Dell™ PowerEdge™ Systems SUSE® Linux Enterprise Server 9 Service Pack 4 for x86_64 Architecture

Installation Instructions and Important Information

DELL™

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.

Contents

This document provides the following information:

- Instructions for installing and reinstalling SUSE® Linux Enterprise Server 9 Service Pack 4 on your Dell™ PowerEdge™ system
- Sources of additional help

Installing and Reinstalling SUSE Linux Enterprise Server 9 Service Pack 4

Use one of the following methods to install or reinstall SUSE Linux Enterprise Server on your system:

- Using *Dell Systems Management Tools and Documentation* media
- Custom installation using the SUSE installation media

Dell recommends that you use the *Dell Systems Management Tools and Documentation* media to install and reinstall SUSE Linux Enterprise Server 9 Service Pack 4. The *Dell Systems Management Tools and Documentation* media provides the following installation benefits:

- Automates the installation process
- Allows the operating system to deliver additional software or customization specific to PowerEdge systems, including the correct device drivers for detected hardware components

To perform custom installation using the SUSE Linux media, you must make additional manual modifications or install additional packages that are not located on the SUSE Linux media. To download additional software, see the Dell Support website at **support.dell.com**. For more details see, "Important Information" on page 8.

Using the Dell Systems Management Tools and Documentation Media

Insert the *Dell Systems Management Tools and Documentation* media into your CD/DVD drive and reboot your system. Follow the instructions, on the screen and the documentation that shipped with your media kit.

Installing SUSE Linux Enterprise Server 9 Service Pack 4 Using the SUSE Linux Media

NOTE: To mount storage partitions consistently, it is recommended that you place file system labels on all file systems and mount the file systems by file system label. This provides consistent file system naming and identification and allows the system to boot correctly when storage is added to or removed from the system.

To add file system labels, perform the following steps during operating system installation:

1 Select **Create custom partition setup** in the partitioning tool.

2 Select **Custom partitioning – for experts**.

3 On the **Expert Partitioner** dialog screen, select **Create**.

4 Configure your partition, and then select **Fstab Options**.

5 Select the **Volume Label** option in **Mount in /etc/fstab by**, and then specify a volume label when prompted.

6 Repeat steps one to five until all partitions are labelled.

To perform a custom installation using the SUSE Linux media:

1 Insert the **Service Pack 4 CD 1** into your CD/DVD drive and reboot the system.

   After the system boots from, an installation option menu and six installation configuration choices appear at the bottom of the screen.

2 Choose your preferred installation configuration, and then select **Installation** from the menu.

   The **SUSE Linux Yet Another Startup Tool (YaST)** installer loads.

3 Review the notes on the left side of the screen as you proceed with the installation choices.

For more information, see the operating system manuals available on the Service Pack 4 CD1 in the **/docu** directory.

Installing or Reinstalling SUSE Linux Enterprise Server 9 Service Pack 4 on Systems With a Dell Utility Partition

To install the boot loader on the first sector of the boot partition without overwriting the master boot record, perform the following steps using YaST:

1 Select the **Booting** menu option from within **YaST**.

2 Select **Boot Loader Section of Boot Partition** under **Boot Loader Location**.

Ø **NOTE:** If you have a utility partition, view the existing partitions in the YaST installer. The utility partition is located on the **/dev/sda1** partition. YaST must not overwrite this partition by default.

You can download updated operating system packages and the latest kernel releases and updates using the YaST Online Update (YOU) service.

DKMS Framework for Device Drivers

Dell device driver packages that are not available on the SUSE Linux media use the Dynamic Kernel Module Support (DKMS) framework. This framework allows the kernel modules to be dynamically built for each kernel on your system and provides a mechanism for driver version control. You can download the DKMS framework and the latest Dell device drivers from the Dell Support website at **support.dell.com**.

Providing Driver Diskette During Installation

To install the driver update:

1 Insert the **Service Pack 4 CD 1** into your CD/DVD drive and reboot the system.

2 In the **Boot** screen, select **Installation**.

3 Press <F6> to select **Driver Update**.

```
Please get your Driver Update Floppy ready
```
appears.

Press <Enter> to continue.

4 Insert the **Driver Update** diskette when prompted and press <Enter>.

`Please choose the Driver Update Medium` appears.

5 In the main menu, select **fd0** (floppy). Select **OK** and press <Enter> to scan the driver diskette.

The Driver Update diskette is scanned and `Reading the Driver Update...` appears, followed by `Driver Update OK`.

Press <Enter> to exit the **Boot** menu.

Updating Your System Packages Using YOU

SUSE periodically releases software updates to fix bugs, address security issues, and add new features. You can download the updates using the YOU service. Dell strongly recommends that you use YOU to update your system software to the latest revisions before you deploy your system.

Configuring Your System Settings

To configure your system after the installation, including hardware, software, and services, use **YaST**. To start **YaST** in a text console, type `yast` at a command prompt. Within the X Window System, type `yast2` in a terminal window, or choose **YaST** from the **System** menu item on the SUSE Linux main menu on the K Desktop Environment (KDE).

