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DELL(TM) REMOTE ACCESS CONTROLLER (DRAC) 5

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This document contains updated information about the Dell Remote Access Controller 5.

For more information about DRAC 5, including installation and configuration information, see the "Dell Remote Access Controller 5 User's Guide" and the "Dell OpenManage(TM) Server Administrator User's Guide." These documents are located on your Product Documentation CD.

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CRITICALITY

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3 - Optional

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MINIMUM REQUIREMENTS

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The following subsections list operating systems that are compatible with the DRAC 5.

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SUPPORTED SYSTEMS

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DRAC 5 is supported on the following Dell PowerEdge(TM) systems:

- * Dell PowerEdge(TM) 1900, 1950, 2900, 2950

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SUPPORTED MANAGED SERVER OPERATING SYSTEMS

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The DRAC 5 is supported by the following operating systems:

- * Microsoft(R) Windows(R) 2000 Server with SP4
- * Microsoft Windows Server(R) 2003 Standard and Enterprise Edition with SP1
- * Microsoft Windows Server 2003 Standard and Enterprise Edition with SP2
- * Microsoft Windows Server 2003 Standard and Enterprise Edition x64 Editions
- * Red Hat(R) Linux, Enterprise Linux AS, ES and WS (version 3) for Intel x86 and Intel Extended Memory 64 Technology
- * Red Hat Linux, Enterprise Linux AS, ES and WS (version 4) for Intel x86 and Intel Extended Memory 64 Technology
- * SUSE(R) Linux, Enterprise Server (version 9) with Update 3 for Intel EM64T
- * Added support for SUSE Linux Enterprise Server (version 10), on Intel Extended Memory 64 Technology (Intel EM64T) systems.

NOTE: DRAC 5 support on SUSE Linux Enterprise Server (version 10) is limited to the Manage Node and to the CLI only. DRAC 5 does not support the Out of Band GUI on the Management station.

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SUPPORTED WEB BROWSERS

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- * Microsoft Windows Internet Explorer 6.0 (32-bit) with Service Pack 1 (SP1) or later Service Pack
- * Linux Mozilla 1.7.8 or later (32-bit)
- * Mozilla Firefox 1.0.7 only (32-bit)

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FIRMWARE VERSIONS

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RAC Firmware Version: 1.00

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KNOWN ISSUES FOR DRAC 5

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- * DRAC 5 support on SUSE Linux Enterprise Server (version 10) is limited to the Manage Node and to the CLI only. DRAC 5 does not support the Out of Band GUI on the Management station.
- * When you input a single character, the keyboard driver expects

make (press) and break (release) key input within 200 milliseconds. If the keyboard driver does not receive break key input within this timeframe, the driver assumes that the user is pressing and holding down the key. As a result, the driver simulates multiple keystrokes.

To work around this issue, perform one of the following procedures:

- Disable the keyboard character repeat feature.
- Modify the server settings by extending the repeat delay and minimizing the repeat rate.

* You might encounter virtual drive issues when copying large files to the DRAC 5 virtual flash. To avoid these issues, you should not attempt to copy large files from the local drive to the DRAC 5 virtual flash on systems running Windows or Linux operating systems. If you need to copy large files, you can create an image of the files to be copied and then use the GUI flash update to update the virtual flash.

If you receive an error message from the host operating system that the copy failed when copying large files to the DRAC 5 virtual flash from a local drive, then your DRAC 5 virtual devices (DVD/CD ROM, floppy, and flash) will be offline. In order to get your DRAC 5 virtual devices back online, you can detach and re-attach the virtual devices from the DRAC 5 GUI or CLI, or you can reboot the server. (67123)

* When accessing the virtual flash feature via the DRAC 5 GUI to either configure or use it, you will notice a "Virtual Flash Enabled" checkbox on the configuration page that is used to enable/disable the Virtual Flash feature. However, when you proceed to the Virtual Flash page the status of this feature is represented by the "Virtual Flash Attached" attribute. If "Virtual Flash Attached" is set to "Yes", the Virtual Flash feature is enabled (checked) via the configuration page. If set to "No", the Virtual Flash feature is disabled (unchecked) via the configuration page. (68818)

* For the Virtual Flash feature to be functional and to see the Virtual Flash as a drive on the server, the Virtual Media must be attached and the Virtual Flash must be enabled. To confirm that these features have been attached and enabled, go to the Media configuration page of the DRAC 5 GUI and make sure that the "Attach Virtual Media" check box and the "Virtual Flash Enabled" check box are checked. (68818)

* DRAC 5 support on SUSE Linux Enterprise Server 10 is limited to the Managed Node and to the CLI only. DRAC 5 does not support the Out of Band GUI on the Management station.

