Ethernet Routing Switch 1600
Software Release 2.1.1.0

1. Release Summary

Release Date: 19-Dec-2006
Purpose: Software maintenance release to address customer found software issues.

2. Important Notes before Upgrading to This Release

None.

3. Platforms Supported

Ethernet Routing Switch 1600; ERS1648, ERS1612, ERS1624

Please refer to the following document for more details on the ERS 1600 Platform

> Release Notes for the Ethernet Routing Switch 1600 Series Switch Software Release 2.1 (Part No. 316859-J)
> Managing Platform Operations Ethernet Routing Switch 1600 Series Software Release 2.1(Part No. 321817-A)

4. Notes for Upgrade

Please see Release Notes for the Ethernet Routing Switch 1600 Series Switch Software Release 2.1 (Part No. 316859-J) and Upgrading to Ethernet Routing Switch 1600 Software Release 2.1 (Part No. 321327-B) at http://www.nortel.com/support (select Passport family) for details on how to upgrade your Ethernet Routing Switch 1600

File Names for This Release

File Name	Module or File Type	File Size (bytes)
p16b2110.img	Boot monitor image	1571808
p16a2110.img	Runtime image	5559935
p16c2110.img	3DES encryption module for SSH	52472
p16c2110.des	DES SNMPv3 encryption module	8638
p16a2110.mib	MIB	2342992

p16a2110.mib.zip	MIB (zip file)	374317
p16a2110.md5	md5 checksum file	435
p16b2110.had	Boot image, pre-boot-monitor code	162376

A direct upgrade from code releases prior to 1.3.x to 2.1.1 is not supported. User must first perform an intermediate upgrade to 1.3.1, and then an upgrade to 2.1.1 code.

5. Version of Previous Release

Software Version **2.1.0.1**

6. Compatibility

This software release is managed with Java Device Manager (JDM) release **6.0.0.0**

7. Changes in This Release

New Features in This Release

Directed Broadcast suppression (Q01329829)
   The ERS 1600 does not support routing of subnet broadcast traffic (also referred to as directed broadcasts). However, in previous code releases, packets sent to the broadcast address of the subnet are copied to the CPU by the hardware, as well as flooded within the VLAN.
The purpose of this new feature is to protect the CPU from such broadcast packets. When this feature is enabled, all packets destined to the subnet broadcast address of a locally configured VLAN are dropped by the hardware, within the affected VLAN. If the feature is disabled, subnet broadcasts will be sent to the CPU and the switch will also flood the packets to all the ports of the local VLAN. The feature is enabled by default on all VLANs where an IP address is assigned to the VLAN. This will be the case for all VLANs after an upgrade to release 2.1.1.0 as this involves support for a new CLI command.

NOTE: It is recommended to leave this feature enabled in order to protect the CPU from subnet broadcast packets.

New Command Line Interface for Directed-Broadcast Suppression
config vlan <vlan-id> ip directed-broadcast <enable/disable>

NOTE: There is no JDM support for this feature in the current release. This command is only available through CLI.

PIM-SM Static RP support (Q01329813)
The ERS 1600 now supports the PIM-SM static RP configuration. The Rendezvous Point (RP) can now be statically configured via CLI. The CLI commands for configuring static-RP are listed below:

Command Line Interface
config ip pim static-rp add grp <value> mask <value> rp <value>
config ip pim static-rp enable

config ip pim static-rp disable
config ip pim static-rp delete grp <value> mask <value> rp <value>
config ip pim static-rp info

NOTE: There is no JDM support for this feature in the current release. This command is only available through CLI

Old Features Removed From This Release

The commands "config bootconfig net mgmt bootp <enable|disable>" and "show boot bootp" are now obsolete and removed from the Command Line Interface (CLI). The Ethernet Routing Switch 1600 Series Software no longer supports the functionality provided by these commands. (Q01412155).
NOTE: While upgrading from Software Release 2.1.0.0, the bootp option setting (still viable with CLI) should not be saved in the existing boot configuration file. If done, the switch may not boot-up successfully. In order to achieve this, please leave the bootp setting in its default state (enable) and then save the boot configuration. The command to do this is "*config bootconfig net mgmt bootp enable*" from the runtime CLI.
NOTE: Enabling or disabling this option through JDM 6.0.0.0 will not have any effect. The operation will be indicated as successful but the configuration will be ignored by the runtime software. Any appropriate action must be done via the CLI.
The CLI commands "config ip mroute static-source-group" and "show ip mroute static-source-group" are now obsolete and removed from the Command Line Interface (CLI). The Ethernet Routing Switch 1600 Series Software no longer supports the functionality provided by these commands. (Q01505266)
NOTE: Configuring the static-source-group option through JDM 6.0.0.0, as the options are still incorrectly shown within JDM, will not have any effect. The operation will be indicated as successful but the configuration will be ignored by the runtime software.

