commands on page 33.

Action/Object	Qualifier	Qualifier Description	Login	Default
release access-endpoint	***extension***	number of the access endpoint.	init inads craft nms	none

For the output of **release access-endpoint 22502**, the port field shows the port address of the released access endpoint.

status access-endpoint

status access-endpoint ***extension***

Use **status access-endpoint to see** the status of an access endpoint and to locate facilities with which access endpoints communicate. For example, use **status access-endpoint** to see the operational state of a non-signaling port on a DS1 interface or on an analog tie trunk circuit pack.

The following display shows a typical result for **status access-endpoint 2300**.

```
status access-endpoint 2300

                 ACCESS ENDPOINT STATUS

                   Extension:  2300
                        Port:  02B0905
          Communication Type:  wideband
                       Width:  6

               Service State:  inservice/active

             Connected Ports:01B1907 01B1908 01B1909
                             01B1910 01B1911 01B1912
```

status access-endpoint field descriptions

status access-endpoint

Field	Description
Extension	The extension number of the access endpoint.
Port	The physical location (cabinet-carrier-slot-circuit) of the port for the access endpoint. For wideband access endpoint, the location is for the starting port.
Communication Type	The type of communication supported by the channel: 56k-data, 64k-data, voice-band-data, voice-grade-data, wideband
Width	For 56k-data, 64k-data, voice-band-data, voice-grade-data, width is 1. For wideband, width is the number of DS0s that make up the access endpoint.
Service State	The operational status of the access-endpoint channel: in-service/active, in-service/idle, out-of-service, maintenance-busy, disconnected.
Connected Ports	The location of any facility/endpoint to which this access-endpoint is connected.

test access-endpoint

Use **test access-endpoint** to perform hardware diagnostic tests on all port circuits that are associated with the specified access endpoint extension.

Action/ Object	Qualifier	Qualifier Description	Login	Default
test access-endpoint	**extension** **short** **long** **repeat *n*** **clear**	Access endpoint extension (# of digits determined by dial-plan) See Common Input Parameters on page 25. Examples: **test access-endpoint 25012** **test access-endpoint 45002 sh** **test access-endpoint 45892 l** **test access-endpoint 24389 sh r 4** **test access-endpoint 34899 l r 6** **test access-endpoint 93483 r 2** **test access-endpoint 10022 c**	init inads craft nms	short 1

The following example shows the output for **test access-endpoint 22502**, and assumes the access endpoint ports for extension 22502 are in cabinet 1, carrier C, slot 11, circuit 1 to 6. The responses are displayed on a port-by-port and test-by-test basis with one line of data for each test result.

```
test access-endpoint 22502 short                    page 1 of 1

                            TEST RESULTS

  Port      Maintenance Name  Alt. Name Test No. Result      Error Code
  01C1101   WAE-PORT          22502       36     PASS
  01C1102   WAE-PORT          22502       36     PASS
  01C1103   WAE-PORT          22502       36     PASS
  01C1104   WAE-PORT          22502       36     PASS
  01C1105   WAE-PORT          22502       36     PASS
  01C1106   WAE-PORT          22502       36     PASS
```

administered-connection

See:
disable administered-connection on page 41
enable administered-connection on page 41
status administered-connection on page 41

disable administered-connection

disable administered connection [*a-c #* | all]

Use **disable administered connection** to stop scheduled and periodic testing, and to stop processing of in-line errors for all or selected administered connections.

To view administrative information for administered connections, use **list administered-connection** and **display administered-connection**.

Action/Object	Qualifier	Qualifier Description	Login
disable administered-connection	***a-c #*** **all**	Number of the administered connection Selects all administered connections Examples: **disable administered-connection all** **disable administered-connection 1** **disable administered-connection 12**	init inads craft cust rcust mis

enable administered-connection

enable administered-connection [*a-c #* | all]

Use **enable administered-connection** to re-enable scheduled and periodic testing and in-line error processing on a specified AC (administered connection) or every AC, after maintenance is disabled with **disable administered-connection**. **Administered-connection** commands can help isolate the results of certain maintenance processes by preventing interference.

To view administrative information for administered connections, use **list administered-connection** and **display administered-connection**.

Action/Object	Qualifier	Qualifier Description	Login	Default
enable administered-connection	***a-c #*** **all**	The number of the connection as assigned during administration Enable every administered connection in the system		init inads craft cust rcust mis

status administered-connection

status administered-connection *a-c #*

Use **status administered-connection** to see the operational status of an administered connection.

To view administrative information for administered connections, use **list administered-connection** and **display administered-connection**.

Action/Object	Qualifier	Qualifier Description	Login	Default
status administered-connection	***a-c #***	The number of the administered connection, assigned during administration.	init inads craft cust rcust bcms browse	

The following display shows a typical result for **status administered-conn 3**. In this example, destination is another switch, and the destination number consists of a trunk access code (512) and extension (26001).

```
status administered-connection 3                    page 1 of 1

               ADMINISTERED-CONNECTION STATUS

               Connection Number:  3
                         Enabled? y
                      Originator:  71001
                     Destination:  51226001

                Connection State:  connected
                   Failure Cause:
               Number of Retries:
                 Auto Restorable? y
```

status administered-connection field descriptions

status administered-connection field descriptions *1 of 2*

Field	Description
Connection Number	The number assigned to the administered connection.
Enabled	Whether the administered connection is enabled.
	1 of 2

status administered-connection field descriptions ***2 of 2***

Field	Description
Originator	The extension of the access or data endpoint that originates the connection.
Destination	The destination address used to route the administered connection.
	2 of 2

aesvcs

See:
reset aesvcs-link
status aesvcs cti-link
status aesvcs interface
status aesvcs link
test aesvcs-server

reset aesvcs-link

`reset aesvcs-link [ n/n ]`

Use **reset aesvcs-link** **`[ n/n ]`** to reset an AESVCS Link. This command closes the socket connection. The AE Server attempts to reconnect.

See status link on page 362 for more details on links.

Action/Object	Qualifier	Qualifier Description	Login	Default
`reset aesvcs-link`	***n/n***	aesvcs server number/ aesvcs link number Example: **`reset aesvcs-link 01/01`**	init inads craft cust	

status aesvcs cti-link

`status aesvcs cti-link`

Use **status aesvcs cti-link** to see the status of all the CTI links associated to AE Services Servers on the **AE Services Administration** page of the **IP SERVICES** form (**`change`**

ip-services). These links provide connectivity to ASAI adjuncts, which are connected to an Ethernet LAN.

See status link on page 362 for more details on links.

Action/Object	Qualifier	Qualifier Description	Login	Default
status aesvcs cti-link			init inads craft cust	

The following example shows a typical output for **status aesvcs cti-link**.

```
status aesvcs cti-link

                         AE SERVICES CTI LINK STATUS

CTI   Version  Mnt  AE Services      Service       Msgs    Msgs
Link           Busy Server           State         Sent    Rcvd

1     4        no   server1          down          0       0
2     3        no   server2          established   0       0
3     4        no   server1          down          0       0
```

status aesvcs cti-link field descriptions

status aesvcs cti-link field descriptions ***1 of 2***

Field	Description
CTI Link	The CTI link number 1-16
Version	Negotiated ASAI protocol version
Mnt Busy	**y/n** If **y**, the link has been busied out with **busyout cti-link**. Use **release cti-link**.
AE Services Server	The name of the AE Services Server on the AE Services Administration page of the IP Services form (**change ip-services**)
Service State	The status of the TCP/IP Tunnel Connection and CTI link. **down/established**
	1 of 2

status aesvcs cti-link field descriptions ***2 of 2***

Field	Description
Msgs Sent	Number of ASAI messages sent during a specified 30-minute window collection period.
Msgs Rcvd	Number of ASAI messages received during a specified 30-minute window collection period.
	2 of 2

status aesvcs interface

status aesvcs interface

Use **status aesvcs interface** to see the status of the interfaces over which Communication Manager is listening for AESVCES Server connections.

Action/Object	Qualifier	Qualifier Description	Login	Default
status aesvcs interface			init inads craft cust	

The following example shows a typical output for **status aesvcs interface**.

```
status aesvcs interface
                              AE SERVICES INTERFACE STATUS

Local Node        Enabled?  Number of     Status
                            Connections
procr             yes       1             listening
```

status aesvcs interface field descriptions

status aesvcs interface field descriptions

Field	Description
Local Node	The name of the AESVCS interface as administered on the **IP SERVICES** form (**change ip-services**)
Enabled	Shows if the interface is enabled, as set on the Enabled field on the **IP SERVICES** form (**change ip-services**).
Number of Connections	Shows the number of active AESVCS Server connections over this interface
Status	The current state of this interface. **Disabled** - the Enabled field is **n** on the IP Services form (**change ip-services**) for this interface. **Intfce-down** - this interface is not functioning and cannot accept incoming communications. **Listening** - the interface is up and running and AESVCS Servers can connect over it.

status aesvcs link

status aesvcs link

Use **status aesvcs link** to see the status of all the active sockets associated with AE Services Servers. The sockets are administered on the AE Services Administration page of the **IP SERVICES** form (**change ip-services**).

See status link on page 362 for more details on links.

Action/Object	Qualifier	Qualifier Description	Login	Default
status aesvcs link			init inads craft cust	

This is an example of a typical output for **status aesvcs link**.

```
status aesvcs link

                          AE SERVICES LINK STATUS

Srvr/  AE Services     Remote IP        Remote  Local Node    Msgs  Msgs
Link   Server                           Port                  Sent  Rcvd

01/01  server1                                  procr          0     0
03/05  server3                                  clan1          0     0
```

status aesvcs link field descriptions

status aesvcs interface field descriptions ***1 of 2***

Field	Description
Srvr/Link	The AE Services Server ID from the AE Services Administration page (1-16) and the AE Services link number (1-16).
AE Services Server	The name of the AE Services Server.
Remote IP	The IP address of the AESVCS Link (AESV-LNK) connection on the AESVCS Server.
Remote Port	The TCP/ IP port of the AESVCS Link connection on the AESVCS Server.
	1 of 2

status aesvcs interface field descriptions ***2 of 2***

Field	Description
Local Nod	The node name of the interface over which the AESVCS Server is connected.
Msgs Sen	The number of ASAI messages sent during the 30-minutes moving window collection period.
Msgs Rcvd	The number of ASAI messages sent during the 30-minutes moving window collection period.
	2 of 2

test aesvcs-server

`test aesvcs-server [1-16] [short/long] [(repeat#)/(clear)] [schedule]`

Use **`test aesvcs-server`** to run diagnostic tests on the specified AESVCS Server and any associated AESVCS Links (AESV-LNK).

Action/Object	Qualifier	Qualifier Description	Login	Default
`test aesvcs-server`	**`1-16`** **`short`** **`long`** **`repeat n`** **`clear`** **`schedule`**	aesvcs server # 1-16 See Common Input Parameters on page 25.	init inads craft cust	short

This is an example of a typical output for **`test aesvcs-server 1`** with no associated AESVCS Links. The test fails.

```
test aesvcs-server 1
                                        TEST RESULTS

Port  Maintenance Name    Alt. Name     Test No.     Result     Error Code

01    AESV-SES                          1623         FAIL
```

This is an example of a typical output for **`test aesvcs-server 1`** with an associated AESVCS Link. The test passes.

```
test aesvcs-server 1

                              TEST RESULTS

Port  Maintenance Name    Alt. Name     Test No.     Result     Error Code

01    AESV-SES                          1623         PASS
01/01 AESV-LNK                          1624         PASS
```

alarms

See:
display alarms on page 49
test alarms on page 54

display alarms

`display alarms [schedule]`

Use **`display alarms`** to see an options screen that allows you to choose which alarms to display. After making your option selections, press ENTER to view the Alarm Report.

Action/Object	Qualifier	Qualifier Description	Login	Default	Feature Interaction
`display alarms`	**`schedule`**	See Common Input Parameters on page 25.	inads cust rcust bcms init browse	All alarms are listed.	See Feature interactions for display alarms on page 54

Use **`display alarms`** to see a hardware alarm report. Use this report to select which alarms to display.

The system creates the reports from the logs of the maintenance subsystem. The subsystem monitors the system hardware and logs problems as errors or alarms. The type of alarm indicates the impact of the problem.

- Warning alarm — A problem that is important enough to log, or may be external to the system but not severe enough to cause a noticeable degradation of service.
- Minor alarm — A problem that could disable a local area of the system and so noticeably degrade the system.
- Major alarm — A problem that widely degrades the system and seriously impairs service. This causes a call to be placed to INADS.

A resolved alarm is a problem that has been corrected, and the alarmed component of the system is functioning correctly again. The system stamps resolved alarms with the date and time the problem was corrected. The system handles any errors associated with the alarms as “resolved.”

Input for display alarms

Enter **`display alarms`** to display the Alarm Reports options screen. Select different options on this screen for the type of report you want to see and press ENTER.

```
display alarms                                                  Page 1 of 1
                                 ALARM REPORTS

         The following options control which alarms will be displayed.
         ALARM TYPES
                   Active? y_      Resolved? n_
                    Major? y_         Minor? y_      Warning? y_
         REPORT PERIOD
                 Interval:  m_    From:  __/__/__:__  To:  __/__/__:__
         EQUIPMENT TYPE ( Choose only one, if any, of the following )
                         Media Gateway:  ___
                               Cabinet:  __
                          Port Network:  __
                          Board Number:  _______
                                  Port:  ________
                              Category:  ________
                             Extension:  _____
                 Trunk ( group/member ):  ___/___
```

display alarms field descriptions

display alarms input screen field descriptions ***1 of 2***

Field	Description
Alarm Types	Enter **y** or **n** in the alarm type fields to specify the type of alarm to display on the report. You can choose a combination of: • active or inactive alarms • major, minor, or warning alarms • resolved or unresolved alarms
Interval	Enter ***m***, ***h***, ***d***, ***w*** or **a** to display alarm records for the last month, last hour, last day, last week, or all. • From: Display alarm records from the time specified by ***mm/dd/hh:mm***, where ***mm*** is the month, ***dd*** is the day, ***hh*** is the hour and ***mm*** is the minute. If this field is not defined, the report includes every alarm active since a month prior to the current time. • To: Display alarm record to the time specified by ***mm/dd/hh/mm***, where ***mm*** is the month, ***dd*** is the day, ***hh*** is the hour and ***mm*** is the minute. If no **To** date is entered, any alarm that is active after the **From** date is used.
	1 of 2

display alarms input screen field descriptions ***2 of 2***

Field	Description
Equipment Type	Identify the equipment type that you want on the report. If there is no input to these fields, the system defaults to every type. • **Media Gateway**: Display every alarm associated with a particular media gateway. • **Cabinet**: Display every alarm associated with a particular cabinet. • **Port Network**: Display every alarm associated with a particular port network. • **Board Number**: Display every alarm associated with a particular circuit pack. Alarms for a circuit pack are referenced by port location (cabinet-carrier-slot). If the cabinet number is omitted, default is 1. • **Port**: Display every alarm associated with a particular port on a circuit pack. Alarms for a port circuit are referenced by port location (cabinet-carrier-slot-circuit). If the cabinet number is omitted, default is 1. • **Category**: Enter a category to restrict the report to maintenance objects in a specific category. The HELP key displays a list of categories. • **Extension**: Alarms associated with an extension number. • **Trunk** (group/member): Display every alarm associated with a particular trunk group or trunk-group member.
	2 of 2

For the following output example, **`display alarms`** options were left at their defaults.

```
display alarms

                                ALARM REPORT

Port    Maintenance  On      Alt    Alarm   Svc   Ack?  Date        Date
        Name         Brd?    Name   Type    State 1 2   Alarmed     Resolved

02A     TONE-BD      y              MAJOR         y n  05/22/20:34 00/00/00:00
01C07   ANL-BD       y              MINOR         n n  05/22/20:26 00/00/00:00
01C0702 ANL-LINE     n       311    WARNING  IN        05/22/20:26 00/00/00:00
01C0701 ANL-LINE     n       1051   WARNING  IN        05/22/20:26 00/00/00:00
01C0703 ANL-LINE     n       1053   WARNING  IN        05/22/20:26 00/00/00:00
01C1505 CO-TRK       n       78/01  WARNING  OUT       05/22/20:26 00/00/00:00
01C1505 CO-TRK       n       78/01  WARNING  OUT       05/22/20:26 00/00/00:00
02A0201 TONE-PT      n              WARNING            05/22/20:34 00/00/00:00
02A     TDM-CLK      n              WARNING            05/23/13:43 00/00/00:00
PN 02B  TDM-BUS      n              WARNING            05/23/14:53 00/00/00:00
```

display alarms ALARM REPORT field descriptions

display alarms report field descriptions ***1 of 2***

Field	Description
Port	The location of the alarmed object. l For installed circuit packs, the location appears as **cabinet-carrier-[slot]-[circuit]**. l For port network-related objects, the location appears as **PN UUB**, where UU is the port network number and B is the bus (A or B). l For fiber link-related objects, the location appears as **x a-pnc** where "x" is the fiber link number and "a" is the PNC side (A or B). This is the same identifier that is used by the alarm log.
Maintenance Name	The name of the MO as it appears in the alarm and error logs.
On Brd	**y** indicates that the fault was on the associated circuit pack **n** indicates that he fault is not connected to the circuit pack, but was on an off-board element connected to the circuit pack.
Alt. Name	The alternate name depends upon the type of the object. For example: l Station MO, Alternate Name = ***nnnnn*** (extension) l Trunk MO, Alternate Name = ***nn/n*** (trunk-group#/member #) l Personal CO line MO, Alternate Name = **P/*xx*** (P/personal CO line group #)
Alarm Type	MAJOR, MINOR, or WARNING. This is an indicator of the seriousness of the alarm.
Service State	Service state of the station and trunk ports: • RDY = ready for service • OUT = out of service • IN = in service • [Blank] = No associated service state
	1 of 2

display alarms report field descriptions ***2 of 2***

Field	Description
Ack	Headings 1 and 2 identify the first and second OSS telephone numbers, respectively. The entries in the column below ACK indicate the acknowledged alarm state: • **y** = alarm has been acknowledged • **n** = alarm has not been acknowledged • **c** (cleared) = alarm was first acknowledged, then resolved and cleared • [Blank] = no attempt was made to report the alarm If the user disables the alarm origination with **`change system-parameters maintenance`**, then the **Ack** field is blank regardless of the true acknowledged state of the alarm.
Date Alarmed	Day, hour, and minute of alarm.
Date Resolved	Day, hour, and minute of resolution. 0 for active alarms.
	2 of 2

Feature interactions for display alarms

If the alarm origination is disabled by **`change system-parameters maintenance`**, the `Ack` field appears blank regardless of the true acknowledge state for the alarm.

If **second-as-backup** is entered in the **`Alarm Origination to OSS Numbers`** field, the column under the **2** heading will be blank for the alarms that the switch has not attempted to send to the second OSS telephone number. For the alarms that the switch has attempted to send to the second OSS telephone number, the column will be **y**, **n**, or **c**, depending on the acknowledgment status of the alarm. After the call to the first OSS telephone number is successful, for the alarms that the switch has attempted to send to OSSN2, the column will be consistent with the column under the **1** heading.

test alarms

`test alarms [auto-page] [failures] [step] [short | long] [repeat # | clear]`

Use **`test alarms`** to test the hardware associated with selected alarms.

Action/Object	Qualifier	Qualifier Description	Login	Default
`test alarms`	**`auto-page`** **`failures`** **`step`** **`short`** **`long`** ***`repeat #`*** **`clear`**	See test alarms command parameters on page 55. Examples: **`test alarms`** **`test alarms step failures`** **`test alarms long clear auto-page`** **`test alarms long failures`**	inads init nms system technician	short repeat 1

Use **`test alarms`** to automatically test all of the hardware that is associated with the active alarms in the alarm log. **`Test alarms`** provides a query screen to help the user narrow the selection of alarmed objects. Once the screen is filled out, press ENTER to test the hardware associated with the selected alarm log entries. The results appear in standard test output and status information appears on the message line as the command progresses.

Several alarms may be logged against a single maintenance object, each alarm representing a different problem. Even if there are multiple entries in the alarm log for a single object, **`test alarms`** tests each physical object once.

test alarms command parameters *1 of 2*

Parameter	Description
`auto-page`	Continue testing and displaying test results by providing a new screen every time the SAT screen is filled with test results. The screen does not scroll to accommodate new results. If the auto-page option is not specified, when the SAT screen is filled with test results testing stops until the user enters the “PAGE” key to continue or the “CANCEL” key to halt the testing.
`failures`	Show failures on the SAT screen. All passes will not be displayed on the output screen. Hardware failures, aborts, conflicts, and PN-down failures appear.
	1 of 2

test alarms command parameters *2 of 2*

Parameter	Description
`step`	Step to the next or previous alarm without testing the current alarm. Alarm information appears with a prompt for a keypress. Enter: • CANCEL to abort the command • ENTER to test the currently displayed alarm • NEXT ALARM (function key) to move to the next alarm • PREV ALARM (function key) to move to the previous alarm without testing the currently displayed alarm. Press NEXT ALARM (function key) or PREV ALARM (function key) at any time during the command, even during test results. If the NEXT ALARM or PREV ALARM is pressed during a test, the test is aborted, testing of the current alarm stops, and the next alarm or previous alarm appears. If the first alarms appears, and the PREV ALARM is pressed, then the last alarm appears. If the last alarm is currently displayed, and NEXT ALARM is requested, the first alarm appears.
`short`	Execute a series of nondestructive diagnostic tests.
`long`	Execute a more comprehensive and longer version of the diagnostic tests. This may involve both destructive and nondestructive tests.
`repeat #`	Number of times to repeat the test, between 1 and 100.
`clear`	Repeat the test sequence until the alarm is cleared, or until a single test in the sequence fails. **`long clear`** forces a clear of all alarms if no errors are encountered during testing **`short clear`** clears alarms pertinent to tests in the short sequence **WARNING:** Executing a clear with short option, may not clear all alarms even if all tests pass. **WARNING:** Since the “clear long” options clear all counters if tests pass, it is possible for firmware counters to be cleared even when a problem exists. In some cases customer service might degrade since calls may be routed over defective equipment.
	2 of 2

test alarms options form

After entering **`test alarms`**, you are presented with an options form for alarm selection.

```
test alarms repeat 1

                        HARDWARE TEST ALARM QUERY

     The following options control which alarms will be tested.

     ALARM TYPES
           Major? y_     Minor? y_    Warning? y_

         REPORT PERIOD
          Interval: m_  From: __/__/__:__  To: __/__/__:__

     EQUIPMENT TYPE ( Choose only one, if any, of the following )
                     Media Gateway:  ___
                           Cabinet: __
                      Port Network: __
                      Board Number: ____
                              Port: ______
                          Category: ________
                         Extension: _____
             Trunk ( group/member ): __/__
```

test alarms field descriptions, Hardware Test Alarm Query

The following fields appear on the **`test alarms`** screen.

test alarms field descriptions, Hardware Test Alarm Query ***1 of 2***

Field	Description
ALARM TYPES	The type of alarm or combination of alarms to be tested, specified by **y** or **n** in the alarm type fields.
REPORT PERIOD	Test alarms for records for the last hour (h), last day (d), last week (w) or all (a).
From	Specifies error records starting from the time specified by **mm/dd/hh/mm** (month/day/hour/minute). If no **From** date is entered, errors from the earliest record in the log are displayed.
	1 of 2

test alarms field descriptions, Hardware Test Alarm Query *2 of 2*

Field	Description
To	Specifies every error record up to the time specified by **mm/dd/hh/mm**. If no **To** date is entered, every error up to the current date appears.
Equipment Type	To limit the report to a specific group of components, enter the location of a type of equipment in one of the following fields. If no entry is made, errors for the entire system are displayed. • **Media Gateway**: Enter the media gateway number. • **Cabinet**: Enter the cabinet number. • **Port Network**; Enter the port network number. • **Board Number**: Enter the cabinet-carrier-slot address of the circuit pack (for example, 11c04). If the cabinet number is omitted, it defaults to 1. • **Port**: Enter the cabinet-carrier-slot-circuit address of the port (for example, 11c0408). If the cabinet number is omitted, the system will default to 1. • **Category**: Enter a category to restrict the report to maintenance objects in a specific category. The HELP key displays a list of categories. • **Extension**: Enter the extension number of a port. • **Trunk (group/member)**: Enter a trunk-group number, or a trunk-group and member number separated by a slash (for example, 78 or 78/1).
	2 of 2

The following example shows the results output from **`test alarms`** (query form left empty by pressing **ENTER**). The responses display on a test-by-test basis with one line of data for each test result.

```
test alarms                                                          Page   1

                                ALARM ENTRY
Port       Maintenance On   Alt     Alarm   Svc    Ack?  Date        Alarm
           Name        Brd? Name    Type    State  1 2   Alarmed     Count

01C03      UDS1-BD     n            WARNING              03/06/16:48 1/4

                                TEST RESULTS
Port      Maintenance Name  Alt. Name Test No. Result            Error Code

01C03     UDS1-BD                     138      NO BOARD
01C03     UDS1-BD                     139      NO BOARD
01C03     UDS1-BD                     140      NO BOARD
01C03     UDS1-BD                     141      NO BOARD
01C03     UDS1-BD                     142      NO BOARD
01C03     UDS1-BD                     143      NO BOARD
01C03     UDS1-BD                     144      NO BOARD
01C03     UDS1-BD                     145      NO BOARD
01C03     UDS1-BD                     146      NO BOARD
```

test alarms output

The responses, with normal output, appear on a test-by-test basis with one line of data displayed for each test result. With the failures option, only the tests that failed appear.

test alarms field descriptions, ALARM ENTRY

test alarms field descriptions, ALARM ENTRY *1 of 2*

Field	Description
Port	The location of the alarmed object (cabinet-carrier-slot-circuit). This is the same identifier as used by the alarm log.
Maintenance Name	The name of the MO as it appears in the alarm and error logs.
On Board	Whether the fault detected is on the associated circuit pack, or an off board element connected to the circuit pack.
Alt Name	Extension numbers or trunk-group numbers.
	1 of 2

test alarms field descriptions, ALARM ENTRY *2 of 2*

Field	Description
Alarm Type	Major, minor, or warning. This is an indicator to the seriousness of the alarm raised.
Service State	RDY (ready for service), OUT (out of service), or IN (in service). This is the current service state of the station and trunk ports shown.
	2 of 2

When errors are encountered preparing a particular object to be tested (not inserted, contention, etc.) an error message appears in the TEST RESULTS data.

For the following output example, assume that only one alarm was in the alarm log and it is on the board in cabinet 1, carrier c, slot 7. **`Test alarms`** was entered and the query screen was left empty by just pressing ENTER.

```
test alarms                                                          Page   1
                                        ALARM ENTRY
Port       Maintenance On   Alt     Alarm   Svc    Ack?  Date        Alarm
           Name        Brd? Name    Type    State  1 2   Alarmed     Count

01C03      UDS1-BD     n            WARNING              03/06/16:48 1/4

                                 TEST RESULTS
Port      Maintenance Name  Alt.  Name Test No.  Result            Error Code

01C03     UDS1-BD                     138      NO BOARD
01C03     UDS1-BD                     139      NO BOARD
01C03     UDS1-BD                     140      NO BOARD
01C03     UDS1-BD                     141      NO BOARD
01C03     UDS1-BD                     142      NO BOARD
01C03     UDS1-BD                     143      NO BOARD
01C03     UDS1-BD                     144      NO BOARD
```

analog-testcall

test analog-testcall

`test analog-testcall` *`trunk-group# / member#`* `| port` *`location`* `| board` *`location`* `full | supervision | no-selftest | no-return-loss | no-st-or-rl] [`*`repeat#`*`] [schedule]`

Use **`test analog-testcall`** to use the Automatic Transmission Measurement System (ATMS) to originate test calls over analog trunks. ATMS collects performance measurements on the test call and compares them to administered thresholds. Detail and summary reports of these measurements are generated with **`list testcalls`**.

You can specify testing of an entire trunk group or an individual trunk using either group/member addresses or port and circuit pack location. The type of test call, the number of the testing line on the far-end switch and various other parameters must be administered on the Trunk Group screen before the command can execute.

The **`test analog-testcall`** test aborts when attempting a test call on these trunk groups:

- ISDN-PRI
- SIP
- DID
- Any incoming trunk group (transmission tests can only be run on outgoing trunks)

ATMS, **`test analog-testcall`**, and the measurement reports are described in Automatic Transmission Measurement System (ATMS) in Automatic Transmission Measurement System in *Maintenance Procedures for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300432) (formerly 03-300192).*

announcement-board

See:
disable announcement-board on page 61
enable announcement-board on page 62
announcement on page 62.

disable announcement-board

`disable announcement-board` ***`X`***

See enable announcement-board on page 62.

enable announcement-board

`enable announcement-board X`

Use **`enable/disable announcement-board`** to administer a specific announcement board on your system. The **Maximum TN2501 VAL Boards** field and **Maximum G700/G350 VAL Sources** field on the **`system-parameters customer-options`** screen must be set properly in order to use **`enable/disable announcement-board`**. For information on administering announcement boards, see *Administering Avaya Aura™ Communication Manager (03-300509)*.

Action/Object	Qualifier	Qualifier Description	Login	Default
`enable announcement board` **`disable announcement board`**	***x***			

announcement

erase announcement

Use **`erase announcement [`*`media gateway number`*`] [`*`module number`*`]`** to erase the announcement files from a gateway location regardless of whether the announcement files are backed up to a Compact Flash or internal flash.
For example, when you run the command **`erase announcement `*`6v9`***,

- If the backup device in the gateway location 6v9 is the internal flash on a G450, all the announcement files on the internal flash (as well as the RAM) are erased.
- If the backup device in the gateway location 6v9 is a Compact Flash inserted in a G450 Release 2 (or later), all the announcement files in the ***/annc/backup*** directory on the Compact Flash (as well as the RAM) are erased.

The following is an example of the screen that appears when you run the **`erase announcement`**.command:

```
Enter board location: [gateway(1-50)];module(V9)


Or press CANCEL to cancel the command
```

list announcement

`list announcement [ext x] [ to-ext x] [count n] [type x] [schedule]`

Use **`list announcement`** to see announcement information listed by extension.

Action/Object	Qualifier	Qualifier Description	Login
`list announcement`		list all announcements by extensions	init inads craft cust rcust
	`ext x`	list information for a specific extension. Also use **`list announcement x`**.	
	`to-ext x`	when used with **`[ext x]`**, list information for all announcement beginning with one extension and ending with another.	
	`count n`	list a certain number (***n***) of announcements	
	`type x`	list all announcements of a specific type	
	`schedule`	See Common Input Parameters on page 25.	
		Examples: **`list announcement`** **`list announcement 27740`** **`list announcement ext 27740`** **`list announcement 27740 to-ext 27750`** **`list announcement 27740 count 10`** **`list announcement 27740 type integrated count 10`**	

The following screen shows the display for **`list announcement`**.

```
list announcement                                                Page   1

                           ANNOUNCEMENTS/AUDIO SOURCES
Announcement                                                     Source     Num of
Extension             Type       Name                          Pt/Bd/Grp   Files
57700                 integrated AUTOVOAAnnouncement            01A05       1
57800                 integrated AUTOCollDigitAnnounce          01A05       1
57850                 integrated AUTORecordPlaybackAnnounce     01A05       1
59620                 integrated please_hold_st12               01A05       1
59621                 integrated voa                            01A05       1
59622                 integrated voa_extra_long                 01A05       1
59623                 integrated collect16digits                01A05       1
59624                 integrated direct_agent_announcement      01A05       1
59625                 integrated announcement025longfilename    01A05       1
59626                 integrated announcement026longfilename    01A05       1
59627                 integrated announcement027longfilename    01A05       1
59628                 integrated announcement028longfilename    01A05       1
59629                 integrated announcement029longfilename    01A05       1
59630                 integrated announcement030longfilename    01A05       1
59631                 integrated announcement031longfilename    01A05       1
59632                 integrated announcement032longfilename    01A05       1
```

arp

netstat arp

`netstat arp [unsorted | ip-sort | mac-sort | ck-dup] [all | board board-location]`

Use **`netstat arp`** to:

- Display the C-LAN circuit pack's Address Resolution Protocol (ARP) table
- Help troubleshoot, isolate, and correct duplicate IP addresses within the network

`netstat arp ck-dup` is the default.

The output of **netstat arp** shows as many pages as are required to display all of the data received from the C-LAN boards.

Action/Object	Qualifier	Qualifier Description	Login
netstat arp	**unsorted** **ip-sort** **mac-sort** **ck-dup**	ARP data in the order it was received ARP data by IP address ARP data by MAC address ARP entries that contain duplicated IP addresses	init inads craft station trunk MSP

The following screen shows an example for **netstat arp unsorted**.

```
netstat arp unsorted                                          Page   1 of 3

Seq     Dup     Board      Mtce        IP                  MAC           Arp/Err
Num   Status  Location     Name      Address             Address          Type

0001           11B15     CLAN-BD 130.240.060.250    02:e0:3b:db:c8:0a   Dynamic
0002           11B14     CLAN-BD 190.010.130.250    00:30:6d:19:5c:0f   Dynamic
0003           11B13     CLAN-BD 130.000.190.250    00:60:2f:a9:45:05   Dynamic
0004           11B12     CLAN-BD 130.000.000.090    08:00:20:81:cc:b8   Dynamic
0005           11B11     CLAN-BD 130.000.160.240    00:00:81:5a:27:05   Dynamic
0006           11B10     CLAN-BD 130.000.160.220    08:00:20:1d:a7:0a   Dynamic
0007           12B15     CLAN-BD 130.000.160.221    08:00:20:7d:ff:6a   Dynamic
0008           12B14     CLAN-BD 130.000.190.200    00:00:81:7f:5d:e8   Dynamic
0009           12B13     CLAN-BD 130.000.190.201    08:00:20:81:cc:b8   Dynamic
0010           12B12     CLAN-BD 220.000.000.000    01:00:5e:00:00:00   Dynamic
0011           12B11     CLAN-BD 220.000.000.000    01:00:5e:00:00:00   Dynamic
0012           12B10     CLAN-BD 220.000.000.000    01:00:5e:00:00:00   Dynamic
0013           13B15     CLAN-BD 220.000.000.000    01:00:5e:00:00:00   Dynamic
0014           12B14     CLAN-BD 220.000.000.000    01:00:5e:00:00:00   Dynamic
0015           12B13     CLAN-BD 130.000.000.140    01:50:da:bf:ae:2a   Dynamic
0016           04A06     CLAN-BD 135.009.005.164    00:00:da:bc:84:63   Dynamic
```

Use netstat arp field descriptions on page 67 to interpret this report.

The following screen shows an example for **`netstat arp ip-sort all`**

```
netstat arp unsorted                                          Page   1 of 3

Seq    Dup    Board      Mtce        IP                  MAC           Arp/Err
Num  Status  Location    Name      Address             Address          Type

0001          12D15     CLAN-BD 130.001.002.001    00:20:fc:1e:13:f9   Dynamic
0002          15D14     CLAN-BD 130.001.002.002    08:00:20:87:f0:87   Dynamic
0003          13D15     CLAN-BD 130.001.002.003    00:80:c7:ac:f0:dc   Dynamic
0004          05A10     CLAN-BD 130.001.002.004    00:50:04:d9:b2:b0   Dynamic
0005          11E09     CLAN-BD 130.001.002.005    00:a0:c9:a4:76:4d   Dynamic
0006          12E14     CLAN-BD 130.001.002.006    00:50:da:ba:c7:93   Dynamic
0007          11D10     CLAN-BD 130.001.002.007    00:50:04:d9:b1:4f   Dynamic
0008          11D11     CLAN-BD 130.001.002.008    08:00:20:75:e3:86   Dynamic
0009          03C09     CLAN-BD 135.003.004.001    08:00:20:7a:ff:b2   Dynamic
0010          10E10     CLAN-BD 135.003.004.002    08:00:20:7a:ff:b2   Dynamic
0011   DUP    05A15     CLAN-BD 135.003.004.003    08:00:20:81:cc:b8   Dynamic
0012   DUP    07B05     CLAN-BD 135.003.004.004    08:00:20:83:21:d0   Dynamic
0013          11B12     CLAN-BD 135.009.004.130    00:01:02:60:a5:43   Dynamic
0014          10C09     CLAN-BD 135.009.004.131    00:a0:c9:b2:89:d7   Dynamic
0015          03D15     CLAN-BD 135.009.004.132    00:50:da:bf:ae:2a   Dynamic
0016          04A06     CLAN-BD 135.009.005.164    00:00:da:bc:84:63   Dynamic
```

Use netstat arp field descriptions on page 67 to further interpret this report.

The following screen shows an example for **`netstat arp mac-sort`**.

```
netstat arp mac-sort                                          Page   1 of 3

Seq    Dup    Board      Mtce        IP                  MAC           Arp/Err
Num  Status  Location    Name      Address             Address          Type

0001          03E09     CLAN-BD 135.240.060.000    00:00:3c:04:2d:55  Dynamic
0002          02A15     CLAN-BD 135.240.060.001    00:00:3c:04:7b:b1  Dynamic
0003          10B12     CLAN-BD 135.000.190.010    00:00:77:01:ab:91  Dynamic
0004          09C13     CLAN-BD 135.000.190.011    00:00:81:5a:27:05  Dynamic
0005          11D15     CLAN-BD 135.000.190.012    00:00:81:7f:5c:e8  Dynamic
0006          12B08     CLAN-BD 135.000.190.013    00:00:a2:c3:82:0a  Dynamic
0007          14C06     CLAN-BD 135.009.160.110    00:00:a5:14:39:00  Dynamic
0008          15C11     CLAN-BD 135.009.160.111    00:00:a5:f5:38:00  Dynamic
0009          02A15     CLAN-BD 135.009.190.112    00:00:a5:f7:38:00  Dynamic
0010          16D11     CLAN-BD 135.009.004.240    00:01:02:36:7c:c1  Dynamic
0011          04A08     CLAN-BD 135.009.004.241    00:01:02:60:a5:43  Dynamic
0012          09B15     CLAN-BD 135.009.004.242    00:01:02:60:a5:6b  Dynamic
0013          15D13     CLAN-BD 135.009.004.243    00:01:02:60:a5:72  Dynamic
0014          13A14     CLAN-BD 135.009.004.244    00:01:02:60:a5:82  Dynamic
0015          07B09     CLAN-BD 135.009.004.245    00:01:02:60:a5:df  Dynamic
0016          04A06     CLAN-BD 135.009.005.164    00:01:02:bc:84:63  Dynamic
```

Use the netstat arp field descriptions on page 67 to further interpret this report.

The following screen shows the display for **`netstat arp ck-dup`**.

```
netstat arp ck-dup

Seq     Dup     Board      Mtce        IP                  MAC          Arp/Err
Num   Status  Location     Name      Address             Address         Type

0001    DUP     03B11    CLAN-BD  135.000.160.110    08:00:6a:19:04:c3   Dynamic
0002    DUP     04B14    CLAN-BD  135.000.160.110    00:00:00:00:00:00   Dynamic
```

Use netstat arp field descriptions to interpret this report.

If the system finds no duplicate IP address, it displays NO DUP IP ADDRS

netstat arp field descriptions

netstat arp field descriptions

Field	Description
Seq Num	A switch-generated, sequential reference number
Dup Status	Displays DUP if a duplicated IP address is found
Board Location	Location of the TN799DP (C-LAN) circuit pack
Maint Name	Maintenance Name of the circuit pack
IP Address	IP address
MAC Addr	The MAC address
Arp/ErrType	Other — The IP address and the MAC address for the entry are dissociated. This can be ignored. Invalid — The IP and MAC address for this entry are disassociated. This can be ignored. Dynamic — needs further investigation. Static — needs further investigation. BRD BUSY - the CLAN-BD has been busied out. LPBCK IP -Loopback query failed, typically because the RSCL is down. SNMPFAIL - SNMP query to the board failed. Timeout - SNMP query timeout.

ars route-chosen

list ars route-chosen

`list ars route-chosen x [location n | all] [partition n] [schedule]`

Screen name: ARS ROUTE CHOSEN REPORT

Use **`list ars route-chosen`** to see the parameters used by ARS to route a call to a specific number (**x**).

See also the ARS Routing Table for more information about the routing of the call.

The following is an example of the results of **`list ars route-chosen`**.

```
list ars route-chosen 5551234
                                      ARS ROUTE CHOSEN REPORT

    Location:  1                      Partitioned Group Number:  1

      Dialed            Total        Route    Call      Node
      String          Min    Max    Pattern   Type     Number    Location

5                      7     7        2       hnpa                 all
```

list ars route-chosen screen field descriptions

list ars route-chosen field descriptions

Field	Description
Location	Location from the command line or default **1**.
Partitioned Group Number	Partitioned Group Number as entered on the command line or **1**.
Dialed String	The matched entry in the **ARS Digit Analysis Table**
Total Min Max	Minimum and maximum length of the string matched in the **ARS Digit Analysis Table**.
Route Pattern	Route Pattern used to route the call.
Call Type	The call type as matched on the **ARS Digit Analysis Table**. See **`change ars analysis`** in the *Administering Avaya Aura™ Communication Manager (*03-300509) screen reference for full explanation of this field.
Node Number	Node number as matched on the **ARS Digit Analysis Table**.
Location	Phones dialing from this location use the entries on this form. If there are no matching entries in the phone's location, Communication Manager tries the entries in location **all**.

attendant

status attendant

`status attendant` ***`console#`***

Use **`status attendant`** to see the operational state of the specified attendant console. This information can help in trouble diagnosis and in locating facilities to which the attendant console is connected.

The following example shows the output from **status attendant**.

```
status attendant 1

                                ATTENDANT STATUS

Console Number: 1            Service State: in-service/night service
          Port: 01C1106    Download Status: no
Connected Ports:
```

status attendant field descriptions

status attendant

Field	Description
Console Number	Number assigned to the attendant
Port	Port location of the attendant (cabinet-carrier-slot-circuit)
Service State	In-service/idle, in-service/active, out of service, or disconnected
Usage State	Idle or active
Maintenance Busy State	**y**/**n** Is maintenance testing the object
Connected Ports	Port locations to which the attendant is communicating (cabinet-carrier-slot-circuit).

atm board

S8700 series

status atm board

status atm board ***location***

Use **status atm board** to see when the circuit pack was last inserted or when a link went down or came back up.

The following example shows the output from **status atm board** ***2a01*** with Personality ATM-EI.

```
 status atm board 02A01

                             ATM BOARD

      Location:  02A01                      Personality: ATM-EI

Network Address: 4700580601d052ae9000ffe1000000f2d100040    Match: Yes
Admined Address: 4700580601d052ae9000ffe1000000f2d100040

Board Insertion: 10/17/2007 12:14:09         Board Boot: 10/16/2007 12:24:36

ILMI Board sysUpTime: 0x0093b930          ILMI Network sysUpTime: 0x0dc67fca

 UNI State: up: Last Down:                    Last Up: 10/16/2007 12:25:15
ILMI State: up: Last Down:                    Last Up: 10/16/2007 12:25:08
```

The following example shows the output from **status atm board** ***4c04*** with Personality ATM-TRK.

```
 status atm board 02A01

                             ATM BOARD

      Location:  02A01                      Personality: ATM-TRK




Board Insertion: 10/17/2007 12:14:09         Board Boot: 10/16/2007 12:24:36
```

status atm board field descriptions

status atm board field descriptions *1 of 2*

Field	Description
Location	physical port location of the ATM circuit pack
Personality	ATM-EI, ATM-TRK
Network Address	Network address obtained from the ATM circuit pack
	1 of 2

status atm board field descriptions *2 of 2*

Field	Description
Admined Address	administered network address
Match	compares the administered address with the network address
Board Insertion	month, day, year, hour, minute, and second of last board insertion
Board Boot	month, day, year, hour, minute, second of when the board last booted
ILMI Board sysUpTime	ILMI board up time in 1/100 seconds
ILMI Network sysUpTime	ILMI network up time in 1/100 seconds
UNI State, Last Down, Last Up	UNI state, and the last time the link went down and/or came up.
ILMI State, Last Down, Last Up	ILMI state, and the last time the link went down and/or came up.
	2 of 2

atm pnc

S8700 series

See:
add atm pnc on page 72
change atm pnc on page 74
display atm pnc on page 74
list atm pnc on page 76

add atm pnc

`add atm pnc` *`n`* `[next]`

Use **add atm pnc *n*** to add a new ATM PNC to an **S8700 MC**.

Action/Object	Qualifier	Qualifier Description	Login	Default
add atm pnc	***n*** **next**	The number to assign to the ATM PNC Next available number Examples: **add atm pnc 23** **add atm pnc next**	init inads craft	

The following example shows the output for **add atm pnc next** on an **S8700 MC**.

```
add atm pnc next                                          Page   1 of   1
                                   ATM PNC
                              Connection Number: 17
      Location:
          Name:
Address Format: E.164 ATM Private
           AFI: 39
         E.164:
        HO-DSP:
           ESI:
           SEL:
```

add atm pnc field descriptions

add atm pnc field descriptions

Field	Description
Location	Physical location: cabinet, carrier, slot (2a15)
Name	16-character alpha-numeric characters for identification
Address Format	**DCC ATM**, **E.164 ATM Private**, **ICD ATM**
E.164	Up to 15 decimal digits
HO-DSP	Switch network prefix, part of the address of the PNC that interfaces with an ATM switch
ESI	End system identifier, part of the address of the PNC that interfaces with an ATM switch
SEL	Selector, part of the address of the PNC that interfaces with an ATM switch

change atm pnc

`change atm pnc n`

Use **`change atm pnc`** to change the name of the ATM switch on **S8700 MC**.

Action/Object	Qualifier	Qualifier Description	Login	Default
`change atm pnc`	***n***	Number assigned to the ATM PNC Example: **`change atm pnc 23`**		

See add atm pnc on page 72 for example screen and field descriptions.

display atm pnc

`display atm pnc n [schedule]`

Use **`display atm pnc`** to see specific ATM PNC data for configurations that have an ATM PNC. If the **Async Transfer Mode (ATM) PNC** field on the **`display system-parameters customer-options`** screen is **n**, **`display atm pnc`** produces the error message **"atm" is an invalid entry**.

Action/Object	Qualifier	Qualifier Description	Login	Default
`display atm pnc`	***n*** **`schedule`**	The administered number of the ATM PNC. See Common Input Parameters on page 25.	init inads craft	

The following example shows the output for **`display atm pnc 2`** for **S8700 MC**.

```
 display atm pnc 2
                                    ATM PNC
                             Connection Number: 2
      Location: 01D01
          Name: dup atm pnc

Address Format: ICD ATM

           AFI: 47
           ICD: 0005
        HO-DSP: 80FFE1000000F21C31D4
           ESI: 000000010D01
           SEL: 00
```

display atm pnc field descriptions

S8700 MC

Each PNC that interfaces with an ATM switch has a unique 40-digit ATM address. The address is made up of a switch network prefix (AFI through HO-DSP), an end system identifier (ESI) and a selector (SEL).

display atm pnc field descriptions

Field	Description
Connection Number	Administered number of the ATM PNC.
Location	Cabinet, carrier, slot location of the ATM circuit pack.
Name	Unique name for the PNC.
Address Format	Indicates the format of the PNC's ATM address. Valid values are: • **DCC ATM** (Data Country Code) • **ICD ATM** (International Code Designator) • **E.164 ATM private**.
AFI	Address Format Identifier. Valid values are: • 39 for DCC • 47 for ICD • 45 for E.164.
DCC ICD E.164	Data Country Code, International Code Designator, or ISDN E.164 address depending on the address format.
HO-DSP	High-Order Domain Specific Part.
ESI	End System Identifier uniquely identifies a PNC connected through an ATM switch. The ESI is the Media Access Control (MAC) address programmed into the TN2305X/TN2306X ATM interface circuit packs. The MAC address is located on the MAC address button on the circuit pack.
SEL	Selector byte is always 0.

list atm pnc

`list atm pnc [schedule]`

Use **`list atm pnc`** to list the administered ATM PNC equipment in the system.

Action/Object	Qualifier	Qualifier Description	Login	Default
`list atm pnc`	**`schedule`**	See Common Input Parameters on page 25.	init inads craft	

The following example shows the output for **`list atm pnc`**.

```
list atm pnc                                                        Page   1
                                    ATM PNC
PNC                     A-PNC                       B-PNC
Connection #            LOC                         LOC

 1                      01C01
 2                      01D01
 3                      02A01
 4                      02E01
 5                      03A01
 6                      03E01
 7                      04A01
 8                      04E01
 9                      05A01
 10                     05E01
 11                     06A01
 12                     06E01
 13                     07A01
 14                     07E01

  press CANCEL to quit --  press NEXT PAGE to continue
```

audio-group

See:
list audio-group
list usage audio-group

list audio-group

`list audio-group { [1-Max] ( number n | (to-number n) | count n)} [schedule]`

Use **`list audio-group`** to list all audio groups and see how many members (audio sources) are in each group.

For more information on the Audio Groups screen, see *Administering Avaya Aura™ Communication Manager (03-300509)*.

Action/Object	Qualifier	Qualifier Description
`list audio-group`	**`1-Max`**	audio group number to list
	`number n` **`to-number n`**	range of audio group numbers to list
	`count n`	number of audio groups to see on the page
	`schedule`	See Common Input Parameters on page 25.

The following is an example of **`list audio-group`**.

```
list audio-group                                                Page 1
                           AUDIO GROUPS

Group            Name                      Number or Sources
  1              Relaxation Music                   2
 12              Forgive the wait                  20
 23              Best deals for today              30

At End of Member List
```

list audio-group field descriptions

list audio-group field descriptions

Field	Description
Group	Number of the Audio Group
Name	Name of the Audio Group
Number of Sources	Number of members (audio group sources) in the audio group

list usage audio-group

`list usage audio-group` *`n`* `[schedule]`

Use **`list usage audio-group`** to see all extensions that refer to the specified audio group.

For more information on the Announcements/Audio Sources screen, see *Administering Avaya Aura™ Communication Manager (03-300509)*.

Action/Object	Qualifier	Qualifier Description
`list usage audio-group`	***`n`*** **`schedule`**	audio group number See Common Input Parameters on page 25.

The following is an example of **`list usage audio-group`**.

```
list usage audio-group                                                Page 1
                          ANNOUNCEMENTS\AUDIO SOURCES
Ann.                                                                Group/
 No  Ext.   Type      COR TN Name                       O Olen Pr Rt Port
 2 45525____integrated  1_ 1_ PresidentzWelcome _____ _ ___ ___ __ G3
```

audits

See:
clear audits on page 79
status audits on page 79

clear audits

Use **clear audits** to clear cumulative and/or peak hour's data collected for each data relation audit. **Clear audits** clears old data to display data collected since the last **clear audits** when **status audits** is run. See status bri-port on page 102.

Action/ Object	Qualifier	Qualifier Description	Login	Feature Interaction
clear audits	***cumulative*** **peak-hour**	Clears data collected about the peak hour since the last reboot or **clear audits cumulative** Clears peak hour data Examples: **clear audits cumulative** **clear audits peak-hour**	init inads	See Feature interactions for clear audits

Feature interactions for clear audits

Status audits displays data cleared by **clear audits**. After **clear audits** executes successfully, **display audits cumulative** and/or **display audits peak-hour** display information collected since the last **clear audits**. The start date displays on the **status audits** screen reflecting the time that **clear audits** executed.

status audits

Use **status audits** to see the results of Data Relation Audits that are built into the switch. Data Relation Audits check for inconsistencies between selected data items in the switch, and report inconsistencies. Data Relation Audits are useful during development and testing phases of projects to uncover software errors. In the field they help the switch to recover from data corruption before service is interrupted.

Status audits displays the date and time that the requested interval begins, the number of times that the full sequence of audits executes (audit cycles), and status information about each audit that detected a problem or aborted during the interval. The status information contains:

- The name of the audit

- The number of times that an audit ran and corrected an error
- The number of times that an audit ran and detected an irreparable error
- The number of times that an audit ran and aborted
- The date and time that the audit first detected a problem (only for cumulative)
- The time of the most recent error detected by the audit (only for cumulative)

Audit data information cumulates from the last reboot or the last **clear audits cumulative** command, and for peak hours since the last reboot or the last **clear audits peak-hour** or **clear audits cumulative**.

Note:

Single process restarts, warm starts, cold 2 restarts, cold 1 restarts, or processor interchanges do not clear this data.

Audits can execute directly using **test MO**. For example, **test MO l 8192 p 512 t 0** executes the Station Connections Audits, audit names and numbers (names) included in Table 11: Time-available Maintenance Audits on page 83. When the “test MO” command executes an audit, report results display on the screen. In general, errors discovered from a demand tests are not logged in the error logs. To be consistent with other error logging, and to avoid confusion, errors that are discovered from a demand test that executes an audit are not displayed.

The screen does not automatically update, but reflects the system at the time of the request.

Action/ Object	Qualifier	Qualifier Description	Login	Feature Interaction
status audits	**peak-hour** **cumulative**	data collected since the last reboot or since the last execution of **clear audits cumulative**. Data for the peak hour since the last reboot or since the last execution of the **clear audits cumulative** or **clear audits peak-hour**.	init inads	see Feature interactions for status audits on page 83

The following example shows the output from **`status audits`**.

```
 status audits cumulative

                          AUDIT STATUS INFORMATION

Start Date: 13:00 THU NOV 1 2007 # of Audit Cycles Completed: 67532

Audit      # Cycles    # Cycles Could    # Cycles       First      Most Recent
Name       Fixed Data   Not Fix Data   Audit Aborted    Error         Error

CR-AUDIT      135           0               0       11/02/10:12  11/02/19:17
HU-CALLS       2            0               0       11/02/10:12  11/02/10:20
SE-CALLS       1            0               1       11/02/10:13  11/02/19:14
TTR-SID        1            0               0       11/02/02:17  11/02/02:17
CO-CALLS       1            0               0       11/02/02:16  11/02/02:16
DE-CALLS       1            0               0       11/02/10:12  11/02/10:12
TR-QUE         1            0               0       11/02/13:05  11/02/13:05
CTRK           0            1               0       11/01/10:12  11/02/10:12
AT-ADM         1            0               0       11/01/10:12  11/02/10:12
PC-ADM         1            0               0       11/01/15:05  11/02/15:05
PRI
```

```
status audits peak-hour

                          AUDIT STATUS INFORMATION

 Start Date: 10:00 THU NOV 01 2007    # of Audit Cycles Completed:  25

 Audit        # Cycles    # Cycles Could      # Cycles
 Name        Fixed Data    Not Fix Data     Audit Aborted
 HTLK             0             25                0
 HU-CALLS         2              0                0
 CR-AUDIT         1              0                0
 DE-CALLS         1              0                0
 CTRK             0              1                0
 AT-ADM           1              0                0
 CO-ADM           1              0                0
 SE-CALLS         0              0                1
 PRI-USR (SCH)    1             0                 0
```

Audit information displays with one line of data displayed audit that has detected an error or aborted. Audits that did not detect any errors or aborted do not display. The output sorts in descending order, based on the sum of the values in the **# Cycles Fixed Data**, **# Cycles Could Not Fix Data**, and **# Cycles Audit Aborted** fields.

status audits field descriptions

status audits field descriptions

Field	Description
Start Date	Date and time that interval begins. **cumulative** = date and time of the last reboot or of **`clear audits cumulative`** **peak-hour** = date and time of the beginning of the peak hour since the last reboot or of **`clear audits cumulative`** or of **`clear audits peak-hour`**
# of Audit Cycles Completed	Number of audit cycles completed in the specified interval (0 – 999999). Asterisks indicate numbers that exceed 999999. The switch executes audits in a set order. After all audits execute, the switch restarts the sequence. Individual audit values can be larger than the values described below (if the switch is partially through another audit cycle). Audit Cycles numbers do not apply to these audits that execute as part of scheduled maintenance.
Audit Name	Audit's name that detected an error or aborted. A few audits do not run in the normal audit sequence. Instead, they execute as part of scheduled maintenance and are marked with "(SCH)" following the audit name.
# Cycles Fixed Data	Number of times that the audit ran, in the specified interval, and found a fixable problem. (0–65534) Asterisks are used form numbers that exceed 65534.
# Cycles Could Not Fix Data	Number of times that the audit ran, in the specified interval, and found an problem that could not be fixed. The audited switch data is inconsistent when this happens. (0–65534) Asterisks are used for numbers that exceed 65534.
# Cycles Audit Aborted	Number of times that the audit ran, in the specified interval, and aborted due to an internal error. (0–65534) Asterisks are for numbers that exceed 65534.
First Error	Date and time that the audit first detected fixed data, could not fix data or audit aborted problems since the last **`clear audits cumulative`** command. Example: 03/27/14:31 for 2:31 pm, March 27th. Appears with **`status audits cumulative`**.
Most Recent Error	Date and time that the audit last detected fixed data, could not fix data or audit aborted problems since the last "clear audits cumulative" command. Example: 03/27/14:31 for 2:31 pm, March 27th. Appears with **`status audits cumulative`**.

Feature interactions for status audits

- **`clear audits`** affects the data from **`status audits cumulative`** and **`status audits peak-hour`**
- **`clear audits cumulative`** clears data collected to date, resets the start time kept for that data, and clears peak hour data
- clear **`audits peak-hour`** clears data kept for the peak hour so that a new peak hour can be established

Table of audits

Table 11: Time-available Maintenance Audits on page 83 shows the names of the audits that are run as part of time available maintenance, the audit number (pname) and a short description of each audit. These audits execute using lname MO_DR_AUDIT (8192). These audits may execute using the **`test mo`** command with lname 8192, pname “audit number,” and test number 0 (for example, **`test mo l 8192 p 607 t 0`** executes the AC state audit).

Table 11: Time-available Maintenance Audits ***1 of 6***

Audit name	Audit number	Description
AAP-MSG	585	aap message buffer audit
AC-ISG	607	AC state audit
ADJUSR	595	Adjunct user record audit
ADMTRM	559	Administration terminal audit
ANUR-A	589	Announcement user record audit
AN-ADM	574	Announcement group administration audit
AN-CALLS	572	Announcement group calls audit
AN-QUE	577	Announcement group queue audit
AQSA	545	ACB queue slot allocation audit
ASLINK	606	ASAI link status audit
ASYLED	605	ASAI yellow LED audit
ATACT	558	Attendant active audit
ATAV	557	Attendant availability audit
AT-ADM	529	Attendant group administration audit
		1 of 6

Table 11: Time-available Maintenance Audits ***2 of 6***

Audit name	Audit number	Description
AT-CALLS	515	Attendant group calls audit
AT-QUE	523	Attendant group queue audit
ATSC-AUD	561	ISDN-PRI TSC UUI Buffer Audit
AUR-A	540	Attendant user record audit
AU-CIDP	596	Announcement user cid/port audit
BR-CALLS	629	Bridged extensions audit
BRDG-LK	625	bridging button lock audit
BUTLK	560	Button lock audit
CALK	569	Coverage answer member lock audit
CATT	527	Attendant connections audit
CD-PN-TAB	622	CD_Pn_tab Audit
CDM	528	Data module connections audit
CLDIR	631	Clear Directory DEMAND-ONLY audit
CNF-A	637	conference record audit
CO-ADM	530	Coverage group administration audit
CO-CALLS	516	Coverage group calls audit
CR-AUDIT	513	Call processing data audit
CSR-A	544	Connection service record audit
CSTAT	512	Station connections audit
CTRK	526	Trunk connections audit
DA-CALLS	583	DAP call record audit
DA-CR	628	dap call records audit
DA-MSG	584	DAP message buffer audit
DE-ADM	531	Data extension group administration audit
DE-CALLS	517	Data extension group calls audit
		2 of 6

Table 11: Time-available Maintenance Audits ***3 of 6***

Audit name	Audit number	Description
DIR	630	integrated directory audit
DMLK	563	Data module lock audit
DMTM-A	640	multimedia data index audit
DUR-A	543	Data user record audit
DXLK	567	Data extension member lock audit
EAL-VCTOKEN	644	EAL SVC Objects audit
EI-TAB	620	Expansion Interface Table Audit
EMMC-LL	657	EMMC: EMMC_T linked list audit
FHT	554	Facility status hundreds table audit
FSM-TIMER	632	fsm (fac_st) timer audit
FTED	553	Facility status tracked user audit
FTING	552	Facility tracking user audit
FTSRA	593	Fiber time-slot record allocation audit
GIP-TIMER	611	GIP Timer Audit
H248TERM-DR	659	H248 term data relation audit
HTLK	568	Hunt member lock audit
HU-ADM	532	Hunt group administration audit
HU-CALLS	518	Hunt group calls audit
HU-QUE	524	Hunt group queue audit
IAP-CALLS	590	IAP call record audit
IAP-URB	591	IAP user record audit
IGAR	654	IGAR: UM<->CM data relations audit
IM-HMM	579	HMM image table audit
INST-LNK	604	Instigator/down-link user link audit
IP-EPT-TAB	651	IP EPT table audit
		3 of 6

Table 11: Time-available Maintenance Audits ***4 of 6***

Audit name	Audit number	Description
IPBW-AUD	653	IP bandwidth audit for CAC
IPSI-HMM	650	IPSI clock/pktint audit
ISGR-A	594	ISG call record audit
LIP-TIMER	626	LIP Timer Audit
LOG-A	570	MDM error/alarm log audit
MAP-HMM	580	HMM map status table audit
MIS-FAC	587	MIS facility state audit
MM-A	636	meet-me user CID audit
MMIP-EPT-TAB	655	MM IP EPT table audit
MP-ADM	575	Modem pool group administration audit
MP-CALLS	573	Modem pool group calls audit
MP-CHL-TAB	661	Medpro channel table audit
MSAP-MSG	600	msap message buffer audit
MSAP-PCALLS	623	masi path call record audit
MSAP-REC	601	msap local record audits
MSGQ-HMM	582	HMM map request queue audit
MS-CALLS	588	MISAP call record audit
MTM-A	638	multimedia complex audit
MTMU-A	641	multi media user CID audit
MUSIC-AUD	634	Multiple Music audit
MUV	555	Message user verification audit
MWIA	550	Message waiting indicator audit
MWL-NOAP	599	Message waiting lamp no AP audit
NR-IGAR	656	IGAR: CM net region audit
PA-ADM	533	Paging group administration audit
		4 of 6

Table 11: Time-available Maintenance Audits ***5 of 6***

Audit name	Audit number	Description
PA-CALLS	519	Paging group calls audit
PCLK	566	PCOL member lock audit
PC-ADM	535	Personal CO line group administration audit
PC-CALLS	521	Personal CO line group calls audit
PE-CALLS	608	PRI Endpoint calls audit
PINC-TAB	614	Packet Inter-Port Network Connection Sub-Table audit
PI-ADM	534	Pickup group administration audit
PK-ALERT	586	pickup alert audit
PKT-VCTOKEN	643	Packet SVC Objects audit
PLIP-LNK	602	LIP link audit
PN-HMM	578	HMM pname table audit
PRI-CR	598	PRI call record audit
PRI-TBUF	592	TSCUUI buffer audit
PUR-A	541	Phantom user record audit
SBS-MTM-A	652	SBS trk MTM index Audit
SDSBUF	581	Service dispatcher stim buffer audit
SDSID	571	Service dispatcher SID audit
SE-ADM	538	Terminating extension group administration audit
SE-CALLS	537	Terminating extension group calls audit
SMTM-A	639	multimedia station index audit
STNLK	562	Station lock audit
SUR-A	539	Station user record audit
S-INC-TAB	613	Service Inter-Port Network Connection Sub-Table audit
S-LD-TAB	635	Service port listen disconnect subtable audit
S-PT-TAB	612	Service-Port Connection Sub-Table audit
		5 of 6

Table 11: Time-available Maintenance Audits ***6 of 6***

Audit name	Audit number	Description
S-TAB	619	Service Table Audit
TDM-VCTOKEN	642	TDM SVC Objects audit
TEGLK	565	TEG member lock audit
TKLK	564	Trunk lock audit
TONE-TS	610	Tone Time Slot Sub-table Audit
TR-ADM	536	Trunk group administration audit
TR-CALLS	522	Trunk group calls audit
TR-QUE	525	Trunk group queue audit
TR-SID	514	Touch tone receiver audit
TR-TAB	621	Touch Tone Receiver Table Audit
TSC-PRI	520	ISDN-PRI TSC resource audit
TSRA	547	Time slot record allocation audit
T-TS-TAB	615	Tone Time Slot Connection Sub-Table Audit
TTI-AWOH	616	TTI/AWOH Audit
UGMA	551	User group membership audit
UPUSR-LNK	603	Up-link user link record audit
URMB	548	User record maintenance busy audit
VDNMM-CALLS	658	VDN MM EMMC: Call Audit
VDN-AUD	633	VDN Call Count Audit
XMOBILE-UPGRADE	649	XMOBILE type upgrade audit
MGMC-AUD	542	MGMC Message table audit
		6 of 6

Table 12: Scheduled Maintenance Audits on page 89 shows the names of audits that run as part of scheduled maintenance, the audit number (pname) and a short description of each audit. These audits execute using lname MO_SCH_AUDIT (8193). These audits may execute using the **`test MO`** command with lname 8193, pname "audit number," and test number 0. For example, **`test MO l 8193 p 556 t 0`** executes the Message Waiting Lamp Audit audit.

Table 12: Scheduled Maintenance Audits

Audit name	Audit number	Description
BRG-REC	647	bridge record audit
BUTC	609	Button memory compaction audit
LABEL-AUD	660	Custom button label audit
MWL	556	Message Waiting Lamp Audit
NUMBER-MAPPING	648	XMOBILE mapping tables audit
PRI-USR	597	PRI user record audit
SSUR-FREE	662	Shared station user record free list audit
SUR-FREE	624	Station User Record Free List Audit
MWL-NOAP	599	MSG Message Waiting Lamp Audit

bcms

See:
monitor bcms on page 89

`list bcms`: see *Avaya Communication Manager Call Center Software Basic Call Management System (BCMS) Operations (07-300061)* for more information on BCMS commands and reports.

monitor bcms

`monitor bcms split` ***`split#`*** **`| system`** ***`split#`*** **`| skill`** ***`skill#`*** **`| vdn`** ***`vdn#`***

Use **`monitor bcms`** to see a summary of Basic Call Management System (BCMS) conditions for agents and splits. The on-line status report is automatically updated every 30 seconds or on demand by pressing **UPDATE**. Press **CANCEL** and terminate the login to cancel **`monitor bcms`**.

Action/ Object	Qualifier	Qualifier Description
monitor bcms	**split *split#***	status of 1 split and the *number* of the split (ACD hunt group number).
	system *system#*	status of the split queue and cumulative split information for every split measured by BCMS, and the *numbers* of the split (ACD hunt group numbers) separated by spaces and/or split number ranges separated by a hyphen (-).
	skill *skill#*	status of 1 particular skill group and the *number* of the group.
	vdn	vector directory number Examples: **monitor bcms system** **mon bcms spl 1**

The following is an example of **monitor bcms system**.

```
 monitor bcms system                                    Page   1 of   1
                              BCMS SYSTEM STATUS

                                                 Date:   14:02 THU OCT 18 2007
                          AVG                    AVG          AVG  AVG     %IN
            CALLS OLDEST SPEED AVAIL  ABAND ABAND  ACD   TALK AFTER   SERV
SPLIT NAME  WAIT  CALL   ANS   AGENT  CALLS TIME   CALLS TIME CALL    LEVL

 Service    3    1:03    :45     0      3    :30   20    2:30 1:25
 Sales      5     :33    :15     0     11    :45   36    1:32  :35
```

monitor bcms system field descriptions

monitor bcms system field descriptions *1 of 2*

Field	Description
Date	The current date and time. Updated every 30 seconds or when UPDATE is pressed.
SPLIT	The name of the split being reported. If no name is administered, the split extension appears as “EXTxxxxx”. Splits appear in split number order.
CALLS WAIT	The number of calls currently waiting in this split’s queue. Direct Agent Calls are preceded by an asterisk. This field is real-time status data.
	1 of 2

monitor bcms system field descriptions ***2 of 2***

Field	Description
OLDEST CALL	The amount of time that the oldest call has waited in queue. Real-time status data.
AVG SPEED ANS	The average time required for an answer in this split during the current period, including time in queue and time ringing at the agent's voice terminal. Intraflow calls (those that overflow from one ACD split to another split) will not have queue time from previous splits included in the average. The calculation is Total Answer Time/Total Automatic Call Distribution (ACD) Calls. This is measurement data and includes only completed calls.
AVAIL AGENT	The number of agents in this split currently available to receive an Automatic Call Distribution (ACD) call from this split. Real-time status data.
ABAND CALLS	The number of calls abandoned during the current period. This is measurement data.
AVG ABAND TIME	The average time abandoned calls waited in queue before abandoning during the current period. The calculation is Total Abandon Time/Total Calls Abandoned. This is measurement data and includes only completed calls.
ACD CALLS	The number of Automatic Call Distribution (ACD) calls handled by this split during the current period. This includes calls that intraflow into the split. This is measurement data.
AVG TALK TIME	The average talk time for Automatic Call Distribution (ACD) calls handled by this split during the current period. This does not include ring time at the agents' voice terminal. The calculation is Total ACD Talk Time/Number of ACD Calls. This is measurement data and includes only completed calls.
AVG AFTER CALL	The average After Call Work (ACW) time for Automatic Call Distribution (ACD) calls handled by this split during the current period. ACD calls with no ACW time are included in the average. Time spent on direct incoming or outgoing calls while in ACW are not included in the average. The calculation is (Total ACW Time - Total ACW Incoming Time - Total ACW Outgoing Time)/Total ACD Calls. This is measurement data and includes only completed calls.
% IN SERV LEVL	Percent in Service Level for a particular skill. It is the percentage of calls that were offered to the skill that were answered within the administered Service Level time according to the service agreement (for example, 80% of the calls within 20 seconds. If all calls were answered in that time, the value for the IN SERV LEVL would be 100%). The administered service level is defined on the hunt group form.
	2 of 2

The following is an example of **monitor bcms split 1**.

```
 monitor bcms split 1                              Page   1 of   1
                      BCMS SPLIT (AGENT) STATUS

        Split:  1
   Split Name:  hunt group 1                Date:   9:02 TUE OCT 23 2007
Calls Waiting:    0
  Oldest Call:  0:00

0=Staffed   0=Avail  0=ACD   0=ACW   0=AUX   0=Extn       0=OtherSplit

AGENT          EXT      STATE      TIME       ACD     EXTN IN  EXTN OUT
                                               CALLS     CALLS     CALLS
```

monitor bcms split field descriptions

monitor bcms split field descriptions *1 of 2*

Field	Description
Split	The number of the split requested. This is translation data.
Split Name	The name of the split requested. If no name exists, “EXT xxxxx” appears.
Date	The current date and time, updated every 30 seconds or when the UPDATE key is pressed.
Calls Waiting	The number of calls currently waiting in this split’s queue. Direct Agent Calls are preceded by an asterisk. This is real-time status data.
Oldest Call	The time in minutes:seconds that the current oldest call has waited in this split’s queue. This is real-time status data.
Staffed	The number of agents currently logged into this split. This is real-time status data.
Avail	The number of agents currently available to receive an Automatic Call Distribution (ACD) call in this split. Agents are in the Auto-in or Manual-in work modes and are not currently on a call. If the agent is on another split’s call or in After Call Work (ACW) for another split, this agent is not considered available and will not be recorded here. This is real-time status data.
ACD	The number of agents in this split currently on an Automatic Call Distribution (ACD) call for this split. This includes ACD calls handled by this split that arrive as coverage from another split. This also includes outbound calls (Outgoing Call Manager) distributed through the ACD. If an agent puts an ACD call on hold, but does not enter another state (for example, the agent does not enter the AVAIL state), the agent is still seen as in the ACD state. This is real-time status data.
	1 of 2

monitor bcms split field descriptions *2 of 2*

Field	Description
ACW	The number of agents in this split currently in After Call Work (ACW) split. This is real-time status data.
AUX	The number of agents in this split currently in AUX work for this split. If an agent is on another split's call or in After Call Work (ACW) for another split, this agent is not considered in AUX work and is not recorded here. This is real-time status data.
Extn	The number of agents in this split currently on non-ACD (Automatic Call Distribution) calls, incoming or outgoing directly to/from their extensions. If the agents are also in After Call Work (ACW) or AUX they are recorded as Extn rather than ACW or AUX. This is real-time status data.
OtherSplit	The number of agents in this split on another split's call or in After Call Work (ACW) for another split. Used if agents belong to multiple splits. This is real-time status data.
AGENT	The name of the agent associated with the extension. If no name exists this field is blank.
EXT	The agent's extension. This field is translation data.
STATE	The current state of the agent for this split. Possible states are Avail, ACD, ACW, AUX, Extn In, Extn Out, OtherSplit, and Unstaff. This is real-time status data.
TIME	The clock time at which the agent entered the current state. This is real-time status data.
ACD CALLS	The number of Automatic Call Distribution (ACD) calls (inbound and outbound), that the agent has completed for this split during the current period (half hour or hour). If the maximum number of 255 calls exceeded, 255 appears. This is measurement data.
EXTN IN CALLS	The number of non-ACD incoming calls that the agent has received and completed during the current period, maximum 255. This is measurement data.
EXTN OUT CALLS	The number of outgoing non-ACD (Automatic Call Distribution) calls that the agent has completed during the current period, maximum 255. This is measurement data.
	2 of 2

The following is an example of **monitor bcms vdn**.

```
 monitor bcms vdn 12345-12349

BCMS VECTOR DIRECTORY NUMBER STATUS
                                                Date: 15:30 Mon Sep 24, 2007

                                AVG          AVG    AVG                CALLS % IN
            CALLS OLDEST ACD    SPEED  ABAND ABAND  TALK/ CONN   FLOW  BUSY/ SERV
 VDN NAME   WAIT  CALL   CALLS ANS    CALLS TIME   HOLD  CALLS  OUT   DISC  LEVL

 knives        5    :25    50   :39      5   :45   2:30     0     0     24   91
 EXT 12346*    0    :00     0   :00      0   :00    :00     0     0      0    0
```

monitor bcms vdn field descriptions

monitor bcms vdn field descriptions ***1 of 2***

Field	Description
Date	The current date and time (updated every 30 seconds or when **Update** is pressed).
VDN NAME	The name of the VDN being reported. If the VDN does not have a name administered, this field displays `EXT ##` where `##` is the VDN extension.
CALLS WAIT	The number of calls that encountered this VDN and have not been answered, abandoned, outflowed, or forced busy/disc. Includes calls in queues, in vector processing, and ringing at an agent telephone.
OLDEST CALL	The time the oldest call currently waiting has waited in the VDN. Timing starts when the call enters the VDN.
ACD CALLS	The number of completed ACD calls answered in a BCMS-measured split. The split may have been reached via the queue-to-main, check backup, route-to, messaging split, or adjunct routing commands. Includes Direct Agent calls (EAS only).
AVG SPEED ANS	The average speed of answer for ACD and connect calls (see CONN CALLS below) that have completed for this VDN during the current period. This includes the time in vector processing, in a split queue, and time ringing. The calculation is: $\frac{\text{Total Answer Time}}{\text{Total ACD Calls + Total CONNect CALLS}}$ Answer time for a call is recorded when the call ends. For example, if a call originates in interval x, is answered in interval y, and ends in interval z, the associated answer and talk times are recorded in interval z.
	1 of 2

monitor bcms vdn field descriptions ***2 of 2***

Field	Description
ABAND CALLS	The number of calls to this VDN that have abandoned before being answered during the current period. This includes VDN calls that were routed to an attendant, telephone, or announcement, and abandoned before being answered.
AVG ABAND TIME	The average time abandoned calls waited before abandoning during the current period. The calculation is: $\frac{\text{Total Abandon Time}}{\text{Total Calls Abandoned}}$
AVG TALK/ HOLD	The average talk time for ACD calls completed by this VDN during the current period. This does not include ring time, but it does include any time the caller spent on Hold. The calculation is: $\frac{\text{Total Talk Time}}{\text{ACD Calls}}$
CONN CALLS	The number of completed calls that were routed to a telephone, attendant, announcement, messaging split, or call pickup and were answered there.
FLOW OUT	The number of calls that were routed to another VDN or to a trunk, including successful look-ahead attempts.
CALLS BUSY/DISC	The number of calls that were forced busy or forced disconnect during the current interval. This value includes: Calls that encountered a busy or disconnect vector step Calls disconnected by a stop vector step Calls forwarded to a split with a full queue Calls forwarded to a split with no available agents and no queue This value does not include abandoned calls.
% IN SERV LEVL	The percent of calls offered that completed and were answered within the acceptable service level defined on the VDN screen. The calculation is: $\frac{\text{accepted} * 100}{\text{calls offered}}$ *calls offered* is defined as: acdcalls + flowout calls + abandoned + connect + busy/disc *accepted* is the number of ACD and CONNect calls that were answered within the administered service level. This field is blank if no calls were recorded for this time interval. This field is also blank if no Acceptable Service Level has been administered on the VDN screen.
	2 of 2

board

See:
busyout board on page 96
release board on page 96
reset board on page 97
test board on page 97

busyout board

`busyout board` ***`location`***

Use **`busyout board`** to busyout all the ports associated with the specified access endpoint. In a port network with duplicated TN2602AP circuit packs, only the standby circuit pack can be busied out.

Action/Object	Qualifier	Qualifier Description	Login
`busyout board`	***`location`***	board address (PCSSPP) Example: **`busyout board 01c11`**	init inads craft

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

release board

`release board` ***`location`***

Use **`release board`** to activate administered maintenance objects on the circuit pack at specified locations.

Action/Object	Qualifier	Qualifier Description	Login
`release board`	***`location`***	Board location: ***`PCSS`***	init inads craft nms

For **`release board 1c07`**, the port field shows the port address of the released maintenance object.

For more information, see Common Command Output Screens on page 28 and Busyout and Release Commands on page 33.

reset board

reset board *location* [repeat *repeat#*]

CAUTION:

Note that **reset board** can be service disrupting and may cause extraneous alarms. Effects of a reset vary depending upon the type of object being reset and upon whether the component is duplicated. See the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)* on the relevant maintenance object for details.

Use **reset board** on a specified port circuit pack or media module to perform a software reset of every administered port on the circuit pack. Every port must be busied out before the port board is reset.

In critical-reliability systems (duplicated PNC), reset of an Expansion Interface, Switch Node Interface, Switch Node Clock, or DS1 Converter circuit pack on the active PNC is not permitted. Busyout the standby components before entering the reset.

For more information, see Common Input Parameters on page 25 and Common Command Output Screens on page 28.

Action/Object	Qualifier	Qualifier Description	Login	Default
reset board	*location* *repeat#*	Reset every administered port on the circuit pack.		1 1

test board

test board *location* [short | long] [repeat *repeat#* | clear] [schedule]

Use **test board** to perform a set of hardware diagnostic tests on a specified circuit pack. The system first validates that the board exists at the specified location. Then, based on the logical type of board (for example, Analog, Digital, Hybrid), a series of tests performs diagnostics on the board and then returns results of the tests along with any possible error codes.

Some of the tests can be disabled by administration.

Destructive long tests on a Switch Node Interface (SNI) board are not allowed unless the board has been busied out.

Action/Object	Qualifier	Qualifier Description	Login	Default
test board	***location*** **short** **long** **repeat *n*** **clear**	Physical location of the board ***PCSS*** See Common Input Parameters on page 25. Examples: **test board 01a01** **test board 01a02** **test board 01a03** **test board 01a05** **test board 01a10**	init inads craft nms	short 1

For more information, see Common Command Output Screens on page 28.

boot-image

See:
get boot-image on page 98
set boot-image on page 100

get boot-image

get boot-image location

Use **get boot-image** to view the two firmware image parameters on the TN2501AP circuit pack.

Action/Object	Qualifier	Qualifier Description	Login
get boot-image	***location***	The physical location of the circuit pack (cabinet, carrier, slot).	init inads craft cust

This is an example of **`get boot-image`**.

```
get boot-image 1C07
                            DISPLAY FIRMWARE IMAGE(S)

               Image 1        Image 2

  Board Type:  TN2501         TN2501
  FW Vintage:  02             02
HW Signature:  02             02
      Suffix:  A              A
        Date:  03/02/02       03/02/01
   Timestamp:  10:30:50       12:42:18
CRC Checksum:  Good           Good
Active Image:  Yes            No
Reboot Image:  Yes            No
```

get boot-image field descriptions

get boot-image field descriptions

Field	Description
Board Type	For VAL, this field is TN2501.
FW Vintage	The firmware vintage number
HW Signature	The hardware signature number
Suffix	The circuit pack suffix code letter
Date	The date the firmware file was created or transferred to the circuit pack
Timestamp	The time that the firmware file was created or transferred to the circuit pack
CRC Checksum	Cyclic Redundancy Check (data integrity algorithm)
Active Image	**y** indicates the active firmware image file. **n** indicates the inactive firmware image file. To change the active image file, use set boot-image on page 100.
Reboot Image	**y** indicates that this image becomes active after a system reset. **n** indicates that this image becomes inactive after a system reset.

set boot-image

`set boot-image [board location] image 1 | 2`

Use **`set boot-image`** to direct the system to use 1 of 2 possible firmware image files on the TN2501AP circuit pack.

Note:

After you enter **`set boot-image`**, reseat the circuit pack to activate the firmware image.

Action/Object	Qualifier	Qualifier Description	Login
`set boot-image`	**`board`** ***`location`*** **`1`** **`2`**	The physical location of the circuit pack use the Image 1 firmware file use the Image 1 firmware file	init inads craft cust
		Example: **`set boot-image board 1B08 image 1`**	

bp

See:
change bp on page 100
display bp on page 102

change bp

The Avaya INIT login controsl business partner access via the **`change bp`** command.

Action/Object	Qualifier	Qualifier Description	Login
`change bp`			init

The following is an example of the **change bp** screen:

```
change bp
                              BUSINESS PARTNER ACCESS



                 Enable Use of dadmin login: y       PIN is set

                 Enable Use of craft2 login: y       PIN is unset
```

change bp field descriptions

change bp field descriptions

Field	Description
Enable Use of dadmin login: y/n	This field is set to yes by default after a new installation. If this field is set to yes, then profile 2 may be used by a login spelled as **dadmin** if it is enabled in the license and subject to other existing constraints. If the field is set to no, then profile 2 is disabled. This field cannot grant access for dadmin if it is disabled in the license, but can inhibit access if dadmin is enabled in the license.
PIN is set/unset	This display-only field indicates whether a PIN has been established for the login (set) or not (unset). If the PIN is unset, then the next SAT access to that login will require the PIN to be established.
Enable Use of craft2 login: y/n	This field works the same as the field for the dadmin login, except that it applies to the second craft login if/when it is enabled by dadmin.

Note that the ""enable" fields are NOT the same as, for example, "enable craft2 joe", which is accessible to the business partner login dadmin. This form is accessible only to INIT and applies another level of lockout for these logins.

display bp

The **display bp** command displays the same form as the **change bp** command, except that all of the fields are display-only and cannot be changed. This command can only be issued by the INIT login ID.

The following is an example of **display** bp.

```
display bp
                            BUSINESS PARTNER ACCESS



                Enable Use of dadmin login: y       PIN is set

                Enable Use of craft2 login: y       PIN is unset
```

See change bp field descriptions on page 101 for a description of the fields.

bri-port

status bri-port

status bri-port *location*

Use **status bri-port** to see the service state, maintenance state and layer 1 state of an ISDN-BRI port. There is also information about the point-to-point signaling links carried over the port. For more information, see the BRI-PORT (ISDN-BRI Port) section in the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*.

Action/Object	Qualifier	Qualifier Description
status bri-port	***location***	location of the BRI port

The following screen shows an example of **status bri-port**.

```
 status bri-port 1c1701                          Page 1 of   1
                              STATUS BRI-PORT

             Port:  01C1701
    Service State:  in-service
Maintenance Busy?:  no
    Layer 1 State:  activated

    TEI Value  Layer2 State   Endpt Extension  Endpt SPID  Service SPID?

Link1   64     13-established      1010           1010

Link2

Link3
```

status bri-port field descriptions

See Table 13: Interpreting BRI-Port Status Reports on page 105 for information on interpreting results.

status bri-port field descriptions *1 of 2*

Field	Description
Port	The location of the ISDN-BRI port.
Service State	Whether the ISDN-BRI port is “in-service” or “out-of-service.”
Maintenance Busy	Whether maintenance testing is currently being performed on the port.
Layer 1 State	The operational state of the physical connection (Layer 1) of the ISDN link carried over the port: **activated** = Layer 1 frames are being passed between the port and BRI endpoints. **pend-activation** = The port is in service, the layer 1 interface device is turned on and layer 1 frames are being sent from the port, but the BRI endpoints are not responding. **deactivated** = The layer 1 interface device on the BRI has been turned off due to the port being out of service.
TEI Value	The Terminal Endpoint Identifier (TEI) is a layer 2 addressing parameter used by the switch to exchange information with BRI endpoints over the point-to-point signaling link. The TEI is a number from 1 to 127.
	1 of 2

status bri-port field descriptions *2 of 2*

Field	Description
Layer2 State	The operational state of the point-to-point signaling link (Layer 2): **assigned** = The link is currently in the AWAIT_EST (Await Establish) state at layer 2. If the BRI endpoint supports TEI allocation procedures, those procedures have been successfully executed and a TEI has been assigned to the endpoint by the switch. **established** = The link is in the MF_EST_NORM (Multi-Frame Established Normal) state at layer 2. The switch has successfully started the link and is now capable of exchanging layer 3 frames with the endpoint. If the endpoint does not support SPID initialization procedures, the voice extension of the endpoint associated with the link is also displayed. This is the normal state for a link in a point-to-point wiring configuration. **L3-established** = The link is in the MF_EST_NORM state at layer 2 and SPID initialization procedures have been successfully completed. The voice extension of the endpoint associated with the link is also displayed. This is the normal state for a link in a multipoint wiring configuration. **hyperactive** = Traffic on this link has exceeded the threshold and the link has been suspended.
Endpt Extension	The extension of the voice/data endpoint associated with the link. This field is blank if the link is not in the **established** or **L3-established** state.
Endpt SPID	The SPID (Service Profile Identifier) administered for the voice/data endpoint. This field is blank if the link is not in the **established** or **L3-established** state.
Service SPID	If the link is associated with the Service SPID this field displays **yes** and the Endpoint Extension field is blank. Otherwise this field is blank. Service SPID is a feature used by service technicians to check building wiring between the switch and the BRI endpoint.
	2 of 2

Interpreting Results of status bri-port

Table 13: Interpreting BRI-Port Status Reports on page 105 helps interpret the results of **`status bri-port`**. Find the combination of the output field values in your report and follow the recommendations for the type of endpoint connected to the port.

Table 13: Interpreting BRI-Port Status Reports ***1 of 6***

Error Type	Aux Data	Associated Test	Alarm Level	On/Off Board	Test to Clear Value
BRI, ASAI	0-126	Assigned	blank	blank	This is a transitory state for BRI endpoints and ASAI adjuncts. The switch is attempting to establish the link. 1. Check the endpoint and wiring by following the SPID Facility test's procedure described in BRI-SET, Various Adjuncts on page 222 in the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*. 2. Repeat **`status bri-port`** to determine that the Layer 2 state of the signaling link is either **L3-Established** (for ASAI adjuncts and BRI endpoints supporting MIM initialization) or **Established** (for fixed TEI BRI endpoints and automatic TEI BRI endpoints not supporting MIM initialization). If it is not, follow normal escalation procedures. (A MIM or management information message is a level-3 message that conveys management and maintenance information between a communications system and a BRI terminal.)
					1 of 6

Table 13: Interpreting BRI-Port Status Reports ***2 of 6***

Error Type	Aux Data	Associated Test	Alarm Level	On/Off Board	Test to Clear Value
ASAI	0-63	Established	blank	blank	This is a transitory state for ASAI adjuncts. ASAI signaling is connected at Layer 2 but the Layer 3 Restart procedure has not been completed between switch and adjunct. 1. Check the adjunct by following the recommended repair procedures of the manufacturer. 2. Repeat **`status bri-port`** and determine whether the L2 state of the signaling link is L3-Established. If it is not, follow normal escalation procedures.
BRI	0-126	Established	ext#	blank	This is the normal state for non-MIM initializing, fixed, and automatic TEI BRI endpoints.
BRI, ASAI	64-126	Established	blank	blank	This is a transitory state for automatic TEI BRI endpoints that support MIM initialization. 1. Verify that SPID administration on the switch and the endpoint are consistent. Repeat **`status bri-port`** to determine whether the Layer 2 state of the signaling link is **L3-Established**. 2. Try replacing the endpoint. Repeat **`status bri-port`** to determine whether the Layer 2 state of the signaling link is **L3-Established**. If it is not, follow normal escalation procedures.
BRI	64-126	L3-Established	ext#	blank	This is the normal state for automatic TEI BRI endpoints that support MIM initialization.
					2 of 6

Table 13: Interpreting BRI-Port Status Reports ***3 of 6***

Error Type	Aux Data	Associated Test	Alarm Level	On/Off Board	Test to Clear Value
BRI, ASAI	64-126	L3-Established	blank	yes	A demand SPID Facility test is in progress on the port, and the link is not currently associated with a BRI endpoint. See SPID Facility test's procedures described in BRI-SET, Various Adjuncts on page 222 in the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*.
BRI	64-126	L3-Established	ext#	yes	A demand SPID Facility test is in progress on the port, and the link is associated with an endpoint on the port. See SPID Facility test's procedures described in BRI-SET, Various Adjuncts on page 222 in the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*.
BRI	0-126	L3-Established	blank	blank	An invalid SPID is assigned to link. 1. Change the SPID value in the BRI endpoint to match the SPID administered to the BRI endpoint on the port. Repeat `status bri-port` to determine whether the Layer 2 state of the signaling link is **L3-Established**. If it is not, follow normal escalation procedures.
					3 of 6

Table 13: Interpreting BRI-Port Status Reports ***4 of 6***

Error Type	Aux Data	Associated Test	Alarm Level	On/Off Board	Test to Clear Value
BRI	0-126	L3-Assigned	ext#	blank	This is a transitory state for BRI endpoints that support MIM initialization. 1. Wait 5 seconds and repeat the command. If the state has not changed, continue with Step 2. 2. Make sure SPID administration on the switch and endpoint are consistent. Repeat **`status bri-port`** to determine whether the Layer 2 state of the signaling link is **L3-Established**. If it is not, go to Step 3. 3. Try replacing the endpoint. Repeat **`status bri-port`** to determine whether the Layer 2 state of the signaling link is **L3-Established**. If it is not, follow normal escalation procedures.
					4 of 6

Table 13: Interpreting BRI-Port Status Reports ***5 of 6***

Error Type	Aux Data	Associated Test	Alarm Level	On/Off Board	Test to Clear Value
BRI	0-126	L3-Assigned	ext#	yes	This is a transitory state for BRI endpoints that support MIM initialization when a SPID Facility test has been used to initialize the station. 1. Wait 5 seconds and repeat the command. If the state has not changed continue with Step 2. 2. Make sure SPID administration on the switch and endpoints are consistent. Repeat **`status bri-port`** to determine whether the Layer 2 state of the signaling link is **L3-Established**. If it is not, go to Step 3. 3. Try replacing the endpoint. Repeat **`status bri-port`** to determine whether the Layer 2 state of the signaling link is **L3-Established**. If it is not, follow normal escalation procedures.
					5 of 6

Table 13: Interpreting BRI-Port Status Reports ***6 of 6***

Error Type	Aux Data	Associated Test	Alarm Level	On/Off Board	Test to Clear Value
ASAI BRI	0-126	Hyperactive	ignore	ignore	Link has sent too many messages per unit time. Signaling has been suspended. After 60 seconds, the system attempts to put the link into service. If a link remains in this state while there is no activity at the BRI endpoint, take the following steps: 1. Make sure SPID administration on the switch and endpoints are consistent. Repeat **`status bri-port`** to determine whether the Layer 2 state of the signaling link is **L3-Established**. If it is not, go to Step 2. 2. Try replacing the endpoint. Repeat **`status bri-port`** to determine whether the Layer 2 state of the signaling link is **L3-Established**. If it is not, follow normal escalation procedures.
ASAI	0-126	L3-Restarting	ext#		The switch has sent a Restart message to the adjunct but has not yet received a Restart Acknowledgment message from the adjunct.
ASAI	0-126	L3-Restarted	ext#		After receiving a Restart Acknowledgment message, the switch has sent a Heartbeat message to the adjunct and is waiting for a response.
ASAI	0-126	L3-Established	ext#		This is the normal state for ASAI adjunct.
					6 of 6

bulletin board

display bulletin board

For detailed information about the Communication Manager bulletin board see *Administering Avaya Aura™ Communication Manager (03-300509)*.

cabinet

S8700 series

See:
add cabinet on page 111
change cabinet
display cabinet
list cabinet on page 115
status cabinet on page 117

add cabinet

`add cabinet <n>`

Use **`add cabinet`** to administer cabinets on a five carrier cabinet (MCC) with an **S8700 series**.

Action/Object	Qualifier	Qualifier Description	Login
`add cabinet`	***n***	Number assigned to the cabinet	init super-user inads craft dadmin

The following is an example screen for **add cabinet** for a G650 gateway.

```
add cabinet 20                                                    Page   1 of   1
                                    CABINET
 CABINET DESCRIPTION
                  Cabinet: 20
           Cabinet Layout: G650-rack-mount-stack
             Cabinet Type: expansion-portnetwork

                 Location: 1

 Rack:               Room:              Floor:             Building:

 CARRIER DESCRIPTION
   Carrier       Carrier Type        Number          Duplicate

      E        not-used
      D        not-used
      C        not-used
      B        not-used
      A        G650-port
```

The following is an example screen for **add cabinet** for an S8700 series server.

```
add cabinet 1                                                     Page   1 of   1
                                    CABINET
 CABINET DESCRIPTION
                  Cabinet: 1
           Cabinet Layout: five-carrier
             Cabinet Type: expansion-portnetwork
  Number of Portnetworks: 1
   Survivable Remote EPN? n
                Location: 1                        IP Network Region: 1
        Cabinet Holdover: A-carrier-only
                    Room:          Floor:          Building:

CARRIER DESCRIPTION
   Carrier          Carrier Type      Number       Duplicate

       C             not-used          PN  01
       B             port              PN  01
       A             expansion-control PN  01
       X             fan
       D             not-used          SN  01
       E             switch-node       SN  01          05ED
```

add cabinet field descriptions

add cabinet field descriptions ***1 of 2***

Field	Description
CABINET DESCRIPTION	
Cabinet	Number assigned to cabinet
Cabinet Layout	Description of the layout type of cabinet / stack: **cmc-carrier-stack** (available when the **IP-PNC** field is **y** on the system-parameters customer-options screen) **five-carrier** **G650-rack-mount-stack** **G650-port** **not-used** single-carrier-stack
Cabinet Type	Description of the type of cabinet: **cmc-port** (available when **IP-PNC** is **y** on the system-parameters customer-options screen) **expansion-portnetwork** **MCC** (multicarrier cabinet) **PPN** **SCC** (single-carrier cabinet) **S75XE** (System 75 XE single-carrier cabinet) **G650-rack-mount-stack**, expansion-port network appears in the **Cabinet Type**. If **Enable Operation of IPSI Duplication** is **y** on the `system-parameters duplication` screen, G600 and CMC1 media gateways are not allowed.
Number of Portnetworks	1 through 5
Survivable Remote EPN	y/n
Location	Location number in which cabinet resides. Use `display locations` to see the administered descriptions of all locations. If `display system-parameters customer-options` shows **Multiple Locations** set to **n**, **Loc** defaults to 1. Cabinets connected through a center stage switch (CSS) are required to be in network region 1.
IP Network Region	IP Network Region assigned to the cabinet, to map port networks (non-IP circuit packs) to Network Regions Cabinets connected through a center stage switch (CSS) are required to be in network region 1.
	1 of 2

add cabinet field descriptions ***2 of 2***

Field	Description
Cabinet Holdover	**A-carrier-only**, or **all-carriers** **S8700 series**: Appears when Five Port Networks Max Per MCC is y on the System-Parameters Customer-Options screen.
Rack	appears when **Cabinet Layout** is **G650-rack-mount-stack** or **rack-mount-stack**
Room, Floor, Building	The physical location of the equipment
CARRIER DESCRIPTION	
Carrier	Letter designation of the carrier
Carrier Type	**expansion-control** **fan** **not-used** **port** **rmc-port** **switch-node** When **Cabinet Layout** is **G650-rack-mount-stack**, **Carrier Type** for Carrier A is **G650-port** and is display-only.
Number	PN (port network) or SN (switch-node) number of the carrier
Duplicate	
	2 of 2

change cabinet

S8700 series

`change cabinet` *`n`*

Use **`change cabinet`** to administer cabinets on a five carrier cabinet (MCC) with an **S8700 series**.

Action/Object	Qualifier	Qualifier Description	Login	Default
`change cabinet`	***`n`***	Number assigned to the cabinet		

See add cabinet on page 111 for example screen and field descriptions.

display cabinet

S8700 series

display `cabinet` ***n***

Use `display cabinet` to see the how a specific cabinet is administered.

Action/Object	Qualifier	Qualifier Description	Login	Default
`display cabinet`	***n***	Number assigned to the cabinet		

See add cabinet on page 111 for example screen and field descriptions.

list cabinet

S8700 series

`list cabinet [schedule]`

Use `list cabinet` to see the type, layout, room, floor, building, location and port network number for each cabinet in the system.

Action/Object	Qualifier	Qualifier Description	Login	Default
`list cabinet`	`schedule`	See Common Input Parameters on page 25.		

The following is an example of the output for `list cabinet` on **S8700 MC**.

```
list cabinet
                                CABINET REPORT

No Type Layout Room       Floor      Building   Loc  A     B     C     D     E
1   EPN 5-car                                   1  PN 01 PN 01 PN 01 PN 01 SN 01
2   EPN 5-car                                   1  PN 02 PN 02 PN 02 PN 02 PN 02
3   EPN 5-car                                   1  PN 03 PN 03 PN 03 PN 03 SN 01
4   EPN 5-car                                   1  PN 04 PN 04 PN 04 PN 04 PN 04
5   EPN 5-car                                   1  PN 05 PN 05 PN 05 PN 05 PN 05
6   EPN 5-car                                   1  PN 06 PN 06 PN 06 PN 06 PN 06
7   EPN 5-car                                   1  PN 07 PN 07 PN 07 PN 07 PN 07
8   EPN 5-car                                   1  PN 08 PN 08 PN 08 PN 08 PN 08
```

The following is an example of the output for **`list cabinet`** on **S8700 IP-PNC**.

```
list cabinet
                                CABINET REPORT

No Type Layout Room       Floor      Building   Loc  A     B     C     D     E
1   EPN rmc                                     1  PN 01 PN 01 PN 01 PN 01 PN 01
2   EPN rmc                                     1  PN 02 PN 02 PN 02 PN 02 PN 02
3   EPN rmc                                     1  PN 03 PN 03 PN 03 PN 03 PN 01
4   EPN rmc                                     1  PN 04
```

list cabinet field descriptions

list cabinet field descriptions

Field	Description
Number	Number assigned to the cabinet.
Type	The type of cabinet.
Layout	Description of the layout type of the cabinet or stack: **cmc-carrier-stack** **expansion-control** **fan** **not-used** **port** **switch-node** **S8700 IP-PNC**: **rmc** **G650**: **G650-port** **G650-rack-mount-stack**
Room	Room where cabinet resides, if administered on the cabinet screen.
Floor	Floor where cabinet resides, if administered on the cabinet screen.
Building	Building where cabinet resides, if administered on the cabinet screen.
Loc	Location number in which cabinet resides. Use **`display locations`** to see the administered descriptions of all locations. If **`display system-parameters customer-options`** shows **Multiple Locations** set to **n**, **Loc** defaults to 1.
A B C D E	The letter designation of each carrier. For each carrier the port network number is given (**PN**). If the carrier is a switch node this number is preceded by **SN**. On **S8700 IP-PNC**, carrier E is not used.

status cabinet

S8700 series

`status cabinet` ***UU***

Use **`status cabinet`** to see the operational status and attributes of the specified cabinet.

The output screen displays configuration information for each carrier, connectivity, and alarm information for each port network or switch node and the emergency transfer status of the cabinet.

Action/Object	Qualifier	Qualifier Description	Login	Default	Feature Interaction
`status cabinet`	***UU***	Location number of cabinet		1	

The following example shows the output for **`status cabinet`** when **Cabinet Layout** on the Cabinet screen is **rack-mount-stack**.

Note:

When a system contains no PN maintenance boards, the **Emergency Select Transfer Switch** field is **NoEqp**.

```
status cabinet 1

CABINET CONFIGURATION STATUS                  CABINET CONNECTIVITY STATUS

 Carrier  PN/SN  Carrier         Cabinet      PN/SN         Connectivity Status
 Location Number Type            Type                      Active    Standby

   01A    PN 1   rmc-port         RMC         PN 1          down
   01B    PN 1   rmc-port
   01C    PN 1   not-used
   01D    PN 1   not used

   CABINET EMERGENCY TRANSFER                  CABINET ALARM STATUS
   Emergency  Select                           PN/SN         Mj     Mn     Wn
   Transfer   Switch
                                               PN 1          0      1      19
     01B      auto-
     01A      auto-
```

status cabinet field descriptions

status cabinet field descriptions ***1 of 3***

Field	Description
Carrier Location	The cabinet number and carrier letter of each carrier in the cabinet.
PN/SN Number	The Port Network number or Switch Node number (1 or 2) of the indicated carrier.
Carrier Type	The type of the indicated carrier: processor, port, expansion-control, switch-node, dup-sw-node or not-used.
Cabinet Type	One of the following types: MCC (multicarrier cabinet) SCC (single-carrier cabinet) S75XE (System 75 XE [pre-R1V4] single-carrier cabinet) blank (undetermined cabinet type).
PN/SN	Each Port Network and Switch Node located in the cabinet is identified by its PN number or its SN number and PNC designation (A or B).
	1 of 3

status cabinet field descriptions ***2 of 3***

Field	Description
Connectivity Status	For PNs connectivity status refers to the availability of the EAL (Expansion Archangel Link) and INL (Indirect Neighbor Link) to the carrier for both active and standby PNCs (if duplicated). Possible values are: **up** — EAL and INL are both available. **down** — EAL and INL are both unavailable. **near-end** — The EAL is available, and the INL is unavailable. **far-end** —The INL is available, and the EAL is unavailable. **aa** — Points to a problem with the archangel. The control is up, but the archangel is not functioning and is not available. **blank** — In the standby column, this means PNC is not duplicated. For SNs connectivity status indicates circuit pack insertion on the Switch Node as follows: **up** — At least one switch node interface circuit pack in the Switch Node is inserted. **down** — There are no switch node interface circuit packs inserted on the Switch Node. **blank** — In the active column, this indicates that the Switch Node carrier is currently the standby in a critical-reliability system. In the standby column, this indicates that the Switch Node carrier is currently active (whether or not PNC is duplicated).
Emergency Transfer	The location of the circuit pack containing the emergency transfer select switch (PN maintenance).
Select Switch	The current setting of the emergency transfer switch: **on** Emergency transfer has been manually activated. **off** Emergency transfer is being manually prevented. **auto+** The cabinet is controlling emergency transfer and is activated. **auto-** The cabinet is controlling emergency transfer and is not activated. **unavail** The current setting of the emergency transfer switch is not available.
PN/SN	Each Port Network and Switch Node located in the cabinet is identified by its PN number or its SN number and PNC designation (A or B).
	2 of 3

status cabinet field descriptions ***3 of 3***

Field	Description
Mj, Mn, Wn	The number of major, minor and warning alarms currently logged against the Port Network or Switch Node.
	3 of 3

calltype route-chosen

list calltype route-chosen

`list calltype route-chosen` *`n`* `[locaton` *`n`* `| all] [partition` *`n`*`] [schedule]`

Use **`list calltype route-chosen`** to see what would happen to a call routed through CALLTYPE.

The following is an example of the results of **`list calltype route-chosen`**.

```
 list calltype route-chosen 6001452 location 1
                          CALLTYPE ANALYSIS ROUTE CHOSEN REPORT

Location:  1                            Partitioned Group Number: 1

Match:  6001452
length: Min 7 Max 7
Selected Location: all

   After Delete and Insert           Type   Result
1: 6001452                           ext    No dialplan match.
2: 452                               aar    Match 452, min=3, max = 7
```

list calltype route-chosen screen field descriptions

list calltype route-chosen field descriptions ***1 of 2***

Field	Description
Location	Location from the command line. Allows you to see what would happen if the telephone number you enter into your administration terminal were dialed from a phone's call log in this location. If there are matching entries in the entered location, those get used. If there are no matching entries in the entered location, Communication Manager tries the entries in location **all**.
Partitioned Group Number	Partitioned Group Number as entered on the command line. Default is **1**.
Match	numeric = the entry in the **Calltype Digit Analysis Table** that was selected for the dialed string Blank = no matching entries for this dialed string in the **Calltype Digit Analysis Table**
length Min Max	numeric = the entry in the **Calltype Digit Analysis Table** that was selected for the dialed string Blank = no matching entries for this dialed string in the **Calltype Digit Analysis Table**
Selected Location	Phones dialing from this location use the entries on this form. If there are matching entries in the phone's location, those entries get used. If there are no matching entries in the phone's location, Communication Manager tries the entries in location **all**.
After Delete and Insert	The digit string as it appears after call type digit manipulation for that pattern, up to 4 manipulations.
	1 of 2

list calltype route-chosen field descriptions ***2 of 2***

Field	Description
Type	**ext** **aar** **ars** **udp** The call type used by the call type algorithm to test the modified string. Call types correspond to the equivalent entries on the **Calltype Digit Analysis Table** (`display calltype analysis`).
Result	Results of the analysis on the dialed string. If there was a successful match and completion of the call, the modifications to the dialed string appear. Results stop at the first successful match and valid route. Use this information to view the call type's specific routing analysis form (AAR Routing Table, ARS Routing Table, dialplan analysis tables and the uniform-dialplan tables) for more information about the routing of the call.
	2 of 2

campon-busyout

campon-busyout

`campon-busyout [ trunk | processor ] <trunk group/member | location >`

Use **`campon-busyout`** to busy-out system resources that need maintenance or repair, and to remove idle VoIP resources from the system's pool of available VoIP resources. **`Campon-busyout`** allows present activity to continue and prevents future activity, so that the facilities will eventually become idle and allow board replacement to occur.

Use **`campon-busy-out media-processor`** to select the media processor to be busied out while the media processor is still in service. Once all of the media processor's resources are in a busy-out state, the associated board can be removed from the system without disrupting active calls. Use status media-processor board on page 448 to check the busy-out status of a media processor.

Action/Object	Qualifier	Qualifier Description
`campon-busyout trunk` **`campon-busyout media-processor`**	***`trunk-group/member`*** location	**`location of the resource`**

A redundant **`campon-busyout,`** issued for a media processor already in the pending busyout or busyout service state, results in **ABORT** with an error code for any media processor resource that is already busied.

Use **release board** to abort **campon-busyout**:

- Busied resources are returned to service. The command result is **PASS**.
- Resources marked for busyout, pending busyout, are cleared. The command result is ABORT with an error code that signifies the release of a media processor that was in the pending busy service state.

Busyout board and **busyout port** override any pending busyout states created with **campon-busyout** for media processors.

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

capacity

display capacity

display capacity [schedule]

Use **display capacity** to see how your system is administered, and to see a snapshot status of system resources.

Use **display capacity** to see the maximum capacities of system resources allowed by the system and the current level of usage. Most of the maximum capacities depend on your contract with Avaya. Capacities are defined in the license files and displayed on the System-Parameters Customer-Options screen.

Action/Object	Qualifier	Qualifier Description	Login	Default
display capacity	**schedule**	See Common Input Parameters on page 25.	init inads dadmin craft cust rcust	

The screen below shows the output for page 1 of **display capacity**.

Note:

The capacities in this example may not coincide with your system. The information is p resented to help explain the command and the field values, not to provide capacity information.

```
display capacity                                                  Page 1 of x
                                 SYSTEM CAPACITY

                   Current System Memory Configuration: G3xV11
                                                                        System
                                                          Used  Available  Limit
                                                        - - - - - - - - - - - - -
                       AAR/ARS
                                 AAR/ARS Patterns:         17      623      640
                             Inserted Digit Strings:        6     2994     3000

             ABBREVIATED DIALING (AD)
                               AD Entries Per System:      10    99990   100000
                      AD Personal Lists Per System:        1     4999     5000

   ADJUNCT SWITCH APPLICATION INTERFACE (ASAI)
                  Active Controlling Associations:         0     6000     6000
                            Notification Requests:         0    10000    10000
     Simultaneous Active Adjunct Controlled Calls:         0     3000     3000
```

display capacity field descriptions, page 1

display capacity field descriptions, AAR/ARS, ABBREVIATED DIALING (AD), ADJUNCT SWITCH APPLICATION INTERFACE (ASAI) page 1 ***1 of 2***

Field	Description
Current System Memory Configuration	The platform on which the translations were saved. Can also be `unknown` if no flash card is present or translations made on old load. This is important because platforms are not always compatible. **Standard** or **Extra Large** = translations are saved on CM 4.0 or later. Anything other than **Standard** or **Extra Large** = translations were saved on a pre-CM4.0 system.
AAR/ARS	
AAR/ARS Patterns	The number of route patterns. See *Administering Avaya Aura™ Communication Manager (03-300509).*
Inserted Digit Strings	Number of 12-digit strings inserted and available for AAR/ARS preferences. See *Administering Avaya Aura™ Communication Manager (03-300509).*
ABBREVIATED DIALING (AD)	
AD Entries Per System	The number of abbreviated dialing entries for both group and personal lists.
	1 of 2

display capacity field descriptions, AAR/ARS, ABBREVIATED DIALING (AD), ADJUNCT SWITCH APPLICATION INTERFACE (ASAI) page 1 ***2 of 2***

Field	Description
AD Personal Lists Per System	The number of abbreviated dialing personal lists. See *Administering Avaya Aura™ Communication Manager (03-300509).*
Adjunct Switch Application Interface (ASAI)	
Active Controlling Associations	The number of station domain controls that ASAI adjuncts can request.
Notification Requests	The number of requests ASAI can make to monitor call activity at a split or VDN.
Simultaneous Active Adjunct Controlled Calls	The number of calls that can be controlled by ASAI adjuncts.
	2 of 2

Following is the page 2 output for **display capacity**.

```
display capacity                                                    Page 2 of x
                             SYSTEM CAPACITY
                                                                     System
                                                        Used  Available  Limit
                                                      - - - - - - - - - - - - -
             ATTENDANT SERVICE
                          Attendant Positions:          2       26       28
                                 Queue Length:          0      300      300
                    Queue/Call Status Buttons:          0    15913    15928+

                          Authorization Codes:          0    90000    90000

  BASIC CALL MANAGEMENT SYSTEM (BCMS)
                         BCMS Measured Agents:          0     2000     2000
                    BCMS Measured ACD Members:          0    40000    40000
                  BCMS Measured Splits/Skills:         50      550      600
                           BCMS Measured VDNs:         40      472      512

               '+' Limit combined with Facility Busy Indicators
```

display capacity field descriptions, page 2

Table 14: display capacity field descriptions, ATTENDANT SERVICE, BASIC CALL MANAGEMENT SYSTEM (BCMS) page 2

ATTENDANT SERVICE	
Attendant Positions	The number of administered attendants.
Queue Length	A real-time snapshot of the number of calls waiting for attendant service.
Queue/Call Status Buttons	The number of attendant queue status buttons administered on stations. There are two types of queue status buttons: • atd-qcalls (ATD - Queue Calls) • atd-qtime (ATD - Queue Time)
Authorization Codes	The number of authorization codes used for security purposes. See *Administering Avaya Aura™ Communication Manager (03-300509).*
BASIC CALL MANAGEMENT SYSTEM (BCMS)	
BCMS Measured Agents	The number of agents the Basic Call Management System (BCMS) is measuring.
BCMS Measured ACD Members	The number of ACD members BCMS is measuring.
BCMS Measured Splits/Skills	The number of hunt groups BCMS is measuring.
BCMS Measured VDNs	The number of vector directory numbers BCMS is measuring.

Following is the page 3 output for **display capacity**.

```
display capacity                                                Page 3 of x
                              SYSTEM CAPACITY
                                                                   System
                                                     Used  Available  Limit
                                                   - - - - - - - - - - - - -
               CALL COVERAGE
                       Coverage Answer Groups:        0     1000     1000
                               Coverage Paths:        7     9992     9999

                           Call Pickup Groups:        0     5000     5000

                                 Call Records:        -        -    15424

      CALL VECTORING/CALL PROMPTING
                Total Vector Directory Numbers:       43    19998    20000
           Meet-me Conference VDNs per system:        1     1799     1800
                     Total Vectors Per System:       27      972      999
        Meet-me Conference Vectors per System:        1      998      999
    BSR Application-Location Pairs Per System:      334     2226     2560
```

display capacity field descriptions, page 3

Table 15: display capacity field descriptions, CALL COVERAGE, CALL VECTORING/CALL PROMPTING page 3 ***1 of 2***

CALL COVERAGE	
Coverage Answer Groups	Number of Coverage Answer Groups. See *Administering Avaya Aura™ Communication Manager (03-300509).*
Coverage Paths	Number of paths taken when a call goes to coverage. See *Administering Avaya Aura™ Communication Manager (03-300509).*
Call Pickup Groups	Number of administered call pickup groups. See *Administering Avaya Aura™ Communication Manager (03-300509).*
Call Records	Maximum number of active calls at a given time, set at the system level.
CALL VECTORING/CALL PROMPTING	
Total Vector Directory Numbers	Number of system VDNs. See *Avaya Call Center Release 4.01 Call Vectoring and Expert Agent Selection (EAS) Guide, 07-600780 (formerly 07-300477, 07-300186, 555-230-714)*.
	1 of 2

Table 15: display capacity field descriptions, CALL COVERAGE, CALL VECTORING/CALL PROMPTING page 3 ***2 of 2***

Meet-me Conference VDNs per system	Number of vector directory numbers for the meet-me conference feature.
Total Vectors Per System	Number of vectors per system. See *Avaya Call Center Release 4.01 Call Vectoring and Expert Agent Selection (EAS) Guide, 07-600780 (formerly 07-300477, 07-300186, 555-230-714)*.
Meet-me Conference vectors per System	Number of vectors for the meet-me conference feature.
BSR Application - Location Pairs Per System	Number of mappings administered in a multisite network. The maximum number of application-location pairs per system is 2560. For example, for a network of 10 locations, you can assign up to 256 applications. With 20 locations, you can assign up to 128 applications. See *Avaya Call Center Release 4.01 Call Vectoring and Expert Agent Selection (EAS) Guide, 07-600780 (formerly 07-300477, 07-300186, 555-230-714)*.
	2 of 2

Following is the page 4 output for **`display capacity`**.

```
display capacity                                                        Page 4 of x
                              SYSTEM CAPACITY
                                                                     System
                                                        Used  Available  Limit
                                                       - - - - - - - - - - - - -
             DATA PARAMETERS
                     Administered Connections:           5      123      128
                 Alphanumeric Dialing Entries:           0     1250     1250

                DIAL PLAN
                                     Extensions:        7551    42182    49733
                     Miscellaneous Extensions:        2153    24105    26258
                        UDP Extension Records:           2    79998    80000

                       Digital Data Endpoints:          50     7450     7500

                      Expansion Port Networks:           6       58       64

                     Facility Busy Indicators:           2    15913    15928+
              '+'  Limit combined with Queue/Call Status Buttons
```

display capacity field descriptions, page 4

Table 16: display capacity field descriptions, DATA PARAMETERS, DIAL PLAN, page 4

DATA PARAMETERS	
Administered Connections	The number of connections between two access or data endpoints. See *Administering Avaya Aura™ Communication Manager (03-300509).*
Alphanumeric Dialing Entries	See *Administering Avaya Aura™ Communication Manager (03-300509).*
DIAL PLAN	
Extensions	This includes stations, data endpoints, hunt groups, announcements, TEGs, VDNs, common shared extensions, and code calling IDs.
Miscellaneous Extensions	Anything that is not a station, trunk, data module, or attendant. This includes, but is not limited to, PCOL groups, common shared extensions, access endpoints, administered TSCs, code calling IDs, VDNs, LDNs, hunt groups, announcements, and TEGs.
UDP Extension Records	The number of 4-digit or 5-digit extension numbers that allow a user to call from one PBX to another using that number.
Digital Data Endpoints	The number of digital serial communication devices that permit the asynchronous transfer of data. This also includes the number of analog adjuncts.
Expansion Port Networks	The number of port networks connected to the TDM bus and packet bus of a processor port network.
Facility Busy Indicators	The number of visual indicators of the busy/idle status of any particular trunk group, hunt group member, or station user. See *Administering Avaya Aura™ Communication Manager (03-300509).*

Following is the page 5 output for **`display capacity`**.

```
display capacity                                                        Page 5 of x
                              SYSTEM CAPACITY
                                                                     System
                                                        Used  Available  Limit
                                                       - - - - - - - - - - - - -
 HUNT GROUPS, SPLITS, OR SKILLS
                         Groups/Splits/Skills:          55      944      999
                  Administered Logical Agents:         699     9301    10000
      Administered Logical Agent-Skill Pairs:       13868    51132    65000
                         Logged-In ACD Agents:           0     5200     5200
                    Logged-In Advocate Agents:           0     5200     5200
                Logged-In IP Softphone Agents:           0     5200     5200
                     Group Members Per System:           0    60000    60000
                     CMS Measured ACD Members:           0    60000    60000
               Dynamic Queue Slots Per System:        2453     9547    12000
                    Queue/Call Status Buttons:          13    15913    15928+

                   Intercom Groups Per System:           0      256      256
                 Modem Pool Groups Per System:           0       63       63
         Personal CO Line (PCOL) Trunk Groups:           0      200      200
                    '+'  Limit combined with Facility busy Indicators
```

display capacity field descriptions, page 5

Table 17: display capacity field descriptions, HUNT GROUPS, SPLITS, OR SKILLS page 5

HUNT GROUPS, SPLITS, OR SKILLS	
Groups/Splits/Skills	The number of ACD hunt groups.
Administered Logical Agents	The number of logical agents administered. Applicable to systems with Expert Agent Selection.
Administered Logical Agent-Skill Pairs	The number of logical agent-skill pairs that are administered.
Logged-In ACD Agents	A real-time field displaying the number of agents actually logged in. For example, if an agent is logged into 4 skills (and there are no other agents), then the Logged-In ACD Agents field is 1 and the Group Members Per System field is 4.
Logged-In Advocate Agents	The number of Advocate agents that are currently logged in.
Logged-In IP Softphone Agents	The number of IP Softphone agents that are currently logged in.
Group Members Per System	The number of agent/group pairs.
CMS Measured ACD Members	The number of agent pairs being measured by CMS.
Dynamic Queue Slots Per System	The number of hunt group queue positions being used. The system pool of queue slots is dynamically assigned as needed. All calls can be queued.
Queue/Call Status Buttons	The number of hunt group queue status buttons administered on stations. There are four types of queue status buttons; attendants use the last two queue status buttons: q-calls (Queue Calls) q-time (Queue Time) atd-qcalls (ATD - Queue Calls) atd-qtime (ATD - Queue Time)
Intercom Groups Per System	The number of intercom groups set up within your organization.
Modem Pool Groups Per System	The number of modem pool groups. See *Administering Avaya Aura™ Communication Manager (03-300509).*
Personal CO Line (PCOL) Trunk Groups	The number of PCOL trunk groups. See *Administering Avaya Aura™ Communication Manager (03-300509).*

Following is the page 6 output for **`display capacity`**.

```
display capacity                                                Page   6 of x
                                 SYSTEM CAPACITY
                                                                     System
                                                         Used Available  Limit
                                                        -----------------------
       RECORDED ANNOUNCEMENTS/MUSIC/AUDIO SOURCES
                              Analog Queue Slots:        0    1000     1000
                   Administered Announcement Files:    111    2889     3000
                               TN2501 VAL Boards:        1       4*        5
                         Media Gateway vVAL Sources:     0       0        0
               TN2602 Boards with 80 VoIP Channels:      0       0        0
              TN2602 Boards with 320 VoIP Channels:      1       1        2

       TEMPORARY SIGNALING CONNECTIONS (TSC)
                              Administered TSCs:        7     243      250
                                  NCA-TSC Calls:        2     997      999

   '*'  Available VAL Boards limited by other inserted integ type annc boards
```

display capacity field descriptions, page 6

Table 18: display capacity field descriptions, TEMPORARY SIGNALING CONNECTIONS (TSC) page 6 ***1 of 2***

Recorded Announcement Analog Queue Slots	
TN2601 VAL Board	The current usage, license limit, and available capacity associated with the “Maximum TN2601 VAL Boards” license feature.
Media Gateway VAL Sources	The current usage, license limit, and available capacity associated with the “Maximum G700 VAL Sources” license feature.
TN2602 Boards with 80 VoIP Channels	The current usage, license limit, and available capacity associated with the "Maximum TN2602 Boards with 80 VoIP Channels" license feature. Used = total number of TN2602 circuit packs in the system administered with 80 VoIP channels Limit = value in the **Maximum TN2602 Boards with 80 VoIP Channels** field on the system -parameters customer-options form.
	1 of 2

Table 18: display capacity field descriptions, TEMPORARY SIGNALING CONNECTIONS (TSC) page 6 ***2 of 2***

TN2602 Boards with 320 VoIP Channels	The current usage, license limit, and available capacity associated with the "Maximum TN2602 Boards with 320 VoIP Channels" license feature. Used = total number of TN2602 circuit packs in the system administered with 320 VoIP channels Limit = value in the **Maximum TN2602 Boards with 320 VoIP Channels** field on the system -parameters customer-options form.
TEMPORARY SIGNALLING CONNECTIONS (TSC)	
Administered TSCs	
NCA-TSC Calls	
	2 of 2

Following is the page 7 output for **`display capacity`**.

```
display capacity                                                        Page 7 of x
                              SYSTEM CAPACITY
                                                                     System
                                                        Used  Available  Limit
                                                      - - - - - - - - - - - - -
                 TRUNKS
                              DS1 Circuit Packs:         10      390      400
                     DS1 With Echo Cancellation:          0      400      400
                           ICHT For ISDN Trunks:          0      576      576
             ISDN CBC Service Selection Trunks:           1      199      200
                                 Trunks Groups:          34     1966     2000
                                  Trunks Ports:         604     7396     8000


 Remote Office Trunks (included in 'Trunk ports'):         0     4000     4000
           SBS Trunks (included in 'Trunk ports'):         0     1000     1000
           SIP Trunks (included in 'Trunk ports'):       765     4000     4000

  '*' Available VAL Boards limited by other inserted integ type annc boards
```

display capacity field descriptions, page 7

Table 19: display capacity field descriptions, TRUNKS, page 7 ***1 of 2***

TRUNKS	
DS1 Circuit Packs	The number of allowed DS1 circuit packs.
	1 of 2

Table 19: display capacity field descriptions, TRUNKS, page 7 ***2 of 2***

DS1 With Echo Cancellation	The number of DS1 circuit packs that can have echo cancellation.
ICHT For ISDN Trunks	The number of Incoming Call Handling Table (ICHT) entries administered for trunk groups.
ISDN CBC Service Selection Trunks	The number of call-by-call trunk groups.
Trunk Groups	The number of trunk groups administered.
Trunk Ports	The number of trunk ports administered.
H.323 Trunks (included in Trunk ports')	The number of administered H.323 Office trunks
Remote Office Trunks (included in 'Trunk ports')	The number of administered Remote Office trunks.
SBS Trunks (included in 'Trunk ports')	The number of administered SBS (Separation of Bearer and Signaling) trunks.
SIP Trunks (included in Trunk ports')	The number of administered SIP trunks
	2 of 2

Following is the page 8 output for **`display capacity`**.

```
display capacity                                                        Page 8 of x
                              SYSTEM CAPACITY
                                                                   System
                                                         Used  Available  Limit
                                                       - - - - - - - - - - - - -
                VOICE TERMINALS
                   Station Button Memory (units):        10 %      90 % 17496000
               Team Button / Monitoreed stations:         9    5991       6000
                        Customized Button Labels:
                                 Station Records:      5392    30565*    36000
        Station Records Used by TTI (Not Shared):        41
            Station Records Used by TTI (Shared):         0
                Stations (includes BRI stations):      4693
                              Stations With Port:       686
                          Stations Without Port:      4007      -         -
                                 Other Stations:       699      -         -
                                      TTI Ports:         0      -         -
                            Auto Moves Stations:         0     5000      5000
                     Administered IP SoftPhones:
                   Video Capable H.323 Stations:
                    Video Capable IP Softphones:
               ISDN-BRI Endpoint And Trunk Ports:        38     6962      7000
```

display capacity field descriptions, page 8

Table 20: display capacity field descriptions, VOICE TERMINALS, page 8

VOICE TERMINALS	
Station Button Memory (units)	The percentage of memory being consumed by every administered button.
Team Button / Monitored stations	The number of team button assignments. Team buttons are used to monitor members of a team of stations, functional between one Communication Manager server and the Tenovis 155 hardware platform.
Station Records	The number of resources being used by regular stations, announcements, and music on hold.
Stations (includes BRI stations)	The number of voice terminals.
Station Records Used by TTI (Not Shared)	TTI ports that are administered by the system when TTI is activated on the **Feature-Related System-Parameters** screen (`change system-parameters features`). The ports provide dial-tone to the unadministered physical station attached to the physical port location.
Station Records Used by TTI (Shared)	Ports that are shared with AWOH stations. The ports are administered by the system when is TTI activated on the **Feature-Related System-Parameters** screen (`change system-parameters features`). The ports provide dial-tone to the unadministered physical station attached to the physical port location.
Stations With Port	The number of connected voice terminals (stations with specific administered ports).
Stations Without Port	The number of voice terminals not having an administered port, such as AWOH.
Other Stations	The number of ports used as conversion resources, agent login ID, MASI, and analog announcements.
TTI Ports	The number of ports assigned by TTI features.
Auto Moves Stations	The number of stations available to move using ACTR.
ISDN-BRI Endpoint and Trunk Ports	The number of ISDN-BRI ports.