* When viewing the Web user interface on a Dell PowerEdge 1900 system that is configured with one NIC, the NIC Configuration page displays two NICs (NIC1 and NIC2). This behavior is normal. The PowerEdge 1900 system - and other PowerEdge systems that are configured with a single LOM - can be configured with NIC teaming. Shared and Teamed modes work independently on these systems.

* The allowed RACADM Serial Escape Key (cfgSerialConsoleQuitKey) values are as follows:

- (a) ^ followed by any alphabetic (a-z, A-Z)
- (b) ^ followed by the listed special characters: [] \ ^ _

* The supported Console Redirection video refresh rates are as follows:

- 720x400 [70 Hz]
- 640X480 [60, 72, 75, 85 Hz]
- 800X600 [60, 70, 72, 75, 85 Hz]
- 1024X768 [60, 70, 72, 75, 85 Hz]
- 1280X1024 [60 Hz]

* When you update your DRAC firmware, the update resets the DRAC, detaches USB devices from the BUS, and disconnects remote Virtual Media. Before you perform a firmware update or RAC reset, it is recommended that you perform the following procedures:

- Ensure that Virtual Flash is unmounted or not in use by another user.
- Disconnect and unmount Virtual Media.

* When you access the DRAC 5 GUI through the Web browser, you are prompted to add the DRAC 5 IP address to the list of trusted domains if the IP address is missing from the list. When completed, click Refresh or relaunch the Web browser to reestablish a connection to the DRAC 5 GUI.

* The DRAC 5 GUI is not supported on 64-bit Web browsers. If you open a 64-bit Browser, access the Console Redirection page, and attempt to install the plug-in, the installation procedure fails. If this error was not acknowledged and you repeat this procedure, the Console Redirect Page loads, even though the plug-in installation fails during your first attempt. This issue occurs because the Web browser stores the plug-in information in the profile directory even though the plug-in installation procedure failed. To fix this issue, install and run a supported 32-bit Web browser and log in to the DRAC 5.

* When viewing the Console Redirection online help in a supported, non-English language, the second note under Console Redirection should state as follows:

"The recommended display resolution on the management station (or client) is at least 1280 x 1024 pixels at 60 Hz with 128 colors. You cannot view the console in Full Screen Mode if your monitor resolution is less than this minimum."

* If you are running Console Redirection on a Red Hat Enterprise Linux (version 4) client with a Simplified Chinese GUI, the viewer menu and title may appear in random characters. This issue is caused by an incorrect encoding in the Red Hat Enterprise Linux (version 4) Simplified Chinese operating system. To fix this issue, access and modify the current encoding settings by performing the following steps:

1. Open a command terminal.
2. Type "locale" and press <Enter>. The following output appears.
LANG=zh_CN.UTF-8
LC_CTYPE="zh_CN.UTF-8"
LC_NUMERIC="zh_CN.UTF-8"
LC_TIME="zh_CN.UTF-8"
LC_COLLATE="zh_CN.UTF-8"
LC_MONETARY="zh_CN.UTF-8"
LC_MESSAGES="zh_CN.UTF-8"
LC_PAPER="zh_CN.UTF-8"
LC_NAME="zh_CN.UTF-8"
LC_ADDRESS="zh_CN.UTF-8"
LC_TELEPHONE="zh_CN.UTF-8"
LC_MEASUREMENT="zh_CN.UTF-8"
LC_IDENTIFICATION="zh_CN.UTF-8"
LC_ALL=
3. If the values include "zh_CN.UTF-8", no changes are required. If the values do not include "zh_CN.UTF-8", go to step 4.
4. Navigate to the /etc/sysconfig/i18n file.
5. In the file, apply the following changes:
Current entry:
LANG="zh_CN.GB18030"
SUPPORTED="zh_CN.GB18030:zh_CN.GB2312:zh_CN:zh"
Updated entry:
LANG="zh_CN.UTF-8"
SUPPORTED="zh_CN.UTF-8:zh_CN.GB18030:zh_CN.GB2312:zh_CN:zh"
6. Log out and then login to the operating system.
7. Relaunch the DRAC 5.