Problems Resolved in This Release

Layer-2 Switching

General

A loss of connectivity no longer occurs when an MLT is associated with a VLAN whose vlan-Id is potentially between 1 and 20. (Q01427568)

MSTP/RSTP

The ERS 1600 now follows the IEEE 802.1s standard. When multiple VLANs and multiple MSTP instances are configured, the port membership in individual MST instances is now determined according to the VLAN port membership within those MST instances. (Q01172319)

Platform

General

The maximum configurable value for CP-limit has now been changed to 5000. This change applies to both broadcast and multicast traffic. However, the default setting is kept at 1700. (Q01485638)
NOTE: It is recommended to leave the CP-limit setting at the default value of 1700. Changing the CP-limit setting to a value greater than 3000 might lead to system instability in certain cases depending on the traffic patterns and the existing CPU utilization.

IP Unicast

General

The DHCP agent on the ERS1600 now always forwards the DHCP ACK back to the DHCP client. (Q01494928)

8. Outstanding Issues

An error message is displayed on the console when the management port state is toggled and a ping command is issued immediately after toggling the state. However, there is no loss of connectivity and the error message is also not seen again till the port state is toggled. (Q01495200)

The LED status indicating the operating speed on the management port of an ERS1612 or ERS1624 remains active even when the port is operating in 10Mbps mode. (Q01492222)

9. Known Limitations

IP destination filters configured via the CLI command "*config flow-classifier dst_ip <ipaddr> action enable*" apply only to host IP addresses (/32 prefixes) and not to network or subnet IP addresses. (Q01216945)

In an SMLT environment, station movement from one IST core to another IST core is not detected if the station continues to send traffic immediately after the move and before the FDB expiration happens on the previous core IST box. In such cases, the FDB entries on the core IST boxes are never aged out and continue to point incorrectly. The only workaround at this point of time is to stop the station from sending traffic for duration equal to the FDB expiry timer configured on the VLAN. . If such moves are made at the L2 edge switch, i.e. from one switch to another, the time to move is generally greater than the default FDB age-out time (300 seconds) which can be made smaller, plus during such movements, the station is generally no longer connected to the network, and therefore can not continue to send traffic. Wireless traffic could be an exception, especially if APs live off different L2 switches configured as part of the SMLT network. There are no plans to change this operation, so care should be taken in how 1600 SMLT networks are designed. (Q01447502/Q01379448)

The BPDUs of the default STG (STG id 1) are never tagged even when they egress from a tagged port. So, on the ERS1600, the "discard-untagged-frames" option should not be enabled on ports which are likely to receive BPDUs of the default STG. Otherwise, the BPDUs of the default STG will be dropped and this can lead to a Spanning tree loop.(Q01486549)

In an SMLT environment, multicast traffic looping can happen when multiple senders with IP addresses in the same subnet start sending traffic to the same group and if the senders are attached to the IST core boxes. Do not create such multicast configurations.(Q01497223)

The ERS 1600 does not support the option to read the operating temperature of the chassis. (Q01416152)

The Flow Classification feature on the ERS 1600 does not support modification or re-marking of IP fragmented packets. (Q01456199).

Please also see Known Limitations and considerations in this release section of Release Notes for the Ethernet Routing Switch 1600 Series Switch Software Release 2.1 (Part No. 316859-J) for other limitations.

10. Documentation Corrections

In the document, "Configuring IP Routing and Multicast Operations using the CLI Ethernet Routing Switch 1600 Series", Software Release 2.1 321711-B Rev 01, Page 160, the configuration required to cause an ERS1600 running the RIP protocol to send a default route has not been documented correctly. The correct configuration should be:

config vlan<vlanId> ip rip enable
config vlan <vlanId> ip rip default-supply enable
config vlan <vlanId> ip rip supply enable

on all VLAN interfaces required to supply a default route. In addition, a route policy configuration is also required where the default route exists in the route table, but is generated from protocols other than RIP or is statically configured by the administrator. The route policy configuration required for this purpose is:

config ip route-policy <policy-name> seq 1 create
config ip route-policy <policy-name> seq 1 enable
config ip route-policy <policy-name> seq 1 action permit
config ip route-policy <policy-name> seq 1 match-route-type <route-type>
config ip route-policy <policy-name> seq 1 match-protocol <protocol-name>

and
config ip rip interface <interface-address> out-policy <policy-name>

on all interfaces that need to announce the default route. (Q01492646)