Red Hat Enterprise Linux 5
5.2 Release Notes

Release Notes for Red Hat Enterprise Linux 5.2
Edition 1.0

Don Domingo

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Abstract

The Release Notes provide high-level coverage of the improvements and additions that have been implemented in Red Hat Enterprise Linux 5.2. For detailed documentation on all changes to Red Hat Enterprise Linux for the 5.2 update, refer to the Technical Notes.

Table of Contents

1. Release Notes Updates

This section contains information about Red Hat Enterprise Linux 5.2 that did not make it into the Release Notes included in the distribution.

1.1. All Architectures

* *Thin Provisioning* (also known as "virtual provisioning") will be first released with *EMC Symmetrix DMX3* and *DMX4*. Please refer to the *EMC Support Matrix* and *Symmetrix Enginuity* code release notes for further details.

* **dom0** has a system-wide IRQ (interrupt request line) limit of 256, which is consumed as follows:

  * 3 per physical CPU.

  * 1 per guest device (i.e. NIC or block device)

  When the IRQ limit is reached, the system will crash. As such, check your IRQ consumption to make sure that the number of guests you create (and their respective block devices) do not exhaust the IRQ limit.

  To determine how many IRQs you are currently consuming, run the command **grep Dynamic-irq /proc/interrupts | wc -l**.

* In **/etc/multipath.conf**, setting **max_fds** to **unlimited** will prevent the **multipathd** daemon from starting up properly. As such, you should use a sufficiently high value instead for this setting.

* When provisioning guests during installation, the **RHN tools for guests** option will not be available. When this occurs, the system will require an additional entitlement, separate from the entitlement used by **dom0**.

  To prevent the consumption of additional entitlements for guests, install the **rhn-virtualization-common** package manually before attempting to register the system to Red Hat Network.

* **virt-manager** should not be left running continuously, as its memory use will grow over time. This could cause memory starvation.

  As such, you should only use **virt-manager** when needed. When extended use is required, it is advisable to periodically exit and restart **virt-manager**.

* Network driver **r8169** updated to add support for the following devices:

  * *RTL8169sb/8110sb*

  * *RTL8169sc/8110sc*

  * *RTL8168b/8111b*

  * *RTL8101e*

  * *RTL8100e*

* The crash utility cannot be used to analyze **kdump**-generated **x86_64** vmcores using the **xen-syms-[release]** binary of the Red Hat Enterprise Linux 5.2 kernel. To read these types of vmcores, use the command **crash --xen_phys_start [address] /boot/xen-syms-[version] vmcore** instead.

  To determine the value of **[address]**, run the command **cat /proc/iomem | grep Hypervisor**. Something similar to the following output should appear:

```
3ee00000-3fdfffff : Hypervisor code and data
```

The *[address]* is the first number in the stated range; in this case, it is 3ee00000.

❧ When installing Red Hat Enterprise Linux 5 on a guest, the guest is configured to explicitly use a temporary installation kernel provided by **dom0**. Once installation finishes, it can then use its own bootloader. However, this can only be achieved by forcing the guest's first reboot to be a shutdown.

As such, when the **Reboot** button appears at the end of the guest installation, clicking it shuts down the guest, but does not reboot it. This is an expected behavior.

Note that when you boot the guest after this it will then use its own bootloader.

❧ Running **rpmbuild** on the **compiz** source RPM will fail if any KDE or **qt** development packages (for example, **qt-devel**) are installed. This is caused by a bug in the **compiz** configuration script.

To work around this, remove any KDE or **qt** development packages before attempting to build the **compiz** package from its source RPM.

❧ If your system has either *ATI Radeon R500* or *R600* graphics card equipped, **firstboot** will not run after installation. The system will go directly to the graphical login screen and skip **firstboot** altogether. If you attempt to run **firstboot** manually (i.e. from a failsafe terminal), the X session will crash.

This issue is caused by the driver used by the *ATI Radeon R500/R600* hardware. The default driver used by these graphics cards are still in technology preview. To work around this, backup your **/etc/X11/xorg.conf** file; then, configure X to use the supported **vesa** driver instead using the following command:

system-config-display --reconfig --set-driver=vesa

You can now run **firstboot**. To switch back to your old settings, restore your original **/etc/X11/xorg.conf**.

❧ **nfsroot** is fully supported in this update. This allows users to run Red Hat Enterprise Linux 5.2 with its root file system (**/**) mounted via NFS.

nfsroot was originally introduced in Red Hat Enterprise Linux 5 as a subset of the Technology Preview feature *Stateless Linux*. The full implementation of Stateless Linux remains a Technology Preview.

At present, **nfsroot** has the following restrictions:

  ▪ Writable directories that hold system files (for example, **/tmp**, **/var**, and **/etc**) must be replicated for each client and mounted independently with no sharing between clients. To do so, perform the following steps:

    ▪ Configure the client's root file system to boot in read-only mode. To do so, set **READONLY** to **yes** in **/etc/sysconfig/readonly-root**.

    ▪ Run **cat /etc/rwtab** to view a default list of directories and files mounted by each client in the format *[type] [path]*.

      [type] can be either **empty** (an empty path), **dirs** (a directory tree that is copied, but is empty), or **files** (a file or directory tree copied intact).

    ▪ If any other files or directories need to writable but are not in **/etc/rwtab**, list them in the same format (i.e. *[type] [path]*) in a file under **/etc/rwtab.d/**. You may use any filename for this file.

- SWAP is not supported over NFS.

- SELinux cannot be enabled on **nfsroot** clients. In general, Red Hat does not recommend disabling SELinux. As such, customers must carefully consider the security implications of this action.

- Installing Red Hat Enterprise Linux 5.2 on a system with multiple network interfaces and manually specified IPv6 addresses may result in a partially incorrect networking setup. When this occurs, your IPv6 settings will not be visible on the installed system.

  To work around this, set **NETWORKING_IPV6** to **yes** in **/etc/sysconfig/network**. Then, restart your network connection using the command **service network restart**.

- If your system uses the TSC timer, the **gettimeofday** system call may move backwards. This is because of an overflow issue that causes the TSC timer to jump forward significantly in some cases; when this occurs, the TSC timer will correct itself, but will ultimately register a movement backwards in time.

  This issue is particularly critical for time-sensitive systems, such as those used for transaction systems and databases. As such, if your system needs precision timing, Red Hat strongly recommends that you set the kernel to use another timer (for example, HPET).

- The **READ_AHEAD** setting in the **cciss** driver is now removed. The **cciss** driver will now use the block layer default of 256. Testing has shown that the setting **READ_AHEAD=1024** did not result in a consistent improvement in performance; in some situations, this setting could also cause the system to hang.

- When multiple NFSv4 clients are repeatedly competing for read/write access to the same file on the NFS server, it is possible for one or more of those clients to stall for an indefinite period of time waiting for access. This occurs because the standard delay observed when failing to get an access delegation from the server is long enough for the client who currently owns such delegation to return it to the server and claim it back again.

- If your system has **yum-rhn-plugin-0.5.2-5.el5_1.2** (or an earlier version) installed, you will be unable to upgrade to Red Hat Enterprise Linux 5.2 through **yum update**. To work around this, upgrade your **yum-rhn-plugin** to the latest version (using **yum update yum-rhn-plugin**) before running **yum update**.

- If your system has an older version of the **gfs2-kmod** package installed but the **yum-kmod** package is no installed, upgrading from Red Hat Enterprise Linux 5.1 to 5.2 will fail. To prevent this, install the latest version of **yum-kmod** first (using **yum install yum-kmod**) before running **yum update**.

- Thanks to the help of upstream developers and testing customers, the FS-Cache feature has undergone significant changes in line with upstream FS-Cache implementation. Consequently, the technology preview implementation of FS-Cache in this release is now rendered obsolete.

  As such, Red Hat does not recommend the usage of FS-Cache. Note that FS-Cache will also be likely disabled for the next minor releases.

  Red Hat will be focusing on further refining this feature as per upstream specifications. Once an acceptable level of invasiveness and compatibility is reached, FS-Cache will then be re-introduced in Red Hat Enterprise Linux.

- **Anaconda** cannot access more than 8 *SmartArray* controllers. If your system has more than 8 such controllers equipped, you will only be able to use storage on the first 8 controllers detected. **Anaconda** will fail when it attempts to open all other controllers (i.e. the 9th controller and above).

  Note, however, that these devices will still function properly after installation.

- **Firefox** is now updated to version 3.0. This update features several fixes and enhancements, most notably:

- Set homepages are now loaded correctly when the **Firefox** browser window is opened.

- **Firefox** no longer crashes when you search for the string "do".

- **Firefox** in 64-bit mode now loads the `ext` JavaScript library correctly. In previous versions of **Firefox**, web-based applications that used this library either took too long to load, or were never loaded at all.

- A cross-site scripting flaw was discovered in the way **Firefox** handled the jar:URI scheme. This flaw made it possible for a malicious web site to conduct a scripting attack against the user. This security issue is now fixed in this update.

- Several flaws were discovered in the way **Firefox** processed certain malformed content. Web sites that contained such content could cause **Firefox** to crash or even execute arbitrary code as the user running **Firefox**. This security issue is now fixed in this update.

- A race condition was discovered in the way **Firefox** set the `window.location` property on a web page. With this flaw, it was possible for a web page to set an arbitrary `Referer` header; this could lead to a cross-site request forgery (CSRF) attack against websites that rely only on the `Referer` header. This security issue is now fixed in this update.

- **Firefox** now renders correctly on laptops equipped with external display.

Note, however, that this update of **Firefox** is not fully backwards compatible with all JavaScripts or **Firefox** plugins used today.

Also, Red Hat has observed that several large commercial web applications have relied on the presence of some cross-site scripting flaws addressed by this **Firefox** update. These scripting flaws are described in the following links:

- http://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2008-1234

- http://cve.mitre.org/cgi-bin/cvename.cgi?name=CVE-2008-0415

Consequently, the use of these commercial web applications may result in some loss of functionality. You can observe this in the presence of additional JavaScript errors in the **Firefox** Error Console (**Tools** => **Error Console**). Red Hat is currently working with the corresponding vendors to address this.

- The updated `ixgbe` driver does not support the *Intel 82598AT* (*Copper Pond 10GbE*).

- Red Hat closely tracks the upstream Open Fabrics Enterprise Distribution (OFED) code base in order to provide a maximal level of enablement for this still evolving technology. As a consequence, Red Hat can only preserve API/ABI compatibility across minor releases to the degree that the upstream project does. This is an exception from the general practice in the development of Red Hat Enterprise Linux.

Because of this, applications build on top of the OFED stack (listed below), might require recompilation or even source-level code changes when moving from one minor release of Red Hat Enterprise Linux to a newer one.

This generally is not required for other applications, built on the Red Hat Enterprise Linux software stack.

The components affected are:

- **dapl**

- **compat-dapl**

- **ibsim**

- **ibutils**

- **infiniband-diags**

- **libcxgb3**

- **libehca**

- **libibcm**

- **libibcommon**

- **libibmad**

- **libibumad**

- **libibverbs**

- **libipathverbs**

- **libmlx4**

- **libmthca**

- **libnes**

- **librmdacm**

- **libsdp**

- **mpi-selector**

- **mpitests**

- **mstflint**

- **mvapich**

- **mvapich2**

- **ofed-docs**

- **openib**

- **openib-mstflint**

- **openib-perftest**

- **openib-tvflash**

- **openmpi**

- **opensm**

- **perftest**

- **qlvnictools**

- **qperf**

- **rds-tools**

- **(future)**

- **srptools**

- **tvflash**

1.2. x86 Architectures

» Recording needs to be manually enabled on *Dell M4300* and *M6300*. To do this, perform the following steps:

  » Open **alsamixer**.

  » Press **Tab** to toggle **[Capture]** in the **View** field (located at the upper left part of the menu).

  » Press the **Space** bar.

  » To verify that recording is enabled, the text above the **ADCMux** field should display **L R CAPTUR**.

1.3. x86-64 Architectures

» Recording needs to be manually enabled on *Dell M4300* and *M6300*. To do this, perform the following steps:

  » Open **alsamixer**.

  » Press **Tab** to toggle **[Capture]** in the **View** field (located at the upper left part of the menu).

  » Press the **Space** bar.

  » To verify that recording is enabled, the text above the **ADCMux** field should display **L R CAPTUR**.

» On an *IBM T61* laptop, Red Hat recommends that you refrain from clicking the **glxgears** window (when **glxgears** is run). Doing so can lock the system.

To prevent this from occurring, disable the tiling feature. To do so, add the following line in the **Device** section of **/etc/X11/xorg.conf**:

```
Option "Tiling" "0"
```

» The distribution version of the release notes stated that crash dumping through **kexec** and **kdump** did not function reliably with *HP Smart Array* controllers. As of general availability, this issue is now resolved.

1.4. PowerPC Architectures

» Recording needs to be manually enabled on *Dell M4300* and *M6300*. To do this, perform the following steps:

  » Open **alsamixer**.

  » Press **Tab** to toggle **[Capture]** in the **View** field (located at the upper left part of the menu).

  » Press the **Space** bar.

  » To verify that recording is enabled, the text above the **ADCMux** field should display **L R CAPTUR**.

» The **setroubleshootd** daemon no longer exits with a fault the first time **sealert** attempts to connect to the daemon.

1.5. ia64 Architecture

❧ Recording needs to be manually enabled on *Dell M4300* and *M6300*. To do this, perform the following steps:

> ❧ Open `alsamixer`.
>
> ❧ Press **Tab** to toggle **[Capture]** in the **View** field (located at the upper left part of the menu).
>
> ❧ Press the `Space` bar.
>
> ❧ To verify that recording is enabled, the text above the `ADCMux` field should display `L R CAPTUR`.

❧ Running `perftest` will fail if different CPU speeds are detected. As such, you should disable CPU speed scaling before running `perftest`.

❧ When the `kdump` kernel is booted, the following error will appear in the boot log:

```
mknod: /tmp/initrd.[numbers]/dev/efirtc: No such file or directory
```

This error results from a malformed request to create the `efirtc` in an incorrect path. However, the device path in question is also created statically in the `initramfs` when the `kdump` service is started. As such, the run-time creation of the device node is redundant, harmless, and should not affect the performance of `kdump`.

❧ The distribution version of the release notes stated that crash dumping through `kexec` and `kdump` did not function reliably with *HP Smart Array* controllers. As of general availability, this issue is now resolved.

❧ Some systems may be unable to boot the `kdump` kernel properly. In such cases, use the `machvec=dig` kernel parameter.

2. Installation-Related Notes

This section includes information specific to **Anaconda** and the installation of Red Hat Enterprise Linux 5.2.

Red Hat Network can install the new and changed packages and upgrade an existing Red Hat Enterprise Linux 5 system. Alternatively, **Anaconda** can upgrade an existing Red Hat Enterprise Linux 5 system or perform a fresh installation of Red Hat Enterprise Linux 5.2.

Note: upgrading from beta releases of Red Hat Enterprise Linux 5.2 to this GA release is not supported.

Further, although **Anaconda** provides an option for upgrading from earlier major versions of Red Hat Enterprise Linux to Red Hat Enterprise Linux 5.2, Red Hat does not currently support this. More generally, Red Hat does not support in-place upgrades between any major versions of Red Hat Enterprise Linux. (A major version is denoted by a whole number version change. For example, Red Hat Entepise Linux 4 and Red Hat Enterprise Linux 5 are both major versions of Red Hat Enterprise Linux.)

In-place upgrades across major releases do not preserve all system settings, services or custom configurations. Consequently, Red Hat strongly recommends fresh installations when upgrading from one major version to another.

2.1. All Architectures

❧ A version naming issue in the updated `libdhcp6client` may cause some package upgrades to fail. To work around this, manually remove the Red Hat Enterprise Linux 5.1 version of `libdhcp6client` before performing an upgrade to Red Hat Enterprise Linux 5.2.

⯈ When installing from CD-ROM or DVD-ROM on a system with an iBFT-configured network device, **Anaconda** will not include any iBFT-configured storage devices unless networking is configured. To enable networking for the installation, use the command `linux updates=http://[any]` at the installation boot prompt. Note that *[any]* can be replaced with any URL.

If your system requires a static IP configuration, use the command `linux updates=http://[any]` `ip=[IP address] netmask=[netmask] dns=[dns]`.

⯈ If you are copying the contents of the Red Hat Enterprise Linux 5 CD-ROMs (in preparation for a network-based installation, for example) be sure to copy the CD-ROMs for the operating system *only*. Do not copy the **Supplementary CD-ROM**, or any of the layered product CD-ROMs, as this will overwrite files necessary for **Anaconda**'s proper operation.

The contents of the **Supplementary CD-ROM** and other layered product CD-ROMs must be installed *after* Red Hat Enterprise Linux 5.2 is installed.

⯈ When installing Red Hat Enterprise Linux 5.2 on a fully virtualized guest, do *not* use the **kernel-xen** kernel. Using this kernel on fully virtualized guests can cause your system to hang.

If you are using an Installation Number when installing Red Hat Enterprise Linux 5.2 on a fully virtualized guest, be sure to deselect the **Virtualization** package group during the installation. The **Virtualization** package group option installs the **kernel-xen** kernel.

Note that paravirtualized guests are not affected by this issue. Paravirtualized guests always use the **kernel-xen** kernel.

⯈ If you are using the Virtualized kernel when upgrading from Red Hat Enterprise Linux 5 to 5.2, you must reboot after completing the upgrade. You should then boot the system using the updated Virtualized kernel.

The hypervisors of Red Hat Enterprise Linux 5 and 5.2 are not ABI-compatible. If you do not boot the system after upgrading using the updated Virtualized kernel, the upgraded Virtualization RPMs will not match the running kernel.

⯈ When upgrading to Red Hat Enterprise Linux 5.1 or later from Red Hat Enterprise Linux 4.6, **gcc4** may cause the upgrade to fail. As such, you should manually remove the **gcc4** package before upgrading.

⯈ The **firstboot** language plugin has been removed, as it does not properly and completely reconfigure the system when a new language is selected.

⯈ The use of Challenge Handshake Authentication Protocol (CHAP) during installation is not supported. As such, CHAP should only be enabled after installation.

If your system boots through an iFBT device, configure CHAP in the iFBT BIOS/firmware setup screen. Your CHAP settings will then be used in the next boot.

If your system boots through PXE iSCSI, configure CHAP through **iscsiadm**. After configuring, use **mkinitrd** to ensure that your CHAP settings are used in the next boot.

2.2. PowerPC Architectures

⯈ The minimum RAM required to install Red Hat Enterprise Linux 5.2 is 1GB; the recommended RAM is 2GB. If a machine has less than 1GB RAM, the installation process may hang.

Further, PowerPC-based machines that have only 1GB of RAM experience significant performance issues under certain RAM-intensive workloads. For a Red Hat Enterprise Linux 5.2 system to perform RAM-intensive processes optimally, 4GB of RAM is recommended. This ensures the system has the same number of physical pages as was available on PowerPC machines with 512MB of RAM running Red Hat

Enterprise Linux 4.5 or earlier.

2.3. ia64 Architecture

❧ If your system only has 512MB of RAM, attempting to install Red Hat Enterprise Linux 5.2 may fail. To prevent this, perform a base installation first and install all other packages after the installation finishes.

❧ Using **yum** to install packages from the **32-bit Compatibility Layer** disc may fail. If it does, it is because the Red Hat package signing key was not imported into the RPM database. This happens if you have not yet connected to Red Hat Network and obtained updates. To import the key manually, run the following command as root:

```
rpm --import /etc/pki/rpm-gpg/RPM-GPG-KEY-redhat-release
```

Once the Red Hat GPG key is imported, you may now use **yum** to install packages from the **32-bit Compatibility Layer** disc.

Note that when installing from this disc, it is advisable to use **yum** instead of **rpm** to ensure that base OS dependencies are addressed during installation.

❧ When upgrading a large number of packages with **yum update**, the update process will take longer to finish than previous versions.

3. Feature Updates

3.1. All Architectures

Systemtap

Systemtap is a GPL-based infrastructure which simplifies information gathering on a running Linux system. This assists in diagnosis of performance or functional problems. With **systemtap**, the tedious and disruptive "instrument, recompile, install, and reboot" sequence is no longer needed to collect diagnostic data.

Systemtap is now fully supported. For more information refer to http://sources.redhat.com/systemtap.

iSNS-utils

The *Internet storage name service* for Linux (**isns-utils**) is now supported. This allows you to register iSCSI and iFCP storage devices on the network. **isns-utils** allows dynamic discovery of available storage targets through storage initiators.

isns-utils provides intelligent storage discovery and management services comparable to those found in fibre-channel networks. This allows an IP network to function in a similar capacity to a storage area network.

With its ability to emulate fibre-channel fabric services, **isns-utils** allows for seamless integration of IP and fibre-channel networks. In addition, **isns-utils** also provides utilities for managing both iSCSI and fibre-channel devices within the network.

For more information about **isns-utils** specifications, refer to http://tools.ietf.org/html/rfc4171. For usage instructions, refer to **/usr/share/docs/isns-utils-*[version]*/README** and **/usr/share/docs/isns-utils-*[version]*/README.redhat.setup**.

rsyslog

rsyslog is an enhanced multi-threaded **syslogd** daemon that supports the following (among others):

⟫ MySQL

⟫ syslog/tcp

⟫ RFC 3195

⟫ permitted sender lists

⟫ filtering on any message part

⟫ more granular output format control

rsyslog is compatible with the stock **sysklogd**, and can be used as a replacement in most cases. Its advanced features make it suitable for enterprise-class, encrypted **syslog** relay chains; at the same time, its user-friendly interface is designed to make setup easy for novice users.

For more information about **rsyslog**, refer to http://www.rsyslog.com/.

Openswan

Openswan is a free implementation of *Internet Protocol Security* (IPsec) and *Internet Key Exchange* (IKE) for Linux. IPsec uses strong cryptography to provide authentication and encryption services. These services allow you to build secure tunnels through untrusted networks. Everything passing through the untrusted network is encrypted by the IPsec gateway machine and decrypted by the gateway at the other end of the tunnel. The resulting tunnel is a virtual private network (VPN).

This release of Openswan supports IKEv2 (RFC 4306, 4718) and contains an IKE2 daemon that conforms to IETF RFCs. For more information about Openswan, refer to http://www.openswan.org/.

Evolution

The **Evolution** update for this release now features the following enhancements (among others):

⟫ **Bogofilter** compatibility for filtering junk mail.

⟫ An option to receive pop-up notifications for new mail.

⟫ Improved performance for downloading messages from a Microsoft Exchange™ server.

⟫ A setup assistant to guide you through both backing up and restoring data and settings.

Thunderbird

Thunderbird has been updated to version 2.0.0.12. This update applies the following features (among others):

⟫ Message tags, which help organize email.

⟫ Built-in support for Google Mail and .Mac mail.

⟫ *Find-as-you-type*, which highlights and filters message text as you type.

⟫ An updated extension system, which provides enhanced security and allows easier extension localization.

For more information about this update, refer to http://www.mozilla.com/en-US/thunderbird/2.0.0.0/releasenotes/.

Password Hashing Using SHA-256/SHA-512

Password hashing using the SHA-256 and SHA-512 hash functions is now supported.

To switch to SHA-256 or SHA-512 on an installed system, run **`authconfig --passalgo=sha256 --update`** or **`authconfig --passalgo=sha512 --update`**. To configure the hashing method through a GUI, use **`authconfig-gtk`**. Existing user accounts will not be affected until their passwords are changed.

For newly installed systems, using SHA-256 or SHA-512 can be configured only for kickstart installations. To do so, use the **`--passalgo=sha256`** or **`--passalgo=sha512`** options of the kickstart command **`auth`**; also, remove the **`--enablemd5`** option if present.

If your installation does not use kickstart, use **`authconfig`** as described above. After installation, change all created passwords, including the root password.

Appropriate options were also added to **`libuser`**, **`pam`**, and **`shadow-utils`** to support these password hashing algorithms. **`authconfig`** configures necessary options automatically, so it is usually not necessary to modify them manually:

※ New values of the **`crypt_style`** option and new options for both **`hash_rounds_min`** and **`hash_rounds_max`** are now supported in the **`[defaults]`** section of **`/etc/libuser.conf`**. For more information, refer to **`man libuser.conf`**.

※ New options **`sha256`**, **`sha512`**, and **`rounds`** are now supported by the **`pam_unix`** PAM module. For more information, refer to **`/usr/share/doc/pam-[pam version]/txts/README.pam_unix`**.

※ The following new options in **`/etc/login.defs`** are now supported by **`shadow-utils`**:

▫ **`ENCRYPT_METHOD`** — Specifies the encryption methods to be used. Valid values are **`DES`**, **`MD5`**, **`SHA256`**, and **`SHA512`**. If this option is defined, **`MD5_CRYPT_ENAB`** is ignored.

▫ **`SHA_CRYPT_MIN_ROUNDS`** and **`SHA_CRYPT_MAX_ROUNDS`** — Specifies the number of hashing rounds to use if **`ENCRYPT_METHOD`** is set to **`SHA256`** or **`SHA512`**. If neither option is set, a default value is chosen by **`glibc`**. If only one option is set, the encryption method specifies the number of rounds.

If both options are used, they specify an inclusive interval from which the number of rounds is chosen randomly. The selected number of rounds is limited to the inclusive interval [1000, 999999999].

OFED in comps.xml

The group **`OpenFabrics Enterprise Distribution`** is now included in **`comps.xml`**. This group contains components used for high-performance networking and clustering (for example, InfiniBand and Remote Direct Memory Access).

Further, the **`Workstation`** group has been removed from **`comps.xml`** in the Red Hat Enterprise Linux 5.2 Client version. This group only contained the **`openib`** package, which is now part of the **`OpenFabrics Enterprise Distribution`** group.

system-config-netboot

system-config-netboot is now included in this update. This is a GUI-based tool used for enabling, configuring, and disabling network booting. It is also useful in configuring PXE-booting for network installations and diskless clients.

openmpi

In order to accommodate the use of compilers other than **gcc** for specific applications that use *message passing interface* (MPI), the following updates have been applied to the **openmpi** and **lam** packages:

- MPI installations are now consolidated under a single installation directory. All files can now be found under **/usr/lib(64)/lam** and **/usr/lib(64)/openmpi/[openmpi version]-[compiler name]**.

- Version and compiler strings are now included in the **openmpi** installation path, but not the **lam** installation path. This enables you to install multiple versions of **openmpi**, or install the same version of **openmpi** built by different compilers.

  While this capability allows you to use a version of **openmpi** built by another compiler, Red Hat only supports the latest, **gcc**-compiled version of **openmpi**.

- **openmpi** and **lam** now use **mpi-selector** to set which MPI implementation to use at any given time. For more information, refer to **man mpi-selector** and **man mpi-selector-menu**.

Note that when upgrading to this release's version of **openmpi**, you should migrate any default parameters set for **lam** or **openmpi** to **/usr/lib(64)/lam/etc/** and **/usr/lib(64)/openmpi/[openmpi version]-[compiler name]/etc/**. All configurations for either **openmpi** or **lam** should be set in these directories.

lvm2 Snapshot Volume Warning

lvm2 will now warn if a snapshot volume is near its maximum capacity. However, this feature is not enabled by default.

To enable this feature, uncomment the following line in **/etc/lvm/lvm.conf** :

```
snapshot_library = "libdevmapper-event-lvm2snapshot.so"
```

Ensure that the **dmeventd** section and its delimiters (**{ }**) are also uncommented.

bash

bash has been updated to version 3.2. This version fixes a number of outstanding bugs, most notably:

- **bash** man page: updated to reflect the correct behavior of special built-in commands (such as **eval**, **exec**, and **set**. In addition, the **bash** man page now includes an explanation of the use of aliases in non-interactive scripts.

- File descriptors now work as expected; in previous releases, **bash** did not close file descriptors with two or more digits.

- A bug in the way **bash** handled certain multi-byte strings is now fixed.

Note that with this update, the output of **`ulimit -a`** has also changed from the Red Hat Enterprise Linux 5.1 version. This may cause a problems with some automated scripts. If you have any scripts that use **`ulimit -a`** output strings, you should revise them accordingly.

3.2. s390x Architectures

Writing System Data to z/VM Monitor Stream

It is now possible to write process and file system data to the z/VM monitor stream. This allows you to consolidate more system resource information into a single source for performance monitoring purposes.

However, since the appropriate scripts for the services in **`/etc/init.d`** are not available in this release, you need to manually start the daemons for them. To write process utilization data to the z/VM monitor stream, run **`/usr/sbin/mon_procd`**. To write file system utilization data to the z/VM monitor stream, run **`/usr/sbin/mon_fsstatd`**.

4. Driver Updates

4.1. All Architectures

General Driver/Platform Updates

- Added the necessary PCI IDs to support the *Intel E7221* Graphic Controller.

- Added the necessary sub-device IDs to support the *PCI-Express icom WAN* adapter.

- **`i2c-piix4`** kernel module is now enabled to support the *AMD SBX00 SMBus*.

- The following kernel configuration flags are now enabled to enhance kernel panic handling for *Intelligent Platform Management Interface* (IPMI):

  - **`CONFIG_IPMI_PANIC_EVENT`** — when a panic occurs, the IPMI message handler generates an IPMI event describing the panic to each interface registered with the message handler.

  - **`CONFIG_IPMI_PANIC_STRING`** — when a panic occurs, OEM events containing the panic string are generated.

  In addition to this, IPMI now supports the *IBM Bladecenter QS21* and *QS22*.

- The **`tlclk`** driver is now included to support the *Intel MPCBL0050* systems.

- *Intel Dynamic Acceleration Technology* is now supported on *Intel Core 2 Duo* mobile processors. This allows a core to run at a higher-than-normal frequency when all CPUs (as a whole) are operating below maximum power.

- **`ioatdma`**: Added the necessary PCI IDs to support the DMA engine used in *Unisys ES7000* systems.

Graphics/Audio

- *High-Definition Multimedia Interface* (HDMI) audio is now supported on *AMD ATI* integrated chipsets.

≫ The *Intel* Xorg driver now provides enhanced support for *i915* (and later) chips. This driver is also the default driver now for such chips. If you prefer to use the older Xorg driver (originally used for *i810* chips), replace **Intel** with **i810** in the **Driver** line of **/etc/X11/xorg.conf** (under the **"Device"** section).

Basic runtime multi-head support is provided by the **intel** Xorg driver. Selecting a resolution with the **System => Preferences => Screen Resolution** tool (**gnome-display-properties**) will set that resolution on all connected outputs.

Video hotkey support (**Fn**+**F7** on most laptops) in the **"intel"** Xorg driver will scan all output connectors (including ports for the built-in flat panel on laptops) to determine which of them have monitors attached. All connected output ports will then be enabled.

Network

≫ **bnx2x**: driver added to provide support for *bcm5710* hardware.

≫ **tg3**: updated to version 3.86. This update enables support for *BroadCom 5761* and *5784* devices.

≫ **sierra**: updated to version 1.0.5. This update enables support for additional variants of *Sierra Wireless MC8755* and *MC8775* chipsets.

≫ In this release, the *Intel 82540 – 82547* network cards are supported by the **e1000** driver, while the following network cards are supported by the **e1000e** driver:

  ▪ *Intel 82571 – 82573*

  ▪ *Intel 82562*

  ▪ *Intel 82566*

  ▪ *Intel 80003eslan*

In Red Hat Enterprise Linux 5.1, the **e1000** driver supported all the aforementioned network cards.

If your system contains a combination of both types of network cards, ethernet devices may be enumerated in a different order in this release. You may need to modify your network configuration after installation in order to remap each card's hardware address to specific device names if you need to preserve a particular order.

Note that properly configured systems should not have device names changed on upgrade. To ensure this, the network configuration files (**/etc/sysconfig/network-scripts/ifcfg-[device name]**) should contain the **HWADDR** parameter, binding the device name to a specific hardware address.

Storage

≫ **lpfc**: updated to version 8.2.0.22. This update applies several **devloss** fixes, and enables support for the following:

  ▪ 1, 2, 4, and 8GB auto-rate negotiation.

  ▪ FC-SP DH-CHAP Authentication.

- The latest *HBAnyware* configuration utility, which is also part of the driver master kit. This enables GUI-based driver configuration (including fibre channel and TCP/IP remote storage area network management), diagnostics (loopback and diagnostics dump) and FC-SP/Authentication Diffie-Hellman CHAP (DH-CHAP).

- LPe1250, LPe1252, LPe12000 and LPe12002 (2, 4, and 8Gb capable HBAs).

- NPIV virtual ports.

- **megaraid_sas**: updated to version 3.15. This applies several upstream changes, most notably:

  - Added the following module parameters:

    - **fast_load**: enables the driver to load faster by skipping physical device check.

    - **cmd_per_lun**: sets the maximum number of commands per logical unit.

    - **max_sectors**: sets the maximum number of sectors per I/O command.

    - **poll_mode_io**: enables support for polling (i.e. reduced interrupt operations). When **poll_mode_io** is set, commands will also be completed from the I/O path.

  - Added support for hibernation.

  - **SYNCHRONIZE_CACHE** is now blocked by the driver.

- **aacraid**: updated to version 1.1.5-2453. This applies several upstream changes, most notably:

  - Fixed a bug that caused **aacraid** to use an incorrect **dma** mapping mask during firmware assert recovery.

  - Added the capability to issue a hardware reset to the adapter via **sysfs**. In line with this, the following check features were also added:

    - **check_interval** — for checking adapter health

    - **update_interval** — for revising time intervals used by adapter

    - **check_reset** — for blocking adapter checks/resets

  - Added a **SYNCHRONIZE_CACHE** call to implement a more effective cache flushing schedule. This helps reduce application stalls resulting from multiple applications issuing I/O commands to the storage device.

  - Replaced all **if/else** packet formations with platform function calls.

  - VPD inquiry pages are now supported. This ensures that when an array is created, the metadata stored on the physical device is issued a unique serial number. This serial number remains constant throughout array morphing or migration to other controllers.

- **qla2xxx**: updated to version 8.02.00-k5. This update to **qla2xxx** adds support for the following:

  - EHAFT, a QLogic host bus adapter mechanism that provides activity information about fibre channel devices.

- *N_Port ID Virtualization* (NPIV), which allows multiple N_Port IDs to share a single physical N_Port. This allows you to tie virtualized guests to fibre-channel identifiers, allowing those guests to migrate between hosts while retaining their access in the storage area network.

- 8GB fibre-channel devices.

This update also applies several improvements provided from upstream.

- **mpt fusion**: updated to version 3.04.05. This update provides several changes, most notably:

  - *On-the-fly logging* (via the **sysfs shost** attribute) is now supported.

  - Added new **sysfs shost** attributes that provide the following:

    - **board_name**

    - **board_assembly**

    - **board_tracer**

    - **unique_id**

    - **version_bios**

    - **version_fw**

    - **version_product**

    - **version_mpi**

    - **version_nvdata_default**

    - **version_nvdata_persistent**

    - **debug_level**

    - **io_delay**

    - **device_delay**

  - **task_abort** calls are no longer sent to hidden RAID components and volumes.

  - Changes related to fibre channel:

    - *Brocade*, a rebranded FC949E fibre channel controller, is now supported.

    - Link speeds are now displayed when the driver is loaded and whenever the link speed changes.

    - *High-priority request* queueing is now used instead of the handshake/doorbell system when sending management requests for SAS or fibre channel.

  - Changes related to parallel SCSI:

    - *ATTO UL4D*, a rebranded SPI 1030 controller, is now supported.

