Release Notes

QLogic 12000 Family of QDR InfiniBand Switches

QLogic Corporation

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1 Version

These release notes describe the changes, fixes, known issues, and release details that apply to the hardware and firmware version 7.1.1.1.1 for the QLogic 12000 family of QDR InfiniBand switches.

2 Changes

The following changes have been made to the QLogic 12000 family of QDR InfiniBand switches between versions 7.1.1.0.23 and 7.1.1.1.1.

Hardware Support

None

OS Support

None

Software Components

- A license key is no longer required in order to run the Embedded Subnet Manager (ESM).

Industry Standards Compliance

N/A

3 Bug Fixes

The following fixes have been made to the QLogic 12000 family of QDR InfiniBand switches:

Between 7.1.1.0.23 and 7.1.1.1.1:

- ♦ None

Between 7.1.0.0.58 and 7.1.1.0.23:

- ♦ None

Between 7.0.1.0.43 and 7.1.0.0.58:

- ♦ The snmpCommunityConf command has been changed to allow a blank string to be entered, which allows individual SNMP version requests to be disabled.
- ♦ When thousands of nodes are rebooted in a fabric managed by OpenSM, there are no longer intermittent connection issues on a small number of nodes.

Between versions 7.0.0.0.35 and 7.0.1.0.43.

- ♦ Fixed an issue that could cause the chassis IPoIB address to not be persistent following a reboot.
- ♦ Fixed an issue to ensure that the proper temperature warning and critical thresholds are used on the 12800 UHD (24 port) Leaf, UHP (18 port) Leaf, and Spine modules. The correct thresholds are:

Threshold	Warning	Critical
Baseboard	88°C	96°C
Fusion	80°C	98°C
ASIC	88°C	96°C

Between versions 6.1.0.3.1 and 7.0.0.0.35.

- ♦ The format of MIBs have been modified so they can be read by more MIB browsers.
- ♦ Chassis Viewer no longer hangs when a Connect Abort response is received from a web browser.
- ♦ The refresh button of web browsers now functions properly when the switch has an IPv6 address.

Between versions 6.1.0.2.1 and 6.1.0.3.1.

- ♦ Modifed ISL Serdes settings to improve SI margins.

Between versions 6.1.0.0.72 and 6.1.0.2.1.

- ♦ Corrects infrequent port initialization errors, including links failing to initialize.
- ♦ To prevent a possible disruption to IB traffic after a 12800 chassis has been up continuously for 497 days, the MM(s) in a 12800 chassis will be automatically non-disruptively rebooted once in an orderly manner after 496.1 days of continuous uptime.

Between versions 6.0.2.1.11 and 6.1.0.0.72.

- ♦ SNMPwalk or other SNMP get requests to certain switch object identifiers (OIDs) no longer causes a master management module (12800) or 12300 to reboot.
- ♦ Logging to a syslog server with a Debug log level no longer causes an out of memory condition.

Between versions 6.0.2.0.28 and 6.0.2.1.11.

- ♦ None

Between 6.0.1.0.31 and 6.0.2.0.28:

- ♦ Ports in the down/training state can now be disabled properly.
- ♦ Certain sequences of bad packets arriving at a port no longer causes the port to hang.
- ♦ The command ismChassisSetMtu <mtu> <NumVLs> -bounce now works properly on all chassis types.
- ♦ A chassis capture no longer hangs the switch when there is no management leaf inserted.
- ♦ Externally-managed 12200 ports connected to a 12800-series switch will now come up when OpenSM sets the LinkWidthEnabled field of these ports to 1x or 4x.

Between 6.0.0.4.2 and 6.0.1.0.31:

- ♦ The time to complete a FastFabric configuration on a 12800-360 chassis has been improved.
- ♦ The OFED commands ibportstate enable and ibportstate disable now work correctly with the 12200 switch.
- ♦ Signal integrity on 12200/12300 ISL ports has improved when using QLogic-supported 1 meter cables.
- ♦ A StateDump now completes successfully on a fully-loaded 12800-360.
- ♦ A fix was made to update the IB Node Description when moving a 12000-series management module between systems.
- ♦ A timing hole during Ethernet startup that impacted DHCP has been fixed.

Between 6.0.0.2.7 and 6.0.0.4.2:

- ♦ Link flow control parameters have been adjusted to better handle high-stress workloads.
- ♦ Links no longer bind in the Init or Polling state after a link down event.
- ♦ The capture command no longer hangs if DHCP is configured on the Ethernet interface of the management switch, and the network configuration received from the DHCP server does not include a gateway address.
- ♦ The switch now boots successfully after resetting the chassis back to factory defaults.
- ♦ Adaptive routing now moves routes correctly for spine switch chip port 0 LID(s).

Between 6.0.0.0.54 and 6.0.0.2.7:

- ♦ Ultra high density (UHD) leaf ports 19-24 are now configured properly if the UHD leaf is inserted in the same slot that was previously populated by an ultra high performance (UHP) leaf.
- ♦ The rlogin command now identifies the escape sequence.
- ♦ False `MAD Local Timeouts` are no longer reported.
- ♦ A 12800 chassis can now be managed via the chassis IPoIB interface.

