

Support Notes for SUSE LINUX Enterprise Server 9 Service Pack 3 for the Intel Itanium 2 Processor Family



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Announcement

Hewlett-Packard has certified SUSE LINUX Enterprise Server® 9 (SLES 9) Service Pack 3 (SP3) (kernel version 2.6.5-7.244, glibc 2.3.3-98.61) on HP Integrity servers, which are based on the Intel® Itanium® 2-based processor. Use the HP Smart Setup EBSU application to prepare your server for operating system installation. It will prompt you to insert operating system media when ready.

This Support Notes document provides instructions for initiating the SLES 9 installation using the HP Smart Setup EBSU application, explains how to get updates from SUSE LINUX Maintenance Web, and lists known problems with SLES 9 SP3 for the Itanium Processor Family on HP Itanium 2-based Servers.

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SLES 9 on Integrity Servers

Hewlett-Packard has certified SLES 9 SP3 for the Itanium Processor Family (kernel version 2.6.5-7.244, glibc 2.3.3-98.61) on Integrity servers.

Using the HP Smart Setup CD to Prepare for Operating System Installation

The HP Smart Setup CD ships with your system hardware and is also available for free download under the **Linux** link at <http://www.hp.com/go/softwaredepot>. This CD contains the HP Smart Setup EBSU application, which prepares your system for operating system installation and prompts you to insert operating system media when ready.

Documentation

Novell provides documentation for SLES 9 operating system installation with its installation media.

Documentation for the HP Integrity Essentials Foundation Pack for Linux and the HP Smart Setup CD comes with your system. The *HP Integrity Essentials Foundation Pack for Linux 1.0 User's Guide* describes how to use HP Smart Setup EBSU application.

For details about installing SLES 9 from the service pack CDs, see *Installing SUSE LINUX Enterprise Server 9 on the Intel Itanium 2 Processor Family*. This document, and other Linux documentation is available at <http://www.docs.hp.com/linux>.

Installing Your Operating System

Before using the SLES 9 installation media, use the HP Smart Setup EBSU application and the Linux Installer media to load the operating system files on the server. After installation, set up the system and update it with the latest firmware, drivers, and patches. For details about installation procedures, see the *HP Integrity Essentials Foundation Pack for Linux 1.0 User's Guide*.

Recovering your operating system:

The HP Integrity Essentials Foundation Pack for Linux media and HP Smart Setup CD ship with your Integrity server. Contact your HP sales representative to obtain the foundation pack kit if it is not with your order. You can download the HP Integrity Essentials Foundation Pack for Linux and updates for free from the **Linux** link at <http://www.hp.com/go/softwaredepot>.

Registering Software and Getting Updates from the SUSE LINUX Maintenance Web

Registering Software

1. From <http://novell.com/suslinuxportal>, click the **sign up here** link under the "Get new account" heading to create a SUSE Portal Login and password.
2. Return to <http://novell.com/suslinuxportal>, enter the login and password created in Step 1 above, and click **OK**.
3. From the vertical list on the left side of the **Manage Registrations** page, click the **Activate Product** link to register your software.

Getting Updates from the SUSE LINUX Maintenance Web

Option 1 - Via the Web

1. Go to <http://novell.com/suslinuxportal> and click the **Patch Database** link on the Support menu.
2. Select **by product**, then find your Novell product in the list and select it (it should be something like "SUSE LINUX Enterprise Server for IA64 (ia64).")
3. Select the desired update. On the resulting page, select the package link that applies to your distribution to download the package.



NOTE Not all packages are available for every operating system version.

Option 2 -Via the Network using YaST Online Update (YOU)

1. If running behind a firewall, edit the `/etc/wgetrc` file to set the permissions YOU requires to obtain packages from the Maintenance Web. Change `#passive_ftp = off` to `passive-ftp = on` and save the file. If not running behind a firewall, proceed to Step 2.



