Ethernet Routing Switch 8600

Release Notes

Software Release 5.1.2.0

Document Version 01.01

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Software Release 5.1.2.0

Release Date: February 11, 2010

Purpose: Software maintenance release to address internally and customer found software issues

Important Notes

Avaya Inc has acquired the Enterprise Solutions business from Nortel. This acquisition includes the ERS 8600 and software described in this document. During the transition of all assets and support infrastructure of products and services to Avaya, Nortel provides certain infrastructure support. As such, you will find the Nortel name, and pointers to Nortel support locations on the Internet being referenced intermixed with Avaya in this document.

REGARDLESS OF SOFTWARE VERSION, the system-monitor flag should be checked on all systems to be sure it is enabled. This flag should always be enabled as it enables a software monitoring capability to detect and respond to abnormal software loop conditions. The flag setting can be checked via the command "show config". NOTE: Enabling this flag only takes effect after a reboot and must be saved in the config prior to reboot.

The display should be similar to the following:

```
ERS8600:6# show config
Preparing to Display Configuration...

#!flags m-mode false
#!flags enhanced-operational-mode false
#!flags vlan-optimization-mode false
#!flags global-filter-ordering false
#!flags r-mode true
#!resource-reservation max-vlan false
#!resource-reservation multicast 2048
#!flags multicast-check-packet true
#!flags system-monitor true (enabled)          or potentially false (disabled)
#!flags regular-Autoneg false
#!record-reservation filter 4096
```

If the system-monitor flag is set false, then it should be changed to true which can be accomplished through JDM by following the menu option sequence "Edit Chassis" -> "System Flags" and then look under "System Monitoring" at the bottom of the screen. Checked equals enabled.

To set via SNMP use:

MIB is rapidCity.rcMgmt.rcChassis.rcChasSystemMonitorEnable

snmpset -v 1 -c public x.x.x.x enterprises.2272.1.4.41.0 1

Where x.x.x.x = some IP address associated with the switch.

To view the setting via SNMP use:

snmpget -v 1 -c public x.x.x.x enterprises.2272.1.4.41.0

Output is either:

FALSE - SNMPv2-SMI::enterprises.2272.1.4.41.0 = INTEGER: 2 (disabled)
TRUE - SNMPv2-SMI::enterprises.2272.1.4.41.0 = INTEGER: 1 (enabled)

In prior releases, the SNMP timer task could potentially crash if the SNMP retry counter is set to a value greater than zero and multiple concurrent SNMP inform events are generated which do not receive an acknowledgement. While multiple factors and conditions need to align in order to encounter this SNMP task crash, it was recommended to set the SNMP retry count within the snmp-v3 target-address to zero in order to avoid the issue altogether. An example of such a configuration is (see the bolded entry):

Config snmp-v3 target-addr create "NNM" 10.10.10.1:162 "TparamV2" tdomain ipv4_tdomain timeout 1500 **retry 0** taglist informTag mms 484

This is now resolved, and the retry value can now be set to values greater than zero. (Q02052753)

Platforms Supported

All Ethernet Routing Switch 8600 modules are supported in the 8006, 8010, and 8010co Chassis. Full slot support for all modules may be dependant on the presence of the High Performance (HP) Backplane. There is an orderable (and chargeable) upgrade option for the HP Backplane.

The following modules are not supported in the 8003 chassis:

8692SF/CPU

All R/RS modules

Please refer to the following documents for details on the Platforms Supported:

Release Notes for the Ethernet Routing Switch 8600 Series Switch Software Release 5.1.0.0 (Doc # NN46205-402, Rev 3.01)
Nortel Ethernet Routing Switch 8600 5.1 Upgrade Manual (Doc # NN46205-400, Rev 3.01)

Nortel Ethernet Routing Switch 8600 Installation - Modules Manual for Software Release 5.1 (Doc # NN46205-304, Rev 3.02)

Nortel Ethernet Routing Switch 8600 Administration Manual for Software Release 5.1 (Doc # NN46205-605, Rev 2.03)

Nortel Ethernet Routing Switch 8600 Routine Maintenance Manual for Software Release 5.1 (Doc # NN46205-312, Rev 2.01)

Note: R/RS-series modules are supported in the 8010co chassis only with a High Performance Backplane installed.

Notes for Upgrade

Please see Upgrade Guide and Release Notes for the Ethernet Routing Switch 8600 Series Switch Software Release 5.1.0.0 available at www.nortel.com/support.

