



Ethernet Routing Switch 8800/8600

Readme

Software Release 7.2.12.0



Table of Content

Ethernet Routing Switch 8800/8600	1
Readme	1
Software Release 7.2.12.0.....	1
Table of Content.....	2
Software Release 7.2.12.0	3
Important Notices.....	3
Supported Hardware for Release 7.2.12.0	3
Upgrade Notes.....	3
Important Operational Notes.....	5
File Names for This Release	6
Version of Previous Release	7
Compatibility	7
Changes in This Release	8
New Features in This Release.....	8
Old Features Removed From This Release	8
Problems Resolved in This Release	8
Known Limitations	10
Documentation Corrections.....	10



Software Release 7.2.12.0

Release Date: April 25, 2014

Purpose: Software maintenance release to address customer reported issues.

Important Notices

Supported Hardware for Release 7.2.12.0

Refer to the ERS 8800 Release Notes for a complete list of supported hardware - **Release Notes — Software Release 7.2.10.0 Avaya Ethernet Routing Switch 8800/8600** available at <https://support.avaya.com>

Upgrade Notes

This section describes the Ethernet Routing Switch 8800 Software Release 7.2.12.0 software files.

Before you upgrade, it is recommended to verify the MD5 signature for each new file to be used.

For upgrade procedures, see **Upgrades — Software Release 7.2.10.0 Avaya Ethernet Routing Switch 8800/8600** available at <https://support.avaya.com>

Important Upgrade Note for systems using NLB configuration:

Due to a software defect present in releases older than 7.1.5.4 or 7.2.1.1 / 7.2.10.x, the system saves the “ip arp static-mcast” related configuration to the config file in an incorrect way as listed below. The parts shown in red are incorrect and should not have been saved. Loss of configuration can result upon system boot up when booting from a config file with this error in it. The reason is that the config-loading operation, that happens upon system boot up, stops prematurely and configuration data that falls beyond the portion below does not get applied.

```
router vrf <vrf name>
ip arp static-mcast <ip add> <mcast Mac addr> vid <vlan id> <ports>
exit
exit
exit
exit
exit
exit
exit
exit
exit
exit
```

If these extra fields exist in a currently saved config file, these “exit” lines must be manually removed from the saved config by getting the file from the ERS 8x00 to a workstation, editing the file (using Notepad) and then downloading the corrected configuration file back onto the ERS 8x00 device. It is strongly recommended that a backup copy of the clean config file be saved off on the flash to use in case of emergency. Note that any time a “save config” operation is performed, the incorrect fields will get saved again and will need correcting.

This problem is not present in this release. However, if upgrading a system from a release older than 7.1.5.4 or 7.2.1.1/7.2.10.x directly to 7.2.12.0, care needs to be taken to ensure the upgrade is performed using a config file that is free from these errors.



Important Upgrade Note for systems with 8895 CPUs and Dual Input Power Supplies (8005DI 1170W/1492W 120/240V Dual AC-input Power Supply) if upgrading from releases older than 7.1.5.2 or 7.2.1.1:

Background:

- An I2C bus hung state can result in systems with 8895 CPUs and 8005 Dual Input (DI) Power supplies running pre-7.1.5.2 or pre-7.2.1.1 release. The system will continue to function properly even with the I2C bus in a hung state. However when system is rebooted, the reboot will fail due to “Chassis SEEPROM read error” and device will remain in a software hung state and potentially become inaccessible.
- This issue is fixed in release 7.1.5.2 and higher software release versions and in 7.2.1.1 and higher software release versions.
- While normal operation is not impacted by the I2C bus being in a hung state, switch initialization (reboot) /S impacted and additional steps need to be taken as part of the upgrade to ensure the switch recovers properly. Failing to follow the additional steps (see ‘special procedure’) below will result in a failed upgrade and the device will remain in a software hung state upon reboot and potentially become inaccessible.

Monitoring:

- The device can be monitored periodically using the “show sys info” (ACL: show sys-info) command. Note: Only run this command on the Primary CPU.
- If the Fan temperature reading shows “0”, it is indicative of a hung I2C.
- The system will continue to function properly without issue even with the I2C bus in a hung state and will only pose issues upon reboot & upgrades. See the ‘special procedure’ in the ‘Upgrade Instructions’ section below on how to deal with such a situation.

