



## **Avaya Solution & Interoperability Test Lab**

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# **Advanced Feature Support for Avaya 1100 and 1200 Series IP Deskphones 3.2 with Avaya Aura® Communication Manager 6.0 and Avaya Aura® Session Manager 6.0 – Issue 1.0**

### **Abstract**

These Application Notes describe selected advanced features supported on Avaya Aura® Communication Manager for Avaya 1100- and 1200-Series IP Deskphones (SIP) registered to Avaya Aura® Session Manager. Configuration steps are also described. These Application Notes serve as a companion to the main document listed in the references.

Information in both Application Notes has been obtained through interoperability testing and additional technical discussions, and was conducted at the Avaya Solution and Interoperability Test Lab at the request of Avaya 1100- and 1200-Series IP Deskphone and Avaya Aura® Product Management.

# 1. Introduction

These Application Notes describe selected advanced features supported on Avaya Aura® Communication Manager for Avaya 1100- and 1200-Series IP Deskphones (SIP) registered to Avaya Aura® Session Manager. Configuration steps are also described. These Application Notes serve as a companion to the main document ([1]).

Avaya is committed to expanding the SIP capabilities of these previously Nortel-branded endpoints with the Avaya Aura® core, and these notes represent the next step. The initial set of SIP features for the Avaya 1100- and 1200-Series IP Deskphones were introduced in [1]. These Application Notes reflect test results for the introduction of the following additional set of advanced features:

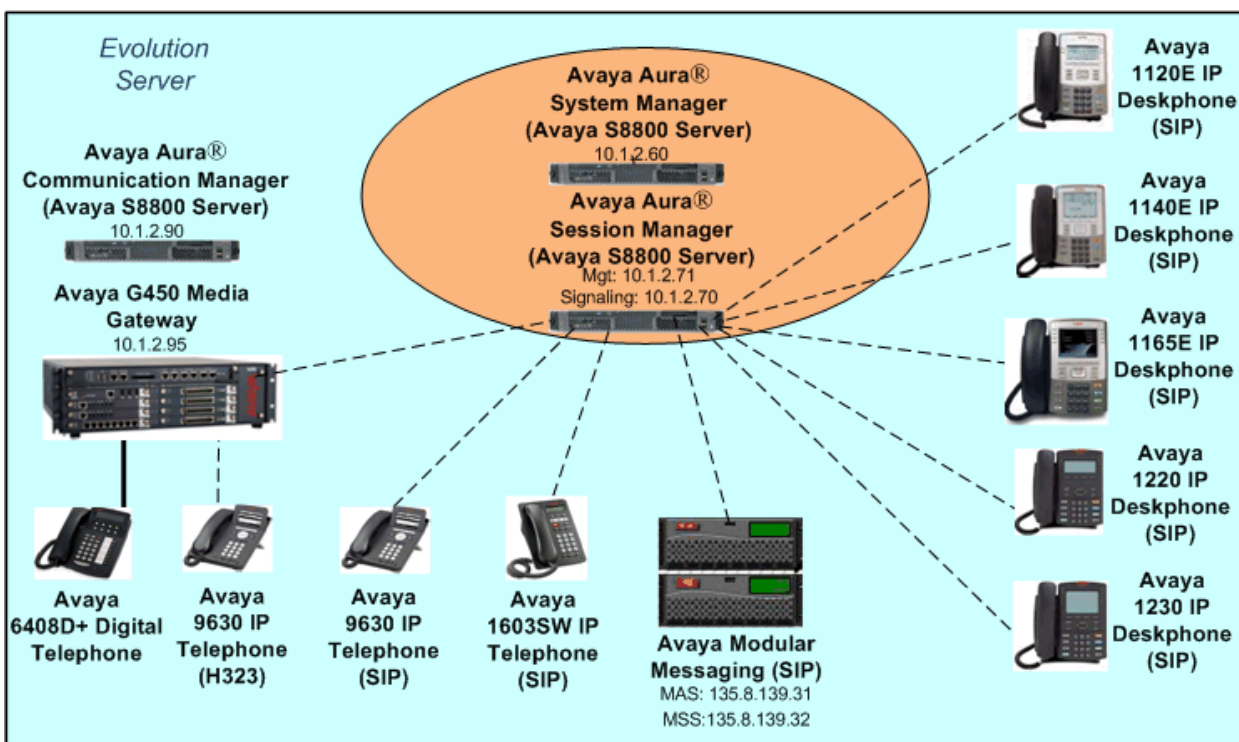
- Abbreviated Dial Lists
- Announcement record/listen
- Automatic Callback
- Change Class of Restriction
- Change Coverage
- EC500 Self Administration
- Extended Call Forwarding
- Extended Group Call Pickup
- Malicious Call Trace Activation
- Remote Send All Calls
- Station Lock and Unlock

See **Section 4** for a summary of all of the features supported.