Following is the page 9 output for **`display capacity`**.

```
display capacity                                                Page 9 of  10
                                SYSTEM CAPACITY
SYSTEM CAPACITY

                  TOTAL LICENSED CAPACITY                                License
                                                         Used Available  Limit
                                                        ------------------------
                           Station and Trunk Ports:   2762     438     3200
                                  Station Capacity:   1789     611     2400
                                      SBS Stations:      0     500      500
                                 Radio Controllers:      0       0        0
                                Wireless Terminals:      0       0        0
                                  XMOBILE Stations:      0     700      700
                                               EC500:      0
                                                DECT:      0
                                                 PHS:      0
                         Off-PBX Telephone - EC500:      0       0        0
                         Off-PBX Telephone -   OPS:    100       0      100
                         Off-PBX Telephone - PBFMC:      0       0        0
                         Off-PBX Telephone - PVFMC:      0       0        0
                         Off-PBX Telephone - SCCAN:      0       0        0
                   Off-PBX Telephone Memory (units):      0%    100% 1039500
```

display capacity field descriptions, page 9

Table 21: display capacity field descriptions, TOTAL LICENSED PORTS, page 9 ***1 of 2***

TOTAL LICENSED PORTS	
Station and Trunk Ports	The number of subscribed ports in the system
Station Records	The number of station records administered on the system
SBS Stations	The number of extensions administered as SBS (Separation of Bearer and Signaling).
Radio Controllers	The number of subscribed Radio Controller circuit packs
Wireless Terminals	The number of subscribed wireless terminals
XMOBILE Stations	The number of X-station mobility (XMOBILE) stations
EC500	The number of Avaya Extension to Cellular (EC500) ports
DECT	The number of DECT ports
PHS	The number of PHS ports
	1 of 2

Table 21: display capacity field descriptions, TOTAL LICENSED PORTS, page 9 ***2 of 2***

Off-PBX Telephone - EC500	Usage of the EC500 application (AvayaExtension to Cellular)
Off-PBX Telephone - OPS	Usage of the OPS application (Off-PBX Station, supporting non-native endpoints)
Off-PBX Telephone - SSE	Usage of the SSE or SCCAN application (combines cellular voice and wireless VoIP)
Off-PBX Telephone Memory (units)	The number of PHS ports
	2 of 2

Following is the page 10 output for **`display capacity`**.

```
display capacity                                                        Page 10 of x
                 CONCURRENT REGISTRATION COUNTS

CONCURRENT REGISTRATION COUNTS
                                              Currently                 System
                                              Registered    Available   Limit
                                              --------------------------------
                              IP Stations:     296            2704       3000
                 IP Stations in TTI State:       0               -          -
                    IP Attendant Consoles:       0               3          3
                   Remote Office Stations:       0             300        300
```

display capacity field descriptions, page 10

Table 22: display capacity field descriptions, CONCURRENT REGISTRATION COUNTS page 10

CONCURRENT REGISTRATION COUNTS	
Field	**Description**
IP Stations	The number of IP stations
IP Stations in TTI State	The number of registered IP stations in TTI state
IP Attendant Consoles	The number of IP attendant consoles
Remote Office Stations	The number of remote office stations

Following is the page 11 output for **`display capacity`**.

```
display capacity                                                    Page 11 of x
                 CURRENT REGISTRATION COUNTS BY PRODUCT ID

                                System                                   System
ID       Rel  Regist.  Avail.  Limit    ID        Rel  Regist.  Avail.  Limit
-----------------------------------------------------------------------------
IP_Agent       :    0      5000    5000                 :
IP_Phone       :  296      4704    5000                 :
IP_ROMax       :    0       300     300                 :
IP_Soft        :    0      5000    5000                 :
IP_eCons       :    0        28      28                 :
               :                                        :
               :                                        :
               :                                        :
               :                                        :
               :                                        :
```

display capacity field descriptions, page 11

Table 23: display capacity field descriptions, CURRENT REGISTRATION COUNTS BY PRODUCT ID, page 11

ID	Product identifier from the license file • **IP_Agent** = IP agents • **IP_Phone** = IP phones • **IP_ROMax** = R300 remote office phones • **IP_Soft** = IP Softphones • **IP_eCons** = IP Softconsole • **Soft_Share** = • **API_Share** =
Rel	Release number of IP endpoint. A blank implies any release.
Regist.	Number of products registered
Avail.	Number of products available for registration
System Limit	Registration limit

Following is the page 12 output for **`display capacity`**.

```
display capacity                                                    Page 12 of 12
                              SYSTEM CAPACITY

CURRENT SYSTEM INFORMATION

          Software Load: R015x.00.0.824.0
   Memory Configuration: Extra Large
         Offer Category: A

LAST TRANSLATION LOADED INFORMATION:

          Software Load: R015x.00.0.824.0
   Memory Configuration: Extra Large
         Offer Category: A
               Platform: 6
```

display capacity field descriptions, page 12

Table 24: display capacity field descriptions, CURRENT SYSTEM INFORMATION, LAST TRANSLATION LOADED INFORMATION, page 12

CURRENT SYSTEM INFORMATION	
Software Load	The current software load on which the system is running.
Memory Configuration	The system platform.
Offer Category	The system's offer category.
LAST TRANSLATION LOADED INFORMATION	
Software Load	The software load translations saved before upgrade or reboot. Can also be `unknown/no trans` if no flash card is present. Also, if load translations were upgraded from one prior to G3V4 load 71 or early G3V5 loads, `unknown/no trans` displays.
Memory Configuration	The platform on which the translations were saved. Can also be `unknown` if no flash card is present or translations made on old load. This is important because platforms are not always compatible. **Standard** or **Extra Large** = translations are saved on CM 4.0 or later. Anything other than **Standard** or **Extra Large** = translations were saved on a pre-CM4.0 system.
Offer Category	The offer category that was set when the last **`save translation`** was done before upgrade or reboot. Can also be unknown if no flash card is present or translations made on old load.

carrier

recycle carrier

`recycle carrier` ***`UUC`*** **`[override]`**

Use **`recycle carrier`** to momentarily shut down and restore power to a specified **S8700 series G650** or **G650** carrier. When a power unit is replaced in a carrier, use **`recycle carrier`** to restart the power on that carrier.

Action/ Object	Qualifier	Qualifier Description	Login	Default
`recycle carrier`	***`cabinet`*** **`carrier`** **`slot`** **`override`**	cabinet location carrier (or **G650** within a **G650** stack) slot location (0 or 15 in a **G650**) Required when the controlling TN2312BP circuit pack is present in the same carrier as the specified power supply	init super-user inads craft dadmin switch circuit pack maintenance permissions	

Use **`recycle carrier`** to:

- Reset all the boards in the carrier in an attempt to clear a problem when a board stops responding to control channel messages
- Verify that each power supply, in a carrier with two power supplies, can supply the full power load for the carrier

Note:

Use **`recycle carrier`** to check the voltages from redundant power supplies Specify the slot number, and force the power supply in the other slot to be the only power supply on the backplane. The power supplies monitor the voltage on the backplane, not the voltage from the power supplies.

The following carriers cannot be recycled:

- Switch Node Carrier
- PN Control Carrier
- Any carrier holding an active Tone-Clock or an active EI circuit pack

Note:

`Recycle carrier` might take 90 seconds to complete. Do not use the LED activity on the front of the power supply as an indicator of the command status.

CAUTION:

S8700 series When a port carrier is recycled, every port and adjunct supported by circuit packs on that carrier undergoes a service outage. Use **`recycle carrier Uuc override`** to power recycle a control carrier.

CAUTION:

Never recycle power to a carrier containing DEFINITY AUDIX TN566/TN2169 circuit packs without first shutting down the AUDIX system. Doing so can damage AUDIX software. Follow instructions on the TN566/TN2169 faceplate (these also appear under ADXDP-PT in *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*).

CAUTION:

`Recycle carrier` drops all calls within a carrier when:

- Do not specify a slot number
- Specify slot 0 for a carrier with a single power supply

CAUTION:

Use **`recycle carrier override`** to power recycle a control carrier. When you execute **`recycle carrier`** for a carrier that contains the controlling TN2312BP, **`recycle carrier drops`** all calls within the port network in the following situations:

- Do not specify a slot number
- Specify slot number 0 for a carrier with a single power supply

When you specify a slot, only the power supply in that slot is shut down. If there is another power supply, it provides power to the carrier while the other power supply is shut down.

When you do not specify a slot, all operating power supplies in the carrier are momentarily shut down and restored.

Use **`test board`** to confirm that the power supply in slot 15 has ringing capability.

For more information, see Common Input Parameters on page 25 and Common Command Output Screens on page 28.

cdr-link

See:
busyout cdr-link on page 142
release cdr-link on page 142
status cdr-link on page 143
test cdr-link on page 144

busyout cdr-link

busyout cdr-link [primary | secondary]

Use **busyout cdr-link** to put the call detail recording link in a maintenance busy state. When busied out, the link is dropped and must be re-established later when returned to service. See status link on page 362 for more details on links.

Action/Object	Qualifier	Qualifier Description	Login	Default
busyout cdr-link	**primary** **secondary**	Specify which CDR output device to busyout. Examples: **busyout cdr-link** **busy cdr secondary**	init inads craft	primary

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

release cdr-link

Use **release cdr-link** to remove maintenance objects associated with specified call detail recording (cdr) links from a maintenance busy state. These links provide asynchronous data connections from switches to peripherals. They are composed of:

- A manager that initiates and maintains the link
- A controller/protocol that services the link

For information on what a CDR link is and does, see the description of status cdr-link on page 143. See status link on page 362 for more details on links.

Action/Object	Qualifier	Qualifier Description	Login	Default
release cdr-link	primary secondary	Specify which CDR output device to busyout. Examples: **busyout cdr-link** **busy cdr secondary**	init inads craft	none

The Maintenance Name field for **release cdr-link primary** shows PRI-CDR for primary cdr-link, or SEC-CDR for secondary cdr-link.

status cdr-link

status cdr-link

Use **status cdr-link** to see the status of the call detail recording (CDR) links. If a link is down, the report includes the number of times the switch has tried to re-establish the link.

The CDR link is established by socket connection between Communication Manager and a CDR output device such as a CDR adjunct. The link is used by the server to send call detail records to the output device. A system may have up to two CDR links, a primary and a secondary. See PRI-CDR (Call Detail Recording Link) in the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*.

See status link on page 362 for more details on links.

The following is an example of the output for **status cdr-link**

```
 status cdr-link
                            CDR LINK STATUS
                     Primary                 Secondary

      Links state: up                      endpoint not administered
Number of retries:
      Date & Time:
  Forward Seq. No:
 Backward Seq. No:
CDR Buffer & Full:
      Reason Code:
```

status cdr-link field descriptions

status cdr-link field descriptions *1 of 2*

Field	Description
Link State	The operational status of the link: **up** The link is established and is capable of supporting the application. This is the normal operational state. **down** The link is physically down. **endpoint not administered** An output device has not been assigned on the CDR system parameters screen.
Number of Retries	The number of times the switch has tried to set up the link.
Date & Time	The last time the CDR link went up or down.
	1 of 2

status cdr-link field descriptions *2 of 2*

Field	Description
Forward Seq. No	A counter which increments with every Session Protocol Data Unit (SPDU) sent from the switch to the CDR adjunct. Both the primary and secondary CDR outputs have independent Forward Sequence numbers.
Backward Seq. No	A counter that indicates the number of the next Session Protocol Data Unit (SPDU) that is expected from the CDR adjunct. Both the primary and the secondary CDR outputs have independent Backward Sequence numbers.
CDR Buffer % Full	When the switch produces a CDR record that cannot be immediately transmitted to the CDR adjunct, that record is placed in the CDR buffer. This percentage indicates how full the CDR buffer is at any point in time. If the switch, the CDR adjunct, and the IP link that interconnects them are all working properly, this number should be zero or very close.
Reason Code	Why the CDR link (primary or secondary) last changed from up to down or vice versa. Values appear when CDR is administered. **CDR connection is closed** **CDR Output mode is blank** **Data write failure** **EIA port Bit rate changes** **LSP is inactive** **Maintenance Busy** **Path is destroyed by COM** **Primary extension is changed** **Queue for primary CDR is full** **Secondary extension is changed**
	2 of 2

test cdr-link

`test cdr-link primary | secondary [short | long] [`*`repeat#`*` | clear] [schedule]`

Use **`test cdr-link`** to validate that a call detail recording link has been administered and established.

`Test cdr-link` first validates that the Call Detail Recording (CDR) link has been administered and exists in the switch. Then individual diagnostic tests run on the link and return results of the test along with any possible error codes. For more information on the CDR link, see status cdr-link on page 143.

See status link on page 362 for more details on links.

Action/Object	Qualifier	Qualifier Description	Login	Default
test cdr-link	**primary** **secondary** **short** **long** ***repeat#*** **clear** **schedule**	test the primary link test the secondary link See Common Input Parameters on page 25.	inti inads craft	primary short

For more information, see Common Command Output Screens on page 28.

circuit packs

See:
change circuit-packs on page 146
display circuit-packs on page 150

change circuit-packs

`change circuit-packs UU`

Use **`change circuit-packs`** to administratively add, change or remove circuit packs that are to be inserted into port, expansion control, and switch node carriers. Also use **`change circuit-packs`** to:

- configure the system when the circuit packs have not yet been physically inserted.
- remove a 655A power supply from translations
- add a missing 655A power supply to translations

Note:

When you add a DS1-C circuit pack to a **G650** media gateway, set **IP Control** on the IP Server Interface screen for the media gateway to ***n***.

Note:

A 655A power supply is self-administering. Do not use **`change circuit-packs`** to add power supply translations.

The TN code for the TN2312 IPSI and TN2182 tone generator circuit packs are not allowed to be entered on this form. The TN code will be displayed but cannot be changed.

Action/Object	Qualifier	Qualifier Description	Login	Default
`change circuit-packs`	***UU***	The number of the cabinet containing the circuit packs to be modified. On an **S8700 IP-PNC**, the number applies to port slots 1-10.	init inads craft cust nms	1

Output for change circuit packs, pages 1 - 5

This is an example of **`change circuit-packs 1`**, page 1, on **S8700 MC**. See change circuit-packs field descriptions on page 150.

```
change circuit-packs 1                                          Page   1 of   5
                              CIRCUIT PACKS

        Cabinet: 1                            Carrier: A
 Cabinet Layout: five-carrier            Carrier Type: expansion-control

 Slot Code  Sf Mode   Name               Slot Code  Sf Mode   Name
                                          11: TN799DP C      CONTROL-LAN
  01: TN570  D       EXPANSION INTF       12:
  02:                                     13:
  03: TN464  G       DS1 INTERFACE        14: TN754  C       DIGITAL LINE
  04: TN2198         BRI LINE             15: TN793  B       ANALOG LINE
  05: TN748  D       TONE DETECTOR        16:
  06: TN464  F       DS1 INTERFACE        17:
  07: TN464  G       DS1 INTERFACE        18: TN767  E       DS1 INTERFACE
  08: TN464  F       DS1 INTERFACE        19:
  09: TN464  F       DS1 INTERFACE
  10: TN464  F       DS1 INTERFACE

  '#' indicates circuit pack conflict.
```

This is an example of **`change circuit-packs 1`**, page 2, on **S8700 MC**. See change circuit-packs field descriptions on page 150.

```
change circuit-packs 1                                          Page   2 of   5
                              CIRCUIT PACKS

        Cabinet: 1                            Carrier: B
 Cabinet Layout: five-carrier            Carrier Type: port

 Slot Code  Sf Mode   Name               Slot Code  Sf Mode   Name
  00:                                     11: TN2302         IP MEDIA PROCESSOR
  01: TN2312AP       IP SERVER INTFC      12:
  02: TN570  D       EXPANSION INTF       13: TN754  C       DIGITAL LINE
  03: TN464  F       DS1 INTERFACE        14: TN754  C       DIGITAL LINE
  04:                                     15:
  05: TN464  F       DS1 INTERFACE        16:
  06: TN464  F       DS1 INTERFACE        17: TN771  D       MAINTENANCE/TEST
  07: TN754  C       DIGITAL LINE         18: TN2181         DIGITAL LINE
  08: TN464  F       DS1 INTERFACE        19: TN464  D       DS1 INTERFACE
  09: TN464  F       DS1 INTERFACE        20: TN464  F       DS1 INTERFACE
  10: TN464  F       DS1 INTERFACE

  '#' indicates circuit pack conflict.
```

This is an example of **`change circuit-packs 1`**, page 3, on **S8700 MC**. See change circuit-packs field descriptions on page 150.

```
change circuit-packs 1                                          Page   3 of   5
                              CIRCUIT PACKS

        Cabinet: 1                            Carrier: C
 Cabinet Layout: five-carrier            Carrier Type: not-used

 Slot Code  Sf Mode   Name               Slot Code  Sf Mode   Name
  00:                                     11:
  01:                                     12:
  02:                                     13:
  03:                                     14:
  04:                                     15:
  05:                                     16:
  06:                                     17:
  07:                                     18:
  08:                                     19:
  09:                                     20:
  10:                                     21:

  '#' indicates circuit pack conflict.
```

This is an example of **`change circuit-packs 1`**, page 4, on **S8700 MC**. See change circuit-packs field descriptions on page 150.

```
change circuit-packs 1                                          Page   4 of   5
                              CIRCUIT PACKS

        Cabinet: 1                            Carrier: D
 Cabinet Layout: five-carrier            Carrier Type: not-used

 Slot Code  Sf Mode   Name               Slot Code  Sf Mode   Name
  00:                                     11:
  01:                                     12:
  02:                                     13:
  03:                                     14:
  04:                                     15:
  05:                                     16:
  06:                                     17:
  07:                                     18:
  08:                                     19:
  09:                                     20:
  10:                                     21:

  '#' indicates circuit pack conflict.
```

This is an example of **`change circuit-packs 1`**, page 5, on **S8700 MC**. See change circuit-packs field descriptions on page 150.

```
change circuit-packs 1                                          Page   5 of   5
                              CIRCUIT PACKS

        Cabinet: 1                            Carrier: E
 Cabinet Layout: five-carrier            Carrier Type: switch-node

 Slot Code  Sf Mode   Name               Slot Code  Sf Mode   Name
                                          11:
  01:                                     12: TN572          SWITCH NODE CLOCK
  02: TN573  B       SWITCH NODE INTF     13:
  03: TN573  B       SWITCH NODE INTF     14:
  04: TN573  B       SWITCH NODE INTF     15:
  05: TN573          SWITCH NODE INTF     16:
  06: TN573  B       SWITCH NODE INTF     17:
  07: TN573  B       SWITCH NODE INTF     18:
  08: TN573  B       SWITCH NODE INTF     19:
  09: TN573  B       SWITCH NODE INTF     20:
  10: TN572          SWITCH NODE CLOCK    21:

  '#' indicates circuit pack conflict.
```

This is an example of **`change circuit-packs`** on Cabinet 15, page 1, on an **S8700 IP-PNC**. See change circuit-packs field descriptions on page 150.

```
change circuit-packs 15                                         Page   1 of   2
                              CIRCUIT PACKS

        Cabinet: 15                           Carrier: A
 Cabinet Layout: rack-mount-stack        Carrier Type: rmc-port

 Slot Code  Sf Mode   Name              Slot Code  Sf Mode   Name

  01: TN556  D       BRI LINE
  02: TN2312AP       IP SERVER INTFC
  03:
  04: TN760  D       TIE TRUNK
  05: TN2302         IP MEDIA PROCESSOR
  06: TN2224 B       DIGITAL LINE
  07: TN556  D       BRI LINE
  08: TN799DP C      CONTROL-LAN
  09: TN2224 B       DIGITAL LINE
  10: TN464  F       DS1 INTERFACE

  '#' indicates circuit pack conflict.
```

change circuit-packs field descriptions

change circuit-packs field descriptions

Field	Description
Cabinet	The administered number of the cabinet
Cabinet Layout	Type of cabinet **CG650-rack-mount-stack** when **Cabinet Layout** is **G650-rack-mount-stack**
Carrier	Each page of this screen reports the information for 1 carrier. This field indicates the letter designation of the carrier displayed on the current page.
Carrier Type	The function of the carrier: **port** **G650-(port)** when Cabinet Layout type is **G650-rack-mount-stack** **processor** **switch-node** **dup-switch-node** **not-used** **cmc-port**
Slot	The carrier slot numbers Populates 655A in slots 00 and 15 if a power supply is plugged in when Cabinet Layout type is **G650-rack-mount-stack**
Code	The TN or UN part number of the circuit pack. This number identifies the circuit pack type to system software.
Sfx	The letter suffix of the circuit pack, if applicable.
Name	The name of the circuit pack. This field aids in entering the circuit pack codes. This field is not populated automatically.

display circuit-packs

`display circuit-packs <cabinet>`

Use **`display circuit-packs`** to list circuit packs on a specific cabinet. The output shows what boards are in which slots in each cabinet and carrier.

clan-all

status clan-all

`status clan-all`

Use **`status clan-port`** to determine if a C-LAN board:

- is in-service
- can be used by IMS (Integrated Management System) as a source board
- is healthy for firmware-download (no alarms on the board or ports)

The following example shows the output for Page 1 from **`status clan-all`**

```
status clan-all                                                    Page   1

                    CLAN STATUS FOR FIRMWARE DOWNLOAD (FWDL)

          Service       Auto FWDL                    Service       Auto FWDL
Slot       State        Capable            Slot       State        Capable
01C17   out-of-service     n               20B06   in-service       y
04D16   in-service         y               07C05   in-service       y
07E09   in-service         y               07E11   in-service       y
04B02   in-service         y               24A02   in-service       y
08A04   in-service         y               08A05   in-service       y
06B02   in-service         y               25A14   in-service       y
20B07   in-service         y               20B08   in-service       y
10B14   in-service         y               10B15   in-service       y
10B16   in-service         y               09C05   in-service       y
04D17   in-service         y               07D10   in-service       y
08D14   in-service         y               09D03   in-service       y
12C15   in-service         y               10D10   in-service       y
09C03   in-service         y               01B05   in-service       y
04C08   in-service         y               06D13   in-service       y
06D14   in-service         y               07C06   in-service       y

                press CANCEL to quit --  press NEXT PAGE to continue
```

status clan-all field descriptions

status clan-all field descriptions ***1 of 2***

Field Name	Description
Slot	Slot where the C-LAN circuit pack is located
	1 of 2

status clan-all field descriptions ***2 of 2***

Field Name	Description
Service State	in-service or out-of-service
Auto FWDL Capable	• n - CLAN is not firmware-capable, CLAN is in use on another download form, or no PPP ports available • y - CLAN is healthy and available for firmware-download
	2 of 2

clan-ip

status clan-ip

`status clan-ip` ***`location`***

Use **`status clan-ip`** to see the activity on a C-LAN circuit pack.

Action/Object	Qualifier	Qualifier Description
`status clan-ip`	***`location`***	board location of the C-LAN circuit pack

The following example shows the output from **`status clan-ip`**.

```
status clan-ip 04E05
                                IP STATUS
Reset Time: 09/10 18:03

  Incoming Received:      Octets      Datagrams   Discards   Hdr Errors
    Since Reset           39294813    108862      0          0

  Outgoing Transmitted:   Octets      Datagrams   Discards   No Routes
    Since Reset           10571795    109174      0          0

  Datagrams w/o Routes    ICMP Dest Unreachables     ICMP Redirects
    Since Reset           6                          0
```

status clan-ip field descriptions

status clan-ip field descriptions

Field Name	Description
Reset Time	Time the last reset occurred.
Incoming Received: Octets	The number of octets received since the last reset.
Incoming Received: Datagrams	The total number of input datagrams received from interfaces, including those received in error, since the last reset.
Incoming Received: Discards	The number of input IP datagrams for which no problems were encountered to prevent their continued processing, but which were discarded (e.g., for lack of buffer space) since the last reset. This total does not include any datagrams discarded while awaiting re-assembly.
Incoming Received: Hdr Errors	The number of input datagrams discarded since the last reset due to errors in their IP headers, including bad checksums, version number mismatch, other format errors, time-to-live exceeded, errors discovered in processing their IP options, etc.
Outgoing Transmitted: Octets	The number of octets transmitted since the last reset.
Outgoing Transmitted: Datagrams	The total number of IP datagrams which local IP user-protocols (including ICMP) supplied to IP in requests for transmission since the last reset.
Outgoing Transmitted: Discards	The number of output IP datagrams for which no problem was encountered to prevent their transmission to their destination, but which were discarded (e.g., for lack of buffer space) since the last reset.
Outgoing Transmitted: No Routes	The number of IP datagrams discarded since the last reset because no route could be found to transmit them to their destination. This total includes any datagrams which a host cannot route because all of its default gateways are down.
Datagrams w/o Routes: ICMP Dest Unreachables	The number of ICMP Destination Unreachable messages received since the last reset.
Datagrams w/o Routes: ICMP Redirects	The number of ICMP Redirect messages received since the last reset.

clan-port

status clan-port

`status clan-port` ***`port location`***

Use **`status clan-port`** to see link and status information regarding a C-LAN port. There are five pages of output which display the following:

- LINK/PORT STATUS
- ERROR COUNTERS
- PROCESSOR CHANNEL STATUS
- TCP/IP Applications Currently Active
- Media Gateways

The following example shows the output for Page 1 from **`status clan-port 1b0517`**

```
status clan-port 01B0517                                Page    1 of    5
                              LINK/PORT STATUS

                 Link Number: 97
                 Link Status: connected
                   Link Type: ethernet
                   Link Name: clan_1b0517
       Service Port Location: 01B0517
 Service Port Data Extension: 40823
               Service State: in-service/idle
                   Node Name: clan_1b0517
           Source IP Address: 172.41.23.145
                 Subnet Mask: 255.255.0.0
           Broadcast Address: 172.41.255.255
            Physical Address: 00:4d:04:a0:9c:b3
                    Enabled?: yes
           Maintenance Busy?: no
             Active Channels: 0
```

The same information that is displayed by **`status clan-port`** can be invoked with **`status link`** ***`n`***. See status link on page 362 for more information.

Action/Object	Qualifier	Qualifier Description	Login	Default
`status clan-port`	***`port location`***	C-LAN port location		1

clan-usage

status clan-usage has been replaced with **status socket-usage**.

See:
status socket-usage on page 550.

cleared-alarm-notif

status cleared-alarm-notif

Expert Systems use status **cleared-alarm-notif** to detect chronic alarming conditions. If **cleared-alarm-notif** displays **Feature is suspended**, Expert Systems can identify open trouble tickets as chronic problems for special consideration.

Action/Object	Qualifier	Qualifier Description	Login	Default
cleared-alarm-notif	*1* *2*	First OSS telephone number status of Cleared Alarm Notification. Second OSS telephone number status of Cleared Alarm Notification.	init inads craft cust rcust	First OSS telephone number for the Cleared Alarm Notification status.

communication-interface links

See:
change communication-interface links on page 155
display communication-interface links on page 156

change communication-interface links

change communication-interface links

Use **`change communication-interface links`** to administer the links to the servers from peripheral adjuncts.

Action/Object	Qualifier	Qualifier Description	Login	Default
`change communication-interface links`			init inads craft	

See status link on page 362 for more details on links.

display communication-interface links

`display communication-interface links [schedule]`

Use **`display communication-interface links`** to list translations for the links to the servers from peripheral adjuncts.

Action/Object	Qualifier	Qualifier Description	Login	Default
`display communication-interface links`	schedule		init inads craft	

See status link on page 362 for more details on links.

The following example shows the output from **`display communication-interface links`**.

```
display communication-interface links                                Page 1 of 15
                              INTERFACE LINKS

Link Enab Est Ext           Type  Dest.      Conn.   Name (20 characters)
          Conn                    Number     Module
 1:
 2:
 3:
 4:
 5:
 6:
 7:
 8:
 9:
10:
11:
12:
13:
14:
15:
16:
17:
```

display communication-interface links field descriptions

display communication-interface links field descriptions ***1 of 2***

Field	Description
Link	Number of the administered link (data module screen).
Enable	**y/n** Depending upon data module administration (processor interface, Ethernet, and PPP).
Est Conn	Establish connection data from the data module forms (processor interface and PPP).
Ext	Extension number of the local data module for this link.
Type	Protocol for this link: · **ppp** · **ethernet**
Dest. Number	Destination of the link as administered on the data module forms (processor interface and PPP).
	1 of 2

display communication-interface links field descriptions ***2 of 2***

Field	Description
DTE/DCE	Processor interface administration from data module screen (processor interface only).
Conn. Module	Connected data module administration from data module screen (processor interface)
Name	Name from the data module forms (processor interface, Ethernet, and PPP)
	2 of 2

communication-interface processor-channels

See:
change communication-interface processor-channels on page 158
display communication-interface processor-channels on page 161

change communication-interface processor-channels

`change communication-interface processor-channels [schedule]`

Use **`change communication-interface processor-channel`** to assign each local processor channel to an interface link channel, and to define the information associated with each processor channel on an Ethernet link.

Action/Object	Qualifier	Qualifier Description	Login	Default
`change communication-interface processor-channels`	***`schedule`***		init inads craft	

The following shows the output from **`change communication-interface processor-channels`**

```
change communication-interface processor-channels                Page 1 of 24
                        PROCESSOR CHANNEL ASSIGNMENT
Proc                Gtwy    Interface        Destination        Session    Mach
Chan  Enable  Appl.  To  Mode  Link/Chan  Node        Port  Local/Remote  ID
  1:    _  ________ ___   _    __  _____  _________  0____  ___   ___    __
  2:    _  ________ ___   _    __  _____  _________  0____  ___   ___    __
  3:    _  ________ ___   _    __  _____  _________  0____  ___   ___    __
  4:    _  ________ ___   _    __  _____  _________  0____  ___   ___    __
  5:    _  ________ ___   _    __  _____  _________  0____  ___   ___    __
  6:    _  ________ ___   _    __  _____  _________  0____  ___   ___    __
  7:    _  ________ ___   _    __  _____  _________  0____  ___   ___    __
  8:    _  ________ ___   _    __  _____  _________  0____  ___   ___    __
  9:    _  ________ ___   _    __  _____  _________  0____  ___   ___    __
 10:    _  ________ ___   _    __  _____  _________  0____  ___   ___    __
 11:    _  ________ ___   _    __  _____  _________  0____  ___   ___    __
 12:    _  ________ ___   _    __  _____  _________  0____  ___   ___    __
 13:    _  ________ ___   _    __  _____  _________  0____  ___   ___    __
 14:    _  ________ ___   _    __  _____  _________  0____  ___   ___    __
 15:    _  ________ ___   _    __  _____  _________  0____  ___   ___    __
 16:    _  ________ ___   _    __  _____  _________  0____  ___   ___    __
```

change communication-interface processor-channels field descriptions

change communication-interface processor-channels field descriptions ***1 of 2***

Field	Description
Enable	**y/n** The processor channel is enabled/disabled.
Appl	Identifies the switch application type/adjunct connection used on this channel over a dedicated network. The application gateway is used for conversion between ISDN and TCP/IP. Other forms must be properly administered as well. Valid entries are • **audix** - Voice Messaging • **dcs** - Distributed Communication System • **fp-mwi -** ISDN Feature Plus Message Waiting Indication. This channel passes message waiting light information for subscribers on the messaging system, from a messaging adjunct on a main switch for a phone on a satellite switch. The terminating location (far end) of this channel must be a Communication Manager system compatible with ISDN Feature Plus proprietary protocol. • **gateway -** Supports an X.25-connected AUDIX connected to an ISDN DCS network. • **gtwy-tcp** - Supports a TCP connected AUDIX connected to an ISDN DCS network. • **mis** - Management Information System, otherwise known as CMS (Communication Management System) • **qsig-mwi** - QSIG Message Waiting Indication. Used with a QSIG-based interface to a messaging system, this channel passes message waiting light information for subscribers on the messaging system. • blank All “msa” entries refer to an obsolete product. An error message appears if an “msa” value is entered: **msaamwl, msaclk, msahlwc, msallwc**, **msamcs.** Voice Messaging.
Gtwy To	Identifies which processor channel the given processor channel is serving as a gateway to. Valid entries are a number between 1-(maximum number of processor channels), or blank.
	1 of 2

change communication-interface processor-channels field descriptions ***2 of 2***

Field	Description
Mode	Identifies whether the IP session is passive (client) or active (server). This field must be blank if the interface link is **processor**. This field cannot be blank if the type of interface link is **ethernet** or **ppp**. Valid entries are **c** (client), **s** (server), or blank.
Interface Link	Identifies the physical link carrying this processor (virtual) channel. Links are numbered 1 through 254 or **p** for processor.
Interface Chan	For TCP/IP, interface channel numbers are in the range 5000-64500. The value 5001 is recommended for CMS and 5003 is recommended for DCS.
Destination Node	Identifies the switch or adjunct at the far end of this link. Enter an adjunct name, switch name, far-end IP address, node ID, or leave blank for services local to this switch. For ppp connections, match the Destination Node Name on the ppp Data Module screen.
Destination Port	Identifies the port number of the destination. The number 0 means any port can be used. Valid entries are **0**, **5000**-**64500**.
Session Local	The Local and Remote Session numbers can be any value between 1 and 256 (si model) or 384 (r model), but they must be consistent between endpoints. For each connection, the Local Session number on this switch must equal the Remote Session number on the remote switch and vice versa. It is allowed, and sometimes convenient, to use the same number for the Local and Remote Session numbers for two or more connections.
Session Remote	
Mach ID	Destination switch ID identified on the dial plan of the destination switch.
	2 of 2

display communication-interface processor-channels

`display communication-interface processor-channels [ schedule ]`

Use **`display communication-interface processor-channels`** to list the TCP/IP listen port to carry each processor (virtual) channel (on an Ethernet link).

Action/Object	Qualifier	Qualifier Description	Login	Default
`display communication-interface processor-channels`			init inads craft	

conference

status conference

status conference [all | *conference-ID*] [schedule]
status conference [all | *conference-ID*] [endpoint all | *endpoint-id*]

Use **status conference** to help identify problems with a multimedia conference, and to help solve more complex problems.

Action/Object	Qualifier	Qualifier Description	Login	Default
status conference	**all** ***conference-ID*** **endpoint all *endpoint-id*** **schedule**	display all stored conference data display data on specified conference (current or last completed) See Common Input Parameters on page 25.	inads init system technician	all
		Examples: **status conference** **status conference 2** **status conference endpoint**		

The first screen appears when **status conference** is entered and at least 1 valid conference is found.

Use **status conference** to solve the following multimedia problems:

- A user unable to join or remain joined to a conference.
- A conference having poor video quality due to it being downgraded because of the automatic algorithms - audio AUTO mode and the Px64 video picture specifications.
- A user not receiving full service, such as being an audio-only endpoint (no video).
- An audio add-on user unable to join or remain joined to a conference.
- A conferee not being seen by other users due to interworking problems.
- A user not able to participate in the Multipoint Communications Service conference.
- A continuous conference not switching endpoints in or out of quadrants.

Output for status conference, page 1

Depending on the **status conference** command entered, it is possible to have many records display. Active conferences display first (in order of conference-ID), followed by completed conferences (most recently completed first). There is no data or information about conferences not yet begun.

The data for each conference displays in 2 parts: the first screen describes the status of the conference and indicates the modes and levels of the conference. It also shows certain endpoint information such as which endpoints are in use and which endpoint caused the conference operating mode to change. This screen is similar to the administration screens. The remainder of the screens display endpoint level data (up to 8 endpoints per screen), displaying the ports and drop reasons.

The screen below shows page 1 of a typical **status conference** screen, when at least 1 valid conference is found.

```
status 50                                                          Page 1 of 2

                      STATUS OF CONFERENCE: 50   Status: in-use

Conference Name: MMCH DYNAMIC          Conference Mode: voice-activated
 Password Scope:
       Password:                          Cascade Mode:
          Class: dedicated                  Audio Mode: G.728
Start Time/Date: 09:08 OCT 28                Data Mode: none            MLP Rate:
 Stop Time/Date: 00:0 000 00           Admin Bandwidth: 64k       No of Channels: 2
          Chair:                        Conf Bandwidth: 64k      Rate Adaptation? y
Format (in/out): CIF                     FPS: 7.5  QFPS: 7.5   Lo/Hi Interworking? n

                                    Dial In  ----Capability---- Rate Bond
   Type Ext Meet-Me Number          Type Use Chl Aud Vid Mlp Gx Adpt Mode Ts Vs
1: P64                               in   c   y   y   c      e               b
2: AUD                               out  y       y
3:
4:
5:
6:
```

status conference field descriptions, page 1

Table 25: status conference field descriptions, page 1 ***1 of 9***

Field	Description
status	The current status of the conference - **active, in-use, complete**
conference name	Always set as **MMCH DYNAMIC**
conference mode	Always set as **voice-activated**
password	Not Applicable
password scope	Not Applicable
cascade mode	Conference cascade mode - blank
audio mode	The current operating audio mode - **G.711-A, G.711-mu, G.728, G.722**
class	The type of conference - **dedicated**
data mode	Data mode capability for this conference - **none, any-mlp, ww-pcs**
MLP rate	MLP Data Rate for this conference - blank.
no of channels	The number of channels (transfer rate) required for each Px64 endpoint - **2**.
Chair	Identifies the current chair token holder. This field is always blank.
conf bandwidth	The current operating channel conference bandwidth. This can be different from the administered bandwidth because of Rate Adaptation.
Rate adaptation	Does this conference support Rate Adaptation? - **n/ y**.
	1 of 9

Table 25: status conference field descriptions, page 1 ***2 of 9***

Field	Description
Format (in/ out)	• For single-screen conference, the video format of the conference, **CIF, QCIF, QCIF/CIF, H.CTS, H.CTX+, and SG4.** • For conferences other than H.261, the input and output formats are always symmetric and the mode is the same for input and output. These display as **H.CTX**, **H.CTX**+, **SG4**. • For H.261 mode non-continuous presence conferences, the format is always symmetric and displays as **CIF** and **QCIF**. The same is true for the non-presentation, continuous presence conference in single-screen. • For presentation mode H.261 single screen continuous presence capable conferences, the input and output formats may be symmetric QCIF/CIF (displayed as **CIF**) or asymmetric QCIF/CIF, depending on if the format is administered as upgradeable. • For quad-screen conferences, the format is QCIF/CIF to reflect the input of QCIF from every participant and output of CIF to every participant. • For presentation mode quad-screen conference, the format is also **QCIF/CIF** to reflect the input/output of every participant except the presenter. In quad-screen mode, the input from the presenter is always **CIF**.
FPS	The CIF frame rate (frames per second) — **'-', 30, 15, 10, 7.5**. FPS indicates the rate that an endpoint is capable of receiving frames. Note that there is no indication of the maximum transmit frame rate nor the current frame rate that the MCU can detect. The frame rate changes as a function of the amount of motion in the input image.
QFPS	The ACIF frame rate (frames per second) — '**- ', 30, 15, 10, 7.5. QFPS** indicates the rate that an endpoint is capable of generating/receiving frames. For quad-screen VAS conferences, QFPS reflects the highest common QCIF frame rate of every endpoint and the rate of the video mixer board, which may be lower than the rest of the participants. Note that QCIF calculation takes into account the highest common CIF frame rate declared by every conference participant, since QCIF rate cannot be greater than that of the highest common CIF rate. For quad-screen presentation conferences, QFPS reflects the highest common QCIF frame rate of every participant and the rate of the video mixer board. Note that the QFPS cannot be greater than the CIF frame rate announced by the presenter. QFPS field is blank for proprietary modes.
	2 of 9

Table 25: status conference field descriptions, page 1 ***3 of 9***

Field	Description
lo/hi interworking	Conference supports Low Speed/High Speed Interworking. Always **n**.
Type	The type of conferee, either Audio/Video (**P64**), Audio Add-on (**AUD**), Cascade Link (**CAS**), BONDing Call (**BOND**), BONDing Cascade Link (**BCAS**), UCC Controller (**UCC**), or Dedicated Access (**DA**). BONDing calls use up to 12 channels to form a single multimedia pipe.
Ext	Endpoint extension chosen at administration. This field is blank.
Meet-me number	Meet-Me Number administered for the Meet-Me Extension. This field is blank.
Dial Type	Indicates whether dial-in or dial-out is used to join the endpoint to the conference - **in, out**. **in** is for dial-in, **out** is for dial-out.
In Use	Is the endpoint currently participating in the conference or in process of connecting to the conference? - **y, c, e, f, n**, blank. • **y** The endpoint is in use and is fully connected on all media in an active conference. • **c** The endpoint is in use and is fully connected, however the endpoint has changed the conference audio or video capability or has changed the rate of the conference because of rate adaptation. This condition requires analysis of this endpoint's capabilities and mode fields to identify which capability was reduced. • **e** The endpoint is in use but the endpoint had capability problems. The endpoint does not have one of the required capabilities (Vid, Bhl, MLP) to be a full participant. For MLP capabilities, see the T120 field. This condition requires analysis of this endpoint's capabilities and mode field to identify the missing capability. • **f** The endpoint is in use but is not connected to all media. This indicates that the endpoint has declared every required capability (channel/video/audio/data) but is not fully connected to all conference media at this time. This endpoint may be in the process of connecting, has failed to connect, or is not a valid video source. This condition requires analysis of this endpoint's capabilities and mode fields to identify the problem. • **n** The endpoint was connected in a conference but has/was disconnected or attempted to connect to a conference but was unsuccessful. • blank until the first call is made from/to the endpoint
	3 of 9

Table 25: status conference field descriptions, page 1 ***4 of 9***

Field	Description
Chl	Data on the quantify and quality of channels (transfer rate)? - **y, e, n**, blank • **y** The endpoint has the required number of channels. • **e** The endpoint has not declared support for the correct number of channels and cannot participate fully in the conference. • **n** The endpoint has declared the correct number of channels, but every channel has not yet joined the conference, due to either a network or endpoint problem. • blank Audio add-on endpoints always set to blank.
Aud	Does it have the required audio capability? - **y, c, e,** blank • **y** The endpoint has the required audio capability. Audio add-on endpoint always have the Aud field set to **y** once the endpoint has joined the conference. • **c** This endpoint is PCM only and it changed the video quality of the conference by changing the operating audio from G.728 to G.711. If the administered audio mode is auto and the administered bandwidth is 112 kbps (56 k/channel) or 128 kbps (64 k/channel), the system starts out with the highest common audio of G.728. When the administered bandwidth is greater than 128 kbps, the system starts out with the highest common bandwidth of 7 kHz. • **e** A PCM-only endpoint that did not have the capability of supporting the administered audio mode of G.728 (such as a data conference), or G. 278/G.711 endpoint that did not have the capability of supporting the administered audio mode of 7 kHz. Such endpoints operate with PCM audio and interwork with the current operating audio mode. • blank until the first call is made from/to the endpoint
	4 of 9

Table 25: status conference field descriptions, page 1 ***5 of 9***

Field	Description
Vid	Does it have the required video capability and is receiving video? - **y, c, e, n**, blank • **y** The endpoint has the required video capability and should be receiving video if the Chl, Aud, and Dat fields are **y**. • **c** It downgraded the conference's video quality - either from CIF to ACIF or by decreasing the frame rate. The conference video mode is set by default to CIF and if a QCIF-only endpoint joins the conference, then the entire conference is made to operate in QCIF, with the video clarity downgraded. Also, the conference frame rate is initially set to the highest frame rate that can then be reduced by any endpoint. If the conference video mode is not administered with upgrade capability, then if the video parameters for a conference have been "downgraded," they are not "upgraded" until every endpoint disconnects from the conference. • **e** The endpoint has not declared any video capability in its cap-set. • **n** Audio only, not receiving video, possibly due to an audio or data problem. • blank Audio add-on endpoints always blank.
Mlp	The state of the Control Link to the ESM (T.120 stack terminator), the endpoint MLP data capability, and the state of the data connection in the T.120 stack. This field value is always blank, indicating that the Data Mode for the conference is `none`, and therefore, the data does not apply, or the endpoint has never joined the conference.
Gx	Does it have the Still Frame Graphics capability? - **y, e,** blank • **y** This endpoint has this capability. • **e** This endpoint did not declare this capability. The conference retains the still frame graphics capability when a non-compliant endpoint joins the conference. • blank This endpoint has never joined the conference.
	5 of 9

Table 25: status conference field descriptions, page 1 ***6 of 9***

Field	Description
Rate Adpt	Rate adaptation/interworking indicator - **5, 6, y, c, e, n**, blank. Values of **5** and **6** apply only to low-speed/high-speed Interworking. Every other value applies only to rate adaptation. • **5** - A 56-kbps (low-speed) endpoint has joined a high-speed (128-kbps or above) conference. This endpoint is connected with audio-only capability, but is neither a valid video source nor destination. • **6** - A 64-kbps (low-speed) endpoint has joined a high-speed (128-kbps or above) conference. This endpoint is connected with audio-only capability, but is neither a valid video source nor destination. • **y** - This endpoint has joined a conference at the administered rate of 64 kbps, but (because rate adaptation to 56 kbps was triggered by another endpoint) this endpoint has successfully rate-adapted to 56 kbps. • **c** - The administered bandwidth of a conference is 64 kbps and this endpoint has joined the conference at 56 kbps. The first 56-kbps endpoint that joins a 64-kbps rate-adaptable conference triggers rate adaptation (see **Join Time** below). • **n** - A 64-kbps conference was triggered to rate adapt to 56 kbps by some other endpoint. This endpoint joined the conference at the bandwidth of 64 kbps, but encountered problems in rate adapting down to 56 kbps. This endpoint may have the audio and may be receiving video, but is not a valid video source. • blank - Rate adaptation was never triggered by any endpoints. So, if an endpoint is in use and connected, then it joined the conference at the administered bandwidth.
Bond Mode	BONDing Mode - blank. This field is blank for calls that are not related to bonding.
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Table 25: status conference field descriptions, page 1 ***7 of 9***

Field	Description
Ts	Indication of the talking state of the endpoint - **t, m, M, S**, blank. • **t** - At the time the command was invoked, voice energy (talking) was detected from the endpoint. • **m** - At the time the command was invoked, the endpoint indicated to the MCU that it was muted. It is possible that an endpoint may mute, but not send any indication to the MCU. In this situation the MCU does not display a mute indication. • **M** - At the time the command was invoked, the endpoint's audio was muted via UDD/CRCS Agent interface. M displays when both the endpoint and the UCC/CRCS Agent have muted the endpoint audio. • **S** - At the time the command was invoked, the endpoint's audio was muted because of solo-audio state set by UCC/CRCS Agent. While in solo-audio state, new endpoints joining the conference are automatically muted. • blank - At the time the command was invoked voice energy (talking) was not being detected from the endpoint.
Vs	• **a** This value applies only to quad-screen conferences. *a indicates that an endpoint is part of the current mixed image and is fixed in one of the quadrants via administration. ***a** indicates that the endpoint is fixed in a quadrant but is not currently connected (Fill image displays). • **b** For full-screen conference it indicates that at the time the command was invoked, this endpoint's video was being broadcast to other sites. This conference was in VAS, broadcast, or presentation mode. For quad-screen VAS conference it is prefixed with an asterisk (*) and indicates that this endpoint's video is part of the mixed image because of VAS. For quad-screen presentation conferences, **b** (without an asterisk) identifies the presenter as the broadcaster. • **B** At the time the command was invoked the endpoint's video was being broadcast to other sites because of the UCC roll call feature. UCC roll call feature can only be performed in full-screen mode. • **c** At the time the command was invoked this endpoint's video was being broadcast to other sites. The conference was in chair mode and the broadcaster was designated by the chair. Chair features can only be performed in full-screen mode.
	7 of 9

Table 25: status conference field descriptions, page 1 ***8 of 9***

Field	Description
Vs (cont'd)	• **i** - At the time the command was invoked the endpoint was not a valid video source. For continuous presence conference, if this endpoint is fixed in a particular quadrant, an asterisk (#) is affixed before i. • **r** - For full-screen conferences, at the time the command was invoked the endpoint's video was the return video to the broadcaster. For continuous presence conference in presentation mode, *r represents a VAS quadrant that is part of the mixed image. • **R** - At the time the command was invoked, the endpoint's video was the return video to the broadcaster because of the UCC browse feature. UCC Browse feature can only be performed in full-screen mode. • **s** - At the time the command was invoked this endpoint's video was suppressed at the request of the endpoint. For continuous presence conference with fixed quadrant participants, if this endpoint is fixed in a particular quadrant a **#** is affixed before **s**. • **S** - At the time the command was invoked this endpoint's video was suppressed via UCC/CRCS Agent interface. For continuous presence conference with fixed quadrant participants, if this endpoint is fixed in a particular quadrant, **#** is affixed before **S**. **S** appears when the endpoint and the UCC/CRCS Agent have suppressed the endpoint video. • **u** - For full-screen conferences, at the time the command was invoked this endpoint's video was being broadcast to other sites. The conference was in VAS mode and the broadcaster was designated by the UCC/CRSCS Agent interface. For quad-screen conferences, it indicates that UCC/CRCS Agent designated this endpoint as fixed in a quadrant. An asterisk (*) is affixed before u if the endpoint is currently part of the quad image, and **#** is affixed if the endpoint is not currently joined.
	8 of 9

Table 25: status conference field descriptions, page 1 ***9 of 9***

Field	Description
	• **U** Applies only to quad-screen conference and indicates that UCC/CRCS Agent designated a quadrant as VAS. An asterisk (*) is affixed before **U** to indicate that this endpoint is part of the current quad image. • **v** At the time the command was invoked this endpoint's video was being broadcast to other sites. The conference was in VAS mode but the endpoint has asked to be a broadcaster via "See-Me" request and was granted a MCV (Multipoint Command Visualize) token. The See-Me feature is only performed in full-screen mode. • **blank** At the time of the request the endpoint's video was not broadcast, return, video, or part of the mixed-image, but it is a valid video source.
	9 of 9

Output for status conference, page 2

```
status conference                                                    page 2 of 2
                              STATUS OF CONFERENCE:

                    Sum Grp: Group1  Group2  Group3  Group 4
                         L1:
                         L2:

            Join    Drop    Drop    AC  --------Ports--------- Sum
      Ext   Time    Time   Reason   Num Trunk   Video  Aud/Esm Grp  Software
1:
2:
3:
4:
5:
6:
```

status conference field descriptions, page 2

Table 26: status conference field descriptions, page 2 ***1 of 4***

Field	Description
Sum Grp	The VD audio Level 1 (L1) and Level 2 (L2) summer group parts for each assigned group (1–4). Summer parts are assigned only for conferences with over 6 participants. When a conference operates at an audio mode of 7 kHz (administered audio mode is 7 kHz, or auto with the bandwidth greater than 128 kbps), the system allocates “primary” and “secondary” L1 and L2 summer parts. These primary and secondary parts are allocated as adjacent port slots on the same board. Status conference only displays the primary summer ports. The secondary summer ports are always one slot higher than the displayed primary summer port.
Join Time	Time (in 24-hour notation) when the channel joined the conference.
Drop Time	Time (in 24-hour notation) when the channel disconnected. If the first channel has a drop time, then it means that the endpoint is idle. If there is a drop time without a join time, it means that the call disconnected without being joined to the conference.
Drop Reason	The reason for the channel’s disconnect: • **2-pri** This drop reason occurs when an administration error causes a mismatch in primary-secondary designation for a cascade link. This mismatch shows that both MCUs are administered as primaries (see “Cascading” for a description of primary-secondary compatibility). • **2-sec** This drop reason occurs when an administration error causes a mismatch in primary-secondary designation for a cascade link. This mismatch shows that both MCUs are administered as secondaries (see “Cascading” for a description of primary-secondary compatibility). • **Agent** The reservation agent has caused the call to disconnect (for example, the agent has changed a connected dial-out destination number). • **Bandwidth** mismatch between a call and the conference it attempted to join. For example, a 56-kbps call attempted to join a 64-kbps conference that does not allow rate adaptation. • **BondHshake** BONDing handshake drop reason can be caused due to the following reasons: information channel parameter not supported or invalid, parameter negotiation terminated out of sequence, timer expired because of the secondary channels did not establish, or BONDing framing was not detected for one of the other channels.
	1 of 4

Table 26: status conference field descriptions, page 2 ***2 of 4***

Field	Description
Drop Reason	• **Busy** This dial-out drop reason occurs when the MCU detects that the conferee's terminal equipment is busy. This drop reason is detected by an ISDN cause value (for example h0). See "Dial-out" for a description of CPTR usage. • **Chair** disconnected the endpoint, using either Chair Command Disconnect (CCD) or Chair Command Kill (CCK) signals. • **Conf End** The conference was ended due to reaching stop time for a reserved conference or due to an active conference being converted to file. • **Endpoint** Clearing received from DS1 - the disconnect came from the endpoint. The endpoint notified the MCU that it intended to disconnect. • **Far-end** Clearing received from DS1 - the disconnect came from either the network or the endpoint. • **Handshake** Either framing was never found (the endpoint could not complete initialization - problems finding Frame Alignment Signal (FAS), Multi Frame Alignment (MFA) and getting a corrected coded cap-set) or framing was lost for some time (over 40 seconds) and the endpoint was disconnected. • **IDtimeout** The MCU has not received response to the UIN/password Query from the H.320 user after three attempts. Each attempt has a system administered timeout period. • **Internal** MCU has a problem allocating trunk resources necessary to route the dial-out call for the specified dial-numbers. This problem can be associated with routing pattern or trunk associated translation (for example, TAC specified in the dial-out number or routing pattern points to a trunk group without members), or it can indicate a lack of trunk resources (for example, every trunk member is maintenance busy or every in-service member is busy on a call). • **Network** Clearing received from DS1 - the disconnect came from the network. The endpoint that had the disconnect notification capability disconnected without notifying the MCU. • **No-ring** This dial-out drop reason occurs when the call has been up for 30 seconds and no ringing is detected. • **Not-MCU** The dial-out destination number(s) of the "CAS" extension has terminated to a number that is not a dial-in cascade MCU extension.
	2 of 4

Table 26: status conference field descriptions, page 2 ***3 of 4***

Field	Description
Drop Reason (cont'd)	• **Password** Either the user entered the wrong password or the audio add-on user did not enter it within the specified time period. Note that the audio add-on user gets one attempt to enter a correct password and inter-digit timing for each digit (that is, about 10 seconds between digits). • **Pre-AnsDrop** The call disconnected before answer by an endpoint. The cause of the disconnect may be the network, an endpoint, or a terminal adapter. This drop reason is different from 'No-answer,' which indicates that a 60-second timeout occurred while alerting. In this case, the call drops before the 60-second timer has expired. Some busy endpoints connected through terminal adapters display this behavior. • **Resource** MCU could not provide resources (VC or MMI) when the call arrived or lost the resources during the call. This could be due to them being Out of Service, busied out by craft, or being used by system maintenance. This drop reason could also occur if the DS1/ MMI cable is disconnected. If there was a resource problem when the call arrived, it would get reorder (fast busy) and not get disconnected by the MCU. • **Reorder** This dial-out drop reason occurs when the MCU detects that there are no available trunks in the network to place the call. This drop reason is detected by MCU CPTR resources. See "Dial-out" for a description of CPTR usage. • **System** An MCU restart (level 2) disconnected every call. • **UIN-Inv** The user entered an invalid User Identification Number. • **Unknown** The system could not determine the cause of the disconnect. • **Wrong-num** This dial-out drop reason occurs when the MCU detects the wrong destination number was dialed. This drop reason is detected by MCU CPTR resources SDN cause value. See "Dial-out" for details. • **UCC** controller intentionally disconnected the endpoint.
AC Num	Administered Connection Number - from 1 to 128. AC number can be used to further diagnose a problem by combining `status conference` information with `status administered connection` and data stored in the error and alarm logs.
Ports Trunk	The data endpoint that the channel is using.
Ports Video	The MMI port for the channel.
	3 of 4

Table 26: status conference field descriptions, page 2 ***4 of 4***

Field	Description
Ports Aud	If the endpoint type is not “UCC,” the VC audio encoder port (which is always paired to a decoder port) for the channel (only the first channel). Because only one audio encoder port is allocated per endpoint, it appears together with the ESM data port in the endpoint’s channel 1 port slot position of the `Port Aud/ESM` column. For “UCC” endpoint type, the channel 1 port slot position displays the allocated Call Classifier resource.
Ports ESM	The Expansion Service Module MMI data port. This field is always blank.
Sum Grp	Endpoint’s assigned summer group number. The summer group port assignments are on screen 1.
software	For Avaya use only.
	4 of 4

Output for status conference endpoint

`status conference x endpoint y`

This is an example of the first page of **`status conference x endpoint y`**. Data relevant for each endpoint appears on 6 pages. If the endpoint-ID of **`all`** is used, every possible endpoint associated with the specified conference appears.

```
status conference endpoint                                          page 1 of 6
              STATUS OF CONFERENCE ___   ENDPOINT: __            Status: ________
Ext: _____  Type: ____       Manufacturer/Country: ____/____   Product: _____
   Terminal Name: _______________       Data Mode: _________  MLP Rate: ____
 Admin Bandwidth: ____                                  Rate Adaptation: _
  Conf Bandwidth: ____                               Lo/Hi Interworking: _
  Meet-Me Number: ____________________       Dial Out #1: ________________________
  Sum Grp: _  L1: ______  L2: ______                  #2: ________________________
      Quadrature: ______ ________

                     ENDPOINT STATES/CAPABILITIES/MODES
                In  Enh  ----Capability---- Rate Bond
                Use BAS  Chl Aud Vid Mlp Gx Adpt Mode  Ts Vs
                 -   -    -   -   -   -  -    -   -    -   -
```

status conference endpoint field descriptions, page 1

Table 27: status conference endpoint field descriptions, page 1 ***1 of 8***

Field	Description
Endpoint	Endpoint-ID is a slot number associated with the endpoint entered on the conference forms.
Product	Product identification number obtained from the endpoint.
Manufacturer/ Country	Manufacturer identification number and manufacturer's country code obtained from the endpoint.
Terminal Name	blank
Sum Grp	Summer group number to which this endpoint belongs and the VC Audio Level (L1) and Level 2 (L2) summer ports for this group. These fields have an entry only for conferences with over 6 participants.
Dial Out #1 Dial Out #2	Blank Blank
	1 of 8

Table 27: status conference endpoint field descriptions, page 1 ***2 of 8***

Field	Description
In Use	Is the endpoint currently participating in the conference or in process of connecting to the conference? – **y**, **c**, **e**, **f**, **n**, **blank**. • **y** – The endpoint is in use and is fully connected on all media in an active conference. • **c** – The endpoint is in use and is fully connected, however the endpoint has changed the conference audio or video capability or has changed the rate of the conference because of rate adaptation. This condition requires analysis of this endpoint's capabilities and mode fields to identify which capability was reduced. • **e** – The endpoint is in use but the endpoint had capability problems. The endpoint does not have one of the required capabilities (Vid, Bhl, MLP) to be a full participant. For MLP capabilities, see the T120 field. This condition requires analysis of this endpoint's capabilities and mode field to identify the missing capability. • **f** – The endpoint is in use but is not connected to all media. This indicates that the endpoint has declared every required capability (channel/video/audio/data) but is not fully connected to all conference media at this time. This endpoint may be in the process of connecting, has failed to connect, or is not a valid video source. This condition requires analysis of this endpoint's capabilities and mode fields to identify the problem. • **n** – The endpoint was connected in a conference but has/was disconnected or attempted to connect to a conference but was unsuccessful. • blank – The field is blank until the first call is made from/to the endpoint.
Enh BAS	EnhancedBasic Service Flag – **n**, **y** **y** – The endpoint supports the enhanced BAS commands/caps; **n** – The endpoint only supports the basic BAS commands/caps.
	2 of 8

Table 27: status conference endpoint field descriptions, page 1 ***3 of 8***

Field	Description
Chl	Data on the quantify and quality of channels (transfer rate)? – **y**, **e**, **n**, blank • y – The endpoint has the required number of channels. • **e** – The endpoint has not declared support for the correct number of channels and cannot participate fully in the conference. • **n** – The endpoint has declared the correct number of channels, but every channel has not yet joined the conference, due to either a network or endpoint problem. • blank – Audio add-on endpoints always have a blank **Chl** field.
Aud	Does it have the required audio capability? – **y**, **c**, **e**, blank • **y** – The endpoint has the required audio capability. Audio add-on endpoint always have the Aud field set to **y** once the endpoint has joined the conference. • **c** – This endpoint is PCM only, and it changed the video quality of the conference by changing the operating audio from G.728 to G.711. If the administered audio mode is auto and the administered bandwidth is 112 kbps (56 k/channel) or 128 kbps (64 k/channel), the system starts out with the highest common audio of G.728. When the administered bandwidth is greater than 128 kbps, the system starts out with the highest common bandwidth of 7 kHz. • **e** – A PCM-only endpoint that did not have the capability of supporting the administered audio mode of G.728 (such as a data conference) • G – 278/G.711 endpoint that did not have the capability of supporting the administered audio mode of 7 kHz. Such endpoints operate with PCM audio and interwork with the current operating audio mode. • blank – The field is blank until the first call is made from/to the endpoint.
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Table 27: status conference endpoint field descriptions, page 1 ***4 of 8***

Field	Description
Vid	Does it have the required video capability and is receiving video? – **y**, **c**, **e**, **n**, blank • **y** – The endpoint has the required video capability and should be receiving video if the Chl, Aud, and Dat fields are **y**. • **c** – It downgraded the conference's video quality - either from CIF to ACIF or by decreasing the frame rate. The conference video mode is set by default to CIF and if a QCIF-only endpoint joins the conference, then the entire conference is made to operate in QCIF, with the video clarity downgraded. Also, the conference frame rate is initially set to the highest frame rate that can then be reduced by any endpoint. If the conference video mode is not administered with upgrade capability, then if the video parameters for a conference have been "downgraded," they are not "upgraded" until every endpoint disconnects from the conference. • **e** – The endpoint has not declared any video capability in its cap-set. • **n** – Audio only, not receiving video, possibly due to an audio or data problem. • blank – Audio add-on endpoint always have the Vid field set to `blank`.
Mlp	The state of the Control Link to the ESM (T.120 stack terminator), the endpoint MLP data capability, and the state of the data connection in the T.120 stack. This field value is always blank, indicating that the Data Mode for the conference is `none`, and therefore, the data does not apply, or the endpoint has never joined the conference.
Gx	Does it have the Still Frame Graphics capability? – **y**, **e**, blank • **y** – This endpoint has this capability. • **e** – This endpoint did not declare this capability. The conference retains the still frame graphics capability when a non-compliant endpoint joins the conference. • blank – This endpoint has never joined the conference.
	4 of 8

Table 27: status conference endpoint field descriptions, page 1 ***5 of 8***

Field	Description
Rate Adpt	Rate adaptation/Interworking indicator – **5**, **6**, **y**, **c**, **e**, **n**, blank. Values of **5** and **6** apply only to low-/high-speed interworking. Every other value applies only to rate adaptation. • **5** – A 56-kbps (low-speed) endpoint has joined a high-speed (128-kbps or above) conference. This endpoint is connected with audio-only capability, but is neither a valid video source nor destination. • **6** – A 64-kbps (low-speed) endpoint has joined a high-speed (128-kbps or above) conference. This endpoint is connected with audio-only capability, but is neither a valid video source nor destination. • **y** – This endpoint has joined the conference at the administered rate of 64 kbps, but (because rate adaptation to 56 kbps was triggered by another endpoint) this endpoint has successfully rate adapted to 56 kbps. • **c** – The administered bandwidth of the conference is 64 kbps and this endpoint has joined the conference at 56 kbps. The first 56-kbps endpoint that joins 64-kbps rate-adaptable conference triggers rate adaptation (see **Join Time** below). • **n** – A 64-kbps conference was triggered to rate adapt to 56 kbps by some other endpoint. This endpoint joined the conference at the bandwidth of 64 kbps, but encountered problems in rate adapting down to 56 kbps. This endpoint may have the audio and may be receiving video, but is not a valid video source. • blank – Rate adaptation was never triggered by any endpoints. So, if this endpoint is in use and connected, then it joined the conference at the administered bandwidth.
Bond Mode	BONDing Mode – blank. This field is blank for calls that are not related to bonding.
	5 of 8

Table 27: status conference endpoint field descriptions, page 1 ***6 of 8***

Field	Description
Ts	Indication of the talking state of the endpoint – **t**, **m**, **M**, **S**, blank. • **t** – At the time the command was invoked, voice energy (talking) was detected from the endpoint. • **m** – At the time the command was invoked, the endpoint indicated to the MCU that it was muted. It is possible that an endpoint may mute, but not send any indication to the MCU. In this situation the MCU does not display a mute indication. • **M** – At the time the command was invoked, the endpoint's audio was muted via UDD/CRCS Agent interface. M displays when both the endpoint and the UCC/CRCS Agent have muted the endpoint audio. • **S** – At the time the command was invoked, the endpoint's audio was muted because of solo-audio state set by UCC/CRCS Agent. While in solo-audio state, new endpoints joining the conference are automatically muted. • blank – At the time the command was invoked voice energy (talking) was not being detected from the endpoint.
	6 of 8

Table 27: status conference endpoint field descriptions, page 1 ***7 of 8***

Field	Description
Vs	Indication of the MCU video state for this endpoint – **a**, **b**, **B**, **c**, **i**, **r**, **R**, **s**, **S**, **u**, **U**, **v**, blank. For quad-screen conferences an * is affixed before the value of Vs to indicate that an endpoint is currently part of the mixed image. A **#** may be affixed before the value of Vs to indicate that an endpoint was fixed to be in the mixed image (via administration or UCC/CRCS Agent), but instead, a Fill video is shown in its place. This occurs when the video of an endpoint that is fixed in a quadrant cannot be used as a video source because the endpoint is currently not joined to the conference, has suppressed its video, or has invalid video to be the video source. Notice that at most four endpoints have an * or **#** affixed before the Vs field value. For quad-screen conference in VAS mode, the mixed image is broadcast to every endpoint. For quad-screen conference in presentation mode, the mixed image is return video to the presenter. • **a** – This value applies only to quad-screen conferences. *a indicates that an endpoint is part of the current mixed image and is fixed in one of the quadrants via administration. ***a** indicates that the endpoint is fixed in a quadrant but is not currently connected (Fill image displays). • **b** – For full-screen conference it indicates that at the time the command was invoked, this endpoint's video was being broadcast to other sites. This conference was in VAS, broadcast, or presentation mode. For quad-screen VAS conference it is prefixed with an asterisk (*****) and indicates that this endpoint's video is part of the mixed image because of VAS. For quad-screen presentation conferences, **b** (without an asterisk) identifies the presenter as the broadcaster. • **c** – At the time the command was invoked this endpoint's video was being broadcast to other sites. The conference was in chair mode and the broadcaster was designated by the chair. Chair features can only be performed in full-screen mode. • **B** – At the time the command was invoked the endpoint's video was being broadcast to other sites because of the UCC roll call feature. UCC roll call feature can only be performed in full-screen mode. • **i** – At the time the command was invoked the endpoint was not a valid video source. For continuous presence conference, if this endpoint is fixed in a particular quadrant, an asterisk (#) is affixed before i.
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Table 27: status conference endpoint field descriptions, page 1 ***8 of 8***

Field	Description
Vs *(cont'd.)*	• **r** – For full-screen conferences, at the time the command was invoked the endpoint's video was the return video to the broadcaster. For continuous presence conference in presentation mode, *r represents a VAS quadrant that is part of the mixed image. • **R** – At the time the command was invoked, the endpoint's video was the return video to the broadcaster because of the UCC browse feature. UCC Browse feature can only be performed in full-screen mode. • **s** – At the time the command was invoked this endpoint's video was suppressed at the request of the endpoint. For continuous presence conference with fixed quadrant participants, if this endpoint is fixed in a particular quadrant a **#** is affixed before **s**. • **S** – At the time the command was invoked this endpoint's video was suppressed via UCC/CRCS Agent interface. For continuous presence conference with fixed quadrant participants, if this endpoint is fixed in a particular quadrant, **#** is affixed before **S**. **S** displays when both the endpoint and the UCC/CRCS Agent have suppressed the endpoint video. • **u** – For full-screen conferences, at the time the command was invoked this endpoint's video was being broadcast to other sites. The conference was in VAS mode and the broadcaster was designated by the UCC/CRSCS Agent interface. For quad-screen conferences, it indicates that UCC/CRCS Agent designated this endpoint as fixed in a quadrant. An asterisk (*) is affixed before u if the endpoint is currently part of the quad image, and **#** is affixed if the endpoint is not currently joined. • **U** – Applies only to quad-screen conference and indicates that UCC/CRCS Agent designated a quadrant as VAS. An asterisk (*) is affixed before **U** to indicate that this endpoint is part of the current quad image. • **v** – At the time the command was invoked this endpoint's video was being broadcast to other sites. The conference was in VAS mode but the endpoint has asked to be a broadcaster via "See-Me" request and was granted a MCV (Multipoint Command Visualize) token. The See-Me feature is only performed in full-screen mode. • blank – At the time of the request the endpoint's video was not broadcast, return, video, or part of the mixed-image, but it is a valid video source.
	8 of 8

Page 2 of **`status conference x endpoint y`** shows endpoint channel information.

```
status conference endpoint                                          page 2 of 6

                         ENDPOINT CHANNEL INFORMATION

Chan.  Join  Drop  ----Drop----  AC  ------------Ports----------  Fr
 No.  Time  Time  Reason  Code  Num Trunk  Video Aud/ESM BONDng  Err Software
  1: _____ _____ _________ __  ___ ______ ______ ______ ______  ___ ________
  2: _____ _____ _________ __  ___ ______ ______ ______ ______  ___ ________
  3: _____ _____ _________ __  ___ ______ ______        ______  ___ ________
  4: _____ _____ _________ __  ___ ______ ______        ______  ___ ________
  5: _____ _____ _________ __  ___ ______ ______        ______  ___ ________
  6: _____ _____ _________ __  ___ ______ ______        ______  ___ ________
  7: _____ _____ _________ __  ___ ______ ______        ______  ___ ________
  8: _____ _____ _________ __  ___ ______ ______        ______  ___ ________
  9: _____ _____ _________ __  ___ ______ ______        ______  ___ ________
 10: _____ _____ _________ __  ___ ______ ______        ______  ___ ________
 11: _____ _____ _________ __  ___ ______ ______        ______  ___ ________
 12: _____ _____ _________ __  ___ ______ ______        ______  ___ ________
```

status conference endpoint field descriptions, page 2

status conference endpoint field descriptions, page 2 ***1 of 5***

Field	Description
Join Time	Time (in 24-hour notation) when the channel joined the conference.
Drop Time	Time (in 24-hour notation) when the channel disconnected. If the first channel has a drop time, then it means that the endpoint is idle. If there is a drop time without a join time, it means that the call disconnected without being joined to the conference.
	1 of 5

status conference endpoint field descriptions, page 2 ***2 of 5***

Field	Description
Drop Reason	The reason for the channel's disconnect: • **2-pri** - This drop reason occurs when an administration error causes a mismatch in primary-secondary designation for a cascade link. This mismatch shows that both MCUs are administered as primaries (see "Cascading" for a description of primary-secondary compatibility). • **2-sec** - This drop reason occurs when an administration error causes a mismatch in primary-secondary designation for a cascade link. This mismatch shows that both MCUs are administered as secondaries (see "Cascading" for a description of primary-secondary compatibility). • **Agent** - The reservation agent has caused the call to disconnect (for example, the agent has changed a connected dial-out destination number). • **Bandwidth** - Mismatch between a call and the conference it attempted to join. For example, a 56-kbps call attempted to join a 64-kbps conference that does not allow rate adaptation. • **BondHshake** - BONDing handshake drop reason can be caused due to the following reasons: information channel parameter not supported or invalid, parameter negotiation terminated out of sequence, timer expired because of the secondary channels did not establish, or BONDing framing was not detected for one of the other channels. • **Busy** - This dial-out drop reason occurs when the MCU detects that the conferee's terminal equipment is busy. This drop reason is detected by an ISDN cause value (for example h0). See "Dial-out" for a description of CPTR usage. • **Chair** - disconnected the endpoint, using either Chair Command Disconnect (CCD) or Chair Command Kill (CCK) signals. • **Conf End** - The conference was ended due to reaching stop time for a reserved conference or due to an active conference being converted to file.
	2 of 5

status conference endpoint field descriptions, page 2 ***3 of 5***

Field	Description
Drop Reason (cont'd)	• **Endpoint** Clearing received from DS1—The disconnect came from the endpoint. The endpoint notified the MCU that it intended to disconnect. • **Far-end** Clearing received from DS1—The disconnect came from either the network or the endpoint. • **Handshake** Either framing was never found (the endpoint could not complete initialization—Problems finding Frame Alignment Signal (FAS), Multi Frame Alignment (MFA) and getting a corrected coded cap-set) or framing was lost for some time (over 40 seconds) and the endpoint was disconnected. • **IDtimeout—**The MCU has not received response to the UIN/password Query from the H.320 user after three attempts. Each attempt has a system administered timeout period. • **Internal** MCU has a problem allocating trunk resources necessary to route the dial-out call for the specified dial-numbers. This problem can be associated with routing pattern or trunk associated translation (for example, TAC specified in the dial-out number or routing pattern points to a trunk group without members), or it can indicate a lack of trunk resources (for example, every trunk member is maintenance busy or every in-service member is busy on a call). • **Network** - Clearing received from DS1—The disconnect came from the network. The endpoint that had the disconnect notification capability disconnected without notifying the MCU. • **Not-MCU** - The dial-out destination number(s) of the "CAS" extension has terminated to a number that is not a dial-in cascade MCU extension. • **No-ring** - his dial-out drop reason occurs when the call has been up for 30 seconds and no ringing is detected. • **Reorder** - his dial-out drop reason occurs when the MCU detects that there are no available trunks in the network to place the call. This drop reason is detected by MCU CPTR resources. See "Dial-out" for a description of CPTR usage. • **Pre-AnsDrop**- The call disconnected before answer by an endpoint. The cause of the disconnect may be the network, an endpoint, or a terminal adapter. This drop reason is different from 'No-answer,' which indicates that a 60-second timeout occurred while alerting. In this case, the call drops before the 60-second timer has expired. Some busy endpoints connected through terminal adapters display this behavior.
	3 of 5

status conference endpoint field descriptions, page 2 ***4 of 5***

Field	Description
Drop Reason (cont'd)	• **Resource** - MCU could not provide resources (VC or MMI) when the call arrived or lost the resources during the call. This could be due to them being Out of Service, busied out by craft, or being used by system maintenance. This drop reason could also occur if the DS1/MMI cable is disconnected. If there was a resource problem when the call arrived, it would get reorder (fast busy) and not get disconnected by the MCU. • **Password** - Either the user entered the wrong password or the audio add-on user did not enter it within the specified time period. Note that the audio add-on user gets one attempt to enter a correct password and inter-digit timing for each digit (that is, about 10 seconds between digits). • **System** - An MCU restart (level 2) disconnected every call. • **UIN-Inv** - The user entered an invalid User Identification Number. • **Unknown** -The system could not determine the cause of the disconnect. • **Wrong-num** - This dial-out drop reason occurs when the MCU detects the wrong destination number was dialed. This drop reason is detected by MCU CPTR resources SDN cause value. See "Dial-out" for details. • **UCC** - controller intentionally disconnected the endpoint.
Drop Code	A detail code complementing the Drop Reason (see above). Additional bonding related information may be obtained from supplementary BONDing Drop Codes described above.
AC Num	Administered Connection Number - from 1 to 128. AC number can be used to further diagnose a problem by combining **`status conference`** information with **`status administered connection`** and data stored in the error and alarm logs.
Ports Trunk	The data endpoint that the channel is using.
Ports Video	The MMI port for the channel.
Ports Aud	If the endpoint type is not "UCC," the VC audio encoder port (which is always paired to a decoder port) for the channel (only the first channel). Because only one audio encoder port is allocated per endpoint, it appears together with the ESM data port in the endpoint's channel 1 port slot position of the `Port Aud/ESM` column. For "UCC" endpoint type, the channel 1 port slot position displays the allocated Call Classifier resource.
Ports ESM	The Expansion Service Module MMI data port. This field is always blank.
	4 of 5

status conference endpoint field descriptions, page 2 ***5 of 5***

Field	Description
Ports BONDng	The MMI port used for BONDing for the channel.
Fr Err	Frame error counter. A circular hex counter (0-FF) to indicate the occurrence of framing errors.
	5 of 5

The following screen shows page 3 of **`status conference x endpoint y`**.

```
status conference endpoint                                          page 3 of 6

CONFERENCE INFO: Broadcaster: xx (See-Me)
                   Return Vid: xx

---------- MODE COMMANDS/COMMUNICATION MODES ------|  EPT MISC   | ------- FAW --
 CMD  STAT    CONF         EPT-IN        EPT-OUT   |------ I  O  |       CH1 CH2
----- ---- ------------ ------------- -------------|  AIM: y  n  |       --- ---
XRATE: y   384          384           384          |  VIS  y  n  | A-OUT: y   n
AUDIO: n   G728         neutral       G728         |  MIS:    n  |  A-IN: y   n
56/64: y   derestrict   derestrict    derestrict   |  MCV: n     | M-FRM: y   n
VIDEO: n   H.261        H.261         H.261        |-------------|   MFA: y   n
  MLP: y   MLP-off      MLP-off       MLP-off      | TALK: y 05  |   MFN: y   n
H-MLP: y   H-MLP-off    H-MLP-off     H-MLP-off    | VFCV: y 01  |   FAS: y   n
  LSD: y   LSD-off      LSD-off       LSD-off      | BCTK: n 02  |MCUFAL: 00  00
  HSD: y   HSD-off      HSD-off       HSD-off      | RTTK: y 01  | FEFAL: 00  00
CRYPT: y   encrypt-off  encrypt-off   encrypt-off  | BCLS: n     |
  S/M: y   N-comp-6B-H0 N-comp-6B-H0  N-comp-6B-H0 | RTLS: n     |
                                                   | HYPR: n 00  |
                                                   |DMUTE: n 00  |
                                                   |H.261: n 00  |
                                                   | VFMT: n 00  |
```

status conference endpoint field descriptions, page 3 Conference Info

status conference endpoint field descriptions, page 3 Conference Info

Field	Description
CONFERENCE INFO: Applies mostly to full-screen conferences.	
Broadcaster	Indicates the endpoint number that is the current broadcaster. Applies to full-screen and quad-screen presentation mode conferences. • **Broadcast:** a broadcast mode broadcaster. • **Chair:** the broadcaster was designated by the chair. • **See-Me:** the broadcaster is a result of MCV request from an endpoint. • **Presenter:** a presentation mode broadcaster. • **Rollcall:** the broadcaster was designated by the UCC via the Rollcall feature. • **UCC:** the broadcaster was designated by the UCC. • **VAS:** Voice Activated Switching broadcaster.
Next Broadcaster	Indicates the endpoint number that is selected to be the next broadcaster.
Return Vid	Indicates the endpoint number that is the current return video. The return video can be qualified with the following keywords: • blank**:** the return video is the previous broadcaster forced to be return video because of VAS, action by Chair, action by UCC, or endpoint MCV request. The broadcaster qualifier identifies which action forced this endpoint to become return video. • **Autoscan:** auto scan return video. This is true only when conference mode is broadcast with auto scan. • **Browse:** the return video was designated by the UCC via the Browse feature. • **VAS:** a Voice Activated Switching return video.
Next Return Vid	Indicates the endpoint number that is selected to be the next return video. MCU

status conference endpoint field descriptions, page 3

Table 28: status conference endpoint field descriptions, page 3 MODE COMMANDS/ COMMUNICATION MODES ***1 of 2***

Fields	Description
MODE COMMANDS/COMMUNICATION MODES This is a collection of both incoming and outgoing bandwidth allocations for the multiplex. The Incoming data is the rate at which the MCU thinks the endpoint is communicating based on the Bit-rate Allocation Signal (BAS) codes received from the endpoint/codec and the capabilities the MCU has declared. The Outgoing data is the rate from the MCU toward the endpoint. The following are column definitions for this section of page 3	
CONF	The desired conference operating mode. This may be different from the endpoint in (**EPT-IN**) or endpoint out (**EPT-OUT**) modes.
CMD	labels for the various types of mode commands
STAT	**y**/**n** Compatibility of conference mode and the incoming mode. **y** indicates mode compatibility. **n** indicates that the modes are not compatible.
EPT-IN	Communication modes coming in from an endpoint.
EPT-OUT	Communication modes sent out to an endpoint based on the number of channels connected and the capabilities of the endpoint.
XRATE	One of the supported rates in Table 29: Supported Transfer Rates on page 193. XRATE may be 64 when the endpoint is just dialing in, or in the event of problems. It implies that only one B-channel is being used.
AUDIO	Audio rate (kbps bandwidth) of the conference and the endpoint must be the same but not necessarily their mode. When the audio rate of the conference and the endpoint are different the endpoint's audio will interwork but the endpoint's video will be invalid. MCU may or may not send video to such an endpoint. Table 30: Audio Mode Configurations on page 193 summarizes expected endpoint audio mode with different configurations of transfer rate, facility bandwidth, conference mode, and whether or not every endpoint supports the highest common audio mode (HC audio) when the administered mode is **auto**. The highest common conference mode is dependent on the administered bandwidth. A '–' in the table indicates 'does not apply.' Other possible AUDIO mode values include **neutral** (neutralized I-channel) and **Au-off, Frm** (no audio signal) which never match conference mode and are not supported by MCU.
	1 of 2

Table 28: status conference endpoint field descriptions, page 3 MODE COMMANDS/ COMMUNICATION MODES ***2 of 2***

Fields	Description
56/64	The **56/64** field is **derestrict** when operating at per-channel rates of either 64, 128, 192, 256, 320, 384, 512, 768, 1472, 1536, or 1920 kbps. It is **restrict** when operating at rates of either 56, 112, 168, 224, 280, 336, 448, or 672 kbps. Note that if the conference is configured for N x 56-kbps operation, the endpoint may signal either via capabilities or modes that is operating at the proper rate. In such a case, even when we receive `derestrict` command which does not match the conference communication mode of **restrict**, if the capability indicates **restrict** (**MISC** capability has **restrict** displayed on Page 4) the **STAT 56/64** is **y** to indicate 56/64 compatibility between the conference and the endpoint.
VIDEO	The Video mode: **H.261** (recommended), **H.CTX** (proprietary), **H.CTX**+ (proprietary), or **SG4** (proprietary) indicate that video is on in the direction indicated; **video-off** when the video is off.
MLP	Multi Layer Protocol data mode. When **Data Mode** is administered as **any-mlp** or **ww-pcs**, the MLP mode should be **var-MLP**. Other values will affect video status. The **MLP** mode should be **MLP-off** when Data Mode is administered as **none**. Again, other values in this mode will affect video status.
H_MLP	The High Speed MLP mode. The HMLP mode should be **H-MLP-off**. Other values in this mode will affect video status.
LSD	Low Speed Data mode. The LSD mode should be **LSD-off**. Other values in this mode will affect video status.
HSD	High Speed Data mode. The HSD mode should be **HSD-off**. Other values in this mode will affect video status.
CRYPT	Encryption mode. The CRYPT mode should be **encrypt-off**. Other values in this mode will affect video status.
S/M	Single-/multi-channel interoperability mode. **6B-H0-comp** indicates that the sender is interoperating multiple channels and a single channel (for example, 6B and H0). **Not-comp-6B-H0** indicates that the sender is not interoperating between 6B and H0. Normally this value is **Not-comp-6B-H0**. Other values in this mode will affect video status.
	2 of 2

Table 29: Supported Transfer Rates

XRATE	Bandwidth of the Call
2x64	2B (2x56 or 2x64)
128	112 or 128 kbps
196	168 or 196 kbps
256	224 or 256 kbps
320	280 or 320 kbps
384	336 or 384 kbps
512	512 kbps
768	768 kbps
1472	1472 kbps
1536	1536 kbps‘
1920	1920 kbps

Table 30: Audio Mode Configurations ***1 of 2***

Admin Mode (HC Audio)	All Support HC Audio	Xfer Rate	Facility BW	Conf Mode	Expected Endpoint Mode
auto (G.728)	yes	<=128k	–	G.728	G.728
auto (G.728)	no	<=128k	64k	G.711-A-56k	G.711-A-56k B.711-Mu-56k
auto (G.728)	no	<=128k	56k	G.711-A-48k	G.711-A-48k G.711-MU-48k
auto (G.722)	–	>128k	64k	G.722-56k	G.722-56k G.711-A-56k G.711-Mu-56k
auto (G.722)	–	>128k	56k	G.722-48k	G.722-48k G.711-A-48k G.711-Mu-48k
G.728	–	–		G.728	G.728
					1 of 2

Table 30: Audio Mode Configurations ***2 of 2***

Admin Mode (HC Audio)	All Support HC Audio	Xfer Rate	Facility BW	Conf Mode	Expected Endpoint Mode
G.711	–	–	64k	G.711-A-56k	G.711-A-56k G.711-Mu-56k
G.711	–	–	56k	G.711-A-48k	G.711-A-48k G.711-Mu-48k
G.722	–	–	64k	G.722-56k	G.722-56k G.711-A-56k G.711-mu-56k
G.722	–	–	56k	G.722-48k	G.722-48k G.711-A-48k G.711-Mu-48k
					2 of 2

status conference endpoint field descriptions, page 3

status conference endpoint field descriptions, page 3 Endpoint Misc Info ***1 of 2***

Field	Description
EPT MISC EPT MISC contains miscellaneous states and counters for an endpoint. The flags can be **y** or **n**. The counters start with initial value of **0x00**, they increment to 0xff, and then wrap around to 0x01. **AIM** and **VIS** are BAS commands which can be sent as input (I) to MCU from an endpoint or as output (O) from MCU to an endpoint.	
AIM	Audio Indicate Muted. **y** on input (I) indicates that this endpoint has muted its audio. MCU will not VAS to an endpoint displaying mute indicate. Value of **n** on input indicates that this endpoint has not muted (only if endpoint audio mode is turned on). **y** on output (O) indicates that every other endpoint in the conference has muted its audio (have sent AIM to MCU). MAC in turn tells this endpoint (by sending it AIM) that there is no audio output from MCU. **n** on output indicates that there is an audio path open across the bridge.
VIS	Video Indicate Suppressed. **y** on input (I) indicates that this endpoint has suppressed its video (indicated video is muted). **y** on output (O) indicates that the MCU is not sending video to this endpoint because there is no video broadcaster (broadcaster has not joined or broadcaster's video is not valid).
MIS	Multipoint Indicate Secondary-status. This command is only sent as output (O) to an endpoint. **n** indicates that the endpoint is viewed as capable of being a valid source (although not necessarily at this moment). **n** is correct for video. **y** indicates that MIS was sent to an endpoint and that this endpoint is viewed as a secondary endpoint. The endpoint is included in the audio portion of the conference but not the video portion. Video will not be sent.
	1 of 2

status conference endpoint field descriptions, page 3 Endpoint Misc Info *2 of 2*

Field	Description
MCV	Multipoint Command Visualize. This command is only sent as input (I) from an endpoint. **y** indicates that an endpoint has requested to become a broadcaster. This is used during Still Frame Graphics and to force “presentation” mode.
TALK	**y** indicates that the VC board is detecting voice energy from the endpoint. The TALK counter indicates the number of times a start/stop was detected.
VRCV	**y** indicates if the endpoint is receiving video (MMCH is sending video to the endpoint). The VRCV counter indicates the number of times video was sent/not sent to this endpoint.
BCTK	Applies to single screen and quad-screen presentation mode conferences. **y** indicates that the endpoint is the video broadcast source. The BCTK counter indicates the number of times this endpoint was the video broadcast source.
RTTK	Applies to single screen conferences. **y** indicates that the endpoint is the return video source. The RTTK counter indicates the number of times this endpoint was the return video source.
BCLS	Applies to single screen and quad-screen presentation mode conferences. **y** indicates that the endpoint is watching the video of the broadcast source.
RTLS	Applies to single screen conferences. **y** indicates that the endpoint is watching the video of the return source.
HYPR	**y** indicates hyperactivity from an endpoint (MCU isolated endpoint from the MCU conference due to “thrashing” behavior) and affects endpoint’s status as a video source (for 5 seconds of hyperactivity timer). The HYPR counter indicates the number of times this endpoint was hyperactive.
DMUTE	**y** indicates that the decoder was muted by the VC board or the software in the MCU. VC board mutes the decoder when it loses MMI or endpoint framing is lost, when it receives an invalid audio code word, and when endpoint is hyperactive. The only time that the MCU software mutes the decoder of an endpoint is to mute every endpoint, other than the broadcaster, when a mode of a conference is “broadcastw/scan” (broadcast with auto scan). The DMUTE counter indicates the number of times this endpoint’s decoder was muted by the VC board.
VFMT	The video format applicable only to quad-screen conferences. Always **n**, indicating QCIF format.
H.261	**y** indicates video framing loss. The H.261 counter indicates the number of times the framing was lost.
	2 of 2

status conference endpoint field descriptions, page 3

status conference endpoint field descriptions, page 3 Frame Alignment Word Info

Field	Description
Frame Alignment Word (FAW) Information The FAW section of page 3 provides the channel Frame Alignment Word information for the communication paths labeled CHL 1 and 2. For 2B calls, both CHL 1 and 2 are used. For 1-channel calls (at rates of 112, 128, 168, 196, 224, 256, 280, 320, 336, 384, 768, 1472, 1536, and 1920 kbps), only CHL 1 is used. **A-OUT**, **A-IN**, **M-FRM**, **MFA**, and **MFN** are flags with values of **y** or **n**.	
A-OUT	MCU has endpoint framing.
A-IN	Endpoint has MCU framing
M-FRM	Multichannel frame alignment is present (alignment of both channels in 2B).
MFA	Multiframe alignment word is present (required in 2B call).
MFN	Multiframe numbering is present (required in 2B call).
FAS	Frame Alignment Signal (FAS) channel number (1 or 2). This number should match the column header.
MCUFAL	MCU Frame Alignment Loss (MCUFAL). A counter of the number of times the MCU indicates to the endpoint that it has lost endpoint FAW or multichannel synchronization (M-FRM). The MCU a-bit toggles when the MCU gains or loses endpoint multichannel synchronization. This counter starts with an initial value of 0x00, increments to 0xff, then wraps around to 0x01. The MCUFAL count is also shown in the **Fr Err** field on page 2.
FEFAL	Far End Frame Alignment Loss (FEFAL). A counter of the number of changes the MCU detects in the endpoint's a-bit (A-OUT). The endpoint a-bit toggles when an endpoint gains or loses MCU framing. This counter starts with an initial value of 0x00, increments to 0xff, then wraps around to 0x01.

The following screen shows page 4 of **`status conference x endpoint y`**.

```
status conference endpoint                                          page 4 of 6

                       ENDPOINT CAPABILITY INFORMATION
-------------------------------------------------------------------------------
 VID | vfmt: QCIF   cfps: 30       H.CTX      SG4     imp
     | da_sfg       qfps: 7.5      H.CTX+     SG4_sfg
-----|-------------------------------------------------------------------------
MISC | derestrict   S/M  mbe  dcomp     cic
-----|-------------------------------------------------------------------------
  XR | 64 64x2 64x3 64x4 64x5 64x6      384   384x2   384x3   384x4   384x5
     |    128  192  256  320  512  768  1152  1472    1536    1920
-----|-------------------------------------------------------------------------
 AUD | ntrl    711m 711a g728 g722_64   g722_48
-----|-------------------------------------------------------------------------
 LSD | var 300 1200 4800 6400 8000 9600 14.4k 16k 24k 32k 40k 48k 56k 62.4k 64k
-----|-------------------------------------------------------------------------
 HSD | var 64k 128k 192k 256k 320k 348k 512k  768k 1152k  1536k
-----|-------------------------------------------------------------------------
 MLP | var 4k 6.4k 14.4k 16k  22.4k 24k 30.4k 32k  38.4k  40k 46.4k   62.4k
-----|-------------------------------------------------------------------------
HMLP | var 62.4k    68k  128k 192k 256k 320k  384k
-------------------------------------------------------------------------------
```

status conference endpoint field descriptions, page 4,

Fields on this page appear only when an endpoint declares the specific capability. For example, if an endpoint does not declare the VID H.CTX capability, the **H.CTX** field does not appear.

status conference endpoint field descriptions, page 4 ***1 of 2***

Field	Description
VID	Provides information about the type of video and frame rate the endpoint supports. **vfmt** - does not display if the endpoint has no video capability. Every value is blank if there is an active call or if this is an audio-only endpoint. Otherwise, values for this field include: • **FCIF** for full CIF • **QCIF** for quarter CIF. Support of CIF implies support of QCIF. In general, for larger screens, CIF displays sharper resolution video, which ZCIF is blocked, but may run at higher frame rates and less clear. The differences are less observable on very small displays. • **cfps** and **qfps** are the maximum frame rate (frames/second) at which the endpoint can receive video for CIF and QCIF operating modes. CIF frame-rate values are 30 fps, 15 fps, 10 fps, and 7.4 fps. If the endpoint does not support CIF (that is, the vfmt field is QCIF), the **cfps** value should be blank. • **da_sfg** indicates support for H.261 Still Frame Graphics transfers. • **H.CTX**, **H.CTX+** and **SG4** are proprietary video format capabilities. • **SG4_sfg** indicates support for SG4 Still Frame Graphics
MISC	The **restrict** field is one way for an endpoint to indicate that it is operating at 56 kbps per channel. Another way is the `56/64` command mode with **restrict**. An endpoint on a 56-kbps conference must send one or both of the 2 indications that they are operating at 56 kbps before they become a video source in a 56-kbps conference. If they signal either way that they are operating at 56 kbps in a 64- or 384-kbps conference, they are an audio-only source, but the MCU continues to send Selected Communication Mode (SCM) toward them when possible. A MISC capability of **derestrict** and a `56/64` command of **derestrict** together indicate that an endpoint is operating at 64 kbps. If either is **restrict**, the conference operates at 56 kbps. Other field values include: • **dcomp** indicates support for WorldWorx PCS data compliance. • **mbe** indicates support for Multi Byte Extension. MBE capability is used for the exchange of passwords, terminal names, and other special capabilities, such as, support of WorldWorx PCS specific features. • **cic** (Chair Indicate Capability) indicates chair control capability.
	1 of 2

status conference endpoint field descriptions, page 4 ***2 of 2***

Field	Description
XR	Transfer rate capabilities are statement about the speeds at which the endpoint can operate over the current connection and operate a Px64 Multiplex. For a 384-kbps (H0) call, the endpoint sends its capabilities to indicate 384-kbps support, which displays as **384**. On a 336-kbps call, the endpoint must signal 384-kbps support. If an endpoint does not indicate support for 384 kbps on a 384-/336-kbps conference, the MCU provides Audio Only Communications Mode (ACOM). For a 2B conference, the MCU sets the rate to 2x64, expecting the endpoints to do likewise (**64x2** is displayed; if this is not displayed, there is no 64x2 capability). Endpoints may occasionally take 2x64 (or the current channel rate: 384, 768, 1472, 1536) out of their capability. This is Mode 0 forcing and is part of normal procedures. The MCU will provide AOCM if the endpoint does not signal support matching the configuration of the conference.
AUD	The audio fields are statements of the audio protocols that the endpoint supports. **711m** and **711a** are PCM (G.711) and support Mu and A-law, respectively, and at least one is required of endpoints. The **g728** field indicates whether G.728 is supported (LB_CELP). This value depends upon the type of the endpoint and how that endpoint is currently configured. The **g722_48** field indicates endpoint support for G.722 (7 kHz) at both 48 and 56 kbps. Therefore, **g722_48** indicates that the endpoint supports G.722 audio at both rates. The **g722_64** field indicates endpoint support for G.722 at 64 kbps in an unframed (not supported by the MCU) mode.
LSD	The **LSD** fields indicate the capabilities for Low Speed Data conferencing.
HSD	The **HSD** fields indicate the capabilities for High speed Data conferencing.
MLP	The **MLP** fields indicate the capabilities for Multi Layer Protocol Data capabilities.
HMLP	The **HMLP** fields indicate the conference's capability for High Speed MLP data conferencing.
	2 of 2

Page 5 - Endpoint Call Status Information

This page summarizes such call-related status as per-channel join counts, join/drop time, drop reason, drop code, and auxiliary bonding drop code. It also contains a drop code and software fields from the previous call. The data on the page is always retained. The Endpoint Call Status Information section groups together call-related fields. The Joint Count field is described below, and other fields are described in the following screens.

```
status conference endpoint                                          page 5 of 6

                      ENDPOINT CALL STATUS INFORMATION

     Join   Join  Drop   -------------- Drop --------   --- Previous -----
Chan Count  Time  Time   Reason      Code    BondCode   DropCode  Software
  1: __    _____ _____  __________   __       __         __      ________
  2: __    _____ _____  __________   __       __         __      ________
  3: __    _____ _____  __________   __       __         __      ________
  4: __    _____ _____  __________   __       __         __      ________
  5: __    _____ _____  __________   __       __         __      ________
  6: __    _____ _____  __________   __       __         __      ________
  7: __    _____ _____  __________   __       __         __      ________
  8: __    _____ _____  __________   __       __         __      ________
  9: __    _____ _____  __________   __       __         __      ________
 10: __    _____ _____  __________   __       __         __      ________
 11: __    _____ _____  __________   __       __         __      ________
 12: __    _____ _____  __________   __       __         __      ________
```

status conference endpoint field descriptions page 5

Field	Description
Join Count	Shows the number of times this endpoint joined this conference during this conference session. This counter starts with 0, can increment to 64, and wraps around back to 1.

Page 6 - Administered Connections

This page summarizes information about the administered connections associated with this endpoint. This data can be viewed while the conference is active.

```
status conference endpoint                                          page 6 of 6

                    ADMINISTERED CONNECTIONS INFORMATION

     AC                                                     Retry   Failure
Chan Num  Dial-out Number         Connection State          Count   Cause
  1: ___  ____________________    ____________________       __      __
  2: ___  ____________________    ____________________       __      __
  3: ___  ____________________    ____________________       __      __
  4: ___  ____________________    ____________________       __      __
  5: ___  ____________________    ____________________       __      __
  6: ___  ____________________    ____________________       __      __
  7: ___  ____________________    ____________________       __      __
  8: ___  ____________________    ____________________       __      __
  9: ___  ____________________    ____________________       __      __
 10: ___  ____________________    ____________________       __      __
 11: ___  ____________________    ____________________       __      __
 12: ___  ____________________    ____________________       __      __
```

status conference endpoint field descriptions, page 6

status conference endpoint field descriptions, page 6 ***1 of 2***

Field	Description
Dial-Out Number	The actual numbers that are dialed out by the administered connections for each channel in the call. Note that the dial Out #1 and #2 on page 1 of the forms display the DCP endpoint number. This is particularly useful with bonding dial-out calls.
Connection State	Indicates the current call state of the AC. The following are connection states associated with dial-out ACs: • **enabled**—is transient in nature and indicates that an AC is about to enter the attempting to connect state. • **disabled**—this may mean one of three things: - The AC has reached an administered retry threshold, and all retries are stopped. Verify this by checking the error log and checking whether an error type of **9** is logged against the AC. - The AC was in a connected state and the far end disconnected. - The initial channel call has not yet connected. No dial out call attempt is made for the additional channel(s) until the initial channel has reached a connected state. • **not scheduled**—is transient in nature and indicates that an AC is about to enter the “attempting to connect” state. • **waiting to retry**—means that the AC is inactive (sleeping) and waiting for the retry timer to expire. Once the timer expires, the AC sends a dial out call and enters the “attempting to connect” state. ACs in this state indicate that the dial out call has failed at least once. • **attempting to connect**—means that the AC is active on a call, but the call has not yet connected. • **connected**—means that the call associated with the AC has been answered and join cut-through to the conference.
	1 of 2

status conference endpoint field descriptions, page 6 ***2 of 2***

Field	Description
Retry Count	Number of retries have been attempted for this AC during this join attempt. This field does not clear when the AC connects. This field clears when a new join attempt is made via a Redial feature. Note that this is different from the **Join Count** which counts the number of times the channel joined the conference during this conference session.
Failure Cause	ISDN or CPTR cause value (values lower than 0x7f) recorded when the last dial out call was dropped. Values above 0x7f are generated internally. Table 31: Status AC - Failure Cause Values on page 203 lists all possible failure cause values displayed by this field and its associated description. This value is logged in the error log and appears with `display errors`. **Err Type** appears as a decimal.
	2 of 2

Table 31: Status AC - Failure Cause Values ***1 of 2***

Failure Cause (hexadecimal)	Description
0x00 (0t0)	N/A
0x01 (0t1)	Incorrect destination address
0x02 (0t2)	Reason unknown
0x06 (0t6)	Reason unknown
0x10 (0t16)	Normal call clearing
0x11 (0t17)	Endpoint not available
0x12 (0t18)	ISDN timer expired
0x15 (0t21)	Reason unknown
0x12 (0t22)	Destination address changed
0x1C (0t28)	Bad destination or access denied
0x1D (0t29)	Access denied
0x1F (0t31)	Reason unknown
0x22 (0t34)	Trunks unavailable
0x26 (0t38)	Temporary or facility failure
0x29 (0t41)	Temporary or facility failure
	1 of 2

Table 31: Status AC - Failure Cause Values *2 of 2*

Failure Cause (hexadecimal)	Description
0x2A (0t42)	Resources unavailable
0x2C (0t44)	Resources unavailable
0x32 (0t50)	Access denied
0x34 (0t52)	Access denied
0x36 (0t54)	Access denied
0x3A (0t58)	Resources unavailable
0x41 (0t65)	Required capability not implemented
0x42 (0t66)	Required capability not implemented
0x45 (0t69)	Required capability not implemented
0x51 (0t81)	ISDN protocol error
0x52 (0t82)	Required capability not implemented
0x58 (0t88)	Incorrect destination number
0x60 (0t96)	ISDN protocol error
0x61 (0t97)	ISDN protocol error
0x62 (0t98)	ISDN protocol error
0x64 (0t100)	ISDN protocol error
0x66 (0t102)	ISDN timer expired
0x7f (0t127)	Reason unknown
0xC2 (0t194)	Ring no answer
0xC8 (0t200)	Hi and dry – no feedback detected
0xC9 (0t201)	Cascade link administered wrong
0xCA (0t202)	CPTR not available to detect failure

2 of 2

configuration

See:
list configuration on page 205

list configuration media-gateway on page 210
list configuration power-supply on page 211
list configuration software-versions on page 212
list configuration stations on page 214

list configuration

`list configuration`
`[all | atm | board location | carrier c | circuit-pack <board code> | control | ds1 | license | hardware-group | port network n | stations | trunks][schedule]`

See also:
list configuration media-gateway on page 210
list configuration power-supply on page 211
list configuration software-versions on page 212
list configuration stations on page 214

Use **`list configuration`** to generate a hardware configuration report. The report includes the type, code, suffix, and vintage of the requested circuit packs as installed in the switch, and every assigned port on the circuit packs.

To display SN circuit packs, use the **`all`**, **`carrier`**, or **`board`** qualifiers.

Action/Object	Qualifier	Qualifier Description	Login	Default
`list configuration`	**`hardware-group`**			
	`all`	Displays every circuit pack administered and/or physically inserted in every port, switch node, and control carrier of the system.		
	`atm`	Displays all the ATM boards		
	`board location`	Displays every assigned port on a circuit pack specified by cabinet, carrier, and slot.		
	`carrier c`	Displays every circuit pack and assigned port on a specified carrier.		
	`circuit-pack <board code>`	Displays all the requested circuit packs in the system that are inserted. AWOH and unplugged circuit packs are not listed.		
	`control`	Displays every circuit pack located in the control complex.		

1 of 2

Action/Object	Qualifier	Qualifier Description	Login	Default
	ds1	Displays every DS1 circuit pack (TN722, TN767, and TN464) administered and/or every physically inserted port carrier of the system.		
	port-network pn#	Displays every circuit pack located in a specified port network. However, Circuit packs in switch node carriers do not appear. **list cabinet** gives the port network number(s) associated with a particular cabinet. To display SN circuit packs, use the **all**, **carrier**, or **board** qualifiers.		
	stations	Displays every circuit pack that can be assigned stations, including DS1 circuit packs for remote stations. Every assigned port appears. See list configuration stations on page 214.		
	trunks	Displays every circuit pack that can be used for administering trunks. Every assigned port appears.		
	schedule	See Common Input Parameters on page 25.		
		Examples: **list configuration carrier 2c schedule** **list configuration port-network 5** **list configuration stations**		
				2 of 2

The following display shows a typical result of **`list configuration all`**.

```
 list configuration all                                                Page   1
                              SYSTEM CONFIGURATION
Board                                                     Assigned Ports
Number   Board Type              Code     Vintage    u=unassigned t=tti p=psa

01A01    CALL CLASSIFIER          TN744E  000002     01 02 03 04 05 06 07 08
01A02    IP SERVER INTFC         TN2312AP HW32 FW042 01 02 03 04 05 06 07 08
01A05    IP MEDIA PROCESSOR      TN2302AP HW03 FW034 01 02 03 04 05 06 07 08

01A06    CONTROL-LAN              TN799C  000003     u  u  u  u  u  u  u  u
                                                      u  u  u  u  u  u  u  u
                                                      17
01A08    CO TRUNK                 TN747B  000026     u  u  u  u  u  u  u  u
01A09    ANALOG LINE              TN793B  000005     u  u  u  u  u  u  u  u
                                                      u  u  u  u  u  u  u  u
                                                      u  u  u  u  u  u  u  u
01A10    DIGITAL LINE            TN2224B  000003     01 u  u  u  u  u  u  u
                                                      u  u  u  u  u  u  u  u
                                                      u  u  u  u  u  u  u  u
01A05    VAL-ANNOUNCEMENT        TN2501AP HW01 FW111 01 02 03 04 05 06 07 08
                                                      09 10 11 12 13 14 15 16
                                                      17 18 19 20 21 22 23 24
                                                      25 26 27 28 29 30 31 32
                                                      33
```

list configuration field descriptions

list configuration field descriptions *1 of 2*

Field	Description
Board Number	Location of the circuit pack
Board Type	Type of board
Code	The TN or UN code and suffix of the circuit packs
Vintage	The vintage number, or the hardware (HW) and firmware (FW) vintages of the circuit pack. Also: **no board** - the circuit pack is administered but not physically installed **conflict** - the circuit pack administered to the slot differs from the circuit pack that is physically installed **no link** - the T1 link is down to a DS1 circuit pack
	1 of 2

list configuration field descriptions ***2 of 2***

Field	Description
Assigned Ports	Each port on the circuit pack is represented by a position corresponding to its circuit number in ascending order from left to right. Two rows appear for circuit packs with more then 8 ports. The assigned ports for **`list configuration ds1`** do not appear. Identifies the current status of the port that corresponds to the position: **01 - 32** - the circuit number of an assigned port **m** - **mj** - the port is assigned as an external device major (mj) alarm port **mn** - the port is assigned as an external device minor (mn) alarm port **p** - psa (personal station access) **t** - the port is not assigned and is supported by Terminal Translation Initialization. Activate the port with the TTI association sequence. **u** - the port exists but is unassigned. Each port on a TN556 ISDN-BRI circuit pack can have two BRI endpoints. BRI ports appear once when assigned only one endpoint and twice when fully configured with two endpoints.
	2 of 2

The following display shows a typical result of **`list configuration ds1`**.

```
 list configuration ds1

                    SYSTEM CONFIGURATION - DS1 Circuit Packs

Location   Code    Vintage     Signaling         Name            CSU MOD

01B05      TN464F  000002      isdn-pri                          120A1
01B06      TN464D  000002      isdn-pri                          n/a
01B10      TN767C  000003      none                              n/a
01B11      TN767E  000003      robbed-bit                        120A1
01B12      TN767E  conflict    none                              <blank>
01C06              no board    none                              <blank>
01C13      TN464E  000003      common-channel                    unknown
01C16      TN767D  000024      robbed-bit                        unkonwn
01C18      TN464F  000002      isdn-pri                          none
```

list configuration ds1 field descriptions

list configuration ds1 field descriptions

Field	Description
Location	Location of the DS1 circuit pack
Code	The TN or UN code and suffix of the DS1 circuit packs
Vintage	The vintage number, or the hardware (HW) and firmware (FW) vintages, of the circuit pack. Other values that may be shown: **no board -** The circuit pack is administered but not physically installed **conflict -** The circuit pack administered to the slot differs from the circuit pack that is physically installed **no link** - The T1 link is down to a DS1 circuit pack
Signaling	Appears for **`list configuration ds1`**. Values are the same as the signaling mode administered for the ds1 circuit pack, or **none** if the circuit pack is not administered.
Name	Appears for **`list configuration ds1`**. Values are the same as the signaling mode administered for the ds1 circuit pack, or **none** if the circuit pack is not administered.
CSU MOD	Appears for **`list configuration ds1`** option. Contains the identification number of the Integrated CSU module present on the DS1 circuit pack (TN767E or later / TN464F or later), or **none**. **`unknown`** = the circuit pack is a TN464E or TN767D **n/a =** the circuit pack is a TN464D or TN767C or earlier suffix DS1 board

list configuration media-gateway

`list configuration media-gateway x`

Use **`list configuration media-gateway x`** to see all the assigned ports on the Media Modules for the specified Media Gateway.

Action/Object	Qualifier	Qualifier Description
`list configuration media-gateway`	***x***	media gateway number

This is an example of **`list configuration media-gateway`** 1

```
list configuration media-gateway 1

                              SYSTEM CONFIGURATION

Board                                                   Assigned Ports
Number  Board Type         Code     Vintage    u=unassigned t=tti p=psa

001V1   ANA MM              MM711AP  HW00 FW001   p  p  p  p  p  p  p  p
001V2   ANA MM              MM711BP  HW00 FW007   p  p  p  p  p  p  p  p
001V3   DCP MM              MM712BP  HW00 FW003   p  p  p  p  p  p  p  p
001V4   DCP MM              MM712BP  HW00 FW003   p  p  p  p  p  p  p  p
```

list configuration media-gateway field descriptions

list configuration media-gateway field descriptions

Field	Description
Module Number	Physical location of the ports. V*n* is the module number (V1-V4) or the virtual slots V8 or V9.
Module Type	Type of Avaya Media Module in the slot. If an administered Media Module is in conflict with the inserted Media Module, a pound sign (#) appears to the left of the **Module Type** field on the Media Gateway screen.
Code	Media Module code
Vintage	Hardware and firmware vintage of the module. No code or vintage is listed for the virtual media modules in slots V8 and V9.
Assigned Ports	Status of ports associated with Media Module/slot. Blank means no assigned port.

list configuration power-supply

`list configuration power-supply <cabinet> <carrier>`

Use **`list configuration power-supply`** to see information about the power supplies in a specified **G650** stack with a TN2312BP IPSI or later IPSI circuit pack.

Action/Object	Qualifier	Qualifier Description	Login	Default
`list configuration power-supply`	***cabinet*** carrier	cabinet location carrier location	init super-user inads craft dadmin any login with Switch Circuit Pack Maintenance permissions	

The following display shows a typical result of **`list configuration power-supply`** ***cabinet***.

```
list configuration power-supply 01

                    SYSTEM CONFIGURATION - 655A Power Supplies

       Power Supply          Power Supply           Power Supply
  Location  Serial Number   Make/Model Number         SAP   Firmware Version

  01A00     03R405000165   Power Unit 655A Rev 03 700246671   02.15.05
  01A15     03R405130016   Power Unit 655A Rev 01 700246671   02.15.05
  01B00     03R404000120   Power Unit 655A Rev 03 700246671   02.15.05
  01B15     03R404000130   Power Unit 655A Rev 03 700246671   02.15.05
  01C00     03R404000144   Power Unit 655A Rev 03 700246671   02.15.05
  01C15     03R404000136   Power Unit 655A Rev 03 700246671   02.15.05
  01D00     03R404000125   Power Unit 655A Rev 03 700246671   02.15.05
  01D15     03R043270034   Power Unit 655A Rev 03 700246671   02.15.05
  01E00     03R404000133   Power Unit 655A Rev 03 700246671   02.15.05
  01E15     03R404000109   Power Unit 655A Rev 03 700246671   02.15.05
```

list configuration power-supply field descriptions

list configuration power-supply

Field	Description
Location	The power supply cabinet/carrier/slot
Power Supply Serial Number	The serial number of the power supply
Power supply Make/Model Number	The apparatus code and hardware revision number of the power supply. If the system cannot communicate with the power supply, or if the power supply is removed from the carrier, this field contains the message “power supply not present.”
SAP ®	Part number SAP is a registered trademark of SAP America, Inc.
Power Supply Firmware Version	The version number of the power supply firmware (10 characters)

list configuration software-versions

`list configuration software-versions [memory-resident] [schedule]`

Use **`list configuration software-version`** to display:

- software version numbers and compatibility indexes of the software load modules stored in system memory (RAM)
- the dates and times when translation and announcement data were last saved
- information about any software update files that have been applied to the system

Action/Object	Qualifier	Qualifier Description	Login
`list configuration software-versions`	**`memory-resident`** **`schedule`**	Specifies display of RAM-resident files. See Common Input Parameters on page 25.	init inads craft

If the memory card contains a core dump file, fields for tape or memory card data display **coredump**. When a core dump is present, all other files on the device are marked invalid.

If the memory card cannot be read at the time the command is entered, the relevant fields display **no tape or memory card**. (This does not indicate that the system does not recognize the presence of the device.)

The following display shows a typical result of **`list configuration software-version`**.

```
list configuration software-versions

                                SOFTWARE VERSIONS

    SOFTWARE VERSION
       Memory Resident: R015x.00.0.824.0
         Disk Resident: R015x.00.0.824.0

    TRANSLATION DATA
       Memory Resident: 11:12 am  FRI OCT 19, 2007
         Disk Resident: 11:12 am  FRI OCT 19, 2007
      Disk Second Copy: good
```

list configuration software-versions

list configuration software-versions field descriptions

Field	Description
SOFTWARE VERSION	Information related to the current software-load module stored in memory
Memory Resident	Version number of the RAM-resident load module
Disk Resident	The last date and time that translation data was saved to disk. This date is read from disk, and is blank if the disk is not installed.
TRANSLATION DATA	Information related to the translation files as stored in memory and the disk.
Memory Resident	Date and time marked on the disk when translation data was last read into memory. This is stored in memory and is not modified by changes to translation data. **Date invalid** appears when the timestamp does not contain the expected information.
Disk Resident	The last date and time that translation data was saved to disk. This date is read from disk, and is blank if the disk is not installed.
Disk Second Copy	The last date and time that translation data was saved to disk. This date is read from the second copy of the file on the disk.

list configuration stations

`list configuration stations`

Use **`list configuration stations`** to see every circuit pack that can be assigned stations, including DS1 circuit packs for remote stations. Every assigned port appears.

Action/Object	Qualifier	Qualifier Description	Login	Default
`list configuration stations`				

This is an example of **`list configuration stations`**.

```
list configuration stations

                                  SYSTEM CONFIGURATION

Board                                                 Assigned Ports
Number  Board Type          Code     Vintage           u=unassigned t=tti p=psa

02A03   DIGITAL LINE        TN754C   0000004           p  p  p  p  p  p  p
```

list configuration stations field descriptions

list configuration stations

Field	Description
Board Number	Physical location of the port.
Board Type	Type of circuit pack in the slot.
Code	Circuit pack TN code and suffix.
Vintage	Hardware and firmware vintage of the circuit pack.
Assigned Ports	Status of ports associated with the circuit pack/slot. Blank means no assigned port.

craft2

See:

enable craft2
disable craft2

enable craft2

Use **`enable craft2 xyz`** to create a second craft login assigned to profile 3. Only one login in addition to craft may be enabled to use profile 3 at any one time.

To change the name of the second craft login, disable the current login (**`disable craft2`**) and enable a new one.

Only logins assigned to profiles 0 (**init**), 1 (**inads**), and 2 (**dadmin**) can execute this command.

Action/Object	Qualifier	Qualifier Description	Login
`enable craft2`	**`xyz`**	The name of a second craft login	Profiles 0-2

disable craft2

Use **`disable craft2`** to remove the second craft login assigned to profile 3.

Only logins assigned to profiles 0 (**init**), 1 (**inads**), and 2 (**dadmin**) can execute this command.

Action/Object	Qualifier	Qualifier Description	Login
`disable craft2`			Profiles 0-2

cti-link

See:
busyout cti-link on page 216
list cti-link on page 217
list usage cti-link on page 218
release cti-link on page 218
test cti-link on page 218

busyout cti-link

busyout cti-link *link*

Use **busyout cti-link** to busyout a specified endpoint for a link that is administered on the AESVCS Administration page of the **ip-services** screen. An ASAI adjunct link provides connectivity to an ASAI adjunct (for example, CentreVu CT), which is connected to an Ethernet LAN.

See status link on page 362 for more details on links.

Action/ Object	Qualifier	Qualifier Description	Login	Feature Interaction
busyout cti-link	***link***	Link number (1- 8)	init inads craft customer -type login	See Feature interactions for busyout cti-link on page 216.

Feature interactions for busyout cti-link

- All ASAI service is disabled.
- A Warning alarm is generated even if more severe CTI link (for example, adj-ip) alarms are present.
- Periodic and scheduled tests continue to run. No alarms more severe than a Warning are generated until the CTI link is released from busyout.
- The release of CTI link from busyout retires all alarms.
- If a problem still exists, background maintenance generates new alarms within a few minutes.

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

list cti-link

Use **`list cti-link`** to list the administered CTI links.

Action/Object	Qualifier	Qualifier Description	Login
`list cti-link`	***`link number`*** ***`count`***	Max # of links to list	init inads craft cust

See status link on page 362 for more details on links.

The following screen is an example of **`list cti-link`**.

```
list cti-link

                                        CTI LINKS

 Link  Ext        Type      Port      Name                        COR
 1     400123     ADJ-IP                                          1
 2     400124     ASAI      01A0701   MAPD link to issak          1
```

list cti-link field descriptions

Field	Description
Link	The link number
Ext	The extension associated with the CTI link (the extension is required but not used)
Type	Link type: ASAI-IP, ADJ-IP, ASAI, ADJLK
Port	Port number
Name	Node name for this link
COR	Class of restriction number

list usage cti-link

`list usage cti-link` ***`link`***

Use **`list usage cti-link`** to list vectors and IP services that use the specified CTI link, and indicate whether the link is currently used to monitor a hunt-group as a controlling link, and/or through an event notification or domain control association.

CTI links are identified by the CTI link number in Communication Manager administration screens, not by extensions. For CTI links, use **`list usage cti-link`** instead of **`list usage extension.`**

Action/ Object	Qualifier	Qualifier Description	Login
`list usage cti-link`	***`link`***	Link number (1-64)	init inads craft customer-type login

release cti-link

`release cti-link [link` ***`n`*****`]`**

Use **`release cti-link`** to release a busied-out endpoint for a link that is administered on the AESVCS Administration page of the ip-services form. An ASAI adjunct link provides connectivity to an ASAI adjunct (e.g., CentreVu CT), which is connected to an Ethernet LAN.

See status link on page 362 for more details on links. For more information, also see Busyout and Release Commands on page 33.

Action/Object	Qualifier	Qualifier Description	Login	Default
`release cti-link`	***`link#`***	Link number Example: **`release cti-link`** ***`1`***	init inads craft or any customer type login	

test cti-link

Use **`test cti-link`** to test the specified CTI link.

For more information on the CTI link, see status firmware download on page 288. See status link on page 362 for more details on links.

Action/Object	Qualifier	Qualifier Description	Login	Default
test cti-link	***n*** **short** **long** **repeat** **clear**	link number See Common Input Parameters on page 25.	init inads craft	short 1

customer alarm

test customer-alarm

test customer-alarm *UUC* [short | long] [repeat *repeat#* | clear] [schedule]

Use **test customer-alarm** to test the customer provided alarm device by closing the alarm relay contact on the PN and EPN maintenance circuit pack in a specified cabinet, including the TN2312BP, for one minute and then restoring the alarm relay contact to its current state. Verify the test by checking the customer alarm attached to the specified circuit pack.

Action/Object	Qualifier	Qualifier Description	Login	Default
test customer -alarm	**location** **short** **long** **repeat *n*** **clear**	Extension of the data module or data channel to be tested, per dial-plan See Common Input Parameters on page 25. Examples: **test customer-alarm** **test customer-alarm 02 r 2** **test customer-alarm 01b r 25** **test customer-alarm 2a** **test customer-alarm 2a sh** **test customer-alarm 3 c**	init inads craft dadmin switch circuit pack maintenance permissions	1a 1

data-module

See:
busyout data-module on page 220
release data-module on page 221

status data-module on page 221
test data-module on page 223

busyout data-module

`busyout data-module` ***`extension`***

Use **`busyout data-module`** to put a data module in a maintenance busy state, even an uninstalled data module.

Use **`release data-module`** to return the specified data module or data channel into service.

Action/Object	Qualifier	Qualifier Description
`busyout data-module`	***`extension`***	Extension number per dial plan Example: **`busyout data-module 31300`**

Use **`list data-module`** to see a list of every data module administered on the system, including the extension, port, type and other data for each data module. The maintenance object name for each data module in the **Type** field is:

Type of data module	Maintenance Object
adm-t	BRI-SET
announcement	DAT-LINE
dtdm	DIG-LINE
pdm	PDMODULE
system-port	DAT-LINE

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

release data-module

Use **release data-module** to activate the specified data module or data channel. Hardware tests are executed to verify that the equipment is functioning.

For more information see Busyout and Release Commands on page 33.

Action/Object	Qualifier	Qualifier Description	Login
release data-module	***extension***	Extension number associated with data module or data channel.	init inads craft cust nms

status data-module

status data-module *extension*

Use **status data-module** to see the internal software states of a specified data-module port. This information helps diagnose and locate facilities to which the data module is connected.

Action/Object	Qualifier	Qualifier Description	Login
status data-module	***extension***	Data module extension	init inads craft cust rcust bcms browse

```
status data-module 70058
                              DATA-MODULE STATUS

Data Ext/Stn Ext for Stn DM: 70058         Service State: in-service/idle
        Port/Channel Number: 26A0817    Maintenance Busy? no
                                       CF Destination Ext:
            Connected Ports:
```

status data-module field descriptions

status data-module field descriptions

Field	Description
Data Ext/Sta Ext for Stn DM	The data module extension number. For DTDMs, the connected station extension is shown.
Port/ ChannelNumber	The location of the port connected to the data module. For data channels, the channel number is shown.
Service State	The operational state of the data-module: **in-service/idle** The data module is connected but idle. **in-service/active** The data module is connected and in use. **out-of-service** The data module has been removed from service. **disconnected** The data module no longer appears to be present

If the specified port is administered as a system port, the following fields will be for more information.

status data-module system port field descriptions

Field	Description
CF Destination Ext	The call-forwarding destination, if any, of the station.
Maintenance Busy	Whether the object is busied out for testing.
Connected Ports	Locations of ports to which the data module is currently connected.
Service State	The operational state of the associated port.

test data-module

`test data-module` ***`extension`*** [short | long] [***`repeat#`*** | clear] [schedule]

Use **`test data-module`** to perform hardware diagnostic tests on a data module or a data channel. Test results are determined by the interface to the digital switch-data line port, digital line port, or network control data channel.

Action/Object	Qualifier	Qualifier Description	Login	Default
`test data-module`	**`extension`** **`short`** **`long`** **`repeat`** ***`n`*** **`clear`**	Extension of the data module to be tested (per dial-plan) Examples: **`test data-module 30000 l`** **`test data-module 30000`** **`test data-module 32000 sh r 2`** **`test data-module 33000 l r 25`** **`test data-module 30000 c`**	init inads craft cust nms	short 1

dialplan

display dialplan

For information about **`display dialplan`**, see *Administering Avaya Aura™ Communication Manager (03-300509).*

directory

list directory

`list directory board` ***`location`*** **`|`** ***`PPCSS`***

Use **`list directory board`** to list every file in the specified board's memory filesystem.

The forward slash (/) is the default path for listing files in the root directory. To list the files in a directory other than the "/" root directory, specify the complete path.

Action/Object	Qualifier	Qualifier Description
`list directory`	***`PPCSS [full path]`***	board location file/directory name

The following is an example of **list directory board 1C12.**

```
list directory board 1C12                                          Page   1
                                 LIST DIRECTORY

  Board                File/Directory                      Creation       Size
 Location                   Name                        Date      Time     Kb

  01C12   F:fwdlimg464gv01                            2007/01/01 00:00:00  367
  01C13   F:fwdlimg2302av01                           2007/02/29 23:59:59  493

D = Directory F = File
```

disabled-MOs

list disabled-MOs

list disabled-mos [schedule]

Use **list disabled-mos** to list the maintenance objects that have been disabled with **disable mo**, **disable all**, or **disable mo-all**, as well as whether or not the command has been run.

Use **display disabled-tests** for numbers of tests that have been disabled.

Action/Object	Qualifier	Qualifier Description
list disabled-mos	**schedule**	See Common Input Parameters on page 25.

disabled-tests

display disabled-tests

This command lists the numbers for all maintenance tests that have been disabled by INADS. These tests are not be available for background or demand testing.

Action/Object	Qualifier	Qualifier Description	Login
`display disabled-tests`			init inads craft cust rcust

ds1-echo-cancellation

change ds1-echo-cancellation

`pin-cancellation` ***`xx`***

Use **`change ds1-echo-cancellation`** to change the plan number of the echo cancellation circuitry.

Communication Manager allows 10 different sets of parameters (plans) to be administered. Each plan contains approximately 120 parameters. Initially, all 10 plans are identical (all 120 fields on each plan have the same default values). Plan 1 is display only. Plans 2 - 10 can be changed.

Echo cancellation is a software, right-to-use feature that is intended for channels supporting voice. It is not intended for channels that support data. Echo Cancellation on the TN464GP/TN2464BP is selectable per channel. The TN464GP/TN2464BP has the capability to detect modem tone and to turn off echo cancellation accordingly.

Echo cancellation is turned on or off on a trunk group basis using **`change trunk-group`**. If **DS1 Echo Cancellation** is **y** on the **`TRUNK GROUP`** form, echo cancellation is applied to every TN2405AP trunk member in that trunk group. The echo cancellation parameters used for a given trunk member are determined by the Echo Cancellation Plan number administered on the DS1 CIRCUIT PACK form for that specific trunk's board. If **DS1 Echo Cancellation** is **n** on the **`TRUNK GROUP`** form, echo cancellation is turned off for every TN2405AP trunk member in that trunk group.

Action/Object	Qualifier	Qualifier Description	Login
change ds1-echo-cancellation	***xx***	plan number to change Example: **change ds1-echo-cancellation 05**	init inads craft

```
change ds1 01c0401                                  Page 1 of 1
                            DS1 CIRCUIT PACK

         Location: 01C04                      Name:
         Bit Rate: 1.544               Line Coding: ami-zcs
Line Compensation: 1                  Framing Mode: esf
   Signaling Mode: common-chan

        Idle Code: 11111111
          DMI-BOS? y

   Slip Detection? n
Echo Cancellation? y_
     EC Direction: inward_
 EC Configuration: 1_
```

change ds1-echo-cancellation field descriptions

change ds1-echo-cancellation field descriptions

Field	Description
Echo Cancellation	**y/n** **y** = echo cancellation is activated.
EC Direction	the direction that echo is being cancelled
EC Configuration	Determines which set of echo cancellation defaults will be administered. Configuration 1 provides the most rapid adaptation in detecting and correcting for echo at the beginning of a call, regardless of the loudness of the talker's voice. Configurations 5-15

ds1-facility

See:
busyout ds1-facility on page 227
test ds1-facility on page 228

busyout ds1-facility

busyout ds1-facility *location* **[override]**

Use **busyout ds1-facility** to put a DS1 facility of a DS1C complex into a maintenance busy state. Each DS1C complex uses from 1 to 4 DS1 facilities.

- The packet facility carries the control channel for every facility in the complex, all packet traffic, and some circuit connections.
- The other facilities carry circuit connections only.

Action/Object	Qualifier	Qualifier Description
busyout ds1-facility	*location* **override**	Location of the ds1-facility All packet and circuit traffic on the packet facility is switched to another facility, and all traffic that was on the destination facility before the switch is dropped. Example: **busyout ipserver-interface 6b**

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

Whenever the circuit pack resets, the packet facility is set on the “a” facility. If system software detects a problem with this facility, it switches the packet and control traffic to another facility. The **busyout** command is not allowed on the packet facility without **override**. When **override** is used, all packet and circuit traffic on the packet facility is switched to one of the other three facilities, and all traffic that was on the destination facility before the switch is dropped.

There is no way to tell which facility is carrying the packet and control traffic without attempting to busy it out. If there is only one facility left in service on the circuit pack, it cannot be busied out. In this case, the circuit pack must be busied out.

CAUTION:

Busying out a non-packet facility disrupts all traffic carried on that facility. Using **override** to busy the packet facility disrupts all traffic on the facility to which the packet and control traffic is moved. This facility cannot be determined in advance.

On critical-reliability systems (duplicated PNC) a facility on the active PNC cannot be busied out. Use **busyout pnc** to busyout a standby PNC, and then busyout a facility on the standby PNC.

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

test ds1-facility

test ds1-facility *location* **[short | long | external loopback]** **[*repeat#*] [schedule]**

Use **test ds1-facility** on **S8700 MC** to perform a series of tests on the specified facility. Each test runs diagnostics on the facility and returns results of the test along with any possible error codes. The **long** test is destructive and is not allowed unless the facility has been busied out.

Action/Object	Qualifier	Qualifier Description
test ds1-facility	*location*	The location of the DS1 Converter circuit pack plus a letter (**a** to **d**) corresponding to the four facilities connected to the circuit pack.
	short	
	long	
	external loopback	This initiates a destructive test that sends a test pattern to an external device and returns it for comparison to the original. Configure the external device to loop back the signal. See DS1-FAC (DS1 Facility) on page 355 in *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)* and DS1-BD (DS1 Interface Circuit Pack) on page 344 in *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*.
		See Common Input Parameters on page 25.
	repeat#	Examples: **test ds1-facility 04a01d**
	schedule	**test ds1-facility 03a01a sh c**

ds1-loop

test ds1-loop

`test ds1-loop` *`location`* `[cpe-loopback-jack-test-begin [`*`number-of-bits bit-pattern`*`] | far-csu-loopback-test-begin | one-way-span-test-begin | end-loopback/span-test | inject-single-bit-error | ds1/csu-loopback-tests]`

For TN464F or TN767E or later suffix DS1 Interface circuit packs, use **`test ds1-loop`** for loopback and one-way span testing of the DS1 span.

Action/ Object	Qualifier	Qualifier Description	Login	Default	Feature Interaction

`test ds1-loop`	*`location`*
	`cpe-loopback-jack-test-begin`
	`number-of-bits bit-pattern`
	`far-csu-loopback-test-begin`
	`one-way-span-test-begin`
	`end-loopback/span-test`
	`inject-single-bit-error`
	`ds1/csu-loopback-tests`
			system technician inads init super-user logins with Maintain Switch Circuit Packs permissions	`ds1/csu-loop back-`	See Feature Interactions for test ds1-loop

		See Parameters for test ds1-loop on page 230.			

		Examples:
		`test ds1-loop 01c08`
		`test ds1-loop 1-3c03 cpe`
		`test ds1-loop 10c03 end`
		`test ds1-loop 02d12 fa`
		`test ds1-loop 02d12 inj`
		`test ds1-loop 1-3c03 cpe-loopback-jack`			

Use **`test ds1-loop`** to validate that the board exists at the specified location, that the board is a TN464F or TN767E or later suffix DS1 Interface board. Based on the command parameter, a long-duration loopback/span test or series of short-duration loopback tests will be executed.

