

Software Release v3.2.x.x

Release Notes

Update 11

Jun 01, 2015Document History

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| --- | --- | --- |
| **Document Title** | **Summary of Changes** | **Publication Date** |
| QLogic Adapters Software Release v3.2.x.x Release Notes Update 11 | Added details for Software Release 3.2.6.0 | Jun 01, 2015 |
| QLogic Adapters Software Release v3.2.x.x Release Notes Update 10 | Added details for Software Release 3.2.5.0 and 3.2.5.1.  Updated the OS support section | Oct 31, 2014 |
| QLogic Adapters Software Release v3.2.x.x Release Notes Update 9 | Added a known issue with 3.2.4.0 release and corresponding work-around | Jul 08, 2014 |
| QLogic Adapters Software Release v3.2.x.x Release Notes Update 8 | Added RHEL 6.5 and RHEL 5.10 support in Software Release 3.2.4.0 | Apr 18, 2014 |
| Brocade Adapters Software Release v3.2.x.x Release Notes Update 7 | Added boot code fix in Software Release 3.2.3.2 and added additional Important Note for Dell 11G/12G servers | Apr 15, 2014 |
| Brocade Adapters Software Release v3.2.x.x Release Notes Update 6 | Added information in the Windows section of Important Notes, updated filenames in Support OS section | Nov 15, 2013 |
| Brocade Adapters Software Release v3.2.x.x Release Notes Update 5 | Added SLES 11 SP3 and VMware ESXi 5.5 support in Software Release 3.2.3.0  Added Windows 2012 R2 support in Software Release 3.2.3.1 | Oct 4, 2013 |
| Brocade Adapters Software Release v3.2.x.x Release Notes Update 4 | Added support for Brocade 1869 4-port 16Gbps Fibre Channel mezzanine HBA | Sept 2, 2013 |
| Brocade Adapters Software Release v3.2.x.x Release Notes Update 3 | Brocade Adapter Software Release v3.2.1.0 | May 20, 2013 |
| Brocade Adapters Software Release v3.2.x.x Release Notes Update 2 | Added additional Important Notes | Mar 1, 2013 |
| Brocade Adapters Software Release v3.2.x.x Release Notes Update 1 | Added VMware support in Software Release 3.2.0.0 | Jan 19, 2013 |
| Brocade Adapters Software Release v3.2.x.x Release Notes |  | Dec 19, 2012 |

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# BR-Series Adapters

These release notes provide information regarding the product’s use and any known issues at the time of publication. Please refer to the OEM release notes for OEM specific data.

For up-to-date information on QLogic and OEM adapter products, visit the QLogic Web site at <http://www.qlogic.com/Products/adapters>

# Product Description

**QLogic Adapter Models**

Information in this document is related to the following adapter models:

* + BR-415 single-port 4 Gbps Fibre Channel to PCIe HBA
  + BR-425 dual-port 4 Gbps Fibre Channel to PCIe HBA
  + BR-804 dual-port 8 Gbps Fibre Channel mezzanine HBA
  + BR-815 single-port 8 Gbps Fibre Channel to PCIe HBA
  + BR-825 dual-port 8 Gbps Fibre Channel to PCIe HBA
  + BR-1007 dual-port 10 Gbps Ethernet to PCIe CNA mezzanine card
  + BR-1010 single-port 10 Gbps Ethernet to PCIe CNA
  + BR-1020 dual-port 10 Gbps Ethernet to PCIe CNA
  + BR1741M-k dual-port 10 Gbps Ethernet to PCIe CNA mezzanine card
  + BR-1860 single-port and dual-port 16 Gbps Fibre Channel and 10 Gbps Ethernet to PCIe Fabric Adapter
  + BR-1867 dual-port 16Gbps Fibre Channel mezzanine HBA
  + BR-1869 4-port 16Gbps Fibre Channel mezzanine HBA

**QLogic Adapter Software Components**

* + QLogic Adapter Software Installer
    - This package enables a single-step installation for all software components including Host Connectivity Manager (HCM), drivers, firmware, agent, BCU CLI, and APIs.
  + Driver
    - A single driver package (per OS and server platform) to support all QLogic BR-Series adapters. The drivers will be packaged appropriately for each operating system.
  + Firmware
    - The adapter firmware is bundled as part of the driver and is automatically updated once the driver is updated.
  + Multi-Boot Code Image
    - A multi-boot code image (BIOS/EFI/UEFI) allows an adapter to be plugged into a server to support boot from SAN functionality for x86, IEM64T, and AMD64 server platforms.  Server administrators can set up a bootable LUN in the SAN through an easy- to-use configuration utility menu.
  + Driver Update Disks (DUDs)
    - DUDs (provided in ISO and zip format) are required to install the drivers during an OS installation to LUNs attached to the SAN.
  + LiveCD
    - The LiveCD can be used to boot up the diskless or OS-less servers. The BCU CLI can then be used to update the boot code.
  + Agent
    - The management agent is automatically installed as part of the driver installation process and can be started manually or automatically.
  + Host Connectivity Manager (HCM)
    - HCM is the QLogic adapter management tool that has an intuitive and easy-to-use graphical user interface (GUI). It is a Java-based application and can run on standard servers and workstations or a dedicated management server. HCM is used to configure and manage local or remote adapters from a single graphical user interface. In addition, data center administrators can use the tool for detailed configuration tasks, device-level monitoring, and comprehensive diagnostics. The minimum set of requirements to support HCM include:
      * Single-processor or multiprocessor server or workstation.
      * Pentium III with 450 MHz (or equivalent) or greater for Windows, Linux Red Hat, Novell, Solaris x86, Sun Ultra 60 for Solaris SPARC.
      * At least 256 MB of physical RAM; 512 MB recommended.
      * Video card capable of at least 256 colors and a screen resolution of 800 x 600 pixels required
      * At least 150 Mb disk space
      * Internet Explorer (7.0 or later), Firefox (3.0 or greater) is required for Webstart.
      * TCP/IP protocol stack for communications to management agents on hosts containing a supported QLogic adapter.
  + BCU CLI
    - QLogic also includes BCU CLI, which is a command line utility used to configure and manage local HBAs and CNAs from the console. Many of the HCM configuration options are also available through BCU. Run “bcu –help” to get more information about BCU options.
  + APIs
    - SNIA HBA API v2.0 is supported. For both Windows and Solaris, the SNIA HBA API libraries are part of the OS. For Linux and VMware, separate API libraries are provided as part of the driver package.
  + SNMP
    - SNMP support has been added to process network adapter related SNMP queries for QLogic CNAs. This support is as a sub-agent and hence an extension to the system’s master agent. SNMP sub-agent will only be available on Windows and Linux platforms. Besides support for informative, critical and statistical data, QLogic’s SNMP sub-agent will also send traps.

**Supported Operating Systems (OS):**

QLogic software components, including drivers, the agent, APIs, and management tools, are supported on leading operating systems including Microsoft Windows Server 2003/2008/2008 R2/2012/2012 R2, Windows 7, Red Hat Enterprise Linux 5/6/7, Novell SUSE Linux Enterprise Server 10/11/12, Oracle Solaris 10/11, Citrix XenServer 5/6, and VMware ESXi 4/5/6. HCM is supported on Windows 7, Windows XP, and Windows Vista in addition to the existing OS drivers above. For available OS and driver support, QLogic maintains N and N-1 support for interoperability.  Please visit the QLogic Web site [http://driverdownloads.qlogic.com](http://driverdownloads.qlogic.com/) for more information.

**Supported Server Platforms:**

QLogic software components, including drivers, agents, APIs, and management tools, are supported on leading server platforms including Intel x86, Intel IEM64T, AMD64, and SPARC. Please visit the QLogic Web site at <http://www.qlogic.com/Products/adapters> for more information.

**Adapter Inbox Support:**

Following tables describe Inbox driver support for QLogic adapters.

