NORTEL

>TECHNICAL SUPPORT
SOFTWARE UPGRADE BULLETIN

Ethernet Routing Switch (ERS) 8600: System Instability maybe seen after a code upgraded to 4.1.6.0 software

BULLETIN ID:	2008008980, Rev 1
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STATUS:	Active
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PRIORITY:	Critical
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Background:

CPU instability issues with Maintenance Release (MR) 4.1.6.0 have been discovered during initial deployment. CPU crash dump events leading to system instability have been reported after the operational SW was upgraded to 4.1.6.0 at different customer site.

Solution Id Numbers
S00313137, S00314649, S00315447

Analysis:

A user may see either of the following dumps on the console or logs when a CPU instability arises.

Dump 1:

```
COMMON Task=tMainTask CPU5 [04/18/08 19:06:49] SW FATAL cppPutFBuf: Trying to put a free BD! 3ad56f8
 MPC106 cs:0x20800006 err1:0x72000001 err2:0x00000000 addr:0xA1000000 0x000000A1
 sysbus addr:0x8008002C data:0x006D007A
  b05b0 vxTaskEntry +68 : cppMainTask ()
 522574 cppMainTask +150: cppScheduleBody ()
 5218e0 cppScheduleBody+428: comTimerTask ()
 4ecab8 comTimerTask +120: ArpTic ()
 8e22ac ArpTic +340: oframe_free ()
 a49c58 oframe_free +24 : cppPutFBuf ()
 52709c cppPutFBuf +6c : duReport ()
 4ee34c duReport +508: duReportFatal ()
 4ede10 duReportFatal +2c : taskDelay ()
```

Dump 2:

```
MPC106 cs:0x20800006 err1:0x72000000 err2:0x00000000 addr:0xA1000000 0x000000A1
sysbus addr:0x80080068 data:0xD036E3D1
b05b0 vxTaskEntry    +68 : cppMainTask ()
52f954 cppMainTask    +150: cppScheduleBody ()
52e9ac cppScheduleBody+14c: cppProcRxFrame ()
52d1bc cppProcRxFrame +fd8: rcIpRxFrame ()
a1554 rcIpRxFrame    +270: rcIpProcessFrame ()
```

aa2b58 rcIpProcessFrame+15d8: arprx ()
d46e14 arprx +1e30: ipSend2Proc ()
ac2f6c ipSend2Proc +8c4: ipDoLocal ()
9776cc ipDoLocal +298: ArpRspProc ()
94c88c ArpRspProc +1d4: ArpAddEnqueue ()
94d23c ArpAddEnqueue +6c : arpadd ()
945f54 arpadd +1708: UpdtDestPort ()
200 : 218 ()
218 : excExcHandle ()
aeedc excExcHandle +2bc: taskSuspend ()

Additionally, an interaction between NLB (Network Load Balancing) when running in multicast mode on 4.1.6.0 code has been identified that could also result in a different CPU crash dump. The resolution of this interaction will be available in the 4.1.7.0 code release. 4.1.7.0 code will be available by mid August, 2008.

The NLB dump footprint will appear to be similar to that as shown below:

NLB dump footprint:

MPC106 cs:0x20800006 err1:0x32000001 err2:0x00000000 addr:0x38000080 0x80000038
sysbus addr:0x8008002C data:0x0040007A
b05b0 vxTaskEntry +68 : cppMainTask ()
522574 cppMainTask +150: cppScheduleBody ()
5218e0 cppScheduleBody+428: comTimerTask ()
4ecab8 comTimerTask +120: 8e28e4 ()
8e28e4 ArpTic +978: NPAL_DeleteInActiveArp ()
616e88 NPAL_DeleteInActiveArp+158: rarDeleteInActiveArp ()
9cc5f4 rarDeleteInActiveArp+1b8: rarClearActivityBit ()
a11a04 rarClearActivityBit+248: chGetSlotFromTap ()
496358 chGetSlotFromTap+88 : duReport ()
4ee34c duReport +508: duReportFatal ()
4ede10 duReportFatal +2c : taskDelay ()
MPC106 cs:0x20800006 err1:0x72000001 err2:0x00000000 addr:0xA1000000 0x000000A1
sysbus addr:0x8008002C data:0x006D007A
b05b0 vxTaskEntry +68 : cppMainTask ()
522574 cppMainTask +150: cppScheduleBody ()
5218e0 cppScheduleBody+428: comTimerTask ()
4ecab8 comTimerTask +120: 8e28e4 ()
8e28e4 ArpTic +978: NPAL_DeleteInActiveArp ()
616e88 NPAL_DeleteInActiveArp+158: rarDeleteInActiveArp ()
9cc5f4 rarDeleteInActiveArp+1b8: rarClearActivityBit ()
a11a04 rarClearActivityBit+248: chGetSlotFromTap ()
496358 chGetSlotFromTap+88 : duReport ()
4ee34c duReport +508: duReportFatal ()
4ede10 duReportFatal +2c : taskDelay ()
MPC106 cs:0x20800006 err1:0x32000001 err2:0x00000000 addr:0x0B080000 0x0000080B
sysbus addr:0x8008002C data:0x006D007A

SW FATAL wdt_reboot: task: 8 tid: 0x5fe5f68 name: tMainTask
b05b0 vxTaskEntry +68 : wdtTask ()
c984e4 wdtTask +158: wdt_reboot ()
c98118 wdt_reboot +a4 : duReport ()
4ee34c duReport +508: duReportFatal ()

Recommendations:

This issue was deemed serious enough to warrant a replacement of 4.1.6.0 with 4.1.6.3, and therefore MR 4.1.6.0 has been pulled from the Nortel Support web site. MR 4.1.6.3 is the official release to replace 4.1.6.0. MR 4.1.6.0 will continue to be supported by Nortel for any situations not related to this known system instability.

1. If seeing a crash dump similar to either dump shown above for Issue #1 after a code upgraded to 4.1.6.0, please upgrade to 4.1.6.3 as soon as possible.

2. To avoid any CPU crash due to the reported interaction of NLB multicast mode and 4.1.6.0, it is recommended to customers who are using NLB multicast mode feature NOT to upgrade to 4.1.6.0 and to defer the upgrade to 4.1.7.0 (by mid-August, 2008)

For any customers who have already upgraded to 4.1.6.0 and are using NLB multicast mode feature and seeing a crash dump similar to one reported in Issue #2, it is recommended to either downgrade to the previous used release that the customer had upgraded from or to use NLB only in unicast mode.

Required Actions:

Please follow the guidelines as mentioned above.

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 8600-8006 Chassis	
Ethernet Rtng Switch-Ethrnt Rtng Swt 8600-8010 Chassis	

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REFERENCE: CR: Q01862845, Q01862845-4, Q01885431
PRE-REQUIRED PATCH:
PATCH ID:

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