Long-duration loopback tests execute for an extended period of time until the system technician terminates it. Short-duration loopback tests return the result of the test to the screen when finished executing. Use **`list measurements ds1 summary`** to monitor the status of a long-duration loopback/span test.

If the [**inject-single-bit-error**] parameter is used, but no CPE loopback jack, far-end CSU, or one-way span test is active on the DS1 circuit pack, the following error message appears:

Parameter valid only if a loopback/span test is active on the DS1

Parameters for test ds1-loop

Parameters for test ds1-loop

location	A ***location*** represents the physical position of the board to be tested. It is represented by the cabinet number, the carrier, and the slot position. A 1-digit cabinet (1-3) is entered with or without a leading zero (0).
cpe-loopback-jack-test-begin [number-of-bits bit-pattern]	For TN464F or TN767E or later suffix DS1 boards, this causes a long-duration loopback test to be setup through the CPE (customer-premises equipment) loopback jack. The command allows you to specify a loop-up code for the CPE loopback jack if it differs from the default of 0x47F. Specify the ***number-of-bits*** in the loop-up code as well as the actual ***bit-pattern*** (in hexadecimal). The test aborts if the **busyout** command has not been set
far-csu-loopback-test-begin	For TN464F or TN767E or later suffix DS1 boards, this causes a long-duration loopback test to be setup through the far-end CSU (channel service unit).
one-way-span-test-begin	For TN464F or TN767E or later suffix DS1 boards, this begins execution of a long-duration one-way span test.
end-loopback/span-test	For TN464F or TN767E or later suffix DS1 boards, this parameter terminates long-duration one-way span and loopback testing.
inject-single-bit-error	For TN464F or TN767E or later suffix DS1 boards, this parameter causes a single bit error to be sent within an active framed 3-in-24 test pattern used in long-duration loopback and span testing.
ds1/csu-loopback-tests	For TN464F or TN767E or later suffix DS1 boards, this parameter executes the following loopback tests: DS1 Board LoopBack, CSU Module Equipment LoopBack, and CSU Module Repeater LoopBack. These tests are performed sequentially for a short duration each, and individual PASS/FAIL/ABORT test results are reported following each test.

Feature Interactions for test ds1-loop

Loopback or span tests are allowed only on DS1 boards that are busied out.

Only one of the CPE loopback jack, far-end CSU, one-way span, or DS1/CSU loopback tests may be active at any given time on a DS1 span.

eda-external-device-alrm

See:
list eda-external-device-alrm on page 231
test eda-external-device-alrm on page 231

list eda-external-device-alrm

For detailed information about **`list eda-external-device-alrm`**, refer to EXT-DEV in *Maintenance for Avaya Communication Manager and DEFINITY® Server CSI* (555-233-119).

test eda-external-device-alrm

`test eda-external-device-alrm all | physical-location [repeat repeat# | clear] [schedule]`

Use **`test eda-external-device-alrm`** to perform hardware diagnostic tests on the alarm port for either an individual device, or every external device.

If **`all`** is entered, **`test eda-external-device-alrm`** performs a hardware diagnostic test on every administered external device's alarm port. If an administered external device's alarm port is entered, this command performs a hardware diagnostic test on that port.

The test PASSES if the external device is not reporting an external device alarm and FAILS if the external device is reporting an external device alarm. If the technician specifies a port, it must be administered as an external device's alarm port either on a maintenance board or on an analog line board.

Note:

If you enter **`test eda-external-device-alrm`** on an IPSI-connected port, an error message appears. The IPSI circuit pack contains maintenance board functionality.

Action/Object	Qualifier	Qualifier Description	Login	Default
test eda-external -device-alrm	**all** **physical-*location*** **repeat *repeat#*** **clear schedule**	test every administered external device's alarm port on analog line boards and maintenance boards. See Parameters for test eda-external-device-alrm on page 232. ***location*** See Common Input Parameters on page 25.	init inads craft	1
		Examples: **test eda-external-device-alrm all** **test eda-external-device-alrm all schedule** **test eda-external-device-alrm physical 1major r 10** **test eda-external-device-alrm physical 2c1101 c**		

Parameters for test eda-external-device-alrm

Parameters for test eda-external-device alrm

physical location	For an administered external device alarm analog line port, the physical location represents the physical position of the port to be tested. Since the "maintenance board" alarm connections connect to control carrier boards that are in unnumbered slots, the standard port format cannot be used to designate these alarm connections. The special ports UUmajor and UUminor are used designate the major or minor maintenance board alarm connection for cabinet UU. The special locations ***UUmajor*** and ***UUminor*** designate the name of the major or minor Maintenance circuit pack alarm connection for cabinet UU (depends upon the auxiliary connector of the Port Network). Thus, both a "major" and "minor" port can be administered with major, minor, or warning alarms.

emergency

set emergency

`set emergency on | off | auto <cabinet>`

Use **`set emergency`** to manually set the state of emergency transfer on a TN2312BP in a media gateway or Compact Modular Cabinet (CMC). **`set emergency`** generates a major alarm if emergency transfer is set to **on** and generates a warning alarm if emergency transfer is set to **off**.

Use **`status health`** (all cabinets) or **`status cabinet`** (individual cabinets) to see the state of emergency transfer.

Action/Object	Qualifier	Qualifier Description	Login
`set emergency`	**`on`** **`off`** **`auto`** ***`cabinet`***	activates emergency transfer deactivates emergency transfer the server controls emergency transfer specify the cabinet location (1-64)	init super-user inads craft dadmin switch circuit pack maintenance permissions

environment

See:
status environment on page 234
test environment on page 238

status environment

`status environment <cabinet> <carrier>`

Use **`status environment`** to see status information for the 655A power supplies in a specified **G650** or **G650** stack.

Action/Object	Qualifier	Qualifier Description	Login
`status environment`	***`cabinet`*** ***`carrier`***	cabinet location	init super-user inads craft dadmin switch circuit pack maintenance permissions

Note:

The microcontroller on the power supply might provide data for diagnostic tests and **`status environment,`** even if the power supply itself fails. The microcontroller can get input power from three sources, the supply output voltage, backplane power, or its own power supply, and might work even though the power supply fails. If the power supply is in a control carrier without a redundant power supply and the carrier fails, then communication with the power supply is not available.

Note:

If the system cannot communicate with the power supply, or if the power supply is removed from the carrier, all fields except **Pow Loc** and **Alm Cnt** contain a single dash (-).

The following display shows a typical result of **`status environment.`**

```
status environment 01

                        CABINET POWER SUPPLY STATUS (655A)

Pow  Alm  Temp(F/C)    Hot    Voltage       FAN        Ring Voltage       Input
Loc  Cnt  InLet  Exhst Spot +5   -5   -48 Ctrl Alm  Stat Ctrl  Set  Det   Power

01A00 0   64/18  66/19  ok  5.05 5.08 48.5 mid   N   ok   actv  20HZ  Y   AC
01A15 0   64/18  66/19  ok  5.10 5.13 49.3 mid   N   ok   stby  20HZ  Y   AC
01B00 0   66/19  64/18  ok  5.08 5.10 48.8 mid   N   ok   actv  20HZ  Y   AC
01B15 0   62/17  64/18  ok  5.08 5.13 48.5 mid   N   ok   stby  20HZ  Y   AC
01C00 0   64/18  66/19  ok  5.10 5.10 49.0 mid   N   ok   actv  20HZ  Y   AC
01C15 0   62/17  64/18  ok  5.08 5.10 48.5 mid   N   ok   stby  20HZ  Y   AC
01D00 0   62/17  64/18  ok  5.10 5.10 48.8 mid   N   ok   actv  20HZ  Y   AC
01D15 1   147/64        ok  5.08 5.05 48.8 mid   N   ok   stby  20HZ  Y   AC
01E00 0   64/18  64/18  ok  5.08 5.08 48.5 mid   N   ok   actv  20HZ  Y   AC
01E15 0   64/18  64/18  ok  5.10 5.08 48.8 mid   N   ok   stby  20HZ  Y   AC
```

status environment field descriptions

status environment field descriptions ***1 of 3***

Field	Description
Pow Loc	Location of the 655A power supply (cabinet/carrier/slot)
Alm Cnt	Number of active major and miner alarms for the maintenance objects, MO_E_I2C_BUS, MO_E_POW_SUP, MO_E_CAB_TEMP, MO_E_RING_GEN
Temp (F/Client	The inlet air flow temperature (Fahrenheit is on the left and Celsius is on the right)
Temp (F/C) Ex	The outlet air flow temperature (Fahrenheit is on the left and Celsius is on the right)
Hot Spot	The status of the temperature at the power supply's hot spot: • ok • wn (warning) • sh (shutdown)
	1 of 3

status environment field descriptions ***2 of 3***

Field	Description
Voltage	The three voltages monitored are: • +5VDC Primary logic control • -5VDC Logic support • -48VDC Telephone support (Talk Battery)
Fan Ctrl	The speed at which the fans are running. Fan voltage is: • udr = under 12VDC • mid = +12VDC • hgh = +14VDC • ovr = above +14
Fan Alm	A fan alarm occurs when one or more fans fail.
Ring Voltage Stat	Status of the ringer on the associated power supply. See Ring Status and Ring Control states on page 237 for the valid states for Ring Stat and Ring Ctrl: • ok • over (overloaded) • shrt (shorted) • fault • cmd (commanded off)
Ring Voltage Ctrl	Indicates if the associated power supply is providing ringing voltage for the G650. Only one power supply can provide ringing voltage to the carrier. See Ring Status and Ring Control states on page 237 for the valid states for Ring Ctrl and Ring Stat: • actv (active) • stby (standby) • dsbl (disabled, see **Ring Set** field values) • off (due to short or internal failure)
Ring Voltage Set	Indicates the ringing voltage frequency. The ringing voltage frequency is set via a physical switch on the 655A power supply: • 20 Hz (North American Ringer Signal) • 25 Hz (European/International Ringer Signal) • off (The ringer switch on the power supply is set to *off.*)
	2 of 3

status environment field descriptions ***3 of 3***

Field	Description
Det	y - backplane ringing is detected n - backplane ringing is not detected
Input Power	Type of current (active input voltage) that is being used on the power supply and an alternate source that can be used. Lower case letters indicate that an input source is present but not being used. Upper case letters indicate the input source that is being used. • AC (Alternating Current) • DC (Direct Current)
	3 of 3

Ring Status and Ring Control states

Stat/Ctrl	Ring Generator State
ok/actv	The ring generator on this power supply is the active ringer.
ok/stby	The ring generator on this power supply is the standby ringer
ok/dsbl	The ring generator on this power supply is OK, but is disabled with the ringer select switch on the power supply. This is done when an external ringer is used, for example the TN2202 French Ringing circuit pack.
over/actv	The ringer voltage on this power supply is overloaded, but the ring generator on this power supply is still active.
shrt/off	The ring generator on this power supply is off due to a short on its output.
fault/off	The ring generator on this power supply is off due to a failure detected by an internal power supply audit.
cmd/off	The ring generator on this power supply is off due to a software command.

test environment

`test environment UU [short | long] [repeat# | clear] [schedule]`

Use **`test environment`** to perform hardware diagnostic tests of the environment monitoring and control, and emergency transfer functions of a specified cabinet. This command tests PN cabinets. Circuit packs involved are the PN's maintenance and tone-Clock (for the ring generator test).

CAUTION:

The **`long`** test recycles power on every port circuit pack carrier and is destructive. It does not recycle power on active or standby servers. When a port carrier is recycled, all service and links to ports on the carrier are dropped. If a carrier containing an active EI or Tone-Clock is recycled, all service to that cabinet is disrupted.

Action/Object	Qualifier	Qualifier Description	Login
`test environment`	***`UU`*** **`short`** **`long`** **`repeat#`** **`clear`** **`schedule`**	cabinet location See Common Input Parameters on page 25.	init super-user inads craft dadmin switch circuit pack maintenance permissions

In **`test environment`**, there are 6 maintenance objects involved on **S8700 IP** servers, and 10 maintenance objects involved on **S8700 MC** servers.

Maintenance Objects reported with the test environment command *1 of 2*

Maintenance Object	Notes
AC-POWER	
CABINET	
CARR-POW	
CUST-ALARM	CUST-ALARM is part of the environment functionality but is not tested with **`test maintenance`**. See test customer-alarm on page 219.
DC-POWER	
EMG-XFER	
	1 of 2

Maintenance Objects reported with the test environment command *2 of 2*

Maintenance Object	Notes
EXT-DEV	Appears when the **External Device Alarm Admin** field is **n** on the `change system-parameters customer-options` screen.
POWER	
RING-GEN	
RMV-GEN	Appears when the rack mount cabinet is used on **S8700 IP-PNC**.
	2 of 2

errors

See:
clear errors on page 239
display errors on page 239

clear errors

`clear errors`

Use `clear errors` to move every error and resolved alarm to the cleared errors list, to make room for new incoming error messages that might otherwise be dropped. `Clear errors` does not clear active alarms from the alarm log. Cleared error entries are the first entries overwritten when additional room is needed to log new entries.

Use `display errors clear` to list the cleared errors.

WARNING:
Use `clear errors` with care. Cleared data is lost when the logs fill up.

Action/Object	Qualifier	Qualifier Description	Login
`clear errors`			init inads craft

display errors

`display errors [high-resolution] [schedule]`

Use **`display errors`** to select the errors that appear on the hardware error report.

Errors can result from in-line firmware errors, periodic tests, failures detected while executing a test command, software inconsistency, or a data audit discrepancy. The error log is restricted in size. A new entry overwrites the oldest unalarmed entry. The overwritten entry must be at least six minutes old, or the new entry is dropped.

Action/Object	Qualifier	Qualifier Description
`display errors`	**`high-resolution`** **`schedule`**	Include high resolution time stamps for the first occurrence and last occurrence of the error. This shows seconds and a sequence count within a second. The sequence count starts over for each second. See Error Log Report High Resolution on page 243. See Common Input Parameters on page 25.

Help Messages

- When the first page of a multiple page list of alarms/errors or after the **Prev Page** key is pressed:

  Press CANCEL to abort or NEXT PAGE for next page

- After the **Next Page** key is pressed and there are more pages of alarms/errors to be displayed:

  Press CANCEL to abort, NEXT PAGE for next page, PREV PAGE for previous page

- After the **Next Page** key is pressed and there are no more alarms/errors to be displayed:

  Press CANCEL to abort, NEXT PAGE to complete, PREV PAGE for previous page

System Reboots and the Error and Alarm Logs

Avaya™ Communication Manager software attempts to save the error and alarm logs to the disk when any of the following events take place:

- The **`save translation`** command is executed.
- Translations are saved as part of scheduled maintenance (as administered on the Maintenance-Related System Parameters screen).
- A demand or software-escalated system reboot takes place.

Whenever the Communication Manager software reloads, the error log is restored from the disk. Since the logs are saved to the disk, the versions restored at reload time may not be current. This occurs when either:

- The attempt to save at reload did not succeed.
- The server that is active coming out of reload is not the same one to which the logs were last saved.

In such a case, the logs will not show the errors and alarms that have been logged since the last time a save was made to the server that became active with the reboot. When looking at errors that precede the last reload, look for indications preceding the reload to determine whether the logs restored at reboot are complete.

System resets less severe than a reload rarely affect the error and alarm logs.

Note:

If there are SYSTEM errors in the error log, use display initcauses on page 310 for more information. Information that could not be logged during a system reset may be found here.

display errors input form

This screen specifies which errors display on the report. When every selection has been made, press **ENTER**. If no selections are made or if the schedule option is specified, every error from the last day that are associated with active alarms display.

```
display errors                                          Page   1 of   1
                                   ERROR REPORT

     The following options control which errors will be displayed.
         ERROR TYPES

            Error Type:  ____          Error List:  active-alarms

         REPORT PERIOD
            Interval:  _      From:  __/__/__:__ To:  __/__/__:__

         EQUIPMENT TYPE ( Choose only one, if any, of the following )
                      Media Gateway:  ___
                            Cabinet:  __
                       Port Network:  __
                       Board Number:  ____
                               Port:  ______
                           Category:  ________
                          Extension:  _____
              Trunk ( group/member ):  __/__
```

display errors input field descriptions

display errors field descriptions

Field	Description
Error Type	The report can be restricted to specific error codes. Default is every error.
Error List	The report can be restricted to errors from one of three lists described below: active-alarms, errors, or cleared-errors. Default is active-alarms.
Interval	Specifies error records for the last month, hour, day, week, or all errors (**m**, **h**, **d**, **w**, **a**). The default is all.
From	Specifies error records starting from the time specified by **mm/dd/hh/mm** (month/day/hour/minute). If no **From** date is entered, errors from the earliest record in the log are displayed.
To	Specifies every error record up to the time specified by **mm/dd/hh/mm**. If no **To** date is entered, every error up to the current date appears.
Equipment Type	To limit the report to a specific group of components, enter the location of a type of equipment in one of the following fields. If no entry is made, errors for the entire system are displayed. • **Media Gateway**: Enter the media gateway number. • **Cabinet**: Enter the cabinet number. • **Port Network**; Enter the port network number. • **Board**: Enter the cabinet-carrier-slot address of the circuit pack (for example, 11c04). If the cabinet number is omitted, it defaults to 1. • **Port**: Enter the cabinet-carrier-slot-circuit address of the port (for example, 11c0408). If the cabinet number is omitted, the system will default to 1. • **Category**: Enter a category to restrict the report to maintenance objects in a specific category. The HELP key displays a list of categories. • **Extension**: Enter the extension number of a port. • **Trunk (group/member)**: Enter a trunk-group number, or a trunk-group and member number separated by a slash (for example, 78 or 78/1).

The following Hardware Error Report shows a typical result for **`display errors`** with default input settings.

Error Log Report Without High Resolution

The following example shows a typical result when **`display errors`** is entered with the default input settings.

```
 display errors                                                    Page 1 of x

                    HARDWARE ERROR REPORT - ACTIVE ALARMS

123456789 12345678 123456789012345 12345 12345 12/12/12:12 123 123 123  1  1
Port      Mtce     Alt             Err   Aux   First/Last  Err Err Rt/ Al Ac
          Name     Name            Type  Data  Occurrence  Cnt Rt  Hr  St
01A0302   MEDPROPT                 1025        10/11/10:23 137 5   3    a  y
                                              10/12/10:09
01A03     IPMEDPRO                 2305  2801  10/11/10:22 1   0   0    a  y
                                              10/11/10:22
```

Error Log Report High Resolution

The following example shows a typical result when **`display errors high-resolution`** is entered with the default input settings.

```
display errors high-resolution                                   Page 1 of x

             HIGH RESOLUTION HARDWARE ERROR REPORT - ACTIVE ALARMS

Port      Mtce      Alt            Err   Aux      First/Last   Sq   Err  Al
          Name      Name           Type  Data     Occurrence   Ct   Cnt  St

006       MED-GTWY                 1     0      11/22/14:42:48 1    1    a
                                                11/22/14:42:48 1
007       MED-GTWY                 1     0      11/22/14:42:48 2    1    a
                                                11/22/14:42:48 2
008       MED-GTWY                 1     0      11/22/14:42:48 3    1    a
                                                11/22/14:42:48 3
009       MED-GTWY                 1     0      11/22/14:42:48 4    1    a
                                                11/22/14:42:48 4
010       MED-GTWY                 1     0      11/22/14:42:48 5    1    a
                                                11/22/14:42:48 5
011       MED-GTWY                 1     0      11/22/14:42:48 6    1    a
                                                11/22/14:42:48 6
012       MED-GTWY                 1     0      11/22/14:42:48 7    1    a
                                                11/22/14:42:48 7
```

display errors output field descriptions

display errors output field descriptions ***1 of 2***

Field	Description
Port	The physical location of the alarmed object. For circuit pack based MOs, the location is cabinet-carrier-[slot]-[circuit]. For PN-based objects, such as TDM-BUS, the location displays as **3PN xx**, where xx is the PN number. For Fiber Link-based objects, the location displays as **x a,b-PNC** where x is the Fiber Link number and a- or b-pnc indicates one of the PNC pair. Always **`a-pnc`** for a high-reliability system with an unduplicated PNC.
Maintenance Name	The name of the MO as it appears in the alarm and error logs.
Alt. Name	The alternate name depends upon the type of the object. For example: l Station MO, Alternate Name = ***nnnnn*** (extension) l Trunk MO, Alternate Name = ***nn/n*** (trunk-group#/member #) l Personal CO line MO, Alternate Name = **P/*xx*** (P/personal CO line group #)
Error Type	Numerical error code that identifies the type of problem. The meanings of these codes are explained under the name of the MO in the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*.
Aux Data	Additional numerical information about the error type. Only the most recent auxiliary data for each error type appears.
First/Last Occurrence	First line: Month, day, hour, and minute (and second, if the **`high-resolution`** command-line option is used) that the error was first recorded. Second line: The month, day, hour, and minute (and second, if the high-resolution command-line option is used) of the most recent error. If the system is unable to retrieve the time of day when the error occurred, a “dummy” date will be stamped in the log so as to distinguish it from reliable data. It appears as “00/00/01:07”
Seq Cnt	Sequence Count. These numbers give the order in which the errors were logged. Each sequence covers a period of one second. Sequence numbers are assigned to the first and last occurrences of a given error within the one second period given in the time stamp. There may be gaps in the sequence numbers within a given second because the last occurrence of an error may replace an existing entry and because sequence numbers are also assigned to software events not shown in the hardware error log. This information appears when the high-resolution option is specified on the command line.
Err Cnt	The total number of times that the error type has occurred. The maximum entry is 999.
	1 of 2

display errors output field descriptions ***2 of 2***

Field	Description
Err Rt	Average hourly rate at which the error has occurred from the first occurrence to the present. The maximum entry is 999.
Rt/Hr	An approximation of the rate at which this error occurred in the last hour. The maximum entry displayed is 999.
Al St	Alarm Status – A character indicating the status of this MO in the error and alarm logs. • **a** — active alarm entry • **r** — resolved alarm entry • **c** — resolved alarm entry due to **`long clear`** option of **`test`** • **s** — resolved alarm entry due to a software-requested (non-demand) system restart • **t** — resolved alarm entry due to a technician-requested system restart • **n** — not alarmed
Ac	**y/n** The maintenance object is still under active consideration by the maintenance subsystem.
	2 of 2

ess

See:
disable ess
enable ess
status ess clusters
status ess port-networks

disable ess

`disable ess [ all | cluster` ***`n <1-999>`*** **`]`**

`Use disable ess` to disable an ESS or main server from connecting to IPSIs in a port network. The **`disable ess cluster`** ***`n`*** command allows an ESS cluster to be disabled (taken out of service).

Note:

A server cluster is either a **S8500** or **S8700 series**.

The enabled / disabled status of ESS and Main servers is preserved across server power down, restarts, and reboots.

A cluster may be disabled if and only if it is not controlling any IPSIs. A disabled ESS will not connect to IPSIs.

A disabled ESS remains registered and receives file sync translation updates.

Execute **`disable ess`** from either a main or ESS. An ESS may disable only its own cluster ID. When **`disable ess`** is run from the main server, any and all clusters may be disabled including the main server itself.

CAUTION:

Use caution when using **`disable ess all`**. Since the main typically controls IPSIs and a cluster may not be disabled when it controls IPSIs, it is generally safe to use **`disable ess cluster`** ***`all`*** to disable only the ESS clusters.

Be aware that if the main is not controlling IPSIs and **`disable ess cluster`** ***`all`*** is used, the main will also be disabled.

When an ESS is disabled, it reboots. After the reboot, the server is in the ESS disabled state and will not connect to any IPSIs. If the cluster involves duplicated servers, this process may take slightly longer while the active server informs the standby of its new ESS disabled state.

When a valid **`disable ess`** command is run from an ESS:

- the server reboots
- no SAT screen is displayed
- Once the server has rebooted, use **`status ess cluster`** to confirm that the disable operation succeeded.

When a valid **`disable ess`** command is run from a main server:

- a TEST RESULTS screen appears
- If the **`disable ess`** command specifies the cluster ID of the main itself, the server reboots and no SAT screen is displayed.
- Use **`status ess cluster`** to confirm that the disable operation succeeded.

Action/Object	Qualifier	Qualifier Description	Login
`disable ess`	**`all`** **`cluster`** ***`n`***	disable all ESS servers Number (1 - 999) of the cluster ID for the target ESS or Main. Examples: **`disable ess`** ***`all`*** **`disable ess cluster`** ***`9`***	init inads craft cust su

The following shows a typical result for **`disable ess all`**.

```
disable ess all
                                TEST RESULTS

Port        Maintenance Name  Alt. Name Test No. Result           Error Code

CL 001      ESS                         1607     ABORT            1993
CL 009      ESS                         1607     IN PROGRESS
CL 013      ESS                         1607     IN PROGRESS
CL 044      ESS                         1607     ABORT            1992
CL 064      ESS                         1607     IN PROGRESS
CL 100      ESS                         1607     IN PROGRESS
CL 200      ESS                         1607     IN PROGRESS
CL 306      ESS                         1607     IN PROGRESS
CL 500      ESS                         1607     IN PROGRESS
CL 850      ESS                         1607     IN PROGRESS
```

In the example above, the **`disable ess all`** command was issued from a main server, and 10 clusters were administered. The disable operation for cluster 1, which happens to be the main, aborted because the main was in control of IPSIs (Error Code 1993). The attempt to disable cluster ID 44 also aborted because the cluster was not registered with the main (Error Code 1992). Otherwise, the disable request was sent to each respective cluster and the result is IN PROGRESS.

Use the **`status ess cluster`** command to check whether or not the disable operation succeeded for the IN PROGRESS clusters. The complete operation may take several minutes since the request is first sent in a message from the main to the ESS. Once the ESS receives the message, it changes to the ESS disabled state and reboots. If duplicate ESS, the standby also is updated and reboots. After the reboot, the ESS re-registers with the main. It is not until the ESS re-registers that the main receives the results of the disable request.

Error Codes

The following table describes the Error Codes that may be returned from the **`disable/enable ess`** commands:

disable/enable ess Error Codes

Error Code	Description
1991	Requested ESS cluster is not administered
1992	Requested ESS cluster is not registered
1993	Requested ESS is controlling an IPSI PN

disable/enable ess Error Codes

Error Code	Description
1994	An ESS cluster may not enable/disable other clusters.
2500	Internal operation failed

enable ess

`enable ess [ all | cluster n <1-999> ]`

The **`enable ess`** command allows an ESS cluster to be enabled (put into service). Once an ESS cluster is enabled, it attempts to connect to IPSIs.

Note:

A server cluster is either a **S8500** or **S8700 series**.

Use **`enable ess`** from either a main or an ESS. An ESS may enable only its own cluster ID. When **`enable ess`** is run from the main server, any and all cluster IDs may be enabled including the main itself. Care should be taken when using **`enable ess all`**

When an ESS is enabled, it removes its translations and reboots. The TEST RESULTS screen is not displayed.

When a main server is enabled, it reboots but does not remove its translations. A TEST RESULTS screen is displayed. The exception is when the **`enable ess cluster`** command specifies the cluster ID of the main itself. In that case, the server reboots and no screen is displayed.

After the reboot, the server is in the ESS enabled state and will attempt to connect to IPSIs. If the cluster involves duplicated servers, this process may take slightly longer while the active server informs the standby of its new ESS enabled state.

Action/Object	Qualifier	Qualifier Description	Login
`enable ess`	**`all`** **`cluster n`**	disable all ESS servers Number (1 - 999) of the cluster ID for the target ESS server or Main server. Examples: **`enable ess all`** **`enable ess cluster 9`**	init inads craft cust su

The following display shows the typical result for **`enable ess all`**.

enable ess command TEST RESULTS example

```
enable ess all
                                TEST RESULTS

Port        Maintenance Name  Alt. Name Test No. Result            Error Code

CL 001      ESS                         1606     PASS
CL 009      ESS                         1606     IN PROGRESS
CL 013      ESS                         1606     IN PROGRESS
CL 044      ESS                         1606     PASS
CL 064      ESS                         1606     IN PROGRESS
CL 100      ESS                         1606     IN PROGRESS
CL 200      ESS                         1606     IN PROGRESS
CL 306      ESS                         1606     IN PROGRESS
CL 500      ESS                         1606     IN PROGRESS
CL 850      ESS                         1606     IN PROGRESS
```

In the above example, the command was issued from a main server and 10 clusters were administered. The enable operation for cluster 1, which happens to be the main, PASSED immediately because the main knows its own status. The attempt to enable cluster ID 44 also PASSED because the ESS can enable its own cluster ID. Otherwise, the enable request was sent to each respective cluster and the result is IN PROGRESS.

Use the **`status ess cluster n`** command to check whether or not the enable operation succeeded for the IN PROGRESS clusters. The complete operation may take several minutes while the following events occur:

- The request is sent from the main to the ESS.
- Once the ESS receives the message, it changes to the ESS enabled state, removes its translations, and reboots.
- After the reboot, the ESS re-registers with the main.
- Since the ESS now has no translations, this triggers a translation filesync and a second reboot.
- The ESS again re-registers with the main. It is not until the ESS re-registration that the main receives the results of the enable request.

Error Codes

See disable/enable ess Error Codes for a description of possible error codes returned from the **`enable ess`** command.

status ess clusters

status ess clusters

Note:

A server cluster is either a **S8500** or **S8700 series**.

Use **status ess clusters** to see the state of the Main server and all administered ESS. Under normal conditions, with full network connectivity, all ESS's should register with the main.

Action/Object	Qualifier	Qualifier Description	Login
status ess cluster	***none***	Examples: **status ess cluster**	init inads craft cust su

When **status ess clusters** is run on a Main server (Cluster ID 1), the Main server:

- knows the identities of all of its associated ESS from the translations input to the Main
- knows the state of all of the ESS that have successfully registered with it
- shows its own state

This is a typical example of **status ess clusters** executed on a Main server (Cluster ID 1).

```
status ess clusters

Cluster ID   1             ESS CLUSTER INFORMATION

                      Active
  Cluster             Server                Translations        Software
    ID     Enabled?     ID   Registered?     Updated            Version

     1        y         1        y       11:02 10/25/2007  R015x.00.0.824.0
    10        y        91        y       11:02 10/25/2007  R015x.00.0.824.0
    20        y        97        y       11:02 10/25/2007  R015x.00.0.824.0
    30        y        96        y       11:02 10/25/2007  R015x.00.0.824.0
    40        n        95        y       11:02 10/25/2007  R015x.00.0.824.0
    50        y        94        y       11:02 10/25/2007  R015x.00.0.824.0
    60        y        90        y       11:02 10/25/2007  R015x.00.0.824.0
    70        y        88        y       11:02 10/25/2007  R015x.00.0.824.0
    80        n         8        y       11:02 10/25/2007  R015x.00.0.824.0
    90        y         9        y       11:02 10/25/2007  R015x.00.0.824.0
```

See status ess clusters field descriptions on page 251.

This is a typical example of **status ess clusters** executed on an ESS (Cluster ID 60). The ESS knows only its own state. It takes time for this state to be propagated to the Main server via the

registration link, and for a short time (minutes) there may be a discrepancy between the state displayed by the ESS and the equivalent state displayed for the ESS on the Main server.

```
status ess clusters

Cluster ID   60            ESS CLUSTER INFORMATION

                      Active
  Cluster             Server                Translations        Software
    ID     Enabled?     ID   Registered?     Updated            Version

    60        y         90       y        11:02 10/25/2007 R015x.00.0.824.0
```

status ess clusters field descriptions

Note:

The field definitions are the same whether the **`status ess`** command is executed on a Main server or ESS.

status ess clusters ***1 of 2***

Field	Description
Cluster ID (title line)	Cluster IDentifier (**1 - 999**). The cluster identifier of the server where **`status ess`** was run. In a duplex server environment (**S8700 series**) both the active and the standby server have the same cluster ID. The cluster ID is initially obtained from the license file (where it is called the Module ID or MID). Once **`save translation`** is executed, the cluster ID is saved in translations.
Cluster ID (detail line)	Cluster IDentifier (**1 - 999**). The cluster ID of a server who's state is known to the server where **`status ess`** was run. The detail lines are shown in cluster ID order. When **`status ess`** is issued on a Main server there is one detail line for the Main server itself and a detail line for every ESS that is registered with the Main. When **`status ess`** is issued on an ESS there is only one detail line since an ESS only knows its own state.
	1 of 2

status ess clusters ***2 of 2***

Field	Description
Enabled	The ESS enabled / disabled state of the server. l **y** = enabled. This server will connect to administered IPSIs l **n** = disabled. This server will not connect to administered IPSIs l **unknown** = the Main does not yet know the maintenance state of the ESS. This may be because: - the ESS is not registered with the Main - the ESS has not yet acknowledged a maintenance state change request from the Main via an **`enable ess`** or **`disable ess`** command
Active Server ID	The server identifier of the active server for each cluster, ESS or Main (**1 - 99**). This is the Server ID that was entered for this server in the **Set Server Identities** web page during configuration. l If the server is a simplex configuration (**S8500**) there is only one Server IDentifier. l If the server is a duplex configurations (**S8700 series**) the A and B servers each have unique server identifiers. Because in a duplex configuration only the active server registers with the Main, only its server identifier is displayed. Only server IDs for registered ESS's are displayed.
Registered	The registration state of the server. l **y** = registered l **n** = not registered The Main server does not register with itself, but always displays its own registration as **y**.
Translations Updated	For an ESS: l The time and date of the latest translation update reported by the ESS to the Main server over the registration link. For a Main server (Cluster ID 1): l The time and date of the latest successful **`save translation`** command of any kind. **Note:** For a Main server this time stamp may be later than those shown for ESS's. A **`save translation`** on the Main updates its time stamp. A **`save translation [ess | all]`** updates the ESS translations and time stamp.
Software Version	The software version of Communication Manager running on the server. For an ESS, this is reported to the Main server over the registration link.
	2 of 2

status ess port-networks

status ess port-networks

Use **status ess port-networks** to see the status of all administered Port Networks on ESS and non-ESS systems.

- For ESS and Main servers, on IP Port Network Connectivity (PNC) and Asynchronous Transfer Mode (ATM) PNC systems, **status ess port-networks** shows the status of all of the administered Port Networks.
- For Center Stage Switch (CSS) PNC systems, only the IPSI equipped Port Networks are known to the ESS, because only the Main server has access to the CSS. The information displayed is very dynamic and may, for brief periods, appear inconsistent.

Action/Object	Qualifier	Qualifier Description	Login
status ess port-networks		Example: **status ess port-networks**	init inads craft cust su

status ess port-networks on page 254 is an example of **status ess port-networks** executed on a server that is controlling five Port Networks in a system. This server is a Main server, but other than the cluster identifier, the display looks exactly the same for an ESS controlling all five Port Networks.

In addition to the Main, seven other ESSs are connected to each IPSI in every Port Network. Each IPSI may be connected to the same, some of the same, or completely different servers.

status ess port-networks

```
status ess port-networks

Cluster ID 1             ESS PORT NETWORK INFORMATION

                  Port IPSI   Pri/ Pri/    Cntl Connected
   Com  Intf Intf Ntwk Gtway  Sec  Sec     Clus Clus(ter)
PN Num  Loc  Type Ste  Loc    Loc  State     ID IDs

 1   1  1B01 IPSI up    1B01  1AXX standby  1   1   44  64  13  9   200 100 500
                             1B01 actv-aa  1   1   44  64  13  9   200 100 500

 2   1  2AXX IPSI up    2AXX  2AXX actv-aa  1   1   44  64  13  9   200 100 500
                             2B01 standby  1   1   44  64  13  9   200 100 500

 3   2  3AXX IPSI up    3AXX  3AXX actv-aa  1   1   44  64  13  100 500 850 9
                             3B01 standby  1   1   44  64  13  100 500 850 9

 4   2  4A01 IPSI up    4A01  4A01 actv-aa  1   1   44  64  13  100 500 850 9
                             4B01 standby  1   1   44  64  13  100 500 850 9

 5   1  5A01 EI   up    3AXX

Command successfully completed
Command:
```

status ess port-networks field descriptions

Status ess port-networks field descriptions *1 of 4*

Field	Description
Cluster ID (title line)	Cluster IDentifier (1 - 999). The cluster identifier of the server on which **`status ess port-networks`** was run. In a duplex server pair (**S8700 series**), both the active and the standby server should have the same cluster identifier. Each server initially learns its own cluster ID from its license file (where it is called the Module IDentifier or MID). After **`save translations`** is executed, the cluster identifier is saved in translations. However, the cluster identifier is always overridden by the license file as long as the license file is present and readable. The example above status ess port-networks on page 254 shows a cluster identifier of one (1).
PN	The number that identifies the Port Network (PN). This is the same number that identifies the Port Network in the **`list cabinet`** command.
	1 of 4

Status ess port-networks field descriptions ***2 of 4***

Field	Description
Com Num	The community number of the Port Network (1 - 64) assigned to the Port Network on **`display system-paramters.`** Port networks have a natural attraction for local preferred servers in the same community. In the event of loss of connectivity with their server, they prefer to be controlled by a server in their community if possible.
Intf Loc	Interface Location. Board location of the most recent interface in the Port Network with which the system tried to control the Port Network. The interface may be any circuit pack through which the Port Network may be controlled, such as a TN2312 IP Server Interface (IPSI), a TN2305B or TN2306B ATM Expansion Interface (ATM EI), or a TN570D Expansion Interface (CSS EI) • blank = there is no interface
Intf Type	The type of interface whose location is shown in the **Intf Loc** field. • **IPSI** = IP Server Interface • **EI** = either type of Expansion Interface (TN570 or TN2305/2306) • **UNKN** = the interface type cannot be determined • blank = there is no interface
Port Ntwk Ste	The Port Network state from the point of view of the server on which **`status ess port-networks`** is run. • **up** = the Port Network is up • **down** = the Port Network is down • **unkn** = the state is unknown • blank = there is no Port Network state The Port Network is **up** from the perspective of the server that is controlling the Port Network. The Port Network is **down** from the perspective of all other servers.
IPSI Gtway Loc	IPSI Gateway Location. The location of the IPSI whose Packet Interface (PKTINT) is being used to deliver packet traffic to the packet bus in this Port Network. The IPSI may be in this Port Network (this location is the same as **Intf Loc**), or it may be in a different Port Network.
Pri / Sec Loc	The location of the Primary and Secondary IP Server Interface (if any) in this Port Network. • If the Port Network has a single IPSI, only one line is displayed. • If the Port Network has duplicated IPSIs equipped, each is displayed on successive lines. • blank = the Port Network has only an Expansion Interface from which it is controlled
	2 of 4

Status ess port-networks field descriptions ***3 of 4***

Field	Description
Pri / Sec State	The state of the Primary and Secondary IPSIs whose locations are shown in the **Pri / Sec Loc** field. l **actv-aa** = the IPSI is both active and is controlling the Port Network (hosting the Arch Angel). l **active** = the IPSI is active but not controlling the Port Network. In this case the Port Network may not be controlled or is being controlled through an Expansion Interface (EI). l **standby** = the IPSI is in standby mode (duplex Port Network connectivity). l **unknown** = the IPSI state is unknown l blank = there is no IP Server Interface.
Cntl Clus ID	Control Cluster IDentifier. The cluster identifier of the server that was last known to be controlling this Port Network through this IPSI. If there are duplicate IPSIs in this Port Network, they should show the same Cluster ID l **Cluster ID** (1 - 999) l ***** (asterisk) - The server where **`status ess port-networks`** is run cannot connect to the IP Server Interface in this Port Network. This may be because: the IPSI is being reset the IPSI rejected the connection request from the server, perhaps because it is already connected to its limit (8) of servers. - The controlling Cluster ID reported for the IPSI is not known to the server (in its translations) where **`status ess port-networks`** was run. l . (period) - The controlling Cluster ID reported by this interface is not known to the server on which this command is executed given its own translations. This can occur when a new ESS is brought on-line and translated on the main server but the translations have not yet been file synchronized to every other ESS. The server on which this command is being executed cannot map from the Server ID reported by the interface to a Cluster ID known to the server in its translations. l ! (exclamation) - The Cluster ID reported by this interface is not in the valid range of values. l blank - There is no IPSI in this Port Network. - There is no controlling server.
	3 of 4

Status ess port-networks field descriptions ***4 of 4***

Field	Description
Connected Clus(ter) IDs	Connected Cluster IDentifiers. The list of cluster identifiers that were last known to be connected to this IP Server Interface. These servers are candidates to control the Port Network through the IPSI if connectivity to the current controlling server is lost. If a server was rejected by an IPSI, the information displayed here may be stale. This information will be updated periodically as each server attempts to connect or reconnect to the IPSI. The Cluster ID of the controlling server should always be displayed in the list of Cluster IDs. • **Cluster ID (1 - 999)** • - (dash) - A dash indicates that the server whose Cluster ID would have been in this position has lost the socket connection to this duplicated IPSI but not the connectivity to the IPSI's pair interface in the same port network. The server in question should appear in the same relative position in the list of Connected Clusters for the IPSI's pair interface. l . (dot) - The controlling Cluster ID reported by this interface is not known to the server on which the command was executed given its own translations. This can occur when a new ESS is brought on-line and translated on the main, but the translations have not yet been file synchronized to every other ESS. The server on which this command is being executed cannot map from the Server ID reported by the interface to a Cluster ID known to the server in its translations. l ! (exclamation) - There is no IP Server Interface in this port network - There is no connected Cluster ID. • * (asterisk) - The Cluster ID reported by the IPSI is not known to the server (in its translations) where `status ess port-network` was executed. • blank - There is no IPSI in this Port Network. - There is no controlling server.
	4 of 4

ethernet-options

See:
get ethernet-options on page 258

list ethernet-options on page 259
set ethernet-options on page 259

get ethernet-options

`get ethernet-options` ***`location`***

Use **`get ethernet-options`** to generate a report about a specific Ethernet connection.

Use **`list ethernet-options`** to see a list of ethernet-enabled circuit packs.

Action/Object	Qualifier	Qualifier Description	Login	Default
`get ethernet-options`	***`location`***	The physical location of the circuit pack	init inads craft cust	

```
get ethernet-options 1C07
                              GET ETHERNET OPTIONS

                     Administered Value         Actual Value

Auto Negotiation:  Yes                        Yes
           Speed:  N/A                        10Mbps
          Duplex:  N/A                        Full
  Link Integrity:                            Active
```

get ethernet-options field descriptions

get ethernet-options field descriptions *1 of 2*

Field	Description
Auto Negotiation	Enter **y** for the system to automatically negotiate the highest possible network speed. Enter **n** to manually assign the Speed and Duplex fields.
Speed	10 Mbps 100 Mbps N/A (not available)
	1 of 2

get ethernet-options field descriptions *2 of 2*

Field	Description
Duplex	Half Full N/A (not available)
Link Integrity	Active Inactive
	2 of 2

list ethernet-options

Use **`list ethernet-options`** to see locations and settings for ethernet-enabled ports.

This is a typical display for **`list ethernet-options`**.

```
list ethernet-options

Eth Pt  Type   Slot   Code   Sfx    Auto     Speed     Duplex
------  ----   ----   ----   ---    ----     -----     ------
   y    C-LAN  01B09  TN799   C      n        10Mbps    Half
   y    C-LAN  01E13  TN799   C      n        10Mbps    Half
   y    MEDPRO 02B07  TN2302         y
   y    C-LAN  01E05  TN799   C      n        10Mbps    Half
   y    MEDPRO 01D11  TN2302         y
```

set ethernet-options

`set ethernet-options` ***`location`***

Use **`set ethernet-options`** to manually or automatically set the ethernet connection parameters.

Note:

The Ethernet port must be administered and busied out before you can issue **`set ethernet-options`**.

Action/Object	Qualifier	Qualifier Description
`set ethernet-options`	***`location`***	The physical location of the circuit pack

```
set ethernet-options 1C07
                              SET ETHERNET OPTIONS
Auto Negotiation:  y

           Speed:

          Duplex:
```

set ethernet-options field descriptions

set ethernet-options field descriptions

Field	Description
Auto Negotiation	**y** = the system automatically negotiates the highest possible network speed. **n** = you must manually assign the Speed and Duplex fields. If **n**, the **Speed** and **Duplex** fields do not appear.
Speed	10 Mbps/100 Mbps Appears when Auto Negotiation is **y**
Duplex	Half/Full Appears when Auto Negotiation is **y**

events

display events

`display events`

Use display events to see a log that shows A vector event is the occurrence of something unexpected during a vector-routed call due to resource exhaustion or faulty vector

programming. For example, route-step failures are typically due to the programming of an invalid extension. These types of failures are not due to faulty hardware or system software error and do not constitute incorrect feature operation.

An IP event occurs when an IP endpoint registration is denied.

Use **`display events`** to diagnose and correct IP registration denials, and vectoring problems due resource exhaustion or faulty vector programming. See *Avaya Call Center Release 4.01 Call Vectoring and Expert Agent Selection (EAS) Guide, 07-600780 (formerly 07-300477, 07-300186, 555-230-714)*, to see how to interpret vectoring fields on this report.

Action/Object	Qualifier	Qualifier Description	Login
`display events`			init inads craft cust rcust

display events input form

Use the Event Report to request events of a certain type or from a certain time period. Enter the desired parameters and press **ENTER.**

The following example shows the input screen for **`display events`**:

```
display events                                Page  1 of  1
                          EVENT REPORT

  The following options control which events will be displayed.

         EVENT CATEGORY

            Category:  denial

         REPORT PERIOD

            Interval:  ___    From:  __/__/__:__ To:  __/__/__:__

         SEARCH OPTIONS
                           Vector Number:  ___
                              Event Type:  _____
                               Extension:
```

display events field descriptions

display events input field descriptions

Field	Description
Category	Enter the type of event to display: **all** **contact-cl** **data-error** **denial** **meetme** **vector**
Report Period	Select the time period for the vector events you want to see. If fields are blank, every recorded vector event is reported.
Interval	The time period for which events are reported: ***m*** (month), ***d*** (day), ***h*** (hour), ***m*** (minute), or **a** (all).
Start/Stop Time	Enter the date and time of day when you want to start and end the search.
Vector Number	Enter a specific vector number to include in the report. If blank, events for every vector are reported. If the category field is **meetme**, this field is ignored.
Event Type	Enter a specific event type to include in the report. If blank, all event types are reported.
Extension	Enter a specific event type to include in the report. If blank, all events for all extensions are reported.

See *Avaya Call Center Release 4.01 Call Vectoring and Expert Agent Selection (EAS) Guide, 07-600780 (formerly 07-300477, 07-300186, 555-230-714)* to see how to interpret this report. In particular, the Event Data 2 field is associated with possible causes and repair strategies for the event.

The following example shows an IP denial event report.

```
display events                                                  Page   1  of  1
                                    EVENTS REPORT

Event Event                        Event     Event      First       Last     Evnt
Type  Description                  Data 1    Data 2     Occur       Occur     Cnt

1012  Destination Unavailable   71        5A       01/09/09:44 01/09/09:54  8
1012  Destination Unavailable   65        22       01/09/09:45 01/09/09:45  1
1012  Destination Unavailable   6E        2D       01/09/09:46 01/09/09:47  3
1012  Destination Unavailable   1EA       4A       01/09/09:47 01/09/09:51  2
1934  IP RRJ - Ext already reg  6c        8709D26D 01/09/09:47 01/09/09:51  1
1012  Destination Unavailable   8E        32       01/09/09:48 01/09/09:48  1
1643  Off-hook dialing time out 46        58       01/09/09:49 01/09/09:53  2
1012  Destination Unavailable   AE        3A       01/09/09:49 01/09/09:49  1
1012  Destination Unavailable   55        41       01/09/09:50 01/09/09:50  2
1012  Destination Unavailable   222       48       01/09/09:51 01/09/09:51  1
1012  Destination Unavailable   1D4       50       01/09/09:52 01/09/09:52  1
1012  Destination Unavailable   46        5E       01/09/09:52 01/09/09:54  2
1012  Destination Unavailable   412       54       01/09/09:52 01/09/09:52  1
1012  Destination Unavailable   72        57       01/09/09:53 01/09/09:53  1
```

display events field descriptions

display events output field descriptions

Field	Description
Event Type	The event identification number that points to a specific piece of software code. See *Avaya Aura™ Communication Manager Denial Events, 03-602793*.
Event Description	A 25-character string describing the problem See *Avaya Aura™ Communication Manager Denial Events, 03-602793*.
Event Data 1	The station UID that is attempting to register See *Avaya Aura™ Communication Manager Denial Events, 03-602793*.
Event Data 2	The IP address of the station that is attempting to register See *Avaya Aura™ Communication Manager Denial Events, 03-602793*.
First Occur	The time and date when this event first occurred
Last Occur	The time and date when this event last occurred
Evnt Cnt	The number of occurrences of the event between the First Occur and Last Occur times

See *Avaya Aura™ Communication Manager Denial Events, 03-602793*. It lists the event type, the text that appears in the **Event Description** field, a further explanation of the condition, and the type of data in the **Event 1** and **Event 2** fields.

extended-user-profile

See

change extended-user-profile on page 264
display extended-user-profile n on page 265

change extended-user-profile

Use **`change extended-user-profile`** to administer detailed access permissions for the vector and station forms.

The screen name is **Extended User Profile**.

Action/Object	Qualifier	Qualifier Description
`change extended-user-profile`	**`n`**	The number of the extended profile to change.

change extended-user-profile screen display

```
change extended-user-profile 37
                         Extended User Profile 37

User Profile Name: Example Profile

      Form                                  Allow Only

R:vector                                1,9,16,23,125-206,302,800-803,804-810,813
M:station                               all
```

change extended-user-profile screen field descriptions

change extended-user-profile field descriptions

Field	Description
User Profile Name	The name of the standard profile for which this is the extended profile. Display only.
Form	Category and type of form (SAT screen) that are administered for extended permissions. Display only.
Allow Only	Specify access to all, certain, or no instances of the form. **all** = access to all instances of the form **blank** = no access to the form List specific instances in a valid format as: l list separated by commas (1,2,3) l one or multiple pair separated by a dash (1000-2000). As many combinations can be administered as can fit in the field.

display extended-user-profile *n*

Use **`display extended-user-profile`** to see the access permissions on an existing Extended User Profile.

The screen name is **Extended User Profile**.

Action/Object	Qualifier	Qualifier Description
`display extended-user-profile`	***n***	Number of the extended user-profile to display.

See change extended-user-profile on page 264 for screen and field descriptions.

extension-type

list extension-type

Use **`list extension-type`** to see the type of stations associated with specific extensions.

Action/Object	Qualifier	Qualifier Description
`list extension -type`	***`n`***	extension number
	`partial string*`	list all extensions that begin with the partial string, as in searching for all numbers that begin with a specific area code
	`all`	
	`type`	list extensions of type: See table list extension-type type entries.

list extension-type type entries

```
access endpoint          data-extension           page-line
administered NCA TSC     data-module              paging
agent-loginid            feature-name-extension   personal-CO-line
announcement             group-page               phantom-user
attendant                hunt-group               pickup
attendant-user           inter-g/w alt routing    pri-endpoint
barrier-code             internal originations    QSIG-Path-Rep endpoint
button-press-extension   ldn                      QSIG/ETSI-TSC endpoint
code-calling             masi-terminal            r2-mfc-test-call
conn-manager             mobile-feature-extension radio-paging
coverage                 modem-pool               remote-access
CTI Link                 mcu-user                 remote-user
h
station-user             term-trunk-transmission  trunk-user
system-parameters sccan  terminating-ext-group    VDN-extension
telecommuting-access     trunk                    voice-synthesis
term-masi-path-call
```

The following is an example of **`list extension-type`**.

```
list extension-type 90000 Count 1

                                EXTENSION TYPE
                                                                COR/      Cv1
Ext.   Type                      Name                           COS   TN  Cv2
---    ----
90001  feature-name-extension     Exclusion (Toggle On/Off)            1
```

failed-ip-network-region

See:
display failed-ip-network-region on page 267
test failed-ip-network-region on page 268

display failed-ip-network-region

`display failed-ip-network-region`

Use **`display failed-ip-network-region`** to see a list of the worst, first 100 network regions with broken connectivity rank ordered by the worst to least worst.

To troubleshoot broken connectivity, see status ip-network-region on page 325 and test failed-ip-network-region on page 268.

Action/Object	Qualifier	Qualifier Description	Login
`display failed ip-network-region`			

```
display failed-ip-network-region
                             WORST NETWORK REGIONS
                      Network Region:Number of Broken Paths

   5:9        :          :          :          :          :          :          :
   4:5        :          :          :          :          :          :          :
   2:4        :          :          :          :          :          :          :
   1:2        :          :          :          :          :          :          :
    :         :          :          :          :          :          :          :
    :         :          :          :          :          :          :          :
    :         :          :          :          :          :          :          :
    :         :          :          :          :          :          :          :
    :         :          :          :          :          :          :          :
    :         :          :          :          :          :          :          :
    :         :          :          :          :          :          :          :
```

The network regions are ordered from worst to best, for example:

- 5:9 (Region 5 has 9 broken paths)
- 4:5 (Region 4 has 5 broken paths)
- 2:4 (Region 2 has 4 broken paths)
- 1:2 (Region 1 has 2 broken paths)

test failed-ip-network-region

`test failed-ip-network-region [all | x]`

Use **`test failed-ip-network-region`** to initiate a real-time **`ping`** test for failed network-region connections.

The default is that all connections that failed the last background maintenance **`ping`** test are tested. If **`network region x`** is specified, then just failed connections from region x are tested. If a previously failed connection passes the **`ping`** test, then the associated minor alarm is cleared.

To troubleshoot broken connectivity, also see display failed-ip-network-region on page 267 and change ip-network-region on page 323.

The following display shows a typical result for **`test failed-ip-network-region`**.

```
 test failed-ip-network-region all
                                     TEST RESULTS

Region     Dest. Region     Maintenance Name     Test No.       Result      Error Code
 2             1               NR_CONN            1417          FAIL         2805
 3             1               NR_CONN            1417          FAIL         1007
```

test failed-ip-network-region field descriptions

test failed-ip-network-region field descriptions *1 of 2*

Field	Description
Region	Network region that had a connection failure to “Dest. Region”.
Dest. Region	A network region to which “Region” is connected, where the connection between the two regions is previously failed the **`ping`** test
Maintenance Name	The name of the MO as it appears in the alarm and error logs.
	1 of 2

test failed-ip-network-region field descriptions *2 of 2*

Field	Description
Test No.	Test Number used to run **ping** test
Result	Result of **ping** test. May be PASS or FAIL. If test failed, follow troubleshooting procedures in NR-CONN (Network-Region Connect), *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*
Error Code	**ping** test error code
	2 of 2

fiber-link

See:
add fiber-link on page 269
busyout fiber-link on page 271
change fiber-link on page 272
display fiber-link on page 275
list fiber-link on page 275
reset fiber-link on page 278
test fiber-link on page 278

add fiber-link

add fiber-link *fiber#* [a-pnc | b-pnc]

Use **add fiber-link** to create a fiber link. A fiber link is a connection carrying all circuit and packet traffic between two port networks, two switch nodes, or a port network and a switch node. A fiber link may contain a DS1 converter complex used to provide connectivity to a remote PN. On critical-reliability systems (duplicated PNC), each fiber link is duplicated and exists as a pair. When PNC duplication is enabled, only the DS1 Converter complex attributes fields can be changed.

Before Avaya Communication Manager Release 2.0, **add fiber-link** restricted the placement of an expansion interface (EI) circuit pack to slot A01 in the A carrier of a port network. In Communication Manager Release 2.0, the TN2312BP resides in slot A01 of a **G650** media gateway.

Slot B01 of a port network can be used for a duplicate fiber connection when IPSI duplication is not active. When IPSI duplication is required, the duplicate IPSI must reside in slot B01 and any fiber connection there must be moved.

```
add fiber-link next                                          Page   1 of   1
                            FIBER LINK ADMINISTRATION
Fiber Link #: 6
Is one endpoint remoted via DS1 Converter Complex? no

             ENDPOINT-1                                ENDPOINT-2
              (A-PNC)                                   (A-PNC)
         Board Location:                           Board Location:
         Board Type:                               Board Type:

             ENDPOINT-1                                ENDPOINT-2
              (B-PNC)                                   (B-PNC)
         Board Location:                           Board Location:
         Board Type:                               Board Type:

         Fiber Translation:                        Converter?
         Type of Transceivers:
```

add fiber-link field descriptions

add fiber-link field descriptions page 1 ***1 of 2***

Field	Description
Fiber Link #	Identifying number of the fiber link.
Is one endpoint remoted via DS1 Converter Complex	y/n **y** indicates that a DS1C converter complex is used on this link to remotely locate a port network. If **y**, a second page appears for administering the DS1C complex attributes.
Board Location	The physical address (cabinet-carrier-slot or gateway:module) of the circuit packs comprising the two endpoints (ENDPOINT-1 and ENDPOINT-2) of the fiber link.
Board Type	**ei** or **sni,** the type of circuit pack administered at each endpoint.
Fiber Translation	**multi-mode** or **single-mode** Use for faster remote diagnosis.
	1 of 2

add fiber-link field descriptions page 1 ***2 of 2***

Field	Description
Converter	**y**/**n** Use for faster remote diagnosis.
Type of Transceivers	**A**/**B** Use for faster remote diagnosis.
	2 of 2

busyout fiber-link

`busyout fiber-link` ***`fiber#`*** **`[a-pnc | b-pnc]`**

Use **`busyout fiber-link`** to put a fiber link into a maintenance busy state. A fiber link is a connection carrying all circuit and packet traffic between two port networks, two switch nodes, or a port network and a switch node. A fiber link may contain a DS1 converter complex used to provide connectivity to a remote PN.

CAUTION:

On a standard- or high-reliability system (unduplicated PNC), **`busyout`** is destructive. Every call and application link carried on the busied-out fiber link will be torn down, and new calls will not be established over the link.

On a critical-reliability system with duplicated PNC, **`busyout fiber-link`**:

- is allowed only on a fiber link on the standby PNC
- does not impact service
- requires that the standby PNC be busied first

Use **`list fiber-link`** to see a list of every fiber link administered on the system, including its number, endpoint, and other useful information.

For more information on busyout, see Busyout and Release Commands on page 33. See status link on page 362 for more details on links. For more information about fiber links, see FIBER-LK (Fiber Link) on page 461 of the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*. See Common Command Output Screens on page 28 for output screen field descriptions.

Action/Object	Qualifier	Qualifier Description	Login	Default
busyout fiber-link	**fiber #** **a-pnc** **b-pnc**	The administered number assigned to the fiber link. In a system with duplicated PNC, this represents a fiber link pair. For an unduplicated PNC, **a-pnc** is the only valid qualifier. Use on a system with duplicated PNC, to distinguish between the two fibers of a duplicated pair. Use on a system with duplicated PNC, to distinguish between the two fibers of a duplicated fiber pair.		a-pnc
		Examples: Critical-Reliability (duplicated PNC): **busyout fiber-link 01 b-pnc** **busyout fiber-link 03** (defaults to a-pnc)		

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

change fiber-link

change fiber-link *fiber#*

Use **change fiber-link** to change the translation data associated with an existing fiber link. On critical-reliability systems (duplicated PNC), each fiber link is duplicated and exists as a pair. When PNC duplication is enabled, only the DS1 Converter complex attributes fields can be changed.

Translation data changes after the **ENTER** key is pressed. Press **CANCEL** any time before pressing ENTER to return to the command line without changing any translation data.

Action/Object	Qualifier	Qualifier Description
change fiber-link	***fiber#***	The administered number associated with a fiber link or, on a duplicated PNC, with a fiber link pair. Example: **change fiber-link 21**

To change the endpoint board locations, remove a fiber and add it again for either a:

- High-reliability system, an unduplicated PNC
- Critical-reliability system with a fully operational duplicated PNC

See status link on page 362 for more details on links.

The following display shows a typical result for **`change fiber-link 1`** on a standard- or high-reliability system (unduplicated PNC and CSS).

```
change fiber-link 1                                          Page   1 of   1

                     FIBER LINK ADMINISTRATION
 Fiber Link #:  1

     ENDPOINT-1                                ENDPOINT-2
      (A-PNC)                                   (A-PNC)

  Board Location:  01E01                    Board Location:  01E02
     Board Type:  ei                           Board Type:  sni


  Fiber Translation:                            Converter?
  Type of Tranceivers:                     Converter Type:

Is one endpoint remoted via DS1 Converter Complex? n
```

change fiber-link field descriptions, page 1

change fiber-link field descriptions page 1

Field	Description
Fiber Link #	Display-only. Identifying number of the fiber link.
Board Location	The physical address (cabinet-carrier-slot or gateway:module) of the circuit packs comprising the two endpoints (ENDPOINT-1 and ENDPOINT-2) of the fiber link.
Board Type	**ei** or **sni,** the type of circuit pack administered at each endpoint. Display-only.
DS1 Converter	**y** indicates that a DS1C converter complex is used on this link to remotely locate a port network. If **y**, a second page appears for administering the DS1C complex attributes.
Fiber Translation	**multi-mode** or **single-mode** Use for faster remote diagnosis.
Converter	**y**/**n** Use for faster remote diagnosis.
Type of Transceivers	**A**/**B** Use for faster remote diagnosis.
Converter Type	**Avaya**/**other**. Appears when C**onverter** on the Fiber Link Administration screen is **y**.

change fiber-link field descriptions, page 2

The following fields appear when a DS1 converter complex is administered on the fiber link. DS1 CONV complex attributes are administered here. The circuit pack is administered by **`change circuit-packs`**. Use page 2 for the A-PNC. If the PNC is duplicated, the fields are repeated as display-only on page 3 for the B-PNC. Page 3 fields change when their counterpoints on page 2 are changed.

change-fiber link field descriptions page 2

Field	Description
Board Location	Under DS1C-1, the physical location of the converter board connected to ENDPOINT-1. When the location is entered, validation is performed to ensure that the board has been administered and is of the correct type (DS1 CONV).
DS1 Converter Facilities	Attributes of the four DS1 facilities (A, B, C, D) that can be connected to the DS1 CONV.
Facility Installed	**y**/**n** Specifies whether the indicated facility has been provided and installed. Facility A is required for the DS1 CONV complex. See Table 32: DS1 Line Equalization Settings on page 275. The line equalization setting defaults to the median value of 3. This setting remains in effect until changed by administration. Incorrect equalizer settings may cause a higher error rate on the DS1 facility.
DS1 CONV-2 Line Compensation	Same as for ENDPOINT-2 of the DS1 CONV complex.
Zero Code Suppression	**zcs**/**b8zs** specifies the line coding format for each facility. There are 2 line coding options supported by the DS1 Interfaces to meet the density requirements in the data stream. Zero Code Suppression (ZCS) line coding is in place following an initialization until changed by administration. Either line coding option may be used on the DS1 Interface that carries the packet time slots.
Framing Mode	**esf**/**d4** specifies the data framing format used on the facility. When **esf**, an automatic selection process is executed until the DS1 Interface is brought into frame, or until an Options CCMS message is received by the framing options master. Once options are set by administration, they remain fixed on the framing option master until the board is again initialized, reset, or sent new options. The framing option on the framing option slave converter board can change to track the framing option master's option.

The line equalization setting defaults to the median value of 3. This setting remains in effect until changed by administration. Incorrect equalizer settings may cause a higher error rate on the DS1 facility.

Table 32: DS1 Line Equalization Settings

Equalizer Setting	Distance to DSX-1 Interface (feet)	
	22 AWG ABAM and 24 AWG PDS	26 AWG PDS
1	1 to 133	0 to 90
2	133 to 266	90 to 180
3	266 to 399	180 to 270
4	399 to 533	270 to 360
5	533 to 655	360 to 450

display fiber-link

`display fiber-link` ***`fiber#`*** **`[schedule]`**

Use **`display fiber-link`** to see the translation data associated with an existing fiber link.

The output for **`display fiber-link`** is the same as that for **`change fiber-link`**.

Action/Object	Qualifier	Qualifier Description	Login	Default
`display fiber-link`	***`fiber#`***	The administered number associated with a fiber link, or fiber link pair in a duplicated PNCs.		
	`schedule`	See Common Input Parameters on page 25.		

See status link on page 362 for more details on links.

list fiber-link

`list fiber-link [schedule]`

Use **`list fiber-link`** to list every fiber link in the system, and to see a summary of data entered on the fiber link screen (**`add`**, **`display`**, **`change`**, or **`remove fiber-link`**).

Action/Object	Qualifier	Qualifier Description	Login	Default
`list fiber-link`	**`schedule`**	See Common Input Parameters on page 25.		

See status link on page 362 for more details on links.

The following display shows a typical result for **`list fiber-link`**.

```
list fiber-link                                                    Page   1

                          FIBER LINK ADMINISTRATION

FIBER -------- ENDPOINT 1 --------  -------- ENDPOINT 2 --------
LINK# TYPE A-PNC DS1   B-PNC DS1    TYPE A-PNC DS1   B-PNC DS1    DS1
           LOC   CONV  LOC   CONV        LOC   CONV  LOC   CONV   CONV
                 LOC         LOC               LOC         LOC    TYPE

 1    ei   01A01       01B02        sni  01E02       01D02

 2    sni  13E02 13B05 13D02 13C05  ei   05A01 05A02 05B02 05B03  TN1654
Primary Facility:A           B                  A           B
 5    sni  12E17       12D17        ei   04E01       04D02

 6    sni  01E07       01D07        sni  12E07       12D07

 7    sni  01E13       01D13        sni  13E13       13D13

 8    sni  01E09       01D09        sni  12E09       12D09

               press CANCEL to quit --  press NEXT PAGE to continue

ESC-x=Cancel Esc-e=Submit Esc-p=Prev Pg Esc-n=Next Pg Esc-h=Help Esc-r=Refresh
```

list fiber-link field descriptions

list fiber-link field descriptions *1 of 2*

Field	Description
FIBER LINK #	The administered number used to identify the fiber link (1 to 27).
TYPE	The types of circuit packs that constitute endpoint 1 and endpoint 2 of the fiber link (ei or sni).
A-PNC LOC	The physical locations (cabinet-carrier-slot number) of the circuit packs that constitute the endpoints.
	1 of 2

list fiber-link field descriptions *2 of 2*

Field	Description
DS1 CONV LOC	Location of the DS1 Converter.
B-PNC LOC	In a system with duplicated PNC, the physical location (cabinet-carrier-slot number) of the circuit packs that constitute the endpoints of the link in the B-PNC.
DS1 CONV TYPE	Whether or not an endpoint of the link is remotely located by means of a DS1C Converter complex.
	2 of 2

Fiber mismatch

Even though a DS1-fed EPN is in service with no complaints, **`list fiber-link`** can report a “MISMATCH” for the Primary Facility. The following example shows this condition:

```
list fiber-link                                                Page   2
                         FIBER LINK ADMINISTRATION

FIBER -------- ENDPOINT 1 --------  -------- ENDPOINT 2 --------
LINK# TYPE A-PNC DS1   B-PNC DS1    TYPE A-PNC DS1   B-PNC DS1    DS1
           LOC   CONV  LOC   CONV        LOC   CONV  LOC   CONV   CONV
                 LOC         LOC               LOC         LOC    TYPE
 27   ei   27A01                    sni  27E02
 28   sni  27E03 27E01              ei   28A01 28A02              TN1654
Primary Facility:B                            B
 29   sni  27E20 27E21              ei   29A01 29A02              TN1654
Primary Facility:B                            B
 30   sni  27E19 27A02              ei   30A01 30A02              TN1654
Primary Facility:B                            B
 31   sni  27E04 27A18              ei   31A01 31A02              TN1654
Primary Facility:A                            A
 32   sni  01E05 01D10              ei   32A01 32A02              TN1654
Primary Facility:B                            A
MISMATCH
```

This “MISMATCH” indicates that the two ends of the DS1 fiber do not agree which DS1 facility is carrying the Primary Facility, or control channels of the fiber. This indicates that the two DS1 spans are crossed, that is, the A-facility in PPN is connected to the B-facility in the EPN. The EPN DS1C board searches both spans for the control channel, and when it finds it, the system link comes up on either A or B facility. This then becomes fiber group 1 and the other span is fiber group 2. The end result is that the system link is up, all timeslots are mapped correctly, and there are no end-user problems. This is only a problem when there are DS1 problems. To fix this problem flip the A and B spans at one end, either PPN or EPN.

reset fiber-link

`reset fiber-link` *`fiber#`* `[a-pnc | b-pnc]`

CAUTION:

The **`reset fiber-link`** command is destructive on a high-reliability system (unduplicated PNC), and may cause an entire port network to be removed from service.

Use **`reset fiber-link`** to reset the Expansion Interface and/or Switch Node Interface circuit packs that are endpoints of a specified fiber link, dropping the link in the process.

A fiber link must be busied out before being reset. To busyout a fiber on critical-reliability systems, the fiber must be on the standby PNC and the standby PNC must first be busied out. See **`busyout fiber-link`**.

Use **`list fiber-link`** to see a list of fiber links and their locations. See status link on page 362 for more details on links.

Action/Object	Qualifier	Qualifier Description	Login	Default	Feature Interaction
`reset fiber-link`	***`fiber#`***	The administered number of the fiber link (1-44). On a critical-reliability system (duplicated PNC), this number designates a fiber link pair; the following qualifier specifies which fiber in the pair is to be reset			
`reset fiber-link`	**`a-pnc`** **`b-pnc`**	For a critical-reliability system (duplicated PNC), this distinguishes between the two fibers in a duplicated pair. On a high-reliability system (unduplicated PNC) this is always a-pnc and need not be specified.			

test fiber-link

Use **`test fiber-link`** to validate that the optical fiber connection between switch node interfaces (SNI) and expansion interfaces (EI), or a combination thereof, are administered. If the fiber link is administered, a series of hardware diagnostic tests are performed on the specified fiber link. The test results along with any possible error codes are displayed on the MT. The long test sequence includes destructive tests. Every destructive test aborts unless the fiber link is first busied out. The short test sequence is non-destructive and can be performed regardless of whether the fiber link is busied out.

A fiber link is a connection between port networks (PNs), switch nodes (SNs), or between a PN and the Center Stage Switch (CSS). This connection is comprised of a bi-directional optical fiber connection (optionally extended via a DS1 Converter complex), with each end terminated on either an Expansion Interface (EI) or a Switch Node Interface (SNI). Fiber links provide the medium for circuit and packet connections between PNs.

The **long** sequence includes destructive tests and requires that the fiber link be busied out first. When a fiber is busied out, every call over that fiber is dropped.

clear firmware-counters clears the firmware counters of specified SNI, SNC, ATM-EI or DS1C circuit packs, or of an the entire PNC (A or B).

See status link on page 362 for more details on links.

Action/ Object	Qualifier	Qualifier Description
test fiber-link	***link#*** **a-pnc** **b-pnc** short long repeat ***repeat#*** clear schedule	The number associated with a fiber link or fiber link pair (on duplicated PNCs). **List fiber-link** displays the location of endpoints for each fiber link On critical-reliability systems (duplicated PNC) this identifier is used to distinguish between the two fibers of a duplicated fiber pair. For details, see Common Input Parameters on page 25. Examples: Critical-reliability system: **test fiber-link 1 a-pnc schedule** **test fiber-link 03 b-pnc sh r 3**

The following display shows a typical result with **test fiber-link *1* b-pnc**.

```
 test fiber-link 1 b-pnc

                                  TEST RESULTS

Port      Maintenance Name  Alt.  Name Test No.  Result  Error Code

1 B-PNC   FIBER-LK                   777      PASS
1 B-PNC   FIBER-LK                   759      PASS
1 B-PNC   FIBER-LK                   989      PASS
1 B-PNC   FIBER-LK                   237      PASS
1 B-PNC   FIBER-LK                   238      PASS
```

Port	On critical-reliability systems (duplicated PNC) there are two fibers associated with every fiber link number. **A-PNC** and **B-PNC** distinguish one from the other.

file

remove file

`remove file` ***`path`*** **`board`** ***`location`***

Use **`remove file`** to request the board ***`location`*** to remove the file given by ***`path`***. If the file does not exist on the source board's filesystem, an error message, **file not found**, appears on the SAT.

To remove a file in a subdirectory, specify the entire path starting at "/".

Action/Object	Qualifier	Qualifier Description
`remove file`	***`PPcss`***	board location
	`path`	file location (using the entire path starting at "/"

filexfer

See:
enable filexfer
disable filexfer

enable filexfer

enable filexfer *location*

Use **enable filexfer** to enable Secure Shell (SSH) and Secure FTP (SFTP) remote access protocols through login/password authentication on C-LAN and VAL circuit packs. FTP capabilities remain enabled.

Action/Object	Qualifier	Qualifier Description	Login
enable filexfer	***location***	location of the circuit pack	

Enable filexfer enables the C-LAN and VAL circuit packs as SSH/SFTP servers (not clients) that prefer the following symmetric algorithms in decreasing order:

- AES
- Arcfour
- Blowfish
- CAST128
- 3DES

Note:

To ensure that technicians can access the relevant circuit packs using SSH or SFTP, technician laptops must have SSH and SFTP clients that use the same algorithms installed.

This is an example screen for **enable filexfer.**

```
enable filexfer  a03                                  Page 1 of 1

                               ENABLE FILE TRANSFER

           Login:______
        Password:___________
Reetner Password:___________
          Secure? y
   Board Address: ________
```

enable filexfer field descriptions

enable filexfer field descriptions

Field	Description
Login	3 - 6 alphabetic characters
Password	7 - 11 characters containing at least one letter and one number.
Renter Password	Reenter the password.
Secure	**y** = enable SFTP **n** = enable FTP
Board Address	location of the circuit pack

disable filexfer

`disable filexfer` ***`location`***

Use **`disable filexfer`** to disable Secure Shell (SSH), and Secure FTP (SFTP) remote access protocols through login/password authentication on C-LAN and VAL circuit packs. **`Disable filexfer`** also disables FTP sessions.

Action/Object	Qualifier	Qualifier Description	Login
`disable filexfer`	***`location`***	location of the circuit pack	

firmware-counters

clear firmware-counters

`clear firmware-counters` ***`location`*** | **`a-pnc`** | **`b-pnc`**

Use **`clear firmware-counters`** to clear the firmware error counters on the specified circuit packs. This command is valid only for SNI, SNC, and DS1C and ATM-EI board locations. When **`a-pnc`** or **`b-pnc`** is specified, every such circuit pack in a single PNC can be cleared at once. On a critical-reliability system (duplicated PNC), only circuit packs on a standby PNC that is busied out can be cleared.

Use **clear firmware-counter** to quickly clear lingering alarms after a hardware problem has been fixed. **Test clear** commands do not clear alarms on SNI, SNC, and DS1C circuit packs.

WARNING:
Clear firmware-counters can mask actual hardware problems, because firmware is cleared and appears as if no problems were ever encountered.

Action/Object	Qualifier	Qualifier Description	Login
clear firmware-counters	***location*** **a-pnc** **b-pnc**	The specified location must be occupied by an SNI, SNC, or DS1C circuit pack. Every circuit pack in the standby PNC can be cleared at once by specifying **a-pnc** or **b-pnc**. To do so, the standby PNC must first be busied out. **WARNING:** **Clear firmware-counters** can mask actual hardware problems because firmware is cleared and appears as if no problems were ever encountered.	init inads craft cust rcust

For more information, see Common Command Output Screens on page 28.

firmware download

See:
change firmware download on page 283
disable firmware download on page 286
display firmware download on page 286
status firmware download on page 288
test firmware download on page 290

change firmware download

change firmware download *schedule-number*

Use **change firmware download *schedule-number*** to schedule a C-LAN-distributed download or a self-download firmware download, immediately or at a later date and time. ***schedule-number*** is a value between 1 and 4.

For information regarding firmware station downloads, see FW-STDL (Firmware Station Download) on page 479 in the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*. To update firmware on Avaya equipment:

1. Open a browser window on your computer and go to http://www.avaya.com/.
2. Select **Support.**
3. Select **Software and Firmware Downloads**.

If a firmware download schedule is already pending or active, **`change firmware download`** is blocked.

Note:

It is highly recommended that you execute test ipserver-interface after scheduling a download but before the download begins.

Note:

If you receive an error message asking you to use test ipserver-interface, there was a problem with a previous firmware download. Run the test before proceeding.

This is the Firmware Download screen that appears when running **`change firmware download`** ***1***

```
change firmware download 1                                          Page   1 of   1
                              FIRMWARE DOWNLOAD                Schedule 1
   Source Board Location:                File Server:
 File Retrieval Protocol: SCP    Login:                Password:
Firmware Image File Name:
       Target Board Code:       Suffix:     Firmware Vintage: 167
       Schedule Download? y   Remove Image File After Successful Download? y
   Start Date/Time:   /  /        :      Stop Date/Time:   /  /        :

    Target          Target          Target          Target          Target
   Location        Location        Location        Location        Location
 1.             11.             21.             31.             41.
 2.             12.             22.             32.             42.
 3.             13.             23.             33.             43.
 4.             14.             24.             34.             44.
 5.             15.             25.             35.             45.
 6.             16.             26.             36.             46.
 7.             17.             27.             37.             47.
 8.             18.             28.             38.             48.
 9.             19.             29.             39.             49.
10.             20.             30.             40.             50.
```

change firmware-download field descriptions

change firmware-download field descriptions ***1 of 2***

Field	Description
Source Board Location	The board location where the firmware image resides. For “remote downloads”, this location is a C-LAN board. For “self-downloads”, this location is the same as the target board location. The value for this field can be **self** (download of multiple boards) or **auto** (Communication Manager chooses the correct C-LAN board to do the download).
File Server	The IP address of the File Server.
File Retrieval Protocol	Display-only field.
Login	Login for the file server.
Password	Password for the file server.
Firmware Image File Name	The firmware image file name, including the file extension, to download.
Target Board Code	The TN-code of the target board to be downloaded, such as TN799.
Suffix	The suffix of the target board to be downloaded. For example, AP, DP, GP.
Firmware Vintage	Display-only, the firmware vintage of the entered image file. This field is always blank for a **`change firmware download`**. This field contains a value with **`display firmware download`** while a download is in progress, and with **`status firmware download`** after a download is complete.
Schedule Download	**y**/**n** Specify whether to run the download immediately or at some future time. If **y, Start Date/Time** and **Stop Date/Time** appear. If **n** the download begins when the screen is submitted.
Remove Image File After Successful Download	**y**/**n** Specify whether to automatically remove the firmware image file on the source board after the download is successful for the specified target boards. If **y** and every board was successfully downloaded, the image file is removed, and the file system on the source board is disabled.
Start Date/ Time	The date and time to begin the firmware download (mm/dd/yyyy, 2 digits for month, 2 digits for day, and 4 digits for year, and hh:mm, 2 digits for hour, and 2 digits for minutes) This field appears when **Schedule Download** field is **y**.
	1 of 2

change firmware-download field descriptions ***2 of 2***

Field	Description
Stop Date/ Time	Appears when the **Schedule Download** field is **y**. It indicates the date and time to end the firmware download to end. If the scheduled stop time is reached before the new firmware image file has been downloaded to every circuit pack, the system finishes downloading to the circuit pack in progress and then aborts the remainder of the download schedule. If this field is blank, the download continues until completion. The field is formatted: mm/dd/yyyy (2 digits for the month, 2 digits for the day, and 4 digits for the year). and hh:mm (2 digits for the hour, and 2 digits for the minutes).
Target Location	These fields contain the target board locations of the boards that will receive the download file image. For a self-download, the target location is the same as the source location.
	2 of 2

disable firmware download

`disable firmware download` ***`schedule-number`***

Use **`disable firmware download`** to stop the firmware download for a specified schedule (1 - 4). If a target board is currently downloading, the download is first completed for the current board, but the remaining boards are not downloaded. Run status firmware download on page 288 to determine how far along the current download is.

Action/Object	Qualifier	Qualifier Description	Login	Default
`disable firmware download`	***`n`***	schedule number		

display firmware download

`display firmware download` ***`schedule`***

Use **`display firmware download`** to see the status of the specified download schedule. Use change firmware download on page 283 to schedule a download. If a scheduled download has not yet occurred or is currently in progress, use **`display firmware download`** to view the settings for the scheduled downloads. If all downloads have finished, the fields are blank.

See status firmware download on page 288, disable firmware download on page 286, and test ipserver-interface on page 351, and the MO FW-STDL (Firmware Station Download) on page 479 in the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)* for more information.

Here is an example of **`display firmware download`**.

```
display firmware download 1                                          Page   1 of   1
                              FIRMWARE DOWNLOAD           Schedule 1
Source Board Location: 1C02                    File Server: 127.34.5.83
 File Retrieval Protocol: SCP    Login:               Password:
Firmware Image File Name: usd1v22r1
       Target Board Code: TN464   Suffix: FP   Firmware Vintage: 22
       Schedule Download? y   Remove Image File After Successful Download? y
   Start Date/Time:  10/02/2007 13:30    Stop Date/Time: 10/02/2007 15:30

    Target          Target          Target          Target          Target
   Location        Location        Location        Location        Location
 1. 01C04       11.             21.             31.             41.
 2. 01C06       12.             22.             32.             42.
 3. 01C08       13.             23.             33.             43.
 4.             14.             24.             34.             44.
 5.             15.             25.             35.             45.
 6.             16.             26.             36.             46.
 7.             17.             27.             37.             47.
 8.             18.             28.             38.             48.
 9.             19.             29.             39.             49.
10.             20.             30.             40.             50.
```

display firmware download field descriptions

See change firmware-download field descriptions for the field descriptions for **`display firmware download`**.

status firmware download

`status firmware download [ schedule# | last schedule# ]`

Use **`status firmware download`** to see the download status for each board that is scheduled, or was scheduled, to receive new downloaded firmware as requested by **`change firmware download`**. Use **`last`** to see the download schedule of the last completed download for a particular schedule. If there is no active download schedule and there was no previous schedule for the **`last`** qualifier to invoke, **`status firmware download`** shows a blank download schedule. The following status flags are shown for each target board:

P	The download to the board is pending.
C	The download to the board was completed successfully.
F	The download to the board failed. Look into the error logs for firmware download for more information about the failure.
S	The board was skipped (the board requires manual intervention to busy-out).
A	The download to the board was aborted.

Action/Object	Qualifier	Qualifier Description	Login	Default
`status firmware download`	***`last`***	last completed or aborted download schedule		

The **status firmware download** screen is display only.

```
status firmware download
                                STATUS FIRMWARE DOWNLOAD       Schedule 3
   Source Board Location: 01C02                File Server: 134.6.94.12
 File Retrieval Protocol: SCP    Login: labtest     Password:
Firmware Image File Name: usd1v22r1
       Target Board Code: TN464  Suffix: FP Firmware Vintage: 22
       Schedule Download? y   Remove Image file After Successful Download? n
   Start Date/Time: 10/12/2007 13:30    Stop Date/Time: 10/14/2007 16:30

     Target          Target           Target           Target           Target
    Location St     Location St      Location St      Location St      Location St
 1.  01C04   C   11.  _____   _   21.  _____   _   31.  _____   _   41   _____   _
 2.  01C06   C   12.  _____   _   22.  _____   _   32.  _____   _   42   _____   _
 3.  01C08   P   13.  _____   _   23.  _____   _   33.  _____   _   43.  _____   _
 4.  _____   _   14.  _____   _   24.  _____   _   34.  _____   _   44.  _____   _
 5.  _____   _   15.  _____   _   25.  _____   _   35.  _____   _   45.  _____   _
 6.  _____   _   16.  _____   _   26.  _____   _   36.  _____   _   46.  _____   _
 7.  _____   _   17.  _____   _   27.  _____   _   37.  _____   _   47.  _____   _
 8.  _____   _   18.  _____   _   28.  _____   _   38.  _____   _   48.  _____   _
 9.  _____   _   19.  _____   _   29.  _____   _   39.  _____   _   49.  _____   _
10.  _____   _   20.  _____   _   30.  _____   _   40.  _____   _   50.  _____   _
20
21
Status: Pending(P) Completed(C) Failed(F) Aborted (A)
```

status firmware download field descriptions

The field values are the same as for change firmware download, except*:*

status firmware download field descriptions

Field	Description
Firmware Vintage	Vintage of the firmware
Start Date/ Time Stop Date/ Time	If the **last** parameter was used, this actual dates and times at which the download was started and stopped appear. Otherwise, scheduled dates and times appear.
St	The download to that board is pending (P), completed (C), failed (F), or aborted (A). If a download fails, enter test ipserver-interface to see the error code. See Troubleshooting procedures for each error code in Firmware Download Test (#1413) on page 1668 in *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*.

For more field descriptions, see change firmware download on page 283.

test firmware download

`test firmware download n`

Run **`test firmware download`** when there is a download scheduled or there are errors or alarms against the FW-DWNLD maintenance object from a previous download. If there is a download scheduled, then this command verifies the Firmware Download screen entries. If there are FW-DWNLD errors or alarms, then this test resolves the errors and clears the alarms. See Firmware Download Test (#1413) on page 1668 in the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)* for more information about the test that is run and the troubleshooting procedures to use if the test does not pass.

It is highly recommended that you execute **`test firmware download`** after scheduling a download with **`change firmware download`**, but before the download begins. The test is blocked if a download is in progress. If a download is in progress or has already completed, use **`status firmware download`** to view progress and status.

For the complete download procedure:

1. Open a browser window on your computer and go to http://www.avaya.com/.
2. Select **Support**.
3. Select **Software and Firmware Downloads**.

firmware station-download

See:
change firmware station-download on page 291
disable firmware station-download on page 291
display firmware station-download on page 292
status firmware station-download on page 292
test firmware station-download on page 295

change firmware station-download

`change firmware station-download`

Use **`change firmware station-download`** to select the range of stations for download and schedule the start/stop time. When there is an active scheduled download, **`change firmware station-download`** is blocked.

Action/Object	Qualifier	Qualifier Description	Login	Default
`change firmware station-download`				

This is an example of the **`change firmware station-download`** screen.

```
change firmware station-download
                          FIRMWARE STATION-DOWNLOAD

Source File: 2420v01.bin

Schedule Download?
Start Date/Time:   /  /        :        Stop Date/Time:   /  /        :
Continue Daily Until Download Complete?

Station Type:

Beginning Station:                      Ending Station:
```

disable firmware station-download

`disable firmware station-download`

Use **`disable firmware station-download`** to disable a currently running download schedule and allow any active station downloads to complete.

Action/Object	Qualifier	Qualifier Description	Login	Default
disable firmware station-download				

display firmware station-download

`display firmware station-download`

Use **`display firmware station-download`** see information for the currently scheduled download.

Action/Object	Qualifier	Qualifier Description	Login	Default
display firmware station-download				

status firmware station-download

`status firmware station-download`

Use **`status firmware station-download`** to see the status of the currently scheduled download.

Action/Object	Qualifier	Qualifier Description	Login	Default
status firmware station-download				

This is an example of the **`status firmware station-download`** screen.

```
status firmware station-download
                          STATUS FIRMWARE STATION DOWNLOAD

Image File: 2420v01.bin
Schedule Download? n                    Continue daily until completed?: n
Start Date/Time:   /  /        :        Stop Date/Time:   /  /        :
                                        Status of download: Idle
Terminal type for download:
Ext Range:         to:                  Number of stations in range:

Stations completed:                     Stations unsuccessful:

Extension Status Err         Extension Status Err       Extension Status Error

12345     ABORT  513
12346     ACTV
12347     ACTV
```

Table 33: Schedule States of status firmware station-download command

State	Schedule Done?	Description
Idle	No	No downloads Pending or Active and there are no unresolved errors/ alarms for the last download
Pending	No	Download has been scheduled but not yet started. Check the start time to see when it is scheduled to start.
Active	No	Download is currently active. Actively downloading terminals should be listed with a status of ACTV. If the schedule has just started and no downloads are listed, the system may be waiting for a FAC requested or terminal requested download to complete before it begins.
Resume-pending	No	Download was stopped at the Stop Date/Time but not all of the terminals have been attempted. Downloading will resume at the scheduled Start Date/Time listed on the screen.
Aborted	Yes	Download was aborted for the entire range of terminals. This could happen if the firmware image was bad, damaged or lost.
Failed	Yes	At least two terminals rejected the firmware as invalid. As a result, the download was aborted to avoid problems with any further terminals. Check the Reason Codes of the failed terminals in the list to find the reason why the download failed. See Table 34: Reason Codes for status firmware station-download command on page 294.
Completed	Yes	The scheduled download has completed either due to all terminals in the range of extensions having completed or due to the stop timer.
Disabled	Yes	An Active schedule was disabled with the **`disable firmware station-download`** command. After an active schedule is disabled, the Schedule state remains Active until all currently active terminal downloads have completed.
No Image	Yes	The download was stopped because there was no firmware image present in memory.
Restart	Yes	The download was stopped due to a system restart. You must schedule a new download for any Aborted terminals.
Sys Fail	Yes	The download was stopped due to a system error.
Sys Occ	No	The download has been suspended due to the system's occupancy level. The schedule resumes when the occupancy level drops to a safe level.
Dnld Timeout	Yes	While the scheduled download was running, two or more consecutive terminals failed to respond to the download process.

Table 34: Reason Codes for status firmware station-download command ***1 of 2***

Reason Code	Status	Description
1	ABORT	The firmware image that was noted in the change firmware station-download form has disappeared. The download schedule had to be stopped.
2	ABORT	The terminal could not be downloaded due to a discrepancy relating to the maximum number of downloads allowed.
3	ABORT	The terminal was not downloaded before the scheduled stop time occurred. Schedule a new download with adequate time for the downloads to complete, or select the continue daily option to allow the schedule to resume the following day.
4	ABORT	The terminal could not be downloaded because the schedule aborted for an unknown reason.
5	ABORT	The terminal did not respond to the download request.
6	ABORT	The terminal that was added to the download list at the scheduled start time no longer exists. This can occur when a station is removed during an active download schedule. Download to this terminal was aborted.
18	ABORT	The terminal was busied out by craft and could not be downloaded.
32	ABORT	Download to the terminal timed out due to an internal error in the station firmware download process.
1000	ABORT	Terminal was in use at the time that it was to be downloaded. Download to this terminal was aborted.
1012	ABORT	An internal error occurred while preparing to download to this station.
3841	ABORT or FAIL	The system restarted during an active download. As a result, all terminals that were not downloaded are marked with a status of ABORT with this reason code. All terminals that were actively downloading when the reset occurred are marked with a status of FAIL with this reason code.
128	FAIL	The terminal rejected the firmware because the firmware image failed the checksum test.
129	FAIL	The terminal rejected the firmware because the firmware image failed the image validity test. The firmware image may not be the right image for the hardware being downloaded to.
130	FAIL	The terminal being downloaded could not write its flash memory.
131	FAIL	The translated terminal type is valid, however the actual terminal type of the hardware is not valid for this download schedule.
		1 of 2

Table 34: Reason Codes for status firmware station-download command ***2 of 2***

Reason Code	Status	Description
513	FAIL	The terminal was not in service at the time that it was to be downloaded. Download to this terminal failed.
3584	FAIL	The terminal rejected the firmware image.
		2 of 2

test firmware station-download

`test firmware station-download`

Use **`test firmware station-download`** to resolve any alarms or errors associated with the firmware station-download. See also FW-STDL (Firmware Station Download) on page 479 in *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430)*.

Action/Object	Qualifier	Qualifier Description	Login	Default
test firmware station-download				

hardware-group

See:
cancel hardware-group on page 295
resume hardware-group on page 296
status hardware-group on page 297
test hardware-group on page 299

cancel hardware-group

`cancel hardware-group`

Action/Object	Qualifier	Qualifier Description	Login	Feature Interaction
`cancel hardware-group`		Example: **`cancel hardware-group`**	init inads	See below.

Use **cancel hardware-group** to temporarily or permanently abort the execution of **test hardware-group.** Use **resume hardware-group**, to resume the same test, or start another test with **test hardware-group**. Press **CANCEL** to cancel a hardware group test executing in the foreground.

The status of a canceled **test hardware-group** appears as **canceled** on the **status hardware-group** screen.

When a hardware group test is executing in the foreground with the **continuously** option and **CANCEL** is pressed or **cancel hardware-group** is entered, the hardware group test is canceled, and for security reasons the MT running the hardware group test is logged off. Use **resume hardware-group to** restart the canceled hardware-group test after logging back on.

Scheduled and Periodic Maintenance

When **test hardware-group** is entered, all activity related to scheduled background maintenance, periodic background maintenance, and data audits is suspended for the duration of the execution of **test hardware-group**. All activity related to scheduled background maintenance, periodic background maintenance, and data audits will restart if **test hardware-group** is canceled.

All-Ports Option

When **test hardware-group all-ports** is canceled, the internally generated port translations for ports that are otherwise untranslated are removed. If **resume hardware-group** is then entered, only customer-administered ports will subsequently be tested. **Resume** does not reinstate the port translations that were removed by the **cancel**.

If **test hardware-group** running in the foreground is successfully canceled with **cancel hardware-group** from another terminal, the following message appears on the terminal where the hardware group command was executing: **Hardware-group command aborted with cancel; command entered from another terminal.**

resume hardware-group

resume hardware-group

Use **resume hardware-group** to restart a hardware group test at the point where it was canceled. This capability is not available if another hardware group test has been started.

Halt a hardware group test (**test hardware-group**) temporarily or permanently with **cancel hardware-group** for a background test, or by pressing CANCEL for a foreground test. Use **status hardware-group** to see the status of a hardware group test.

When **test hardware-group all-ports** is canceled, the internally generated port translations for previously untranslated ports are removed. If **resume hardware-group** is

then entered, only customer-administered ports are tested. **Resume** does not reinstate the port translations that were removed by cancellation of **test hardware-group all-ports**.

Action/Object	Qualifier	Qualifier Description	Login	Default
resume hardware-group			init inads	

When a test that was executing in the background is resumed, a success message appears. When a test that was executing in the foreground is resumed, test results appear.

status hardware-group

status hardware-group

Use **status hardware-group** to see summary information about the active or last hardware group tests.

The information includes the number and percentage of maintenance objects tested, the percentage of tests passed/failed/aborted, the time elapsed since initiating the hardware group test, the specific hardware group **test** command (see test ipserver-interface on page 351) initiated, and the state (active/canceled/complete) of the hardware group test.

Action/Object	Qualifier	Qualifier Description	Login
status hardware-group			init inads craft cust rcust bcms browse

The following display shows the output of **status hardware-group**.

```
 status hardware-group                                    page 1 of 1
                          HARDWARE GROUP STATUS

                  Hardware Group Command State:   active
                          Number of MOs Tested:    11070
              Total Number of MOs to be Tested:    12300
                                Percent Complete:       90%
                Elapsed Test Time (hr:min:sec):  4:15:30
                              Repetition Number:        1
                    Percentage of Tests Passed:       82%
                    Percentage of Tests Failed:       11%
                   Percentage of Tests Aborted:        7%

                         ENTERED HARDWARE GROUP Command

         Command:  test hardware-group system
   Test sequence:  short
 Test repetition:  repeat 3
  Output Options:  failures
Hardware Options:  all-ports
```

status hardware-group field descriptions

status hardware-group field descriptions *1 of 2*

Field	Description
Hardware Group Command State	The state of a **hardware-group** command: active: testing is in progress; canceled: testing has been canceled; complete the command has completed and there is no testing going on.
Number of MOs Tested	The number of MOs in the specified group (see test ipserver-interface on page 351) that have had been tested by current **hardware-group**. This includes every MO that either was actually tested or was aborted due to resource contention.
Total Number of MOs to be Tested	The total number of MOs in the group that was specified in **test hardware-group**.
Percent Complete	A ratio of the number of MOs completed and the total number of MOs to test in the command.
Elapsed Test Time	The duration of the hardware-group test. If a test was canceled and then restarted this time excludes the cancel period. If **hardware-group** has finished it indicates the length of time it took to complete the command. The time appears as HH:MM:SS where HH is hours, MM is minutes, and SS is seconds.
	1 of 2

status hardware-group field descriptions *2 of 2*

Field	Description
Repetition Number	The number of iterations that have been completed corresponding to the ‘repeat’ or the ‘continuously’ option.
Percentage of Tests Passed	The percentage of tests that passed.
Percentage of Tests Failed	The percentage of tests that failed.
Percentage of Tests Aborted	The percentage of tests that were aborted.
Command	The **`hardware-group`** action/object and qualifiers that were entered.
Test sequence	short/long.
Test repetition	Displays either continuously or the keyword repeat along with the repeat value entered.
Output options	Displays the selections that were chosen on the input screen: auto-page, background, or failures.
Hardware options	Displays the selections that were chosen on the input screen (all-ports).
	2 of 2

test hardware-group

`test hardware-group [system | carrier` ***`UUC`*** **`| cabinet`** ***`UU`*** **`| port-network`** ***`PN#`*** **`| pnc a-pnc | b-pnc | board`** ***`location`*** **`] [schedule]`**

Use **`test hardware-group`** to run a series of demand maintenance tests on all hardware in a specified group: a carrier, cabinet, port network, PNC (A or B), circuit pack or the entire system. The tests executed vary depending on the options chosen and types of hardware in the group. Some tests are run concurrently to speed execution, so test results for several maintenance objects may be intermixed.

A **`hardware-group`** command running in the foreground can be aborted by pressing CANCEL or by entering **`cancel hardware-group`** at another terminal. Use **`cancel`** for a test running in the background. You can restart a canceled hardware-group test at the point it left off by entering **`resume hardware-group`**. Hardware group tests started with the all-ports option can be resumed, but they will not always test every port that originally would have been tested.

Action/ Object	Qualifier	Qualifier Description	Login	Feature Interaction
test hardware -group	**system** **carrier** ***UUC*** **cabinet** ***UU*** **port-network** ***PN#*** **pnc** **a-pnc** **b-pnc** **board** ***location*** **schedule**	Every maintenance object included in the specified hardware group is tested, including every circuit pack and port. When a cabinet or larger entity is specified, environmental MOs are tested. See test environment on page 238. See Common Input Parameters on page 25.		see test hardware-group feature interactions on page 300
		Examples: **test hardware-group system** **test hardware-group port-network 11** **test hardware-group pnc a-pnc** **test hardware-group board 01c07**		

test hardware-group feature interactions

test hardware-group feature interactions ***1 of 2***

Test hardware-group	Only one **test hardware-group** command can be active at any given time.
TTI	If **test hardware-group** is issued with the all-ports option while the TTI background task is active, some unadministered ports may not be tested. In addition, active alarms on line ports may be cleared by this task. The **status tti** command may be used to determine the state of the TTI background task.
Add Station	If **add station** is entered for an untranslated port at the same time as it is being tested by **test hardware-group** with the all-ports option, the request to **add station** will fail and the following message appears: **Object in use; please try later**
Trunk Administration	If an attempt is made to add an unadministered trunk port to a trunk group at the same time as it is being tested because of **test hardware-group** with the all-ports option, the request will fail, and the following message appears: **Object in use; please try later**
Save Translation	If **test hardware-group** is issued with the all-ports option when a translation save operation is active, some unadministered ports may not be tested. All other hardware will be tested normally.
	1 of 2

test hardware-group feature interactions ***2 of 2***

Hardware Alarms	When a hardware error is detected by **`test hardware-group`**, the hardware goes through the standard escalation strategy. Alarms will be raised on hardware that manifest hard errors. This alarming strategy is the same, regardless of whether the ports are translated or not.
System Interaction	The performance of **`test hardware-group`** is affected by call processing traffic, administration activity, choice of the short or long option, whether the all-ports option was chosen and other demand maintenance activity.
Scheduled and Periodic Maintenance	When **`test hardware-group`** is entered, all activity related to scheduled background maintenance, periodic background maintenance, and data audits is suspended for the duration of the execution of **`test hardware-group`**. When **`test hardware-group`** is canceled or when **`test hardware-group`** completes, all suspended periodic, scheduled, and data audits background maintenance activity will be restarted where it left off.
	2 of 2

The following is a typical input form for **`test hardware-group`**.

```
test hardware-group system                              Page 1 of 1

               TEST HARDWARE-GROUP SELECTIONS

     Select the desired options for the specified test.

                   Test sequence: short
               Test repetition: repeat_____  count: 1_

             Output OPTIONS:              HARDWARE OPTIONS:

              Auto-page? n                       All-ports? n
             Background? n
               Failures? n
```

test hardware-group field descriptions

test hardware-group field descriptions

Field	Description
Test sequence	**short** / **long**. **long** is more comprehensive and is not destructive.
Test Repetition	Enter **repeat** to enter a number of times that the entire test sequence is to be repeated. Enter **continuously** to cause the test sequence repeat until the command is canceled.
count	When Test repetition is set to **`repeat`**, specify the number of repetitions.
Auto-page	**y**/**n** Enter **y** to display a new screen when the screen fills up with results. This option is incompatible with the background option. If **n**, once the screen fills with results, testing stops until you press PAGE or CANCEL.
Background	Enter **y** to run the tests in the background and free up the terminal for other tasks. Error results are logged in the error log but not displayed on the screen. This option is incompatible with the auto-page and “continuously” options.
Failures	Enter **y** to see failure results only on the screen.
All-ports	Enter **y** to test all customer-translated line and trunk ports and, for the following circuit packs, untranslated ports as well:

When **`test hardware-group`** is run in the foreground, test results appear in the normal format. The message line shows a running count of the number of maintenance objects already tested, the total number included in the tests, percent completed, and repetition count.

The following screen shows a typical result for **test hardware-group system** .

```
test hardware-group system                                        Page   1 of   1

                        TEST HARDWARE-GROUP SELECTIONS

             Select the desired options for the specified test.

                      Test sequence: short
                    Test repetition: repeat        count: 1

              OUTPUT OPTIONS:               HARDWARE OPTIONS:

               Auto-page? n                       All-ports? n
              Background? n
                Failures? n
```

health

See:
monitor health on page 303
status health on page 304

monitor health

monitor health

Use **monitor health** to show the current system alarm summary, maintenance busy summary, user summary, critical system status, and cabinet status, that are updated every minute.

See the same information with **status health**. Press **CANCEL** to end **monitor health** and drop the management terminal login.

Note:

monitor health is not available in ASA.

Action/Object	Login	Feature Interaction
monitor health	init inads craft cust nms browse	If standby Emergency Transfer Select Switches change and handshakes are down, the displayed Emerg Trans field is incorrect until handshake re-initializes. When **monitor health** terminates, users are logged off of the system.

This is an example output screen for **monitor health**.

```
monitor health                                                    Page 1 of 1
                                   OCC: St:  4%   Sm:   3%   Cp:  21% Idl:  72%
                                ALARMS:Maj:  62  Min:  15   Wrn:  37
                                Logins:3 BUSYOUT:Trk:   2   Stn:   1 Oth:  39

Cab EmTr  Maj Min Wrn PNC               Cab EmTr  Maj Min Wrn PNC
 1  auto-   2|  1| 25 up
 4  auto-   2|  1| 25 up/up
 5  n.a.    0|  0|  4 up/up
 3  auto-   0|  0|  3 up/up
 6  auto-   0|  0|  3 up/up
 7  auto-   0|  0|  4 up
 8  auto-   0|  0|  0 up



Use 'Status Media-Gateways' for H.248 Gateway status    9:53 THU AUG 16 2007
```

See status health on page 304 for field descriptions.

status health

status health

Use **status health** to list various performance measurements in the system. Measurements include the current system alarm summary, maintenance busy summary, user summary, critical system status, and cabinet status.

Action/Object	Qualifier	Qualifier Description	Login
status health		See Common Input Parameters on page 25.	init inads craft cust nms browse

The following example shows the output for **`status health`**.

```
status health

                                   OCC: St: 4%   Sm:  4%   Cp:  22% Idl: 70%
                                ALARMS:Maj:  0  Min:  9   Wrn:  61
                                Logins:3 BUSYOUT:Trk: 0   Stn:   0 Oth:   0

Cab EmTr  Maj Min Wrn PNC               Cab EmTr  Maj Min Wrn PNC
 1  auto-   0|  1| 41 up
 2  auto-   0|  1|  5 up/up
 3  auto-   0|  0|  5 up/up
 4  auto-   0|  0|  0 up/up
 5  auto-   0|  0|  0 up/up


Use 'Status Media-Gateway' for H.248 Gateway status     9:51 THU AUG 16 2007
```

status health field descriptions

status health field descriptions ***1 of 3***

Field	Description
St	Percentage of CPU time currently dedicated to high priority items such as the operating system, rounded to the nearest whole number
Sm	Percentage of CPU time currently dedicated to system management or periodic and scheduled maintenance, rounded to the nearest whole number If a large amount of periodic or scheduled maintenance testing is being performed, this number can be high without affecting service.
Cp	Percentage of CPU time currently dedicated to call processing, rounded to the nearest whole number Call processing has priority over system management and will draw occupancy from the SM or IDLE categories.
Idl	Percentage of CPU time currently idle and available for use, rounded to the nearest whole number
Maj	Number of major alarms logged
Min	Number of minor alarms logged
Wrn	Number of warning alarms logged
Logins	Number of current users
Trk	Number of maintenance busied-out trunks
	1 of 3

status health field descriptions ***2 of 3***

Field	Description
Stn	Number of maintenance busied-out stations
Oth	Number of busied-out maintenance objects, excluding trunks and stations
Cab	Cabinet number Use **`list cabinet`** to relate cabinet numbers to port network numbers.
EmTr	Emergency Transfer shows the current setting of the switches on the PN's Maintenance circuit packs that control Emergency Transfer. See EMG-XFER (Emergency Transfer) on page 405 in the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*. The following states are available: **auto-** Emergency Transfer is under system control and is not currently activated (normal operating state). **auto+** Emergency Transfer is under system control and is in effect. **on** Emergency Transfer has been manually activated. This setting should only be in effect during an emergency. **off** Emergency Transfer is manually prevented from occurring. This setting should only be in effect when a technician is on site. **n.a**. The setting of the switch in this PN is not available to the switch. The Expansion Archangel Link (EAL) may be down. **NoEqp** means that the cabinet has circuit packs that do not support Emergency Transfer.
	2 of 3

status health field descriptions ***3 of 3***

Field	Description
Maj, Min, Wrn	Number of major, minor or warning alarms associated with the cabinet An asterisk indicates that the number exceeds 99 or 999.
PNC	Current Port Network Connectivity (PNC) status for each of the port networks in the cabinet When multiple port networks exist within a cabinet, Carriers A, B, and C are listed first and separated from Carriers D and E by a slash (e.g., up/up). **aa** Points to a problem with the archangel. The control is up, but the archangel is not functioning and is not available. **up** Both the Expansion Archangel Link (EAL) and the Indirect Neighbor Link (INL, if applicable) are available. **dn** Both EAL and INL (if applicable) are not available. **ne** (Near End) The EAL is available but the INL is not available. **fe** (Far End) The INL is available but the EAL is not available. **up/up**: 2 port networks share a cabinet. The first up is associated with the PN contained in A, B, and C carriers, and the 2nd up in D and E. **up/up/up**: 3 port networks share a cabinet. The first is in carrier A, the second in B and C, and the third in D and E. **up/up/up/up**: 4 port networks share a cabinet. The first is in carrier A, the second in B, the third in C, and the fourth in D and E. **up/up/up/up/up**: 5 (the maximum allowed) port networks share a cabinet. The first is in A, the 2nd in B, the 3rd in C, the 4th in D, and the 5th in E. Use `list cabinet` to see the carriers and port networks in each cabinet in the system.
	3 of 3

history

list history

```
list history [date] [time] [login x] [action x] [object x] [qualifer x]
[schedule]
```

list history with no options generates a log of the most recently completed data-affecting administration and maintenance commands. This includes the history of ACTR moves, which can be used to track moves and help reduce fraud.

Action/Object	Qualifier	Qualifier Description	Login	Default	Feature Interaction
list history	**date** **time** **login** **action** **object** **qualifier** **schedule**	MM or MM/DD HH or HH:MM login-id action performed object acted on extension, etc. See Common Input Parameters on page 25.	init inads craft cust browse rms		See list history feature interactions on page 308

list history feature interactions

The translation log is written to memory as translation data when **save translation** is executed. The translation data is time stamped when saved. This time stamp is noted when translation is loaded from memory and included in every recent change history report.

When a user requests a recent change history report, there could be other users concurrently issuing data commands and altering the contents of the transaction log. Therefore, if the user pages the entire way through the report, the oldest entries in the transaction log (maximum 250 commands) may have been overwritten by data commands issued by these other users. If this occurs, the final entries of the report show the data commands issued by the other users since the recent change history report was originally requested.

Also, using **set time** to alter the system clock could make it look as if the recent change history report is not in true LIFO order.

```
list history                                                          Page   1
                                   HISTORY
          Date of Loaded Translation: 1:02am FRI OCT 19, 2007

 Date    Time Port      Login    Actn Object       Qualifier

 10/25 13:46 MAINT     init     save translation
 10/25 13:35 MAINT     init     logn
 10/25 13:29           maint    save translation
 10/25 13:27 S01505    ip-u     cha  sta          21466
 10/25 13:24 S01506    ip-u     cha  sta          21467
 10/25 13:19 S01507    ip-u     cha  sta          21468
 10/25 13:17 MAINT     init     logn
 10/25 11:21 MAINT     init     logf
 10/25 11:20 MAINT     init     logn
 10/25 11:20 MAINT     init     logf
 10/25 10:13 MAINT     init     logn
 10/25  9:35 MAINT     init     save translation
```

list history field descriptions

list history field descriptions

Field	Description
Date	The date `list history` was issued (mm/dd).
Time	The time `list history` was issued (hh:mm).
Port	The port type to which the user was connected when `list history` was issued. • TTI, PSA, CTA and ACTR moves are recorded when the **CTA/PSA/TTI Transactions in History Log** field is **y** on the Feature-Related System Parameters screen. These transactions appear as two separate records: one recording the moved-from port, and the other one recording the moved-to port. • IP station registrations and unregistrations are recorded when the **Record IP Registrations in History Log** field is **y** on the Feature-Related System Parameters screen.
Login	User login
Actn	The action part of the command, specifying the operation to be performed. This field is truncated after 4 characters to allow enough space for objects and qualifiers and to uniquely identify each action.
Object	The qualifier (12 characters) specifying the object of the command. Where the object is multiple words in length, only the first word appears in the object field; every succeeding word is treated as a qualifier.
Qualifier	One or more qualifiers describing the characteristics of the Action/Object pair. This field is truncated after 31 characters to keep information for a command on a single line.

Communication Manager events are also logged in the Linux syslog. Syslog is a standard Linux service that supports storing event information in local files as well as sending events to an external syslog server. Syslog supports storing events in different files or ’logs’ depending on the nature of the event.

Access the Communication Manager web interface log pages through **Select Diagnostics > System Logs**. For more information on Communication Manager web interface System Logs, see *Maintenance Procedures for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300432) (formerly 03-300192)*.

The following types of activities are logged:

- Security-related events: Communication Manager logs all events related to security to the secure log. An administrator cannot disable or change parameters related to security events.
- System Administration Terminal (SAT) interface logging: Administration changes are logged to the command history log with the date and time, the unique identify of the person making the change, the value of the parameter that is changing and the status of the operation (successful or not). The administrator can configure the level of detail that is logged.

  Communication Manager logs attempts by users to view information to which they are not permitted access or attempts to submit forms with invalid or non-acceptable values.
- Web page logging: Attempts to access the Avaya server's web pages and changes to a value in a web page are logged. Changes to a web page are logged only if the page is submitted, either successfully or unsuccessfully.

initcauses

display initcauses

`| schedule]`

Use **`display initcauses`** to see a history of recovery steps taken by the system. **`Display initcauses`** shows information for restarts of the active processor only. When the processor resets and the system is restarted, either by a technician command or by system software, information about the recovery is stored. If the reset is escalated, only the reset that successfully completes is recorded. The error log contains information about the reset. When a reset 4 (reload) occurs, the error log is saved on the disk.

Records of the last 16 restarts are retained in the initcauses log in chronological order.

Action/Object	Qualifier	Qualifier Description
`display initcauses`	**`schedule`**	See Common Input Parameters on page 25

```
display initcauses

                              INITIALIZATION CAUSES
      Cause            Action     Escalated        Mode          Time
Interchange-Craft        4           yes         Active      11/02 17:17
Craft Request            4           no          Active      11/06 17:04
Initialized              4           no          Active      11/06 22:15
Internal Request         1           no          Standby     11/06 22:16
Craft Request            4           no          Active      11/08 11:20
Craft Request            4           no          Active      11/08 11:33
Craft Request            4           no          Active      11/08 11:38
Craft Request            4           no          Active      11/08 15:07
Craft Request            4           no          Active      11/08 16:14
Craft Request            4           no          Active      11/08 16:39
Craft Request            4           no          Active      11/08 16:55
Initialized              4           no          Active      11/08 23:06
Craft Request            4           no          Active      11/10 14:24
Initialized              4           no          Active      11/13 23:02
```

display initcauses field descriptions

display initcauses field descriptions ***1 of 2***

Field	Description
Cause	This gives the reason for the system reset, as follows: **Craft Request**:**=** The reset was manually initiated using **`reset system`**. **Initialized =** A power-up. Always the first entry in the log unless more than 15 restarts have occurred since the last power up. **Interchange =** A State of Health change caused the arbiter process to initiate the restart. **Interchange-Craft =** An administrative session (**`session -i`** command, on-demand interchange) caused the arbiter process to initiate the restart. **Internal Request =** Software requested the restart, usually in response to a server interchange. Internal request restarts are not initiated in direct response to an error and are non-escalating. **Software Request =** Software requested the system restart.
Action	The level of recovery performed by the system. l **1** Reset system 1 (Warm): Communication Manager software is restarted, and active calls remain up. l **2** Reset system 2 (Cold): Communication Manager software is restarted, translations are preserved, and all calls are dropped. l **4** Reset system 4 (Reload): Communication Manager software is completely reloaded, and the hardware is reinitialized.
	1 of 2

display initcauses field descriptions ***2 of 2***

Field	Description
Escalated	**y/n** **y** = the restart was escalated to a higher level than originally attempted. The system's software escalation strategy can perform a higher level restart than the one initiated if problems prevent or conditions interfere with normal execution.
Mode	State of the server immediately after the interchange, at the time of the restart. Look for a change of mode to help determine when an interchange occurred. l **Active** = Mode of a simplex server and for a duplex server that is the active server. l **Standby** = Mode of a standby server in a duplex configuration l **BUSY OUT =** Mode of a standby server that has been placed out-of-service with a **`busyout`** command.
Time	The month, day and time of the restart.
	2 of 2

See also reset system on page 614.

integ-annc-board

list usage integ-annc-board

`list usage integ-annc-board` ***`location`***

Use **`list usage integ-annc-board`** to see information on the announcements and audio groups on an announcement circuit pack.

For more information on Announcements/Audio Sources screens and integrated announcement boards, see *Administering Avaya Aura™ Communication Manager (03-300509)*.

Action/Object	Qualifier	Qualifier Description
`list usage integ-annc-board`	***`location`***	board location

The following screen shows a typical result for **`list usage integ-annc-board.`**

```
list usage integ-annc-board 01B18                                   Page 1

                       ANNOUNCEMENT GROUP BOARD USAGE
USED BY

 Audio Group           Group     4     Member    28
 Audio Group           Group    23     Member   101
 Announcement   Announcement  2087  Extension 9876543210
```

list usage integ-annc-board field descriptions

list usage integ-annc-board field descriptions

Field	Description
USED BY	The type of announcement source on the announcement circuit pack **Audio Group** with Audio Group number and Member number **Announcement** with Announcement number and Extension

integ-annc-brd-loc

change integ-annc-brd-loc

`change integ-annc-brd-loc`

Use **`change integ-annc-brd-loc`** to change all the currently administered 'from' board location to the 'to' board location on the ANNOUNCEMENTS/AUDIO SOURCES and AUDIO GROUP screens.

```
                  CHANGE INTEGRATED ANNOUNCEMENT TRANSLATIONS

   Change all board location translations from board:       to board:



          Changing board locations using this command will change
          all currently administered "from" board locations on the
          ANNOUNCEMENTS/AUDIO SOURCES and AUDIO GROUP screens
          to the "to" board location
```

The **`change integ-annc-brd-loc`** command does not physically move the announcement files. It only changes the administrative view on CM to the new location.

For example, you cannot use **`change integ-annc-brd-loc`** to change the location of the announcement files from an internal flash on the gateway to an external Compact Flash for backup and restore.

ip-board

status ip-board

`status ip-board` ***`location`***

`Status ip-board` has the same syntax and output as **`status clan-ip`** except the list of allowed boards is larger.

Note:

`status ip-board` ***`location`*** is a SAT command that cannot be run on the MAPD board.

Use **`status ip-board`** ***`location`*** to see the data in the first two columns of the following table. The screen also shows the time of the last port reset, the last hour start time and end time for the error counter statistics.

Action/Object	Qualifier	Qualifier Description
`status ip-board`	***`CCccss`***	board location

status ip-board field descriptions

status ip-board field descriptions *1 of 2*

Field Name	Output type		MIB data	Description
Incoming datagram header errors	Counter	Long	ipInHdrErrors	The number of input datagrams discarded due to errors in their IP headers, including bad checksums, version number mismatch, other format errors, time-to-live exceeded, and errors discovered in processing their IP options.
Outgoing datagrams with no route available	Counter	Long	ipOutNoRoutes	The number of IP datagrams discarded because no route could be found to transmit them to their destination. Note that this counter includes any packets counted in ipForwDatagrams which meet this `no-route' criterion. Note that this includes any datagrams which a host cannot route because all of its default gateways are down.
Incoming datagrams received	Counter	Long	ipInReceives	The total number of input datagrams received from interfaces, including those received in error.
Incoming datagrams discarded	Counter	Long	ipInDiscards	The number of input IP datagrams for which no problems were encountered to prevent their continued processing, but which were discarded (e.g., for lack of buffer space). Note that this counter does not include any datagrams discarded while awaiting re-assembly.
Outgoing datagrams submitted for transmission	Counter	Long	ipOutRequests	The total number of IP datagrams which local IP user-protocols (including ICMP) supplied to IP in requests for transmission. Note that this counter does not include any datagrams counted in ipForwDatagrams.
Outgoing datagrams discarded	Counter	Long	ipOutDiscards	The number of output IP datagrams for which no problem was encountered to prevent their transmission to their destination, but which were discarded (e.g., for lack of buffer space). Note that this counter would include datagrams counted in ipForwDatagrams if any such packets met this (discretionary) discard criterion.
				1 of 2

status ip-board field descriptions ***2 of 2***

Field Name	Output type		MIB data	Description
ICMP Destination unreachable messages	Counter	Long	icmpInDestUnreachs	The number of ICMP Destination Unreachable messages received.
ICMP Redirect message	Counter	Long	icmpInRedirects	The number of ICMP Redirect messages received
				2 of 2

ip-codec-set

change ip-codec set

`change ip-codec-set [n]`

Use **`change ip-codec-set`** to independently administer codec sets to use media encryption or not.

Action/Object	Qualifier	Qualifier Description
`change ip-codec-set`	***n***	codec set number

This is an example screen for **`change ip-codec-set`**.

```
change ip-codec-set 7                                          Page   1 of   1
                                   IP Codec Set
    Codec Set: 7

    Audio      Silence      Frames   Packet
    Codec      Suppression  Per Pkt  Size(ms)
 1: G.711MU         n         2        20
 2:
 3:
 4:
 5:
 6:
 7:

 Media Encryption
 1: aes
 2: aea
 3: none
```

change ip-codec-set field descriptions

change ip-codec-set field descriptions ***1 of 2***

Field	Description
Codec Set	1-7 specifies the codec set used between the network regions. If blank, there is no connectivity between the network regions.
Audio Codec	Name of the audio codec in this codec-set G.711A (a-law) G.711MU (mu-law) G.722-64k G.722.1-24k G.722.1-32k G.723.5.3 G.723.6.3 G.726A-32k G.729 G.729A G.729B G.729AB SIREN14-24k SIREN14-32k SIREN14-48k SIREN14-S48k SIREN14-S56k SIREN14-S64k SIREN14-S96kk
Silence Suppression	**y**/**n** Enter **y** to enable RTP-level silence suppression on the audio stream
Frames Per Pkt	Number of frames per packet up to a packet size of 60 milliseconds (ms) **1**-**6** or blank G.711 default frame size is 2 (20 ms). G.723 default frame size is 3 (30 ms). G.729 default frame size is 2 (20 ms).
	1 of 2

change ip-codec-set field descriptions ***2 of 2***

Field	Description
Packet Size (ms)	Size of the packet in milliseconds (ms).
Media Encryption	The options for each codec set apply to all codecs defined in that set. Appears when **Media Encryption Over IP** is **y** on the **system-parameters customer-options** screen. Enter the options in the order of preference. Enter **aes** in one of the fields to add AES Media Encryption. l Enter **aes** for Advanced Encryption Standard encryption, standard used by U.S. government to protect sensitive (unclassified) information. Reduces circuit-switched to IP call capacity by 25%. l Enter **aea** for Avaya Encryption Algorithm. Not as secure as AES. Use to encrypt: - all endpoints (except Avaya 46x4 IP Telephones) within a network region using this codec set - all endpoints communicating between two network regions and using this codec set l Enter **none** for an unencrypted media stream. Prevents encryption when using this codec set. Default value when **Media Encryption Over IP** is **y** for the first time on the Special Applications screen. l **1-srtp-aescm128-hmac80** l **2-srtp-aescm128-hmac32** l **3-srtp-aescm128-hmac80-unauth** l **4-srtp-aescm128-hmac32-unauth** l **5-srtp-aescm128-hmac80-unenc** l **6-srtp-aescm128-hmac32-unenc** l **7-srtp-aescm128-hmac80-unenc-unauth** l **8-srtp-aescm128-hmac32-unenc-unauth** Or leave blank
	2 of 2

ip-interface

change ip-interface

`change ip-interface [ cabinet | carrier | slot ]`

Use **`change ip-interface`** to see the IP-Interfaces report.

Options: You can change the value in the **Enable Voice/Network Stats?** from **n** (No) to **y** (Yes). The default value for **Enable Voice/Network Stats?** field is **n**.

The following is an example of the page 2 of the **`change ip-interface`** screen:

```
change ip-interface 04b05                                        Page   2 of   2
                                  IP INTERFACES

ETHERNET OPTIONS
                         Slot: 04b05
                         Auto? y


VoIP/NETWORK THRESHOLDS
Enable VoIP/Network Thresholds? n
               Packet Loss (%): 5
                   Jitter (ms): 50
                 RT Delay (ms): 500
```

change ip-interface field descriptions

Field	Description
Enable VoIP/ Network Thresholds?	Enables/disables the record of Voice/Network Statistics at a single media processor board level (applies to both TN2602 boards, if duplicated).
Packet Loss (%)	Unacceptable packet loss coming into the administered media processor board.
Jitter (ms)	Unacceptable disturbance for the administered media processor board. Jitter is based on RTCP that is, time stamp and expected arrival times of packets.
RT Delay (ms)	Elapsed time for a packet to reach remote location and revert. (Round Trip Delay)

list ip-interface

`list ip-interface [ clan | medpro | all ]`

Use **`list ip-interface`** to see information on Media Processor and IP Media Resource circuit packs in your system.

Action/Object	Qualifier	Qualifier Description	Default
`list ip-interface`	**`clan`**	show information for all C-LAN circuit packs	
	`medpro`	show information for all media processor circuit packs	
	`all`	show information for all media processor and IP Media Resource circuit packs	

This example shows a typical output for **`list ip-interface medpro`**.

list ip-interface medpro

```
list ip-interface medpro

                                IP INTERFACES
                                                        Net
ON Slot Code Sfx IP Address/Mask    Gateway Address Rgn VLAN Virtual Address
-- ---- ---- --- ------------------ --------------- --- ---- ---------------
y 01A02 TN2302   172.16.241.24  /24 172.16.241.254  1   n
y 01B10 TN2302   172.16.241.27  /24 172.16.241.254  3   n
y 01B02 TN2302   172.16.241.26  /24 172.16.241.254  1   n
y 01A05 TN2302   172.16.241.25  /24 172.16.241.254  1   n
y 03B02 TN2302   172.16.241.29  /24 172.16.241.254  3   n
y 03A02 TN2302   172.16.241.28  /24 172.16.241.254  3   n
y 05B02 TN2302   172.16.242.26  /24 172.16.242.254  7   n
y 05A02 TN2302   172.16.242.25  /24 172.16.242.254  3   n
y 07B02 TN2302   172.16.242.30  /24 172.16.242.254  7   n
```

This example shows a typical output for **`list ip-interface all`**.

list ip-interface all

```
list ip-interface all                                                   Page   1
                                IP INTERFACES
                                                                         Net
ON Type  Slot  Code Sfx Node Name/      Subnet Mask     Gateway Address Rgn VLAN
                        IP-Address
-- ----  ----  ---- --- --------------- --------------- --------------- --- ----
y C-LAN  01C15 TN799  D st13clan        255.255.255.0   192.168.22.254  77  0
                        192.168.22.33
y MEDPRO 02B05 TN2302   st13_prowler1   255.255.0.0     172.22.22.254   4   n
                        172.22.22.227
y MEDPRO 01B06 TN2602   st13_prowler10  255.255.254.0   172.21.21.254   4   n
                        172.21.20.31
y MEDPRO 03B14 TN2602   st13_prowler2   255.255.0.0     172.22.22.254   1   n
                        172.22.22.228
y MEDPRO 03B15 TN2602   st13_prowler3   255.255.0.0     172.22.22.254   1   n
                        172.22.22.229
y MEDPRO 02C06 TN2302   st13_prowler4   255.255.0.0     172.22.22.254   1   0
                        172.22.22.230
y MEDPRO 02C07 TN2302   st13_prowler5   255.255.0.0     172.22.22.254   250 0
                        172.22.22.231
```

list ip-interface field descriptions

list ip-interface field descriptions *1 of 2*

Field	Description
ON	**y** - allows use of the ethernet port
Type	Type of IP interface. This field appears for **`list ip-interface all`**.
Slot	Physical port location of the IP interface.
Code	TN identification of the circuit pack for the IP interface.
Sfx	Suffix identification of the circuit pack for the IP interface.
Node Name	Node name for the IP interface administered on the **Node Names** screen.
IP Address	The IP address of the IP Interface. For **`list ip-interface medpro`**, the IP Address and Subnet Mask fields are combined.
	1 of 2

list ip-interface field descriptions ***2 of 2***

Field	Description
Subnet Mask	Subnet mask associated with the IP address for the IP interface. The subnet mask is a 32-bit binary number that divides the network ID and the host ID in an IP address.
Gateway Address	Address of a network node that serves as the default gateway for the IP interface.
Num Skts Warn	Threshold number of sockets in use for IP endpoint registration on the C-LAN before a warning message is logged. This field appears for **`list ip-interface clan`**.
Net Rgn	Network region number for the IP interface.
VLAN	This field sends VLAN instructions to C-LAN and Media Processor boards. It does not send VLAN instructions to IP endpoints such as IP telephones and softphones. This field cannot be administered for VAL boards.
Dup	**n** - the IP interface circuit is not duplicated **y** - the IP Media Resource 320 circuit pack is duplicated. The next board in this list is the associated duplicated IP Media Resource 320 circuit pack. If media processor boards are not duplicated, **n** is displayed in this column.
Virtual Address	The virtual address of the duplicated TN2602 (Crossfire) circuit pack pair. This field appears on **`list ip-interface medpro`** for duplicated TN2602 circuit packs .
	2 of 2

ip-network-region

See:
change ip-network-region on page 323
status ip-network-region on page 325

change ip-network-region

`change ip-network-region x`

Use **`change ip-network-region`** to change the audio and Quality of Service (QoS) attributes of IP network region ***x***, where ***x*** is a network region number, or to change the codec set used for connections from network region ***x*** to other network regions.

To troubleshoot broken inter-network region connectivity, see **`status ip-network-region`**, **`display failed-ip-network-region`** and **`test failed-ip-network-region`**.

