NORTEL

>TECHNICAL SUPPORT
TECHNICAL BULLETIN

Ethernet Routing Switch (ERS) 8648 GTR Module duplex mismatch may cause port(s) to stop communicating.

Notice:

This bulletin replaces bulletin 2008008723.1. This update has been issued to communicate some new information regarding the issue.

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STATUS:	Active
REGION:	APAC CALA EMEA GC NA
PRIORITY:	Critical
TYPE:	Bulletin

Reissue Reason:

Change incorrect character that would not allow this to post.

Background:

An Ethernet port can operate either in Full or Half Duplex mode. A duplex mismatch is created when using inconsistent settings for duplex mode, i.e. full duplex on the port and half duplex on the connected device (or vise versa). This situation is most likely created when using inconsistent and inappropriate settings for auto-negotiation, i.e. auto-negotiation enabled on the port and disabled on the device connected to the port (or vise versa). The duplex mismatch problem can be corrected by setting consistent duplex mode on both the port and the connected device when hard setting the duplex mode or by enabling auto-negotiation on both the port and the connected device, when using auto-negotiation.

Ethernet ports of most devices today have auto-negotiation enabled as the default setting. When a device with auto-negotiation disabled is connected to a port that has auto-negotiation enabled, the port is not able to detect the duplex setting of the connected device and falls back to half duplex thus potentially causing a duplex mismatch. A duplex mismatch will cause physical layer errors and performance degradation of the connection. Any mixture of auto-negoatiation enabled on one-side and auto-negotiation disabled on the other side is an "unsupported" configuration. The setting on both sides of any connection must match for proper operation.

A problem has been identified when there is a duplex mismatch on one or more ports of an 8648 GTR module. For an 8648 GTR module, a duplex mismatch may cause complete communication issues on the port with the mis-matched duplex or occasionally on the entire lane (Port 1-24 or Port 25-48) that contains the port with mismatched duplex. The module can be recovered from the situation when physically reseated, but for complete recovery the mis-configuration must also be corrected. Correcting the duplex setting configuration alone will not recover the communication loss until the module is reseated as well.

Analysis:

A duplex mismatch may cause communication loss on a port or an entire lane of an 8648 GTR module. When there is such a communication loss, the debugging commands show that the ingress stats look normal with all traffic ingressing the impacted port(s) and the MAC addresses learned in the Forwarding Database Table for the devices connected to the port(s), but no traffic egressing the port(s).

Recommendations:

Nortel recommends proper configuration of auto-negotiation whenever possible to prevent a duplex mismatch situation. To avoid a duplex mismatch, auto-negotiation must be enabled on the port as well as the device connected to that port.

When hard-setting the duplex mode and not using auto-negotiation, ensure the same duplex mode is set on both the port and the device connected to that port.

Required Actions:

None

Attachments:

There are no attachments for this bulletin

Products and Releases:

The information in this bulletin is intended to be used with the following products and associated releases:

PRODUCT	RELEASE
Ethernet Rtng Switch-Ethrnt Rtng Swt 8600-8648GTR	4.1.0

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REFERENCE:
PRE-REQUIRED PATCH:
PATCH ID:

Nortel recommends any maintenance activities, such as those outlined in this bulletin, be completed during a local maintenance window.