These Application Notes serve as companion to the main document listed in [1]. Information in both Application Notes has been obtained through interoperability testing and additional technical discussions, and was conducted at the Avaya Solution and Interoperability Test Lab at the request of Avaya 1100- and 1200-Series IP Deskphone and Avaya Aura® Product Management.

## 2. Reference Configuration

In the test configuration shown below, The Avaya S8800 Server with Avaya G450 Media Gateway is configured as an Evolution Server (CM-ES), and supports all of the telephones shown. The SIP telephone models tested included the 1120E (4 line monochrome), 1140E (6 line monochrome), 1165E (8 line color), 1220 (4 line monochrome), and the 1230 (10 line monochrome) running SIP firmware. The phones are directly registered to Session Manager and are supported by Communication Manager configured as an Evolution Server (CM-ES). Communication between Communication Manager and Avaya Modular Messaging for voice messaging coverage is via Session Manager.



**Figure 1: Sample Configuration**

In general, a SIP telephone originates a call by sending a call request (SIP INVITE message) to Session Manager, which then routes the call over a SIP trunk to Communication Manager for origination services. If the call is destined for another local SIP telephone, then Communication Manager routes the call back over the SIP trunk to Session Manager for delivery to the destination SIP telephone. If the call is destined for an H.323 or Digital telephone, then Communication Manager terminates the call directly.

These application notes assume that Communication Manager and Session Manager are already installed and basic configuration steps have been performed. Only steps relevant to selected SIP telephone calling features will be described in this document. For further details on configuration steps not covered in this document, consult the appropriate document in **Section 7**.

### 3. Equipment and Software Validated

The following equipment and software/firmware were used for the sample configuration.

Equipment	Software/Firmware
S8800 Server with G450 Media Gateway	Avaya Aura® Communication Manager 6.0 Service Pack 0 (Load 345, Update 18246)
S8800 Server	Avaya Aura® Session Manager 6.0, Load 600020
	Avaya Aura® System Manager 6.0, Load 600020
Avaya 9630 IP Telephone (SIP)	2.6.0.0
Avaya 9630 IP Telephone (H.323)	3.1.1
Avaya 1603 IP Telephone (SIP)	R1.0.0
Avaya 6408D+ Digital Telephone	-
Modular Messaging Storage Server	5.2, Service Pack 3 Patch 1
Modular Messaging Application Server	5.2, Service Pack 3 Patch 1
Avaya 1100-series IP deskphones (SIP)	03.02.15.05
Avaya 1200-series IP deskphones (SIP)	03.02.15.05

**Table 1: Equipment and Software/Firmware**

### 4. Calling Features

#### 4.1. Overview

**Table 2** below shows all calling features supported. The selected advanced features addressed in these Application Notes are shown in **bold** and their feature operation and Communication Manager configuration are described in **Section 4.2**. All others are addressed in [1]. In addition to basic calling capabilities, the Internet Engineering Task Force (IETF) has defined a supplementary set of calling features in RFC 5359 [2], previously referred to as the SIPING features. This provides a useful framework to describe product capabilities and compare features supported by various equipment vendors. Communication Manager can support many of these features if the telephone can not locally support them. In addition, features beyond those specified in RFC 5359 can be extended to the telephone using Communication Manager configured as an Evolution Server.

Some supported features shown in **Table 2** can be invoked by dialing a Communication Manager Feature Name Extension (FNE) or Feature Access Code (FAC). A speed dial button on the telephone can be programmed to an FNE or FAC to streamline dialing (see [1, 7-8]). Communication Manager automatically handles many other standard features such as call coverage, trunk selection using Automatic Alternate Routing (AAR) and Automatic Route Selection (ARS), Class Of Service/Class Of Restriction (COS/COR), and voice messaging. Details on operation and administration for Communication Manager can be found in References [3-6].