Action/Object	Qualifier	Qualifier Description
`change ip-network-region`	***x***	Region number

See *Administering Network Connectivity on Avaya Aura™ Communication Manager (555-233-504)* for administration guidelines.

```
change ip-network-region 3                                      Page   1
                              IP Network Region

      Region: 3
    Location:                Home Domain:
        Name:
                              Intra-region IP-IP Direct Audio?
AUDIO PARAMETERS              Inter-region IP-IP Direct Audio?
   Codec Set: 2                          IP Audio Hairpinning? y
UDP Port Min: 2048
UDP Port Max: 65535                     RTCP Reporting Enabled? y
                                RTCP MONITOR SERVER PARAMETERS
                                 Use Default Server Parameters? n
DIFFSERV/TOS PARAMETERS                       Server IP address: 172.16.24.28
 Call Control PHB Value: 43                         Server Port: 5005
        Audio PHB Value: 46            RTCP Report Period(secs): 5
          BBE PHB Value: 43
                               AUDIO RESOURCE RESERVATION PARAMETERS
                                                   RSVP Enabled? y
          802.1P/Q PARAMETERS           RSVP Refresh Rate(secs): 15
 Call Control 802.1p Priority:6 Retry upon RSVP Failure Enabled? y
        Audio 802.1p Priority:                  RSVP Profile: guaranteed-service
H.323 IP ENDPOINTS            RSVP unreserved (BBE) PHB Value:
   H.323 Link Bounce Recovery?
   Idle Traffic Inerval (sec):
    Keep-Alive Interval (sec):
             Keep-Alive Count:
```

```
change ip-network-region 1                                      Page   2 of  19
                                IP NETWORK REGION

INTER-GATEWAY ALTERNATE ROUTING / DIAL PLAN TRANSPARENCY
 Incoming LDN Extension:
 Conversion To Full Public Number - Delete:    Insert:
 Maximum Number of Trunks to Use for IGAR:
 Dial Plan Transparency in Survivable Mode? n

BACKUP SERVERS IN PRIORITY ORDER     H.323 SECURITY PROFILES
 1   sv-st12-elspy                   1   pin-eke
 2                                   2
 3                                   3
 4                                   4
 5
 6                                   Allow SIP URI Conversion? y

TCP SIGNALING LINK ESTABLISHMENT FOR AVAYA H.323 ENDPOINTS
   Near End Establishes TCP Signaling Socket? n
                      Near End TCP Port Min: 61440
                      Near End TCP Port Max: 61444
```

```
change ip-network-region 3                                      Page   2 of   x
                                IP Network Region

BACKUP SERVERS IN PRIORITY ORDER
1
2
3
4
5
6
```

```
change ip-network-region 3                                     Page   3 of x

                   Inter Network Region Connection Management

src dst   codec  direct  Audio          Video                              Dyn
rgn rgn    set    WAN   WAN-BW-limits  WAN-BW-limits intervening-regions  CAC   IGAR
1   1       1
1   2       1      y    :NoLimit
1   3       1      y    :NoLimit
1   4       1      n    :                             ___3:   :   :
1   5       1      n    :                             ___3:  4:   :
1   6       1      n    :                             ___3:  4:  5:
```

See *Administering Avaya Aura™ Communication Manager (03-300509)* for field descriptions for **`change ip-network-region`**.

status ip-network-region

`status ip-network-region x`

Use **`status ip-network-region x`** to see the status of the administered network connections between network region ***x*** and other network regions.

Action/Object	Qualifier	Qualifier Description
`status ip network-region`	***x***	ip-network region number

This is an example of the output for **`status ip-network-region 2`**.

```
status ip-network-region 2

                   Inter Network Region Bandwidth Status

                                       BW-Used                 # Times
Src Dst Conn     Conn   BW-Limits    (Kbits)   #Connections BW-Limit     IGAR
Rgn Rgn Type     Stat                  Tx    Rx    Tx    Rx  Hit Today  Now/Today

2   1   direct   pass  128 Kbits   xxxxx xxxxx xxxxx xxxxx    xxx      xxx/xxx
2   3   indirect pass
2   4   indirect pass
2   5   indirect pass
```

status ip-network-region field descriptions

status ip-network-region field descriptions *1 of 2*

Field	Description
Src Rgn	Source Region number
Dst Rgn	Destination region
Conn Type	Type of connection **direct** **indirect**
Conn Stat	status of the connection **pass** **fail**
BW-Limits	Bandwidth and limits as administered with **`add ip-network-region`**
	1 of 2

status ip-network-region field descriptions *2 of 2*

Field	Description
BW-Used (kbits) Tx	Bandwidth used for transmission, direct connections only
BW-Used (kbits) Rx	Bandwidth used receiving, direct connections only
#Connections Tx	Number of transmission connections, direct connections only
#Connections Rx	Number of receiving connections, direct connections only
#Times BW-Limit hit Today	Number of times the CAC threshold limits reached since the previous midnight, direct connections only
IGAR Now/Today	The number of active IGAR connections for the pair of Network Regions/ The number of times IGAR has been invoked for the pair of Network Regions since the previous midnight.
	2 of 2

ip-route

See:
list ip-route on page 326
netstat ip-route on page 328
refresh ip-route on page 330

list ip-route

`list ip-route [board location]`

Use **`list ip-route`** to list the IP routes from DEFINITY ECS out to the LAN. Enter the board parameter to list the IP routes for a specific C-LAN circuit pack, for example, **`list ip-route board location`**.

Action/Object	Qualifier	Qualifier Description	Login	Default
`list ip-route`	**`board location`**	Physical location of the circuit pack. Example: **`list ip-route board 01A03`**	init inads craft	

The following example shows the output from **`list ip-route`**.

```
list ip-route
                                   IP ROUTING

 Route    Destination    Gateway/          C-LAN        Metric/     Accepted
 Number   Node        Subnet Mask          Port Network Bits        by C-LAN

 xxx    xxxxxxxxxxxxxx  xxxxxxx          xxxxxxx    0              accepted
                      xxx.xxx.xxx.xxx                24
 xxx    xxxxxxxxxxxxxx  xxxxxxx          xxxxxxx    0              pending
                      xxx.xxx.xxx.xxx                24
 xxx    xxxxxxxxxxxxxx  xxxxxxx          xxxxxxx    1              rejected
                      xxx.xxx.xxx.xxx                24
```

list ip-route field descriptions

list ip-route field descriptions ***1 of 2***

Field	Description
Route Number	IP-route number
Destination Node	Destination of the route. The name is administered on the Node Name screen and can include the keyword **`Default`** indicating the default route.
Gateway	The node name of the Gateway through which the destination is to be reached. The Gateway is a name administered on the Node Name screen.
Subnet Mask	The destination IP subnet address. Identifies which portion of an IP address is a network address and which is a host identifier.
C-LAN Port	Indicates the C-LAN port location that provides the interface for the route.
Metric	Specifies the desirability of the IP route in terms of the efficiency of data transmission over the route. Valid entries are **0** (a simple route) and **1** (a complex route). A metric value of **1** is used only when the switch has more than one C-LAN board installed. A metric-1 route diverts usage of the route to a metric-0 route, if available.
	1 of 2

list ip-route field descriptions ***2 of 2***

Field	Description
Network Bits	
Accepted by C-LAN	Indicates whether a C-LAN circuit pack has accepted the administered IP-route. Routes for a link are downloaded to the C-LAN circuit pack when the link comes into service. Possibilities include: • **accepted** – the route has been accepted by the C-LAN circuit pack • **rejected** – the route has been rejected by the C-LAN circuit pack. The Gateway may not be on the attached ethernet subnet or may not be the IP address of the far end of the PPP link. • **pending** – the route has not been sent to the C-LAN circuit pack, or it has been sent but no reply has been received. Typically, this status changes to `accepted` or `rejected` when some condition changes, such as a link coming up. • **obsolete** – the route is no longer needed (some host routes were needed in R7 but are no longer needed in subsequent releases, or are duplicates of existing routes).
	2 of 2

netstat ip-route

`netstat ip-route [board location]`

Use **`netstat ip-route`** to see the routing tables that are resident in the C-LAN and/or VAL circuit packs. Without the **`board`** option, all C-LAN and VAL circuit packs are displayed. With the **`board`** option, only the specified C-LAN or VAL circuit pack appears.

Action/Object	Qualifier	Qualifier Description	Login
`netstat ip-route`	 **`board location`**	(none) Display routing tables for all C-LAN and VAL circuit packs specific C-LAN or VAL circuit pack	init inads craft

The following example shows the output from **`netstat ip-route`**.

```
netstat ip-route
                                IP ROUTING

Bd/Pt     Destination         Gateway            Subnet Mask              Intfc/Err

01A0633   0.0.0.0             192.168.22.264     0.0.0.0                  motfec0
01S0618   127.0.0.1           127.0.0.1          255.255.255.255          lo0
01A0618   127.0.0.8           127.0.0.8          255.255.255.0            lo0
01A0633   192.168.22.0        192.168.22.113     255.255.255.0            motfec0
07A04     ****                ****               ****                     LPBK_IP
```

netstat ip-route field descriptions

netstat ip-route field descriptions

Field	Description
Bd/Pt	The circuit pack location for the pack that provides the interface for the route.
Destination	Fixed field giving the destination of the route. The destination is a name administered on the Node Name screen which can include the keyword “Default,” indicating the default route.
Gateway	The node name of the Gateway by which the Destination can be reached. The Gateway must be a name administered on the Node Name screen.
Subnet Mask	Subnet mask information entered on the IP Interfaces screen.
Intfc/Err	• **pppn** represents one of the PPP interfaces on the C-LAN, which is administered as port n+1. • **cpm0** represents the ethernet interface on the C-LAN which is administered as port 17. • **motfec0** represents the internet interface on the VAL circuit pack, which is administered as port 33. • **lo0** represents the loopback interface on the C-LAN or VAL. • LPBK_IP - Loopback request failed, typically because the RSCL is down. • Timeout - Query timed out. • SNMP - SNMP call failed. • BD BUSY - Board was busied out.

refresh ip-route

`refresh ip-route [all | board location]`

Occasionally, tables that are used to route IP messages become corrupted and/or contain stale routes which will delay packet delivery. Use **`refresh ip-route`** to remove dynamic (learned) routes from C-LAN circuit pack route tables and replace any administered routes that have been corrupted.

Action/Object	Qualifier	Qualifier Description	Login	Default
`refresh ip-route`	**`all`** **`board location`**	Refreshes route tables in all C-LAN circuit packs. Refreshes ip-route tables in a specific C-LAN circuit pack.	init inads craft station trunk MSP permissions	all

The following example shows the output from **`refresh ip-route all`**.

```
refresh ip-route all
                              REFRESH IP ROUTE

  Board        Maintenance      Refresh       Routes       Routes      Failure
 Location          Name          Result        Deleted      Added       Reason

 05B11         CLAN-BD          Fail             0            0         Brd Busy
 01A11         CLAN-BD          Success          0            0
```

refresh ip-route all field descriptions

refresh ip-route all field descriptions ***1 of 2***

Field	Description
Board Location	The physical location of the C-CLAN circuit pack.
Routes Deleted	Number of routes that were deleted from the C-LAN route tables.
	1 of 2

refresh ip-route all field descriptions ***2 of 2***

Field	Description
Routes Added	Number of routes that were added from the C-LAN route tables.
Failure Reason	The refresh failed for the following reasons: Add - Adding a route failed. Delete - Deleting a route failed. Loopback - Failed to acquire loopback address. RSCL is probably down. Brd Busy- the CLAN-BD has been busied out. SNMP - SNMP query to the board failed. Timeout - SNMP query timeout.
	2 of 2

ip-stations

reset ip-stations

`reset ip-stations [ip-phones | all | tti] [ ip-network-region n | all-regions | ipaddr n n]`

Use **`reset ip-stations`** to simultaneously unregister and reset all IP endpoints on a system, or a certain group of IP stations. You can limit the reset to only IP phones, to IP phones in a specific network region, to all IP endpoints in a specific network region, or within a range of ip addresses. Each defined ip station receives a reset message and is unregistered.

Use **reset ip-stations** to initiate simultaneous firmware upgrades to many IP stations, or a certain group of IP stations. You can reset IP stations on one ip-network region to prevent overloading a system with large numbers of IP station resets.

Action/Object	Qualifier	Qualifier Description	Login	Default	Feature Interaction
reset ip-stations	**all**	reset all IP endpoints	(all)	all-ip	See Feature Interactions for reset ip-stations on page 333
	ip-phones	reset IP phones only		all regions	
	tti	reset phones in TTI state only			
	ip-network-region ***n***	reset IP endpoints in specified IP network region			
	all-regions	reset IP endpoints in all network regions			
	ipaddr ***n n***	reset IP endpoints within an ip address range			
	status	verify if the reset ip-stations command is completed in the background			
	type 4620 all-ip	reset a specified IP phone type only			
	unauth all-ip	reset all Unauthenticated IP stations			
		Examples: **reset ip-stations ip-phones** **reset ip-stations ip-network-region 2** **reset ip-stations ip-phones ip-network-region 2** **reset ip-stations ip-phones ipaddr 135.9.76.70 135.9.77.70** **reset ip-stations status** **reset ip-stations type 4620 all-ip** **reset ip-stations unauth all-ip**			

Use **reset ip-stations** to reset H.323 stations including:

- IP phones
- IP Softphones
- IP Agents
- IP E-consoles
- All endpoints that appear as IP stations to Communication Manager

When **reset ip-stations** is issued:

- The system unregisters each station

- Each station individually resets
- “Command completed successfully” appears immediately at the SAT. However, not all IP stations have already been reset.
- An event is logged in the Events Report (**`display events`**)

If **`reset ip-station`** is executed a second time before all stations have reset, “Command already running; Please try again later” appears.

When **`reset ip-stations`** is submitted, the “Command completed successfully” message appears, but all the resets are not complete. If the system resets while **`reset ip-stations`** is running, resubmit the command to restart the process.

Feature Interactions for reset ip-stations

Network Regions

When setting up IP-network regions, consider the number of IP endpoints assigned to each region. Network regions are associated with specific media processing resources. Administer IP-network regions to a size that DHCP and TFTP servers can handle, and limit the performance impacts of simultaneously resetting large numbers of IP stations.

Duplicated systems

In duplicated systems, submit **`reset ip-stations`** on the processor where the IP endpoints are registered. For example, if there are IP endpoints registered to both a main processor and a Local Survivable Processor (LSP), and **`reset ip-stations`** is run on the main processor, the IP endpoints registered to the LSP are not reset. This also applies on G3R only to IP stations registered to C-LANs controlled by an ATM WAN Spare Processor, and C-LANS controlled by the processor on a Survivable Remote EPN.

ipserver-interface

See:
add ipserver-interface on page 334
busyout ipserver-interface on page 334
change ipserver-interface on page 335
display ipserver-interface on page 340
get forced-takeover ipserver-interface on page 341
list ipserver-interface on page 343
list measurements ipserver-interface on page 344
release ipserver-interface on page 348
remove ipserver-interface on page 348
reset ipserver-interface on page 350
set ipserver-interface on page 350
test ipserver-interface on page 351

add ipserver-interface

`add ipserver-interface n`

Use **`add ipserver-interface n`** to administer a port-network ***n*** to be IPSI controlled.

Action/Object	Qualifier	Qualifier Description
`add ipserver-interface`	***n***	Port network
		Example: **`add ipserver-interface 10`**

For an example of the ipserver-interface screen and the field descriptions, see change ipserver-interface.

busyout ipserver-interface

`busyout ipserver-interface Uc`

Use **`busyout ipserver-interface`** to force an IPSI circuit pack to be out of service.

S8700 MC

If the IPSI is not duplicated:

- **`busyout`** causes a fallback to traditional control where the Expansion Interface is the ArchAngel
- PKT-INT functionality is moved to an IPSI in another port network

If the IPSIs are duplicated in the port network (the required argument is a cabinet/carrier):

- the active IPSI cannot be busied out
- the standby Tone-Clock is busied out

CAUTION:
Busying out an IPSI board takes down the port network.

Action/Object	Qualifier	Qualifier Description
`busyout ipserver-interface`	**`Uc`**	Cabinet and carrier you want to test.
		Example: **`busyout ipserver-interface 6b`**

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

change ipserver-interface

`change ipserver-interface n`

Use **`change ipserver-interface n`** to change the QoS parameters, the IPSI circuit pack, and socket encryption.

Action/Object	Qualifier	Qualifier Description
`change ipserver-interface`	***n***	port network
		Example: **`change ipserver-interface 2`**

The following screen shows an example of the change ip-server interface 1. Certain fields may not appear, depending on the system configuration.

```
change ipserver-interface 1                                   Page   1 of   3
          IP SERVER INTERFACE (IPSI) ADMINISTRATION - PORT NETWORK 1
  IP Control? y             Ignore Connectivity in Server Arbitration? n
  Encryption? n        Administer secondary ip server interface board? n

 Primary IPSI                                   QoS and Ethernet Settings
 ------------                                   -------------------------
        DHCP? n                                 Use System QoS Values? n
        Host: ipsi-A01a                                         802.1p: 6
    Location:  1A01                                           DiffServ: 46
 Subnet Mask: 255.255.255.0                                    Auto? n
  IP Address: 135.9  .69 .6                                      Speed: 100Mbps
     Gateway: 135.9  .69 .254                                   Duplex: Full

 Secondary IPSI                                 QoS and Ethernet Settings
 --------------                                 -------------------------
        DHCP? n                                 Use System QoS Values? n
        Host: ipsi-A01a                                         802.1p: 6
    Location:  1B01                                           DiffServ: 46
 Subnet Mask: 255.255.255.0                                    Auto? n
  IP Address: 135.9  .69 .7                                      Speed: 100Mbps
     Gateway: 135.9  .69 .254                                      Duplex: Full
```

change ipserver-interface field descriptions

change ipserver-interface field descriptions

Field	Description
IP Control	**y** = All port networks have an IPSI that provides control. • Display-only, if IP-PNC is **y** on the **`display system-parameters customer-options`** screen **n** = This IPSI is used only for Tone Clock / Tone Detector functions • Remaining fields on this screen do not appear when IP Control is **n** and IP-PNC is **n** on the **`display system-parameters customer-options`** screen • **n** when the port network contains a DS1 Converter (DS1C) circuit pack
Encryption	Enter **y** to turn on socket encryption for the server and IPSI link.
Primary IPSI	
DHCP?	DHCP client identifier **y** = The DHCP client identifier is populated. This is a display-only value. **n** = The DHCP client identifier is not populated.
Host	Name of the host machine
Location	Location of the IPSI board
Subnet Mask	If you have set the value of DHCP to **y**, the Subnet Mask value is read-only. (If applicable for users to see) If you have set the value for DHCP as **n** and attempt to change the Subnet Mask value, upon form validation, check if the ip server is busied out. If ip server is not busied out, the system does not accept the changes and displays the message—**`ipserver must be busied out.`**
IP Address	If you have set the value of DHCP to **y**, the IP Address value is read-only. If you have set the value for DHCP as **n** and attempt to change the IP Address value, upon form validation, check if the ip server is busied out. If ip server is not busied out, the system does not accept the changes and displays the message—**`ipserver must be busied out`**.
	1 of 5

Field	Description
Gateway	If you have set the value of DHCP to **y**, the Gateway value is read-only. If you have set the value for DHCP as **n** and attempt to change the Gateway value, upon form validation, check if the ip server is busied out. If ip server is not busied out, the system does not accept the changes and displays the message—**`ipserver must be busied out`**.
Secondary IPSI	Secondary IPSI fields (**S8700 MC** only)
DHCP?	DHCP client identifier **y** = The DHCP client identifier is populated. This is a display-only value. **n** = The DHCP client identifier is not populated.
Host	Name of the host machine
Location	Location of the IPSI board
Subnet Mask	If you have set the value of DHCP to **y**, the Subnet Mask value is read-only. (If applicable for users to see) If you have set the value for DHCP as **n** and attempt to change the Subnet Mask value, upon form validation, check if the ip server is busied out. If ip server is not busied out, the system does not accept the changes and displays the message—**`ipserver must be busied out`**.
IP Address	If you have set the value of DHCP to **y**, the IP Address value is read-only. If you have set the value for DHCP as **n** and attempt to change the IP Address value, upon form validation, check if the ip server is busied out. If ip server is not busied out, the system does not accept the changes and displays the message—**`ipserver must be busied out`**.
Gateway	If you have set the value of DHCP to **y**, the Gateway value is read-only. If you have set the value for DHCP as **n** and attempt to change the Gateway value, upon form validation, check if the ip server is busied out. If ip server is not busied out, the system does not accept the changes and displays the message—**`ipserver must be busied out`**.
QoS and Ethernet Settings	
	2 of 5

Field	Description
Use System QoS Values?	If set to **y**: The 802.1p and DiffServ fields appear. The values for these fields are read-only. If you attempt to change the values, the system displays the following message: **`value set in system-parameters ipserver-interface`**. If set to **n**: The 802.1p and DiffServ fields appear. The values for these fields are modifiable. 802.1p default value = 6; DiffServ default value = 46. Range for 802.1p is 0 – 7 (null value not allowed); range for DiffServ is 0 – 63 (null value not allowed).
802.1p	This value is downloaded to the IPSI. This value is the priority value and does not enable 802.1p. You must enable 802.1p from the IPSI CLI interface. The default value for 802.1p = 6 and the range is 0 – 7 (whole numbers).
DiffServ	This value is downloaded to the IPSI and applied to communication manager from the IPSI to CM and from CM to the IPSI.
Auto?	If set to **y**, the Speed and Duplex fields do not appear If set to **n**, the Speed and Duplex fields appear. The default values are: Speed = 100Mbps; Duplex = Full. If the ipserver is not busied out, the values are read-only. If you attempt to change the values, the system displays a message—**`ipserver must be busied out`**. If the ipserver is busied out, you can change the values.
Speed	If the ipserver is not busied out, this value is read-only. If you attempt to change this value, the system displays a message—**`ipserver must be busied out`**. If the ipserver is busied out, you can change the value. The default value is 100 Mbps. The range of the value is 10Mbps–100Mbps.
	3 of 5

Field	Description
Duplex	If the ipserver is not busied out, the value is read-only. If you attempt to change the value, the system displays a message—ipserver must be busied out. If the ipserver is busied out, you can change the value.
QoS and Ethernet Settings	
Use System QoS Values?	If set to **y**: The 802.1p and DiffServ fields appear. The values for these fields are read-only. If you attempt to change the values, the system displays the following message: **`value set in system-parameters ipserver-interface`**. If set to **n**: The 802.1p and DiffServ fields appear. The values for these fields are modifiable. 802.1p default value = 6; DiffServ default value = 46. Range for 802.1p is 0 – 7 (null value not allowed); range for DiffServ is 0 – 63 (null value not allowed).
802.1p	This value is downloaded to the IPSI. This value is the priority value and does not enable 802.1p. You must enable 802.1p from the IPSI CLI interface. The default value for 802.1p = 6 and the range is 0 – 7 (whole numbers).
DiffServ	This value is downloaded to the IPSI and applied to communication manager from the IPSI to CM and from CM to the IPSI.
Auto?	If set to **y**, the Speed and Duplex fields do not appear If set to **n**, the Speed and Duplex fields appear. The default values are: Speed = 100Mbps; Duplex = Full. If the ipserver is not busied out, the values are read-only. If you attempt to change the values, the system displays a message—**`ipserver must be busied out`**. If the ipserver is busied out, you can change the values.
	4 of 5

Field	Description
Speed	If the ipserver is not busied out, this value is read-only. If you attempt to change this value, the system displays a message—**`ipserver must be busied out`**. If the ipserver is busied out, you can change the value. The default value is 100 Mbps. The range of the value is 10Mbps–100Mbps.
Duplex	If the ipserver is not busied out, the value is read-only. If you attempt to change the value, the system displays a message—**`ipserver must be busied out`**. If the ipserver is busied out, you can change the value.
	5 of 5

display ipserver-interface

`display ipserver-interface` ***`n`*** **`[schedule]`**

Use **`display ipserver-interface`** to see administration data for a port-network to be IPSI controlled.

Action/Object	Qualifier	Qualifier Description	Login	Default
`display ipserver-interface`	***`n`***	Port network 1 - 64 Example: **`display ipserver-interface 2`**		

For an example of the ipserver-interface screen and the field descriptions, see change ipserver-interface

get forced-takeover ipserver-interface

`get forced-takeover ipserver-interface [ all | port-network n <1 - 64>]`

CAUTION:

Moving a port network from one server to another causes a level 2 reset of the Port Network. This resets every board in the port network and drops any established calls carried by the port network. Shuffled IP calls are not dropped, but during the reset they will not have access to any features such as Hold, Transfer, Conference, etc.

The **`get forced-takeover ipserver-interface`** command provides for manually taking control of IPSI port networks. The command is issued from the server intended to control the port network.

- If the Port Network targeted by **`get forced-takeover ipserver-interface`** is already controlled by the Main server or ESS where the command is issued, Test #1605 will immediately **PASS**.
- If the Port Network is not controlled by the Main server or ESS where **`get forced-takeover ipserver-interface`** is issued, the server shows the test result as **IN PROGRESS**.

Important:

On an ESS administered as Local Only, the **`get forced-takeover ipserver-interface`** command will only attempt to gain control of port networks with the same community number as the Local Only server.
See **`survivable-processor`** and **`system-parameters port-networks`** for Local Only and community assignments.
A test result of **IN PROGRESS** will be shown for Port Networks in other communities, but the **`get forced-takeover ip-server`** command will not attempt to gain control of these Port Networks.

Use **status ess port-networks** or **list ipserver-interface** to verify that the **get forced-takeover ipserver-interface** command was successful.

Action/Object	Qualifier	Qualifier Description	Login
get forced-takeover ipserver-interface	**all** **port-network *n***	Force a manual takeover of all IPSI PNs Force a manual takeover of the Port Network number Examples: **get forced-takeover ipserver-interface all** **get forced-takeover ipserver-interface port-network 9**	init inads craft cust su

The following example shows a typical result for **get forced-takeover ipserver-interface all.**

```
get forced-takeover ipserver-interface all

                                TEST RESULTS

Port        Maintenance Name  Alt. Name Test No. Result           Error Code

PN 01       IPSV-CTL                    1605     PASS
PN 02       IPSV-CTL                    1605     IN PROGRESS
PN 03       IPSV-CTL                    1605     IN PROGRESS
PN 04       IPSV-CTL                    1605     IN PROGRESS


Command successfully completed
```

Error Codes

The following table contains a description for the Error Codes which may be returned from Test 1605:

get forced-takeover ipserver-interface command Error Codes

Error Code	Description
1995	ESS cluster is disabled
1996	Port network does not exist
1997	Not an IPSI port network

list ipserver-interface

`list ipserver-interface [schedule]`

Use **`list ipserver-interface`** to list all administered IPSIs in the system.

Action/Object	Qualifier	Qualifier Description	Login
`list ipserver-interface`	**`schedule`**	See Common Input Parameters on page 25.	init super-user inads craft dadmin switch circuit pack maintenance permissions

This is an example of **`list ipserver-interface`** on **S8700 IP-PNC**.

```
list ipserver-interface

                        IP SERVER INTERFACE INFORMATION

Port Pri/   Primary/         Primary/         Primary/                State Of
Ntwk Sec    Secondary        Secondary        Secondary Serv  Control Health
Num  Bd Loc IP Address       Host Name        DHCP ID   State State   C P E G
---- ------ --------------- ---------------- --------- ----- ------- -------
  1   1A01  198.152.254.1    ipsi-A01a        ipsi-A01a  IN   actv-aa 0.0.0.0
      1B01  198.152.255.1    ipsi-A01b        ipsi-A01b  IN   standby 0.0.0.0
  2   2A01  198.152.254.2    ipsi-A02a        ipsi-A02a  IN   actv-aa 0.0.0.0
      2B01  198.152.255.2    ipsi-A02b        ipsi-A02b  IN   standby 0.0.0.0
```

This is an example of **`list ipserver-interface`** on **S8700 MC**.

```
list ipserver-interface                                                Page   1

                        IP SERVER INTERFACE INFORMATION

Port Pri/   Primary/         Primary/         Primary/                State
Ntwk Sec    Secondary        Secondary        Secondary Serv  Control Of
Num  Bd Loc IP Address       Host Name        DHCP ID   State State   Health
---- ------ ---------------  ---------------- --------- ----- ------- ------
  1   1AXX  198.152.254.  1  ipsi-A01a        ipsi-A01a  BSY  active  0.1.1
      1B01  198.152.255.  1  ipsi-A01b        ipsi-A01b  BSY  standby 0.1.1
  2   2AXX  198.152.254.  2  ipsi-A02a        ipsi-A02a  IN   actv-aa 0.0.0
      2B01  198.152.255.  2  ipsi-A02b        ipsi-A02b  IN   standby 0.0.0
  3   3AXX  198.152.254.  3  ipsi-A03a        ipsi-A03a  IN   actv-aa 0.0.0
      3B01  198.152.255.  3  ipsi-A03b        ipsi-A03b  IN   standby 0.0.0
  5   5AXX  198.152.254.  5  ipsi-A05a        ipsi-A05a  IN   actv-aa 0.0.0
      5B01  198.152.255.  5  ipsi-A05b        ipsi-A05b  IN   standby 0.0.0
  6   6AXX  198.152.254.  6  ipsi-A06a        ipsi-A06a  IN   actv-aa 0.0.0
      6B01  198.152.255.  6  ipsi-A06b        ipsi-A06b  IN   standby 0.0.0
  7   7AXX  198.152.254.  7  ipsi-A07a        ipsi-A07a  IN   actv-aa 0.0.0
      7B01  198.152.255.  7  ipsi-A07b        ipsi-A07b  IN   standby 0.0.0
```

list ipserver-interface field descriptions

list ipserver-interface field descriptions

Field	Description
Serv State	Shows the current service state: busy out, in service, out of service
Control State	**active** or **standby**
Primary/ Secondary IP Address	**n/a** if the IPSI is not in control. All other fields are blank.
State of Health C P E G	Shows the state of health of the clock (C), packet interface (P), the expansion archangel link (E), and the Tone Generator (G) **0**=healthy, **1**=unhealthy

list measurements ipserver-interface

`list measurements ipserver-interface`

Use **list measurements ipserver-interface** to add monitoring to the IP Server Interface (IPSI)–Packet Control Driver (PCD) socket to identify and troubleshoot network-related problems.

You can assess the health of the IPSI socket and its underlying network connection by using the **list measurements ipserver-interface** command and the corresponding SAT display. The round-trip delay information between the PCD and the IPSI is an indicator of the network health and includes the average, maximum, and threshold-exceeded values. The IPSI socket sanity timeout values are also included to show occurrences of the IPSI socket bounce. The throughput from the PCD and IPSI and from the IPSI and PCD are listed under the downlink and uplink traffic rates respectively. The IP Server Interface report shows activity on network ports for a specified hour or on a summary basis for today or yesterday, peak or worst periods.

The commands to display the IP server information are:

list measurements ipserver-interface [hourly | summary]

list measurements ipserver-interface hourly [[1-64] or 'schedule']

list measurements ipserver-interface summary ['yesterday-worst'|'today-worst'|'yesterday-peak'|'today-peak'|'last-hour']

where,

Action/Object	Qualifier	Qualifies Description
list measurements ipserver-interface hourly	IPSI Port Network Number [1-64] schedule	24-hour history for a given port network's IPSIs
list measurements ipserver-interface summary	yesterday-worst	worst network hours (most outages) for each Port Network for yesterday
	today-worst	worst network hours (most outages) for each Port Network for today
	yesterday-peak	highest traffic hours for each Port Network for yesterday
	today-peak	highest traffic hours for each Port Network for the current day
	last-hour	summary of activity for each Port Network for the last hour

list measurements ipserver-interface SAT screen displays

The **list measurements ipserver-interface** command has different options and displays several SAT screens. The following are examples of a few SAT screens displayed:

list measurements ipserver-interface hourly 1

```
Switch Name:                                  Date: 5:57 pm  FRI JAN 23, 2009
               IP SERVER-INTERFACE HOURLY REPORT - IPSI
               Network Delay       Network Indicators          Throughput
      Meas    (RTT-msec)  CNT     HB    Ntwk  Outg  Snty      (kbytes/sec)
      Hour    Avg   Max   >300    Msd   Outg  >3s    TO       Down     Up
```

list measurements ipserver-interface summary last-hour

```
Switch Name:                                  Date: 6:33 pm  FRI JAN 23, 2009
               IP SERVER-INTERFACE SUMMARY LAST HOUR REPORT
Port  Prim/    Network Delay       Network Indicators          Throughput
Ntwk  Secdry  (RTT-msec)  CNT     HB    Ntwk  Outg  Snty      (kbytes/sec)
Num   Bd Loc  Avg   Max   >300    Msd   Outg  >3s    TO       Down   Up
```

list measurements ipserver-interface summary today-peak

```
Switch Name:                                  Date: 7:57 pm  FRI JAN 23, 2009
               IP SERVER-INTERFACE SUMMARY TODAY-PEAK REPORT
         Port  Prim/    Network Delay     Network Indicators      Throughput
  Meas   Ntwk  Secdry  (RTT-msec)  CNT   HB    Ntwk  Outg  Snty  (kbytes/sec)
  Hour   Num   Bd Loc  Avg   Max   >300  Msd   Outg  >3s    TO   Down   Up
```

list measurements ipserver-interface summary today-worst

```
Switch Name:                                  Date: 8:04 pm  FRI JAN 23, 2009
               IP SERVER-INTERFACE SUMMARY TODAY-WORST REPORT
         Port  Prim/    Network Delay     Network Indicators      Throughput
  Meas   Ntwk  Secdry  (RTT-msec)  CNT   HB    Ntwk  Outg  Snty  (kbytes/sec)
  Hour   Num   Bd Loc  Avg   Max   >300  Msd   Outg  >3s    TO   Down   Up
```

list measurements ipserver-interface field descriptions

Field	Range/ Default	Description
Network Delay RTT Avg.	0–9999	Network Delay Round-Trip Time (RTT) in milliseconds. It is the measure of the sample time for packets to go back and forth and averaged per hour between the PCD and IPSI.
Network Delay RTT Max	0–9999	Network Delay Round-Trip Time (RTT) in milliseconds. It is the measure of the hourly maximum sample time for packets to go back and forth between the PCD and IPSI.
Network Delay CNT > 300	0–9999	Network Delay Count of how many times within an hour the sample delay was greater than 300 milliseconds.
Network Indicator HB MSD	0–3600	Network Indicator HeartBeats Missed measures how many once per second “heartbeats” between the IPSI and PCD were missed.
Network Indicator Ntwk Outg	0–1800	Network Indicator Network Outage measures the number of times there was at least a one second outage.
Network Indicator Outg > 3s	0–1200	Network Indicator Network Outage > 3 seconds (subset of number above) measures the number of times there was an outage of greater than 3 seconds duration.
Network Indicator SNTY TO	0–999	Network Indicator Sanity Timeout (subset of number above) measures the number of times there was an outage greater than the value administered for the “IPSI Socket Sanity Timeout” (4–15 seconds). If a value is not administered, this number is the same as the preceding column.
Throughput Down	0–999.9	Throughput for the downlink. This measures the “application” level traffic from CM to IPSI in kilobytes per second (KBps). Not included are the IP and TCP headers or retransmission traffic. Data is shown to the nearest tenth of a decimal place, rounded up if there is any traffic. If there is no traffic, a 0 is displayed.
Throughput Up	0–999.9	Throughput for the uplink. This measures the “application” level traffic from IPSI to CM in kilobytes per second (KBps). Not included are the IP and TCP headers, or retransmission traffic. Data is shown to the nearest tenth of a decimal place, rounded up if there is any traffic. If there is no traffic, a 0 is displayed.

release ipserver-interface

`release ipserver-interface Uc`

Use **`release ipserver-interface`** to return an IPSI circuit pack to service after it has been busied out. See busyout ipserver-interface on page 334.

For more information see Busyout and Release Commands on page 33.

CAUTION:

Busying out an IPSI circuit pack takes down the port network.

Action/Object	Qualifier	Qualifier Description
`release ipserver-interface`	***U*** ***c***	Specify the cabinet number (1-44) with the IPSI board you want to test. Specify the carrier you want to test

remove ipserver-interface

`remove ipserver-interface n`

Use **`remove ipserver-interface`** to remove a port network from IPSI control.

Note:

You may need to busy out the IPSI before you can remove it.

Action/Object	Qualifier	Qualifier Description	Login	Default
`remove ipserver-interface`	***n***	Port network 1 - 64		

This is an example of **`list ipserver-interface`** on **S8700 MC**.

```
remove ipserver-interface 5                                     Page   1 of   1
          IP SERVER INTERFACE (IPSI) ADMINISTRATION - PORT NETWORK 5
                                                                 Enable QoS? y

 Primary IPSI                                          QoS Parameters
 ------------                                          --------------
  Location:  5AXX                                        Call Control 802.1p: 6
      Host: ipsi-A05a                                  Call Control DiffServ: 46
   DHCP ID: ipsi-A05a

 Secondary IPSI
 --------------
  Location:  5B01
      Host: ipsi-A05b
   DHCP ID: ipsi-A05b
```

This is an example of **`list ipserver-interface`** on an **S8700 IP-PNC**.

```
remove ipserver-interface 3                                     Page   1 of   1
          IP SERVER INTERFACE (IPSI) ADMINISTRATION - PORT NETWORK 3

                                                            Socket Encryption? y

                                                                 Enable QoS? y

 Primary IPSI                                          QoS Parameters
 ------------                                          --------------
  Location:  3A02                                        Call Control 802.1p: 6
      Host: 130.120.50.140                             Call Control DiffServ: 46
   DHCP ID: ipsi-A03a
```

remove ipserver-interface field descriptions

remove ipserver-interface field descriptions *1 of 2*

Field	Description
Socket Encryption	**y**/**n** Indicates whether socket encryption is turned on or off for the S87xx server and IPSI link.
Enable QoS	**y**/**n** Indicates whether quality of service (QoS) is turned on or off.
Primary IPSI	
Location	Location of the IPSI board
	1 of 2

remove ipserver-interface field descriptions *2 of 2*

Field	Description
Host	Name of the host machine
DHCP ID	DHCP client identifier
Secondary IPSI: These fields appear on **S8700 MC**	
Location	Location of the IPSI board
Host	Name of the host machine
DHCP ID	DHCP client identifier
QoS Parameters	
Call Control 802.1p	Call priority setting (1-7)
Call Control DiffServ	DiffServ code point (DSCP)
	2 of 2

reset ipserver-interface

`reset ipserver-interface` *`UUc`*

Use **`reset ipserver-interface`** to reset an IPSI in the named cabinet/carrier. This is equivalent to **`reset board`** ***`location`***.

Note:

Use **`busy ipserver-interface`** to take the IPSI out of service before a reset is allowed.

Action/Object	Qualifier	Qualifier Description
`reset ipserver-interface`	***`UU`*** ***`c`***	Specify the cabinet with the board you want to test. Specify the carrier you want to test. Example: **`reset ipserver-interface 2a`**

set ipserver-interface

`set ipserver-interface` *`Uc`* `| a-all | b-all`

Use **`set ipserver-interface`** ***`Uc`*** to set a specified IPSI to be active for a given cabinet carrier.

Use **`set ipserver-interface a-all`** or ***`b-all`*** to set all the a- or b-side IPSIs in the control network to be active. This is useful in preparation of hub/subnet maintenance.

Use **`list ipserver-interface`** to see the IPSI Control State and verify that the interchange occurred. See IPSV-CTL (IP Server Interface Control) on page 526 in *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430)* for additional information on any error codes that occur.

Action/Object	Qualifier	Qualifier Description
`set ipserver-interface`	***`Uc`*** ***`a-all`*** **`b-all`**	Specify the cabinet and carrier with the IPSI board you want to make active. Sets all “a” side IPSIs active. Sets all “b” side IPSIs active.
		Examples: **`set ipserver-interface 1b`** **`set ipserver-interface a-all`** **`set ipserver-interface b-all`**

test ipserver-interface

`test ipserver-interface` ***`Uc`***

Use **`test ipserver-interface`** to perform a board test for an IPSI in the named cabinet/carrier. It tests all clock and PKT-INT components.

Action/Object	Qualifier	Qualifier Description
`test ipserver-interface`	***`Uc`***	Cabinet and carrier you want to test. Examples: **`test ipserver-interface 3A`** **`test ipserver-interface 12A repeat 2`**

The following screen shows a typical result for test ipserver-interface.

```
test ipserver-interface 3a
                                TEST RESULTS

Port        Maintenance Name  Alt. Name Test No. Result            Error Code

03A         TONE-BD                      46       PASS
03A         TONE-BD                      52       PASS
03A0201     ETR-PT                       42       PASS
03A0201     ETR-PT                       43       PASS
03A0202     ETR-PT                       42       PASS
03A0202     ETR-PT                       43       PASS
03A0203     ETR-PT                       42       PASS
03A0203     ETR-PT                       43       PASS
03A0204     ETR-PT                       42       PASS
03A0204     ETR-PT                       43       PASS
03A0205     ETR-PT                       42       PASS
03A0205     ETR-PT                       43       PASS
03A0206     ETR-PT                       42       PASS
03A0206     ETR-PT                       43       PASS
```

isdnpri-testcall

See:
clear isdnpri-testcall on page 352
list isdnpri-testcall on page 353
status isdnpri-testcall on page 353
test isdnpri-testcall on page 355

clear isdnpri-testcall

Use **`clear isdnpri-testcall`** to cancel in-progress ISDN-PRI test calls. Once a running test call is cleared, another can begin.

Action/Object	Qualifier	Qualifier Description	Login
`clear isdnpri-testcall`	***`group number`*** ***`member number`***	Trunk group number. Member within the trunk group.	init inads craft
		Examples: **`clear isdnpri-testcall 80/1`** **`clear isdnpri-testcall 78/2`**	

list isdnpri-testcall

`list isdnpri-testcall [schedule]`

Use **`list isdnpri-testcall`** to display the ISDN-PRI trunks currently in use for outgoing ISDN test calls.

Action/Object	Qualifier	Qualifier Description	Login	Default
`list isdnpri-testcall`	**`schedule`**	See Common Input Parameters on page 25.		

The following display shows a typical result for **`list isdnpri-testcall`**.

```
list isdnpri-testcall
                              ISDN-PRI TESTCALLS

     B-Channel     Start Time      Duration     M/T Port

     078/001       25/14:36        120          1B1102
```

Field Descriptions for list isdnpri-testcall

list isdnpri-testcall field descriptions

Field	Description
B-Channel	The trunk-group number and member number of the trunk in use.
Start Time	Day of the month, hour and minute when the test call began.
Duration	Expected duration, in minutes, of the test call.
M/T Port	Cabinet, carrier, slot and circuit number of the port on the Maintenance/Test circuit pack in use for the outgoing test call.

status isdnpri-testcall

`status isdnpri-testcall` ***`group# / member#`***

Use **`status isdnpri-testcall`** to display the progress of an outgoing ISDN-PRI test call on the specified trunk. The tested ISDN-PRI B-channel's port number, bit error rate, number of

bits transmitted, block error rate, number of blocks transmitted, start time, duration specified, duration of test call, and reason of termination are displayed on the status screen.

Action/Object	Qualifier	Qualifier Description	Login	Feature Interaction
status isdnpri-testcall	group number ***group member number***	Administered trunk group number Administered group number (trunk within a trunk group)	init inads craft	see below
		Example: **status isdnpri-testcall 78/1**		

status isdnpri-testcall feature interactions

If the bit error rate or block error rate is greater than zero, the ISDN-PRI trunk “may” be in a troubled state. Based on the statistical information displayed on the terminal, it can be decided to take the ISDN trunk out of service. This is subjective data because the ISDN trunk may be used for data or voice. If the trunk is used for data and the rates are high, the trunk should be taken out of service. If the trunk is used for voice, the trunk may not have to be taken out of service. High rates may also be due to some type of power hit on the line.

The following example shows the output from **status isdnpri-testcall 80/1**.

```
status isdnpri-testcall 80/1                                  Page 1 of   1

                            ISDN TESTCALL STATUS

          Bit   Number Block Number                   Duration Reason
          Error Of     Error Of     Start    Duration  Of     Of
 Port     Rate  Bits   Rate  Blocks Time     Specified Test   Termination

 1B1401   0EE0  4EE7   0EE0  6EE2   25/12:36 120       100    in progress
```

status isdn testcall field descriptions

status isdn testcall field descriptions ***1 of 2***

Field	Description
Port	This field specifies the physical address of the ISDN-PRI B-channel.
Bit Error Rate	The measured bit error count according to the comparison of the sent and received bit pattern. The number appears in scientific notation.
Number of Bits	The number of bits generated. The number appears in scientific notation.
	1 of 2

status isdn testcall field descriptions ***2 of 2***

Field	Description
Block error Rate	The measured block error count according to the comparison of the sent and received bit pattern. The number appears in scientific notation.
Number of Blocks	The number of blocks generated. The number appears in scientific notation.
Start Time	The time the test call started (dd/hh:mm).
Duration Specified	The duration specified in minutes for how long the test call should run. Valid durations are 1-120 (minutes) or blank (to indicate the default amount of minutes was used to run the test).
Duration of Test	The duration specified in minutes for how long the test call has been running. A blank indicates that the default amount of time was used to run the test.
Reason of Termination	The reason of termination indicates why the test call has terminated. Valid reasons of termination are “finished,” “canceled,” “overflow,” “no bits,” “transmission,” “internal fail,” “data corrupt,” and “in progress.” A termination reason of “finished” means the test finished in the specified time. A termination reason of “canceled” means the test call has been canceled with **`clear isdnpri-testcall`**. A reason of “overflow” denotes that the bits transmitted have overflowed buffer allocation. A reason of “no bits” means that no bits have been received because the ISDN-PRI test call circuit connection is bad. A reason of “transmission” means there has been a data transmission interruption, probably caused from a power hit. A termination reason of “internal fail” specifies that there is an internal error on the Maintenance/Test circuit pack. A reason of “in progress” means the test is still running and a reason of “data corrupt” is used for any other error condition.
	2 of 2

test isdnpri-testcall

`test isdnpri-testcall group#/member# [minutes` *`num-minutes`*`] [schedule]`

Use **`test isdnpri-testcall`** to start an outgoing ISDN-PRI test call.

Only one ISDN trunk in each port network can be tested at one time. The maximum number of asynchronous outgoing test calls that can be run simultaneously depends on the number of Maintenance/Test circuit packs in the system.

For more information, see Test #258 under the ISDN-TRK (DS1 ISDN Trunk) section in the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*.

Action/Object	Qualifier	Qualifier Description	Login	Default
`test isdnpri-testcall`	***`group# member#`*** **`minutes`** ***`num-minutes`*** **`schedule`**	Specify the trunk over which to originate the test call. Specify the duration of the test call in minutes from 1 to 120. The duration defaults to 8.4 or 9.6 seconds. See Common Input Parameters on page 25.		
		Example: **`test isdnpri-testcall 78/2 minutes 10`**		

The output screen for **`test isdnpri-testcall`** shows:

Result	PASS – The test call was successfully initiated. ABORT – Resources were not available (for example, a B-channel or Maintenance/Test circuit pack). FAIL – An outgoing test call could not be initiated.

journal-link

status journal-link

status journal-link wakeup-log | pms-log

Use **status journal-link** to see the operational status of a wakeup-log or a pms-log printer link. If the link is down, the number of times the switch has tried to re-establish the link will be shown.

A journal printer is used to document automatic wake-up events, emergency access to attendant events and, if the Property Management System is not functional, housekeeping events. When the system includes two printers, one is for the housekeeping events and the other is used for automatic wake-up events and emergency access events.

See status link on page 362 for more details on links.

Action/ Object	Qualifier	Qualifier Description	Login
status journal -link	**wakeup-log** **pms-log**	Status the printer that handles automatic wakeup events, emergency access events and scheduled reports Status the printer that handles housekeeping events while the PMS is down Examples: **status journal-link wakeup-log** **status journal-link pms-log**	

The following display shows a typical result for **status journal-link wakeup-log**.

```
status journal-link wakeup-log

                              JOURNAL LINK STATUS

         Link State:  down
  Number of retries:  1
   Maintenance Busy? no
```

status journal-link field descriptions

status journal-link field descriptions

Field	Description
Link State	The operational status of the link: **up** — normal operational state, the link is established and is capable of supporting the application. **down** — The link is physically down. **extension not administered** — An extension number for the printer has not been assigned on the hospitality system parameters.
Maintenance Busy	Whether there is any maintenance testing being performed upon the link.

journal-printer

See:
busyout journal-printer on page 358
release journal-printer on page 359
test journal-printer on page 360

busyout journal-printer

`busyout journal-printer pms-log | wakeup-log`

Use **`busyout journal-printer`** to put the link to the Property Management System log or wakeup log printers in a maintenance busy state. When busied out, the link is dropped and no data transfer can take place over it.

Use **busyout journal-printer** to prevent unwanted interference between different maintenance processes. Maintenance software may put a component that is part of a link in a busy state, causing link set-up to fail, and resulting in attempts by the system to reestablish the link. If a maintenance test requires that the component be idle, frequent attempts at re-setup may delay the recovery of a faulty component. Busyout the link to prevent re-setup attempts.

Action/Object	Qualifier	Qualifier Description
busyout journal-printer	**pms-log** **wakeup-log**	Busies out the link to the Property Management System printer Busies out the link to the Wakeup Log printer
		Examples: **busyout journal-printer pms-log** **busyout journal-printer wakeup-log**

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

release journal-printer

release journal-printer wakeup-log | pms-log

Use **release journal-printer** to return to service a busied out link to the Property Management System (PMS) log or wakeup log printers. See Busyout and Release Commands on page 33.

Action/ Object	Qualifier	Qualifier Description	Login	Default	Feature Interaction
release journal-printer	**wakeup-log** **pms-log**	The printer that handles automatic wakeup events, emergency access events and scheduled reports. The printer that handles housekeeping events while the PMS is down.	init inads craft nms		See note below.

For general information on journal printer links, see busyout pms-link on page 492. For information on journal printers, see status journal-link on page 357.

Note:

Specific component maintenance performed on a link sometimes conflicts with link maintenance, because busied-out objects create link setup failure. Frequent link re-setup attempts may delay component recovery. For best results, **busyout** the link to disable attempted link re-setup.

test journal-printer

`test journal-printer pms-log | wakeup-log [short | long] [`*`repeat-number`*`| clear] [schedule]`

Use **`test journal-printer`** to perform hardware diagnostics on the link between the switch and a specified journal printer link to either the pms-log printer or the wakeup-log printer.

Action/Object	Qualifier	Qualifier Description
`test journal-printer`	**`pms-log`** **`wakeup-log`** **`short`** **`long`** ***`repeat-number`*** **`clear`** **`schedule`**	Test the link to the Property Management System printer, whose maintenance name is PMS-PRNT Test the wakeup-log printer, whose maintenance name is JNL-PRNT See Common Input Parameters on page 25.

The output screen for **`test journal-printer`** includes:

Maintenance Name	PMS-PRNT designates the PMS-log printer. JNL-PRNT designates the wakeup-log printer.

Background maintenance activity on a link can interfere with testing and recovery of a particular component of the link. For example, as part of a test, maintenance software may busyout a component of the link, causing the link to drop. The system may then perform frequent attempts to re-establish the link. This can delay recovery of the component, since it must be idle for certain tests to take place. Busying out the link will prevent the system from these attempts to set up the link. Remember that a **`busyout`** will tear down a link if it is not already down.

led

test led

`test led [ all | cabinet UU | port-network `*`PN#`*` | switch-node `*`SN#`*` | media gateway # | a-pnc | b-pnc] [repeat `*`repeat#`*`]`

Use **`test led`** to verify that a specified cabinet, port network, PNC or switch node is recognized by the system. Also use **`test led`** to identify a port network, cabinet, or PNC (A or B).

When **test led** is entered, the red, green and yellow circuit pack LEDs are turned on until all administered carriers in the specified group have been lit for 2 seconds. They are turned off in the same order in which they came on. The cycle can be repeated a number of times with the **repeat** option. Once every repeat cycle is completed, every affected LED is restored to reflect its current status.

license

test license

test license [short | long]

Use **test license** to run a license file check on the server so you do not have to wait for the next hourly update to see if certain license errors have been cleared.

Action/Object	Qualifier	Qualifier Description	Login
test license	**short** **long**	On an S87xx server, **short** and **long** run the same test function, even though the test numbers show up differently in the results. See Common Input Parameters on page 25.	init inads craft dadmin Customer superuser login if the Processor and System MSP feature is enabled (**display system-parameters customer-options**), and the customer superuser login is administered on the Permissions screen

For more information, see Common Command Output Screens on page 28.

If the test results are:

- PASS, the system is in License-Normal mode.
- FAIL, the system is in License-Error or No-License mode, depending on the **Error** value.

link

See:
busyout link on page 362
clear link on page 362
status link on page 362
test link on page 367

busyout link

busyout link#

Use **busyout link** to put a specified packet gateway link in a maintenance busy state. For more information, see Busyout and Release Commands on page 33.

CAUTION:

Busyout of a link drops all calls and packet traffic dependent on that link. The application, adjunct, or switch connected to the link will be inaccessible and the link will have to be re-established later when returned to service. See status link on page 362 for more details on links.

Action/ Object	Qualifier	Qualifier Description	Login	Default
busyout link	***link#***	A number assigned to the link on the Communication Interface Links screen. Processor Interface circuit pack 1a1 or 1a1 = 1 - 4 Processor Interface circuit pack 1a2 or 1b2 = 5 - 8		

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

clear link

clear link *n*

Use **clear link** to clear the counters associated with a numbered PPP C-LAN link. The statistical counters cannot be cleared for a C-LAN's Ethernet link.

See status link on page 362 for more details on links.

Use **clear clan-port** to clear the counters associated with a numbered PPP C-LAN link.

status link

status link *n* (with C-LAN circuit pack–Ethernet connection)

Use **status link** to see:

- static information about the link
- the data extension and port used, connect speed, and protocol information
- a counter of CHAP failures for PPP links

- time information for PPP and Ethernet links, including the time of the last reset
- the type and number of active applications

The same information that is displayed by **status link** can also be invoked with **status clan-port** or **netstat link** for C-LAN links.

Action/Object	Qualifier	Qualifier Description	Login	Default
status link	***n***	The number of the administered link Example: **status link *1***	init inads craft	

The following example shows page 1 of the output for **status link**.

status link screen, page 1, Link/Port Status

```
status link 1                                                    Page   1 of   4
                              LINK/PORT STATUS

                Link Number: 1
                Link Status: connected
                  Link Type: ethernet
                  Link Name: gert_clan1
      Service Port Location: 01A0317
Service Port Data Extension: 70050
              Service State: in-service/active
                  Node Name: gert_clan1
          Source IP Address: 172.22.22.177
                Subnet Mask: 255.255.0.0
          Broadcast Address: 172.22.255.255
           Physical Address: 00:04:0d:05:37:1d
                    Enabled? yes
           Maintenance Busy? no
            Active Channels: 2
```

status link field descriptions, page 1

status link field descriptions, page 1 ***1 of 2***

Field	Description
Link Number	Administered link number (assigned by **add/change data-module**)
Link Status	no, yes, unavail, connected, disconnected, enabled, out-of-service, or restarting
	1 of 2

status link field descriptions, page 1 ***2 of 2***

Field	Description
Link Type	The type of interface according to the physical/link protocol(s) immediately “below” the network layer in the protocol stack (Ethernet or PPP)
Link Name	Administered link name (assigned by **`add/change data-module`**)
Service Port Location	Administered port location (assigned by **`add/change data-module`**)
Service Port Data Extension	Administered extension number (assigned by **`add/change data-module`**)
Service State	in-service/idle, in-service/active, disconnected, out-of-service, maintenance busy, in-service, inactive, active, idle
Node Name	Administered node name for TCP/IP endpoint (assigned by **`add/change data-module`**)
Source IP Address	IP address administered for node name (assigned with **`change node-name`** or **`add/change data-module`**)
Enabled	**y/n**
Maintenance Busy	**y/n**
Active Channels	Number of active channels
	2 of 2

status link screen, Page 2

```
status link 1                                                  Page   2 of   4
                            ERROR COUNTERS

  Reset Time: 03/08 17:38

  Incoming Received:       Unicast Pkts   Multicast Pkts   Octets
    Since Reset            5649003        1401469          689650382

  Incoming Dropped:        Error Pkts     Discard Pkts
    Since Reset            0              83

  Outgoing Transmitted:    Unicast Pkts   Multicast Pkts   Octets
    Since Reset            4181883        773              492543628

  Outgoing Dropped:        Error Pkts     Discard Pkts
    Since Reset            0              0

  CRC Check: 0           Collision Count: 0
```

status link field descriptions, page 2

status link field descriptions, page 2 ***1 of 2***

Field	Description
Incoming received Unicast packets	The number of subnetwork-unicast packets delivered to a higher-layer protocol.
Incoming received multicast packets	The number of non-unicast (subnetwork-broadcast or subnetwork-multicast) packets delivered to a higher-layer protocol.
Incoming dropped octets	The total number of octets received on the interface, including framing characters.
Incoming errored packets	The number of inbound packets that contained errors preventing them from being deliverable to a higher-layer protocol.
Incoming packets discarded	The number of inbound packets which were chosen to be discarded even though no errors had been detected to prevent their being deliverable to a higher-layer protocol. One possible reason for discarding such a packet could be to free up buffer space.
Outgoing Transmitted unicast packets	The total number of packets that higher-level protocols requested be transmitted to a subnetwork-unicast address, including those that were discarded or not sent.
	1 of 2

status link field descriptions, page 2 ***2 of 2***

Field	Description
Outgoing multicast packets	The total number of packets that higher-level protocols requested be transmitted to a non- unicast (subnetwork-broadcast or subnetwork-multicast) address, including those that were discarded or not sent.
Outgoing transmitted octets	The total number of octets transmitted out of the interface, including framing characters.
Outgoing errored packets	The number of outbound packets that could not be transmitted because of errors.
Outgoing packets discarded	The number of outbound packets which were chosen to be discarded even though no errors had been detected to prevent their being transmitted. One possible reason for discarding such a packet could be to free up buffer space.
	2 of 2

status link screen, page 3

The example below is for processor channels (page 3 of the screen). Information about administered hop channels displays on page 4 of the screen.

The processor or hop channel status information can take either 1 or 2 pages on this screen, depending on the number of links being reported and their condition.

```
 status link 1                                                  Page   3 of   4
                         PROCESSOR CHANNEL STATUS

UP: 001,004
```

status link field descriptions, page 3

Note:

A dash (–) or a colon (:) between numbers indicates all numbers including and between the indicated numbers.

status link field descriptions, page 3

Field	Description
UP	Channels are up.
DN	Channels are down.
PND	Channels are in a pending state from the down to the up state (processor channels only)

status link, page 4

The following is an example of the output of page 4 of **`status link`**. The screen displays every TCP/IP socket link that is currently up and active and that is using the Ethernet link **n** via the C-LAN board or the Processor Ethernet interface. Note that the service type of DOLAN reflects the total of IP endpoints and H323 signaling groups on that C-LAN.

```
status link 1                                                  Page   4 of   4
                   TCP/IP Applications Currently Active

Service Type        Sessions

ALARM1              0
ALARM2              0
CDR1                0
CDR2                0
DOLAN               66
PMS                 0
PMS_JRNL            0
PMS_LOG             0
SAT                 0
SAT_LSTN            0
SYS_PRNT            0
```

test link

`test link link# [short | long] [repeat repeat# | clear] [schedule]`

Use **test link** to verify that the specified link is administered and performs a series of tests on the link. See status link on page 362 for more details on links.

Action/Object	Qualifier	Qualifier Description
test link	**link#** **short** **long** **repeat** **repeat#** **clear** **schedule**	Each link is identified by a number (1-16) assigned on the **communication-interface links** screen. **display communication-interface links** shows the location and identification of each link. See Common Input Parameters on page 25.

logging-levels

See:
change logging-levels on page 368
display logging-levels on page 370

change logging-levels

change logging-levels

Use **change logging-levels** to control how much information is logged for SAT activity.

Action/Object	Qualifier	Qualifier Description	Login
change logging-levels	**xyz**		

The following is an example of the results of **`change logging-levels`** page 1.

```
change logging-levels                                      Page   1 of   2
                                 LOGGING LEVELS
Enable Command Logging? y
        Log Data Values: both

 When enabled, log commands associated with the following actions:

             add? y            export? y                  refresh? y
         busyout? y               get? n                  release? y
  campon-busyout? y                go? y                   remove? y
          cancel? n            import? y                   reset? y
          change? y              list? n                    save? y
           clear? y              mark? n                     set? y
         disable? y           monitor? y                   status? n
         display? n           netstat? n                     test? y
       duplicate? y            notify? n                traceroute? n
          enable? y              ping? n                   upload? n
           erase? y           recycle? y
```

The following is an example of the results of **`change logging-levels`** page 2.

```
change logging-levels                                      Page 2 of   2

                                 LOGGING LEVELS
    Log all Submission Failures:
        Log PMS/AD Transactions:
Log IP REgistrations and events:
   Log CTA/PSA/TTI Transactions:
```

change logging-levels screen field descriptions

change logging-levels field descriptions

Field	Description
Enable Command Logging	**y**/**n** Enter **y** to enable SAT activity logging. Enter **n** to disable SAT activity logging.
Log Data Values	This value applies to EVERY field on a form. **both** = causes both the value prior to a change and the value after a change to be logged. **new** = causes only the value following a change to be logged. The value prior to the change is not logged. **none** =Neither the value prior to the change nor the value after the change is logged. However the form access is logged.
When enabled, log commands associated with the following actions	**y**/**n** Enter **y** to log these commands and transactions to the Command History log. The Command History log is stored via syslog and is available from the server web pages only.

display logging-levels

`display logging-levels`

Use **`display logging-levels`** to see what SAT activities are being logged to the Command History log.

See change logging-levels on page 368 for screen and field descriptions.

login-id

reset login-id

`reset login-ID` ***`n`***

Use **reset login-ID** to terminate a SAT session on a TCP/IP link, or other traditional connection. Use **status logins** to see the ID number of all active SAT sessions.

Action/Object	Qualifier	Qualifier Description	Login	Default
reset login-id	***n***	The number (0-999) of the SAT session Example: **reset login-id 9**	init	

logins

status logins

status logins

Screen name: COMMUNICATION MANAGER LOGIN INFORMATION

Use **status logins** to see information about all of the users that are currently using the Communication Manager SAT.

The screen does not automatically update, and is a reflection of the system at the time the request was made. Users may have logged off, or on, or the command may have finished executing while the information is being displayed. This screen shows only those users who have a SAT session active. It does not show users that may be accessing the server but have no SAT session active.

The following is an example of the results of **status logins**.

```
 status logins
                          COMMUNICATION MANAGER LOGIN INFORMATION
                                                                                Session
  Login     Profile  User's Address    Active Command                            ID

init          0      135.  9.  1.  4   status logins                               1
```

status logins screen field descriptions

display profile-base field descriptions

Field	Description
Login	Login name.
Profile	The user profile number assigned to the login.
User's Address	User's IP address (correct regardless of whether the user is connected through a CLAN or a processor interface)
Active Command	Current or last command issued by the login. This field may not be accurate, and updates are not reflected until the next execution of **`status logins`**.
Session ID	The session number assigned by the system, in chronological order of access.

maintenance

See:
reset maintenance on page 372
test maintenance on page 372

reset maintenance

`reset maintenance` ***`UUC`***

Use **`reset maintenance`** to reset a specified maintenance circuit pack. Specify a cabinet, 1 through 44, to reset the PN's Maintenance circuit pack in the 'a' carrier of the specified cabinet, dropping any local login to that circuit pack.

test maintenance

`test maintenance [C] [short | long] [`*`repeat#`*`| clear] [schedule]`

Use **`test maintenance`** to perform hardware diagnostic tests on the PN's Maintenance circuit packs.

For a PN's Maintenance circuit pack, the MT interface, EI link, reset, and sanity functions are tested. The long test resets the PN's Maintenance circuit pack, dropping the local login via the Maintenance board.

Parameter C specifies a cabinet. The cabinet number defaults to 1.

For more information, see Common Command Output Screens on page 28.

marked-ports

list marked-ports

`list marked-ports [schedule]`

Use **`list marked-ports`** to list every port that has been marked unusable with **`mark port`**.

Action/Object	Qualifier	Qualifier Description
`list marked-ports`	**`schedule`**	See Common Input Parameters on page 25.

```
list marked-ports
                        MARKED-PORT INFORMATION

       Port       Board-Type

       1C0101     DIG-BD
       1C0102     DIG-BD
```

list marked-ports field descriptions

list marked-ports field descriptions

Field	Description
Port	The physical location (cabinet-carrier-slot-port circuit) of the marked port.
Board-Type	The type of circuit pack with the marked port.

mct-history

list mct-history

Use **`list mct-history`** to display the data associated with the Malicious Call Trace (MCT) feature chronologically, with the newest data displayed first.

MCT enables customers to collect information that could be used to identify a calling party whose conversation is deemed to have a malicious intent. Several scenarios are possible:

- Communication Manager software records information about the caller, including the Calling Number whenever possible for incoming trunk calls. This information can be viewed using the Malicious Call Trace History report.
- If the Communication Manager server is connected directly to a public ISDN that follows the ETSI protocol standard, Communication Manager software sends a message to the network requesting that the source of the incoming call be identified and the call be registered.
  a. If the public ISDN sends an acknowledgement, the **ISDN Notification** field on the MCT History report will show `acknowledged`.
  b. If the public ISDN sends a rejection (perhaps because the feature was not subscribed), the **ISDN Notification** field on the MCT History report will show `rejected`.
  c. If the public ISDN does not send any response, the **ISDN Notification** field on the MCT History report will show `no response`.
- If the Communication Manager server is *not* connected directly to a public ISDN that follows the ETSI protocol standard, the **ISDN Notification** field on the MCT History report will display `not sent`. Note that this includes the following two cases:
  1. If the Communication Manager server is directly connected to a public ISDN that follows the Australian ISDN protocol standard (Country Protocol 2), the public ISDN is notified when MCT is activated, but the **ISDN Notification** field displays `not sent`.
  2. If the Communication Manager server is *indirectly* connected via a QSIG or DCS private network to a public ISDN that follows the ETSI or Australian ISDN protocol standard, a message is sent through the private network to the gateway server. The gateway server then notifies the public ISDN that MCT has been activated, but the **ISDN Notification** field displays `not sent`. Note that in the QSIG case, the private-network message is proprietary, so all servers between the user activating MCT and the gateway must be Communication Manager servers.

The following is an example of the MCT history report:

```
list mct-history                                                    Page 1

                              MALICIOUS CALL TRACE HISTORY
              Contr Ext/      Recorder    Redir From/        Parties on Call
Date   Time   Active Ext      Port        Actual Party        _______________
12/20  14:54  none            07E0401     none                43991
              43990                       43990               no party #3
                                                              no party #4
                                                              no party #5
                                                              no party #6
ISDN Notification: not sent

 9/20   10:58  41908          none        0                   08A0704
               41970                      41801               07E0401
                                                              no party #4
                                                              no party #5
                                                              no party #6
ISDN Notification: not sent
```

Field Descriptions for list mct-history

Table 35: Field Descriptions for list mct-history

Date	The date of the occurrence.
Time	The time of the occurrence.
Contr Ext	Controlling Extension: The extension of the user who enabled the MCT control feature. The controlling extension user then has access (via display messages) to the information regarding the malicious call.
Active Ext	The extension of the user that activated the MCT feature.
Recorder Port	The port of a voice recorder being used to record the malicious call.
Redir From	For redirected calls, the party from which the malicious call was redirected (e.g., coverage, forwarding).
Actual Party	The extension of the user who received the malicious call.
Parties on Call	The extensions of other parties connected to the malicious call when the MCT feature was activated.
ISDN Notification	Whether an ISDN notification was sent to the PSTN notifying them of the call, and whether the network responded.

measurements

list measurements [aca | announcement | atm | attendant | coverage-path | blockage | occupancy | call-rate | call-summary | communications-links |clan | cell-traffic | cbc-trunk-group | ds1 | ds1-facility | expansion-services-mod | hunt-group | ip | lar-route-pattern | lightly-used-trunk | load-balance | modem-pool | multimedia-interface | outage-trunk | principal | route-pattern | security-violations | summary | tone-receiver | trunk-group | voice-conditioners | wideband-trunk-group]

See:
list measurements aca on page 378
list measurements clan ethernet on page 378
list measurements clan ppp on page 381
list measurements ds1 on page 385
list measurements clan sockets on page 382
list measurements ip codec on page 387
list measurements ip dsp-resource on page 391
list measurements ip signaling-groups on page 406
list measurements ip voice-stats on page 409
list measurements tone-receiver on page 429

Use list measurements to get system performance measurements.

Table 36: list measurements command qualifier information ***1 of 3***

Action/Object	Qualifier	Qualifier Description	Login
list measurements	**log** **detail** **summary** **schedule**	Detailed report generated Summary report generated See Common Input Parameters on page 25.	init inads craft cust rcust browse nms bcms
	aca	list measurements aca on page 378	
	announcements		
	atm		
	attendant		
	blockage		
	call-rate		
	call-summary		

1 of 3

Table 36: list measurements command qualifier information ***2 of 3***

Action/Object	Qualifier	Qualifier Description	Login
	`cbc-trunk-group`		
	`clan ethernet`	list measurements clan ethernet on page 378	
	`clan ppp`	list measurements clan ppp on page 381	
	`clan sockets`	list measurements clan sockets on page 382	
	`communications-links`		
	`coverage-path`		
	`ds1_location`	list measurements ds1 on page 385	
	`expansion-services mod`		
	`hunt-group`		
	`ip codec`	list measurements ip codec on page 387	
	`ip dsp-resource`	list measurements ip dsp-resource on page 391	
	`ip signaling-groups`	list measurements ip signaling-groups on page 406	
	`lar-route-pattern`		
	`lightly-used-trunk`		
	`load-balance`		
	`modem-pool`		
	`multimedia-interface`		
	`occupancy`		
	`outage-trunk`		
	`principal`		
	`route-pattern`		
	`security-violations`		

2 of 3

Table 36: list measurements command qualifier information ***3 of 3***

Action/Object	Qualifier	Qualifier Description	Login
	`summary`		
	`tone-receiver`	list measurements tone-receiver on page 201	
	`trunk-group`		
	`voice-conditioners`		
			3 of 3

list measurements aca

For more information about using ACA, refer to “Automatic Circuit Assurance” in *Administering Avaya Aura™ Communication Manager (03-300509).*

list measurements clan ethernet

`list measurements clan ethernet` *`location`* `[schedule]`

Use **`list measurements clan ethernet`** to see a 24-hour history of important packet-level statistics.

Use the list to infer some LAN performance characteristics. For example:

- high collision counts could indicate high traffic on the LAN segment, or congestion on the bus.
- high Cyclic Redundancy Check (CRC — detects and corrects errors on every frame) errors could suggest that:
  - the LAN connection may be “noisy”
  - a wire connection is loose
  - a wire is frayed or broken

The 24-hour history gives the ability to look back at these measures if the trouble cleared.

The data is collected at 15-minute intervals over 24 hours for the CRC (Cyclic Redundancy Check) and collisions for ethernet connections. If the data cannot be retrieved for the 15-minute interval, **N/A** appears. The delta (the change from the last inquiry) and the total are provided for each error count. After the occurrence of “N/A” (not available), the delta equals the total.

The primary use of this command is to quickly and unambiguously determine whether the fault lies within the Avaya-provided equipment or with the LAN or LAN administration to which the system is connected.

Action/Object	Qualifier	Qualifier Description	Login	Default
list measurements clan ethernet	***location*** **schedule**	Cabinet-carrier-slot address of the C-LAN circuit pack See Common Input Parameters on page 25.	init inads craft cust	
		Example: **list measurements clan ethernet 1A05**		

The following example shows the output from **list measurements clan ethernet**.

```
list measurements clan ethernet 1C10                                        Page 1

Switch Name:  sierra                              Date:4:07pm WED AUG 01,2007

               C-LAN ETHERNET PERFORMANCE MEASUREMENTS DETAILED REPORT

Date      Time               CRC Check               Collision Count
                        Total        Delta       Total           Delta
08/01     0308            650           50         650            250
08/01     0253            600          600         400            400
08/01     0238            N/A          N/A         N/A            N/A
08/01     0223      1000000570           20 10000000570             20
08/01     0208      1000000550  10000000550 10000000550    10000000550
```

list measurements clan ethernet field descriptions

list measurements clan ethernet field descriptions *1 of 2*

Field	Description
Date	The date that the data was collected.
Time	The current 15-minute interval in which the action was performed
CRC Check	The error count for CRC errors
Total	The total value of the counter on the board The counter value can be up to 11 digits long because of the 32-bit counter on the board. After an N/A occurs, the delta equals the total. Busying out or releasing a board or a port, using **reset board**, and reseating the board all clear the firmware counters.
	1 of 2

list measurements clan ethernet field descriptions *2 of 2*

Field	Description
Delta	The difference between the current and the previous sample
Collision Count	The error count for collisions on the ethernet
	2 of 2

list measurements clan ppp

`list measurements clan ppp` *`location`* `[schedule]`

Use **`list measurements clan ppp`** to list a 24-hour history of important packet-level statistics from which you can infer some LAN performance characteristics. For example:

- Invalid frames—the number of frames that are misaligned
- CHAP failures—Challenge Handshake Authentication Protocol—the number of attempts for ppp authentication that failed
- High Cyclic Redundancy Check (CRC)—detects and corrects errors on every frame; errors could suggest that the connection may be “noisy”

The 24-hour history gives the ability to look back at these measures.

Data is retrieved at 15-minute intervals for 24 hours for CRC, Invalid Frame, and Chap Failures for PPP connections. If the data cannot be retrieved for the 15-minute interval, **N/A** appears. The delta (the change from the last inquiry) and the total are provided for each error count. After the occurrence of an “N/A,” the delta equals the total.

Action/Object	Qualifier	Qualifier Description	Login	Default
`list measurements clan ppp`	**`clan ppp`** **`location`** **`schedule`**	Link identifier, primary or secondary Cabinet-carrier-slot port address of the C-LAN circuit pack See Common Input Parameters on page 25.	init inads craft cust	primary
		Example: **`list measurements clan ppp 1C1001`**		

The following example shows the output from **`list measurements clan ppp`**.

```
list measurements clan ppp 1C1001                                          Page 1

Switch Name:  sierra                                          Date:08/01/12007
    C-LAN PPP PERFORMANCE MEASUREMENTS DETAILED REPORT

Date      Time          CRC Check          Invalid Frame          CHAP Failures
                      Total     Delta     Total    Delta          Total      Delta

08/01     03:08          85        25      185       85               5          0
08/01     02:53          60        60      100      100               5          5
08/01     02:38         N/A       N/A      N/A      N/A             N/A        N/A
08/01     02:23     1000060        10  1000090       10              25          5
08/01     02:08     1000050   1000050  1000080  1000080              20         20
```

list measurements clan ppp field descriptions

list measurements clan ppp field descriptions

Field	Description
Date	The date that the data was collected
Time	The current 15-minute interval in which the action was performed
CRC Check	The error count for CRC errors
Total	Total value of the board counter. The counter value can be up to 7 digits long because the 16- bit counter on the board. After the occurrence of an “N/A” the delta equals the total. Busying out or releasing a board or a port, using **`reset board`**, and reseating the board all clear the firmware counters.
Delta	The difference between the current and the previous sample
Invalid Frame	The number of invalid frames detected. Invalid frames are the frames that are misaligned.
CHAP Failures	The number of failed attempts for ppp authentication

list measurements clan sockets

`list measurements clan sockets` ***`qualifier`*** **`[schedule]`**

Use **`list measurements clan sockets`** on IP Media Processor and Medpro.

Action/Object	Qualifier	Qualifier Description
`list measurements clan sockets`	**`hourly`** ***`location`***	Lists the measurements for the last 24 hours, from current hour backwards, for the indicated board.
	`summary yesterday-peak` **`summary today-peak`** **`summary last-hour`**	Lists the measurements for the previous day’s peak, in socket usage (Erl), for the C-LAN boards administered on the IP interfaces screen. The screen output may reflect multiple C-LAN boards.
	`detail yesterday-peak` ***`loc`*** **`detail today-peak`** ***`loc`*** **`detail last-hour`** ***`loc`***	Lists the measurements for the previous day’s peak for the specified board. If the switch clock is changed, the report shows asterisks.

The following example shows page 1 of a **`list measurements clan sockets hourly`** report.

```
list measurements clan sockets hourly 32A01                              Page   1

Switch Name:                                   Date:  9:29 am  MON AUG 13, 2007
                          CLAN SOCKETS HOURLY REPORT
                               (Last 24 Hours)

                     Socket          Socket
Meas                 Usage   Socket  Denial  %        % Time
Hour  Board  Region   (Erl)  Peg     Peg     Denials  ASB
0400  32A01  3         51.4  4       0        0.00     0.00
0300  32A01  3          1.9  12      0        0.00     0.00
0200  32A01  3          2.6  4       0        0.00     0.00
0100  32A01  3          2.5  507     0        0.00     0.00
0000  32A01  3          1.0  15      0        0.00     0.00
2300  32A01  3          2.3  4       0        0.00     0.00
2200  32A01  3          9.2  8       0        0.00     0.00
2100  32A01  3         18.2  0       0        0.00     0.00
2000  32A01  3          4.8  4       0        0.00     0.00
1900  32A01  3          4.8  4       0        0.00     0.00
1800  32A01  3          6.7  4       0        0.00     0.00
1700  32A01  3          3.9  8       0        0.00     0.00
```

list measurements clan sockets field descriptions

list measurements clan sockets field descriptions *1 of 2*

Field	Description
Meas Hour	The hour the measurement was taken. Switches in multiple time zones are treated as in the current MMI reports. We do not assume that the customer has made any correlation between LAN regions and time zones.
Board	The cabinet, carrier, and slot for the specified board.
Region	The network region where the C-LAN for this measurement resides.
Socket Usage (Erl)	The total time, in Erlangs, that is available from sockets on this C-LAN board. Calculated by: (Total Socket Seconds of usage) / 3600.
Socket peg	Total number of times a C-LAN socket on the board was allocated to a call or link.
Socket Denial peg	Total number of times a C-LAN socket on the board was needed for a call or link, but was not available.
	1 of 2

list measurements clan sockets field descriptions *2 of 2*

Field	Description
% Denials	(Socket Denial peg)/(Socket Denial peg + Socket peg).
% Time ASB	The percentage of time during the measured interval that every C-LAN socket on the board was unavailable for use.
	2 of 2

The following example shows page 1 of a **`list measurements clan sockets summary yesterday-peak`** report.

```
list measurements clan sockets summary yesterday-peak  Page   1

Switch Name:                                   Date:  9:28 am  MON AUG 13, 2007

                         CLAN SOCKETS PEAK REPORT
                 (Yesterday-Peak Hour for Each Board)

                     Socket           Socket
Meas                 Usage    Socket  Denial  %        % Time
Hour  Board  Region  (Erl)    Peg     Peg     Denials  ASB
0800  01A03  1       112.0    0       0        0.00     0.00
2300  02A10  1       109.0    0       0        0.00     0.00
1000  13A05  2        83.0    0       0        0.00     0.00
2300  26A08  2        82.0    0       0        0.00     0.00
2000  32A01  3       122.7    15      0        0.00     0.00
700   64A08  3       164.5    0       0        0.00     0.00
```

The reports for **`summary today-peak`** and **`summary last-hour`** are similar to the previous report.

The following example shows **`list measurements clan sockets detail yesterday-peak`** report – Page 1.

```
list measurements clan sockets detail yesterday-peak 32a10

Switch Name:                                   Date:  9:30 am  MON AUG 13, 2007

                             CLAN SOCKETS DETAIL REPORT
                               (Yesterday-Peak Hour)

                     Socket          Socket
Meas                 Usage   Socket  Denial  %        % Time
Hour  Board  Region  (Erl)   Peg     Peg     Denials  ASB
2000  32a10  3       122.7   15      0        0.00     0.00
```

The reports for **`detail today-peak`** and **`detail last-hour`** are similar to the above report.

list measurements ds1

`list measurements [ ds1]  [ ds1-log ] location [schedule]`
`list measurements [ ds1-facility]  location [log | summary] [schedule]`

Use **`list measurements ds1`** to list performance measurements on a DS1 link. The performance measurements of a DS1 link indicate the quality of the DS1's physical interface between the system and a far-end system.

Use **`list measurements ds1-facility`** to see link performance measurements on a DS1 Converter facility. The DS1 Converter complex consists of two DS1Cs connected by one to four DS1 facilities. This complex allows the distance between two port networks to extend up to 100 miles, thereby extending the range of the optical fiber link within limited bandwidth (96 channels). A DS1C complex can be used in a direct connectivity configuration or a Center Stage Switch configuration. The DS1 converters may be connected to an Expansion Interface (EI) or a Switch Node Interface (SNI) via a metallic connection.

Action/Object	Qualifier	Qualifier Description	Login	Default
`list measurements ds1` **`list measurements dis1-facility`**	**`log`** **`summary`** ***`location`*** **`schedule`**	Detailed report generated Summary report generated The physical location of a DS1 circuit pack entered as cabinet-carrier-slot, or of a DS1 converter facility where location of the circuit pack is entered and *f* is a letter (a-d) designating one of the four DS1 facilities See Common Input Parameters on page 25.	init inads craft cust rcust browse nms bcms	
		Examples: **`list measurements ds1 log 2a18`** **`list measurements ds1 summary`** **`list measurements ds1-log 2e01a`** **`list measurements ds1-fac summary 2e01d schedule`**		

This is the output screen for **`list measurements ds1 summary`**:

```
list measurements ds1 summary 2a19

 Switch Name:                  Date: 1:25 pm  THU OCT 18, 2007

      DS-1 LINK PERFORMANCE MEASUREMENTS SUMMARY REPORT

                            Counted Since: 1:20 pm  THU OCT 18, 2007
Valid 15-Minute Intervals in Last 24 Hours: 96
       Seconds Elapsed In Current Interval: 598    ESF Error Events: N/A
       Test:  none                 Pattern: none       Synchronized: N/A
        Loopback/Span Test Bit-Error Count: 0         Test Duration: 00:00:00

                       Worst 15-Minute Interval 24-Hour  Current
           Category         Date   Time  Count   Count  Interval Count

           Errored Seconds  10/18  13:20 26      2456      2
    Bursty Errored Seconds  10/18  13:20 0       0         0
  Severely Errored Seconds  10/18  13:20 0       0         0
Unavailable/Failed Seconds  10/18  13:20 0       0         0
   Controlled Slip Seconds  N/A    N/A   N/A     N/A       N/A
       Loss of Frame Count  N/A    13:20
```

list measurements ds1-summary field descriptions

The following field descriptions pertain to the summary reports accessed by **`list measurements ds1 summary`** and **`list measurements ds1-facility summary`**.

list measurements ds1-summary field descriptions ***1 of 2***

Field	Description
Counted Since	The start time and date when the associated measurement counters were cleared or the DS1 circuit pack or facility was administered.
Valid 15-Minute Intervals in Last 24 Hours	The total number of 15-minute intervals int he past 24-hour period that contain valid data. (0-96)
Seconds Elapsed In Current Interval	The number of seconds from the beginning of the current 15-minute interval. (0 - 900)
ESF Error Events	
Test	
Pattern	
	1 of 2

list measurements ds1-summary field descriptions ***2 of 2***

Field	Description
Synchronized	
Loopback/Span Test Bit-Error Count	
Test Duration	
Worst 15-Minute Interval (Date, Time, Count)	The date, end time, and error count (from 0 to 900 in increments of four) of the 15-minute interval in the previous 24-hour period that contains the maximum value for each error category.
24-Hour Count	The sum of all valid 15-minute counts for the previous 24-hour period for each error category. (0 - 65535)
Current Interval Count	The error count for the current (incomplete) 15-minute interval for each of the four error categories. (0 - 900 or N/A if data for the 15-minute interval is invalid)
Category	The categories correspond to measurement error counters: • **Errored Seconds**: the value of the errored seconds counter for the specified 15-minute interval (0 - 900 or N/A if data for the 15-minute interval is invalid). • **Bursty Errored Seconds:** the value of the bursty errored seconds counter for the specified 15-minute interval (0 - 900 or N/A if data for the 15-minute interval is invalid). • **Severely Errored Seconds**: the value of the severely errored seconds counter for the specified 15-minute interval(0 - 900 or N/A if data for the 15-minute interval is invalid). • **Unavailable/Failed Seconds:** the value of the failed seconds counter for the specified 15-minute interval (0 - 900 or N/A if data for the 15-minute interval is invalid). • **Controlled Slip Seconds** • **Loss of Frame Count**:
	2 of 2

list measurements ip codec

`list measurements ip codec` ***`qualifier`***

Use **`list measurements ip codec`** to see IP media processing codec resource measurements. The **`list measurements ip codec`** command works on IP Media Processor and Medpro.

The IP media processing codec resource measurements are listed by software. The report output may span multiple IP Media Processor or Medpro boards. A single report output combines statistics from IP Media Processor and Medpro circuit packs. Codecs are considered to be part of a common pool.

To estimate the amount of IP traffic used on IP trunks versus IP stations, compare the **`list measurements ip codec`** report with the lines of the **`list measurements trunk-group`**, **`list performance trunk-group`**, **`list measurements outage-trunk`**, and **`monitor traffic trunk-groups`** reports corresponding to IP trunk groups. It is required that the switch not have mixed IP and non-IP ports in a single trunk group.

Action/Object	Qualifier	Qualifier Description	Login	Default
`list measurements ip codec`		Example: **`list measurements ip codec hourly region 4`**		
	`hourly` ***`region#`***	Lists the measurements for the last 24 hours, from current hour backwards, for the indicated region. If the switch clock is changed, the report shows asterisks.		
	`summary yesterday-peak` **`summary today-peak`** **`summary last-hour`**	Lists the measurements for the previous day's peak, for every region with MEDPRO resources administered on the IP Interfaces screen. The peak hour in a given region is the hour at which [G.711 Usage (Erl) + G.711 Usage (Erl)] is a maximum for that region. If the switch clock is changed, the report shows asterisks.		
	`detail` ***`reg#`*** **`yesterday-peak`** **`detail`** ***`reg#`*** **`today-peak`** **`detail`** ***`reg#`*** **`last-hour`**	Lists the measurements for the previous day's peak for the indicated region. If the switch clock is changed, the report shows asterisks.		

The following example shows the IP Codec Hourly Output For Region 4, from **`list measurements ip codec hourly 4`**.

```
list measurements ip codec hourly 4

Switch Name:                                  Date:  5:32 pm  WED AUG 15, 2007

                    IP CODEC RESOURCE HOURLY REPORT

                       G711                           G723/9
                    ---------------------       -------------------------
Meas          DSP    Usage   In Reg  Out of     Usage   In Reg  Out of
Hour Region  Rscs    (Erl)   Peg     Reg Peg    (Erl)   Peg     Reg Peg
0400 4       xxxx   xxxx.x  xxxxx   xxxxx      xxxx.x  xxxxx   xxxxx
0300 4       xxxx   xxxx.x  xxxxx   xxxxx      xxxx.x  xxxxx   xxxxx
0200 4       xxxx   xxxx.x  xxxxx   xxxxx      xxxx.x  xxxxx   xxxxx
0100 4       xxxx   xxxx.x  xxxxx   xxxxx      xxxx.x  xxxxx   xxxxx
0000 4       xxxx   xxxx.x  xxxxx   xxxxx      xxxx.x  xxxxx   xxxxx
2300 4       xxxx   xxxx.x  xxxxx   xxxxx      xxxx.x  xxxxx   xxxxx
2200 4       xxxx   xxxx.x  xxxxx   xxxxx      xxxx.x  xxxxx   xxxxx
```

list measurements ip codec field descriptions

list measurements ip codec field descriptions ***1 of 2***

Field	Description
Meas Hour	The hour the measurement was taken. Switches in multiple time zones are treated as in the current MMI reports. We do not assume that the customer has made any correlation between LAN regions and time zones. Range: 0000 – 2300.
Region	The network region that the IP Media Processors and Medpros for this measurement are in.
DSP Rscs	Total IP codec resources (voice channels) in the region. (22 or 31) * # Medpro + 64 * #IP Media Processors. The 22 or 31 multiplier for Medpro depends on admin of codec preferences. For R10, a G711 call takes 1 resource, while a G723/729 call or a Fax relay call takes 2 resources.
G.711 Usage (ERL)	Usage in Erlangs of G.711 codecs during the measurement interval. Includes time that the voice channels are on a call. Usage shall be measured from the time the voice channel is allocated until it is released. Calculated by: (Total Call Seconds) / 3600 where Total Call Seconds is a sum of the following: total time (in seconds) that a G.711 resource on a Medpro is in use total time (in seconds) that a G.711 resource on an IP Media Processor is in use
	1 of 2

list measurements ip codec field descriptions ***2 of 2***

Field	Description
G.711 In Reg Peg	Total number of times an IP media processor port in the region was allocated to a G.711 call.
G.711 Out of Reg peg	The total number of times an IP media processor port was needed in the region for a G.711 call, but was successfully allocated to a resource in another region. Out of Region does not include denials. If “Network regions are interconnected” is **n**, Out of Region is always **0**.
G.723/9 Usage (ERL)	Usage in Erlangs of G.723 or G.729 codecs during the measurement interval. Includes time that the voice channels are on a call. Usage shall be measured from the time the voice channel is allocated until it is released. Calculated by: (Total Call Seconds) / 3600 where Total Call Seconds is a sum of the following: total time (in seconds) that a G.723 or G.729 resource on a Medpro is in use twice the total time (in seconds) that a G.723 or G.729 resource on an IP Media Processor is in use
G.723/9 In Reg peg	Total number of times an IP media processor port in the region was allocated to a G.723 or G.729 call.
G.723/9 Out of Reg peg	The total number of times an IP media processor port was needed in the region for a G.723 or G.729 call, but was successfully allocated to a resource in another region. Out of Region does not include denials. If **Network regions are interconnected** is **n**, **Out of Region** is always **0**.
	2 of 2

The following example shows the Measurements IP CODEC yesterday-peak – Page 1.

```
list measurements ip codec summary yesterday-peak

Switch Name:                                   Date:  5:27 pm  WED AUG 15, 2007

          IP CODEC RESOURCE SUMMARY REPORT

                       G711                           G723/9
                  ---------------------        -------------------------
Meas          DSP    Usage   In Reg  Out of     Usage   In Reg  Out of
Hour Region   Rscs   (Erl)   Peg     Reg Peg    (Erl)   Peg     Reg Peg
0400 1        xxxx   xxxx.x  xxxxx   xxxxx      xxxx.x  xxxxx   xxxxx
0300 2        xxxx   xxxx.x  xxxxx   xxxxx      xxxx.x  xxxxx   xxxxx
0600 44       xxxx   xxxx.x  xxxxx   xxxxx      xxxx.x  xxxxx   xxxxx
```

The reports **`list measurements ip codec summary today-peak`** and **`list measurements ip codec summary last-hour`** are similar to the above report.

The following example shows the Sample IP Codec detail yesterday-peak Output for Region 4, from **`list measurements ip codec detail 4 yesterday-peak`**.

```
list measurements ip codec detail 4 yesterday-peak

Switch Name:                                  Date:  5:32 pm  WED AUG 15, 2007

                    IP CODEC RESOURCE DETAIL REPORT

                       G711                           G723/9
                    ---------------------       -------------------------
Meas          DSP    Usage   In Reg  Out of      Usage   In Reg  Out of
Hour Region   Rscs   (Erl)   Peg     Reg Peg     (Erl)   Peg     Reg Peg
0400 4        xxxx   xxxx.x  xxxxx   xxxxx       xxxx.x  xxxxx   xxxxx
```

list measurements ip dsp-resource

`list measurements ip dsp-resource` ***`qualifier`***

Use **`list measurements ip dsp-resource`** on IP Media Processor and Medpro to see the following:

- IP media processing DSP resource measurements
- G.711 equivalent peak usage at the network region level

The **`list measurements ip dsp-resource`** measurements are displayed by software. The report output may span multiple IP Media Processor or Medpro boards. A single report

output combines statistics from both IP Media Processor and Medpro boards. Codecs are considered to be part of a common pool.

Action/Object	Qualifier	Qualifier Description	Login	Default
list measurements ip dsp-resource				
	hourly	Lists the measurements for the last 24 hours, from current hour backwards, for the indicated region. If the switch clock is changed, the report shows stars.		
	summary yesterday-peak **summary today-peak** **summary last-hour**	Lists the measurements for the previous day's peak DSP Usage (Erl) for every regions with MEDPRO resources administered on the ip-interfaces screen. The peak hour in a given region is the hour at which DSP Usage (Erl) is a maximum for that region. If the switch clock is changed, the report shows stars. If you are running 3FQ08 CM software or later, the list measurements ip dsp-resource summary report shows G.711 equivalent peak usage at the network region level. It shows the peak hour of DSP resource activity per network region.		
	pn summary	Lists the cumulative/total line of output that shows the hour with the greatest dsp usage for all of the fiber-connected port networks based on the highest Erlang usage.		
	gw summary	Lists the gateway summary report that shows the peak hour DSP usage for a specific H.248 gateway.		
	detail *reg#* yesterday-peak **detail reg# today-peak** **detail reg# last-hour**	Lists the measurements for the previous day's peak for the indicated region. If the switch clock is changed, the report shows stars.		

The following example shows the ip dsp-resource hourly report:

To display the list measurements ip dsp-resource hourly report, type **`list measurements ip dsp-resource hourly`** and press **Enter**.
Options: None.

```
list measurements ip dsp-resource hourly                                Page   1

Switch Name: sv-manta                          Date: 1:41 pm  THU NOV 30, 2006
                      IP DSP RESOURCE HOURLY REPORT
           G711 Equivalent DSP   Total    Endpoint Calculations
Net  Meas   Rsrc   Rsrc  Usage    DSP    In Reg  Out Reg  Denied    %    % Out
Reg  Hour  Capcty  Peak  (Erl)   Pegs    Pegs     Pegs     Pegs  Denied  of Srv
2    1200  448  *  420   19.5    18000   17940    0        0      0      0
2    1100  448     400   19.4    18321   17930    0        0      0      0
2    1000  448     475   19.2    18031   17933    0        0      0      0
2    900   448     400   19.1    18223   17939    0        0      0      0
2    800   448     376   19.0    18311   17928    0        0      0      0
2    700   448     399   19.0    18213   17934    0        0      0      0
2    600   448     400   18.6    18002   17942    0        0      0      0
2    500   448     394   18.7    17924   17924    0        0      0      0
```

list measurements ip dsp-resource hourly report field descriptions

Field	Range	Description/Algorithm
Net Reg	1–250	The network region represents the network region of the IP media processors being measured. The region number is assigned on the ip-interface screen during switch administration.
Meas Hour	0000–2300	Hour for which data is collected.
G711 Equivalent DSP Rsrc Capcty	0–99999 “”*”	DSP resource capacity indicates the maximum number of unencrypted, simultaneous G.711 DSP resources that could be supported for a given network region. The “*” indicates that the media processor capacity changed during the measurement hour.
G711 Equivalent DSP Rsrc Peak	0–99999	Indicates the maximum number of G.711 equivalent DSP resources used at any point in time in the measurement hour. The “spike” traffic pattern helps to determine when resources should be added.
G711 Equivalent DSP Usage (ERL)	0–9999.9 Erlangs	DSP Usage. Total G.711 equivalent usage for all codecs that were in use during the measurement period. The time is measured from the time the voice channel is allocated until it is released, including the time that the voice channel is on a call. Depending on the media processor being used usage counts may vary per codec (for example, TN2302 counts G.729/3 as 2, encryption counts as 1.25 and so on).

1 of 2

Field	Range	Description/Algorithm
Total DSP Pegs	0–65535	The total number of times media processor resources were allocated in a network region during the measurement hour.
Endpoint In Reg Pegs	0–65535	The total number of times an IP media processor port in the region was allocated to a call/request within that same network region during the measurement hour. Endpoint calculations also include IP/SIP trunks and IGCs.
Endpoint Out Reg Pegs	0–65535	The total number of times an endpoint request for an IP media processor port from a specific network region was allocated to a media processor in a different region. This might occur when there are no available resources in the requested network region, a call has been re-directed to another port network. If the "Region" fields on the Inter Network Region Connection Management screen are blank, then this measurement will always be 0.
Endpoint Denied Pegs	0–65535	The total number of times an IP media processor port was requested for a call, but was denied because there were no media processing resources available in the system. Note: Calls that were re-directed are not considered denied calls Denied peg counts are against the network region or the IP endpoint that is requesting the resource. Denied peg counts for IGCs are against the network region of the cabinet that is requesting the resource.
% Denied	0–99	Percentage Denied: The percent of pegs which were denied during the measurement period. **Note:** It is possible to have denied calls even though Peak DSP usage has not been exceeded. For example, Peak DSP is 479 out of 480. The next call that comes in could be denied because it needs two DSP resources and only one is available (for example, if the call used a G.729 codec).
% Out of Srv	0–99	Percentage Out of Service: The percent of total resource time that ports were out of service during the measurement period. This percent includes ports that were manually busied out or maintenance busy during the measured interval.

2 of 2

The following example shows the list measurements ip dsp-resource summary report:

To display the list measurements ip dsp-resource summary report, type **`list measurements ip dsp-resource summary yesterday-peak`** and press **Enter**.
Options: None.

```
list measurements ip dsp-resource summary yesterday-peak

Switch Name: sv-manta                          Date: 9:32 am  THU APR 19, 2007
                       IP DSP RESOURCE SUMMARY REPORT
           G711 Equivalent DSP   Total   Endpoint Calculations
Net  Peak   Rsrc   Rsrc  Usage    DSP   In Reg  Out Reg  Denied    %     % Out
Reg  Hour  Capcty  Peak  (Erl)   Pegs    Pegs     Pegs    Pegs   Denied  of Srv
2    2300  448  *  440   19.5    19000   17940    2       0      0       0
3    0900  640     600   21.1    21934   12873    0       0      0       0
4    1100  448     440   19.2    19123   17942    0       0      0       0
5    1100  448     400   18.6    18002   17924    0       0      0       0
6    1500  448     440   19.2    19123   17942    0       0      0       0
7    2300  448     440   18.7    19123   17928    0       0      0       0
```

IP DSP Resource Summary Report Field Descriptions

Field	Range	Description/Algorithm
Net Reg	1–250	The network region represents the network region of the IP media processors being measured. The region number is assigned on the ip-interface screen during switch administration.
Peak Hour	0000–2300	The measurement hour with the highest Erlang usage for a specific network region.
G711 Equivalent DSP Rsrc Capcty	0–99999 “”*”	DSP resource capacity indicates the maximum number of unencrypted, simultaneous G.711 DSP resources that could be supported for a given network region. The “*” indicates that the media processor capacity changed during the measurement hour.
G711 Equivalent DSP Rsrc Peak	0–99999	Indicates the maximum number of G.711 equivalent DSP resources used at any point in time in the measurement hour. The “spike” traffic pattern helps to determine when resources should be added.

1 of 3

Field	Range	Description/Algorithm
G711 Equivalent DSP Usage (ERL)	0–9999.9 Erlangs	DSP Usage. Total G.711 equivalent usage for all codecs that were in use during the measurement period. The time is measured from the time the voice channel is allocated until it is released, including the time that the voice channel is on a call. Depending on the media processor being used usage counts may vary per codec (for example, TN2302 counts G.729/3 as 2, encryption counts as 1.25 and so on).
Total DSP Pegs	0–65535	The total number of times media processor resources were allocated in a network region during the measurement hour.
Endpoint In Reg Pegs	0–65535	The total number of times an IP media processor port in the region was allocated to a call/request within that same network region during the measurement hour. Endpoint calculations also include IP/SIP trunks and IGCs.
Endpoint Out Reg Pegs	0–65535	The total number of times an endpoint request for an IP media processor port from a specific network region was allocated to a media processor in a different region. This might occur when there are no available resources in the requested network region, a call has been re-directed to another port network. If the "Region" fields on the Inter Network Region Connection Management screen are blank, then this measurement will always be 0.
Endpoint Denied Pegs	0–65535	The total number of times an IP media processor port is requested for a call, but was denied because there were no media processing resources available in the system. Note: Calls that were re-directed are not considered denied calls Denied peg counts are against the network region or the IP endpoint that is requesting the resource. Denied peg counts for IGCs are against the network region of the cabinet that is requesting the resource.

2 of 3

Field	Range	Description/Algorithm
% Denied	0–99	Percentage Denied: The percent of pegs which were denied during the measurement period. **Note:** It is possible to have denied calls even though Peak DSP usage has not been exceeded. For example, Peak DSP is 479 out of 480. The next call that comes in could be denied because it needs two DSP resources and only one is available (for example, if the call used a G.729 codec).
% Out of Srv	0–99	Percentage Out of Service: The percent of total resource time that ports were out of service during the measurement period. This percent includes ports that were manually busied out or maintenance busy during the measured interval.

3 of 3

The reports **`list measurements ip dsp-resource summary today-peak`** and **`list measurements ip dsp-resource summary last-hour`** are similar to the **`list measurements ip dsp-resource summary yesterday-peak`** report.

The following example shows the DSP activity at an hourly level for a specific network Region:

To display the list measurements ip dsp-resource detail report, type **`list measurements ip dsp-resource detail 2 yesterday-peak`** and press **Enter**.
Options: None.

```
list measurements ip dsp-resource detail 2 yesterday-peak             Page   1

Switch Name: sv-manta                          Date: 1:41 pm  THU MAR 30, 2007
                      IP DSP RESOURCE DETAIL REPORT
            G711 Equivalent DSP   Total   Endpoint Calculations
Net  Meas    Rsrc   Rsrc   Usage   DSP   In Reg  Out Reg  Denied   %     % Out
Reg  Hour   Capcty  Peak   (Erl)  Pegs    Pegs    Pegs     Pegs  Denied  of Srv
2    1200   448  *  420    19.5   18000  17940    0        0      0      0
2    1100   448     400    19.4   18321  17930    0        0      0      0
2    1000   448     475    19.2   18031  17933    0        0      0      0
2    900    448     400    19.1   18223  17939    0        0      0      0
2    800    448     376    19.0   18311  17928    0        0      0      0
2    700    448     399    19.0   18213  17934    0        0      0      0
2    600    448     400    18.6   18002  17942    0        0      0      0
2    500    448     394    18.7   17924  17924    0        0      0      0
```

For the field details of the list measurements ip dsp-resource detail report, see IP DSP Resource Summary Report Field Descriptions on page 395.

The following is an example of the pn summary report. The pn summary report displays a cumulative/total line of output that shows the hour with the greatest dsp usage for all of the fiber-connected port networks based on the highest Erlang usage.

To display the PN Summary DSP Resource Report, type **`list meas ip dsp-resource pn summary ['yest' | 'today' | 'last-hr'] [<blank> | 'pn' <pn number> 'count <number>' |'pn' <pn number> 'to' 'pn' <pn number>], ['schedule']`** and press **Enter**. ***Options***: None

```
Switch Name:                                  Date:
                     IP DSP RESOURCE  PORT NETWORK
                  G711 Equivalent DSP         Total           PN
PN#-  Net  Peak   Rsrc   Rsrc   Usage  IGC    DSP     IGC    Denied  %    % Out
Type  Reg  Hour   Capty  Peak   (Erl)  Usage  Pegs    Pegs   Pegs   Den   Of Srv
```

PN Summary DSP Resource Report Field Descriptions

Field	Range	Description/Algorithm
PN#-Type	1–64 F(iber) or I (P)	Indicates the port network of the media processor being measured. A port network number followed by "F" (for example, 1–F) indicates that this is a fiber-connected PN. Similarly, a port network number followed by "I" (for example 4–I) indicates that this is a IP-connected PN. Up to five rows of data is shown for each PN, based on the five lowest network region numbers administered. C = Cumulative total of all fiber connected PNs (that is, CCS, ATM)
Net Reg	All 1–250 = future develmt	Shows data for a given PN across all network regions in that PN (note that typically media processors in a port network are administered for a single network region. However, that is not always the case). The network region column represents the network region of the IP media processors being measured; not the network region of the cabinets. The region number is assigned on the ip-interfaces screen during switch administration.
Peak Hour	0000–2300	The measurement hour with the highest Erlang usage for the specific port network/network region combination.

1 of 2

Field	Range	Description/Algorithm
G711 Equivalent DSP Rsrc Capcty	0–99999	G.711 Equivalent Digital Signaling Processor Resource Capacity. Indicates the maximum number of unencrypted, simultaneous G.711 DSP resources that could be supported for a given port network. The "*" in this column indicates that media processor capacity changed during the measurement hour. Totals are shown for all fiber- and IP-connected PNs in cases where a port network has multiple media processors across different network regions.
G711 Equivalent DSP Rsrc Peak	0–99999	Indicates the maximum number of G.711 equivalent DSP resources used at any point in time in the measurement hour for that port network. This is helpful to customer with "spike" traffic patterns to determine when resources should be added.
G711 Equivalent DSP Usage (ERL)	0–9999.9 Erlangs	G.711 Equivalent DSP Usage. Total G.711 equivalent usage for all codecs that were in use during the measurement period. The time is measured from the time the voice channel is allocated until it is released, including the time that the voice channel is on a call. Depending on the media processor being used usage counts may vary per codec (for example, TN2302 counts G.729/3 as 2, encryption counts as 1.25 and so on).
G711 Equivalent DSP IGC Usage	0–999.9 Erlangs	Total usage of a port-network or gateway for its involvement in Inter-PN or Inter-GW connections. Channel usage may be from IP endpoints or an IGC.
Total DSP Pegs	0–65535	The total number of times media processor resources were allocated in a network region during the measurement hour.
IGC Pegs	0–65535	Inter-Gateway Connection Pegs - the number of times media processor resources were allocated in a port network to connect two endpoints via an IGC (this is a subset of total DSP pegs).
PN Denied Pegs	0–65535	The total number of times an IP media processor port is needed in the port network for a call, but was denied because there were no media processing resources available in that port network.
% Den	0–99 (pegs)	Percentage Denied: The percent of pegs which were denied during the measurement period.
% Out of Srv	0–99	Percentage Out of Service: The percent of total resource time that ports were out of service during the measurement period. This percent includes ports that were manually busied out or maintenance busy during the measured interval.

2 of 2

The PN hourly DSP resource report displays up to 24 hours worth of data per port network.

To display the PN hourly DSP resource report, type **`list measurements ip dsp-resource pn hourly [<blank> | <pn number> | <pn number> 'count' <number> |'pn' <pn number> 'to' 'pn' <pn number>], ['schedule']`** and press **Enter**.

Options: The **`print`** and **`schedule`** options are available for this command.

```
Switch Name:                                  Date: 3:01 pm  TUE FEB 17, 2009
                  IP DSP RESOURCE PORT NETWORK HOURLY REPORT
            G711 Equivalent DSP            Total          PN
PN#-  Meas  Rsrc    Rsrc   Usage   IGC     DSP     IGC    Denied    %    % Out
Type  Hour  Capty   Peak   (Erl)   Usage   Pegs    Pegs   Pegs     Den   Of Srv
C -F  1400    128       3     0.1    0.0   5       0      0         0       0
C -F  1300    128*      2     0.2    0.0   30      0      0         0       0
1 -I  1400    128       3     0.1    0.0   5       0      0         0       0
1 -I  1300    128*      2     0.2    0.0   30      0      0         0       0
```

PN Hourly DSP Resource Report Field Descriptions

Field	Range	Description/Algorithm
PN#-Type	1–64 F(iber) or I (P)	Indicates the port network of the media processor being measured. A port network number followed by "F" (for example, 1–F) indicates that this is a fiber-connected PN. Similarly, a port network number followed by "I" (for example, 4–I) indicates that this is a IP-connected PN. Up to five rows of data is shown for each PN, based on the five lowest network region numbers administered. C = Cumulative total of all fiber connected PNs (that is, CCS, ATM)
Meas Hour	0000–2300	The hour for which data is collected for the port network.
G711 Equivalent DSP Rsrc Capcty	0–99999	G.711 Equivalent Digital Signaling Processor Resource Capacity. Indicates the maximum number of unencrypted, simultaneous G.711 DSP resources that could be supported for a given port network. The "*" in this column indicates that media processor capacity changed during the measurement hour. Totals are shown for all fiber- and IP-connected PNs in cases where a port network has multiple media processors across different network regions.

1 of 2

Field	Range	Description/Algorithm
G711 Equivalent DSP Rsrc Peak	0–99999	Indicates the maximum number of G.711 equivalent DSP resources used at any point in time in the measurement hour for that port network. This is helpful to customer with "spike" traffic patterns to determine when resources should be added.
G711 Equivalent DSP Usage (ERL)	0–9999.9 Erlangs	G.711 Equivalent DSP Usage. Total G.711 equivalent usage for all codecs that were in use during the measurement period. The time is measured from the time the voice channel is allocated until it is released, including the time that the voice channel is on a call. Depending on the media processor being used usage counts may vary per codec (for example, TN2302 counts G.729/3 as 2, encryption counts as 1.25 and so on).
IGC Usage	0–999.9 Erlangs	Total usage of a port-network or gateway for its involvement in Inter-PN or Inter-GW connections. Channel usage may be from IP endpoints or an IGC.
Total DSP Pegs	0–65535	The total number of times media processor resources were allocated in a network region during the measurement hour.
IGC Pegs	0–65535	Inter-Gateway Connection Pegs - the number of times media processor resources were allocated in a port network to connect two endpoints via an IGC (this is a subset of total DSP pegs).
PN Denied Pegs	0–65535	The total number of times an IP media processor port is needed in the port network for a call, but was denied because there were no media processing resources available in that port network.
% Den	0–99 (pegs)	Percentage Denied: The percent of pegs which were denied during the measurement period.
% Out of Srv	0–99	Percentage Out of Service: The percent of total resource time that ports were out of service during the measurement period. This percent includes ports that were manually busied out or maintenance busy during the measured interval.

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The GW summary DSP resource report displays the peak hour DSP usage for a specific H.248 gateway.

To display the GW summary DSP resource report, type **`list measurements ip dsp-resource gw summary ['yest' | 'today' | 'last-hr'] [<blank> | 'gw' <gw number> 'count <number>' |'gw' <gw number> 'to' 'gw' <gw number>], ['schedule']`** and press **Enter**.

Options: None.

```
Switch Name:                                    Date:
                     IP DSP RESOURCE  PORT NETWORK
                  G711 Equivalent DSP         Total          PN
PN#-  Net  Peak   Rsrc   Rsrc   Usage  IGC    DSP     IGC    Denied  %    % Out
Type  Reg  Hour   Capty  Peak   (Erl)  Usage  Pegs    Pegs   Pegs   Den   Of Srv
```

GW Summary DSP Resource Report Field Descriptions

Field	Range	Description/Algorithm
GW Num	G001–G250	Indicates the number of the administered H.248 gateway for which DSP resource usage is being reported for the given measurement hour.
GW Type	g700 g350 g250 g450 ig550 trm480	Indicates the H.248 gateway type containing the DSP resource being used.
Peak Hour	0000–2300	The measurement hour with the highest Erlang usage for the specific gateway.
Net Reg	1–250	The network region represents the network region of the IP media processors being measured. The region number is assigned on the ip-interface screen during switch administration.
G711 Equivalent DSP Rsrc Capty	0–99999	G711 Equivalent DSP Resource Capacity. Indicates the maximum number of unencrypted, simultaneous G.711 DSP resources that could be supported for a given network region. The "*" in this column indicates that media processor capacity changed during the measurement hour. Gateways with older firmware that do not support this feature display the capacity data as **n/a**, indicating that data is not available.
G711 Equivalent DSP Rsrc Peak	0–99999	Indicates the maximum number of G.711 equivalent DSP resources used at any point in time in the measurement hour. This is helpful to customer with "spike" traffic patterns to determine when resources should be added. Gateways with older firmware that do not support this feature display the capacity data as **n/a**, indicating that data is not available.

1 of 3

Field	Range	Description/Algorithm
G711 Equivalent DSP Usage (Erl)	0–9999.9 Erlangs	G.711 Equivalent DSP Usage. Total G.711 equivalent usage that all codecs were in use during the measurement period. The time is measured from the time the voice channel is allocated until it is released, including the time that the voice channel is on a call. Depending on the media processor being used usage counts may vary per codec (for example, TN2302 counts G.729/3 as 2, encryption counts as 1.25 and so on). Gateways with older firmware that do not support this feature display the capacity data as **n/a**, indicating that data is not available.
IGC Usage	0–999.9 Erlangs	Total usage of a port-network or gateway for its involvement in Inter-PN or Inter-GW connections. Channel usage may be from IP endpoints or an IGC. Result is to 1 decimal point. Gateways with older firmware that do not support this feature display the capacity data as **n/a**, indicating that data is not available.
Total DSP Pegs	0–65535	The total number of attempts at allocating a media processor resource in a gateway during the measurement hour. Gateways with older firmware that do not support this feature display the capacity data as **n/a**, indicating that data is not available.
IGC Pegs	0–65535	Inter-Gateway Connection Pegs - the number of times media processor resources were allocated in a gateway to connect two endpoints via an IGC (this is a subset of total DSP pegs). Gateways with older firmware that do not support this feature display the capacity data as **n/a**, indicating that data is not available.
GW Denied Pegs	0–65535	The total number of times an IP media processor port is needed in the gateway for a call, but was denied because there were no media processing resources available in that gateway. Gateways with older firmware that do not support this feature display the capacity data as **n/a**, indicating that data is not available.

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Field	Range	Description/Algorithm
% Den	0–99 (pegs)	PN Percentage Denied. PN denied pegs shown as a percentage. Gateways with older firmware that do not support this feature display the capacity data as **n/a**, indicating that data is not available.
% Out of Srv	0–99	Percentage Out of Service: The percent of total resource time that ports were out of service during the measurement period. This percent includes ports that were manually busied out or maintenance busy during the measured interval. Gateways with older firmware that do not support this feature display the capacity data as **n/a**, indicating that data is not available.

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The gateway hourly report displays up to 24 hours worth of data per gateway. To display the GW hourly DSP resource report, type **`list measurements ip dsp-resource gw hourly [<blank> | <gw number> | <gw number> 'count' <number> |'gw' <gw number> 'to' 'gw' <gw number>], ['schedule']`** and press **Enter**.

```
Switch Name: er ' [<blank> | <gw              Date: Note: gw range is 1-250
Ent               H.248 GW DSP RESOURCE HOURLY REPORT
                        G711 Equivalent DSP        Total         GW
GW    Meas  Net  GW     Rsrc   Rsrc  Usage   IGC    DSP  IGC   Denied  %  % Out
Num   Hour  Reg  Type   Capty  Peak  (Erl)  Usage  Pegs  Pegs   Pegs  Den Of Srv
```

GW Hourly DSP Resource Report Field Descriptions

Field	Range	Description/Algorithm
GW Num	G001–G250	Indicates the number of the administered H.248 gateway for which DSP resource usage is being reported for the given measurement hour.
Meas Hour	0000–2300	The hour for which data is collected for the port network.
Net Reg	1–250	The network region represents the network region of the IP media processors being measured. The region number is assigned on the ip-interface screen during switch administration.

1 of 3

Field	Range	Description/Algorithm
GW Type	g700 g350 g250 g450 ig550 trm480	Indicates the H.248 gateway type containing the DSP resource being used.
G711 Equivalent DSP Rsrc Capty	0–99999	G711 Equivalent DSP Resource Capacity. Indicates the maximum number of unencrypted, simultaneous G.711 DSP resources that could be supported for a given network region. The "*" in this column indicates that media processor capacity changed during the measurement hour. Gateways with older firmware that do not support this feature display the capacity data as **n/a**, indicating that data is not available.
G711 Equivalent DSP Rsrc Peak	0–99999	Indicates the maximum number of G.711 equivalent DSP resources used at any point in time in the measurement hour. This is helpful to customer with "spike" traffic patterns to determine when resources should be added. Gateways with older firmware that do not support this feature display the capacity data as **n/a**, indicating that data is not available.
G711 Equivalent DSP Usage (Erl)	0–9999.9 Erlangs	G.711 Equivalent DSP Usage. Total G.711 equivalent usage that all codecs were in use during the measurement period. The time is measured from the time the voice channel is allocated until it is released, including the time that the voice channel is on a call. Depending on the media processor being used usage counts may vary per codec (for example, TN2302 counts G.729/3 as 2, encryption counts as 1.25 and so on). Gateways with older firmware that do not support this feature display the capacity data as **n/a**, indicating that data is not available.
IGC Usage	0–999.9 Erlangs	Total usage of a port-network or gateway for its involvement in Inter-PN or Inter-GW connections. Channel usage may be from IP endpoints or an IGC. Result is to 1 decimal point. Gateways with older firmware that do not support this feature display the capacity data as **n/a**, indicating that data is not available.

2 of 3

Field	Range	Description/Algorithm
Total DSP Pegs	0–65535	The total number of attempts at allocating a media processor resource in a gateway during the measurement hour. Gateways with older firmware that do not support this feature display the capacity data as **n/a**, indicating that data is not available.
IGC Pegs	0–65535	Inter-Gateway Connection Pegs - the number of times media processor resources were allocated in a gateway to connect two endpoints via an IGC (this is a subset of total DSP pegs). Gateways with older firmware that do not support this feature display the capacity data as **n/a**, indicating that data is not available.
GW Denied Pegs	0–65535	The total number of times an IP media processor port is needed in the gateway for a call, but was denied because there were no media processing resources available in that gateway. Gateways with older firmware that do not support this feature display the capacity data as **n/a**, indicating that data is not available.
% Den	0–99 (pegs)	PN Percentage Denied. PN denied pegs shown as a percentage. Gateways with older firmware that do not support this feature display the capacity data as **n/a**, indicating that data is not available.
% Out of Srv	0–99	Percentage Out of Service: The percent of total resource time that ports were out of service during the measurement period. This percent includes ports that were manually busied out or maintenance busy during the measured interval. Gateways with older firmware that do not support this feature display the capacity data as **n/a**, indicating that data is not available.

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list measurements ip signaling-groups

`list measurements ip signaling-groups` ***`qualifier`***

Use **`list measurements ip signaling-groups`** to see the 10 worst signaling groups for each hour of today, starting with the most recent whole hour. The forms for the **`today`** and

yesterday qualifiers are 24 pages, one for each hour. The groups for each hour will be rank-ordered from worst to least worst based on the Hour Average Latency.

Action/Object	Qualifier	Qualifier Description
list measurements ip signaling-groups	**current-hour**	Shows the 10 worst signaling groups for the current hour.
	last-hour	Shows the 10 worst signaling groups for the last full hour.
	today yesterday	Shows the 10 worst signaling groups for each hour of today, starting with the most recent whole hour, or yesterday.

The following example shows the output for **list measurements ip signaling-groups current-hour**

```
list measurements ip signaling-groups current-hour

Switch Name:                                          Date: 6:28 pm TUE NOV 13, 2007
                      IP SIGNALING GROUPS LATENCY AND LOSS REPORT
              10 WORST PERFORMING BYPASS-ENABLED IP SIGNALING GROUPS
                 RANK ORDERED STARTING WITH WORST PERFORMING GROUP

Sig         Hour         Hour    Hour    Hour/    Interval    Interval Interval
Grp         Average      Packets Packets Worst    Average     Packets  Packets
No  Region  Latency(ms)  Sent    Lost(%) Interval Latency(ms) Sent     Lost(%)
--- ------  ----------- ------- -------  -------- ----------- -------- --------
 14   12      10          10        0%    18:03     10         10        0%
120   23      10          10        0%    18:03     10         10        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
```

The following example shows the output for **`list measurements ip signaling-groups last-hour`**

```
list measurements ip signaling-groups last-hour

Switch Name:                                        Date: 6:28 pm TUE NOV 13, 2007
                      IP SIGNALING GROUPS LATENCY AND LOSS REPORT
             10 WORST PERFORMING BYPASS-ENABLED IP SIGNALING GROUPS
                RANK ORDERED STARTING WITH WORST PERFORMING GROUP

Sig         Hour         Hour    Hour    Hour/    Interval    Interval Interval
Grp         Average      Packets Packets Worst    Average     Packets  Packets
No  Region  Latency(ms)  Sent    Lost(%) Interval Latency(ms) Sent     Lost(%)
--- ------  ----------- ------- -------  -------- ----------- -------- --------
 14   12      10          180       0%    18:03     10         10        0%
120   23      10          180       0%    18:03     10         10        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
```

The following example shows the report for **`list measurements ip signaling-groups today`**.

```
list measurements ip signaling-groups last-hour                          Page 1

Switch Name:                                        Date: 6:28 pm TUE NOV 13, 2007
                      IP SIGNALING GROUPS LATENCY AND LOSS REPORT
             10 WORST PERFORMING BYPASS-ENABLED IP SIGNALING GROUPS
                RANK ORDERED STARTING WITH WORST PERFORMING GROUP

Sig         Hour         Hour    Hour    Hour/    Interval    Interval Interval
Grp         Average      Packets Packets Worst    Average     Packets  Packets
No  Region  Latency(ms)  Sent    Lost(%) Interval Latency(ms) Sent     Lost(%)
--- ------  ----------- ------- -------  -------- ----------- -------- --------
 14   12      10          180       0%    18:03     10         10        0%
120   23      10          180       0%    18:03     10         10        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
  0    0       0           0        0%    18:00      0          0        0%
```

The **`yesterday`** screen has the same layout and content type as the **`today`** screen but the information applies to the previous day's 24 hours.

list measurements ip signaling-groups field descriptions

list measurements ip signaling-groups field descriptions

Field	Description
Sig Grp No	The group number, rank ordered.
Region	The network region of the group.
Hour Average Latency (ms)	The average latency for the whole hour.
Hour Packets Sent	The number of packets sent during the whole hour.
Hour Packets Lost (%)	The percent lost packets for the whole hour (if 100% the corresponding latency is shown as ****).
Hour/Worst Interval	The hour and worst 3 minute interval within the hour. (The interval is identified by the last minute of the interval.)
Interval Average Latency (ms)	The average latency for the interval.
Interval Packets Sent	The number of packets sent during the interval.
Interval Packets Lost (%)	The percent lost packets during the interval (if 100% the corresponding latency is shown as ****).

list measurements ip voice-stats

`list measurements ip voice-stats` ***`qualifier`***

Use **`list measurements ip voice-stats`** ***`qualifier`*** to see the Voice/Network Statistics reports that record the voice statistics for the TN media processor boards.

Action/Object	Qualifier	Qualifier Description
`list measurements ip voice-stats`	**`hourly jitter [`*`network region number`*`]`** **`hourly rtdelay [`*`network region number`*`]`** **`hourly pktloss [`*`network region number`*`]`** **`hourly data [`*`network region number`*`]`**	Assesses the following at the network region per hour during a call: • jitter • round trip delay • packet loss • data calls which exceeded a threshold event
	`hourly jitter [`*`media processor board location`*`]` **`hourly rtdelay`** ***`media processor board location`*`]`** **`hourly pktloss [`*`media processor board location`*`]`** **`hourly data [`*`media processor board location`*`]`**	Assesses the following at the media processor region per hour during a call: • jitter • round trip delay • packet loss • data calls which exceeded a threshold event
	`summary jitter today` **`summary rtdelay today`** **`summary pktloss today`** **`summary data today`**	Summarizes the following for a given media processor board (for up to 24 hours) in the network region for the corresponding peak hour: • five worst jitter calls • five worst round trip delay calls • five worst packet loss calls • five worst data calls

The following is an example of the **`list measurements ip voice-stats hourly jitter [`*`network region number`*`]`** report:

```
list measurements ip voice-stats hourly jitter 12                  Page   1

Switch Name: ST10                            Date: 2:47 pm  THU SEP 13, 2007
IP VOICE STATISTICS NETWORK REGION JITTER HOURLY REPORT
                                        Pkt  Time Jitter-Buffr  Jitter
Meas Board Calling       Called Number/         Size  of  Size Orn Urn Avg Peak
Hour  Loc  Number__      FarEnd IP Addr Codec   (ms) Call (ms)           (ms)
1300 07B11 12345678901__ 12345678901__  g729___ _20 1521  120  2   8  100_ 320_
                         3ffe:ffff:107::235:6eff:fe03:d9ff
1300 03B07 22345678901__ 12345671234__  g729___ _20 1805  120  3   7  100_ 520_
                         xxx.xxx.xxx.xxx
      .
      .
      . Up to 5 calls
1200
.
.
.
1100
.
.
.
```

list measurements ip voice-stats hourly jitter at the network region field details

Field	Description
Switch Name	The name of system from which measurement data is being collected/ reported.
Date	Time and date on which measurement data is requested.
Meas Hour	The hour (military time) in which data was collected.
Board Loc	The carrier/slot location of the media processor for which data is being reported.
Calling Number	The number of the endpoints initiating the call (near end).
Called Number/ FarEnd IP Addr	The number of the endpoint which has received the call (far end), followed by the corresponding IP Address.
Codec	The codec used for the call.
	1 of 2

Field	Description
Pkt Size (ms)	The packet size for each steam of data for the associated call, measured in milliseconds.
Time of Call	A time stamp when threshold was first exceeded for the associated call, shown in MMSS (minutes seconds).
Jitter Buffr Size (ms)	The size of the jitter buffer used for the call, measured in milliseconds.
Jitter Buffr Orn	The number of jitter buffer overruns occurred for the call. Overruns occur when many packets arrive into the jitter buffer very quickly, causing the jitter buffer to fill up. When this happens, the jitter buffer is unable to handle additional traffic/packets. If the number of overruns exceeds 99, the value in this field is "99+".
Jitter Buffr Urn	The number of jitter buffer underruns occurred for the call. When the arrival time of packets goes beyond the size of the jitter butter, a jitter buffer underrun occurs. This results in silence until there are additional packets in the jitter buffer to process. If the number of underruns exceeds 99, the value in this field is "99+".
Avg Jitter (ms)	The average amount of jitter recorded for the call over a 10-second reporting interval, measured in milliseconds.
Peak Jitter (ms)	The peak amount of jitter recorded for the call, measured in milliseconds.
	2 of 2

The following is an example of the **`list measurements ip voice-stats hourly rtdelay [`*`network region number`*`]`** report:

```
list measurements ip voice-stats hourly rtdelay 12                    Page   1

Switch Name: ST10                             Date: 2:47 pm  THU SEP 13, 2007
IP VOICE STATISTICS NETWORK REGION RTDELAY HOURLY REPORT
                                        Pkt       RT-Delay   Time
Meas  Board  Calling Number/            Size Dst  Avg  Peak   of   Data
Hour  Loc   Called#/FE Addr  _Codec_ (ms) Reg   (ms)    Call  Call Encryp EC
1300  07B11  3035381234___     g729___ 20_  220  300_ 650_  1301  n    y      y
             0114412345678/3ffe:ffff:107::235:6eff:fe03:d9ff
      01E13  3035551212___     g729___ 20_  220  320_ 650_  1921  n    y      y
             0114412345678/xxx.xxx.xxx.xxx
      .
      .
      . Up to 5 calls
1200         0                0       0    0    0    0     0     0    0      0

1100
.
.
.
```

list measurements ip voice-stats hourly rtdelay at the network region field details:

Field	Description
Switch Name	The name of system from which data is being collected/reported.
Date	Time and date that data is requested.
Meas Hour	The hour (military time) in which data was collected.
Board Loc	The carrier/slot location of the media processor for which data is being reported.
Calling Number/ Called#/FE Addr	The number of the endpoint initiating the call (near end). The number of the endpoint that received the call (far end), followed by the associated far-end IP address.
Codec	The codec used for the call.
Pkt Size (ms)	The packet size for each steam of data for the associated call, measured in milliseconds.
Dst Reg	The network region where the destination media processor is located.
Avg RT Delay (ms)	The average round trip delay of packets, measured in milliseconds.
Peak RT Delay (ms)	The peak round trip delay recorded for the call.
Time of Call	A time stamp when threshold was first exceeded for the associated call, shown in MMSS (minutes seconds).
Data Call	Indicates whether the call is a data call.
Encryp	Indicates whether media encryption was used for the call.
EC	Indicates whether the echo cancellation is on/off for the call.