**Adapter Linux Inbox Support Table:**

|  |  |  |
| --- | --- | --- |
| **Adapters** | **Minimum Inbox Driver Version#1** | **Supported Linux Distributions** |
| BR-415,  BR-425,  BR-815,  BR-825 | 2.1.2.x | RHEL5.5, RHEL5.6, RHEL5.7, RHEL5.8, RHEL5.9, RHEL6.0, RHEL6.1, RHEL6.2, RHEL6.3, RHEL6.4, SLES10SP3, SLES10SP4, SLES11, SLES11SP1, SLES11SP2, SLES11 SP3, XenServer5.6FP1, XenServer6.0 |
| BR-1010,  BR-1020 | 2.1.2.x | RHEL5.7, RHEL5.8, RHEL5.9, RHEL6.1, RHEL6.2, RHEL6.3, RHEL6.4, SLES10SP3, SLES10SP4, SLES11SP1, SLES11SP2, SLES11 SP3, XenServer5.6FP1, XenServer6.0 |
| BR-1007 | 2.3.2.x | RHEL5.7, RHEL5.8, RHEL5.9, RHEL6.1, RHEL6.2, RHEL6.3, RHEL6.4, SLES10SP4, SLES11SP2, SLES11 SP3, XenServer5.6FP1, XenServer6.0 |
| BR-804 | 2.3.2.x | RHEL5.7, RHEL5.8, RHEL5.9, RHEL6.1, RHEL6.2, RHEL6.3, RHEL6.4, SLES10SP4, SLES11SP2, SLES11 SP3, XenServer5.6FP1, XenServer6.0 |
| BR-1741 | 2.3.2.x | RHEL5.7, RHEL5.8, RHEL5.9, RHEL6.1, RHEL6.2, RHEL6.3, RHEL6.4, SLES10SP4, SLES11SP2, SLES11 SP3, XenServer5.6FP1, XenServer6.0 |
| BR-1860 | 3.0.2.x | RHEL5.8, RHEL5.9, RHEL6.2, RHEL6.3, RHEL6.4, SLES11SP2, SLES11 SP3 |
| BR-1867 | 3.0.23.0 | RHEL5.9, RHEL6.4, SLES11 SP3 |
| BR-1869 | 3.2.21.0 | RHEL6.5 |

**Notes:**

* Minimum Inbox Driver Version**#1** is the driver version that enabled the support for the respective adapter. The Linux distribution listed above may have newer version of inbox drivers. Refer to respective Linux Distribution documents for QLogic Adapter Inbox versions.
* Use Out of box Driver Update Disk if the Linux distribution is not included in the “Supported Linux Distribution” for the respective adapters.
* This release supports installation up to upstream 3.9.0 kernel.

When using Linux in-box drivers, the Util Package can be downloaded from QLogic’s Driver downloads Web site.

**Adapter Windows Inbox Support Table:**

|  |  |  |
| --- | --- | --- |
| **Adapters** | **Minimum Inbox Driver Version** | **Supported Windows Version** |
| BR-415,  BR-425,  BR-815,  BR-825 | 3.0.2.21 | Windows Server 2012, Windows Server 2012 R2 |
| BR-1010,  BR-1020 | 3.0.2.21 | Windows Server 2012, Windows Server 2012 R2 |
| BR-1007 | 3.0.2.21 | Windows Server 2012, Windows Server 2012 R2 |
| BR-804 | 3.0.2.21 | Windows Server 2012, Windows Server 2012 R2 |
| BR-1741 | 3.0.2.21 | Windows Server 2012, Windows Server 2012 R2 |
| BR-1860 | 3.0.2.21 | Windows Server 2012, Windows Server 2012 R2 |
| BR-1867 | N/A | Planned for future Windows release |
| BR-1869 | N/A | Planned for future Windows release |
|  |  |  |

**Note:** Use Out of box Driver Update Disk if the Windows Version is not included in the “Supported Windows Versions” for the respective adapters.

# QLogic Adapter Release 3.2.6.0

Key features and enhancements supported for the software release 3.2.6.0 include the following:

New Operating System Support:

* SLES 12
* RHEL 6.6
* RHEL 7.1

The 3.2.6.0 release includes the following fix(es) or enhancement(s):

* 000134760: Invalid product identification in HP SUM firmware flash discovery on VMware with 3.2.5.0 driver
* 000135486: Add in systemd support in HCM Linux agent

Known issues/limitations:

* 000134976: S11 SP3: Speed negotiation may fail at times between Brocade 1860 16G FC adapter and Cisco MDS 9710 when in “auto” mode
  + Suggested work-around:
    1. Perform “shutdown” and “no shutdown” of the given switch port.
    2. If the above step does not resolve the problem,
       1. Force the corresponding switch port speed to 16G
       2. Perform shutdown/no shutdown of the switch port
       3. If the problem still persists,
          1. Configure both the switch and HBA ports to fixed speed
          2. Perform “shutdown” and “no shutdown” of the switch port

**Release Content in 3.2.6.0**

This release includes the following software components:

