Brocade 5000 Switch Hardware Release Notes

For Installation in a Sun™ Storage Area Network

Sun Microsystems, Inc.
www.sun.com

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Brocade 5000 Switch Hardware Release Notes

This document contains important information about the Brocade 5000 switch hardware installed in Sun storage area networks (SANs).

Read this document so that you are aware of issues or requirements that can affect the installation and operation of the Brocade 5000 switch in a Sun SAN.

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This document contains the following sections:

- "Product Features" on page 2
- "Installing the Switch in a Brocade SAN" on page 2
- "Installing the Switch in a McDATA SAN" on page 7
- "Downloading the Firmware from SunSolve" on page 13
- "Known Issues and Bugs" on page 14
- "Related Documentation" on page 15
- "Service Contact Information" on page 15

Product Features

The Brocade 5000 switch is a Fibre Channel switch that supports 16, 24, or 32 auto-sensing 1, 2, or 4-Gbps ports.

You can install the Brocade 5000 switch in a Brocade or McDATA SAN.

- For Brocade SAN information, use this section:

  "Installing the Switch in a Brocade SAN" on page 2

- For McDATA SAN information, use this section:

  "Installing the Switch in a McDATA SAN" on page 7

Installing the Switch in a Brocade SAN

The Brocade 5000 switch is delivered with FOS v5.2.1 (minimum). FOS v5.2.1 is required for installation in a Brocade SAN.

TABLE 1 summarizes the versions of the Brocade Fabric OS that are supported in conjunction with this release. Use the current firmware version to optimize the benefits of a SAN. Brocade FOS releases are available as patches on SunSolve.

TABLE 1 Minimum Brocade Fabric OS Requirements

Description	Silkworm 2000 Series	Silkworm 3200 and 3800	Silkworm 3250, 3850, 3900, 4100 and 24000	Silkworm 4900	Silkworm 200E, and 48000	Brocade 5000	Silkworm 7500	Silkworm 12000	Brocade Fabric Manager
General compatibility	2.6.1	3.2.1a	5.0.1	5.1.0a	5.0.1a	5.2.1b	5.1.0d	5.0.1	5.2.0a
With secure fabric enabled	2.6.1	3.2.1a	5.0.1	5.1.0a	5.0.1a	5.2.1b	5.1.0d	5.0.1	5.2.0a
Recommended software versions	2.6.2d	3.2.1a	5.2.1b	5.2.1b	5.2.1b	5.2.1b	5.2.1b	5.0.5c	5.2.0a

Note – Fabric OS v2.6.x can interoperate with Fabric OS v5.2.x through the FC routing capability of the Brocade AP7420 or Silkworm 7500. Customers who want to have Fabric OS v2.6.x and v5.2.x mixed in the same fabric should consult their equipment provider for a detailed list of limitations. New fabric-wide features introduced in Fabric OS v5.2.x will not be compatible with Fabric OS v2.6.x.

Note – Silkworm 3250, 3850, and 24000 are supported by Fabric OS v4.2.0 or later.
Silkworm 3250, 3850, and 24000 are supported by Fabric Manager 4.1.1 or later.
Silkworm 3900 is supported by Fabric OS v4.1.0 or later.
Silkworm 4100 is supported by Fabric Manager 4.4.0 or later.
Silkworm 4900 is supported by Fabric OS v5.1.0a or later.
Silkworm 200E and 48000 are supported by Fabric Manager 5.0 or later.
Silkworm 7500 is supported by Fabric Manager 5.2.0 or later.

Firmware Patch ID for Brocade SANs

FOS v5.2.1b is delivered as patch ID 124898-xx. The *-xx* suffix indicates the latest patch revision number.

For a list of the new features introduced in each Brocade Fabric OS release, refer to the *Brocade Fabric OS v5.2.1b Release Notes v2.0* delivered with the patch.

Note – The Brocade Fabric release notes are also available from Brocade online at `http://www.brocadeconnect.com/index.jsp`.

A login is required, but registration is free with a valid Brocade switch World Wide Name (WWN).