    - **mptspi_target_destroy** is now declared as static.

4.2. x86 Architectures

General Driver/Platform Updates

≫ All PCI-X configuration registers (up to 4096 bytes) are now accessible.

≫ The maximum length of the kernel command line is now 2,048 bytes. To use this increased maximum length, upgrade the `grub` package.

≫ The following chipsets are now supported through the **EDAC** driver:

  ▪ *Intel 3000*

  ▪ *Intel 3010*

  ▪ *Intel 5000* (Greencreek/Blackford)

≫ The *Intel Tolapai* chipset (SATA, I2C) is now supported.

Graphics/Audio

≫ The *Sony/Philips Digital Interconnect Format* (S/PDIF) port on the *Dell D/Dock Expansion Station* is now supported by the *Dell M4300* and *M6300 Precision Workstations*. This allows digital audio output through the S/PDIF port on the *Dell D/Dock Expansion Station* when either the *M4300* or *M6300* is docked.

4.3. x86-64 Architectures

General Driver/Platform Updates

≫ The maximum length of the kernel command line is now 2,048 bytes. To use this increased maximum length, upgrade the `grub` package.

≫ The following chipsets are now supported through the **EDAC** driver:

  ▪ *Intel 3000*

  ▪ *Intel 3010*

  ▪ *Intel 5000* (Greencreek/Blackford)

Graphics/Audio

≫ The *Sony/Philips Digital Interconnect Format* (S/PDIF) port on the *Dell D/Dock Expansion Station* is now supported by the *Dell M4300* and *M6300 Precision Workstations*. This allows digital audio output through the S/PDIF port on the *Dell D/Dock Expansion Station* when either the *M4300* or *M6300* is docked.

4.4. PowerPC Architectures

Graphics/Audio

≫ The *Sony/Philips Digital Interconnect Format* (S/PDIF) port on the *Dell D/Dock Expansion Station* is now supported by the *Dell M4300* and *M6300 Precision Workstations*. This allows digital audio output through the S/PDIF port on the *Dell D/Dock Expansion Station* when either the *M4300* or *M6300* is docked.

4.5. ia64 Architecture

Graphics/Audio

⯈ The *Sony/Philips Digital Interconnect Format* (S/PDIF) port on the *Dell D/Dock Expansion Station* is now supported by the *Dell M4300* and *M6300 Precision Workstations*. This allows digital audio output through the S/PDIF port on the *Dell D/Dock Expansion Station* when either the *M4300* or *M6300* is docked.

5. Kernel-Related Updates

5.1. All Architectures

⯈ Executing binaries with more than 2GB of debug information no longer fails.

⯈ When shutting down a database, all allocated hugepages are now released upon shutdown.

⯈ **invalidate_mapping_pages()** calls no longer cause soft lockups.

⯈ A bug that delayed **oomkill** from launching in a timely fashion (on systems with large memory) is now fixed.

⯈ A bug that caused soft lockup warnings when allocating memory on a system with large memory is now fixed.

⯈ 32-bit NFS clients can now correctly process 64-bit inode numbers.

⯈ The kernel now asserts *Data Terminal Ready* (DTR) signals before printing to serial ports during boot time. DTR assertion is required by some devices. Kernel boot messages are now printed to serial consoles on such devices.

⯈ The kernel parameter **ide0=noprobe** no longer causes a kernel panic.

⯈ Added a new kernel parameter: **/proc/sys/vm/flush_mmap_pages**. This parameter specifies whether or not memory-mapped file pages should be flushed to disk by **kupdate** while the memory map is active. Valid values for this parameter are **1** (enable memory mapping by **kupdate**) and **0** (disable memory mapping by **kupdate**). The default value for this parameter is **1**.

To configure this parameter, use **echo *[1 or 0]* /proc/sys/vm/flush_mmap_pages**. Setting this parameter to **0** does the following:

- ▫ **kupdate** will not flush dirty memory-mapped file pages as long as the memory map is active.

- ▫ All dirty file pages will be asynchronously flushed to disk only as soon as the memory map is deactivated.

If you set **/proc/sys/vm/flush_mmap_pages** to **0**, it is advisable that you use another application to manually sync memory-mapped pages to disk.

⯈ Added a new kernel parameter: **/proc/sys/kernel/sched_interactivity**. This parameter allows you to tune the CPU scheduler's interactivity estimator. The interactivity estimator allows interactive processes to acquire more CPU time without causing CPU starvation in other processes.

To configure this parameter, use **echo *[interactivity_level]* > /proc/sys/kernel/sched_interactivity**, where ***[interactivity_level]*** can be any of the following:

- ▫ **2** — interactivity estimator is fully activated.

- ▫ **1** — provides a weaker affinity to interactive processes than **2**, but avoids CPU starvation under certain scheduling patterns.

- **0** — any bias or affinity towards interactive processes is disabled.

» **kprobe** now supports **kretprobe_blacklist[]**.

» *Core dump masking* is now supported. This allows a core dump process to skip the shared memory segments of a process when creating a core dump file. This feature also allows you to select whether or not to dump anonymous shared memory for each process.

When a process is dumped, all anonymous memory is written to a core file as long as the size of the core file isn't limited. In some cases, you may want to prevent some memory segments (such as huge shared memory) from being dumped. Conversely, you may also want to save file-backed memory segments into a core file, in addition to individual files.

For these purposes, you can use **/proc/[pid]/coredump_filter** to specify which memory segments of the **[pid]** process is dumped. **coredump_filter** is a bitmask of memory types. If a bitmask is set, memory segments of the corresponding memory type are dumped.

The following memory types are supported:

- **0x0** — anonymous private memory

- **0x1** — anonymous shared memory

- **0x2** — file-backed private memory

- **0x3** — file-backed shared memory

To set a bitmask for **[pid]**, simply **echo** the corresponding bitmask to **/proc/[pid]/coredump_filter**. For example, to prevent a dump of all shared memory segments attached to process 1111, use:

```
echo 0x1 > /proc/1111/coredump_filter
```

The default value of **coredump_filter** is **0x3**, which specifies that all anonymous memory segments are dumped. Also, note that regardless of the bitmask status, MMIO pages (such as frame buffers) are never dumped and vDSO pages are always dumped

When a new process is created, the process inherits the bitmask status from its parent. As such, Red Hat recommends that you set up **coredump_filter** before the program runs. To do so, **echo** the desired bitmask to **/proc/self/coredump_filter** before running the program.

» **audit** can now trace and display per-session user activity.

» REV UDF file sizes larger than 1GB are now supported.

» *Lock contention tracing* and **lockdep** are now supported. These features provide in-depth information about spinlocks held in the kernel, which in turn help developers in driver debugging.

» The enumeration order of PCI devices has changed on several platforms to have NICs appear in the order they are labeled on the chassis and how the BIOS numbers them. The affected platforms are as follows:

- *Dell PowerEdge R900*

- *HP ProLiant DL385 G2*

- *HP ProLiant DL585 G2*

- *HP Proliant DL580 G5*

Note that this change affects new installations only. If you prefer the old enumeration order, use the kernel parameter **pci=nobfsort**.

≫ You can now determine the resource limit (**rlimit**) of a process. To do so, run **cat /proc/[pid]/limits**.

≫ The maximum soft lockup timeout is now increased from 60 seconds to 300 seconds for systems that have a large number of CPUs. A soft lockup occurs when a CPU reports a memory starvation while it is unable to access a memory node accessed by other CPUs.

In this release, you can also adjust the trigger limit for soft lockup warnings. To do so, use the following command (as root):

echo *[time]* > /proc/sys/kernel/softlockup_thresh

Replace ***[time]*** with the desired number of seconds before a soft lockup warning should be triggered. By default, this value is set to 10 (seconds).

≫ **show_mem()** output now includes the total number of pagecache pages.

≫ MSI-X is no longer enabled by default. To enable MSI-X, use the kernel module parameter **ql2xenablemsix**.

5.2. PowerPC Architectures

≫ **oprofile** now supports the *Cell Broadband Engine*. Note, however, that full **oprofile** support is available only for the PPU code in this release.

For the SPU code, symbol-based profiling is not supported.

5.3. ia64 Architecture

≫ Added support for *Corrected Machine Check Interrupt* (CMCI) on hot-added CPUs.

6. Virtualization

This section contains information about updates made to Red Hat Enterprise Linux suite of Virtualization tools.

6.1. All Architectures

Enhancements/Updates

≫ Running 16 cores or more using *AMD Rev F* processors no longer results in system resets when performing fully-virtualized guest installations.

≫ On an *AMD NPT* system used as a PAE host, guests can now have more than 4GB of memory.

Note that *nested paging* can only translate 32-bit guest virtual addresses. This is because of a hardware feature that exists only in 32-bit physical address extensions (PAE).

≫ When entering the second stage of a Windows™ Server 2003 installation, you no longer need to manually edit **/etc/xen/*[name of guest machine]*** to continue. The current user interface now allows you to change media on CD-ROMs attached to the guest.

- The **Virtual Machine Manager** (`virt-manager`) included in this release now allows users to specify kernel boot parameters to the paravirtualized guest installer.

- During the lifetime of `dom0`, you can now create guests (i.e. `xm create`) more than 32,750 times.

- When using `virt-manager` to add disks to an existing guest, duplicate entries are no longer created in the guest's `/etc/xen/[domain name]` configuration file.

Known Issues

- Paravirtualized guests can only have a maximum of 16 disk devices.

- Repeated live migration of paravirtualized guests between two hosts may cause one host to panic. If a host is rebooted after migrating a guest out of the system and before migrating the same guest back, the panic will not occur.

- If a system configured for `kdump` encounters a kernel panic while an IDE device is performing I/O, the system may be unable to successfully boot into the `kdump` environment. This occurs if the IDE device is controlled by a device driver other than `libata`, and is caused by a bug in the IDE/ATA driver stack.

  To work around this, use the `kdump` command-line argument `hd[X]=noprobe` for storage devices and `hd[X]=cdrom` for optical drives, where `[X]` is the device identifier. Either command-line argument should be added to `KDUMP_COMMANDLINE_APPEND` in `/etc/sysconfig/kdump`.

6.2. x86 Architectures

Known Issues

- Migrating paravirtualized guests through `xm migrate [domain] [dom0 IP address]` does not work.

- When installing Red Hat Enterprise Linux 5 on a fully virtualized SMP guest, the installation may freeze. This can occur when the host (`dom0`) is running Red Hat Enterprise Linux 5.2.

  To prevent this, set the guest to use a single processor using the install. You can do this by using the `--vcpus=1` option in `virt-install`. Once the installation is completed, you can set the guest to SMP by modifying the allocated `vcpus` in `virt-manager`.

6.3. x86-64 Architectures

Enhancements/Updates

- The hypervisor can now support up to 512GB of memory. To ensure that the system properly detects and uses this much memory, boot the virtualized kernel with the parameter `xenheap_megabytes=64`.

  For systems that use *Non-Uniform Memory Access* (NUMA), Red Hat recommends that you use the parameter `dom0_mem=512m`. Note that this can be set to a maximum of 120GB (`dom0_mem=120gb`).

- You can now run paravirtualized 32-bit guests on 64-bit hosts. This capability is now included as a technology preview. Note that the ability to save, restore, and migrate paravirtualized 32-bit guests on 64-bit hosts is not functional, and as such should not be attempted.

Known Issues

❧ Migrating paravirtualized guests through **xm migrate *[domain] [dom0 IP address]*** does not work.

❧ Creating a guest more than 1,000 times will cause **dom0** to reboot suddenly. Red Hat recommends that you pre-empt this by rebooting **dom0** before the domain ID of any guest reaches 1000.

❧ Installing the Virtualization feature may cause a

```
time went backwards
```

warning on HP systems with model numbers xw9300 and xw9400.

To work around this issue for xw9400 machines, configure the BIOS settings to enable the **HPET** timer. Note that this option is not available on xw9300 machines.

❧ Installing Red Hat Enterprise Linux 3.9 on a fully virtualized guest may be extremely slow. In addition, booting up the guest after installation may result in **hda: lost interrupt** errors.

To avoid this bootup error, configure the guest to use the SMP kernel.

❧ Upgrading a host (**dom0**) system to Red Hat Enterprise Linux 5.2 may render existing Red Hat Enterprise Linux 4.5 SMP paravirtualized guests unbootable. This is more likely to occur when the host system has more than 4GB of RAM.

To work around this, boot each Red Hat Enterprise Linux 4.5 guest in single CPU mode and upgrade its kernel to the latest version (for Red Hat Enterprise Linux 4.5.z).

6.4. ia64 Architecture

Enhancements/Updates

❧ When attempting to create a fully-virtualized guest, the hypervisor no longer hangs due to memory shortage when a large amount of memory is allocated to the guest. This version of the hypervisor automatically takes care of allocating needed memory for hypervisor overhead.

❧ Virtualization on this architecture can now support guests with RAM beyond 65,434 MB.

❧ By default, the *Itanium* **dom0** virtualized kernel can now boot with up to 4 CPUs and a maximum system memory of 4GB. In previous releases, the *Itanium* **dom0** virtualized kernel only booted with 1 CPU and a maximum system memory of 500MB by default.

In addition to this, the *Itanium* **dom0** virtualized kernel allocates as much system memory as it can (up to the 4GB maximum by default, or up to the maximum amount specified with the **dom0_mem=** parameter) while avoiding memory starvation on the hypervisor.

Known Issues

❧ Migrating paravirtualized guests through **xm migrate *[domain] [dom0 IP address]*** does not work.

❧ Creating a guest more than 1,000 times will cause **dom0** to reboot suddenly. Red Hat recommends that you pre-empt this by rebooting **dom0** before the domain ID of any guest reaches 1000.

❧ If you encounter a guest installation failure, Red Hat recommends that you restart the **xend** daemon before attempting to install a new guest.

❧ On some *Itanium* systems configured for console output to VGA, the **dom0** virtualized kernel may fail to boot. This is because the virtualized kernel failed to properly detect the default console device from the *Extensible Firmware Interface* (EFI) settings.

When this occurs, add the boot parameter **console=tty** to the kernel boot options in **/boot/efi/elilo.conf**.

❧ On some *Itanium* systems (such as the *Hitachi Cold Fusion 3e*), the serial port cannot be detected in **dom0** when VGA is enabled by the EFI Maintenance Manager. As such, you need to supply the following serial port information to the **dom0** kernel:

- Speed in bits/second

- Number of data bits

- Parity

- **io_base** address

These details must be specified in the **append=** line of the **dom0** kernel in **/boot/efi/elilo.conf**. For example:

```
append="com1=19200,8n1,0x3f8—quiet rhgb console=tty0
console=ttyS0,19200n8"
```

In this example, **com1** is the serial port, **19200** is the speed (in bits/second), **8n1** specifies the number of data bits/parity settings, and **0x3f8** is the **io_base** address.

❧ Virtualization does not work on architectures that use NUMA. As such, installing the virtualized kernel on systems that use NUMA will result in a boot failure.

Some installation numbers install the virtualized kernel by default. If you have such an installation number and your system uses NUMA (or cannot disable NUMA), deselect the Virtualization option during installation.

❧ Currently, live migration of fully virtualized guests is not supported on this architecture. In addition, **kexec** and **kdump** are also not supported for virtualization on this architecture.

7. Technology Previews

Technology Preview features are currently *not* supported under Red Hat Enterprise Linux subscription services, may not be functionally complete, and are generally not suitable for production use. However, these features are included as a customer convenience and to provide the feature with wider exposure.

Customers may find these features useful in a non-production environment. Customers are also free to provide feedback and functionality suggestions for a Technology Preview feature before it becomes fully supported. Erratas will be provided for high-severity security issues.

During the development of a Technology Preview feature, additional components may become available to the public for testing. It is the intention of Red Hat to fully support Technology Preview features in a future release.

7.1. All Architectures

ALUA Mode on *EMC Clariion*

Explicit active-passive failover (ALUA) mode using **dm-multipath** on *EMC Clariion* storage is now available. This mode is provided as per T10 specifications, but is provided in this release only as a technology preview.

For more information about T10, refer to http://www.t10.org.

radeon_tp

The **radeon_tp** driver is now included in this release as a Technology Preview. This driver enables the *ATI R500/R600* chipsets.

This driver also features the following capabilities:

- Modesetting on *R500/R600* chipsets

- 2D acceleration on *R500* chipsets

- Shadow framebuffer acceleration on *R600* chipsets

FreeIPMI

FreeIPMI is now included in this update as a Technology Preview. FreeIPMI is a collection of Intelligent Platform Management IPMI system software. It provides in-band and out-of-band software, along with a development library conforming to the Intelligent Platform Management Interface (IPMI v1.5 and v2.0) standards.

For more information about FreeIPMI, refer to http://www.gnu.org/software/freeipmi/

Frysk

The goal of the **frysk** project is to create an intelligent, distributed, always-on system monitoring and debugging tool that allows developers and system administrators to:

- monitor running processes and threads (including creation and destruction events)

- monitor the use of locking primitives

- expose deadlocks

- gather data

- debug any given process by choosing it from a list or allowing **frysk** to open a source code (or other) window on a process that is crashing or misbehaving

This updated version of **frysk** includes the following new utilities:

- **fauxv**

- **fdebuginfo**

- **fdebugrpm**

- **ferror**

- **fexe**

- **fmaps**

In addition, **ftrace** can now perform signal and function symbol tracing. In previous releases, **ftrace** could only perform system call tracing.

frysk was introduced in Red Hat Enterprise Linux 5, and is still included in this release as a Technology Preview. For more information about **frysk**, refer to http://sources.redhat.com/frysk/.

TrouSerS and tpm-tools

TrouSerS and **tpm-tools** are included in this release to enable use of *Trusted Platform Module* (TPM) hardware.TPM hardware features include (among others):

» Creation, storage, and use of RSA keys securely (without being exposed in memory)

» Verification of a platform's software state using cryptographic hashes

TrouSerS is an implementation of the Trusted Computing Group's Software Stack (TSS) specification. You can use TrouSerS to write applications that make use of TPM hardware. **tpm-tools** is a suite of tools used to manage and utilize TPM hardware.

For more information about TrouSerS, refer to http://trousers.sourceforge.net/.

eCryptfs

eCryptfs is a stacked cryptographic file system for Linux. It mounts on individual directories in existing mounted lower file systems such as EXT3; there is no need to change existing partitions or file systems in order to start using **eCryptfs**.

eCryptfs stores cryptographic metadata in the header of each file written to the lower file system. This enables you to copy encrypted files between hosts or directly onto backup media. Files encrypted and copied in this manner can be decrypted with the proper key.

This release's version of **eCryptfs** provides several key management options, including protection based on passphrases and public keys. Below is a list of other fully functional features:

» Interactive and non-interactive mounting.

» Compatibility with SELinux.

» Cryptographic metadata storage in both **xattrs** and file headers.

At present, the following issues still exist with **eCryptfs**:

» **direct_IO** is not implemented.

» Complex I/O patterns within the **mmap** implementation in **eCryptfs** may cause data corruption in some cases.

» **eCryptfs** cannot be used for root file systems.

For more information about **eCryptfs**, refer to http://ecryptfs.sf.net. You can also refer to http://ecryptfs.sourceforge.net/README and http://ecryptfs.sourceforge.net/ecryptfs-faq.html for basic setup information.

GFS2

GFS2 is an incremental advancement of GFS. This update applies several significant improvements that require a change to the on-disk file system format. GFS file systems can be converted to GFS2 using the utility **gfs2_convert**, which updates the metadata of a GFS file system accordingly.

While much improved since its introduction in Red Hat Enterprise Linux 5, GFS2 remains a Technology Preview. Benchmark tests indicate faster performance on the following:

> heavy usage in a single directory and faster directory scans (Postmark benchmark)

> synchronous I/O operations (**fstest** benchmark test indicates improved performance for messaging applications like TIBCO)

> cached reads, as there is no longer any locking overhead

> direct I/O to preallocated files

> NFS file handle lookups

> **df**, as allocation information is now cached

In addition, GFS2 also features the following changes:

> journals are now plain (though hidden) files instead of metadata. Journals can now be dynamically added as additional servers mount a file system.

> quotas are now enabled and disabled by the mount option **quota=<on|off|account>**

> **quiesce** is no longer needed on a cluster to replay journals for failure recovery

> nanosecond timestamps are now supported

> similar to ext3, GFS2 now supports the **data=ordered** mode

> attribute settings **lsattr()** and **chattr()** are now supported via standard **ioctl()**

> file system sizes above 16TB are now supported

> GFS2 is a standard file system, and can be used in non-clustered configurations

Stateless Linux

Stateless Linux is a new way of thinking about how a system should be run and managed, designed to simplify provisioning and management of large numbers of systems by making them easily replaceable. This is accomplished primarily by establishing prepared system images which get replicated and managed across a large number of stateless systems, running the operating system in a read-only manner (refer to **/etc/sysconfig/readonly-root** for more details).

In its current state of development, the Stateless features are subsets of the intended goals. As such, the capability remains as Technology Preview.

Red Hat recommends that those interested in testing stateless code read the HOWTO at http://fedoraproject.org/wiki/StatelessLinux/HOWTO and join stateless-list@redhat.com.

The enabling infrastructure pieces for Stateless Linux were originally introduced in Red Hat Enterprise Linux 5.

AIGLX

AIGLX is a Technology Preview feature of the otherwise fully supported X server. It aims to enable GL-accelerated effects on a standard desktop. The project consists of the following:

> A lightly modified X server.

> An updated Mesa package that adds new protocol support.

By installing these components, you can have GL-accelerated effects on your desktop with very few changes, as well as the ability to enable and disable them at will without replacing your X server. AIGLX also enables remote GLX applications to take advantage of hardware GLX acceleration.

iSCSI Target

The Linux target (tgt) framework allows a system to serve block-level SCSI storage to other systems that have a SCSI initiator. This capability is being initially deployed as a Linux iSCSI target, serving storage over a network to any iSCSI initiator.

To set up the iSCSI target, install the **scsi-target-utils** RPM and refer to the instructions in:

- **/usr/share/doc/scsi-target-utils-*[version]*/README**

- **/usr/share/doc/scsi-target-utils-*[version]*/README.iscsi**

Replace *[version]* with the corresponding version of the package installed.

For more information, refer to **man tgtadm**.

FireWire

The **firewire-sbp2** module is still included in this update as a Technology Preview. This module enables connectivity with FireWire storage devices and scanners.

At present, FireWire does not support the following:

- IPv4

- *pcilynx* host controllers

- multi-LUN storage devices

- non-exclusive access to storage devices

In addition, the following issues still exist in FireWire:

- a memory leak in the **SBP2** driver may cause the machine to become unresponsive.

- a code in this version does not work properly in big-endian machines. This could lead to unexpected behavior in PowerPC.

7.2. x86 Architectures

mac80211 802.11a/b/g WiFi protocol stack (mac80211)

The *mac80211* stack (formerly known as the *devicescape/d80211* stack) enables the **iwlwifi 4965GN** wireless driver for *Intel* Wifi Link 4965 hardware. This stack allows certain wireless devices to connect to any Wi-Fi network.

Although the stack is already accepted upstream, the stability of this stack is yet to be verified through testing. As such, this stack is included in this release as a Technology Preview.

7.3. x86-64 Architectures

mac80211 802.11a/b/g WiFi protocol stack (mac80211)

The *mac80211* stack (formerly known as the *devicescape/d80211* stack) enables the `iwlwifi 4965GN` wireless driver for *Intel* Wifi Link 4965 hardware. This stack allows certain wireless devices to connect to any Wi-Fi network.

Although the stack is already accepted upstream, the stability of this stack is yet to be verified through testing. As such, this stack is included in this release as a Technology Preview.

8. Resolved Issues

8.1. All Architectures

- *Netapp* devices can now complete failback (after a previously-failed path is restored) within a reasonable time with the default `dm-multipath` configuration.

- `system-config-kickstart` now supports package selection through the Red Hat Network plugin.

- `kudzu` can now properly parse `ifcfg-*` files that contain quotes around the `HWADDR` or `SUBCHANNELS` parameters. In addition, if a device's `HWADDR` is not specified, `kudzu` no longer modifies network configurations when the device is changed.

- Running `netstat` with the `-A inet` or `-A inet6` option (on a system where `sctp` was not added to the kernel) no longer terminates abnormally. Note, however, that `netstat` will display the following warning message when invoked with the `-s` option:

```
netstat: no support for `AF INET (sctp)' on this system.
```

- The `nohide` export option is no longer required on referral exports (i.e. exports that specify a referral server). For more information on bound mounts, refer to `man 5 exports`.

- The priority callouts of `dm-multipath` are now statically compiled and copied onto the memory of `multipathd`. As such, `multipathd` no longer requires access to the root file system in order to execute priority callouts.

  This fixes a problem that occurred when running `dm-multipath` on devices containing the root file system, which caused such devices to freeze during fibre-channel path faults.

- `parted` can now understand and correctly print out Xen Virtual Device (XVD) partition labels. This allows paravirtualized guests to use the `parted` utility. It is no longer necessary to run `parted` within `dom0` to configure disk partitions on paravirtualized guests.

- When upgrading to Red Hat Enterprise Linux 5.2 via Red Hat Network, you no longer need to manually import the redhat-beta key prior to upgrading.

- Systems using the *AMD 8132* or *HT 1000* chipsets no longer need the `pci=nommconf` kernel parameter.

  Note that the system will still restrict such bridges to using the *PortIO CF8/CFC* mechanism. However, bridges (including those on the same platform) that respond correctly to `MMCONFIG` cycles will use `MMCONFIG`, provided that the platform's BIOS correctly supports `MMCONFIG`.

  However, if you are installing Red Hat Enterprise Linux 5.2 on an *HP DC7800*, the kernel parameter, `pci=nommconf`, is still needed. This is because the *HP DC7800* is not yet included in the `MMCONF` blacklist.

- Previous versions of Red Hat Enterprise Linux 5 on *HP BL860c* blade systems could hang during the IP information request stage of installation. When this occurred, you were required to reboot and perform the installation with Ethernet autonegotiation disabled.

Red Hat Enterprise Linux 5.2 includes a fix for this issue.

❥ *Gemalto 64K* smart cards now use Chip/Smart Card Interface Devices-compliant (CCID-compliant) readers. Previously, this smart card used the built-in e-gate reader, which essentially meant that the card and reader were being inserted at the same time. As a result, **coolkey** did not consistently recognize *Gemalto 64K* smart cards.

With this update, **coolkey** now works correctly with *Gemalto 64k* smart cards.

8.2. x86-64 Architectures

❥ Systems equipped with *Intel* graphics cards that have the **XD** (execute disable) option disabled no longer crash upon exiting an X session.

❥ Using the **divider=** command-line argument now works properly on this architecture.

❥ The *Calgary IOMMU* chip is now supported by default. As such, the kernel command line option **iommu=calgary** to enable support for this chip is no longer necessary.

8.3. ia64 Architecture

❥ Kernel modules such as **e1000** and **qla2xxx** can now be unloaded while running the virtualized kernel. As such, you no longer need to reboot the system after installing third-party drivers.

❥ The X server no longer attempts to utilize memory regions incompatible to its needs. This fixes a bug that previously caused a *Machine Check Abort* (MCA) on some *Itanium* systems.

❥ A machine check error (which previously resulted in a **dom0** reboot) no longer occurs when you attempt to run the virtualized kernel on systems that use the *P600 SmartArray* controller.

9. Known Issues

9.1. All Architectures

❥ A bug in the updated **/etc/udev/rules.d/50-udev.rules** file prevents the creation of persistent names for tape devices with numbers higher than 9 in their names. For example, a persistent name will not be created for a tape device with a name of **nst12**.

To work around this, add an asterisk (*) after each occurrence of the string **nst[0-9]** in **/etc/udev/rules.d/50-udev.rules**.

❥ The **smartctl** tool cannot properly read SMART parameters from SATA devices.

❥ A bug in previous versions of **openmpi** and **lam** may prevent you from upgrading these packages. This bug manifests in the following error (when attempting to upgrade **openmpi** or **lam**:

```
error: %preun(openmpi-[version]) scriptlet failed, exit status 2
```

As such, you need to manually remove older versions of **openmpi** and **lam** in order to install their latest versions. To do so, use the following **rpm** command:

```
rpm -qa | grep '^openmpi-\|^lam-' | xargs rpm -e --noscripts --allmatches
```

❥ Some controller names (specifically, newer ones) printed by the **cciss** driver are incorrect, and will not match correctly with the names listed in the *HP* documentation. The **cciss** firmware, however, will be

able to correctly print the names of each attached controller at boot-time.

❧ When using **dm-multipath**, if **features "1 queue_if_no_path"** is specified in **/etc/multipath.conf** then any process that issues I/O will hang until one or more paths are restored.

To avoid this, set **no_path_retry *[N]*** in **/etc/multipath.conf** (where ***[N]*** is the number of times the system should retry a path). When you do, remove the **features "1 queue_if_no_path"** option from **/etc/multipath.conf** as well.

❧ Enabling multiple installed versions of the same kernel module is not supported. In addition to this, a bug in the way kernel module versions are parsed can sometimes result in enabling an older version of the same kernel module.

Red Hat recommends that when you install a newer version of an installed kernel module, you should delete the older one first.

❧ Executing **kdump** on an *IBM Bladecenter QS21* or *QS22* configured with NFS root will fail. To avoid this, specify an NFS dump target in **/etc/kdump.conf**.

❧ *IBM T60* laptops will power off completely when suspended and plugged into a docking station. To avoid this, boot the system with the argument **acpi_sleep=s3_bios**.

❧ The *QLogic iSCSI Expansion Card* for the *IBM Bladecenter* provides both ethernet and iSCSI functions. Some parts on the card are shared by both functions. However, the current **qla3xxx** and **qla4xxx** drivers support ethernet and iSCSI functions individually. Both drivers do not support the use of ethernet and iSCSI functions simultaneously.

Because of this limitation, successive resets (via consecutive **ifdown**/**ifup** commands) may hang the device. To avoid this, allow a 10-second interval after an **ifup** before issuing an **ifdown**. Also, allow the same 10-second interval after an **ifdown** before issuing an **ifup**. This interval allows ample time to stabilize and re-initialize all functions when an **ifup** is issued.

❧ Laptops equipped with the *Cisco Aironet MPI-350* wireless may hang trying to get a DHCP address during any network-based installation using the wired ethernet port.

To work around this, use local media for your installation. Alternatively, you can disable the wireless card in the laptop BIOS prior to installation (you can re-enable the wireless card after completing the installation).

❧ Boot-time logging to **/var/log/boot.log** is not available in Red Hat Enterprise Linux 5.2.

❧ The system may not successfully reboot into a **kexec**/**kdump** kernel if X is running and using a driver other than *vesa*. This problem only exists with *ATI Rage XL* graphics chipsets.

If X is running on a system equipped with *ATI Rage XL*, ensure that it is using the *vesa* driver in order to successfully reboot into a **kexec**/**kdump** kernel.

❧ When using Red Hat Enterprise Linux 5.2 on a machine with an *nVidia CK804* chipset installed, the following kernel messages may appear:

```
kernel: assign_interrupt_mode Found MSI capability
kernel: pcie_portdrv_probe->Dev[005d:10de] has invalid IRQ. Check vendor
BIOS
```

These messages indicate that certain PCI-E ports are not requesting IRQs. They do not, however, affect the operation of the machine in any way.

❧ Removable storage devices (such as CDs and DVDs) do not automatically mount when you are logged in as root. As such, you will need to manually mount the device through the graphical file manager.

Alternatively, you can run the following command to mount a device to **/media**:

```
mount /dev/[device name] /media
```

❧ When a LUN is deleted on a configured storage system, the change is not reflected on the host. In such cases, **lvm** commands will hang indefinitely when **dm-multipath** is used, as the LUN has now become *stale*.

To work around this, delete all device and **mpath** link entries in **/etc/lvm/.cache** specific to the stale LUN.

To find out what these entries are, run the following command:

ls -l /dev/mpath | grep *[stale LUN]*

For example, if *[stale LUN]* is 3600d0230003414f30000203a7bc41a00, the following results may appear:

```
lrwxrwxrwx 1 root root 7 Aug  2 10:33 /3600d0230003414f30000203a7bc41a00 -
> ../dm-4
lrwxrwxrwx 1 root root 7 Aug  2 10:33 /3600d0230003414f30000203a7bc41a00p1
-> ../dm-5
```

This means that 3600d0230003414f30000203a7bc41a00 is mapped to two **mpath** links: **dm-4** and **dm-5**.

As such, the following lines should be deleted from **/etc/lvm/.cache**:

```
/dev/dm-4
/dev/dm-5
/dev/mapper/3600d0230003414f30000203a7bc41a00
/dev/mapper/3600d0230003414f30000203a7bc41a00p1
/dev/mpath/3600d0230003414f30000203a7bc41a00
/dev/mpath/3600d0230003414f30000203a7bc41a00p1
```

❧ Running the **multipath** command with the **-ll** option can cause the command to hang if one of the paths is on a blocking device. Note that the driver does not fail a request after some time if the device does not respond.

This is caused by the cleanup code, which waits until the path checker request either completes or fails. To display the current **multipath** state without hanging the command, use **multipath -l** instead.

❧ The system may not successfully reboot into a **kexec/kdump** kernel if X is running and using a driver other than *vesa*. This problem only exists with *ATI Rage XL* graphics chipsets.

If X is running on a system equipped with *ATI Rage XL*, ensure that it is using the *vesa* driver in order to successfully reboot into a **kexec/kdump** kernel.

❧ Upgrading **pm-utils** from a Red Hat Enterprise Linux 5.2 Beta version of **pm-utils** will fail, resulting in the following error:

```
error: unpacking of archive failed on file /etc/pm/sleep.d: cpio: rename
```

To prevent this from occurring, delete the **/etc/pm/sleep.d/** directory prior to upgrading. If **/etc/pm/sleep.d** contains any files, move those files to **/etc/pm/hooks/**.

❱ Hardware testing for the *Mellanox MT25204* has revealed that an internal error occurs under certain high-load conditions. When the **ib_mthca** driver reports a catastrophic error on this hardware, it is usually related to an insufficient completion queue depth relative to the number of outstanding work requests generated by the user application.

Although the driver will reset the hardware and recover from such an event, all existing connections at the time of the error will be lost. This generally results in a segmentation fault in the user application. Further, if **opensm** is running at the time the error occurs, then you need to manually restart it in order to resume proper operation.

❱ Attempting to run **sniff** may result in an error. This is because some required packages are not installed with **dogtail**.

To prevent this from occurring, install the following packages manually:

- ▫ librsvg2

- ▫ ghostscript-fonts

- ▫ pygtk2-libglade

❱ It is not possible to configure **layer 2** through **system-config-network-gui**.

9.2. x86 Architectures

❱ When running the bare-metal (non-Virtualized) kernel, the X server may not be able to retrieve **EDID** information from the monitor. When this occurs, the graphics driver will be unable to display resolutions highers than 800x600.

To work around this, add the following line to the **ServerLayout** section of **/etc/X11/xorg.conf**:

```
Option "Int10Backend" "x86emu"
```

9.3. x86-64 Architectures

❱ Some machines that use *NVIDIA* graphics cards may display corrupted graphics or fonts when using the graphical installer or during a graphical login. To work around this, switch to a virtual console and back to the original X host.