When you switch from any other language to the Simplified Chinese language, ensure that this fix is still valid. If not, repeat this procedure. (53205)

- * The Linux operating system mouse settings are used to control the mouse arrow in the DRAC 5 Console Redirection screen. If the user or the Linux operating system (Red Hat or Novell) changes the default mouse settings, you will see the mouse synchronization problem.
- * Closing the DRAC5 GUI from a Microsoft Internet Explorer using the close button ("x") on the top right corner of the browser may generate an application error. To fix this issue, download the latest Cumulative Security Update for Internet Explorer from the Microsoft Support website located at support.microsoft.com. See Microsoft Knowledge Base article KB835193 for more information.
- * When using Active Directory credentials to log in to the DRAC 5 GUI, the GUI supports passwords with a maximum length of 256 characters. However, Active Directory supports passwords with a maximum length of 127 characters. For more information about Active Directory password policies, see the Microsoft Technet website at technet.microsoft.com.

* If you access DRAC 5 GUI using Internet Explorer and click "Save As" in one of the GUI pages, the browser may open the file within the Web browser and avoid prompting you to save the file to your system's hard drive. To resolve this issue, download the Cumulative Security Update for Internet Explorer located on the Microsoft Support website at support.microsoft.com.

KNOWN ISSUES FOR DRAC 5 WITH FIRMWARE UPDATE
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* Network traffic may cause the firmware update to timeout. If the firmware download procedure exceeds 15 minutes, the DRAC will timeout, cancel the firmware download procedure, reset, and then return to normal operation.. To work around this issue, transfer the firmware flash image to a local drive on the server. Using Console Redirection, connect to the remote system and install the firmware locally using local racadm.

KNOWN ISSUES FOR DRAC 5 WITH VIRTUAL MEDIA
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* Virtual Media may not function properly on Windows operating system clients that are configured with Internet Explorer Enhanced Security. To resolve this issue, see your Microsoft operating system documentation or contact your administrator.

* If you use Virtual Media and the Windows 2000 operating system CD to install Windows 2000 with Service Pack 4, your system may momentarily lose its connection to the CD drive during the installation procedure, and the operating system may fail to install properly. To fix this issue, download "usbstor.sys" from the Microsoft Support website at support.microsoft.com and run the program only on your systems that experience this issue. See Microsoft Knowledge Base article KB823086 for more information.

* If Virtual Flash is enabled and does not contain a valid image (for example the virtual flash contains a corrupted or random image), you may not be able to install Windows 2000 locally or remotely. To fix this issue, install a valid image on Virtual Flash or disable Virtual Flash if it will not be used during the installation procedure.

* Installing network and chipset drivers on the server causes the Virtual Media connection to drop when configured in the Shared-NIC mode. Installing the network or chipset drivers causes the LOM to reset, which in turn causes network packets to timeout and the Virtual Media connection to timeout and drop. To work around this issue, copy the drivers from your virtual drive to the server's local hard drive. To prevent a dropped Virtual Media connection from interfering with your driver installation procedure, start the driver installation directly from the server.

* If you are installing the Windows operating System using the Dell PowerEdge Installation and Server Management CD and a slow network connection, the installation procedure may require an extended amount of time to access the DRAC 5 GUI due to network latency. While the installation window does not indicate the installation progress, the installation procedure is in progress.

* When viewing the Virtual Media Configuration online help, note the following corrections in the Attributes section:

- "Maximum Number of Sessions" needs to state:

"Maximum Number of Sessions Displays the maximum number of simultaneously active Virtual Media sessions."