For more information about firmware revisions, see the README file delivered with the patch.

Supported Hardware and Software in a Brocade SAN

This section provides the hardware and supported software for the Brocade 5000 switch when installed in Brocade environments.

Operating System Requirements

The following operating systems running on hosts in the SAN are compatible with Brocade fabric OS versions.

Solaris

- Solaris 8, 9, and 10 for SPARC
- Solaris 10 for x86

Linux

- Red Hat Enterprise Linux 3, 4 (IA32/AMD64)
- SuSE Linux Enterprise Server 8 (AMD64)
- SuSE Linux 9 Professional Community Edition (AMD64)

Microsoft Windows

- Windows Server 2000 (IA32)
- Windows Server 2003 (IA32/AMD64)

Supported Switches in a Brocade SAN

The following switches are compatible with the Brocade 5000 switch when operating in a Brocade SAN.

- Silkworm 2000 series are only supported using routing via the 7500 or FR4-18i blade in a 48000 director
- Silkworm 3200 and 3800
- Silkworm 3250, 3850, 3900, 24000
- Silkworm 4100
- Silkworm 200E, 4900, 48000
- Silkworm 7500
- Silkworm 12000

Software Used in a Brocade SAN

Several options are available for managing the Brocade switches and directors. The following is a list of the available options and any operating requirements.

- Advanced WebTool v.5.0.1 - requires Firefox™ 1.5.0.1 (minimum version)
- Java™ Plug-in 1.5.0_06 (minimum version)
- Brocade Fabric Manager v5.2.0a
- Application programming interface (API)

- Telnet and Simple Network Management Protocol (SNMP) management access

Supported Protocol

The Brocade 5000 switch does not support FICON with classic Brocade fabrics.

Supported Storage Platforms in a Brocade SAN

The following storage platforms are compatible with the Brocade 5000 switch when operating in a Brocade SAN.

- Sun StorageTek™ 2540 array
- Sun StorEdge™ 3510, 3511 FC arrays
- Sun StorEdge 6120 and 6130 arrays
- Sun StorageTek 6140 and 6540 arrays
- Sun StorEdge T3B array with full fabric
- Sun StorEdge 6320 system
- Sun StorageTek FlexLine™ 380 array
- Sun StorEdge Fibre Channel 9840A, 9840B, 9840C, 9940A, 9940B, T10000, LTO-2, LTO-3, and SDLT 600 FC tape drives
- Sun StorEdge FC420 FC-SCSI Bridge for L25 and L100 tape libraries with the SG-XFCCARD2-C LVD SCSI to Fibre Channel Card Quantum or the SG-XFC420CARD-MOD Fibre Channel / LVD Internal Bridge
- FC Robots: L180, L700j, L1400M, SL500, L500
- C4 tape library with the SG-XFCCARD2-C LVD SCSI to Fibre Channel Card Quantum

Supported HBAs in a Brocade SAN

The following HBAs are compatible with the Brocade 5000 switch when operating in a Brocade SAN.

- SG-XPCI1FC-QF2
- SG-XPCI1FC-QL2
- SG-XPCI2FC-QF2
- SG-XPCI1FC-QLC
- SG-XPCI1FC-EM2
- SG-XPCI2FC-EM2
- SG-XPCI1FC-QF4

- SG-XPCI2FC-QF4
- SG-XPCI1FC-EM4
- SG-XPCI2FC-EM4
- SG-XPCIE1FC-QF4
- SG-XPCIE2FC-QF4
- SG-XPCIE1FC-EM4
- SG-XPCIE2FC-EM4
- SG-XPCIE2FC-QB4
- SG-XPCIE2FC-EB4
- SG-XPCIE20FC-NEM

Supported Server Platforms in a Brocade SAN

The following server platforms are compatible with the Brocade 5000 switch in a Brocade SAN.

x64/x86 Systems

- Sun Fire™ V20z/40z
- Sun Fire x2100 and x4100/4200
- Sun Fire x2200 and x4600
- Sun Fire 8000 Blade Server