SUPPORTED FEATURES	COMMENTS
<b>Basic Calling features</b>	
Extension to extension call	Via handset or speakerphone operation
Basic call to non-SIP phones	Via handset or speakerphone operation
Intercept tones/displays	Reorder with message
Mute	Via Mute button
Redial	Via Redial soft key
Call Waiting	Via display of incoming call
Do Not Disturb	Reference [1], Section 4.2.1
Speed Dial buttons	Via soft labeled feature keys
Redial from call logs	Via soft key menus
Compressed codecs	G.729A, G.729AB, G.722-64k
Message Waiting Support	Phone indicator light
<b>SIPPING (RFC 5359) Features</b>	
Call Hold	Via Hold button
Consultation Hold	Via Hold button and basic calling features
Music on Hold	Via Communication Manager RTP stream
Unattended Transfer	Via Hold button, basic calling, and soft key features
Attended Transfer	Via Hold button, basic calling, and soft key features
Call Forward Unconditional	Reference [1], Sections 4.2.2, 5.8
Call Forward Busy	Via FNE/FAC (Reference [1], Section 5.8)
Call Forward No Answer	Via FNE/FAC (Reference [1], Section 5.8)
3-way conference - 3rd party added	Via Hold button, basic calling, and soft key features
3-way conference - 3rd party joins	Via call waiting and soft key features
Find-Me	Modular Messaging "Find Me" feature
Incoming Call Screening	Via Class Of Restriction (Reference [1], Section 5.9)
Outgoing Call Screening	Via Class Of Restriction (Reference [1], Section 5.9)
Call Park/Unpark	Via FNE (Reference [1], Section 5.8)
Call Pickup	Via FNE/FAC (Reference [1], Section 5.8)
<b>Additional Station-Side Features</b>	
<b>Abbreviated Dial Lists</b>	<b>Via FAC (Section 4.2.2)</b>
<b>Announcement Record/Listen</b>	<b>Via FAC (Section 4.2.3)</b>
<b>Automatic Callback</b>	<b>Via FNE (Section 4.2.4)</b>
Calling Name/Number Block	Via FNE/FAC (Reference [1], Section , 4.2.3, 5.8)
<b>Change Class of Restriction</b>	<b>Via FAC (Section 4.2.5)</b>
<b>Change Coverage</b>	<b>Via FAC (Section 4.2.6)</b>
Directed Call Pick-Up	Via FNE/FAC (Reference [1], Section 5.8)
<b>EC500 Self Administration</b>	<b>Via FAC (Section 4.2.7)</b>
<b>Extended Call Forwarding</b>	<b>Via FAC (Section 4.2.8)</b>
<b>Extended Group Call Pickup</b>	<b>Via FNE/FAC (Section 4.2.9)</b>
<b>Malicious Call Trace Activation</b>	<b>Via FNE/FAC (Section 4.2.10)</b>
Priority Call	Via FNE (Reference [1], Sections 4.2.4, 5.8, 5.9)
<b>Remote Send All Calls</b>	<b>Via FAC (Section 4.2.11)</b>
<b>Station Lock and Unlock</b>	<b>Via FAC (Section 4.2.12)</b>
Transfer to Voice Mail	Via FNE (Reference [1], Section 5.8)
Whisper Page	Via FNE (Reference [1], Section 5.8)

**Table 2: SIP Telephony Feature Support**

## 4.2. Selected Advanced Features – Operation and Configuration

### 4.2.1. FNEs and FACs

Feature Access Codes (FACs) must be defined in Communication Manager for each of the features, subject to the existing dial plan. Use **change feature-access-codes** to define them, as shown below. The following screens have been abbreviated to highlight those FACs involved.

change feature-access-codes	Page 1 of 10
FEATURE ACCESS CODE (FAC)	
Abbreviated Dialing List1 Access Code: 621	
Abbreviated Dialing List2 Access Code: 622	
Abbreviated Dialing List3 Access Code: 623	
Abbreviated Dial - Prgm Group List Access Code: 653	
Announcement Access Code: 626	
Answer Back Access Code: 625	
Attendant Access Code:	
Auto Alternate Routing (AAR) Access Code: 8	
Auto Route Selection (ARS) - Access Code 1: 9      Access Code 2:	
Automatic Callback Activation: *5      Deactivation: #5	
Call Forwarding Activation Busy/DA: *2      All: 612      Deactivation: #2	
Call Forwarding Enhanced Status:      Act:      Deactivation:	
Call Park Access Code: 624	
Call Pickup Access Code: *6	
CAS Remote Hold/Answer Hold-Unhold Access Code: #6	
CDR Account Code Access Code:	
Change COR Access Code: 652	
Change Coverage Access Code: 629	
change feature-access-codes	Page 2 of 10
FEATURE ACCESS CODE (FAC)	
Directed Call Pickup Access Code: 654	
Directed Group Call Pickup Access Code: 680	
Emergency Access to Attendant Access Code:	
EC500 Self-Administration Access Codes: 627	
Enhanced EC500 Activation: 660      Deactivation: 661	
Enterprise Mobility User Activation:      Deactivation:	
Extended Call Fwd Activate Busy D/A 640      All: 641      Deactivation: 642	
Extended Group Call Pickup Access Code: 647	
Facility Test Calls Access Code:	
change feature-access-codes	Page 3 of 10
FEATURE ACCESS CODE (FAC)	
Malicious Call Trace Activation: 613      Deactivation: 614	
Meet-me Conference Access Code Change:	
Message Sequence Trace (MST) Disable:	
Refresh Terminal Parameters Access Code: 694	
Remote Send All Calls Activation: 648      Deactivation: 649	
change feature-access-codes	Page 4 of 10
FEATURE ACCESS CODE (FAC)	
Station Lock Activation: 650      Deactivation: 651	

