

Microsoft® Windows Server® 2003 R2,
Datacenter x64 Edition With Unlimited
Virtualization With SP2 for
Dell™ PowerEdge™ Systems
Important Information

Notes and Notices



NOTE: A NOTE indicates important information that helps you make better use of your computer.



NOTICE: A NOTICE indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

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Contents

| | |
|---|-----------|
| Minimum Supported BIOS, System Firmware, and RAID Controller Driver Versions | 5 |
| Adding Trusted Sites to Your Browser | 9 |
| Hardware Management Component in R2 | 10 |
| Known Issues | 11 |
| Networking. | 12 |
| R2 Optional Components. | 13 |
| Index | 17 |

This document provides important information about Microsoft® Windows Server® 2003 R2, Datacenter x64 Edition with unlimited virtualization with SP2 operating systems.

The following topics are discussed in this document:

- Minimum supported basic input/output system (BIOS), system firmware, and redundant array of independent disks (RAID) controller driver versions
- Adding trusted sites to your browser
- Hardware management component in R2
- Known Issues



NOTICE: To prevent the possibility of a virus on your network, Dell™ recommends that you use a different system to download any recommended patches, hotfixes, and service packs from the Microsoft website at www.update.microsoft.com. Ensure that the system running Windows Server 2003 R2, Datacenter x64 Edition with Unlimited Virtualization with SP2 is attached to your network before you install updates.

Minimum Supported BIOS, System Firmware, and RAID Controller Driver Versions



NOTE: The tables in this section list the minimum requirements for supporting Windows Server 2003 R2, Datacenter x64 Edition with Unlimited Virtualization with SP2 on the supported Dell PowerEdge™ systems. Dell strongly recommends that you use the latest BIOS, firmware, and drivers located on the Dell Support website at support.dell.com/support/downloads or on the *Dell PowerEdge Service and Diagnostic Utilities* media.

Table 1-1 provides a list of the PowerEdge systems that support Windows Server 2003 R2, Datacenter x64 Edition with Unlimited Virtualization with SP2 and the minimum supported versions of the BIOS, Baseboard Management Controller (BMC), and Emergency Management Services (EMS) firmware.

Table 1-1. Minimum Supported BIOS/BMC Versions

| PowerEdge System | Supported BIOS/BMC Version |
|-------------------------|-----------------------------------|
| 1850 | A02/A02 or later |
| 1855 | A02/A00 or later |
| 1950 | 1.0.0/A00 or later |
| 1955 | A00 |
| 2850 | A02/A02 or later |
| 2900 | 1.0.0/A00 or later |
| 2950 | 1.0.0/A00 or later |
| 6850 | A00/A01 |
| 6950 | A00 |
| 2970 | A00 |

Table 1-2 lists the minimum supported versions of the system firmware and drivers (native and non-native) for the supported RAID controllers. Native drivers are included with the operating system; non-native drivers are not included with the operating system. You can download non-native drivers and utilities from the Dell Support website at support.dell.com/support/downloads or from the *Dell PowerEdge Service and Diagnostic Utilities* media that shipped with your Dell system.

If your system is *not* listed in Table 1-1 or Table 1-2, see your system documentation to determine whether Windows Server 2003 R2, Datacenter x64 Edition with Unlimited Virtualization with SP2 is supported on your system.

Table 1-2. Minimum Supported Versions of System Firmware and RAID Controller Driver

| Product and Supported Platforms | Minimum Required Firmware Version | Minimum Required Driver Version | Driver included in the operating system? |
|---|--|--|---|
| SAS 5/i Integrated on PowerEdge 1950, 2950 | 00.06.40.00.06.06.00.02 | 1.21.08.00 | No |
| PowerEdge Expandable RAID Controller (PERC) 5/e Adapter on PowerEdge 1950, 2950 | 5.0.1-0026 | 1.18.0.64 | No |
| PERC 5/i Adapter on PowerEdge 1950, 2950 | 5.0.1-0030 | 1.18.0.64 | No |
| Adaptec 39320A on PowerEdge 1950, 2950 | 4.30.1 | 7.0.0.1 | No |
| PERC 4e/DC on PowerEdge 1950, 2950 | 521X | 6.46.3.64 | Yes |
| PERC 4/SC on PowerEdge 1850 | 351H | 6.37.2.64 | Yes (native) |
| PERC 4/DC on PowerEdge 1850, 2850, 6850 | 351H | 6.37.2.64 | Yes |
| CERC SATA 6CH | 4.1.0.7403 | 4.1.1.7033 | No |
| PERC 4e/Si on PowerEdge 1850 | 521H | 6.44.3.64 | Yes |
| PERC 4e/Di on PowerEdge 2850, 6850 | 521H | 6.44.3.64 | Yes |
| PERC 4e/DC on PowerEdge 1850, 2850, 6850 | 521H | 6.37.2.64 | Yes |

NOTE: The drivers and firmware are located on the *Dell PowerEdge Service and Diagnostic Utilities* media, the *System Support* media, and on the Dell Support website at support.dell.com.