Upgrade Steps:

- Ensure someone is physically present near the device, in case a power cycle is needed to recover the system.
- Download the 7.2.12.0 software release onto the device and get all the pre-sets done as you would in a normal upgrade. However DO NOT issue the reset or reboot command. - Run the “show sys info” command. If the Fan temperature reading shows “0”, it is indicative of a hung I2C. If this is the case, you need to follow special procedure below:
 1. Once all pre-work is complete, power the chassis off
 2. Remove **ALL** power supplies from chassis and hold them out for a minimum of **30** seconds. This allows the capacitors in the supply to discharge and ensure the supply has gone completely cold electrically. This step ensures the I2C bus will start clean on power-up.
 3. Reinsert all the necessary power supplies into the chassis securely.
 4. Power on the chassis
 - a) Make sure you have at least one PC with working console access to CPU (start with CPU in slot 5 if only one console terminal available).
 - b) (For chassis with dual CPUs): Pull out CPU in slot 6.
 - c) Power up the chassis power supplies (all) and monitor console output.
 - d) Hit <RETURN> repeatedly and stop the booting process at monitor mode.
 - e) At monitor mode, run command: ‘ boot /flash/p80b<new_sw_load>.img’
 - Chassis will reboot again and this time do not hit any ENTER but just watch on console as CPU powers-up normally.
 - If chassis has only one CPU, then go to step 5. If chassis has two CPUs then go to next step, f.
 - f) Connect console and terminal to console port on CPU-6.
 - g) Insert spare CPU in slot-6.
 - h) Repeat steps d – e on CPU-6 console.
 5. The chassis should boot successfully with the 7.2.12.0 software that it was preconfigured to load.
- If fan temperature readings were normal, you do not need to do the above procedure. You can simply complete the upgrade using the normally outlined upgrade procedures.
- The chassis should boot successfully with the 7.2.12.0 or higher software that it was preconfigured to load.
- If for any reason the chassis is hung during software initialization during this upgrade boot, you can recover it using the above noted special procedure.



Important Operational Notes

- Do not use TFTP to transfer large files to/from the device. There is a possibility of causing stack overflow and potential crash of the system. FTP should be used instead.
- Out-of-band management network addressing scheme should be kept completely disjoint from in-band network addressing, ensuring that no overlap results. Any overlap between the management network and in-band network can result in network loops and severely affect network performance. A configuration with overlap between management and user address schemes is not supported.
- The “verbose mode” feature of CLI/ACLI is to be used to generate a verbose mode configuration for the sole purpose of viewing default configuration options. Sourcing or loading of such a “verbose” config file is not supported. Only a non-verbose configuration should be used for device operation.
- Configuration of non-IST inter-switch links running parallel to an inter-switch IST is not a valid configuration and can result in network loops. This kind of configuration should never be done.
- It is important to make sure that a system upgrade does not result in a condition where the system boots with mismatched boot-monitor image (“b” or “be” image) and run-time image (“a”, “ae” or “m” image). This can result in incorrect system behaviour. Please follow correct procedure to boot with the boot-monitor image
- Special care must be taken when upgrading dual-CP systems running in hot-standby HA mode. The two CPs need to be booted in a specific order within a very specific time gap between them. Booting outside of these guidelines can result in upgrade failure. Further, upgrade of IO cards will not take place if this procedure is not followed correctly resulting in software release mismatch between CP and IO cards resulting in malfunction of the system.
- Show commands such as “show sys info” that access system level information or SNMP gets/walks that access system MIB should never be run from/against the Backup CPU.
- For 8812 ports utilizing LRM transceivers, link establishment may require an additional 15-20 seconds due to the synchronization/training time required for hardware linear mode equalization. The delays will be proportional to the number of LRM transceivers populating the lane.
- SMLT / IST ports enter a special “hold-down” state transition immediately after reboot, as the system comes up and until it reaches full operational state. As such any dynamic configuration changes or movement of SMLT/IST ports should not be done until system is completely up and all ports have reached their normal run-time states.
- Migration from PIM to SPB – When migrating a PIM based network to Multicast Service over SPB, one must wait 5 seconds between disabling PIM and enabling Multicast over SPB. Disabling of PIM results in removal of forwarding entries associated with PIM. This can take up to 5 seconds (timer). Not waiting for that interval to enable MCoSPB can result in the SPB-installed forwarding records to get deleted when PIM cleanup task runs. [wi01133076]
- Diagnostic features such as PCAP, Port Mirroring, DDM should be used cautiously as incorrect usage or over-usage of these features can adversely affect the device operations.
- The dos-chkdsk command should only be run in a maintenance window.
- Ensure PCMCIA and flash have sufficient space available on them. Having large number of files on these or not having enough available space can cause system to malfunction.
- Live removal of PCMCIA / Compact flash is not supported and it can result in system reset. The “dos-stop /pcmcia” or “pcmcia-stop” command should be used to stop the device before it can be removed. Additionally before issuing the command, all user-driven and system-driven read/write activity to the device must be disabled by the user. Logging to PCMCIA, CLI Logging, SNMP Logging must be disabled and any manual or automated commands that would result in a write to PCMCIA should be blocked before running the “dos-stop /pcmcia” or the “pcmcia-stop” command.