The following is an example of the **`list measurements ip voice-stats hourly pktloss [`*`network region number`*`]`** report:

```
list measurements ip voice-stats hourly pktloss 12                  Page   1

Switch Name: ST10                             Date: 2:47 pm  THU SEP 13, 2007
IP VOICE STATISTICS NETWORK REGION PACKET LOSS HOURLY REPORT
                                             Time        Pkt   Total  Pkt
Meas  Board Calling Number/           Dst    of   UDP   Size  #Lost  Loss  Sil
Hour  Loc   Called#/FE Addr  _Codec_  Reg   Call  Port  (ms)  Pkts   (%)   Sup
1300  07B11 3031234567____   g729___  220   2333  12345 30_   30__   5     n
            0112912345678/3ffe:ffff:107::235:6eff:fe03:d9ff
      01E13 3035554567____   g729___  100   3325  52345 30_   20__   3     n
            0112912345678/xxx.xxx.xxx.xxx
      07B11 3035554567____   g729___  220   4343  12345 30_   35__   5     n
            0112912345678/3ffe:ffff:107::135:6eff:fe03:d9ff
      .
      .
      . Up to 5 calls
1200
.
.
.
1100
```

list measurements ip voice-stats hourly pktloss at the network region field details

Field	Description
Switch Name	The name of system from which data is being collected/reported.
Date	Time and date that data is requested.
Meas Hour	The hour (military time) in which data was collected.
Board Loc	The carrier/slot location of the media processor for which data is being reported.
Calling Number/ Called#/FE Addr	The number of the endpoint initiating the call (near end). The number of the endpoint that received the call (far end), followed by the associated far-end IP address.
Codec	The codec used for the call.
Pkt Size (ms)	The packet size for each steam of data for the associated call, measured in milliseconds.
Dst Reg	The network region where the destination media processor is located.
	1 of 2

Field	Description
Time of Call	A time stamp when threshold was first exceeded for the associated call, shown in MMSS (minutes seconds).
UDP Port	The UDP port used by the media processor for this call.
Total #Lost Pkts	The total number of packets lost for the call.
Pkt Loss (%)	The peak packet loss for the call. The packet loss percentage is calculated at 10-second intervals.
Sil Sup	Indicates whether the silence suppression was used for the call.
	2 of 2

The following is an example of the **`list measurements ip voice-stats hourly data [`*`network region number`*`]`** report:

```
list measurements ip voice-stats hourly data 12                    Page   1

Switch Name: ST10                            Date: 2:47 pm  THU SEP 13, 2007
IP VOICE STATISTICS NETWORK REGION DATA HOURLY REPORT
                                                          Packet      Peak
Meas  Board Calling        Called Num/          _Data_  Size Loss  Jit_ Dly_ EC
Hour  Loc   Number_______ FarEnd IP Add _Codec_ _Type_  (ms)  (%)    (ms)
1300  07B10 8234567890123 1234567890123 g729___ mod-pt  20   15    100_ 500_ n
                          3ffe:ffff:107::235:6eff:fe03:d9ff
      07B10 8234567890123 1234567890123 g729___ fax-pt  20   15    100_ 500_ n
                          3ffe:ffff:107::235:6eff:fe03:d9ff
      .
      .
      . Up to 5 calls
1200
.
.
.
1100
```

list measurements ip voice-stats hourly data at the network region field details

Field	Description
Switch Name	The name of system from which data is being collected/reported.
Date	Time and date that data is requested.
	1 of 2

Field	Description
Board Loc	The carrier/slot location of the media processor for which data is being reported.
Meas Hour	The hour (military time) in which data was collected.
Calling Number/ Called#/FE Addr	The number of the endpoint initiating the call (near end). The number of the endpoint that received the call (far end), followed by the associated far-end IP address.
Codec	The codec used for the call.
Data Type	Indicates the type of data call. Valid options include: l ttyrel (TTY Relay) l mod-pt (Modem pass-through) l fax-pt (FAX pass-through) l tty-pt (TTY pass-through) l t38fax (T.38 FAX) l faxrel (FAX relay) l modrel (Modem relay)
Pkt Size (ms)	The packet size for each steam of data for the associated call, measured in milliseconds.
Pkt Loss (%)	The packet Loss for the call. The Packet loss percentage is calculated at 10-second intervals.
Peak Jit (ms)	The peak amount of jitter recorded for the call, measured in milliseconds.
Peak Dly (ms)	The peak round trip delay recorded for the call, measured in milliseconds.
EC	Indicates whether the echo cancellation is turned on/off for the call.
	2 of 2

The following is an example of the **`list measurements ip voice-stats hourly jitter [`*`media processor board location`*`]`** report:

```
list measurements ip voice-stats hourly jitter 07B11              Page   1

Switch Name: ST10                            Date: 2:47 pm  THU SEP 13, 2007
IP VOICE STATISTICS MEDIA PROCESSOR JITTER HOURLY REPORT - NET REG 1__*
                                      Pkt   Time  Jitter-Buffr   Jitter
Meas  Calling       Called Number/          Size   of   Size Orn Urn  Avg_ Peak
Hour  Number        FarEnd IP Addr _Codec_  (ms)  Call  (ms)            (ms)
1300  30345678901__ 12345678901__  g729___  30_   0321  120  2   8    100_ 320_
                    3ffe:ffff:107::235:6eff:fe03:d9ff
      3033452234252 0114423456788  g723___  20_   1326  120  4   1    100_ 200_
                    198.255.255.255
      3033452234252 0115212345689  g711___  20_   5332  120  15  5    110_ 520_
                    3ffe:ffff:117::237:6eff:fe03:d8ff
      .
      .
      . Up to 5 calls
1200
1100
```

list measurements ip voice-stats hourly jitter for media processor field details

Field	Description
Switch Name	The name of system from which data is being collected/reported.
Date	Time and date that data is requested
Net Reg	The network region associated with the media processor for which data is being recorded.
Meas Hour	The hour (military time) in which data was collected.
Calling Number	The number of the endpoint initiating the call (near end).
Called Number/ FarEnd IP Addr	The number of the endpoint that received the call (far end), followed by the corresponding IP Address.
Codec	The codec used for the call.
Pkt Size (ms)	The packet size for each steam of data for the associated call, measured in milliseconds.
	1 of 2

Field	Description
Time of Call	A time stamp when threshold was first exceeded for the associated call, shown in MMSS (minutes seconds).
Jitter Buffr Size (ms)	The size of the jitter buffer used for the call, measured in milliseconds.
Jitter Buffr Orn	The Number of jitter buffer overruns occurred for the call. Overruns occur when many packets arrive into the jitter buffer very quickly, causing the jitter buffer to fill up. When this happens, the jitter buffer is unable to handle additional traffic/packets. If the number of overruns exceeds 99, the value in this field is "99+".
Jitter Buffr Urn	The number of jitter buffer underruns occurred for the call. When the arrival time of packets goes beyond the size of the jitter butter, a jitter buffer underrun occurs. This results in silence until there are additional packets in the jitter buffer to process. If the number of underruns exceeds 99, the value in this field is "99+".
Avg Jitter (ms)	The average amount of jitter recorded for the call over a 10-second reporting interval, measured in milliseconds.
Peak Jitter (ms)	The peak amount of jitter recorded for the call, measured in milliseconds.
	2 of 2

The following is an example of the **`list measurements ip voice-stats hourly rtdelay [`*`media processor board location`*`]`** report:

```
list measurements ip voice-stats hourly rtdelay 07b11                 Page   1

Switch Name: ST10                            Date: 2:47 pm  THU SEP 13, 2007
IP VOICE STATISTICS MEDIA PROCESSOR RTDELAY HOURLY REPORT - NET REG 120
                                Pkt        RT-Delay   Time
Meas  Calling Number/           Size  Dst  Avg  Peak   of    Data
Hour  Called#/FE Addr   _Codec_ (ms)  Reg   (ms)    Call   Call  Encryp  EC
1300  3035551212___      g729    20_   220  300_ 650_  1501   n     y       y
      0114498712345/3ffe:ffff:117::237:6eff:fe03:d8ff
        .
        .
        . Up to 5 calls
1200
.
.
.
1100
```

list measurements ip voice-stats hourly rtdelay for media processor field details

Field	Description
Switch Name	The name of system from which data is being collected/reported.
Date	Time and date that data is requested
Net Reg	The network region associated with the media processor for which data is being recorded.
Meas Hour	The hour (military time) in which data was collected.
Calling Number/ Called#/FE Addr	The number of the endpoint initiating the call (near end). The number of the endpoint that received the call (far end), followed by the associated far-end IP address.
Codec	The codec used for the call.
Pkt Size (ms)	The packet size for each steam of data for the associated call, measured in milliseconds
Dst Reg	The network region where the destination media processor is located.
Avg RT Delay (ms)	The average round trip delay of packets, measured in milliseconds.
Peak RT Delay (ms)	The peak round trip delay recorded for the call, measured in milliseconds.
Time of Call	A time stamp when threshold was first exceeded for the associated call, shown in MMSS (minutes seconds).
Data Call	Indicates whether the call is a data call.
Encryp	Indicates whether media encryption was used for the call.
EC	Indicates whether the echo cancellation is on/off for the call.

The following is an example of the **`list measurements ip voice-stats hourly pktloss [`*`media processor board location`*`]`** report:

```
list measurements ip voice-stats hourly pktloss 07b11                 Page   1

Switch Name: ST10                            Date: 2:47 pm  THU SEP 13, 2007
IP VOICE STATISTICS MEDIA PROCESSOR PACKET LOSS HOURLY REPORT- NET REG 1
                                        Time          Pkt   Total  Pkt
Meas  Calling Number/             Dst   of    UDP    Size  Lost   Loss  Sil
Hour  Called#/FE Addr   _Codec_   Reg  Call   Port   (ms)  Pkts   (%)   Sup
1300  3034214111___     g729___   220  1733   12345  30_   30__   5     n
      0114438472854/3ffe:ffff:117::237:6eff:fe03:d8ff
        .
        .
        . Up to 5 calls
1200
.
.
.
1100
```

list measurements ip voice-stats hourly pktloss for media processor field details

Field	Description
Switch Name	The name of system from which data is being collected/reported.
Date	Time and date that data is requested
Net Reg	The network region associated with the media processor for which data is being recorded.
Meas Hour	The hour (military time) in which data was collected.
Calling Number/ Called#/FE Addr	The number of the endpoint initiating the call (near end). The number of the endpoint that received the call (far end), followed by the associated far-end IP address.
Codec	The codec used for the call.
Pkt Size (ms)	The packet size for each steam of data for the associated call, measured in milliseconds.
Dst Reg	The network region where the destination media processor is located.
	1 of 2

Field	Description
Time of Call	A time stamp when threshold was first exceeded for the associated call, shown in MMSS (minutes seconds).
UDP Port	The UDP port used by the media processor for the call.
Total #Lost Pkts	The total number of packets lost for the call.
Pkt Loss (%)	The peak packet loss for the call. The packet loss percentage is calculated at 10-second intervals.
Sil Sup	Indicates whether the silence suppression was used for the call.
	2 of 2

The following is an example of the **`list measurements ip voice-stats hourly data [`*`media processor board location`*`]`** report:

```
list measurements ip voice-stats hourly data 07b11                    Page   1

Switch Name: ST10                             Date: 2:47 pm  THU SEP 13, 2007
IP VOICE STATISTICS MEDIA PROCESSOR DATA HOURLY REPORT - NET REG 53
                                                        Packet      Peak
Meas  Calling         Called Num/            _Data_  Size Loss  Jit_ Dly_  EC
Hour  Number_______  FarEnd IP Add  _Codec_  _Type_  (ms)  (%)     (ms)
1300  8234567890123  1234567890123  g711a    ttyrel  30    15   100  500   y
                     3ffe:ffff:117::237:6eff:fe03:d8ff
      3031234567890  0115311111111  g711mu   fax-pt  20    25   320  700   n
                     3ffe:ffff:117::246:6eff:fe03:d6ff
      3031234567890  0115311111111  g711mu   fax-pt  20    18   200  550   n
                     3ffe:ffff:125::237:6eff:fe03:d8ff
      .
      .
      . Up to 5 calls
1200
```

list measurements ip voice-stats hourly data for media processor field details

Field	Description
Switch Name	The name of system from which data is being collected/reported.
Date	Time and date that data is requested
	1 of 2

Field	Description
Net Reg	The network region associated with the media processor for which data is being recorded.
Meas Hour	The hour (military time) in which data was collected.
Calling Number/ Called#/FE Addr	The number of the endpoint initiating the call (near end). The number of the endpoint that received the call (far end), followed by the associated far-end IP address.
Codec	The codec used for the call.
Data Type	Indicates the type of data call. Valid options include: • ttyrel (TTY Relay) • mod-pt (Modem pass-through) • fax-pt (FAX pass-through) • tty-pt (TTY pass-through) • t38fax (T.38 FAX) • faxrel (FAX relay) • modrel (Modem relay)
Pkt Size (ms)	The packet size for each steam of data for the associated call, measured in milliseconds.
Pkt Loss (%)	The packet Loss for the call. The packet loss percentage is calculated at 10-second intervals.
Peak Jit (ms)	The peak amount of jitter recorded for the call.
Peak Dly (ms)	The peak round trip delay recorded for the call.
EC	Indicates whether the echo cancellation was turned on/off for the call.
	2 of 2

The following is an example of the **`list measurements ip voice-stats summary jitter today`** report:

```
list measurements ip voice-stats summary jitter today                 Page   1

Switch Name: yoda-srv2 wjb                    Date: 12:17 pm  THU JUL 17, 2008
                  IP VOICE STATISTICS SUMMARY JITTER REPORT
                                              Pkt  Time Jitter-Buffer Jitter
Src Meas  Board Calling Number/ Dst           Size  of  Size Orn Urn Avg Peak
Reg Hour  Loc   Called#/FEAddr  Reg  Codec    (ms) Call (ms)           (ms)
1   1100  01a03 4423203528210   143  g711m    1    1404 81   86  94  96  96
                2521382520444  192.168.1.1
1   1100  01a03 4423203528210   142  g729a    2    1404 82   87  94  97  97
                2521382520444  192.168.2.2
1   1100  01a03 4423203528210   141  unknown  3    1404 83   88  94  98  98
                2521382520444  192.168.3.3
1   1100  01a03 4423203528210   140  g722-64  4    1404 84   89  94  99  99
                2521382520444  192.168.4.4
1   1100  01a03 4423203528210   139  g723-63  5    1404 85   90  94  100 100
                2521382520444  192.168.5.5
2   1100  01b03 4423203528210   138  g723-53  6    1404 86   91  94  101 101
                2521382520444  192.168.6.6
2   1100  01b03 4423203528210   137  g723a    7    1404 87   92  94  102 102
                2521382520444  192.168.7.7
```

list measurements ip voice-stats summary jitter today field details

Field	Description
Switch Name	The name of system from which data is being collected/reported.
Date	Time and date that data is requested
Srg Reg	The network region associated with the media processor for which data is being recorded.
Meas Hour	The hour (military time) in which data was collected.
Board Loc	The carrier/slot location of the media processor for which data is being reported.
Calling Number	The number of the endpoint initiating the call (near end).
	1 of 2

Field	Description
Called Number/ FarEnd IP Addr	The number of the endpoint that received the call (far end), followed by the corresponding IP Address.
Dst Reg	The network region where the destination media processor is located.
Codec	The codec used for the call.
Pkt Size (ms)	The packet size for each steam of data for the associated call, measured in milliseconds.
Time of Call	A time stamp when threshold was first exceeded for the associated call, shown in MMSS (minutes seconds).
Jitter Buffer Size (ms)	The size of the jitter buffer used for the call, measured in milliseconds.
Jitter Buffer Orn	The number of jitter buffer overruns occurred for the call. Overruns occur when many packets arrive into the jitter buffer very quickly, causing the jitter buffer to fill up. When this happens, the jitter buffer is unable to handle additional traffic/packets. If the number of overruns exceeds 99, the value in this field is "99+".
Jitter Buffer Urn	The number of jitter buffer underruns occurred for the call. When the arrival time of packets goes beyond the size of the jitter butter, a jitter buffer underrun occurs. This results in silence until there are additional packets in the jitter buffer to process. If the number of underruns exceeds 99, the value in this field is "99+".
Avg Jitter (ms)	The average amount of jitter recorded for the call over a 10-second reporting interval, measured in milliseconds.
Peak Jitter (ms)	The peak amount of jitter recorded for the call, measured in milliseconds.
	2 of 2

The following is an example of the **`list measurements ip voice-stats summary rtdelay today`** report:

```
list measurements ip voice-stats summary rtdelay today                Page   1

Switch Name: yoda-srv2 wjb                    Date: 12:21 pm  THU JUL 17, 2008
                  IP VOICE STATISTICS SUMMARY RTDELAY REPORT
                                  Pkt              RT-Delay   Time
Src Meas Board  Calling Number/ Size Dst         Avg  Peak   of  Data
Reg Hour Loc    Called#/FE-Addr (ms) Reg Codec   (ms) (ms)  Call Call Encr EC
187 1100 01a07  7737303528210    37  12  g711m   1     1    1604  n    n    n
                2521383530777  192.168.160.1
180 1100 01a07  7737303528210    37  12  g729a   2     2    1614  n    n    n
                2521383530777  192.168.160.2
180 1100 01a07  7737303528210    37  12  unknown 3     3    1624  n    n    n
                2521383530777  192.168.160.3
180 1100 01a07  7737303528210    37  12  g722-64 4     4    1634  n    n    n
                2521383530777  3ffe:ffff:117::237:6eff:fe03:d8ff
180 1100 01a07  7737303528210    37  12  g723-63 5     5    1644  n    n    n
                2521383530777  192.168.160.5
180 1100 01b04  7737303528210    37 12   g723-53 6     6    1604  n    n    n
                2521383530777  192.168.160.6
180 1100 01b04  7737303528210    37 12   g723a   7     7    1624  n    n    n
                2521383530777  192.168.160.7
```

list measurements ip voice-stats summary rtdelay today field details

Field	Description
Switch Name	The name of system from which data is being collected/reported.
Date	Time and date that data is requested.
Srg Reg	The network region associated with the media processor for which data is being recorded.
Meas Hour	The hour (military time) in which data was collected.
Board Loc	The carrier/slot location of the media processor for which data is being reported.
Calling Number/ Called#/FE Addr	The number of the endpoint initiating the call (near end). The number of the endpoint that received the call (far end), followed by the associated far-end IP address.
Codec	The codec used for the call.
Pkt Size (ms)	The packet size for each steam of data for the associated call, measured in milliseconds.
	1 of 2

Field	Description
Dst Reg	The network region where the destination media processor is located.
Avg RT Delay (ms)	The average round trip delay recorded for the call.
Peak RT Delay (ms)	The peak round trip delay recorded for the call.
Time of Call	A time stamp when threshold was first exceeded for the associated call, shown in MMSS (minutes seconds)
Data Call	Indicates whether the call is a data call.
Encryp	Indicates whether media encryption was used for the call.
EC	Indicates whether the echo cancellation is on/off for the call.
	2 of 2

The following is an example of the **`list measurements ip voice-stats summary pktloss today`** report:

```
list measurements ip voice-stats summary pktloss today                Page   1

Switch Name: yoda-srv2 wjb                    Date: 12:20 pm  THU JUL 17, 2008
                  IP VOICE STATISTICS SUMMARY PKTLOSS REPORT
                                             Time        Pkt   Total Packet
Src Meas  Board Calling Number/ Dst          of   UDP   Size  #lost   Loss  Sil
Reg Hour  Loc   Called#/FEAddr  Reg Codec  Call  Port  (ms)   Pkts    %    Sup
2   1100  01a03 5525203528210   243 g711m  1504  130   1     137     1     y
                2521382520555  192.168.160.1
2   1100  01a03 5525203528210   242 g729a  1504  130   2     138     2     y
                2521382520555  192.168.160.2
2   1100  01a03 5525203528210   241 unknown1504  130   3     139     3     y
                2521382520555  192.168.160.3
2   1100  01a03 5525203528210   240 g722-641504  130   4     140     4     y
                2521382520555  192.168.160.4
2   1100  01a03 5525203528210   239 g723-631504  130   5     141     5     y
                2521382520555  192.168.160.5
3   1100  02b03 5525203528210   238 g723-531504  130   6     142     6     y
                2521382520555  192.168.160.6
3   1100  02b03 5525203528210   237 g723a  1504  130   7     143     7     y
```

list measurements ip voice-stats summary pktloss today field details

Field	Description
Switch Name	The name of system from which data is being collected/reported.
Date	Time and date that data is requested
Src Reg	The network region associated with the media processor for which data is being recorded.
Meas Hour	The hour (military time) in which data was collected.
Board Loc	The carrier/slot location of the media processor for which data is being reported.
Calling Number/ Called#/FE Addr	The number of the endpoint initiating the call (near end). The number of the endpoint that received the call (far end), followed by the associated far-end IP address.
Codec	The codec used for the call.
Pkt Size (ms)	The packet size for each steam of data for the associated call, measured in milliseconds.
Dst Reg	The network region where the destination media processor is located.
Time of Call	A time stamp when threshold was first exceeded for the associated call, shown in MMSS (minutes seconds)
UDP Port	The UDP port used by the media processor for the call.
Total #Lost Pkts	The total number of packets lost for this call.
Pkt Loss (%)	The peak packet loss for the call. The packet loss percentage is calculated at 10-second intervals.
Sil Sup	Indicates whether the silence suppression was used for the call.

The following is an example of the **`list measurements ip voice-stats summary data today`** report:

```
list measurements ip voice-stats summary data today              Page   1

Switch Name: ST10                            Date: 2:47 pm  THU SEP 13, 2007
IP VOICE STATISTICS SUMMARY DATA REPORT
                                                          Packet     Peak
Src  Meas  Board  Calling Num/   Dst          _Data_  Size Loss  Jit_ Dly_  EC
Reg  Hour  Loc    Called#/FE IP  Rgn _Codec_  _Type_  (ms)  (%)    (ms)
  1  1300  07b11  3035381111___  120 g711a    mod-pt   10   15   100_ 500_  n
                  1234556789123 3ffe:ffff:117::237:6eff:fe03:d8ff
  1  1300  07b11  8329374238742    3 g711a    fax-pt   20    7   120  300   n
                  3035551212___ 3ffe:ffff:117::237:6eff:fe03:d8ff
 26  1200  08e10  6543212345678    5 g711a    fax-pt   20    8   300  400   y
                  1234556443345 xxx.xxx.xxx.xxx
200  1300  07b11  1234567890123  120 g711mu   mod-pt   20   17   120  500   n
                  0114356738495 xxx.xxx.xxx.xxx
```

list measurements ip voice-stats summary data today field details

Field	Description
Switch Name	The name of system from which data is being collected/reported.
Date	Time and date that data is requested
Src Reg	The network region associated with the media processor for which data is being captured.
Meas Hour	The hour (military time) in which data was collected.
Calling Number/ Called#/FE Addr	The number of the endpoint initiating the call (near end). The number of the endpoint that received the call (far end), followed by the associated far-end IP address.
Dst Reg	The network region where the destination media processor is located.
Codec	The codec used for the call.
	1 of 2

Field	Description
Data Type	Indicates the type of data call. Valid options include: l ttyrel (TTY Relay) l mod-pt (Modem pass-through) l fax-pt (FAX pass-through) l tty-pt (TTY pass-through) l t38fax (T.38 FAX) l faxrel (FAX relay) l modrel (Modem relay)
Pkt Size (ms)	The packet size for each steam of data for the associated call, measured in milliseconds.
Pkt Loss (%)	The packet Loss for the call. The packet loss percentage is calculated at 10-second intervals.
Peak Jit (ms)	The peak amount of jitter recorded for the call.
Peak Dly (ms)	The peak round trip delay recorded for the call, measured in milliseconds.
EC	Indicates whether the echo cancellation was turned on or off for the call.
	2 of 2

list measurements tone-receiver

`list measurements tone-receiver` ***`qualifier`***

Use **`list measurements tone-receiver`** to see how many tone receiver ports the server is using and has available.

Action/Object	Qualifier	Qualifier Description
`list measurements tone-receiver`	**`schedule`**	See Common Input Parameters on page 25.
	`summary yesterday-peak` **`summary today-peak`** **`summary last-hour`**	Lists a summary of the number of tone receiver ports the server used and had available for the previous day's peak, today's peak, or the last-hour.
	`detail yesterday-peak` **`detail today-peak`** **`detail last-hour`**	Lists a detail of the number of tone receiver ports the server used and had available for the previous day's peak, today's peak, or the last-hour.

The following example shows the output from **`list measurements tone-receiver detail yesterday-peak.`**

```
list measurements tone-receiver detail yesterday-peak                    Page   1

Switch Name: Denver                           Date: 5:18 pm  WED OCT 17, 2007

                       TONE RECEIVER DETAIL MEASUREMENTS

                              PN      PN        Peak      Total    Peak
       Hour  PN   Type        Req     Alloc     Alloc     Off-PN   Off-PN

       2300   1   DTMF         15        15        2          0        0
       1200   1   GPTD          3         3        1          0        0
       2300   1   CC-TTR        0         0        0          0        0
       2300   1   CC-CPTR       0         0        0          0        0
       2300   1   CC-MFCR       0         0        0          0        0
```

list measurements tone-receiver detail yesterday-peak field descriptions

list measurements tone-receiver detail yesterday-peak field descriptions *1 of 2*

Field	Description
Switch Name	Name of switch
Date	Time and date of report
Hour	The hour of peak tone-receiver usage per port for the time period specified (in this case, yesterday's peak)
PN	Port Network
Type	Type of tone-receiver being measured
PN Req	Port Network Requests. The number of requests for DTMF, GPTD, CC-TTR, CC-CPTR, or MFCR receivers within the port network during the listed hour.
PN Alloc	Port Network Total Allocation. The total number of DTMF, GPTD, CC-TTR, CC-CPTR, or MFCR receivers located in the listed port network allocated for use during the listed hour.
Peak Alloc	Peak Allocation. The peak number of DTMF, GPTD, CC-TTR, CC-CPTR, or MFCR receivers located in the listed port network in use simultaneously during the listed hour.
	1 of 2

list measurements tone-receiver detail yesterday-peak field descriptions *2 of 2*

Field	Description
Total Off-PN	Total Off-Port Network. For the identified hour and port network, this is the total number of DTMF, GPTD, CC-TTR, CC-CPTR, or MFCR receivers allocated on a different port network for requests originated on this port network. With ideal conditions, this field shows **0**. With more practical conditions, the field displays a larger number. **Suggested actions:** Locate communities of interest within the same port network. Provide sufficient tone receivers for each port network.
Peak Off-PN	Peak Off-Port Network. For the identified hour and port network, this is the peak number of DTMF, GPTD, CC-TTR, CC-CPTR, or MFCR receivers simultaneously allocated on a different port network for requests originated on this port network. A desirable goal is to minimize (within reason) the number displayed with this field. **Suggested actions:** Locate communities of interest within the same port network. Provide sufficient tone receivers for each port network. Perhaps you should move one TN748 and TN420 circuit pack (or, if you are working with a CC-TTR, CC-CPTR, and MFCR, move a TN744 circuit pack) to the PN with the Off-PN counts to minimize Off-PN allocations.
	2 of 2

The following example shows the output from **`list measurements tone-receiver summary last-hour.`**

```
list measurements tone-receiver summary last-hour

Switch Name: Denver                          Date: 5:23 pm  WED OCT 17, 2007

                       TONE RECEIVER SUMMARY MEASUREMENTS

      Meas             Total     Peak     Total     Peak      Total     Peak
Hour  Type             Req       Req      Queued    Queued    Denied    Denied

1600  DTMF                 16        2        0         0         0         0
1600  GPTD                  0        0                          0         0
1600  CC-TTR                0        0        0         0         0         0
1600  CC-CPTR               0        0                          0         0
1600  CC-MFCR               0        0                          0         0

      TR Type          Total Avail        Capabilities

      DTMR-PT             40              DTMF
      GPTD-PT             20              GPTD
      CLAS-PT              0              DTMF,CC-TTR,CC-CPTR,MFCR
      ETR-PT              64              DTMF,CC-TTR,CC-CPTR,MFCR,GPTD
```

list measurements tone-receiver summary last-hour field descriptions

list measurements tone-receiver summary last-hour field descriptions ***1 of 2***

Field	Description
Switch Name	Name of switch
Date	Time and date of report
Hour	The hour the measurement was taken
Meas Type	Type of tone-receiver being measured
Total Req	Total Requests. The system-wide total number of requests, by call processing, for DTMF, GPTD, CC-TTR, CC-CPTR, or MFCR receivers during the listed hour. The total number of requests is calculated by incrementing a counter for each request.
Peak Req	Peak Requests. The system-wide peak number of simultaneous requests for DTMF, GPTD, CC-TTR, CC-CPTR, or MFCR receivers that occurred at any one time for the listed hour. The peak (or maximum) number is calculated by incrementing a counter for each request and decreasing the counter when the request fails or a tone receiver is released. If the Peak Req field indicates a number higher than listed in the Avail field, certain requests were either queued or denied during the peak time interval. Denied requests fail and are given the reorder tone.
Total Queued	The system-wide total number of requests queued during the listed hour. A request is queued when there are no receivers immediately available. Only DTMF and CC-TTR requests are queued. If a request for a receiver is made in one port network, and no receivers are available, then the request is offered to the next port network. If no receivers are available on any port network, then the request is queued. Queued call requests do not receive dial tone until a tone receiver becomes available.
Peak Queued	The system-wide maximum number of call requests queued at any one time during the listed hour. Maximum queue size: • TMF requests = 4 • CC-TTR call vectoring requests = 80.
Total Denied	The system-wide total number of requests denied because no receivers were available during the listed hour. For DTMF-receiver or CCTR requests, this happens only after the queue is full. Those requests denied are given reorder tone.
	1 of 2

list measurements tone-receiver summary last-hour field descriptions *2 of 2*

Field	Description
Peak Denied	The system-wide peak number of requests denied because no receivers were available during the listed hour. **Suggested action:** l Increase the number of tone receivers by the number displayed in the Peak Denied field. l Administer the system as “non-blocking” for tone receivers: increase the number of tone receivers (the Avail field) so all requests receive service immediately and no requests are queued. For example, keep the value displayed in the Avail field greater than that displayed in the Peak Req field.
TR Type	Type of tone-receiver
Total Avail	Number of tone-receivers of each type available for use
Capabilities	Tone capabilities of each tone-receiver
	2 of 2

media-gateway

See:
add media-gateway on page 433
change media-gateway on page 437
display media-gateway on page 437
list media-gateway on page 438
list configuration media-gateway on page 210
list trace media-gateway on page 655
reset media-gateway on page 441
status media-gateways on page 441
test media-gateway on page 444

add media-gateway

`add media-gateway [ x | next ]`

Use **`add media-gateway`** from the primary server to add a Media Gateway to the system.

Action/Object	Qualifier	Qualifier Description	Login	Default
`add media-gateway`	***x*** **`next`**	Number to assign to the media gateway Next available number		

This following example shows a typical input screen for **add media-gateway next**.

```
add media-gateway next                                                  Page 1 of 1
                                      MEDIA GATEWAY
          Number: 1                                     Registered? n
            Type: G700                        FW Version/HW Vintage:
            Name:                                    MGP IP Address:
       Serial No:                             Controller IP Address:
    Encrypt Link? y                                    MAC Address:
  Network Region:
        Location: 1                                     Site Data:
   Recovery Rule: none

Slot  Module Type                     Name
V1:
V2:
V3:
V4:




V8:
V9:

                                              Max Survivable IP Ext:
```

add media-gateway field descriptions

add media-gateway field descriptions ***1 of 4***

Field	Description
Controller IP Address	(Display only) Blank until the media gateway registers for the first time. This is the IP address the that the media gateway is registered to on the server. l For S87xx and other External Call Controllers (ECC), this is a CLAN address. l For S8300, S8500-LSP and other servers providing Processor Ethernet (PE), this is the native NIC address.
	1 of 4

add media-gateway field descriptions ***2 of 4***

Field	Description
Enable CF?	Appears only for G450 and G430 gateways and only when the announcement module is administered in the V9 slot. The **Enable CF?** field indicates if you have enabled a compact flash to backup or restore the announcement files. The valid responses are **y** and **n**, where **n** is the default response. Enter **y** to eable a Compact Flash. If you are using a G450 Release 1.*x*, where the compact flash is not a valid option, the **Enable CF?** field is display-only and the value is set to **n**.
Encrypt Link	The valid values are **y** and **n**. Enter **y** to encrypt the H.248 link on the gateway. **y** is the default value when the gateway is added.
FW Version/ HW Vintage	(Display only) Current firmware and hardware versions on the media gateway.
IP Address	(Display only) The IP address of the media gateway. Blank until the Media Gateway registers for the first time. Once the media gateway has registered, that IP address always appears, even if the media gateway becomes unregistered, until a media gateway with a different IP address is validly registered with the same administered identifier. The populated IP address is persistent over reboots.
Location	Refers to a time-zone offset, day-light savings rule, and number plan area code. **WARNING:** If you change the Location field while the media gateway is registered, you must reboot the media gateway to ensure optimal audio quality.
MAC Address	(Display only) MAC Address of the media gateway. Blank until the Media Gateway registers for the first time. Once the Media Gateway has registered, that MAC Address appears, even if the Media Gateway becomes unregistered, until a Media Gateway with a different MAC Address is validly registered with the same administered identifier.
	2 of 4

add media-gateway field descriptions ***3 of 4***

Field	Description
Max Survivable IP Ext:	Appears when Type is **G250, G350, G450, J2320,** and so on. Limits the number of simultaneous endpoint registrations for the media gateway in SLS mode. VoIP resources in SLS can handle a limited number of simultaneous endpoint registrations. Administering this field above the default value can result in system performance problems. For information about SLS, see *Administration of the Avaya G250 and the G350 Gateways (03-300436)*.
MGP IP Address	This is the IP address of the H.248 media gateway platform. The platform could reside in a network component which has its own IP address.
Module Type	Type of Avaya Media Module in the slot. Refer to the administration guide of the media gateway being added for valid media modules and slot configuration. If an administered Media Module is in conflict with the inserted Media Module, a pound sign (#) appears to the left of the **Module Type** field on the Media Gateway screen.
Name	Name assigned to the gateway
Name (Controller)	Name assigned to the controller.
Network Region	Network Region assigned to the media gateway. Used by the primary server to allocate resources from the nearest Media Gateway. The number of characters is dependent upon the type of primary server.
Number	(Display only) Number assigned to the media gateway.
Recovery Rule	Number of the auto-fallback recovery rule that applies to this Media Gateway. The recovery rule is set on the **`system-parameters mg-recovery-rule`** screen. **none** = no automatic fallback registrations are accepted. See *Administering Avaya Aura™ Communication Manager (03-300509)* and *Administering Network Connectivity on Avaya Aura™ Communication Manager (555-233-504)*
Registered?	(Display only) **y** = The media gateway is currently registered with the primary server. **n** = The media gateway is not currently registered with the primary server. **pd** = The media gateway registration is pending, subject to the Recovery Rule assigned on the set on the **`system-parameters mg-recovery-rule`** screen.
Serial No	Used for the controller to identify the gateway
Site Data	General site information
	3 of 4

add media-gateway field descriptions ***4 of 4***

Field	Description
Slot	(Display only) Slot number for the identified Media Module. Slots V8-V9, for virtual media modules, are listed after Slots V1-V4.
Type	Type of media gateway. Use the help key to see the list of valid media gateway types.
	4 of 4

change media-gateway

`change media-gateway x`

Use **`change media-gateway`** to change the administration of a Media Gateway.

Action/Object	Qualifier	Qualifier Description
`change media-gateway`	***x***	number assigned to the media gateway

See add media-gateway on page 433 for an example of the screen and an explanation of the field descriptions.

display media-gateway

`display media-gateway x [schedule]`

Use **`display media-gateway`** to see information for a specific Media Gateway.

Action/Object	Qualifier	Qualifier Description
`display media-gateway`	***x*** ***schedule***	number to assign to the media gateway See Common Input Parameters on page 25.

See add media-gateway on page 433 for an example of the screen and an explanation of the field descriptions. However, the **display media-gateway** form shows the following additional media gateway registration statuses for the field **Registered?**:

display media-gateway field descriptions

Field	Description
Registered?	(Display only) **ad** = The media gateway is in a network region that was automatically disabled by the split registration solution feature. To enable the network region (if the network region has a gateway administered for time-day-window), the administrator does not need to perform any action . The region re-enables itself. **rd** = The media gateway is in a network region that was both manually and automatically disabled. In this case, the status form shows only the manual status **rd**. To enable the network region, the administrator must run the **enable nr-registration** command. **ap** = The media gateway is in a network region that was automatically disabled by the split registration solution feature and is now communicating with CM. To enable the network region (if the network region has a gateway administered for time-day-window), the administrator does not need to perform any action . The region re-enables itself. **rp** = The media gateway is in a network region that was manually disabled by the **disable nr-registration** command and is now communicating with CM. If a network region is both manually and automatically disabled, the status form shows only the manual status **rp**. To enable the network region, the administrator must run the **enable nr-registration** command.

list media-gateway

list media-gateway [type *x*] [region #] [schedule]

Use **list media-gateway** from the primary server to see all administered media gateways.

Action/Object	Qualifier	Qualifier Description
list media-gateway	**type *x*** **region #** **schedule**	type of media-gateway (g250, etc.) region number See Common Input Parameters on page 25.

This is an example of **`list media-gateway`**.

```
list media-gateway                                                  page 1 of x

                              MEDIA-GATEWAY REPORT

Num  Name         Serial No/         IP Address       Type   NetRgn   Reg?
                  FW Ver/HW Vint     Cntrl IP Addr            RecRule

1    mediagw1     01DR07125102                        G700    1        n
                  unavailable

2    mediagw2     01DR07128724       xxx.x  .xx. .xx  G700    1        y
                  xxx.x  .x  /0      xxx.x  .xx. .xx
```

list media-gateway field descriptions

list media-gateway field descriptions ***1 of 2***

Field	Description
Number	The number assigned to the media gateway by the primary server administration
Name	The name given to the media gateway by the user
Serial No	The serial number of the media gateway. Use the **`show system`** media gateway CLI command or see the sticker on the back of the unit to locate the media gateway serial number.
IP Address	The IP address of the media gateway. The IP address field is blank until the media gateway registers for the first time. Once the media gateway registers, the IP address appears, even if the media gateway becomes unregistered. That IP address changes when a media gateway with a different IP address is validly registered with the same administered identifier. The populated IP address is persistent over reboots.
Type	Type of media gateway. Use the help key to list the valid types of media gateways
NetRgn	The network region number assigned to the media gateway
	1 of 2

list media-gateway field descriptions ***2 of 2***

Field	Description
Reg?	**y** = A media gateway is currently registered with the primary server. **n** = A media gateway is not currently registered with the primary server. **pd** = A media gateway registration is pending, subject to the Recovery Rule as assigned on the set on the **`system-parameters mg-recovery-rule`** screen. **ad** = The media gateway 1 is in a network region that was automatically disabled by the split registration solution feature and the media gateway 2 is in a network region that was manually disabled by the **`disable nr registration`** command. To enable the network region (if the network region has a gateway administered for time-day-window), the administrator does not need to perform any action . The region re-enables itself. **rd** = The media gateway is in a network region that was both manually and automatically disabled. In this case, the status form shows only the manual status **rd**. To enable the network region, the administrator must run the **`enable nr-registration`** command. **ap** = The media gateway is in a network region that was automatically disabled by the split registration solution feature and is now communicating with CM. To enable the network region (if the network region has a gateway administered for time-day-window), the administrator does not need to perform any action . The region re-enables itself. **rp** = The media gateway is in a network region that was manually disabled by the **`disable nr-registration`** command and is now communicating with CM. If a network region is both manually and automatically disabled, the status form shows only the manual status **rp**. To enable the network region, the administrator must run the **`enable nr-registration`** command.
FW Ver/ HW Vint	Firmware version and hardware vintage
Cntrl IP Addr	IP address of the C-LAN or NIC
RecRule	Recovery Rule that applies to the media gateway, as set on the **`system-parameters mg-recovery-rule`** screen. See *Administering Avaya Aura™ Communication Manager (03-300509)* and *Administering Network Connectivity on Avaya Aura™ Communication Manager (555-233-504)*.
	2 of 2

reset media-gateway

`reset media-gateway [ x | all ] level [ 1 | 2 | 3]`

Use **`reset media-gateway`** from the primary server to add a media gateway to the system.

Action/Object	Qualifier	Qualifier Description
`reset media-gateway`	***x***	number of the media gateway to reset
	`all`	all registered media gateways
	`level 1`	**`reset media-gateway level 1`** forces a reset of the entire platform and is destructive to user connections. The media gateway attempts to register with the media gateway controllers on its MGC list.
	`level 2`	**`reset media-gateway level 2`** resets the H.248 link and does not tear-down calls. The media gateway attempts to register with the media gateway controllers on its MGC list. Use **`reset media-gateway level 2`** to force a media gateway off of an LSP.
	`level 3`	**`reset media-gateway level 3`** resets all media modules and tears down all calls.

status media-gateways

`status media-gateways`

Use **`status media-gateways`** to see the alarm status of the administered Media Gateways.

`status media-gateways` lists alarms, busyout summary, and H.248 link status for the media gateways. The alarms are associated only with board-type alarms on the Media Modules. Status for VoIP and MGP alarms are provided via the Media Gateway Processor CLI.

The following is an example of **`status media-gateways`**.

```
status media-gateways                                                    page 1

 ALARM SUMMARY    BUSY-OUT SUMMARY    H.248 LINK SUMMARY
   Major:    0       Trunks:  0         Links Down:   0      # Logins: 1
   Minor:    0     Stations:  0           Links Up:   0
 Warning:    0
                                GATEWAY STATUS

    Alarms          Alarms          Alarms          Alarms          Alarms
MG Mj Mn Wn Lk  MG Mj Mn Wn Lk  MG Mj Mn Wn Lk  MG Mj Mn Wn Lk  MG Mj Mn Wn Lk
 1  0| 0| 0|up   9  0| 0| 0|up  17  0| 0| 0|up  25  0| 0| 0|up  33  0| 0| 0|up
 2  0| 0| 0|up  10  0| 0| 0|up  18  0| 0| 0|up  26  0| 0| 0|up  34  0| 0| 0|up
 3  0| 0| 0|up  11  0| 0| 0|up  19  0| 0| 0|up  27  0| 0| 0|up  35  0| 0| 0|up
 4  0| 0| 0|up  12  0| 0| 0|up  20  0| 0| 0|up  28  0| 0| 0|up  36  0| 0| 0|up
 5  0| 0| 0|up  13  0| 0| 0|up  21  0| 0| 0|up  29  0| 0| 0|up  37  0| 0| 0|up
 6  0| 0| 0|up  14  0| 0| 0|up  22  0| 0| 0|up  30  0| 0| 0|up  38  0| 0| 0|up
 7  0| 0| 0|up  15  0| 0| 0|up  23  0| 0| 0|up  31  0| 0| 0|up  39  0| 0| 0|up
 8  0| 0| 0|rd  16  0| 0| 0|up  24  0| 0| 0|up  32  0| 0| 0|up  40  0| 0| 0|up
```

status media-gateways field descriptions

status media-gateways field descriptions *1 of 2*

Field	Description
ALARM SUMMARY	Current number of alarms (Major/Minor/Warning) for all administered media gateways
BUSY-OUT SUMMARY	Current number of trunks/stations in a busy-out state for all administered media gateways
H.248 LINK SUMMARY	Current number of H.248 links that are down and up for all administered media gateways
	1 of 2

status media-gateways field descriptions ***2 of 2***

Field	Description
GATEWAY STATUS Alarms (Mj Mn Wn)	Number of major alarms, minor alarms, and warnings that exist on each administered media gateways.
GATEWAY STATUS Lk	Status of the H.248 link on each administered media gateways **up** = the link is up **dn** = the link is down **pd** = the media gateway has not yet returned to the primary call controller after having at least one registration request denied. **ad** = The media gateway 1 is in a network region that was automatically disabled by the split registration solution feature and the media gateway 2 is in a region that was manually disabled by the disable nr registration command. To enable the network region (if the network region has a gateway administered for time-day-window), the administrator does not need to perform any action . The region re-enables itself. **rd** = The media gateway is in a network region that was both manually and automatically disabled. In this case, the status form shows only the manual status **rd**. To enable the network region, the administrator must run the **`enable nr-registration`** command. **ap** = The media gateway 1 is in a network region that was automatically disabled by the split registration solution feature and is now communicating with CM and the media gateway 2 is in a network region that was manually disabled by the disable **`nr-registration command`** and is now communicating with CM. To enable the network region (if the network region has a gateway administered for time-day-window), the administrator does not need to perform any action . The region re-enables itself. **rp** = The media gateway is in a network region that was both manually and automatically disabled. In this case, the status form shows only the manual status **rp**. To enable the network region, the administrator must run the **`enable nr-registration`** command.
	2 of 2

test media-gateway

`test media-gateway x`

Action/Object	Qualifier	Qualifier Description
`test media-gateway`	***x***	number assigned to the media gateway

Use **`test media-gateway`** from the primary server to run a board audit, an H.248 link audit, and an H.248 context audit.

- The link (test 1527) and context audits run successfully and no error codes are associated with the tests. Use **`test media-gateway`** to run an H.248 link audit when there is an alarm against a Media Gateway for being unregistered when it actually is registered. If there is an interchange while a media gateway is registering or unregistering, the alarm may appear and **`status media-gateway`** and **`list media-gateway`** may incorrectly show the media gateway to be unregistered.
- Results of **`test media-gateway`** vary depending on configuration of the media gateway.

test media-gateway results

The media gateway is operating as	and is	test result
main server	registered	pass
local survivable processor	registered	fail with error code 257
main server	unregistered, and the Link Loss Delay Timer period has not expired (link bounce is occurring)	fail with error code 769
main server	unregistered, and the Link Loss Delay Timer period has expired	fail with error code 1

media-processor

See:
set media-processor on page 445
status media-processor board on page 448

set media-processor

`set media-processor location [ lock | unlock ] [ override ]`

Use **`set media-processor`** to request a demand interchange of TN2602AP IP Media Resource 320 circuit packs. Use **`set media-processor location lock`** to prevent an undesired interchange.

Action/Object	Qualifier	Qualifier Description	Login
`set media-processor`	***`location`***	location of the Media Resource to be active	craft
	`lock`	boards remain in their current state (active/standby)	
	`unlock`	clear the locked state	
	`override`	force an interchange to a less-healthy board	

When **`set media-processor`** does not produce an interchange, an error message appears.

set media-processor error messages

SAT Error Message	Description
Command only supported by a TN2602 AP and greater board	The board location specified is not a TN2602 IP Media Resource. Use **`list config`** to verify the TN code and identify the board in this location.
Duplication not administered for this media-processor	This IP Media Resource is not administered as a duplicated board. Use **`display ip-interface`** to verify administration of the board.
Invalid duplication state for this media-processor pair	This pair of duplicated IP Media Resources has not transitioned to a state where one is active and one is standby. Use **`status media-processor`** to verify the duplication status of the IP Media Resources.
standby media-processor is not refreshed; use “override”	The standby IP Media Resource does not have the same set of calls up as the active board. An interchange making the standby active would cause a loss of some or all of the calls. Use **`set media-processor location override`** to ignore the warning and continue the interchange.

If the **set media-processor** interchange fails, the TEST RESULTS screen appears with a result of FAIL and an Error Code.

Table 37: set media-processor Test Results Error Codes ***1 of 2***

Error Code	Description
1	Mode not configured. The board indicates that it has not been configured to be duplex mode.
2	Requested state not recognized. The message to the board to go active or standby is corrupted (neither active nor standby).
3	Board locked active. To prevent interchanges when certain operations are being performed, it is possible to disable interchanges with **set media-processor lock**. Error Code 3 appears when a demand interchange is requested and the board is locked in the active state. Use **set media-processor unlock** to unlock the boards.
4	Board locked standby. To prevent interchanges when certain operations are being performed, interchanges are disabled with **set media-processor lock**. Error Code 4 is returned when a demand interchange is requested and the board is locked in the standby state. Use **set media-processor unlock** to unlock the boards.
5	Peer state of health better. The process to make this board standby was denied because the health of the current active board is better. Use **set media-processor override** to force the interchange if necessary. Use **set media-processor lock** within 20 seconds; otherwise the boards will automatically interchange back.
6	Peer state of health worse. A request to make this board active was denied because the health of the current standby board is worse. Use **set media-processor override** to force the interchange if necessary. Use **set media-processor lock** within 20 seconds; otherwise the boards will automatically interchange back.
7	Interchange prevented by the damping timer. To prevent interchange oscillation, and to allow for locking of less health boards in the active state, a damping timer of 20 seconds is started after each interchange. If an interchange request is received during that period, it is prevented and this error code is returned. Use **set media-processor override** to bypass this operation.
8	Internal error prevented interchange. An internal error in the board prevented the interchange.
9	Incorrect network configuration. For duplex configurations, additional network configuration data values are required, and they must be valid. Specifically, both boards must be on the same subnet and they each must have their peer addresses. If this information has not been configured or it is invalid, the interchange fails with this code
	1 of 2

Table 37: set media-processor Test Results Error Codes ***2 of 2***

Error Code	Description
10	Interchange in progress. If a state transition is already in progress when an interchange request is received, the state requested by the command is compared with the state currently being transitioned to. If the states are not the same, the interchange request is ignored and this error code is returned.
11	Internal error. This error is reported if an interchange request is received and the duplication subsystem on the board is stuck in the arbitration state, unable to go either active or standby as a result of a mode downlink from CM software
12	Internal error. This error is reported if an interchange request is received and the duplication subsystem on the board is stuck in the arbitration state, unable to go either active or standby as a result of a previous interchange request.
501	Internal error. This error is reported when no response is received from the active-going-standby board.
502	Internal error. This error is reported when no response is received from the standby-going-active board.
	2 of 2

status media-processor

`status media-processor [`*`location`*` | all]`

Use **`status media-processor`** to see the busyout status of the specified MedPro or IPMedPro media processor board.

Action/Object	Qualifier	Qualifier Description	Login
`status media-processor`	***`location`*** **`all`**	location of the media processor all media processor boards in a system	

The following is an example of **`status media-processor all`**.

```
status media-processor all                                          Page 1 of 1
                              IP BEARER INTERFACE STATUS

           Alarms   Links                          Alarms   Links
Slot  Code  Mj Mn Wn Pr Cl El Dup St      Slot  Code  Mj Mn Wn Pr Cl El Dup St
1A05  TN2602 0| 0| 0|up|up|up|B05|act     8A08  TN2602 0| 0| 0|up|up|up|B08|act
1B05  TN2602 0| 0| 0|up|up|up|A05|sby     8B08  TN2602 0| 0| 0|up|up|up|A08|sby

Pr=Peer Link, Cl=Control Link, El=Ethernet Link, Dup=Duplicate Slot, St=state
```

status media-processor all field descriptions

status media-processor all field descriptions

Field	Description
If a circuit pack is duplicated, this screen indicates which is the active board. **na** = non-duplicated circuit packs	
Slot	Location of the media processor circuit pack
Code	TN code for the media processor circuit pack
Alarms	Mj = major alarms Mn = minor alarms Wn = warnings
Links	Status of the circuit pack links for single and duplicated circuit packs. Pr = Peer Link Cl = Control Link El = Ethernet Link **up** = the link is up **dn** = the link is down **na** = not applicable
Dup	na = not applicable, for single circuit packs The slot location of the duplicated media processor circuit pack, If the circuit pack is duplicated.
St	Status of the media processor circuit pack **act** = active **sby** = standby **dis** = disabled **bsy** = busied out **ini** = init

status media-processor board

status media-processor board *location*

Use **status media-processor board** to see the status of the specified MedPro or IPMedPro media processor board. List the circuit pack and digital signal processor (DSP) usage, and the active and standby circuit pack usage for duplicated circuit pack

Action/Object	Qualifier	Qualifier Description	Login
status media-processor	***location***	location of the media processor	

The following is an example of **status media-processor board 1c03** for a duplicated circuit pack.

```
status media-processor board 1c03                                Page 1 of 1

                            MEDIA-PROCESSOR STATUS

Duplication State: active                  Duplication State: standby
   Board Location: 1c03                      Board Locations: 1c07
Source IP Address: 192.168.22.11           Source IP Address: 192.168.22.51
        Node Name: medpro1                         Node Name: medpro2
      Subnet Mask: 255.255.255.0                 Subnet Mask: 255.255.255.0
  Gateway Address: 192.168.22.255            Gateway Address: 192.168.22.255
      MAC Address: 00:00:04:0d:05:03             MAC Address: 00:00:04:0d:05:07
 Ethernet Enabled? yes                       Ethernet Enabled? yes

                           COMMON DUPLICATED VALUES

   Links   Alarms     Standby Refreshed: yes     Locked? no   Links   Alarms
  mpcl: up mj: 0         Network Region: 1                  mpcl: up mj: 0
   eth: up mn: 0      Shared IP Address: 135.9.72.52         eth: up mn: 0
  peer: up wn: 0        Shared Virt-MAC: 02:00:04:0d:05:18   peer: up wn: 0

                              DSP CHANNEL STATUS

DSP 1: in-service/active, 60 calls         DSP 1: in-service/standby
DSP 2: in-service/active, 50 calls         DSP 2: in-service/standby
DSP 3: in-service/active, 57 calls         DSP 3: in-service/standby
DSP 4: in-service/active, 47 calls         DSP 4: in-service/standby
```

status media-processor board field descriptions

status media-processor board field descriptions

Field	Description
Duplication State	**active/standby/init** Status of each duplicated circuit pack.
Links	**up/down -** status of the circuit pack link, for single or duplicated circuit packs. mpcl = Media Processor Control Link eth = Ethernet link peer = peer-to-peer link (applies only to duplicated circuit packs)
Alarms	**0** through **99** - the number of major alarms, minor alarms, or warnings mj = major alarms mn = minor alarms wn = warnings
Standby Refreshed	**y**/**n** **y** = the standby circuit pack in a duplicated pair is in sync with Communication Manager. Appears for duplicated circuit packs.
Network Region	**1** through **250** The network region number of the duplicated circuit packs.
Shared IP Address	The virtual IP address that is shared between the two duplicated circuit packs. Appears for duplicated circuit packs.
Shared Virt-MAC	The virtual MAC address that is shared between two duplicated circuit packs. Appears for duplicated circuit packs.
Locked	**y/n** **y** = `set media-processor override` or `set media-processor lock` command is in use. Appears for duplicated circuit packs.

mg-announcements

status mg-announcements

`status mg-announcements`

Use `status mg-announcements` to see the status of the announcements of the administered media gateways.

The following is an example of **`status mg-announcements`**:

```
status mg-announcements
                        MEDIA GATEWAY ANNOUNCEMENT STATUS

MG       MG        Announcements     CF Storage Usage(MB)    CF Status
Num     Type         Enabled?        Total/Annc /Avail       Ins/Act/Err
1       g250-bri        n            n/a
2       g450            y            n/a
3       g700            n            n/a
5       g350            n            n/a
6       g450            n            n/a
7       g450            y            988   0     988          y   y   n
```

status mg-announcements field description

status mg-announcements field descriptions

Field	Description
Announcements Enabled?	Displays whether the announcements for the media gateway have been enabled by using the enable announcement-board command. If Announcements Enabled? is **y**, announcements for the media gateway have been enabled. If Announcements Enabled? is **n**, announcements for the media gateway have not been enabled.
	1 of 2

Field	Description
CF Storage Usage (MB)	If the gateway is G450 or G430 and the Enable CF? field on the change media-gateway form is **y**, the memory data of the compact flash is displayed. If CF Storage Usage(MB) field is not applicable for a gateway, **n/a** is displayed. CF Storage Usage (MB) has the following fields: **Total**–displays the total memory of the compact flash **Annc**–displays how much memory of the compact flash is currently used for the announcements **Avail**–displays how much memory of the compact flash is left for use There could be other things along with the media gateway announcements which are stored on the compact flash. So, it is not necessary that the total memory of **Annc** and **Avail** adds upto to the total memory of the compact flash. Also, the numbers that are represented are block-sized numbers and different compact flash cards could have different block sizes.
CF Status	Displays the status of the compact flash. The status of the compact flash is displayed as one of the following: **Ins**–the compact flash is inserted on the media gateway and is recognizable **Act**–the compact flash is being used. **Err**–The compact flash • is either not present or not recognized • does not have sufficient space on the compact flash • does not have sufficient RAM available for usage
	2 of 2

mis

See:

busyout mis on page 452

release mis on page 453

busyout mis

```
busyout mis
```

Use **busyout mis** to busyout a management information system.

Action/Object	Qualifier	Qualifier Description	Login
busyout mis			init inads craft cust rcust

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

release mis

release mis

Use **release mis** to activate management information systems. Hardware tests are executed to verify that equipment is functioning properly.

For more information see Busyout and Release Commands on page 33.

Action/Object	Qualifier	Qualifier Description	Login
release mis			init inads craft cust rcust

mg-return

See enable mg-return on page 453

enable mg-return

enable mg-return

Use the **enable mg-return** command to perform automatic return of gateways to the main or ESS Server without your having to reset each LSP. The administrator can force the main or ESS Server to accept the gateways and telephones.

Action/Object	Qualifier	Qualifier Description
enable mg-return	***network-region R***	all the gateways within network region R
	all	all the gateways

The **enable mg-return** command overrides the Media Gateway recovery rules that block registration if LSPs are active or inactive. Such overriding can be applied per region.

If there are no media gateways in the region and the command **enable mg-return *network-region R*** is run, the following error message is shown:

```
IP network region has no gateways administered
```

The administrator can run the command **disable nr-registration** on any region. If the status of a media gateway in that region is already **ad** or **ap**, the status changes to **rd**. For information on the media gateway registration statuses—**ad**, **ap**, and **rd**—see the field descriptions of display media-gateway, list media-gateway, and status media-gateways.

Important:

The **enable mg-return** command remains active for a period of 60 minutes. During this period of 60 minutes, if you want to move the gateways and phones from server to server, you must run the **disable mg-return** command first to end the 60 minutes timer.

If you do not run the **disable mg-return** command, the timer either ends itself after a period of 60 minutes or after the LSP reports to the main Communication Manager server that the gateways have unregistered from the LSP.

modem-pool

See:
release modem-pool on page 454
test modem-pool on page 455

release modem-pool

```
release modem-pool
```

Use **`release modem-pool`** to deactivate specified modem pool groups or group members. Specify group numbers and member numbers to release single group members. Specify modem pool group numbers to release members in a modem pool group.

For more information see Busyout and Release Commands on page 33.

Action/Object	Qualifier	Qualifier Description	Login	Default
`release modem-pool`	***`group`*** ***`member`***	1-5 pair of analog and digital line ports (or two pair for the Integrated modem-pool case). 1-32.	init inads craft	

test modem-pool

Use **`test modem-pool`** to performs hardware diagnostic tests on the specified modem pool group or an individual member of a specified group (Combined or Integrated). A Combined modem-pool group consists of pairs of Analog and Digital Line ports. One pair of Analog and Digital Line ports used for modem-pooling is called a conversion resource. An Integrated group consists of modem-pool circuit packs, each containing two conversion resources. Therefore, when a member number is specified for a Combined modem-pool group, one conversion resource is tested, and when a member number is specified for an Integrated modem-pool group, two conversion resources are tested.

Action/Object	Qualifier	Qualifier Description	Login	Default
`test modem-pool`	**`group number`** **`member number`** **`short`** **`long`** **`repeat n`** **`clear`** **`schedule`**	The administered group number (1-5) See Common Input Parameters on page 25.	init inads craft	short 1
		Examples: **`test modem-pool 1`** **`test modem-pool 1 schedule`** **`test modem-pool 1/3 l r 2`** **`test modem-pool 1/3 l r 2 schedule`** **`test modem-pool 2 r 2`** **`test modem-pool 2 l`**		

moh-analog-group

list moh-analog-group

`list moh-analog-group { [1-Max] ( number n | (to-number n) | count n)} [schedule]`

Use **`list moh-analog-group`** to list Music On Hold groups and see how many members (audio sources) are in each group.

For more information on the Music On Hold Groups screen, see *Administering Avaya Aura™ Communication Manager (03-300509)*.

Action/Object	Qualifier	Qualifier Description
`list moh-analog-group`	**`1-Max`**	Music On Hold number
	`number n` **`to-number n`**	range of Music On Hold group numbers to list
	`count n`	number of Music On Hold groups to see on the page
	`schedule`	See Common Input Parameters on page 25.

The following is an example of **`list moh-analog-group`**.

```
list moh-analog-group                                              Page 1
                           MUSIC-ON-HOLD GROUPS

Group            Name                      Number or Sources
  8              Elevator Music                  5
 10              Latin Renditions               20
 11              Polka Music                    30

At End of Member List
```

list moh-analog-group field descriptions

list moh-analog-group field descriptions

Field	Description
Group	Number of the Music On Hold group
Name	Name of the Music On Hold group
Number of Sources	Number of members (sources) in the Music On Hold group

monitored-station

list monitored-station

`list monitored-station [start extension] [count xxxx]`

Use **`list monitored-station`** to see information on stations controlled by domain-controlled associations. Each station can have a maximum of 4 domain-controlled associations.

Action/Object	Qualifier	Qualifier Description	Login	Default
`list monitored-station`	**`start extension`** **`count xxxx`**	starting extension for the list number of stations on the list	init inads craft cust	

The following screen shows the output for **`list monitored-station`**.

```
list monitored-station
                                  MONITORED STATION

Station   Association 1   Association 2   Association 3   Association 4

Ext        Link Ext CRV   Link Ext CRV    Link Ext CRV    Link Ext CRV
3001       25001    1000  25002     23
```

list monitored-station field descriptions

list monitored-station field descriptions

Field	Description
Ext	The extension number of the station.
Link Ext	index to a table where the information about a particular ASAI link is stored.
CRV	ISDN Call Reference Value

mst

See:
clear mst on page 458
disable mst on page 458
list mst on page 459

clear mst

Use **`clear mst`** before a trace. If **`clear mst`** is active during a trace, it clears unwanted data.

Action/Object	Qualifier	Qualifier Description	Login
`clear mst`			init inads

disable mst

The **`disable mst`** command stops the message trace facility. If the trace was not already disabled, the command inserts a GAP marker into the trace. The user should execute **`disable mst`** when the trace is complete. If left enabled, the trace continues to use CPU time until the time limit expires. Entering **`disable mst`** has no effect on the system if the trace is already disabled. To view the results of the trace, enter **`list mst`**.

Action/Object	Qualifier	Qualifier Description	Login
`disable mst`			init inads

list mst

list mst

Use **list mst** to see the messages in the trace buffer while a trace is active or disabled. If the trace is active, older messages may be sporadically omitted if wraparound is selected and the message rate is high. The integrity of the buffer remains intact even when **list mst** is used repeatedly.

Action/ Object	Qualifier	Qualifier Description	Login	Default	Feature Interaction
list mst	**from** ***message number***	First message in the list. List indicates if the number is not in the buffer, and no additional messages appear. If no message number is entered, the list begins with the oldest FIFO message.	init inads	FIFO order	See Common Input Parameters on page 25
	count number	The number of messages in the list. Use this number to limit the trace			
	continuous	Display updates as new messages enter the trace buffer (FIFO). This option is most useful in conjunction with “auto-page.” The command terminates when canceled by the user.			
	LIFO	Show newest message first			
	FIFO	Show messages in the order received			
	auto-page	The screen will automatically page when full. Use with **continuous** to see messages arrive. Examples: **list mst continuous** **list mst continuous auto-page** **list mst LIFO** **list mst from 222 count 7**			

The following screen shows the output for **`list mst`**.

```
list mst
                  Message Sequence Trace Data

 Number  Date/Time   Type  Message
   1   12/21/90
       14:30:21.220  62  00 00 74 17 08 02 00 11 05 04 03 80 90 a2 18
                         03 a1 83 86 70 01 80 96 28 0d 73 74 61 74 69
                         6f 6e 20 35 31 30 30 31
   2   14:30:22.420  60  00 00 74 17 08 02 80 11 02 18 03 a9 83 86
   3   14:30:23.420  60  00 00 74 17 08 02 80 11 03 1e 02 81 81
   4   14:30:25.420  60  00 00 74 17 08 02 80 11 01
   5   14:30:25.820  60  00 00 74 17 08 02 80 11 07 96 28 0d 73 74 61
                         74 69 6f 6e 20 35 31 30 30 34
   6   14:30:28.020  62  00 00 74 17 08 02 00 11 0f
   7   14:50:25.820  71  01
   8   14:52:26.020  56  00 00 70 00 08 01 04 64 96 1c 13 91 a1 10 02
                         01 03 02 01 c4 40 08 96 49 05 83 31 30 30 b4
   9   14:52:26.020  57  00 00 70 00 08 01 84 64 96 1c 0d 91 a2 0a 02
                         01 03 30 05 02 01 c4 40 00
```

list mst field descriptions

list mst field descriptions

Field	Description
Number	The sequence number for the message.
Date/Time	The Date/Time.
Type	MST message type: 60 = ISDN uplink 62 = ISDN downlink, 6C = ISDN level 2 primitive
Message	Message text in hexadecimal.

MST message descriptions

The terminology Message [n] used in this section refers to the byte at offset ***n*** in the message being displayed.

MST message types contain a version number. When the structure of the MST message changes, the version field in the MST buffer also changes. Version 1 displays a blank in the version field immediately after the MST message type field. Subsequent versions display the version number after the MST message type field and are connected with a hyphen (-). For example: Version 2 of the X.25 Application error/notification message added the text of the pm state table stimulus, which was ignored.

Example:

Version 1 of MST message type 0xA2 appears on the **enlist mst** output:

```
list mst
                          Message Sequence Trace Data

 Number  Date/Time        Type   Message
   1     12/21/90
         11:41:22:425     A2     17 10
```

Version 2 of MST message type 0xA2 appears on the **list mst** output:

```
list mst
                          Message Sequence Trace Data

 Number  Date/Time        Type    Message
   90     12/21/90
          12:41:14:112    A2-02  17 10 21 03 32 05 01 80
```

multimedia

list multimedia

list multimedia [endpoints | h.320-stations | ip-stations | ip-unregistered][ext *x*] [to-ext *x*] [count *n*] [schedule]

Action/Object	Qualifier	Qualifier Description
list multimedia endpoints **list multimedia h.320-stations** **list multimedia ip-stations** **list multimedia ip-unregistered**	**[ext *x*]** **[to-ext *x*]** **[count *n*]** **schedule**	list information for a specific extension. when used with **[ext *x*]**, list information for all multimedia endpoint types beginning with one extension and ending with another. list a certain number (***n***) of multimedia endpoints See Common Input Parameters on page 25.

The following screen shows the output for **`list multimedia endpoints`**.

```
list multimedia endpoints

                                 MULTIMEDIA ENDPOINTS

MM Data    MMComplex    H.320          Multimedia    Service Link
Ext        Voice Ext    Conversion?    Mode          Mode
75040      75045        y              enhanced      as-needed
75041
75051      75050        y              basic         as-needed
```

The following screen shows the output for **`list multimedia h.320-stations`**.

```
list multimedia h.320-stations
                               MULTIMEDIA H.320-STATIONS

                          Station Ext       Media Complex Ext
                           33528
                           33530
                           33531
                           35051            35059
```

The following screen shows the output for **`list multimedia ip-stations`**.

```
list multimedia ip-stations
                               MULTIMEDIA IP STATIONS

     IP STATION                                MEDIA COMPLEX
   Ext      Port     Registered?          Ext       Port     Registered?
4002      X          n
33564     S00032     n
35036     S00002     y                  35037      S0003     n
```

list multimedia ip-stations field descriptions

list multimedia ip-stations field descriptions page 1 *1 of 2*

Field	Description
IP STATION	
Ext	Extension of the IP station.
Registered	Shows the current registration status of the endpoint.

1 of 2

list multimedia ip-stations field descriptions page 1 ***2 of 2***

Field	Description
Port	Port information for the IP Telephone when an IP telephone and IP Softphone are in service on the same extension simultaneously.
Registered	Shows the current registration status of the endpoint.
MEDIA COMPLEX	
Ext	Extension of the endpoint.
Port	Port information for the IP Softphone when an IP telephone and IP Softphone are in service on the same extension simultaneously.
Registered	Shows the current registration status of the endpoint.
	2 of 2

node-names

display node-names

`display node-names [schedule]`

Use **`display node-names`** to see a list of the administered node names.

Action/Object	Qualifier	Qualifier Description	Login	Default
`display node-names`	**`schedule`**	See Common Input Parameters on page 25	init inads craft	

The following example shows the output from page 1 **`display node-names`**

```
                                                                  page 1 of 6
                                 NODE NAMES

   Audix Name      IP address          MSA Names      IP Address
1.  _______         ___.___.___.___ 1.  _______         ___.___.___.___
2.  _______         ___.___.___.___ 2.  _______         ___.___.___.___
3.  _______         ___.___.___.___ 3.  _______         ___.___.___.___
4.  _______         ___.___.___.___ 4.  _______         ___.___.___.___
5.  _______         ___.___.___.___ 5.  _______         ___.___.___.___
6.  _______         ___.___.___.___ 6.  _______         ___.___.___.___
7.  _______         ___.___.___.___ 7.  _______         ___.___.___.___
8.  _______         ___.___.___.___
```

display node-names field descriptions, page 1

display node-names field descriptions page 1

Field	Description
Audix Name	Identifies the name of the adjunct or switch node. Enter 1-7 characters for audix or msa; 1-20 characters for others. Default is blank.
IP Address	IP address for the adjunct or switch. Enter **0** – **255** or leave blank.
MSA Names	MSA node name (up to 7 characters)
IP Address	IP address for the adjunct or switch. Enter **0** – **255** or leave blank.

The following example shows the output from page 2 **`display node-names.`**

```
                                                                  Page 2 of 6
                                 NODE NAMES

 Name                   IP Address           Name                IP Address
 1.  Default               0.  0.  0.  0.  17.  _______________    ___.___.___.___
 2.  _______________    ___.___.___.___  18.  _______________    ___.___.___.___
 3.  _______________    ___.___.___.___  19.  _______________    ___.___.___.___
 4.  _______________    ___.___.___.___  20.  _______________    ___.___.___.___
 5.  _______________    ___.___.___.___  21.  _______________    ___.___.___.___
 6.  _______________    ___.___.___.___  22.  _______________    ___.___.___.___
 7.  _______________    ___.___.___.___  23.  _______________    ___.___.___.___
 8.  _______________    ___.___.___.___  24.  _______________    ___.___.___.___
 9.  _______________    ___.___.___.___  25.  _______________    ___.___.___.___
10.  _______________    ___.___.___.___  26.  _______________    ___.___.___.___
11.  _______________    ___.___.___.___  27.  _______________    ___.___.___.___
12.  _______________    ___.___.___.___  28.  _______________    ___.___.___.___
13.  _______________    ___.___.___.___  29.  _______________    ___.___.___.___
14.  _______________    ___.___.___.___  30.  _______________    ___.___.___.___
15.  _______________    ___.___.___.___  31.  _______________    ___.___.___.___
16.  _______________    ___.___.___.___  32.  _______________    ___.___.___.___
```

display node-names field descriptions, page 2

display node-names field descriptions page 2

Field	Description
Name	Node name for CMS nodes, DCS nodes, and so forth.
IP Address	IP address for the adjunct or switch. Enter **0** – **255** or leave blank.

nr-registration

See:
disable nr-registration on page 466
enable nr-registration on page 467

disable nr-registration

`disable nr-registration`

CAUTION:

`disable nr-registration` can cause momentary service disruption. It causes all gateways and IP phones in a network region to unregister from the server where the command is executed. **`disable nr-registration`** is automatically saved across system restarts even without **`save translation`**.

Use **`disable nr-registration`** to deny media gateways and IP-phones within a specified IP Network Region from registering on the primary server or survivable processor. This causes the media gateways and IP phones to register instead with an alternate server or Local Survivable Processor (LSP). This is useful when network outages cause media gateways and IP phones to disconnect and reregister with the primary server in an interval that is too short for the endpoints to fail over to an LSP.

Use **`disable nr-registration`** on a primary server and an ESS. The disabled network region registration state on the primary server is not file-synced to the LSP or associated ESS.

A gateway must be assigned to the specified network region.

If you have set the value of the **Force Phones and Gateways to Active LSPs?** field in the **`system-parameters ip-options`** form as **y** and then run the **`disable nr-registration`** command on one network region, Communication Manager applies this command to all the network regions associated with the LSP.
For example, a single LSP is the backup server for multiple network regions—network region 1 and network region 2. A system administrator runs the **`disable nr-registration`** ***`1`*** command. The Communication Manager server disables region 2. A media gateway in network region 1 is unregistered from the Communication Manager server and registers to the LSP. The LSP reports to the main Communication Manager server that the LSP is active. The Communication Manager server then automatically disables network region 2.

The **`disable nr-registration`** command causes a disable network region warning alarm to appear in the alarm log.

Note:

When the **Enable Detection and Alarms** field is **y** on the IP-Options System Parameters screen (**`change system-parameters ip-options`**) the detection of the hyperactive link bounce is enabled which will cause associated gateway and network region alarms.

Action/Object	Qualifier	Qualifier Description	Login
disable nr-registration	***x***	IP network region number. A gateway must be assigned to the network region.	init inads craft superuser customer login with server maintenance permissions

enable nr-registration

enable nr-registration ***[IP network region number]***

Use the **enable nr-registration** command to end an active **disable nr-registration** command.

This enables the media gateways and IP-phones within the specified IP Network Region to register with the primary server or survivable processor.

However, the **enable nr-registration** command can only end an active **disable nr-registration** command. This command cannot override any other condition that prevents the media gateways and IP-phones to register with the primary server or survivable processor.

For example, if the time-day-window prevents the media gateways and IP-phones to register with the primary server, you cannot use the **enable nr-registration** command to register the media gateways and IP-phones with the primary server.

If you have set the value for the **Force Phones and Gateways to Active LSPs?** field in the **system-parameters ip-options** form as **y** and then run the **enable nr-registration** command when the LSP is active, the command does not immediately enable the network region. Instead, the **enable nr-registration** command puts the network region into an auto-disabled state. Communication Manager does this so that if the LSP is backing up more than one region, the **enable nr-registration** command does not cause a split registration by allowing endpoints in that one region to return to the Communication Manager server while endpoints in other regions backed up by the same LSP stay on the LSP.

Use **enable nr-registration** on a primary server, an ESS, and an LSP. The enabled network region registration state on the primary server is not file-synced to the LSP or associated ESS.

When an unused IP network region number is entered for **`enable nr-registration`**, no error message appears.

Action/Object	Qualifier	Qualifier Description	Login
`enable nr-registration`	***x***	IP network region number. A gateway must be assigned to the network region.	init inads craft superuser customer login with server maintenance permissions

off-pbx-telephone

See:
status off-pbx-telephone station on page 469
list off-pbx-telephone station-mapping on page 470

status off-pbx-telephone station

`status off-pbx-telephone station x`

Use **`status off-pbx-telephone station x`** to see the service state and connected ports of an Extended Access (off-PBX) station. Extended Access applications include:

- Extension to Cellular
- Cellular Service Provider (CSP)
- Session Initiation Protocol (SIP)
- Seamless Converged Communications Across Network (SCCAN)

Action/Object	Qualifier	Qualifier Description	Login
`status off-pbx-telephone station`	***x***	extension	inads init

The following example shows the output from **`status off-pbx-telephone station`**

```
status off-pbx-telephone station 12345                                page 1 of 1

                          OFF-PBX TELEPHONE STATUS FOR STATION 12345

No. Type      Trunk/Member      Port           Connected Ports
                 Group

1   OPS         0001/001        T00026         001V204   T00026
2   EC500       0017/004        001V204        T00026    T00026
```

status off-pbx telephone station field descriptions

status off-pbx-telephone station field descriptions

Field	Description
No.	The order in which the Extension to Cellular, EC500 application was administered on the **Stations with Off-PBX Telephone Integration (`add off-pbx-telephone station-mapping`)** screen.
Type	The type of Extended Access application.
Trunk/ Member Group	The number of the Trunk Group and Trunk Group member associated with the station. If there is no active outside call, the message appears: `No trunks associated with this off-pbx telephone station`
Port	The port connected to the physical station. This physical station is mapped to an Extended Access telephone such as a cellular phone.
Connected Ports	The connected ports of Extended Access calls.

off-pbx-telephone station-mapping

list off-pbx-telephone station-mapping

`list off-pbx-telephone station-mapping x`

Use **`list off-pbx-telephone station-mapping x`** to see the association between an office phone and an off-PBX phone.

Action/Object	Qualifier	Qualifier Description
`list off-pbx-telephone station-mapping`	***x***	complete office phone extension, or partial phone number plus * (wildcard)

Station To Off-PBX Telephone Mapping screen

```
list off-pbx-telephone station-mapping                                Page 1 of 1

                     STATION TO OFF-PBX TELEPHONE MAPPING

Station        Appl   CC    Phone Num    Config     Trunk      Mapping     Calls
Extension                                Set        Selection  Mode       Allowed
43001          EC500        9736831204   1 /        ars        both        all
43001          OPS          12345        1 /        ars        orig        all
1234567891111  CSP    423   6095343211   3          ars        both        all
```

list off-pbx-telephone station-mapping field descriptions

See **`add off-pbx-telephone station-mapping`** in the*Administering Avaya Aura™ Communication Manager (03-300509)* for additional information on these fields.

list off-pbx-telephone station-mapping field descriptions

Field	Description
Station Extension	The extension assigned to the user
Appl	Type of application used for mapping the OPTIM station to off-pbx-telephone **CSP** = cell phone with Extension to Cellular provided by the cellular service provider **EC500** = cell phone with Extension to Cellular **HEMU** = Home Enterprise Mobility User **OPS** = SIP Enablement Services (SES) enabled phone **PBFMC** = Public Fixed Mobile Convergence **PVFMC** = Private Fixed Mobile Convergence **SCCAN** = wireless SIP Enablement Services (SES) phone and cell phone **VEMU** = Visited Enterprise Mobility User **VIEMU** = Visited Initial Enterprise Mobility User
CC	Country Code associated with the off-pbx-telephone.
Phone Num	Phone number of the off-pbx-telephone.
Config Set	Configuration set to be used for mapping.
Trunk Selection	Trunk group that connects to the off-pbx-telephone.
Mapping Mode	Specifies the direction for calls allowed at the off-pbx-telephone.
Calls Allowed	Number of simultaneous active calls at the off-pbx-telephone.

options

set options

`set options`

Use **`set options`** to administer whether certain alarms are reported to INADS or whether they are downgraded to a minor alarm, warning alarm, or no alarm.

Action/Object	Login	Default
`set options`	inads init	Alarm reporting options for major and minor On-board Trunk Alarms (Alarm Group 1) are **y**. All others are **w**. Every trunk group is associated with alarm severity group 1.

A remote user with INADS permission uses **`set options`** to select:

- types of maintenance categories that report alarms automatically
- types of maintenance categories that require the customer to call in

If the default setting are used, normal alarm levels are observed. Changing the default settings on the **`set options`** form may increase the number of alarms reported to the Global Services Delivery (GSD).

Upgrades to the **`set options`** form are tied to Avaya Service Offers. Customers who wish to have Avaya monitor off-board network facilities must subscribe to an Offer to have these alarms accepted by Avaya.

Note:

Alarms cannot be upgraded.

set options SAT screen

The following is an example of the **set options** screen.

```
 set options                                                    Page   1 of  22
                              ALARM REPORTING OPTIONS

                                                      Major   Minor
                               On-board Station Alarms: w     w
                              Off-board Station Alarms: w     w
                 On-board Trunk Alarms (Alarm Group 1): y     y
                Off-board Trunk Alarms (Alarm Group 1): w     w
                 On-board Trunk Alarms (Alarm Group 2): w     w
                Off-board Trunk Alarms (Alarm Group 2): w     w
                 On-board Trunk Alarms (Alarm Group 3): w     w
                Off-board Trunk Alarms (Alarm Group 3): w     w
                 On-board Trunk Alarms (Alarm Group 4): w     w
                Off-board Trunk Alarms (Alarm Group 4): w     w
                          On-board Adjunct Link Alarms: w     w
                         Off-board Adjunct Link Alarms: w     w
                            Off-board MASI Link Alarms:       w
                                  Off-board DS1 Alarms: w     w

                          Off-board TCP/IP Link Alarms: w     w
                              Off-board Alarms (Other): w     w
                          Off-board ATM Network Alarms:       w
```

```
set options                                                     Page   2 of  22
                              ALARM REPORTING OPTIONS

                                                      Major   Minor
                     Off-board Firmware Download Alarms:      w
                       Off-board Signaling Group Alarms:      w
                                      Remote Max Alarms:      w
                                       CLAN Ping Alarms:      w
```

```
set options                                                    Page   3 of  22
                          TRUNK GROUP ALARM OPTIONS

                                  (Alarm Group)

01: 1   11: 1   21: 1   31: 2   41: 2   51: 3   61: 3   71: 3   81: 4   91: 4
02: 1   12: 1   22: 1   32: 2   42: 2   52: 3   62: 3   72: 3   82: 4   92: 4
03: 1   13: 1   23: 1   33: 2   43: 2   53: 3   63: 3   73: 3   83: 4   93: 4
04: 1   14: 1   24: 1   34: 2   44: 2   54: 3   64: 3   74: 3   84: 4   94: 4
05: 1   15: 1   25: 1   35: 2   45: 2   55: 3   65: 3   75: 3   85: 4   95: 4
06: 1   16: 1   26: 2   36: 2   46: 2   56: 3   66: 3   76: 4   86: 4   96: 4
07: 1   17: 1   27: 2   37: 2   47: 2   57: 3   67: 3   77: 4   87: 4   97: 4
08: 1   18: 1   28: 2   38: 2   48: 2   58: 3   68: 3   78: 4   88: 4   98: 4
09: 1   19: 1   29: 2   39: 2   49: 2   59: 3   69: 3   79: 4   89: 4   99: 4
10: 1   20: 1   30: 2   40: 2   50: 2   60: 3   70: 3   80: 4   90: 4   100: 4
```

On the Alarm Reporting Options screen, select the alarm severity options for:

- four trunk alarm severity groups
- adjunct alarms
- off-board DS1 alarms
- other off-board alarms
- each trunk group (This allows management of alarming for different trunk groups. Some can be upgraded while others are left as warnings.)
- remote max alarms
- off-board C-LAN TCP/IP Ping Test alarms: downgrade alarm levels of the Off-board C-LAN TCP/IP Ping Test Alarm and all other Off-board TCP/IP Link Alarms.

Alarm options available are:

- Minor

  Alarms are raised as maintenance testing discovers them and the severity of the alarm is upgraded or downgraded to a minor. Alarmed resources that are normally taken out of service are still taken out of service. LEDs on the port board and maintenance board follow the normal minor alarm LED strategy and there is a call to the receiving OSS.

- Warning

  Alarms are raised as maintenance testing discovers them, and the severity of the alarm is downgraded to a warning. The advantage is that the Alarm Log can still be used to pinpoint trunk or station problems. Alarmed resources that are normally taken out-of-service are still taken out-of-service. Alarm LEDs light on the port circuit pack and Maintenance circuit pack as before, but no attendant LEDs or stations reporting alarms are affected. There is no call to INADS.

- Report

  Downgrade the alarm to a warning and report the warning to INADS. This is not supported by Avaya.

- Yes

  Alarms are raised in the normal manner. There is no filtering of alarm data.

- No

  Alarms raised on a trunk, station, or adjunct in this category are dropped. Error information is provided, but there is no trace of an alarm. There is no LED activity and no call to INADS. Because resources are taken out-of-service without any record, this option is recommended only when other options do not provide the desired result.

The alarm options can be administered only on a system-wide basis for the following alarm categories:

- Major on-board station alarms
- Minor on-board station alarms

Four alarm severity groups are provided for trunk alarms. The alarm options can be administered for the categories listed below in each alarm severity group:

- Major on-board trunk alarms
- Minor on-board trunk alarms
- Major off-board trunk alarms
- Minor off-board trunk alarms

For Adjuncts, an alarm severity option is assigned to each of the following categories:

- Major on-board adjunct alarms
- Major off-board adjunct alarms
- Minor on-board adjunct alarms
- Minor off-board adjunct alarms

You can also administer the options on a system-wide basis for minor off-board DS1 Interface circuit pack alarms.

Alarm reporting options information in the Alarm Reporting Options screen is considered translation data and is preserved through every level of restart.

Neither the trunk nor the station category applies to alarms raised on the common portion of the circuit pack.

If the option associated with the alarm type is **n**, the alarm report is dropped. All error information about the alarm is intact, but there is no record of an alarm and no LEDs light on the port circuit pack, the Maintenance circuit pack, the attendant console, or alarm reporting station to indicate a problem.

If the option is set to **warning** or **report**, port circuit pack LEDs and LEDs on the Maintenance circuit pack are affected the same as normal warning alarms.

The default parameters are as follows:

- Downgrade every station, off-board trunk, and minor DS1-BD alarm to a warning alarm.
- Major and minor on-board trunk alarms should continue to raise alarms and report to INADS.

MOs affected by set options ***1 of 3***

MO type	MO
Investigate even warning alarms on these MOs when there are user-reported problems.	
Adjunct-Related MOs	• ASAI adjunct (ASAI-ADJ) • ASAI adjunct IP (ADJ-IP/ASAI-IP) • Avaya adjunct port (ATT-PORT) • Ethernet ASAI port (LGATE-PT) • Ethernet ASAI adjunct (LGATE-AJ) • Ethernet Avaya port (ATTE-PT) • Ethernet Avaya adjunct (ATTE-AJ) • ISDN-BRI ports connected to adjuncts (ABRI-PORT) • Control LAN Packet/Port (PPT-PT) Although adjuncts are administered as stations, the administration of alarm severity for the station alarm group does not affect the alarm severity levels of the adjuncts. Similarly, the administration of alarm severity for the adjunct alarm group does not affect the alarm severity levels for other types of stations.
	1 of 3

MOs affected by set options ***2 of 3***

MO type	MO
Investigate even warning alarms on these MOs when there are user-reported problems.	
Associated Link MOs	• CDR Link (CDR) • PN or EPN Maintenance circuit pack (MAINT) • Expansion Interface (EXP-INTF) • ISDN-PRI signaling group (ISDN-SGR) • Journal printer (JNL-PRNT) • PMS link (PMS-LINK) • Control LAN Packet/Port (PPT-PT) • Primary CDR link (PRI-CDR) • Synchronization (SYNC) • System Communication Interface (PI-SCI) • System printer (SYS-PRNT) • TDM clock (TDM-CLK) • Tone Generator board (TONE-BD)
Circuit Pack MOs	• DS1 Interface Circuit Pack (DS1-BD) • Control LAN Ethernet (ETH-PT)
Station MOs	• Analog Lines (ANL-LINE, ANL-NE-L, ANL-16-L) • Digital Lines (DIG-LINE) • Hybrid Lines (HYB-LINE) • MET Lines (MET-LINE) • ISDN-BRI Lines (BRI-PORT, BRI-SET) Minor alarms escalate to major alarms if more than 75 percent of the members of the trunk group are alarmed. If the trunk option is set to “warning,” “minor,” “report,” or “no,” this no longer happens. Maintenance reactivates individual trunk members according to major and minor alarm criteria.
	2 of 3

MOs affected by set options ***3 of 3***

MO type	MO
Investigate even warning alarms on these MOs when there are user-reported problems.	
Trunk MOs	• Auxiliary Trunks (AUX-TRK) • Central Office Trunks (CO-TRK) • Direct Inward Dialing Trunks (DID-TRK) • Direct Inward and Outward Dial Trunks (DIOD-TRK)[G1.2SE only] • DS1 Central Office Trunks (CO-DS1) • DS1 Direct Inward Dialing Trunks (DID-DS1) • DS1 Tie Trunks (TIE-DS1) • ISDN Trunks (ISDN-TRK) • Tie Trunks (TIE-TRK) Trunks that are not members of Trunk Groups, (for example, PCOLs) are downgraded according to the alarm severity of group one.
	3 of 3

set options field help descriptions

m(inor)	Downgrade the major alarm to a minor alarm and report the alarm to INADS.
n(o)	Do not log the alarm or report it to INADS.
r(eport)	Downgrade the alarm to a warning and report the warning to INADS. This is not supported by Avaya.
w(arning)	Downgrade the alarm to a warning, log it but do not report the alarm to INADS.
y(es)	Log and report the alarm to INADS.

Press HELP in any field of page 2 to see the help message:

```
Enter alarm group number: 1 to 4
```

The alarm group number is a way of distinguishing four different groups of alarms. These alarm groups allow the user to specify that alarms in different groups are handled differently from those in other groups.

packet-interface

See:
reset packet-interface on page 479
status packet-interface on page 480
test packet-interface on page 482

reset packet-interface

`reset packet-interface` ***`Uc`***

Use **`reset packet-interface`** to reset and initialize the Packet Interface (PKT-INT) module on the IPSI (TN2312AP) circuit packs.

A standby PKT-INT can always be reset. An active PKT-INT can be reset if it has been taken out of service by the software. There is no **`busy-out`** command for the PKT-INT. When the PKT-INT goes out of service due to errors, the IPSI has a bad PKT-INT state of health, and the IPSI goes out of service.

Taking an IPSI out of service also takes the PKT-INT out of service. Attempts to reset the PKT-INT on a busied-out IPSI are ignored because **`release ipserver-interface`** resets the PKT-INT.

Action/Object	Qualifier	Qualifier Description	Login
`reset packet-interface`	***`U`*** ***`c`***	Specify the cabinet number that has the board to test. Specify the carrier you want to test.	

status packet-interface

`status packet-interface [cabinet #]`

Use **`status packet-interface`** to see the status of the IPSIs in the servers.

Use **`status packet-interface`** to see the status of all packet-interface circuit packs in the system along with link information. The service state appears for both active and standby packet-interface circuit packs. Link status information including total, active and failed links are displayed for active packet-interface circuit packs only.

If there are no standby Packet Interface circuit packs, or if the standby is inaccessible (due to handshake failure or incomplete memory refresh) the standby packet-interface circuit packs will be in the uninstalled state.

When a packet-interface circuit pack is out-of-service or uninstalled, it is not used to establish and maintain links. When the circuit pack returns to in-service status, new links are again assigned to it.

`Status packet-interface` currently provides status for up to five packet interfaces. The command line takes a cabinet number as an argument and displays information about all packet interfaces for the cabinet. If there are no IPSIs in the requested cabinet, an error displays.

Action/Object	Qualifier	Qualifier Description	Login	Default
`status packet- interface`			init inads craft	

On the **`status packet-interface`** screen, separate columns identify each Packet Interface circuit pack slot. Service state appears for both active and standby packet-interface circuit packs. A cabinet number must be specified. If there are no IPSIs in the cabinet, the **No IPSI in cabinet specified** message appears. Locate the IPSI using **`list ipserver-interface`**.

The following display shows a typical result for **status packet-interface**.

```
status packet-interface
                      PACKET INTERFACE STATUS

      Location:       01A1             01A2
 Service State:       in-service       in-service

   Total Links:       1                264
  Active Links:       1                264
  Failed Links:       0                0

      Location:       01B1             01B2
 Service State:       uninstalled      uninstalled
   Total Links:       -                -
  Active Links:       -                -
  Failed Links:       -                -
```

status packet-interface field descriptions

status packet-interface field descriptions

Field	Description
Location	The packet-interface cabinet, carrier and circuit pack position number.
Service State	One of the following states appears: “in-service”, “out-of-service” or “uninstalled”. The “standby” state is used in place of “in-service” for standby packet-interface circuit packs.
Total Links	The total number of links.
Active Links	The number of links that are in use.
Failed Links	The number of links that failed to be established. These links are in a recovery state and not active. The failures can arise from problems in the packet-interface, EI or center stage hardware. The number of failed links is the number of total links minus the number of active links.

test packet-interface

`test packet-interface [Uc] [short | long] [repeat# | clear] [schedule]`

Use **`test packet-interface`** to perform hardware diagnostic tests on any or all of the Packet Interface circuit packs in a specified carrier. Tests performed include local memory checksum tests, loop-around tests, and checks of failure counters. On Linux platforms, **`test packet-interface`** tests the IPSI circuit packs.

The Maintenance Loop-Around test (#886) is included in the test sequences of *active* packet-interface circuit packs only. The Active-Standby Peer Link test (#888) is included in the test sequences of the *standby* packet-interface circuit packs only.

If the packet-interface circuit pack is in the “out-of-service” or “uninstalled” states, no demand tests as well as scheduled, periodic and error tests will run. See also reset packet-interface on page 479 and status packet-interface on page 480.

Action/Object	Qualifier	Qualifier Description
`test packet-interface`	***`Uc`*** **`short`** **`long`** ***`repeat#`*** **`clear`** **`schedule`**	Specify the cabinet number with the IPSI board you want to test, and the carrier. See Common Input Parameters on page 25.

See Common Command Output Screens on page 28.

periodic-scheduled

status periodic-scheduled

status periodic-scheduled

Use **status periodic-scheduled** to see summary information about currently active and recently completed background testing. Periodic tests run every hour, and scheduled tests run daily. Starting and stopping times, and other parameters for daily scheduled testing, are administered with change system-parameters maintenance on page 628.

The following example shows results from **status periodic-scheduled**.

```
status periodic-scheduled
                    MO        Current     Current    Previous Cycle    Rate of
                  Type        Cycle %      Cycle        Duration      Completed
                              Complete    Active?     (hr:min:sec)      Cycles

PERIODIC      System Critical  100%         n           00:00:08        4.0/hr
MAINTENANCE   Shared Resource  100%         n           00:00:16        4.0/hr
                  Single User  100%         n           00:00:05        4.0/hr
                        Total                            00:00:29

     Start Time of Current or Previous Cycle: 07/02/04:17:16

  Pre - SCHEDULED MAINTENANCE                n          00:00:09

SCHEDULED     System Critical   100%        n          00:00:26        1.0/day
MAINTENANCE   Shared Resource   100%        n          00:01:35        1.0/day
                  Single User   100%        n          00:00:06        1.0/day
                        Total                           00:02:07

     Start Time of Current or Previous Cycle: 07/01/22:00:15
```

status periodic-scheduled field descriptions

status periodic-scheduled field descriptions ***1 of 2***

Field	Description
PERIODIC MAINTENANCE section	This data reflects the status of periodic maintenance which is performed hourly, according to the selections made on the **change system-parameters maintenance** screen. See *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)* for more information.
	1 of 2

status periodic-scheduled field descriptions ***2 of 2***

Field	Description
Pre-SCHEDULED MAINTENANCE section	The data in this section reflects the status of pre-scheduled maintenance. Pre-scheduled maintenance can include interchanges of duplicated components and backup of translation data. It is performed according to selections made on the **`change system-parameters maintenance`** screen.
SCHEDULED MAINTENANCE section	The data in this section reflects the status of scheduled maintenance which is performed daily. Scheduled maintenance is performed according to the selections made on the **`change system-parameters maintenance`** screen.
System Critical	System-critical resources are those whose health affects the entire system such as the processor. These are always tested first.
Shared Resource	Shared resources are those that are used by many users, such as trunks. These are tested after system critical resources.
Single User	Single-user resources are those whose health affects only one user, such as voice stations.
Total	Total duration of previous periodic or scheduled maintenance cycle. Note: Scheduled maintenance total does not include pre-scheduled maintenance duration.
Current Cycle % Complete	The ratio of the number of maintenance objects tested to the total number of maintenance objects tested during a cycle. For periodic tests, the ratio is for the current cycle, if active; or for the last completed cycle if not. For scheduled tests, the ratio is for the last completed cycle.
Current Cycle Active	Reflects whether the current cycle of periodic, pre-scheduled or scheduled maintenance is currently running. Value is **y** if currently running or **n** if it is not.
Previous Cycle Duration	Reflects how long the system critical, shared resource, or single user maintenance activities took for the previous cycle of maintenance.
Rate of Completed Cycles	Reflects how often maintenance cycle is performed.
Start Time of Current or Previous Cycle	Time at which maintenance cycle began in ***`month/day/hour:minute:second`*** format. For scheduled maintenance, this time reflects when the pre-scheduled maintenance began.
	2 of 2

pin

See:
change pin on page 485
reset pin on page 486

change pin

`change pin [ dadmin | second craft login name ]`

Use the **`change pin`** command to change the PIN for the dadmin login or for the second craft login. The PIN should be a minimum of 7 characters and a maximum of 32 characters. Upper and lower case, plus numbers 0 - 9, and the special characters shown on the screen are allowed. Other characters are prohibited. PINs do not expire. PINs must conform to the minimum and maximum lengths, and must contain at least one letter and one number. PINS are not displayed when entered or changed.

The dadmin and init logins may change the PIN for dadmin or the second craft login.

The second craft login may change the PIN only for the second craft login.

Action/Object	Qualifier	Qualifier Description	Login
`change pin`	***`dadmin`*** ***`second craft login name`***	dadmin login craft2 login	dadmin init

```
  change pin
                                  CHANGE PIN

                       New Pin: ____________________________________

                  Re-enter Pin: ____________________________________


PINS may be between 7 and 32 characters, and may contain
    --upper and lower case letters,
    --the numbers 0-9
    --the special character period (.)
    --the special character percent (%)
    --the special character star (*)
    --the special character question (?)
    --the special character minus (-)
    --the special character comma (,)
    --the special character colo (:)
PINs must contain at least one numeral and one alphabetic character.
```

reset pin

reset pin [*dadmin* | *second craft login name*]

The **reset pin** command resets the PIN for the dadmin login or the second craft login. The old PIN is not required. When a PIN is reset, it returns to the state where the PIN must be re-created on the next SAT access. Note that the PIN of the second craft login may be changed, but it cannot be "reset" to an uninitialized value.

The command is accessible only to the init and dadmin logins, and either login may reset either pin. When the command is entered, no screen appears. The message "Command completes successfully" is displayed.

Action/Object	Qualifier	Qualifier Description	Login
reset pin	***dadmin*** ***second craft login name***	dadmin login craft2 login	dadmin init

ping

ping ip-address *addr* [board *location* | source *port-id*] [packet-length *len*] [repeat #]

ping node-name name [board *location* | source *port-id*] [packet-length *len*] [repeat #]

When debugging connectivity problems, a ping helps to indicate low-level connectivity. If an external ping works but higher-level applications such as DCS, CMS, or INTUITY do not, there probably is connectivity to the board. Interrogate the switch for other clues as to why the higher-level application is not working.

The **ping** command checks low-level connectivity between two IP-connected peers: a destination and a source.

- The destination can be:
  - an IP address (**ip-address addr**)
  - a node (**node-name name**)
- The source can be:
  - a C-LAN or IP Medpro board (**board *location***)
  - a Softphone, IP phone or Remote Office (R300) phone (**source *port-id***).

  If no source is specified, the first C-LAN in the same region as the IP address that is being pinged is used as the source.

Use this test to check the circuitry in the data path for a peer-to-peer IP layer connection. This test is nondestructive.

Note:

Pings from an IP Medpro board reflect audio transport performance. Pings from a C-LAN board reflect control information transport performance. The recipient of a ping will reply with the same Quality of Service (QoS) value found in the received packet, so the time measurements reported should reflect the behavior of the type of packets sent. When an IP Medpro board is used as the source, the default DiffServ and 802.1p/Q parameters downloaded to that board are used in the execution of the **ping**.

CAUTION:

Repeated ping tests can consume a lot of bandwidth and can bog down a network as a result. If the network is already heavily loaded, a ping test can fail even if there is connectivity between the source and destination.

Action/Object	Qualifier	Qualifier Description	Login
ping ip-address **ping node-name**	***addr* board *loc* source *port-id* packet-length *len* repeat #**	See descriptions below. Examples: ping ip-address 192.68.3.26 ping ip-address 192.68.3.26 board 1C05 ping ip-address 168.24.3.66 packet-length 1500 ping node-name gert_clan1 source S00015	init inads craft cust dadmin

ping parameters

ping parameters *1 of 2*

ip-address *addr*	The IP address of the device to ping, www.xxx.yyy.zzz.
node-name *name*	The name of the node to ping. Use **display node-names ip** to see what IP nodes are administered.
board *location*	The location of the C-LAN or IP Medpro board (***location***) used as the source of the ping. Specify the board if there are multiple C-LAN or IP Medpro boards. If neither **board** nor **source** is given, the first C-LAN in the same region as the IP address that is being pinged will be the source of the ping.
source *port-id*	The virtual endpoint port ID to use as the source of the ping. This can be the virtual endpoint port ID of a softphone, IP phone, or Remote Max (R300) phone. Use **status station *ext*** to determine the virtual endpoint port ID of a phone. If neither **board** nor **source** is given, the first C-LAN in the same region as the IP address that is being pinged will be the source of the ping.

ping parameters ***2 of 2***

`packet-length` ***`len`***	The packet length of the ping packet, from 64 to 1500. If **`packet-length`** is not given, the default packet length is 64 bytes. Specifying a longer packet length in the command line can show: • if a router or host has a problem fragmenting or reassembling transferred packets • a more complete indication of the link status
`repeat` ***`rpt`***	The number of times to repeat the **`ping`** test. See Caution above before using.

ping output

The following screens show examples of **`ping ip-address packet-length`** and **`ping node-name`**.

```
ping ip-address 192.68.3.26 packet-length 1500

                            PING RESULTS

  End-pt IP        Port       Port Type  Result   Time(ms)  Error Code

  192.68.3.26      01C0202    PPP-PT     PASS     221
```

```
ping node-name prowler10

                             PING RESULTS

  End-pt Node-name   Port       Port Type  Result   Time(ms)  Error Code

  prowler10          64A0817    ETH-PT     PASS     16
```

ping field descriptions

ping field descriptions ***1 of 2***

Field	Description
End-pt IP or End-pt Node-name	The destination of the **`ping`** command.
Port	The source's slot or port
	1 of 2

ping field descriptions ***2 of 2***

Field	Description
Port Type	The source port's maintenance object name
Result	PASS, FAIL or ABORT
Time (ms)	The round-trip time (in milliseconds) of the **`ping`**.
Error Code	Identifies problems associated with the circuitry in the data path for a peer-to-peer IP layer connection. For the meaning of the error code and troubleshooting procedures, see the Port Type's maintenance object description in the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*. The MO description indicates the type of **`ping`** test used and the meaning of that ping test's error codes.
	2 of 2

Error messages

Error messages for **`ping`** are listed in Ping command error messages.

Ping command error messages ***1 of 2***

Message	Interpretation
www.xxx.yyy.zzz IP address not assigned	The system cannot find the IP address.
IP address not reachable from this board	The IP address is not in the route table of the specified board.
Local IP address not supported	The C-LAN board does not support ping of a local PPP IP address.
More than one route exists, specify board	The IP address is not in the route table, and more than one C-LAN circuit pack has a default route.
"xxxx" Invalid IP address	Invalid IP address parameter. Must be in www.xxx.yyy.zzz format.
"CCcss" is an invalid identifier; please press HELP	Invalid board location (when using **`board`**).
Board not inserted	Valid board location, but there is no board in that slot.
Error encountered, could not complete request	An internal error, the port through which the IP address is reached could not be found.
	1 of 2

Ping command error messages ***2 of 2***

Message	Interpretation
Invalid range	The packet size is greater than 1500 or less than 64 bytes in length, or there are invalid or unrecognized parameters.
WARNING Default packet length of 64 bytes used for TN799DP	The default packet length of 64 bytes is used for a TN799DP board.
	2 of 2

pkt

See:
clear pkt on page 490
test pkt on page 490

clear pkt

Use **`clear pkt`** to resolve packet bus problems and send a forced packet bus **`clear stimuli`** over the packet bus.

Action/Object	Qualifier	Qualifier Description	Login	Default
`clear pkt`	**`port network location`**	Physical position of the packet bus (1 - 3) Example: **`clear pkt port-network 1`**	init inads craft	

test pkt

`test pkt port-network n [short | long] [repeat repeat# | clear] [schedule]`

Use **`test pkt`** to run a series of tests on the packet bus of the specified PN or PPN.

WARNING:
Since **`clear long`** clears every counter if the test passes, it is possible for firmware counters to be cleared even though a problem exists. In some cases customer service might degrade since calls may be routed over defective equipment.

Action/Object	Qualifier	Qualifier Description	Login	Default
`test pkt port-network`	**`pn`** **`short`** **`long`** **`repeat n`** **`clear`**	The Packet bus to be tested: *nn* (1)	init inads craft	short 1
		Examples: **`test pkt port-network 1 l`** **`test pkt port-network 1 sh r 2`** **`test pkt port-network 1 l r 25`** **`test pkt port-network 1`** **`test pkt port-network 1 c`**		

pms-down

list pms-down

`list pms-down [start-time] [stop-time]`

Use **`list pms-down`** to see every event that has meaning to the Property Management System (PMS) that has occurred while the link between the switch and the PMS was down. For example, room status codes entered by hotel housekeeping staff during a PMS outage appear in this report.

Action/Object	Qualifier	Qualifier Description
`list pms-down`	**`start-time`** **`stop-time`**	The starting time in 24-hour notation from which events are to be listed. The time in 24-hour notation up to which events are to be listed.

The following example shows a typical result of **list pms-down**.

```
list pms-down
                 PROPERTY MANAGEMENT SYSTEM ACTIVITY

Extension    Event                Reason                 Time

 402     from room, code 1    PMS link out of service    7:00am
 405     from stn, code 1     PMS link out of service    9:00am
 411     check in, complete   PMS link out of service    9:30am
 411     PBX enabled MWL      PMS link out of service   12:00am
 450     from room, code 1    PMS reject                12:05am
```

list pms-down field descriptions

list pms-down field descriptions

Field	Description
Extension	The extension associated with the reported event.
Event	The PMS event that was reported to the switch, but which could not be sent to the PMS.
Reason	The reason that the event could not be reported by the switch to the PMS.
Time	The time at which the event was reported.

pms-link

See:
busyout pms-link on page 492
release pms-link on page 493
status pms-link on page 494
test pms-link on page 495

busyout pms-link

busyout pms-link

Use **busyout pms-link** to place every maintenance object associated with a property management system link in the maintenance busy state. No periodic or scheduled maintenance is performed on the busied out maintenance objects until they are released. When the object is

maintenance busy the object is deactivated (no call processing activity may include the busied object) and the link is dropped. Warning alarms (error type 18) are generated on each busied out maintenance object, so that the Initialization and Administration System (INADS) can determine the state of the objects. Use **`release pms link`** to reactivate the busied out objects on the link.

These links provide asynchronous data connections from switches to peripherals, and they are composed of the following:

- Far-end data module
- Simulated data channel
- Manager that initiates and maintains the link
- Controller/protocol that services the link

For information about what a property management system (PMS) is and what it does, see status pms-link on page 494. See status link on page 362 for more details on links.

Note:

Specific component maintenance performed on a link sometimes conflicts with link maintenance, because busied-out objects create link setup failure. Frequent link re-setup attempts may delay component recovery. For best results, **`busyout`** the link to disable attempted link re-setup.

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

release pms-link

`release pms-link`

Use **`release pms-link`** to reactivate the busied out maintenance objects on the property management system (PMS) link. The **`busyout pms-link`** command places all maintenance objects associated with a PMS link in the maintenance busy state. Once released, periodic and scheduled maintenance can be performed on the maintenance objects. See Busyout and Release Commands on page 33. See status link on page 362 for more details on links.

Use **`release pms-link`** to deactivate MOs that are associated with a property management system link. These links provide asynchronous data connections from switches to peripherals; they are composed of a:

- Far end data module
- Simulated data channel on a NETCON board
- Manager that initiates and maintains the link

- Controller/protocol that services the link

Action/Object	Qualifier	Qualifier Description	Login	Default	Feature Interaction
release pms-link			init inads craft		See note below.

Note:

Specific component maintenance performed on a link sometimes conflicts with link maintenance, because busied-out objects create link setup failure. Frequent link re-setup attempts may delay component recovery. For best results, **busyout** the link to disable attempted link re-setup.

status pms-link

status pms-link

Use **status pms-link** to see the status of the property management system interface link.

Action/Object	Qualifier	Qualifier Description	Login
status pms-link			init inads craft cust browse

Status of the property management link will be up, whether or not a data base swap is taking place between the switch and PMS. If the link is down, the number of attempts made to set up the link appears.

A property management system (PMS) is a stand alone computer system that can be integrated with the switch to enhance the service capability for a hotel/motel.

For general information on PMS links, see busyout pms-link on page 492. See status link on page 362 for more details on links.

The following display shows a typical result for **status pms-link**.

```
status pms-link
                              PMS LINK STATUS

    Physical Link State: down
        Protocol State: down
     Number of Retries: 3
      Maintenance Busy? no
```

status pms-link field description

status pms-link field description

Field	Description
Physical Link State	**up**, **down**, **extension not administered**. The PMS link is considered administered only if an extension is given in the System Hospitality form.
Protocol State	**up**/**down** The state of the C-LAN protocol. Blank if not administered.
Number of Retries	Number of times the switch has tried to set up the link. Appears when the link is down.
Maintenance Busy	**y**/**n** If **y**, maintenance testing is being performed on the link.

test pms-link

`test pms-link [long | short] [repeat n | clear] [schedule]`

Use **`test pms-link`** to verify that the link to the Property Management System (PMS) is administered and performs a series of tests on the link.

See status pms-link on page 494 for information about the PMS and interpreting its status. See busyout pms-link on page 492 for information on PMS links. See status link on page 362 for more details on links.

Action/Object	Qualifier	Qualifier Description	Login	Default	Feature Interaction
`test pms-link`	**`short`** **`long`** **`repeat n`** **`clear`** **`schedule`**	See Common Input Parameters on page 25. Examples: **`test pms-link sh r 5`** **`test pms-link l`** **`test pms-link`** **`test pms-link c`** **`test pms-link c sch`**	init inads craft	short 1	See note below

Note:

Specific component maintenance performed on a link sometimes conflicts with link maintenance, because busied-out objects create link setup failure. Frequent link re-setup attempts may delay component recovery. For best results, **`busyout`** the link to disable attempted link re-setup.

pnc

See:
set pnc on page 496
status pnc on page 496

set pnc

`set pnc lock | unlock`

On critical-reliability systems (duplicated PNC), **`set pnc lock`** locks the active port network connectivity in the active state. PNC interchanges are prevented, and the active PNC remains active regardless of its state of health. Duplicate call setup takes place, though the standby is not available for service. This condition can also be initiated with **`reset pnc interchange override-and-lock`**. Use the **Software Locked** field on the **`status pnc`** screen to see if the PNC is locked. The **Interchange Disabled** field refers to the antithrashing mechanism.

`Set pnc unlock` releases the lock and enables subsequent interchanges to take place.

If the health of the active PNC has degraded to worse than that of the standby pnc, unlocking the active port network connectivity can cause an immediate PNC interchange This condition can be foreseen by use of **`status pnc`**.

System restarts remove a PNC lock.

CAUTION:
If the active PNC experiences problems while in the locked state, service disruptions may occur that would ordinarily be avoided by PNC interchange.

Action/ Object	Qualifier	Qualifier Description
`set pnc`	**`lock`** **`unlock`**	PNC interchanges are prevented, and the active port network connectivity is locked on-line. Releases the PNC lock.

status pnc

`status pnc`

Use **`status pnc`** to see a summary of conditions on the active and standby Port Network Connectivities (PNC). If the PNC is not duplicated, the B-PNC column and other duplication-related fields are blank.

The following screen shows an example of **status pnc** on a system with a single switch node CSS and duplicated PNC.

```
status pnc
                          PORT NETWORK CONNECTIVITY

                               Duplicated? yes
                          Software Locked? no
                           Standby Busied? no
                           Direct Connect? no
                       Standby Refreshed? yes
                   Interchange Disabled? no
            A-PNC                                  B-PNC

            Mode: active                           Mode: standby
 State of Health: functional            State of Health: functional
  Inter PN Index: 00.00.00.00.00.00      Inter PN Index: 00.00.00.00.00.00
  Inter SN Index: 00.00                  Inter SN Index: 00.00
    Major Alarms: 0                        Major Alarms: 0
    Minor Alarms: 0                        Minor Alarms: 0
  Warning Alarms: 0                      Warning Alarms: 0
   SN Locations:                      SN Locations: 03E
```

status pnc field descriptions

Many fields on this screen are blank when the PNC is not duplicated

status pnc field descriptions ***1 of 3***

Field	Description
Duplicated	Whether or not the system has a duplicated PNC (critical-reliability option).
Software Locked	On a system with duplicated PNC, whether the PNCs are locked by means of the **set pnc lock** or **reset pnc override-and-lock**. When this field is **y**, spontaneous or demand PNC interchanges are not possible. To enable interchanges, use **set pnc unlock**.
Standby Busied	On a system with duplicated PNC, whether or not the standby PNC is busied out with **busy pnc**. Interchanges are prevented when the standby is busied out.
Direct Connect	Whether the system uses direct-connect connectivity or a center stage switch.
	1 of 3

status pnc field descriptions ***2 of 3***

Field	Description
Standby Refreshed	On a duplicated system, this field indicates whether the standby PNC has completed a global refresh of duplicated call setup after being released from a busyout, or after a system reset. This field does not indicate if a partial unrefresh has taken place in response to a problem on the standby. Only a “functional” state of health on the standby (all zeros in the **State of Health** vector) guarantees that the standby’s call setup matches completely that of the active.
Interchange Disabled	This field is **y** when the anti-thrashing mechanism is in effect, preventing PNC interchanges. This is the case for 5 minutes after a spontaneous PNC interchange, and for 30 seconds after a demand interchange. The **`reset pnc interchange override-and-lock`** command overrides antithrashing. This field does not indicate whether a PNC interchange is currently prevented by a software lock, by insufficient state of health of the standby, or by busyout of the standby.
Mode	This field displays “active” or “standby”, depending on whether or not that PNC controls active call processing.
State of Health	On a system with duplicated PNC, the state of health of each PNC. For the standby PNC, service effects mentioned below are those that would occur if that PNC were to become active via an interchange. **Functional**: the indicated PNC has no service disrupting alarms against it. The state-of-health vector is all zeros, and call setup on the standby PNC matches that of the active. **Partially functional**: the health of the PNC is less than perfect. The source and severity of the problem is indicated by the state-of-health vector (Inter-PN and Inter-SN Indexes). Whenever the standby’s state of health is partially functional, duplicated call setup on the standby probably does not match that on the active. **Not functional**: Expansion Archangel Links to all PNs are down on this PNC. No service is possible to any PNs via this PNC.
	2 of 3

status pnc field descriptions ***3 of 3***

Field	Description
Inter PN Index, Inter SN Index	The Inter-PN and Inter-SN Indexes screen the state-of-health vector, which is used to track and compare the states of health of both PNCs. The fields making up the indexes are 2-digit numbers separated by periods (.), with each field representing a different class of faults. The fault class fields are arranged in order of decreasing importance from left to right. In other words, each field in the index supersedes the following fields in determining which PNC is healthiest. The Inter-PN Index contains six fields (***aa.bb.cc.dd.ee.ff***), and the Inter-SN Index has two (***gg.hh***). The Inter-PN Index reports faults in connectivity between port networks and supersedes the Inter-SN Index, which reports faults in connectivity between switch nodes. (The Inter-SN Index is only meaningful for systems with a center stage switch having 2 switch nodes, each of which is duplicated). The meaning of each fault class field is given in Table 38: Fault Class Field Descriptions on page 499. A zero entry indicates that there are no such faults reported. Higher numbers indicate increasing number of faults. All zeros indicates a perfect state of health. Unless the PNCs are locked, the active PNC's state of health should always be equal to or better than the standby's. (Otherwise, the system would perform a spontaneous interchange.) After a PNC-related alarm is cleared, the system performs a partial refresh of the standby PNC. The corresponding fault class field is not updated to reflect the improved state of health until the refresh is done. The state-of-health indexes will not agree with the current alarm status during this period.
Major Alarms, Minor Alarms, Warning Alarms	The number of major, minor, or warning alarms logged against DS1C-BD, SNI-BD, SNC-BD, EXP-INTF, FIBER-LK, DS1C-FAC, SNC-LINK, SN-CONF, SNC-REF, SYNCH, and SNI-PEER on the indicated PNC.
SN Locations	The locations of all switch nodes comprising the indicated PNC.
	3 of 3

Table 38: Fault Class Field Descriptions ***1 of 2***

Inter PN Index Fields (*aa.bb.cc.dd.ee.ff*)				
Position	**Fault Class**	**Priority**	**Description**	**MOs**
aa	FC_EAL	1	Number of PNs with EALs down	EXP-PN
bb	FC_INL	2	Number of PNs with LINL, RINL, or EI-SNI neighbor link faults	EXP-PN SN-CONF
				1 of 2

Table 38: Fault Class Field Descriptions ***2 of 2***

Inter PN Index Fields (*aa.bb.cc.dd.ee.ff*)				
Position	**Fault Class**	**Priority**	**Description**	**MOs**
cc	FC_BFDL	3	Number of PNs with Bearer Fault Detection Link (BFDL) faults.	EXP-INTF SYS-LINK
dd	FC_HW	4	Number of PNs affected by hardware faults in a link having an EI as an endpoint (Endpoints can be determined with **`list fiber-link`**.)	EXP-INTF SN-CONF FIBER-LK SNI-BD DS1C-BD
ee	FC_PER	5	Number of PNs affected by SNI peer link faults for SNIs connected to EIs	SNI-PEER
ff	FC_DS1	6	Number of PNs affected by DS1C facility faults	DS1FAC
Inter SN Index Fields (*gg.hh*)				
gg	FC_SNIL	7	Number of inter-switch-node fibers affected by peer or neighbor link faults	SNI-PEER
hh	FC_SNIHW	8	Number of inter-switch-node fibers affected by hardware faults	SN-CONF SNI-BD FIBER-LK
				2 of 2

pnc interchange

reset pnc interchange

`reset pnc interchange [override-and-lock]`

Note:

`Reset pnc interchange` does not work like other **`reset`** commands. Instead of resetting or initializing hardware, a PNC interchange is executed. Before entering **`reset pnc interchange`**, use **`status pnc`** to check the states of health of the two PNCs.

Use **`reset pnc interchange`** to execute a PNC interchange on a critical-reliability system (duplicated PNC). The standby PNC becomes active and assumes control of active call processing, and the active goes to standby. If the standby PNC's health is equal to or better than the active PNC's, no service disruption takes place; all stable calls and links are preserved. Some unstable calls may drop.

Both demand and spontaneous PNC interchanges cannot take place when:

- The standby PNC is busied out.
- The PNCs are locked by means of the **`set pnc lock`** or **`reset pnc interchange override-and-lock`** commands.
- For 5 minutes after a spontaneous PNC interchange, or for 30 seconds after a demand interchange, an anti-thrashing mechanism prevents subsequent interchanges unless the override-and-lock option is used.
- When the standby PNC's state of health is lower than the active PNC's, the command aborts unless the **`override-and-lock`** option is used.
- If the standby PNC has not completed a global refresh since it was last initialized or released, the reset aborts unless the **`override-and-lock`** option is used.

Note the following caution regarding the use of the **`override-and-lock`** option.

See status pnc for details of how to obtain and interpret the states of health and other current information about the PNCs. For a more complete explanation of PNC duplication and interchanges, see PNC-DUP (PNC Duplication) of the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*.

Action/Object	Qualifier	Qualifier Description	Login
`reset pnc interchange`	**`override-and-lock`**	Override the anti-thrashing mechanism. Subsequent PNC interchanges are prevented, regardless of changes in the states health of the PNCs. Double call setup still takes place; each call is set up on both PNCs. To unlock the PNCs, use **`set pnc unlock`**. **CAUTION:** This option forces execution of the interchange regardless of the standby's state of health, possibly disrupting service.	

If **`reset pnc interchange`** is unsuccessful due to the standby PNC's state of health (operation of anti-thrashing), the following message appears:

Interchange of pnc failed;
try again using the "override-and-lock" identifier

If **`reset pnc interchange`** is unsuccessful due to a busyout of the standby PNC, the **Must release port network connectivity first** message appears.

port

See:
busyout port on page 502
clear port on page 502
display port on page 502
mark port on page 504

release port on page 505
test port on page 505

busyout port

busyout port *location*

Use **busyout port** to busyout a specified port on a circuit pack.

Action/Object	Qualifier	Qualifier Description	Login
busyout port	***location***	port address (PCSS) marked port: PPSSpp Examples: **busyout port 01c1101** **busyout port 02c1501**	init inads craft

Busyout port *location* on a specific SIP B-channel:

- drops any active call that exists on the B -channel
- reduces the trunk group's capacity by one
- the physical piece of hardware is removed from service

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

clear port

Use **clear port** to remove marks from ports and free the ports for service. **Clear port** works with **mark port**.

Action/Object	Qualifier	Qualifier Description	Login
clear port	**location**	Port location: ***PCSSpp*** Example: **clear port 01c1102**	init inads cust nms

display port

display port *location* [schedule]

Use **`display port`** to see a port's equipment type and identification number.

Action/ Object	Qualifier	Qualifier Description	Login
`display port`	***`location`***	address of the port Example: **`display port 1a0502`** **`display port 01a05002`** (both specify cabinet 1, carrier A, slot 5 and port 2).	init inads craft cust browse

The following example shows the output from **`display port`**.

```
display port 1c0801
                                PORT INFORMATION

                                  Port: 01C08001
                        Equipment Type: Station
                        Identification: 71026
```

display port field descriptions

display port field descriptions

Field	Description
Port	Port address location
Equipment type	Type of hardware that is physically connected to the specified port, or **TTI port** for a phone in a TTI state **Softphone Restore Port** = softphone registration originated from this port. No new extensions can be assigned to this port location. Use **`list registered-ip-stations`** for more information on the IP Softphone extension assigned to this port.
Identification	Depending on the equipment type, identifies: • extension • trunk group number and member number • modem pool group number • IP address of an IP telephone that is in TTI state

mark port

mark port ***port-location***

Use **mark port** to make a port unusable by normal call processing. The port can be tested, etc., but calls are not attempted through the port. A marked port is saved as part of translation. Use **clear port** to restore the port to service.

For more information, see Common Input Parameters on page 25 and Common Command Output Screens on page 28.

Action/Object	Qualifier	Qualifier Description	Login
mark port	***port-location***	Location of the port to be marked Examples: **mark port 1c0208** **mark port 2a1001**	init inads craft

release port

Use **`release port`** to activate specified ports on circuit packs.

For more information see Busyout and Release Commands on page 33.

Action/Object	Qualifier	Qualifier Description	Login	Default
`release port`	***`location`***	Physical location of the port, ***`PCSS`***	init inads craft	

`Release port` ***`location`*** on a specific SIP B-channel:

- increases the trunk group's capacity by one
- the physical piece of hardware is added to service

test port

`test port` ***`location`*** **`[long | short] [repeat`** ***`n`*** **`| clear]`**

Use **`test port`** ***`location`*** to perform hardware diagnostic tests on an individual port circuit. In most cases, tests are performed on hardware connected to the port.

Action/Object	Qualifier	Qualifier Description	Login	Default
`test port`	**`location`** **`short`** **`long`** **`repeat`** ***`n`*** **`clear`**	***`PCSSpp`*** See Common Input Parameters on page 25. Examples: **`test port 01c1101 l`** **`test port 02e1502 sh r 2`** **`test port 02d1201 r 4`** **`test port 01c1101 c`**	init inads craft	short 1

WARNING:

Because **`test port`** ***`location`*** **`clear long`** clears all counters if tests pass, firmware counters may be cleared even when a problem exists. In some cases customer service might degrade because calls may be routed over defective equipment.

port-network

See:
reset port-network on page 506
status port-network on page 506

reset port-network

`reset port-network PN# level [1 | 2]`

CAUTION:
A reset of level 2 is destructive, causing all calls and application links on the specified PN to drop. PN resets are described in EXP-PN (Expansion Port Network) on page 451 in *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190).*

Use **`reset port-network`** to reset a specified port network to a specified level. This does not cause an interchange on a system with duplicated PNC. A reset will not work on a port network whose fiber link to the PN or CSS is down.

Action/Object	Qualifier	Qualifier Description	Login	Default
`reset port-network`		Example: **`reset port-network 10 level 2`**		
	PN#	Port network number. Use **`list cabinet`** to find the PN number(s) associated with a given cabinet.		
	`level 1` **`level 2`**	Use reset level 1 (WARM restart) to restart a PN that is still fully or partially in service. All stable calls are preserved, and full service is restored within 35 seconds. Use reset level 2 (COLD restart) to reset, remove, and reinsert all PN circuit packs, to recover a PN that has been taken out of service. Level 2 restarts should take less than 2 minutes. All calls and application links with an endpoint in the PN are dropped. If two level 2 resets within an hour fail to return the PN to service, PN Emergency Transfer is invoked. PN Emergency Transfer is already in effect if the link to the PN has been down for more than 1 minute.		

For more information, see Common Command Output Screens on page 28 and Common Error Codes for maintenance commands on page 34.

status port-network

`status port-network`

Use **status port-network** to see information about the status of a specified port network. The fields on the screen vary depending on the PNC configuration on the system.

In port networks where PKT-INTs are moved to the IPSIs, **status port-network** shows the location and state of the links, whether active or failed, and the total alarms, faults, and open bus links.

The following example shows the output for the **status port-network** for an **S8700 IP-PNC** port network.

```
status port-network 2
                              PORT NETWORK STATUS

   Major  Minor  Warning Carrier   PN Control      Internet Protocol (IP)
PN Alarms Alarms Alarms  Locs   Active   Standby   Connected Port Network

 2   0      4       6    02A    up       up
                         02B
                         02C
                         02D

TDM Service  Control  Dedicated              TONE/  Service  System   System
Bus  State   Channel   Tones                 CLOCK  State    Clock    Tones

 A   in         y        n                   02B     in      standby  standby
 B   in         n        y                   02A     in      active   active

                Service     Major   Minor   Bus    Open Bus
           PKT  State       Alarms  Alarms  Faults  Leads

            2      in         n        y
```

The following example shows the output for the **status port-network** for an ATM port network.

```
status port-network 2
                              PORT NETWORK STATUS

   Major  Minor  Warning Carrier   PN Control      ATM PNC
PN Alarms Alarms Alarms  Locs   Active   Standby   Conn         Endpoints     Mode

 2   0      4       6    02A    up       up        2  A-PNC 02A01-AT02A active
                         02B                       1  B-PNC 02B02-AT02B standby



TDM Service  Control  Dedicated              TONE/  Service  System   System
Bus  State   Channel   Tones                 CLOCK  State    Clock    Tones

 A   in         y        n                   02B     in      standby  standby
 B   in         n        y                   02A     in      active   active

                Service     Major   Minor   Bus    Open Bus
           PKT  State       Alarms  Alarms  Faults  Leads

           1       in         n       n
```

The following example shows the output for the **status port-network** for a CSS port network.

```
status port-network 1
                              PORT NETWORK STATUS

   Major  Minor  Warning Carrier   PN Control      Fiber
PN Alarms Alarms Alarms  Locs   Active   Standby   Link       Endpoints     Mode

 1   0      28     732   01A    up       up        1  A-PNC 01A01-01E02 active
                         01B                       1  B-PNC 01B02-01D02 standby



TDM Service  Control  Dedicated              TONE/  Service  System   System
Bus  State   Channel   Tones                 CLOCK  State    Clock    Tones

 A   in         y        n                   01B     in      standby  standby
 B   in         n        y                   01A     in      active   active

                Service     Major   Minor   Bus    Open Bus
           PKT  State       Alarms  Alarms  Faults  Leads

           1       in         n       n
```

status port-network field descriptions

status port-network field descriptions *1 of 3*

Field	Description
PN	The Port Network number associated with the Port Network for which status is being displayed.
Major Alarms	The number of major alarms logged against the Port Network that is being displayed.
Minor Alarms	The number of minor alarms logged against the Port Network that is being displayed.
Warning Alarms	The number of warning alarms logged against the Port Network that is being displayed.
Carrier Locs	The cabinet and carrier locations of each carrier in the Port Network.
PN Control Active/Standby	Active and standby (if control network is duplicated) control network status status for the specified port network. **up** = the link between the TN2312 IPSI circuit pack and the server is up **down =** the link between the TN2312 IPSI circuit pack and the server is down For direct connect, CSS, or ATM fiber connected port networks, the PNC status of a port network is determined by the availability of the EAL (Expansion Archangel Link) and the INL (Indirect Neighbor Link) to the port network. **up** = the EAL and INL are both available **down** = the EAL and INL are both unavailable **near-end** = the EAL is available but the INL is unavailable **far-end** = the INL is available but the EAL is unavailable. When the far-end EAL is unavailable, Tone-Clock, TDM-bus, and packet-bus information are blank. **aa** = there is a problem with the archangel. The control is up, but the archangel is not functioning and is not available.
FIBER-LINK	This field displays the fiber-link number associated with all fiber links having an Expansion Interface circuit pack endpoint residing in the specified Port Network. The fiber connectivity side will also be displayed (i.e., “A-PNC” or “B-PNC”).
Endpoints	The physical position of each Expansion Interface board that is an endpoint for a fiber link in the specified Port Network. A high-reliability system will display only one Expansion Interface pair, while a critical-reliability system will display two Expansion Interface pairs separated by a hyphen (-). If blanks are displayed, it means the endpoints could not be retrieved by software.
	1 of 3

status port-network field descriptions *2 of 3*

Field	Description
Mode	The mode is the current role of the link. A mode of “active” means the link is providing normal circuit and control functions for the Port Network. A mode of “standby” means the link is part of a duplicated system and is ready to perform its functions but is not active. If blanks are displayed it means that PNC is not duplicated, or the mode could not be retrieved from software.
TDM Bus	The TDM bus identifier associated with the Port Network appears. The TDM bus (“a” or “b”) specifies which half of the TDM bus is being displayed. When Control Links are down, this field is blank.
Service State	The operational state of the TDM bus. A TDM bus service state of “in” means the bus is in normal operation. A TDM bus service state of “out” means the bus has failed certain maintenance tests and has been taken out of service, or the maintenance object has been demand busied out. When Control Links are down, this field is blank.
Control Channel	**y/n** Shows whether the TDM bus has the control channel on it. Only one TDM bus of a TDM bus pair on each Port Network can have the control channel on it at a given time. Blank if the system does not contain a PN, and when Control Links are down.
Dedicated Tones	**y/n** Shows whether the TDM bus has the system tones on it. Only one TDM bus of a TDM bus pair can have system tones on it at a given time. Blank if the system does not contain a PN, and when Control Links are down.
TONE/CLOCK	The location of the IPSI or Tone-Clock circuit pack, containing the Tone-Clock circuit in the specified Port Network. The location is represented using the cabinet and carrier where the Tone-Clock resides (e.g., 1a, 1b, 2a, 2b, etc.). Blank = Control Links are down.
Service State	The operational state of the Tone-Clock circuit. **in** means the Tone-Clock has been installed and is in normal operation. **out** means that the Tone-Clock is out of service and has failed certain maintenance tests. Blank = Control Links are down.
System Clock	Shows which IPSI or Tone-Clock circuit pack supplies the system clock for that port network by displaying the mode of the Tone-Clock. **active** = the Tone-Clock supplies the system clock. Only one Tone-Clock in each Port Network can be **active** at any given time. **standby** = the Tone-Clock is part of a duplicated clock system and is ready to supply the system clock, but is not currently **active** **down** = the Tone-Clock is not operational Blank = Control Links are down.
	2 of 3

status port-network field descriptions ***3 of 3***

Field	Description
System Tones	Shows which IPSI or Tone-Clock circuit pack supplies the system tones for that port network by displaying the mode of the Tone-Clock. **active** means that the Tone-Clock supplies the system tones. Only one Tone-Clock in each Port Network can be **active** at any given time. **standby** means the Tone-Clock is part of a duplicated clock system and is ready to supply system tones, but is not currently **active** **down** means the Tone-Clock is not operational. Blank when Control Links are down.
PKT	Packet Bus identifier, the same as the Port Network number.
Service State	This field represents the operational state of the packet bus. A service state of “in” means the packet bus has been installed and is in normal operation. A service state of “out” means either that the: • Packet bus is out of service and has failed certain maintenance tests • Maintenance object has been demand busied out. A service state of “reconfig” means that the Maintenance/Test circuit pack has swapped one or more signal leads because of lead faults detected during testing (high- and critical-reliability systems). A service state of “open lds” means the Maintenance/Test circuit pack query was run, and open bus leads were found. A service state of blanks in this field means the system does not have the Packet Bus feature optioned. When Control Links are down, service state information is unavailable.
Major Alarms	Whether major alarms are logged against the packet bus that is being displayed **y**/**n**. When Control Links are down, this field is blank.
Minor Alarms	Whether minor alarms are logged against the packet bus that is being displayed **y**/**n**. When Control Links are down, this field is blank.
Bus Faults	This field indicates the number of faulty bus leads, where a fault is defined as either shorted to another lead or stuck at some value. This field may take on any integer value between 0 and 24. The field contains a blank if the Maintenance/Test circuit pack is not present or has been taken out of service. When Control Links are down, this field is blank.
Open Bus Leads	This field indicates the number of bus leads that have an open circuit between the Maintenance/Test circuit pack and bus terminator. This information is determined by testing performed on the bus leads; bus leads test open as a result of physical damage to the backplane or the backplane’s connectors, or because a bus terminator is missing. This field may contain integer values between 0 and 24. This field contains a blank if the Maintenance/Test circuit pack is not present or has been taken out of service. When Control Links are down, this field is blank.
	3 of 3

power-shutdown

get power-shutdown

get power-shutdown [*cabinet* | *carrier*]

Use **get power-shutdown** to see the cause of the last shutdown of a power supply in an individual media gateway or a stack. Use **get power-shutdown** on carriers or a stack (cabinet) equipped with a TN2312BP IPSI or later IPSI circuit pack.