Work Group Servers

- Sun Fire T1000/T2000
- Sun Fire V1280/Netra 1280
- Sun Fire V240/Netra 240
- Sun Fire V210/V240/V250
- Sun Fire V440
- Sun Fire V480
- Sun Fire V490
- Sun Fire V880
- Sun Fire V890
- Sun Fire 4800/4810/6800
- Sun Fire 2900
- Sun Fire 12k/15k/20k/25k
- Sun Blade™ 1500/2500
- Sun Blade 2500+

- Sun Enterprise™ 4900/6900

Installing the Switch in a McDATA SAN

Brocade Fabric OS v5.2.1_NI1 (Native Interop) enables the Brocade 5000 switch to fully interoperate with M-EOS fabrics in McDATA Fabric 1.0 Interop mode (sometimes called M-EOS Native mode).

Note – The FOSv5.2.1_NI1 code is only required for Brocade to McDATA interoperability on the Brocade 5000 switch.

Before you install the switch, read the Brocade document *Read Me First - Installing the Brocade 5000*, publication number 53-1000559-01.

TABLE 2 lists the McDATA switches and E/OS minimum firmware versions supported by FOS v5.2.1_NI1. Use the current firmware version to optimize the benefits of a SAN.

TABLE 2 Minimum McDATA E/OS Requirements for Interop Mode

Fabric OS Interoperability with Brocade Switches and Firmware	
Brocade 5000 switch	Fabric OS v5.2.1_NI1
Fabric OS Interoperability with McDATA Switches and Firmware	
Intrepid 6140, 6064 and 10000	E/OS v9.x
Sphereon or M type 3016, 3032, 3232, 4300, 4400, 4500 4700 and 3216	E/OS v9.x
M1620, M2640	E/OSi 4.x & 5.x

Direct e-port attachment is only supported on the Intrepid directors and the Sphereon or M-type switches listed above.

Interoperability with M-type bladed switches is not supported and these switches should not be included in the fabric.

McDATA SAN Firmware Patch ID

The Brocade 5000 switch is delivered with FOS v5.2.1 (minimum). You must download and install FOS v5.2.1_NI1 if you are using the switch in a McDATA environment. Brocade Fabric OS v5.2.1_NI1 is available as a patch 124899-*xx* on SunSolve. The *-xx* suffix indicates the latest patch revision number.

For a list of the new features introduced in each Brocade Fabric OS release, refer to the *Brocade Fabric OS v5.2.1_NI1 Release Notes v2.0* delivered with the patch.

Note – The Brocade Fabric release notes are also available from Brocade online at `http://www.brocadeconnect.com/index.jsp`.

A login is required, but registration is free with a valid Brocade switch World Wide Name (WWN).

For more information about firmware revisions, see the README file delivered with the patch.

Upgrading FOS v5.2.1 to v5.2.1_NI1

Fabric OS v5.2.1_NI1 firmware is supported only on Brocade 5000. An upgrade to v5.2.1_NI1 from v5.2.1 or a downgrade from v5.2.1_NI1 to v5.2.1 is disruptive and requires a cold reboot.

1. **Download patch 124899 from SunSolve (see** "Downloading the Brocade Fabric OS Firmware Patch from SunSolve" on page 13**).**
2. **Install the v5.2.1_NI1 firmware as described in the README file.**

Note – Do not connect to the McDATA fabric until after you reboot the switch.

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3. **Reboot the switch.**

   After reboot, the switch boots into McDATA fabric mode.
4. **Connect the Brocade 5000 switch to the McDATA switches.**

Downgrading FOS v5.2.1_NI1 to v5.2.1

When you downgrade to Fabric OS v5.2.1, the switch must be reconfigured to be in BRCD Native mode using interopMode CLI after successful installation of non v5.2.1_NI1 and before a reboot. Failure to do so will result in residual configuration that will interfere while operating with non v5.2.1, or when upgrading to NI version of firmware in the future.