File Names for This Release

Module or file Type	Description	File name	Size in bytes
Tar file of all software	Deliverables (includes images that also contain encryption software)	pr86_72120.tar.gz	69,378,898
Ethernet Routing Switch images			
Boot monitor image for 8692 SF/CPU	8692 CPU and switch fabric firmware	p80b72120.img	1,200,265
Boot monitor image for 8895 SF/CPU	8895 CPU and switch fabric firmware	p80be72120.img	1,269,725
Run-time image for 8692 SF/CPU	Run-time image for 8692 SF/CPU	p80a72120.img	17,032,610
Run-time image for 8895 SF/CPU	Run-time image for 8895 SF/CPU	p80ae72120.img	15,966,745
Run-time image for R modules	Run-time image for R modules	p80j72120.dld	1,914,564
Run-time image for RS modules	Run-time image for RS modules	p80k72120.dld	1,983,084
Run-time image for Enterprise Enhanced SF/CPU Daughter Card (SuperMezz)	Image for the SuperMezz Card	p80m72120.img	17,112,900
3DES for 8692 SF/CPU	Encryption module for privacy protocol with Secure Shell (SSH)	p80c72120.des	56,124
3DES for 8895 SF/CPU	Encryption module for privacy protocol with Secure Shell (SSH)	p80ce72120.des	51,972
AES for 8692 SF/CPU	Encryption module for privacy protocol with Secure Shell (SSH)	p80c72120.aes (this image includes the 3DES image)	27,644
AES for 8895 SF/CPU	Encryption module for privacy protocol with Secure Shell (SSH)	p80ce72120.aes (this image includes the 3DES image)	25,316
MIB	MIB files	p80a72120.mib	5,682,462
MIB (zip file)	Zip file containing MIBs	p80a72120.mib.zip	897,275



MD5 checksum File	md5 checksums of all Release 7.2.11.0 software files	p80a72120.md5	1,249
Trace files			
FOQ for R modules	Feedback output queuing FPGA firmware	foq267.xsvf	5,320,469
BMC for R modules	BAP memory controller FPGA firmware	bmc776.xsvf	2,640,266
DPC for R modules	Dual port Controller FPGA firmware	dpc194.xsvf	2,642,001
PIM8630GBR	Programmable I/O module FPGA firmware; for the 8630GBR only	PI_769.xsvf	2,284,578
Firmware for RS modules	Contains FOQ, BMC, DPC, mirroring, and loopback images	rs_dpm_fpga.bin	4,538,368
PIM images for RS modules	PIM FPGA firmware required for 8612XLRS module only	pim8612XLRS.bin	60,183
	PIM FPGA firmware required for 8634XGRS module only	pim8634XGRS.bin	78,173
	PIM FPGA firmware required for 8648GBRS module only	pim8648GBRS.bin	79,891
	PIM FPGA firmware required for 8648GTRS module only	pim8648GTRS.bin	54,441
EDM Help files			
MPLS trace file	Trace file for MPLS. This is auto generated and appears on the PCMCIA after upgrade.	nbpdtrc.lo0	variable
EDM help files	Help files for EDM GUI	ers8000v72120_HELP_EDM_gzip.zip	3,995,737
ERS 8000 EDM plug-in for COM			
EDM plug-in for COM	EDM plug-in for COM	ers8000v7.2.12.0.zip	5,336,629
Copyright	File containing copyright information	ERS8k.7.2.12.0_Copyri ght.pdf	266,541

Version of Previous Release

Software Version **7.2.11.0**

Compatibility

This software release is managed with Enterprise Device Manager (EDM).