FNEs are defined using the **change off-pbx-telephone feature-name-extensions** command. The **set** parameter defaults to 1 if not specified. This command is used to support both SIP telephones and Extension to Cellular. The highlighted fields correspond to those selected features addressed in these Application Notes and shown in **bold** in **Table 2**. Note that the corresponding FAC must be defined before an FNE for that feature can be assigned. Note also that in some cases, a given feature is supported using the FNE only, FAC only, or both FNE and FAC. See the individual feature descriptions for the appropriate usage.

<b>change off-pbx-telephone feature-name-extensions set 1</b>	Page 1 of 2
EXTENSIONS TO CALL WHICH ACTIVATE FEATURES BY NAME	
Set Name:	
Active Appearance Select: 70030	
<b>Automatic Call Back: 70003</b>	
<b>Automatic Call-Back Cancel: 70004</b>	
Call Forward All: 70005	
Call Forward Busy/No Answer: 70006	
Call Forward Cancel: 70007	
Call Park: 70008	
Call Park Answer Back: 70009	
Call Pick-Up: 70010	
Calling Number Block: 70012	
Calling Number Unblock: 70013	
Conditional Call Extend Enable:	
Conditional Call Extend Disable:	
Conference Complete:	
Conference on Answer: 70011	
Directed Call Pick-Up: 70014	
Drop Last Added Party: 70015	
<b>change off-pbx-telephone feature-name-extensions set 1</b>	Page 2 of 2
EXTENSIONS TO CALL WHICH ACTIVATE FEATURES BY NAME	
Exclusion (Toggle On/Off): 70016	
<b>Extended Group Call Pickup: 70025</b>	
Held Appearance Select: 70017	
Idle Appearance Select: 70031	
Last Number Dialed: 70019	
<b>Malicious Call Trace: 70029</b>	
<b>Malicious Call Trace Cancel: 70021</b>	
Off-Pbx Call Enable: 70027	
Off-Pbx Call Disable: 70028	
Priority Call: 70000	
Recall:	
Send All Calls: 70001	
Send All Calls Cancel: 70002	
Transfer Complete:	
Transfer On Hang-Up: 70022	
Transfer to Voice Mail: 70023	
Whisper Page Activation: 70026	

The above FNEs and FACs will be referenced in the following sections when describing how these advanced features are accessed from the 1100- and 1200-Series IP DeskPhones.

## 4.2.2. Abbreviated Dialing Lists

Abbreviated dialing lists allow the telephone user to dial the associated FAC (e.g., **Abbreviated Dialing List1 Access Code**), followed by an index (e.g., 02) specifying which member of the list is to be called. Note that programming the FAC into a speed dial button is preferred so as to yield a net savings in the number of dialed digits. The list can also be modified by dialing the **Abbreviated Dial - Prgm Group List Access Code** FAC, entering the number of the list (1, 2, or 3), the index of the list to be changed (e.g., 05), and the number to be dialed.

In the example below, a group list is defined using the **change abbreviated-dialing group n** command, where **n** can be 1, 2, or 3. Specify an appropriate **Group Name**, the **Size** of the list, and the numbers of the members in the list under **DIAL CODE**. In the example, extensions were used, but any dial plan compatible number can be entered.

change abbreviated-dialing group 1		Page 1 of 1	
ABBREVIATED DIALING LIST			
Group List: 1	Group Name: Test		
Size (multiple of 5): 10	Program Ext: 30046	Privileged? n	
DIAL CODE			
01: 32001			
02: 30042			
03: 30043			
04: 30045			
05: 32005			
06: 32002			
07: 32004			
08: 32003			
09:			
10:			

On Page 4 of the station form for the user, enter “group” and “1” for **List1**. This user now has access to the defined list.

change station 30041		Page 4 of 6	
STATION			
SITE DATA			
Room:		Headset? n	
Jack:		Speaker? n	
Cable:		Mounting: d	
Floor:		Cord Length: 0	
Building:		Set Color:	
ABBREVIATED DIALING			
List1: group 1	List2:	List3:	
BUTTON ASSIGNMENTS			



### 4.2.3. Announcement Record/Listen

This feature allows the phone user to record an announcement associated with an assigned extension by dialing the **Announcement Access Code** FAC, the extension of the announcement, and a “1” to hear confirmation tone to begin recording. Recording ends when the phone is hung up. After a one minute pause, the announcement extension can be dialed to listen to the recording.