Table 1-3 lists Microsoft’s minimum requirements and recommended hardware configurations for Windows Server 2003 R2, Datacenter x64 Edition with Unlimited Virtualization with SP2.

Table 1-3. Microsoft’s Required Minimum and Recommended Hardware Configurations for R2

| Supported Hardware | Minimum | Recommended |
|----------------------------|----------------|--------------------|
| Intel EM64T-based Xeon® | 2.80 GHz | 3.60 GHz |
| Intel EM64T-based Pentium® | 3.20 GHz | 3.60 GHz |
| Memory | 1 GB | 1 GB |
| Disk space | 4 GB* | 4 GB* |

*Dell recommends a 12-GB system partition. The default setting for Dell factory-installed images and the *Dell PowerEdge Installation and Server Management* media is 12 GB.

Table 1-4 lists the minimum BIOS requirements for Execute Disable (XD) and Enhanced Intel® SpeedStep® Technology (EIST) support. Dell PowerEdge systems based on Intel EM64T support the following features in Windows Server 2003 R2, Datacenter x64 Edition with Unlimited Virtualization with SP2:

- **Data Execution Prevention (DEP)**, which requires XD-supported processors that are shipped with supported PowerEdge systems since October 2004.
- **System Balanced Processor Power and Performance**, which leverages EIST on supported Intel processors. Support for this operating system feature depends on the processor model, frequency, and stepping.

Introduced in 32-bit Windows Server 2003 SP1, DEP and System Balanced Processor Power and Performance are new features available in R2 that require hardware support.

Table 1-4. Minimum BIOS Requirements for XD and EIST Support on Dell PowerEdge Systems

| Dell PowerEdge System | Minimum BIOS Revision Required for XD Support | Minimum BIOS Revision Required for EIST Support |
|------------------------------|--|--|
| 1850 | A02 | A02 |
| 1855 | A02 | A02 |
| 1950 | 1.0.0 | 1.0.0 |
| 1955 | A00 | A00 |
| 2850 | A02 | A02 |
| 2950 | 1.0.0 | 1.0.0 |
| 6850 | A00 | A00 |
| 6950 | A00 | A00 |
| 2970 | A00 | A00 |

Adding Trusted Sites to Your Browser

Due to enhanced Microsoft security standards, you may be prompted to add an Internet or intranet site to the trusted sites zone when you initially access the site.

To add trusted sites to your browser, perform the following steps:

- 1** In the **Tools** menu, click **Internet Options**.
The **Internet Options** window appears.
- 2** Click the **Security** tab.
The **Security** tab menu appears.
- 3** Click **Trusted Sites**.
- 4** Click **Sites**.
The **Trusted sites** window appears.
- 5** In the **Add this Web site to the zone:** field, type the address of the site, and click **Add**.
The site appears in the **Web sites:** box.

- 6 Repeat step 5 to add any additional sites and click **Close**.
The **Internet Options** window appears.
- 7 Click **OK**.

Hardware Management Component in R2

R2 contains an optional component called Hardware Management that consists of a set of features designed to improve management of the system hardware.

For more information regarding the Hardware Management component, see the related article on the Microsoft website at www.microsoft.com/technet/scriptcenter/preview/wsm/intro.msp.

For detailed instructions on installing the additional R2 components, see the document *Microsoft Windows Server 2003 R2, Datacenter x64 Edition With Unlimited Virtualization With SP2 for Dell PowerEdge Systems Installation and Setup Guide* located on the User Guides website at www.dell.com/ostechsheets.

When you install the Hardware Management component on a system that has a BMC, the following message may appear:

```
An IPMI device has been registered within the
system BIOS; all 3rd party IPMI drivers must be
removed from the system prior to installation in
order to prevent system instability; if all 3rd
party drivers have been removed or you wish to
ignore this risk press 'OK' otherwise press 'Cancel'.
```

Before proceeding, it is recommended that you uninstall all third-party intelligent platform management interface (IPMI) drivers.



NOTE: Dell OpenManage™ 4.5.x requires the Dell IPMI driver and cannot use the R2 IPMI driver. If you are using Dell OpenManage 4.5.x to manage your eighth generation PowerEdge systems, we strongly recommend that you do not install the R2 IPMI driver on those systems. For more information on the impact of the R2 IPMI driver on the Dell OpenManage suite and possible limitations of Dell OpenManage, see *What Versions of Dell OpenManage are Supported in Microsoft Windows Server 2003 R2?* on the Dell Support website at support.dell.com.