**\Boot**

**\boot\_image**

Bcu.efi

brocade\_adapter\_boot\_fw\_v3-2-6-0

**\driver\_update\_disks**

brocade\_adapter\_sles10sp3\_dud\_v3-2-6-0.iso

brocade\_adapter\_sles10sp4\_dud\_v3-2-6-0.iso

brocade\_adapter\_sles11sp2\_dud\_v3-2-6-0.iso

brocade\_adapter\_sles11sp3\_dud\_v3-2-6-0.iso

brocade\_adapter\_sles12\_dud\_v3-2-6-0.iso

brocade-bfa-3.2.6.0-xen-5.6.100.iso

brocade-bfa-3.2.6.0-xen-6.0.0.iso

brocade-bfa-3.2.6.0-xen-6.1.0.iso

brocade-bna-3.2.6.0-xen-5.6.100.iso

brocade-bna-3.2.6.0-xen-6.0.0.iso

brocade-bna-3.2.6.0-xen-6.1.0.iso

brocade\_unified\_adapter\_rhel510\_i386\_dud\_v3-2-6-0.iso

brocade\_unified\_adapter\_rhel510\_x86\_64\_dud\_v3-2-6-0.iso

brocade\_unified\_adapter\_rhel511\_i386\_dud\_v3-2-6-0.iso

brocade\_unified\_adapter\_rhel511\_x86\_64\_dud\_v3-2-6-0.iso

brocade\_unified\_adapter\_rhel65\_i386\_dud\_v3-2-6-0.iso

brocade\_unified\_adapter\_rhel65\_x86\_64\_dud\_v3-2-6-0.iso

brocade\_unified\_adapter\_rhel66\_i386\_dud\_v3-2-6-0.iso

brocade\_unified\_adapter\_rhel66\_x86\_64\_dud\_v3-2-6-0.iso

brocade\_unified\_adapter\_rhel70\_x86\_64\_dud\_v3-2-6-0.iso

brocade\_unified\_adapter\_rhel71\_x86\_64\_dud\_v3-2-6-0.iso

brocade\_adapter\_solaris10\_dud\_v3-2-6-0.iso

brocade\_adapter\_solaris11\_dud\_v3-2-6-0.iso

bfa\_esx50\_3.2.6.0.zip

bfa\_esx55\_3.2.6.0.zip

bna\_esx50\_3.2.6.0.zip

bna\_esx55\_3.2.6.0.zip

brocade\_adapter\_fcoe\_w2k12\_r2\_x64\_dud\_v3-2-6-0.zip

brocade\_adapter\_fcoe\_w2k12\_x64\_dud\_v3-2-6-0.zip

brocade\_adapter\_fcoe\_w2k8\_r2\_x64\_dud\_v3-2-6-0.zip

brocade\_adapter\_fc\_w2k12\_r2\_x64\_dud\_v3-2-6-0.zip

brocade\_adapter\_fc\_w2k12\_x64\_dud\_v3-2-6-0.zip

brocade\_adapter\_fc\_w2k8\_r2\_x64\_dud\_v3-2-6-0.zip

**\livecd**

live\_cd\_v3-2-6-0.iso

**\Documentation**

cli.zip

QLogic\_Adapters\_v3-2-x-x\_Release\_Notes.pdf

QLogic\_BR-series\_Adapters\_v3.2.6.0\_Install\_and\_Reference\_Manual.pdf

QLogic\_BR-series\_Adapters\_v3.2.6.0Admin\_Guide.pdf

QLogic\_BR-series\_Adapters\_v3.2.6.0Troubleshooting\_Guide.pdf

**\Linux**

brocade\_adapter\_software\_installer\_linux\_v3-2-6-0.bin

brocade\_adapter\_software\_installer\_linux\_x64\_v3-2-6-0.bin

HCMDefaultInstall.properties

**\Drivers**

brocade\_driver\_linux\_rhel5\_v3-2-6-0.tar.gz

brocade\_driver\_linux\_rhel6\_v3-2-6-0.tar.gz

brocade\_driver\_linux\_rhel7\_v3-2-6-0.tar.gz

brocade\_driver\_linux\_sles10sp3\_v3-2-6-0.tar.gz

brocade\_driver\_linux\_sles10sp4\_v3-2-6-0.tar.gz

brocade\_driver\_linux\_sles11sp2\_v3-2-6-0.tar.gz

brocade\_driver\_linux\_sles11sp3\_v3-2-6-0.tar.gz

brocade\_driver\_linux\_sles12\_v3-2-6-0.tar.gz

brocade\_driver\_linux\_v3-2-6-0.tar.gz

brocade\_driver\_linux\_xen56sp2\_v3-2-6-0.tar.gz

brocade\_driver\_linux\_xen60\_v3-2-6-0.tar.gz

brocade\_driver\_linux\_xen61\_v3-2-6-0.tar.gz

**\Solaris**

brocade\_adapter\_software\_installer\_solaris\_sparc\_v3-2-6-0.bin

HCMDefaultInstall.properties

brocade\_adapter\_software\_installer\_solaris\_x86\_v3-2-6-0.bin

**\Drivers**

brocade\_driver\_solaris10\_v3-2-6-0.tar

brocade\_driver\_solaris11\_v3-2-6-0.tar

**\VMware**

bcd\_depot\_esx50\_3.2.6.0.zip

bcd\_depot\_esx55\_3.2.6.0.zip

brocade\_driver\_esx50\_v3-2-6-0.tar.gz

brocade\_driver\_esx55\_v3-2-6-0.tar.gz

brocade\_ss\_esx50i\_v3-2-6-0.tgz

brocade\_ss\_esx55i\_v3-2-6-0.tgz

**\Windows**

brocade\_adapter\_software\_installer\_windows\_v3-2-6-0.exe

HCMDefaultInstall.properties

**\Drivers**

brocade\_driver\_win2008\_R2\_x64\_v3-2-6-0.exe

brocade\_driver\_win2012\_R2\_x64\_v3-2-6-0.exe

brocade\_driver\_win2012\_x64\_v3-2-6-0.exe

# QLogic Adapter Release 3.2.5.1

Key features and enhancements supported for the software release 3.2.5.0 include the following:

New Operating System Support:

* RHEL 5.11
* RHEL 7.0

The 3.2.5.1 release includes the following fixes or enhancements:

* 000132130: Fixed an issue which causes PM-Hibernate to be unsuccessful on Linux platforms.
* 000132813: Fixed a system crash issue while handling target disconnects

Known issues/limitations:

\*\*\* Important \*\*\*

* Panic while booting from the Red Hat Enterprise Linux 6.5 installation media when the BFA module loads in a system with a QLogic BR-1869 or BR-1867 adapter present
  + Suggested work-around:
    1. Local Boot:
       1. Boot the RHEL 6.5 installation media
       2. To avoid panic, add grub option “blacklist=bfa”
       3. Continue with installation of RHEL 6.5
       4. Reboot
       5. Edit /etc/modprobe.d/anaconda.conf file and delete or comment out “blacklist=bfa”
       6. Install 3.2.5.1 driver
       7. Reboot
       8. System will be running RHEL6.5 with 3.2.5.1 driver
    2. Boot From SAN:
       1. Boot the RHEL 6.5 installation media
       2. To avoid panic and use a driver disk, at install prompt, enter “blacklist=bfa dd”
       3. Load 3.2.5.1 DUD when prompted
          1. This may result in a warning regarding driver not found. Select continue
       4. Once the RED HAT ENTERPRISE LINUX 6 screen is reached, press Ctlr+Alt+F2 to switch to a command shell
       5. Edit /etc/modprobe.d/anaconda.conf file and delete or comment out “blacklist=bfa”
       6. Load the bfa driver with “modprobe bfa”
       7. Hit Ctrl+Alt+F6 to switch back to the Anaconda (installer) interface
       8. Proceed with the installation of RHEL 6.5
       9. Reboot
       10. System will be running RHEL6.5 with the bfa driver from the 3.2.5.1 DUD.

**Release Content in 3.2.5.1**

This release includes the following software components:

**\Boot**

**\driver\_update\_disks**

brocade\_adapter\_sles10sp3\_dud\_v3-2-5-1.iso

brocade\_adapter\_sles10sp4\_dud\_v3-2-5-1.iso

brocade\_adapter\_sles11sp2\_dud\_v3-2-5-1.iso

brocade\_adapter\_sles11sp3\_dud\_v3-2-5-1.iso

brocade\_unified\_adapter\_rhel64\_i386\_dud\_v3-2-5-1.iso

brocade\_unified\_adapter\_rhel64\_x86\_64\_dud\_v3-2-5-1.iso

brocade\_unified\_adapter\_rhel65\_i386\_dud\_v3-2-5-1.iso

brocade\_unified\_adapter\_rhel65\_x86\_64\_dud\_v3-2-5-1.iso

brocade\_unified\_adapter\_rhel70\_x86\_64\_dud\_v3-2-5-1.iso

brocade\_unified\_adapter\_rhel510\_i386\_dud\_v3-2-5-1.iso

brocade\_unified\_adapter\_rhel510\_x86\_64\_dud\_v3-2-5-1.iso

brocade\_unified\_adapter\_rhel511\_i386\_dud\_v3-2-5-1.iso

brocade\_unified\_adapter\_rhel511\_x86\_x64\_dud\_v3-2-5-1.iso

brocade-bfa-3.2.5.1-xen-5.6.100.iso

brocade-bfa-3.2.5.1-xen-6.0.0.iso

brocade-bfa-3.2.5.1-xen-6.1.0.iso

brocade-bna-3.2.5.1-xen-5.6.100.iso

brocade-bna-3.2.5.1-xen-6.0.0.iso

brocade-bna-3.2.5.1-xen-6.1.0.iso

**\livecd**

live\_cd\_v3-2-5-1.iso

**\Documentation**

cli.zip

QLogic\_Adapters\_v3-2-x-x\_Release\_Notes.pdf

QLogic\_BR-series\_Adapters\_v3.2.5.0\_Install\_and\_Reference\_Manual.pdf

QLogic\_BR-series\_Adapters\_v3.2.5.0Admin\_Guide.pdf

QLogic\_BR-series\_Adapters\_v3.2.5.0Troubleshooting\_Guide.pdf

**\Linux**

brocade\_adapter\_software\_installer\_linux\_v3-2-5-1.bin

brocade\_adapter\_software\_installer\_linux\_x64\_v3-2-5-1.bin

HCMDefaultInstall.properties

**\Drivers**

brocade\_driver\_linux\_rhel5\_v3-2-5-1.tar.gz

brocade\_driver\_linux\_rhel6\_v3-2-5-1.tar.gz

brocade\_driver\_linux\_rhel7\_v3-2-5-1.tar.gz

brocade\_driver\_linux\_sles10sp3\_v3-2-5-1.tar.gz

brocade\_driver\_linux\_sles10sp4\_v3-2-5-1.tar.gz

brocade\_driver\_linux\_sles11sp2\_v3-2-5-1.tar.gz

brocade\_driver\_linux\_sles11sp3\_v3-2-5-1.tar.gz

brocade\_driver\_linux\_v3-2-5-1.tar.gz

brocade\_driver\_linux\_xen56sp2\_v3-2-5-1.tar.gz

brocade\_driver\_linux\_xen60\_v3-2-5-1.tar.gz

brocade\_driver\_linux\_xen61\_v3-2-5-1.tar.gz

# QLogic Adapter Release 3.2.5.0

Key features and enhancements supported for the software release 3.2.5.0 include the following:

New Operating System Support:

* ESXi 6.0 (drivers same as that of ESXi 5.5)

The 3.2.5.0 release includes the following fixes or enhancements:

* 000131844: Fixed an issue where enabling OPROM on BR-825 adapter causes LOM iSCSI feature to go offline
* 000132760: Fixed an issue where BR-815/825 adapters report an incorrect PCI Subsystem ID

Known issues/limitations:

* 000131627/000133870: For Qlogic adapters in HBA mode, the boot BIOS may not discover target successfully.
  + Suggested workaround is to set the port topology appropriately (to FC-AL or P2P) using the BCU interface - this can be achieved either from within the OS or using LiveCD.
* 000132454: Repeated frame drops can cause the paths to the target to disappear.
  + Potential issue with the Solaris Leadville stack. Suggested work-around is to manually disable and enable the adapter port by the bcu (command line utility).