The Class Of Service (COS) for the user must include **Console Permissions** to allow this feature to be used. This is shown below for COS 1.

change cos																Page	1 of	2
CLASS OF SERVICE																		
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
Auto Callback	n	y	y	n	y	n	y	n	y	n	y	n	y	n	y	n		
Call Fwd-All Calls	n	y	y	y	y	n	n	y	y	n	n	y	y	n	n	n		
Data Privacy	n	n	n	y	n	y	y	y	y	n	n	n	n	y	y	y		
Priority Calling	n	y	n	n	n	n	n	n	n	y	y	y	y	y	y	n		
Console Permissions	y	y	y	n	n	n	n	n	n	n	n	n	n	n	n	n		
Off-hook Alert	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n		
Client Room	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n		
Restrict Call Fwd-Off Net	n	n	y	y	y	y	y	y	y	y	y	y	y	y	y	y		
Call Forwarding Busy/DA	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	n		
Personal Station Access (PSA)	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n		
Extended Forwarding All	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	n		
Extended Forwarding B/DA	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	n		
Trk-to-Trk Transfer Override	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	n		
QSIG Call Offer Originations	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n		
Contact Closure Activation	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n		

Announcements can be used in vectors or as music-on-hold sources, for example. The screen below shows adding an announcement using the **add announcement x** command, where **x** is the extension of the announcement. Provide an appropriate **Annc Name**, and set the **Annc Type** and **Group/Board** fields to match the gateway configuration. In the example, the announcement board is on the Avaya G450 Media Gateway. Note that if an announcement is to be used for music-on hold, the **Annc Type** must be set to “integ-mus”.

change announcement 31999																Page	1 of	1
ANNOUNCEMENTS/AUDIO SOURCES																		
Extension: 31999																COR: 1		
Annc Name: FACtest																TN: 1		
Annc Type: integrated																Queue? y		
Group/Board: 001V9																		
Protected? n																Rate: 64		

## 4.2.4. Automatic Callback

If user A receives a busy signal when calling user B, the **Automatic Callback FNE**<sup>1</sup> can be dialed afterward to request notification when B becomes free. Communication Manager will call A at this time, and when the call is answered, A is automatically connected to a ringing call to the now free B. Note that this feature is not available if A has a coverage path configured (e.g., for voice messaging). A can dial the **Automatic Callback Cancel FNE** to cancel notification.

The “auto-cback” feature button must be configured on Page 4 or 5 of A’s station form:

change station 30041		Page 4 of 6	
STATION			
SITE DATA			
Room:		Headset?	n
Jack:		Speaker?	n
Cable:		Mounting:	d
Floor:		Cord Length:	0
Building:		Set Color:	
ABBREVIATED DIALING			
List1: group	1	List2:	List3:
BUTTON ASSIGNMENTS			
1: call-appr		5: ec500	Timer? n
2: call-appr		6: brdg-appr	B:1 E:30043
3: call-appr		7:	
4: auto-cback		8:	

Use the **change cos** command to enable use of this feature at stations with the corresponding Class of Service. In the sample configuration, COS 1 was assigned to the stations, so **Auto Callback** is set to “y” under the corresponding column, as shown below.

change cos		Page 1 of 2															
CLASS OF SERVICE		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Auto Callback	n	y	y	n	y	n	y	n	y	n	y	n	y	n	y	n	n
Call Fwd-All Calls	n	y	y	y	y	n	n	y	y	n	n	y	y	n	n	n	n
Data Privacy	n	n	n	y	n	y	y	y	y	n	n	n	n	y	y	y	y
Priority Calling	n	y	n	n	n	n	n	n	n	n	y	y	y	y	y	y	n
Console Permissions	y	y	y	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Off-hook Alert	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Client Room	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Restrict Call Fwd-Off Net	n	n	y	y	y	y	y	y	y	y	y	y	y	y	y	y	y
Call Forwarding Busy/DA	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Personal Station Access (PSA)	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Extended Forwarding All	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Extended Forwarding B/DA	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n
Trk-to-Trk Transfer Override	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n

<sup>1</sup> Dialing the FAC is not supported.

## 4.2.5. Change Class of Restriction

The Class of Restriction (COR) for a given extension can be changed using the **Change COR Access Code FAC**. The caller dials the FAC, followed by a system-wide password defined for this purpose, followed by the extension whose COR is to be changed, followed by the COR (e.g., 02). The change can be verified by displaying the station form for the extension and examining the **COR** field.