File Names for This Release

Module or file Type	Description	File name	Size in bytes
Software tar file Tar file of all software	Deliverables (includes images that also contain encryption software)	pr86_5120.tar.gz	62008946
Ethernet Routing Switch images			
Boot monitor image	CPU and switch fabric firmware	p80b5120.img	1138861
Run-time image	Run-time image	p80a5120.img	12614553
Run-time image for R modules	Image for R modules	p80j5120.dld	1519012
Run-time image for RS modules	Run-time image for RS modules	p80k5120.dld	1579496
Run-time image for Enterprise Enhanced SF/CPU Daughter Card (SuperMezz)	Image for the SuperMezz card	p80m5120.img	12718767
3DES	Encryption module for privacy protocol with Secure Shell (SSH)	p80c5120.img	55928
AES	Encryption module for privacy protocol for SNMPv3. Includes AES and 3DES	p80c5120.aes (this image includes the 3DES image)	26947
MIB	MIB files	p80a5120.mib	4149424
MIB (zip file)	Zip file containing MIBs	p80a5120.mib.zip	674759
MD5 checksum file	md5 checksums of all Release 5.1 software files	p80a5120.md5	1358
Runtime image for ATM	Runtime image for the ATM module	p80t5120.dld	906024
Runtime image for POS	Runtime image for the POS module	p80p5120.dld	701771
Firmware images			
FOQ for R modules	Feedback output queuing FPGA firmware	foq267.xsvf	5320469
BMC for R modules	BAP memory controller FPGA firmware	bmc776.xsvf	2640266
DPC for R modules	Dual port Controller FPGA firmware	dpc184.xsvf	2583454
PIM8630GBR	Programmable I/O module FPGA firmware; for the 8630GBR only	PI_769.xsvf	2284578
Firmware for RS modules	Contains FOQ, BMC, DPC, mirroring, and loopback images	rs_dpm_fpga.bin	4538368

PIM images for RS modules	PIM FPGA firmware required for 8612XLRS module only	pim8612XLRS.bin	60183
	PIM FPGA firmware required for 8634XGRS module only	pim8634XGRS.bin	78173
	PIM FPGA firmware required for 8648GBRS module only	pim8648GBRS.bin	79891
	PIM FPGA firmware required for 8648GTRS module only	pim8648GTRS.bin	54441
SSL images			
SSL cluster upgrade	Ethernet Routing Switch 8600 clustered SSL modules self-installing runtime image/upgrade	p80s5120.pkg	5988896
SSL boot monitor	Ethernet Routing Switch 8600 SSL module boot monitor	p80s5120.img	7528448
SSL upgrade instructions	Ethernet Routing Switch 8600 SSL upgrade instructions	p80s5120.upgrade	1481
SSL installation instructions	Ethernet Routing Switch 8600 SSL installation instructions	p80s5120.install	2895
SSL diagnostics	Ethernet Routing Switch 8600 SSL diagnostics	p80s5120.diag	19460381
WSM images for Ethernet Routing Switch 8600			
WebOS firmware image	WSM WebOS v10.0.34.0 firmware image	wsm1003400_mp.img	845560
WebOS binary	WSM WebOS v10.0.34.0 binary image	wsm1003400_bin.img	1376256
WebOS boot image	WSM WebOS v10.0.34.0 boot image	wsm1003400_boot.img	43004
Device Manager images			
Solaris for SPARC image	Device Manager software image	jdm_6200_solaris_sparc.sh	239157758
Microsoft Windows image	Device Manager software image	jdm_6200.exe	215146471
Linux image	Device Manager software image	jdm_6200_linux.sh	218350078
Service Delivery Module images			
Service Delivery Module Firewall	Boot ISO for the NSF Service Delivery Module Firewall booting from CD-ROM	NSF5100_2.3.7.0_SDM_R60.iso NSF5100_2.3.7.0_SDM_R65.iso	
	Upgrade package for the NSF Service Delivery Module Firewall	NSF5100_2.3.7.0_SDM_R60.pkg.gz NSF5100_2.3.7.0_SDM_R65.pkg.gz	
Service Delivery Module TPS	Boot image for TPS Intrusion Sensor	Nortel_TPS_Intrusion_Sensor-SDM-v4.5.0-627-Install.iso	
	Boot ISO for TPS Defense Center booting from CD-ROM	NortelTPSDefenseCenter_2x70v4.5.0_627_Install.iso	
	Upgrade script (patch) to upgrade TPS IS from 4.5.0 to 4.5.1.	Nortel_TPS_IS_Upgrade_4.5.0_to_4.5.1_Upgrade-47.sh	

	IS upgrade download verification file.	Nortel_TPS_IS_Upgrade_4.5.0_to_4.5.1_Upgrade-47.sh.md5	
Trace files			
MPLS trace file	Trace file for MPLS. This is auto generated and appears on the PCMCIA after upgrade.	nbpdtrc.lo0	variable

This software release is managed with Java Device Manager (JDM) release 6.1.8.0 or higher.