- "Number of Active Sessions" needs to state:

"Displays the current number of active Virtual Media sessions"

- "Virtual Media Port Number" needs to state:

"Display and set the port number (in decimal) for Virtual Media connection. Valid numbers are unused DRAC5 port numbers between 0 and 65535. Default=3668."

- "Virtual Media SSL Port Number" needs to state:

"Display and set the Secure Socket Layer communications port number (in decimal). Valid numbers are unused DRAC5 port numbers between 0 and 65535. Default=3669."

FREQUENTLY ASKED QUESTIONS ON VIRTUAL MEDIA
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Q: I am viewing the contents of a floppy drive or USB memory key. If I try to establish a Virtual Media connection using the same drive, I receive a connection failure message and am asked to retry. Why?

A: Simultaneous access to Virtual Floppy drives is not allowed. Close the application used to view the drive contents before you attempt to virtualize the drive.

Q: How do I configure my virtual device as a bootable device?

A: On the managed system, access the BIOS Setup and navigate to the boot menu. Locate the virtual CD, Virtual Floppy, or Virtual Flash and change the device boot order as needed. For example, to boot s from a CD drive, configure the CD drive as the first drive in the boot order.

Q: What types of media can I boot from?

A: The DRAC 5 allows you to boot from the following bootable media:
- CDROM/DVD Data media
- ISO9660 image

- 1.44 Floppy disk or floppy image
- DRAC5 embedded virtual flash
- A USB key that is recognized by the OS as a removable disk
- A USB key image

Q: How can I make my USB key bootable?

A: Only USB keys with Windows 98 DOS can boot from the Virtual Floppy.

To configure your own bootable USB key, boot to a Windows 98 startup disk and copy system files from the startup disk to your USB key. For example, from the DOS prompt, type the following command:

```
"sys a: x: /s"
```

where "x:" is the USB key you want to make bootable.

Q: Do I need Administrator privileges to install the ActiveX plug-in?

A: You must have Administrator or Power User privileges on Windows systems to install the Virtual Media plug-in.

Q: What privileges do I need to install and use the Virtual Media plug-in on a Red Hat Linux Management station?

A: You must have Write privileges on the browsers directory tree to successfully install the Virtual Media plug-in.

Q: I cannot locate my Virtual Floppy device on a system running Red Hat Enterprise Linux or the SUSE Linux operating System. My Virtual Media is attached and I am connected to my remote floppy.

A: Some Linux versions do not automount the Virtual Floppy and the Virtual CDROM in a similar manner. In order to mount the Virtual Floppy, locate the device node that Linux assigns to the Virtual Floppy. Perform the following steps to correctly find and mount the Virtual Floppy:

1) Open a Linux command prompt and run the following command:

```
grep "Virtual Floppy" /var/log/messages
```

2) Locate the last entry to that message and note the time.

3) At the Linux prompt, run the following command:

```
grep "hh:mm:ss" /var/log/messages
```

where hh:mm:ss is the time stamp of the message found in step 1.

4) In step 3, read the result of the grep command and locate the device name that is given to the "Dell Virtual Floppy"

5) Ensure that you are attached and connected to the Virtual a Floppy.

6) At the Linux prompt, run the following command:

```
mount /dev/sdx /mnt/floppy
```

where "/dev/sdx" is the device name found in step 4 and "/mnt/floppy" is the mount point.

Q: What file system types are supported on my Virtual Floppy or Virtual Flash?

A: Your Virtual Floppy or Virtual Flash supports FAT16 or FAT32 file systems.

Q: When I performed a firmware update remotely using the DRAC 5 GUI, my virtual drives at the server were removed. Why?

A: Firmware updates cause the DRAC 5 to reset, drop the remote connection, and unmount the virtual drives. The drives will reappear when the DRAC reset is complete.

Q: When enabling or disabling the Virtual Flash, I noticed that all my virtual drives disappeared and then reappeared. Why?

A: Disabling or enabling the Virtual Flash causes a USB reset and causes all virtual drives to detach from and then re-attach to the USB bus.

Q: Sometimes I notice my Virtual Media client connection drop. Why?

A: When a network timeout occurs, the DRAC 5 firmware drops the connection, disconnecting the link between the server and the Virtual Drive. To reconnect to the Virtual Drive, use the Virtual Media feature.

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July 2006