9.4. PowerPC Architectures

❱ When using **Alt**-**SysRq**-**W** to debug, the following warning message will appear:

```
Badness in smp_call_function at arch/powerpc/kernel/smp.c:223
```

Afterwards, the system will also warn that it will hang. This message should be ignored as it will not cause the system to hang.

9.5. s390x Architectures

❱ When running Red Hat Enterprise Linux 5.2 on a z/VM that has more than 2GB of guest storage defined, invalid data can be read from and written to any FCP and OSA device attached in QDIO mode with the

Queued-I/O assist (QIOASSIST) option enabled. If your system has any such devices attached, Red Hat recommends that you download and install the corresponding z/VM Program Temporary Fix (PTF) from the following link:

http://www-1.ibm.com/support/docview.wss?uid=isg1VM64306

※ The *IBM System z* does not provide a traditional Unix-style physical console. As such, Red Hat Enterprise Linux 5.2 for the *IBM System z* does not support the *firstboot* functionality during initial program load.

To properly initialize setup for Red Hat Enterprise Linux 5.2 on the *IBM System z*, run the following commands after installation:

- `/usr/bin/setup` — provided by the **setuptool** package.

- `/usr/bin/rhn_register` — provided by the **rhn-setup** package.

※ It is not possible to directly read and convert a z/VM dump into a file. Instead, you should first copy the dump from the z/VM reader into a Linux file system using **vmur** and convert the dump into a Linux-readable file using **vmconvert**.

9.6. ia64 Architecture

※ Some *Itanium* systems cannot properly produce console output from the **kexec purgatory** code. This code contains instructions for backing up the first 640k of memory after a crash.

While **purgatory** console output can be useful in diagnosing problems, it is not needed for **kdump** to properly function. As such, if your *Itanium* system resets during a **kdump** operation, disable console output in **purgatory** by adding **--noio** to the **KEXEC_ARGS** variable in **/etc/sysconfig/kdump**.

10. Added Packages

dapl-2.0.7-2.el5

※ Group:

```
System Environment/Libraries
```

※ Summary:

```
Library providing access to the DAT 1.2 and 2.0 APIs
```

※ Description:

```
libdat and libdapl provide a userspace implementation of the DAT
1.2 and 2.0
API that is built to natively support InfiniBand/iWARP network
technology.
```

dstat-0.6.6-3.el5

※ Group:

```
System Environment/Base
```

Summary:

```
Versatile resource statistics tool
```

Description:

```
Dstat is a versatile replacement for vmstat, iostat, netstat and
ifstat.
Dstat overcomes some of their limitations and adds some extra
features,
more counters and flexibility. Dstat is handy for monitoring
systems
during performance tuning tests, benchmarks or troubleshooting.

Dstat allows you to view all of your system resources instantly,
you
can eg. compare disk usage in combination with interrupts from
your
IDE controller, or compare the network bandwidth numbers directly
with the disk throughput (in the same interval).

Dstat gives you detailed selective information in columns and
clearly
indicates in what magnitude and unit the output is displayed. Less
confusion, less mistakes.
```

ecryptfs-utils-41-1.el5

Group:

```
System Environment/Base
```

Summary:

```
The eCryptfs mount helper and support libraries
```

Description:

```
eCryptfs is a stacked cryptographic filesystem that ships in the
Linux kernel. This package provides the mount helper and
supporting
libraries to perform key management and mount functions.

Install ecryptfs-utils if you would like to mount eCryptfs.
```

freeipmi-0.5.1-5.el5

Group:

```
Applications/System
```

Summary:

```
FreeIPMI
```

≫ Description:

```
The FreeIPMI project provides "Remote-Console" (out-of-band) and
"System Management Software" (in-band) based on Intelligent
Platform Management Interface specification.

This package contains a Technology Preview for FreeIPMI. Please
visit
http://www.redhat.com/support/service/ for details on the Red Hat
support
policies.
```

gtk-vnc-0.3.2-3.el5

≫ Group:

```
Development/Libraries
```

≫ Summary:

```
A GTK widget for VNC clients
```

≫ Description:

```
gtk-vnc is a VNC viewer widget for GTK. It is built using
coroutines
allowing it to be completely asynchronous while remaining single
threaded.
```

ibsim-0.4-2.el5

≫ Group:

```
System Environment/Libraries
```

≫ Summary:

```
InfiniBand fabric simulator for management
```

≫ Description:

```
ibsim provides simulation of infiniband fabric for using with OFA
OpenSM,
diagnostic and management tools.
```

infiniband-diags-1.3.6-1.el5

≫ Group:

```
System Environment/Libraries
```

≫ Summary:

```
OpenFabrics Alliance InfiniBand Diagnostic Tools
```

➤ Description:

```
This package provides IB diagnostic programs and scripts needed to
diagnose an IB subnet.
```

isns-utils-0.91-0.1.el5

➤ Group:

```
System Environment/Daemons
```

➤ Summary:

```
The iSNS daemon and utility programs
```

➤ Description:

```
The iSNS package contains the daemon and tools to setup a iSNS
server,
and iSNS client tools. The Internet Storage Name Service (iSNS)
protocol
allows automated discovery, management and configuration of iSCSI
and
Fibre Channel devices (using iFCP gateways) on a TCP/IP network.
```

libcxgb3-1.1.4-1.el5

➤ Group:

```
System Environment/Libraries
```

➤ Summary:

```
Chelsio T3 iWARP HCA Userspace Driver
```

➤ Description:

```
Userspace hardware driver for use with the libibverbs
InfiniBand/iWARP verbs
library. This driver enables Chelsio iWARP capable ethernet
devices.
```

libehca-1.2-1.el5

➤ Group:

```
System Environment/Libraries
```

➤ Summary:

```
IBM InfiniBand HCA Userspace Driver
```

» Description:

```
IBM hardware driver for use with libibverbs user space verbs
access
library.
```

libibcm-1.0.2-1.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
Userspace InfiniBand Communication Manager.
```

» Description:

```
libibcm provides a userspace InfiniBand Communication Managment
library.
```

libibcommon-1.0.8-1.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
OpenFabrics Alliance InfiniBand management common library
```

» Description:

```
libibcommon provides common utility functions for the OFA
diagnostic and
management tools.
```

libibmad-1.1.6-1.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
OpenFabrics Alliance InfiniBand MAD library
```

» Description:

```
libibmad provides low layer IB functions for use by the IB
diagnostic
and management programs. These include MAD, SA, SMP, and other
```

```
basic
IB functions.
```

libibumad-1.1.7-1.el5

❧ Group:

```
System Environment/Libraries
```

❧ Summary:

```
OpenFabrics Alliance InfiniBand umad (user MAD) library
```

❧ Description:

```
libibumad provides the user MAD library functions which sit on top
of
the user MAD modules in the kernel. These are used by the IB
diagnostic
and management tools, including OpenSM.
```

libibverbs-1.1.1-9.el5

❧ Group:

```
System Environment/Libraries
```

❧ Summary:

```
Library providing access to InfiniBand/iWARP hardware verbs
protocol
```

❧ Description:

```
libibverbs is a library that allows userspace processes to use
InfiniBand/iWARP "verbs" as described in the InfiniBand
Architecture
Specification. This includes direct hardware access for fast path
operations.

For this library to be useful, a device-specific plug-in module
should
also be installed.
```

libipathverbs-1.1-10.el5

❧ Group:

```
System Environment/Libraries
```

❧ Summary:

```
QLogic InfiniPath HCA Userspace Driver
```

» Description:

```
QLogic hardware driver for use with libibverbs user space verbs
access
library. This driver supports QLogic InfiniPath based cards.
```

libmlx4-1.0-3.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
Mellanox ConnectX InfiniBand HCA Userspace Driver
```

» Description:

```
Mellanox hardware driver for use with libibverbs user space verbs
access
library. This driver supports Mellanox ConnectX architecture
cards.
```

libmthca-1.0.4-9.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
Mellanox InfiniBand HCA Userspace Driver
```

» Description:

```
Mellanox hardware driver for use with libibverbs user space verbs
access
library. This driver supports Mellanox based Single Data Rate and
Dual Data
Rate cards, including those from Cisco, Topspin, and Voltaire. It
does
not support the Connect-X architecture based Quad Data Rate cards
(libmlx4
handles that hardware).
```

libnes-0.5-2.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
NetEffect RNIC Userspace Driver
```

» Description:

```
Userspace hardware driver for use with the libibverbs
InfiniBand/iWARP verbs
library. This driver enables NetEffect iWARP capable ethernet
devices.
```

librdmacm-1.0.7-1.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
Userspace RDMA Connection Manager.
```

» Description:

```
librdmacm provides a userspace RDMA Communication Managment API.
```

libsdp-1.1.99-9.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
A library for direct userspace use of Sockets Direct Protocol
```

» Description:

```
libsdp is an LD_PRELOAD-able library that can be used to have
existing
applications use InfiniBand Sockets Direct Protocol (SDP) instead
of
TCP sockets, transparently and without recompilation. For
information
on how to configure libsdp, see libsdp.conf, which is installed in
$(sysconfdir) (usually /usr/local/etc or /etc).
```

libsmi-0.4.5-2.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
A library to access SMI MIB information
```

» Description:

```
Libsmi is a C library to access MIB module information through
a well defined API that hides the nasty details of locating
and parsing SMIv1/v2 MIB modules.

This package contains tools to check, dump, and convert MIB
definitions and a steadily maintained and revised archive
of all IETF and IANA maintained standard MIB modules.
```

mpi-selector-1.0.0-2.el5

» Group:

```
System Environment/Base
```

» Summary:

```
Provides site-wide and per-user MPI implementation selection
```

» Description:

```
A simple tool that allows system administrators to set a site-wide
default for which MPI implementation is to be used, but also allow
users to set their own default MPI implementation, thereby
overriding
the site-wide default.

The default can be changed easily via the mpi-selector command —
editing of shell startup files is not required.
```

mstflint-1.3-1.el5

» Group:

```
Applications/System
```

» Summary:

```
Mellanox firmware burning tool
```

» Description:

```
This package contains a burning tool for Mellanox manufactured HCA
cards.
It also provides access to the relevant source code.
```

nspluginwrapper-0.9.91.5-21.el5

» Group:

```
Networking/WWW
```

> Summary:

```
A compatibility layer for Netscape 4 plugins
```

> Description:

```
nspluginwrapper makes it possible to use Netscape 4 compatible
plugins
compiled for ppc into Mozilla for another architecture, e.g.
x86_64.

This package consists in:
* npviewer: the plugin viewer
* npwrapper.so: the browser-side plugin
* mozilla-plugin-config: a tool to manage plugins installation and
update
```

ofed-docs-1.3-3.el5

> Group:

```
Documentation/Man
```

> Summary:

```
OpenFabrics Enterprise Distribution documentation
```

> Description:

```
Documentation from OFED 1.3
```

opensm-3.1.8-1.el5

> Group:

```
System Environment/Daemons
```

> Summary:

```
OpenIB InfiniBand Subnet Manager and management utilities
```

> Description:

```
OpenSM is the OpenIB project's Subnet Manager for Infiniband
networks.
The subnet manager is run as a system daemon on one of the
machines in
the infiniband fabric to manage the fabric's routing state. This
package
also contains various tools for diagnosing and testing Infiniband
networks
that can be used from any machine and do not need to be run on a
machine
running the opensm daemon.
```

openswan-2.6.12-2.el5

» Group:

```
System Environment/Daemons
```

» Summary:

```
Openswan IPSEC implementation
```

» Description:

```
Openswan is a free implementation of IPSEC & IKE for Linux. IPSEC
is
the Internet Protocol Security and uses strong cryptography to
provide
both authentication and encryption services. These services allow
you
to build secure tunnels through untrusted networks. Everything
passing
through the untrusted net is encrypted by the ipsec gateway
machine and
decrypted by the gateway at the other end of the tunnel. The
resulting
tunnel is a virtual private network or VPN.

This package contains the daemons and userland tools for setting
up
Openswan on a freeswan enabled kernel.
```

perftest-1.2-10.el5

» Group:

```
Productivity/Networking/Diagnostic
```

» Summary:

```
IB Performance tests
```

» Description:

```
gen2 uverbs microbenchmarks
```

pexpect-2.3-1.el5

» Group:

```
Development/Languages
```

» Summary:

```
Pure Python Expect-like module
```

  ➤ Description:

```
Pexpect is a pure Python module for spawning child applications;
controlling
them; and responding to expected patterns in their output. Pexpect
works like
Don Libes' Expect. Pexpect allows your script to spawn a child
application and
control it as if a human were typing commands.

Pexpect can be used for automating interactive applications such
as ssh, ftp,
passwd, telnet, etc. It can be used to automate setup scripts for
duplicating
software package installations on different servers. And it can be
used for
automated software testing. Pexpect is in the spirit of Don Libes'
Expect, but
Pexpect is pure Python. Unlike other Expect-like modules for
Python, Pexpect
does not require TCL or Expect nor does it require C extensions to
be compiled.
It should work on any platform that supports the standard Python
pty module.
```

python-iniparse-0.2.3-4.el5

  ➤ Group:

```
Development/Libraries
```

  ➤ Summary:

```
Python Module for Accessing and Modifying Configuration Data in
INI files
```

  ➤ Description:

```
iniparse is an INI parser for Python which is API compatible
with the standard library's ConfigParser, preserves structure of
INI
files (order of sections & options, indentation, comments, and
blank
lines are preserved when data is updated), and is more convenient
to
use.
```

python-setuptools-0.6c5-2.el5

  ➤ Group:

```
Development/Languages
```

» Summary:

```
Download, build, install, upgrade, and uninstall Python packages
```

» Description:

```
setuptools is a collection of enhancements to the Python distutils
that allow
you to more easily build and distribute Python packages,
especially ones that
have dependencies on other packages.
```

qlvnictools-0.0.1-8.el5

» Group:

```
System Environment/Base
```

» Summary:

```
VNIC ULP service
```

» Description:

```
VNIC ULP service
```

qperf-0.4.0-1.el5

» Group:

```
Networking/Diagnostic
```

» Summary:

```
Measure socket and RDMA performance
```

» Description:

```
Measure socket and RDMA performance.
```

rsyslog-2.0.0-11.el5

» Group:

```
System Environment/Daemons
```

» Summary:

```
Enhanced system logging and kernel message trapping daemons
```

» Description:

```
Rsyslog is an enhanced multi-threaded syslogd supporting, among
others, MySQL,
syslog/tcp, RFC 3195, permitted sender lists, filtering on any
message part,
and fine grain output format control. It is quite compatible to
stock sysklogd
and can be used as a drop-in replacement. Its advanced features
make it
suitable for enterprise-class, encryption protected syslog relay
chains while
at the same time being very easy to setup for the novice user.
```

setroubleshoot-plugins-2.0.4-2.el5

> » Group:

```
Applications/System
```

> » Summary:

```
Analysis plugins for use with setroubleshoot
```

> » Description:

```
This package provides a set of analysis plugins for use with
setroubleshoot. Each plugin has the capacity to analyze SELinux
AVC
data and system data to provide user friendly reports describing
how
to interpret SELinux AVC denials.
```

srptools-0.0.4-2.el5

> » Group:

```
System Environment/Base
```

> » Summary:

```
Tools for using the InfiniBand SRP protocol devices
```

> » Description:

```
In conjunction with the kernel ib_srp driver, srptools allows you
to
discover and use SCSI devices via the SCSI RDMA Protocol over
InfiniBand.
```

system-config-netboot-0.1.45.1-1.el5

> » Group:

```
Applications/System
```

» Summary:

```
network booting/install configuration utility (GUI)
```

» Description:

```
system-config-netboot is a utility which allows you to configure
diskless environments and network installations.
```

tpm-tools-1.3.1-1.el5

» Group:

```
Applications/System
```

» Summary:

```
Management tools for the TPM hardware
```

» Description:

```
tpm-tools is a group of tools to manage and utilize the Trusted
Computing
Group's TPM hardware. TPM hardware can create, store and use RSA
keys
securely (without ever being exposed in memory), verify a
platform's
software state using cryptographic hashes and more.
```

trousers-0.3.1-4.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
TCG's Software Stack v1.2
```

» Description:

```
TrouSerS is an implementation of the Trusted Computing Group's
Software Stack
(TSS) specification. You can use TrouSerS to write applications
that make use
of your TPM hardware. TPM hardware can create, store and use RSA
keys
securely (without ever being exposed in memory), verify a
platform's software
state using cryptographic hashes and more.
```

tvflash-0.9.0-2.el5

» Group:

```
Applications/System
```

» Summary:

```
Tool to manage Mellanox HCA firmware flash memory
```

» Description:

```
tvflash is used to query and update the firmware flash memory
attached
to Mellanox InfiniBand HCAs.
```

udftools-1.0.0b3-0.1.el5

» Group:

```
Applications/Archiving
```

» Summary:

```
Linux UDF Filesystem userspace utilities
```

» Description:

```
Linux UDF Filesystem userspace utilities.
```

virt-viewer-0.0.2-2.el5

» Group:

```
Applications/System
```

» Summary:

```
Virtual Machine Viewer
```

» Description:

```
Virtual Machine Viewer provides a graphical console client for
connecting
to virtual machines. It uses the GTK-VNC widget to provide the
display,
and libvirt for looking up VNC server details.
```

wdaemon-0.13-1

» Group:

```
User Interface/X Hardware Support
```

» Summary:

```
Hotplug helper for Wacom X.org driver
```

  » Description:

```
Helper application which emulates persistent input devices for
Wacom tablets
so they can be plugged and unplugged while X.org server is
running. This should
go away as soon X.org properly supports hotplugging.
```

xulrunner-1.9-0.beta5.6.el5

  » Group:

```
Applications/Internet
```

  » Summary:

```
XUL Runtime for Gecko Applications
```

  » Description:

```
XULRunner provides the XUL Runtime environment for Gecko
applications.
```

yum-updatesd-0.9-2.el5

  » Group:

```
System Environment/Base
```

  » Summary:

```
Update notification daemon
```

  » Description:

```
yum-updatesd provides a daemon which checks for available updates
and
can notify you when they are available via email, syslog or dbus.
```

11. Dropped Packages

No packages listed here.

12. Updated Packages

Deployment_Guide-5.1.0-11 - Deployment_Guide-5.2-9

  » Group:

```
Documentation
```

❯ Summary:

```
Deployment Guide
```

❯ Description:

```
This Deployment Guide documents relevant information regarding the
deployment, configuration and administration of Red Hat Enterprise
Linux
5.2.
```

❯ No added dependencies

❯ No removed dependencies

ImageMagick-6.2.8.0-3.el5.4 - ImageMagick-6.2.8.0-4.el5_1.1

❯ Group:

```
Applications/Multimedia
```

❯ Summary:

```
An X application for displaying and manipulating images.
```

❯ Description:

```
ImageMagick(TM) is an image display and manipulation tool for the
X
Window System. ImageMagick can read and write JPEG, TIFF, PNM,
GIF,
and Photo CD image formats. It can resize, rotate, sharpen, color
reduce, or add special effects to an image, and when finished you
can
either save the completed work in the original format or a
different
one. ImageMagick also includes command line programs for creating
animated or transparent .gifs, creating composite images, creating
thumbnail images, and more.

ImageMagick is one of your choices if you need a program to
manipulate
and dis play images. If you want to develop your own applications
which use ImageMagick code or APIs, you need to install
ImageMagick-devel as well.
```

❯ No added dependencies

❯ No removed dependencies

NetworkManager-0.6.4-6.el5 - NetworkManager-0.6.4-8.el5

❯ Group:

```
System Environment/Base
```

❧ Summary:

```
Network connection manager and user applications
```

❧ Description:

```
NetworkManager attempts to keep an active network connection
available at all
times. It is intended only for the desktop use-case, and is not
intended for
usage on servers.  The point of NetworkManager is to make
networking
configuration and setup as painless and automatic as possible. If
using DHCP,
NetworkManager is _intended_ to replace default routes, obtain IP
addresses
from a DHCP server, and change nameservers whenever it sees fit.
```

❧ Added Dependencies:

- ▫ autoconf

- ▫ automake

- ▫ intltool

- ▫ libtool

❧ No removed dependencies

OpenIPMI-2.0.6-5.el5.4 - OpenIPMI-2.0.6-6.el5

❧ Group:

```
System Environment/Base
```

❧ Summary:

```
OpenIPMI (Intelligent Platform Management Interface) library and
tools
```

❧ Description:

```
The Open IPMI project aims to develop an open code base to allow
access to
platform information using Intelligent Platform Management
Interface (IPMI).
This package contains the tools of the OpenIPMI project.
```

❧ No added dependencies

❧ No removed dependencies

Virtualization-5.1.0-12 - Virtualization-5.2-9

» Group:

```
Documentation
```

» Summary:

```
Virtualization Guide
```

» Description:

```
The Red Hat Enterprise Linux Virtualization Guide contains
information on installation, configuring, administering, tips,
tricks and troubleshooting Virtualization technologies used in Red
Hat Enterprise Linux.
```

» No added dependencies

» No removed dependencies

a2ps-4.13b-57.1.el5 - a2ps-4.13b-57.2.el5

» Group:

```
Applications/Publishing
```

» Summary:

```
Converts text and other types of files to PostScript(TM).
```

» Description:

```
The a2ps filter converts text and other types of files to
PostScript(TM).
A2ps has pretty-printing capabilities and includes support for a
wide
number of programming languages, encodings (ISO Latins, Cyrillic,
etc.),
and medias.
```

» Added Dependencies:

• psutils

» No removed dependencies

acl-2.2.39-2.1.el5 - acl-2.2.39-3.el5

» Group:

```
System Environment/Base
```

» Summary:

```
Access control list utilities.
```

» Description:

```
This package contains the getfacl and setfacl utilities needed for
manipulating access control lists.
```

» No added dependencies

» No removed dependencies

alsa-utils-1.0.14-2.rc4.el5 - alsa-utils-1.0.14-3.rc4.el5

» Group:

```
Applications/Multimedia
```

» Summary:

```
Advanced Linux Sound Architecture (ALSA) utilities
```

» Description:

```
This package contains command line utilities for the Advanced
Linux Sound
Architecture (ALSA).
```

» No added dependencies

» No removed dependencies

amtu-1.0.4-4 - amtu-1.0.6-1.el5

» Group:

```
System Environment/Base
```

» Summary:

```
Abstract Machine Test Utility (AMTU)
```

» Description:

```
Abstract Machine Test Utility (AMTU) is an administrative utility
to check
whether the underlying protection mechanism of the hardware are
still being
enforced. This is a requirement of the Controlled Access
Protection Profile
FPT_AMT.1, see
http://www.radium.ncsc.mil/tpep/library/protection_profiles/CAPP-
1.d.pdf
```

» No added dependencies

❯ No removed dependencies

anaconda-11.1.2.87-1 - anaconda-11.1.2.113-1

❯ Group:

```
Applications/System
```

❯ Summary:

```
Graphical system installer
```

❯ Description:

```
The anaconda package contains the program which was used to
install your
system. These files are of little use on an already installed
system.
```

❯ Added Dependencies:

▪ libdhcp-devel >= 1.20-5

▪ libnl-devel >= 1.0-0.10.pre5.5

❯ Removed Dependencies:

▪ glib2-devel >= 2.11.1-5

▪ libdhcp-devel >= 1.16

apr-util-1.2.7-6 - apr-util-1.2.7-7.el5

❯ Group:

```
System Environment/Libraries
```

❯ Summary:

```
Apache Portable Runtime Utility library
```

❯ Description:

```
The mission of the Apache Portable Runtime (APR) is to provide a
free library of C data structures and routines. This library
contains additional utility interfaces for APR; including support
for XML, LDAP, database interfaces, URI parsing and more.
```

❯ No added dependencies

❯ No removed dependencies

at-spi-1.7.11-2.fc6 - at-spi-1.7.11-3.el5

❯ Group:

```
System Environment/Libraries
```

» Summary:

```
Assistive Technology Service Provider Interface
```

» Description:

```
at-spi allows assistive technologies to access GTK-based
applications. Essentially it exposes the internals of applications
for
automation, so tools such as screen readers, magnifiers, or even
scripting interfaces can query and interact with GUI controls.
```

» No added dependencies

» No removed dependencies

audit-1.5.5-7.el5 - audit-1.6.5-9.el5

» Group:

```
System Environment/Daemons
```

» Summary:

```
User space tools for 2.6 kernel auditing
```

» Description:

```
The audit package contains the user space utilities for
storing and searching the audit records generate by
the audit subsystem in the Linux 2.6 kernel.
```

» Added Dependencies:

- checkpolicy

- openldap-devel

- selinux-policy-devel

» No removed dependencies

authconfig-5.3.12-2.el5 - authconfig-5.3.21-3.el5

» Group:

```
System Environment/Base
```

» Summary:

```
Command line tool for setting up authentication from network
services
```

> ❯ Description:

```
Authconfig is a command line utility which can configure a
workstation
to use shadow (more secure) passwords. Authconfig can also
configure a
system to be a client for certain networked user information and
authentication schemes.
```

> ❯ Added Dependencies:

  ▪ python >= 2.4.1

> ❯ Removed Dependencies:

  ▪ python

autofs-5.0.1-0.rc2.55 - autofs-5.0.1-0.rc2.88

> ❯ Group:

```
System Environment/Daemons
```

> ❯ Summary:

```
A tool for automatically mounting and unmounting filesystems.
```

> ❯ Description:

```
autofs is a daemon which automatically mounts filesystems when you
use
them, and unmounts them later when you are not using them. This
can
include network filesystems, CD-ROMs, floppies, and so forth.
```

> ❯ No added dependencies

> ❯ No removed dependencies

bash-3.1-16.1 - bash-3.2-21.el5

> ❯ Group:

```
System Environment/Shells
```

> ❯ Summary:

```
The GNU Bourne Again shell (bash) version 3.2
```

> ❯ Description:

```
The GNU Bourne Again shell (Bash) is a shell or command language
interpreter that is compatible with the Bourne shell (sh). Bash
incorporates useful features from the Korn shell (ksh) and the C
shell
```

```
(csh). Most sh scripts can be run by bash without modification.
This
package (bash) contains bash version 3.2, which improves POSIX
compliance over previous versions.
```

» Added Dependencies:

- autoconf

- gettext

» No removed dependencies

bind-9.3.3-10.el5 - bind-9.3.4-6.P1.el5

» Group:

```
System Environment/Daemons
```

» Summary:

```
The Berkeley Internet Name Domain (BIND) DNS (Domain Name System)
server.
```

» Description:

```
BIND (Berkeley Internet Name Domain) is an implementation of the
DNS
(Domain Name System) protocols. BIND includes a DNS server
(named),
which resolves host names to IP addresses; a resolver library
(routines for applications to use when interfacing with DNS); and
tools for verifying that the DNS server is operating properly.
```

» No added dependencies

» No removed dependencies

binutils-2.17.50.0.6-5.el5 - binutils-2.17.50.0.6-6.el5

» Group:

```
Development/Tools
```

» Summary:

```
A GNU collection of binary utilities.
```

» Description:

```
Binutils is a collection of binary utilities, including ar (for
creating, modifying and extracting from archives), as (a family of
GNU
assemblers), gprof (for displaying call graph profile data), ld
(the
GNU linker), nm (for listing symbols from object files), objcopy
```

```
(for
copying and translating object files), objdump (for displaying
information from object files), ranlib (for generating an index
for
the contents of an archive), size (for listing the section sizes
of an
object or archive file), strings (for listing printable strings
from
files), strip (for discarding symbols), and addr2line (for
converting
addresses to file and line).
```

» No added dependencies

» No removed dependencies

booty-0.80.4-5 - booty-0.80.4-6

» Group:

```
System Environment/Libraries
```

» Summary:

```
simple python bootloader config lib
```

» Description:

```
Small python library for use with bootloader configuration by
anaconda
and up2date.
```

» No added dependencies

» No removed dependencies

busybox-1.2.0-3 - busybox-1.2.0-4.el5

» Group:

```
System Environment/Shells
```

» Summary:

```
Statically linked binary providing simplified versions of system
commands
```

» Description:

```
Busybox is a single binary which includes versions of a large
number
of system commands, including a shell. This package can be very
useful for recovering from certain types of system failures,
particularly those involving broken shared libraries.
```

➤ No added dependencies

➤ No removed dependencies

cachefilesd-0.8-2.el5 - cachefilesd-0.8-5.el5

➤ Group:

```
System Environment/Daemons
```

➤ Summary:

```
CacheFiles userspace management daemon
```

➤ Description:

```
The cachefilesd daemon manages the caching files and directory
that are
that are used by network filesystems such a AFS and NFS to
do persistent caching to the local disk.
```

➤ No added dependencies

➤ No removed dependencies

cairo-1.2.4-2.el5 - cairo-1.2.4-5.el5

➤ Group:

```
System Environment/Libraries
```

➤ Summary:

```
A vector graphics library
```

➤ Description:

```
Cairo is a vector graphics library designed to provide high-
quality
display and print output. Currently supported output targets
include
the X Window System, OpenGL (via glitz), in-memory image buffers,
and
image files (PDF, PostScript, and SVG). Cairo is designed to
produce
identical output on all output media while taking advantage of
display
hardware acceleration when available (eg. through the X Render
Extension or OpenGL).
```

➤ No added dependencies

➤ No removed dependencies

checkpolicy-1.33.1-2.el5 - checkpolicy-1.33.1-4.el5

≫ Group:

```
Development/System
```

≫ Summary:

```
SELinux policy compiler
```

≫ Description:

```
Security-enhanced Linux is a feature of the Linux® kernel and a
number
of utilities with enhanced security functionality designed to add
mandatory access controls to Linux. The Security-enhanced Linux
kernel contains new architectural components originally developed
to
improve the security of the Flask operating system. These
architectural components provide general support for the
enforcement
of many kinds of mandatory access control policies, including
those
based on the concepts of Type Enforcement®, Role-based Access
Control, and Multi-level Security.

This package contains checkpolicy, the SELinux policy compiler.
Only required for building policies.
```

≫ No added dependencies

≫ No removed dependencies

chkconfig-1.3.30.1-1 - chkconfig-1.3.30.1-2

≫ Group:

```
System Environment/Base
```

≫ Summary:

```
A system tool for maintaining the /etc/rc*.d hierarchy.
```

≫ Description:

```
Chkconfig is a basic system utility. It updates and queries
runlevel
information for system services. Chkconfig manipulates the
numerous
symbolic links in /etc/rc.d, to relieve system administrators of
some
of the drudgery of manually editing the symbolic links.
```

≫ No added dependencies

≫ No removed dependencies

clustermon-0.10.0-5.el5 - clustermon-0.12.0-7.el5

≫ Group:

```
System Environment/Base
```

≫ Summary:

```
Monitoring and management of Red Hat Enterprise Linux Cluster
Suite
```

≫ Description:

```
This package contains Red Hat Enterprise Linux Cluster Suite
SNMP/CIM module/agent/provider.
```

≫ Added Dependencies:

- cman-devel

≫ No removed dependencies

cman-2.0.73-1.el5 - cman-2.0.84-2.el5

≫ Group:

```
System Environment/Base
```

≫ Summary:

```
cman - The Cluster Manager
```

≫ Description:

```
cman - The Cluster Manager
```

≫ Added Dependencies:

- kernel-headers

≫ No removed dependencies

conga-0.10.0-6.el5 - conga-0.12.0-7.el5

≫ Group:

```
System Environment/Base
```

≫ Summary:

```
Remote Management System
```

≫ Description:

```
Conga is a project developing management system for remote
```

```
stations.
It consists of luci, https frontend, and ricci, secure daemon that
dispatches
incoming messages to underlying management modules.
```

❧ No added dependencies

❧ Removed Dependencies:

  ◌ cman-devel

control-center-2.16.0-14.el5 - control-center-2.16.0-16.el5

❧ Group:

```
User Interface/Desktops
```

❧ Summary:

```
GNOME Control Center
```

❧ Description:

```
GNOME (the GNU Network Object Model Environment) is an attractive
and
easy-to-use GUI desktop environment. The control-center package
provides the GNOME Control Center utilities that allow you to
setup
and configure your system's GNOME environment (things like the
desktop
background and theme, the screensaver, system sounds, and mouse
behavior).

If you install GNOME, you need to install control-center.
```

❧ No added dependencies

❧ No removed dependencies

coolkey-1.1.0-5.el5 - coolkey-1.1.0-6.el5

❧ Group:

```
System Environment/Libraries
```

❧ Summary:

```
CoolKey PKCS #11 module
```

❧ Description:

```
Linux Driver support for the CoolKey and CAC products.
```

❧ No added dependencies

⟫ No removed dependencies

coreutils-5.97-12.1.el5 - coreutils-5.97-14.el5

⟫ Group:

```
System Environment/Base
```

⟫ Summary:

```
The GNU core utilities: a set of tools commonly used in shell
scripts
```

⟫ Description:

```
These are the GNU core utilities. This package is the combination
of
the old GNU fileutils, sh-utils, and textutils packages.
```

⟫ No added dependencies

⟫ No removed dependencies

cpuspeed-1.2.1-1.48.el5 - cpuspeed-1.2.1-3.el5

⟫ Group:

```
System Environment/Base
```

⟫ Summary:

```
CPU frequency adjusting daemon
```

⟫ Description:

```
cpuspeed is a daemon that dynamically changes the speed
of your processor(s) depending upon its current workload
if it is capable (needs Intel Speedstep, AMD PowerNow!,
or similar support).

This package also supports enabling cpu frequency scaling
via in-kernel governors on Intel Centrino and AMD
Athlon64/Opteron platforms.
```

⟫ No added dependencies

⟫ No removed dependencies

crash-4.0-4.6.1 - crash-4.0-5.0.3

⟫ Group:

```
Development/Debuggers
```

⟫ Summary:

```
crash utility for live systems; netdump, diskdump, kdump, LKCD or
mcore dumpfiles
```

» Description:

```
The core analysis suite is a self-contained tool that can be used
to
investigate either live systems, kernel core dumps created from
the
netdump, diskdump and kdump packages from Red Hat Linux, the mcore
kernel patch
offered by Mission Critical Linux, or the LKCD kernel patch.
```

» No added dependencies

» No removed dependencies

createrepo-0.4.4-2.fc6 - createrepo-0.4.11-3.el5

» Group:

```
System Environment/Base
```

» Summary:

```
Creates a common metadata repository
```

» Description:

```
This utility will generate a common metadata repository from a
directory of rpm
packages.
```

» Added Dependencies:

• python

» No removed dependencies

crypto-utils-2.3-1 - crypto-utils-2.3-2.el5

» Group:

```
Applications/System
```

» Summary:

```
SSL certificate and key management utilities
```

» Description:

```
This package provides tools for managing and generating
SSL certificates and keys.
```

➣ No added dependencies

➣ No removed dependencies

cups-1.2.4-11.14.el5 - cups-1.2.4-11.18.el5

➣ Group:

```
System Environment/Daemons
```

➣ Summary:

```
Common Unix Printing System
```

➣ Description:

```
The Common UNIX Printing System provides a portable printing layer
for
UNIX® operating systems. It has been developed by Easy Software
Products
to promote a standard printing solution for all UNIX vendors and
users.
CUPS provides the System V and Berkeley command-line interfaces.
```

➣ No added dependencies

➣ No removed dependencies

cyrus-imapd-2.3.7-1.1.el5 - cyrus-imapd-2.3.7-2.el5

➣ Group:

```
System Environment/Daemons
```

➣ Summary:

```
A high-performance mail server with IMAP, POP3, NNTP and SIEVE
support
```

➣ Description:

```
The cyrus-imapd package contains the core of the Cyrus IMAP
server.
It is a scaleable enterprise mail system designed for use from
small to large enterprise environments using standards-based
internet mail technologies.

A full Cyrus IMAP implementation allows a seamless mail and
bulletin
board environment to be set up across multiple servers. It differs
from
other IMAP server implementations in that it is run on "sealed"
servers, where users are not normally permitted to log in and have
no
system account on the server. The mailbox database is stored in
```

```
parts
of the filesystem that are private to the Cyrus IMAP server. All
user
access to mail is through software using the IMAP, POP3 or KPOP
protocols. It also includes support for virtual domains, NNTP,
mailbox annotations, and much more. The private mailbox database
design
gives the server large advantages in efficiency, scalability and
administratability. Multiple concurrent read/write connections to
the
same mailbox are permitted. The server supports access control
lists on
mailboxes and storage quotas on mailbox hierarchies.

The Cyrus IMAP server supports the IMAP4rev1 protocol described
in RFC 3501. IMAP4rev1 has been approved as a proposed standard.
It supports any authentication mechanism available from the SASL
library, imaps/pop3s/nntps (IMAP/POP3/NNTP encrypted using SSL and
TLSv1) can be used for security. The server supports single
instance
store where possible when an email message is addressed to
multiple
recipients, SIEVE provides server side email filtering.
```

» No added dependencies

» No removed dependencies

dbus-1.0.0-6.el5 - dbus-1.0.0-7.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
D-BUS message bus
```

» Description:

```
D-BUS is a system for sending messages between applications. It is
used both for the systemwide message bus service, and as a
per-user-login-session messaging facility.
```

» No added dependencies

» No removed dependencies

desktop-printing-0.19-20.el5 - desktop-printing-0.19-20.1.el5

» Group:

```
Applications/File
```

» Summary:

```
Desktop print icon
```

» Description:

```
Desktop-printing contains eggcups, a program for user print job
notification and control.
```

» No added dependencies

» No removed dependencies

devhelp-0.12-11.el5 - devhelp-0.12-16.el5

» Group:

```
Development/Tools
```

» Summary:

```
API document browser
```

» Description:

```
An API document browser for GNOME 2.
```

» Added Dependencies:

- gecko-devel-unstable = 1.9

» Removed Dependencies:

- gecko-devel = 1.8.0.12

device-mapper-1.02.20-1.el5 - device-mapper-1.02.24-1.el5

» Group:

```
System Environment/Base
```

» Summary:

```
device mapper library
```

» Description:

```
This package contains the supporting userspace files (libdevmapper
and
dmsetup) for the device-mapper.
```

» No added dependencies

» No removed dependencies

device-mapper-multipath-0.4.7-12.el5 - device-mapper-multipath-0.4.7-17.el5

» Group:

❧ Group:

```
System Environment/Base
```

❧ Summary:

```
Tools to manage multipath devices using device-mapper.
```

❧ Description:

```
device-mapper-multipath provides tools to manage multipath devices
by instructing the
device-mapper multipath kernel module what to do.
The tools are :
* multipath :  Scan the system for multipath devices and assemble
them.
* multipathd : Detects when paths fail and execs multipath to
update things.
```

❧ No added dependencies

❧ No removed dependencies

dhcp-3.0.5-7.el5 - dhcp-3.0.5-13.el5

❧ Group:

```
System Environment/Daemons
```

❧ Summary:

```
DHCP (Dynamic Host Configuration Protocol) server and relay agent.
```

❧ Description:

```
DHCP (Dynamic Host Configuration Protocol) is a protocol which
allows
individual devices on an IP network to get their own network
configuration information (IP address, subnetmask, broadcast
address,
etc.) from a DHCP server. The overall purpose of DHCP is to make
it
easier to administer a large network. The dhcp package includes
the
ISC DHCP service and relay agent.