NOTE The YaST2 Online Update (YOU) requires a direct Internet connection. If you connect via a proxy, configure as follows:

- a. Open `/etc/wgetrc` with an editor of your choice.
- b. Delete these lines:
 - i. `#http_proxy = http://proxy.yoyodyne:18023/`
 - ii. `#ftp_proxy = http://proxy.yoyodyne:18023/`
- c. Replace the lines deleted in the previous step, respectively, with:
 - i. `http_proxy = http://your_proxy:port/`
 - ii. `ftp_proxy = http://your_proxy:port/`

Where *your_proxy* stands for the name of your proxy machine and *port* is the port number to which the proxy listens on the proxy machine.

- d. Save the file.

If your system is behind a proxy, you also may need the run the following commands to get YOU to work:

```
$ export https_proxy="http://your_proxy:port/"
$ you
```

-
2. To access YOU:
 - a. Type `you` and press **Enter**.
 - b. On the "Welcome to YaST Online" screen, use the **Tab** key to highlight an option and press the space bar to select. When done making your selections, tab to `Next` at the bottom of the screen and press **Enter**.
 - c. Select and install any desired updates.



NOTE When presented with a list of packages to update, a plus (+) sign to the left of the package indicates “select this package for update”.

Known Issues

1. No support for uncertified RPM packages.
If you add uncertified RPM packages to the operating system (e.g. from an open source development repository), it will not be supported by Novell. Novell supports only RPM packages bundled in supported Linux distributions for Integrity servers and official SLES Service Packs for those distributions. HP supports the Linux software it distributes.
2. No support for systems with a recompiled kernel.
Although you may recompile your kernel to change configuration parameters, HP does not support systems on which you have recompiled your kernel for any other reason, e.g. for kernel source code changes.
Supported customizations:
 - a. Modifying configuration options found in `/usr/src/linux-version-versionnumber/configs` to set values or make modules static or dynamically loadable.
 - b. Changing boot-time parameters found in `/usr/src/linux/Documentation/kernel-parameters.txt` (with the kernel-source /rpm).
3. Before installing or booting SLES 9 on an nPartition on an rx7620, rx8620, or Integrity Superdome server, set the ACPI configuration value to `acpiconfig single-pci-domain`.
For rx7620, rx8620, or Integrity Superdome servers booting SLES 9:
 - a. At the EFI Shell prompt, type `acpiconfig single-pci-domain` and press **Enter**.
 - b. Type `reset` and press **Enter**.
4. System is unbootable after adding new disks.

When you add new disks, the system may fail with one of the following messages:

```
init=
```

```
or
```

```
VFS root not found
```

To fix the problem:

- a. Remove any disks you've added since you last booted your system.
- b. Invoke `parted /dev/sdXwhere sdX is the disk where your root partition resides`.
- c. Use `name` command to assign forward slash (/) as a LABEL to the root file system. The `help` name from inside `parted` explains the syntax you should use, e.g. `name 1 /`
- d. Manually verify `root= "LABEL= /"` is in each image section of the `/boot/efi/SuSE/elilo.conf` file.

```
==== sample elilo.conf for mounting root partition by label ====
```

```
prompt
```

```
timeout=50
```

```
default=linux
```

```
image=vmlinuz-2.4.18-e.25smp
```

```
label=linux
```

```
initrd=initrd-2.4.18-e.Nsmp.img
```

```
read-only
```

```
root="LABEL=/"
```

```
append="console=ttyS0,115200n8 hdd=ide-scsi"
```

```

image=vmlinuz-2.4.18-e.25
  label=linux-up
  initrd=initrd-2.4.18-e.25.img
  read-only
  root="LABEL=/"
  append="console=ttyS0,115200n8 hdd=ide-scsi"
==== sample elilo.conf for mounting root partition by label ====

```

- e. Manually verify LABEL="/" entry is in the /etc/fstab.

```

===== sample fstab for mounting root device by label =====
LABEL=/          /                ext2            defaults,errors=remount-ro    1 1
/dev/hda1        /boot/efi        vfat            defaults                    0 0
none             /dev/pts         devpts          gid=5,mode=620               0 0
none             /proc            proc            defaults                    0 0
none             /dev/shm         tmpfs           defaults                    0 0
/dev/hda3        swap             swap            defaults                    0 0
/dev/hda5        /home            ext2            defaults,errors=remount-ro    0 2
/dev/cdrom       /mnt/cdrom       iso9660         noauto,owner,kudzu,ro        0 0
/dev/cdrom1      /mnt/cdrom1      iso9660         noauto,owner,kudzu,ro        0 0
===== sample fstab for mounting root device by label =====

```

5. If you want rx7620 or rx8620 server hardware to power off when the shutdown -h command or poweroff command is issued, run the acpiconfig enable softpowerdown command from the EFI shell and reset the nPartition to make the ACPI configuration take effect.