To enable this feature, use the **change system-parameters customer-options** command and set **Change COR by FAC** to “y” on Page 3. Remember to log off and on to affect the change.

change system-parameters customer-options		Page 3 of 11
OPTIONAL FEATURES		
Abbreviated Dialing Enhanced List? y	Audible Message Waiting? y	
Access Security Gateway (ASG)? n	Authorization Codes? y	
Analog Trunk Incoming Call ID? y	CAS Branch? n	
A/D Grp/Sys List Dialing Start at 01? y	CAS Main? n	
Answer Supervision by Call Classifier? y	Change COR by FAC? y	
ARS? y	Computer Telephony Adjunct Links? y	
ARS/AAR Partitioning? y	Cvg Of Calls Redirected Off-net? y	
ARS/AAR Dialing without FAC? n	DCS (Basic)? y	
ASAI Link Core Capabilities? n	DCS Call Coverage? y	
ASAI Link Plus Capabilities? n	DCS with Rerouting? y	
Async. Transfer Mode (ATM) PNC? n		
Async. Transfer Mode (ATM) Trunking? n	Digital Loss Plan Modification? y	
ATM WAN Spare Processor? n	DS1 MSP? y	
ATMS? y	DS1 Echo Cancellation? y	
Attendant Vectoring? y		
(NOTE: You must logoff & login to effect the permission changes.)		

Then use the **change system-parameters feature** command and set **Password to Change COR by FAC** to the desired password value on Page 17.

change system-parameters features		Page 17 of 19
FEATURE-RELATED SYSTEM PARAMETERS		
AUTOMATIC EXCLUSION PARAMETERS		
Automatic Exclusion by COS? n		
Recall Rotary Digit: 2		
Password to Change COR by FAC: 123456		
Duration of Call Timer Display (seconds): 3		
WIRELESS PARAMETERS		
Radio Controllers with Download Server Permission (enter board location)		
1:	2:	3: 4: 5:

## 4.2.6. Change Coverage

The Change Coverage feature allows telephone users to switch between the two call coverage paths defined for their station. Dial the **Change Coverage Access Code** FAC, the extension of the phone plus #, the **Security Code** for the phone plus #, and “1” or “2” to change the lead coverage path to **Coverage Path 1** or **Coverage Path 2** respectively, as defined on Page 1 of the station form.

change station 30041		Page 1 of 6
STATION		
Extension: 30041	Lock Messages? n	BCC: 0
Type: 9630SIP	Security Code: 123456	TN: 1
Port: S00007	Coverage Path 1: 60	COR: 1
Name: 1120-2	Coverage Path 2: 2	COS: 1
Hunt-to Station:		
STATION OPTIONS		
Time of Day Lock Table:		
Loss Group: 19	Message Lamp Ext: 30041	
Display Language: english	Button Modules: 0	
Survivable COR: internal	IP SoftPhone? n	
Survivable Trunk Dest? y	IP Video? n	

The Class of Restriction (COR) to which the station is assigned must permit usage of this feature. Use the **change cor n** command, where **n** is the COR of the station, and set **Can Change Coverage** to “y” on Page 1.

change cor 1		Page 1 of 23
CLASS OF RESTRICTION		
COR Number: 1		
COR Description: Trunk		
FRL: 0	APLT? y	
Can Be Service Observed? y	Calling Party Restriction: none	
Can Be A Service Observer? y	Called Party Restriction: none	
Time of Day Chart: 1	Forced Entry of Account Codes? n	
Priority Queuing? n	Direct Agent Calling? y	
Restriction Override: none	Facility Access Trunk Test? n	
Restricted Call List? n	Can Change Coverage? y	
Access to MCT? y	Fully Restricted Service? n	
Group II Category For MFC: 7	Hear VDN of Origin Annc.? n	
Send ANI for MFE? n	Add/Remove Agent Skills? n	
MF ANI Prefix:	Automatic Charge Display? n	
Hear System Music on Hold? y	PASTE (Display PBX Data on Phone)? n	
	Can Be Picked Up By Directed Call Pickup? y	
	Can Use Directed Call Pickup? y	
	Group Controlled Restriction: inactive	

### 4.2.7. EC500 Self Administration

EC500 Self Administration allows telephone users to assign and change the EC500 telephone number associated with their desk phone. Dial the **EC500 Self-Administration Access Codes** FAC<sup>2</sup> followed by the desk phone extension plus #, the desk phone station **Security Code** plus #, and the EC500 telephone number plus #. This assigns the telephone number and automatically activates EC500. The user can also manually activate or deactivate EC500 from a phone by dialing the **Enhanced EC500 Activation or Deactivation** FAC followed by the desk phone extension plus #, followed by the desk phone station **Security Code** plus #. See [6] for more information on EC500 operation and administration.