To use DHCP on your network, install a DHCP service (or relay
agent),
and on clients run a DHCP client daemon. The dhcp package provides
the ISC DHCP service and relay agent.
```

❧ No added dependencies

❧ No removed dependencies

dhcpv6-0.10-33.el5 - dhcpv6-1.0.10-4.el5

≫ Group:

```
System Environment/Daemons
```

≫ Summary:

```
DHCPv6 - DHCP server and client for IPv6
```

≫ Description:

```
Implements the Dynamic Host Configuration Protocol (DHCP) for
Internet
Protocol version 6 (IPv6) networks in accordance with RFC 3315:
Dynamic Host
Configuration Protocol for IPv6 (DHCPv6). Consists of dhcp6s(8),
the server
DHCP daemon, and dhcp6r(8), the DHCPv6 relay agent.

Install this package if you want to support dynamic configuration
of IPv6
addresses and parameters on your IPv6 network.
```

≫ Added Dependencies:

  ▫ kernel-headers

≫ Removed Dependencies:

  ▫ openssl-devel

diffutils-2.8.1-15.2.2 - diffutils-2.8.1-15.2.3.el5

≫ Group:

```
Applications/Text
```

≫ Summary:

```
A GNU collection of diff utilities.
```

≫ Description:

```
Diffutils includes four utilities: diff, cmp, diff3 and sdiff.
Diff
compares two files and shows the differences, line by line. The
cmp
command shows the offset and line numbers where two files differ,
or
cmp can show the characters that differ between the two files. The
diff3 command shows the differences between three files. Diff3 can
be
used when two people have made independent changes to a common
original; diff3 can produce a merged file that contains both sets
```

```
of
changes and warnings about conflicts. The sdiff command can be
used
to merge two files interactively.

Install diffutils if you need to compare text files.
```

▸ No added dependencies

▸ No removed dependencies

dmraid-1.0.0.rc13-4.el5 - dmraid-1.0.0.rc13-9.el5

▸ Group:

```
System Environment/Base
```

▸ Summary:

```
dmraid (Device-mapper RAID tool and library)
```

▸ Description:

```
DMRAID supports RAID device discovery, RAID set activation and
display of
properties for ATARAID on Linux >= 2.4 using device-mapper.
```

▸ No added dependencies

▸ No removed dependencies

dovecot-1.0-1.2.rc15.el5 - dovecot-1.0.7-2.el5

▸ Group:

```
System Environment/Daemons
```

▸ Summary:

```
Dovecot Secure imap server
```

▸ Description:

```
Dovecot is an IMAP server for Linux/UNIX-like systems, written
with security
primarily in mind. It also contains a small POP3 server. It
supports mail
in either of maildir or mbox formats.
```

▸ No added dependencies

▸ No removed dependencies

dvgrab-2.0-1.2.2 - dvgrab-3.0-1.el5

▸ Group:

```
Applications/Multimedia
```

» Summary:

```
Utility to capture video from a DV camera
```

» Description:

```
The dvgrab utility will capture digital video from a DV source on
the firewire
(IEEE-1394) bus.
```

» No added dependencies

» No removed dependencies

e2fsprogs-1.39-10.el5 - e2fsprogs-1.39-15.el5

» Group:

```
System Environment/Base
```

» Summary:

```
Utilities for managing the second and third extended (ext2/ext3)
filesystems
```

» Description:

```
The e2fsprogs package contains a number of utilities for creating,
checking, modifying, and correcting any inconsistencies in second
and third extended (ext2/ext3) filesystems. E2fsprogs contains
e2fsck (used to repair filesystem inconsistencies after an unclean
shutdown), mke2fs (used to initialize a partition to contain an
empty ext2 filesystem), debugfs (used to examine the internal
structure of a filesystem, to manually repair a corrupted
filesystem, or to create test cases for e2fsck), tune2fs (used to
modify filesystem parameters), and most of the other core ext2fs
filesystem utilities.

You should install the e2fsprogs package if you need to manage the
performance of an ext2 and/or ext3 filesystem.
```

» No added dependencies

» No removed dependencies

eclipse-3.2.1-18.el5 - eclipse-3.2.1-19.el5

» Group:

```
Text Editors/Integrated Development Environments (IDE)
```

» Summary:

```
An open, extensible IDE
```

» Description:

```
The Eclipse Platform is designed for building integrated
development
environments (IDEs) that can be used to create applications as
diverse
as web sites, embedded Java(tm) programs, C++ programs, and
Enterprise
JavaBeans(tm).
```

» No added dependencies

» Removed Dependencies:

  ▪ firefox-devel

  ▪ nspr-devel

emacs-21.4-19.el5 - emacs-21.4-20.el5

» Group:

```
Applications/Editors
```

» Summary:

```
GNU Emacs text editor
```

» Description:

```
Emacs is a powerful, customizable, self-documenting, modeless text
editor. Emacs contains special code editing features, a scripting
language (elisp), and the capability to read mail, news, and more
without leaving the editor.

This package provides an emacs binary with support for X windows.
```

» No added dependencies

» No removed dependencies

emacspeak-23.0-2.1 - emacspeak-23.0-3.el5

» Group:

```
Applications/Editors
```

» Summary:

```
emacspeak — The Complete Audio Desktop
```

» Description:

```
Emacspeak is a speech interface that allows visually impaired
users to
interact independently and efficiently with the computer.
Emacspeak has
dramatically changed how the author and hundreds of blind and
visually
impaired users around the world interact with the personal
computer and
the Internet. A rich suite of task-oriented speech-enabled tools
provides
efficient speech-enabled access to the evolving semantic WWW.
When combined with Linux running on low-cost PC hardware,
Emacspeak/Linux provides a reliable, stable speech-friendly
solution that
opens up the Internet to visually impaired users around the world.
```

» No added dependencies

» No removed dependencies

esc-1.0.0-32.el5 - esc-1.0.0-33.el5

» Group:

```
Applications/Internet
```

» Summary:

```
Enterprise Security Client Smart Card Client
```

» Description:

```
Enterprise Security Client allows the user to enroll and manage
their
cryptographic smartcards.
```

» No added dependencies

» No removed dependencies

evolution-data-server-1.8.0-25.el5 - evolution-data-server-1.12.3-6.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
Backend data server for Evolution
```

» Description:

```
The evolution-data-server package provides a unified backend for
programs
that work with contacts, tasks, and calendar information.
```

```
It was originally developed for Evolution (hence the name), but is
now used
by other packages.
```

» Added Dependencies:

   ▫ gtk-doc

   ▫ intltool >= 0.35.0

   ▫ openldap-evolution-devel

   ▫ openssl-devel

» Removed Dependencies:

   ▫ intltool

   ▫ openldap-devel >= 2.0.11

file-4.17-9.0.1.el5 - file-4.17-13

» Group:

```
Applications/File
```

» Summary:

```
A utility for determining file types.
```

» Description:

```
The file command is used to identify a particular file according
to the
type of data contained by the file. File can identify many
different
file types, including ELF binaries, system libraries, RPM
packages, and
different graphics formats.

You should install the file package, since the file command is
such a
useful utility.
```

» No added dependencies

» No removed dependencies

firefox-1.5.0.12-3.el5 - firefox-3.0-0.beta5.6.el5

» Group:

```
Applications/Internet
```

» Summary:

```
Mozilla Firefox Web browser
```

» Description:

```
Mozilla Firefox is an open-source web browser, designed for
standards
compliance, performance and portability.
```

» Added Dependencies:

- startup-notification-devel

- xulrunner-devel >= 1.9-0.beta5.6

- xulrunner-devel-unstable >= 1.9-0.beta5.6

» Removed Dependencies:

- cairo-devel >= 0.5

- libjpeg-devel

- libpng-devel

- nspr-devel >= 4.6

- nss-devel >= 3.11.1

- zlib-devel

flac-1.1.2-27 - flac-1.1.2-28.el5_0.1

» Group:

```
Applications/Multimedia
```

» Summary:

```
An encoder/decoder for the Free Lossless Audio Codec.
```

» Description:

```
FLAC stands for Free Lossless Audio Codec. Grossly oversimplified,
FLAC
is similar to Ogg Vorbis, but lossless. The FLAC project consists
of
the stream format, reference encoders and decoders in library
form,
flac, a command-line program to encode and decode FLAC files,
metaflac,
a command-line metadata editor for FLAC files and input plugins
for
various music players.
```

» No added dependencies

» No removed dependencies

fontconfig-2.4.1-6.el5 - fontconfig-2.4.1-7.el5

≫ Group:

```
System Environment/Libraries
```

≫ Summary:

```
Font configuration and customization library
```

≫ Description:

```
Fontconfig is designed to locate fonts within the
system and select them according to requirements specified by
applications.
```

≫ No added dependencies

≫ No removed dependencies

fonts-indic-2.0.13-1.el5 - fonts-indic-2.1.7-2.el5

≫ Group:

```
User Interface/X
```

≫ Summary:

```
Free Indian truetype/opentype fonts
```

≫ Description:

```
This package provides the Hindi, Bengali, Gujarati, Punjabi, Tamil,
Kannada, Malayalam, Oriya, Telugu TrueType/Opentype fonts.
```

≫ No added dependencies

≫ No removed dependencies

frysk-0.0.1.2007.06.21.rh2-4.el5 - frysk-0.0.1.2008.03.19.rh1-1.el5

≫ Group:

```
Development/System
```

≫ Summary:

```
Frysk execution analysis tool
```

≫ Description:

```
Frysk is an execution-analysis technology implemented using native
Java and C++.
It is aimed at providing developers and sysadmins with the ability
```

```
to both
examine and analyze running multi-host, multi-process, multi-
threaded systems.
Frysk allows the monitoring of running processes and threads, of
locking
primitives and will also expose deadlocks, gather data and debug
any given
process in the system.
```

» Added Dependencies:

   ▪ eclipse-ecj

» Removed Dependencies:

   ▪ /lib/libc.so.6

   ▪ /lib64/libc.so.6

   ▪ /usr/lib/libc.so

   ▪ /usr/lib64/libc.so

   ▪ binutils-devel

   ▪ libgconf-java-devel

gcc-4.1.2-14.el5 - gcc-4.1.2-42.el5

» Group:

```
Development/Languages
```

» Summary:

```
Various compilers (C, C++, Objective-C, Java, ...)
```

» Description:

```
The gcc package contains the GNU Compiler Collection version 4.1.
You'll need this package in order to compile C code.
```

» Added Dependencies:

   ▪ xulrunner-devel

» Removed Dependencies:

   ▪ firefox-devel

gd-2.0.33-9.3.fc6 - gd-2.0.33-9.4.el5_1.1

» Group:

```
System Environment/Libraries
```

» Summary:

```
A graphics library for quick creation of PNG or JPEG images
```

❯ Description:

```
The gd graphics library allows your code to quickly draw images
complete with lines, arcs, text, multiple colors, cut and paste
from
other images, and flood fills, and to write out the result as a
PNG or
JPEG file. This is particularly useful in Web applications, where
PNG
and JPEG are two of the formats accepted for inline images by most
browsers. Note that gd is not a paint program.
```

❯ No added dependencies

❯ No removed dependencies

gdb-6.5-25.el5 - gdb-6.5-37.el5

❯ Group:

```
Development/Debuggers
```

❯ Summary:

```
A GNU source-level debugger for C, C++, Java and other languages.
```

❯ Description:

```
GDB, the GNU debugger, allows you to debug programs written in C,
C++,
Java, and other languages, by executing them in a controlled
fashion
and printing their data.
```

❯ No added dependencies

❯ No removed dependencies

gdm-2.16.0-31.0.1.el5 - gdm-2.16.0-46.el5

❯ Group:

```
User Interface/X
```

❯ Summary:

```
The GNOME Display Manager.
```

❯ Description:

```
Gdm (the GNOME Display Manager) is a highly configurable
reimplementation of xdm, the X Display Manager. Gdm allows you to
```

```
log
into your system with the X Window System running and supports
running
several different X sessions on your local machine at the same
time.
```

≫ No added dependencies

≫ No removed dependencies

gedit-2.16.0-5.el5 - gedit-2.16.0-9.el5

≫ Group:

```
Applications/Editors
```

≫ Summary:

```
gEdit is a small but powerful text editor for GNOME
```

≫ Description:

```
gEdit is a small but powerful text editor designed specifically
for
the GNOME GUI desktop. gEdit includes a plug-in API (which
supports
extensibility while keeping the core binary small), support for
editing multiple documents using notebook tabs, and standard text
editor functions.

You'll need to have GNOME and GTK+ installed to use gEdit.
```

≫ No added dependencies

≫ No removed dependencies

gfs-kmod-0.1.19-7.el5 - gfs-kmod-0.1.23-5.el5

≫ Group:

```
System Environment/Kernel
```

≫ Summary:

```
gfs kernel modules
```

≫ Description:

```
gfs - The Global File System is a symmetric, shared-disk, cluster
file
system.
```

≫ Added Dependencies:

▪ kernel-devel-ia64 = 2.6.18-92.el5

- kernel-xen-devel-ia64 = 2.6.18-92.el5

» Removed Dependencies:

- kernel-devel-ia64 = 2.6.18-53.el5

- kernel-xen-devel-ia64 = 2.6.18-53.el5

gfs-utils-0.1.12-1.el5 - gfs-utils-0.1.17-1.el5

» Group:

```
System Environment/Kernel
```

» Summary:

```
Utilities for managing the global filesystem (GFS)
```

» Description:

```
The gfs-utils package contains a number of utilities for creating,
checking, modifying, and correcting any inconsistencies in GFS
filesystems.
```

» No added dependencies

» No removed dependencies

gfs2-kmod-1.52-1.16.el5 - gfs2-kmod-1.92-1.1.el5

» Group:

```
System Environment/Kernel
```

» Summary:

```
gfs2 kernel module
```

» Description:

```
GFS2 - The GFS2 filesystem provided for RHEL5.
```

» Added Dependencies:

- kernel-devel-ia64 = 2.6.18-92.el5

- kernel-xen-devel-ia64 = 2.6.18-92.el5

» Removed Dependencies:

- kernel-devel-ia64 = 2.6.18-53.el5

- kernel-xen-devel-ia64 = 2.6.18-53.el5

gfs2-utils-0.1.38-1.el5 - gfs2-utils-0.1.44-1.el5

» Group:

```
System Environment/Kernel
```

» Summary:

```
Utilities for managing the global filesystem (GFS)
```

» Description:

```
The gfs2-utils package contains a number of utilities for
creating,
checking, modifying, and correcting any inconsistencies in GFS
filesystems.
```

» No added dependencies

» No removed dependencies

ghostscript-8.15.2-9.1.el5 - ghostscript-8.15.2-9.1.el5_1.1

» Group:

```
Applications/Publishing
```

» Summary:

```
A PostScript(TM) interpreter and renderer.
```

» Description:

```
Ghostscript is a set of software that provides a PostScript(TM)
interpreter, a set of C procedures (the Ghostscript library, which
implements the graphics capabilities in the PostScript language)
and
an interpreter for Portable Document Format (PDF) files.
Ghostscript
translates PostScript code into many common, bitmapped formats,
like
those understood by your printer or screen. Ghostscript is
normally
used to display PostScript files and to print PostScript files to
non-PostScript printers.

If you need to display PostScript files or print them to
non-PostScript printers, you should install ghostscript. If you
install ghostscript, you also need to install the ghostscript-
fonts
package.
```

» No added dependencies

» No removed dependencies

glibc-2.5-18 - glibc-2.5-24

» Group:

```
System Environment/Libraries
```

» Summary:

```
The GNU libc libraries.
```

» Description:

```
The glibc package contains standard libraries which are used by
multiple programs on the system. In order to save disk space and
memory, as well as to make upgrading easier, common system code is
kept in one place and shared between programs. This particular
package
contains the most important sets of shared libraries: the standard
C
library and the standard math library. Without these two
libraries, a
Linux system will not function.
```

» No added dependencies

» No removed dependencies

gnome-panel-2.16.1-6.el5 - gnome-panel-2.16.1-7.el5

» Group:

```
User Interface/Desktops
```

» Summary:

```
GNOME panel
```

» Description:

```
The GNOME panel provides the window list, workspace switcher,
menus, and other
features for the GNOME desktop.
```

» No added dependencies

» No removed dependencies

gnome-power-manager-2.16.0-8.el5 - gnome-power-manager-2.16.0-9.el5

» Group:

```
Applications/System
```

» Summary:

```
GNOME Power Manager
```

» Description:

```
GNOME Power Manager uses the information and facilities provided
by HAL
displaying icons and handling user callbacks in an interactive
GNOME session.
GNOME Power Preferences allows authorised users to set policy and
change preferences.
```

≫ No added dependencies

≫ No removed dependencies

gnome-python2-desktop-2.16.0-1.fc6 - gnome-python2-desktop-2.16.0-2.el5

  ≫ Group:

```
Development/Languages
```

  ≫ Summary:

```
The sources for additional PyGNOME Python extension modules for
the GNOME desktop
```

  ≫ Description:

```
The gnome-python-desktop package contains the source packages for
additional
Python bindings for GNOME. It should be used together with gnome-
python.
```

  ≫ No added dependencies

  ≫ No removed dependencies

gnome-python2-extras-2.14.2-4.fc6 - gnome-python2-extras-2.14.2-6.el5

  ≫ Group:

```
Development/Languages
```

  ≫ Summary:

```
The sources for additional. PyGNOME Python extension modules.
```

  ≫ Description:

```
The gnome-python-extra package contains the source packages for
additional
Python bindings for GNOME. It should be used together with gnome-
python.
```

  ≫ Added Dependencies:

    ▪ gecko-devel-unstable >= 1.9

  ≫ Removed Dependencies:

- firefox-devel >= 1.5.0.5

gnome-screensaver-2.16.1-5.el5 - gnome-screensaver-2.16.1-8.el5

» Group:

```
Amusements/Graphics
```

» Summary:

```
GNOME Screensaver
```

» Description:

```
gnome-screensaver is a screen saver and locker that aims to have
simple, sane, secure defaults and be well integrated with the
desktop.
```

» Added Dependencies:

- libXxf86misc-devel

- libXxf86vm-devel

» No removed dependencies

gnome-utils-2.16.0-3.el5 - gnome-utils-2.16.0-5.el5

» Group:

```
Applications/System
```

» Summary:

```
GNOME utility programs
```

» Description:

```
GNOME (GNU Network Object Model Environment) is a user-friendly
set of
GUI applications and desktop tools to be used in conjunction with
a
window manager for the X Window System. The gnome-utils package
includes a set of small "desk accessory" utility applications for
GNOME.
```

» No added dependencies

» No removed dependencies

gnome-volume-manager-2.15.0-4.el5 - gnome-volume-manager-2.15.0-5.el5

» Group:

```
Applications/System
```

▶ Summary:

```
The GNOME Volume Manager
```

▶ Description:

```
The GNOME Volume Manager monitors volume-related events and
responds with
user-specified policy. The GNOME Volume Manager can automount hot-
plugged
drives, automount inserted removable media, autorun programs,
automatically
play audio CDs and video DVDs, and automatically import photos
from a digital
camera. The GNOME Volume Manager does this entirely in user-space
and without
polling.

The GNOME Voume Manager sits at the top end of a larger picture
that aims to
integrate the Linux system from the kernel on up through the
desktop and its
applications.
```

▶ No added dependencies

▶ No removed dependencies

grub-0.97-13 - grub-0.97-13.2

▶ Group:

```
System Environment/Base
```

▶ Summary:

```
GRUB - the Grand Unified Boot Loader.
```

▶ Description:

```
GRUB (Grand Unified Boot Loader) is an experimental boot loader
capable of booting into most free operating systems - Linux,
FreeBSD,
NetBSD, GNU Mach, and others as well as most commercial operating
systems.
```

▶ No added dependencies

▶ No removed dependencies

gthumb-2.7.8-5.el5 - gthumb-2.7.8-8.el5

▶ Group:

```
User Interface/X
```

≫ Summary:

```
Image viewer, editor, organizer
```

≫ Description:

```
gthumb is an application for viewing, editing, and organizing
collections of images.
```

≫ No added dependencies

≫ No removed dependencies

gtk2-2.10.4-19.el5 - gtk2-2.10.4-20.el5

≫ Group:

```
System Environment/Libraries
```

≫ Summary:

```
The GIMP ToolKit (GTK+), a library for creating GUIs for X
```

≫ Description:

```
GTK+ is a multi-platform toolkit for creating graphical user
interfaces. Offering a complete set of widgets, GTK+ is suitable
for
projects ranging from small one-off tools to complete application
suites.
```

≫ No added dependencies

≫ No removed dependencies

gtkhtml3-3.12.0-1.fc6 - gtkhtml3-3.16.3-1.el5

≫ Group:

```
System Environment/Libraries
```

≫ Summary:

```
gtkhtml library
```

≫ Description:

```
GtkHTML is a lightweight HTML rendering/printing/editing engine.
It
was originally based on KHTMLW, but is now being developed
independently of it.
```

≫ Added Dependencies:

- intltool >= 0.35.0

≫ Removed Dependencies:

- intltool

- libgnomeprint22-devel >= 2.7.1

- libgnomeprintui22-devel >= 2.7.1

gzip-1.3.5-9.el5 - gzip-1.3.5-10.el5

≫ Group:

```
Applications/File
```

≫ Summary:

```
The GNU data compression program.
```

≫ Description:

```
The gzip package contains the popular GNU gzip data compression
program. Gzipped files have a .gz extension.

Gzip should be installed on your Red Hat Linux system, because it
is a
very commonly used data compression program.
```

≫ No added dependencies

≫ No removed dependencies

hal-0.5.8.1-25.el5 - hal-0.5.8.1-35.el5

≫ Group:

```
System Environment/Libraries
```

≫ Summary:

```
Hardware Abstraction Layer
```

≫ Description:

```
HAL is daemon for collection and maintaining information from
several
sources about the hardware on the system. It provides a live
device
list through D-BUS.
```

≫ No added dependencies

≫ No removed dependencies

hal-cups-utils-0.6.2-5 - hal-cups-utils-0.6.2-5.2.el5

> Group:

```
Applications/System
```

> Summary:

```
Halified CUPS utilities
```

> Description:

```
Halified utilities for CUPS:
- hal_lpadmin
- hal CUPS backend
```

> No added dependencies

> No removed dependencies

hplip-1.6.7-4.1.el5 - hplip-1.6.7-4.1.el5_0.3

> Group:

```
System Environment/Daemons
```

> Summary:

```
HP Linux Imaging and Printing Project
```

> Description:

```
The Hewlett-Packard Linux Imaging and Printing Project provides
drivers for HP printers and multi-function peripherals.
```

> Added Dependencies:

  - openssl-devel

> No removed dependencies

htdig-3.2.0b6-9.el5 - htdig-3.2.0b6-9.0.1.el5_1

> Group:

```
Applications/Internet
```

> Summary:

```
ht://Dig - Web search engine
```

> Description:

```
The ht://Dig system is a complete world wide web indexing and
```

```
searching
system for a small domain or intranet. This system is not meant to
replace
the need for powerful internet-wide search systems like Lycos,
Infoseek,
Webcrawler and AltaVista. Instead it is meant to cover the search
needs for
a single company, campus, or even a particular sub section of a
web site. As
opposed to some WAIS-based or web-server based search engines,
ht://Dig can
span several web servers at a site. The type of these different
web servers
doesn't matter as long as they understand the HTTP 1.0 protocol.
ht://Dig is also used by KDE to search KDE's HTML documentation.

ht://Dig was developed at San Diego State University as a way to
search the
various web servers on the campus network.
```

» No added dependencies

» No removed dependencies

htmlview-4.0.0-1.el5 - htmlview-4.0.0-2.el5

» Group:

```
Applications/Internet
```

» Summary:

```
Launcher of Preferred Web Browser
```

» Description:

```
htmlview and launchmail are tools for launching Preferred
Applications.
This package exists for compatibility reasons and is likely to be
removed
later when equivalent functionality is implemented elsewhere.
```

» No added dependencies

» No removed dependencies

httpd-2.2.3-11.el5 - httpd-2.2.3-11.el5_1.3

» Group:

```
System Environment/Daemons
```

» Summary:

```
Apache HTTP Server
```

➤ Description:

```
The Apache HTTP Server is a powerful, efficient, and extensible
web server.
```

➤ No added dependencies

➤ No removed dependencies

hwbrowser-0.30-1.el5 - hwbrowser-0.30-2.el5

➤ Group:

```
Applications/System
```

➤ Summary:

```
A hardware browser.
```

➤ Description:

```
A browser for your current hardware configuration.
```

➤ No added dependencies

➤ No removed dependencies

hwdata-0.211-1 - hwdata-0.213.6-1.el5

➤ Group:

```
System Environment/Base
```

➤ Summary:

```
Hardware identification and configuration data
```

➤ Description:

```
hwdata contains various hardware identification and configuration
data,
such as the pci.ids database and MonitorsDb databases.
```

➤ No added dependencies

➤ No removed dependencies

ibutils-1.2-2.el5 - ibutils-1.2-3.el5

➤ Group:

```
System Environment/Libraries
```

➤ Summary:

```
OpenIB Mellanox InfiniBand Diagnostic Tools
```

» Description:

```
ibutils provides IB network and path diagnostics.
```

» Added Dependencies:

- libibumad-devel

» No removed dependencies

icu-3.6-5.11 - icu-3.6-5.11.1

» Group:

```
System Environment/Libraries
```

» Summary:

```
International Components for Unicode
```

» Description:

```
The International Components for Unicode (ICU) libraries provide
robust and full-featured Unicode services on a wide variety of
platforms. ICU supports the most current version of the Unicode
standard, and they provide support for supplementary Unicode
characters (needed for GB 18030 repertoire support).
As computing environments become more heterogeneous, software
portability becomes more important. ICU lets you produce the same
results across all the various platforms you support, without
sacrificing performance. It offers great flexibility to extend and
customize the supplied services.
```

» No added dependencies

» No removed dependencies

initscripts-8.45.17.EL-1 - initscripts-8.45.19.EL-1

» Group:

```
System Environment/Base
```

» Summary:

```
The inittab file and the /etc/init.d scripts.
```

» Description:

```
The initscripts package contains the basic system scripts used to
boot
your Red Hat system, change runlevels, and shut the system down
cleanly. Initscripts also contains the scripts that activate and
```

```
deactivate most network interfaces.
```

» No added dependencies

» No removed dependencies

iproute-2.6.18-4.el5 - iproute-2.6.18-7.el5

» Group:

```
Applications/System
```

» Summary:

```
Advanced IP routing and network device configuration tools.
```

» Description:

```
The iproute package contains networking utilities (ip and rtmon,
for
example) which are designed to use the advanced networking
capabilities of the Linux 2.4.x and 2.6.x kernel.
```

» No added dependencies

» No removed dependencies

iprutils-2.2.6-1.el5 - iprutils-2.2.8-1.el5

» Group:

```
System Environment/Base
```

» Summary:

```
Utilities for the IBM Power Linux RAID adapters
```

» Description:

```
Provides a suite of utilities to manage and configure SCSI devices
supported by the ipr SCSI storage device driver.
```

» No added dependencies

» No removed dependencies

ipsec-tools-0.6.5-8.el5 - ipsec-tools-0.6.5-9.el5

» Group:

```
System Environment/Base
```

» Summary:

```
Tools for configuring and using IPSEC
```

❧ Description:

```
This is the IPsec-Tools package. You need this package in order to
really use the IPsec functionality in the linux-2.5+ kernels. This
package builds:

- setkey, a program to directly manipulate policies and SAs
- racoon, an IKEv1 keying daemon
```

❧ No added dependencies

❧ No removed dependencies

iptables-1.3.5-1.2.1 - iptables-1.3.5-4.el5

❧ Group:

```
System Environment/Base
```

❧ Summary:

```
Tools for managing Linux kernel packet filtering capabilities.
```

❧ Description:

```
The iptables utility controls the network packet filtering code in
the
Linux kernel. If you need to set up firewalls and/or IP
masquerading,
you should install this package.
```

❧ No added dependencies

❧ No removed dependencies

irqbalance-0.55-6.el5 - irqbalance-0.55-10.el5

❧ Group:

```
System Environment/Base
```

❧ Summary:

```
IRQ balancing daemon.
```

❧ Description:

```
irqbalance is a daemon that evenly distributes IRQ load across
multiple CPUs for enhanced performance.
```

❧ No added dependencies

❧ No removed dependencies

iscsi-initiator-utils-6.2.0.865-0.8.el5 - iscsi-initiator-utils-6.2.0.868-0.7.el5

» Group:

```
System Environment/Daemons
```

» Summary:

```
iSCSI daemon and utility programs
```

» Description:

```
The iscsi package provides the server daemon for the iSCSI
protocol,
as well as the utility programs used to manage it. iSCSI is a
protocol
for distributed disk access using SCSI commands sent over Internet
Protocol networks.
```

» Added Dependencies:

  ▪ bison

  ▪ flex

» No removed dependencies

isdn4k-utils-3.2-50.1 - isdn4k-utils-3.2-51.el5

» Group:

```
Applications/System
```

» Summary:

```
Utilities for configuring an ISDN subsystem.
```

» Description:

```
The isdn4k-utils package contains a collection of utilities needed
for
configuring an ISDN subsystem.
```

» No added dependencies

» No removed dependencies

jakarta-commons-collections-3.1-6jpp.1 - jakarta-commons-collections-3.2-2jpp.3

» Group:

```
Development/Libraries/Java
```

» Summary:

```
Jakarta Commons Collections Package
```

≫ Description:

```
The introduction of the Collections API by Sun in JDK 1.2 has been
a
boon to quick and effective Java programming. Ready access to
powerful
data structures has accelerated development by reducing the need
for
custom container classes around each core object. Most Java2 APIs
are
significantly easier to use because of the Collections API.
However, there are certain holes left unfilled by Sun's
implementations, and the Jakarta-Commons Collections Component
strives
to fulfill them. Among the features of this package are:
- special-purpose implementations of Lists and Maps for fast
access
- adapter classes from Java1-style containers (arrays,
enumerations) to
Java2-style collections.
- methods to test or create typical set-theory properties of
collections
such as union, intersection, and closure.
```

≫ Added Dependencies:

   ▪ xml-commons-apis >= 1.3

≫ No removed dependencies

java-1.4.2-gcj-compat-1.4.2.0-40jpp.112 - java-1.4.2-gcj-compat-1.4.2.0-40jpp.115

≫ Group:

```
Development/Languages
```

≫ Summary:

```
JPackage runtime scripts for GCJ
```

≫ Description:

```
This package installs directory structures, shell scripts and
symbolic
links to simulate a JPackage-compatible runtime environment with
GCJ.
```

≫ No added dependencies

≫ No removed dependencies

kbd-1.12-19.el5 - kbd-1.12-20.el5

≫ Group:

.

```
System Environment/Base
```

» Summary:

```
Tools for configuring the console (keyboard, virtual terminals,
etc.)
```

» Description:

```
The kbd package contains tools for managing a Linux
system's console's behavior, including the keyboard, the screen
fonts, the virtual terminals and font files.
```

» No added dependencies

» No removed dependencies

kdeadmin-3.5.4-2.fc6 - kdeadmin-3.5.4-3.el5

» Group:

```
User Interface/Desktops
```

» Summary:

```
Administrative tools for KDE.
```

» Description:

```
The kdeadmin package includes administrative tools for the K
Desktop
Environment (KDE) including:

kcron - Crontab editor
kdat - Tape backup tool
kuser - Frontend for configuring users and user groups
```