**Release Content in 3.2.5.0**

This release includes the following software components:

**\Boot**

**\boot\_image**

Bcu.efi

brocade\_adapter\_boot\_fw\_v3-2-5-0

**\driver\_update\_disks**

bfa\_esx50\_3.2.5.0.zip

bna\_esx50\_3.2.5.0.zip

bfa\_esx55\_3.2.5.0.zip

bna\_esx55\_3.2.5.0.zip

brocade\_adapter\_fc\_w2k8\_r2\_x64\_dud\_v3-2-5-0.zip

brocade\_adapter\_fcoe\_w2k8\_r2\_x64\_dud\_v3-2-5-0.zip

brocade\_adapter\_fc\_w2k12\_x64\_dud\_v3-2-5-0.zip

brocade\_adapter\_fcoe\_w2k12\_x64\_dud\_v3-2-5-0.zip

brocade\_adapter\_fc\_w2k12\_r2\_x64\_dud\_v3-2-5-0.zip

brocade\_adapter\_fcoe\_w2k12\_r2\_x64\_dud\_v3-2-5-0.zip

brocade\_adapter\_solaris10\_dud\_v3-2-5-0.iso

brocade\_adapter\_solaris11\_dud\_v3-2-5-0.iso

**\livecd**

live\_cd\_v3-2-5-0.iso

**\Documentation**

cli.zip

QLogic\_Adapters\_v3-2-x-x\_Release\_Notes.pdf

QLogic\_BR-series\_Adapters\_v3.2.5.0\_Install\_and\_Reference\_Manual.pdf

QLogic\_BR-series\_Adapters\_v3.2.5.0Admin\_Guide.pdf

QLogic\_BR-series\_Adapters\_v3.2.5.0Troubleshooting\_Guide.pdf

**\Solaris**

brocade\_adapter\_software\_installer\_solaris\_sparc\_v3-2-5-0.bin

HCMDefaultInstall.properties

brocade\_adapter\_software\_installer\_solaris\_x86\_v3-2-5-0.bin

**\Drivers**

brocade\_driver\_solaris10\_v3-2-5-0.tar

brocade\_driver\_solaris11\_v3-2-5-0.tar

**\VMware**

bcd\_depot\_esx50\_3.2.5.0.zip

bcd\_depot\_esx55\_3.2.5.0.zip

brocade\_driver\_esx50\_v3-2-5-0.tar.gz

brocade\_driver\_esx55\_v3-2-5-0.tar.gz

brocade\_ss\_esx50i\_v3-2-5-0.tgz

brocade\_ss\_esx55i\_v3-2-5-0.tgz

**\Windows**

brocade\_adapter\_software\_installer\_windows\_v3-2-5-0.exe

HCMDefaultInstall.properties

**\Drivers**

brocade\_driver\_win2008\_R2\_x64\_v3-2-5-0.exe

brocade\_driver\_win2012\_R2\_x64\_v3-2-5-0.exe

brocade\_driver\_win2012\_x64\_v3-2-5-0.exe

# QLogic Adapter Release 3.2.4.0

Key features and enhancements supported for the software release 3.2.4.0 include the following:

New Operating System Support:

* RHEL6.5
* RHEL 5.10

The 3.2.4.0 release includes the following fixes or enhancements:

* 000425540: For QLogic adapters in NIC mode, fixed an issue wherein under certain conditions, RSS was being disabled resulting in poor performance.
* 000474130: For QLogic adapters in CNA mode PCI vulnerability scan may fail. This failure is due to SSL Ciphers remaining open. Suggested workaround for customers who want more secure SSL can configure the Ciphers they will accept by editing the abyss.conf file and adding a line to reflect their algorithm of choice. For example to add RC4 support, they’d add the following line:

SSLCiphers RC4

* 000480906: For QLogic adapters in NIC mode, fixed an issue of link not coming up when MTU is configured to jumbo on Linux platform.
* 000131627: For Qlogic adapters in HBA mode, the boot BIOS may not discover target when in FC-AL topology. Suggested workaround is to set the port topology to FC-AL using the BCU interface - this can be achieved either from within the OS or using LiveCD.

**Release Content in 3.2.4.0**

This release includes the following software components:

**\Boot**

**\boot\_image**

Bcu.efi

brocade\_adapter\_boot\_fw\_v3-2-4-0

**\driver\_update\_disks**

brocade\_adapter\_solaris11\_dud\_v3-2-4-0.iso

brocade\_adapter\_solaris10\_dud\_v3-2-4-0.iso

bfa\_esx50\_3.2.4.0.zip

bna\_esx50\_3.2.4.0.zip

bfa\_esx55\_3.2.4.0.zip

bna\_esx55\_3.2.4.0.zip

brocade\_adapter\_sles11sp2\_dud\_v3-2-4-0.iso

brocade\_unified\_adapter\_rhel59\_i386\_dud\_v3-2-4-0.iso

brocade\_adapter\_sles10sp4\_dud\_v3-2-4-0.iso

brocade-bfa-3.2.4.0-xen-6.0.0.iso

brocade-bna-3.2.4.0-xen-6.1.0.iso

brocade\_unified\_adapter\_rhel64\_i386\_dud\_v3-2-4-0.iso

brocade-bna-3.2.4.0-xen-5.6.100.iso

brocade-bna-3.2.4.0-xen-6.0.0.iso

brocade\_unified\_adapter\_rhel64\_x86\_64\_dud\_v3-2-4-0.iso

brocade\_unified\_adapter\_rhel510\_x86\_64\_dud\_v3-2-4-0.iso

brocade\_unified\_adapter\_rhel65\_i386\_dud\_v3-2-4-0.iso

brocade-bfa-3.2.4.0-xen-5.6.100.iso

brocade\_adapter\_sles11sp3\_dud\_v3-2-4-0.iso

brocade-bfa-3.2.4.0-xen-6.1.0.iso

brocade\_unified\_adapter\_rhel65\_x86\_64\_dud\_v3-2-4-0.iso

brocade\_unified\_adapter\_rhel510\_i386\_dud\_v3-2-4-0.iso

brocade\_adapter\_sles11sp1\_dud\_v3-2-4-0.iso

brocade\_adapter\_sles10sp3\_dud\_v3-2-4-0.iso

brocade\_unified\_adapter\_rhel59\_x86\_64\_dud\_v3-2-4-0.iso

brocade\_adapter\_fc\_w2k8\_r2\_x64\_dud\_v3-2-4-0.zip

brocade\_adapter\_fcoe\_w2k8\_r2\_x64\_dud\_v3-2-4-0.zip

brocade\_adapter\_fc\_w2k12\_x64\_dud\_v3-2-4-0.zip

brocade\_adapter\_fcoe\_w2k12\_x64\_dud\_v3-2-4-0.zip

brocade\_adapter\_fc\_w2k12\_r2\_x64\_dud\_v3-2-4-0.zip

brocade\_adapter\_fcoe\_w2k12\_r2\_x64\_dud\_v3-2-4-0.zip

**\livecd**

live\_cd\_v3-2-4-0.iso

**\Documentation**

cli.zip

Brocade\_Adapter\_v3-2-x-x\_Release\_Notes.pdf

Brocade\_Adapters\_v3.2.4.0\_Install\_and\_Reference\_Manual.pdf

Brocade\_Adapters\_v3.2.4.0\_Admin\_Guide.pdf

Brocade\_Adapters\_v3.2.4.0\_Troubleshooting\_Guide.pdf

**\Linux**

brocade\_adapter\_software\_installer\_linux\_v3-2-4-0.bin

brocade\_adapter\_software\_installer\_linux\_x64\_v3-2-4-0.bin

HCMDefaultInstall.properties

**\Drivers**

brocade\_driver\_linux\_rhel5\_v3-2-4-0.tar.gz

brocade\_driver\_linux\_rhel6\_v3-2-4-0.tar.gz

brocade\_driver\_linux\_sles10sp3\_v3-2-4-0.tar.gz

brocade\_driver\_linux\_sles10sp4\_v3-2-4-0.tar.gz

brocade\_driver\_linux\_sles11sp1\_v3-2-4-0.tar.gz

brocade\_driver\_linux\_sles11sp2\_v3-2-4-0.tar.gz

brocade\_driver\_linux\_sles11sp3\_v3-2-4-0.tar.gz

brocade\_driver\_linux\_v3-2-4-0.tar.gz

brocade\_driver\_linux\_xen56sp2\_v3-2-4-0.tar.gz

brocade\_driver\_linux\_xen60\_v3-2-4-0.tar.gz

brocade\_driver\_linux\_xen61\_v3-2-4-0.tar.gz

**\Solaris**

brocade\_adapter\_software\_installer\_solaris\_sparc\_v3-2-4-0.bin

HCMDefaultInstall.properties

brocade\_adapter\_software\_installer\_solaris\_x86\_v3-2-4-0.bin

**\Drivers**

brocade\_driver\_solaris10\_v3-2-4-0.tar

brocade\_driver\_solaris11\_v3-2-4-0.tar

**\VMware**

bcd\_depot\_esx50\_3.2.4.0.zip

bcd\_depot\_esx55\_3.2.4.0.zip

brocade\_driver\_esx41\_v3-2-4-0.tar.gz

brocade\_driver\_esx50\_v3-2-4-0.tar.gz

brocade\_driver\_esx55\_v3-2-4-0.tar.gz

brocade\_ss\_esx41i\_v3-2-4-0.tgz

brocade\_ss\_esx50i\_v3-2-4-0.tgz

brocade\_ss\_esx55i\_v3-2-4-0.tgz

**\Windows**

brocade\_adapter\_software\_installer\_windows\_v3-2-4-0.exe

HCMDefaultInstall.properties

**\Drivers**

brocade\_driver\_win2008\_R2\_x64\_v3-2-4-0.exe

brocade\_driver\_win2012\_R2\_x64\_v3-2-4-0.exe

brocade\_driver\_win2012\_x64\_v3-2-4-0.exe

# Brocade Adapter Release 3.2.3.2

Key features and enhancements supported for the software release 3.2.3.2 include the following:

New Operating System Support:

* None

**Release Content in 3.2.3.2**

This release includes the following software components:

**\Boot**

**\boot\_image**

brocade\_adapter\_boot\_fw\_v3-2-3-1.zip

**\live\_cd**

live\_cd\_v3-2-3-2.iso

The 3.2.3.2 release includes the following fixes or enhancements:

000488827: For Brocade BR1741M-k dual-port 10 Gbps Ethernet to PCIe CNA mezzanine card for Dell chassis, fixed EBDA memory corruption with CLP

# Brocade Adapter Release 3.2.3.1

Key features and enhancements supported for the software release 3.2.3.1 include the following:

New Operating System Support:

* Windows 2012 R2

**Release Content in 3.2.3.1**

This release includes the following software components:

**\Boot**

**\boot\_image**

brocade\_adapter\_boot\_fw\_v3-2-3-1.tar

brocade\_adapter\_boot\_fw\_v3-2-3-1.zip

**\driver\_update\_disks**

brocade\_adapter\_fc\_w2k12\_r2\_x64\_dud\_v3-2-3-1.zip

brocade\_adapter\_fcoe\_w2k12\_r2\_x64\_dud\_v3-2-3-1.zip

**\live\_cd**

live\_cd\_v3-2-3-1.iso

**\Windows**

**\Drivers**

brocade\_adapter\_software\_installer\_windows\_v3-2-3-1.exe

brocade\_driver\_win2012\_R2\_x64\_v3-2-3-1.exe

# Brocade Adapter Release 3.2.3.0

Key features and enhancements supported for the software release 3.2.3.0 include the following:

New Features:

* Multi-Q, IODM (VMware ESXi5.5 features)
* Linux PTP support

Feature Enhancements:

* Configurable Max NetQueue
* On-Demand D-port
* Windows Network Performance and scalability enhancement
* Support for 16G/10G quad-rate SFP

New Operating System Support:

* ESXi 5.5
* SLES 11 SP3

The 3.2.3.0 release includes the following fixes or enhancements:

* 000460817: For Brocade adapters in NIC mode, added code to work around link flaps seen when connected to Cisco TOR in VEM (Virtual Ethernet Module) environment with LACP enabled. Link flapping occurs during code load or config changes to the Cisco switch.
* 000434644: For Brocade adapters in FC mode, fixed a corner case scenario where user is unable to change adapter port trunking state
* 000476585: For Brocade adapters in FC mode, Linux tape I/O may fail with 1MB or greater block size. This behavior is likely to happen when mapped pages are highly fragmented in a system. The failure is due to the current implementation of Linux ST layer’s mapping of user buffers. Suggested workaround is to set the BFA module parameter bfa\_io\_max\_sge=256

**Release Content in 3.2.3.0**

This release includes the following software components:

**\Boot**

**\boot\_image**

brocade\_adapter\_boot\_fw\_v3-2-3-0.tar

brocade\_adapter\_boot\_fw\_v3-2-3-0.zip

**\driver\_update\_disks**

brocade\_adapter\_fc\_w2k8\_x64\_dud\_v3-2-3-0.zip

brocade\_adapter\_fc\_w2k8\_x86\_dud\_v3-2-3-0.zip

brocade\_adapter\_fc\_w2k8\_ r2\_x64\_dud\_v3-2-3-0.zip

brocade\_adapter\_fcoe\_w2k8\_x64\_dud\_v3-2-3-0.zip

brocade\_adapter\_fcoe\_w2k8\_x86\_dud\_v3-2-3-0.zip

brocade\_adapter\_fcoe\_w2k8\_r2\_x64\_dud\_v3-2-3-0.zip

brocade\_adapter\_fc\_w2k12\_x64\_dud\_v3-2-3-0.zip

brocade\_adapter\_fcoe\_w2k12\_x64\_dud\_v3-2-3-0.zip

brocade\_unified\_adapter\_rhel58\_i386\_dud\_v3-2-3-0.iso

brocade\_unified\_adapter\_rhel58\_x86\_64\_dud\_v3-2-3-0.iso

brocade\_unified\_adapter\_rhel59\_i386\_dud\_v3-2-3-0.iso

brocade\_unified\_adapter\_rhel59\_x86\_64\_dud\_v3-2-3-0.iso

brocade\_unified\_adapter\_rhel63\_i386\_dud\_v3-2-3-0.iso

brocade\_unified\_adapter\_rhel63\_x86\_64\_dud\_v3-2-3-0.iso

brocade\_unified\_adapter\_rhel64\_i386\_dud\_v3-2-3-0.iso

brocade\_unified\_adapter\_rhel64\_x86\_64\_dud\_v3-2-3-0.iso

brocade\_adapter\_sles10sp3\_dud\_v3-2-3-0.iso

brocade\_adapter\_sles10sp4\_dud\_v3-2-3-0.iso

brocade\_adapter\_sles11sp2\_dud\_v3-2-3-0.iso

brocade\_adapter\_sles11sp3\_dud\_v3-2-3-0.iso

brocade\_adapter\_solaris10\_dud\_v3-2-3-0.iso

brocade\_adapter\_solaris11\_dud\_v3-2-3-0.iso

**\live\_cd**

live\_cd\_v3-2-3-0.iso

**\Linux**

**\Drivers**

\NOARCH

brocade\_driver\_linux\_3-2-3-0.tar.gz

\RHEL5

brocade\_driver\_linux\_rhel5\_3-2-3-0.tar.gz

\RHEL6

brocade\_driver\_linux\_rhel6\_3-2-3-0.tar.gz

\SLES10SP3

brocade\_driver\_linux\_sles10sp3\_3-2-3-0.tar.gz

\SLES10SP4

brocade\_driver\_linux\_sles10sp4\_3-2-3-0.tar.gz

\SLES11SP2

brocade\_driver\_linux\_sles11sp2\_v3-2-3-0.tar.gz

\SLES11SP3

brocade\_driver\_linux\_sles11sp3\_v3-2-3-0.tar.gz

\XenServer

brocade\_driver\_linux\_xen56sp2\_v3-2-3-0.tar.gz

brocade\_driver\_linux\_xen60\_v3-2-3-0.tar.gz

brocade\_driver\_linux\_xen61\_v3-2-3-0.tar.gz

brocade\_adapter\_software\_installer\_linux\_x64\_v3-2-3-0.bin

brocade\_adapter\_software\_installer\_linux\_v3-2-3-0.bin

**\VMware**

**\ESXi 5.0/5.1 packages and bundles**

brocade\_driver\_esx50\_v3-2-3-0.tar.gz

BCD-bfa-3.2.3.0-00000-offline\_bundle-1328230.zip

BCD-bna-3.2.3.0-00000-offline\_bundle-1326881.zip

bcu\_esx50\_3.2.3.0.zip

brocade-esx-5.0.0-bfaConfig-3.2.3.0-offline\_bundle-1331664.zip

**\ESXi 5.5 packages and bundles**

brocade\_driver\_esx55\_v3-2-3-0.tar.gz

BCD-bfa-3.2.3.0-00000-offline\_bundle-1326941.zip

BCD-bna-3.2.3.0-00000-offline\_bundle-1326741.zip

bcu\_esx55\_3.2.3.0.zip

brocade-esx-5.5.0-bfaConfig-3.2.3.0-offline\_bundle-1345827.zip

**\Windows**

**\Drivers**

brocade\_driver\_win2008\_x64\_v3-2-3-0.exe

brocade\_driver\_win2008\_x86\_v3-2-3-0.exe

brocade\_driver\_win2008\_R2\_x64\_v3-2-3-0.exe

brocade\_driver\_win2012\_x64\_v3-2-3-0.exe

brocade\_adapter\_software\_installer\_windows\_v3-2-3-0.exe

**\Solaris**

**\Drivers**

brocade\_driver\_solaris10\_v3-2-3-0.tar

brocade\_driver\_solaris11\_v3-2-3-0.tar

brocade\_adapter\_software\_installer\_solaris\_sparc\_v3-2-3-0.bin

brocade\_adapter\_software\_installer\_solaris\_x86\_v3-2-3-0.bin

**\Documentation**

Brocade\_Adapter\_v3-2-x-x\_Release\_Notes.pdf

Brocade\_Adapters\_v3.2.3.0\_Install\_and\_Reference\_Manual.pdf

Brocade\_Adapters\_v3.2.3.0\_Admin\_Guide.pdf

Brocade\_Adapters\_v3.2.3.0\_Troubleshooting\_Guide.pdf

# Brocade Adapter Release 3.2.1.1

Adapter software release 3.2.1.1 provides support for Brocade 1869 4-port 16Gbps Fibre Channel mezzanine HBA.