Use **display error** to see the time of the last shutdown.

Note:

When you reset a 655A power supply by unplugging it, keep it unplugged for 30 seconds to allow it to discharge. Otherwise, it retains the information it stored before it was unplugged.

Action/Object	Qualifier	Qualifier Description	Login
get power-shutdown	***cabinet*** ***carrier***	cabinet location location of a G650 carrier within a G650 stack	init super-user inads craft dadmin Switch Circuit Pack Maintenance permissions

The following display shows a typical result of **get power-shutdown**.

```
get power-shutdown 01

                            655A POWER SUPPLY SHUTDOWN CAUSE

   SLOT                CAUSE

   01A00            PS removed and reinserted
   01A15            PS removed and reinserted
   01B00            PS removed and reinserted
   01B15            PS removed and reinserted
   01C00            Commanded shutdown
   01C15            Commanded shutdown
   01D00            PS removed and reinserted
   01E00            AC input removed
```

get power-shutdown field descriptions

Field	Description
Slot	Power supply cabinet/carrier/slot
Cause	Cause of last shutdown.

pri-endpoint

See:
busyout pri-endpoint on page 513
release pri-endpoint on page 514
status pri-endpoint on page 514
test pri-endpoint on page 516

busyout pri-endpoint

`busyout pri-endpoint` ***`extension`***

Use **`busyout pri-endpoint`** to busyout all PRI endpoint ports (B-channels) associated with the specified PRI endpoint.

Action/Object	Qualifier	Qualifier Description	Login	Default	Feature Interaction
`busyout pri-endpoint`	***`location`***	PRI endpoint extension number Example: **`busyout pri-endpoint 25012`**	init inads craft mms	Active calls on busied out PRI endpoints are dropped. Call attempts from far-end PRI terminal adapters are denied with a cause value of 17.	

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

release pri-endpoint

Use **release pri-endpoint** to remove PRI endpoint ports (B-channels) associated with specified PRI endpoint from maintenance busy states. Periodic and scheduled tests resume on released ports. The switch attempts to negotiate with the far-end PRI terminal adapter activating PRI endpoint port (B-channel). Maintenance does background initialization testing on released ports. For details of the test sequence, refer to [3].

Action/Object	Qualifier	Qualifier Description	Login
release pri-endpoint	***extension***	extension number associated with desired PRI endpoint.	init inads craft nms

status pri-endpoint

This command displays internal software state information for diagnosis and can help locate facilities with which a PRI endpoint is communicating. Status information for each of the B-channels making up the PRI endpoint display in addition to some overall PRI endpoint information.

Action/Object	Qualifier	Qualifier Description	Login
status pri-endpoint	**extension**	PRI endpoint extension to be displayed (see dial-plan). Examples: **status pri-endpoint 25012** **status pri-endpoint 77868**	init inads craft nms browse

The following example shows the output for **status pri-endpoint 22501** and assumes the following:

- PRI endpoint ports for extension 22501 are in cabinet 1, carrier B, slot 20, circuit 1 to 6.
- The ports 1 to 3 of the specified PRI endpoint are connected on an active call to ports 13 to 15 of board in location 1B19 (cabinet 1, carrier B, slot 19).
- Ports 4 and 5 of the specified PRI endpoint are idle.
- Port 6 of the specified PRI endpoint is out of service, and background maintenance testing is being performed on the port.

Note:

A PRI endpoint can initiate and receive a call on any one or more of the B-channels making up the PRI endpoint.

```
status pri-endpoint 22501                                page 1 of 1


                      PRI-ENDPOINT STATUS

                   Extension: 22501                Width: 6
          Signaling Group ID: 3       B-Channels Active: 3
Originating Auto Restoration? n         B-Channels Idle: 2


 Port     Service State       Test In Progress  Connected Port
 01B2001  in-service/active          n          01B1913
 01B2002  in-service/active          n          01B1914
 01B2003  in-service/active          n          01B1915
 01B2004  in-service/idle            n
 01B2005  in-service/idle            n
 01B2006  out-of-service-NE          y
```

Note that the line listing of each B-channel's status may continue onto the next page. The user is prompted to press the NxtPg key to continue the display.

status pri-endpoint field descriptions

status pri-endpoint field descriptions ***1 of 2***

Field	Description
Extension	PRI endpoint extension
Width	Administered number of B-channels associated with the specified PRI endpoint
Signaling Group ID	ID number of the signaling group that handles the signaling for the ports in the specified PRI endpoint
Originating Auto Restoration	Administered option for the auto restore feature (restores calls originated from this PRI endpoint in the case of network failure): **y** restoration option enabled **n** restoration option disabled
B-Channels Active	The number of B-channels active on a call
B-Channels Idle	The number of B-channels in the in-service/idle state
Port	Port locations (cabinet-carrier-slot-circuit) for each of the B-channels making up the PRI endpoint.
	1 of 2

status pri-endpoint field descriptions ***2 of 2***

Field	Description
Service State	Service state of the B-channels: in-service/active, in-service/idle, out-of-service-NE, out-of-service-FE, maint-NE/active, maint-FE/active, maint-NE/idle, and maint-FE/idle. NE (Near End) and FE (Far End) refer to which “end” of the B-channel has placed the facility in the current state. NE refers to the switch and FE refers to the PRI terminal adapter (or any device that terminates the D-channel signaling on the facility).
Test In Progress	Whether or not there is any current maintenance testing on the port.
Connected Port	Connected port location (cabinet-carrier-slot-circuit) for each of the B-channels active on a call.
	2 of 2

test pri-endpoint

Use **`test pri-endpoint`** to perform hardware diagnostic tests on all port circuits (B-channels) that are associated with the specified PRI endpoint.

Action/ Object	Qualifier	Qualifier Description	Login	Default
`test pri-end point`	**`extension`** **`short`** **`long`** **`repeat n`** **`clear`**	PRI endpoint extension to be tested (must conform to dial-plan) See Common Input Parameters on page 25.	init inads craft nms	short 1
		Examples: **`test pri-endpoint 25012`** **`test pri-endpoint 45002 sh`** **`test pri-endpoint 45892 l`** **`test pri-endpoint 24389 sh r 4`** **`test pri-endpoint 34899 l r 6`** **`test pri-endpoint 34912 l r 5 schedule`** **`test pri-endpoint 93483 r 2`** **`test pri-endpoint 10022 c`**		

processor-ip-interface

See:
busyout processor-ip-interface on page 517
status processor-ip-interface on page 517
release processor-ip-interface on page 517

busyout processor-ip-interface

busyout processor-ip-interface

Use **busyout processor-ip-interface** to busyout the processor ethernet interface link. **Busyout processor-ip-interface** brings down the processor channel applications, ip-services, and IP calls that were active on the link.

Action/Object	Qualifier	Qualifier Description	Login
busyout processor-ip-interface		Example: **busyout board 01c11**	init inads craft

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

status processor-ip-interface

Use **status processor-ip-interface** to see the status of the processor-ip-interface.

Action/Object	Qualifier	Qualifier Description
status processor-ip-interface		

The following example shows the output from **status processor-ip-interface**.

```
status processor-ip-interface                                Page 1 of 2

               PROCESSOR IP INTERFACE STATUS

                                   Status: connected
                           Enabled: n
                Source IP Address: 192.11.128.148
                      Subnet Mask: 255.255.255.0
                Broadcast Address: 0.0.0.0
                Maintenance Busy?: no
                  Active Channels: 0
```

release processor-ip-interface

release processor-ip-interface

Use **`release processor-ip-interface`** to release the processor ethernet interface link and to bring up the processor channel applications, ip-services, and IP calls that were administered active prior to busying out the link.

For more information see Busyout and Release Commands on page 33.

profile-base

display profile-base

`display profile-base`

Use **`display profile-base`** to see the Linux Group number that corresponds to Communication Manager user profile 0.

The screen name is **User Profile Base**.

Action/Object	Qualifier	Qualifier Description
`display profile-base`		

display profile-base screen display

```
display profile-base
                                        User Profile Base

                                        Profile Base: 10000

                     This screen is used to display the Linux Group number that
                     corresponds to CommunicationManager user profile 0.
```

display profile-base screen field descriptions

display profile-base field descriptions

Field	Description
Profile Base	Linux Group number that corresponds to Communication Manager user profile 0. Profile Base default number is 10000.

psa

status psa

status psa

See status tti on page 684.

public-unknown-numbering

See:
change public-unknown-numbering on page 519
display public-unknown-numbering on page 520
list public-unknown-numbering on page 520

change public-unknown-numbering

change public-unknown-numbering *n [ext-digits x][trunk-group trunk-group-number]*

Use **change public-unknown-numbering *n [trunk-group trunk-group#]*** to administer the desired digits for name and number display on display-equipped stations in an ISDN network.

Action/Object	Qualifier	Qualifier Description
change public-unknown-numbering	***n***	Number of digits (extension length, Ex -Len) in the extension being administered. Enter **0** for attendant.
	ext-digits	the first extension on the screen Example: **change public-unknown-numbering 5** **change public-unknown-numbering 5 ext-digits 10010**
	trunk-group #	The ***trunk-group*** option displays valid results only when used in conjunction with the ***ext-digits*** option. Otherwise, an error message is returned.

See *Administering Avaya Aura™ Communication Manager (03-300509)* for a screen example and field descriptions, and for more information on ISDN Call Identification Display and Numbering-Public/Unknown.

display public-unknown-numbering

`display public-unknown-numbering n [ext-digits]`

Use **`display public-unknown-numbering`** to see the administration for name and number display on display-equipped stations in an ISDN network.

Action/Object	Qualifier	Qualifier Description
`display public-unknown-numbering`	***n***	Number of digits (extension length, Ex -Len) in the extension being administered. Enter **0** for attendant.
	`ext-digits`	the first extension on the screen Example: **`display public-unknown-numbering 5`** **`display public-unknown-numbering 5 ext-digits 10010`**

See *Administering Avaya Aura™ Communication Manager (03-300509)* for a screen example and field descriptions, and for more information on ISDN Call Identification Display and Numbering-Public/Unknown.

list public-unknown-numbering

`list public-unknown-numbering start n [ext digits | count]`

Use **`list public-unknown-numbering`** to list all entries in the public-unknown-numbering table, used to specify desired digits for name and number display on display-equipped stations in an ISDN network.

Action/Object	Qualifier	Qualifier Description
`list public-unknown-numbering`	**`start`** ***`n`*** **`count`**	starting point for the extension digits you want to see number of output lines Example: **`list public-unknown-numbering`** **`list public-unknown-numbering 5`** **`list public-unknown-numbering start 4`** **`list public-unknown-numbering start 4 count 50`**

The following example shows the output for **`list public-unknown-numbering`**.

```
list public-unknown-numbering

                     NUMBERING - PUBLIC/UNKNOWN FORMAT
                                                Total
       Ext  Ext      Trk        CPN             CPN
       Len  Code     Grp(s)     Prefix          Len
        5     4                                     4
```

list public-unknown-numbering field descriptions

Field	Description
CPN Prefix	The number that is added to the beginning of the extension to form a Calling or Connected Number. • blank = the extension is sent unchanged. Use in countries where the public network is able to insert the appropriate CPN Prefix to form an external DID number • If the CPN Prefix length matches the Total CPN Len, the extension number is not used to formulate the PN number. • If the CPN Prefix length plus the extension length exceeds the Total CPN Len, excess leading digits of the extension are deleted when formulating the CPN. • If the CPN Prefix length plus the extension length is less than the Total CPN Len, the entry is not allowed • If the Total CPN Len is **0**, no calling party number information is provided to the called party and no connected party number information is provided to the calling party.
Ext Code	Can be up to 7 digits, but cannot be greater than the Ext Len field. **attd** = attendant **0** = the Ext Len field must be 1 and the DDD number must be 10 digits. **0** to **9** or blank Example: When **Ext Len** is 4, **Ext Code** of 12 represents all extensions of the screen 12xx, excluding any explicitly listed longer codes. If code 123 is also listed, the **Ext Code** 12 represents all extensions of the screen 12xx except extensions of the screen 123x.
Ext Len	Number of digits for the extension, as entered on the command line (**`list public-unknown-numbering`** ***`n`***).
Total CPN Len	Total number of digits to send. If **0**, no calling party number information is provided to the called party and no connected party number information is provided to the calling party.
Trk Grp(s)	Number of the ISDN trunk group carrying the call, or the range of trunk groups that use the same CPN Prefix. **blank** = IEs are not dependent on which trunk group carries the call.

registered-ip-stations

list registered-ip-stations

`list registered-ip-stations`

[ext *X*] [type *X*] [id *X*] [release *X*] [region *X*] [port *X*] [gatekeeper *X*] [tcp y | n] [authenticated *X*] [count *n*]

Use **list registered-ip-stations** to see specific information about registered ip stations. Sort registered ip-station information by:

- gatekeeper address
- network region
- product ID
- station type
- TCP socket registration

Action/Object	Qualifier	Qualifier Description
list registered-ip-stations	**authenticated**	
	count *n*	number of stations to list
	ext x	extension number of the registered stations
	gatekeeper x	the C-LAN's or processor's IP address (xxx.xxx.xxx.xxx)
	id x	the product type (x.yyy) of the registered extension
	port x	the port number of the registered stations
	release x	release number of the registered stations
	region x	the network region of the registered stations
	tcp y|n	TCP signaling socket registration established
	type x	administered set type (***xxxxxx)***.

The following example shows a typical result of **`list registered-ip-stations`**.

```
list registered-ip-stations                                          Page 1 of 1
                                REGISTERED IP STATIONS

Station Ext/    Set     Product    Prod  Station         Net Gatekeeper      TCP
 Orig Port      Type    ID         Rel   IP Address      Rgn IP Address      Skt
1234567890123   1234567 1234567890 12345 123456789012345 123 123456789012345 1
 1234567

20000           4620    IP_Phone   2.200 172.20.80.1     12   172.23.23.134  y
20001           4620    IP_Phone   2.200 172.20.80.2     12   172.23.23.134  y
```

list registered-ip-stations field descriptions

list registered-ip-stations ***1 of 2***

Field	Description
For shared-control endpoints (an IP telephone and IP Softphone are in service on the same extension simultaneously), both endpoints register. The records for each endpoint appear vertically adjacent to each other.	
Station Ext/ Orig Port	First line: Station extension number Second line: Port number assigned to the extension that is now under the control of the specified endpoint, for example, a softphone. For an IP endpoint, this is the circuit-switched port that was assigned to this extension number before the IP endpoint registered to the extension. For a shared-control extension where the Telephone is a DCP set, this is the port of the shared-control's DCP set. If a softphone is not taking over a DCP set, no second line appears.
Set Type	Administered set type for the extension.
Product ID	Product ID of the registered endpoint. For example, this can be the product ID of a softphone that is registered to a hardphone extension, and the release information, provided from the endpoint during registration.
Prod Rel	Release number of the endpoint, provided from the endpoint to the gatekeeper during registration.
Station IP address	Location of the registered station, as the C-LAN or processor IP address or port location.
Net Rgn	Network region number assigned to the endpoint.
	1 of 2

list registered-ip-stations ***2 of 2***

Field	Description
Orig Port	Port number assigned to the extension that is now under the control of the specified endpoint, for example, a softphone. For an IP endpoint, this is the circuit-switched port that was assigned to this extension number before the IP endpoint registered to the extension. For a shared-control extension where the Telephone is a DCP set, this is the port of the shared-control's DCP set.
Gatekeeper IP Address	The IP address of the C-LAN, server, or other device that is performing the role of the H.323 gatekeeper for this endpoint.
TCP Skt	**y**/**n** Indicates whether or not the TCP signaling socket is established for the IP station.
	2 of 2

release

`Release` commands release specified maintenance objects from the maintenance busyout state and puts them back into service, assuming the health of the component(s) permits. Hardware tests specific to the maintenance object are performed to verify that it is functioning.

For each maintenance object, **`release`** is entered in the same fashion as the associated **`busyout`** command, except that the word **`release`** is entered instead of **`busyout`**. See the description of the related **`busyout`** command for details of command syntax.

If a **`release`** command is entered for an object that is not busied out, the command aborts. Some **`release`** commands trigger recovery actions by the system, such as the refresh of a standby PNC. See the description of the related **`busyout`** command for details of command execution and interactions.

For more information see Busyout and Release Commands on page 33.

Action/Object	Qualifier	Qualifier Description	Login	Default
release xxxx	***location maintenance-name*** **[*address*]**	Location of the given maintenance object. Use the same format as that used for the related **busyout** command.		
		Examples: **release board 01c11** **release data-module 310** **release Tone-Clock 2a** **release ds1-fac 02e01a** **release fiber-link 13** **release port 03a1012** **release station *extension***		

The identity of the maintenance object and the result of executing **release** appears on an output screen similar to the related **busyout** screen. When a **release** aborts or fails, an error code indicating the reason appears. See Common Error Codes for maintenance commands on page 34.

remote-access

status remote-access

status remote-access

Use **status remote-access** to see information about remote access calls.

```
status remote-access
                                REMOTE ACCESS STATUS
Remote Access Status: not-administered
                       Date/Time Modified:   /  /     :

    Barrier  Date      Expiration No. of Calls Status   Date/Time Expired Cause
    Code     Modified  Date       Calls  Used

 1:            /  /      /  /                             /  /     :
 2:            /  /      /  /                             /  /     :
 3:            /  /      /  /                             /  /     :
 4:            /  /      /  /                             /  /     :
 5:            /  /      /  /                             /  /     :
 6:            /  /      /  /                             /  /     :
 7:            /  /      /  /                             /  /     :
 8:            /  /      /  /                             /  /     :
 9:            /  /      /  /                             /  /     :
10:            /  /      /  /                             /  /     :
```

status remote-access field descriptions

status remote-access field descriptions

Field	Description
Remote Access Status	Indicates if the feature is enabled or not.
Barrier Code	
Date Modified	
Expiration Date	
No. of Calls	
Calls Used	
Status	
Date/Time Expired	
Cause	Reason for the expiration

remote-office

See:
add remote-office on page 528

change remote-office on page 529
list remote-office on page 529
display remote-office on page 529
remove remote-office on page 530
status remote-office on page 530

add remote-office

add remote-office *nn*

Use **add remote-office *n*** to administer a new remote office on your system.

Action/Object	Qualifier	Qualifier Description	Login	Default
add remote-office	***nn***	The number assigned to the remote office.		

The following example shows the screen for **add remote-office**.

```
add remote-office n                                          Page   1 of   1

                                  REMOTE OFFICE

          Node Name:
     Network Region:
           Location:
          Site Data:
```

add remote-office field descriptions

add remote-office field descriptions

Field	Description
Node Name	Node Name or IP address assigned to the remote office
Network Region	Network Region number assigned to all stations supported on this remote office. This network region may be used to override the default region obtained form the C-LAN used for signaling to and from the stations.
Location	Location number of the remote office
Site Data	Text information specific to your company.

change remote-office

`change remote-office nn`

Use **`change remote-office nn`** to change the administration of a specific remote office on your system. See add remote-office on page 528 for screen and field information.

display remote-office

`display remote-office nn`

Use **`display remote-office nn`** to see the information for a specific remote office administered on your system.

Action/Object	Qualifier	Qualifier Description
`display remote-office`	**`schedule`**	See Common Input Parameters on page 25.

See add remote-office on page 528 for screen and field information.

list remote-office

`list remote-office [schedule]`

Use **`list remote-office`** to list all of the currently administered remote offices on the system. Information includes the remote-office number, node name, network region, location number, and ip address of the remote office.

Action/Object	Qualifier	Qualifier Description	Login	Default
`list remote-office`	**`schedule`**	See Common Input Parameters on page 25.		

The following example shows the screen from **`list remote-office`**.

```
list remote-office                                          Page   1 of   1


Num     Node Name          Net Region   Location     IP Address
10      romaxn01               1            1         135.9  .72 .52
```

list remote-office field descriptions

list remote-office field descriptions

Field	Description
Node Name	Node Name assigned to the remote office
Net Region	Network Region number
Location	Location of the remote office
IP Address	IP Address of the remote office

remove remote-office

`remove remote-office nn`

Use **`remove remote-office nn`** to remove a specific remote office from your system. See add remote-office on page 528 for screen and field information.

status remote-office

Use **`status remote-office nn`** to see information about a specified remote-office.

The following example shows the screen from **`status remote-office`**.

```
status remote-office 10
                                  REMOTE OFFICE 10

             Node Name:  romaxn01                IP Address: 135.9  .72 .52
        Network Region:  1
              Location: 1

Trunk Signaling Groups: *14

   Stations Registered: 81234  82232  81234  88888  83210  83333

* Signaling group is currently registered
```

status remote-office field descriptions

status remote-office field descriptions

Field	Description
Node Name	Node Name assigned to the Remote Office
IP Address	IP Address of the node name assigned to the Remote Office
Network Region	Network Region number assigned to the Remote Office
Location	Location number for the Remote Office
Trunk Signaling Groups	Trunk Signaling Group assigned to the Remote Office
Stations Registered	Extensions of the stations on the Remote Office that are currently registered.

reset meet-me-vdn

Administrators use the reset meet-me-vdn command to disconnect all the members of a given meet-me conference and then place that conference back into an idle/active state. The maintenance commands **status meet-me-vdn *xxxx*** and **reset meet-me-vdn *xxxx*** are added for the meet-me conference VDNs; where ***xxxx*** is the extension.

Type the command **reset meet-me-vdn *XXXX*** and then type the command **status meet-me-vdn *XXXX***.

If the **reset meet-me-vdn *XXXX*** command is successful, the following status meet-me-vdn form appears:

```
                                GENERAL STATUS
                                                        Service State: idle

 Extension: 5000

 Conferee Ports
```

route-table

refresh route-table [all | *location*]

Occasionally, tables that are used to route IP messages become corrupted and/or contain stale routes, delaying packet delivery. Use **refresh route-table** to remove learned routes from C-LAN circuit pack route tables, and replace administered routes that have been corrupted.

Action/ Object	Qualifier	Qualifier Description	Login	Default
refresh route-table	**all** ***location***	Refreshes route tables in all C-LAN circuit packs. Refreshes ip-route tables in a specific C-LAN circuit pack (CCcss).	init inads craft station trunk MSP permissions	all

The following example shows the output from **refresh route-table all**.

```
refresh route-table all                                          Page   1 of   1

C-LAN Board Location   Number of Routes Removed    Number of Routes Added

       01B11                          7                          0
       01B12                          0                          0
       01B13                          0                          1
       01C05                          2                          0
       01C06                          3                          0
       01C07                          0                          0
       01C08                          15                         2
       01C09                          2                          0
       01C10                          5                          0
       01C11                          9                          0
                         Refresh Route Table Is Completed
```

The following example shows the output from **refresh route-table 01B11**.

```
refresh route-table 01B11                                        Page   1 of   1

C-LAN Board Location   Number of Routes Removed    Number of Routes Added

     01B11                          7                          0
                         Refresh Route Table Is Completed
```

refresh route-table field descriptions

refresh route-table field descriptions

Field	Description
C-LAN Board Location	The physical location of the circuit pack in CCcss format (cabinet, carrier, slot)
Number of Routes Removed	The number of routes that were deleted from the TN799DP (C-LAN) route tables
Number of Routes Added	The number of routes that were added from the TN799DP (C-LAN) route tables

security violations

monitor security-violations

`monitor security-violations`

Use **`monitor security-violations`** to see the following information about failed attempts to access the system:

- the time of the violation
- the login entered
- the port accessed during the failed login attempt

For remote access violations additional information appears:

- trunk-group number
- member number
- extension

A total of 16 entries are maintained for each type of access. The **`monitor security-violations`** report is automatically updated every 30 seconds until the command is canceled by pressing **CANCEL**. Canceling does not log off the terminal.

Note:

`monitor security-violations` is not available in ASA.

Action/Object	Qualifier	Qualifier Description	Login
`monitor security-violations`			init inads craft cust rcust bcms browse

security violations output

monitor security-violations output field descriptions

Date	The date of the security violation (MM/DD)
Time	The time of the logged security violation (HH:MM)
Login	The login ID that was entered as part of the violation attempt.

System Management Violations

System management violations field descriptions

Port Type	The type of port through which the login violation was attempted: SYS-PORT - a dial-in connection to a system port. MAINT - a physical connection to the G3-MT terminal connector on a PN's Maintenance circuit pack.
Ext	Extension assigned to the data module that was used to attempt the failed login. If a data module was not used (as in the case of dedicated EIA connections) the field is blank.

Remote Access Violations

Remote access violations field descriptions

TG No.	The trunk group that carried the incoming remote access attempt (remote access violations only).
Mbr	The trunk-group member number associated with the trunk from which the remote access attempt terminated (remote access violations only).
Ext	The extension used to access the RAP (remote access violations only).

session

enable session

enable session enables a telnet session on the TN2302 and TN2602 media-processor circuit packs.

Action/Object	Qualifier	Qualifier Description	Login
enable session			init craft inads

This is an example screen for **enable session.**

```
enable session                                                  Page 1 of 1

                                ENABLE SESSION

            Login:______
         Password:___________
  Renter Password:___________
           Secure? y
    Time to login: 0
    Board Address: ________
```

enable session field descriptions

enable session field descriptions ***1 of 2***

Field	Description
Login	3 - 6 alphabetic characters
Password	7 - 11 characters containing at least one letter and one number.
Reenter Password	Reenter the password
Secure	**y** = enable SFTP **n** = enable FTP
	1 of 2

enable session field descriptions ***2 of 2***

Field	Description
Time to login	Number of minutes (0 - 255) to be logged in. The login will be dropped after that time.
Board Address	Location of the circuit pack
	2 of 2

set-data

list set-data

`list set-data [schedule]`

Use **`list set-data`** to see phone information administered from the **Site Data** and **Station** screens.

Action/Object	Qualifier	Qualifier Description	Login
`list set-data`	**`schedule`**	See Common Input Parameters on page 25.	

The following example shows the screen from **`list set-data.`**

```
list set-data                                                    Page 1 of 1
                                   SET DATA

                                           Building   Cable Color/   Speaker
                                           Floor      Jack  Cord Len Headset
Extension       Name                       Room       Set Type       Mounting
---------       ----                       --------   ----- -------- --------
4000            sdfsd                                                   n
                                                              0         n
                                                      H.323

4001            793 Analog 1                                            n
                                                              0         n
                                                      2500+
```

list set-data field descriptions

list set-data field descriptions

Field	Description
Ext	station extension number, administered on the Station screen
Name	name used in the system directory
Building, Floor, Room	physical location of the station
Cable	identifies the cable that connects the phone jack to the system
Jack	identifies the jack where the phone is plugged in
Color	color of phone
Cord Len	length of the cord attached to the receiver
Speaker	y/n
Headset	y/n
Mounting	desk or wall
Set Type	type of phone

shell

go shell

`go shell`

Use **`go shell`** to get SAT access to the server's Linux bash shell.

1. Type **`go shell`** at the SAT command prompt and press **ENTER**.

   The screen displays:

   Suppress alarm origination? (y/n) [y]

2. Enter **y** to suppress alarms if you are logged into a server via an analog modem that is also the server's only alarm-reporting interface.

   This prevents the other server logging an occurrence of SME Event ID #1.

3. Enter your terminal type, or press **ENTER** for the default terminal type.

   The Linux prompt appears. It is the login and the server name followed by >.

4. At the Linux prompt, enter a Linux command.

Here is a sample screen for **go shell**.

```
Suppress alarm origination? (y/n) [y] y
  Alarm is suppressed. 30 minutes left.
Alarm origination suppressed

Wed Oct 24 13:24:30 MST 2007
Enter your terminal type (i.e., xterm, vt100, etc.) [vt100]=>vt100
31516: old priority 0, new priority 0
craft@server1>
```

signaling-group

See:
display signaling-group on page 538
list signaling-group on page 542
set signaling-group on page 544
status signaling-group on page 544
test signaling-group on page 546

display signaling-group

Use **display signaling-group** to see the properties of a specific signaling group, designated by the qualifier. Signaling groups are groups of B-Channels for which a given D-Channel (or D-Channel pair) carries the signaling information.

Action/Object	Qualifier	Qualifier Description	Login	Default
display signaling-group	***xx***	number of signaling group to display Example: **display signaling-group 4**	init inads craft	none

The following is an example of the output of **`display signaling-group`** page 1

```
display signaling-group 4                                        Page 1 of 5
                              SIGNALING GROUP

        Group Number: 4  Group Type: h.323  Max number of NCA TSC: 4
        Remote Office? n                     Max number of CA TSC: 4
                                           Trunk Group for NCA TSC: 4
        Trunk Group for Channel Selection:   4
        TSC Supplementary Service Protocol:      a
        T303 Timer (sec):

        Near-end Node Name:    jb_clan    Far-end Node Name: cl_dolan_cll
        Near-end Listen Port:  7007       Far-end Listen Port:  7007
                                          Far-end Network Region:
        LRQ Required? n     Calls Share IP Signaling Connection? y
        RRQ Required? n
                Bypass if IP Threshold Exceeded? n

                Direct IP-IP Audio Connection?   n
                IP Audio Hairpinning?  n
                Interworking Message:  PROGress
```

display signaling-group field descriptions

display signaling-group field descriptions ***1 of 3***

Field	Description
Grp No	The signaling group number
Group Type	The type of signal format (ISDN-PRI, ATM, H.323, SIP)
Max NCA TSCs	Maximum number of Non-Call Associated (NCA) Temporary Signaling Connections (TSCs) - virtual connections established within a D-Channel in the facility so that users can transport non-call control user-user information.
Max CA TSCs	Maximum number of Call Associated (CA) TSCs.
Remote Office	The number of NCA TSCs that are administered.
Trunk Group for NCA TSC	The ISDN-PRI trunk group number whose incoming call-handling table handles incoming NCA-TSCs through this signaling group
Trunk Group for Channel Selection	If more than one trunk group is assigned to this signaling group, this trunk group is the one that can accept incoming calls
	1 of 3

display signaling-group field descriptions ***2 of 3***

Field	Description
TSC Supplementary Service Protocol	This field appears when trunk Group Type is ISDN, and for signaling group types ATM, H.323, and ISDN-PRI. **a** = AT&T Customer Supplementary Services when **Country Code** is **1A** on the DS1 screen. **a** = Bellcore Supplementary Services when **Country Code** is **1B** on the DS1 screen **a** = Nortel Proprietary Supplementary Services when **Country Code** is **1C** on the DS1 screen. **b** = ISO Q SIT **c =** ETSI. Use to support ETSI-ISDN Completion of Calls (Auto Callback) functionality. **d =** ECMA QSIG **e** allows DCS with rerouting, when **DCS with Rerouting** is **y**, and **Used for DCS** on the trunk group screen is **y**. **f** = Feature Plus **g** = ANSI.
T303 Timer (sec)	The number of seconds the system waits for a response from the far end before invoking Look Ahead Routing. Appears when the **Group Type** field is **isdn-pri** on the DS1 Circuit Pack screen or **h.323** on the Signaling Group screen.
Near-end Node Name	The node name for the C-LAN IP interface on this switch, administered on the Node Names screen and the IP Interfaces screen.
Far-end Node Name	The node name for the far-end C-LAN IP interface used for trunks assigned to this signaling group, administered on the Node Names screen.
Near-end Listen Port	A port number assigned to both near-end and far-end systems for signaling. 1719 is used when **LRQ** is **y**.
Far-end Listen Port	The same port number assigned to the near-end listen port.
Far-end Network Region	The network region number that is assigned to the far-end of the trunk group. It appears only for H.323 signaling groups. A blank indicates the region of the near-end node
LRQ Required	**n** when the far-end PBX uses a Communication Manager server **y** when the far-end PBX uses a server that is not a Communication Manager server, and requires a location request to obtain a signaling address in its signaling protocol
	2 of 3

display signaling-group field descriptions ***3 of 3***

Field	Description
RRQ Required	**y** when the signaling group serves a remote office (gateway) **n** when the signaling group serves a gatekeeper
Calls Share IP Signaling Connection	**y** = inter-Communication Manager server connections **n** = the local and/or remote PBX uses a non-Avaya server.
Bypass if IP Threshold Exceeded?	**y** = the system automatically removes from service trunks assigned to this signaling group, when IP transport performance falls below limits administered on the Maintenance-Related System-Parameters screen.
Direct IP-IP Audio Connection	**y** allows direct audio connections between IP endpoints, and saves on bandwidth resources and improves sound quality of VoIP transmissions.
IP Audio Hairpinning	**y** allows IP endpoints to be connected through the IP circuit pack on the switch in IP format, without going through the TDM bus.
Interworking Message	Determines what message the switch sends when an incoming ISDN trunk call interworks (is routed over a non-ISDN trunk group). PROGress causes the public network to cut through the B-channel and allow the caller to hear tones, such as ringback or busy tone, over the non-ISDN trunk. ALERTing causes the public network in many countries to play ringback tone to the caller. Select this value only if the DS1 is connected to the public network, and it is determined that callers hear silence (rather than ringback or busy tone) when a call incoming over the DS1 interworks to a non-ISDN trunk.
	3 of 3

The following is an example of the output of **`display signaling-group`** page 2

```
display signaling-group 4                                          Page 2 of 5
                         ADMINISTERED NCA TSC ASSIGNMENT

Service/Feature:                          As-needed Inactivity Time-out (min):

     TSC     Local                              Mach.
     Index   Ext.    Enabled   Established   Dest.       Digits     Appl.     ID

     1:      64666      Y      permanent     22666                  dcs       24
     2:               n
     3:               n
     4:               n
     5:               n
     6:               n
     7:               n
     8:               n
     9:               n
    10:               n
    11:               n
    12:               n
    13:               n
    14:               n
    15:               n
    16:               n
```

list signaling-group

Use **`list signaling-group`** to see a list of signaling groups, which are groups of B-Channels for which a given D-Channel (or D-Channel pair) will carry the signaling information.

Action/Object	Qualifier	Qualifier Description	Login
`list signaling-group`	**`count`** ***`xx`***	number of signaling groups to be displayed Example: **`list signaling-group count 6`**	init inads craft

The following is an example of **`list signaling-group`**.

```
list signaling-group

                              SIGNALING GROUPS

Grp  Group         No.         Primary    Secondary     Max      Max No,  Adm'd
No.  Type     FAS? Trunk Brds  D-Channel  D-Channel   NCA TSCs  NCA TSCs NCA TSCs

2    atm       y   1           01B0815                   0         0         0
4    h.323     y   1                                     4         4         1
5    isdn-pri  y   1           01B1024                   0         0         0
6    isdn-pri  y   1           01A0724                  48        23         1
9    h.323     y   1                                     0         0         0
15   atm       y   1           01B0809                   0         0         0
25   isdn-pri  y   1           01B0924                  20        20         0
```

list signaling-group field descriptions

list signaling-group field descriptions ***1 of 2***

Field	Description
Grp No	The signaling group number
Group Type	The type of signal format (ISDN-PRI, ATM, H.323)
FAS	Facility Associated Signaling (FAS), in which a D-Channel carries signaling information for only those B-Channels on the same facility as the D-Channel. This is identical to a DS1 interface. If the parameter is “n”, this is referred to as Non-Facility Associated Signaling (NFAS), in which a B-Channel can belong to any signaling group as long as the maximum number of DS1’s for a signaling group is not exceeded.
No. Trunk Brds	The number of trunk boards having members belonging to this signaling group
Primary D-Channel	The D-Channel administered to be the primary channel. If, during the backup procedure, both channels are in the same state, switches at opposite ends of the PRI select the primary D-Channel to be put into service.
Secondary D-Channel	This channel will only appear if the signaling group is an NFAS signaling group. This D-Channel is administered to be the secondary D-Channel. If, during the backup procedure, both channels are in the same state, switches at opposite ends of the PRI select the primary D-Channel to be put into service.
	1 of 2

list signaling-group field descriptions ***2 of 2***

Field	Description
Max NCA TSCs	Maximum number of Non-Call Associated (NCA) Temporary Signaling Connections (TSCs) - virtual connections established within a D-Channel in the facility so that users can transport non-call control user-user information.
Max CA TSCs	Maximum number of Call Associated (CA) TSCs.
No. Adm'd NCA TSCs	The number of NCA TSCs that are administered.
	2 of 2

set signaling-group

`set signaling-group` ***`group#`***

Use **`set signaling-group`** to set the secondary D-channel in the specified signaling group to be the primary D-channel. The primary D-channel becomes the secondary D-channel. A signaling group is a collection of B-channels signaled for by a designated single D-channel or set of D-channels over an ISDN-PRI link.

Action/Object	Qualifier	Qualifier Description	Login	Default
`set signaling-group`	***`group#`***	The number assigned to the signaling group.		

status signaling-group

`status signaling-group` ***`group#`***

Use **`status signaling-group`** to see the service state, type, and port location of the primary and secondary D-channels within an ISDN-PRI signaling group. A signaling group is a set of B-channels signaled for by a designated single D-channel, or combination of D-channels over an ISDN-BRI.

Action/Object	Qualifier	Qualifier Description	Login	Default
`status signaling-group`	***`group#`***	The administered number associated with each signaling group.		

The following information is given for **status signaling-group** for both primary and secondary D-channels, if any.

```
status signaling-group 1                          Page 1 of   1
                        STATUS SIGNALING-GROUP
       Group ID:  1
           Type:  facility associated signaling
    Group State:  in-service

                          Primary D-Channel
  Link:  1      Port:  01C1924    Level 3 State:  in-service

                         Secondary D-Channel
  Link:        Port:            Level 3 State:
```

status signaling-group field descriptions

status signaling-group field descriptions ***1 of 2***

Field	Description
Group ID	An administered number that identifies the signaling group.
Type	See ISDN-SGR (ISDN-PRI Signaling Group) on page 549 in the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)* for more information about group types. • facility associated signaling: Every member is carried on a single DS1-associated facility. Facility-associated signaling groups support only simplex D-channel configurations. • non-facility associated signaling: Members can include trunks on several different associated DS1 facilities. • An explicit identifier specifies members of the DS1 trunk group across its ISDN-PRI link. A single D-channel on one facility provides signaling for every member. With D-channel backup, a second D-channel is assigned to assume control of signaling if the primary D-channel fails.
Group State	**in-service**: one of the D-channels signaling for the group is in service **out-of-service**: neither D-channel in the group is in service If there is no D-channel backup and the primary D-channel is out-of-service, the signaling group is in an out-of-service state.
Link	Link transporting the D-channel
	1 of 2

status signaling-group field descriptions ***2 of 2***

Field	Description
Port	Address of the port transporting either the primary or secondary D-channel
Level 3 State	State of the primary or secondary D-channels: **in-service**: the D-channel is in the multiple-frame-established state at layer 2 carrying normal call-control signaling at layer 3. **standby**: the D-channel is in the multiple-frame-established state at layer 2, and not carrying any layer 3 call-control messages on logical link 0,0. **wait**: an attempt has been made by one side of the interface to establish layer 3 peer communications as part of the process of going to the “in-service” state, which is transitional in nature. Only when the **ISDN SERVICE** message is sent over the interface, and the far end of the interface responds with a SERVICE ACKnowledge message is the D-channel placed in the “in-service” state. **maintenance-busy**: the D-channel is not in the multiple-frame-established state at layer 2. This state is entered automatically when an active D-channel is declared failed. A D-channel that has been placed in the “maintenance-busy” state may be placed in the “out-of-service” state without system technician intervention. **manual-out-of-service**: system technician intervention has caused the D-channel to be placed in the TEI-assigned state at layer 2. System Technician intervention is required to retrieve a D-channel from this state. **out-of-service**: the D-channel is in the TEI-assigned state at layer 2, but is periodically requested by layer 3 to attempt to establish the link. **no-link**: no link is administered for the D-channel
	2 of 2

test signaling-group

`test signaling-group` ***`group#`*** **`[short | long] [repeat`** ***`repeat#`*** **`| clear] [schedule]`**

Use **`test signaling-group`** to validate the administration of a signaling group, and run a series of diagnostic tests on it.

An ISDN-PRI signaling group is a set of B-channels whose signaling messages are carried together on a designated D-channel or set of D-channels.

See status signaling-group on page 544 for information on how to access the additional data after running **test signaling-group**.

Action/Object	Qualifier	Qualifier Description	Login	Default
test signaling-group	***group identifier*** **short** **long** **repeat** ***n*** **clear**	The station extension (must conform to dial-plan) See Common Input Parameters on page 25.	init inads craft	short 1
		Examples: **test signaling-group 1** **test signaling-group 1 repeat 10** **test signaling-group 2 short** **test signaling-group 4 long** **test signaling-group 4 long clear**		

skill-status

list skill-status

list skill-status [*starting-number xx*] [count *num-groups yy*] [schedule]

Use **list skill-status** to see administration and status data for skilled hunt groups.

Action/Object	Qualifier	Qualifier Description	Login	Default
list skill-status	**starting-number xx** **count num-groups yy**	The starting hunt group number. The number of hunt groups to be displayed.	init inads craft	1 1 if *starting-number* is specified. Otherwise, all.
		Example: **list skill-status** **list skill-status 3** **list skill-status 11 count 6**		

```
list skill-status                                                Page   1 of 5
                                   SKILL STATUS

                   S C O D D D      Extension/
Grp Grp   Grp      L S C T P Q      Service     Level 1   Level 2
No. Name  Type     S O W A A P SO   Level       Threshold Threshold S EWT  OCW

1   CC HG 1                         70631
          ead-mia y n y n   n 20      /        40  /     60  /       0    0
2   CC HG 2                         70632
          ead-mia n         n 20      /            /         /       0    0
3   CC HG 3                         70633
          ead-mia n         n 20      /            /         /       0    0
4   CC HG 4                         70634
          ead-mia n         n 20      /            /         /       0    0
5   CC HG 5                         70635
          ead-mia n         n 20      /            /         /       0    0
6   CC HG 6                         70636
          ead-mia n         n 20      /            /         /       0    0
7   CC HG 7                         70637
          ead-mia n         n 20      /            /         /       0    0
```

list skill-status field descriptions

list skill-status field descriptions ***1 of 2***

Field	Description
Group No.	The number of the hunt group/skill group being reported
Group Name	Communication Manager name associated with the hunt group/skill group as administered with **`change hunt-group`** (not the CMS name)
Group Type	Call distribution method for the hunt group/skill group
SLS	Service level supervisor
CSO	Call selection override
OCW	(Activate on) Oldest call waiting
DTA	Dynamic threshold adjustment
DPA	Dynamic percentage adjustment
DQP	Dynamic queue position
SO	Service objective
	1 of 2

list skill-status field descriptions ***2 of 2***

Field	Description
Extension Service Level	Extension number of the hunt group/skill group and the assigned service level targets (represents percentage of calls answered in a specific number of seconds)
Level 1 Threshold	First wait time threshold; when value is exceeded, calls queued to group of reserve agents.
Level 2 Threshold	Second wait time threshold; when exceeded, calls routed to contingency reserve agents
EWT	Estimated wait time for calls queuing to hunt group/skill group
OCW	Oldest call waiting time in queue for the hunt group/skill group
	2 of 2

This table shows data for each skilled hunt group.

Skilled hunt group details

Group Number	Group Name	Group Extension	Group Type
Service Level Supervisor	Call Selection Override	Activate on Oldest Call Waiting	Dynamic Threshold Adjustment
Dynamic Percent Adjustment	Dynamic Queue Position	Service Objective	Weighted Service Level (status)
Service Level Target (percentage and time)	Level 1 Threshold	Adjusted Level 1 Threshold (status)	Level 2 Threshold
Adjusted Level 2 Threshold (status)	SLS State (status)	Expected Wait Time (status)	Time in Queue of Call at Head of Queue (status)

socket-usage

See:
monitor socket-usage on page 549
status socket-usage on page 550

monitor socket-usage

```
monitor socket-usage
```

Use **monitor socket-usage** to show how many IP endpoints are registered and how many of those registered IP endpoints have their TCP signaling channels established (connected). The **monitor socket-usage** screen is periodically updated until the user cancels out of the command.

Action/Object	Qualifier	Qualifier Description
monitor socket-usage		

The following example shows the output for **monitor socket-usage**.

```
monitor socket-usage
                                        SOCKET USAGE

                                  Total Registered IP Endpoints: 20
Registered IP Endpoints with TCP Signaling Socket Established: 10
```

status socket-usage

status socket-usage

Use **status socket-usage** to show a snapshot of the individual socket usage for each C-LAN or Processor Ethernet information, and to list the system's:

- number of registered IP endpoints
- number of registered IP endpoints with TCP signaling sockets established
- number of sockets used
- number of sockets on the system

Status socket-usage replaces **status clan-usage**.

Action/Object	Qualifier	Qualifier Description
status socket-usage	**schedule**	See Common Input Parameters on page 25

The following example shows the output for **status socket-usage**.

```
status socket-usage                                          Page   1 of    4
                             SOCKET USAGE

                                Total Registered IP Endpoints: 6883
Registered IP Endpoints With TCP Signaling Socket Established: 6705
                                          Total Socket Usage: 08262/24576

Intf         Board Socket      Net        Intf        Board  Socket     Net
Type   Loc    Sfx  Usage       Rgn        Type  Loc   Sfx    Usage      Rgn

procr              003/2500    6          CLAN  02A09 D     007/400    1
CLAN  03A04   D    000/400     2          CLAN  03A05 D     000/400    2
```

status socket-usage field descriptions

status socket-usage field descriptions

Field	Description
Total Registered IP Endpoints	The number of IP endpoints registered with the server.
Registered IP Endpoints with TCP Signaling Socket Established	The number of registered IP endpoints that have their TCP signaling channels established.
Total Socket Usage	The number of TCP signaling sockets currently in use by C-LANs and Processor Ethernet circuit packs.
Intf Type	Type of interface: **C-LAN** = TN799 circuit pack **procr** = Processor Ethernet circuit pack
Loc	The cabinet/carrier/slot location of the C-LAN or Processor Ethernet circuit pack
Board/Suffix	The circuit pack designation suffix.
Socket Usage	The first number = number of sockets in use on the circuit pack when the command was entered. The second number = value administered in the **Number of C-LAN Sockets Before Warning** field using the add/change ip-interfaces command. The socket number does not include sockets used by adjuncts.
Net Rgn	Network Region assigned to the circuit pack on the **add ip-interfces** screen.

sp-link

See:
busyout sp-link on page 552
release sp-link on page 553
status sp-link on page 553
test sp-link on page 554

busyout sp-link

`busyout sp-link`

Use **`busyout sp-link`** to put the system printer link into a maintenance busy state and prevent access to the system printer.

The system printer link is a link from the switch to an external printer. This link is created by administering the system printer extension and setting up a call to the system printer.

See status link on page 362 for more details on links.

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

release sp-link

`release sp-link`

Use **`release sp-link`** to release the system printer link from a maintenance busy state and enable access to the system printer. See **`busyout sp-link`** for more information, and Busyout and Release Commands on page 33. See status link on page 362 for more details on links.

Action/Object	Qualifier	Qualifier Description	Login
`release sp-link`			init inads craft

status sp-link

`status sp-link`

Use **`status sp-link`** to see a summary of the operational state of the system printer link.

See status link on page 362 for more details on links.

The following display shows a typical result of **`status sp-link`**.

```
status sp-link
                          SYSTEM PRINTER LINK STATUS

       Link State: down
Number of Retries: 0
 Maintenance Busy? no
```

status sp-link field descriptions

status sp-link field descriptions

Field	Description
Link State	The operational state of the link: • **up** — A call is currently set up to the system printer. • **down** — The link is administered but a call is not currently set up to the printer. • **extension not administered** — An extension is not administered on the features-related system parameters screen for the system printer.
Number of Retries	The number of times the switch tried to establish the link since a request to set it up was received. This field appears only when the link is down.
Maintenance Busy	Whether maintenance testing is being performed on the system printer link. Blank if the system printer link is not administered.

test sp-link

`test sp-link [long | short] [schedule]`

Use **`test sp-link`** to perform tests on the system printer link to determine if the link is up, down, or if an extension was not administered. The system printer link is a link from the switch to an external printer.

See status pms-link on page 494 for more information. See status link on page 362 for more details on links.

Action/Object	Qualifier	Qualifier Description	Login	Default
`test sp-link`	**`short`** **`long`** **`schedule`**	See Common Input Parameters on page 25.	init inads craft	short
		Examples: **`test sp-link`** **`test sp-link sh`** **`test sp-link l`** **`test sp-link schedule`** **`test sp-link sh sch`**		

ssh-keys

reset ssh-keys

`reset ssh-keys board` *`location`*

Use **`reset ssh-keys board`** (SAT command) to generate new SSH dynamic host keys on C-LAN and VAL circuit packs for craft/dadmin logins and higher. Before you reset the dynamic host keys with **`reset ssh-keys board`**, use **`busyout board`** to busyout the C-LAN and VAL circuit packs.

Action/Object	Qualifier	Qualifier Description	Login
`reset ssh-keys board`	*`location`*	location of the board on which to reset the dynamic host keys	craft dadmin (and higher)

Dynamic host keys

Dynamic keys are inherently more secure than static keys because:

- If static keys for one circuit pack are compromised, all circuit packs are compromised.
- The probability of compromise is reduced when each circuit pack has its own dynamic key.
- Users can change dynamic keys at any time.

Dynamic host keys include:

- IP address
- Host name
- Firmware

Public key exchange

TN circuit packs support dynamic host keys. Because clients have the server's public key information stored on them, when the server generates a new public/private key pair (which happens the first time the board initializes or when the user decides), the client prompts the user to accept the key when logging into the server. This is to make the client user aware that the server's public key is not what it used to be and this may, but not necessarily, imply a rogue server.

A technician encountering a situation where the server's public key is not what it used to be should determine if the server's keys were changed since the last servicing.

- If they were, the technician should continue login.

- If not, there is a security issue, and the technician should notify the appropriate personnel.

station

See:
add station on page 556
busyout station on page 558
change station on page 559
list station on page 559
list trace station on page 657
release station on page 561
status station on page 562
test station on page 582

add station

`add station` *`extension`* `| next`

Use **`add station`** to administer a new station.

Action/Object	Qualifier	Qualifier Description	Login	Default
`add station`	***`extension`*** **`next`**	Extension number of the new station Assigns the next available extension number to the new station		

The following screens show examples of the Station screen. For field descriptions, see *Administering Avaya Aura™ Communication Manager (03-300509).*

```
add station 2000                                          Page   1 of   4
                                     STATION

Extension: 67403                          Lock Messages? n          BCC: 0
     Type: 8410D__                        Security Code: 1234        TN: 1
     Port: X______                      Coverage Path 1:            COR: 1
     Name: Vphone_______________________ Coverage Path 2:            COS: 1
                                        Hunt-to Station:
STATION OPTIONS
              Loss Group: 2_                Personalized Ringing Pattern:
             Data Module? n                            Message Lamp Ext: 67403
            Speakerphone:                            Mute button enabled?
        Display Language?
                   Model:                               Expansion Module?

 Survivable GK Node Name:                              Media Complex Ext:
          Survivable COR:                                   IP SoftPhone? n
   Survivable Trunk Dest?                            Remote Office Phone? y
                                                      IP Video Softphone?
                                                                IP Video?
```

```
add station 2000                                                Page   2 of   4
                                     STATION
FEATURE OPTIONS
           LWC Reception: spe                  Auto Select Any Idle Appearance? n
          LWC Activation: y                             Coverage Msg Retrieval? y
  LWC Log External Calls? n                                       Auto Answer: none
            CDR Privacy? n                                  Data Restriction? n
   Redirect Notification? y                         Idle Appearance Preference? n
 Per Button Ring Control? n
   Bridged Call Alerting? n                             Restrict Last Appearance? y
  Active Station Ringing: single

        H.320 Conversion? n             Per Station CPN - Send Calling Number? _
       Service Link Mode: as-needed          Busy Auto Callback without Flash? y
         Multimedia Mode: basic                       Audible Message Waiting?
    MWI Served User Type: _______                   Display Client Redirection? n
        Automatic Moves:
             AUDIX Name:                           Select Last Used Appearance? n
                                _                    Coverage After Forwarding? _
     Recall Rotary Digit? n                            Multimedia Early Answer? n

Remote Softphone Emergency Calls: as-on-local   Direct IP-IP Audio Connections? n
Emergency Location Ext: 75001      Always use? n          IP Audio Hairpinning? n
Precedence Call Waiting? y
```

```
add station 2000                                                Page   3 of   4
                                        STATION
SITE DATA
      Room:                                                  Headset? n
      Jack:                                                  Speaker? n
     Cable:                                                 Mounting: d
     Floor:                                              Cord Length: 0
  Building:                                                Set Color:


ABBREVIATED DIALING
     List1:                    List2:                        List3:

BUTTON ASSIGNMENTS
 1: call-appr                                        6:
 2: call_appr                                        7:
 3:                                                  8:
 4:                                                  9:
 5:                                                 10:
```

```
add station 2000                                                Page   4 of   4
                                        STATION
SOFTKEY BUTTON ASSIGNMENTS

 1: lwc-store                                   13:
 2: lwc-cancel                                  14:
 3: auto-cback                                  15:
 4: timer                                       16:
 5: call-fwd   Ext:                             17:
 6: call-park                                   18:
 7: date-time                                   19:
 8: priority                                    20:
 9: abr-prog                                    21:
10: abr-spchar Char: ~p                         22:
11: abr-spchar Char: ~m                         23:
12: abr-spchar Char: ~w                         24:
```

busyout station

busyout station *extension*

Use **busyout station** to busyout an installed or uninstalled station extension.

Action/Object	Qualifier	Qualifier Description	Login
busyout station	***extension***	Extension number per dial plan Example: **busyout station 12345**	init inads craft

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

change station

change station ***extension***

See add station on page 556 for examples of the Station screen. For field descriptions, see *Administering Avaya Aura™ Communication Manager (03-300509).*

list station

list station [ext *x*] [to-ext *x*] | [port *x*] | [type *x*] | [movable *x*] | [count *n*] | [schedule]

- **list station movable always** – shows extensions available for moves anytime
- **list station movable done** – shows extensions that had the Automatic Moves field set to once, and have moved
- **list station movable error** – shows mis-administered, non-serialized extensions
- **list station movable no** – shows extensions not available to be moved
- **list station movable once** – shows extensions available to be moved once

Action/ Object	Qualifier	Qualifier Description	Login	Default
list station	**ext *x***	first extension in the list		
	to-ext *x*	last extension in the list		
	port x	port number Shows IP Telephone port when IP Softphone and IP Telephone are in shared control.		
	type *x*	type of station		
	count *n*	number of stations in the list		
	movable always	shows extensions available for moves anytime		
	movable done	shows extensions that had the Automatic Moves field set to once, and have moved		
	movable error	shows mis-administered, non-serialized extensions		
	movable no	shows extensions not available to be moved		
	movable once	shows extensions available to be moved once		
	schedule	See Common Input Parameters on page 25.		

This is an example of **list station**.

```
list station                                                          Page   1
                                        STATIONS

Ext/      Port/     Name/                        Room/         Cv1/ COR/     Cable/
 Type     Hunt-to   Surv GK NN          Move     Data Ext      Cv2  COS      Jack

40000     091V303   Thorsten Analog                                 1
 2500                                   no                            1
40001     03B0601   Thorsten Analog Sim Trunk                       1
 2500                                   no                            1
40002     091V203   Thor DCP                                        1
 6408D+                                 no                            1
40010     S02976    Ext. 40010                                      1
 4620                                   no                            1
```

This is an example of **`list station movable always`**.

```
list station movable always
                                  STATIONS

Ext/      Port/     Name/                        Room/          Cv1/ COR/     Cable/
 Type     Hunt-to   Surv GK NN          Move     Data Ext       Cv2  COS      Jack

1001      01A0301   Digital a0301                               1     1
6402D                                   always
```

The Port field shows information for only IP Telephone when an IP telephone and IP Softphone are in service on the same extension simultaneously.

release station

`release station`

Use **`release station`** to remove specified administered voice terminal extensions from a maintenance busy state.

For more information see Busyout and Release Commands on page 33.

Action/Object	Qualifier	Qualifier Description	Login
`release station`	***`extension`***	Extension number See your company's dial-plan	init inads craft cust

status station

status station *extension*

Use **status station** to see the internal software state information for a specific station. Use the information for diagnosis and to help locate the facilities to which the station is communicating.

Action/Object	Qualifier	Qualifier Description	Login	Default
status station	***extension***	Station extension (per dial plan)	init inads craft cust browse	
		Example: **status station 30001**		

status station, page 1

The following example shows the output for **status station 30001**.

```
 status station 30001                                                    page 1 of 7
                                    GENERAL STATUS
     Administered Type: 6408D+             Service State: No hardware assigned
        Connected Type: N/A            TCP Signal Status:
             Extension: 30001            Download Status: pending
                  Port: X              Parameter Download:
           Call Parked? no                  SAC Activated? no
      Ring Cut Off Act? no
Active Coverage Option: 1
     Service Link Port: 05D1621         Service Link Ext: 93035389077
        Softphone Port: S00013
   Softphone Signaling:            Shd TCP Signal Status:

         EC 500 Status:            Off-PBX Service State:
       Message Waiting:
       Connected Ports:

Limit Incoming Calls?

 User Cntrl Restr:                                HOSPITALITY STATUS
Group Cntrl Restr:                              Awaken at:
                                                 User DND: not activated
                                                Group DND: not activated
                                              Room Status: non-guest room
```

status station field descriptions

status station field descriptions, GENERAL STATUS and HOSPITALITY STATUS ***1 of 4***

Field	Description
GENERAL STATUS	
Active Coverage Option	Specifies the active coverage pa
Administered Type	Administered station type
Call Parked	Whether the station has a call parked (**y/n**)
Connected Ports	Port locations of the facilities to which the telephone/softphone is connected: cabinet-carrier-slot-circuit
Connected Type	The type of phone connected to this port
Download Status	Status of soft key download.
EC 500 Status	**enabled =** Extension to Cellular is enabled **disabled** = Extension to Cellular is disabled
Extension	Station or attendant extension
Group Cntrl Restr	One or two of the following • none • total • stat-stat • outward • terminate
Limit Incoming Calls	State of the Limit Number of Concurrent Call (LNNC).
Message Waiting	Whether there is a message waiting for the station. • AUDIX • PMS • blank if no messages are waiting
Off-PBX Service State	• **inservice/idle** = there is no OPTIM call at the station • **inservice/active** = there is an OPTIM call at the station • **out-of-service** = the station is busied out.
	1 of 4

status station field descriptions, GENERAL STATUS and HOSPITALITY STATUS ***2 of 4***

Field	Description
Parameter Download	Current status of downloading terminal parameter information • **complete** = the information was successfully downloaded sometime in the past • **pending** = the system is waiting to download the information. The download will complete through a background periodic test or demand test. • **not applicable** = this is not a programmable station.
Port	Port location of the endpoint: cabinet-carrier-slot-circuit.
Ring Cut Off Activated	Whether ring cut-off is activated (**y/n**)
SAC Activated	Whether Send All Calls is activated on this extension (**y/n**)
Service Link Extension	Extension for the softphone off-premise destination on a telecommuter configuration
Service Link Port	Shows the port used to establish a connection to the softphone off-premise destination on a telecommuter configuration
Service State	State of the telephone endpoint • **in-service/on-hook** (with no OPTIM calls, if applicable) • **in-service/off-hook** • i**n-service/disconnected** (no OPTIM calls, if applicable) • **in-service/idle** (the station is AWOH or hardware is otherwise not present, with no OPTIM calls if applicable) • **in-service/active** (with OPTIM, has OPTIM calls and is not physically off-hook) • **in-service/in-tsa** (Terminal Self Administration) • **out of service** (the station is busied-out)
	2 of 4

status station field descriptions, GENERAL STATUS and HOSPITALITY STATUS ***3 of 4***

Field	Description
Shd TCP Signal Status:	Indicates whether a TCP signaling channel is established for the endpoint on a shared control connection. Appears only for IP Telephones and Softphones. • **connected** = Endpoint is registered and TCP signaling link is established • **connecting** = Endpoint is registered and TCP signaling link is in the process of being connected • **not connected** = Endpoint is not registered • **on-demand** = Endpoint is registered and TCP signaling link is not established. For IP endpoints with **on-demand** status, `test station` triggers TCP socket establishment. For all IP endpoints except "soft" IP endpoints such as IP Softphone and IP Agent, `status station` triggers TCP socket establishment.
Softphone Signaling	
Softphone Port	The port for the softphone controlling an IP telephone.
TCP Signal Status	Indicates whether a TCP signaling channel is established for the endpoint. Appears only for IP Telephones and Softphones. • **connected** = Endpoint is registered and TCP signaling link is established • **connecting** = Endpoint is registered and TCP signaling l0000000ink is in the process of being connected • **not connected** = Endpoint is not registered • **on-demand** = Endpoint is registered and TCP signaling link is not established. For IP endpoints with **on-demand** status, `test station` triggers TCP socket establishment. For all IP endpoints except "soft" IP endpoints such as IP Softphone and IP Agent, `status station` triggers TCP socket establishment.
	3 of 4

status station field descriptions, GENERAL STATUS and HOSPITALITY STATUS ***4 of 4***

Field	Description
User Cntrl Restr	One or two of the following • none • total • stat-stat • outward • terminate
HOSPITALITY STATUS	
Awaken at	Time that Automatic Wakeup Call is scheduled
User DND	**activated/not activated** Status of Do Not Disturb
Group DND	**activated/not activated** Status of group Do Not Disturb
Room Status	Whether a room is occupied or not • non-guest room • vacant • occupied
	4 of 4

status station, page 2

Page 2 status station displays the part ID of the station for status station, if available.

```
status station 30001                                    page 2 of 7

                                GENERAL STATUS

CONNECTED STATION INFORMATION
               Part ID Number: unavailable
                Serial Number: unavailable

          Station Lock Active?                  TOD Station Lock?

UNICODE DISPLAY INFORMATION
       Native Name Scripts:N/A
   Display Message Scripts:0x08000001:latn;ChiS
 Station Supported Scripts:0x000801b7:Latn;Lat1;LatA;Grek;Cyrl;Hebr;Arab...

CF Destination Ext:
Enhanced Call Forwarding Destinations
                Internal             Extarnal
  Unconditional:
           Busy:
       No Reply:

           Team Button
Monitoring Stations
```

status station field descriptions, page 2

status station field descriptions, CONNECTED STATION INFORMATION and UNICODE DISPLAY INFORMATION *1 of 2*

Field	Description
GENERAL STATUS	
CONNECTED STATION INFORMATION	
Part ID Number	Part ID Number (comcode) of the telephone. If this field shows Unavailable, the software was unable to determine the Part ID Number.
	1 of 2

status station field descriptions, CONNECTED STATION INFORMATION and UNICODE DISPLAY INFORMATION ***2 of 2***

Field	Description
Serial Number	Serial number of the telephone. • Unavailable = the software is unable to determine the Serial Number. • Errored = the serial number received is not in the correct format.
Station Lock Active	Indicates whether the station has been locked using Station Lock.
TOD Station Lock	Indicates whether the station is within a Time of Day lock interval.
UNICODE DISPLAY INFORMATION	
Native Name Scripts	N/A, or on a Unicode-enabled station, the script used for the native name of the station: 0x plus the hex value of the script tag, and up to 7 language acronyms.
Display Message Scripts	N/A, or on a Unicode-enabled station, the script used for the display language of the station: 0x plus the hex value of the script tag, and up to 7 language acronyms.
Station Supported Scripts	N/A, or on a Unicode-enabled station, the script supported by the telephone: 0x plus the hex value of the script tag based on the scripts supported by Unicode capable endpoints, and up to 7 language acronyms.
CF Destination Ext	Call forwarding destination extension, if any. • blank when Extension to Cellular is enabled • appears for mapped extensions when Extension to Cellular is disabled
Enhanced Call Forwarding Destinations	Up to six Enhanced Call Forwarding destination numbers for Unconditional, Busy, or No Rely ECF types, and the internal or external destination for each.
Team Button Monitoring Stations	Shows all monitoring extensions that supervise the monitored station
	2 of 2

The following example shows the output for **`status station`** with Active IP Phone Conference call on an **S8700 IP-PNC**. This example shows IP audio parameters used for each IP hop. This data is dependent on the connected ports (page 1 of the **`Status Station`** screen).

status station, page 1, for a 3-way IP conference call

```
status station 70103                                          Page   1 of x
                              GENERAL STATUS
     Administered Type: 4606               Service State: in-service/off-hook
        Connected Type: 4606             Download Status: complete
             Extension: 70103              SAC Activated? no
                  Port: S00003          User Cntrl Restr: none
           Call Parked? no             Group Cntrl Restr: none
      Ring Cut Off Act? no
Active Coverage Option: 1

          EC500 Status:            Off-PBX Service State:
       Message Waiting:
   Connected Ports: 01B0824     02A0723


                                                   HOSPITALITY STATUS
                                                Awaken at:
                                                 User DND: not activated
                                                Group DND: not activated
                                              Room Status: non-guest room
```

Field descriptions are the same as status station field descriptions on page 563.

status station, page 2, for a 3-way IP conference call

```
status station 70103                                          Page   2 of x
                                         GENERAL STATUS
CONNECTED STATION INFORMATION

               Part ID Number: unavailable
                Serial Number: unavailable
          Station Lock Active? no

UNICODE DISPLAY INFORMATION
          Native Name Scripts:
      Display Message Scripts:
    Station Supported Scripts:
```

Field descriptions are the same as status station, page 2 on page 567.

status station, page 3 for an IP call

```
status station 70103                                          Page 3 of x

                                CALL CONTROL SIGNALING

                            Port:S00588
                   Switch                       IP                       IP
                   Port     Switch-end IP Addr:Port    Set-end IP Addr:Port
     IP Signaling: 01A0317  172. 22. 22.120   :1720    172. 25. 48  73:1032
            H.245:
        Node Name:          gert_clan1
   Network Region:          1                          1

                            Shared Port:S00011
                   Switch                       IP                       IP
                   Port     Switch-end IP Addr:Port    Set-end IP Addr:Port
     IP Signaling: 01A0318  172. 22. 22.121   :1720    172. 25. 48  74:1032
            H.245:
        Node Name:          gert_clan1
   Network Region:          1                          1
```

```
status station 70103                                          Page x of x

                                  AUDIO CHANNEL
                                  Port: S00588

                   Switch                       IP                       IP
                   Port     Other-end IP Addr :Port    Set-end IP Addr:Port
G.711MU     Audio: 01B0905  170. 20. 20.230   :2960    170. 20. 20.  0:2854
        Node Name:          gert_prow8
   Network Region:          1                          1
    Audio Connection Type: ip-tdm

                           Port: S00588                Shared Port: S00011
   Product ID and Release: IP_Tel   1.700              IP_Soft   5.000
  H.245 Tunneled in Q.931? does not apply              does not apply
      Registration Status: registered-authenticated    registered-authenticated
              MAC Address: 00:60:1d:24:65:18           unavailable
       Native NAT Address: 10.0.0.1                    10.0.0.2
 ALG - NAT WAN IP address:
         Media Encryption:
```

status station field descriptions, CALL CONTROL SIGNALING

status station field descriptions, CALL CONTROL SIGNALING

Field	Description
CALL CONTROL SIGNALING Call Control Signaling fields show information for both endpoints when an IP telephone and IP Softphone are in service on the same extension simultaneously (shared-control).	
IP Signaling: Switch Port	The C-LAN board location serving the switch end of the IP signaling link. The port number is always 17 for the “ethernet” port of the C-LAN. This field is blank for an unregistered H.323 station.
IP Signaling: Switch-end IP Addr and Port	Switch-end Q.931 (H.323 station) or CCMS (IP SoftPhone) IP signaling address and IP port. IP Port has a decimal value 0-65535. This field is blank for an unregistered H.323 station.
IP Signaling: Set-end IP Addr and Port	Set-end Q.931 IP signaling address and IP port. IP port is a decimal value 0-65535. This field is blank for an unregistered H.323 station.
H.245: Switch Port	The C-LAN port serving the H.245 signaling link. The port number is 17 for the “ethernet” port. This field is blank for an unregistered H.323 station, a VPhone, or when H.245 tunneling in Q.931 is used.
H.245: Switch-end IP Addr and Port	Switch-end H.245 IP signaling address and TCP/IP port. IP Port is 0-65535. This field is blank for IP SoftPhone endpoints, endpoints using Q.931 tunneling of H.245, and unregistered or inactive H.323 stations.
H.245: Set-end IP Addr and Port	Set-end H.245 IP signaling address and IP Port. IP Port is 0-65535. This field is blank for IP SoftPhone endpoints, endpoints using Q.931 tunneling of H.245, and unregistered or inactive H.323 stations.
Node Name (for Call Control)	Label administered for an IP address.
Network Region (for Call Control)	A number given to a set of IP addresses to indicate they have a common set of characteristics.

status station field descriptions AUDIO CHANNEL

status station field descriptions, AUDIO CHANNEL *1 of 3*

Field	Description
AUDIO CHANNEL Audio Channel fields show information for only the IP Telephone when an IP telephone and IP Softphone are in service on the same extension simultaneously. Product Information fields show the information for both endpoints for Softphone and Telephone Shared Control.	
xxxxxxx Audio	The type of audio active for the station. *xxxxxxxx* is one of these values: **G.711-MU, G711-A, G.729A, G.723.1-6.3, G.723.1-5.3, PCM, 711-MU, 711-A, 729, 729A, 729B, 729-AB**, or **723.1-5.3/6.3**. • **PCM** - the station is a telecommuter IP SoftPhone configuration with call-back audio • blank - no audio path is present
Port / Shared Port	The physical port used to provide audio path for the endpoint. The port represents a MedPro port for H.323 stations, or for stations using a H.323 endpoint for audio. An idle IP SoftPhone or H.323 station with an as-needed service link shows no audio port. Blank - stations with no established audio path, or for telecommuter stations.
Other-end IP Addr and Port	Other-end IP audio address and IP port. Port is a decimal value 0-65535. This field is blank for an idle station with no audio link, or for a telecommuter IP SoftPhone with circuit-switched audio link.
Set-end IP Addr and Port	Set-end IP audio address and IP port. Port is a decimal value 0-65535. This field is blank for an idle station with no audio link, or for a telecommuter IP SoftPhone with circuit-switched audio link.
Node Name	Label administered for an IP address.
Network Region	A number given to a set of IP addresses to indicate they have a common set of characteristics.
Audio Connection Type	Audio codec selected. • ip-tdm • ip hairpin • ip direct • ip-idle • blank - audio is carried directly to service link port
	1 of 3

status station field descriptions, AUDIO CHANNEL *2 of 3*

Field	Description
Product ID and Release	Identifier submitted by the endpoint during registration, and the release number of the endpoint that is provided to the gatekeeper upon registration. This field appears only for Avaya or Lucent products. This field appears in the second column of the screen when the Shared Port field is populated. Value is one of the 30 allowed product IDs administered on the **system-parameters customer-options** screen, including: • **IP_Tel** - IP Telephone • **IP_Soft** - IP Softphone • **IP_eCons** - An IP soft console • **IP_Agent** - An IP soft agent phone • **IP_ROMax** - A remote office phone
H.245 Tunneled in Q.931	**y =** H.245 is contained within Q.931, and H.245 fields do not appear. Does not apply to IP SoftPhone endpoints. This field appears in the second column of the screen when the Shared Port field is populated.
Registration Status	Identifies the registration and authentication status of the IP endpoint. An unregistered IP SoftPhone cannot be identified as an IP endpoint. This field appears in the second column of the screen when the Shared Port field is populated. • **unregistered** (H.323 station only) — the endpoint is unregistered • **registered-not-authenticated** (H.323 station only) — the endpoint is registered, but has not been authenticated (the station is disallowed from making or receiving calls). • **authenticated-not-registered** (H.323 station only) — the endpoint has been authorized (by the associated IP SoftPhone), but is not yet registered • **registered-authenticated** — the endpoint is registered and authenticated (for example, an IP station that is able to make calls) • **pending-unregistration —** the endpoint is unregistered, but critical internal data structures have not yet been updated
	2 of 3

status station field descriptions, AUDIO CHANNEL *3 of 3*

Field	Description
MAC Address	The Media Access Control (MAC) address received from the phone when the phone registers. This field appears in the second column of the screen when the Shared Port field is populated. • **not available** - the phone registers but is unable to send a MAC address • blank - the phone is not registered.
Native NAT Address	Specifies the network address translation (NAT) IP address of the endpoint when a network device provides the network address translation function for the endpoint. The network device provides the NAT address of the endpoint at the time of registration. The field is blank if the NAT address is not known. This field appears in the second column of the screen when the Shared Port field is populated.
ALG - NAT WAN IP address	This field is populated only when a special application turned on.
Media Encryption	**aes** indicates Advanced Encryption Standard encryption, the standard used by U.S. government to protect sensitive (unclassified) information. Reduces circuit-switched to IP call capacity by 25%. **aea** indicates Avaya Encryption Algorithm. Not as secure as AES. **none** indicates an unencrypted media stream.
	3 of 3

status station, NETWORK STATUS and SUMMARY, for an IP call.

This screen is available only to IP endpoints.

```
status station 70103                                          Page x of x
NETWORK STATUS
      Average Jitter (ms)          Packet Loss per Second
       Last Ten Seconds              Last Ten Seconds
       # - more than 255ms           * - 100% loss

              0                             0              Per Call Info
              0                             0
              0                             0   Out of Order Counter: 0
              0                             0   SSRC Change for Call: 0
              0                             0     Last Rx Sequence #: 5450
              0                             0     Last Tx Sequence #: 22932
              0                             0  Echo Return Loss (db): 0
              0                             0        Bulk Delay (ms): 8
              0                             0   ERL Enhancement (dB): 25
              0                             0

SUMMARY
Worst Case this Call (ms): 1          Worst Case this Call: 0
   Average this Call (ms): 0          Average this Call: 0
 Current Buffer Size (ms): 8
```

status station field descriptions, NETWORK STATUS and SUMMARY

status station field descriptions, NETWORK STATUS and SUMMARY ***1 of 2***

Field	Description
NETWORK STATUS Network Status fields show information for only the IP Telephone when an IP telephone and IP Softphone are in service on the same extension simultaneously.	
Average Jitter Last Ten Seconds # - more than 255 ms	The average jitter in received packets from the last ten one-second intervals. # = maximum (100%) packet loss per second during the one-second interval.
Packet Loss per Second Last Ten Seconds * - 100% loss	The ten most recent one-second samples of the lost packet information for the requested endpoint. * = maximum (100%) packet loss per second during the one-second interval. * appears when silence suppression is y on the ip-codec-set screen, or when packet loss = 100%.
Out of Order Counter	A count of the number of out-of-order packets detected during the current connection.
	1 of 2

status station field descriptions, NETWORK STATUS and SUMMARY ***2 of 2***

Field	Description
SSRC Change for Call	The number of SSRC changes occurring during the current connection.
Last Rx Sequence No.	Last received data packet sequence number.
Last Tx Sequence No.	Last transmitted data packet sequence number.
Echo Return Loss	Loss of the echo signal, relative to the transmitted signal, due to the PSTN network including the hybrid.
Bulk Delay	Delay offset of the echo relative to the original signal.
ERL Enhancement	Loss introduced by the echo canceller. This is the measure of the effectiveness of the echo canceller.
SUMMARY	
Worst Case this Call	Jitter: the worst-case, 1-second jitter (ms) experienced during the current connection. Packet Loss: the worst-case, 1-second packet loss experienced during the current connection.
Average this Call	Jitter: the average jitter for the current connection (the running average of all the 1-second intervals during the connection. Packet Loss: the average packet loss number for the current connection (running average of all the 1-second intervals experienced during the connection.
Current Buffer Size	The current jitter buffer size.
	2 of 2

status station, CONNECTED PORTS, for an IP call

This screen shows the IP media processor resources used during a conference call.

```
status station 70103                                          Page x of x
                                  CONNECTED PORTS
           src port: S00588

 ip-start: 172. 22. 22.  8:2854
   ip-end: 172. 22. 22.233:2960 01B0905
    audio: G.711MU        encryption:none   ss:off  pkt:20ms

 ip-start: 172. 22. 22.182:2712
   ip-end: 172. 22. 22.234:2224 02A0107
    audio: G.711MU        encryption:aes    ss:off  pkt:20ms

 ip-start:
   ip-end:
    audio:

 ip-start:
   ip-end:
    audio:

           dst port: 01B0824
```

status station field descriptions, CONNECTED PORTS

status station field descriptions, CONNECTED PORTS ***1 of 2***

Field	Description
CONNECTED PORTS Connected Ports fields show information for only the IP telephone when an IP telephone and IP Softphone are in service on the same extension simultaneously.	
src port	The port address of the statused station.
MP	The physical port location of the media processing circuit pack. The audio stream passes through a media processing circuit pack (either a Medpro or a VoIP module on a media gateway) when direct IP-IP audio connections are disabled or the connection cannot be direct for other reasons (for example, the call requires a codec conversion).
HP	Hairpinning. **y** appears when the audio stream is handled entirely on the media processing circuit pack. The audio connection does not require more extensive processing (for example, some codec conversion), and does not use TDM bus resources.
ip-start	The IP address of one end of a direct connection.
	1 of 2

status station field descriptions, CONNECTED PORTS ***2 of 2***

Field	Description
ip-end	The IP address of the other end of a direct connection.
audio	Type of audio codec active for the connection. **G.711-MU, G711-A, G.729A, G.723.1-6.3, G.723.1-5.3, PCM, 711-MU, 711-A, 729, 729A, 729B, 729-AB**, or **723.1-5.3/6.3**.
encryption	Type of media encryption as entered on the ip-codec-set form. **aes** = Advanced Encryption Standard encryption, standard used by U.S. government to protect sensitive (unclassified) information. Reduces circuit-switched to IP call capacity by 25%. **aea** = Avaya Encryption Algorithm. Not as secure as AES. **none** = an unencrypted media stream.
ss	Indicates whether silence suppression is active on this audio stream. **on**/ **off**
pkt	Size of the packet carrying the audio.
dst port	The port address of one of the other parties to which the statused station has a connection on this call.
	2 of 2

status station, ACD STATUS

This screen shows the ACD status of the station.

```
status station 70103                                          Page x of x
                                    ACD STATUS

Grp/Mod  Grp/Mod  Grp/Mod  Grp/Mod  Grp/Mod
   /        /        /        /        /            On ACD Call? no
   /        /        /        /        /              Occupancy: 0.0
   /        /        /        /        /
   /        /        /        /        /
   /        /        /        /        /
   /        /        /        /        /
   /        /        /        /        /
```

status station field descriptions, ACD STATUS

status station field descriptions, ACD STATUS

Field	Description
Grp	Hunt Group number
Mod	ACD Work Mode
On ACD Call	Whether the agent is on an ACD call (**y/n**)
Occupancy	

status station, ATM VPI.VCI DATA

This screen shows the ATM VPI.VCI DATA for the station.

```
status station 40000                                          Page x of x
                                    ATM VPI.VCI DATA

 Port         Talk            Connected Port         Listen

 091V303      n/a
```

status station, SRC PORT TO DEST PORT TALKPATH

This screen shows SRTP as the encryption algorithm when in use for the currently active H.323 IP station and corresponds with AES Media Encryption requirements.

```
status station 1012                                           Page x of x
                                    SRC PORT TO DEST PORT TALKPATH

src port: S00119
 S00119:TX:172.28.8.14:2712/g729a/20ms/srtp
01A0801:RX:172.28.8.6:2576/g729a/20ms/srtp TX: tdm:a222
01A1401:RX:tdm:a222

dst port: 01A1401
```

status station field descriptions, SRC PORT TO DEST PORT TALKPATH

status station field descriptions, SRC PORT TO DEST PORT TALKPATH

Field	Description
src port	port number

status station, Voice Statistics

This screen shows the real-time voice statistics for the calls in progress. The real-time voice statistics may or may not exceed the administered Voice/Network thresholds.

```
status station 20004                                          Page x of xx
                            VOICE STATISTICS

           TN Code: 2602AP                    Board Loc: 7e1305
             Codec: g729a/b                  Encryption: aes
        DSP Number: 2                       Endpoint ID: 12346
          UDP Port: 32543
     Called Number: 7205321234___           Dst Net Reg: 120
 Far-End IP Addr: 3ffe:ffff:107::235:6eff:fe03:d9ff
         Echo Canc: y
    Echo Tail (ms): 128             Silence Suppression: y
 Comfort Noise Gen: y                    Data Call/Type: n

THRESHOLD DATA
  Total Exceptions: 22          Jiffer Buffer Size (ms): 120
  Packet Size (ms): 20           Jitter Buffer Overruns:   2
     % Packet Loss:  1     Jitter Buffer Underruns:   5
Peak Packet Loss% : 15              Average Jitter (ms):
                                       Peak Jitter (ms):
 Avg RT Delay (ms):                   Peak RT Delay (ms):
```

status station, VOICE STATISTICS

Field	Description
TN Code	The media processor board code used for the call.
Board Loc	The carrier/slot location of the media processor for which data is being reported.
Codec	The codec used for the call.
	1 of 3

Field	Description
Encryption	The type of media encryption used on the call (for example, AES, AEA, SRTP 1, and so on.
DSP Number	The number of the DSP on the media processor board used for the call.
Endpoint ID	The endpoint ID assigned for the call.
UDP Port	The UDP port used by the media processor board for the call.
Called Number	The number of the endpoint which received the call (far end).
Dst Net Reg	The network region where the destination media processor is located.
Far-End IP Addr	IP address of the device on the far end of the call (called party).
Echo Canc	Indicates whether the echo cancellation is on/off for the call.
Echo Tail (ms)	The tail length of the echo canceller used for the call. "0" implies that a different echo canceller was used than the one on the media processor.
Silence Suppression	Indicates whether Voice Activation Detection (VAD) is used for the call.
Comfort Noise Gen	Indicates whether CNG is being used for the call.
Data Call/ Type	Indicates whether the call is a data call. If **y** (yes), include type of data call (for example, FAX, Modem, Clear Channel, TTY, Fax-PT (pass-thru), Mod-PT, TTY-PT). For example, Data Call/Type: y/T.38 FAX
Threshold Exceptions	A total number of thresholds that are exceeded for the call when the data was requested.
Packet Size (ms)	The size for each steam of data for the associated call, measured in milliseconds.
% Packet:Loss	The amount of packet loss occurred for the call when the data was requested.
Peak Packet Loss (%)	The peak packet loss recorded for the call.
Jitter Buffer Size (ms)	The size of the jitter buffer used for the call, measured in milliseconds.
	2 of 3

Field	Description
Jitter Buffer Overruns	A number of jitter buffer overruns occurred for the call. Overruns occur when too many packets arrive into the jitter buffer very quickly, causing the jitter buffer to fill up. When it happens, the jitter buffer is unable to handle additional traffic/packets. If the number of overruns exceeds 99, the value in this field is "99+".
Jitter Buffer Underruns	A number of jitter buffer underruns occurred for the call. When the arrival time of packets goes beyond the size of the jitter butter, the jitter buffer underrun occurs which results in silence until there are additional packets in the jitter buffer to process. If the number of underruns exceeds 99, the value in this field is "99+".
Average Jitter (ms)	The average amount of jitter recorded for the call over a 10-second reporting interval, measured in milliseconds.
Peak Jitter (ms)	The peak amount of jitter recorded for the call, measured in milliseconds.
Avg RT Delay (ms)	The average round trip delay of packets, measured in milliseconds.
Peak RT Delay (ms)	The peak round trip delay recorded for the call, measured in milliseconds.
	3 of 3

test station

`test station`

Use **`test station`** to perform hardware diagnostic tests on an individual port circuit assigned to that extension. The technician must specify the extension and a translation is automatically done to the physical port location.

Action/Object	Qualifier	Qualifier Description	Login	Default
`test station`	**`extension`** **`short`** **`long`** **`repeat n`** **`clear`**	The station extension (per dial-plan) See Common Input Parameters on page 25.	init inads craft cust nms	short 1
		Examples: **`test station 81709 l`** **`test station 85136 s r 2`** **`test station 85036 l r 25`** **`test station 84297 r 4`** **`test station 81709 c`**		

WARNING:
Since the “clear long” options clear all counters if tests pass, it is possible to clear firmware counters even when a problem exists. In some cases customer service might degrade since calls might be routed over defective equipment.

survivable-processor

list survivable-processor

`list survivable-processor`

Use **`list survivable-processor`** on the primary controller to see the status of LSPs or ESSs administered on the Survivable Processors screen (**`add survivable-processor`**) or the **`system-parameters port-networks`** screen. Verify that the LSP or ESS(s) register, and that translations are updated.

Action/Object	Qualifier	Qualifier Description
`list survivable-processor`		

The following display shows a typical result for **`list survivable-processor`**:

```
list survivable-processor

                              SURVIVABLE PROCESSORS
 Name            Type       IP Address     Reg LSP         Translations     Net
                                               Act         Updated          Rgn

 sv-st12-lspa     LSP       172.22 .21 .111 y   n          1:00 5/29/2007    1
 st12SIMlsp002    LSP       172.20 .148.2   n   n                            1
 st12SIMlsp004    LSP       172.20 .148.4   n   n                            1
 sv-st12-lspe     LSP       172.22 .21 .122 y   n          1:00 5/29/2007    1
 st12SIMlsp006    LSP       172.20 .148.6   n   n                            1
 st12SIMlsp007    LSP       172.20 .148.7   n   n                            1
 st12SIMlsp008    LSP       172.20 .148.8   n   n                            1
 st12SIMlsp009    LSP       172.20 .148.9   n   n                            1
 st12SIMlsp010    LSP       172.20 .148.10  n   n                            1
 st12SIMlsp011    LSP       172.20 .148.11  n   n                            1
 st12SIMlsp012    LSP       172.20 .148.12  n   n                            1
 st12SIMlsp013    LSP       172.20 .148.13  n   n                            1
 st12SIMlsp014    LSP       172.20 .148.14  n   n                            1
 st12SIMlsp015    LSP       172.20 .148.15  n   n                            1
 st12SIMlsp016    LSP       172.20 .148.16  n   n                            1
```

The following display shows a typical result for **`list survivable-processor`**

```
list survivable-processor

                              SURVIVABLE PROCESSORS
 Name           Type   ID  IP Address         Service              Translations
                                                State?              Updated

 sv-st12-lspa    LSP   04  172.22 .21 .111   in-service/idle      1:00 5/29/2007
 st12SIMlsp002   LSP   05  172.20 .148.2     out-of-service       1:00 5/29/2007
```

list survivable-processor field descriptions

list survivable-processor field descriptions

Field	Description
Name	Name of the LSP or ESS as administered on the Survivable Processors screen (**`add survivable-processor`**) or the System Parameters Port Networks screen.
Type	**LSP**, **ESS** Survivable processor type as listed on the Survivable processor- processor ethernet form (add survivable-processor node-name).
ID	Server ID number (cluster ID) of the ESS or LSP.
IP Address	IP address of the node name as it appears in the IP Node Name screen and on the Survivable Processor ethernet screen.
Reg LSP Act	
Service State	in-service/idle: the LSP is registered out-of-service
Translations Updated	Time and date of the translation update to the LSP or ESS
Net Rgn	Network region in which the PE interface of the LSP or ESS resides, as listed on the Survivable Processor ethernet screen.

For more examples of the Survivable Processor screen, see the Survivable Processor section in *Avaya Aura™ Communication Manager Screen Reference (03-602878)*.

suspend-alm-orig

See:
disable suspend-alm-orig on page 585
enable suspend-alm-orig on page 585
list suspend-alm-orig on page 586

disable suspend-alm-orig

Use **`disable suspend-alm-orig`** to stop entries from the active Suspend Alarm Origination table. This command disables all board entries that match a specific physical board location.

Note:

`disable suspend-alm-orig` does not disable port entries.

Action/Object	Qualifier	Qualifier Description	Login	Default
`disable suspend-alm-orig`	board location	Physical location of the replaced or corrected board (does not support port location)	init inads craft cust rcust	
		Examples: **`disable suspend-alm-orig 1C03`** **`disable suspend-alm-orig 1E07`**		

enable suspend-alm-orig

`enable suspend-alm-orig [`*`location`*`] [off-board-only] expires-in-hrs `*`hrs`*

Use **`enable suspend-alm-orig`** to suspend alarm origination for alarms generated by the specified board (***`location`***) or port (***`location`***) for a the specified amount of time (***`hrs`***).

`enable suspend-alm-orig` does not support circuit packs without a board location. Enter **`enable suspend-alm-orig`** multiple times to suspend alarms on different boards or ports. If a physical location is specified for which there is already a suspension in effect, the most recent suspension request replaces the previous request.

Use **`enable suspend-alm-orig`** to improve control over situations such as:

- Quieting a hyperactive port board during installation or troubleshooting.
- Improving control over customer requests. For example, use **`enable suspend-alm-orig`** to temporarily suspend off-board DS1 alarms for customers who periodically disconnect DS1 trunks for testing or other business purposes.

- Improving control over external (non-Avaya) problems. For example, use **enable suspend-alm-orig** to suspend off-board DS1 alarms before a customer resolves facility problems, such as working with the vendor of a T1 trunk that has developed an off-board condition.
- Improving control over internal (Avaya) problems that cannot be immediately resolved. For example, use **enable suspend-alm-orig** to suspend alarm origination for a bad circuit pack detected late Friday night if personnel cannot be dispatched until Monday.

To see a list of active alarm origination suspensions, use **list suspend-alm-orig**. To disable a suspension, use **disable suspend-alm-orig**.

Action/Object	Qualifier	Qualifier Description	Login	Default
enable suspend-alm-orig	**board/port location** **off-board-only** **expires-in-hrs**	Physical location of the hardware optional; if not specified, both on-and off-board alarms suspended Number of hours (1-72)	init inads craft cust rcust	on-and off-board alarms
		Examples: **enable suspend-alm-orig 1B03 expires-in-hrs 3** **enable suspend-alm-orig 1B0701 expires-in-hrs 72** **enable suspend-alm-orig 1B07 off-board-only expires-in-hrs 24**		

list suspend-alm-orig

Use **list suspend-alm-orig** to see active entries in the Suspend Alarm Origination table. Even though this command only lists active entries, an entry that expires during the list process still appears in the output. If the Suspend Alarm Origination table is empty, the output contain only the title and field headings.

Action/Object	Qualifier	Qualifier Description	Login	Default
list suspend-alm-orig			init inads craft	

```
list suspend-alm-orig
                       Suspend Alarm Origination Entries

                     Physical   Board        Expires At

                     01C03      off-only     06/11/15:06
                     01E0407    on-and-off   06/11/17:26
                     01E0406    on-and-off   06/12/45:34
```

switch-node

status switch-node

`status switch-node` ***`SN#`***

Use **`status switch-node`** to see the operational status and attributes of the user specified switch node. The operational status of the active and standby Switch Node Clock (SNC) circuit packs for the switch node appear along with any alarms logged against the specified switch node.

Action/Object	Qualifier	Qualifier Description	Default
`status switch-node`	***`SN#`***	Normally switch node 1 resides in the PN cabinet, and switch node 2, if present, resides in the nearest PN cabinet.	1

The following display shows a typical result for **`status switch-node`**.

```
 status switch-node 1                                              page 1 of 1
                                SWITCH NODE STATUS

                              Major   Minor   Warning  Active SNC  Standby SNC
Switch Node  Location  Mode    Alarms  Alarms  Alarms   Location    Location

 1  A-PNC      01E     active    0       0       0      01E10       01E12
 1  B-PNC      01D     standby   0       1       2      01D10       01D12
```

status switch-node field descriptions

A line of information appears for each switch node carrier.

status switch-node field descriptions

Field	Description
Switch Node	The switch node number, 1 or 2. If the PNC is duplicated, the A and B PNCs are reported separately.
Location	The physical location of the switch node carrier • A high-reliability system shows one switch node location. • A critical-reliability shows the active and standby switch node locations.
Mode	Current role of the switch node carrier. **active** = SN is providing normal circuit and control functions for PNC **standby** = SN is ready to become active, but is currently not active blanks = PNC is not duplicated
Major Alarms	Number of major alarms logged against the switch node carrier
Minor Alarms	Number of minor alarms logged against the switch node carrier.
Warning Alarms	Number of warning alarms logged against the switch node carrier.
Active SNC Location	The physical location of the standby switch node Clock circuit pack **no board** if an SNC is administered but not inserted
Standby SNC Location	The physical location of the standby switch node Clock circuit pack **no board** if an SNC is administered but not inserted Blanks if there is no standby switch node Clock for a given switch node

switch-node clock

set switch-node-clock

`set switch-node-clock` ***`location`*** **`[override]`**

Use **`set switch-node-clock`** to set the active switch node clock (SNC) circuit pack in a given switch node carrier.

`Set switch-node-clock` is valid only for a simplex PNC with a Center State Switch (CSS).

Action/Object	Qualifier	Qualifier Description	Login	Default
`set switch-node-clock`	***`override`***	Set the active switch node clock regardless of the health of the standby SNC circuit pack.		

synchronization

See:
change synchronization on page 590
display synchronization on page 593
list synchronization on page 596
set synchronization on page 597**4**
status synchronization on page 597
test synchronization on page 600

change synchronization

`change synchronization`

`[ atm | css | port-network n]` parameters are available on their respective port networks.

Use **`change synchronization`** to change the synchronization source for the system. After running **`change synchronization`**, clocks may momentarily lose synchronization.

Use **`change synchronization atm`** to administer primary and secondary references for the Stratum 4 option, or ATM-Switch, indicating that the synchronization references are input directly to the ATM switch.

Action/Object	Qualifier	Qualifier Description	Login	Feature Interaction
`change synchronization`	**`atm`** **`css`** **`port network n`**	change ATM-connected PNs change CSS-connected PNs change the PN number entered	init inads craft cust rcust bcms	DS1 interface, BRI trunk, or UDS1 board selected as either a primary or secondary synch source cannot be removed on the DS1 circuit pack administration form or the regular circuit pack administration form.

This is an example of **`change synchronization port-network 3`** on **S8700 IP-PNC**.

```
change synchronization port-network 3                                Page   1 of   2
                                  SYNCHRONIZATION PLAN
                                    PORT-NETWORK 31
                     SYNCHRONIZATION SOURCE (circuit pack location)

                    Stratum: 4

                    Primary: 03B02      Secondary: 03A08

                      CIRCUIT PACKS AVAILABLE FOR SYNCHRONIZATION
Location  Type  Name             Slip      Location  Type  Name             Slip

03B05     DS1   to gert 13a06    n
03A09     DS1   GERT Loop 414    y
03A14     DS1   Gert Loop 415    y
03A08     DS1   Gertrude <> 5E   y
03B02     DS1   gertrude <> st1  y
03B13     DS1   GERT<>ST13       y
03B07     DS1   SIP<>TEST        n

NOTE: DS1 and BRI TRUNK sources result in stratum 4, type II synchronization
```

This is an example of **`change synchronization css`** on **S8700 MC**.

```
change synchronization css                                           Page   1 of   10
                                  SYNCHRONIZATION PLAN

                       SYNCHRONIZATION SOURCE (circuit pack location)

                    Stratum: 4

                    Primary: 01B02      Secondary: 01A08

                CIRCUIT PACKS AVAILABLE FOR SYNCHRONIZATION
Location  Type  Name             Slip      Location  Type  Name             Slip
01B05     DS1   2a18             n
01A08     DS1   1a17             y
01A09     DS1   1b12             y
01B02     DS1   5b06             y

NOTE: DS1 and BRI TRUNK sources result in stratum 4, type II synchronization
```

This is an example of **`change synchronization atm`** on **S8700 IP-PNC**.

```
change synchronization atm                                          Page   1 of   2
                                 SYNCHRONIZATION PLAN

                     ATM SYNCHRONIZATION REFERENCE (circuit pack location)

                    Stratum: 4

                    Primary: ATM-SW            Secondary: STM-SW

                      CIRCUIT PACKS AVAILABLE FOR SYNCHRONIZATION
Location  Type  Name              Slip      Location  Type  Name              Slip

02D07     DS1   TKG37<>ST13       n         06E06     DS1   DS1<>ST12         n
02D08     DS1   TKG36<>ST13       n         06E04     DS1   DS1<>MANTA        n
04E03     DS1   DS1<>ST11         n         06E07     DS1   DS1<>ST12         n
04E04     DS1   TKG 8<>ST13       n         14B20     DS1   Engl Loop 14B20   n
05E03     DS1   CAB 5 <> LOOP     n         14C20     DS1   Agile Loop 1      n
05E04     DS1   LOOP<>ST10        n         06A18     DS1   uds1-tq32         n
05E05     DS1   QSIG<>ST12        n         02D20     DS1   atm tn464 2d20    n
06E05     DS1   DS1<>LOOP         n         03A19     DS1   uds1-tg35         n

NOTE: DS1 and BRI TRUNK sources result in stratum 4, type II synchronization
```

change synchronization field descriptions

change synchronization field descriptions *1 of 2*

Field	Description
Stratum	Enter 3 for stratum-3 clocking or 4 for stratum 4 clocking.
Primary	First choice system synchronization source. Blank means no synchronization. Enter 5-character board location on any system • ATM PNC: Enter **atm-switch**. ATM PNC port networks can get synchronization only from the ATM switch. Entering a circuit pack location only monitors that pack for errors. • CSS, **S8700 IP-PNC**: Sync source must be in the cabinet being administered
Secondary	5-character board location for second choice system synchronization source. Blank means no synchronization. **S8700 IP-PNC**: Sync source must be in the cabinet being administered.
	1 of 2

change synchronization field descriptions ***2 of 2***

Field	Description
Location	Circuit pack location of all administered DS1 circuit packs (port network, carrier and board slot)
Type	Type of circuit pack
Name	User-defined name for the DS1 circuit pack
Slip	**y**/**n** Slip alarm enabled on DS1 circuit pack
Port Network	Display-only. Port network that supplies synchronization through the tone clock circuit pack (valid for stratum 3 synchronization)
	2 of 2

display synchronization

`display synchronization`

`[ atm | css | port-network n] [schedule]` parameters are available on on their respective port networks.

Use **`display synchronization`** to see a synchronization plan. On an **S8700 IP-PNC**, specify the port network number.

Use **`display synchronization`** to display the synchronization form, with the administered synchronization stratum and reference sources.

Action/Object	Qualifier	Qualifier Description	Login	Default	Feature Interaction
`display synchronization`	**`atm`** **`css`** **`port network n`** **`schedule`**	display ATM-connected PNs display CSS-connected PNs display the PN number entered See Common Input Parameters on page 25.	init inads craft cust rcust bcms browse	No default. A DS1 interface or a UDS1 board that is selected as a primary or secondary synchronization source cannot be removed on the DS1 circuit pack administration form or the regular circuit pack administration form.	

This is an example of **`display synchronization port-network 2`**.

```
display synchronization port-network 2                                Page  1 of  2
                                  SYNCHRONIZATION PLAN
                                       PORT NETWORK 2
                      SYNCHRONIZATION SOURCE (circuit pack location)
                      Stratum: 4

                      Primary: 02A08      Secondary:

                  CIRCUIT PACKS AVAILABLE FOR SYNCHRONIZATION
Location   Type   Name             Slip      Location   Type   Name
02A05      DS1    Gert Loop 415    y
02A08      DS1    Gert<>ST13       y

NOTE: DS1 and BRI TRUNK sources result in stratum 4, type II synchronization
```

This is an example of **`display synchronization css`**.

```
 display synchronization css                                          Page 1 of 2
                                   SYNCHRONIZATION PLAN

                 SYNCHRONIZATION SOURCE (circuit pack location)
                      Stratum: 4

                      Primary: 02A08      Secondary:

                  CIRCUIT PACKS AVAILABLE FOR SYNCHRONIZATION
Location   Type   Name             Slip      Location   Type   Name
02A05      DS1    Gert Loop 415    y
02A08      DS1    Gert<>ST13       y


NOTE: DS1 and BRI TRUNK sources result in stratum 4, type II synchronization
```

This is an example of **`display synchronization atm`**.

```
display synchronization atm                                          Page 1 of 10
                                    SYNCHRONIZATION PLAN

                  SYNCHRONIZATION SOURCE (circuit pack location)
                       Stratum: 4

                       Primary: ATM-SW          Secondary:ATM-SW

                   CIRCUIT PACKS AVAILABLE FOR SYNCHRONIZATION
Location    Type    Name             Slip      Location    Type    Name             Slip
02A05       DS1     DS1-2a05         y         08B20       DS1     DS1-8b20         n
02A08       DS1     DS1-2a08         y         08B17       DS1     DS1-8b17         n
01A17       DS1     DS1-1a17         n         06B04       DS1     DS1-6b04         n
01B12       DS1     DS1-1b12         n         08A19       DS1     DS1-8a19         n
05B06       DS1     DS1-5b06         n         08A20       DS1     DS1-8a20         n
05B05       DS1     DS1-5b05         n         02B18       DS1     DS1-2b18         n

NOTE: DS1 and BRI TRUNK sources result in stratum 4, type II synchronization
```

display synchronization field descriptions

display synchronization field descriptions

Field	Description
Stratum	Specifies the synchronization stratum used. **S8700 IP-PNC**: **4** **S8700 MC** with ATM/CSS: **3** and **4**
Primary	Designates the first choice system synchronization source. Blank = no synchronization. **S8700 MC**: this field is valid only if **Stratum** is **4**.
Secondary	Designates the second choice system synchronization source. **S8700 MC**: this field is valid only if **Stratum** is **4**.
Location	The circuit pack location (cabinet-carrier-slot) of all circuit packs administered to serve as synchronization references.
Name	The user-defined name of the circuit pack. If blank, no name was administered.
Slip	**y** If the circuit pack has slip detection enabled.

list synchronization

`list synchronization [schedule]`

Use **`list synchronization`** on to see the stratum clock and primary and secondary synchronization sources administered for all the cabinets.

Action/Object	Qualifier	Qualifier Description	Login	Default
`list synchronization`	**`schedule`**	See Common Input Parameters on page 25.		

This is an example of **`list synchronization atm`**.

```
list synchronization atm
                                SYNCHRONIZATION PLAN

Location            Stratum                Primary           Secondary

ATM                    4                   ATM-SW            ATM-SW
PN 33                  4                   33B02             33B01
PN 34                  4                   34A04
PN 35                  4                   35A06
PN 36                  4
PN 37                  4
PN 38                  4
PN 39                  4
PN 40                  4
```

This is an example of **`list synchronization css`**.

```
list synchronization css
                                SYNCHRONIZATION PLAN

Location             Stratum               Primary           Secondary

CSS                    4                   01C08             01C14
PN 33                  4                   33B01             33A01
PN 34                  4                   34A04
PN 35                  4                   35A06
PN 36                  4
PN 37                  4
PN 38                  4
PN 39                  4
PN 40                  4
```

set synchronization

`set synchronization` ***`location`***

Use **`set synchronization`** to set a specific synchronization-capable circuit pack as the reference source for system synchronization signals. Synchronization-capable circuit packs include:

- DS1 Trunks
- BRI Trunks
- IPSIs
- ATM CES
- Tone-Clocks

Specify the synchronization source location according to your system configuration:

- **S8700 IP-PNC**: specify a synchronization source location for each port network. The default is the Tone-Clock in that port network.
- On **S8700 MC**, set per system.
- On gateways, set per gateway.

Use **`set synchronization`** only after automatic synchronization has been disabled with **`disable synchronization-switch`**.

Any administered circuit pack that is synchronization-capable may be specified with **`set synchronization`**. The circuit pack remains the synchronization reference until **`set synchronization`** specifies another circuit pack, or **`enable synchronization`** is entered.

After **`enable synchronization`**, the administered primary or secondary synchronization source becomes the synchronization reference. If no primary or secondary source is administered, an IPSI's Tone-Clock circuit, or a Tone-Clock circuit pack provides the port network's timing source.

`Set synchronization` is not supported when ATM-PNC is enabled.

Action/Object	Qualifier	Qualifier Description
`set synchronization`	***`location`***	Specifies the physical position of the synchronization-capable circuit pack that supplies a reference for synchronization.

status synchronization

`status synchronization [ atm | css | port network <`*`n`*`> | all ]`

Use **status synchronization** to see the current synchronization reference. Synchronization can be established for:

- Fiber-PNCs, established through the server-connected PN, in a direct, CSS, or ATM network.
- IP-PNCs, established by individual PN. The synchronization source can be the same source as the ATM or CSS PNs in a Fiber-PNC network.

Action/Object	Qualifier	Qualifier Description	Login	Default
status synchronization	**atm** **css** **port network *n*** **all**	status of ATM-connected PNs status of CSS-connected PNs status of the PN number status for all PNs	init inads craft cust browse	all

The following example shows the output for **status synchronization** on a CSS system.

```
status synchronization
                              SYNCHRONIZATION STATUS

                          Source        Soure                      Excessive
            Stratum     Maintenance    Physical    Switching      Reference
Location     Level          Name        Location    Capability     Switching

CSS            4         UDS1-BD         01C14        Enabled          No
PN 33          4         USD1-BD         33A10        Enabled          No
PN 34          4         TONE-BD         34A          Enabled          No
PN 35          4         TONE-BD         35A          Enabled          No
PN 36          4         TONE-BD         36A          Enabled          No
PN 37          4         TONE-BD         37A          Enabled          No
PN 38          4         TONE-BD         38A          Enabled          No
PN 39          4         TONE-BD         39A          Enabled          No
PN 40          4         TONE-BD         40A          Enabled          No
PN 41          4         TONE-BD         41A          Enabled          No
```

The following example shows the output for **status synchronization** on an ATM system.

```
status synchronization
                              SYNCHRONIZATION STATUS

                          Source        Soure                      Excessive
            Stratum     Maintenance    Physical    Switching      Reference
Location     Level         Name        Location    Capability     Switching

ATM            4        ATM-SWITCH                                    No
PN 33          4        USD1-BD         33A10        Enabled          No
PN 34          4        TONE-BD         34A          Enabled          No
PN 35          4        TONE-BD         35A          Enabled          No
PN 36          4        TONE-BD         36A          Enabled          No
```

status synchronization field descriptions

status synchronization field descriptions

Field	Description
Location	Cabinet location of synchronization: l port network number l **ATM** l **CSS**
Stratum Level	The stratum level of the current system synchronization reference. If Stratum 3 appears, and no DS1s are connected to the Stratum-3 clock or no DS1 connection existed to the Stratum-3 clock for over 24 hours, then the Stratum-3 clock is in free run mode.
Source Maintenance Name	Maintenance object name of the circuit pack that is providing the current system synchronization reference. **IPSI** or **TONE-BD** = the switch is operating in free run mode. **ATM-SWITCH** = **Switching Capability**, **Excessive Reference Switching**, and **Physical Location** fields do not appear.
Source Physical Location	The carrier of the PN. Blank when **Source Maintenance Name** is **ATM-SWITCH**.
Switching Capability	Indicates whether the online reference can be switched or not. Blank when **Source Maintenance Name** is **ATM-SWITCH**.
Excessive Reference Switching	**y**/**n** Excessive reference switching is taking place (sync error 1793 is at threshold) Blank when **Source Maintenance Name** is **ATM-SWITCH**.

test synchronization

`test synchronization [ atm | css | port network <n> | all ]`

Use **`test synchronization`** to check the timing synchronization source and update circuit packs with the correct synchronization parameters. The synchronization-capable circuit packs are sent down-link messages to place them in the correct synchronization configuration given the current on-line synchronization reference. The synchronization-capable circuit packs include:

- DS1s
- IPSIs
- EIs
- Tone-Clocks

The synchronization subsystem provides error-free digital communication between the switch and other PBXs, COs, or customer premises equipment. The subsystem is made up of the TDM bus clock, DS1 trunk circuit packs, and maintenance and administration software.

Action/Object	Qualifier	Qualifier Description	Login	Default
`test synchronization`	**`atm`** **`css`** **`port network n`** **`all`**	check ATM-connected PNs check CSS-connected PNs check the PN number check all PNs	init inads craft cust super-user	all

test synchronization field descriptions

test synchronization field descriptions

Field	Description
Port	l port network number l **ATM** l **CSS**
Maintenance Name	ATM-SYNC = ATM port networks Sync = CSS port networks or IP-PNCs
Alt Name	blank
Test No.	The test number, 417, associated with the synchronization test
Error Code	The maintenance error code if the test fails.

synchronization-switch

See:
disable synchronization-switch on page 601
enable synchronization-switch on page 601

disable synchronization-switch

`disable synchronization-switch`

`[all | css | port-network n]` parameters are available on on their respective port networks.

`disable synchronization-switch` does not apply to ATM-connected port networks.

Use **`disable synchronization-switch`** to disable the automatic clock-switching capability of the Synchronization Maintenance subsystem. The synchronization subsystem (TDM bus clock, DS1 trunk board, and maintenance and administration software) provides error-free digital communication between the switch and other PBXs, COs, or customer equipment.

Note:

When adding fiber-connect PNs to a configuration, the PNs must be added before enabling synchronization. If synchronization is enabled, use **`disable synchronization-switch`** to disable synchronization before adding fiber-connect PNs.

Action/Object	Qualifier	Qualifier Description	Login	Default
`disable synchronization-switch`	**`all`** **`css`** **`port network n`**	disable all PN disable CSS-connected PNs disable the PN number entered	init inads craft	

enable synchronization-switch

`enable synchronization-switch`

`[all | css | port-network n]` parameters are available on on their respective port networks.

`enable synchronization-switch` does not apply to ATM-connected port networks.

Use **enable synchronization-switch** to return control of the selection of the synchronization source to the Synchronization Maintenance subsystem after being previously turned off by **disable synchronization-switch**.

The synchronization subsystem consists of the TDM bus clock, DS1 trunk board, maintenance and administration software, and provides error free digital communication between the switch and other PBXs, COs, or customer-premise equipment (CPE). See SYNC (Port Network Synchronization) on page 893 in the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*.

Note:

When adding fiber-connect PNs to a configuration, the PNs must be added before enabling synchronization. If synchronization is enabled, use **disable synchronization-switch** to disable synchronization before adding fiber-connect PNs.

Action/Object	Qualifier	Qualifier Description	Login	Default
enable synchronization-switch	**all** **css** **port network *n***	disable all PNs disable CSS-connected PNs disable the PN number entered	init inads craft	

sys-link

See:
list sys-link on page 602
status sys-link on page 604
test sys-link on page 609

list sys-link

list sys-link [schedule]

Use **list sys-link** to see every system link. Each link's location, type and dlci number, state, current path status, faulted path status, and last recorded fault (if any) are displayed. See SYS-LINK (System Links) on page 925 in *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)* for details. See status link on page 362 for more details on links.

Action/Object	Qualifier	Qualifier Description
list sys-link	**schedule**	See Common Input Parameters on page 25.

The following display shows a typical result for **`list sys-link`**.

```
list sys-link                                                          Page   1

                           SYSTEM LINKS INFORMATION

Location  Type/dlci     State   Current      Faulted    Last Fault
                                Path         Path       Recorded

01A0001   RSL/030       up      present      none
01B0101   EAL           up      present      present    03/12/2007 17:11
02A0001   EAL           up      present      none
02B0101   EAL           up      present      present    03/12/2007 17:11
03A0001   EAL           up      present      none
03B0101   EAL           up      present      present    03/12/2007 17:11
04A0101   EAL           up      present      none
04B0201   EAL           up      present      none
05A0001   EAL           up      present      none
05B0101   EAL           up      present      present    03/12/2007 17:11
06A0001   EAL           up      present      none
06B0101   EAL           up      present      present    03/12/2007 17:11
07A0001   EAL           up      present      none
07B0101   EAL           up      present      present    03/12/2007 17:11
```

The output below for the last screen of **`list sys-link`** shows bearer fault detection links (BFDLs). These links exist only for port networks with IPSIs.

```
                           SYSTEM LINKS INFORMATION

Location  Type/dlci     State   Current      Faulted    Last Fault
                                Path         Path       Recorded

01A0101   BFDL          up      present      none
01B0201   BFDL          up      present      none
02A0101   BFDL          up      present      none
02B0201   BFDL          up      present      none
03A0101   BFDL          up      present      none
03B0201   BFDL          up      present      none
05A0101   BFDL          up      present      none
05B0201   BFDL          up      present      none
06A0101   BFDL          up      present      none
06B0201   BFDL          up      present      none
07A0101   BFDL          up      present      none
07B0201   BFDL          up      present      none
08A0101   BFDL          up      present      none
08B0201   BFDL          up      present      none
```

list sys-link field descriptions

list sys-link field descriptions

Field	Description
Location	The physical location of the far endpoint associated with the system link (cabinet-carrier-slot-circuit).
Type/dlci	The type of system-link and the dlci of the link (if there is one). System links include the following (see SYNC (Port Network Synchronization) on page 893 in the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*: • BFDL - Bearer Fault Detection Link • EAL - Expansion Archangel Link • INL - Indirect Neighbor Link (center stage switch) • MBL - Maintenance Board Link • MPCL - Medpro Control Link • PACL - Port-Network Connectivity ATM Control Link • PRI - ISDN-PRI signaling link • RSCL - Remote Socket Control Link (C-LAN/VAL) • RSL - Remote Socket Link • TACL - Trunk ATM Control Link
State	Whether the system link is “up” or “down.”
Current Path	This field specifies the status of the current path. This field displays “none” if the link is down or “present” if the current path is functional.
Faulted Path	This field shows whether the link has experienced a fault and been switched to another path. “Present” indicates that the link has been faulted at least once. “None” appears if the link has not gone down. “Default” appears if the default faulted path is being used.
Last Fault Recorded	The date and time that the most recent fault on the link took place.

status sys-link

status sys-link *port-location* [dlci #]

Use **status sys-link** to see status data for a specified system link. The report includes the type and operational state of the link, the associated processor dlci, if any, active alarms and path status, and a list of all hardware components making up the link's path. If, in addition to the current path, a faulted path exists, the components making up the faulted path are displayed on page 2 of the report.

For port networks with IPSI, **status sys-link** also provides status for a BFD link. The information shown is similar to other link types.

See status link on page 362 for more details on links.

Action/Object	Qualifier	Qualifier Description	Login	Default
status sys-link	***port-location*** **dlci #**	The location of the port associated with the link. The dlci number associated with an RSL link. Examples: **status sys-link 1e0201** **status sys-link 1a1001 dlci 030**		

The following display shows a typical result for **status sys-link 8a02**.

```
status sys-link 8a02                                          Page   1 of   2

     Location: 08A0201       Type/dlci: EAL            Alarms: none
 Current Path: present           State: up            Time Up: 10/20/2007 15:49
 Faulted Path: none                                 Last Fault:

                              Current Hardware Path
             Maintenance                                      Maintenance
 Location    Name       Alarms                   Location     Name       Alarms

 08A         PKT-INT    none
 PN 08       PKT-BUS    none
 08A         IP-SVR     none
```

For **S8700 MC**, **`status sys-link`** provides status for a bearer fault detection link (BFDL) for the specific link location. The screen shows status about BFDLs, which only exist in port networks with IPSIs.

```
status sys-link 2a0101                                          Page   1 of   2
     Location: 02A0101       Type/dlci: BFDL           Alarms: none
 Current Path: present           State: up            Time up: 10/25/2007 15:49
 Faulted Path: none                                 Last Fault:

                              Current Hardware Path
             Maintenance                                        Maintenance
 Location    Name       Alarms                  Location    Name       Alarms

 03A         PKT-INT    none
 PN 03       PKT-BUS    none
 03A01       EXP-INTF   none
 3 A-PNC     FIBER-LK   none
 01E02       SNI-BD     none
 01E03       SNI-BD     none
 2 A-PNC     FIBER-LK   none
 02A01       EXP-INTF   none
```

The following display shows a typical result for **`status sys-link 2a0101`**. In the following case, the link encountered a fault and recovered by switching to a different inter-switch-node fiber.

```
status sys-link 2a0101                                  Page   1 of   2

    Location: 02A0101        Type/dlci: EAL          Alarms: none
Current Path: present            State: up          Time Up: 10/12/2007 10:48
Faulted Path: present                             Last Fault: 10/17/2007 11:37

                             Current Hardware Path

            Maintenance                             Maintenance
Location    Name       Alarms            Location    Name       Alarms

01A1        PKT-INT    none
PN 01       PKT-BUS    none
01E01       EXP-INTF   none
1 A-PNC     FIBER-LK   none
01E02       SNI-BD     none
01E09       SNI-BD     none
7 A-PNC     FIBER-LK   none
02E09       SNI-BD     none
02E02       SNI-BD     none
2 A-PNC     FIBER-LK   none
02A01       EXP-INTF   none
```

```
status sys-link 2a0101                                  Page   2 of   2

    Location: 02A0101        Type/dlci: EAL          Alarms: none
Current Path: present            State: up          Time Up: 10/12/2007 10:48
Faulted Path: present                             Last Fault: 10/17/2007 11:37

                              Faulted Hardware Path
            Maintenance                                 Maintenance
Location    Name       Alarms              Location    Name       Alarms

01A1        PKT-INT    none
PN 01       PKT-BUS    none
01E01       EXP-INTF   none
1 A-PNC     FIBER-LK   none
01E02       SNI-BD     none
01E13       SNI-BD     none
6 A-PNC     FIBER-LK   none
02E13       SNI-BD     none
02E02       SNI-BD     none
2 A-PNC     FIBER-LK   none
02A01       EXP-INTF   none
```

The following display shows a typical result for **`status sys-link 1a1001 dlci 030`**.

```
status sys-link 1a1001                                          Page   1 of   2

     Location: 01A1001       Type/dlci: RSL/030       Alarms: none
 Current Path: present           State: up            Time Up: 03/20/2007 15:49
 Faulted Path: none                                 Last Fault:

                              Current Hardware Path
             Maintenance                                        Maintenance
 Location    Name       Alarms                  Location    Name       Alarms

 01A         PKT-INT    none
 PN 01       PKT-BUS    none
 01A10       CLAN-BD    none
```

status sys-link field descriptions

status sys-link field descriptions ***1 of 2***

Field	Description
Location	The location of the port associated with the system link (cabinet-carrier-slot-circuit).
Type/dlci	The type of system link and dlci number (RSL link). See Type/dlci under **`list sys-link`** for the link types.
Alarms	The highest level of alarm currently logged against the components making up the link.
Current Path	The operational status of the current path: • none: The link is down. • present: The current path displayed below is valid.
State	Whether the system link is “up” or “down.”
Time Up	The date and time that the link came up
Faulted Path	The status of the faulted path, if any: • present: The path of the link has been faulted at least once. • none: There is no record of the link having gone down. • default: The default faulted path is being used.
Last Fault	The date and time at which the most recent fault occurred.
	1 of 2

status sys-link field descriptions ***2 of 2***

Field	Description
Current Hardware Path	The location, maintenance name, and alarm information for each hardware component making up the current path of the link. The path begins at the Packet Interface on the IPSI and terminates at the circuit path that terminates the other end of the link.
Faulted Hardware Path	If the link encounters a fault, the system will reroute it if possible over an alternate route. If this has taken place, the faulted path appears on page 2 of the report. The location, maintenance name, and alarm information for each hardware component making up the most recent faulted path is shown.
	2 of 2

test sys-link

`test sys-link` *`location`* `[`*`dlci #`*`] [current | faulted] [short | long] [`*`repeat#`*` | clear] [schedule]`

Use **`test sys-link`** to validate the existence of the specified link and runs diagnostic tests on the hardware path that comprises the system link. Use **`current`** or **`faulted`** to run tests on every hardware object that comprises the specified link. If **`current`** or **`faulted`** is not specified, only the end-to-end sys-link connection is tested.

The hardware path that comprises a system link consists of up to 21 hardware components that affect the behavior of the link. The number of components of a given system link hardware path depends on the system configuration and type of system link. The following links are examples of system links: EAL (Expansion Archangel Link), INL (Indirect Neighbor Link), and PRI (PRI signaling link).

See status link on page 362 for more details on links.

Action/ Object	Qualifier	Qualifier Description	Login	Default
`test sys-link`	**`location`** **`dlci #`** **`current`** **`faulted`** **`short`** **`long`** **`repeat n`** **`clear`**	Port location associated with the system link. Current hardware path tested dlci number Tests the hardware path of the system link as it was constituted when a fault last caused the link to go down. See Common Input Parameters on page 25. Examples: **`test sys-link 2e0201 current`** **`test sys-link 2e0201 faulted r 10`**	init inads craft	

system

See:
monitor system on page 610
reset system on page 614

monitor system

monitor system [view1 | view2 | conn [pnn *pnn-1* pnn-2 pnn-3]]

Use **monitor system** to see a summary of the overall condition of the system, real-time status for time slots and buses, call rates, intervals, etc. Press **CANCEL** to clear the command.

Action/ Object	Qualifier	Qualifier Description	Login
monitor system		Example: **monitor system view1** **monitor system view2** **monitor system conn** **monitor system conn pnn 1 5 7**	system technician inads cust init nms browse
	view1	show attendant status, the maintenance status, the last hour's measurement of trunk groups, hunt groups, and the attendant group, and the time of day.	
	view2	show the view1 screen except the last hour's hunt group measurements	
	connection	show the connection monitor output for key information	
	conn pnn *pnn-1* *pnn-2* *pnn-3*	**pnn** shows data for PNN's 1, 2 and 3 **pnn** *pnn-n* shows data for specific PNNs (up to 3).	

Use **monitor system view1** and **monitor system view2** to see the condition, or health, of the system.

- **view1** shows attendant, maintenance, and traffic status. Attendant and maintenance status are updated every minute and traffic status is updated on an hourly basis. Pressing **CANCEL** forces a logout of the current login ID.
- **view2** shows the **view1** screen except the hunt group measurements

Use **monitor system connection** to see the status of connections, compiled by the connection manager. This on-line status report is automatically updated every minute or by pressing the **UPDATE** key. Pressing **CANCEL** forces a logout of the current login ID. Use **monitor system conn** ***pnn*** to specify PNNs for the report.

The following is an example of **monitor system view1**.

```
monitor system view1
             MAINTENANCE STATUS

               # of alarms for trunks: 4
             # of alarms for stations: 2
            # of alarms for other res: 1
   First OSS number has been informed? n

                              TRAFFIC STATUS
                            Measurement Hour:  18
            Trunk Group Measurement              Hunt groups Measurement
(4 grps with highest %time ATB)          (4 grps with highest # of qued calls)
    Grp no:  78                                  Grp no: 16
   Grp dir:                                   Calls qued:  2
Calls qued:  1                                Calls aban:  1
 %Out blkg:                                        Attendant Group Measurement
 %Time ATB:                                  Calls qued:  1     Calls aban:  0

                                                     16:06 TUE MAR 6 2007
```

monitor system view1 and monitor system view2 field descriptions

monitor system view1 and monitor system view2 field descriptions ***1 of 2***

Field	Description
# of alarms for trunks	The number of existing minor and major alarms on trunk ports.
# of alarms for stations	The number of existing minor and major alarms on stations.
	1 of 2

monitor system view1 and monitor system view2 field descriptions ***2 of 2***

Field	Description
# of alarms for other resources	The number of existing minor and major alarms on every maintainable object in the system except trunks and stations.
First OSS number has been informed	Has every alarm been reported and acknowledged by the first OSS telephone number? If “Alarm Origination” is not enabled or there are no active alarms, this is **n**.
Measurement Hour	The starting time of the period for which the measurement was taken. For example, if the measurement hour is shown as 18, the traffic status data is for the time period from 6 PM to 7 PM. The measurement is taken on an hourly basis).
Grp no	The trunk-group or hunt-group number.
Grp dir	Group direction: incoming, outgoing, or two way.
Calls qued	Total calls that arrived and were placed in the queue for trunk groups.
Calls aban	Total calls that were abandoned by the caller.
%Out blkg	The ratio of outgoing calls that are not carried, due to overload conditions, on a trunk group to the outgoing calls offered.
% Time ATB	The percentage of time within the polling interval that every trunk in the trunk group was unavailable for use.
Time of day	The current time of day acquired from the system.
	2 of 2

The following display shows the output for **monitor system conn**.

```
        Time Slot Status                 Bus Status
 Pnn     Bus   State  *Idle Count   Pnn  Bus  State
  10       0   Maint     0           10    0  Avail
  10       1   Normal    233         10    1  Avail
  10       0   Maint     0           22    0  Avail
  10       1   Normal    233         22    1  Avail
  22       0   Maint     0            1    0  Avail
  22       1   Normal    233          1    1  Avail
  22       0   Maint     0
  22       1   Normal    233        *Callrate:  20
   1       0   Maint     0          *Interval:  60
   1       1   Normal    233      *Max_callrate:45
   1       0   Maint     0         *Next_hour:  70
   1       1   Normal    233
  tot_ts_req :0F24 0000 3CE2 ts_count :0010 0920 0200 Requests-TN748 TTRs :0014
  ts_denied  :0E46 3CE2 0000 ts_total :0000 0090 0028 Requests-TN748 CPTRs:0041
  tot_fts_req:0000 53D2 2231 fts_count:02E0 0910 0784 Requests-TN744 CPTRs:0082
                             fts_total:0320 0192 7048 Requests-TN744 TTRs :0082
                            Requests-TN744 MFCs :0082
 Note:  * Denotes Base 10, All Other Figures are in Base 16
```

monitor system conn field descriptions

monitor system conn field descriptions ***1 of 2***

Field	Description
Max_callrate	The maximum call rate hit during the time since the last hour has passed. For example, if **monitor system conn** is executed at 20 minutes past 12:00, this shows the maximum call rate obtained during the past 20 minutes.
Next_hour	0 or 1, depending upon if the measurements being taken are for this hour or the next. It is related to the previous field in that the maximum call rate is reflected for this hour. When this flag is set, statistics begin to accumulate for the next hour. Shortly thereafter, the maximum call rate becomes zero and new accumulations begin.
tot_ts_req	Number of time slots in use during the time period elapsed since the top of the last hour. Data is collected every 100 seconds. When the timer fires and the data collection occurs, a check is made as to how many time slots are currently in use. One number appears for each PNN requested.
ts_denied	Number of time slots requests that were denied during the time period elapsed since the top of the last hour. Data is collected every 100 seconds. One number appears for each PNN requested.
	1 of 2

monitor system conn field descriptions ***2 of 2***

Field	Description
tot_fts_req	Number of fiber time slots that have been requested. One number appears for each PNN requested.
ts_count	The number of time slots in use during the last 100-second poling period. One number appears for each PNN requested.
ts_total	Number of time slots requested since the top of the last hour.
fts_count	Number of fiber time slots in use during the last 100-second polling period. One number appears for each PNN requested.
fts_total	Number of fiber time slots requested since the top of the last hour.
Requests-TN748 TTRs	Number of currently active touch-tone receivers requested on the TN748 circuit pack.
Requests-TN748 CPTRs	Number of currently active call progress tone receivers requested on theTN748 circuit pack.
Requests-TN744 CPTRs	Number of currently active call progress tone receivers requested on the TN744 circuit pack.
Requests-TN744 TTRs	Number of currently active touch-tone receivers requested on the TN744 circuit pack.
Requests-TN744 MFC	Number of currently active multifrequency receivers requested on the TN744 circuit pack.
	2 of 2

reset system

`reset system [`*`level#`*`]`

CAUTION:

All system resets are service affecting, with higher levels being increasingly destructive. Some resets may take up to one-half hour to complete. Certain conditions may result in a higher reset level than the one requested. Unless you are experienced with resetting a system, follow normal escalation procedures.