Important Information

This section contains information about software fixes, problems you might encounter, and other information for using SUSE Linux on your Dell system.

lspci Reports Unknown Devices

When you use **lspci** to display information about all Peripheral Component Interconnect (PCI) buses in the system and the devices that are connected to the PCI buses, the output may contain unknown devices. The problem occurs when the **pci.ids** file does not contain the definition of the latest chipsets, PCI hardware, and so on.

To resolve the problem, download the latest **pci.ids** file from **http://pciids.sourceforge.net/pci.ids** or use the **update-pciids** utility to download the latest **pci.ids** file and save it at **/usr/share/pci.ids**.

SUSE Linux Enterprise Server 9 Service Pack 4 Hangs During Initialization on Systems With Quad-Core AMD Opteron™ Processors With More Than 4 GB RAM

SUSE Linux Enterprise Server 9 Service Pack 4 kernel 2.6.5-7.308 installs successfully on a system with a Quad-Core Advanced Micro Devices (AMD) Opteron processor with more than 4 GB RAM. However, the system hangs while booting after the installation. A solution to this issue is available in kernel version 2.6.5-7.311 or later. You can download and install the kernel using YOU. For more information, see the Technical Information Document (TID) number 3191716 on the Novell Support website at **support.novell.com**.

You can also workaround the issue using one of the following methods:

- Limit the RAM to less than 4 GB using a boot parameter. The boot parameter is mem=xxxxm, where *xxxx* is a number less than 4000.
- In the BIOS System Setup, enable **Node Interleaving** in the **Memory Information** screen.

Linux Enumeration of NICs

Linux operating system versions that use the **udev** kernel device manager may enumerate the NICs differently than earlier Linux versions, which used the **devfs** device manager. Although this does not affect system functionality, when using SUSE Linux Enterprise Server 9 operating systems, NIC1 may be configured as **eth1** rather than as **eth0**, and NIC2 as **eth0**. For more information on and to find methods of changing the default device enumerations, see **White Papers** at **linux.dell.com**.

Installing on Systems With Less Than 512 MB of RAM

For SUSE Linux Enterprise Server 9 x68_64, Graphical User Interface (GUI) mode installation is not supported on systems with less than 512 MB of RAM. If your system has less than 512 MB of RAM, use the text mode to install SUSE Linux Enterprise Server 9.

Dell OpenManage™ Server Administrator Alerts Not Received in KDE Console

The KDE text console, known as Kconsole, cannot display Dell OpenManage Server Administrator alerts if the alert action is configured to broadcast the event to all SUSE Linux Enterprise Server 9 active consoles. When using KDE, alternatives such as Xconsole displays the broadcast alert correctly.

Mouse Tracking Synchronization Problem When Connecting Through the DRAC Remote Console

When connecting the remote console to a PowerEdge system with DRAC4, DRAC5, and iDRAC running SUSE Linux Enterprise Server 9, the local mouse may not synchronize with the server mouse in the remote console. To resolve this issue, complete the following steps on the remote server:

1   Start the **sax2** utility by typing **sax2** at a command prompt.

2   In the sax2 window, click **Input-Devices**, and then **Mouse**.

3   Click **Change Configuration**, and remove any mouse entries that begin with **Autodetection**.

4   Click **Add a New Mouse**, then select the **Auto-Generic** mouse.

5   Save the changes, and then restart your X Window session.

System Time Might Become Inconsistent With the Hardware Clock

On certain PowerEdge systems running SUSE Linux Enterprise Server 9 Service Pack 4, the system time may not synchronize with the hardware clock.

A workaround to this problem is to use the kernel boot parameter **nohpet** in **/boot/grub/menu.lst** or use network time protocol (NTP) to synchronize the system time with a reliable time source. This issue will be resolved in a future SUSE Linux Enterprise Server 9 update.

X Window System Fails to Start When PCI Cards are Added or Removed From the System

Adding, removing, modifying, enabling, or disabling PCI cards in PowerEdge systems can result in X Window System failing to start. This is caused due to the **BusID** parameter in the **/etc/X11/XF86Config** file not being updated when PCI cards in the system are changed.

To workaround this issue, comment the line beginning with **BusID** in the **/etc/X11/XF86Config** file. This issue will be resolved in a future SUSE Linux Enterprise Server 9 update.

Finding More Information

- For additional information about using and administering the SUSE Linux Enterprise Server 9 operating system, see **www.novell.com/linux**.

- You can download updated operating system packages and the latest kernel releases and updates using the YOU service in **YaST**.

- For the latest information from Novell, see the *SUSE Linux Enterprise Server 9 Service Pack 4 Release Notes* on Service Pack 4 CD1.

- For latest BIOS and firmware versions, see the Dell support website at **support.dell.com**. You can download the specific support files for Linux operating systems.

- Dell's public mailing lists promote community involvement among Dell system users who use the Linux operating system. To sign up to these lists, see **lists.us.dell.com**.