Note: Updated EDM Help files and a new EDM plug-in version (v7.2.12.0) for COM are included with this release. Those must also be updated as part of upgrading to release 7.2.12.0.

Changes in This Release

New Features in This Release

- A SNMP trap has been added when the maximum number of MAC addresses has been learnt on a device. Hence, along with the log message being displayed on the console and logged into the log file, a trap will be also sent via SNMP. [wi01147739]

The new trap format is: "Maximum Number (64000) of Mac Entries Reached. Mac Address learning stopped."

- A log message has been introduced to record the diagnostic reason code when a BFD session goes down. [wi01135953]

The new log message format is: "BFD change state UP to DOWN: destip:<value> myDisc <value>, detectMult: <value>, ifIndex: <value>, UpPktCount: <value>, actRxIntv: <value>, detectTime: <value>, actTxIntv: <value>, txTimeout <value>, negoTxIntv: <value>, desTx: <value>, reqRx: <value>, diag : <reason-value>"

- Log messages have been enhanced to record the CP incoming packet rate, the packet drop count and the packet queue length when congestion is detected at the CP port. [wi01156721]

The new log message formats are:

"SysOp is congested - Start! dropCount = <value>, qDepth = <value>, cppInRate = <value> pps".

"cppQShow - <time-elapsed>. dropCount = <value>, qDepth = <value>, cppInRate = <value> pps".

"cppQShowPorts - <time-elapsed>. dropCount = <value>, qDepth = <value>, cppInRate = <value> pps".

Old Features Removed From This Release

None

Problems Resolved in This Release

- SNMP MIB Walk traversing MIBs did not dump MIBs related to rcPrQosTxQueueStats. [wi01130473]
- It was not possible to modify an existing MED (Multi-Exit Discriminator) in BGP Announce Policies to eBGP peers. [wi01139882]
- In ACLI mode, the BGP global-debug mask was being saved incorrectly in the config file. [wi01143229]
- The "config ip arp static-mcastmac add" command had to be entered twice to add static multicast mac address to the Arp table and after a reboot the configured static-mcastmac entry was not added to the Arp table. [wi01125450]
- IPv6 packets were being sent to the CP on an incorrect queue. This would result in IPv6 VRRP transitions for fast advertisement values during high CPU conditions. [wi01142753, wi01143136]
- When VRRP backup node transitioned to master after receiving low priority VRRP message, an incorrect cause was shown in the log file. [wi01142757]
- TACACS+ authenticated SSH sessions were not getting cleaned up fully on termination, resulting in crashes. [wi01130627]
- Deleting TACACS+ server configuration with multiple TACACS+ authentications in progress would sometimes result in a crash. [wi01144526]
- Packet loss of one packet per 100000 packets was observed in multiple RS and 88xx modules when the modules were powered off and powered on multiple times. This is now being automatically detected, recovered, and the event(s) logged. [wi01135244]