Use **`reset system`** to reload Communication Manager software. All system resets are disruptive and terminate the SAT login.

If you set the value of the **Display Warning Prior to System Reset?** field to **y** on the **system-parameters maintenance** form and then use the **`reset system`** command, a warning message is displayed. The following screen is an example of the warning message:

```
 reset system 2



WARNING: All system resets are service affecting, with higher
         levels being increasingly destructive.
```

Press the **SUBMIT** or **ENTER** function key to continue or **CANCEL** to abort the command.

Note:

Connections are preserved on H.248 media gateways on reset system 2 and reset system 4 conditions. To reset media gateways from the SAT, use **`reset media-gateway`**.

`Reset system` resets the system in the following manner:

- A mini-coredump is generated for non-interchange related restarts and placed under /var/log/defty/dumps.
- the restart is performed

System software generally does not escalate a demand system reset to a higher level. There are certain conditions that result in a higher level reset than that requested. These include:

- A PNC interchange is already in progress.
- A change in translation administration is in progress.

Action/ Object	Qualifier	Qualifier Description	Login	Feature Interaction
`reset system`	**`Level`** **`1`** **`2`** **`4`**	1 = Warm Restart 2 = Cold 2 3 = Reboot (G3 systems only) 4 = Reboot 5 = Reboot (G3 systems only) See Table 39: Approximate Recovery Time for S8700 series System Resets (min:sec) System reset times differ between different configurations on page 616. **`Example: reset system 1`**	init inads craft	see reset system feature interactions on page 616

Table 39: Approximate Recovery Time for S8700 series System Resets (min:sec) System reset times differ between different configurations

Level	Recovery	2,400 lines	5,000 lines	15,000 lines
		Disk	Disk	Disk
1	Warm Restart	:10	:10	:10
2	Cold-2	1:00	2:00	4:00
4	Reload	4:00	6:30	11:00

reset system feature interactions

- **reset** invokes system initialization like low-level maintenance. Software never escalates requested reset levels; technicians determine the levels.

Reset system cannot be canceled. The screen shows the results of various initialization tests. If **reset system** is successful, the user is logged off. Several conditions may prevent a requested reset.

See also display initcauses on page 310.

Reset system specifications

Reset Level 1 (warm restart) duration, causes, and effects ***1 of 2***

Duration	Up to 10 seconds, typically 4 seconds
Causes	**reset system 1** command from Communication Manager (SAT/ASA) command line
	Spontaneous server interchange (those caused by hardware faults) Software faults that are not service affecting
	Demand server interchange
	Software escalation
Effects	Stable calls are preserved; queued ACD calls, H.323 calls, and H.320 (multimedia) calls stay up.
	System links such as ISDN-PRI D-channel signaling links, CMS, AUDIX, DCS links over C-LAN are preserved. The CMS, DCS, and AUDIX links could lose buffered messages.
	Error and alarm logs are preserved, but every alarm is resolved except busyouts.

1 of 2

Reset Level 1 (warm restart) duration, causes, and effects ***2 of 2***

Effects (cont.)	Stable features are preserved.
	Transient calls (not yet connected) and some user stimuli are dropped.
	New calls are not processed during the reset.
	Encrypted system links may be dropped and reestablished.
	Every administrative session except those over the TN799 C-LAN are dropped.
	If the reset resulted from a spontaneous server interchange, memory shadowing is turned off, and the standby server will not be available for service until memory is refreshed (several minutes).
	Application links such as those to AUDIX and CDR are dropped and re-established in under 2½ minutes.
	Translation data is preserved in memory. If **`save translation`** is in progress, an SAT-requested warm restart would be aborted. A software-requested warm restart would result in an unsuccessful **`save translation`** and possibly corrupt translations.
	2 of 2

Reset Level 2 (cold restart) duration, causes, and effects ***1 of 2***

Duration	Up to 3.75 minutes
Causes	**`reset system 2`** command from Communication Manager (SAT/ASA) command line
	Escalation from SAT's **`reset level 1`**
	An attempted SAT's **`reset level 1`** during a PNC interchange
	Spontaneous interchange into an unrefreshed standby **server**
Effects	Every system and application link is dropped.
	Gateways are *not* reset.
	Every call is dropped.
	Every administrative session is dropped.
	Every system link is dropped and re-established.
	Every application link is dropped and re-established.
	Non-translation feature data, such as Automatic Wakeup calls, are lost and must be re-entered.
	Translation data is preserved in memory. If **`save translation`** is in progress, a SAT-requested cold-2 restart would be aborted. A software-requested cold-2 restart would result in an unsuccessful **`save translation`** and possibly corrupt translations.
	Every login, including remote access and system port logins, is dropped.
	Initialization firmware runs diagnostics and displays results on the screen.
	Server memory shadowing is turned off, leaving the standby **server** unavailable for service for up to several minutes.
	Every hardware component is reset *except* • Active TN2312 IPSI in any PN. • Active EI in a non-IPSI connected PN. • SNIs. • SNCs. • DS1 clocks.

1 of 2

Reset Level 2 (cold restart) duration, causes, and effects ***2 of 2***

Effects (cont.)	For a critical-reliability system (duplicated PNC), a global refresh of the standby PNC is performed after the reset.
	Every busied-out MO is released and can be rebusied.
	Circuit packs are reinitialized. (Translations are verified by comparison to physical boards' locations.)
	Error and alarm logs are preserved, and every Communication Manager alarm is resolved.
	2 of 2

Reset Level 4 (reload) duration, causes, and effects

Duration	Typically 11 to 14 minutes
Causes	**`reset system 4`** command from Communication Manager (SAT/ASA) command line
	Escalation from SAT's **`reset level 2`**
	Power up
	Recovery attempt from server-down mode
Effects	System software (boot image) is reloaded and every process is re-initialized.
	Communication Manager administration (translations) are reloaded from the hard disk.
	Before reboot, the system attempts to save the alarm and error logs.
	After reboot, error and alarm logs are restored. Some error and alarm information may be lost if the last save before the reboot save does not succeed.
	Other effects are the same as those in reset level 2, except that more extensive diagnostics are performed.
	A core dump is automatically enabled for this reset level and is saved to the /var/log/defty/dumps/ directory. The reboot is delayed until the core dump is finished.

system-parameters

See:
system-parameters duplication on page 620
system-parameters ipserver-interface on page 623
system-parameters ip-options on page 626
system-parameters maintenance on page 628

system-parameters duplication

See:
change system-parameters duplication on page 620
display system-parameters duplication on page 622

change system-parameters duplication

`change system-parameters duplication`

Use **`change system-parameters duplication`** to enable or disable PNC and/or IPSI duplication.

If only IPSI duplication is administrable, it is because PNC duplication is disabled on the **`change system-parameters customer-options`** screen. IPSI duplication can be enabled without PNC duplication, but if PNC duplication is enabled, IPSI duplication must also be enabled.

Enabling IPSI duplication requires that all IPSI-connected port networks with direct-connect, CSS, or ATM fiber connections have both primary and secondary IPSI boards. Disabling IPSI duplication requires that all primary IPSI boards be active.

Action/Object	Qualifier	Qualifier Description	Login	Default	Feature Interaction
`change system-parameters duplication`			init super-user inads craft dadmin		

This is an example for **`change system-parameters duplication`** on **S8700 MC**.

```
change system-parameters duplication                            Page   1 of   1
                    DUPLICATION RELATED SYSTEM PARAMETERS

     Enable Operation of PNC Duplication? y

     Enable Operation of IPSI Duplication? y
```

change system-parameters duplication field descriptions

change system-parameters duplication field descriptions

Field	Description
Enable Operation of PNC Duplication	**y/n**
Enable Operation of IPSI Duplication	**y/n** Defaults to **n** if a **CMC1** or media gateway exists if **y**, all fiber-connected PNs must have duplicated IPSIs

display system-parameters duplication

`display system-parameters duplication`

Use **`display system-parameters duplication`** to see if IPSI (processing element) and PNC (port network connectivity) duplication is enabled. The following must be duplicated:

- Each switch node record and every switch node with its duplicate. Cabinets must be administered.
- Every fiber link containing either an EI circuit pack as an endpoint, or a DS1-C. Fiber links must be administered, including circuit pack administration and then duplication administration.

Every unduplicated SNI (switch node interface) to an SNI fiber link is automatically duplicated.

Note:

Release every PNC-A and -B board from the “busyout” state before PNC duplication, and be sure **PNC Duplication** is **y** on the Duplication Related System Parameters screen before you administer duplication. You must obtain a license file to enable this option.

Action/Object	Qualifier	Qualifier Description	Login	Default
`display system-parameters duplication`			init inads craft	

The following shows an example from **`display system-parameters duplication`**.

```
display system-parameters duplication

                  DUPLICATION RELATED SYSTEM PARAMETERS

     Enable Operation of PNC Duplication? y
    Enable Operation of IPSI Duplication? y
```

display system-parameters duplication field descriptions

display system-parameters duplication field descriptions

Field	Description
Enable Operation of PNC Duplication	**y/n** PNC duplication enabled. Appears when **PNC Duplication** is **y** on System-Parameters Customer-Options screen.
Enable Operation of IPSI Duplication	**y/n** IPSI duplication enabled.

system-parameters ipserver-interface

See:
change system-parameters ipserver-interface on page 623
display system-parameters ipserver-interface on page 626

---

change system-parameters ipserver-interface

`change system-parameters ipserver-interface`

Use **`change system parameters ipserver-interface`** to:

- display the subnet address of the two servers on a duplicated system
- administer the switch identifier
- turn on/off IPSI control of port networks
- turn on/off IPSI preference switching
- set the socket sanity timeout interval
- administer and manage the IPSI QoS parameters

Note:

Run **`change system parameters ipserver-interface`** before running **`add ipserver-interface`**.

```
change system-parameters ipserver-interface                     Page   1 of   1
                 IP SERVER INTERFACE (IPSI) SYSTEM PARAMETERS

SERVER INFORMATION


   Primary Control Subnet Address: 172.28.32.0
 Secondary Control Subnet Address:                                           *

OPTIONS

                Switch Identifier: A
    IPSI Control of Port Networks: enabled
           A-side IPSI Preference: enabled
       IPSI Socket Sanity Timeout: 3

QoS PARAMETERS
                           802.1p: 6
                         DiffServ: 46

                NOTE: * indicates data changed on the Server
```

change system-parameters ipserver-interface, field descriptions *1 of 2*

Field	Description
SERVER INFORMATION	
Primary Control Subnet Address Secondary Control Subnet Address	The control subnetwork addresses typically match the first three groups of digits in the IP address of the server. An asterisk (*) to the right of the **Control Subnet Address** fields means that Communication Manager does not have the subnetwork information and the subnetwork address displayed is incorrect. Select the **`configure server`** command on the Maintenance Web Interface to see the IP address of the server.
OPTIONS	
Switch Identifier	[**A-J**], [**a-j**] The ID letter of the switch. Default is **A**.
IPSI Control of Port Networks	**enabled** **disabled**

change system-parameters ipserver-interface, field descriptions *2 of 2*

Field	Description
Preference switching to A-side IPSI	The automatic preference to the A-side IPSI (duplicated IPSIs). **enable** - If a fault causes an interchange away from IPSI-A to IPSI-B, the system will automatically return to IPSI-A when the fault heals. Changing this field to **disable** stops the automatic return.
IPSI Socket Sanity Timeout	Number of seconds between **3**–**15** for IPSI connections to recover from a network outage before closing the IPSI signaling connections that result in data loss and port network warm restarts. Default is **3**. When the field is set to a value higher than 3 seconds, the IPSI media gateway is less prone to warm restarts and is more resilient to short network outages. Even when set at 15 seconds, IPSI Socket Sanity Timeout accommodates only short control network outages of up to approximately 7 seconds. Resynchronization of the TCP connections between the media server and the IPSI once the network recovers requires additional time. Actual network outages of longer than 7 seconds may still result in IPSI socket sanity timeouts.
QoS PARAMETERS	
802.1p	The value for this field is between **0**–**7**. The default value is **6**. The value is queued and downloaded to the IPSI board, if you set the value of the **Use System QoS values?** field to **yes** on the corresponding **`change ipserver-interface`** screen. After you reset the board, the value is downloaded to the IPSI board. If you change the value, the system displays the `ipserver(s) must be busied out to effect change` message. When you accept the change, PCD stores the updated value. The updated value is displayed on the Systems Parameters IP Server Interface screen, and on the **`change ipserver-interface`** screen.
DiffServ	The value for this field is between **0**–**63**. The default value is **46**. The value is queued and downloaded to the IPSI board, if you set the value of the **Use System QoS values?** field to **yes** on the corresponding **`change ipserver-interface`** screen. After you reset the board, the value is downloaded to the IPSI board. If you change the value, the system displays the `ipserver(s) must be busied out to effect change` message. When you accept the change, PCD stores the updated value. The updated value is displayed on the System Parameters IP Server Interface screen, and on the **`change ipserver-interface`** screen.

display system-parameters ipserver-interface

`display system-parameters ipserver-interface [schedule]`

Use **`display system-parameters ipserver-interface`** to display the information for the primary and secondary servers.

Action/Object	Qualifier	Qualifier Description	Login	Default
`display system-parameters ipserver-interface`	**`schedule`**	See Common Input Parameters on page 25.	init inads craft dadmin customer super-user	

The following shows an example for **`display system-parameters ipserver-interface.`**

```
display system-parameters ipserver-interface

                 IP SERVER INTERFACE (IPSI) SYSTEM PARAMETERS
SERVER INFORMATION
                IPSI Host Name Prefix:
       Primary Control Subnet Address: 135.122. 50.  0
     Secondary Control Subnet Address:    .   .   .

OPTIONS
                     Switch Identifier: A
        IPSI Control of Port Networks: enabled
  Preference switching to A-side IPSI: enabled
           IPSI Socket Sanity Timeout: 3

NOTE: * indicates data changed on the Server
```

For field descriptions, see change system-parameters ipserver-interface on page 623.

system-parameters ip-options

See:
change system-parameters ip-options on page 626
display system-parameters ip-options on page 627

change system-parameters ip-options

`change system-parameters ip-options`

Use the **change system-parameters ip-options** command to modify the **IP-OPTIONS SYSTEM PARAMETERS** form.
The following shows an example of the **change system-parameters ip-options** screen:

```
 IP-OPTIONS SYSTEM PARAMETERS

 IP MEDIA PACKET PERFORMANCE THRESHOLDS
    Roundtrip Propagation Delay (ms)    High: 800      Low: 400
                      Packet Loss (%)     High: 40       Low: 15
                      Ping Test Interval (sec): 20
    Number of Pings Per Measurement Interval: 10
                   Enable Voice/Network Stats? ?
 RTCP MONITOR SERVER
         Default Server IP Address:    .   .   .
               Default Server Port: 5005
  Default RTCP Report Period(secs): 5

AUTOMATIC TRACE ROUTE ON
           Link Failure? y


 H.248 MEDIA GATEWAY                 H.323 IP ENDPOINT
  Link Loss Delay Timer (min): 5      Link Loss Delay Timer (min): 5
                                        Primary Search Time (sec): 75
                                 Periodic Registration Timer (min): 20
```

See *Avaya Aura™ Communication Manager Screen Reference (03-602878)* for more details on the **change system-parameters ip-options** fields description.

display system-parameters ip-options

display system-parameters ip-options

Use the **display system-parameters ip-options** command to display the **IP-OPTIONS SYSTEM PARAMETERS** form.
The description of the **display system-parameters ip-options** form is the same as the **change system-parameters ip-options** form. However, the fields in the **display system-parameters ip-options** form are display-only.
See change system-parameters ip-options on page 626 for more details.

system-parameters maintenance

See:
change system-parameters maintenance on page 628
display system-parameters maintenance on page 634

change system-parameters maintenance

`change system-parameters maintenance`

Use **`change system-parameters maintenance`** to specify and display scheduled maintenance operations and maintenance support functions. It also activates and deactivates INADS alarm origination during repairs. Fields on this screen may differ depending on the configuration of the system (duplicated or not).

Action/Object	Qualifier	Qualifier Description	Login	Default
`change system-parameters maintenance`			init inads craft cust rcust	

This is an example of page 1 of **`change system-parameters maintenance`**.

```
change system-parameters maintenance                            Page   1 of   3
                   MAINTENANCE-RELATED SYSTEM PARAMETERS

OPERATIONS SUPPORT PARAMETERS
     CPE Alarm Activation Level: none

SCHEDULED MAINTENANCE
                                          Start Time: 22 : 00
                                           Stop Time: 06 : 00
                                     Save Translation: daily
 Update LSP and ESS Servers When Saving Translations: n
                          Command Time-out (minutes): 120
                         Control Channel Interchange: no
                       System Clocks/IPSI Interchange: no

SYSTEM RESETS
               Display Warning Prior to System Reset? n
```

The following table explains the fields on Page 1 of the **change system-parameters maintenance** screen.

change system-parameters maintenance field descriptions page 1

OPERATIONS SUPPORT PARAMETERS	
CPE Alarm Activation Level	Indicates the minimum level (Major, Minor or Warning) to activate Customer-Provided Equipment (CPE) alarm. If the level is **none**, the CPE does not activate for any alarm. (none) When the switch goes into Emergency Transfer, the CPE alarm activates regardless of the CPE Alarm Activation Level setting.
SCHEDULED MAINTENANCE	
Start Time	Hour and minute (24-hour notation) when daily scheduled maintenance starts.
Stop Time	The hour and minute when scheduled daily maintenance ceases. If any daily maintenance operations are not completed by this time, the system notes its stopped sequence location and includes those operations during the next scheduled daily maintenance.
Save Translation	Indicates days that translation data in memory automatically saves to the hard disk during scheduled maintenance. The operation saves to disk, then completes a backup to tape. Translation data saves to both servers. **n** prevents automatic saves.
Update LSP and ESS Servers When Saving Translations	**y**/**n** Enable filesync to LSP and ESS Servers during scheduled maintenance save translations.
Command Time-out (minutes)	**10**-**360** Enter the number of inactive minutes after which an active SAT screen reverts to a Linux screen or the user is logged off of the system. Default is 120.
Control Channel Interchange	Each port network has a pair of TDM busses (A and B). Each has a set of time slots dedicated to the control channel. One bus at a time carries the control channel in each PN. “Daily”, days of the week, or **n** prevents interchanges.
	1 of 2

change system-parameters maintenance field descriptions page 1

System Clocks/ IPSI Interchange	The days that interchanges occur (daily, days of the week, or no). **n** prevents interchanges. For high-reliability configurations, there are duplicate IPSIs on IPSI-controlled port networks. For critical-reliability configurations, there are both duplicate Tone-Clock circuit packs on non-IPSI controlled port networks and duplicate IPSIs on IPSI-controlled port networks. When this is turned on, a system clock or IPSI interchange is automatically initiated on each port network possessing duplicated Tone-Clock circuit packs or IPSIs. Each port network interchanges in the standby system clock or IPSI for 20 seconds. During this time the newly-active circuit pack is tested and system health is monitored. Then an interchange is made back to the originally-active circuit pack. This field indicates the days that interchanges occur: daily, days of the week, or no. No prevents interchanges. Does not apply to duplex-reliability configurations since the IPSIs are not duplicated in the port networks.
SYSTEM RESETS	
Display Warning Prior to System Reset?	**y** = Displays a warning prior to a system reset. **n** = Does not display any warning prior to a system reset.
	2 of 2

This is an example of page 2 of **`change system-parameters maintenance`**.

```
 change system-parameters maintenance                              Page   2 of   3
                   MAINTENANCE-RELATED SYSTEM PARAMETERS

MINIMUM MAINTENANCE THRESHOLDS ( Before Notification )
        TTRs: 4        CPTRs: 1        Call Classifier Ports: 0
        MMIs: 0          VCs: 0

TERMINATING TRUNK TRANSMISSION TEST ( Extension )
   Test Type 100:                   Test Type 102:
   Test Type 105:

ISDN MAINTENANCE
   ISDN-PRI Test Call Extension:
          ISDN-BRI Service SPID: 68888

DS1 & MF MAINTENANCE
   DS0 Loop-Around Test Call Extension: 44003
                MF Test Call Extension:
```

The following table describes the fields on page 2 of the **change system-parameters maintenance** screen.

change system-parameters maintenance field descriptions page 2: ***1 of 3***

MINIMUM MAINTENANCE THRESHOLDS (Before Notification)	
TTRs	When the number of touch-tone receivers (TTRs) in service falls below this number (4 to 200), a warning alarm is raised against TTR-LEV. These are also known as dual-tone multifrequency receivers (DTMRs). There are 4 TTRs on each TN748, TN718, TN420, or TN756; TN2182 and TN744 (suffix C or later) each have 8 TTRs. To alarm the first occurrence of a TTR being taken out of service, set this field to the total number of TTRs in the switch.
CPTRs	When the number of call progress tone receivers in service falls below this number (2 to 100), a warning alarm is raised against TTR-LEV. These are also known as general purpose Tone Detectors (GPTDs). There are 2 CPTRs on each TN748, TN718, TN420, or TN756; TN2182 and TN744 (suffix C or later) each have 8 CPTRs. To alarm the first occurrence of a CPTR being taken out of service, set this field to the total number of CPTRs in the switch.
Call Classifier Ports	When the number of call classifier ports (CLSFY-PTs) in service falls below this number, a warning alarm is raised against TTR-LEV. Valid entries are 1 to 200. There are eight ports on each TN744 or TN2182 circuit pack. To alarm the first occurrence of a CLSFY-PT being taken out of service, set this field to the total number of CLSFY-PTs. If there are no TN744 or TN2182 circuit packs in the system, leave this field blank.
MMIs	The minimum number of MMI ports needed for the Multimedia Call Handling (MMCH) feature to run efficiently. The MMCH feature must be enabled on the **system-parameters customer-options** screen before the **MMIs** field can be changed to a number greater than zero. If the number of in-service Multimedia Interface (MMI) ports falls below the minimum port capacity (valid entries between 0-128), a MMI-LEV error is logged. Each MMI circuit pack contains a maximum of 32 ports. To alarm the first occurrence of an MMI being taken out of service, set this field to the total number of MMI ports. If this outage continues for 15 minutes, a major alarm is raised.
VCs	The minimum number of VC ports needed for the Multimedia Call Handling (MMCH) feature. The MMCH feature must be enabled on the **system-parameters customer-options** screen before the **VCs** field can be changed to a number greater than 0. Each VC circuit pack contains 16 physical ports: eight ports are reserved for VC-DSPPT ports, and the remaining eight ports are designated as VC-SUMPT ports. The eight DSP ports are made up of four encoder and four decoder resources that encode and decode audio formats. Thus, *one VC circuit pack is required for every eight ports of MMCH port capacity*. If the number of in-service VC ports falls below the MMCH port capacity (valid entries between 0 and 128), a VEC-LEV error is logged. To alarm the first occurrence of a VC port being taken out of service, set this field to the total number of VC ports. If this outage continues for 15 minutes a major alarm is raised.
	1 of 3

change system-parameters maintenance field descriptions page 2: ***2 of 3***

MINIMUM MAINTENANCE THRESHOLDS (Before Notification)	
TERMINATING TRUNK TRANSMISSION TEST (Extension)	
Test Type 100	Specifies extensions assigned to receive tie-trunk calls from other switches that have test line origination capability. The system responds by sending a sequence of test tones. Test type 100 tests far-end to near-end loss and C-message by sending: • 5.5 seconds of 1004-Hz tone at 0 dB • Quiet until disconnect; disconnect is forced after 1 minute
Test Type 102	Test Type 102 tests far-end to near-end loss by sending: • 9 seconds of 1004-Hz tone at 0 dB • 1 second of quiet • This cycle is repeated until disconnect; disconnect is forced after 24 hours.
Test Type 105	Test Type 105 tests 2-way loss, gain slope, and C-message and C-notch noise by sending: • 9 seconds of 1004-Hz tone at -16 dB • 1 second of quiet • 9 seconds of 404-Hz tone at -16 dB • 1 second of quiet • 9 seconds of 2804-Hz tone at -16 dB • 30 seconds of quiet • ½ second of 2225-Hz test progress tone • approximately 5 seconds of quiet • forced disconnect
ISDN MAINTENANCE	
ISDN-PRI Test Call Extension	Indicates the extension used by far-end ISDN nodes to place calls to the system, for testing ISDN-PRI trunks between the far end and the system.
ISDN-BRI Service SPID	Shows if the link associates with the Service SPID. If the link is associated with the Service SPID. This number is the test SPID (0 – 99999) (under BRI-SET MO). Otherwise, this field is blank. Service SPID is a feature used by the system technician to check building wiring between the switch and the BRI endpoint.
	2 of 3

change system-parameters maintenance field descriptions page 2: ***3 of 3***

MINIMUM MAINTENANCE THRESHOLDS (Before Notification)	
DS1 & MF MAINTENANCE	
DS0 Loop-Around Test Call Extension	The extension used to set up a DS0 loop-around connection for testing non-PRI DS1 trunks. Use DS0 Loop-Around Test Call to test DS0 channels associated with non-PRI trunks. Activate the loop-around by dialing the test extension. Establish multiple DS0 loop-around connections by placing multiple calls to the loop-around extension. For more information, see the the DS0 Loop-Around test section in *Maintenance Procedures for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300432)*.
MF Test Call Extension	Enter the multifrequency test call extension. To allow COs in different locations to use different DID numbers to reach the MF test call extension, administer one number as the MF test call extension. Administer additional DID numbers as x-port stations, and call forward from the x-port stations to the MF test call extension.
	3 of 3

This is an example of page 3 of **`change system-parameters maintenance.`**

```
display system-parameters maintenance                              Page 3 of 3
                     MAINTENANCE-RELATED SYSTEM PARAMETERS









MAINTENANCE SAVE TRANSLATION CORRUPTION AUDIT
                 Enable Translation Audit? y
           Display Warning When Detected? n
                     Alarm When Detected? n
    Block Save Translation When Detected? n
```

The following table describes the fields on page 3 of the **change system-parameters maintenance** screen.

change system-parameters maintenance field descriptions page 3:

MAINTENANCE SAVE TRANSLATION CORRUPTION AUDIT	
Enable Translation Audit	**y/n** Set to **y** to have a translation audit performed prior to every scheduled **`save translation`** operation. A translation audit detects corruption in the translation data. **y** applies when **Save Translation** on the first page of this screen is **y**.
Display Warning When Detected	**y/n** Display a warning on the SAT at login if translation corruption is detected by a translation audit. Write the event to the command history log. **n** is recommended. Set to **y** when translation corruption is actively being diagnosed. Appears when Enable Translation Audit is **y**.
Alarm When Detected	**y/n** Issue an alarm if translation corruption is detected by a translation audit. **n** is recommended. Set to **y** when translation corruption is actively being diagnosed. Appears when Enable Translation Audit is **y**.
Block Save Translation When Detected	**y/n** Block **`save translation`** if corruption is detected. **n** is recommended. Set to **y** when translation corruption is actively being diagnosed. Appears when Enable Translation Audit is **y**.

display system-parameters maintenance

`display system-parameters maintenance [schedule]`

Use **`display system-parameters maintenance`** to display translation data for maintenance-related system parameters.

Action/Object	Qualifier	Qualifier Description	Login	Default
`display system-parameters maintenance`	**`schedule`**	See Common Input Parameters on page 25.	craft inads init super-user logins with Maintain Switch Circuit Packs permissions	

A series of maintenance tests and operations runs automatically every day according to the schedule and settings specified in the following fields.

See change system-parameters maintenance on page 628 for examples of screens and field descriptions.

system-parameters port-networks

See:

change system-parameters port-networks on page 635

change system-parameters port-networks

Use **`change system-parameters port-networks`** to assign port networks to communities and to specify the recovery rules for port networks to return to the main server.

Following is an example of the **`change system-parameters port-networks`** screen:

```
change system-parameters port-networks                          Page   1 of   2

               COMMUNITY ASSIGNMENTS FOR PORT NETWORKS


 PN Community      PN Community      PN Community      PN Community     PN Community
 ------------      ------------      ------------      ------------     ------------
  1: 1              14: 1             27: 1             40: 1            53: 1
  2: 1              15: 1             28: 1             41: 1            54: 1
  3: 1              16: 1             29: 1             42: 1            55: 1
  4: 1              17: 1             30: 1             43: 1            56: 1
  5: 1              18: 1             31: 1             44: 1            57: 1
  6: 1              19: 1             32: 1             45: 1            58: 1
  7: 1              20: 1             33: 1             46: 1            59: 1
  8: 1              21: 1             34: 1             47: 1            60: 1
  9: 1              22: 1             35: 1             48: 1            61: 1
 10: 1              23: 1             36: 1             49: 1            62: 1
 11: 1              24: 1             37: 1             50: 1            63: 1
 12: 1              25: 1             38: 1             51: 1            64: 1
 13: 1              26: 1             39: 1             52: 1
```

For more details about the change system-parameters port-networks screens and field details, see the System Parameters – Port Networks section in *Avaya Aura™ Communication Manager Screen Reference (03-602878)*.

terminal

erase terminal

`erase terminal {extension} {log | customizations | all}`

Use **`erase terminal`** to erase local data items from 2410 Release 2 and 2420 Release 4 DCP telephones. A system administrator can use **`erase terminal`** to reassign a phone

without having a technician erase the data manually. **`Erase terminal`** fails if the extension is busy on a call or on a local task.

`Erase terminal` deletes:

- call logs
- speed dial lists
- button labels
- user option settings
- language

Action/Object	Qualifier	Qualifier Description	Default
`erase terminal`	***`extension`***	Extension of the phone	
	`log`	erase the call log	
	`cusomizations`	erase customizations: call log, button labels, speed dial list, user option settings	
	`all`	erase all data: call log, button labels, speed dial list, user option settings, language Example: **`erase terminal`**	

tdm

See:
busyout tdm on page 636
release tdm on page 637
set tdm on page 637
test tdm on page 639

busyout tdm

`busyout tdm` ***`pn# bus`***

Use **busyout tdm** to busyout a specified tdm bus.

Action/Object	Qualifier	Qualifier Description	Login	Default	Feature Interaction
busyout tdm	***pn#*** ***bus* a** ***bus* a**	TDM bus Port Network number default control bus default tone bus (Each 512 timeslot TDM bus configures as 2 duplicate 256 time slot buses. This division allows duplication of control channels and dedicated tone time slots.) Example: **busyout tdm 1a**	init inads craft		Move dedicated tone time slots to another bus (the other half of the duplicated bus) before you busyout a particular bus.

For more information, see Common Input Parameters on page 25, Common Command Output Screens on page 28, and Busyout and Release Commands on page 33.

release tdm

release tdm

Use **release tdm** to remove specified tdm buses from a maintenance busy state.

For more information see Busyout and Release Commands on page 33.

Action/ Object	Qualifier	Qualifier Description	Login	Feature Interaction
release tdm	**port-network** ***pn*** **bus bus**	Port network number of the TDM bus (“a” or “b”) specifies desired half of the TDM bus. Each 512 time slot TDM bus is configured as two duplicate 256 time slot buses. This division allows for duplication of control channels and dedicated tone time slots. The default control bus (carrying the control channel) is the “a” bus, while the default tone bus (carrying dedicated tones) is the “b” bus. (1 - 3)	init inads craft	see below

set tdm

set tdm port-network *PN#* bus a | b [override]

Use **set tdm port-network** to specify which of the paired TDM buses (A or B) on a port network carries the control channel and dedicated tone time slots. Each port network has a 512 time-slot TDM bus configured as two separate 256 time-slot buses. This division allows for duplication of control channels and time slots dedicated for use by system tones. On power-up, the control channel is carried on the A bus, and the tone time slots are carried on the B bus. Execution of **set tdm port-network** puts both the control channel and the tone time slots on the specified bus.

Under extremely heavy traffic load, tone time slots on the bus that is not currently carrying the tones may be used for call processing. Use of **override** under these conditions causes calls to be dropped.

See TDM-BUS (TDM Bus) on page 952 in the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)* for details.

Action/Object	Qualifier	Qualifier Description	Feature Interaction
set tdm port-network	***PN#*** **bus** **override**	Port Network number of the TDM bus to be set. Use **list cabinet** to see port network numbers for a given cabinet. One of the paired TDM buses, a or b. Sets a bus which is out of service, or a bus whose dedicated tone time slots are in use by call processing. **CAUTION:** Use of override option disrupts service. Example: **set tdm port-network 2 bus a**	See set tdm feature interactions on page 638

set tdm feature interactions

New calls go to time slots reserved for tones on the bus that have not other time slots when:

- Time slots on a specified bus are in use
- Dedicated tone time slots are on the other half of the bus

A **set** command to buses that have calls on dedicated tone time slots drops these calls.

test tdm

`test tdm port-network PN# [short | long] [repeat# | clear] [schedule]`

Use **`test tdm`** to run hardware diagnostic tests on the time slots of the specified TDM bus. Both halves ("a" and "b") of the TDM bus are tested. This command tests all the time slots on a bus associated with a PPN or an EPN.

Action/Object	Qualifier	Qualifier Description	Login	Default
`test tdm`	**`pn number`** **`short`** **`long`** **`repeat n`** **`clear`**	*nn* = number of the port network to have its TDM bus tested. Both halves ("a" and "b") of the TDM bus are tested. See Common Command Parameters on page 20. Examples: **`test tdm port-network 1 l`** **`test tdm port-network 2 sh r 2`** **`test tdm port-network 1 l r 25`** **`test tdm port-network 2`** **`test tdm port-network 1 c`**	init inads craft	short 1

test-number

See:
disable test-number on page 639
enable test-number on page 639

disable test-number

Use **`disable test-number`** to prohibit selected maintenance tests.

Use **`enable test-number`** to run a disabled test.

Action/Object	Qualifier	Qualifier Description	Login
`disable test-number`	**`number`**	Maintenance test number	init inads

enable test-number

`enable test-number test#`

Use **enable test-number** to re-enable a specified test that was previously turned off with **disable test.** While disabled, a test cannot be run by background or demand maintenance. Before enabling a test, ascertain why it was disabled, and inform INADS that it has been turned back on.

Use **display disabled-tests** to list all disabled tests.

Action/Object	Qualifier	Qualifier Description	Login	Default
enable test-number	***test#***	The number of the test to be re-enabled Descriptions of each test appear under the relevant MO in *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)* Example: **enable test-number 102**		

test-schedule

display test-schedule

display test-schedule

Use **display test-schedule** to see the test schedule for an ATMS trunk.

Automatic Transmission Measurement System (ATMS) provides advanced maintenance procedures for monitoring system trunk facilities. This system performs transmission tests on system trunks to determine whether trunks are performing satisfactorily.

See Common Input Parameters on page 25.

The following is the output from **`display test-schedule n`**.

```
                                                                  Page 1 of 1
                                ATMS TRUNK TEST SCHEDULE
  Schedule No: __
Schedule Time: __:__              Schedule Test Days            Interval: __
Schedule Date: __/__/__       SU: _  TU: _  TH: _  SA: _       Duration: __
 OTL Throttle: _              MO: _  WE: _  FR: _             Test Type: ______
Trk Bgn End     Trk Bgn End     Trk Bgn End     Trk Bgn End     Trk Bgn End
Grp Mem Mem     Grp Mem Mem     Grp Mem Mem     Grp Mem Mem     Grp Mem Mem

___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___
___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___
___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___
___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___
___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___
___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___
___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___
___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___
___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___
___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___
___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___
___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___     ___ ___ ___
```

display test schedule field descriptions

display test schedule field descriptions ***1 of 2***

Field	Description
Schedule	The current schedule number.
Schedule Time	The hour and minute that the test begins (24-hour time, with “00:00” being midnight). This time must be greater than the current time.
Schedule Date	Month (**1** to **12**), day (**1** to **31**), and year on which testing begins (default is the system date). This date must be equal to or greater than the current date.
Schedule Test Days	**y** next to the days of the week indicates which days of the week this test runs.
Interval	The length of this schedule in weeks. If **0**, the schedule runs on the specified days only once.
OTL Throttle	The number of trunk members (1 – 4) tested concurrently during a schedule. If this field is set to **1**, the OTL (originating test line) tests each trunk sequentially. If set from **2** to **4**, the specified number of trunks are tested in parallel.
	1 of 2

display test schedule field descriptions ***2 of 2***

Field	Description
Test Type	One of the following types of test to be performed on the trunk group/ members in this schedule: • **full** runs the most comprehensive test and collects every associated measurement for each TTL type. • **supv** performs a supervision test and only confirms the presence of the test set at the far end. No measurements are taken for this test. • **no-st** runs the “full” test, but skips any self-test sequences. This saves about 20 seconds on the type 105 test and does not have any effect on type 100 or 102 tests. • **no-rl** runs the “full” test, but skips any return-loss sequences. This saves about 20 seconds on the type 105 test and does not have any effect on type 100 or 102 tests. • **no-st/rl** runs the “full” test, but skips every self-test and return-loss sequence. This saves about 40 seconds on the type 105 test and does not have any effect on type 100 or 102 tests.
Duration	The maximum number of hours (**1** to **24**) a schedule can remain active. Schedules continue to run until every trunk group/member for that particular schedule is tested or until the scheduled duration elapses. If the duration elapses before every trunk group/member can be tested, the schedule stops.
Trk Trp	The trunk-group numbers to be tested when this schedule runs. There is no limit to the number of times that a trunk group can appear on any particular schedule, or to the number of different schedules in which a trunk group can appear. Default is blank.
Bgn Mbr	The beginning member number of the trunk group to be tested; default is **1**.
End Mbr	The ending member number of the trunk group to be tested. This value must be greater than or equal to the value of the beginning member field.
	2 of 2

testcalls

list testcalls

Use **list testcalls** to generate an Automatic Transmission Measurement System (ATMS) report. The ATMS allows the voice and data trunk facilities to be measured for satisfactory transmission performance. The performance of the trunks is evaluated according to measurements produced by a series of analog tests (**test analog-testcall)** and are compared against user-defined threshold values. The purpose of the report is to provide measurement data to help determine the quality of trunk lines. The measurement report contains data on trunk signal loss, noise, singing return loss, and echo return loss.

The measurements are produced by a set of analog trunk tests (**test analog-testcall)**. The tests are initiated by a maintenance demand test or by a set of scheduled tests. The largest portion of these measurements are generated through scheduled testing during system quiet hours (hours where the traffic volume is low). Each trunk test performed by the system stores the results in a database. The trunk measurements in this database reflect the state of each trunk at the time of its last test.

The **test analog-testcall** test aborts when attempting a test call on these trunk groups:

- ISDN-PRI: The ATMS Summary Report (**list testcalls** command) shows a 0 in the in the Busied Out Trunks field when **test analog-testcall** is run on an ISDN-PRI trunk.
- SIP
- DID
- Any incoming trunk group (transmission tests can only be run on outgoing trunks)

Action/Object	Qualifiers/Options	Qualifier/Option description
list testcalls	**detail** **summary**	Detailed measurement report displayed Summary measurement report displayed
	grp ***group number***	Measurements for a specific trunk group displayed. When used with the **to-grp** option, this option is the starting trunk group in a range of user-specified trunk groups.
	to-grp ***group number***	Measurements for all trunk groups from 1 to the specified “to-grp” trunk group are displayed. When used with the **grp** option, this option is the ending trunk group in a range of user-specified trunk groups.
	mem ***member number***	Measurements for a specific trunk group member displayed. When used with the **to-mem** option, this option is the starting trunk group member in a range of user-specified trunk group members.
		1 of 2

Action/Object	Qualifiers/Options	Qualifier/Option description
	to-mem ***member number***	Measurements for all trunk group members from 1 to the specified “to-mem” trunk group member displayed. With **mem**, this option is the ending trunk group member in a range of user-specified trunk group members.
	port location	Measurements for a specific trunk circuit (port) displayed
	result identifier	Filter out the measurement results that do not match the user-specified result. Only measurement results that match the specified result appear. Examples of results are pass, marg, fail.
	not-result identifier	Filter out the measurement results that do match the user-specified result. Only measurement results that do not match the user specified result appear. Examples of results are pass, marg, fail.
	count number	Specify the number of records displayed.
		2 of 2

Examples

```
list testcalls detail
list testcalls detail grp 78
list testcalls detail grp 78 to-grp 80
list testcalls detail grp 78 to-grp 80 mem 1 not-result pass
list testcalls detail grp 78 to-grp 80 mem 1 to-mem 5
list testcalls detail mem 1 count 3 result pass
list testcalls detail to-grp 78 to-mem 4 count 3 result pass
list testcalls detail to-mem 3 result pass
list testcalls detail port 1c1504t
list testcalls summary
list testcalls summary grp 78
list testcalls summary grp 78 count 5
list testcalls summary grp 78 to-grp 80
list testcalls summary grp 78 to-grp 80 count 3
list testcalls summary to-grp 78
list testcalls detail grp 78 to-grp 80 mem 1 to-mem 5 count 3 result
pass
```

The following example is of the output for **`list testcalls detail grp 80`**.

```
list testcalls detail grp 80

                        ATMS MEASUREMENT REPORT
 Group: 80   Type: co     Vendor:           TTL Type: 105-w-rl

THRESHOLD VALUES           Loss dev at

                    1004Hz-loss  404Hz 2804Hz C-msg C-ntch SRL SRL
                     Min   Max   -  +  -  +   Noise Noise  LO  HI   ERL
           Marginal   -2   21    9  9  9  9     55    74   0   0    0
       Unacceptable   -2   21    9  9  9  9     55    74   0   0    0

Trk Test  Test  Test -16dBm  0dBm
Mem Date  Time  Rslt  NE FE NE FE  NE FE NE FE  NE FE NE FE  NE FE NE FE  NE FE
1
2
3
4
5
6
7
8
9
```

list testcalls detail report field descriptions

list testcalls detail report field descriptions ***1 of 2***

Field	Description
Group	trunk group number selected
Type	trunk group type
Vendor	vendor of this trunk group
TTL Type	kind of test line for this trunk group
Threshold Values	The list of marginal and unacceptable threshold values defined on the trunk group form. The following fields appear on the lower section of the form. Many of the column headings contain the abbreviations “FE” for far end and “NE” for near end. These abbreviations define which end took the measurements.
Trk Mem	The trunk member within the trunk group.
Test Date	The month and day this trunk was tested.
	1 of 2

list testcalls detail report field descriptions ***2 of 2***

Field	Description
Test Time	The time of day this trunk was tested.
Tst Rslt	This field describes the results of the trunk transmission test.
1004Hz-loss Min	Far-to-near and near-to-far measurements of 1004-Hz loss from low-level tone.
1004Hz-loss Max	Far-to-near and near-to-far measurements of 1004-Hz loss at 0 dBm.
Loss dev at 404Hz	Transmission tests at low frequency. These tests measure a maximum positive and negative deviation of +9 and -9 dB from the 1004-Hz loss measurements.
Loss dev at 2804Hz	Transmission tests at high frequency. These tests measure a maximum positive and negative deviation of +9 and -9 dB from the 1004-Hz loss measurements.
C-msg Noise	Maximum noise interference (in dBrnC: decibels above reference noise, which is B(EQ)10 sup -12E(EQ) watts) terminating on a voice terminal within the voice-band frequency range (500 to 2500 Hz) between 15 and 55 dBrnC.
C-ntch Noise	Maximum signal-dependent noise interference on a line between 34 and 74 dBrnC.
SRL-LO	Singing return loss from 0 to 40 dB between the sum of the circuit (repeater) gains and the sum of the circuit losses. SRL-LO occurs most often in the frequency range of 200 to 500 Hz.
SRL-HI	Singing return loss from 0 to 40 dB between the sum of the circuit (repeater) gains on a circuit and the sum of the circuit losses. SRL-HI occurs most often in the frequency range of 2500 to 3200 Hz.
ERL	Echo return loss from 0 to 40 dB between the level of signal strength transmitted and the level of signal strength reflected. ERL occurs most often in the frequency range of 500 to 2500 Hz.
	2 of 2

The following example is the output from **`list testcalls summary grp 80`**.

```
list testcalls summary grp 80

                        ATMS MEASUREMENT SUMMARY REPORT

                         Trunks  Trunks   Trunks
 Trk  Num   Last   Last  Passed  Failed   Failed    Trks Trks  Busied
 Grp  Of    Test   Test  Transm  Marginal Unaccept  In-  Not   Out
 Num  Trks  Date   Time   Test   Threshld Threshld  Use  Test  Trunks

 80   19                   0       0        0       0     0      0
```

list testcalls summary report field descriptions

list testcalls summary report field descriptions

Field	Description
Trk Grp Num	The trunk group number which is being summarized. Only outgoing or two-way analog trunks will be listed.
Num Of Trks	Total number of members per trunk group.
Last Test Date	Date of the oldest measurement in the trunk group.
Last Test Time	Time of the oldest measurement in the trunk group.
Trunks Passed Transm Test	Number of trunks that have passed the trunk transmission tests.
Trunks Failed Marginal Threshld	Number of trunks that failed a marginal threshold, but not an unacceptable threshold according to the threshold values defined on the trunk group form.
Trunks Failed Unaccept Threshld	Unacceptable threshold administered on the Trunk group form.
Trks In-Use	Number of trunks that were in-use at the time of testing.
Trks Not Test	Number of trunks that were not tested due to error conditions.
Busied Out Trunks	Number of trunks that were busied out at the time. This could be due to hardware problems, incorrect threshold values, etc.

tftp-server

See:
change tftp-server on page 648
display tftp-server on page 648

change tftp-server

Use **`change tftp-server`** to copy a firmware image from the FTP file server into Communication Manager memory.

Action/Object	Qualifier	Qualifier Description
`change tftp-server`		

This is an example of **`change tftp-server.`**

```
change tftp-server
                              TFTP Server Configuration
       Local Node Name:
 TFTP Server Node Name:
      TFTP Server Port: 69
      File to Retrieve:

           File Status:
             File Size:
    Filename in Memory:
```

display tftp-server

`display tftp-server`

Use **`display tftp-server`** to see the status of the TFTP Server, and to verify the status of a firmware image file download.

See disable suspend-alm-orig on page 585.

time

See:
display time on page 649
set time on page 650

display time

`display time [schedule]`

Use **`display time to`** display the system date and time that is used by software processes for scheduling and so on.

Action/Object	Qualifier	Qualifier Description
`display time`	**`schedule`**	See Common Input Parameters on page 25.

The following example shows the output for **`display time`**.

```
display time
                                    DATE AND TIME
DATE
            Day of the Week: Tuesday        Month: October
           Day of the Month: 16              Year: 2007

TIME
Hour: 8   Minute: 5     Second: 51

WARNING: Changing the date or time will impact BCMS, CDR and MEASUREMENTS
```

display time field descriptions

display time field descriptions

Field	Description
Day of the Week	The day of the week that the system has stored.
Day of the Month	The numerical day of the month.
Month	The month of the year stored by the system.
Year	The current year stored by the system.
Hour	The hour of the current day.
Minute	The number of minutes into the hour.
Second	The number of seconds into the minute stored by the system.

set time

set time

Use **set time** to show and edit the current day, date, month, year and time kept by the system clock. The second field is set to zero when the time on the clock is altered.

set time input screen

```
 set time                                                          Page 1 of 1
                                DATE AND TIME
          DATE

            Day of the Week: Thursday         Month: October
           Day of the Month: 11                Year: 2007

          TIME

            Hour: 8  Minute: 16     Second: 31     Type: Standard

                        Daylight Savings Rule: 0

WARNING: Changing the date or time may impact BCMS, CDR, SCHEDULED EVENTS,
         and MEASUREMENTS
```

Note:

When the system clock is upgraded from an earlier release, the daylight savings time rule on the **set time** screen defaults to **0** (no rule). When you change the daylight savings time rule, the system clock automatically adjusts during the next transition of the rule.

set time field descriptions

These are the fields on the **set time** input screen. The current time, or default time appears in the fields.

set time field descriptions ***1 of 2***

Field	Description
Day of the Week	Valid entries are Monday through Sunday.
Day of the Month	1-31 are valid entries. A check for leap year is also made.
Month	January through December.
	1 of 2

set time field descriptions ***2 of 2***

Field	Description
Year	The year must be saved as translation data and passed to the kernel whenever kernel memory is corrupted (system reboot or cold I restart), or the data is changed.
Hour	0-23 are valid entries.
Minute	0-59 are valid entries.
Second	This field is reset automatically and cannot be altered.
Type	**Daylight-savings** = daylight savings time **Standard** = standard time
Daylight Savings Rule	The daylight savings time rule number (0 to 15). Rule 0 is no daylight savings time, and rule 1 defaults to U.S. daylight savings time rule.
	2 of 2

tone-clock

See:
set tone-clock on page 651
test tone-clock on page 652

set tone-clock

`set tone-clock` ***`cabinetc [carrier]`*** **`[override]`**

On port networks not controlled by an IPSI, use **`set tone-clock`** to force a Tone-Clock interchange.

On port networks with duplicated Tone-Clocks, use **`set tone-clock`** to select which of the two Tone-Clock circuit packs is to be active.

On port networks with an IPSI for a Tone-Clock, **`set tone-clock`** is blocked.

In PNs, the A-carrier Tone-Clock is the preferred Tone-Clock. It is always active unless a failure, maintenance testing, or **`set tone-clock`** caused an interchange to the B-carrier Tone-Clock. If you use **`set tone-clock`** during a maintenance session, set the PN Tone-Clock back to the A carrier when you are finished, assuming it is healthy.

Tone-clock interchanges executed by scheduled daily maintenance cause the standby to become active for 20 seconds and then interchange back to whichever Tone-Clock was originally active.

Action/Object	Qualifier	Qualifier Description	Login	Default
set tone-clock	***cabinet*** ***carrier*** **override**	Cabinet number of the Tone-Clock to be activated. Carrier of the Tone-Clock to be activated. Executes the set command regardless of the health of the Tone-Clock circuit pack. **CAUTION:** Use of this option is destructive to an entire port network for PNs.	init inads craft	1
		Examples: **set tone-clock 01c override** **set tone-clock a**		

test tone-clock

test tone-clock *UUC* [short | long] [*repeat#* | clear] [schedule]

Use **test tone-clock** to perform hardware diagnostic tests on the three maintenance objects on a specified IPSI, or Tone-Clock circuit pack on **S8700 MC**: TONE-BD, TONE-PT, TDM-CLK.

See the MO information for TONE-BD (Tone-Clock Circuit Pack), TONE-PT (Tone Generator), and TDM-CLK (TDM Bus Clock) in *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*.

trace

list trace

`list trace station ext | tac tac# | attendant | data-module | previous | advocate | ewt | media-gateway | ras | vdn | vector`

Use **`list trace`** to view:

- the Virtual Path Identifier (VPI) and Virtual Channel Identifier (VCI) data, including incoming (**`list trace tac`**) and outgoing (**`list trace station`**) MFC signaling information
- the source of the audio for a call being traced

Use **`list trace`** to troubleshoot:

- misdirected calls
- trunking/routing problems
- call denials
- DS1 connectivity to other vendor equipment

List trace commands can be used with Tenant Partitioning only with an init login.

See:
list trace media-gateway on page 655
list trace ras on page 655
list trace station on page 657
list trace tac on page 660
list trace vdn on page 661
list trace vector on page 662

list trace command options ***1 of 2***

Action/ Object	Qualifier	Qualifier Description	Login
list trace			init inads craft cust
	advocate	Examples: **list trace advocate agent <agent_loginID>** **list trace advocate skill <skill_number>**	
	attendant	Trace calls to and from the attendant extension to monitor attendant-activated console features.	
	data-module	Trace calls to and from data modules	
	ewt	Observe processing events of all calls, to verify that Expected Wait TIme is operating as expected.**list trace ewt** traces all events that change the ewt for that skill at that priority level. **list trace ewt** is blocked when Tenant Partitioning is enabled. Examples: **list trace ewt low <skill_number>** **list trace ewt medium <skill_number>** **list trace ewt high <skill_number>** **list trace ewt top <skill_number>**	
	media-gateway	Trace media-gateway registration messages. See list trace media-gateway on page 655.	
	previous	Show the results of the previous trace	
	ras	Observe Communication Manager processed RAS messages (registration, keepalive, admission, status, unregistration) between two H.323 entities for gatekeeper discovery and endpoint registration. See list trace ras on page 655	
	station *ext*	Trace calls originating from and terminating to a specific station extension. See list trace station on page 657.	
	tac *tac#*	Trace calls entering and leaving the server on a specific trunk group number. See list trace tac on page 660.	
	vdn	Trace vdn (Vector Directory Number) operations. Show the next call that enters the VDN, through all vectors, until the call leaves vector processing. A **list trace vdn** command resembles **list trace vector**, except that **list trace vdn** follows the call through multiple vectors. See list trace vdn on page 661.	

1 of 2

list trace command options ***2 of 2***

Action/ Object	Qualifier	Qualifier Description	Login
	vector	Trace vector operations. For a specific vector, show the next call that enters the vector, each vector step being executed, and data for steps associated with Best Service Routing until the call leaves the vector. Seelist trace vector on page 662.	
list trace (cont.)		Examples: **list trace attendant 12345** **list trace previous** **list trace media-gateway** ***ip-address***	
			2 of 2

list trace media-gateway

list trace media-gateway ***ip-address*** **|** ***identifier***

Use **list trace media-gateway** to trace media-gateway registration messages and denial events. **List trace media-gateway** traces registration messages:

- ServiceChangeRequest
- ServiceChangeReply
- NotificationRequest (only Keep Alives)
- NotificationReply (only Keep Alives)

list trace ras

list trace ras [ip-address ***x*** **| ip-stations** ***x*** **| forced_urqs]**

Use **list trace ras** to see the RAS (registration, admission, status) messages that Communication Manager is processing between:

- servers in an ESS configuration
- servers in an LSP/ESS configuration
- gatekeepers and endpoints

This can be limited to a single station or expanded to the whole system. It shows registration, keepalive, and unregistration requests.

This information is helpful when an endpoint fails to register. For example, use **list trace ras** for a particular endpoint, then register the endpoint. If no commands appear on the output screen, the gatekeeper is not receiving the message from the endpoint. Check for a network problem.

- **list trace ras ip-address *x*** shows RAS messages between the entity owning the IP address and the recipients of its messages. To monitor registration requests from the ESS, use **list trace ras ip-address** to display registration requests from the ESS and the associated response from the Main server.
- **list trace ras ip-stations *x*** shows RAS messages between the gatekeeper and endpoints using the extensions specified in the command.
- **list trace ras forced_urqs** shows some RAS unregistration request (URQ) messages sent by the gatekeeper to force unregister endpoints. Not all gatekeeper-originated URQ messages are captured here. See the denial event log (**display events**, Category = denial) for a complete record.

The following example shows a typical output for **list trace ras ip-address** for an ESS in an ESS configuration.

The first message exchange is the ESS sending a Registration Request (RRQ) to the Main server. The Main responds with a Registration Confirmation (RCF). The ESS and Main continue a conversation where the ESS sends a Keep-Alive message (KARRQ) and the Main confirms it (RCF). Note that under normal operation a Keep-Alive (KA) message is periodically sent from the ESS to the Main server. This should not be confused with a registration failure.

```
list trace ras ip-address 135.9.78.143                          Page   1

                                LIST TRACE

time            data

11:01:02   rcv RRQ endpt 135.9.78.143:1719 switch 135.9.72.168:1719 ext
11:01:02   snd RCF endpt 135.9.78.143:1719 switch 135.9.72.168:1719 ext

11:03:02   rcv KARRQ endpt 135.9.78.143:1719 switch 135.9.72.168:1719 ext
11:03:02   snd RCF endpt 135.9.78.143:1719 switch 135.9.72.168:1719 ext

11:04:02   rcv KARRQ endpt 135.9.78.143:1719 switch 135.9.72.168:1719 ext
11:04:02   snd RCF endpt 135.9.78.143:1719 switch 135.9.72.168:1719 ext

11:05:02   rcv KARRQ endpt 135.9.78.143:1719 switch 135.9.72.168:1719 ext
11:05:02   snd RCF endpt 135.9.78.143:1719 switch 135.9.72.168:1719 ext
11:06:02   rcv KARRQ endpt 135.9.78.143:1719 switch 135.9.72.168:1719 ext
11:06:02   snd RCF endpt 135.9.78.143:1719 switch 135.9.72.168:1719 ext
11:07:02   rcv KARRQ endpt 135.9.78.143:1719 switch 135.9.72.168:1719 ext
```

The following example shows another output for **list trace ras ip-address** for an ESS in an ESS configuration.

In this example the ESS sends a Registration Request (these appear as KARRQ messages at the main) and the Main server responds with Registration Confirmation (RCF) messages.

```
list trace ras ip-address 135.9.72.168                          Page   1

                                LIST TRACE

time            data

11:01:02   snd RRQ endpt 135.9.72.168:1719 switch 135.9.78.143:1719 ext
11:01:02   rcv RCF endpt 135.9.72.168:1719 switch 135.9.78.143:1719 ext

11:03:02   snd RRQ endpt 135.9.72.168:1719 switch 135.9.78.143:1719 ext
11:03:02   rcv RCF endpt 135.9.72.168:1719 switch 135.9.78.143:1719 ext

11:04:02   snd RRQ endpt 135.9.72.168:1719 switch 135.9.78.143:1719 ext
11:04:02   rcv RCF endpt 135.9.72.168:1719 switch 135.9.78.143:1719 ext

11:05:02   snd RRQ endpt 135.9.72.168:1719 switch 135.9.78.143:1719 ext
11:05:02   rcv RCF endpt 135.9.72.168:1719 switch 135.9.78.143:1719 ext
11:06:02   snd RRQ endpt 135.9.72.168:1719 switch 135.9.78.143:1719 ext
11:06:02   rcv RCF endpt 135.9.72.168:1719 switch 135.9.78.143:1719 ext
```

In this example, the ESS is incorrectly configured on the Configure Identities page of Configure Server to have Server ID 98, but it is administered on the **`survivable-processor`** SAT screen to have Server ID 97 on the Main server. Notice that on the Main a denial event occurs when the ESS attempts to register. Use **`display events`** to see Denial Event information.

```
list trace ras ip-address 135.9.78.143                        Page   1

                                LIST TRACE

time            data

12:47:42   rcv RRQ endpt 135.9.78.143:1719 switch 135.9.72.168:1719 ext
12:47:42   denial event 3600: IP RRJ-ESS not admin endpt 135.9.78.143 data0:0x0
12:47:42   snd RRJ endpt 135.9.78.143:1719 switch 135.9.72.168:1719 ext
```

list trace station

`list trace station` ***`ext`***

Use **`list trace station`** to trace the time and activity on a specific station.

The following example shows the output for **`list trace station`** for an outgoing MFC call with ANI. Check the outgoing MFC signaling with the entries that show when the far end requests ANI (send ANI), signals end-of-dial, and that the called party is free (ring).

```
list trace station 52501                                              Page 1

                              LIST TRACE


   Time         Data

19:24:29      active station    52051 cid 0x10
19:24:32      dial *07535
19:24:32      term trunk-group 111    cid 0x10
19:24:32      dial *07535
19:24:32      seize trunk-group 111 member 2 cid 0x10
19:24:33      send ANI 5352051
19:24:33      end-of-dial     cid 0x10
19:24:33      dial *075351001
19:24:33      ring 5351001
19:24:33      active trunk-group
19:24:35      idle station 52051 cid 0x10
19:24:44 TRACE COMPLETE station 52051 cid 0x10
```

Use **`list trace station`** to check VPI.VCI data for a specific station. Add **`/a`** after the extension (*ext*/a) to request ATM-specific trace data.

The following screen shows VPI.VCI and ATM-specific trace data for a successful 2-party call setup.

```
list trace station 52501/a                                            Page 1
                                       LIST TRACE

   Time         Data

15:12:07      Calling party station    57405 cid 0x20
15:12:09      dial 52501
15:12:09      ring station 52501 cid 0x20
15:12:09      ATM setup PN01-0081 to PN03-0045
15:12:09      ATM setup PN03-0046 to PN01-0082
15:12:11      active station 52501 cid 0x20
15:12:22      idle station 57405 cid 0x20
```

The following screen shows a sample output of **`list trace station`** with an announcement connection. The announcement information in the Data section of the screen begins with hear and may include the audio group number and member number, music on hold and port, and network region and extension.

```
list trace station 51001                                                Page 1
                                        LIST TRACE

   Time         Data

11:38:33  dial 52099
11:38:33  ring vector 1 cid 516
11:38:34  hear audio group 1 member 201 netrgn 3 ext 50505
11:38:41  hear annc ext 55526
11:38:41  TRACE COMPLETE station 51001 cid 516
```

The following screen shows a sample output of **`list trace station`** following Call Type Digit Analysis. Calltype analysis messages are logged when the station makes a logdialing request. After the modified string is passed to existing dial plan analysis routines (UDP, AAR, ARS) and the call is handed off, list trace continues to work on the call.

List trace station shows the phone's location in the logdial row of the output screen.

```
list trace station 11                                                   Page 1
                                        LIST TRACE
time data
10:18:34 active station 11 cid 0x7
10:18:34 G711MU ss:off ps:20 rn:1/1 135.9.170.99:2374 135.9.97.94:2148
10:18:34 xoip: fax:Relay modem:off tty:US 135.9.97.94:2148 uid:0x9
10:18:35 dial 6000
10:18:35 ring station 6000 cid 0x7
10:18:35 calltype 6000# match=6000
10:18:35 calltype 6000 call_type EXT,loc=ALL,match=6000
10:18:35 G711MU ss:off ps:20 rn:1/1 135.9.170.78:2388 135.9.97.94:2152
10:18:35 xoip: fax:Relay modem:off tty:US 135.9.97.94:2152 uid:0x1
10:18:36 active station 6000 cid 0x7
10:18:36 G711MU ss:off ps:20 rn:1/1 135.9.170.99:2374 135.9.170.78:2388
10:18:36 G711MU ss:off ps:20 rn:1/1 135.9.170.78:2388 135.9.170.99:2374
10:18:36 idle station 6000 cid 0x7
```

list trace tac

list trace tac *tac#* [/ [q] [d] [a]]

Use **list trace tac** to trace calls entering and leaving the server via a trunk group. To request additional trace data, follow tac# with a slash (/) and then one or more of these qualifiers:

q	Requests trace data of QSIG operations, such as diversion, diversion with reroute and path replacement, performed on the specified trunk. QSIG trace data displayed includes reject and invoke information and return errors.
d	Requests trace data on calls made over a specified trunk group.
a	Requests ATM-specific trace data for specified trunk.

Examples

list trace tac 48
list trace tac *14/q
list trace tac 284/dqa

The following example shows the output for **list trace tac *tac#/q*** requesting QSIG trace data with an outgoing call on trunk *14 to a station that had call forwarding turned on. The “DV_RR” data line shows the attempted QSIG diversion reroute.

```
list trace tac *14/q                                                    Page   1
                                      LIST TRACE
time             data

14:08:56     dial 86242000
14:08:56     route-pattern  14 preference 1  cid 0xb
14:08:56     seize trunk-group 14 member 2  cid 0xb
14:08:56     Setup digits 2000
14:08:56     Calling Number & Name 5382500 stat 2500
14:08:56     Proceed trunk-group 14 member 2  cid 0xb
14:08:56     Alert trunk-group 14 member 2  cid 0xb
14:09:07 QSIG<in  DV_RR Invk 6242001  invkid 0x17
14:09:07     dial 8624
14:09:07     term trunk-group 14   cid 0xb
14:09:07 QSIG>out DV_L2 Invk 3035382000  invkid 0x19
14:09:07 QSIG>out DV_L2 Invk 3035382000  invkid 0x19
14:09:07     dial 86242001#
14:09:07     route-pattern  14 preference 1  cid 0xb
14:09:07     seize trunk-group 14 member 3  cid 0xb
```

The following example shows the output for **list trace tac *tac#/q*** requesting QSIG trace data on a call incoming on trunk *15 that is call forward no response, attempting a QSIG diversion reroute.

```
list trace tac *15/q                                                    Page   1
                                      LIST TRACE
time             data

14:10:20      Calling party trunk-group 15 member 4 cid 0xf
14:10:20      Calling Number & Name 5382500 stat 2500
14:10:20      active trunk-group 15 member 4 cid 0xf
14:10:20      dial 2000
14:10:20      ring station 2000 cid0xf
14:10:30 QSIG>out DV_RR Invk 6242001  invkid 0x22
14:10:30      idle trunk-group 15 member 4 cid 0xf
```

The following example shows the output for **list trace tac** on an incoming call with MFC signaling, showing the call Category (1) and the Calling Party Number (532010).

```
list trace tac 692                                              Page 1

                              LIST TRACE


   Time         Data

19:31:19      active trunk-group 112 member 3 cid 0x23
19:31:21      dial 51001
19:31:21      Category + CPN 1532010
19:31:31      active station 51001 cid 0x23
19:31:41      idle trunk-group 112 member 3 cid0x23
19:31:41 TRACE COMPLETE trunk-group 112 cid 0x23
```

list trace vdn

list trace vdn vdn#

Use **list trace vdn** to trace vdn (Vector Directory Number) operations. Show the next call that enters the VDN, through all vectors, until the call leaves vector processing. A **list trace vdn** command resembles **list trace vector**, except that **list trace vdn** follows the call through multiple vectors. See *Avaya Call Center Release 4.01 Call Vectoring and Expert Agent Selection (EAS) Guide, 07-600780 (formerly 07-300477, 07-300186, 555-230-714)* for more information.

The following example shows the output for **`list trace vdn.`**

```
list trace vdn 2000
                                  LIST TRACE

time      vec st data
08:56:22  0   0 ENTERING TRACE cid 3
08:56:22  1   1 vdn e2000 bsr appl 0 strategy 1st-found override n
08:56:22  1   1 goto
08:56:22  1  1 time-of-day(5:08:56)
08:56:22  1   1 vector=2, step=1
08:56:22  2   1 disconnect
08:56:22  2   1 announcement: board 01A05 ann ext: 4503
08:56:26  2   2 LEAVING VECTOR PROCESSING cid 3
08:56:26  2   2 TRACE COMPLETE cid 3
```

list trace vector

`list trace vector #`

Use **`list trace vector`** to trace vector operations. For a specific vector, see the next call that enters the vector, each vector step being executed, and data for steps associated with Best Service Routing until the call leaves the vector. See *Avaya Call Center Release 4.01 Call Vectoring and Expert Agent Selection (EAS) Guide, 07-600780 (formerly 07-300477, 07-300186, 555-230-714)* for more information.

The following examples show the output for **`list trace vector.`**

```
list trace vector 1
                                   LIST TRACE

time vec st data
08:56:51 0 0 ENTERING TRACE cid 4
08:56:51 1 1 vdn e2000 bsr appl 0 strategy 1st-found override n
08:56:51 1 1 goto
08:56:51 1 1 time-of-day(5:08:56)
08:56:51 1 1 TRACE COMPLETE cid 4
```

```
list trace vector 2
LIST TRACE
time vec st data
08:57:25 2 0 ENTERING TRACE cid 5
08:57:25 2 1 disconnect
08:57:25 2 1 announcement: board 01A05 ann ext: 4503
08:57:28 2 2 LEAVING VECTOR PROCESSING cid 5
08:57:28 2 2 TRACE COMPLETE cid 5
```

Here are examples of messages from **`list trace vector`**.

List trace vector messages ***1 of 3***

All messages start with the hour, minute, second, vector and step

ALL PLATFORMS

```
HH:MM:SS VVVV SS ENTERING TRACE cid <cid>
HH:MM:SS VVVV SS vdn <vdn> bsr appl ### strategy 1st-found override <ovr>
HH:MM:SS VVVV SS vdn <vdn> bsr appl ### strategy EAD-LOA override <ovr>
HH:MM:SS VVVV SS vdn <vdn> bsr appl ### strategy EAD-MIA override <ovr>
HH:MM:SS VVVV SS vdn <vdn> bsr appl ### strategy UCD-LOA override <ovr>
HH:MM:SS VVVV SS vdn <vdn> bsr appl ### strategy UCD-MIA override <ovr>
HH:MM:SS VVVV SS LEAVING VECTOR PROCESSING cid <cid>
HH:MM:SS VVVV SS TRACE COMPLETE cid <cid>
HH:MM:SS VVVV SS TRACE BUFFER FULL
HH:MM:SS VVVV SS TRACE TIMED OUT
HH:MM:SS VVVV SS
HH:MM:SS VVVV SS adjunct
HH:MM:SS VVVV SS announcement
HH:MM:SS VVVV SS busy
HH:MM:SS VVVV SS check
HH:MM:SS VVVV SS collect
HH:MM:SS VVVV SS consider
HH:MM:SS VVVV SS converse-on
HH:MM:SS VVVV SS disconnect
HH:MM:SS VVVV SS goto
HH:MM:SS VVVV SS messaging
HH:MM:SS VVVV SS queue-to
HH:MM:SS VVVV SS reply-best
HH:MM:SS VVVV SS return
HH:MM:SS VVVV SS route-to
HH:MM:SS VVVV SS route-to Meet-me Conference
```

1 of 3

List trace vector messages *2 of 3*

All messages start with the hour, minute, second, vector and step

```
HH:MM:SS VVVV SS set
HH:MM:SS VVVV SS stop
HH:MM:SS VVVV SS wait-time
HH:MM:SS VVVV SS consider skill ### pri <pri> ewt <ewt> adjusted ewt <aewt>
HH:MM:SS VVVV SS consider location ###    ewt <ewt> adjusted ewt <aewt>
HH:MM:SS VVVV SS consider skill ### pri <pri> idle time <idle>
HH:MM:SS VVVV SS consider location ###    idle time <idle>
HH:MM:SS VVVV SS consider skill ### pri <pri> occupancy <occ>
HH:MM:SS VVVV SS consider location ###    occupancy <occ>
HH:MM:SS VVVV SS consider skill ### pri <pri> idle time <idle> skill level <lvl>
HH:MM:SS VVVV SS consider location ###    idle time <idle> skill level <lvl>
HH:MM:SS VVVV SS consider skill ### pri <pri> occupancy <occ> skill level <lvl>
HH:MM:SS VVVV SS consider location ###    occupancy <idle> skill level <lvl>
HH:MM:SS VVVV SS ADJUSTING: local adj ### rem adj ## adj idle time <idle>
HH:MM:SS VVVV SS ADJUSTING: local adj ### rem adj ## adj occ time <occ>
HH:MM:SS VVVV SS reply-best ewt <ewt> adjustment #### idle time ####
HH:MM:SS VVVV SS            occupancy ### skill level ##
HH:MM:SS VVVV SS queueing to skill ### pri <pri>
HH:MM:SS VVVV SS queueing to location ### interflow vdn <vdn>
HH:MM:SS VVVV SS            location ### being suppressed for ### seconds
HH:MM:SS VVVV SS consider location ### polling suppressed
HH:MM:SS VVVV SS consider location ### ignored, available agent found
HH:MM:SS VVVV SS consider skill ### ignored, available agent found
HH:MM:SS VVVV SS queue attempt FAILED
HH:MM:SS VVVV SS NO BEST DATA DEFINED
HH:MM:SS VVVV SS consider location ### POLL FAILED
HH:MM:SS VVVV SS consider location ### NO DATA RETURNED FROM POLL
HH:MM:SS VVVV SS consider location ### BAD DATA RETURNED FROM POLL
HH:MM:SS VVVV SS consider location ### BAD RESPONSE FROM POLL
HH:MM:SS VVVV SS consider location ### LOCATION NOT ADMINISTERED
HH:MM:SS VVVV SS consider location INVALID, NOT CONSIDERED
HH:MM:SS VVVV SS consider location ### POLLING VDN NOT ADMINISTERED
HH:MM:SS VVVV SS consider location ### BSR PLAN NOT ADMINISTERED
HH:MM:SS VVVV SS          location ### INTERFLOW FAILED
HH:MM:SS VVVV SS DELAYED BRI DOWN location ### trkgrp <tgrp>
HH:MM:SS VVVV SS NCR: No NCT PSTN service tgrp <tgrp> err_rc <err>
HH:MM:SS VVVV SS NCR: No NCT outgoing trk tgrp <tgrp> err_rc <err>
HH:MM:SS VVVV SS NCR: NCT outgo trk drop tgrp <tgrp> err_rc <err>
HH:MM:SS VVVV SS NCR: PSTN NCT invoke err tgrp <tgrp> net_rc <err>
HH:MM:SS VVVV SS NCR: PSTN NCT netwrk err tgrp <tgrp> net_rc <err>
HH:MM:SS VVVV SS NCR: Used NCT trk-to-trk tgrp <tgrp> net_rc <err>
HH:MM:SS VVVV SS NCR: No NCD PSTN service tgrp <tgrp> net_rc <err>
HH:MM:SS VVVV SS NCR: NCD invalid PSTN nmbr tgrp <tgrp> net_rc <err>
HH:MM:SS VVVV SS NCR: NCD call connect err tgrp <tgrp> err_rc <err>
```

2 of 3

List trace vector messages ***3 of 3***

All messages start with the hour, minute, second, vector and step

```
HH:MM:SS VVVV SS NCR: PSTN NCD invoke err tgrp <tgrp> net_rc <err>
HH:MM:SS VVVV SS NCR: PSTN NCD netwrk err tgrp <tgrp> net_rc <err>
HH:MM:SS VVVV SS NCR: PSTN NCD max redirs tgrp <tgrp> net_rc <err>
HH:MM:SS VVVV SS NCR: PSTN NCD no disc tgrp <tgrp> err_rc <err>
HH:MM:SS VVVV SS NCR: NCR internal system error cid <cid>
HH:MM:SS VVVV SS      variable <var> = [<assign>] <aux>
HH:MM:SS VVVV SS      variable V<var> = [<assign>] <aux>
HH:MM:SS VVVV SS      digits     = [<assign>] <aux>
HH:MM:SS VVVV SS      ========= ADD =========
HH:MM:SS VVVV SS      ========= SUB =========
HH:MM:SS VVVV SS      ========= MUL =========
HH:MM:SS VVVV SS      ========= DIV =========
HH:MM:SS VVVV SS      ========= CATL =========
HH:MM:SS VVVV SS      ========= CALR =========
HH:MM:SS VVVV SS      ========= MOD =========
HH:MM:SS VVVV SS      ========= MOD10 =========
HH:MM:SS VVVV SS      ========= SEL =========
HH:MM:SS VVVV SS      time-of-day(<assign>) <aux>
HH:MM:SS VVVV SS      EWT:<assign> - New EWT:<aux>
HH:MM:SS VVVV SS      operand    = [<assign>] <aux>
HH:MM:SS VVVV SS      vector=<vec>, step=<step>
HH:MM:SS VVVV SS      no return destination
HH:MM:SS VVVV SS hear moh port <port>
HH:MM:SS VVVV SS Local Agent Preference=n
HH:MM:SS VVVV SS Local Call Preference=n
HH:MM:SS VVVV SS Local Agent Preference=y  Call Location ID=<id>
HH:MM:SS VVVV SS Local Call Preference=y  Agent Location ID=<id>
HH:MM:SS VVVV SS Agent Login ID: <login>  Logged in at station: <station>
HH:MM:SS VVVV SS Local Preference: No local agents
HH:MM:SS VVVV SS      Alternate BSR Tie Strategy: Best
HH:MM:SS VVVV SS      Alternate BSR Tie Strategy: Not best
```

ONLY IF NOT GAZ:

```
HH:MM:SS VVVV SS announcement: board <port> ann ext: <ext>
HH:MM:SS VVVV SS music announcement: board <port> ann ext: <ext>
```

3 of 3

trace-route

`trace-route ip-address` *`ip-address`* `| node-name` *`node-name`* `[board` *`board`* `| source` *`source`*`][clan-port` *`clan-port`*`]`

Use **`trace-route ip-address`** to trace the route of packets originated from TN IP circuit packs through the LAN. The output shows the IP address of each router or host (hop) that the packets encounter and the time elapsed between each hop. If a TN IP circuit pack has trouble

communicating with a far-end device, **trace-route** can determine “how far” packets get toward the destination.

TN IP circuit packs include:

- TN799B (or later suffix) C-LAN board
- TN802B Medpro board
- TN2302 IP Medpro board
- TN2602 IP Medpro board

The output screen lists:

- Hops traversed from source to destination
- IP addresses of the hop points and the final destination
- Observed round-trip delay from the source to each hop point

If no reply is received from a potential hop point, **IP Address** contains stars (*), which indicates a timeout condition.

The primary use of **trace-route** is to determine quickly and unambiguously if the fault lies within Avaya-provided equipment, or if the fault is with the LAN or LAN administration to which the server switch is connected.

Action/ Object	Qualifier	Qualifier Description	Login	Default
trace-route	**ip-address** *ip-address* **node-name** *node-name* **board** *board* **clan-port** *clan-port* **source** **schedule**	Where IP address is www.xxx.yyy.zzz From node-name screen Cabinet-carrier-slot address of the active (not busied-out) IP circuit pack Port 1-17 (port must be translated) An endpoint's virtual port ID See Common Input Parameters on page 25.	init inads craft cust	primary ip address
		Examples: **trace-route node-name sr1clan1 source S00015** **trace-route ip-address 123.4.56.789 board 1C14 clan-port 2**		

Note:

The default DiffServ and 802.1p/Q parameters downloaded to a IP Media Processor board are used for **ping** and **trace-route** commands which are sourced from that IP Media Processor. The recipient of a **ping** replies with the same QoS value found in the received packet, and the measurements reported should reflect the behavior of the type of packets sent. IP Media Processor-sourced pings should reflect audio transport performance and C-LAN-sourced pings should reflect control information transport performance.

The following shows an example output for a C-LAN **trace-route**. For Medpro boards, the **clan-port** qualifier (1-17) does not appear.

```
trace-route ip-address 135.9.1.22 board 1C14 clan-port 2

                            TRACE ROUTE RESULTS

Hop        Time(ms)                      IP Address

0         from address                    130.9.1.20
1         03,10,05                        130.9.14.20
2         11,20,03                        130.9.5.100
3         22,01,25                        100.245.20.200
4         22,01,25   !N                   100.245.27.200
```

trace-route field descriptions

trace-route field descriptions ***1 of 2***

Field	Description
clan-port	Port on the C-LAN board from which **trace-route** is issued. Note: If no C-LAN port is specified for trace-route on a ppp link, **traceroute** defaults to the ethernet port (port 17, SAT passed port 0). This field appears only if the board is a C-LAN board.
Hop	The node number (in sequence). The 0 node is the address from which **traceroute** is issued.
	1 of 2

trace-route field descriptions ***2 of 2***

Field	Description
Time (ms)	Time from the board to each intermediate destination and back in milliseconds. If an error occurs at a node, the entry is repeated with an error code immediately following the time. Error codes and their meanings are: • ! - Unable to reach port • !N - Unable to reach network • !H - Unable to reach host • !P - Failure between endpoints • !F - Need fragmentation of data packet • !S - Source return failure • !X - Packet blocked by filter • “ - Timeout - no data available
IP Address	The 32-bit network address.
	2 of 2

trace-route error messages

trace-route command error messages

Message	Interpretation
Port not up	Port or link is down
Out of service	RSCL is down
Try later	No socket is available
Ethernet port not translated	Ethernet port is not administered

traffic

monitor traffic

```
monitor traffic trunk-groups [starting-group#]
monitor traffic hunt-groups [starting-group#]
```

Use **monitor traffic** to see the current load on specified trunk and hunt groups, the number of trunk group and hunt group calls waiting to be serviced, and the length of time that the oldest call in the group has been waiting.

Action/Object	Qualifier	Qualifier Description	Login	Default
monitor traffic trunk-groups	**starting -group#**	Number of calls in the queue waiting to be serviced for each trunk group. The number of members in the group and the number of members active on calls appear for comparative analysis. Only administered trunk groups up to a maximum of 60 appear. Use **#** to specify the starting trunk group. For example, enter 5 to see trunk groups from group 5 and up.		
monitor traffic hunt-groups	**starting -group#**	Shows trunk-group report information plus how long the oldest call in each group's queue has been waiting. Updated every minute. Unadministered hunt groups are blank.		

The following display shows a typical result for **monitor traffic hunt-groups**.

```
  monitor traffic hunt-groups
                                HUNT GROUP STATUS     22:49 THU OCT 25 2007
          #   S   A   Q   W   LCIQ           #   S    A   Q   W  LCIQ

          1   1   0   n   0    0             17
          2   0   0   y   0    0             18
          3   0   0   y   0    0
          4                                  20
          5                                  21
          6                                  22
          7                                  23
          8                                  24  16   5   0   0   10
          9                                  25
          10                                 26
          11                                 27
          12                                 28
          13                                 29
          14                                 30
          15                                 31
          16                                 32
#: Group;  S: Grp Size;  A:  Active Members;  Q: Queue?;  W: Calls Waiting)
 (LCIQ:  Longest Call In Queue in seconds)
```

The following display shows a typical result for **monitor traffic trunk-groups**.

```
monitor traffic trunk-groups

                              TRUNK GROUP STATUS     22:49 Thu OCT 25, 2007
   #  S  A  Q  W    #  S  A  Q  W    #  S  A  Q  W    #  S  A  Q  W


   1  15 10 0  0
   2  22 21 10 10
   9  31 12 20 0
   65 5  5  10 8
   99 12 0  0  0


(#:  Group;  S:  Grp Size;  A:  Active Members;  Q:  Q Length;  W:  Calls Waiting)
```

monitor traffic field descriptions

monitor traffic hunt-groups and monitor traffic trunk-groups field descriptions

Field	Description
#	Group number for the trunk group or hunt group.
S	The number of members administered for each trunk or hunt group.
A	The number of members in a group that are active on a call. This does not include busied out members.
Q	The length of the queue administered for a group.
W	The number of calls waiting in the group queue to be serviced.
LCIQ	The time, in seconds, the oldest call in the hunt group queue has been waiting to be serviced.

translation

save translation

save translation [all | ess | lsp]

Note:

`save translation` can take up to 5 minutes to complete. Avoid pressing the ENTER key on the keyboard during this time, or result messages will be lost.

Use **`save translation`** to commit the active server translations (volatile) in memory to a file (non-volatile). It either completes or fails. For Linux platforms, the translation file is copied to the standby server by a filesync process.

Action/Object	Qualifier	Qualifier Description
`save translation`		Commit the active server translations (volatile) in memory to a file (non-volatile). It either completes or fails. For **S8700 series** servers, the translation file is copied to the standby server by a filesync process. • On ESS, saves translation changes only on the main server pair.
	`all`	Save translations to all ESSs, Local Survivable Processors (LSPs) and the main server pair.
	`ess`	From the Server, send changed translations to the active server and to the standby for **S8700 series** servers, and to the ESS by a filesync process.
	`lsp`	From the Server, send changed translations to the active server and to the standby for **S8700 series** servers, and to the LSP by a filesync process.

All translation data is kept in volatile system memory or on the hard drive during normal operation. In the event of a power outage or certain system failures, data in memory is lost. **`Save translation`** stores on disk the translation data currently in memory.

When a SAT user issues **`save translation`** on a duplicated system, translations are saved on both the active and standby servers. If an update of the standby server is already in progress, subsequent **`save translation`** commands fail with the message "**save translations has a command conflict**".

`Save translation` will not run and an error message appears when:

- translation data is being changed by an administration command
- translations are locked by use of the Communication Manager web interface Pre-Upgrade Step.

Run **`save translation`** as part of scheduled background maintenance or on demand. See change system-parameters maintenance on page 628 for more information

The following display shows a typical result for **save translation**.

```
save translation
                                    SAVE TRANSLATION

Command Completion Status         Error Code
Success                                0

 Command Successfully Completed
```

save translation field descriptions

save translation field descriptions

Field	Description
Command Completion Status	Identifies the success or failure of the command.
Error Code	Identifier for any error that occurred during translation.

tti-ip-stations

list tti-ip-stations

list tti-ip-stations

Use **list tti-ip-stations** to see information on the stations administered as in TTI service.

Stations in TTI service do not show up on the **list multimedia ip-unregistered** screen.

The following example shows the output from **monitor trunk 78/1**.

```
list tti-ip-stationd
                           TTI SERVICE IP STATIONS

Station            Product      Prod     Net          Gatekeeper
IP Address         ID           Rel      Rgn          IP Address        Port
135.9.159.130      IP_Phone     2.200    1            135.9.159.128     S00074
```

trunk

See:
busyout trunk on page 673
monitor trunk on page 673
release trunk on page 675
status trunk on page 675
test trunk on page 680

busyout trunk

`busyout trunk` ***`group# [/member#]`***

Use **`busyout trunk`** to put an entire trunk group or a single trunk-group member in a maintenance busy state, whether it is installed or uninstalled. Entering only the group number busies out every member in the group.

Note:

Entering a group number and a slash (/) without a member number busies-out the member with the lowest-numbered port location. This is not recommended.

Action/Object	Qualifier	Qualifier Description	Login
`busyout trunk`	***`group#`*** ***`member#`***	Trunk group number Number of particular trunk in a group Examples: **`busyout trunk 78`** **`busyout trunk 78/1`**	init inads craft

For more information, see Common Input Parameters on page 25, list, and Busyout and Release Commands on page 33.

monitor trunk

`monitor trunk` ***`group# / member#`***

Use **monitor trunk** to see same information as status trunk on page 675. **Monitor trunk** updates the data automatically every minute, or manually with the **UPDATE** key. The terminal login is not dropped when you press **CANCEL** to cancel **monitor trunk**.

Action/Object	Qualifier	Qualifier Description	Login
monitor trunk	***trunk-groups*** ***hunt-groups***		init inads craft cust rcust bcms browse

The following example shows the output from **monitor trunk 78/1**.

```
monitor trunk 78/1
                                TRUNK STATUS

 Trunk Group/Member: 078/001            Service State: in-service/idle
               Port: 01C1505         Maintenance Busy? no
 Signaling Group ID:                     CA-TSC State:
    Connected Ports:
```

monitor trunk field descriptions

monitor trunk field descriptions ***1 of 2***

Field	Description
Trunk Group/ Member	Trunk group and group member number. (1-99/1-99).
Port	The port location (cabinet-carrier-slot-circuit) for trunks.
Signaling Group ID	If the trunk is ISDN, this field contains the number of the ISDN Signaling Group. Otherwise, this field is blank.
Connected Ports	Port locations (cabinet-carrier-slot-circuit) connected to the trunk.
Service State	In-service/active, in-service/idle, out-of-service, out-of-service-NE (Near End), out-of-service-FE (Far End), maint-NE/active, maint-FE/active, maint-NE/idle, maint-FE/idle, pending-in-service, pending-maint, or disconnected. NE (Near End) and FE (Far End) refer to the “end” of the trunk that has placed the facility in its current state.
	1 of 2

monitor trunk field descriptions ***2 of 2***

Field	Description
Maintenance Busy	Identifies maintenance testing that occurs on the trunk.
CA-TSC State	The state of temporary signaling connections. (connection set up to pass call information over PRI signaling links).
	2 of 2

release trunk

`release trunk`

Use **`release trunk`** to remove specified trunk groups or trunk group members from a maintenance busy state. Specifying the group number releases a single group member and the member number; specifying the trunk group number releases members in a trunk group.

For more information see Busyout and Release Commands on page 33.

Action/Object	Qualifier	Qualifier Description	Login
`release trunk`	**`group`** **`member`**	trunk group number trunk group member number	init inads craft

status trunk

`status trunk` ***`group#`*** **`[/`** ***`member#`*** **`]`**

Use **`status trunk`** to see information about the current status of a single trunk or of all members of a trunk group. You can also use **`status trunk`** to locate facilities with which the trunk is communicating.

Note:

If you use **`status trunk`** for a trunk that uses a 1d interface, you receive different information with **`status trunk`** on the near end of the trunk from **`status trunk`** on the far end of the trunk.

- If you execute **`status trunk`** on the near end of the trunk, it correctly indicates whether or not the trunk is in a maintenance state.
- If you execute **`status trunk`** on the far end of the trunk, it never indicates that the trunk is in a maintenance state. This is because the near end is unable to inform the far end of its maintenance state status.

See monitor trunk on page 673, which shows the same information as **status trunk** and updates the screen automatically every minute or on demand.

Action/Object	Qualifier	Qualifier Description	Login
status trunk	***group#*** ***group#/*** ***group#/*** ***member#***	Status all members of the trunk group. Status member number 1. Status a specific member of a trunk group. Examples: **status trunk 78** **status trunk 80/2**	init inads craft cust rcust bcms browse

The following screen shows typical results for **status trunk** on **S8700 IP-PNC**.

```
status trunk 20/1
                              TRUNK STATUS

Trunk Group/Member: 0020/001               Service State: in-service/idle
              Port: T00016              Maintenance Busy? no
Signaling Group ID:                          CA-TSC state: none

   Connected Ports:

                  Port     Near-end IP Addr : Port    Far-end IP Addr : Port
            Q.931: 08A0617  192.168. 18. 41  : 10071   172. 17. 17.107 : 7020
            H.245:
            Audio:

  H.245 Tunneled in Q.931? no
    Audio Connection Type: ip-tdm                  Media Encryption: aes
```

status trunk on S8700 IP-PNC field descriptions ***1 of 2***

Field	Description
Trunk Group/ Member	Group and member numbers of specified trunks.
Port	The location of the port associated with the trunk.
Signaling Group ID	For ISDN trunks, the number of the signaling group to which the trunk group belongs. For other trunk types, the field is blank.
Connected Ports	Locations of ports currently connected to the trunk.
	1 of 2

status trunk on S8700 IP-PNC field descriptions ***2 of 2***

Field	Description
Service State	One of the following states appears: in-service/active, in-service/idle, out-of-service, out-of-service-NE (Near End), out-of-service-FE (Far End), maint-NE/active, maint-FE/active, maint-NE/idle, maint-FE/idle, pending-in-service, pending-maint, or disconnected. NE (Near End) and FE (Far End) refer to which end of the trunk has placed the facility in its current state. Explanations of these service states for each type of trunk appear in the maintenance object descriptions in the *Maintenance Alarms for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300430) (formerly 03-300190)*.
Maintenance Busy	Whether maintenance testing is currently being performed upon the trunk.
CA-TSC State	The status of the call-associated temporary signaling connection, if any. A TSC is a temporary connection set up to pass call information over ISDN-PRI signaling links.
Audio Connection Type	Shows ip-tdm, ip hairpin, ip direct, or ip idle.
Audio Switch Port	Shows a virtual port number (i.e., one starting with T). If a trunk is in ip-idle state, the **Audio Switch Port** field is blank.
Media Encryption	Enter **aes** for Advanced Encryption Standard encryption, standard used by U.S. government to protect sensitive (unclassified) information. Reduces circuit-switched to IP call capacity by 25%. Enter **aea** for Avaya Encryption Algorithm. Not as secure as AES. Enter **none** for an unencrypted media stream.
	2 of 2

For an IP-TDM call, the Audio Switch Port field shows one of ports 1-8 on a TN2302 Prowler board.

```
status trunk 1/19
                                          TRUNK STATUS

Trunk Group/Member: 01/19                           Service State: in-service/active
              Port: T00123                        Maintenance Busy? no
Signaling Group ID: 1                                 CA-TSC state: not allowed
                                                  MM Conference ID: 8
                                                    MM Endpoint ID: 2
   Connected Ports: S00004

Switch                     IP                                IP
                    Port    Near-end IP Addr: Port            Far-end IP Addr : Port
             Q.931: 12B1217 xxx.xxx.xxx.xxx : nnnnn           xxx.xxx.xxx.xxx : nnnnn
             H.245: 12B1217 xxx.xxx.xxx.xxx : nnnnn           xxx.xxx.xxx.xxx : nnnnn
G.711-MU     Audio: 12B11   xxx.xxx.xxx.xxx : nnnnn           xxx.xxx.xxx.xxx : nnnnn

H.245 Tunneled in Q.931? no
  Audio Connection Type: ip hairpin
```

For an IP-MEDPRO-IP hairpin call, the Audio Switch Port field shows a cabinet and slot, but not a port, on a TN2302 Prowler board.

```
status trunk 1/19
                                          TRUNK STATUS

Trunk Group/Member: 01/19                       Service State: in-service/active
              Port: T00123                    Maintenance Busy? no
Signaling Group ID: 1                             CA-TSC state: not allowed
                                              MM Conference ID: 8
                                                MM Endpoint ID: 2
   Connected Ports: S00004

                   Switch                     IP                                IP
                    Port    Near-end IP Addr: Port            Far-end IP Addr : Port
            Q.931: 12B1217 xxx.xxx.xxx.xxx : nnnnn           xxx.xxx.xxx.xxx : nnnnn
            H.245: 12B1217 xxx.xxx.xxx.xxx : nnnnn           xxx.xxx.xxx.xxx : nnnnn
G.711-MU    Audio: T00123  xxx.xxx.xxx.xxx : nnnnn           xxx.xxx.xxx.xxx : nnnnn

H.245 Tunneled in Q.931? no
  Audio Connection Type: ip direct
```

The following display shows a typical result when **status trunk** is entered for a trunk group with two members.

```
  status trunk 1

                        TRUNK GROUP STATUS

 Member   Port      Service State     Mtce Busy  Connected Ports
 01/01    01A0101   in-service/idle    no        01A0501  02B0607
 01/02    04A0702   in-service/idle    no        04C0604
```

Use **status trunk** to generate a snapshot jitter and packet loss report for a particular trunk-group member.

In this instance, jitter is the variability in the amount of time (in milliseconds) that packets are received over the network. When jitter increases, the user experiences a noisy connection, delays, and a general loss of quality, making speech unintelligible.

If you issue **status trunk** for a non-IP station or the connection is hairpinned or shuffled, then the packet loss and jitter size information (page 2) does not appear. Refer to *Administering Network Connectivity on Avaya Aura™ Communication Manager (555-233-504)* for more information.

```
status trunk 11/3                                        Page   2 of   2
                              TRUNK STATUS
NETWORK STATUS
      Average Jitter (ms)          Packet Loss per Second
       Last Ten Seconds              Last Ten Seconds
       # - more than 255ms           * - 100% loss

              0                            0              Per Call Info
              0                            0
              0                            0      Out of Order Counter:  0
              0                            0      SSRC Change for Call:  0
              0                            0        Last Rx Sequence #:  0x1D64
              0                            0        Last Tx Sequence #:  0x1D1B
              0                            0
              0                            0
              0                            0
              0                            0
SUMMARY
Worst Case this Call (ms):  0       Worst Case this Call:  0
   Average this Call (ms):  0          Average this Call:  0
 Current Buffer Size (ms):  30
```

status trunk field descriptions

status trunk

Field	Description
Average Jitter Last Ten Seconds # - more than 255 ms	The average jitter in received packets from the last ten one-second intervals. # = more than 255 ms
Packet Loss per Second Last Ten Seconds * - 100% loss	The ten most recent one-second samples of the lost packet information for the requested endpoint. * = maximum (100%) packet loss per second during the one-second interval. * appears when silence suppression is y on the ip-codec-set screen, or when packet loss = 100%.
Out of Order Counter	A count of the number of out-of-order packets detected during the current connection.
SSRC Change for Call	The number of SSRC changes occurring during the current connection.
Last Rx Sequence No.	Last received data packet sequence number.
Last Tx Sequence No.	Last transmitted data packet sequence number.
Worst Case this Call	Jitter: the worst-case, 1-second jitter (ms) experienced during the current connection. Packet Loss: the worst-case, 1-second packet loss experienced during the current connection.
Average this Call	Jitter: the average jitter for the current connection (the running average of all the 1-second intervals during the connection. Packet Loss: the average packet loss number for the current connection (running average of all the 1-second intervals experienced during the connection.
Current Buffer Size	The current jitter buffer size.

test trunk

test trunk *group#* [/ *member#*] [short | long] [*repeat#* | clear] [schedule]

Use **test trunk** to perform hardware diagnostic tests on an entire trunk group or an individual trunk-group member, depending on the options entered.

Action/Object	Qualifier	Qualifier Description	Login	Default
test trunk	**group number** **member number** **short** **long** **repeat *n*** **clear**	Administered group number Administered number identifying a particular trunk within a trunk group See Common Input Parameters on page 25. Examples: **test trunk 78 l** **test trunk 80/1 sh r 2** **test trunk 78/2 l r 25** **test trunk 78 r 4** **test trunk 78 c**	init inads craft cust	short 1

trunk-group

list trunk-group

For more information about **list trunk-group**, see Trunk Groups in *Administering Avaya Aura™ Communication Manager (03-300509).*

tsc-administered

See:
status tsc-administered on page 681
test tsc-administered on page 684

status tsc-administered

status tsc-administered *signaling-group#* [/*tsc-index*]

Use **status tsc-administered** to see the operational status of temporary signaling connections (TSCs) administered for a specified signaling group.

Action/Object	Qualifier	Qualifier Description	Login
status tsc-administered	***signaling-group# tsc-index***	Administered signaling group number. TSC number in the signaling group	init inads craft
		Examples: **status tsc-administered 1** **status tsc-administered 1/2**	

The following display shows a typical result for **status tsc-administered 1/1**.

```
  status tsc-administered 1/1
                  ADMINISTERED NON-CALL-ASSOCIATED TSC STATUS
TSC        TSC
Index      State            Establish     Enabled     Congested

 1          inactive         as-needed     yes         no
```

status tsc-administered field descriptions

status tsc-administered field descriptions ***1 of 2***

Field	Description
TSC Index	The administered TSC index (1-759).
TSC State	**inactive:** the administered TSC is not functioning (D-channel out-of-service, disabled, etc.). **active:** the administered TSC is up and user information can be exchanged end-to-end. **pending-inactive**: the TSC is being released. **pending-active:** the TSC is about to come up.
Establish	This field pertains to the switch responsible for the origination of the administered TSC. **as-needed**: the TSC is established on an as needed basis. **permanent**: the TSC is permanently established.
	1 of 2

status tsc-administered field descriptions ***2 of 2***

Field	Description
Enabled	**y**: indicates that the administered TSCs have been enabled.
Congested	A congested state indicates that the network cannot handle the receipt of USER INFORMATION messages for the administered TSC. **y**: the administered TSC is congested. **n**: the administered TSC is not congested. **clear**: the TSC was congested during its active period and the congestion has been cleared.
	2 of 2

test tsc-administered

`test tsc-administered` ***`signaling-group`*****`# / tsc-index [`*****`repeat#`*****`] [schedule]`**

Use **`test tsc-administered`** to run diagnostic tests on any type of administered TSCs (Temporary Signaling Connections) on a signaling group. A switched services request to run the TSC heartbeat test is also performed.

Action/Object	Qualifier	Qualifier Description	Login	Default	Feature Interaction
`test tsc-administered`	**`signaling group number/`** **`tsc index`** **`repeat`** ***`n`***	Signaling group number The number associated with each TSC in a signaling group. The number of times each test in sequence is repeated.	init inads craft	1	Additional data available after running the test. See status tsc-administered for how to access additional data.

tti

status tti

`status tti`

Use **`status tti`** to see the TTI/PSA status screen and see if the TTI background maintenance task is active. If the TTI background maintenance task is active, the screen shows whether TTI ports are being generated or removed, the number of TTI-supported boards that have processed, and the number of TTI-supported boards that have not yet been processed. The screen also shows the elapsed time since the background maintenance task started.

To activate the TTI background maintenance task, enter **y** in the TTI field on the Feature-Related System-Parameters screen.

Use **status psa** to also see the TTI/PSA status screen. It shows that the status of PSA is dependent on the state of TTI.

Action/Object	Qualifier	Qualifier Description	Login	Default	Feature Interaction
status tti			init inads craft cust nms browse		TTI background maintenance task is activated by enabling TTI on the System-Parameters Features screen.

The following example shows the output for **status tti** and **status psa**.

```
 status tti
 status psa
                            TTI/PSA STATUS

          TTI Background Task State:  completed - all ports translated
                          TTI State:  voice
              # of Boards Completed:  30
        # of Boards Left to Process:  0
                   Percent Complete:  100
    Elapsed Time since Task Started:  0 :0 :1

NOTE: TTI state must be 'voice', TTI task state 'completed' and PSA
      customer-option enabled, for PSA to operate properly
```

status tti and status psa field descriptions

status tti and status psa field descriptions ***1 of 2***

Field	Description
TTI Background Task State	**generating TTI ports** **removing TTI ports** **suspended** **not active** **completed - all ports translated:** The last background maintenance task completed normally. **completed - some ports not translated:** The last background maintenance task stopped when resources were exhausted, and some ports were not translated.
	1 of 2

status tti and status psa field descriptions ***2 of 2***

Field	Description
TTI State	**off** means that TTI is disabled **voice, data** shows the type of TTI ports that are being generated or removed
# of Boards Completed	Number of TTI-supported circuit packs that were processed by the background maintenance task. The ports on a “completed” circuit pack: • if unadministered, were translated as TTI ports • if administered, the administration was removed
# of Boards Left to Process	The number of TTI-supported circuit packs that were not processed by the background maintenance task.
Percent Complete	A ratio of the of number of circuit packs completed to the total number of circuit packs.
Elapsed Time Since Task Started	Elapsed time in hours:minutes:seconds since the TTI background task was started. This field is blank if the task is not active. If the task is completed or suspended, this field shows the elapsed time up to when the job finished or was suspended.
	2 of 2

usage

list usage

```
list usage [ button-type | cti-link | digit-string | extension |
holiday-table | hunt-group| integ-annc-board | ip-address | node-name
| variables | vector ]
```

Use **list usage** to see where an extension or object is used.

Action/ Object	Qualifier	Qualifier Description
list usage	**schedule**	See Common Input Parameters on page 25.
	button-type crss-alert night-serv hunt-ns trunk-ns	List extension and button number for buttons administered as: crisis alert night service night service hunt group night service trunk group See list usage button-type night-serve screen on page 688.
	cti-link *n*	List vectors and ip-services that use the specified CTI link, and indicate whether the link is currently used to monitor a hunt-group as a controlling link, and/or through an event notification or domain control association. See list usage cti-link on page 218.
	digit-string	List the vectors, vector routing tables, and Best Service Routing Plans that use the specified digit string.
	extension *x* *x* vector	List all the uses of the extension in stations administered with an off-PBX telephone application, announcements, bridged appearance buttons, coverage paths, data module extensions, hunt groups, intercom groups, vector steps, or anywhere that the extension can be used that might interfere with removal of the extension.
	holiday-table	List vectors and vector steps that refer to the specified Holiday Table.
	hunt-group *x*	List hunt group number and member number. See list usage hunt group screen on page 688.
	integ-annc-board *location*	List information on the announcements and audio groups on an announcement circuit pack. See list usage integ-annc-board on page 312.
	ip-address	List the forms on which the specified address is used. List the extension (as Station Extension) for a shared-control IP Telephone address or a shared-control IP Softphone's IP address. See list usage ip-address screen on page 689
	node-name	List the forms on which the specified node-name is used. See list usage ip-address node-name on page 689.
	variables *x*	List vectors that use variables, and which administered variable is used in each vector.
	vector *x*	List all the vector numbers and step where the extension is used in a vector step. Example: list vector extension 300

list usage button-type night-serve screen

The following example shows the output for **`list usage button-type night-serv`**.

```
list usage button-type night-serv
                                    LIST USAGE REPORT
Located on

Attendant Number          3            Button 5
Station Extension     51001    Feature Button 15
Station Extension     51001   Feat Mod Button 12
Station Extension     51001    Cov Mod Button 18
```

list usage extension screen

The following example shows the output for **`list usage extension`**.

```
list usage extension 12345
                            LIST USAGE REPORT
Used By

Vector                      Vector Number            128               Step     12
Vector                      Vector Number            234               Step     31
Hunt Group                  Group Number              85               Member  136
Hunt Group                  Group Number              79               Member   53
Station Button              Station Extension      51001               Step     12
Station Button              Station Extension       1002               Step     12
Coverage Path               Coverage Path Number       2     Coverage Point     2
Announcement
```

list usage hunt group screen

The following example shows the output for **`list usage hunt group`**.

```
list usage hunt group
                                   LIST USAGE REPORT
Used By

Vector                   Vector Number        128             Step     12
Vector                   Vector Number        234             Step     31
Attendant Button         Attendant Number       3           Button     15
Station Button        Station Extension     51001           Button      9
Station Button        Station Extension      1002           Button     25
Coverage Path      Coverage Path Number         6   Coverage Point      2
Agent Login ID          Agent Extension      1021            Skill      3
VDN                       VDN Extension     51004            Skill      2
```

list usage ip-address node-name

The following example shows the output for **`list usage node-name`** for a local node.

```
list usage node-name inde-e72
                                    LIST USAGE REPORT
Used By
Processor Channel   Channel Number 4   Destination Node
TFTP Server                            Local Node
```

The following example shows the output for **`list usage node-name`** for a server node.

```
list usage node-name inde-e72
                                  LIST USAGE REPORT
Used By
Processor Channel   Channel Number 4   Destination Node
TFTP Server                            Server Node Name
```

The TFTP Server is displayed as Local Node or Server Node Name depending on its administration on the **TFTP-SERVER** screen.

list usage ip-address screen

See list usage ip-address field descriptions on page 691.

The following example shows the output for **`list usage ip-address`** for a local node.

```
list usage ip-address 135.9.76.72

                                LIST USAGE REPORT
Used By
IP Route            Route Number   2              Destination Node
Node Name           IP Name            inde-372   IP Address
Processor Channel   Channel Number 4              Destination Node
TFTP Server                                       Local Node
Remote Office       Remote Office  123            Node Name
Station             Extension      1234567        Switch-end IP Address
Station             Extension      1234567        Set-end IP Address
LSP                 LSP            10             Node Name
```

The following example shows the output for **`list usage ip-address`** for a server node.

```
list usage ip-address 135.9.76.72

                              LIST USAGE REPORT
Used By
IP Route            Route Number   2          Destination Node
Node Name           IP Name        inde-372   IP Address
Processor Channel   Channel Number 4          Destination Node
IP Service          Service Type   SAT        Local Node
TFTP Server                                   Server Node Name
Remote Office       Remote Office  123        Node Name
Station             Extension      1234567    Switch-end IP Address
Station             Extension      1234567    Set-end IP Address
LSP                 LSP            10         Node Name
TTI Station         Port Number    S00074     Station IP Addr
```

The following two examples show the output for **`list usage ip-address`** for endpoints when an IP telephone and IP Softphone are in service on the same extension simultaneously.

```
list usage ip-address 254.254.254.0

                              LIST USAGE REPORT
Used By
Station             Extension      57407      Station IP Addr
Station             Extension      59002      Station IP Addr
Station             Extension      60000      Station IP Addr
```

```
list usage ip-address 253.253.253.33

                              LIST USAGE REPORT
Used By
Station             Extension      59001      Gatekeeper IP Addr
Station             Extension      59003      Gatekeeper IP Addr
Station             Extension      60001      Gatekeeper IP Addr
```

list usage ip-address field descriptions

list usage ip-address field descriptions

Field	Description
Used By	The forms on which the specified address is used. **Station_Extension** appears when a station using the ip-address is registered. This includes the IP Telephone or IP Softphone's IP address when an IP telephone and IP Softphone are in service on the same extension simultaneously.

user-profile

See
add user-profile on page 691
change user-profile on page 700
display user-profile on page 701
duplicate user-profile on page 701
export user-profile on page 701
import user-profile on page 703
list user-profiles on page 704
remove user-profile on page 705

See also user-profile-by-category on page 706 to display SAT forms in order by category and alphabetical within category.

add user-profile

`add user-profile [`*`n`*` |next]`

Use **`add user-profile`** ***`n`*** to add a new SAT profile and administer permissions, where ***`n`*** is the profile number 20-69. SAT command objects are listed in alphabetical order beginning on page 2, along with their assigned category and the type of access granted to or denied this profile.

Each category is associated with a unique set of SAT forms. A given object (SAT form) appears in one category.

Consider permission entries as read/write for administration and yes/no for maintenance.

The screen name is **User Profile**.

Action/Object	Qualifier	Qualifier Description
`add user-profile`	***n*** **`next`**	Profile number (20-69) Next number in sequence

add user-profile screen display page 1

```
add user-profile n                                          Page 1 of X
                                  User Profile N

User Profile Name: Example Profile

         This profile is disabled? n                        Shell Access?n
  Facility Test Call Notification? n              Acknowledgement required?n
       Grant un-owned permissions? n                      Extended Profile?n

                     Name       Cat Enbl                      Name       Cat Enbl

                     Adjuncts A   n             Routing and Dial Plan J   n
                  Call Center B   n                          Security K   n
                     Features C   n                           Servers L   n
                     Hardware D   n                          Stations M   n
                  Hospitality E   n                 System Parameters N   n
                           IP F   n                      Translations O   n
                  Maintenance G   n                          Trunking P   n
    Measurements and Performance H   n                             Usage Q   n
                 Remote Access I   n                       User Access R   n
```

add user-profile screen field descriptions page 1

add user-profile field descriptions page 1 ***1 of 2***

Field	Description
User Profile Name	The user-defined profile name, up to 40 characters.
Shell Access	**y**/**n** **y** = users assigned this profile are able to execute **`go shell`** from the SAT. This does not affect the user's default login shell in Linux.
Facility Test Call Notification	**y**/**n** **y** = users assigned this profile receive notification at logoff if Facility Test if Notification is still administered. For security, set to **y** for all profiles.
	1 of 2

add user-profile field descriptions page 1 ***2 of 2***

Field	Description
Acknowledgement Required	**y**/**n** **y** = users assigned this profile must acknowledge that they want to logoff while Facility Test if Notification is still administered.
This profile is disabled	**y**/**n** **n** = the profile is active **y** = the profile is disabled If changed to **y**, an existing active login using this profile is unaffected, but any new attempted session using this profile fails. l A login via CLAN receives **access denied**. l A login via Linux receives an error return code with the message **access denied** displayed via stderr.
Grant un-owned permissions	**y**/**n** **y** = If this profile has write access to the user-profile form, users with this profile can grant any permission allowed for profile 18 (customer super user) to other profiles even when this profile does not itself have those permissions. **n** = users may not grant permissions they themselves do not have.
Extended profile	**y**/**n**, default is **n** **y** = extended profile is enabled. If **y**, the profile has additional access restrictions to the station and vector forms.
Name	Category name. Each category is associated with a unique set of SAT forms. A given object (SAT form) appears in one category.
Cat	Category.
Enbl	**y**/**n** **y** = enable the category for this user-profile. Category displays **y** when any object in a category has permissions other than "- -". **n** = disable the category for this user-profile. Category displays **n** only when all objects in the category have permissions "**- -**" . l If the field is changed from **n** to **y**, permissions for all objects assigned to the category are set to **w--.** l If the field is changed from **y** to **n**, permissions for all objects assigned to the category are set to **--**. This field also reflects the settings on pages 2-X of this form.
	2 of 2

add user-profile screen display page 2

```
add user-profile n                                          Page 2 of X
                                 User Profile N
Set Permissions for Category:_ to_                   Set All Permissions to:_
                            Name        Cat  Perm
                                     aar K    wm
                      abbreviated-dialing C    wm
                           aca-parameters P    wm
                          access endpoint P    wm
                            adjunct-names A    wm
                 administered-connections C    wm
                          aesvcs cti-link A    wm
                         aesvcs interface A    wm
                              aesvcs link A    wm
                              aesvcs-link A    wm
                            aesvcs-server A    wm
                           agent-login ID B    wm
                                   alarms I    wm
                                    alias M    wm
                 alphanumberic-dial-table K    wm
                             alternate-frl C    wm
                                   amw all G    wm
```

add user-profile screen field descriptions page 2-X

add user-profile field descriptions page 2-X ***1 of 2***

Field	Description
Set Permissions for Category_ to _	Set permissions for only the objects assigned to this specific category. 1. Enter a letter to specify the category to set. 2. Enter the permission. l Consider permission entries as read/write for administration and yes/no for maintenance. l A blank character indicates no-change. For example, if the permissions field is set to blank"**-**", all affected objects are set to deny maintenance access but the current access for administration for each object in this category remains unchanged. See the field description for Perm (permissions) on page 696 for more details.
Set All Permissions to	Set permissions for all objects in all categories.
Cat (category)	Display only. Letter that corresponds to the category, used for sorting alphabetically by category, as opposed to alphabetically by SAT form command object.
	1 of 2

add user-profile field descriptions page 2-X ***2 of 2***

Field	Description
Perm (permissions)	Enter a 2-character value, including blank. Consider permission entries as deny, read/write for administration and deny, yes/no for maintenance. l The first character specifies access for administration. l **- (dash)** = deny. No access. l **r** = view without change via commands shown in table Table 40: SAT Command Object Access and Permissions on page 697. l **w** = change via commands shown inTable 40: SAT Command Object Access and Permissions on page 697. **w** implies **r**. l The second character specifies access for maintenance. l **- (dash)** = deny. No access to maintenance commands. l **m** = access to maintenance commands via commands shown in Table 40: SAT Command Object Access and Permissions on page 697. Setting this field to **m** requires at least read access for administration. For example: l **r-** = a user with this profile can use the commands read, display, export, status, and list for the object assigned the **r-** permission, and no others. l **wm** grants full access for all commands to the object assigned this permission A **blank** character indicates no-change. For example, if the permissions field is set to blank-(dash), all affected objects are set to deny maintenance access but the current access for administration for each object in this category remains unchanged. All permission fields on the User Profile page 2-x accept the full range of values (**r**, **w**, **d**) or (**w**,**m**) Independent of whether all values apply to the field or not. Settings on these pages are reflected on the **Enbl** field on page 1 of this form.
Name	Name of the SAT form by command object. Display only.
	2 of 2

Table 40: SAT Command Object Access and Permissions ***1 of 2***

SAT Command	Administration		Maintenance (m)
	r	w	
add		x	
busyout			x
campon-busyout			x
cancel			x
change		x	
clear		x	x
disable			x
display	x	x	
duplicate		x	
enable			x
erase		x	
get	x	x	x
go			x
list	x	x	
mark			x
monitor	x	x	
netstat			x
notify	x	x	
ping			x
recycle			x
refresh		x	
release			x
remove		x	
reset			x
			1 of 2

Table 40: SAT Command Object Access and Permissions *2 of 2*

SAT Command	Administration		Maintenance (m)
	r	w	
resume			x
rp			x
save		x	
set		x	x
status	x	x	
test			x
trace-route			x
upload	x		
wp			x
			2 of 2

Table 41: SAT command permissions and object permissions *1 of 3*

Object Name	Administration commands						Maintenance Commands									Communication Manager 5.0 Object Permissions admin maintenance				
	add	change	display	list	remove	status	busyout	campon-busyout	clear	disable	enable	release	set	status	test	--	r-	w-	rm	wm
aca-parameters				x												x	x			
access-endpoint	x					x	x					x			x	x	x		x	x
call-screening		x	x													x	x	x		
cpc-ii-conversion (special application SA8122)																				
inc-call-handling-tr trunk-group		x	x													x	x	x		
																				1 of 3

Table 41: SAT command permissions and object permissions ***2 of 3***

Object Name	Administration commands						Maintenance Commands									Communication Manager 5.0 Object Permissions admin maintenance				
	add	change	display	list	remove	status	busyout	campon-busyout	clear	disable	enable	release	set	status	test	--	r-	w-	rm	wm
isdn dcs-qsig-tsc-gateway		x	x													x	x	x		
isdn mwi-prefixes		x	x													x	x	x		
isdn network facilities		x	x													x	x	x		
isdn private-numbering		x	x													x	x	x		
isdn public-unknown-numbering		x	x													x	x	x		
isdn qsig-dcs-tsc-gateway		x	x													x	x	x		
isdn tsc-gateway		x	x													x	x	x		
isdnpri-testcall				x					x					x	x	x	x		x	x
multifrequency-signaling		x	x													x	x	x		
pri-endpoint	x	x	x	x			x					x		x	x	x	x	x	x	x
private-numbering		x	x													x	x	x		
public-unknown-numbering		x	x													x	x	x		
signaling-group	x	x	x	x	x		x					x	x	x	x	x	x	x	x	x
synchronization atm		x	x	x												x	x	x		
synchronization css		x	x	x												x	x	x		
synchronization port-network		x	x													x	x	x		
telecommuting-access	x	x	x													x	x	x		
synchronization port-network ip		x	x													x	x	x		
synchronization port-network ip		x	x													x	x	x		

2 of 3

Table 41: SAT command permissions and object permissions ***3 of 3***

Object Name	Administration commands						Maintenance Commands									Communication Manager 5.0 Object Permissions admin maintenance				
	add	change	display	list	remove	status	busyout	campon-busyout	clear	disable	enable	release	set	status	test	--	r-	w-	rm	wm
synchronization-switch										x	x								x	x
tandem-calling-party-num		x	x													x	x			
trunk						x	x	x				x		x	x	x	x		x	x
trunk-group	x	x	x	x	x											x	x	x		
tsc-administered		x	x											x	x				x	x

3 of 3

change user-profile

`change user-profile n`

Use **`change user-profile n`** to change the access permissions of an existing SAT profile. Changes do not affect active SAT sessions, but become effective on new sessions.

The screen name is **User Profile**.

Use **`change user-profile-by-category`**.

Action/Object	Qualifier	Qualifier Description
`change user-profile`	***n***	Profile number (20-69)

See add user-profile on page 691 for screen and field descriptions.

display user-profile

Use **`display user-profile n`** to display the permissions of an existing SAT profile.

The screen name is **User Profile**.

Also use **`display user-profile-by-category`**.

Action/Object	Qualifier	Qualifier Description
`display user-profile`	***n***	Profile number (20-69)

See add user-profile on page 691 for screen and field descriptions.

duplicate user-profile

`duplicate user-profile x`

Use **`duplicate user-profile`** to duplicate an existing SAT profile.

`Duplicate user-profile x` copies the permissions from profile X to a new profile.

Action/Object	Qualifier	Qualifier Description
`duplicate user-profile`	***X Y***	X is the number of an existing SAT profile greater than 17

export user-profile

`export user-profile`

Use **`export user-profile`** to export SAT profile files for editing in a program such as Microsoft Excel.

When **`export user-profile`** is entered, SAT profiles in Communication Manager numbered 20-69 are written to **/var/home/ftp/pub/cmprofiles.txt**. If the file already exists, it is deleted and replaced.

export user-profile file

```
release: R015x.00.0.824.0
Number of Profiles: 10
20: snmpSV
21: roger
22: asa
23: bcmsvu
24: test1
25: avaya2
26: vam
27: fpm
28: cmuser
29: msa
Profile Number                    20 21 22 23 24 25 26 27 28 29
This Profile is Disabled?          n  n  n  n  n  n  n  n  n  n
Facility Test Call Notification?   y  y  y  y  y  y  y  y  y  y
Grant Un-owned Permissions?         n  n  n  n  n  n  n  n  n  n
```

export user-profile file field descriptions

export user-profile file field descriptions

Field	Description
Fields from **User Profile** form, page 1	
first line	Current release
second line	Number of profiles being exported
next lines - x	Profile number and name of the profile, for as many profiles as exist
next line	"profile number″ and a list of existing SAT profile numbers in ascending order starting with the first existing number after profile 19.
Fields from **User Profile** form, pages 2 - x	
remaining lines	Two columns: l category and feature names as they appear on the user-profile forms l object permissions for each profile number

Use **`status logins`** to see SAT profile assignments.

Export user-profile error messages

export user-profile error messages

Error message	Description
/var/home/ftp/pub/cmprofiles.txt create error (the actual file name from the ecs.conf variable cm_profile_export_file)	The file cannot be created.
/var/home/ftp/pub/cmprofiles.txt write error (the actual file name from the ecs.conf variable cm_profile_export_file)	The file cannot be written.

import user-profile

`import user-profile`

Use **`import user-profile`** to import SAT profiles numbered 20-69 from the **/var/home/ftp/pub/cmprofiles.txt** file to Communication Manager. You can edit SAT profile information in Microsoft Excel and import the information back into Communication Manager.

- If a profile in the file does not exist in Communication Manager, it is created.
- If a profile in the file already exists in Communication Manager, the profile in Communication Manager is overwritten.
- If profiles exist in Communication Manager that do not exist in the file, they remain in Communication Manager unmodified.

Use **`status logins`** to see SAT profile assignments.

Import user-profile error messages

import user-profile error messages ***1 of 2***

Error message	Description	Result
Note: In the following text, the file /var/home/ftp/pub/cmprofiles.txt shall be replaced by the actual file name from the ecs.conf variable cm_profile_export_file.		
/var/home/ftp/pub/cmprofiles.txt does not exist and the import aborted.	The file does not exist.	The import is aborted.
		1 of 2

import user-profile error messages ***2 of 2***

Error message	Description	Result
var/home/ftp/pub/cmprofiles.txt not readable	The file is not readable.	The import is aborted.
release mis-match	The first line of the file does not contain a release number that exactly matches the release number of Communication Manager.	The user is prompted as to whether or not to continue. Additional checks will prevent corruption and cannot be overridden.
invalid profile identifier in file var/home/ftp/pub/cmprofiles.txt	The file contains a profile number lower than 20.	The import is aborted.
invalid feature name at line xxx in var/home/ftp/pub/cmprofiles.txt xxx = the file line number where the first error is found.	The feature names do not exactly match in spelling, order and number the existing profile forms in Communication Manager.	The import is aborted.
invalid permissions at line xxx in var/home/ftp/pub/cmprofiles.txt	The feature permissions characters are not valid.	The import is aborted.
		2 of 2

list user-profiles

`list user-profiles`

Use **`list user-profiles`** to see existing SAT profile numbers and profile names in numerical order.

Use **`status logins`** to see SAT profile assignments.

list user-profiles screen display

```
list user-profiles                                          Page 1 of 1
                                User Profiles
                Extended
       Profile  Profile  User Profile Name
         0        n      Services Super-user
         1        n      Services manager
         2        n      Business parnter
         3        n      Services
         1        n      Call Center Manager
         17       n      SNMP
         18       n      Customer Super User
         19       n      Customer Non-Super User
         20       n      Station Administrator
         21       n      Station Auditor
         22       y      Vector Administrator
```

list user-profiles screen field descriptions

list user-profile field descriptions page 1

Field	Description
Profile	Profile number
Extended Profile	**y/n** **y=** The **Extended Profile** field is **y** on the **User Profile** (**`add user-profile`**) screen.
User Profile Name	Avaya-defined name for Profile numbers 0-19. Customer-defined name for Profile numbers 20-69.

remove user-profile

`remove user-profile` ***`n`***

Use **`remove user-profile`** to remove an existing SAT profile and its extended profile, if one exists.

When **`remove user-profile`** ***`n`*** is executed, the selected profile appears. Submit the form to remove the profile.

When a profile is removed, SAT sessions using the profile are automatically logged out.

user-profile-by-category

See
add user-profile-by-category on page 706
change user-profile-by-category on page 707
display user-profile-by-category on page 708

See also user-profile on page 691 to display SAT forms in alphabetical order regardless of category.

add user-profile-by-category

Use **`add user-profile-by-category`** to add a new SAT profile and administer permissions, where ***`n`*** is the profile number 20-69.

Pages 2 - X contain a list of SAT forms in order by category and alphabetically within category, and the type of access granted to or denied this profile.

The screen name is **User Profile**.

Consider permission entries as read/write for administration and yes/no for maintenance.

Also use **`add user-profile.`**

Action/Object	Qualifier	Qualifier Description
`add user-profile-by-category`		

For the page one screen and field descriptions, see add user-profile screen display page 1 on page 692.

add user-profile-by-category screen display page 2

```
add user-profile-by-category                                        Page 2 of X
                                        User Profile N
Set Permissions for Category:_ to_                    Set All Permissions to:_
                                Name        Cat  Perm
                             adjunct-names A    wm
                           aesvcs cti-link A    wm
                          aesvcs interface A    wm
                               aesvcs link A    wm
                               aesvcs-link A    wm
                             aesvcs-server A    wm
              communication-interface links A    wm
communication-interface processor-channels A    wm
                          Intra-switch-cdr A    wm
                                       nis A    wm
                        processor channels A    wm
                            agent-login ID B    wm
                             announcements B    wm
                                bcms agent B    wm
                                bcms skill B    wm
                                bcms split B    wm
```

add user-profile-by-category screen page 2 field descriptions

See add user-profile screen field descriptions page 2-X on page 695.

change user-profile-by-category

Use **`change user-profile-by-category`** to change the access permissions of an existing SAT profile. Changes do not affect active SAT sessions, but become effective on new sessions.

Pages 2 - X contain a list of SAT forms in order by category and alphabetically within category, and the type of access granted to or denied this profile.

The screen name is **User Profile**.

Also use **`change user-profile.`**

Action/Object	Qualifier	Qualifier Description
`change user-profile-by-category`	***n***	Profile number (20-69)

See add user-profile on page 691 for screen and field descriptions.

display user-profile-by-category

`display user-profile-by-category n`

Use **`display user-profile-by-category`** to display the permissions of an existing SAT profile.

Pages 2 - X contain a list of SAT forms in order by category and alphabetically within category, and the type of access granted to or denied this profile.

The screen name is **User Profile**.

Also use **`display user-profile.`**

Action/Object	Qualifier	Qualifier Description
`display user-profile-by-category`	***n***	Profile number 20-69

See add user-profile on page 691 for screen and field descriptions.

val

reset val

`reset val`

Use **`reset val`** to perform a software reset of every administered port on the circuit pack. **`Reset val`** performs the same functions as **`reset board`**, but overrides querying the board to determine whether an announcement autosave is in process. This allows resetting the circuit pack if it is in the insane state.

Action/Object	Qualifier	Qualifier Description
`reset val`	***location***	Reset every administered port on the circuit pack.

val-ip

status val-ip

status val-ip ***location***

Use **status val-ip** to generate an IP-related status report about the specified VAL circuit pack's LAN connection.

```
status val-ip 08C14
                                IP STATUS

Reset Time:  09/10 18:04

Incoming Received:      Octets   Datagrams    Discards    Hdr Errors
  Since reset           5597     62           0           0

Outgoing Transmitted:   Octets   Datagrams    Discards    No Routes
  Since reset           4813     62           0           0

Datagrams w/o Routes    ICMP Dest Unreachables      ICMP Redirects
  Since Reset           0                           0
```

video-bridge

status video-bridge

status video-bridge ***number***

Use **`status video-bridge`** to view the status of the video bridge.

```
                              VIDEO BRIDGE STATUS

          Name: RMX Auslabs                           Ports Used: 0     of 20
 Bridge Status: in-service                          Network Region: 1

   PRIORITY CONFERENCE STATUS
               Call Rate: 768  Kbits Maximum     Ports Available: 18    of 18
   Conferences Available: 18   of 200        Ports Rsvd per Conf: 1
 Conference Failure Rate: 0   of 0      Participant Failure Rate: 0   of 0

STANDARD CONFERENCE STATUS
               Call Rate: 384  Kbits Maximum     Ports Available: 18    of 18
   Conferences Available: 18   of 200        Ports Rsvd per Conf: 1
 Conference Failure Rate: 0   of 0      Participant Failure Rate: 0   of 0
```

status video-bridge field descriptions

Field	Description
Name	The name configured on the video-bridge form
Bridge Status	• in-service: the bridge is available • low-resources: the bridge is heavily loaded, but available • call-rejected: the last conference attempt failed • no-resources: the bridge has not reported any resources • trunks-busy: the configured trunks for this bridge are all full or busied out. Check trunk status • out-of-service: check signaling group status **Note**: Typically, CM avoids the low-resources and call-rejected bridges. However, if the in-service bridge is unavailable, CM uses the low-resources or call-rejected bridge.
Ports Used	The number of call-legs administered on the video bridge form which CM uses.
Network Region	The network region used to assess the bandwidth requirements of the bridge.
	1 of 2

Field	Description
PRIORITY CONFERENCE STATUS	The resources available for priority users (see Class Of Service settings)
Call Rate	The allowed bandwidth usage for the call-legs to a bridge. Maximum means a bandwidth up to the reported rate. Exact means a bandwidth of the reported rate.
Ports Available	The available ports reported by the bridge. **Note**: The available ports are bridge dependent and may not match with the CM configuration or the number of endpoints in the conferences, especially if the bridge is supporting multiple CMs.
Conferences Available	The available conferences are reported by the bridge. **Note**: The available conferences are bridge dependent and may not match with the CM configuration or the number of conferences underway, especially if the bridge is supporting multiple CMs.
Ports Rsvd per Conf	The number of ports on the bridge that a new conference takes up.
Conference Failure Rate	The number of conferences reverted to the audio-only mode. **Note**: Typically, conferences are reverted to the audio-only mode if one or more call-legs to the video bridge are dropped.
Participant Failure Rate	The number of participants who are unable to dial in to the bridge. **Note**: If a participant is unable to dial in to the bridge, the call-rejected status appears. This status continues to appear till the participant is able to make a call successfully.
	2 of 2

Chapter 2: Linux Bash Commands

Introduction

Linux platform commands are executed from the bash shell. These bash commands provide server information and help troubleshoot problems in the switch and other components.