» No added dependencies

» No removed dependencies

kdebase-3.5.4-13.6.el5 - kdebase-3.5.4-18.el5

» Group:

```
User Interface/Desktops
```

» Summary:

```
K Desktop Environment - core files
```

» Description:

```
Core applications for the K Desktop Environment. Included are: kdm
(replacement for xdm), kwin (window manager), konqueror
(filemanager,
web browser, ftp client, ...), konsole (xterm replacement), kpanel
(application starter and desktop pager), kaudio (audio server),
kdehelp (viewer for kde help files, info and man pages), kthememgr
(system for managing alternate theme packages) plus other KDE
components (kcheckpass, kikbd, kscreensaver, kcontrol, kfind,
kfontmanager, kmenuedit).
```

» No added dependencies

» No removed dependencies

kdelibs-3.5.4-13.el5 - kdelibs-3.5.4-16.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
K Desktop Environment - Libraries
```

» Description:

```
Libraries for the K Desktop Environment:
KDE Libraries included: kdecore (KDE core library), kdeui (user
interface),
kfm (file manager), khtmlw (HTML widget), kio (Input/Output,
networking),
kspell (spelling checker), jscript (javascript), kab
(addressbook),
kimgio (image manipulation).
```

» No added dependencies

» No removed dependencies

kernel-2.6.18-53.el5 - kernel-2.6.18-92.el5

» Group:

```
System Environment/Kernel
```

» Summary:

```
The Linux kernel (the core of the Linux operating system)
```

» Description:

```
The kernel package contains the Linux kernel (vmlinuz), the core
of any
Linux operating system. The kernel handles the basic functions
of the operating system: memory allocation, process allocation,
```

```
device
input and output, etc.
```

» No added dependencies

» No removed dependencies

kexec-tools-1.101-194.4.el5 - kexec-tools-1.102pre-21.el5

» Group:

```
Applications/System
```

» Summary:

```
The kexec/kdump userspace component.
```

» Description:

```
kexec-tools provides /sbin/kexec binary that facilitates a new
kernel to boot using the kernel's kexec feature either on a
normal or a panic reboot. This package contains the /sbin/kexec
binary and ancillary utilities that together form the userspace
component of the kernel's kexec feature.
```

» No added dependencies

» No removed dependencies

krb5-1.6.1-17.el5 - krb5-1.6.1-25.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
The Kerberos network authentication system.
```

» Description:

```
Kerberos V5 is a trusted-third-party network authentication
system,
which can improve your network's security by eliminating the
insecure
practice of cleartext passwords.
```

» No added dependencies

» No removed dependencies

ksh-20060214-1.4 - ksh-20060214-1.7

» Group:

```
Applications/Shells
```

» Summary:

```
The Original ATT Korn Shell
```

» Description:

```
KSH-93 is the most recent version of the KornShell by David Korn
of
AT&T Bell Laboratories.
KornShell is a shell programming language, which is upward
compatible
with "sh" (the Bourne Shell).
```

» No added dependencies

» No removed dependencies

kudzu-1.2.57.1.15-1 - kudzu-1.2.57.1.17-1

» Group:

```
Applications/System
```

» Summary:

```
The Red Hat Linux hardware probing tool.
```

» Description:

```
Kudzu is a hardware probing tool run at system boot time to
determine
what hardware has been added or removed from the system.
```

» No added dependencies

» No removed dependencies

lam-7.1.2-8.fc6 - lam-7.1.2-14.el5

» Group:

```
Development/Libraries
```

» Summary:

```
The LAM (Local Area Multicomputer) programming environment.
```

» Description:

```
LAM (Local Area Multicomputer) is an Message-Passing Interface
(MPI)
programming environment and development system for heterogeneous
```

```
computers on a network. With LAM/MPI, a dedicated cluster or an
existing network computing infrastructure can act as one parallel
computer to solve one problem. LAM/MPI is considered to be
"cluster
friendly" because it offers daemon-based process startup/control
as
well as fast client-to-client message passing protocols. LAM/MPI
can
use TCP/IP and/or shared memory for message passing (different
RPMs
are supplied for this—see the main LAM website at
http://www.mpi.nd.edu/lam/ for details).<

LAM features a full implementation of MPI version 1 (with the
exception that LAM does not support cancelling of sends), and much
of
version 2. Compliant applications are source code portable between
LAM
and any other implementation of MPI. In addition to meeting the
standard, LAM/MPI offers extensive monitoring capabilities to
support
debugging. Monitoring happens on two levels: On one level, LAM/MPI
has
the hooks to allow a snapshot of a process and message status to
be
taken at any time during an application run. The status includes
all
aspects of synchronization plus datatype map/signature,
communicator
group membership and message contents (see the XMPI application on
the
main LAM website). On the second level, the MPI library can produce
a
cumulative record of communication, which can be visualized either
at
runtime or post-mortem.
```

» No added dependencies

» No removed dependencies

libX11-1.0.3-8.0.1.el5 - libX11-1.0.3-9.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
X.Org X11 libX11 runtime library
```

» Description:

```
X.Org X11 libX11 runtime library
```

» No added dependencies

» No removed dependencies

libXfont-1.2.2-1.0.2.el5 - libXfont-1.2.2-1.0.3.el5_1

» Group:

```
System Environment/Libraries
```

» Summary:

```
X.Org X11 libXfont runtime library
```

» Description:

```
X.Org X11 libXfont runtime library
```

» No added dependencies

» No removed dependencies

libao-0.8.6-5 - libao-0.8.6-7

» Group:

```
System Environment/Libraries
```

» Summary:

```
Cross Platform Audio Output Library.
```

» Description:

```
Libao is a cross platform audio output library. It currently
supports
ESD, OSS, Solaris, and IRIX.
```

» No added dependencies

» No removed dependencies

libchewing-0.3.0-7.el5 - libchewing-0.3.0-8.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
Intelligent phonetic input method library for Traditional Chinese
```

» Description:

```
libchewing is an intelligent phonetic input method library for
Chinese.
```

```
It provides the core algorithm and logic that can be used by
various
input methods. The Chewing input method is a smart bopomofo
phonetics
input method that is useful for inputting Mandarin Chinese.
```

» No added dependencies

» No removed dependencies

libdhcp-1.20-2.el5 - libdhcp-1.20-5.el5

» Group:

```
Development/Libraries
```

» Summary:

```
A library for network interface configuration with DHCP
```

» Description:

```
libdhcp enables programs to invoke and control the Dynamic Host
Configuration
Protocol (DHCP) clients: the Internet Software Consortium (ISC)
IPv4 DHCP
client library, libdhcp4client, and the IPv6 DHCPv6 client
library,
libdhcp6client, and provides Network Interface Configuration (NIC)
services
for network parameter autoconfiguration with DHCP.
```

» Added Dependencies:

- dhcp-devel >= 12:3.0.5-13

- libdhcp4client-devel >= 12:3.0.5-13

- libdhcp6client-devel >= 1.0.9-1

» Removed Dependencies:

- dhcp-devel

- libdhcp4client-devel >= 12:3.0.4-17

- libdhcp6client-devel

liberation-fonts-0.2-2.el5 - liberation-fonts-1.0-1.el5

» Group:

```
User Interface/X
```

» Summary:

```
Fonts to replace commonly used Microsoft Windows Fonts
```

» Description:

```
The Liberation Fonts are intended to be replacements for the three
most commonly used fonts on Microsoft systems: Times New Roman,
Arial, and Courier New.
```

» No added dependencies

» No removed dependencies

libexif-0.6.13-4.0.2.el5 - libexif-0.6.13-4.0.2.el5_1.1

» Group:

```
System Environment/Libraries
```

» Summary:

```
Library for extracting extra information from image files
```

» Description:

```
Most digital cameras produce EXIF files, which are JPEG files with
extra tags that contain information about the image. The EXIF
library
allows you to parse an EXIF file and read the data from those
tags.
```

» No added dependencies

» No removed dependencies

libgnomeprint22-2.12.1-9.el5 - libgnomeprint22-2.12.1-10.el5

» Group:

```
System Environment/Base
```

» Summary:

```
Printing library for GNOME.
```

» Description:

```
GNOME (GNU Network Object Model Environment) is a user-friendly
set of
applications and desktop tools to be used in conjunction with a
window
manager for the X Window System. The gnome-print package contains
libraries and fonts needed by GNOME applications for printing.

You should install the gnome-print package if you intend to use
any of
```

```
the GNOME applications that can print. If you would like to
develop
GNOME applications that can print you will also need to install
the
gnome-print devel package.
```

⯈ No added dependencies

⯈ No removed dependencies

libhugetlbfs-1.0.1-1.el5 - libhugetlbfs-1.2-5.el5

⯈ Group:

```
System Environment/Libraries
```

⯈ Summary:

```
Library to access the Huge TLB Filesystem
```

⯈ Description:

```
The libhugetlbfs library interacts with the Linux hugetlbfs to
make large pages
available to applications in a transparent manner.
```

⯈ No added dependencies

⯈ No removed dependencies

libica-1.3.7-5.el5 - libica-1.3.7-7.el5

⯈ Group:

```
System Environment/Libraries
```

⯈ Summary:

```
A library of functions for accessing ICA hardware crypto on IBM
zSeries
```

⯈ Description:

```
A library of functions for accessing ICA hardware crypto on IBM
zSeries
```

⯈ Added Dependencies:

- autoconf

- automake

- libtool

⯈ No removed dependencies

libnl-1.0-0.10.pre5.4 - libnl-1.0-0.10.pre5.5

 ▶ Group:

```
Development/Libraries
```

 ▶ Summary:

```
Convenience library for kernel netlink sockets
```

 ▶ Description:

```
This package contains a convenience library to simplify
using the Linux kernel's netlink sockets interface for
network manipulation
```

 ▶ No added dependencies

 ▶ No removed dependencies

libpng-1.2.10-7.0.2 - libpng-1.2.10-7.1.el5_0.1

 ▶ Group:

```
System Environment/Libraries
```

 ▶ Summary:

```
A library of functions for manipulating PNG image format files
```

 ▶ Description:

```
The libpng package contains a library of functions for creating
and
manipulating PNG (Portable Network Graphics) image format files.
PNG
is a bit-mapped graphics format similar to the GIF format. PNG was
created to replace the GIF format, since GIF uses a patented data
compression algorithm.

Libpng should be installed if you need to manipulate PNG format
image
files.
```

 ▶ No added dependencies

 ▶ No removed dependencies

libraw1394-1.2.1-1.fc6 - libraw1394-1.3.0-1.el5

 ▶ Group:

```
System Environment/Libraries
```

 ▶ Summary:

```
Library providing low-level IEEE-1394 access
```

❧ Description:

```
The libraw1394 library provides direct access to the IEEE-1394 bus
through
the Linux 1394 subsystem's raw1394 user space interface.
```

❧ Added Dependencies:

- autoconf

- automake

- libtool

❧ No removed dependencies

librtas-1.2.4-3.el5 - librtas-1.3.3-1.el5

❧ Group:

```
System Environment/Libraries
```

❧ Summary:

```
Libraries to provide access to RTAS calls and RTAS events
```

❧ Description:

```
The librtas shared library provides userspace with an interface
through which certain RTAS calls can be made. The library uses
either of the RTAS User Module or the RTAS system call to direct
the kernel in making these calls.

The librtasevent shared library provides users with a set of
definitions and common routines useful in parsing and dumping
the contents of RTAS events.
```

❧ No added dependencies

❧ No removed dependencies

libselinux-1.33.4-4.el5 - libselinux-1.33.4-5.el5

❧ Group:

```
System Environment/Libraries
```

❧ Summary:

```
SELinux library and simple utilities
```

❧ Description:

```
Security-enhanced Linux is a feature of the Linux® kernel and a
number
of utilities with enhanced security functionality designed to add
mandatory access controls to Linux. The Security-enhanced Linux
kernel contains new architectural components originally developed
to
improve the security of the Flask operating system. These
architectural components provide general support for the
enforcement
of many kinds of mandatory access control policies, including
those
based on the concepts of Type Enforcement®, Role-based Access
Control, and Multi-level Security.

libselinux provides an API for SELinux applications to get and set
process and file security contexts and to obtain security policy
decisions. Required for any applications that use the SELinux API.
```

» No added dependencies

» No removed dependencies

libuser-0.54.7-2.el5.2 - libuser-0.54.7-2.el5.5

» Group:

```
System Environment/Base
```

» Summary:

```
A user and group account administration library.
```

» Description:

```
The libuser library implements a standardized interface for
manipulating
and administering user and group accounts. The library uses
pluggable
back-ends to interface to its data sources.

Sample applications modeled after those included with the shadow
password
suite are included.
```

» No added dependencies

» No removed dependencies

libvirt-0.2.3-9.el5 - libvirt-0.3.3-7.el5

» Group:

```
Development/Libraries
```

» Summary:

```
Library providing a simple API virtualization
```

» Description:

```
Libvirt is a C toolkit to interract with the virtualization
capabilities
of recent versions of Linux (and other OSes).
```

» Added Dependencies:

- avahi-devel

- bridge-utils

- dnsmasq

- gnutls-devel

» Removed Dependencies:

- /sbin/iptables

- libsysfs-devel

libxml2-2.6.26-2.1.2 - libxml2-2.6.26-2.1.2.1

» Group:

```
Development/Libraries
```

» Summary:

```
Library providing XML and HTML support
```

» Description:

```
This library allows to manipulate XML files. It includes support
to read, modify and write XML and HTML files. There is DTDs
support
this includes parsing and validation even with complex DtDs,
either
at parse time or later once the document has been modified. The
output
can be a simple SAX stream or and in-memory DOM like
representations.
In this case one can use the built-in XPath and XPointer
implementation
to select subnodes or ranges. A flexible Input/Output mechanism is
available, with existing HTTP and FTP modules and combined to an
URI library.
```

» No added dependencies

» No removed dependencies

logrotate-3.7.4-7 - logrotate-3.7.4-8

» Group:

```
System Environment/Base
```

» Summary:

```
Rotates, compresses, removes and mails system log files.
```

» Description:

```
The logrotate utility is designed to simplify the administration
of
log files on a system which generates a lot of log files.
Logrotate
allows for the automatic rotation compression, removal and mailing
of
log files. Logrotate can be set to handle a log file daily,
weekly,
monthly or when the log file gets to a certain size. Normally,
logrotate runs as a daily cron job.

Install the logrotate package if you need a utility to deal with
the
log files on your system.
```

» No added dependencies

» No removed dependencies

logwatch-7.3-5 - logwatch-7.3-6.el5

» Group:

```
Applications/System
```

» Summary:

```
A log file analysis program
```

» Description:

```
Logwatch is a customizable, pluggable log-monitoring system. It
will go
through your logs for a given period of time and make a report in
the areas
that you wish with the detail that you wish. Easy to use - works
right out
of the package on many systems.
```

» No added dependencies

» No removed dependencies

ltrace-0.5-6.45svn.fc6 - ltrace-0.5-7.45svn.el5

➤ Group:

```
Development/Debuggers
```

➤ Summary:

```
Tracks runtime library calls from dynamically linked executables.
```

➤ Description:

```
Ltrace is a debugging program which runs a specified command until
the
command exits. While the command is executing, ltrace intercepts
and
records both the dynamic library calls called by the executed
process
and the signals received by the executed process. Ltrace can also
intercept and print system calls executed by the process.

You should install ltrace if you need a sysadmin tool for tracking
the
execution of processes.
```

➤ No added dependencies

➤ No removed dependencies

lvm2-2.02.26-3.el5 - lvm2-2.02.32-4.el5

➤ Group:

```
System Environment/Base
```

➤ Summary:

```
Userland logical volume management tools
```

➤ Description:

```
LVM2 includes all of the support for handling read/write
operations on
physical volumes (hard disks, RAID-Systems, magneto optical, etc.,
multiple devices (MD), see mdadd(8) or even loop devices, see
losetup(8)), creating volume groups (kind of virtual disks) from
one
or more physical volumes and creating one or more logical volumes
(kind of logical partitions) in volume groups.
```

➤ Added Dependencies:

▪ device-mapper >= 1.02.24-1

➤ Removed Dependencies:

▪ device-mapper >= 1.02.20-1

lvm2-cluster-2.02.26-1.el5 - lvm2-cluster-2.02.32-4.el5

⯈ Group:

```
System Environment/Base
```

⯈ Summary:

```
Cluster extensions for userland logical volume management tools
```

⯈ Description:

```
Extensions to LVM2 to support clusters.
```

⯈ Added Dependencies:

- device-mapper >= 1.02.24-1

⯈ Removed Dependencies:

- device-mapper >= 1.02.20-1

m17n-db-1.3.3-46.el5 - m17n-db-1.3.3-48.el5

⯈ Group:

```
System Environment/Libraries
```

⯈ Summary:

```
Multilingualization datafiles for m17n-lib
```

⯈ Description:

```
This package contains multilingualization (m17n) datafiles for
m17n-lib
which describe input maps, encoding maps, and OpenType font data
for many languages.
```

⯈ No added dependencies

⯈ No removed dependencies

m2crypto-0.16-6.el5.1 - m2crypto-0.16-6.el5.2

⯈ Group:

```
System Environment/Libraries
```

⯈ Summary:

```
Support for using OpenSSL in python scripts
```

⯈ Description:

```
This package allows you to call OpenSSL functions from python
scripts.
```

- No added dependencies

- No removed dependencies

mailman-2.1.9-2 - mailman-2.1.9-4.el5

- Group:

```
Applications/Internet
```

- Summary:

```
Mailing list manager with built in Web access.
```

- Description:

```
Mailman is software to help manage email discussion lists, much
like
Majordomo and Smartmail. Unlike most similar products, Mailman
gives
each mailing list a webpage, and allows users to subscribe,
unsubscribe, etc. over the Web. Even the list manager can
administer
his or her list entirely from the Web. Mailman also integrates
most
things people want to do with mailing lists, including archiving,
mail
<-> news gateways, and so on.

Documentation can be found in: /usr/share/doc/mailman-2.1.9

When the package has finished installing, you will need to perform
some
additional installation steps, these are described in:
/usr/share/doc/mailman-2.1.9/INSTALL.REDHAT
```

- No added dependencies

- No removed dependencies

make-3.81-1.1 - make-3.81-3.el5

- Group:

```
Development/Tools
```

- Summary:

```
A GNU tool which simplifies the build process for users.
```

- Description:

```
A GNU tool for controlling the generation of executables and other
non-source files of a program from the program's source files.
Make
allows users to build and install packages without any significant
knowledge about the details of the build process. The details
about
how the program should be built are provided for make in the
program's
makefile.

The GNU make tool should be installed on your system because it is
commonly used to simplify the process of installing programs.
```

- » No added dependencies

- » No removed dependencies

man-pages-ja-20060815-5 - man-pages-ja-20060815-6.el5

- » Group:

```
Documentation
```

- » Summary:

```
Japanese man (manual) pages from the Japanese Manual Project
```

- » Description:

```
Japanese Manual pages, translated by JM-Project (Japanese Manual
Project).
```

- » No added dependencies

- » No removed dependencies

mcstrans-0.2.6-1.el5 - mcstrans-0.2.7-1.el5

- » Group:

```
System Environment/Daemons
```

- » Summary:

```
SELinux Translation Daemon
```

- » Description:

```
Security-enhanced Linux is a feature of the Linux® kernel and a
number
of utilities with enhanced security functionality designed to add
mandatory access controls to Linux. The Security-enhanced Linux
kernel contains new architectural components originally developed
to
improve the security of the Flask operating system. These
```

```
architectural components provide general support for the
enforcement
of many kinds of mandatory access control policies, including
those
based on the concepts of Type Enforcement®, Role-based Access
Control, and Multi-level Security.

mcstrans provides an translation daemon to translate SELinux
categories
from internal representations to user defined representation.
```

» No added dependencies

» No removed dependencies

mdadm-2.5.4-3.el5 - mdadm-2.6.4-1.el5

» Group:

```
System Environment/Base
```

» Summary:

```
mdadm controls Linux md devices (software RAID arrays)
```

» Description:

```
mdadm is used to create, manage, and monitor Linux MD (software
RAID)
devices. As such, it provides similar functionality to the
raidtools
package. However, mdadm is a single program, and it can perform
almost all functions without a configuration file, though a
configuration
file can be used to help with some common tasks.
```

» No added dependencies

» No removed dependencies

metacity-2.16.0-8.el5 - metacity-2.16.0-10.el5

» Group:

```
User Interface/Desktops
```

» Summary:

```
Metacity window manager
```

» Description:

```
Metacity is a simple window manager that integrates nicely with
GNOME 2.
```

➣ No added dependencies

➣ No removed dependencies

microcode_ctl-1.17-1.42.el5 - microcode_ctl-1.17-1.47.el5

➣ Group:

```
System Environment/Base
```

➣ Summary:

```
Tool to update x86/x86-64 CPU microcode.
```

➣ Description:

```
microcode_ctl - updates the microcode on Intel x86/x86-64 CPU's
```

➣ No added dependencies

➣ No removed dependencies

mkinitrd-5.1.19.6-19 - mkinitrd-5.1.19.6-28

➣ Group:

```
System Environment/Base
```

➣ Summary:

```
Creates an initial ramdisk image for preloading modules.
```

➣ Description:

```
Mkinitrd creates filesystem images for use as initial ramdisk
(initrd)
images. These ramdisk images are often used to preload the block
device modules (SCSI or RAID) needed to access the root
filesystem.

In other words, generic kernels can be built without drivers for
any
SCSI adapters which load the SCSI driver as a module. Since the
kernel needs to read those modules, but in this case it isn't able
to
address the SCSI adapter, an initial ramdisk is used. The initial
ramdisk is loaded by the operating system loader (normally LILO)
and
is available to the kernel as soon as the ramdisk is loaded. The
ramdisk image loads the proper SCSI adapter and allows the kernel
to
mount the root filesystem. The mkinitrd program creates such a
ramdisk using information found in the /etc/modules.conf file.
```

➣ No added dependencies

≫ No removed dependencies

module-init-tools-3.3-0.pre3.1.34.el5 - module-init-tools-3.3-0.pre3.1.37.el5

≫ Group:

```
System Environment/Kernel
```

≫ Summary:

```
Kernel module management utilities.
```

≫ Description:

```
The modutils package includes various programs needed for
automatic
loading and unloading of modules under 2.6 and later kernels, as
well
as other module management programs. Device drivers and
filesystems
are two examples of loaded and unloaded modules.
```

≫ No added dependencies

≫ No removed dependencies

mozldap-6.0.4-1.el5 - mozldap-6.0.5-1.el5

≫ Group:

```
System Environment/Libraries
```

≫ Summary:

```
Mozilla LDAP C SDK
```

≫ Description:

```
The Mozilla LDAP C SDK is a set of libraries that
allow applications to communicate with LDAP directory
servers. These libraries are derived from the University
of Michigan and Netscape LDAP libraries. They use Mozilla
NSPR and NSS for crypto.
```

≫ No added dependencies

≫ No removed dependencies

mysql-5.0.22-2.1.0.1 - mysql-5.0.45-7.el5

≫ Group:

```
Applications/Databases
```

≫ Summary:

```
MySQL client programs and shared libraries.
```

» Description:

```
MySQL is a multi-user, multi-threaded SQL database server. MySQL
is a
client/server implementation consisting of a server daemon
(mysqld)
and many different client programs and libraries. The base package
contains the MySQL client programs, the client shared libraries,
and
generic MySQL files.
```

» Added Dependencies:

- gawk

» No removed dependencies

nautilus-2.16.2-6.el5 - nautilus-2.16.2-7.el5

» Group:

```
User Interface/Desktops
```

» Summary:

```
Nautilus is a file manager for GNOME.
```

» Description:

```
Nautilus integrates access to files, applications, media,
Internet-based resources and the Web. Nautilus delivers a dynamic
and
rich user experience. Nautilus is an free software project
developed
under the GNU General Public License and is a core component of
the
GNOME desktop project.
```

» No added dependencies

» No removed dependencies

net-snmp-5.3.1-19.el5 - net-snmp-5.3.1-24.el5

» Group:

```
System Environment/Daemons
```

» Summary:

```
A collection of SNMP protocol tools and libraries.
```

» Description:

```
SNMP (Simple Network Management Protocol) is a protocol used for
network management. The NET-SNMP project includes various SNMP
tools:
an extensible agent, an SNMP library, tools for requesting or
setting
information from SNMP agents, tools for generating and handling
SNMP
traps, a version of the netstat command which uses SNMP, and a
Tk/Perl
mib browser. This package contains the snmpd and snmptrapd
daemons,
documentation, etc.

You will probably also want to install the net-snmp-utils package,
which contains NET-SNMP utilities.

Building option:
—without tcp_wrappers : disable tcp_wrappers support
```

» No added dependencies

» No removed dependencies

net-tools-1.60-73 - net-tools-1.60-78.el5

» Group:

```
System Environment/Base
```

» Summary:

```
Basic networking tools.
```

» Description:

```
The net-tools package contains basic networking tools, including
ifconfig, netstat, route, and others.
```

» No added dependencies

» No removed dependencies

newt-0.52.2-9 - newt-0.52.2-10.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
A development library for text mode user interfaces.
```

» Description:

```
Newt is a programming library for color text mode, widget based
```

```
user
interfaces. Newt can be used to add stacked windows, entry
widgets,
checkboxes, radio buttons, labels, plain text fields, scrollbars,
etc., to text mode user interfaces. This package also contains the
shared library needed by programs built with newt, as well as a
/usr/bin/dialog replacement called whiptail. Newt is based on the
slang library.
```

» No added dependencies

» No removed dependencies

nfs-utils-1.0.9-24.el5 - nfs-utils-1.0.9-33.el5

» Group:

```
System Environment/Daemons
```

» Summary:

```
NFS utilities and supporting clients and daemons for the kernel
NFS server.
```

» Description:

```
The nfs-utils package provides a daemon for the kernel NFS server
and
related tools, which provides a much higher level of performance
than the
traditional Linux NFS server used by most users.

This package also contains the showmount program. Showmount
queries the
mount daemon on a remote host for information about the NFS
(Network File
System) server on the remote host. For example, showmount can
display the
clients which are mounted on that host.

This package also contains the mount.nfs and umount.nfs program.
```

» No added dependencies

» No removed dependencies

notification-daemon-0.3.5-8.el5 - notification-daemon-0.3.5-9.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
Notification Daemon
```

> Description:

```
notification-daemon is the server implementation of the
freedesktop.org desktop
notification specification.
```

> No added dependencies

> No removed dependencies

nspr-4.6.5-3.el5 - nspr-4.7.0.99.2-1.el5

> Group:

```
System Environment/Libraries
```

> Summary:

```
Netscape Portable Runtime
```

> Description:

```
NSPR provides platform independence for non-GUI operating system
facilities. These facilities include threads, thread
synchronization,
normal file and network I/O, interval timing and calendar time,
basic
memory management (malloc and free) and shared library linking.
```

> No added dependencies

> No removed dependencies

nss-3.11.7-1.3.el5 - nss-3.11.99.5-2.el5

> Group:

```
System Environment/Libraries
```

> Summary:

```
Network Security Services
```

> Description:

```
Network Security Services (NSS) is a set of libraries designed to
support cross-platform development of security-enabled client and
server applications. Applications built with NSS can support SSL
v2
and v3, TLS, PKCS #5, PKCS #7, PKCS #11, PKCS #12, S/MIME, X.509
v3 certificates, and other security standards.
```

> Added Dependencies:

  ▪ nspr-devel >= 4.6.99

Removed Dependencies:

- nspr-devel >= 4.6.2

nss_db-2.2-35.1 - nss_db-2.2-35.3

Group:

```
System Environment/Libraries
```

Summary:

```
An NSS library for the Berkeley DB.
```

Description:

```
Nss_db is a set of C library extensions which allow Berkeley
Databases
to be used as a primary source of aliases, ethers, groups, hosts,
networks, protocol, users, RPCs, services, and shadow passwords
(instead of or in addition to using flat files or NIS). Install
nss_db
if your flat name service files are too large and lookups are
slow.
```

No added dependencies

No removed dependencies

nss_ldap-253-5.el5 - nss_ldap-253-12.el5

Group:

```
System Environment/Base
```

Summary:

```
NSS library and PAM module for LDAP.
```

Description:

```
This package includes two LDAP access clients: nss_ldap and
pam_ldap.
Nss_ldap is a set of C library extensions that allow X.500 and
LDAP
directory servers to be used as a primary source of aliases,
ethers,
groups, hosts, networks, protocol, users, RPCs, services, and
shadow
passwords (instead of or in addition to using flat files or NIS).

Pam_ldap is a module for Linux-PAM that supports password changes,
```

```
V2
clients, Netscape's SSL, ypldapd, Netscape Directory Server
password
policies, access authorization, and crypted hashes.
```

❯ Added Dependencies:

  ▪ keyutils-libs-devel

  ▪ libselinux-devel

❯ No removed dependencies

ntp-4.2.2p1-7.el5 - ntp-4.2.2p1-8.el5

❯ Group:

```
System Environment/Daemons
```

❯ Summary:

```
Synchronizes system time using the Network Time Protocol (NTP).
```

❯ Description:

```
The Network Time Protocol (NTP) is used to synchronize a
computer's
time with another reference time source. The ntp package contains
utilities and daemons that will synchronize your computer's time
to
Coordinated Universal Time (UTC) via the NTP protocol and NTP
servers.
The ntp package includes ntpdate (a program for retrieving the
date
and time from remote machines via a network) and ntpd (a daemon
which
continuously adjusts system time).

Install the ntp package if you need tools for keeping your
system's
time synchronized via the NTP protocol.
```

❯ Added Dependencies:

  ▪ perl-HTML-Parser

❯ No removed dependencies

oddjob-0.27-7 - oddjob-0.27-9.el5

❯ Group:

```
System Environment/Daemons
```

❯ Summary:

```
A D-BUS service which runs odd jobs on behalf of client
applications
```

» Description:

```
oddjob is a D-BUS service which performs particular tasks for
clients which
connect to it and issue requests using the system-wide message
bus.
```

» No added dependencies

» No removed dependencies

openCryptoki-2.2.4-16.el5 - openCryptoki-2.2.4-21.el5

» Group:

```
Productivity/Security
```

» Summary:

```
Implementation of Cryptoki v2.11 for IBM Crypto Hardware
```

» Description:

```
The PKCS#11 Version 2.11 api implemented for the IBM Crypto cards.
This package includes support for the IBM 4758 Cryptographic
CoProcessor (with the PKCS#11 firmware loaded) and the IBM eServer
Cryptographic Accelerator (FC 4960 on pSeries)
```

» Added Dependencies:

- trousers-devel

» No removed dependencies

openais-0.80.3-7.el5 - openais-0.80.3-15.el5

» Group:

```
System Environment/Base
```

» Summary:

```
The openais Standards-Based Cluster Framework executive and APIs
```

» Description:

```
This package contains the openais executive, openais service
handlers,
default configuration files and init script.
```

» No added dependencies

≫ No removed dependencies

openhpi-2.8.1-2.el5.7 - openhpi-2.10.2-1.el5

 ≫ Group:

```
System Environment/Base
```

 ≫ Summary:

```
openhpi Hardware Platform Interface (HPI) library and tools
```

 ≫ Description:

```
OpenHPI is an open source project created with the intent of
providing an
implementation of the SA Forum's Hardware Platform Interface
(HPI). HPI
provides an abstracted interface to managing computer hardware,
typically for
chassis and rack based servers. HPI includes resource modeling;
access to and
control over sensor, control, watchdog, and inventory data
associated with
resources; abstracted System Event Log interfaces; hardware events
and alerts;
and a managed hotswap interface.

OpenHPI provides a modular mechanism for adding new hardware and
device support
easily. Many plugins exist in the OpenHPI source tree to provide
access to
various types of hardware. This includes, but is not limited to,
IPMI based
servers, Blade Center, and machines which export data via sysfs.
```

 ≫ No added dependencies

 ≫ No removed dependencies

openib-1.2-6.el5 - openib-1.3-3.el5

 ≫ Group:

```
System Environment/Base
```

 ≫ Summary:

```
OpenIB Infiniband Driver Stack
```

 ≫ Description:

```
User space initialization scripts for the kernel InfiniBand
drivers
```

» No added dependencies

» Removed Dependencies:

      autoconf

      automake

      libsysfs-devel

      libtool

      pciutils-devel

      zlib-devel

openldap-2.3.27-8 - openldap-2.3.27-8.el5_1.3

» Group:

```
System Environment/Daemons
```

» Summary:

```
The configuration files, libraries, and documentation for
OpenLDAP.
```

» Description:

```
OpenLDAP is an open source suite of LDAP (Lightweight Directory
Access
Protocol) applications and development tools. LDAP is a set of
protocols for accessing directory services (usually phone book
style
information, but other information is possible) over the Internet,
similar to the way DNS (Domain Name System) information is
propagated
over the Internet. The openldap package contains configuration
files,
libraries, and documentation for OpenLDAP.
```

» No added dependencies

» No removed dependencies

openmotif-2.3.0-0.3.el5 - openmotif-2.3.0-0.5.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
Open Motif runtime libraries and executables.
```

» Description:

```
This is the Open Motif 2.3.0 runtime environment. It includes the
Motif shared libraries, needed to run applications which are
dynamically
linked against Motif, and the Motif Window Manager "mwm".
```

› No added dependencies

› No removed dependencies

openmpi-1.2.3-4.el5 - openmpi-1.2.5-5.el5

› Group:

```
Development/Libraries
```

› Summary:

```
Open Message Passing Interface
```

› Description:

```
Open MPI is an open source, freely available implementation of
both the
MPI-1 and MPI-2 standards, combining technologies and resources
from
several other projects (FT-MPI, LA-MPI, LAM/MPI, and PACX-MPI) in
order to build the best MPI library available. A completely new
MPI-2
compliant implementation, Open MPI offers advantages for system
and
software vendors, application developers, and computer science
researchers. For more information, see http://www.open-mpi.org/ .
```

› No added dependencies

› No removed dependencies

openssh-4.3p2-24.el5 - openssh-4.3p2-26.el5

› Group:

```
Applications/Internet
```

› Summary:

```
The OpenSSH implementation of SSH protocol versions 1 and 2
```

› Description:

```
SSH (Secure SHell) is a program for logging into and executing
commands on a remote machine. SSH is intended to replace rlogin
and
rsh, and to provide secure encrypted communications between two
untrusted hosts over an insecure network. X11 connections and
arbitrary TCP/IP ports can also be forwarded over the secure
```

```
channel.

OpenSSH is OpenBSD's version of the last free version of SSH,
bringing
it up to date in terms of security and features, as well as
removing
all patented algorithms to separate libraries.

This package includes the core files necessary for both the
OpenSSH
client and server. To make this package useful, you should also
install openssh-clients, openssh-server, or both.
```

- ❯ No added dependencies

- ❯ No removed dependencies

openssl-0.9.8b-8.3.el5_0.2 - openssl-0.9.8b-10.el5

- ❯ Group:

```
System Environment/Libraries
```

- ❯ Summary:

```
The OpenSSL toolkit
```

- ❯ Description:

```
The OpenSSL toolkit provides support for secure communications
between
machines. OpenSSL includes a certificate management tool and
shared
libraries which provide various cryptographic algorithms and
protocols.
```

- ❯ No added dependencies

- ❯ No removed dependencies

oprofile-0.9.2-6.el5 - oprofile-0.9.3-16.el5

- ❯ Group:

```
Development/System
```

- ❯ Summary:

```
System wide profiler
```

- ❯ Description:

```
OProfile is a profiling system for systems running Linux. The
profiling runs transparently during the background, and profile
data
```

```
can be collected at any time. OProfile makes use of the hardware
performance
counters provided on Intel P6, and AMD Athlon family processors,
and can use
the RTC for profiling on other x86 processor types.