After the Hardware Management component is installed, manually install the IPMI device driver using the following commands (if required):
`Rundll32 ipmisetp.dll, AddTheDevice`

The IPMI device can be viewed in **Device Manager** under **System Devices** under the entry **Microsoft Generic IPMI Compliant Device**.

The hardware management component in R2 and the IPMI driver are supported only on PowerEdge systems with BMCs that support IPMI versions 1.5 and later. PowerEdge systems with BMCs that support IPMI version 1.0 are not supported by R2 IPMI driver. These systems can continue to use the Dell OpenManage IPMI driver.

Table 1-5 provides the support matrix for the R2 IPMI driver and the Dell OpenManage IPMI driver on PowerEdge systems.

Table 1-5. Support Matrix for the R2 IPMI and Dell OpenManage IPMI Driver

| PowerEdge System | R2 IPMI Driver Support | Dell OpenManage IPMI Driver Support |
|-------------------------|-------------------------------|--|
| 1850 | Yes | Yes |
| 1855 | Yes | Yes |
| 1950 | Yes | Yes |
| 1955 | Yes | Yes |
| 2850 | Yes | Yes |
| 2950 | Yes | Yes |
| 6850 | Yes | Yes |
| 6950 | Yes | Yes |
| 2970 | Yes | Yes |

Known Issues

This section contains known issues related to networking and the R2 optional components in the Windows Server 2003 R2, Datacenter x64 Edition with Unlimited Virtualization with SP2 operating system.

Networking



NOTE: If you are planning to deploy Windows Server 2003 operating system on a system that has a Broadcom 5708 Networking device, see the latest *Broadcom NetXtreme II Tech Sheet and Best Practices* documents available on the Dell Support website at support.dell.com.

- **Remote installation services (RIS) requires a special driver when using a Broadcom 5708 networking device.**

The RIS driver is available in the **Broadcom NetXtreme II Family of Adapters** driver package. Use this driver for RIS installations only. After you install the operating system, run the **Broadcom NetXtreme II Family of Adapters** driver package setup to enable complete network connectivity.


For information on Windows Server 2003 issues that are not related to the R2 components, see the *Windows Server 2003 R2, Datacenter x64 Edition with Unlimited Virtualization with SP2 for Dell PowerEdge Systems Important Information* document located at Dell documentation website at www.dell.com/ostechsheets.

- **After you install the Microsoft Scalable Networking Pack, blue screen is displayed when you change from a dynamic host configuration protocol (DHCP) to a static IP address or when you change the gateway's IP address.**

This issue occurs only when the active transport control protocol (TCP) connections are off loaded to the TCP/IP off load engine (TOE) networking device, at the time the change is applied. You can work around this issue by performing one of the two options described below:

- Disable the secure network programming (SNP) off load functionality before applying the default gateway. You can do this by using the `netsh` command to turn off the SNP and then enable it after changing the IP address. To turn off the SNP, use the command `netsh int ip set chimney disabled` and to turn the SNP back on, use the command `netsh int ip set chimney enable`.

- In the **Network Connections** folder, right click the **TOE LAN Connection** object and select the **Disable (Enable)** option to disable the TOE network interface controller (NIC) before applying the IP address change. Enable the TOE NIC after changing the IP address.

 **NOTE:** A fix for this issue will be addressed in a future Microsoft Knowledge Base article.

- After you install the **Microsoft Scalable Networking Pack**, blue screen is displayed if the same IP address is set to two or more networking devices.


To work around this issue, disable the networking device in the system BIOS and go back into the operating system to change the IP address to a non-conflicting address.

R2 Optional Components

- **Hardware Events appear in XML format.**

After installing the Hardware Management component of R2 and the IPMI driver, a new log titled **Hardware Events** is created in the Event Log Viewer. This log captures and displays all the entries in the baseboard management controller system event log (BMC SEL).

Unlike entries in the application and system event logs, the entries in the hardware events log appear in raw XML format that has not been translated into text, making them difficult to read.

 **NOTE:** You can use **Dell OpenManage** or the **Dell Remote Access Controller (DRAC)** to view the BMC SEL entries in text format. For more information, see the **Dell Support website** at support.dell.com.

To determine the cause of the event, locate the system event received from the IPMI device with message. A brief description of the SEL entry appears with an associated hyperlink. This provides information about the event.