Use the **change off-pbx-telephone station-mapping x** command, where **x** is the desk phone extension, to configure an EC500 entry. The **Phone Number** may be left blank if the first number to be used is not known. Correct self administration can be verified by using the same command to display the current value of the **Phone Number** field.

change off-pbx-telephone station-mapping 30041							Page 1 of 3
STATIONS WITH OFF-PBX TELEPHONE INTEGRATION							
Station Extension	Application	Dial Prefix	CC	Phone Number	Trunk Selection	Config Set	Dual Mode
30041	OPS	-		30041	aar	1	
30041	EC500	-			aar	1	
		-					

### 4.2.8. Extended Call Forwarding

Extended Call Forwarding allows a telephone user to configure the telephone number to which all calls or busy/unanswered calls to a given phone will be forwarded. Dial the **Extended Call Fwd Activate Busy D/A** or **All** FAC, the extension of the phone plus #, the **Security Code** for the phone plus #, and the forward-to extension . To deactivate call forwarding for the phone, dial the **Deactivation** FAC, the extension of the phone plus #, and the **Security Code** for the phone plus #.

<sup>2</sup> Note that although rare, more than one **EC500 Self-Administration Access Codes** FAC (see **Section 4.2.1**) can be defined for Self Administration For EC500 (SAFE) applications, and they must be in the order listed in the help text for the **off-pbx-telephone station-mapping** form **Application** field. For the sample configuration, even though the form shows two entries, the first SAFE application is EC500 (OPS is not a SAFE application), so the **first** access code field should be used, as shown in **Section 4.2.1**.

Use the **change cos** command to enable use of this feature at stations with the corresponding Class of Service. In the sample configuration, COS 1 was assigned to the stations, so **Extended Forwarding All** and **Extended Forwarding B/DA** are set to “y” under the corresponding column, as shown below.

change cos																Page	1	of	2
CLASS OF SERVICE																			
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15			
Auto Callback	n	y	y	n	y	n	y	n	y	n	y	n	y	n	y	n			
Call Fwd-All Calls	n	y	y	y	y	n	n	y	y	n	n	y	y	n	n	n			
Data Privacy	n	n	n	y	n	y	y	y	y	n	n	n	n	y	y	y			
Priority Calling	n	y	n	n	n	n	n	n	n	y	y	y	y	y	y	n			
Console Permissions	y	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n			
Off-hook Alert	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n			
Client Room	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n			
Restrict Call Fwd-Off Net	n	n	y	y	y	y	y	y	y	y	y	y	y	y	y	y			
Call Forwarding Busy/DA	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	n			
Personal Station Access (PSA)	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n			
Extended Forwarding All	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	n			
Extended Forwarding B/DA	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	n			
Trk-to-Trk Transfer Override	n	y	n	n	n	n	n	n	n	n	n	n	n	n	n	n			
QSIG Call Offer Originations	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n			
Contact Closure Activation	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n	n			

#### 4.2.9. Extended Group Call Pickup

An extended pickup group is a pickup group that contains other pickup groups as members. Use of the **Extended Group Call Pickup** FNE or **Extended Group Call Pickup Access Code** FAC allows a user to answer a ringing call to any phone that is in any of the pickup groups that are members of the specified extended pickup group. When the call is ringing, dial the FNE or FAC followed by the number of the extended pickup group (e.g., “01”).

In the sample configuration below, extended pickup group 1 has been defined to include pickup groups 1 and 3.

add extended-pickup-group 1				Page	1	of	1
EXTENDED PICKUP GROUP							
Extended Group Number: 1							
Pickup Number	Pickup Group Number	Pickup Number	Pickup Group Number				
0:	1	13:					
1:	3	14:					
2:		15:					
3:		16:					
4:		17:					
5:		18:					
6:		19:					
7:		20:					
8:		21:					
9:		22:					
10:		23:					
11:		24:					

#### 4.2.10. Malicious Call Trace

Malicious call trace activation is initiated from a phone to start a trace for a currently active call on a specified extension. All configured trace controller phones on the system are notified of the request and can take control of the trace. The active controller can deactivate the trace. Avaya 1100- and 1200-Series IP Deskphones can request a malicious call trace, but cannot act as a controller. To make the request, dial the **Malicious Call Trace FNE** or **FAC** followed by the extension of the phone that is on the call to be traced. The request can be canceled by dialing the **Malicious Call Trace Cancel FNE** or **FAC**.

#### 4.2.11. Remote Send All Calls

This feature allows a telephone user to activate or deactivate Send All Calls for a specified extension from a telephone whose Class of Restriction includes **console permissions** (see **Section 4.2.3**). From the phone, dial the **Remote Send All Calls Activation FAC** followed by the extension of the target phone plus #, and the station **Security Code** of the target phone plus #. To deactivate, repeat the procedure, dialing the **Remote Send All Calls Deactivation FAC**.