Between 5.0.5.0.1 and 6.0.0.0.54:

- ♦ GUI page is now refreshed at the appropriate time after a reboot.
- ♦ The definition of the PHYS_STATE of a port has been modified. The port PHYS_STATE is now determined sequentially (that is, if not 1 then 2, etc.) by the following rules:

1. **Disabled**: if a port was most recently set to `disabled` by a Subnet Manager Agent (SMA) packet, and the time that the port was not explicitly disabled through the command line interface (CLI) (for example, `ismPortDisable`).
2. **Sleeping**: if a port was most recently set to `sleeping` by an SMA packet, and from that point, the port has not been explicitly disabled through the CLI.
3. **Disabled**: if a port has been explicitly disabled via the CLI (for example, `ismPortDisable`).
4. **Sleeping**: if a port is an InfiniBand cable port, and the quad small form-factor pluggable (QSFP) is not online; or if the port is an ISL port, and the corresponding leaf/spine for that ISL is not installed in the chassis.
5. **Polling**: the InfiniBand Trade Association (IBTA)-defined link training state.

4 Known Issues

The QLogic 12000 family of QDR InfiniBand switches, version 7.1.1.1.1, has the following known issues:

Known Issue	Workaround
Following a hot swap of a management module (MM) (with the part number **220055-001-C** or earlier), the ATTN LED will occasionally flash once and the module does not boot.	Remove and reinsert the management module.
When using a web browser on a Linux system and rebooting the switch, only two digits of the countdown time are displayed. If the countdown time is greater than 100, the ones column is not displayed, causing the countdown to appear to be proceeding very slowly (that is, decreasing 1 second every 10 seconds).	Once the time remaining reaches 99 seconds, the counter will be displayed correctly.
Sometimes when inserting fiber optic cables (with the following part numbers) the warning message "QSFP fault condition" is logged in the switch log. CBL2-1000301-3 – 3.0M Fiber QSFP to QSFP. CBL2-1001001-3 – 10M Fiber QSFP to QSFP. CBL2-1003001-3 – 30M Fiber QSFP to QSFP.	This message can be safely ignored.

Known Issue	Workaround
In a dual-management module (MM) setup, when rebooting either a slave or master MM using the Chassis Viewer GUI, the GUI takes much longer than normal to refresh itself.	Rather than wait for the GUI countdown timer to complete, 100 seconds after rebooting the MM enter the chassis URL into the browser address bar.
Chassis Viewer 'Browse' button is missing for embedded subnet manager configuration file page for Linux Firefox 8.0.1 and 9.0.1 browsers.	Double-click on the 'Upload config file' field, then select the file to use.
The text on the buttons on the Chassis Viewer 'Firmware Update' page are sometimes difficult to read when using Firefox 3.6 on RHEL5.7.	The names of the buttons are, from left to right, 'Update Firmware', 'Close', and 'Refresh'.

5 Additional Information

5.1 Included in this release:

QLogic 12000 Firmware version 7.1.1.1.1 (X.xt3.7.1.1.1.1.pkg) for the following switches:

- ♦ QLogic 12200-BS23-MM
- ♦ QLogic 12200-BS01-MM
- ♦ QLogic 12300-BS01
- ♦ QLogic 12300-BS18
- ♦ QLogic 12800-040
- ♦ QLogic 12800-120
- ♦ QLogic 12800-180
- ♦ QLogic 12800-360

5.2 Miscellaneous:

- ♦ Different chassis types require different time intervals to fully reboot. The amount of time it takes a switch to reboot is dependent upon several factors, including:
  - o The type of reboot
  - o The number of leaves, spines and management modules in the chassis.
  - o Whether or not the switch chip firmware is being updated as a result of the reboot.
- ♦ Below are the maximum times that a chassis will take to reboot. In your environment you might see reboot times much less than these:
  - o 12200/12300 - 120 seconds
  - o 12800-040 – 220 seconds
  - o 12800-120 – 290 seconds
  - o 12800-180 – 350 seconds
  - o 12800-360 – 630 seconds

  At any point during the reboot, you can point a web browser to the chassis IP address, or telnet/ssh to the chassis IP address to see if the reboot has completed.
- ♦ For access to the QLogic Fabric Manager, the QLogic InfiniBand Fabric Suite is required.
- ♦ The embedded version of the QLogic Fabric Manager supports a maximum of 500 nodes.
- ♦ QLogic products will auto-negotiate with devices that utilize IBTA-compliant auto-negotiation.

♦ When attaching QLogic products to a third-party device, the bit error rate is optimized if the third-party device utilizes attenuation-based tuning.
♦ For most configurations, using the default MTU size of 2K is recommended.
♦ The QLogic 12000 switches have been qualified with the following web browsers:

   o Windows Internet Explorer 8.0 (for Windows XP)
   o Windows Internet Explorer 9.0 (for Windows 7)
   o Mozilla Firefox 3.5.9 (for SLES 11 SP1)
   o Mozilla Firefox 3.6 and 8 (for all supported Linux OSs)
   o Mozilla Firefox 9 (for all supported Linux OSs, except SLES10 SP4)
   o Mozilla Firefox 10 (for SLES 11 SP2).

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Please feel free to contact your QLogic approved reseller or QLogic Technical Support at any phase of integration for assistance. QLogic Technical Support can be reached by the following methods:

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