**Release Content in 3.2.1.1**

This release includes the following software components:

**\Boot**

**\boot\_image**

brocade\_adapter\_boot\_fw\_v3-2-1-1.tar

brocade\_adapter\_boot\_fw\_v3-2-1-1.zip

**\driver\_update\_disks**

brocade\_adapter\_fc\_w2k8\_x64\_dud\_v3-2-1-1.zip

brocade\_adapter\_fc\_w2k8\_x86\_dud\_v3-2-1-1.zip

brocade\_adapter\_fc\_w2k8\_ r2\_x64\_dud\_v3-2-1-1.zip

brocade\_adapter\_fcoe\_w2k8\_x64\_dud\_v3-2-1-1.zip

brocade\_adapter\_fcoe\_w2k8\_x86\_dud\_v3-2-1-1.zip

brocade\_adapter\_fcoe\_w2k8\_r2\_x64\_dud\_v3-2-1-1.zip

brocade\_unified\_adapter\_rhel58\_x86\_64\_dud\_v3-2-1-1.iso

brocade\_unified\_adapter\_rhel59\_x86\_64\_dud\_v3-2-1-1.iso

brocade\_unified\_adapter\_rhel63\_x86\_64\_dud\_v3-2-1-1.iso

brocade\_unified\_adapter\_rhel64\_x86\_64\_dud\_v3-2-1-1.iso

brocade\_adapter\_sles10sp3\_dud\_v3-2-1-1.iso

brocade\_adapter\_sles10sp4\_dud\_v3-2-1-1.iso

brocade\_adapter\_sles11sp1\_dud\_v3-2-1-1.iso

brocade\_adapter\_sles11sp2\_dud\_v3-2-1-1.iso

vmware-esx-drivers-scsi-bfa\_400.3.2.1.1-1OEM.1222105.iso

vmware-esx-drivers-net-bna\_400.3.2.1.1-1OEM.1220979.iso

**\live\_cd**

live\_cd\_v3-2-1-1.iso

**\Linux**

**\Drivers**

\RHEL5

brocade\_driver\_linux\_rhel5\_3-2-1-1.tar.gz

\RHEL6

brocade\_driver\_linux\_rhel6\_3-2-1-1.tar.gz

\SLES10SP3

brocade\_driver\_linux\_sles10sp3\_3-2-1-1.tar.gz

\SLES10SP4

brocade\_driver\_linux\_sles10sp4\_3-2-1-1.tar.gz

\SLES11SP1

brocade\_driver\_linux\_sles11sp1\_3-2-1-1.tar.gz

\SLES11SP2

brocade\_driver\_linux\_sles11sp2\_v3-2-1-1.tar.gz

brocade\_adapter\_software\_installer\_linux\_x64\_v3-2-1-1.bin

brocade\_adapter\_software\_installer\_linux\_v3-2-1-1.bin

**\VMware**

brocade\_driver\_esx41\_v3-2-1-1.tar.gz

brocade\_ss\_esx41i\_v3-2-1-1.tgz

brocade\_driver\_esx5x\_v3-2-1-1.tar.gz

BCD-bfa-3.2.1.1-00000-offline\_bundle-1223690.zip

BCD-bna-3.2.1.1-00000-offline\_bundle-1222448.zip

bcu\_esx50\_3.2.1.1.zip

brocade-esx-5.0.0-bfaConfig-3.2.1.1-offline\_bundle-1197603.zip

**\Windows**

**\Drivers**

brocade\_driver\_win2008\_x64\_v3-2-1-1.exe

brocade\_driver\_win2008\_x86\_v3-2-1-1.exe

brocade\_driver\_win2008\_R2\_x64\_v3-2-1-1.exe

brocade\_driver\_win2012\_x64\_v3-2-1-1.exe

brocade\_adapter\_software\_installer\_windows\_v3-2-1-1.exe

**\Documentation**

Brocade\_Adapter\_v3-2-x-x\_Release\_Notes.pdf

Brocade\_Adapters\_v3.2.1.1\_Install\_and\_Reference\_Manual.pdf

Brocade\_Adapters\_v3.2.1.1\_Admin\_Guide.pdf

Brocade\_Adapters\_v3.2.1.1\_Troubleshooting\_Guide.pdf

# Brocade Adapter Release 3.2.1.0

Key features and enhancements supported for the software release 3.2.1.0 include the following:

New Operating System Support:

* RHEL 5.9 and RHEL 6.4

The 3.2.1.0 release includes the following fixes or enhancements:

* 000431104: Enhanced Linux driver to persist user configured path tov value and does not change due to change in dev\_loss\_tmo.
* 000441394: For Windows 2008 & R2, enabled support for “lower filter” driver to bind to Brocade Intermediate driver e.g. security software to install on Teamed / VLAN ports.
* 000428877: For Brocade 1860, addressed an issue to avoid IO stall in the uncommon case where the port is in INTx mode.
* 000445746: Enhanced Linux driver data path to properly execute IPv6 socket connection.
* 000433461: Enhanced Linux RHEL5 kdump to handle multi-pathing in storage direct attach scenario.

**Release Content in 3.2.1.0**

This release includes the following software components:

**\Boot**

**\boot\_image**

brocade\_adapter\_boot\_fw\_v3-2-1-0.tar

brocade\_adapter\_boot\_fw\_v3-2-1-0.zip

**\driver\_update\_disks**

brocade\_adapter\_fc\_w2k8\_x64\_dud\_v3-2-1-0.zip

brocade\_adapter\_fc\_w2k8\_x86\_dud\_v3-2-1-0.zip

brocade\_adapter\_fc\_w2k8\_ r2\_x64\_dud\_v3-2-1-0.zip

brocade\_adapter\_fcoe\_w2k8\_x64\_dud\_v3-2-1-0.zip

brocade\_adapter\_fcoe\_w2k8\_x86\_dud\_v3-2-1-0.zip

brocade\_adapter\_fcoe\_w2k8\_r2\_x64\_dud\_v3-2-1-0.zip

brocade\_unified\_adapter\_rhel58\_i386\_dud\_v3-2-1-0.iso

brocade\_unified\_adapter\_rhel58\_x86\_64\_dud\_v3-2-1-0.iso

brocade\_unified\_adapter\_rhel59\_i386\_dud\_v3-2-1-0.iso

brocade\_unified\_adapter\_rhel59\_x86\_64\_dud\_v3-2-1-0.iso

brocade\_unified\_adapter\_rhel63\_i386\_dud\_v3-2-1-0.iso

brocade\_unified\_adapter\_rhel63\_x86\_64\_dud\_v3-2-1-0.iso

brocade\_unified\_adapter\_rhel64\_i386\_dud\_v3-2-1-0.iso

brocade\_unified\_adapter\_rhel64\_x86\_64\_dud\_v3-2-1-0.iso

brocade\_adapter\_sles10sp3\_dud\_v3-2-1-0.iso

brocade\_adapter\_sles10sp4\_dud\_v3-2-1-0.iso

brocade\_adapter\_sles11sp1\_dud\_v3-2-1-0.iso

brocade\_adapter\_sles11sp2\_dud\_v3-2-1-0.iso

brocade\_adapter\_solaris10\_dud\_v3-2-1-0.iso

brocade\_adapter\_solaris11\_dud\_v3-2-1-0.iso

vmware-esx-drivers-net-bna\_400.3.2.1.0-1OEM.1125181.iso

vmware-esx-drivers-scsi-bfa\_400.3.2.1.0-1OEM.1108847.iso

**\live\_cd**

live\_cd\_v3-2-1-0.iso

**\Linux**

**\Drivers**

\NOARCH

brocade\_driver\_linux\_3-2-1-0.tar.gz

\RHEL5

brocade\_driver\_linux\_rhel5\_3-2-1-0.tar.gz

\RHEL6

brocade\_driver\_linux\_rhel6\_3-2-1-0.tar.gz

\SLES10SP3

brocade\_driver\_linux\_sles10sp3\_3-2-1-0.tar.gz

\SLES10SP4

brocade\_driver\_linux\_sles10sp4\_3-2-1-0.tar.gz

\SLES11SP1

brocade\_driver\_linux\_sles11sp1\_3-2-1-0.tar.gz

\SLES11SP2

brocade\_driver\_linux\_sles11sp2\_v3-2-1-0.tar.gz

\XenServer

brocade\_driver\_linux\_xen56sp2\_v3-2-1-0.tar.gz

brocade\_driver\_linux\_xen60\_v3-2-1-0.tar.gz

brocade\_driver\_linux\_xen61\_v3-2-1-0.tar.gz

brocade\_adapter\_software\_installer\_linux\_x64\_v3-2-1-0.bin

brocade\_adapter\_software\_installer\_linux\_v3-2-1-0.bin

**\VMware**

brocade\_driver\_esx41\_v3-2-1-0.tar.gz

brocade\_ss\_esx41i\_v3-2-1-0.tgz

brocade\_driver\_esx5x\_v3-2-1-0.tar.gz

BCD-bfa-3.2.1.0-00000-offline\_bundle-1108413.zip

BCD-bna-3.2.1.0-00000-offline\_bundle-1125108.zip

bcu\_esx50\_3.2.1.0.zip

brocade-esx-5.0.0-bfaConfig-3.2.1.0-offline\_bundle-1128125.zip

**\Windows**

**\Drivers**

brocade\_driver\_win2008\_x64\_v3-2-1-0.exe

brocade\_driver\_win2008\_x86\_v3-2-1-0.exe

brocade\_driver\_win2008\_R2\_x64\_v3-2-1-0.exe

brocade\_driver\_win2012\_x64\_v3-2-1-0.exe

brocade\_adapter\_software\_installer\_windows\_v3-2-1-0.exe

**\Solaris**

**\Drivers**

brocade\_driver\_solaris10\_v3-2-1-0.tar

brocade\_driver\_solaris11\_v3-2-1-0.tar

brocade\_adapter\_software\_installer\_solaris\_sparc\_v3-2-1-0.bin

brocade\_adapter\_software\_installer\_solaris\_x86\_v3-2-1-0.bin

**\Documentation**

Brocade\_Adapter\_v3-2-x-x\_Release\_Notes.pdf

Brocade\_Adapters\_v3.2.1.0\_Install\_and\_Reference\_Manual.pdf

# Brocade Adapter Release 3.2.0.0

The Brocade adapter software release 3.2.0.0 expands the feature set and support matrix for all Brocade adapter products.

Key features and enhancements supported for the software release 3.2.0.0 include the following:

New Features:

* BB Credit Recovery
* Forward Error Correction (FEC)

Feature Enhancement:

* Diagnostic Port (D-Port)
* LUN Level IO Latency/Stats
* UCM (Unified Configuration Manager)
* Windows Network Performance and scalability enhancement

New Operating System Support:

* Solaris 11 (BFA and BNA Drivers)
* Citrix XenServer 5.6SP2, 6.0, 6.1

The 3.2.0.0 release includes the following fixes or enhancements:

* 000425693: For Brocade 8x5/4x5, I/O interrupt latency values are dynamically updated. Changes are effective for all the ports on the given adapter.
  + 000419547: Addressed infrequent PSOD in VMware ESX with iSCSI or VLAN configured traffic in DCB enabled network.
  + 000415192: Enhanced BR1860 Tape IO performance.
  + 000421908: Improved BR1860 initialization on Xen kernel.

**Release Content in 3.2.0.0**

This release includes the following software components:

**\Boot**

**\boot\_image**

brocade\_adapter\_boot\_fw\_v3-2-0-0.tar

brocade\_adapter\_boot\_fw\_v3-2-0-0.zip

**\driver\_update\_disks**

brocade\_adapter\_fc\_w2k8\_x64\_dud\_v3-2-0-0.zip

brocade\_adapter\_fc\_w2k8\_x86\_dud\_v3-2-0-0.zip

brocade\_adapter\_fc\_w2k8\_ r2\_x64\_dud\_v3-2-0-0.zip

brocade\_adapter\_fcoe\_w2k8\_x64\_dud\_v3-2-0-0.zip

brocade\_adapter\_fcoe\_w2k8\_x86\_dud\_v3-2-0-0.zip

brocade\_adapter\_fcoe\_w2k8\_r2\_x64\_dud\_v3-2-0-0.zip

brocade\_unified\_adapter\_rhel57\_i386\_dud\_v3-2-0-0.iso

brocade\_unified\_adapter\_rhel57\_x86\_64\_dud\_v3-2-0-0.iso

brocade\_unified\_adapter\_rhel58\_i386\_dud\_v3-2-0-0.iso

brocade\_unified\_adapter\_rhel58\_x86\_64\_dud\_v3-2-0-0.iso

brocade\_unified\_adapter\_rhel62\_i386\_dud\_v3-2-0-0.iso

brocade\_unified\_adapter\_rhel62\_x86\_64\_dud\_v3-2-0-0.iso

brocade\_unified\_adapter\_rhel63\_i386\_dud\_v3-2-0-0.iso

brocade\_unified\_adapter\_rhel63\_x86\_64\_dud\_v3-2-0-0.iso

brocade\_adapter\_sles10sp3\_dud\_v3-2-0-0.iso

brocade\_adapter\_sles10sp4\_dud\_v3-2-0-0.iso

brocade\_adapter\_sles11sp1\_dud\_v3-2-0-0.iso

brocade\_adapter\_sles11sp2\_dud\_v3-2-0-0.iso

brocade\_adapter\_solaris10\_dud\_v3-2-0-0.iso

brocade\_adapter\_solaris11\_dud\_v3-2-0-0.iso

vmware-esx-drivers-net-bna\_400.3.2.0.0-1OEM.944114.iso

vmware-esx-drivers-scsi-bfa\_400.3.2.0.0-1OEM.943766.iso

**\live\_cd**

live\_cd\_v3-2-0-0.iso

**\Linux**

**\Drivers**

\NOARCH

brocade\_driver\_linux\_3-2-0-0.tar.gz

\RHEL5

brocade\_driver\_linux\_rhel5\_3-2-0-0.tar.gz

\RHEL6

brocade\_driver\_linux\_rhel6\_3-2-0-0.tar.gz

\SLES10SP3

brocade\_driver\_linux\_sles10sp3\_3-2-0-0.tar.gz

\SLES10SP4

brocade\_driver\_linux\_sles10sp4\_3-2-0-0.tar.gz

\SLES11SP1

brocade\_driver\_linux\_sles11sp1\_3-2-0-0.tar.gz

\SLES11SP2

brocade\_driver\_linux\_sles11sp2\_v3-2-0-0.tar.gz

\XenServer

brocade\_driver\_linux\_xen56sp2\_v3-2-0-0.tar.gz

brocade\_driver\_linux\_xen60\_v3-2-0-0.tar.gz

brocade\_driver\_linux\_xen61\_v3-2-0-0.tar.gz

brocade\_adapter\_software\_installer\_linux\_x64\_v3-2-0-0.bin

brocade\_adapter\_software\_installer\_linux\_v3-2-0-0.bin

**\VMware**

brocade\_driver\_esx41\_v3-2-0-0.tar.gz

brocade\_ss\_esx41i\_v3-2-0-0.tgz

brocade\_driver\_esx5x\_v3-2-0-0.tar.gz

BCD-bfa-3.2.0.0-00000-offline\_bundle-943825.zip

BCD-bna-3.2.0.0-00000-offline\_bundle-944129.zip

bcu\_esx50\_3.2.0.0.zip

brocade-esx-5.0.0-bfaConfig-3.2.0.0-offline\_bundle-949349.zip

**\Windows**

**\Drivers**

brocade\_driver\_win2008\_x64\_v3-2-0-0.exe

brocade\_driver\_win2008\_x86\_v3-2-0-0.exe

brocade\_driver\_win2008\_R2\_x64\_v3-2-0-0.exe

brocade\_driver\_win2012\_x64\_v3-2-0-0.exe

brocade\_adapter\_software\_installer\_windows\_v3-2-0-0.exe

**\Solaris**

**\Drivers**

brocade\_driver\_solaris10\_v3-2-0-0.tar

brocade\_driver\_solaris11\_v3-2-0-0.tar

brocade\_adapter\_software\_installer\_solaris\_sparc\_v3-2-0-0.bin

brocade\_adapter\_software\_installer\_solaris\_x86\_v3-2-0-0.bin

**\Documentation**

Brocade\_Adapter\_v3-2-x-x\_Release\_Notes.pdf

Brocade\_Adapters\_v3.2.0.0\_Admin\_Guide.pdf

Brocade\_Adapters\_v3.2.0.0\_Install\_and\_Reference\_Manual.pdf

Brocade\_CNA\_v3.2.0.0\_Quick\_Installation\_Guide.pdf

Brocade\_HBA\_v3.2.0.0\_Quick\_Installation\_Guide.pdf

Brocade\_Adapters\_v3.2.0.0\_Troubleshooting\_Guide.pdf

Brocade\_FA\_v3.2.0.0\_Quick\_Installation\_Guide.pdf

# Important Notes

**General:**

1. In a configuration with multiple QLogic Adapters in the same server, the latest revision of boot code should be updated on all the adapters after upgrading to the latest drivers. For Boot over SAN configuration, use of the single adapter upgrade option in this configuration could result in an unstable boot environment. The boot image can be updated on all the adapters using the command “bcu boot –update <boot-firmware> -a” to update the boot firmware. LiveCD and HCM can also be used to update the boot code. Refer to the boot section of the “QLogic Adapters Installation and Reference Manual” for details.
2. The current BIOS retry mechanism uses a timeout of one second and max of six retries for SCSI control commands. If the boot device fails to respond within this timeout period and all the retries are exhausted, the boot from this device will fail.
3. On some IBM servers (3250M2, 3650, 3950 M2), during the POST phase, a resource issue may cause QLogic BIOS config to not be displayed properly. It is recommended to disable any onboard disk controllers and PXE boot option.
4. PCI scan operations (e.g., lspci in Linux or Windows registry PCI device enumeration) may report two ports for the 415 and 815 single port HBAs. This is expected behavior. However, operating system device drivers will correctly enumerate only a single HBA for these cards.
5. When no targets are visible, running CLI query "bcu fcpim --lunlist" reports "Error: operation failed ". The error can be safely ignored since there is no impact on functionality.
6. It is highly recommended to disable Spanning Tree topologies on switch ports that the CNAs running FCoE traffic are connected to.  Spanning tree topologies may result in lost or dropped FCoE logins. Alternatively the switch ports can be configured as edgeport (RSTP, MSTP) or portfast (STP) to help avoid lost FCoE logins due to spanning tree. Please refer to the CEE switch Administrator’s guide for further details on how to configure spanning tree.
7. D-port functionality is supported between QLogic 16Gb BR-Series HBAs, with adapter firmware version 3.1 or later, and Brocade 16Gb FC switch running FOS v7.0.1 or later. This feature requires 16G SFP+ to be used both at the adapter and the switch. For additional details of this functionality please consult QLogic Adapter Administrator’s Guide.
8. In rare cases the HCM master log may report all zero WWN and MAC address. There is no functional impact.
9. For 1860 Adapter, FC / FCoE configured attributes are expected to persist across mode changes.
10. For IBM UEFI servers, to ensure parameter persistency it is recommended to use HII for modifying parameter values.
11. Dell 12G servers must use the latest Dell BIOS and Dell 11G servers must use Lifecycle Controller 1.6.5 or later

**Windows:**

1. On a Windows2012 R2 installation, HCM incorrectly displays the OS type and version. It will display OS type as “Microsoft Windows Server 2012” and OS version as “Build 9200” – the correct strings should be OS type as “Microsoft Windows Server 2012 R2” and OS version as “Build 9600”. This is a display issue only and has no functional impact.
2. When using Windows 2003 R2 SP2 and QLogic adapters:

* With CNA’s, Brocade Adapter Software Release 2.3.0.x or prior must be used
* With FC HBA’s, Brocade Adapter Software Release 3.0.x.x or prior must be used

1. Windows selects the first port visible during normal boot (and this can be different from the port that was selected for booting under HBA BIOS configuration). If multiple paths are configured to the same boot LUN, and if the path on which Windows has discovered the boot LUN goes down, then Windows might experience a failure.
2. In Windows, the driver installation will fail if the HBA or CNA ports don't show up under Device Manager. This can happen if the driver package is installed and uninstalled without a reboot. Rescan the hardware devices using Device Manager to work around the issue.
3. In Windows, the QLogic Adapter Installer checks for minimally-required Microsoft hotfixes and reports an error if a required hotfix (or a later version) is not installed.

* Windows Server 2008:
  + Recommended: KB968675, KB958015
* Windows Server 2008 R2:
  + Recommended: KB977977, KB2490742
  + With iSCSI service enabled, applying hotfix KB979711 is required per Microsoft.   
    KB979711: <http://support.microsoft.com/kb/979711/en-us>

1. In rare cases, on Windows systems with a CNA installed the Ethernet device number in the Network Manager (i.e. “Local Area Connection##”) may not match the adapter/port order. This is Microsoft Windows limitation as detailed in the KB article: <http://support.microsoft.com/kb/823206>. The workaround is to rename the “Local Area Connection##” to match the adapter/port order (right click on the Local Area Connection and click “rename”).
2. When using Brocade Adapter Software Installer (BASI), a pop-up window may appear stating that the file ‘bninotify.dll’ cannot be found. This is because the installer is referencing the wrong path. To correct the path, edit the ‘Copy files from:’ field from "c:\program files (x86)\brocade\adapter\driver\net" to "c:\program files\brocade\adapter\driver\net".
3. In rare cases the adapter may not show in HCM but is visible in BCU and Device Manager. In this situation, restart the HCM Agent.
4. In Windows 2008 R2, VMQ is supported with miniport driver. VMQ support with VLAN and Team is not available.
5. For Windows 2012 Boot over SAN deployments, use Windows 2012 Inbox driver or Windows 2008 R2 DUD (Driver Update Disk).

**Linux:**

1. When Network Manager is enabled, network traffic may not pass through multiple CNA network interfaces. The workaround is to disable Network Manager or set up Network Manager to use the appropriate NIC interface.
2. Currently the QLogic installer is inadvertently backing up the .syslog and install.log files from the /root to /var/log/brocade folder. This has no functional impact and will be addressed in the next release.
3. On Linux systems, QLogic Adapter Software Installer doesn't check to see if /boot is full and fails silently when updating initrd. Re-try installation after adding or freeing up disk space in the /boot partition.
4. On 64 bit distributions, silent installer warning “‘/lib/libc.so.6’ No such file” can be ignored.
5. In Citrix Xenserver Boot over SAN configuration, after installing 3.2.0.0 driver using driver ISO, manually run mkinitrd to enable loading 3.2.0.0 driver after reboot.
6. In Linux, if dev\_loss\_tmo is used in multipath configuration, path\_tov of the bfa driver will assume the dev\_loss\_tmo. If dev\_loss\_tmo is set to a value greater than 90 seconds, path\_tov will be set to 90 seconds. There is no impact to functionality.

**Solaris:**

1. The Solaris driver installation (using silent installation) requires a manual reboot.
2. On Solaris 10 the error message "WARNING: interrupt 0x70025440 at level 1 not serviced” can be ignored.
3. When STMSboot is enabled, fcpim --lunlist does not always display Dev names.
4. On Solaris 11 Hot add and remove support is available for 1860 only.
5. When installing bfa driver on Solaris 11, the warning “bfad0-bfad\_bind\_port: Failed to bind - error 0x35” can be ignored.
6. In Solaris 11 Boot over SAN configuration, following steps are required to properly install QLogic Solaris11 drivers:

* Copy DUD to a USB drive. Perform OS installation via GUI - applying driver updates when prompted for.
* After the OS installation is complete (and before rebooting the box)- execute following steps:
  + set -x
  + rem\_drv bfa
  + add\_drv -b /a -m '\* 0600 root sys' -c fibre-channel -i '"pciex1657,13" "pciex1657,17" "pciex1657,14.1657.14" "pciex1657,22.1657.22" "pciex1657,22.1657.24"' bfa
* Reboot the system as prompted by the graphical installer.

**VMware:**

1. When performing a fresh driver installation on ESXi 4/5, the error message from VMware Update Manager "Error: Unable to update module options: The object or item referred to could not be found" can be ignored.

# Documentation Updates

* None

# Product Support

QLogic Technical Support for products under warranty is available during local standard working hours excluding QLogic Observed Holidays. For customers with extended service, consult your plan for available hours. For Support phone numbers, see the Contact Support link at [support.qlogic.com](http://support.qlogic.com).

|  |  |
| --- | --- |
| **Support Headquarters** | QLogic Corporation 4601 Dean Lakes Blvd. Shakopee, MN 55379 USA |
| **QLogic Web Site** | <http://www.qlogic.com> |
| **Technical Support Web Site** | <http://support.qlogic.com> |
| **Technical Support E-mail** | [support@qlogic.com](mailto:support@qlogic.com) |
| **Technical Training E-mail** | [training@qlogic.com](mailto:training@qlogic.com) |

# Abbreviations

PCIe PCI Express

FC Fibre Channel

HBA Host Bus Adapter

OS Operating System

IO Input Output

QoS Quality of Service

TRL Target Rate Limiting

BIOS Basic Input Output System

EFI Extensible Firmware Interface

LUN Logical Unit Number

HCM Host Connectivity Manager

DCF Data Center Fabric

BCU CLI Utility

API Application Program Interface

SAN Storage Area Network

CD Compact Disk

DUD Driver Update Disk

GUI Graphical User Interface

RAM Random Access Memory

SNIA Storage Networking Industry Association

RH Red Hat

SLES   [SUSE Linux Enterprise Server](http://www.suse.com/products/server/)