#### 4.2.12. Station Lock

This feature allows a telephone user to restrict calls from being made from a specified extension. Dial the **Station Lock Activation FAC** followed by the extension of the target phone plus #, and the station **Security Code** of the target phone plus #. Thereafter, calls dialed from the target phone will result in busy tone and a display of "Forbidden." To deactivate station lock, repeat the procedure, dialing the **Station Lock Deactivation FAC**.

Calls are restricted by configuring a COR that restricts outbound calls, an example of which is shown below.

change cor 2		Page 1 of 23
CLASS OF RESTRICTION		
COR Number: 2		
COR Description: Origination restricted		
FRL: 3	APLT? y	
Can Be Service Observed? y	Calling Party Restriction: origination	
Can Be A Service Observer? y	Called Party Restriction: none	
Time of Day Chart: 1	Forced Entry of Account Codes? n	
Priority Queuing? n	Direct Agent Calling? n	
Restriction Override: none	Facility Access Trunk Test? n	
Restricted Call List? n	Can Change Coverage? n	
Access to MCT? y	Fully Restricted Service? n	
Group II Category For MFC: 7	Hear VDN of Origin Annc.? n	
Send ANI for MFE? n	Add/Remove Agent Skills? n	
MF ANI Prefix:	Automatic Charge Display? n	
Hear System Music on Hold? y	PASTE (Display PBX Data on Phone)? n	
	Can Be Picked Up By Directed Call Pickup? y	
	Can Use Directed Call Pickup? y	
	Group Controlled Restriction: inactive	

The COR of the stations for which station lock is to be supported should have **Station Lock COR** set to this restricted COR. Activation of Station Lock switches the active COR for that phone to the restricted COR. In the example, when a phone with COR 1 activates Station Lock for a specified phone, the COR for that phone is switched to 2.

change cor 1	Page 2 of 23
CLASS OF RESTRICTION	
MF Incoming Call Trace? n	
Brazil Collect Call Blocking? n	
Block Transfer Display? n	
Block Enhanced Conference/Transfer Displays? y	
Remote Logout of Agent? n	
Station Lock COR: 2	TODSL Release Interval (hours):
	ASAI Uses Station Lock? n
Station-Button Display of UI IE Data? y	
Service Observing by Recording Device? n	
Can Force A Work State Change? y	
Work State Change Can Be Forced? y	

## 5. Verification Steps

All features described in these Application Notes were tested using the sample configuration. See the section corresponding to each individual feature for information on feature operation and possible configuration changes that can be verified in Communication Manager via the System Access Terminal (SAT) interface.

## 6. Conclusion

These Application Notes have described the administration steps required to use selected advanced telephony features from Avaya 1100- and 1200-Series IP Deskphones (SIP) registered to Session Manager. The advanced set relies on Avaya Aura® Communication Manager Evolution Server and the use of Feature Name Extensions and Feature Access Codes.



## 7. Additional References

Avaya documentation may be found at <http://support.avaya.com/>.

### Avaya Application Notes

- [1] *Application Notes for Avaya 1100- and 1200-Series IP Deskphones R3.2 with Avaya Aura® Communication Manager R6, Avaya Aura® Session Manager R6, and Avaya Modular Messaging R5.2 – Issue 1.0*

### IETF Standards

- [2] *Session Initiation Protocol Service Examples*, Internet Engineering Task Force, RFC 5259, available at <http://www.ietf.org>.

### Avaya Aura® Communication Manager

- [3] *Avaya Aura® Communication Manager Feature Description and Implementation*, Release 6.0, Doc # 555-245-205, Issue 8.0, June 2010.
- [4] *SIP Support in Avaya Aura<sup>TM</sup> Communication Manager Running on Avaya S8xxx Servers*, Doc # 555-245-206, Issue 9, May, 2009.
- [5] *Administering Avaya Aura<sup>TM</sup> Communication Manager*, Doc # 03-300509, Issue 6.0, June 2010.
- [6] *Avaya Extension to Cellular and Off-PBX Station (OPS) Installation and Administration Guide Release 3.0*, Doc # 210-100-500, Version 6.0, Issue 9, June 2005.

### Avaya IP Deskphones (SIP)

- [7] *SIP Software for Avaya 1100 Series IP Deskphones – Administration*, Release 3.2, Doc # NN43170-600, Issue 01.01.
- [8] *SIP Software for Avaya 1200 Series IP Deskphones – Administration*, Release 3.2, Doc # NN43170-601, Issue 01.01.

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