See the HTML documentation for further details.
```

» No added dependencies

» No removed dependencies

pam-0.99.6.2-3.26.el5 - pam-0.99.6.2-3.27.el5

» Group:

```
System Environment/Base
```

» Summary:

```
A security tool which provides authentication for applications
```

» Description:

```
PAM (Pluggable Authentication Modules) is a system security tool
that
allows system administrators to set authentication policy without
having to recompile programs that handle authentication.
```

» No added dependencies

» No removed dependencies

parted-1.8.1-12.el5 - parted-1.8.1-17.el5

» Group:

```
Applications/System
```

» Summary:

```
The GNU disk partition manipulation program
```

» Description:

```
The GNU Parted program allows you to create, destroy, resize,
move,
and copy hard disk partitions. Parted can be used for creating
space
for new operating systems, reorganizing disk usage, and copying
data
to new hard disks.
```

» No added dependencies

> No removed dependencies

pciutils-2.2.3-4 - pciutils-2.2.3-5

> Group:

```
Applications/System
```

> Summary:

```
PCI bus related utilities.
```

> Description:

```
The pciutils package contains various utilities for inspecting and
setting devices connected to the PCI bus. The utilities provided
require kernel version 2.1.82 or newer (which support the
/proc/bus/pci interface).
```

> No added dependencies

> No removed dependencies

pcre-6.6-1.1 - pcre-6.6-2.el5_1.7

> Group:

```
System Environment/Libraries
```

> Summary:

```
Perl-compatible regular expression library
```

> Description:

```
Perl-compatible regular expression library.
PCRE has its own native API, but a set of "wrapper" functions that
are based on
the POSIX API are also supplied in the library libpcreposix. Note
that this
just provides a POSIX calling interface to PCRE: the regular
expressions
themselves still follow Perl syntax and semantics. The header file
for the POSIX-style functions is called pcreposix.h.
```

> No added dependencies

> No removed dependencies

pcsc-lite-1.3.1-7 - pcsc-lite-1.4.4-0.1.el5

> Group:

```
System Environment/Daemons
```

> Summary:

```
PC/SC Lite smart card framework and applications
```

> Description:

```
The purpose of PC/SC Lite is to provide a Windows(R) SCard
interface
in a very small form factor for communicating to smartcards and
readers. PC/SC Lite uses the same winscard API as used under
Windows(R). This package includes the PC/SC Lite daemon, a
resource
manager that coordinates communications with smart card readers
and
smart cards that are connected to the system, as well as other
command
line tools.
```

> No added dependencies

> No removed dependencies

perl-5.8.8-10 - perl-5.8.8-10.el5_0.2

> Group:

```
Development/Languages
```

> Summary:

```
The Perl programming language
```

> Description:

```
Perl is a high-level programming language with roots in C, sed,
awk
and shell scripting. Perl is good at handling processes and files,
and is especially good at handling text. Perl's hallmarks are
practicality and efficiency. While it is used to do a lot of
different things, Perl's most common applications are system
administration utilities and web programming. A large proportion
of
the CGI scripts on the web are written in Perl. You need the perl
package installed on your system so that your system can handle
Perl
scripts.

Install this package if you want to program in Perl or enable your
system to handle Perl scripts.
```

> No added dependencies

> No removed dependencies

php-5.1.6-15.el5 - php-5.1.6-20.el5

➤ Group:

```
Development/Languages
```

➤ Summary:

```
The PHP HTML-embedded scripting language. (PHP: Hypertext
Preprocessor)
```

➤ Description:

```
PHP is an HTML-embedded scripting language. PHP attempts to make
it
easy for developers to write dynamically generated webpages. PHP
also
offers built-in database integration for several commercial and
non-commercial database management systems, so writing a
database-enabled webpage with PHP is fairly simple. The most
common
use of PHP coding is probably as a replacement for CGI scripts.

The php package contains the module which adds support for the PHP
language to Apache HTTP Server.
```

➤ No added dependencies

➤ No removed dependencies

php-pear-1.4.9-4 - php-pear-1.4.9-4.el5.1

➤ Group:

```
System
```

➤ Summary:

```
PHP Extension and Application Repository framework
```

➤ Description:

```
PEAR is a framework and distribution system for reusable PHP
components. This package contains the basic PEAR components.
```

➤ No added dependencies

➤ No removed dependencies

piranha-0.8.4-7.el5 - piranha-0.8.4-9.3.el5

➤ Group:

```
System Environment/Base
```

➤ Summary:

```
Cluster administation tools
```

» Description:

```
Various tools to administer and configure the Linux Virtual Server
as well as
heartbeating and failover components. The LVS is a dynamically
adjusted
kernel routing mechanism that provides load balancing primarily
for web
and ftp servers though other services are supported.
```

» No added dependencies

» No removed dependencies

pirut-1.2.10-1.el5 - pirut-1.3.28-13.el5

» Group:

```
Applications/System
```

» Summary:

```
Package Installation, Removal and Update Tools
```

» Description:

```
pirut (pronounced "pirate") provides a set of graphical tools for
managing
software.
```

» No added dependencies

» No removed dependencies

pkgconfig-0.21-1.fc6 - pkgconfig-0.21-2.el5

» Group:

```
Development/Tools
```

» Summary:

```
A tool for determining compilation options.
```

» Description:

```
The pkgconfig tool determines compilation options. For each
required
library, it reads the configuration file and outputs the necessary
compiler and linker flags.
```

» No added dependencies

≫ No removed dependencies

pm-utils-0.99.3-6.el5.17 - pm-utils-0.99.3-6.el5.19

    ≫ Group:

```
System Environment/Base
```

    ≫ Summary:

```
Power management utilities and scripts for Fedora Core
```

    ≫ Description:

```
The pm-utils package contains utilities and scripts for Fedora
Core
useful for power management.
```

    ≫ No added dependencies

    ≫ No removed dependencies

policycoreutils-1.33.12-12.el5 - policycoreutils-1.33.12-14.el5

    ≫ Group:

```
System Environment/Base
```

    ≫ Summary:

```
SELinux policy core utilities.
```

    ≫ Description:

```
Security-enhanced Linux is a feature of the Linux® kernel and a
number
of utilities with enhanced security functionality designed to add
mandatory access controls to Linux. The Security-enhanced Linux
kernel contains new architectural components originally developed
to
improve the security of the Flask operating system. These
architectural components provide general support for the
enforcement
of many kinds of mandatory access control policies, including
those
based on the concepts of Type Enforcement®, Role-based Access
Control, and Multi-level Security.

policycoreutils contains the policy core utilities that are
required
for basic operation of a SELinux system. These utilities include
load_policy to load policies, setfiles to label filesystems,
```

```
newrole
to switch roles, and run_init to run /etc/init.d scripts in the
proper
context.
```

≫ No added dependencies

≫ No removed dependencies

poppler-0.5.4-4.1.el5 - poppler-0.5.4-4.4.el5_1

≫ Group:

```
Development/Libraries
```

≫ Summary:

```
PDF rendering library
```

≫ Description:

```
Poppler, a PDF rendering library, it's a fork of the xpdf PDF
viewer developed by Derek Noonburg of Glyph and Cog, LLC.
```

≫ No added dependencies

≫ No removed dependencies

postgresql-8.1.9-1.el5 - postgresql-8.1.11-1.el5_1.1

≫ Group:

```
Applications/Databases
```

≫ Summary:

```
PostgreSQL client programs and libraries.
```

≫ Description:

```
PostgreSQL is an advanced Object-Relational database management
system
(DBMS) that supports almost all SQL constructs (including
transactions, subselects and user-defined types and functions).
The
postgresql package includes the client programs and libraries that
you'll need to access a PostgreSQL DBMS server. These PostgreSQL
client programs are programs that directly manipulate the internal
structure of PostgreSQL databases on a PostgreSQL server. These
client
programs can be located on the same machine with the PostgreSQL
server, or may be on a remote machine which accesses a PostgreSQL
server over a network connection. This package contains the docs
in HTML for the whole package, as well as command-line utilities
for
```

```
managing PostgreSQL databases on a PostgreSQL server.

If you want to manipulate a PostgreSQL database on a remote
PostgreSQL
server, you need this package. You also need to install this
package
if you're installing the postgresql-server package.
```

» No added dependencies

» No removed dependencies

ppc64-utils-0.11-2 - ppc64-utils-0.11-9.el5

» Group:

```
System Environment/Base
```

» Summary:

```
Linux/PPC64 specific utilities
```

» Description:

```
A collection of utilities for Linux on PPC64 platforms.
```

» Added Dependencies:

- db4-devel

- librtas-devel >= 1.3.3

- libstdc++-devel

- libtool

- sg3_utils-devel

- zlib-devel

» Removed Dependencies:

- librtas-devel

procps-3.2.7-8.1.el5 - procps-3.2.7-9.el5

» Group:

```
Applications/System
```

» Summary:

```
System and process monitoring utilities.
```

» Description:

```
The procps package contains a set of system utilities that provide
```

```
system information. Procps includes ps, free, skill, pkill, pgrep,
snice, tload, top, uptime, vmstat, w, watch and pdwx. The ps
command
displays a snapshot of running processes. The top command provides
a repetitive update of the statuses of running processes. The free
command displays the amounts of free and used memory on your
system. The skill command sends a terminate command (or another
specified signal) to a specified set of processes. The snice
command is used to change the scheduling priority of specified
processes. The tload command prints a graph of the current system
load average to a specified tty. The uptime command displays the
current time, how long the system has been running, how many users
are logged on, and system load averages for the past one, five,
and fifteen minutes. The w command displays a list of the users
who are currently logged on and what they are running. The watch
program watches a running program. The vmstat command displays
virtual memory statistics about processes, memory, paging, block
I/O, traps, and CPU activity. The pwdx command reports the current
working directory of a process or processes.
```

≫ No added dependencies

≫ No removed dependencies

psmisc-22.2-5 - psmisc-22.2-6

≫ Group:

```
Applications/System
```

≫ Summary:

```
Utilities for managing processes on your system.
```

≫ Description:

```
The psmisc package contains utilities for managing processes on
your
system: pstree, killall and fuser. The pstree command displays a
tree
structure of all of the running processes on your system. The
killall
command sends a specified signal (SIGTERM if nothing is specified)
to
processes identified by name. The fuser command identifies the
PIDs
of processes that are using specified files or filesystems.
```

≫ No added dependencies

≫ No removed dependencies

pygtk2-2.10.1-8.el5 - pygtk2-2.10.1-12.el5

≫ Group:

```
Development/Languages
```

» Summary:

```
Python bindings for the GTK+ widget set.
```

» Description:

```
PyGTK is an extension module for python that gives you access to
the GTK+
widget set. Just about anything you can write in C with GTK+ you
can write
in python with PyGTK (within reason), but with all the benefits of
python.
```

» No added dependencies

» No removed dependencies

pykickstart-0.43-1.el5 - pykickstart-0.43.1-1.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
A python library for manipulating kickstart files
```

» Description:

```
The pykickstart package is a python library for manipulating
kickstart
files.
```

» No added dependencies

» No removed dependencies

python-2.4.3-19.el5 - python-2.4.3-21.el5

» Group:

```
Development/Languages
```

» Summary:

```
An interpreted, interactive, object-oriented programming language.
```

» Description:

```
Python is an interpreted, interactive, object-oriented programming
language often compared to Tcl, Perl, Scheme or Java. Python
includes
```

```
modules, classes, exceptions, very high level dynamic data types
and
dynamic typing. Python supports interfaces to many system calls
and
libraries, as well as to various windowing systems (X11, Motif,
Tk,
Mac and MFC).

Programmers can write new built-in modules for Python in C or C++.
Python can be used as an extension language for applications that
need
a programmable interface. This package contains most of the
standard
Python modules, as well as modules for interfacing to the Tix
widget
set for Tk and RPM.

Note that documentation for Python is provided in the python-docs
package.
```

- No added dependencies

- No removed dependencies

python-virtinst-0.103.0-3.el5 - python-virtinst-0.300.2-8.el5

- Group:

```
Development/Libraries
```

- Summary:

```
Python modules for starting Xen guest installations
```

- Description:

```
virtinst is a module to help in starting installations of
Fedora/Red
Hat Enterprise Linux related distributions inside of virtual
machines. It
supports both paravirt guests (for which only FC and RHEL guests
are
currently supported) as well as fully virtualized guests. It uses
libvirt (http://www.libvirt.org) for starting things.

Also contained is a simple script virt-install which uses
virtinst in a command line mode.
```

- Added Dependencies:

  - gettext

  - libvirt-python

  - libxml2-python

- python-urlgrabber

» No removed dependencies

redhat-release-5Server-5.1.0.2 - redhat-release-5Server-5.2.0.4

» Group:

```
System Environment/Base
```

» Summary:

```
Red Hat Enterprise Linux release file
```

» Description:

```
Red Hat Enterprise Linux release files
```

» No added dependencies

» No removed dependencies

redhat-release-notes-5Server-9 - redhat-release-notes-5Server-12

» Group:

```
System Environment/Base
```

» Summary:

```
Red Hat Enterprise Linux release notes files
```

» Description:

```
Red Hat Enterprise Linux release notes files.
```

» No added dependencies

» No removed dependencies

redhat-rpm-config-8.0.45-22.el5 - redhat-rpm-config-8.0.45-24.el5

» Group:

```
Development/System
```

» Summary:

```
Red Hat specific rpm configuration files.
```

» Description:

```
Red Hat specific rpm configuration files.
```

⯈ No added dependencies

⯈ No removed dependencies

rgmanager-2.0.31-1.el5 - rgmanager-2.0.38-2.el5

⯈ Group:

```
System Environment/Base
```

⯈ Summary:

```
Open Source HA Resource Group Failover for Red Hat Enterprise
Linux
```

⯈ Description:

```
Red Hat Resource Group Manager provides high availability of
critical server
applications in the event of planned or unplanned system downtime.
```

⯈ Added Dependencies:

  ▪ slang-devel

⯈ No removed dependencies

rhel-instnum-1.0.7-1.el5 - rhel-instnum-1.0.8-1.el5

⯈ Group:

```
System Environment/Base
```

⯈ Summary:

```
A library for decoding RHEL installation numbers
```

⯈ Description:

```
rhel-instnum provides methods for decoding RHEL installation
numbers
```

⯈ No added dependencies

⯈ Removed Dependencies:

  ▪ python

rhn-client-tools-0.4.16-1.el5 - rhn-client-tools-0.4.17-8.el5

⯈ Group:

```
System Environment/Base
```

⯈ Summary:

```
Support programs and libraries for Red Hat Network
```

➤ Description:

```
Red Hat Network Client Tools provides programs and libraries to
allow your
system to receive software updates from Red Hat Network.
```

➤ No added dependencies

➤ No removed dependencies

rhpxl-0.41.1-1.el5 - rhpxl-0.41.1-6.el5

➤ Group:

```
System Environment/Libraries
```

➤ Summary:

```
Python library for configuring and running X.
```

➤ Description:

```
The rhpxl (pronounced 'rapunzel') package contains a Python
library for
configuring and running X.
```

➤ No added dependencies

➤ No removed dependencies

rpm-4.4.2-47.el5 - rpm-4.4.2-48.el5

➤ Group:

```
System Environment/Base
```

➤ Summary:

```
The RPM package management system.
```

➤ Description:

```
The RPM Package Manager (RPM) is a powerful command line driven
package management system capable of installing, uninstalling,
verifying, querying, and updating software packages. Each software
package consists of an archive of files along with information
about
the package like its version, a description, etc.
```

➤ No added dependencies

➤ No removed dependencies

rsh-0.17-37.el5 - rsh-0.17-38.el5

> ⯈ Group:

```
Applications/Internet
```

> ⯈ Summary:

```
Clients for remote access commands (rsh, rlogin, rcp).
```

> ⯈ Description:

```
The rsh package contains a set of programs which allow users to
run
commands on remote machines, login to other machines and copy
files
between machines (rsh, rlogin and rcp). All three of these
commands
use rhosts style authentication. This package contains the clients
needed for all of these services.
The rsh package should be installed to enable remote access to
other
machines.
```

> ⯈ No added dependencies

> ⯈ No removed dependencies

ruby-1.8.5-5.el5 - ruby-1.8.5-5.el5_1.1

> ⯈ Group:

```
Development/Languages
```

> ⯈ Summary:

```
An interpreter of object-oriented scripting language
```

> ⯈ Description:

```
Ruby is the interpreted scripting language for quick and easy
object-oriented programming. It has many features to process text
files and to do system management tasks (as in Perl). It is
simple,
straight-forward, and extensible.
```

> ⯈ No added dependencies

> ⯈ No removed dependencies

s390utils-1.5.3-10.el5.14 - s390utils-1.5.3-17.el5

> ⯈ Group:

```
System Environment/Base
```

❯ Summary:

```
Linux/390 specific utilities.
```

❯ Description:

```
This package contains utilities related to Linux for S/390.
The most important programs contained in this package are:

- The cmstools suite to list, check, copy and cat files from a CMS
volume.
- chccwdev, a script to generically change attributes of a ccw
device.
- dasdfmt, which is used to low-level format eckd-dasds with
either the classic linux disk layout or the new z/OS
compatible disk layout.
- dasdview, which displays DASD and VTOC information and dumps the
content
of a DASD to the console.
- fdasd, which is used to create or modify partitions on
eckd-dasds formatted with the z/OS compatible disk layout.
- osasnmpd, a subagent for net-snmp to access the OSA hardware.
- qetharp to query and purge address data in the OSA and
HiperSockets hardware
- qethconf to configure IBM QETH function IPA, VIPA and Proxy ARP.
- src_vipa.sh to start applications using VIPA capabilities
- tunedasd, a tool to adjust tunable parameters on DASD devices
- vmconvert, a tool to convert vm dumps to lkcd compatible dumps.
- vmcp, a tool to send CP commands from a Linux guest to the VM.
- zipl, which is used to make either dasds or tapes bootable
for system IPL or system dump.
- zdump, which is used to retrieve system dumps from either
tapes or dasds.
```

❯ No added dependencies

❯ No removed dependencies

salinfo-1.1-3.el5 - salinfo-1.1-4.el5

❯ Group:

```
Utilities/System
```

❯ Summary:

```
Sal info tool.
```

❯ Description:

```
The IA64 Linux kernel has a Software Abstraction Layer (SAL). One
of
SAL's tasks is to record machine problems such as CMC (correctable
machine checks), CPE (correctable platform errors), MCA (machine
check
```

```
architecture) and INIT (cpu initialized after boot). These records
are
provided by SAL to user space. salinfo saves and decodes
CMC/CPE/MCA
and INIT records.
```

⯈ No added dependencies

⯈ No removed dependencies

samba-3.0.25b-0.el5.4 - samba-3.0.28-0.el5.8

⯈ Group:

```
System Environment/Daemons
```

⯈ Summary:

```
The Samba SMB server.
```

⯈ Description:

```
Samba is the suite of programs by which a lot of PC-related
machines
share files, printers, and other information (such as lists of
available files and printers). The Windows NT, OS/2, and Linux
operating systems support this natively, and add-on packages can
enable the same thing for DOS, Windows, VMS, UNIX of all kinds,
MVS,
and more. This package provides an SMB server that can be used to
provide network services to SMB (sometimes called "Lan Manager")
clients. Samba uses NetBIOS over TCP/IP (NetBT) protocols and does
NOT
need the NetBEUI (Microsoft Raw NetBIOS frame) protocol.
```

⯈ No added dependencies

⯈ No removed dependencies

sblim-1-29.EL5 - sblim-1-31.el5

⯈ Group:

```
Applications/System
```

⯈ Summary:

```
Standards Based Linux Instrumentation for Manageability
```

⯈ Description:

```
SBLIM stands for Standards Based Linux Instrumentation for
Manageability,
and consists of a set of standards based Web Based Enterprise
```

```
Management
(WBEM) modules that use the Common Information Model (CIM)
standard to
gather and provide systems management information, events, and
methods
to local or networked consumers via an CIM object services broker
using
the CMPI (Common Manageability Programming Interface) standard.
This package provides a set of core providers and development
tools
for systems management applications.
```

» No added dependencies

» No removed dependencies

scim-anthy-1.2.0-5.el5 - scim-anthy-1.2.0-6.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
SCIM IMEngine for anthy for Japanese input
```

» Description:

```
Scim-anthy is a SCIM IMEngine module for anthy to support Japanese
input.
```

» No added dependencies

» No removed dependencies

scim-chewing-0.3.1-10.el5 - scim-chewing-0.3.1-11.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
Chewing Chinese input method for SCIM
```

» Description:

```
This package provides Chewing Chinese input method for SCIM.
```

» No added dependencies

» No removed dependencies

scim-pinyin-0.5.91-15.el5 - scim-pinyin-0.5.91-16.el5

» Group:

```
System Environment/Libraries
```

» Summary:

```
Smart Pinyin IMEngine for Smart Common Input Method platform
```

» Description:

```
Simplified Chinese Smart Pinyin IMEngine for SCIM.
```

» No added dependencies

» No removed dependencies

selinux-policy-2.4.6-104.el5 - selinux-policy-2.4.6-137.el5

» Group:

```
System Environment/Base
```

» Summary:

```
SELinux policy configuration
```

» Description:

```
SELinux Reference Policy - modular.
```

» No added dependencies

» No removed dependencies

setroubleshoot-1.8.11-4.el5 - setroubleshoot-2.0.5-3.el5

» Group:

```
Applications/System
```

» Summary:

```
Helps troubleshoot SELinux problems
```

» Description:

```
setroubleshoot gui. Application that allows you to view
setroubleshoot-server
messages.
Provides tools to help diagnose SELinux problems. When AVC
messages
are generated an alert can be generated that will give information
```

```
about the problem and help track its resolution. Alerts can be
configured
to user preference. The same tools can be run on existing log
files.
```

» Added Dependencies:

  ▪ desktop-file-utils

  ▪ htmlview

» No removed dependencies

sg3_utils-1.20-2.1 - sg3_utils-1.25-1.el5

» Group:

```
Utilities/System
```

» Summary:

```
Utils for Linux's SCSI generic driver devices + raw devices
```

» Description:

```
Collection of Linux utilities for devices that use the SCSI
command set.
Includes utilities to copy data based on "dd" syntax and semantics
(called
sg_dd, sgp_dd and sgm_dd); check INQUIRY data and VPD pages
(sg_inq); check
mode and log pages (sginfo, sg_modes and sg_logs); spin up and down
disks (sg_start); do self tests (sg_senddiag); and various other
functions.
See the README, CHANGELOG and COVERAGE files. Requires the linux
kernel 2.4
series or later. In the 2.4 series SCSI generic device names (e.g.
/dev/sg0)
must be used. In the 2.6 series other device names may be used as
well (e.g. /dev/sda).

Warning: Some of these tools access the internals of your system
and the incorrect usage of them may render your system inoperable.
```

» No added dependencies

» No removed dependencies

shadow-utils-4.0.17-12.el5 - shadow-utils-4.0.17-13.el5

» Group:

```
System Environment/Base
```

» Summary:

```
Utilities for managing accounts and shadow password files.
```

❧ Description:

```
The shadow-utils package includes the necessary programs for
converting UNIX password files to the shadow password format, plus
programs for managing user and group accounts. The pwconv command
converts passwords to the shadow password format. The pwunconv
command
unconverts shadow passwords and generates an npasswd file (a
standard
UNIX password file). The pwck command checks the integrity of
password
and shadow files. The lastlog command prints out the last login
times
for all users. The useradd, userdel, and usermod commands are used
for
managing user accounts. The groupadd, groupdel, and groupmod
commands
are used for managing group accounts.
```

❧ No added dependencies

❧ No removed dependencies

shared-mime-info-0.19-3.el5 - shared-mime-info-0.19-5.el5

❧ Group:

```
System Environment/Libraries
```

❧ Summary:

```
Shared MIME information database
```

❧ Description:

```
This is the freedesktop.org shared MIME info database.

Many programs and desktops use the MIME system to represent the
types of
files. Frequently, it is necessary to work out the correct MIME
type for
a file. This is generally done by examining the file's name or
contents,
and looking up the correct MIME type in a database.
```

❧ No added dependencies

❧ No removed dependencies

smartmontools-5.36-3.1.el5 - smartmontools-5.36-4.el5

❧ Group:

```
System Environment/Base
```

» Summary:

```
Tools for monitoring SMART capable hard disks
```

» Description:

```
The smartmontools package contains two utility programs (smartctl
and smartd) to control and monitor storage systems using the Self-
Monitoring, Analysis and Reporting Technology System (SMART) built
into most modern ATA and SCSI hard disks. In many cases, these
utilities will provide advanced warning of disk degradation and
failure.
```

» No added dependencies

» No removed dependencies

sos-1.7-9.1.el5 - sos-1.7-9.2.el5

» Group:

```
Development/Libraries
```

» Summary:

```
A set of tools to gather troubleshooting information from a system
```

» Description:

```
Sos is a set of tools that gathers information about system
hardware and configuration. The information can then be used for
diagnostic purposes and debugging. Sos is commonly used to help
support technicians and developers.
```

» No added dependencies

» No removed dependencies

spamassassin-3.1.9-1.el5 - spamassassin-3.2.4-1.el5

» Group:

```
Applications/Internet
```

» Summary:

```
Spam filter for email which can be invoked from mail delivery
agents.
```

» Description:

```
SpamAssassin provides you with a way to reduce if not completely
```

```
eliminate
Unsolicited Commercial Email (SPAM) from your incoming email. It
can
be invoked by a MDA such as sendmail or postfix, or can be called
from
a procmail script, .forward file, etc. It uses a genetic-algorithm
evolved scoring system to identify messages which look spammy,
then
adds headers to the message so they can be filtered by the user's
mail
reading software. This distribution includes the spamd/spamc
components
which create a server that considerably speeds processing of mail.

To enable spamassassin, if you are receiving mail locally, simply
add
this line to your ~/.procmailrc:
INCLUDERC=/etc/mail/spamassassin/spamassassin-default.rc

To filter spam for all users, add that line to /etc/procmailrc
(creating if necessary).
```

» Added Dependencies:

- perl-HTML-Parser >= 3.43

» No removed dependencies

speex-1.0.5-4 - speex-1.0.5-4.el5_1.1

» Group:

```
System Environment/Libraries
```

» Summary:

```
A voice compression format (codec)
```

» Description:

```
Speex is a patent-free compression format designed especially for
speech. It is specialized for voice communications at low bit-
rates in
the 2-45 kbps range. Possible applications include Voice over IP
(VoIP), Internet audio streaming, audio books, and archiving of
speech
data (e.g. voice mail).
```

» No added dependencies

» No removed dependencies

squid-2.6.STABLE6-4.el5 - squid-2.6.STABLE6-5.el5_1.3

» Group:

```
System Environment/Daemons
```

» Summary:

```
The Squid proxy caching server.
```

» Description:

```
Squid is a high-performance proxy caching server for Web clients,
supporting FTP, gopher, and HTTP data objects. Unlike traditional
caching software, Squid handles all requests in a single,
non-blocking, I/O-driven process. Squid keeps meta data and
especially
hot objects cached in RAM, caches DNS lookups, supports non-
blocking
DNS lookups, and implements negative caching of failed requests.

Squid consists of a main server program squid, a Domain Name
System
lookup program (dnsserver), a program for retrieving FTP data
(ftpget), and some management and client tools.
```

» No added dependencies

» No removed dependencies

sudo-1.6.8p12-10 - sudo-1.6.8p12-12.el5

» Group:

```
Applications/System
```

» Summary:

```
Allows restricted root access for specified users.
```

» Description:

```
Sudo (superuser do) allows a system administrator to give certain
users (or groups of users) the ability to run some (or all)
commands
as root while logging all commands and arguments. Sudo operates on
a
per-command basis. It is not a replacement for the shell. Features
include: the ability to restrict what commands a user may run on a
per-host basis, copious logging of each command (providing a clear
audit trail of who did what), a configurable timeout of the sudo
command, and the ability to use the same configuration file
(sudoers)
on many different machines.
```

» Added Dependencies:

- audit-libs-devel

- libcap-devel

≫ No removed dependencies

sysklogd-1.4.1-40.el5 - sysklogd-1.4.1-44.el5

≫ Group:

```
System Environment/Daemons
```

≫ Summary:

```
System logging and kernel message trapping daemons.
```

≫ Description:

```
The sysklogd package contains two system utilities (syslogd and
klogd)
which provide support for system logging. Syslogd and klogd run as
daemons (background processes) and log system messages to
different
places, like sendmail logs, security logs, error logs, etc.
```

≫ No added dependencies

≫ No removed dependencies

sysstat-7.0.0-3.el5 - sysstat-7.0.2-1.el5

≫ Group:

```
Applications/System
```

≫ Summary:

```
The sar and iostat system monitoring commands.
```

≫ Description:

```
This package provides the sar and iostat commands for Linux. Sar
and
iostat enable system monitoring of disk, network, and other IO
activity.
```

≫ No added dependencies

≫ No removed dependencies

system-config-cluster-1.0.50-1.3 - system-config-cluster-1.0.52-1.1

≫ Group:

```
Applications/System
```

≫ Summary:

```
system-config-cluster is a utility which allows you to manage
cluster configuration in a graphical setting.
```

⯈ Description:

```
system-config-cluster is a utility which allows you to manage
cluster configuuration in a graphical setting.
```

⯈ No added dependencies

⯈ No removed dependencies

system-config-date-1.8.12-1.el5 - system-config-date-1.8.12-3.el5

⯈ Group:

```
System Environment/Base
```

⯈ Summary:

```
A graphical interface for modifying system date and time
```

⯈ Description:

```
system-config-date is a graphical interface for changing the system
date and
time, configuring the system time zone, and setting up the NTP
daemon to
synchronize the time of the system with an NTP time server.
```

⯈ No added dependencies

⯈ No removed dependencies

system-config-httpd-1.3.3.1-1.el5 - system-config-httpd-1.3.3.3-1.el5

⯈ Group:

```
Applications/System
```

⯈ Summary:

```
Apache configuration tool
```

⯈ Description:

```
A RHN configuration tool for apache.
```

⯈ Added Dependencies:

▪ gettext

⯈ No removed dependencies

system-config-kdump-1.0.12-1.el5 - system-config-kdump-1.0.14-1.el5

 ❧ Group:

```
System Environment/Base
```

 ❧ Summary:

```
A graphical interface for configuring kernel crash dumping
```

 ❧ Description:

```
system-config-kdump is a graphical tool for configuring kernel
crash
dumping via kdump and kexec.
```

 ❧ No added dependencies

 ❧ No removed dependencies

system-config-kickstart-2.6.19.1-1.el5 - system-config-kickstart-2.6.19.6-1.el5

 ❧ Group:

```
System Environment/Base
```

 ❧ Summary:

```
A graphical interface for making kickstart files.
```

 ❧ Description:

```
Kickstart Configurator is a graphical tool for creating kickstart
files.
```

 ❧ No added dependencies

 ❧ No removed dependencies

system-config-language-1.1.18-1.el5 - system-config-language-1.1.18-2.el5

 ❧ Group:

```
System Environment/Base
```

 ❧ Summary:

```
A graphical interface for modifying the system language
```

 ❧ Description:

```
system-config-language is a graphical user interface that
allows the user to change the default language of the system.
```

 ❧ No added dependencies

▸ No removed dependencies

system-config-lvm-1.0.22-1.0.el5 - system-config-lvm-1.1.3-2.0.el5

▸ Group:

```
Applications/System
```

▸ Summary:

```
A utility for graphically configuring Logical Volumes
```

▸ Description:

```
system-config-lvm is a utility for graphically configuring Logical
Volumes
```

▸ Added Dependencies:

  ▪ intltool

▸ No removed dependencies

system-config-network-1.3.99-2.el5 - system-config-network-1.3.99.10-2.el5

▸ Group:

```
Applications/System
```

▸ Summary:

```
The GUI of the NEtwork Adminstration Tool
```

▸ Description:

```
This is the GUI of the network configuration tool,
supporting Ethernet, Wireless, TokenRing, ADSL, ISDN and PPP.
```

▸ No added dependencies

▸ No removed dependencies

system-config-printer-0.7.32.5-1.el5 - system-config-printer-0.7.32.8-1.el5

▸ Group:

```
System Environment/Base
```

▸ Summary:

```
A printer administration tool
```

▸ Description:

```
system-config-printer is a graphical user interface that allows
```

```
the user to configure a CUPS print server.
```

» No added dependencies

» No removed dependencies

system-config-securitylevel-1.6.29.1-1.el5 - system-config-securitylevel-1.6.29.1-2.1.el5

» Group:

```
System Environment/Base
```

» Summary:

```
A graphical interface for modifying the system security level
```

» Description:

```
system-config-securitylevel is a graphical user interface for
setting basic firewall rules.
```

» No added dependencies

» No removed dependencies

system-config-users-1.2.51-1.el5 - system-config-users-1.2.51-4.el5

» Group:

```
Applications/System
```

» Summary:

```
A graphical interface for administering users and groups
```

» Description:

```
system-config-users is a graphical utility for administrating
users and groups. It depends on the libuser library.
```

» No added dependencies

» No removed dependencies

systemtap-0.5.14-1.el5 - systemtap-0.6.2-1.el5

» Group:

```
Development/System
```

» Summary:

```
Instrumentation System
```

» Description:

```
SystemTap is an instrumentation system for systems running Linux
2.6.
Developers can write instrumentation to collect data on the
operation
of the system.
```

» Added Dependencies:

- /usr/bin/dvips

- /usr/bin/latex

- /usr/bin/ps2pdf

- crash-devel

- latex2html

- libcap-devel

- zlib-devel

» Removed Dependencies:

- dejagnu

- glib2-devel >= 2.0.0

tcpdump-3.9.4-11.el5 - tcpdump-3.9.4-12.el5

» Group:

```
Applications/Internet
```

» Summary:

```
A network traffic monitoring tool.
```

» Description:

```
Tcpdump is a command-line tool for monitoring network traffic.
Tcpdump can capture and display the packet headers on a particular
network interface or on all interfaces. Tcpdump can display all of
the packet headers, or just the ones that match particular
criteria.

Install tcpdump if you need a program to monitor network traffic.
```

» Added Dependencies:

- /usr/sbin/sendmail

» No removed dependencies

telnet-0.17-38.el5 - telnet-0.17-39.el5

» Group:

```
Applications/Internet
```

» Summary:

```
The client program for the telnet remote login protocol.
```

» Description:

```
Telnet is a popular protocol for logging into remote systems over
the
Internet. The telnet package provides a command line telnet
client.
```

» No added dependencies

» No removed dependencies

tetex-3.0-33.1.el5 - tetex-3.0-33.2.el5_1.2

» Group:

```
Applications/Publishing
```

» Summary:

```
The TeX text formatting system.
```

» Description:

```
TeTeX is an implementation of TeX for Linux or UNIX systems. TeX
takes
a text file and a set of formatting commands as input and creates
a
typesetter-independent .dvi (DeVice Independent) file as output.
Usually, TeX is used in conjunction with a higher level formatting
package like LaTeX or PlainTeX, since TeX by itself is not very
user-friendly. The output format needn't to be DVI, but also PDF,
when using pdflatex or similar tools.

Install tetex if you want to use the TeX text formatting system.
Consider
to install tetex-latex (a higher level formatting package which
provides
an easier-to-use interface for TeX). Unless you are an expert at
using TeX,
you should also install the tetex-doc package, which includes the
documentation for TeX.
```