The normal behavior on rx7620 and rx8620 servers is for an nPartition to be made inactive (all cells are in a boot-is-blocked state) when shutdown -h or poweroff is issued from the SLES command line. This behavior is established with the acpiconfig disable powerdown setting, which is the normal setting for the single-pci-domain ACPI configuration.

On HP Integrity Superdome servers, an nPartition is always made inactive when halted from the operating system (for example, after shutdown -h), and this behavior cannot be changed.

When softpowerdown is enabled on an rx7620 or rx8620 server, if one nPartition is defined in the server then halting the operating system powers off the server cabinet (including all cells and I/O chassis). On an rx7620 or rx8620 server with multiple nPartitions, halting the operating system from an nPartition with softpowerdown enabled causes only the resources on the local nPartition to be powered off.

You can run the acpiconfig command with no arguments to check the current setting and the softpowerdown setting; however, softpowerdown information is displayed only when different from normal behavior.

To power on hardware that has been powered off, use the PE command at the management processor command menu. To make an inactive nPartition active, use the management processor BO command to boot the nPartition past the boot-is-blocked state.

6. HP supports up to two I/O chassis per nPartition on rx7620, rx8620, and Integrity Superdome servers running SLES 9.
7. SCSI errors and resets for any reason cause system failures. For example, if your disks have a problem such as a parity or disk error that causes a SCSI reset, the system will fail. Combining a Seagate drive with the ds2100 disk carrier causes electrical problems on the SCSI bus and subsequent reset attempts that also result in system failure. Do not use Seagate drives with this disk carrier.
8. This issue affects Linux running on the following systems: rx1600, rx1620, rx2600, rx2620, rx4640, rx7620, rx8620, and Superdome.

The Management Processor UART on these systems does not supply the Carrier Detect signal. This causes applications to hang when opening the UART device, waiting for Carrier Detect, unless they use the O_NDELAY or O_NONBLOCK flag.

For example, echo foo > /dev/ttyS0 hangs.

This is usually not a problem because /dev/ttyS0 is usually used as a console, the agetty process opens it with O_NONBLOCK, and processes spawned by agetty generally inherit the already-opened device.

Previously, a workaround was recommended for cases where the device had to be opened again, and applications observed the hang. The recommended workaround included the following steps:

- a. Add the `-L` option to the `agetty` line in the `/etc/inittab` file as show below to resolve the problem:

```
S0:1235:respawn:/sbin/agetty -L 9600 ttyS0
```

- b. After editing the file, signal the `init` process to re-read the `inittab` file with the following command:

```
kill -HUP 1
```

- c. If you are logged in to the console, then exit and log in again to restart the `agetty`.

This `inittab` workaround is included in SLES9 SP3

9. When installing SP3 from CD, if you boot off SP3 CD1, the installer enters YaST, asking to enter CD1 into the drive. The installer expects you to enter the SLES9 CD1 at this dialog, not SP3 CD1.
For details about installing SLES 9 from the service pack CDs, see *Installing SUSE LINUX Enterprise Server 9 on the Intel Itanium 2 Processor Family*, available at <http://www.docs.hp.com/linux>.
10. A package will fail to install if the system clock is not set properly (as indicated in Bugzilla 56902). Ensure the system clock is set properly before attempting any installs.
11. If you intend to use an Emulex 4Gb FibreChannel adapter (part number AB429A or AB379A), you must upgrade your system to use the driver provided by HP. This driver can be found on <http://www.hp.com> under "Support and Drivers". The current supported version of the driver for these cards is 8.0.16.21.