Linux bash commands can be found in /opt/ecs/bin and /opt/ecs/sbin. The user must be logged into the switch as *root* to perform certain bash commands.

Use **-?** to see a description of command options for most Linux bash commands. For example, use **fasttop -?** to see a description of all **fasttop** command options.

Server information

Use these commands to see information about the server.

Linux commands for the server

almdisplay
ipsiversion
loginreport
productid
serialnumber
server
statapp
statuslicense
swversion
systat
uname

Use these commands on Communication Manager to see information about the SES server.

Linux commands on Communication Manager for SES

almdisplay
loginreport
productid
server
statapp
swversion
systat
uname

Troubleshooting the switch

Use these commands to troubleshoot the switch.

Linux commands for troubleshooting the switch

almclear
almdisplay
disp_dup_log
fasttop
filesync
ftpserv
modserv
restartcause
topsting
vilog

Troubleshooting the IPSI

Use these commands to help troubleshoot the IPSI circuit pack.

- ipsiversion
- pingall

Remote Maintenance Board administration

Use these commands to use and administer Remote Maintenance Boards, including the S8400-Maintenance Processor Complex (MPC). The commands can be run on the server, on the SAMP/MPC, or on both.

Remote Maintenance Board administration CLI commands

Server commands	SAMP/MPC commands	Server and MPC commands
almdisplay	serverctrl	almcall
almsuppress		almenable
environment		defsat
loadpwd		inventory
rmbpasswd		productid
rmbuseradd		sampupdate [filename]
rmbuserdel		testinads
rmbusermod		testmodem
sampcmd [cmd]		
sampdiag		
sampupdate [filename]		

New Bash commands

The following are new Bash commands for Communication Manager 5.1:

- hardware_info

Replaced commands

The following table lists the Bash commands that have been replaced:

Replaced Bash commands

Command	Replaced with
busyout	server -b (on standby)
patch_apply	update_activate
patch_info	update_info
patch_install	update_unpack
patch_remove	update_remove
patch_show	update_show
patch_uninstall	update_deactivate
release	server -r (if busied)
telnetable	ipsisession

Linux bash commands

acpfindvers

acpfindvers [-?] [-c] file(s)

Use **acpfindvers** to see the release string, date, and time for an object located in /opt/ws, and in which software base the object was built. More than one file can be specified on the command line.

acpfindvers options

command	option	description
acpfindvers	**file1 [file2] ...**	Display the release string, software base, date, and time the object file was built
	-c file1 [file2] ...	Display the CDA Vintage string for the file(s)
	-?	Display the help message

Example screen for acpfindvers command

```
(root@sray3-srv2 ws)# pwd
/opt/ws
(root@sray3-srv2 ws)# acpfindvers pcd
pcd=>R015x.00.0.823.0:drint08:alawint=/usr/add-on/defty/cm5.0/ipd/CM5.pj
@09/28/07 09:50:06 AM
(root@sray3-srv2 ws)# acpfindvers -c pcd
pcd CDAVINT=17.3
(root@sray3-srv2 ws)#
```

almcall

almcall [-f first-number] [-a [y|n]] [-s second-number] [-b [y|n]] [-t timer]] [-i interval] [-?]

Use **almcall** to set or display the telephone numbers to services, enable or disable alarm abbreviation on those numbers, and set the interval between retries.

To run **almcall** directly on the remote maintenance board, enter

sudo /opt/alarming/bin/almcall.

almcall command options

command	option	description
almcall		Display the dial-out numbers, alarm abbreviation, and timer/interval information
	-f *first-number*	Set the first dial-out number to ***first-number***. The number can have up to 30 digits (0-9), and "," for pause. Dashes are allowed but are ignored.
	-a y|n	Set alarm abbreviation on (y) or off (n) for the first telephone number. The default is y.
	-s *second-number*	Set the second dial-out number to ***second-number***. The number can have up to 30 digits (0-9), and "," for pause. Dashes are allowed but are ignored.
	-b y|n	Set alarm abbreviation on (y) or off (n) for the second telephone number. The default is y.
	-t *timer*	Set the alarm abbreviation timer between 1 and 24 hours. The default value is 4 (**almcall -t**)
	-i *interval*	Set the interval between retries in minutes. The interval can be between 1 and 20 minutes. The default value is 7 minutes (**almcall -i**). The value 0 is ignored.
	-?	Display the command usage.

almclear

almclear [-a] [-n [id | id1, ids1,...idn | idn1-idn]] [-?]

Use **almclear** to clear specific server alarms, a list of server alarms, or all server alarms within a range. An alarm is referenced by a positive integer, called its Alarm ID, which can be found using the almdisplay command. **almclear** does not clear Communication Manager alarms.

almclear command options

command	option	description
almclear		Display the command usage
	-a	Clear all outstanding server alarms
	-n *id*	Clear a single server alarm with Alarm ID ***id***
	-n *id1, id2,..idn*	Clear a set of server alarms with Alarm ID numbers ***id1, id2,..idn.*** **almclear -n 1, 2, 3,** is valid. **almclear -n 1 2 3** is not.
	-n *id1-idn*	Clear a range of server alarms from id number ***id1*** to id number ***idn.***
	-?	Display the command usage.

almdisplay

almdisplay [-v] [-?]

Use **almdisplay** to display the list of outstanding messaging, Communication Manager, and server alarms.

almdisplay with no options displays the outstanding alarms.

almdisplay -v displays the outstanding alarms with an additional Description field. The Description field displays the description contained in the original alarm string.

almdisplay -? displays the command usage.

The following is an example of the output for **almdisplay**:

```
[root@]# almdisplay

CommunicaMgr ALARMS
====================

ID    MO         Source   On Brd   Lvl   Ack   Date
1     H323-SGRP  627      n        MIN   Y     Wed Oct 31 08:18:49 MDT 2007
2     H323-SGRP  629      n        MIN   Y     Wed Oct 31 08:18:45 MDT 2007
3     H323-SGRP  631      n        MIN   Y     Wed Oct 31 08:18:39 MDT 2007
4     H323-SGRP  633      n        MIN   Y     Wed Oct 31 08:18:35 MDT 2007
5     H323-SGRP  662      n        MIN   Y     Wed Oct 31 08:18:29 MDT 2007
6     H323-SGRP  664      n        MIN   Y     Wed Oct 31 08:14:13 MDT 2007
7     H323-SGRP  291      n        MIN   Y     Wed Oct 31 08:14:09 MDT 2007
8     H323-SGRP  295      n        MIN   Y     Wed Oct 31 08:14:05 MDT 2007
9     USD1-BD    06E15    n        MIN   Y     Wed Oct 31 06:54:34 MDT 2007

SERVER ALARMS
=============

ID    Source   EvtID   Lvl   Ack   Date
1839  CMG      46      MIN   Y     Wed Oct 31 08:35:58 MDT 2007
1838  CMG      46      MIN   Y     Wed Oct 31 08:28:51 MDT 2007
1837  CMG      46      MIN   Y     Wed Oct 31 08:05:11 MDT 2007
1836  CMG      46      MIN   Y     Wed Oct 31 07:58:04 MDT 2007
1835  CMG      46      MIN   Y     Wed Oct 31 07:34:24 MDT 2007
1834  CMG      46      MIN   Y     Wed Oct 31 07:27:22 MDT 2007
1834  CMG      46      MIN   Y     Wed Oct 31 07:25:50 MDT 2007
```

The following is an example of the output for **almdisplay** on an SES server:

```
[root@]# almdisplay

MESSAGING ALARMS
=================

No MESSAGING Alarms

CommunicaMgr ALARMS
====================

No CommunicaMgr Alarms

SERVER ALARMS
=============

ID    Source   EvtID   Lvl   Ack   Date
5     SES      68      MIN   Y     Tue Nov 20 03:27:50 MST 2007
4     SES      68      MIN   Y     Mon Nov 19 03:27:49 MST 2007
3     SES      72      WRN   Y     Sun Nov 18 08:12:11 MST 2007
2     SES      68      MIN   Y     Sun Nov 18 03:27:49 MST 2007
1     SES      68      MIN   Y     Sat Nov 17 03:27:49 MST 2007
0     SES      68      MIN   Y     Fri Nov 16 03:27:50 MST 2007
```

almdisplay field descriptions

Field	Description
ID	Lists the unique Alarm ID assigned to each alarm
MO	Name of the Maintenance Object that was alarmed
Source	Displays the abbreviated name of the source which generated the alarm
On Bd	Displays y if the problem is on-board, n if the problem is off-board
EvtID	Displays the Event ID of the alarm. The Event ID identifies a particular event that occurred on a given source that generated the alarm.
Lvl	The severity level of the alarm: Warning (WRN), Minor (MIN), or Major (MAJ)
Ack	Displays Y or N, indicating if the alarm has been acknowledged by INADS or not.
Date	The time stamp assigned when the alarm was created.

almenable

almenable [-d [n | f | b]] [-s [y|n]] [-?]

Use **almenable** to enable or disable dial-out and SNMP alarm origination.

To run **almenable** directly on the remote maintenance board, enter:

sudo /opt/alarming/bin/almenable.

almenable command options

command	option	description
almenable		Display the administered information
	-d *n*	Set dial out alarm origination to ***neither*** (default). Disable alarming dialout. Alarm origination does not occur, reports are not sent to either OSS number.
	-d *f*	First number only -use only the first dial out number for alarming.
	-d *b*	Both numbers - use both dial out phone numbers for alarming.
	-s *y|n*	Enable (y) or disable (n) alarming through SNMP. The default is y.
	-?	Display the command usage.

almnotif

almnotif [-r [y | n]] [-c [y | n]] [-s threshold] [-?]

Use **almnotif** to set the alarming strategy for dial-out and to administer the suspension threshold.

almnotif command options *1 of 2*

command	option	description
almnotif		Display the administration for restart notification, clear alarm notification, and suspension threshold.
	-r y|n	Enable (y) or disable (n) restart notification.
	-c y|n	Enable (y) or disable (n) clear alarm notification.
		1 of 2

almnotif command options *2 of 2*

command	option	description
	-s ***threshold***	Set the suspension threshold to ***threshold.*** The threshold value must be a value between **1-15** to avoid a problem being generated and resolved repeatedly. The default value is 5.
	-?	Display the command usage
		2 of 2

almsnmpconf

almsnmpconf [-d IP] [-c community] [-b [y\|n]] [-e [y\|n]] [-add] [-del] [-mod] [-?]

Use **almsnmpconf** to administer SNMP alarming to INADS.

almsnmpconf command options

command	option	description
almsnmpconf		Display the administered information for SNMP alarming to INADS.
	-d ***IP***	Set IP address to send SNMP traps.
	-c ***community***	Set the trap community name to use the SNMP traps. The community name is any string of characters and numbers, and may not contain a space or tab.
	-b ***y|n***	Enable (y) or disable (n) alarm abbreviation for SNMP
	-e ***y|n***	Enable (y) or disable (n) trap destination
	-add	Add this as a new trap destination
	-del	Delete this trap destination. The -d flag with a valid/existing IP address is required.
	-mod	Modify an existing trap destination. The -d flag with a valid/existing IP address is required. In order to modify the IP address, the trap destination must be deleted, then re-added.
	-?	Display the command usage

almsummary

almsummary [-?]

Use **almsummary** to see a summary of outstanding Minor and Major alarms against Communication Manager and the server, if any exist. **almsummary -?** displays the command usage.

almsuppress

almsuppress [-s [y|n]] [-t minutes] [-?]

Use **almsuppress** to suppress/unsuppress alarm origination or to check the state of alarm suppression. Used by the **craft** login to stop alarms during troubleshooting operations.

To run **almsuppress** directly on the remote maintenance board, enter

sudo /opt/alarming/bin/almsuppress.

almsuppress command options

command	option	description
almsuppress		Display the current status of alarm suppression
	-s y|n	Suppress (y) or unsuppress (n) alarm origination for 30 minutes. The default is y.
	-t *minutes*	Number of minutes to suppress alarm origination, where ***minutes*** is in the range of **30-120**. The default is 30 minutes.
	-?	Display command option descriptions.

authtype

Use **authtype** to see if a login is authenticated with a password or Access Security Gateway (ASG).

autosat

See sat on page 767.

cmpasswd

cmuserpasswd username

Use **cmuserpasswd** to create or change a login password.

cmuseradd

cmuseradd <type> [-C profile] [P[key] | p[password]] user name

Use **cmuseradd** to add a login.

Examples:

- **cmuseradd super-user username**
- **cmuseradd craft2 username**
- **cmuseradd cm-only -C 20 username**

cmuseradd command options

command	option	description
cmuseradd	**type**	The type of login being added. **super-user** **nonsuper-user** **cm-only** **remote** **craft2**
	-C profile	Profile for the login being added. Login of **cm-only** type requires a profile Login of **remote** type is never assigned a profile
	-P[key]	The login is asg authenticated. If no key is specified on the command line, one will be generated automatically. Not valid with **-p**.
	-p[pass]	The login is password authenticated. [pass] is the encrypted password. Not valid with **-P**. Because this option requires an encrypted password, Avaya recommended you use this option without a password, then use **cmpasswd** to set the password.

cmuserdel

Use **cmuserdel** to delete a login. This replaces the Communication Manager SAT command **remove login**.

cmusermod

cmusermod <type> [-C profile] [P[key] | p[password]] login

Use **cmusermod** to add a login.

Examples:

- **cmusermod craft2 username**
- **cmusermod dadmin**

cmusermod command options

command	option	description
cmusermod	**-C profile**	Profile for the login being added. Login of **cm-only** type requires a profile. Login of **remote** type is never assigned a profile.
	-P[key]	The login is asg authenticated. If no key is specified on the command line, one will be generated automatically. Not valid with **-p**.
	-p[pass]	The login is password authenticated. [pass] is the encrypted password. Not valid with **-P**. Because this option requires an encrypted password, Avaya recommended you use this option without a password, then use **cmpasswd** to set the password.
	-L	Lock the login. Not valid with **-U**.
	-U	Unlock the login. Not valid with **-L**.

cnc

cnc [on | off | status]

S8700 series

Use **cnc** to enable, disable, or status Control Network C on **S8700 series** servers.

CAUTION:
If Control Network C is enabled, executing **configure server** from the Maintenance Web Interface disables Control Network C. Execute the bash command **cnc *on*** to enable Control Network C.

Control Network C (cnc) uses the customer LAN for control signaling to TN2312 IPSI circuit packs on IP-PNCs. Use Control Network C when Control Networks A and B are administered as duplicated control networks to a Direct, CSS, or ATM-connected Port Network configuration.

cnc command options

command	option	description
cnc	**on**	Enables Control Network C on the **S8700 series** servers.
	off	Disables Control Network C on **S8700 series** servers.
	status	Determine whether Control Network C on **S8700 series** server is enabled or disabled.

corevector

corevector [-l] [-s [-f]] [-c arg] [-?]

corevector is used to request or clear coredump requests. The core dump files are generated prior to the execution of the restart requested. After the core files are taken, a reload of Communication Manager processes is executed. Specifying single process restart will also create a core file for terminal processes.

When the core files are to be taken, the state of health is lowered to force a server interchange. The core files are only taken on the ACTIVE server unless the -f (force) option is specified.

corevector -? displays the command option descriptions

corevector -l lists the current settings

corevector -s sets the core dump vector using the options noted below for option -c

corevector -f forces the core dump vector using the options noted below for option -c

corevector -c clears the core dump vector using the options noted as follows:

all - coredump files on all Communication Manager restarts

warm - coredump files on warm restart request

cold2 - coredump on cold2 restart request

reload - coredump on reload (reboot) restart request

insane - coredump on system insane condition

single - coredump on single process restart and killing of TERMINAL processes

trap - coredump of process that trapped

corevector accepts multiple arguments, e.g., **corevector -s warm cold2**

custalmopt

custalmopt [-?] [-h] [-d] [-m] [-a]

Use custalmopt to set or display the current customer alarm option. This command runs on the active server only , and Communication Manager must be running.

custalmopt command options

command	option	option description
custalmopt	**-? or -h**	Display command option descriptions.
	-d	Display current settings (default)
	-m	Set to report Major/Minor alarms only
	-a	Set to report all alarms

defsat

Use **defsat** to invoke a Communication Manager SAT session if the incoming TCP port is 5022 or 5023.

disp_dup_log

disp_dup_log [--hour | -h] [--day | -d] [--help | -?] [# - # of entries to list]

Use **disp_dup_log** to show logs from the duplicate server.

disp_dup_log command options

command	option	description
disp_dup_log	**--hour or -h**	Display the hourly duplication measurements.
	--day or -d	Display the daily duplication measurements.
	--help or -?	Display command options.
	#	Number of entries to display.

dkill

dkill [-def | -ses | -a | -h | [<proc1> [<proc2>...]]

Use **dkill** to send a kill signal to processes in Communication Manager. Generally used with **-a** (all) when a system is caught in a state where **stop all** failed.

dkill command options

command	option	description
dkill	**-def**	All Communication Manager (defty) processes
	ses	All SES processes
	-a	All processes
	-h	Display command option descriptions.
	<proc1>	Only this process.

dsat

See sat on page 767.

environment

Use **environment** to see reports for environmental sensors such as temperature, fan speed, and voltage.

Use **environment -v** to turn on verbose output.

Use **environment -?** to display the help message.

Example of environment output

```
> environment
*** Hardware Health ***
PowerSupplies:
Pwr. Supply Bay                 Normal

Fans:
I/O Zone                        Normal
I/O Zone                        Normal
Processor Zone                  Normal
Processor Zone                  Normal
Processor Zone                  Normal

Temperature:
Ambient             59F/  15C   Normal
CPU (1)             91F/  33C   Normal
CPU (2)            ---F/  ---   Normal
Pwr. Supply Bay     93F/  34C   Normal
Processor Zone     105F/  41C   Normal
I/O Zone           100F/  38C   Normal
```

fasttop

`fasttop -[DLMh?] [-o filename] [-d delay] [-c #] [-n lines]`

Use **`fasttop`** to see occupancy results for Communication Manager processes running on the server. Default screen refresh is 5 seconds.

fasttop command options

command	option	description
`fasttop`	**`-D`**	Query for HMM overload information.
	`-L`	Do not track threads.
	`-M`	Display memory leak detection instead of occupancy.
	`-h or -?`	Display command option descriptions.
	`-o filename`	Put the output in the specified filename.
	`-d delay`	Display the results every **`delay`** seconds. Default is 5.
	`-c #`	Number of ticks between looking at /proc
	`-n lines`	Display the number of lines specified by **`lines.`**

Example screen for fasttop command

```
C:\WINNT\System32\telnet.exe
Thu Jan  9 13:47:09.367
processor at 851941 khz 4.99 seconds   7.52 % used   4.12 % prio
Summary 4.99 seconds    7.52 % used   4.12 % prio
  PID    PPID  %occ     name          pol  prio    memory
  9406   9375   3.47 capro           FIFO    17 101167104
  9413   9375   3.26 audit           FIFO     3   1847296
  9389   9375   0.27 pcd             FIFO    22   5578752
 28314  27937   0.10 arbiter           RR    55   1474560
  9391   9390   0.09 pcd             FIFO    22   5578752
  9386   9375   0.08 tim             FIFO    24   1642496
  9460   9375   0.07 fac_st          FIFO     5   3248128
  9387   9375   0.07 tmr_mgr         FIFO    23   2043904
 15004  14992   0.04 fasttop         OTHR     0   1679360
  9401   9375   0.03 hmm             FIFO    21   5738496
  4165   9375   0.02 map             FIFO     4   2646016
  9464   9375   0.01 mdm             FIFO     5   2080768

[root@sray3-srv2 defty]#
```

filesync

filesync [-w] [-s | -f | -t | -i | -d | -e | -v]
[-r <TYPE>] [-a <TYPE> <ipaddr>] [-q | -H <TYPE>]
[-Q <TYPE> [NUM]] [filegroup]

Use **filesync** to request synchronization of files from active to standby server(s). Specify all files, or sets of files; define the type of synchronization; enable, disable, or temporarily inhibit file synchronization; report synchronization status and history.

File synchronization sends translations to a duplicate, standby server, or to an LSP. File synchronization may take place because of LSP registration, or with the commands:

- **filesync trans** (sends translations to the standby server or the LSPs)
- **loaddisplang** (sends unicode files to the standby server and the LSPs)
- **loadlicense** (sends the license file to the standby server)
- **loadpwd** (in this instance, sends the password files to the standby server and the LSPs)
- **save_trans** (sends translations to the standby server)
- **save_trans lsp** (sends translations to the standby server and the LSPs)
- **server -i** (sends all synchronized files to the standby server before the interchange)

filesync command options ***1 of 2***

command	option	option description
filesync	**-w filegroup**	Wait for a response before returning. Specify filegroup, or **all** for all groups.
	-s filegroup	Run the file synchronization silently. The exit status is the only indication of success or failure. Specify filegroup, or **all** for all groups.
	-f filegroup	Force a file synchronization for the specified filegroup. Contact the duplicate standby server(s) and ensure that the files in the specified sets are in agreement. Default. Specify filegroup, or **all** for all groups.
filesync	**-t filegroup**	Timestamp-based synchronization for the specified filegroup to the duplicate server. Verify the timestamps on all files in the specified sets, and synchronize the file/remote server when: • the file's timestamp is more recent than the last synchronization • the last synchronization attempt for the set failed Specify filegroup, or **all** for all groups. **filesync -t** is more efficient on the active server, and it ensures that if the file is changed locally it will be synchronized to the other server(s). **filesync -t** will not correct a corrupted file on the other server.
	-q filegroup	Query the status and receive a summary of the most recent synchronization, and synchronize the requested filegroup. Implies **-w**, wait for a response before returning. Specify filegroup, or **all** for all groups.
	-d	Disable file synchronization. No files will be synchronized to or from this server until an enable is given. The disable state persists across Communicator Manager restarts and Linux reloads.
	-e	Enable. Re-enable file synchronization.
	-i	Inhibit file synchronization temporarily. This command will not exit if given this option, so it should be run in the background as follows: **filesync -i&** **fs=$!** ***other processing *** **kill-HUP $fs**
	-v	Verbose output, use with **-Q** queries.

1 of 2

filesync command options *2 of 2*

command	option	option description
	-a <TYPE> <ipaddr> filegroup	Send files to a server of <TYPE> **ESS** or **LSP** at the specified IP address. Specify filegroup, or **all** for all groups.
	-Q <TYPE> [NUM]	Query the status of the translation synchronization number **[NUM]** to specified servers **<TYPE>**. Shows status for **save trans**, **filesync trans**, or nightly maintenance. Synchronization number **[NUM]**: **1 - 25**. Default synchronization number is the most recent synchronization. Server type **<TYPE>**: **dup**, **ess**,**lsp**, **all**
	-H <TYPE>	Show the history of the last 25 translation synchronizations to specified server types **<TYPE>**. Shows history for **save trans**, **filesync trans**, or nightly maintenance. Server type: **dup**, **ess**,**lsp**, **all**
	-r <TYPE>	Send files to the duplicate server and remote servers of a specified type **<TYPE>**. Server type: **dup**, **ess**,**lsp**, **all**
		2 of 2

filesync status description

On errors, an explanation of the error is sent to stdout. If the command is successfully sent to the daemon, and any response is received, a description of the status is printed to stdout. The exit code is:

Filesync status code descriptions

Code	Explanation
0	Successful
2	Synchronization is in progress.
3	Synchronization is currently inhibited or disabled.
4	Pre-script execution returned non-zero status.
5	Post-script execution returned non-zero status.
6	Request was bad (such as bad set name).
	1 of 2

Filesync status code descriptions

Code	Explanation
7	An error occurred during file synchronization.
8	A local error occurred.
	2 of 2

ftpserv

`ftpserv [-? | -h] [ -f | -q | -w] on|off`

Use **`ftpserv`** to configure ftp access and service. Use **`-f on|off`** to enable or disable ftp service. Use **`-a on/off`** to enable or disable anonymous ftp. This command works when the user is logged in as root, or with **`sudo`**, for example **`sudo ftpserv -a on`**.

ftpserv command options

command	option	description
`ftpserv`		Display the status of ftp service and anonymous logins
	`-?`	Display command option descriptions
	`-h`	Display command option descriptions
	`-f`	Display the firewall state for this port
	`-f [on | off]`	Change the state of the firewall (on or off)
	`-w`	web option
	`-q`	Query option for the state of ftpd or the firewall associated with this service.

hardware_info

The **hardware_info** command displays the hardware configuration of certain servers.

```
hardware_info -w [ -D <delimiter> ] [ -v ]
hardware_info -W <keyword> [ -v ]
hardware_info -w [ -v ]
hardware_info -l
hardware_info [ -v ]
hardware_info [ -h | -? ]
```

Option	Option Description
-D <delimiter>	User-defined delimiter for -w option
-W <keyword>	Get a particular value
-h or -?	Display a list of all options available for this command
-l	List valid keywords for -w option
-v	Verbose - show all system hardware information
-w	Web output format for string extraction

hardware_info output

```
> hardware_info
Product: Dell Incl, PowerEdge 1950

Physical RAM: 2022 MiB

Number of CPU cores: 1
    CPU 0 model: Intel(R) Xeon(R) CPU E5410 @ 2.33GHz

Disk devices:   hda sda
Device hda, type CD/DVD-ROM, interface ATAPI
           Size: (data not obtainable) GiB
          Model: TEAC DVD-ROM DV28EV
            S/N: (data not obtainable)
Device sda (RAID drive 0), Type HDD, interface SATA
           Size: 232.25 GiB
          Model: ST3250620NS
            S/N: 9QE6F0J9
Device sda (RAID drive 1), type HDD, interface SATA
           Size: 232.25 GiB
          Model: ST3250620NS
            S/N: 9QE6EWYY

SAMP type: Augmentix A+SAMP, S/N SMI07383636

Number of power supply: 1
```

fwdlreason

`fwldreason [ -a ] [ -c code ] [ -?]`

Use **`fwdlreason`** to see reason codes for firmware download failures.

fwdlreason command options

command	option	description
`fwdlreason`		Display the list of all reason codes
	`-a`	Display the list of all reason codes
	`-c code`	Display the reason for a specific code
	`-?`	Display command option descriptions.

inventory

`inventory [-v]`

Use **`inventory`** to

- see the remote maintenance board manufacturing information
- verify that the remote maintenance board is connected and working correctly

Use **`inventory -v`** to see the detailed (verbose) information.

Example of inventory output

```
> inventory
306 Avaya   S8510  Chassis Information   Asset Tag is       5000000000
306 Avaya   S8510  Product Information   Product is         Avaya S8510
306 Avaya   S8510  Product Information   Manufactured by    Avaya
306 Avaya   S8510  Product Information   Serial Number is   Service Tag JXSNPQ1
306 Avaya   S8510  Board Information     Product is         Augmentix A+SAMP
306 Avaya   S8510  Board Information     Manufactured by    DELL
306 Avaya   S8510  Board Information     Product Version is FRU18Z.DELL P/N
306 Avaya   S8510  Board Information     Part Number is     OTT740A00
306 Avaya   S8510  Board Information     Serial Number is   CN687026CC00131
306 Avaya   S8510  Board Information     File ID is         0
```

ipsisession

`ipsisession [-d] [-k] [-c cab#carrier] [-p IP_address] [-?]`

Use **`ipsisession`** to enable:

- Secure Shell (SSH) remote access protocols through login/password authentication on IPSI circuit packs that support SSH
- Telnet on IPSI circuit packs that do not support SSH

Use **`ipsisession -k`** to remove the known hosts file in Communication Manager and enable an SSH session on the circuit pack. For more information on dynamic host keys, see reset ssh-keys on page 555 and ssh-keygen on page 801.

Once the session is established, the user is prompted to accept the new keys. First, verify that

- A new host key has been generated.
- The IP address or hostname of the IPSI has changed. Use **`list history`** at the SAT to see whether **`reset ssh-keys`** has been executed on the CLAN or VAL circuit packs.

If neither of these conditions has occurred, then it is likely that another server is posing as the IPSI (rogue server, aka man-in-the-middle attack).

ipsisession command options

Action/Object	Qualifier	Qualifier Description
ipsisession	**-k**	Remove known hosts file and enable SSH on IPSI circuit packs that have changed dynamic host keys. (reset the ssh host public key).
	-d	Disable the telnet server. Default is enable the telnet server.
	-c *cab#carrier*	The target IPSI board with the specified cabinet number and carrier ID.
	-p *IP_address*	The IP address of the target IPSI board.
	-?	Display the help message.

ipsiversion

ipsiversion [-a | -c cab#[carrier]] [-?]

Use **ipsiversion** to query each IPSI to determine its IP address, name, TN code, and hardware and firmware vintages.

ipsiversion -a shows all IPSIs in the system

ipsiversion -c cab#[carrier] shows information for a specific IPSI

ipsiversion -? displays the help message.

Example screen for ipsiversion command

```
C:\WINNT\System32\telnet.exe
[root@sray3-srv1 defty]# ipsiversion -a
This may take 1 seconds ...
        IPaddress            IPSI Name        IPSIBoard    HW#    FW#

   198.152.255.3             ipsi-A02d           TN2312      2      3
   198.152.254.3             ipsi-A02e           TN2312      2      3
   198.152.255.2             ipsi-A02b           TN2312      2      3
   198.152.254.2             ipsi-A02a           TN2312      2      3
   198.152.255.1             ipsi-A01b           TN2312      2      3
   198.152.254.1             ipsi-A01a           TN2312      2      3
[root@sray3-srv1 defty]#
```

listhistory

`listhistory [-l] [-f filename] [-?]`

Use **`listhistory`** to list the Communication Manager shell commands which alter system administration or environment.

`listhistory` displays the most recent command history log file.

`listhistory -l` lists the names of the existing command history log files.

`listhistory -f` ***`filename`*** specifies which command history log file (***`filename)`*** to view.

`listhistory -?` displays the command usage.

loaddisplang

`loaddisplang [-? | -v]`

`loaddisplang -q[c|C|s|S] [d] [f] [filename]]`

`loaddisplang -i[c|s [d]] [filename]`

Use **`loaddisplang`** to query (-q) or install (-i) Unicode/user-defined phone message files. There is no "uninstall" option for this command. If the installed files are not satisfactory, the user is expected to either overwrite them by re-running **`loaddisplang`** or to manually delete the installed files across all servers on which they reside.

On Linux platforms, the ftp directory is /var/home/ftp/pub. The installation directory is /etc/opt/defty/i18n/

loaddisplang command options

Action/Object	Qualifier	Qualifier Description
loaddisplang		Display the help message.
	-c	Operate on all custom non-installed phone message files.
	-C	Operate on all custom installed phone message files.
	-s	Operate on all standard non-installed phone message files.
	-S	Operate on all standard installed phone message files.
	-d	Indicates the file in question is user-defined (omission implies default of unicode file).
	-f	Indicates the file in question is non-installed phone message files.
	-i	Install a unicode or user-defined file. With no file specifiers, will install all valid unicode files in the ftp directory.
	-q	Perform a query of the language tag. With no file specifiers, will query among the installed set of unicode files. With the -d option, will query among the installed set of user-defined files. Precedence is given to the custom file in either case.
	-v	Display the version number.
	-?	Display the help message.

loadipsi

loadipsi [-a board-code] [-l] [-c cab#[carrier]] [-b] [-r] [-f file] [-s time] [-d] [-e] [-i ip-addr -u user] [-w pwd]] [-?]

Use **loadipsi** to load IPSI application firmware or boot code to all or specific IPSI boards in the system. The firmware or boot code is then burned into flash memory. Prior to a download, **loadipsi** checks the current firmware and boot code versions on all target IPSI boards against the version ready for download. If the version on the boards is equal to or greater than

the version on the server, **loadipsi** will stop the process. The command option -r will override the version check and allow the download.

loadipsi command options

command	option	description
loadipsi		Display instructions and command options.
	-a board-code	Download the application firmware or boot code file to all IPSI boards with the specified board code.
	-l	Download the application firmware or boot code file to all standby IPSIs.
	-c cab#[carrier]	-c cab# - Download the application firmware or boot code file to all IPSIs in a specified cabinet. -c cab#carrier - Download the application firmware or boot code file to all IPSIs in a specified carrier.
	-b	Specifies the download of the boot code.
	-r	Activates a download without checking the current application firmware or boot code on the target IPSI board(s).
	-f file	Identifies and displays the application firmware or boot code file ready for download.
	-s time	Start time for a download in mmddyyyyhh:ii format, where m = month, d = day, y = year, h = hour, i = minute.
	-d	Display all scheduled loadipsi jobs in the system
	-e	Remove all scheduled loadipsi jobs from the system
	-i ip-addr	Download the firmware image from the specified server before downloading it to the IPSI board(s).
	-u user	Use this user name to obtain the file from the remote server specified by the -i option.
	-p pwd	Use this password for the user name specified by the -u option.
	-?	Display a description of command options.

loadlicense

loadlicense [-i input-file] [-?] [-h] [-u] [-v]

Use **loadlicense** to run a command-line version of the utility to load the license file.

loadlicense command options

Action/Object	Qualifier	Qualifier Description
loadlicense		Load the license file in /var/home/ftp/pub with the latest timestamp.
	-i	Use this input file
	-u	Uninstall one level
	-v	Display version and build information
	-? or -h	Display this help message.

loadpwd

loadpwd [-c directory] [-o file] [-l file] [-i] [-f] [-?]

Use **loadpwd** to run a command-line version of the utility to load the Avaya authentication file (password file) onto the

- host server
- standby server
- LSP
- remote maintenance board/ Maintenance Processor Complex (MPC)

loadpwd command options

Action/Object	Qualifier	Qualifier Description
loadpwd	**-c directory**	The path to the directory that contains the passwd.conf and group.conf files. These files have the same format as /etc/group and /etc/passwd. They describe the attributes logins added by this command will have. Default is /etc/asg
	-o file	Path to the output file. Default is /etc/asg/asgfile.
	-l file	Path to the authentication file to be loaded. Default is the newest file in /var/home/ftp/pub.
	-i	Ignore the config file if the login already exists. By default, logins in the authentication file that already exist on the system are changed so they match what is in the passwd. conf and group.conf files. This option overrides this behavior.

loadpwd command options

	-f	Force the new authentication file to load even if product ID's don't match.
	-?	Display this help message.

loadstbyipsis

loadstbyipsis [-r] [-?] -f file

This command loads all standby IPSI boards in the system with the IPSI firmware image. This command is especially useful to load firmware on all standby IPSIs in a duplicated IPSI system, then using the reset**stbyipsis** command to activate the firmware (non-service affecting).

This command will do nothing if the system is not running or there are no standby IPSIs administered.

This command only works on the active server.

loadstbyipsis command options

command	**option**	**description**
loadstbyipsis		Display instructions and command options.
	-r	Activates a download without checking the current application firmware or boot code on the target standby IPSI board(s).
	-f file	The application firmware or boot code file to download.
	-?	Display instructions and command options.

locktrans

Use **locktrans** to lock translations so that no save translations can be performed until you use the **unlocktrans** command. See unlocktrans on page 784. This command has no options.

logc

See logv logc logw on page 747.

logclear

Use **logclear** to remove logmanager output files from the /var/log/ecs directory.

logecho

logecho -p procname -s[c|h|m|l] -l level -t type -|message

logecho -x procname

logecho -?

Use **logecho** to make an entry in the logmanager log. Only the first non-option argument is placed in the log as the message body. Shell quoting can be used to put messages which contain white space. If the argument value is "-", then the standard input is read, and each line becomes an entry in the log.

logecho command options

command	option	description
logecho	**-p procname**	the process name the user wants to appear in the log
	-s severity	Severity: c = critical, h = high, m = medium, l = low
	-l level	The level mask. The level can be entered in decimal, octal (preceded by ’0’), or hex (preceded by ’0x).
	-t type	The type mask. The type can be entered in decimal, octal (preceded by ’0’), or hex (preceded by ’0x).
	-	Log each stdin line
	message	The message to log
	x	Do a gstTrace_exit for this process.
	-?	Display command option descriptions

logfilter

logfilter [-o] [-a] [-l level] [-t type] processname | all

logecho [-? | -h]

Use **logfilter** to selectively turn on/off the logging specific types of messages as well as specific levels of messages for a specific process or all processes.

If either the level or type mask is not specified, then its value is left the same. If neither are specified, then the current value of each for each specified process is displayed.

logfilter command options

command	option	description
`logfilter`	`-? | -h`	Display command option description.s
	`-o`	OR in the mask for which levels and types of messages will be logged. The mask can be entered in decimal, octal (preceded by ’0’), or hex (preceded by ’0x).
	`-a`	AND in the mask for which levels and types of messages will be logged. The mask can be entered in decimal, octal (preceded by ’0’), or hex (preceded by ’0x).
	`-l level`	Sets the mask for which levels of messages will be logged. The mask can be entered in decimal, octal (preceded by ’0’), or hex (preceded by ’0x).
	`-t type`	Sets the mask for which types of messages will be logged. The mask can be entered in decimal, octal (preceded by ’0’), or hex (preceded by ’0x).

loginreport

`loginreport [-afhrsv] [-l (login | all)] [-b "mm/dd hh:mm" (begin time)] [-e "mm/dd hh:mm" (end time)] [-n (line limit)]`

Use `loginreport` search for a specific set of log events. This command is intended to display normal user activity and is a starting point only for debugging analysis. At least one report type [-sfv] must be specified.

loginreport command options ***1 of 2***

command	option	description
`loginreport`	`-a`	Report only active sessions. Only useful with -s or -v
	`-b`	Include activity starting after this time. Double quotes are required. This parameter is optional. If not provided, events from the beginning of the file(s) to the stop time are included.
	`-n N`	Limit the output to the first N events.
		1 of 2

loginreport command options *2 of 2*

command	option	description
	-e	Include activity in the report starting at or before this time. Double quotes are required. This parameter is optional. If not provided, all events from the begin time to the current time are included.
	-h	Display the command option descriptions
	-r	Display specified report with most recent events listed first.
	-s	Produce a report of successful logins
	-f	Produce a report of failed logins
	-v	Produce a detailed report of user activity of successful logins. BASH indicates activity was from a shell. SAT indicates activity in a Communication Manager SAT.
	-l	Enter a specific user name or "all". If a specific user name is entered, activity for that single user is included in the report. If no "-l" option is specified, "all" is assumed.
		2 of 2

logv logc logw

logv [OPTIONS]...[LOGS...] [-t time]...[[-a]FILTERS]...[-?]

logc [OPTIONS]...[LOGS...] [-t time]...[[-a]FILTERS]... [-?]

logw [OPTIONS]...[LOGS] [[-a]FILTERS]...[-?]

Use **logv** to merge and edit (vi) the various log files in the system, including SES log reports.

Use **logc** to merge and output (cat) various log files to standard output.

Use **logw** to watch the requested log file for changes applying the specified filters.

Multiple logs can be specified. The logs are merged and sorted by time. Multiple time patterns and time ranges can also be specified.

The log file names are:

all	Display all possible logs.
lm	Logmanager debug trace log (default).
lxboot	Linux boot messages.
lxsys	Linux syslog.
lxsec	Linux access security log.
lxwtmp	Linux login/logout/reboot log.
lxxfer	Linux file transfer log.
wd	Watchdog logs.
cmds	Platform command history log
httperr	HTTP/web server error log
httpssl	HTTP/web secure sockets layer (SSL) request log
httpaccess	HTTP/web access log
cmrestart	Communication Manager restart log (last 16 restarts).
filesync	Communication Manager file synchronization log
update	System updates/patches
ccsppm	SES PPM log
siptrace	SES SIP trace log
ccsmaws	SES Core Router trace log

logv, logc, logw command options ***1 of 3***

command	option	description
logv **logc** **logw**	**-?**	Display command option descriptions
	-b	Remove blank lines.
	-c	Display the contents of the log. Automatically set if called with logc.
		1 of 3

logv, logc, logw command options ***2 of 3***

command	option	description
	-d	Augment timestamps with time delta between entries displayed.
	-desp[N]	Output a separator line when the delta between entries is greater than N seconds. The default is one second.
	-ls	List the names and sizes of log files.
	-r	Reverse the order to show the latest entry first.
	-s	Strip off the timestamp and header of each line.
	-st	Leave the timestamp and strip off the rest of the header on each line.
	-sd	Format the timestamp as yyyy/mm/dd HH:MM:SS and strip off the rest of the header on each line.
	-w	Watch the log (automatically set if called with logw).
	-v	Show the version of the command.
	-l	Search only the latest file in the log. (Default is all files.)
	-lf file	Assume that **file** is a log file and read input from it. Multiple -lf arguments may be entered.
	-ld dir	Look for log files in the directory **dir** instead of the default.
	-clear	Clear the log files (only logmanager files).
	-t pattern	Filter events for a particular day/time pattern with the format of yyyy[mm[dd:[HH[MM[SS[mmm]]]]]]
	-t range	Filter events for a particular day/time range with the format of yyyy[mm[dd:[HH[MM[SS[mmm]]]]]]-yyyy[mm[dd:[HH[MM[SS[mmm]]]]]]
	-t today	Display today's log.
	-t yesterday	Display yesterday's log.
	app-pat	Filter events for a specific application or process (for example, capro). Multiple application patterns can be specified.
	-a	Application patterns following the -a are applied to the output of those preceding the -a. Application patterns following the -a are considered to be grep patterns.
		2 of 3

logv, logc, logw command options ***3 of 3***

command	option	description
	`-g`	Assume application filters are grep patterns instead of application names.
	`-i`	Assume application pattern filters are grep patterns and ignore the case of letters.
	`--views`	Lists the predefined log views. A view is a shorthand for a log type as well as a pattern to match in the logs.
	`--view VIEWNAME`	Display the log using the log types and grep patterns associated with the view VIEWNAME. The built-in views are: **ipevt** - List IP events (interfaces up/down, telephone/endpoint registration/deregistration). **bashhist** - Platform command history log. **mst** - If enabled via a SAT command, entries to the Communication Manager's message sequence trace (MST) log can be echoed into the debug trace log as well. The fields are the raw hex bytes of the MST log entry. **hwerr** - The events that go into the Communication Manager's hardware error and alarm logs. This needs special deciphering by an external tool. **sat** - The System Administration and Maintenance activities performed on Communication Manager's System Access Terminal (SAT). **swerr** - The events that go into the Communication Manager's software error log. This needs special deciphering by an external tool. **kernel** - Linux kernel debug messages. **cron** - Linux scheduled task log.
		3 of 3

logw

See logv logc logw on page 747.

modserv

```
modserv [-T] [-v] [-stat | -off | -once | -respawn | -?]
```

Use **modserv** to turn modem access on or off for one or more calls.

modserv command options

command	option	description
modserv	**-T**	Turn on verbose mode
	-stat	Return the access status: 0 - access off 1 - access on for one call 2 - access on for multiple calls
	-v	Display current status if -stat option is set.
	-off	Turn modem access off
	-once	Turn modem access on for one call
	-respawn	Turn modem access on for multiple calls
	-?	Display command option descriptions

Example screen for modserv command

```
[root@pilsner1 ecssw-02.0.519.0]# modserv -v
Modem access is administered for incoming calls.
The modem is active for an outgoing call.
[root@pilsner1 ecssw-02.0.519.0]# _
```

mv_lastlog

Use **mv_lastlog** to run the Communication Manager modified version of the Linux lastlog utility.

mv_status

Use **mv_status** to generate a report on Communication Manager run status.

pingall

`pingall [ [-s [ServerID]]  [-d [ServerID]] [-i [cab#][carrier]] [-n [ServerID[a|b]]] [-u  [upsID]] [-h [hubID]] [-c count] [-v]`

Use **`pingall`** to verify basic connectivity.

pingall command options

command	option	description
`pingall`		Ping all IPSI circuit packs
	`-a`	Ping all network entities on the remote sides, including servers, routers, and IPSI circuit packs.
	`-s ServerID`	Ping a specific customer LAN
	`-d ServerID`	Ping a specific duplink
	`-i cab#[carrier]`	Ping a specific IPSI
	`-n ServerID`	Ping a specific control network
	`-u upsID`	Ping a specific ups
	`-h hubID`	Ping a specific hub
	`-c count`	The number of test messages for each network entity
	`-v`	Turn on verbose mode
	`-?`	Display a description of command options

Example screen for pingall command

```
C:\WINNT\System32\telnet.exe
init@sray3-srv1> pingall -a
Testing.

HostName            IPAddress         Status
sray3-srv2-cnb      198.152.255.202   Pass
sray3-srv2-cna      198.152.254.202   Pass
ipsi-A02d           198.152.255.3     Pass
ipsi-A02e           198.152.254.3     Pass
ipsi-A02b           198.152.255.2     Pass
ipsi-A02a           198.152.254.2     Pass
ipsi-A01b           198.152.255.1     Pass
ipsi-A01a           198.152.254.1     Pass
sray3-srv2-dup      192.11.13.14      Pass
sray3-srv2          135.9.77.61       Pass
init@sray3-srv1>
```

productid

`productid [ -p | -m | -r productID] [-?]`

Use **`productid`** to view or set the Product ID for Communication Manager, Messaging products, or the Remote Maintenance Board for alarms.

To run **`productid`** directly on the remote maintenance board, enter **`sudo /opt/alarming/bin/productid`**.

productid command options

command	option	description
`productid`		Display Product ID of this server
	`-p productid`	Set this server's Product ID to **`productid`**. The **`productid`** is a 10-digit number that starts with "1".
	`-m productid`	Set the Messaging identification number to **`productid`**. The **`productid`** is a 10-digit number that starts with "2".
	`-r productid`	Set the Remote Maintenance Board identification number to **`productid`**. The **`productid`** is a 10-digit number that starts with "5".
	`-?`	Display the command option descriptions.

raid_status

S8730 | S8510

```
raid_status -c
raid_status -h
raid_status [-s | -v]
raid_status [-s | -v] -p
raid_status [-s | -v] -n
```

Use **raid_status** to display the server RAID (Redundant Array of Independent Disks) controller status on an S8730 or S8510 server. The status displayed depends on the following command options and the server type.

Specifying the following options together is INVALID:

```
raid_status -v -s
raid_status -p -n
```

raid_status command options

command	option	description
raid_status	-c	Check for a possible HDD failure and log the failure in syslog.
	-h	Display the help message.
	-v	Verbose output, display all RAID Controller Data.
	-n	Display the number of disk drives.
	-s	(Default). Display short physical disk drive data.
	-p	Display physical disk drive data - use with -v or -s.
	-p -s	(Default). Display short physical disk drive data.
	-p -v	Display verbose physical disk drive data.
	-n -s	(Default). Display short drive data 1, 2, or -1 (not sure).
	-n -v	Display verbose (slot number) number drive data

raid_status output

raid_status -n displays the number of HDD's detected. The values returned are 1, 2, and -1. -1 indicates that it is not clear if both hard drives are plugged in, or there may have been an error when obtaining the data. Refer to **raid_status diagnostics** for more information.

The following example shows that **one** HDD was detected:

```
craft@s8730server2>raid_status -n
1
craft@s8730server2>
```

The following is an example of the verbose output for the RAID HDD physical data on an S8730 server equipped with **one** HDD:

```
craft@s8730server2>raid_status -p -v

Smart Array E200 in Slot 3

  array A

    physicaldrive 1:1
      Port: 1l
      Box: 1
      Bay: 1
      Status: OK
      Drive Type: Data Drive
      Interface Type: SAS
      Size: 72 GB
      Rotational Speed: 10000
      Firmware Revision: HPD7
      Serial Number: 3LB1J0260000009731H792
      Model: HP    DG072A8B54
    physicaldrive 1:2
      Port: 1l
      Box: 1
      Bay: 2
      Status: Failed
      Drive Type: Data Drive
      Interface Type: SAS
      Size: 0 MB
```

S8730 servers are usually shipped with **one** HDD. In the above example, **`raid_status`** reports that this server has **one** HDD. The second physical HDD is shown since the sever was staged with two HDD's, but it was only shipped with one. The physical data for the second HDD is not displayed since the second HDD does not exist. To verify that the second HDD is not present, run **`raid_status -n -v`**:

```
craft@s8730server2>raid_status -n -v
Drive in slot 1 is present
Drive in slot 2 is NOT present
craft@s8730server2>
```

The following is an example of the output for the RAID HDD physical data on an S8730 server equipped with **two** HDDs:

```
craft@dlws8730>raid_status -p -v

Smart Array E200 in Slot 3

  array A (Failed)

    physicaldrive 1:1
      Port: 1l
      Box: 1
      Bay: 1
      Status: OK
      Drive Type: Data Drive
      Interface Type: SAS
      Size: 72 GB
      Rotational Speed: 10000
      Firmware Revision: HPD7
      Serial Number: 3LB1J8BM000009731KUXM
      Model: HP    DG072A8B54
    physicaldrive 1:2
      Port: 1l
      Box: 1
      Bay: 2
      Status: Failed
      Drive Type: Data Drive
      Interface Type: SAS
      Size: 72 MB
      Rotational Speed: 10000
      Firmware Revision: HPD0
      Serial Number: B365P720FCBB0707
      Model: HP    DG072A9BB7
```

raid_status diagnostics

-1 - `raid_status -n` will return **-1** when it is not clear if both hard drives are plugged in. If this occurs, enter **`raid_status -n -v`** or **`raid_status -p`** which displays if both hard drives are present or if one is marked as **Failed**

Failed - If a hard drive is shown as **Failed**, the amber LED on the associated failed hard drive will either be flashing on a regular basis or solidly on. A hard drive may also be marked as **Failed** if it was pulled live.

Interim Recovery Mode - It is possible that a disk is bad or the server only has one HDD plugged into the server. To determine the server HDD state, enter **`raid_status -p -v`** or **`raid_status -n -v`**

If **raid_status -c** is executed and a disk failure exists, the output will indicate the failed disk. The following is an example of the output that would be displayed to show that the disk in bay 2 failed:

```
craft@s8730server2>raid_status -c

Drive in slot 1 is present
Drive in slot 2 NOT sure if present
Log HDD 2 failure
craft@s8730server2>
```

Note:

An unplugged HDD appears as a failed HDD to the RAID controller.

resetipsi

`resetipsi [-a | -b | -c cab#[carrier] | -d | -r | -i interval | -s start time |-t stop time | -F | - S suffix] [-?]`

Use **`resetipsi`** to reset one or more IPSI boards.

resetipsi command options

command	option	description
`resetipsi`	**`-a`**	Reset all IPSI circuit packs.
	`-b`	Reset all standby ipsi boards.
	`-c cab#[carrier]`	Reset a specific IPSI circuit pack.
	`-d`	Display all scheduled resets.
	`-r`	Remove all scheduled resets.
	`-i interval`	Interval in minutes between two resets. Default = 10. Max = 15.
	`-s start time`	Start time for reset in mmddyyyyhh:ii format.
	`-t stop time`	Stop time for reset in mmddyyyyhh:ii format.
	`-F`	Fork background process to do resets.
	`-S suffix`	Suffix of ipsi boards to reset.
	`-?`	Display a description of command options.

resetstbyipsis

Use **`resetsbyipsis`** to reset all standby IPSI boards in the system. This command is especially useful to activate the firmware on all standby IPSIs in a duplicated IPSI system. This command will do nothing if the system is not running or if there are no standby IPSI boards administered.

This command only works on the active server.

CAUTION:

This command has no options. It is executed when the command is entered.

restartcause

Use **restartcause** to see a list of Communication Manager restarts, their causes, and whether or not each restart escalated into a higher initialization. Use **restartcause** to help determine when an interchange or reload took place. Restarts are listed in ascending order of time.

See also display initcauses on page 310.

Example screen for restartcause command

```
init@pilsner1> restartcause
                          RESTART CAUSES for sv-oddie1

     Cause             Action      Escalated    Mode        Time
Interchange-Craft     4 (RELOAD)     yes     Active    06/17  9:17
Initialized           4 (RELOAD)     no      Active    06/21  8:46
Interchange-Craft     4 (RELOAD)     no      Standby   06/27 15:14
Internal Request      1 (WARM)       no      Standby   06/27 15:16
Internal Request      1 (WARM)       no      Standby   06/27 15:16
Interchange-Craft     1 (WARM)       no      Active    06/27 15:34
Interchange-Craft     4 (RELOAD)     no      Standby   06/29 13:20
Internal Request      1 (WARM)       no      Standby   06/29 13:22
Internal Request      1 (WARM)       no      Standby   06/29 13:23
Initialized           4 (RELOAD)     no      Standby   07/01 10:08
Internal Request      1 (WARM)       no      Standby   07/01 10:09
Internal Request      1 (WARM)       no      Standby   07/01 10:10
Initialized           4 (RELOAD)     no      BUSY OUT  07/01 10:35
Internal Request      1 (WARM)       no      Standby   07/01 10:37
Internal Request      1 (WARM)       no      Standby   07/01 10:37
Interchange-Craft     4 (RELOAD)     yes     Active    07/01 10:43
```

restartcause field descriptions

restartcause field descriptions

Field	Description
Cause	The reason for the restart. **Initialized** =System initialization. **Craft request** = A user logged in as **craft** requested the restart and selected the level through an administration session on the server. **Interchange =** A State of Health change caused the arbiter process to initiate the restart. **Interchange-Craft =** An administrative session (`session -i` command, on-demand interchange) caused the arbiter process to initiate the restart. **Internal request** = Software requested the restart, usually in response to a server interchange. Internal request restarts are not initiated in direct response to an error and are non-escalating. **Software request** = Typically, software detected an error and automatically requested a restart.
Action	The level of the restart. **1 (Warm)** = Communication Manager is restarted, and active calls remain up. **2 (Cold)** = Communication Manager is restarted, translations are preserved, and all calls are dropped. **4 (Reload)** = Communication Manager software is completely reloaded. All calls are dropped, the translations are reloaded, and the hardware is reinitialized.
Escalated	Escalated indicates whether the current restart has been escalated (increased in level) from a previous level. Restarts can be automatically or manually escalated to a higher level. For example, if the software detected an error and could not resolve the error by doing a level 1 restart, it would automatically initiate a level 2 restart. In this case, the Restart Causes page shows a **2** in the Action column and a **yes** in the Escalated column.
Mode	State of the server immediately after the interchange, at the time of the restart. Look for a change of mode to help determine when an interchange occurred. l **Active** = Mode of a simplex server and for a duplex server that is the active server. l **Standby** = Mode of a standby server in a duplex configuration l **BUSY OUT =** Mode of a standby server that has been placed out-of-service with a `busyout` command.
Time	The date and time the restart occurred. The restarts display according to when they occur, with the most recent restart appearing at the end of the list.

restartcause error messages

restartcause error messages

error message	description
invalid argument: <argument>	More than one argument was entered on the command line.
No initfile at ./initcause.log or /var/log/defty/initcause.log	The data file is either missing or unreadable (for example, there is no read permission).
restartcause: Error reading initcausefile, error = <error>	The command encountered a problem reading the data file. The file is either ./initcause.log or /var/log/defty/initcause.log.

remaster

`remaster [ -? -u -y ]`

Use **`remaster`** to recover from an aborted data restore after remastering a hard drive.

Use **`remaster -?`** for help.

`Use remaster -u` to undo a remaster command.

`Use remaster -y` to answer yes to all prompts.

Before you use **`remaster`**, you must have:

- a Communication Manager installation CD to be loaded in a CD-ROM drive at bootup
- on **S8300**, a USB CD-ROM drive attached and a Communication Manager installation CD

See *Installing and Upgrading the Avaya S8300 Server (555-234-100)* for information on setting up your connections.

WARNING:
Running **`remaster`** causes the entire hard disk to be re-imaged after the next server reboot. All data will be lost. Backup your data before running **`remaster`**, and use the maintenance web interface “Shutdown Server” link afterward to perform the reboot. The remaster process will begin at the reboot, the hard disk will be reimaged, and there will be no service until a second reboot is performed.

Example screen for remaster command

```
root@tsochawk> remaster

         ==== WARNING =======

Running this command causes the entire hard disk to be re-imaged after the
next server reboot. All data will be lost. Please backup your data before
proceeding, and use the maintenance web interface "Shutdown Server" link
afterward to perform the reboot.

You must have the Avaya CM Installation CD to complete the re-imaging.

Do you want to continue and reimage this hard disk [N/y]? y
Added a6
Added a1
Added RAMa6
Added RAMa1
Added Rebuild

        ******Success ************

        Insert the ACM Installation CD in the
        CDROM drive, and reboot the server to
        reimage the server.

        You can undo this operation by running this
        command with the "-u" option
```

To run `remaster`:

1. Type **`remaster`** at the command prompt.

   The remaster screen appears.

2. Type **`y`** and Enter after the prompt **"Do you want to continue and reimage this hard disk [N/y]?"**

3. Wait for the message: **"You can undo this operation by running this command with the "-u" option"**.

   Note: Use **`remaster -u`** now to stop the remaster process. If you do not use **`remaster -u`**, the next time the server is re-booted the remaster process begins, the hard disk is reimaged, and there is no service until a second re-boot is performed.

4. Open a DOS command window.

5. Perform a "ping -t 192.11.13.6" and leave the session running.

6. Perform a reboot of the server.

   Wait to receive valid ping replies.

7. Telnet back into the services port and follow installation procedures.

rm_download_files

`rm_download_files [file-to-delete]`

`sudo rm_download_files [file-to-delete]`

Use **`rm_download_files`** to add remove files from the /var/home/ftp/pub directory.

`rm_download_files file-to-delete` attempts to delete the specified file from /var/home/ftp/pub. The file must be present in the directory (or a subdirectory) and must alos be a regular file. The file must also be owned by the ftp user in order to prevent others from deleting files saved by other logins.

The susers group logins must use sudo in order to have access to this command since the command requires root permission to run.

rmbpasswd

`rmbpasswd [-f passwd] name`

Use **`rmbpasswd`** to change passwords for remote maintenance board logins. The -f option forces encryption of the password.

rmbuseradd

`rmbuseradd [-u uid] [-o]][-d home] [-p passwd] [-P y|n] [-s shell] name`

Use **`rmbuseradd`** to add remote and local modem and user logins on the remote maintenance board.

rmbuseradd command options

command	option	description
`rmbuseradd`	**`-d home`**	Identify a home directory for a particular login on the remote maintenance board. Default is **`home/`*`login`*** where ***`login`*** is the unique user name.
	`-o`	Create a duplicate User ID.
	`-s shell`	Identify the login shell to use. If not used, the system uses the /bin/sh default.
	`-p passwd`	Set the login password to **`passwd`**. Use this only on automated scripts. This must be an encrypted password as returned by the crypt system call. To manually add or change a password, use **`rmbpasswd`**.
	`-P y/n`	Specify that the login is used for establishing a PPP session through the modem. Default is **n** (non-modem access).
	`-u uid`	Specify a unique User login ID. If not used, the system assigns the next available User ID.

rmbuserdel

Use **`rmbuserdel name`** to delete existing customer-created logins on the remote maintenance board. Craft and rasaccess logins cannot be deleted with **`rmbuserdel`**.

rmbusermod

rmbusermod [-u uid [-o]] [-d home][-p passwd] [-P y|n] [-s shell] [-l new_name] name

Use **rmbusermod** to modify existing logins on the remote maintenance board.

rmbusermod command options

command	option	description
rmbusermod	**-d home**	Identify a home directory for a particular login on the remote maintenance board. Default is **home/*login*** where ***login*** is the unique user name.
	-o	Create a duplicate User ID.
	-s shell	Identify the login shell to use. If not used, the system uses the /bin/sh default.
	-p passwd	Set the login password to **passwd**. Use this only on automated scripts. This must be an encrypted password as returned by the crypt system call. To manually add or change a password, use **rmbpasswd**.
	-P y|n	Specify that the login is used for establishing a PPP session through the modem. Default is **n** (non-modem access).
	-u uid	Specify a unique User login ID. If not used, the system assigns the next available User ID.
	-l new_name	Change the name to **new_name**

rtrenice

Use **rtrenice** to change the current login's priority. Useful, but dangerous on a high occupancy customer switch. Example:

rtrenice -r 99 $$ (as root)

sampcmd [cmd]

Use **sampcmd** to

- log into the remote maintenance board
- run a command on the remote maintenance board from the host

To run a command on the remote maintenance board from the host, enter **sampcmd** and another command. For example, enter **sampcmd date** to see the date reported by the remote maintenance board.

sampdiag

Use **sampdiag** to:

- test the communication path to the remote maintenance board
- perform simple repairs on the server-to-rmb internal connection

Example screen for sampdiag command

```
chintan-8500: sampdiag -v
The SAMP is using the Avaya IP address.
SAMP HW address: 00:0F:29:00:01:5C
SAMP IPaddress: 192.11.13.2
HOST IPaddress: 192.11.13.1
SSH port: 10022
SSH OK
HPI OK
SAMP OK
```

The following fields appear on the **sampdiag** screen.

sampdiag field descriptions

Field	Description
SAMP HWaddress	Shows if a remote maintenance board (rmb) was detected. If no HWaddress was detected, either the ecs.conf file is incorrect or the rmb is not working.
SAMP IP address	l If the IP address cannot be determined, check for problems with the remote maintenance board. l If the IP address is similar to 10.221.248.1(or .2), then an administration step was skipped or failed when the host software was installed. Verify that the remote maintenance board software is the most current.
HOST IP address	If the IP addresses are similar to 10.221.248.1(or .2), then an administration step was skipped or failed when the host software was installed. Verify that the remote maintenance board software is the most current.
SSH HPI	Shows the configuration of HPI and SSH. If both fail and the IP address is reported, the host software may have been administered incorrectly.

sampupdate [filename]

Use **sampupdate *[filename]*** to update the firmware on the remote maintenance board (SAMP, MPC). The filename is the firmware image located in the /var/home/ftp/pub directory. No filename is needed if there is only one file in the directory.

sat

sat [-? | h] [path]

Use **sat** to run a Communication Manager SAT (system access terminal) session. Also use **autosat** and **dsat**.

Use **sat -h or sat -?** to display the help message.

Use **sat path** to use an alternate SAT executable, where **path** is the path to the directory containing the SAT executable.

save_trans

Use **save_trans** to save translations to the active and standby servers. Equivalent to **save translations** on the SAT. This command has no options.

serialnumber

serialnumber [-l | -q | -h | -?]

Use **serialnumber** to see the serial number in the license file, or the serial number detected in the network by the server.

serialnumber command options

command	option	description
serialnumber		Display all serial numbers.
	-l	Report the serial number from the license file.
	-q	Force a direct query of the IPSIs.
	-h or -?	Display command option descriptions.

server

`server [ -i | -if | -c | -b | -r | -q | -o | -? ]`

Use **`server`** to display or change server status on a server, and to see the status and health of each server, including information on:

- duplication
- connectivity status
- shadowing
- status of outstanding major and minor alarms
- how long the servers have been up since the last restart.
- state of health (hardware health, process health, control network health)

server command options

command	option	description
`server`		Display status of active and standby servers
	`-i`	Perform an interchange between active and standby servers.
	`-if`	Perform an interchange immediately with a forced health-override (potentially dangerous).
	`-c`	Continuously display status updates at 1-second intervals.
	`-b`	Busyout this server if it is in standby mode.
	`-r`	Release this server if it is busied-out.
	`-q`	Query the state of this server.
	`-o`	Query the state of the other server.
	`-?`	Display command option descriptions.

Example screen for server command

```
0;init@sv-st2-2:~0;init@sv-st2-2: ~> server
                                SERVER STATUS

                                Cluster ID: 001
                               Duplication: hw
                            Standby Busied? no
                          Standby Refreshed? yes
                          Standby Shadowing: on
                           Duplication Link: up
        Elapsed Time since Init/Interchange: 5d 02:21:30

                 sv-st2-2                                sv-st2-1

             ID: 002 (2)                             ID: 001 (1)
           Mode: Active                            Mode: Standby
   Major Alarms: yes                       Major Alarms: yes
   Minor Alarms: yes                       Minor Alarms: yes
 Control Network: 15 /15 /15             Control Network: 15 /15 /15
 Server Hardware: okay                   Server Hardware: okay
       Processes: okay                         Processes: okay
```

Example screen for server command on SES:

```
craft> server
                                SERVER STATUS

                   myservername

           Mode: Active (In service Primary)
       SIP Role: Home
   Major Alarms: no
   Minor Alarms: yes
Server Hardware: okay
      Processes: okay
```

serverctrl

`serverctrl[-f] [-r resourceID]`

`serverctrl power [ on | off | cycle ]`

`serverctrl reset [ warm | cold ]`

`serverctrl shutdown`

`serverctrl boot timer [ enable | disable | stop ]`

`serverctrl boot load [ default | loadname ]`

Use **`serverctrl`** on the remote maintenance board to see the status of the boot timer on the remote maintenance board.

Use **`serverctrl boot timer disable`** on the remote maintenance board to disable the boot timer on the remote maintenance board when the server is shut down. Disable the boot timer to prevent the remote maintenance board from rebooting the server during server installation or remastering the hard drive.

To access the remote maintenance board CLI to use the commands, plug the services laptop into the remote maintenance board services port, which is the same port as the server services port, and perform the necessary steps to access the remote maintenance board CLI. See Disabling the boot timeout using Linux commands on page 90 of the *Maintenance Procedures for Avaya Aura™ Communication Manager, Media Gateways and Servers (03-300432) (formerly 03-300192)*.

serverctrl command options

command	option	description
`serverctrl`		Display status information.
	`-f`	Force operation, stopping boot timer if it is running.
	`-r resourceID`	
	`power on|off|cycle`	Power on/off/cycle the server.
	`reset warm|cold`	Reset the server (warm or cold).
	`shutdown`	Shutdown the server.
	`boot timer enable|disable| stop`	Enable/disable/stop the boot timer.
	`boot load default|loadname`	Boot using the default or specified load.
	`-?`	Display command option descriptions.

Example screen for serverctrl

```
craft@STA04310083:~$ serverctrl
Power On
Server Operational
Reset Deasserted
Boot Timer Disabled
craft@STA04310083:~$
```

Example screen for serverctrl boot timer disable

```
craft@STA04310083:~$ serverctrl boot timer disable
OK
```

setnic

`setnic -h`

`setnic [-d] -B <interface>`

`setnic [-d] -m <10H|10F|100H|100F|1000H|1000F|AUTO> <interface>`

`setnic [-d] -q <interface>`

Use **`setnic`** to configure Ethernet interface speed, duplex, and autonegotiaion settings on the NIC of a specific server running Communication Manager.

CAUTION:

If you use **`setnic`** to query/set the interface Speed/Duplex settings of an interface, that interface will be reset. Be careful about doing this on an active server.

setnic command options ***1 of 2***

command	option	description
`setnic`	**`-h`**	Display the help message
	`-B`	Boot mode. Invoked from network scripts like ifup
	`-d`	Turn on debug mode

setnic command options ***2 of 2***

command	option	description
	-m	Set <interface> to specified speed/duplex
	-q	Query the configured and current speed/duplex setting for <interface>
	-w	Web option (only update speed settings in config file)

start

`start -a [ -c ]`

`start -s application [-c]`

`start -?`

Use **`start`** to start server applications. A single application or several applications can be specified. Most common usage is **`start -ac`**

start command options

command	option	description
`start`	**`-a`**	Start all applications.
	`-c`	Continuously display status of the application(s) until it is fully running.
	`-s application`	Start a specific application.
	`-?`	Display command options and a list of valid applications.

statapp

`statapp [-c# [-D | -U]] [-d] [-l [#]] [-p] [-w] [-b] [-s app1 [,app2,...]] [-v] [-?]`

Use **`statapp`** to see the status of server applications.

statapp command options ***1 of 2***

command	option	description
`statapp`		List all server applications and their status (UP, DOWN, WATCHED)
	`-c#`	Continuous update of output every # (1-9) seconds.
	`-D`	Exit continuous update when all processes are DOWN.
	`-U`	Exit continuous update when all processes are UP.
	`-d`	List applications that are down but expected to be up.
	`-l`	List all possible names of applications and services.
	`-l#`	List the status of all possible applications and services. Show applications at level # (0-9) and below. Default is 0.
		1 of 2

statapp command options ***2 of 2***

command	option	description
	-p	List the names and status of processes associated with applications.
	-w	Also list applications with status WATCHED by watchdog.
	-b	Brief output status - application name and UP/DOWN status
	-s app#	List the status of the named applications. **-l** lists all possible names.
	-v	Show command version.
	-?	See a description of command options.
		2 of 2

Example screen for statapp command

```
craft@sv-st2-1> statapp
Watchdog       19/19 UP
TraceLogger     0/ 0 UP
ENV             1/ 1 UP
LicenseServer   3/ 3 UP
SME             7/ 7 UP
MasterAgent     4/ 4 UP
MIB2Agent       1/ 1 UP
MVSubAgent      1/ 1 UP
LoadAgent       1/ 1 UP
FPAgent         1/ 1 UP
INADSAlarmAgen  1/ 1 UP
GMM             4/ 4 UP
SNMPManager     1/ 1 UP
arbiter         2/ 2 UP
filesyncd       8/ 8 UP
dupmgr          1/ 1 UP
MCD             1/ 1 UP
CommunicaMgr   85/85 UP
```

Example screen for statapp command on SES:

```
craft> statapp
Watchdog       13/13 UP
ModemMtty       1/ 1 UP
TraceLogger     3/ 3 UP
SME             7/ 7 UP
INADSAlarmAgen  1/ 1 UP
GMM             4/ 4 UP
SNMPManager     1/ 1 UP
ImLogger        3/ 3 UP
SipServer      46/46 UP
CCSTrapAgent    1/ 1 UP
mon             1/ 1 UP
MtceMgr         3/ 3 UP
drbdEventSvc    1/ 1 UP
```

statuslicense

`statuslicense [-e] [-a application] [-f [ # | field] ] [-?hv]`

Use **`statuslicense`** to see license information.

statuslicense command options

command	option	description
`statuslicense`		Display the license status.
	`-e`	Display Allocation License Status and Expiration Date if EWL is enabled
	`-a application`	Display the License information for Communication Manager (CommunicaMgr), AUDIX, CORNERSTONE, or SNMP. Default is CommunicaMgr.
	`-f [# | name]`	See license information a feature field number or name. 0=false, 1=true. Other values = error.
	`-v`	See more detailed (verbose) license file information, including the serial number and location of the IPSI
	`-h or -?`	Display command option descriptions.

Example screen for statuslicense command

```
craft> statuslicense -v
CommunicaMgr License Mode: Normal
checking application CommunicaMgr version R015x.00.0.824.0
Network used for License: Carrier 02a
License Serial Number is 03J204718661 on Carrier 02a
RFA Module ID is 3
RFA System ID is 65100
craft>
```

stop

stop [-a | -b | -c | -f | -h | -i | -n | -r | -S | -s]

Use **stop** to stop applications. The most common use is **stop -acfn**.

stop command options

command	option	description
stop	**-a**	Stop all applications.
	-b	Tell CMO to stop monitoring this virtual machine. Only applicable for vm_blade.
	-c	Continually display system status until all applications are DOWN.
	-f	Override any warnings or errors encountered with the **-a, -h**, **-r** and **-s** options.
	-h	Stop all applications and execute a processor halt.
	-i	Immediately stop all applications without allowing them to clean up.
	-n	Do not prompt before executing this command
	-r	Stop all applications and execute a processor reboot.
	-S	Wait until all applications are stopped. Normally, the **stop** command returns when the **stop** request has been received by the system.
	-s app	Stop a specific application. Use **stop -?** for a full list.
	-?	Display a description of command options.

swversion

swversion [-r [root-dir] [-v | -l | -R | -a]] [-?]

Use **swversion** to see the current software version of Communication Manager running on the switch, including patches, and the last time that translations were saved. You must be sroot to run portions of **swversion**.

swversion command options

command	option	description
swversion		Display a subset of the software version values.
	-r	Use root2 as the base path.
	-r root-dir	Use the specified directory as the base path.
	-v	Display the software version string of Communication Manager only.
	-l	Display the load string of Communication Manager only.
	-R	Display the release string only.
	-a	Display all fields on the swversion screen.
	-?	Display a description of command options.

Example screen for swversion command

```
swversion
 Operating system:     Linux 2.6.11-AV20 i686 i686
            Built:     Jul 3 10:44 2007

           Contains:     00.0.824.0
      CM Reports as:     R015x.00.0.824.0
  CM Release String:     S8720-015-00.0.824.0

UPDATES:
                  There are no updates on the system

CM Translation saved:     2007-10-29  12:11:02

CM License Installed:     2007-10-24  15:48:53

    CM Memory Config:     Extra Large
```

Example screen for swversion command on SES:

```
craft> swversion
 Operating system:     Linux 2.6.11-AV20 i686 i686
            Built:     Oct 4 15:37 2007

      Release String:     SES-5.0.0.0-825.11
       Software Load:     SES05.0-00.0.825.11
Server BIOS Build ID:     KEEH24AUS
     SAMP Version ID:     AVAYA_S8500_2_1_SP@

UPDATES:
                  There are no updates on the system
```

sudo

Use **sudo**, from a login that is not root, to temporarily run some commands as root.

systat

systat [-b] [-c# [-D | -U]] [-d] [-l#] [-p] [-w] [-s app1 [,app2, . . .]] [-v]

Use **systat** to see an update of the processes that are running on Communication Manager.

systat command options ***1 of 2***

command	option	description
systat	**-b**	Brief output status, show application name and UP/DOWN/OFF status
	-c#	Continuous update of output every # (1-9) seconds.
	-D	Exit continuous update when all processes are DOWN.
	-U	Exit continuous update when all processes are UP.
	-d	List applications that are down but expected to be up.
	-l	List all possible names of applications and services.
	-l#	List the status of all possible applications and services. Show applications at level # (0-9) and below. Default is 0.
	-p	List the names and status of processes associated with applications.
		1 of 2

systat command options *2 of 2*

command	option	description
	`-w`	Also list applications with status WATCHED by watchdog.
	`-s app`	List the status of the named applications. `-l` gives all possible names.
	`-v`	Show command version
	`-?`	See a description of command options.
		2 of 2

testcustalm

Use **`testcustalm`** to generate a customer-alarming test SNMP trap. No arguments are required. This command tests the health of alarm processing between the system and the receiver.

testdupboard

`testdupboard [-s | -l | -t arg ][-?]`

Use **`testdupboard`** to perform maintenance on the duplication memory card (DAJ1/DAL1/DAL2) on the **S8700 series** servers.

testdupboard command options

command	option	option description
`testdupboard`		Run the Read Error Register test (read_err_reg)
	`-s`	Run the Read Error Register test (read_err_reg) (default).
	`-l`	Run the Read Error Register test and the Duplication Memory Board Local Loop test (localloop).
	`-t arg`	Specify which test to perform: **`read_err_reg`** **`localloop`**
	`-?`	Display command option descriptions.

testinads

Use **testinads** to test the connectivity between the system and INADS. **testinads** generates a test alarm, sends it to INADS, and waits for a response. No command options are required.

To run **testinads** directly on the remote maintenance board, enter

```
sudo /opt/alarming/bin/testinads
```

testled

testled [-a | -d | -s | -?]

Use **testled** to test the LEDs in the server.

testled command options

command	option	option description
testled	**-a**	Test the LEDs on the server and the duplication memory card.
	-d	Test the Trans LED on the duplication memory card.
	-s	Test the LEDs on the server.
	-?	Display command option descriptions.

testmodem

testmodem [-s | -l] [-?]

testmodem [-t [reset_usb | handshake | offhook | looparound]

testmodem provides the ability to reset the modem and perform offhook, handshake, and looparound tests. The looparound test dials out to INADS and waits for a response.

testmodem command options ***1 of 2***

command	option	option description
testmodem		Perform the handshake and offhook tests.
	-s	Perform the handshake and offhook tests.
	-l	Perform the handshake, offhook, and looparound test to INADS.
	-t reset_usb	Reset the modem.

testmodem command options ***2 of 2***

command	option	option description
	`-t handshake`	Run only the handshake test.
	`-t offhook`	Run only the offhook test.
	`-t looparound`	Run only the looparound test.
	`-?`	Display command option descriptions.

Example screen for testmodem:

```
craft> testmodem


TEST        RESULT        DESCRIPTION

----        ------        ------------
handshake   PASS
offhook     PASS
```

tlscertmanage

`tlscertmanage [ -l ] [ -i file ] [ -r # ] [ -help ]`

The **`tlscertmanage`** (transport layer security certificate management) command facilitates loading a third-party trusted certificate into the Communication Manager repository for use the next time Communication Manager restarts.

tlscertmanage command options

command	option	option description
`tlscertmanage`	**`-l`**	List all CA (Certificate Authority) certificates in all-ca.crt, along with their corresponding certificate files and hash links on the system.
	`-i` ***`file`***	Install a Certificate Authority into Communication Manager's trusted certificate repository on disk. The command copies the certificate file from the allowed location to /etc/opt/ecs/certs/CA, concatenates the data in the certificate file into the all-ca.crt file, and creates a link to the newly-copied certificate filename with the certificate's hash. The full path to the file must be specified, e.g. tlscertmanage -i /var/home/ftp/pub/newCA.crt
	`-r #`	Remove a CA (specify # 1-8) from all-ca.crt, along with its corresponding file and hash link from the /etc/opt/ecs/certs/CA directory. **CAUTION:** Applications that depend on certificates will not operate properly if the certificates are removed.
	`-help`	Display the help information for this command

CA certificates are now installed from the file system, rather than being embedded into the telephony application. When Communication Manager is upgraded to 5.0 from an earlier release, the four (4) original Avaya CA certificates are installed.

The administrator may then choose to modify the list of trusted CA certificates used by the Communication Manager telephony application in order to support third-party SES identity certificates.

To change the Communication Manager telephony application's CA certificates:

1. Use **`tlscertmanage`** to modify the list using the options described above
2. Restart the Communication Manager telephony application (**`stop -afc, start -ac`** from the root-level command line)

To identify the latest CA certificates installed in the telephony application, review the Communication Manager log and locate the last section of messages containing the phrase "gip/tls: Loaded trusted CA cert". Each CA certificate installed into the telephony application is recorded in the Communication Manager log, which is viewable using the command **vilog.**

If the telephony application fails to install any or all specified CA certificates, the Communication Manager log will contain one or more of the following error messages (where x is the Communication Manager release number):

> CMx_proc_err: pro=7204, err=201, seq=22145,da1=<n>,da2=<max> - This indicates that the number of CA certificates specified exceeds the number supported by the telephony application. <n> is the overlimit value and <max> is the maximum number of certificates supported. To resolve, use **tlscertmanage** to edit the list, then restart the telephony application.
>
> CMx_proc_err: pro=7204, err=201, seq=22146,da1=<n>,da2=0 - This indicates that a failure occurred when attempting to install the n'th CA certificate into the telephony application. <n> is the index of the CA certificate list item that failed to install. To resolve, use **tlscertmanage** to remove, then re-add the certificate. Once re-added, restart the telephony application.
>
> CMx_proc_err: pro=7204, err=201, seq=22147,da1=0,da2=0 - This indicates that the CA certificate list file, /etc/opt/ecs/certs/CA/all-ca.crt, cannot be opened. This may be due to a user privilege issue or a missing/corrupted file. Use **tlscertmanage** to reconstruct the CA certificate list, then restart the telephony application.

tlscertmanage informs the administrator upon successfully displaying, adding, or removing CA certificate list entries, and notes that a restart of the telephony application is required if the list has changed. It prompts for confirmation before deleting a CA entry and associated CA files from the file system. It returns a warning message if the CA certificate list is empty.

topsting

`topsting [ -e ] [ -C procname] [-p pid] [-d directory] filename`

Use **`topsting`** to pull information from a specific mini-core dump, based on the mini-core dump filename. Mini-core dump files are located in /var/log/defty/dumps, and are created after traps or buffer exhaustion in the system.

topsting command options

command	option	option description
`topsting`	**`-e`**	Generate abbreviated core files for all process
	`-C procname`	Generate abbreviated core files for a specific procname. This option can be repeated for multiple processes.
	`-P pid`	Generate abbreviated core files for process id (PID). THis option can be repeated for multiple processes.
	`-d directory`	The directory where abbreviated core files are to be placed. Default is the current directory.
	`-p path`	**`path`** contains a scolon-separated list of directory paths used to locate the exec_file and any shared libraries. An example would be "-p $MYPJ/_mipslx.O:$BASEPJ/_mipslx.O"
	`-?`	See a description of command options.
	`filename`	Name of the mini-coredump file.

uname

`uname [ -a ] [ -help ]`

Use **`uname -a`** to display all system information, including the kernel and the node name.

Use **`uname -a`** to display all system information, including the kernel and the node name.

unlocktrans

Use **`unlocktrans`** to unlock the “locked” translations and allow successful translation saves.

unused_login_audit

Use **`unused_login_audit`** to lock logins after a period of non-use.

update_activate

Use **update_activate** to activate a previously unpacked update on the server. Use **update_activate -h** to see the command options.

update_deactivate

Use **update_deactivate** to deactivate a previously activated update on the server. Use **update_deactivate -h** to see the command options.

update_info

Use **update_info** <***update-id***> to see information about a specified software update that is already installed. Use **update_info** -h to see the command options.

update_remove

Use **update_remove** <***update-id***> to permanently remove a “deactivated” update from the server.

Use **update_remove -a** to remove all updates.

Use **update_remove** -h to see the command options and additional information.

Communication Manager must be stopped for **update_remove** to complete successfully.

update_show

Use **update_show** to see information about a specified software update.

Use **update_show -a** to see activated updates only.

Use **update_show -u** to see unpacked updates only.

Use **update_show -h** to see the help information.

update_unpack

Use **update_unpack** to unpack the software update. This command is the step prior to “activating” a software update.

userlock

`userlock [-t tries] [-o lockout] enable`

`userlock disable`

`userlock settings`

`userlock [-u login] unlock`

`userlock [-u login] status`

`userlock -? | -h`

Use **`userlock`** to configure the security software used to lock out login accounts where too many unsuccessful login attempts have occurred. This command also unlocks accounts that have been locked out by the security software.

userlock command options

command	option	description
`userlock`	**`-t tries`**	The number of sequential failed login attempts when the account becomes locked out. The default is 5.
	`-o lockout`	The number of seconds to lock out an account. The default is 600 seconds.
	`enable`	Enable the security software that locks out accounts.
	`disable`	Disable the security software that locks out accounts. The current settings of **`tries`** and **`lockout`** are preserved upon the next **`enable.`**
	`settings`	Display if the feature is enabled or not, the value for the number of unsuccessful login attempts, and for how long a login should be locked out.
	`unlock`	Unlock all locked-out accounts, or just the specified login if **`-u login`** is used.
	`status`	Display the lockout status of all accounts, or just the specified login if **`-u login`** is used.
	`-u login`	Unlock or display status on this login only.
	`-? or -h`	Display the help message.

vilog

Use **vilog** to run the vi editor and to open current Communication Manager log files.

Use **vilog -?** to see a description of all **vilog** command options.

webssl

webssl [-o] [-d [-r]] [-r] [-h]

webssl provides the ability to generate server certificates using Avaya certificate authority (CA) certificate, display the CA certificate, and reset to the default server certificate.

With no options, **webssl** creates the open ssl certificate using the hostname (if it contains the domain name) or its IP address.

webssl command options

command	option	option description
webssl		Create the open SSL certificate using the hostname (if it contains the domain name) or its IP address.
	-o	Display the root certificate
	-d	Set the openssl certificate to the default.
	-r	Restart the web server daemon.
	-h	Display the command option descriptions.

wlog

Use **wlog** to run the vi editor and to open current Communication Manager log files.

Use **wlog -?** to see a description of all **wlog** command options.

xlnrecovery

xlnrecovery [-d] [-i] [-?]

xlnrecovery provides the ability to display or set the translation recovery strategy stored in the system configuration files. There are currently two supported translation recovery strategies: immediate and deferred. The recovery strategy is applied during a system restart when Communication Manager detects that the restart has interrupted a translation transaction and has left the translation corrupted.

The "immediate" recovery strategy escalates the current system restart to a higher restart level that forces translation to be read from the disk to eliminate the corruption. This is the default strategy.

The "deferred" strategy just sets the translation corruption flag and continues execution of the current restart level. Setting the corruption flag prevents the corrupted translation from being saved to the disk file. At some later time, a system restart can be executed to force translation to be read from the disk to eliminate the corruption. This strategy allows the user to select a convenient time for the system restart.

xlnrecovery command options

command	option	option description
`xlnrecovery`		Display the current translation recovery strategy.
	`-d`	Set the translation recovery strategy to "deferred".
	`-i`	Set the translation recovery strategy to "immediate".
	`-?`	Display the command option descriptions.

Chapter 3: IPSI Commands

This chapter describes the command functionality available to users of the TN2312 IPSI (IP Server Interface) circuit pack. The IPSI provides an IP interface to S87xx servers and provide PKTINT, Archangel and Tone/Clock functionality in a port network.

Access IPSI functionality locally via a laptop PC connected to the IPSI's Ethernet services port, which connects to the IPSI via the Control Network. The IPSI hosts the ipadmin firmware application, which may be accessed from the laptop or the server. The ipadmin application permits IPSI IP operating parameters to be changed, grants remote access to the server from the laptop, and allows the execution of several IPSI and network diagnostics.

IPSI command firmware components

Command Interpreter

At the core of ipadmin is a command interpreter, which features a command-line interface (CLI), menus, and command help. See Commands processed by the ipadmin command interpreter on page 792.

The command interpreter initializes in an unprivileged mode ([IPSI]:) prompt when a user connects to the IPSI via telnet. The user may telnet to another host, including the active S87xx server, which has its own security, and determine the IPSI firmware version, or enter into privileged mode ([IPADMIN]:) prompt via the **`ipsilogin`** command.

In a privileged mode, the user must enter a valid login ID and password when prompted. In privileged mode, the user may query or set IPSI operating parameters, execute network diagnostics, and observe the IP addresses of the servers.

IPSI / Network Diagnostics

Authenticated IPSI users may execute diagnostics, including ping, telnet, show arp, show control route, traceroute, show internet stats and several others. Commands to reset the IPSI or to disable its IP interface are also available to authenticated users.

Query / Display Server IP Addresses

Server IP addresses are hidden from unprivileged users - even the IPSI telnet client suppresses the remote host IP address in its traditional “Trying <ipaddr>...” message, and other messages that reveal the IP address of the server. If the user authenticates, the server IP addresses, which are provided by the IPSI SIM (Server Interface Module) firmware, are displayed (if known) when the IPSI telnet command is issued without specifying an IP address.

IPSI Clock

The IPSI clock (a tick count-driven firmware data structure), which is used to timestamp debug messages, is synchronized with the Stingray server's clock via SNTP (Simple Network Time Protocol - the preferred method) or may be set manually via ipadmin commands. See [IPSICLOCK] for IPSI clock and clock synchronization details.

IPSI user access commands

Use access commands to connect to the IPSI ipadmin application:

- telnet on page 802
- exit (or quit) on page 792
- logout on page 793

Basic IPSI ipadmin commands

Any ipadmin user may execute Basic IPSI ipadmin commands. All other commands require that the user authenticate.

- exit (or quit) on page 792
- help (or ?) on page 793
- ipsilogin on page 793
- show firmware version on page 798
- show servers on page 800
- telnet on page 802

Basic diagnostic commands

These are the most commonly used IPSI and network diagnostic commands.

- reset on page 793
- show control interface on page 798
- show control stats on page 798
- ping on page 793

Control Network Interface Configuration commands

Use Control Network Interface Configuration commands to manually configure an IPSI. These commands configure the IPSI's control network interface operating parameters. Typically, the S87xx server sets the IPSI's IP address, subnet mask, and default gateway via DHCP.

CAUTION:
Exercise caution when issuing this command, especially from a remote platform. If improper IP operating parameters are issued, the IPSI may need to be reset, or even removed and reinserted, to recover.

- set control interface on page 794
- set control gateway on page 794

Additional IPSI / network diagnostic commands

Most of the following diagnostic utilities were derived from VxWorks.

- show arp on page 798
- show host on page 798
- show network stats on page 799
- show internet stats on page 799
- show ip stats on page 799
- show route on page 800
- show route stats on page 800
- show tcp stats on page 801
- traceroute on page 802

Ethernet services port configuration commands

Ethernet Services Port Configuration commands configure (or query) the Ethernet services port IP operating parameters. They appear in the authorized users' menu because they will be used by services. These commands are only for use in special circumstances.

CAUTION:
Exercise caution when issuing this command. If improper IP operating parameters are issued, the services interface may be rendered unusable with the standard services laptop PC configuration.

- set services interface on page 796
- set services gateway on page 796
- set port negotiation on page 795
- set port speed on page 796
- set port duplex on page 795
- set port flowcontrol on page 795
- show port on page 799
- show services interface on page 800
- show services stats on page 800

Commands processed by the ipadmin command interpreter

The following information is an alphabetical list of command-line-interface commands that are processed by the ipadmin command interpreter on the IPSI circuit pack.

exit (or quit)

Exit ipadmin, end telnet session or return to shell.

help (or ?)

help (or ?)

Display a context-sensitive list of available commands at the current level if a command is not specified. If a command name accompanies 'help', the help for that command is printed with a brief description.

An ipadmin user may enter **help**, **help [<command> [<sub-command>]]** to get a list of available commands, or to get more detailed help for a command. For example, typing **show help** will instruct ipadmin to display all legal commands that pertain to the literal show. The help is context-sensitive; a user must authenticate to be able to gain access to the privileged commands.

ipsilogin

ipsilogin

Prompts for a login ID and password. If these are entered correctly, the user may access the IPSI administrative and diagnostic commands.

logout

logout

Disconnect from the IPSI ipadmin application.

ping

ping <ipaddr> [numpackets]

Gets the target host IP address from the user at the command line. The user may elect to send from 1 to 255 data packets to the specified host by indicating the number of packets at the command line. Verifies that a remote host is reachable by sending ICMP echo request packets and waiting for replies. If the number of packets to send is not indicated on the command line, this command will send five data packets to the target host. See the ping() description in [VXWREF] for more information.

reset

reset

Causes the IPSI to immediately reset.

set control gateway

`set control gateway <gateway>`

CAUTION:

Exercise caution when issuing **`set control gateway`**, especially from a remote platform. If improper IP operating parameters are issued, the IPSI may need to be reset, or even removed and reinserted, to recover.

Gets the control network default gateway value from the user at the command line. If the default gateway value format is valid, it is applied to the control network IP interface. Note: The default gateway is where datagrams are routed when there is no specific routing table entry available for the destination IP network or host. This control network interface setting will take effect upon exiting IPADMIN.

set control interface

`set control interface <ipaddr><netmask>`

CAUTION:

Exercise caution when issuing **`set control interface`**, especially from a remote platform. If improper IP operating parameters are issued, the IPSI may need to be reset, or even removed and reinserted, to recover.

Gets the IP address and subnetmask from the user at the command line. If the address is in valid format, it is applied to the control network IP interface. “IP<blank>” will be written to the faceplate LED display; this indicates at a glance that the IPSI IP address has been set manually. If the command fails, an error message is written to standard output, the control network IP interface will be disabled, and “A00” is written to the faceplate LED display; this indicates at a glance that the IPSI IP interface has been disabled. These control network interface settings will take effect upon exiting IPADMIN.

set diffserv

`set diffserv <value>`

Sets and stores the diffserv value in flash memory.

set port duplex

`set port duplex < port number > {half | full}`

CAUTION:

Exercise caution when issuing **`set port duplex`**. If improper IP operating parameters are issued, the services interface may be rendered unusable with the standard services laptop PC configuration.

Configures the duplex mode of a 10/100Base-T port. You can configure the 10/100Base-T port. You can configure the duplex mode to either Half or Full duplex. If auto negotiation is enabled for such ports, the port's duplex mode is determined by auto negotiation, overriding any value specified with this command. If auto negotiation is disabled, the speed configured with this command will take effect.

set port flowcontrol

`set port flowcontrol < port number > {receive | transmit } {on | off}`

CAUTION:

Exercise caution when issuing **`set port flowcontrol`**. If improper IP operating parameters are issued, the services interface may be rendered unusable with the standard services laptop PC configuration.

Enables/disables IEEE 802.3 flow control for a full duplex port. If auto negotiation is enabled, the flow control configured by this command will be advertised as during auto negotiation. After auto negotiation, flow control remains enabled only if it is negotiated between the link partners. If auto negotiation is disabled, flow control will only be enabled if the port is set to full duplex operation. Currently only receive flow control is available.

set port negotiation

`set port negotiation <port number> {enable | disable}`

CAUTION:

Exercise caution when issuing **`set port negotiation`**. If improper IP operating parameters are issued, the services interface may be rendered unusable with the standard services laptop PC configuration.

Enables or disables auto negotiation on a port. For 10/100Base-T ports auto negotiation determines the speed duplex mode. The set port flowcontrol command affects the advertisement of flow control during auto negotiation.

set port speed

`set port speed < port number > {10MB | 100MB}`

CAUTION:

Exercise caution when issuing **`set port speed`**. If improper IP operating parameters are issued, the services interface may be rendered unusable with the standard services laptop PC configuration.

Configures the speed of a 10/100Base-T port. You can configure the speed to either 10 Mbps or 100 Mbps. If auto negotiation mode is enabled for such ports, the port's speed is determined by auto negotiation, overriding any value specified with this command. If auto negotiation is disabled, the speed configured with this command will take effect.

set services interface

`set services interface <ipaddr> <netmask>`

CAUTION:

Exercise caution when issuing **`set services interface`**. If improper IP operating parameters are issued, the services interface may be rendered unusable with the standard services laptop PC configuration.

Gets the services port IP interface address and subnet mask from the user at the command line. If the address format is valid, it is applied to the services port IP interface upon exiting IPADMIN. If the command fails, an error message is written to standard output.

set services gateway

`set services gateway <gateway>`

CAUTION:

Exercise caution when issuing **`set services gateway`**. If improper IP operating parameters are issued, the services interface may be rendered unusable with the standard services laptop PC configuration.

Gets the services port gateway value from the user at the command line. If the gateway value is valid, it is (at the time of this writing) written into FLASH memory, but is not applied to the services port IP interface; it is reserved for a possible future use. Note: The services port gateway is typically the same value as the IP address of the services laptop PC. This is not the same gateway described under the set gateway command description.

set time slot occupancy notification

set time slot occupancy notification

set fault-thresholds timeslot { none | <% *upper-threshold*> <%*lower-threshold*> }

where,

- The % upper-threshold range is 1–100. The default value of the range is 90.
- The % lower-threshold range is 0–99. The default value of the range is 85.

Sets and clears the time slot occupancy rate at which an SNMP trap is generated.

set vlan priority

set vlan priority <level>

Sets vlan priority level to specified level and stores it in flash memory.

set vlan tag

set vlan tag {on | off}

Sets vlan tagging on/off and stores the specified vlan tagging switch, on/off, in flash memory.

show arp

Displays the current Internet-to-Ethernet address mapping in the ARP table.

show control interface

Displays several IPSI control network interface status indicators, including the IP address, subnet mask, default gateway, and the IP addressing mode (DHCP or manual)

show control stats

Displays IP operating statistics associated with IPSI control network interface. Displayed data includes the IP and MAC addresses, number of packets sent and received, number of input and output errors, and flags (loopback, promiscuous, ARP, etc.).

show firmware version

Displays the IPSI application firmware version and related information, including the build time and workspace name.

show host

show host

Prints a list of remote hosts, along with their Internet addresses and aliases.

show internet stats

`show internet stats`

CAUTION:

Exercise caution when issuing **`show internet stats`**. If improper IP operating parameters are issued, the services interface may be rendered unusable with the standard services laptop PC configuration.

Displays a list of all active Internet protocol sockets in a format similar to the Unix netstat command.

show ip stats

`show ip stats`

Displays detailed statistics for the IP protocol. See the ipstatShow() description in [VXWREF] for details.

show network stats

`show network stats`

Displays statistics for all three attached network interfaces. Unit number 1 is the control network interface, unit number 2 is the services port interface, and unit number 3 is the packet bus interface.

show port

`show port < port number >`

CAUTION:

Exercise caution when issuing **`show port`**. If improper IP operating parameters are issued, the services interface may be rendered unusable with the standard services laptop PC configuration.

Displays link indication, speed, duplex, and auto negotiation of a specified port.

show qos

`show qos`

Displays current and future vlan and diffserv parameters stored in flash memory. The future vlan and diffserv parameters, if applicable, is stored after the next reset.

show route

`show route`

Displays the current routing information contained in the routing table for all three interfaces (control network, services port, and packet bus).

show route stats

`show route stats`

Displays routing statistics. See the routestatShow() description in [VXWREF] for more information.

show servers

`show servers`

Displays the IP addresses of the active and standby servers.

show services interface

`show services interface`

CAUTION:

Exercise caution when issuing **`show services interface`**. If improper IP operating parameters are issued, the services interface may be rendered unusable with the standard services laptop PC configuration.

Displays several IPSI services interface status indicators, including the IP address, subnet mask, and default gateway.

show services stats

`show services stats`

CAUTION:

Exercise caution when issuing **`show services stats`**. If improper IP operating parameters are issued, the services interface may be rendered unusable with the standard services laptop PC configuration.

Displays IP operating statistics associated with IPSI services interface. Displayed data includes the IP and MAC addresses, number of packets sent and received, number of input and output errors, and flags (loopback, promiscuous, ARP, etc.).

show tcp stats

`show tcp stats`

Displays detailed statistics for the TCP protocol.

ssh-keygen

S8700 series | S8500

`ssh-keygen`

Use **`ssh-keygen`** (IPSI-CLI command) to generate new SSH dynamic host keys on the IPSI circuit pack. Before you reset the dynamic host keys with **`reset ssh-keygen`**, use **`busyout board`** at the SAT to busyout the IPSI circuit pack.

Dynamic host keys

Dynamic keys are inherently more secure than static keys because:

- If static keys for one circuit pack are compromised, all circuit packs are compromised.
- The probability of compromise is reduced when each circuit pack has its own dynamic key.
- Users can change dynamic keys at any time.

Dynamic host keys include:

- IP address
- Host name
- Firmware

Public key exchange

TN circuit packs support dynamic host keys. Because clients have the server's public key information stored on them, when the server generates a new public/private key pair (which happens the first time the board initializes or when the user decides), the client prompts the user to accept the key when logging into the server. This is to make the client user aware that the server's public key is not what it used to be and this may, but not necessarily, imply a rogue server.

A technician encountering a situation where the server's public key is not what it used to be should determine if the server's keys were changed since the last servicing.

- If they were, the technician should continue login.
- If not, there is a security issue, and the technician should notify the appropriate personnel.

telnet

`telnet <ipaddr>`

Connects user to ipadmin, [IPSI]: prompt

Connects to the specified server via the telnet protocol on TCP port 23. User may access the server, or authenticate to run administrative and diagnostic commands. If the user authenticates, the prompt is changed to [IPADMIN].

If the user connects to the shell via telnet, he or she may launch ipadmin from the shell prompt. In this case, the ipadmin exit (or quit) command will return the user to the shell prompt. The user must then enter logout to disconnect.

Any ipadmin user may telnet to the active server via the telnet command. He or she will have to contend with the server's security. See [IPSIACCESS] for details regarding ipadmin, and server access via telnet.

traceroute

`traceroute <ipaddr>`

CAUTION:

Exercise caution when issuing this command. If improper IP operating parameters are issued, the services interface may be rendered unusable with the standard services laptop PC configuration.

Uses ICMP messages to verify each segment along a path to a remote host.

Chapter 4: SAT Command Parameters

This chapter lists Communication Manager SAT interface translation screen titles that are used primarily for administrative tasks. These screens are most often accessed by command actions such as **`add`**, **`change`**, and **`remove`**. The tables contains parameter descriptions of each command.

To access the screens, enter text exactly as shown at the SAT, or an abbreviated form of the word may be entered. MAX is the maximum number available in your system configuration. Enter the proper variable for your system when *variable font* appears. For detailed information on the screens listed, see the *Administering Avaya Aura™ Communication Manager (03-300509)*.

Brackets [ ] indicate that the qualifier is optional.

For additional command information, see *Avaya Aura™ Communication Manager Reports (555-233-505).*

Administration Screen Reference

AAR and ARS Digit Analysis Table

Action/Object	Qualifier
change aar analysis	*digits 0 to 9* | * | *x* | X [location (*n* | all)] [min *n*]
change ars analysis	*digits 0 to 9* | * | *x* | X [location (*n* | all)] [min n]
display aar analysis	*digits 0 to 9* | * | *x* | X [location (*n*| all)] [min *n*] [schedule]
display ars analysis	*digits 0 to 9* | * | *x* | X [location (*n* | all)] [min n] [schedule]
list aar analysis	[start string] [route (n | r1-r32 | p1-p2000)] [location (*n* | all)] [node *n*] [to-node *n*] [count *n*] [schedule]
list ars analysis	[start string] [route (*n* | r1-r32 | p1-p2000)] [location (*n* | all)] [node *n*] [to-node *n*] [count *n*] [schedule]
list aar route-chosen	dialed number [partition *n*] [schedule]
list ars route-chosen	dialed number [location (*n* | all)] [partition *n*] [schedule]

AAR and ARS Digit Conversion Table

Action/Object	Qualifier
change aar digit-conversion	*digits 0 to 9* | * | *x* | X [location (*n* | all)]
change ars digit-conversion	*digits 0 to 9* | * | *x* | X [location (*n* | all)]
display aar digit-conversion	*digits 0 to 9* | * | *x* | X [schedule]
display ars digit-conversion	*digits 0 to 9* | * | *x* | X [location (*n* | all)] [schedule]
list aar digit-conversion	[start *matching pattern*] [count *n*] [location (*n* | all)] [schedule]
list ars digit-conversion	[start *matching pattern*] [count *n*] [location (*n* | all)] [schedule]

Abbreviated Dialing Lists

Action/Object	Qualifier
add abbreviated-dialing enhanced	*dial code first digit(s)* (3 digits 0-9 | 4 digits 00-99) [list 1 | list 2]
change abbreviated-dialing enhanced	*dial code first digit(s)* (3 digits 0-9 | 4 digits 00-99) [list 1 | list 2]
display abbreviated-dialing enhanced	*dial code first digit(s)* (3 digits 0-9 | 4 digits 00-99) [schedule]
remove abbreviated-dialing enhanced	*dial code first digit(s)* (3 digits 0-9 | 4 digits 00-99) [list 1 | list 2]

Action/Object	Qualifier
add abbreviated-dialing group	*n* | next
change abbreviated-dialing group	*n*
display abbreviated-dialing group	*n* [schedule]
list abbreviated-dialing group	[number n] [to - number *n*] [count *n*] [schedule]
remove abbreviated-dialing group	*n*

Action/Object	Qualifier
change abbreviated-dialing personal	*extension* with personal list and list (*1-3*)
display abbreviated-dialing personal	*extension* with personal list and list (*1-3*) [schedule]
list abbreviated-dialing personal	[ext *n*] [to-ext *n*] [count *n*] [schedule]

Action/Object	Qualifier
add abbreviated-dialing system	
change abbreviated-dialing system	
display abbreviated-dialing system	[schedule]
remove abbreviated-dialing system	

Action/Object	Qualifier
add abbreviated-dialing 7103A-buttons	
change abbreviated-dialing 7103A-buttons	
display abbreviated-dialing 7103A-buttons	[schedule]
remove abbreviated-dialing 7103A-buttons	

Access Endpoint

Action/Object	Qualifier
add access-endpoint	*extension* | next
change access-endpoint	*extension*
display access-endpoint	*extension* [schedule]
duplicate access-endpoint	*extension*
remove access-endpoint	*extension*
list access-endpoint	*extension* (starting) [count *n*] [schedule]

Administered Connection

Action/Object	Qualifier
add administered-connection	*n* | next
change administered-connection	*n*
display administered-connection	*n* | all [schedule]
duplicate administered-connection	*administered-connection n* [count *n*]
remove administered-connection	*n*
list administered-connection	*starting number* [count *n*] [schedule]

Administration Change Notification

Action/Object	Qualifier
notify history	

Alias Station

Action/Object	Qualifier
change alias station	
display alias station	[schedule]

Alphanumeric Dialing Table

Action/Object	Qualifier
change alphanumeric-dial-table	[*entry name*] [next]
display alphanumeric-dial-table	[*entry name*] [schedule]

Announcement Group Board Usage

Action/Object	Qualifier	Purpose
list usage integ-annc-board	*board location* [schedule]	list the audio groups that have members resident on the board

Announcements/Audio Sources

Action/Object	Qualifier	Purpose
change announcements	*n*	
change integ-annc-brd-loc		
display announcements	*n* [schedule]	

1 of 2

Action/Object	Qualifier	Purpose
display integrated-annc-boards	[schedule]	
disable announcement-board	*n*	
erase announcements	board *location* | gateway *location*	
list usage audio-group	*n* (1-max) [schedule]	list all extensions that refer to the audio group
list integrated-annc-boards	board *location* | gateway *location* [schedule]	
		2 of 2

ARS Toll Table

Action/Object	Qualifier
change ars toll	*n:xxx* (1 to MAX:office code) *n:xyy:nn; : x* (2-MAX); *y* (0-MAX); *y* (0-MAX)
display ars toll	*n:xxx*(1 to MAX:office code) *n:xyy:nn; : x* **:** *x* (2-MAX); *y* (0-MAX); *y* (0-MAX) [schedule]

ATM Board

Action/Object	Qualifier
status atm board	board *location*

Attendant Console

Action/Object	Qualifier
add attendant	*n*
change attendant	*n*
display attendant	*n* [schedule]
remove attendant	*n*

Audio Group

Action/Object	Qualifier	Purpose
add audio-group	*n* (1-max) | next	add an audio group
change audio-group	*n* (1-max)	change an audio group
display audio-group	{ [*n* (1-max) | [number *n* | to-number *n*] | [count *n*] } [schedule]	display an audio group
remove audio-group	*n* (1-max)	remove audio group
list audio-group	{ [*n* (1-max) | [number *n* | to-number *n*] | [count *n*] }[schedule]	list all administered audio groups

Authorization Code COR Mapping

Action/Object	Qualifier
change authorization-code	*auth n*
display authorization-code	*auth n* [schedule]
list authorization-code	[start code] [count *n*] [cor *x*] [to-cor *x*] [schedule]

Best Service Routing

Action/Object	Qualifier
add best-service-routing	*n* | next
change best-service-routing	*n*
display best-service-routing	*n* [schedule]
list best-service-routing	*starting number* [count *n*] [schedule]
remove best-service-routing	*n*

Boot Image

Action/Object	Qualifier
get boot-image	board *location*
set boot-image	board *location* [image 1 | image 2]

Bulletin Board

Action/Object	Qualifier
change bulletin-board	
display bulletin-board	[schedule]

Button Type

Action/Object	Qualifier
list usage button-type	[schedule]
list usage button-type crss-alert	[schedule]
list usage button-type hunt-ns	[*hunt-grp n*] [schedule]
list usage button-type night-serv	[schedule]
list usage button-type trunk-ns	[*trunk-grp n*] [schedule]

Call Vector

Action/Object	Qualifier
change vector	*n*
display vector	*n* [schedule]

Calltype Digit Analysis

Action/Object	Qualifier
change calltype analysis	[1-*n* | all]
display calltype analysis	[1-*n* | all] [schedule]
list calltype route-chosen	*n* [location *n* | all] [partition *n*] [schedule]

CAMA Numbering Format

Action/Object	Qualifier
change cama-numbering	
display cama-numbering	[schedule]

CDR System Parameters

Action/Object	Qualifier
change system-parameters cdr	
display system-parameters cdr	[schedule]

C-LAN

Action/Object	Qualifier
status clan-ip	*c-lan board location*
status clan-port	*c-lan board location*
status clan-usage	

Class of Restriction

Action/Object	Qualifier
change cor	0-MAX
display cor	0-MAX [schedule]
list cor	[cor n] [to-cor n] [schedule]

Class of Service

Action/Object	Qualifier
change cos	
display cos	[schedule]

Code Calling IDs

Action/Object	Qualifier
change paging code-calling-ids	
display paging code-calling-ids	[schedule]

Command Permission Categories

Action/Object	Qualifier
change permissions	*login-id*
display permissions	*login-id* [schedule]

Console-Parameters

Action/Object	Qualifier
change console-parameters	
display console-parameters	[schedule]

Coverage Answer Group

Action/Object	Qualifier
add coverage answer-group	*n* | next
change coverage answer-group	*n*
display coverage answer-group	*n* [schedule]
list coverage answer-group	[number *n*] [to- number *n*] [name x] [count *n*] [schedule]
remove coverage answer-group	*n*

Coverage Path

Action/Object	Qualifier
add coverage path	*n* | next
change coverage path	*n*
display coverage path	*n* [schedule]
list coverage path	[path *n*] [to-path *n*] [count *n*] [schedule]
remove coverage path	*n*

Coverage Time of Day

Action/Object	Qualifier
add coverage time-of-day	*n* | next
change coverage time-of-day	*n*
display coverage time-of-day	*n* [schedule]
remove coverage time-of-day	*n*

Crm-Features

Action/Object	Qualifier
list crm-features	

CTI-Link

Action/Object	Qualifier
add cti-link	*link n* | next
busyout cti-link	*link n*
change cti-link	*link n*
display cti-link	*link n* [schedule]
list cti-link	[*cti-link number n*] [count *n*] [schedule]
list usage cti-link	[*cti-link number n*] [schedule]
remove cti-link	*link n*
test cti-link	*link n* [long | short] [repeat (1-100) | clear]

Data Module

Action/Object	Qualifier
add data-module	*extension* | next
change data-module	*extension*
display data-module	*extension* [schedule]
list data-module	[ext *n*] [to-ext *n*] [name *x*] [count *n*] [schedule]

Date and Time

Action/Object	Qualifier
set time	
display time	[schedule]

Daylight Savings Rules

Action/Object	Qualifier
change daylight-savings-rules	
display daylight-savings-rules	[schedule]

DCS to QSIG TSC Gateway

Action/Object	Qualifier
change isdn dcs-qsig-tsc-gateway	
display isdn dcs-qsig-tsc-gateway	[schedule]

Dial Plan Analysis Table

Action/Object	Qualifier
change dialplan analysis	
display dialplan analysis	[schedule]

Dial Plan Parameters

Action/Object	Qualifier
change dialplan parameters	
display dialplan parameters	[schedule]

Digit Absorption

Action/Object	Qualifier
change digit-absorption	*0-4*
display digit-absorption	*0-4* [schedule]

Digit String

Action/Object	Qualifier
list usage digit-string	*string* (0-9, +?*#~prwWms) [schedule]

Display-Messages Button Labels

Action/Object	Qualifier
change display-message button-labels	
display display-message button-labels	[schedule]

DLG CTI Link

Action/Object	Qualifier
status dlg cti-link	

DLG Interface

Action/Object	Qualifier
status dlg interface	

DS1 Circuit Pack

Action/Object	Qualifier
add ds1	board *location*
change ds1	board *location* [schedule]
display ds1	board *location* [schedule]
list measurements ds1 summary	board *location* [local | carrier-local | remote] [schedule]
list measurements ds1 log	board *location* [local | carrier-local | remote] [schedule]
remove ds1	board *location*

Ethernet Option

Action/Object	Qualifier
get ethernet-option	[cabinet *n* carrier (A-E) slot *n*]
set boot-image	[cabinet *n* carrier (A-E) slot *n*] image 1 | image 2

Extended Pickup Group

Action/Object	Qualifier
change extended-pickup-group	*n*
display extended-pickup-group	*n* [schedule]
list extended-pickup-group	[number *n*] [to- number *n*] [count *n*] [schedule]

Extension

Action/Object	Qualifier
list usage extension	*extension* [vector] [schedule]
change extension-station	*extension*

Extensions Administered to have an MCT-Control Button

Action/Object	Qualifier
change mct-group-extensions	

Extension Type

Action/Object	Qualifier
list extension-type	[*extension* (starting *n*)] [[type *x*] [cor *x*] [to-cor *x*] [cos *x*] [to-cos *x*] [count *n*] [schedule]

Feature Access Code

Action/Object	Qualifier
change feature-access-codes	
display feature-access-codes	[schedule]

Feature-Related System Parameters

Action/Object	Qualifier
change system-parameters features	
display system-parameters features	[schedule]

Filexfer

Action/Object	Qualifier
enable filexfer	board *location*
disable filexfer	board *location*

Firmware Station Download

Action/Object	Qualifier
change firmware station-download	
display firmware station-download	
status firmware station-download	last

Group Paging

Action/Object	Qualifier
add group-page	*n* | next
change group-page	*n*
display group-page	*n* [schedule]

History

Action/Object	Qualifier
list history	[date *MM* |date *MM/DD*] [time *HH* | time *HH:MM*] [login *x*] [action *x*] [object *x*] [qualifier *x*] [schedule]

Holiday Table

Action/Object	Qualifier
change holiday-table	*n*
display holiday-table	*n* [schedule]
list usage holiday-table	*n* [schedule]

Hospitality

Action/Object	Qualifier
change system-parameters hospitality	
display system-parameters hospitality	[schedule]

Hunt Group

Action/Object	Qualifier
add hunt-group	*n* | next
change hunt-group	*n*
display hunt-group	*n* [number *n*][to- number n] [count *n*] [schedule]
list hunt-group	[number *n*] [to- number *n*] [name *x*] [type *x*] [ext *n*] [to-ext *n*] [count *n*] [schedule]
remove hunt-group	*n*
list usage hunt-group	group *n* [vector] [schedule]
list members hunt-group	hunt group *n* [ext *n*] [to-ext *n*] [name *x*] [loginid *n*] [to-loginid *n*] [logname *x*] [count *n*] [schedule]

Incoming Call Handling Treatment

Action/Object	Qualifier
change inc-call-handling-trmt	trunk-group *n*
display inc-call-handling-trmt	trunk-group *n*

Integrated Announcements

Action/Object	Qualifier
change integ-annc-brd-loc	
display integrated-annc-boards	[schedule]

Intercom Group

Action/Object	Qualifier
add intercom-group	*n* | next
change intercom-group	*n*
display intercom-group	*n* [schedule]
list intercom-group	[number *n*] [to-number *n*] [count *n*] [schedule]
remove intercom-group	*n*

Inter-Exchange Carrier (IXC) codes

Action/Object	Qualifier
change ixc-codes	
display ixc-codes	[schedule]

Intra-Switch CDR

Action/Object	Qualifier
add intra-switch-cdr	
change intra-switch-cdr	*extension*
display intra-switch-cdr	*extension* [schedule]
list intra-switch-cdr	*extension* [count *n*] [schedule]

IP Address

Action/Object	Qualifier
list usage ip-address	*IP address* [schedule]

IP Codec Set

Action/Object	Qualifier
change ip-codec-set	*n*
display ip-codec-set	*n* [schedule]

IP Interface

Action/Object	Qualifier
list ip-interface	[clan | medpro | all]
add ip-interface	board *location*
change ip-interface	board *location*
display ip-interface	board *location* [schedule]
remove ip-interface	board *location*

IP Network Map

Action/Object	Qualifier
change ip-network-map	
display ip-network-map	[schedule]

IP Network Regions

Action/Object	Qualifier
change ip-network- region	region number n
display ip-network- region	*n* [schedule]
status ip-network- region	*n* [schedule]

IP Node Name

Action/Object	Qualifier
change node-name ip	*node name*
list-usage node-name	*node name* [schedule]

IP Options System Parameters

Action/Object	Qualifier
display system-parameters ip-options	*n* [schedule]

IP Route

Action/Object	Qualifier
add ip-route	*n* | next
change ip-route	*n*
display ip-route	*n* [schedule]

IP Services

Action/Object	Qualifier
change ip-services	
display ip-services	[schedule]

IP Station

Action/Object	Qualifier
reset ip-station	[ip-phones | all | tti] [network-region *n* | all-regions]

ISDN Network Facilities

Action/Object	Qualifier
change isdn network-facilities	
display isdn network-facilities	

ISDN Numbering Private

Action/Object	Qualifier
change isdn private-numbering	
display isdn private-numbering	[schedule]

ISDN Numbering Public/ Unknown

Action/Object	Qualifier
change isdn public-unknown-numbering	
display isdn public-unknown-numbering	[schedule]

ISDN Tandem Calling Party Number

Action/Object	Qualifier
change tandem-calling-party-number	

ISDN-BRI Trunk Circuit Pack

Action/Object	Qualifier
add bri-trunk-board	[board *location* | gateway *location*]
change bri-trunk-board	[board *location* | gateway *location*]
display bri-trunk-board	board *location* [schedule]
remove bri-trunk-board	[board *location* | gateway *location*]

Language Translations (Display Messages)

Action/Object	Qualifier
change display-messages auto-wakeup-dn-dst	
display display-messages auto-wakeup-dn-dst	[schedule]
change display-messages call-identifiers	
display display-messages call-identifiers	[schedule]
change display-messages date-time	
display display-messages date-time	[schedule]
change display-messages leave-word-calling	
display display-messages leave-word-calling	[schedule]
change display-messages malicious-call-trace	
display display-messages malicious-call-trace	[schedule]
change display-messages miscellaneous-features	
display display-messages miscellaneous-features	[schedule]

1 of 2

Action/Object	Qualifier
change display-messages property-management	
display display-messages property-management	[schedule]
change display-messages softkey-labels	
display display-messages softkey-labels	[schedule]
change display-messages time-of-day-routing	
display display-messages time-of-day-routing	[schedule]
change display-messages transfer-conference	
display display-messages transfer-conference	[schedule]
change display-messages view-buttons	
display display-messages view-buttons	[schedule]
	2 of 2

Listed Directory Numbers

Action/Object	Qualifier
change listed-directory-numbers	
display listed-directory-numbers	[schedule]

Locations

Action/Object	Qualifier
change locations	
display locations	[schedule]

Location Parameters

Action/Object	Qualifier
change location-parameters	*n*
display location-parameters	*n*

Local Survivable Processor

Action/Object	Qualifier
change lsp	
display lsp	

Loudspeaker Paging

Action/Object	Qualifier
change paging loudspeaker	
display paging loudspeaker	[schedule]

Measurements Announcements

Action/Object	Qualifier
list measurements announcements all	[yesterday-peak | today-peak | last-hour] [schedule]
list measurements announcements integ-all	[yesterday-peak | today-peak | last-hour] [schedule]
list measurements announcements board	[to cabinet *location* | gateway *location*] V9 [yesterday-peak | today-peak | last-hour] [schedule]
list measurements announcements-board-loc	[to cabinet *location* | disk | gateway *location*] V9 [yesterday-peak | today-peak | last-hour] [schedule]

Media Gateway

Action/Object	Qualifier
add media-gateway	[*n* | next]
change media-gateway	*n*
display media-gateway	*n*
list media-gateway	*n* [schedule]
remove media-gateway	*n*

Medpro

Action/Object	Qualifier
set medpro ucss	[lock | unlock | override]

Mode Code Related System Parameters

Action/Object	Qualifier
change system-parameters mode-code	
display system-parameters mode-code	

Modem Pool Group

Action/Object	Qualifier
add modem-pool num	*n*
change modem-pool num	*n*
display modem-pool num	*n* [schedule]
list modem-pool num	[schedule]
remove modem-pool num	*n*

Multifrequency-Signaling

Action/Object	Qualifier
change multifrequency-signaling	*n*
display multifrequency-signaling	*n*

Multiple Level Precedence and Preemption (MLPP)

Action/Object	Qualifier
change system-parameters mlpp	
display system-parameters mlpp	

Music Sources

Action/Object	Qualifier
change music-sources	*n*
display music-sources	*n* [schedule]

Night Service

Action/Object	Qualifier
enable night-service	[attendant-group | hunt group | trunk-group] *group numbe*r
disable night-service	[attendant-group | hunt group | trunk-group] *group number*

Packet Gateway Board

Action/Object	Qualifier
add pgate	board *location*
change pgate	board *location*
display pgate	board *location*
remove pgate	board *location*

Partition Route Table

Action/Object	Qualifier
change partition-route-table	[index *n*]
display partition-route-table	[index *n*] [schedule]

Pickup Group

Action/Object	Qualifier
add pickup-group	[*n* | next]
change pickup-group	[*n*]
display pickup-group	[number *n*] [to- number *n*] [count *n*] [schedule]
remove pickup-group	[*n*]

Port

Action/Object	Qualifier
display port	port *n* [schedule]

Precedence Routing Digit Analysis

Action/Object	Qualifier
change precedence-routing analysis	[*location* (1 to 250 or all)] [*min* (1 to 28)]
display precedence-routing analysis	0 to 9, '*', '*x*', '*X*', [schedule]

Precedence Routing Digit Conversion

Action/Object	Qualifier
change precedence-routing digit-conversion	0 to 9, '*', '*x*', '*X*', [*location* (1 to 250 or all)]
display precedence-routing digit-conversion	0 to 9, '*', '*x*', '*X*', [*min* (1 to 28)] [schedule]

PRI Endpoint

Action/Object	Qualifier
add pri-endpoint	*extension* | next
change pri-endpoint	*extension*
display pri-endpoint	*extension* [schedule]
list pri-endpoint	*extension* [count *n*] [schedule]
remove pri-endpoint	*extension*

QSIG to DCS TSC Gateway

Action/Object	Qualifier
change isdn qsig-dcs-tsc-gateway	
display isdn qsig-dcs-tsc-gateway	[schedule]

Remote Access

Action/Object	Qualifier
change remote-access	[*n*]
display remote-access	[schedule]
status remote-access	

Remote Call Coverage Table

Action/Object	Qualifier
change coverage remote	*n*
display coverage remote	*n*

Remote Office

Action/Object	Qualifier
add remote-office	[*n* | next]
change remote-office	*n*
display remote-office	*n* [schedule]
list remote-office	[schedule]
remove remote-office	*n*
status remote-office	*n*

RHNPA Table

Action/Object	Qualifier
change rhnpa	RHNPA and code n:xxx n*n* x(0-MAX) x(0-MAX) x(0-MAX)
display rhnpa	RHNPA and code n:xxx n*n* x(0-MAX) x(0-MAX) x(0-9) [schedule]

Route Pattern

Action/Object	Qualifier
change route-pattern	*n*
display route-pattern	*n* [schedule]
list route-pattern	[trunk *n*] [*service /feature name-string*] [schedule]

Security-Related System Parameters

Action/Object	Qualifier
change system-parameters security	
display system-parameters security	[schedule]

Session

Action/Object	Qualifier	Purpose
enable session		
disable session		

Signaling Group

Action/Object	Qualifier
add signaling-group	*n*| next
change signaling-group	*n*
display signaling-group	*n* [schedule]
list signaling-group	*n* [schedule]
remove signaling-group	*n*

Site Data

Action/Object	Qualifier
change site-data	
display site-data	[schedule]
list site-data	*extension*

Station

Action/Object	Qualifier
add station	*extension* | next
change station	*extension*
display station	[ext *n*] [to-ext *n*] [count *n*] [schedule]
duplicate station	*extension* [start extension] [*board location* | *x* | *w* | *i*] [count *n*] [one-ep]
list station	[ext *n*] [to-ext *n*] [port x] [[type *x*] [movable *x*] [count *n*] [schedule]
status station	*extension*

System Parameters Call Coverage/Call Forwarding

Action/Object	Qualifier
change system-parameters coverage-forwarding	
display system-parameters coverage-forwarding	[schedule]

System Parameters Country-Options

Action/Object	Qualifier
display system-parameters country-options	[schedule]

System Parameters Crisis Alert

Action/Object	Qualifier
change system-parameters crisis-alert	
display system-parameters crisis-alert	[schedule]

System Parameters Customer-Options

Action/Object	Qualifier
display system-parameters customer-options	[schedule]

System Parameters IP Options

Action/Object	Qualifier
change system-parameters ip-options	
display system-parameters ip-options	[schedule]

System Parameters Media Gateway Automatic Recovery Rule

Action/Object	Qualifier
change system-parameters mg-recovery-rule	*n*
display system-parameters mg-recovery-rule	*n*

Telecommuting Access

Action/Object	Qualifier
change telecommuting-access	
display telecommuting-access	[schedule]

Tenant

Action/Object	Qualifier
change tenant	*n*
display tenant	*n* [schedule]

Terminal Parameters

Action/Object	Qualifier
change terminal-parameters	*n*
display terminal-parameters	*n* [schedule]

Terminating extension Group

Action/Object	Qualifier
add term-ext-group	*n* | next
change term-ext-group	*n*
display term-ext-group	*n* [schedule]
list term-ext-group	[number *n*] [to- number *n*] [name *x*] [ext *n*] [to-ext *n*] [count *n*] [schedule]
remove term-ext-group	*n*

TFTP Server

Action/Object	Qualifier
change tftp-server	[schedule]
display tftp-server	[schedule]

Time of Day Routing Plan

Action/Object	Qualifier
add coverage time-of-day	*n* | next
change coverage time-of-day	n
display coverage time-of-day	*n* [schedule]
remove coverage time-of-day	*n*

Time of Day Routing Plan

Action/Object	Qualifier
change time-of-day	*routing plan number*
display time-of-day	*routing plan number* [schedule]

Toll Analysis

Action/Object	Qualifier
change toll	*n* 0-9 | * | *x* | X [location (*n* | all)] [min 1-28]
display toll	*n* 0-9 | * | *x* | X [location (*n* | all)] [min 1-28] [schedule]
list toll toll-list	[start *dialed-string*] [count *n*] [location (*n* | all)] [schedule]
list toll all	[start *dialed-string*] [count *n*] [location (*n* | all)][schedule]
list toll restricted-call	[start *dialed-string*] [count *n*] [location (*n* | all)] [schedule]
list toll unrestricted-call	[*n*] [start *dialed-string*] [count *n*] [location (*n* | all] [schedule]

Tone Generation

Action/Object	Qualifier
change tone-generation	*n*
display tone-generation	*n*

Trace

Action/Object	Qualifier
list trace attendant	*n* [schedule]
list trace data-module	[ext *n*] [to-ext *n*] [name *x*] [count *n*] [schedule]
list trace ewt	
list trace ras	
list trace station	*extension* | ext/a (atm) | q (qsig) *ext 1-40* (button *n*)
list trace tac	*Trunk access code n* | tac/a (atm) | ac/d (digits) q (qsig)
list trace vdn	*extension* [schedule]
list trace vector	*n*

Trunk Groups

Action/Object	Qualifier
add trunk-group	1 to MAX | next
change trunk-group	1 to MAX | TAC X...
display trunk-group	1 to MAX [number *n*] [to- number *n*] [count *n*] [tac n] [schedule]
list trunk-group	[number *n*] [to- number *n*] [name *x*] [type *x*] [count *n*] [schedule]
remove trunk-group	1 to MAX | TAC X...

TTI IP Station

Action/Object	Qualifier
list tti-ip-stations	

Uniform Dial Plan

Action/Object	Qualifier
change uniform-dialplan	*number 0-9*
display uniform-dialplan	*number 0-9* [schedule]
list uniform-dialplan	[start *matching-pattern*] [*len (3-7)*] [insert (0-MAX)] [net *x*] [node *n*] [to-node *n*] [count *n*] [schedule]

Usage CTI-Link

Action/Object	Qualifier
list usage cti-link	*link number* [schedule]

Usage extension

Action/Object	Qualifier
list usage *extension*	*extension* [vector] [schedule]

Vector

Action/Object	Qualifier
change vector	*n*
list usage vector	*n*

Vector Directory Numbers

Action/Object	Qualifier
add vdn	*extension* | next
change vdn	*extension*
display vdn	*extension* [schedule]

Virtual MAC Address Table

Action/Object	Qualifier
display virtual-mac-addr	[table number]

XMOBILE Configuration Set

Action/Object	Qualifier
change xmobile configuration-set	digits 1 to 10
display xmobile configuration-set	digits 1 to 10

XMOBILE station to cell telephone mapping

Action/Object	Qualifier
list xmobile mapping	cell telephone number | partial string* | all [schedule]

Partial string of a cell telephone number followed by the wildcard “”.

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