» No added dependencies

» No removed dependencies

tk-8.4.13-3.fc6 - tk-8.4.13-5.el5_1.1

» Group:

```
Development/Languages
```

≫ Summary:

```
Tk graphical toolkit for the Tcl scripting language
```

≫ Description:

```
When paired with the Tcl scripting language, Tk provides a fast and
powerful
way to create cross-platform GUI applications.
```

≫ No added dependencies

≫ No removed dependencies

tog-pegasus-2.6.1-2.el5 - tog-pegasus-2.7.0-2.el5

≫ Group:

```
Systems Management/Base
```

≫ Summary:

```
OpenPegasus WBEM Services for Linux
```

≫ Description:

```
OpenPegasus WBEM Services for Linux enables management solutions
that deliver
increased control of enterprise resources. WBEM is a platform and
resource
independent DMTF standard that defines a common information model
and
communication protocol for monitoring and controlling resources
from diverse
sources.
```

≫ Added Dependencies:

- net-snmp-devel

≫ No removed dependencies

tomcat5-5.5.23-0jpp.3.0.2.el5 - tomcat5-5.5.23-0jpp.7.el5

≫ Group:

```
Networking/Daemons
```

≫ Summary:

```
Apache Servlet/JSP Engine, RI for Servlet 2.4/JSP 2.0 API
```

❯ Description:

```
Tomcat is the servlet container that is used in the official
Reference
Implementation for the Java Servlet and JavaServer Pages
technologies.
The Java Servlet and JavaServer Pages specifications are developed
by
Sun under the Java Community Process.

Tomcat is developed in an open and participatory environment and
released under the Apache Software License. Tomcat is intended to
be
a collaboration of the best-of-breed developers from around the
world.
We invite you to participate in this open development project. To
learn more about getting involved, click here.
```

❯ No added dependencies

❯ No removed dependencies

totem-2.16.7-1.el5 - totem-2.16.7-4.el5

❯ Group:

```
Applications/Multimedia
```

❯ Summary:

```
Movie player for GNOME 2
```

❯ Description:

```
Totem is simple movie player for the Gnome desktop. It features a
simple playlist, a full-screen mode, seek and volume controls, as
well as
a pretty complete keyboard navigation.
```

❯ Added Dependencies:

  ▪ gecko-devel-unstable >= 1.9

❯ Removed Dependencies:

  ▪ firefox-devel

traceroute-2.0.1-2.el5 - traceroute-2.0.1-3.el5

❯ Group:

```
Applications/Internet
```

❯ Summary:

```
Traces the route taken by packets over an IPv4/IPv6 network
```

Description:

```
The traceroute utility displays the route used by IP packets on
their
way to a specified network (or Internet) host. Traceroute displays
the IP number and host name (if possible) of the machines along
the
route taken by the packets. Traceroute is used as a network
debugging
tool. If you're having network connectivity problems, traceroute
will
show you where the trouble is coming from along the route.

Install traceroute if you need a tool for diagnosing network
connectivity
problems.
```

» No added dependencies

» No removed dependencies

tzdata-2007d-1.el5 - tzdata-2007k-2.el5

» Group:

```
System Environment/Base
```

» Summary:

```
Timezone data
```

» Description:

```
This package contains data files with rules for various timezones
around
the world.
```

» No added dependencies

» No removed dependencies

udev-095-14.9.el5 - udev-095-14.16.el5

» Group:

```
System Environment/Base
```

» Summary:

```
A userspace implementation of devfs
```

» Description:

```
The udev package contains an implementation of devfs in
```

```
userspace using sysfs and netlink.
```

» No added dependencies

» No removed dependencies

usermode-1.88-3.el5 - usermode-1.88-3.el5.1

» Group:

```
Applications/System
```

» Summary:

```
Tools for certain user account management tasks.
```

» Description:

```
The usermode package contains the userhelper program, which can be
used to allow configured programs to be run with superuser
privileges
by ordinary users.
```

» No added dependencies

» No removed dependencies

util-linux-2.13-0.45.el5 - util-linux-2.13-0.47.el5

» Group:

```
System Environment/Base
```

» Summary:

```
A collection of basic system utilities.
```

» Description:

```
The util-linux package contains a large variety of low-level
system
utilities that are necessary for a Linux system to function. Among
others, Util-linux contains the fdisk configuration tool and the
login
program.
```

» No added dependencies

» No removed dependencies

virt-manager-0.4.0-3.el5 - virt-manager-0.5.3-8.el5

» Group:

```
Applications/Emulators
```

» Summary:

```
Virtual Machine Manager
```

» Description:

```
Virtual Machine Manager provides a graphical tool for
administering
virtual machines such as Xen. It uses libvirt as the backend
management
API.
```

» No added dependencies

» No removed dependencies

vsftpd-2.0.5-10.el5 - vsftpd-2.0.5-12.el5

» Group:

```
System Environment/Daemons
```

» Summary:

```
vsftpd - Very Secure Ftp Daemon
```

» Description:

```
vsftpd is a Very Secure FTP daemon. It was written completely from
scratch.
```

» No added dependencies

» No removed dependencies

wireshark-0.99.6-1.el5 - wireshark-0.99.7-1.el5

» Group:

```
Applications/Internet
```

» Summary:

```
Network traffic analyzer
```

» Description:

```
Wireshark is a network traffic analyzer for Unix-ish operating
systems.

This package lays base for libpcap, a packet capture and filtering
```

```
library, contains command-line utilities, contains plugins and
documentation for wireshark. A graphical user interface is
packaged
separately to GTK+ package.
```

- ❯ Added Dependencies:

  - ▪ libsmi-devel

- ❯ Removed Dependencies:

  - ▪ net-snmp-devel >= 5.3

  - ▪ net-snmp-utils >= 5.3

wpa_supplicant-0.4.8-10.1.fc6 - wpa_supplicant-0.4.8-10.2.el5

- ❯ Group:

```
System Environment/Base
```

- ❯ Summary:

```
WPA/WPA2/IEEE 802.1X Supplicant
```

- ❯ Description:

```
wpa_supplicant is a WPA Supplicant for Linux, BSD and Windows with
support
for WPA and WPA2 (IEEE 802.11i / RSN). Supplicant is the IEEE
802.1X/WPA
component that is used in the client stations. It implements key
negotiation
with a WPA Authenticator and it controls the roaming and IEEE
802.11
authentication/association of the wlan driver.
```

- ❯ No added dependencies

- ❯ No removed dependencies

x3270-3.3.4p7-3.el5.1 - x3270-3.3.4p7-3.el5.4

- ❯ Group:

```
Applications/Internet
```

- ❯ Summary:

```
An X Window System based IBM 3278/3279 terminal emulator
```

- ❯ Description:

```
The x3270 package contains files needed for emulating the IBM
3278/3279
terminals, commonly used with mainframe applications.
```

```
You will also need to install a frontend for x3270. Available
frontends
are x3270-x11 (for the X Window System) and x3270-text (for text
mode).
```

> » Added Dependencies:

- /usr/bin/makeconv
- libicu-devel

> » No removed dependencies

xen-3.0.3-41.el5 - xen-3.0.3-64.el5

> » Group:

```
Development/Libraries
```

> » Summary:

```
Xen is a virtual machine monitor
```

> » Description:

```
This package contains the Xen tools and management daemons needed
to run virtual machines on x86, x86_64, and ia64 systems.
Information on how to use Xen can be found at the Xen project
pages.

The Xen system also requires the Xen hypervisor and domain-0
kernel, which can be found in the kernel-xen* package.

Virtualization can be used to run multiple operating systems on
one
physical system, for purposes of hardware consolidation, hardware
abstraction, or to test untrusted applications in a sandboxed
environment.
```

> » No added dependencies

> » No removed dependencies

xorg-x11-drv-ati-6.6.3-3.2.el5 - xorg-x11-drv-ati-6.6.3-3.13.el5

> » Group:

```
User Interface/X Hardware Support
```

> » Summary:

```
Xorg X11 ati video driver
```

> » Description:

```
X.Org X11 ati video driver.
```

» Added Dependencies:

- autoconf

- automake

- libtool

- xorg-x11-server-randr-source >= 1.1.1-48.39.el5

» No removed dependencies

xorg-x11-drv-i810-1.6.5-9.6.el5 - xorg-x11-drv-i810-1.6.5-9.13.el5

» Group:

```
User Interface/X Hardware Support
```

» Summary:

```
Xorg X11 i810 video driver(s)
```

» Description:

```
X.Org X11 i810 video driver.
```

» Added Dependencies:

- xorg-x11-server-randr-source >= 1.1.1-48.39.el5

» No removed dependencies

xorg-x11-drv-keyboard-1.1.0-2.1 - xorg-x11-drv-keyboard-1.1.0-3

» Group:

```
User Interface/X Hardware Support
```

» Summary:

```
Xorg X11 keyboard input driver
```

» Description:

```
X.Org X11 keyboard input driver.
```

» No added dependencies

» No removed dependencies

xorg-x11-drv-mga-1.4.2-6.el5 - xorg-x11-drv-mga-1.4.2-7.el5

» Group:

```
User Interface/X Hardware Support
```

❧ Summary:

```
Xorg X11 mga video driver
```

❧ Description:

```
X.Org X11 mga video driver.
```

❧ No added dependencies

❧ No removed dependencies

xorg-x11-drv-nv-2.1.2-1.el5 - xorg-x11-drv-nv-2.1.6-6.el5

❧ Group:

```
User Interface/X Hardware Support
```

❧ Summary:

```
Xorg X11 nv video driver
```

❧ Description:

```
X.Org X11 nv video driver.
```

❧ Added Dependencies:

- xorg-x11-server-randr-source

❧ No removed dependencies

xorg-x11-drv-sis-0.9.1-7 - xorg-x11-drv-sis-0.9.1-7.1.el5

❧ Group:

```
User Interface/X Hardware Support
```

❧ Summary:

```
Xorg X11 sis video driver
```

❧ Description:

```
X.Org X11 sis video driver.
```

❧ No added dependencies

❧ No removed dependencies

xorg-x11-server-1.1.1-48.26.el5 - xorg-x11-server-1.1.1-48.41.el5

❧ Group:

Group:

```
User Interface/X
```

- Summary:

```
X.Org X11 X server
```

- Description:

```
X.Org X11 X server
```

- No added dependencies

- No removed dependencies

xorg-x11-xinit-1.0.2-13.el5 - xorg-x11-xinit-1.0.2-15.el5

- Group:

```
User Interface/X
```

- Summary:

```
X.Org X11 X Window System xinit startup scripts
```

- Description:

```
X.Org X11 X Window System xinit startup scripts
```

- No added dependencies

- No removed dependencies

xsane-0.991-4.el5 - xsane-0.991-5.el5

- Group:

```
Applications/Multimedia
```

- Summary:

```
An X Window System front-end for the SANE scanner interface.
```

- Description:

```
XSane is an X based interface for the SANE (Scanner Access Now
Easy)
library, which provides access to scanners, digital cameras, and
other
capture devices. XSane is written in GTK+ and provides control for
performing the scan and then manipulating the captured image.
```

- No added dependencies

⯈ No removed dependencies

yelp-2.16.0-15.el5 - yelp-2.16.0-18.el5

⯈ Group:

```
Applications/System
```

⯈ Summary:

```
A system documentation reader from the Gnome project
```

⯈ Description:

```
Yelp is the Gnome 2 help/documentation browser. It is designed
to help you browse all the documentation on your system in
one central tool.
```

⯈ Added Dependencies:

  ▫ gecko-devel-unstable >= 1.9

⯈ Removed Dependencies:

  ▫ gecko-devel >= 1.8.0.12

yum-3.0.1-5.el5 - yum-3.2.8-9.el5

⯈ Group:

```
System Environment/Base
```

⯈ Summary:

```
RPM installer/updater
```

⯈ Description:

```
Yum is a utility that can check for and automatically download and
install updated RPM packages. Dependencies are obtained and
downloaded
automatically prompting the user as necessary.
```

⯈ No added dependencies

⯈ No removed dependencies

yum-metadata-parser-1.0-8.fc6 - yum-metadata-parser-1.1.2-2.el5

⯈ Group:

```
Development/Libraries
```

⯈ Summary:

```
A fast metadata parser for yum
```

❯ Description:

```
Fast metadata parser for yum implemented in C.
```

❯ No added dependencies

❯ No removed dependencies

yum-rhn-plugin-0.5.2-3.el5 - yum-rhn-plugin-0.5.3-6.el5

❯ Group:

```
System Environment/Base
```

❯ Summary:

```
RHN support for yum
```

❯ Description:

```
This yum plugin provides support for yum to access a Red Hat
Network server for
software updates.
```

❯ No added dependencies

❯ No removed dependencies

yum-utils-1.0.4-3.el5 - yum-utils-1.1.10-9.el5

❯ Group:

```
Development/Tools
```

❯ Summary:

```
Utilities based around the yum package manager
```

❯ Description:

```
yum-utils is a collection of utilities and examples for the yum
package
manager. It includes utilities by different authors that make yum
easier and
more powerful to use.
```

❯ No added dependencies

❯ No removed dependencies

13. Configuration Changes From Previous Release

```
krb5-server-1.6.1-17.el5.i386.rpm: /etc/rc.d/init.d/krb524
---
+++
@@ -13,9 +13,6 @@
 # Get config.
 . /etc/sysconfig/network

-# Check that networking is up.
-[ ${NETWORKING} = "no" ] && exit 0
-
 # Get config.
 [ -r /etc/sysconfig/krb524 ] && . /etc/sysconfig/krb524

@@ -28,9 +25,8 @@

 # Shell functions to cut down on unnecessary shell invocations.
 start() {
-   if [ ! -f /var/kerberos/krb5kdc/principal ] ; then
-      exit 0
- fi
+   [ -f /var/kerberos/krb5kdc/principal ] || exit 6
+ [ -x $krb524d ] || exit 5
   echo -n $"Starting $prog: "
   daemon ${krb524d} ${KRB524D_ARGS:--m}
   RETVAL=$?
@@ -68,7 +64,7 @@
   ;;
    *)
   echo $"Usage: $0 {start|stop|status|restart|condrestart}"
- RETVAL=1
+ RETVAL=2
   ;;
 esac

lvm2-2.02.26-3.el5.i386.rpm: /etc/rc.d/init.d/lvm2-monitor
---
+++
@@ -27,17 +27,11 @@
 VGCHANGE="/usr/sbin/vgchange"
 WARN=1

-getvgs() {
-    # TODO workaround, need fix warning messages to always use stderr
-    vgs --noheadings -o name 2> /dev/null | grep -v '^[ \t]*WARNING:' | \
- grep -v '^[ \t]*Volume Groups with the clustered attribute will be
inaccessible.'
-}
-
 start()
 {
  ret=0
  # TODO do we want to separate out already active groups only?
- VGS=`getvgs`
+ VGS=`vgs --noheadings -o name 2> /dev/null`
  for vg in $VGS
  do
```

```
      action "Starting monitoring for VG $vg:" $VGCHANGE --monitor y $vg ||
ret=$?
@@ -55,7 +49,7 @@
     echo "Not stopping monitoring, this is a dangerous operation. Please
use force-stop to override."
     return 1
  fi
- VGS=`getvgs`
+ VGS=`vgs --noheadings -o name 2> /dev/null`
  for vg in $VGS
  do
      action "Stopping monitoring for VG $vg:" $VGCHANGE --monitor n $vg ||
ret=$?
dhcp-3.0.5-7.el5.i386.rpm: /etc/rc.d/init.d/dhcpd
---
+++
@@ -1,128 +1,140 @@
 #!/bin/sh
 #
-# dhcpd        This shell script takes care of starting and stopping
-#              dhcpd.
+### BEGIN INIT INFO
+# Provides: dhcpd
+# Default-Start:
+# Default-Stop:
+# Should-Start:
+# Required-Start: $network
+# Required-Stop:
+# Short-Description: Start and stop the DHCP server
+# Description: dhcpd provides the Dynamic Host Configuration Protocol (DHCP)
+#              server.
+### END INIT INFO
+#
+# The fields below are left around for legacy tools (will remove later).
 #
 # chkconfig: - 65 35
-# description: dhcpd provide access to Dynamic Host Control Protocol.
+# description: dhcpd provides the Dynamic Host Configuration Protocol (DHCP)
\
+#              server
+# processname: dhcpd
+# config: /etc/dhcpd.conf
+# config: /var/lib/dhcpd/dhcpd.leases
+# pidfile: /var/run/dhcpd.pid

-# Source function library.
-. /etc/rc.d/init.d/functions
+. /etc/init.d/functions

-# Source networking configuration.
-. /etc/sysconfig/network
-. /etc/sysconfig/dhcpd
+RETVAL=0

-# Check that networking is up.
-[ ${NETWORKING} = "no" ] && exit 0
```

```
+prog=dhcpd
+dhcpd=/usr/sbin/dhcpd
+lockfile=/var/lock/subsys/dhcpd
+pidfile=/var/run/dhcpd.pid
+statedir=/var/lib/dhcpd

-[ -f /usr/sbin/dhcpd ] || exit 0
+[ -f /etc/sysconfig/dhcpd ] && . /etc/sysconfig/dhcpd

-cfOption()
-{ let i=0;
-  for a in $*;
-  do ((++i));
-     if [ $a = -cf ]; then
-  ((++i));
-  eval 'echo $'$i;
-     elif [[ $a = -cf* ]]; then
-  echo ${a#-cf};
-     fi;
-  done;
+# if the user specified a different config file, make sure we reference it
+findConfig() {
+    for arg in $DHCPDARGS ; do
+        if [ "$found" = 1 ]; then
+            [ -f "$arg" ] && echo "$arg"
+            return
+        fi
+        if [ "$arg" = "-cf" ]; then
+            found=1
+            continue
+        fi
+    done
+    echo "/etc/dhcpd.conf"
 }

-CF=`cfOption $DHCPDARGS`
-if [ -z "$CF" ]; then
-   CF='/etc/dhcpd.conf';
+conf="$(findConfig "$DHCPDARGS")"
+
+if [ ! -f $statedir/dhcpd.leases ] ; then
+    mkdir -p $statedir
+    touch $statedir/dhcpd.leases
+    [ -x /sbin/restorecon ] && [ -d /selinux ] && /sbin/restorecon
$statedir/dhcpd.leases >/dev/null 2>&1
 fi

-[ -f "$CF" ] || exit 0
-if [ ! -f /var/lib/dhcpd/dhcpd.leases ] ; then
-   mkdir -p /var/lib/dhcpd
-   touch /var/lib/dhcpd/dhcpd.leases
-   [ -x /sbin/restorecon ] && [ -d /selinux ] && /sbin/restorecon
/var/lib/dhcp/dhcpd.leases >/dev/null 2>&1
-fi
-
-RETVAL=0
```

```
-prog="dhcpd"
-
-configtest()
-{
- /usr/sbin/dhcpd -q -t -cf $CF
- return $?
+configtest() {
+    [ -x $dhcpd ] || return 5
+    [ -f $conf ] || return 6
+    $dhcpd -q -t -cf $conf
+    RETVAL=$?
+    return $RETVAL
 }

 start() {
- # Start daemons.
- echo -n $"Starting $prog: "
- daemon /usr/sbin/dhcpd ${DHCPDARGS} 2>/dev/null
- RETVAL=$?
- echo
- if [ $RETVAL -eq 0 ]; then
-     touch /var/lock/subsys/dhcpd
-     if [ -x /usr/bin/logger ]; then
-  /usr/bin/logger -t dhcpd 'dhcpd startup succeeded'
-     fi;
- else
-     if [ -x /usr/bin/logger ]; then
-  /usr/bin/logger -t dhcpd 'dhcpd startup failed'
-     fi;
-        fi
- return $RETVAL
+    [ -x $dhcpd ] || return 5
+    [ -f $conf ] || return 6
+
+    pidofproc $prog >/dev/null 2>&1
+    RETVAL=$?
+    [ $RETVAL -eq 0 ] && return $RETVAL
+
+    echo -n $"Starting $prog: "
+    daemon $dhcpd $DHCPDARGS 2>/dev/null
+    RETVAL=$?
+    echo
+    [ $RETVAL = 0 ] && touch $lockfile
+    return $RETVAL
 }

 stop() {
- # Stop daemons.
- echo -n $"Shutting down $prog: "
- killproc dhcpd
- RETVAL=$?
- echo
- if [ $RETVAL -eq 0 ]; then
-            rm -f /var/lock/subsys/dhcpd
-     if [ -x /usr/bin/logger ]; then
-  /usr/bin/logger -t dhcpd 'dhcpd shutdown succeeded'
```

```
-    fi;
- else
-    if [ -x /usr/bin/logger ]; then
-  /usr/bin/logger -t dhcpd 'dhcpd shutdown failed'
-    fi;
- fi
- return $RETVAL
+    pidofproc $prog >/dev/null 2>&1
+    if [ $? -ne 0 ]; then
+        RETVAL=7
+        return $RETVAL
+    fi
+
+    echo -n $"Shutting down $prog: "
+    killproc $prog
+    RETVAL=$?
+    [ $RETVAL = 0 ] && rm -f $lockfile
+    echo
+    return $RETVAL
 }

-# See how we were called.
+if [ $# -gt 1 ]; then
+    RETVAL=2
+    exit $RETVAL
+fi
+
 case "$1" in
-  start)
- start
- ;;
-  stop)
- stop
- ;;
-  restart|reload)
- configtest || exit $?
- stop
- start
- RETVAL=$?
- ;;
-  condrestart)
- if [ -f /var/lock/subsys/dhcpd ]; then
-     stop
-     start
-     RETVAL=$?
- fi
- ;;
-  configtest|check|testconfig|test)
- configtest
- RETVAL=$?
- ;;
-  status)
- status dhcpd
- RETVAL=$?
- ;;
-  *)
```

```
- echo $"Usage: $0 {start|stop|restart|condrestart|configtest|status}"
- exit 1
+    start)
+        start
+        RETVAL=$?
+        ;;
+    stop)
+        stop
+        RETVAL=$?
+        ;;
+    restart|force-reload)
+        stop ; start
+        RETVAL=$?
+        ;;
+    try-restart|reload)
+        RETVAL=3
+        ;;
+    condrestart)
+        if [ -f $lockfile ]; then
+            stop ; start
+            RETVAL=$?
+        fi
+        ;;
+    configtest)
+        configtest
+        RETVAL=$?
+        ;;
+    status)
+        status $dhcpd
+        RETVAL=$?
+        ;;
+    *)
+        echo $"Usage: $0
{start|stop|restart|condrestart|configtest|status}"
+        RETVAL=3
+        ;;
 esac

 exit $RETVAL
-
bind-9.3.3-10.el5.i386.rpm: /etc/rc.d/init.d/named
---
+++
@@ -14,10 +14,9 @@
 # Source networking configuration.
 [ -r /etc/sysconfig/network ] && . /etc/sysconfig/network

-# Check that networking is up.
-[ "${NETWORKING}" = "no" ] && exit 1
-
 [ -r /etc/sysconfig/named ] && . /etc/sysconfig/named
+
+export KRB5_KTNAME=${KEYTAB_FILE:-/etc/named.keytab}

 # Don't kill named during clean-up
 NAMED_SHUTDOWN_TIMEOUT=${NAMED_SHUTDOWN_TIMEOUT:-100}
```

```
@@ -36,8 +35,6 @@
     named='named_sdb';
 fi;
 prog=$named
-
-[ -x /usr/sbin/$named ] || exit 1

 nmdcOption()
 { let i=0;
@@ -54,18 +51,6 @@

 named_c_option=`nmdcOption $OPTIONS`;
 named_conf=${named_c_option:-/etc/named.conf};
-
-if [ ! -r ${ROOTDIR}${named_conf} ] ; then
-    if [ -z "$named_c_option" ] && [ -r ${ROOTDIR}/etc/named.caching-
nameserver.conf ]; then
-        named_conf='/etc/named.caching-nameserver.conf';
-        OPTIONS="$OPTIONS -c ${named_conf}";
-    else
-        echo Locating $ROOTDIR/${named_conf} failed:
-        failure
-        echo;
-        exit 1;
-    fi;
-fi;

 dbusEnabled=0;
 for a in $OPTIONS; do
@@ -88,6 +73,21 @@
 fi

 start() {
+
+ [ -x /usr/sbin/$named ] || exit 5
+
+ if [ ! -r ${ROOTDIR}${named_conf} ] ; then
+    if [ -z "$named_c_option" ] && [ -r ${ROOTDIR}/etc/named.caching-
nameserver.conf ]; then
+        named_conf='/etc/named.caching-nameserver.conf';
+        OPTIONS="$OPTIONS -c ${named_conf}";
+    else
+        echo Locating $ROOTDIR/${named_conf} failed:
+        failure
+        echo;
+        exit 6;
+    fi;
+ fi;
+
        # Start daemons.
        echo -n $"Starting $named: "
  if [ -n "`/sbin/pidof -o %PPID $named`" ]; then
@@ -185,7 +185,7 @@
     if [ -x /usr/bin/logger ]; then
        echo "$named_err" | /usr/bin/logger -pdaemon.error -tnamed
            fi;
```

```
-             return $RETVAL;
+             return 7;
          fi;
    [ $RETVAL -eq 0 ] && touch /var/lock/subsys/named
          echo
@@ -196,23 +196,19 @@
          echo -n $"Stopping $named: "
  /usr/sbin/rndc stop >/dev/null 2>&1
  RETVAL=$?
- if [ $RETVAL -eq 0 ]; then
-             timeout=0
-             while : ; do
-  if /sbin/pidof -o %PPID $named >/dev/null; then
-             if [ $timeout -ge $NAMED_SHUTDOWN_TIMEOUT ]; then
-       killproc $named -TERM >/dev/null 2>&1
-             RETVAL=$?
+ [ "$RETVAL" -eq 0 ] || killproc "$named" -TERM >/dev/null 2>&1
+
+ timeout=0
+ RETVAL=0
+ while /sbin/pidof -o %PPID "$named" >/dev/null; do
+  if [ $timeout -ge $NAMED_SHUTDOWN_TIMEOUT ]; then
+    RETVAL=1
     break
-             else
+  else
     sleep 2 && echo -n "."
     timeout=$((timeout+2))
-     fi;
-  else
-     break
-                fi;
-             done
- fi;
+  fi;
+ done
  if [ $RETVAL -eq 0 ]; then
       rm -f /var/lock/subsys/named
       rm -f /var/run/named.pid
@@ -238,6 +234,7 @@
 }
 rhstatus() {
  /usr/sbin/rndc status
+ status /usr/sbin/$named
  return $?
 }
 restart() {
@@ -292,7 +289,7 @@
    restart
    ;;
  condrestart)
-  if [ -e /var/lock/subsys/named ]; then restart; fi
+  [ -e /var/lock/subsys/named ] && restart;
    ;;
  reload)
   reload
```

```
@@ -304,8 +301,8 @@
        checkconfig
   ;;
  *)
-       echo $"Usage: $0
{start|stop|status|restart|condrestart|reload|probe}"
-  exit 1
+       echo $"Usage: $0
{start|stop|status|restart|condrestart|reload|configtest|probe}"
+  exit 2
 esac

 exit $?
krb5-server-1.6.1-17.el5.i386.rpm: /etc/rc.d/init.d/kprop
---
+++
@@ -12,9 +12,6 @@
 # Get config.
 . /etc/sysconfig/network

-# Check that networking is up.
-[ ${NETWORKING} = "no" ] && exit 0
-
 # Source function library.
 . /etc/init.d/functions

@@ -24,9 +21,8 @@

 # Sheel functions to cut down on useless shell instances.
 start() {
-   if [ ! -f /var/kerberos/krb5kdc/kpropd.acl ] ; then
-      exit 0
- fi
+   [ -f /var/kerberos/krb5kdc/kpropd.acl ] || exit 6
+ [ -x $kpropd ] || exit 5
   echo -n $"Starting $prog: "
   daemon ${kpropd} -S
   RETVAL=$?
@@ -65,7 +61,7 @@
   ;;
    *)
   echo $"Usage: $0 {start|stop|status|restart|condrestart}"
- RETVAL=1
+ RETVAL=2
   ;;
 esac

initscripts-8.45.17.EL-1.i386.rpm: /etc/sysconfig/network-scripts/ifup-ipsec
---
+++
@@ -102,6 +102,7 @@
     [ -n "$KEY_ESP_IN" ] && SPD_ESP_IN=yes
     [ -n "$KEY_ESP_OUT" ] && SPD_ESP_OUT=yes
 else
+    [ -z "$IKE_DHGROUP" ] && IKE_DHGROUP=2
     [ -z "$AH_PROTO" ] && AH_PROTO=sha1
```

```
      [ -z "$ESP_PROTO" ] && ESP_PROTO=3des

@@ -179,7 +180,7 @@
          encryption_algorithm $ESP_PROTO;
   hash_algorithm $AH_PROTO;
   authentication_method pre_shared_key;
-  dh_group 2 ;
+  dh_group $IKE_DHGROUP;
  }
 }
 EOF
@@ -201,7 +202,7 @@
   encryption_algorithm $ESP_PROTO;
   hash_algorithm $AH_PROTO;
   authentication_method rsasig;
-  dh_group 2;
+  dh_group $IKE_DHGROUP;
  }
 }
 EOF
@@ -213,7 +214,7 @@
          encryption_algorithm $ESP_PROTO;
   hash_algorithm $AH_PROTO;
   authentication_method gssapi_krb;
-  dh_group 2 ;
+  dh_group $IKE_DHGROUP;
  }
 }
 EOF
krb5-server-1.6.1-17.el5.i386.rpm: /etc/rc.d/init.d/kadmin
---
+++
@@ -14,9 +14,6 @@
 # Get config.
 . /etc/sysconfig/network

-# Check that networking is up.
-[ ${NETWORKING} = "no" ] && exit 0
-
 # Get config.
 [ -r /etc/sysconfig/kadmin ] && . /etc/sysconfig/kadmin

@@ -32,15 +29,16 @@
    if [ ! -f /var/kerberos/krb5kdc/principal ] ; then
       # Make an educated guess—if they're using kldap somewhere,
       # then we don't know for sure that this is an error.
-       if [ ! grep -q 'db_library.*=.*kldap' /etc/krb5.conf ] ; then
+       if ! grep -q 'db_library.*=.*kldap' /etc/krb5.conf ; then
          echo $"Error. Default principal database does not exist."
+         exit 1
      fi
-      exit 0
  fi
    if [ -f /var/kerberos/krb5kdc/kpropd.acl ] ; then
      echo $"Error. This appears to be a slave server, found kpropd.acl"
-      exit 0
```

```
+       exit 6
   else
+ [ -x $kadmind ] || exit 5
         if [ ! -f /var/kerberos/krb5kdc/kadm5.keytab ] ; then
     echo -n $"Extracting kadm5 Service Keys: "
     # This should always work.
@@ -97,7 +95,7 @@
   ;;
    *)
   echo $"Usage: $0 {start|stop|status|condrestart|reload|restart}"
- RETVAL=1
+ RETVAL=2
   ;;
 esac


nfs-utils-1.0.9-24.el5.i386.rpm: /etc/rc.d/init.d/nfs
---
+++
@@ -14,41 +14,38 @@
 . /etc/rc.d/init.d/functions

 # Source networking configuration.
-if [ ! -f /etc/sysconfig/network ]; then
-    exit 6
-fi
-
-. /etc/sysconfig/network
-
-# Check that networking is up.
-[ "${NETWORKING}" = "no" ] && exit 6
-
-[ -x /usr/sbin/rpc.nfsd ] || exit 5
-[ -x /usr/sbin/rpc.mountd ] || exit 5
-[ -x /usr/sbin/exportfs ] || exit 5
-
-# Don't fail if /etc/exports doesn't exist; create a bare-bones version and
continue.
-[ -r /etc/exports ] || \
-    { touch /etc/exports && chmod u+rw,g+r,o+r /etc/exports ; } || \
-    { echo "/etc/exports does not exist" ; exit 0 ; }
+[ -f /etc/sysconfig/network ] && . /etc/sysconfig/network

 # Check for and source configuration file otherwise set defaults
 [ -f /etc/sysconfig/nfs ] && . /etc/sysconfig/nfs
-
-[ -z "$MOUNTD_NFS_V2" ] && MOUNTD_NFS_V2=default
-[ -z "$MOUNTD_NFS_V3" ] && MOUNTD_NFS_V3=default
-
-# Number of servers to be started by default
-[ -z "$RPCNFSDCOUNT" ] && RPCNFSDCOUNT=8
-
-# Remote quota server
-[ -z "$RQUOTAD" ] && RQUOTAD=`type -path rpc.rquotad`

 RETVAL=0
```

```
 # See how we were called.
 case "$1" in
   start)
+
+ # Check that networking is up.
+ [ "${NETWORKING}" = "no" ] && exit 6
+
+ [ -x /usr/sbin/rpc.nfsd ] || exit 5
+ [ -x /usr/sbin/rpc.mountd ] || exit 5
+ [ -x /usr/sbin/exportfs ] || exit 5
+
+ # Don't fail if /etc/exports doesn't exist; create a bare-bones
+ # version and continue.
+ [ -r /etc/exports ] || \
+     { touch /etc/exports && chmod u+rw,g+r,o+r /etc/exports ; } || \
+     { echo "/etc/exports does not exist" ; exit 0 ; }
+ [ -z "$MOUNTD_NFS_V2" ] && MOUNTD_NFS_V2=default
+ [ -z "$MOUNTD_NFS_V3" ] && MOUNTD_NFS_V3=default
+
+ # Number of servers to be started by default
+ [ -z "$RPCNFSDCOUNT" ] && RPCNFSDCOUNT=8
+
+ # Remote quota server
+ [ -z "$RQUOTAD" ] && RQUOTAD=`type -path rpc.rquotad`
+
   # Start daemons.
   [ -x /usr/sbin/rpc.svcgssd ] && /sbin/service rpcsvcgssd start

@@ -98,6 +95,7 @@
   daemon rpc.mountd $RPCMOUNTDOPTS
   RETVAL=$?
   echo
+ [ $RETVAL -ne 0 ] && exit $RETVAL
   touch /var/lock/subsys/nfs

   # Let rpc.idmapd know that rpc.mountd just started
@@ -117,13 +115,6 @@
    killproc rpc.rquotad
    RETVAL=$?
    echo
- fi
- # Reset the lockd ports if they were set
- if [ -n "$LOCKD_TCPPORT" ]; then
-     /sbin/sysctl -w fs.nfs.nlm_tcpport=0 >/dev/null 2>&1
- fi
- if [ -n "$LOCKD_UDPPORT" ]; then
-     /sbin/sysctl -w fs.nfs.nlm_udpport=0 >/dev/null 2>&1
   fi
   # Do it the last so that clients can still access the server
   # when the server is running.
gdm-2.16.0-31.0.1.el5.i386.rpm: /etc/gdm/PreSession/Default
---
+++
@@ -68,4 +68,17 @@
   "$XSETROOT" -cursor_name left_ptr -solid "$BACKCOLOR"
 fi
```

```
+SESSREG=`gdmwhich sessreg`
+if [ "x$SESSREG" != "x" ] ; then
+ # some output for easy debugging
+ echo "$0: Registering your session with utmp"
+ echo "$0: running: $SESSREG -a -u /var/run/utmp -x \"$X_SERVERS\" -h
\"$REMOTE_HOST\" -l \"$DISPLAY\" \"$USER\""
+
+ exec "$SESSREG" -a -u /var/run/utmp -x "$X_SERVERS" -h "$REMOTE_HOST" -l
"$DISPLAY" "$USER"
+ # this is not reached
+fi
+
+# some output for easy debugging
+echo "$0: could not find the sessreg utility, cannot update wtmp and utmp"
+
 exit 0
kexec-tools-1.101-194.4.el5.i386.rpm: /etc/rc.d/init.d/kdump
---
+++
@@ -24,6 +24,7 @@
 BOOTDIR="/boot"

 KDUMP_KERNELVER=""
+KDUMP_INITRDEXT=""
 KDUMP_COMMANDLINE=""
 KEXEC_ARGS=""
 KDUMP_CONFIG_FILE="/etc/kdump.conf"
@@ -43,7 +44,7 @@
   coredir="/var/crash/`date +"%Y-%m-%d-%H:%M"`"

   mkdir -p $coredir
- cp /proc/vmcore $coredir/vmcore-incomplete
+ cp --sparse=always /proc/vmcore $coredir/vmcore-incomplete
   exitcode=$?
   if [ $exitcode == 0 ]; then
     mv $coredir/vmcore-incomplete $coredir/vmcore
@@ -83,7 +84,7 @@
   fi

   kdump_kernel="${KDUMP_BOOTDIR}/${KDUMP_IMG}-${kdump_kver}${KDUMP_IMG_EXT}"
- kdump_initrd="${KDUMP_BOOTDIR}/initrd-${kdump_kver}kdump.img"
+ kdump_initrd="${KDUMP_BOOTDIR}/initrd-
${kdump_kver}${KDUMP_INITRDEXT}kdump.img"

   if [ ! -f $kdump_kernel ]; then
     echo -n "No kdump kernel image found."; warning; echo
@@ -186,6 +187,7 @@
     KDUMP_COMMANDLINE=`cat /proc/cmdline`
   fi

+ ARCH=`uname -m`
   if [ "$ARCH" == "ppc64" ]
   then
     MEM_RESERVED=`grep "crashkernel=[0-9]\+[MmKkGg]@[0-9]\+[MmGgKk]"
/proc/cmdline`
```

```
initscripts-8.45.17.EL-1.i386.rpm: /etc/rc.d/init.d/network
---
+++
@@ -174,7 +174,7 @@
         rootfs=$(awk '{ if ($1 !~ /^[ \t]*#/ && $2 == "/") { print $3; }}'
/etc/mtab)
         rootopts=$(awk '{ if ($1 !~ /^[ \t]*#/ && $2 == "/") { print $4;
}}' /etc/mtab)

- if [[ "$rootfs" =~ "^nfs" ]] || [[ "$rootopts" =~ "_netdev" ]] ; then
+ if [[ "$rootfs" =~ "^nfs" ]] || [[ "$rootopts" =~ "_netdev|_rnetdev" ]] ;
then
    exit 1
  fi

nfs-utils-1.0.9-24.el5.i386.rpm: /etc/rc.d/init.d/rpcidmapd
---
+++
@@ -12,15 +12,7 @@
 . /etc/init.d/functions

 # Source networking configuration.
-if [ ! -f /etc/sysconfig/network ]; then
-    exit 6
-fi
-. /etc/sysconfig/network
-
-# Check that networking is up.
-[ "${NETWORKING}" = "no" ] && exit 6
-
-[ ! -x /usr/sbin/rpc.idmapd ] && exit 5
+[ -f /etc/sysconfig/network ] && . /etc/sysconfig/network

 # Check for and source configuration file otherwise set defaults
 [ -f /etc/sysconfig/nfs ] && . /etc/sysconfig/nfs
@@ -31,6 +23,11 @@

 case "$1" in
   start|condstart)
+ # Check that networking is up.
+ [ "${NETWORKING}" = "no" ] && exit 6
+
+ [ ! -x /usr/sbin/rpc.idmapd ] && exit 5
+
   # Make sure the daemon is not already running.
   [ "$1" = "condstart" -a -n "`pidofproc $prog`" ] && {
   killproc $prog "-SIGHUP" > /dev/null
NetworkManager-gnome-0.6.4-6.el5.i386.rpm: /etc/dbus-1/system.d/nm-
applet.conf
---
+++
@@ -20,5 +20,7 @@
   <deny send_destination="org.freedesktop.NetworkManagerInfo"/>
   <deny send_interface="org.freedesktop.NetworkManagerInfo"/>
  </policy>
+
```

```
+ <limit name="max_replies_per_connection">512</limit>
 </busconfig>

sysklogd-1.4.1-40.el5.i386.rpm: /etc/logrotate.d/syslog
---
+++
@@ -2,5 +2,6 @@
     sharedscripts
     postrotate
   /bin/kill -HUP `cat /var/run/syslogd.pid 2> /dev/null` 2> /dev/null ||
true
+ /bin/kill -HUP `cat /var/run/rsyslogd.pid 2> /dev/null` 2> /dev/null ||
true
     endscript
 }
nfs-utils-1.0.9-24.el5.i386.rpm: /etc/rc.d/init.d/rpcgssd
---
+++
@@ -12,23 +12,13 @@
 . /etc/init.d/functions

 # Source networking configuration.
-if [ ! -f /etc/sysconfig/network ]; then
-    exit 6
-fi
-. /etc/sysconfig/network
-
-# Check that networking is up.
-[ "${NETWORKING}" = "no" ] && exit 6
-
-[ ! -x /usr/sbin/rpc.gssd ] && exit 5
+[ -f /etc/sysconfig/network ] && . /etc/sysconfig/network

 # Check for and source configuration file otherwise set defaults
 [ -f /etc/sysconfig/nfs ] && . /etc/sysconfig/nfs
+
+# See if we are configured to start
 [ "${SECURE_NFS}" != "yes" ] && exit 6
-
-# List of kernel modules to load
-[ -z "${SECURE_NFS_MODS}" ] && SECURE_NFS_MODS="des rpcsec_gss_krb5"
-

 # Try to use machine credentials by default
 RETVAL=0
@@ -37,6 +27,13 @@

 case "$1" in
   start|condstart)
+ # Check that networking is up.
+ [ "${NETWORKING}" = "no" ] && exit 6
+ [ ! -x /usr/sbin/rpc.gssd ] && exit 5
+
+ # List of kernel modules to load
+ [ -z "${SECURE_NFS_MODS}" ] && SECURE_NFS_MODS="des rpcsec_gss_krb5"
+
```

```
   # Make sure the daemon is not already running.
   if status $prog > /dev/null ; then
     exit 0
krb5-server-1.6.1-17.el5.i386.rpm: /etc/rc.d/init.d/krb5kdc
---
+++
@@ -13,9 +13,6 @@
 # Get config.
 . /etc/sysconfig/network

-# Check that networking is up.
-[ ${NETWORKING} = "no" ] && exit 0
-
 # Get config.
 [ -r /etc/sysconfig/krb5kdc ] && . /etc/sysconfig/krb5kdc

@@ -28,6 +25,7 @@

 # Sheel functions to cut down on useless shell instances.
 start() {
+ [ -x $krb5kdc ] || exit 5
   echo -n $"Starting $prog: "
   daemon ${krb5kdc} ${KRB5REALM:+-r ${KRB5REALM}} $KRB5KDC_ARGS
   RETVAL=$?
@@ -75,7 +73,7 @@
   ;;
    *)
   echo $"Usage: $0 {start|stop|status|reload|restart|condrestart}"
- RETVAL=1
+ RETVAL=2
   ;;
 esac

nfs-utils-1.0.9-24.el5.i386.rpm: /etc/rc.d/init.d/rpcsvcgssd
---
+++
@@ -12,22 +12,13 @@
 . /etc/init.d/functions

 # Source networking configuration.
-if [ ! -f /etc/sysconfig/network ]; then
-     exit 6
-fi
-. /etc/sysconfig/network
-
-# Check that networking is up.
-[ "${NETWORKING}" = "no" ] && exit 6
-
-[ ! -x /usr/sbin/rpc.svcgssd ] && exit 5
+[ -f /etc/sysconfig/network ] && . /etc/sysconfig/network

 # Check for and source configuration file otherwise set defaults
 [ -f /etc/sysconfig/nfs ] && . /etc/sysconfig/nfs
+
+# See if we are configured to start
 [ "${SECURE_NFS}" != "yes" ] && exit 6
```

```
-
-# List of kernel modules to load
-[ -z "${SECURE_NFS_MODS}" ] && SECURE_NFS_MODS="des rpcsec_gss_krb5"

 RETVAL=0
 LOCKFILE=/var/lock/subsys/rpcsvcgssd
@@ -35,6 +26,14 @@

 case "$1" in
   start|condstart)
+ # Check that networking is up.
+ [ "${NETWORKING}" = "no" ] && exit 6
+ [ "${SECURE_NFS}" != "yes" ] && exit 6
+ [ ! -x /usr/sbin/rpc.svcgssd ] && exit 5
+
+ # List of kernel modules to load
+ [ -z "${SECURE_NFS_MODS}" ] && SECURE_NFS_MODS="des rpcsec_gss_krb5"
+
   # Make sure the daemon is not already running.
   if status $prog > /dev/null ; then
     exit 0
gdm-2.16.0-31.0.1.el5.i386.rpm: /etc/gdm/PostSession/Default
---
+++
@@ -21,6 +21,6 @@

 SESSREG=`gdmwhich sessreg`
 if [ "x$SESSREG" != "x" ] ; then
- "$SESSREG" -d -w /var/log/wtmp -u /var/run/utmp -x "$X_SERVERS" -h
"$REMOTE_HOST" -l "$DISPLAY" "$USER"
+ "$SESSREG" -d -u /var/run/utmp -x "$X_SERVERS" -h "$REMOTE_HOST" -l
"$DISPLAY" "$USER"
 fi
 exit 0
fontconfig-2.4.1-6.el5.i386.rpm: /etc/fonts/conf.d/30-aliases-fedora.conf
---
+++
@@ -42,6 +42,7 @@
    <family>Helvetica</family>
    <accept>
    <family>Nimbus Sans L</family>
+         <family>Liberation Sans</family>
    <family>Arial</family>
    <family>Albany</family>
    <family>Albany AMT</family>
@@ -52,6 +53,7 @@
    <family>Times</family>
    <accept>
    <family>Nimbus Roman No9 L</family>
+         <family>Liberation Serif</family>
    <family>Times New Roman</family>
    <family>Thorndale</family>
    <family>Thorndale AMT</family>
@@ -62,6 +64,7 @@
    <family>Courier</family>
    <accept>
```

```
       <family>Nimbus Mono L</family>
+          <family>Liberation Mono</family>
       <family>Courier New</family>
       <family>Cumberland</family>
       <family>Cumberland AMT</family>
@@ -74,6 +77,7 @@
          <alias>
       <family>Arial</family>
       <accept>
+          <family>Liberation Sans</family>
       <family>Albany</family>
       <family>Albany AMT</family>
       <family>Helvetica</family>
@@ -84,6 +88,7 @@
          <alias>
       <family>Times New Roman</family>
       <accept>
+          <family>Liberation Serif</family>
       <family>Thorndale</family>
       <family>Thorndale AMT</family>
       <family>Times</family>
@@ -94,6 +99,7 @@
          <alias>
       <family>Courier New</family>
       <accept>
+          <family>Liberation Mono</family>
       <family>Cumberland</family>
       <family>Cumberland AMT</family>
       <family>Courier</family>
@@ -106,6 +112,7 @@
          <alias>
       <family>Albany</family>
       <accept>
+          <family>Liberation Sans</family>
       <family>Arial</family>
       <family>Albany AMT</family>
       <family>Helvetica</family>
@@ -116,6 +123,7 @@
          <alias>
       <family>Thorndale</family>
       <accept>
+          <family>Liberation Serif</family>
       <family>Times New Roman</family>
       <family>Thorndale AMT</family>
       <family>Times</family>
@@ -126,6 +134,7 @@
          <alias>
       <family>Cumberland</family>
       <accept>
+          <family>Liberation Mono</family>
       <family>Courier New</family>
       <family>Cumberland AMT</family>
       <family>Courier</family>
@@ -138,6 +147,7 @@
          <alias>
       <family>Albany AMT</family>
```

```
       <accept>
+            <family>Liberation Sans</family>
      <family>Arial</family>
      <family>Albany</family>
      <family>Helvetica</family>
@@ -148,6 +158,7 @@
            <alias>
      <family>Thorndale AMT</family>
      <accept>
+            <family>Liberation Serif</family>
      <family>Times New Roman</family>
      <family>Thorndale</family>
      <family>Times</family>
@@ -158,6 +169,7 @@
            <alias>
      <family>Cumberland AMT</family>
      <accept>
+            <family>Liberation Mono</family>
      <family>Courier New</family>
      <family>Cumberland</family>
      <family>Courier</family>
lam-devel-7.1.2-8.fc6.i386.rpm: /usr/lib/pkgconfig/lam.pc
---
+++
@@ -3,5 +3,5 @@
 Description: The LAM (Local Area Multicomputer) programming environment.
 URL:  http://www.lam-mpi.org/
 Version: 7.1.2
-Libs:  -L/usr/lib/lam -lmpi
-Cflags:  -I/usr/include/lam -I@INCLUDEDIR@/32
+Libs:  -L/usr/lib/lam/lib -lmpi
+Cflags:  -I/usr/lib/lam/include
initscripts-8.45.17.EL-1.i386.rpm: /etc/rc.d/rc.sysinit
---
+++
@@ -119,10 +119,12 @@
  fi
  if [ -n "$key" -a "x$key" != "xnone" ]; then
      if test -e "$key" ; then
+  owner=$(ls -l $key | (read a b owner rest; echo $owner))
+  if ! key_is_random "$key"; then
   mode=$(ls -l "$key" | cut -c 5-10)
-  owner=$(ls -l $key | awk '{ print $3 }')
-  if [ "$mode" != "------" ] && ! key_is_random "$key"; then
-      echo $"INSECURE MODE FOR $key"
+      if [ "$mode" != "------" ]; then
+         echo $"INSECURE MODE FOR $key"
+     fi
   fi
   if [ "$owner" != root ]; then
      echo $"INSECURE OWNER FOR $key"
@@ -139,6 +141,12 @@
  makeswap=""
  mke2fs=""
  skip=""
+ # Parse the src field for UUID= and convert to real device names
```

```
+ if [ "${src%%=*}" == "UUID" ]; then
+   src=`/sbin/blkid -t "$src" -o device|(read oneline;echo $oneline)`
+ elif [ "${src/^\/dev\/disk\/by-uuid\/}" != "$src" ]; then
+   src=$(__readlink $src)
+ fi
  # Parse the options field, convert to cryptsetup parameters
  # and contruct the command line
  while [ -n "$opt" ]; do
@@ -695,11 +703,27 @@
  action $"Checking local filesystem quotas: " /sbin/quotacheck -aRnug
 fi

+remount_needed() {
+   local state oldifs
+   [ "$READONLY" = "yes" ] && return 1
+   state=`LC_ALL=C awk '/ \/ / && ($3 !~ /rootfs/) { print $4 }'
/proc/mounts`
+   oldifs=$IFS
+   IFS=","
+   for opt in $state ; do
+    if [ "$opt" = "rw" ]; then
+   IFS=$oldifs
+   return 1
+ fi
+   done
+   IFS=$oldifs
+   return 0
+}
+
 # Remount the root filesystem read-write.
 update_boot_stage RCmountfs
-state=`LC_ALL=C awk '/ \/ / && ($3 !~ /rootfs/) { print $4 }' /proc/mounts`
-[ "$state" != "rw" -a "$READONLY" != "yes" ] && \
+if remount_needed ; then
   action $"Remounting root filesystem in read-write mode: " mount -n -o
remount,rw /
+fi

 # Clean up SELinux labels
 if [ -n "$SELINUX_STATE" ]; then
@@ -779,14 +803,14 @@
    if [ -x /usr/bin/passwd ]; then
        /usr/bin/passwd root
    fi
-    if [ -x /usr/sbin/netconfig ]; then
- /usr/sbin/netconfig
+    if [ -x /usr/sbin/system-config-network-tui ]; then
+ /usr/sbin/system-config-network-tui
    fi
    if [ -x /usr/sbin/timeconfig ]; then
  /usr/sbin/timeconfig
    fi
-    if [ -x /usr/sbin/authconfig ]; then
- /usr/sbin/authconfig --nostart
+    if [ -x /usr/sbin/authconfig-tui ]; then
+ /usr/sbin/authconfig-tui --nostart
```

```
      fi
      if [ -x /usr/sbin/ntsysv ]; then
   /usr/sbin/ntsysv --level 35
nfs-utils-1.0.9-24.el5.i386.rpm: /etc/rc.d/init.d/nfslock
---
+++
@@ -13,17 +13,10 @@
 . /etc/rc.d/init.d/functions

 # Source networking configuration.
-if [ ! -f /etc/sysconfig/network ]; then
-     exit 6
-fi
+[ -f /etc/sysconfig/network ] && . /etc/sysconfig/network

 # Check for and source configuration file
 [ -f /etc/sysconfig/nfs ] && . /etc/sysconfig/nfs
-
-. /etc/sysconfig/network
-
-# Check that networking is up.
-[ "${NETWORKING}" = "no" ] && exit 6

 # Start lockd from userland only if kernel <= 2.2.18
 OS_RELEASE=`uname --release`
@@ -37,22 +30,25 @@
      USERLAND_LOCKD=
 fi

-if [ "$USERLAND_LOCKD" ] ; then
-     [ -x /sbin/rpc.lockd ] || exit 5
-fi
+RETVAL=0
+start() {
+ # Check that networking is up.
+ [ "${NETWORKING}" = "no" ] && exit 6

-[ -x /sbin/rpc.statd ] || exit 5
+ if [ "$USERLAND_LOCKD" ] ; then
+     [ -x /sbin/rpc.lockd ] || exit 5
+ fi
+ [ -x /sbin/rpc.statd ] || exit 5

-RETVAL=0
-if [ -n "${STATD_HOSTNAME}" ]; then
-     STATDARG="-n ${STATD_HOSTNAME}"
-else
-     STATDARG=""
-fi
+ if [ -n "${STATD_HOSTNAME}" ]; then
+     STATDARG="-n ${STATD_HOSTNAME}"
+ else
+     STATDARG=""
+ fi