- **IPMI Driver appears as a yellow bang in Device Manager.**

If the R2 IPMI driver is manually installed on a system that is not configured with BMC, the driver appears in **Device Manager** with a yellow bang and a message stating that the driver could not start.

This is the expected behavior since the driver is unable to communicate with BMC.

To fix this issue, do not install the IPMI driver on systems with unsupported or missing BMC.

See Table 1-4 for a list of systems that support the R2 IPMI driver.

- **WinRM error appears in Application Event Log.**

After installing the R2 Hardware Management component, a (Windows Remote Management) WinRM error message may appear in the Application Event Log after every reboot.

This error message appears because a listener service was not configured in WS-Management. To remove this error message, create a listener service in WS-Management or turn off the WS-Management service. See the Microsoft Hardware Management website at www.microsoft.com/technet/scriptcenter/preview/wsm/intro.mspx or the Help section for Hardware Management for more information about WS-Management configuration.

- **Enabling Microsoft Clustering Services (MSCS) on a system running Windows Server 2003 R2, Datacenter x64 Edition With Unlimited Virtualization With SP2.**

To enable MSCS on a system running Windows Server 2003 R2 Datacenter x64 Edition with Unlimited Virtualization with SP2, you must MSCS configure before installing additional R2 components. If additional R2 components are already installed on your system, uninstall these components, configure MSCS, and then reinstall the R2 components. This procedure ensures that the R2 components will function properly in a cluster environment.

- **Network file system (NFS) service terminated error appears in System Event Log.**

After uninstalling the Microsoft Services for NFS component in R2, the following error message may appear:

The Server for NFS terminated with the following error. The system cannot find the file specified.

This issue is caused by the stopping order of each service. It does not affect any operating system functionality, and can be ignored.

- **Perflib error appears in Application Event Log.**

After installing the R2 optional components, an error from source **Perflib** with Event ID 1008 may appear in the Application Event Log.

This issue is caused by a limitation with ASP.NET performance counters and Internet Information Server. This issue will affect the ASP.NET counters in **PerfMon**. Microsoft is currently working on a fix in a future release of the operating system.

- **Windows NT[®] to UNIX Password Synchronization errors in Application Event Log.**

After installing and uninstalling the Identity Management for UNIX[®] component in R2, Event IDs 16386 and 8192 from source Windows NT to UNIX Password Synchronization may appear in the Application Event Log.

This issue does not affect the functionality of any operating system component. Microsoft is currently working on a fix for this in a future release of the Microsoft Windows[®] operating system.

- **System Use Agreement (SUA) errors appear in Application Event Log.**

After installing the R2 components subsystem for UNIX-based applications and Microsoft Services for NFS on a system installed with IIS, Event ID 1013 from source SUA may appear in the Application Event Log.

This issue does not affect the functionality of any operating system component. Microsoft is currently working on a fix in a future release of the Windows operating system.

- **IIS Admin Service terminated error in System Event Log.**

After uninstalling the IIS and Microsoft Active Directory® federation service (ADFS) components on an R2 system, the error *IIS Admin Service terminated with service-specific error* appears in the System Event Log. This issue does not affect the functionality of any operating system component since it occurs only during the un-installation of the components. Microsoft is currently working on a fix for this in a future release of the Windows operating system.

Index

B

baseboard management
controller

See *BMC*

Baseboard Management
Controller System Event
Log

See *BMC SEL*

BIOS

minimum requirements for
EIST support, 8-9

minimum requirements for XD
support, 8-9

minimum supported
version, 5-9

BMC, 5-6

BMC SEL, 13

D

data execution prevention
See *DEP*, 8

DEP, 8

Device Manager
yellow bang, 11

E

EIST, 8-9

Emergency Management
Services

See *EMS*

EMS, 5

Enhanced Intel SpeedStep
Technology 6

See *EIST*

H

hardware configurations, 8

Hardware Management, 10

I

Important Information
Windows Server 2003 R2, 10

Intel, 8

IPMI

device, 10

drivers, 10

support matrix for R2 native
IPMI driver, 11

K

- known issues and problems
 - hardware events appear in XML format, 13
 - IPMI driver appears as a yellow bang, 14
 - WinRM error in application event log, 14

M

- memory, 8
- Microsoft Management Console
 - See MMC
- Microsoft, 8-9
- Microsoft® Windows Server® 2003 R2, 5

N

- native and non-native, 6

R

- RAID controllers
 - minimum driver version, 5-9

S

- Server Balanced Processor
 - Power and Performance, 8

- system firmware
 - minimum supported version, 5-9

T

- trusted sites
 - adding to browser, 9

V

- virus, 5

W

- Windows Server 2003 R2
 - Important Information, 10

X

- XD, 8-9

Y

- yellow bang, 11