- A crash would sometimes occur when a switch received IGMP joins & leaves while a pre-release 5.0 formatted PCMCIA card was continuously removed and reinserted. [wi01145436]
- An ARP entry associated with an MLT could not be deleted using off-box and on-box EDM. [wi01141440]
- A crash was seen when a traceroute command was run but the session it was being run from was terminated before the traceroute could complete. [wi01146501]
- CFM trace routes would not work if CFM was enabled before SPB was enabled. [wi01150891]
- A SSH related crash was observed while executing “show isis spbm i-sid all” command. [wi01150894, wi01148021]
- In ACLI mode, “ip rvs-path-chk” enable configuration was not saved to the configuration, so after a reboot rvs-path-chk was disabled on all IP interfaces. [wi01142717]
- The switch could not be accessed through EDM using Firefox version v27 or later. [wi01154943]
- A warning message, “ATTENTION MISMATCH version”, was observed while upgrading the 8895 CPU to 7.2.11.0. [wi01155674]
- Port Driver has been enhanced to handle an interconnectivity issue between ERS 8600/8800 with 100FX SFPs and Baystack 450-MDA FX GBIC inserted ports. [wi01156533]
- Robustness improvements have been made to avoid crashes caused by ISIS SNMP requests. [wi01157051]
- I2C bus handling has been improved to reduce the number of I2C read operations to avoid high CPU utilization scenarios resulting from I2C reset condition. [wi01156806, wi01150889]
- A missing boundary check in the KHI module was causing a crash. [wi01160108]
- Abruptly terminated radius accounting sessions left a stale socket with invalid session task information. [wi01147963]
- IST was not coming up upon an IST hard or soft reset operation. [wi01156183]
- An incorrect error message was thrown when user tried to create more than 64 ISIS interface from EDM. [wi01162614]
- Consistency checks have been implemented to prevent creation of more than 64 ISIS interfaces on a switch. [wi01155879]
- When the switch was accessed through COM or EDM, the copyright information displayed 2013 instead of 2014 and the SVN Revision was not displayed. [wi01161328, wi01156695]
- After creating the maximum allowed 24 VRFs, deleting the last VRF (VrflD 24) did not update the intermediate static route list traversal pointer. [wi01139632]
- The community field set on redistribution route policies was not propagated to iBGP peers. [wi01143903]
- A CLI lockup was seen with SCP and telnet scripts running on the switch for a few hours. [wi01145067]
- A 33% delay was observed in transmission of SLPP PDUs. [wi01146951]
- TACACS Error message "Mutex id of the message is null" appeared in the log file with every logout, even when TACACS was not enabled. [wi01151194]
- Static-mcast MAC configuration on a LACP enabled MLT was lost upon reboot. [wi01151257]
- When a Qualys scan was run on a switch configured with an unreachable TACACS+ server, a crash was observed after a few hours. [wi01153143]
- ISIS adjacencies were timing out prematurely after bouncing the MLT links multiple times. [wi01156459]
- Upon double clicking a port on the EDM UI when using a 8010CO chassis with 8634XGRS/8834XG cards, a blank window was being displayed and a java script error was being thrown. [wi01162499]
- A crash was observed when ECMP was enabled and disabled. [wi01150188]



Known Limitations

- "ROOT DIRECTORY FULL" messages will scroll on the console if there are a maximum number of files present on the PCMCIA card. [wi01153536]
- RVS-PATH-CHK configurations are not set to default values when we delete and re-create IP address on an interface. [wi01152884]
- In ACLI mode, disabling SLPP globally resets SLPP "tx-interval" value to default. [wi01159348]
- A user is unable to create IP addresses in the 172.31.255.245 to 172.31.255.255 range under a vlan. [wi01156974]
- ACL filter configurations get corrupted when executing show filter acl config multiple times. [wi01154657]
- An abrupt telnet session closure can result in a telnetd crash when radius accounting is enabled. [wi01162687]
- If software-lockup detects any task in infinite loop, a full memory dump is not collected leading to insufficient data collection. [wi01162274]
- The switch does not compute FIB if another node in the network has more than 64 ISIS adjacencies. [wi01163437]
- When an IPFIX packet is exported to the collector, it does not contain the source VLAN ID information in the flow record [wi01147835]

Please refer to the Known Limitations section of the Release Notes for Ethernet Routing Switch 8600 Software Release 7.2.10.1 and 7.2.11.0. No other known limitations have been found than those noted above.

Documentation Corrections

None

Copyright © 2014 Avaya Inc - All Rights Reserved. The Ethernet Routing Switch 8100/8300/8600/8800 is a trademark of Avaya, Inc.

The information in this document is subject to change without notice. The statements, configurations, technical data, and recommendations in this document are believed to be accurate and reliable, but are presented without express or implied warranty. Users must take full responsibility for their applications of any products specified in this document. The information in this document is proprietary to Avaya.

To access more technical documentation, search our knowledge base, or open a service request online, please visit Avaya Support on the web at <https://support.avaya.com/>