This software release supports the Web Switching Module (WSM) release WebOS 10.0.34.0. This code is found on Nortel web site under Content Networking -> Web Switches -> Ethernet Routing Switch Web Switch Module.

This software release supports SDM FW Release up to 2.3.7.0. This code is found on Nortel web site under Security & VPN -> Service Delivery Module 8660, which provides a link to CheckPoint web site.

This software release supports SDM TPS Release up to 4.7.0.2. This code is found on Nortel web site under Security & VPN -> Service Delivery Module 8660.

To download any of these code releases requires valid Nortel support web access, as well as valid CheckPoint support site access for most FW code.

Changes in This Release

New Features in This Release

None.

Old Features Removed From This Release

None.

Problems Resolved in This Release

Switch management

The SNMP trap for rcIpBgpPeerLastError will now be sent with a proper byte string length such that the last bye will no longer be lost. This could previously cause operational issues with some SNMP management stations. (Q02092718)

ERS 8600 will no longer observe system instability associated with configuration changes to switch parameters involving SNMP settings. (Q02094258)

Previously the ERS 8600 was applying a local Access Policy to IPv6 routed SSH packets. Now the system will route these packets and apply Access Policies to only local destination policy type (SSH, Telnet, HTTP) IPv6 packets. This will no longer cause inappropriate connection issues to remote hosts. (Q02070640-01)

ERS8600 has been modified to now allow proper communication with NetQOS Management Device. (Q02049612-01)

Platform

With both filtering and ingress mirroring enabled on the ERS8600, system instability could be seen under certain traffic conditions. This is now resolved. (Q02078239-01)

For non-routed VLANs, SLPP will now use a source MAC address equal to the Base Mac Address of the ERS8600 plus the ID of the VLAN. This will ensure that received SLPP packets are processed against the correct non-routed VLAN when a loop is present in the network and avoid erroneous warning messages. (Q02081719)

IP fix traffic from the switch to an external collector will no longer be sent with an improper QoS marking of QOS=7, but instead sent with QOS=0, now placing these packets into the proper default egress queue. Previously this traffic could potentially interfere with other system management traffic leading to the potential for system instability when IPFix was enabled. (Q02044640-01)

High CPU utilization on an I/O line card co-processor will no longer result in a loss of messaging synchronization with the SSF CPU, which previously could have led to system instability. (Q02085085)

ERS 8600 will no longer show instability in tLogger task while writing to the PCMCIA card with clilogging enabled. (Q02006689-01)

ERS 8600 R and RS module card ports will now initialize multicast and broadcast bandwidth limiting values properly when these features are enabled. (Q02074960)

ERS 8600 will now properly handle any broadcast destination MAC IPX packets of type RIP or SAP. Previously this could cause and issue for routing IPX for E/M modules (R/RS modules do not support IPX Routing). (Q01997486-04)

Packet throughput performance for jumbo frames at line rate has been improved for the 8612XLRS modules. (Q02075673)

Filter pattern definitions for HTTP packet streams will no longer impact other protocol traffic. (Q02089688)

Users will now be able to connect to an ERS 8600 using Secure Copy (SCP) with access-level rwa when access-strict true is also configured. Previously SSH worked, but SCP did not. (Q01767930-01)

ERS 8600 will no longer encounter link flapping upon reboot of an OM1400 edge device running SFFD when connected to 8630GBR ports. (02014236-01)

ERS8600 will now properly forward DHCP packets with the DHCP-relay agent configured as the VRRP virtual IP when the DHCP request has the broadcast flag set. Best practice recommendation still continues to be to configure the DHCP-relay agent IP address as the VLAN physical address and not the VRRP IP address. (Q02059607-01)

Reliability of R and RS series line card recovery after CPU resets (normally seen during switch software upgrades) has been improved due to enhancements in SSF CPU to I/O module co-processor message communication and synchronization. (Q02091485/ Q01997485)

ERS 8600 will no longer silently drop packets when the number of ACEs with debug count enabled is such that system resources are at their maximum, but instead the filters will now all function properly. (Q02045086)

RSTP/MSTP

Enhanced MSTP/RSTP logging information which was previously added in release 4.1.3.0 was not present in any 5.x code. This functionality has now been properly added. Q02053232)