A v5.2.1_ NI1 configuration file cannot be used on the same switch after the switch has been downgraded to firmware version v5.2.1

1. **Download patch 124898 from SunSolve (see** "Downloading the Brocade Fabric OS Firmware Patch from SunSolve" on page 13**).**
2. **Downgrade the v5.2.1_NI1 firmware as described in the *Fabric OS Administrator's Guide*.**
3. **Disconnect the switch from the McDATA fabric.**
4. **Reconfigure the switch to BRCD Native mode using the** `interopmode` **command. For example:**

   ```
   interopMode 0
   ```

5. **Reboot the switch.**

   After reboot, the switch boots into Brocade fabric mode.

Supported Hardware and Software

This section provides the hardware and supported software for the Brocade 5000 switch when installed in McDATA environments.

Operating System Requirements

The following operating systems running on hosts in the SAN are compatible with Brocade fabric OS versions.

Solaris

- Solaris 8, 9, and 10 for SPARC
- Solaris 10 for x86

Linux

- Red Hat Enterprise Linux 3, 4 (IA32/AMD64)
- SuSE Linux Enterprise Server 8 (AMD64)

- SuSE Linux 9 Professional Community Edition (AMD64)

Microsoft Windows

- Windows Server 2000 (IA32)
- Windows Server 2003 (IA32/AMD64)

Software Used in a McDATA SAN

Several options are available for managing the Brocade switches and directors. The following is a list of the available options and any operating requirements.

- Brocade Fabric Manager v5.2.0a
- Brocade EFCM 9.1 (minimum) and FOS v5.2.1_NI1 for managing Brocade 5000 switches in McDATA environments
- Application programming interface (API)
- Telnet and Simple Network Management Protocol (SNMP) management access

Supported Protocol

FICON is not supported with FOS v5.2.1_NI1 in McDATA fabrics.

Supported Switches in a McDATA SAN

The following switches and directors are compatible with the Brocade 5000 switch when operating in a McDATA SAN.

- Intrepid 6140, 6064 and 10000
- Sphereon or M type 3016, 3032, 3232, 4300, 4400, 4500 4700 and 3216
- M1620, M2640

Supported Storage Platforms in a McDATA SAN

The following storage platforms are compatible with the Brocade 5000 switch when operating in a McDATA SAN.

- Sun StorageTek 3510 and 3511 FC arrays
- Sun StorageTek 6120 and 6130 arrays
- Sun StorEdge T3 array with full fabric
- Sun StorEdge 6320 system

- Sun StorageTek Fibre Channel 9840B, 9840C, 9940B, SDLT 600, T10000, LTO-2 and LTO-3 FC tape drives
- Sun StorageTek FC420 FC-SCSI Bridge for L25 and L100 tape libraries with the SG-XFCCARD2-C LVD SCSI to Fibre Channel Card or the SG-XFC420CARD-MOD Fibre Channel / LVD Internal Bridge C4 tape library with the SG-XFCCARD2-C LVD SCSI to Fibre Channel Card
- FC Robots: L180, L700 2G (Full Fabric), L500 2G (Full Fabric), L8500 2 (Full Fabric)
- Sun StorageTek Flexline 380 array
- Sun StorageTek 6140 and 6540 arrays
- Sun StorageTek 3900-family Switchless Systems
- Sun StorEdge SE9910, 9960, 9970, 9980, 9985, 9990 systems

Supported HBAs in a McDATA SAN

The following HBAs are compatible with the Brocade 5000 switch when operating in a McDATA SAN.