The VLAN interface on an ERS8600 in RSTP/MSTP mode will no longer be brought up unless a port first becomes active in the VLAN. This matches the existing VLAN interface behavior in STP mode. (Q02083039)

Packet loss on an MLT with RSTP enabled will no longer been seen after a CPU reset/switchover with HA mode enabled or after a complete switch re-boot. (Q02003158-01)

ERS 8600 will properly retain the MLT path-cost configuration over reboots when configured for RSTP/MSTP mode. (Q02048253)

ERS8600 will now properly show the MSTP CIST port pathcost info when "show port info mstp" is executed. (Q02048252)

IP Unicast

UDP

The configured filter action is now properly observed for ACL's configured to match UDP source and destination port ranges between 32752 and 32767. (Q02076252-01)

Static Routes

ERS 8600 will no longer encounter system (DRAM) memory exhaustion with DHCP-relay configured on a Layer 2 VLAN or at the port level for a non-brouter port. (Q02076879)

BGP

ERS 8600 will now properly learn the default routes from eBGP peers even after the failover or toggling of the physical port connection. (Q02094999)

IP Multicast

ERS 8600 will no longer observe periods of sustained high CPU utilization associated with the forwarding of multicast traffic. (Q02067852)

ERS 8600 will now properly recover its DVMRP status for an ATM interface when a Port/Fiber Fault occurs, and is then restored. (Q02041428)

MLT / SMLT

Connectivity to NLB servers single homed to one ERS8600 in an IST pair will now function properly for SMLT connected devices when using an nlb-mode of unicast or with arp multicast-mac-flooding enabled. Configurations using nlb-mode of multicast were not affected. (Q02037778-01)

SLPP will now disable the correct SMLT port when a loop is detected on an SMLT link where the smlt-id configured is not the same as the mlt-id value configured. (Q02089994)

On ERS8600, FDB and ARP entries will point correctly to SMLT after IST peer reboots. Previously entries learnt on SMLT ports could very occasionally point incorrectly to the IST. (Q02091486)

RSMLT

With ICMP redirect enabled on RSMLT peer switches, packets destined to the RSMLT-peer's MAC address will now be forwarded correctly and not dropped as ICMP-redirect packets. (Q02091034)

In RSMLT environments, ERS8600 will no longer add the RSMLT-peer's MAC address to its Router MAC table. This will result in packets destined to the IP interface of RSMLT-peer to forward properly. (Q02091350)

VLACP

ERS 8600 will now always bring down a port via VLACP within the configured timeout value when its VLACP peer goes down. Previously one end of the link would take an extra timeout cycle before downing the port in some scenarios. (Q02088710)

In scenarios where a port was taken down by VLACP and then the far end switch is rebooted or VLACP recovered to recover the port, Persistent VLACP port flapping will no longer occur. (Q02088709)

On E-mode enabled switches in full mesh SMLT topologies, protocol traffic will now flow properly on the second MLT link when the first MLT link is disabled. (Q02089615)

VRRP

Disabling and re-enabling the IST session on an IST switch pair with VRRP configured between them will no longer result in both switches reporting VRRP mastership. (Q02104773)

Outstanding Issues

Please refer to the Outstanding Issues Section of the Release Notes for Ethernet Routing Switch 8600 Software Release 5.1.0.0. Additionally, the following issues have also been classified outstanding issues.

Repeated HA-CPU failovers may result in R-modules going offline. (Q02053766)

ERS8600 might show LANE lockup and COP may observe crash with an exception against tTimerTask. (Q02068289)

A task exception within the I/O module co-processor has been reported very intermittently which will result in the I/O module resetting. (Q02113086)

When an R or RS I/O module experiences SW instability, the port status at the far end of the connected links may not drop for up to 20 seconds. (Q02112285)

On systems equipped with the 8692SF card with mezz, the LED status indicator for the mezz daughter board may not display the operational status properly. The status of the mezz card is properly displayed in the CLI and through JDM (Q02102364)

Retrieval of an exact entry of dot1dTpFdbTable via an SNMP GET does not function properly. Retrieval of the dot1dTpFdbTable with SNMP Get Next works correctly (Q02113802)

Known Limitations

Please refer to the Known Limitations Section of the Release Notes for Ethernet Routing Switch 8600 Software Release 5.1.0.0. Additionally, the following issues have also been classified as operation not to be changed.

To access more technical documentation, search our knowledge base, or open a service request online, please visit Avaya Technical Support on the web hosted by Nortel: http://www.nortel.com/support