- SG-XPCI1FC-QF2
- SG-XPCI1FC-QL2
- SG-XPCI2FC-QF2-Z
- SG-XPCI1FC-QF4
- SG-XPCI2FC-QF4
- SG-XPCIE1FC-QF4
- SG-XPCIE2FC-QF4
- SG-XPCIE2FC-QB4-Z
- SG-XPCI1FC-EM2
- SG-XPCI2FC-EM2
- SG-XPCIE1FC-EM4
- SG-XPCIE2FC-EM4
- SG-XPCI1FC-EM4
- SG-XPCI2FC-EM4
- SG-XPCI1FC-EM4-Z
- SG-XPCI2FC-EM4-Z

Supported Server Platforms in a McDATA SAN

The following server platforms are compatible with the Brocade 5000 switch in a McDATA SAN.

x64/x86 Systems

The following x64/x86 systems are supported:

- Sun Fire V20z/V40z
- Sun Fire V60x/V65x
- Sun Fire X2100, X2200
- Sun Fire X4100/4200
- Sun Fire X4600
- Sun Blade 8000 Modular System

SPARC Systems

The following SPARC systems are supported:

- Sun Fire 12k/15k/E20k/E25k
- Sun Fire E2900/E4900/E6900
- Sun Fire 3800/4800/4810/6800
- Sun Fire T1000/T2000
- Sun Fire V1280/Netra1280
- Sun Fire V125
- Sun Fire V210 and V240
- Sun Fire V215 and V245
- Sun Fire V250
- Sun Fire V440
- Sun Fire V445
- Sun Fire V480
- Sun Fire V490
- Sun Fire V880
- Sun Fire V890
- Sun Fire 240/Netra
- Sun Blade 1500/2500/2500+

Downloading the Firmware from SunSolve

This section provides patch information and instructions for downloading and installing Brocade fabric OS firmware.

Downloading the Brocade Fabric OS Firmware Patch from SunSolve

Use the following procedure to retrieve Brocade fabric OS firmware.

1. **Access the SunSolve web site at:**

   `http://sunsolve.sun.com`

2. **Accept the terms and conditions of the license agreement.**

3. **Click Patches and Updates under the Support category.**

4. **Under PatchFinder, type the appropriate patch ID (see** "Firmware Patch ID for Brocade SANs" on page 3 **or** "McDATA SAN Firmware Patch ID" on page 8**), and click Find Patch.**

   Do not type the *-xx* revision number. PatchFinder automatically finds the latest patch.

5. **Verify that you have retrieved the correct patch.**

6. **Print the README file that contains installation instructions and any special guidelines.**

7. **Download the patch by clicking on either HTTP or FTP in the following line:**

   Download Patch (*nn,nnn,nnn* bytes) `HTTP FTP`

8. **When you have finished downloading the patch, install the patch by following the instructions in the patch README file.**

Known Issues and Bugs

This section provides information about bugs filed against this product.

Port Number Displays Incorrectly

Brocade Bug Number: PR#86331

EFCM 9.1: Attached port number and port number incorrectly displays port offset for a 5000.

Symptom: When viewing a stable fabric using EFCM 9.1, Port Numbers and Attached Port Numbers will appear with port offset of '4' compared to the FC Address. The 5000, similar to the Mi10K, M4400, and M4700 switches, do not use port offsets.

Workaround: Visually verify which port on the switch the device is plugged into, instead of relying on EFCM 9.1.

Related Documentation

For more information on the Brocade 5000 switch, refer to the following documents:

- *Read Me First - Installing the Brocade 5000* (Brocade P/N 53-1000559-01) for information about installing and configuring the Brocade 5000 switch.
- The *Brocade 5000 Quick Start Guide* (Brocade P/N 53-1000425-xx) for an overview to help experienced installers unpack, install, and configure a Brocade 5000 switch quickly.
- The *Brocade 5000 Hardware Reference Manual* (Brocade P/N 53-1000424-xx) for a complete set of Brocade 5000 switch installation procedures and an overview of the switch hardware.
- The Brocade Fabric OS release notes available with the patch or from Brocade online at:
  `http://http://www.brocadeconnect.com/index.jsp`.
  A login is required, but registration is free with a valid Brocade switch World Wide Name (WWN).
- The Sun document *Brocade SilkWorm Switch and SilkWorm Director Sun Rackmounting Guide*, part number 817-0066-18, available at:
  `http://docs.sun.com`.

Service Contact Information

If you need help installing or using this product in the United States, call 1-800-USA-4SUN, or go to:

`http://www.sun.com/service/contacting/index.html`