-
```

```
-start() {
-     if [ ! -f /var/lock/subsys/nfslock ]; then
+ if [ -f /var/lock/subsys/nfslock ]; then
+   return $RETVAL
+ fi
  # Start daemons.
  if [ "$USERLAND_LOCKD" ]; then
    echo -n $"Starting NFS locking: "
@@ -62,12 +58,10 @@
  # See if the kernel lockd should start up
  # listening on a particular port
  #
-   LOCKDARG=""
-   [ -n "$LOCKD_TCPPORT" ] && LOCKDARG="nlm_tcpport=$LOCKD_TCPPORT"
+   [ -n "$LOCKD_TCPPORT" ] && \
+     /sbin/sysctl -w fs.nfs.nlm_tcpport=$LOCKD_TCPPORT >/dev/null 2>&1
    [ -n "$LOCKD_UDPPORT" ] && \
-     LOCKDARG="$LOCKDARG nlm_udpport=$LOCKD_UDPPORT"
-   [ -n "$LOCKDARG" ]  && \
-     modprobe lockd $LOCKDARG
+     /sbin/sysctl -w fs.nfs.nlm_udpport=$LOCKD_UDPPORT >/dev/null 2>&1
  fi
  echo -n $"Starting NFS statd: "
  # See if a statd's ports has been defined
@@ -81,7 +75,6 @@
  RETVAL=$?
  echo
  [ $RETVAL -eq 0 ] && touch /var/lock/subsys/nfslock
-     fi
    return $RETVAL
 }


dhcpv6-0.10-33.el5.i386.rpm: /etc/rc.d/init.d/dhcp6s
---
+++
@@ -1,83 +1,107 @@
 #!/bin/sh
 #
-# dhcp6s        dhcp6s is an implementation of DHCPv6 server.
-#               This shell script takes care of starting and stopping
-#               dhcp6s.
+### BEGIN INIT INFO
+# Provides: dhcp6s
+# Default-Start:
+# Default-Stop:
+# Should-Start:
+# Required-Start: $network
+# Required-Stop:
+# Short-Description: Start and stop the DHCPv6 server agent
+# Description: dhcp6s provides IPv6 addresses and prefix assignment
+#               administrative policy and configuration information for
+#               DHCPv6 clients.  dhcp6s also manages those addresses and
+#               prefixes, such as IPv6 addresses, prefixes, DNS server
+#               addresses, or ntp server addresses.
+### END INIT INFO
+#
```

```
+# The fields below are left around for legacy tools (will remove later).
 #
 # chkconfig: - 66 36
-# description: dhcp6s supports server side of  Dynamic Host Configuration \
-#              Protocol for IPv6.
+# description: dhcp6s provides IPv6 addresses and prefix assignment \
+#              administrative policy and configuration information for \
+#              DHCPv6 clients.  dhcp6s also manages those addresses and \
+#              prefixes, such as IPv6 addresses, prefixes, DNS server \
+#              addresses, or ntp server addresses.
 # processname: dhcp6s
 # config: /etc/dhcp6s.conf
 # config: /etc/sysconfig/dhcp6s

-# Source function library.
-. /etc/rc.d/init.d/functions
+. /etc/init.d/functions

-# Source networking configuration.
-. /etc/sysconfig/network
-. /etc/sysconfig/dhcp6s
+RETVAL=0
+
+prog=dhcp6s
+dhcp6s=/usr/sbin/dhcp6s
+lockfile=/var/lock/subsys/dhcp6s

 # Check that networking is up.
-[ ${NETWORKING} = "no" ] && exit 0
-
-# Check that files exist
-[ -x /usr/sbin/dhcp6s ] || exit 0
-[ -f /etc/dhcp6s.conf ] || exit 0
-
-if [ "x$DHCP6SIF" =  "x" ]; then logger -s -t "dhcp6s" -p "daemon.info"
"Warning: dhcp6s listening on ALL interfaces - set DHCP6SIF in
/etc/sysconfig/dhcp6s"; fi
-
-RETVAL=0
-prog="dhcp6s"
+# networking is not up, return 1 for generic error
+. /etc/sysconfig/network
+[ $NETWORKING = "no" ] && exit 1

 start() {
- # Start daemons.
- echo -n $"Starting $prog: "
- daemon /usr/sbin/dhcp6s -c /etc/dhcp6s.conf ${DHCP6SARGS} ${DHCP6SIF}
- RETVAL=$?
- echo
- [ $RETVAL -eq 0 ] && touch /var/lock/subsys/dhcp6s
- return $RETVAL
+    # return 5 if program is not installed
+    [ -x $dhcp6s ] || exit 5
+
+    # return 6 if program is not configured
```

```
+    [ -f /etc/dhcp6s.conf ] || exit 6
+    [ -f /etc/sysconfig/dhcp6s ] || exit 6
+    . /etc/sysconfig/dhcp6s
+
+    if [ -z "$DHCP6SIF" ]; then
+        logger -s -t "$prog" -p "daemon.info" "Warning: $prog listening on
ALL interfaces"
+    fi
+
+    echo -n $"Starting $prog: "
+    daemon $dhcp6s -c /etc/dhcp6s.conf $DHCP6SARGS $DHCP6SIF
+    RETVAL=$?
+    echo
+    [ $RETVAL -eq 0 ] && touch $lockfile
+    return $RETVAL
 }

 stop() {
- # Stop daemons.
- echo -n $"Shutting down $prog: "
- killproc dhcp6s
- RETVAL=$?
- echo
- [ $RETVAL -eq 0 ] && rm -f /var/lock/subsys/dhcp6s
- return $RETVAL
+    echo -n $"Shutting down $prog: "
+    killproc $prog -TERM
+    RETVAL=$?
+    echo
+    [ $RETVAL -eq 0 ] && success || failure
+    echo
+    rm -f $lockfile
+    return $RETVAL
 }

 # See how we were called.
 case "$1" in
-  start)
- start
- ;;
-  stop)
- stop
- ;;
-  restart|reload)
- stop
- start
- RETVAL=$?
- ;;
-  condrestart)
- if [ -f /var/lock/subsys/dhcp6s ]; then
-     stop
-     start
-     RETVAL=$?
- fi
- ;;
-  status)
```

```
- status dhcp6s
- RETVAL=$?
- ;;
- *)
- echo $"Usage: $0 {start|stop|restart|condrestart|status}"
- exit 1
+     start)
+         start
+         RETVAL=$?
+         ;;
+     stop)
+         stop
+         RETVAL=$?
+         ;;
+     restart|force-reload)
+         stop && start
+         RETVAL=$?
+         ;;
+     try-restart|reload)
+         RETVAL=3
+         ;;
+     condrestart)
+         if [ -f $lockfile ]; then
+             stop && start
+         fi
+         ;;
+     status)
+         status $prog
+         RETVAL=$?
+         ;;
+     *)
+         echo $"Usage: $0 {start|stop|restart|try-restart|reload|force-
reload|status}"
+         RETVAL=3
+         ;;
 esac

 exit $RETVAL
-
dhcpv6-0.10-33.el5.i386.rpm: /etc/rc.d/init.d/dhcp6r
---
+++
@@ -1,80 +1,95 @@
 #!/bin/sh
 #
-# dhcp6r        dhcp6r is an implementation of DHCPv6 relay agent.
-#               This shell script takes care of starting and stopping
-#               dhcp6r.
+### BEGIN INIT INFO
+# Provides: dhcp6r
+# Default-Start:
+# Default-Stop:
+# Should-Start:
+# Required-Start: $network
+# Required-Stop:
+# Short-Description: Start and stop the DHCPv6 relay agent
```

```
+# Description: dhcp6r acts as a DHCPv6 relay agent forwarding DHCPv6
messages
+#              from clients to servers and vice versa.
+### END INIT INFO
+#
+# The fields below are left around for legacy tools (will remove later).
 #
 # chkconfig: - 66 36
-# description: dhcp6r supports the DHCPv6 relay agent protocol.
-#
+# description: dhcp6r acts as a DHCPv6 relay agent forwarding DHCPv6
messages \
+#              from clients to servers and vice versa.
 # processname: dhcp6r
 # config: /etc/sysconfig/dhcp6r

-# Source function library.
-. /etc/rc.d/init.d/functions
+. /etc/init.d/functions

-# Source networking configuration.
-. /etc/sysconfig/network
-. /etc/sysconfig/dhcp6r
+RETVAL=0
+
+prog=dhcp6r
+dhcp6r=/usr/sbin/dhcp6r
+lockfile=/var/lock/subsys/dhcp6r

 # Check that networking is up.
-[ ${NETWORKING} = "no" ] && exit 0
-
-# Check that files exist
-[ -f /usr/sbin/dhcp6r ] || exit 0
-[ -f /etc/sysconfig/dhcp6r ] || exit 0
-
-RETVAL=0
-prog="dhcp6r"
+# networking is not up, return 1 for generic error
+. /etc/sysconfig/network
+[ $NETWORKING = "no" ] && exit 1

 start() {
- # Start daemons.
- echo -n $"Starting $prog: "
- daemon /usr/sbin/dhcp6r ${DHCP6RARGS}
- RETVAL=$?
- echo
- [ $RETVAL -eq 0 ] && touch /var/lock/subsys/dhcp6r
- return $RETVAL
+    # return 5 if program is not installed
+    [ -x $dhcp6r ] || exit 5
+
+    # return 6 if program is not configured
+    [ -f /etc/sysconfig/dhcp6r ] || exit 6
+    . /etc/sysconfig/dhcp6r
```

```
+
+    echo -n $"Starting $prog: "
+    daemon $dhcp6r $DHCP6RARGS
+    RETVAL=$?
+    echo
+    [ $RETVAL -eq 0 ] && touch $lockfile
+    return $RETVAL
 }

 stop() {
- # Stop daemons.
- echo -n $"Shutting down $prog: "
- killproc dhcp6r
- RETVAL=$?
- echo
- [ $RETVAL -eq 0 ] && rm -f /var/lock/subsys/dhcp6r
- return $RETVAL
+    echo -n $"Shutting down $prog: "
+    killproc $prog -TERM
+    RETVAL=$?
+    echo
+    [ $RETVAL -eq 0 ] && success || failure
+    echo
+    rm -f $lockfile
+    return $RETVAL
 }

 # See how we were called.
 case "$1" in
-  start)
- start
- ;;
-  stop)
- stop
- ;;
-  restart|reload)
- stop
- start
- RETVAL=$?
- ;;
-  condrestart)
- if [ -f /var/lock/subsys/dhcp6s ]; then
-     stop
-     start
-     RETVAL=$?
- fi
- ;;
-  status)
- status dhcp6r
- RETVAL=$?
- ;;
-  *)
- echo $"Usage: $0 {start|stop|restart|condrestart|status}"
- exit 1
+    start)
+        start
```

```
+          RETVAL=$?
+          ;;
+    stop)
+          stop
+          RETVAL=$?
+          ;;
+    restart|force-reload)
+          stop && start
+          RETVAL=$?
+          ;;
+    try-restart|reload)
+          RETVAL=3
+          ;;
+    condrestart)
+          if [ -f $lockfile ]; then
+               stop && start
+          fi
+          ;;
+    status)
+          status dhcp6r
+          RETVAL=$?
+          ;;
+    *)
+          echo $"Usage: $0 {start|stop|restart|try-restart|reload|force-
reload|status}"
+          RETVAL=3
+          ;;
 esac

 exit $RETVAL
-
sysklogd-1.4.1-40.el5.i386.rpm: /etc/rc.d/init.d/syslog
---
+++
@@ -14,25 +14,25 @@
 # Source function library.
 . /etc/init.d/functions

-[ -f /sbin/syslogd ] || exit 0
-[ -f /sbin/klogd ] || exit 0
-
-# Source config
-if [ -f /etc/sysconfig/syslog ] ; then
- . /etc/sysconfig/syslog
-else
- SYSLOGD_OPTIONS="-m 0"
- KLOGD_OPTIONS="-2"
-fi
-
 RETVAL=0

-if [ -z "$SYSLOG_UMASK" ] ; then
-      SYSLOG_UMASK=077;
-fi
-umask $SYSLOG_UMASK
+start() {
```

```
+ [ -x /sbin/syslogd ] || exit 5
+ [ -x /sbin/klogd ] || exit 5

-start() {
+ # Source config
+ if [ -f /etc/sysconfig/syslog ] ; then
+   . /etc/sysconfig/syslog
+ else
+   SYSLOGD_OPTIONS="-m 0"
+   KLOGD_OPTIONS="-2"
+ fi
+
+ if [ -z "$SYSLOG_UMASK" ] ; then
+       SYSLOG_UMASK=077;
+ fi
+ umask $SYSLOG_UMASK
+
   echo -n $"Starting system logger: "
  daemon syslogd $SYSLOGD_OPTIONS
  RETVAL=$?
@@ -66,12 +66,12 @@
     RETVAL=1
     syslog=`cat /var/run/syslogd.pid 2>/dev/null`
     echo -n "Reloading syslogd..."
-    if [ -n ${syslog} ] && [ -e /proc/${syslog} ]; then
- kill -HUP $syslog;
+    if [ -n "${syslog}" ] && [ -e /proc/"${syslog}" ]; then
+ kill -HUP "$syslog";
  RETVAL=$?
     fi
     if [ $RETVAL -ne 0 ]; then
- fail
+ failure
     else
  success
     fi
@@ -79,12 +79,12 @@
     RETVAL=1
     echo -n "Reloading klogd..."
     klog=`cat /var/run/klogd.pid 2>/dev/null`
-    if [ -n ${klog} ] && [ -e /proc/${klog} ]; then
- kill -USR2 $klog;
+    if [ -n "${klog}" ] && [ -e /proc/"${klog}" ]; then
+ kill -USR2 "$klog";
         RETVAL=$?
     fi
     if [ $RETVAL -ne 0 ]; then
- fail
+ failure
     else
  success
     fi
@@ -112,7 +112,7 @@
  ;;
   *)
  echo $"Usage: $0 {start|stop|status|restart|condrestart}"
```

```
 - exit 1
 + exit 2
  esac

  exit $?
NetworkManager-0.6.4-6.el5.i386.rpm: /etc/dbus-
1/system.d/NetworkManager.conf
---
+++
@@ -17,5 +17,7 @@
                 <deny send_destination="org.freedesktop.NetworkManager"/>
                 <deny send_interface="org.freedesktop.NetworkManager"/>
        </policy>
+
+        <limit name="max_replies_per_connection">512</limit>
 </busconfig>

initscripts-8.45.17.EL-1.i386.rpm: /etc/sysconfig/network-scripts/ifup-eth
---
+++
@@ -125,7 +125,16 @@
     for arg in $BONDING_OPTS ; do
         key=${arg%%=*};
         value=${arg##*=};
-        echo $value > /sys/class/net/${DEVICE}/bonding/$key
+        if [ "${key}" = "arp_ip_target" ]; then
+            OLDIFS=$IFS;
+            IFS=',';
+            for arp_ip in $value; do
+                echo +$arp_ip > /sys/class/net/${DEVICE}/bonding/$key
+            done
+            IFS=$OLDIFS;
+        else
+            echo $value > /sys/class/net/${DEVICE}/bonding/$key
+        fi
     done

     /sbin/ip link set dev ${DEVICE} up
system-config-lvm-1.0.22-1.0.el5.noarch.rpm: /etc/pam.d/system-config-lvm
---
+++
@@ -1,8 +1,4 @@
 #%PAM-1.0
-auth       sufficient pam_rootok.so
-auth       sufficient   pam_timestamp.so
-auth       required pam_stack.so service=system-auth
-session    required pam_permit.so
-session    optional pam_xauth.so
-session    optional     pam_timestamp.so
-account    required pam_permit.so
+auth   include   config-util
+account   include   config-util
+session   include   config-util
caching-nameserver-9.3.3-10.el5.i386.rpm: /var/named/named.ca
---
+++
```

```
@@ -1,80 +1,53 @@
-;       This file holds the information on root name servers needed to
-;       initialize cache of Internet domain name servers
-;       (e.g. reference this file in the "cache  .  <file>"
-;       configuration file of BIND domain name servers).
-;
-;       This file is made available by InterNIC
-;       under anonymous FTP as
-;           file                /domain/named.cache
-;           on server           FTP.INTERNIC.NET
-;       -OR-                    RS.INTERNIC.NET
-;
-;       last update:    Jan 29, 2004
-;       related version of root zone:   2004012900
-;
-;
-; formerly NS.INTERNIC.NET
-;
-.                             3600000  IN  NS    A.ROOT-SERVERS.NET.
-A.ROOT-SERVERS.NET.           3600000      A     198.41.0.4
-;
-; formerly NS1.ISI.EDU
-;
-.                             3600000      NS    B.ROOT-SERVERS.NET.
-B.ROOT-SERVERS.NET.           3600000      A     192.228.79.201
-;
-; formerly C.PSI.NET
-;
-.                             3600000      NS    C.ROOT-SERVERS.NET.
-C.ROOT-SERVERS.NET.           3600000      A     192.33.4.12
-;
-; formerly TERP.UMD.EDU
-;
-.                             3600000      NS    D.ROOT-SERVERS.NET.
-D.ROOT-SERVERS.NET.           3600000      A     128.8.10.90
-;
-; formerly NS.NASA.GOV
-;
-.                             3600000      NS    E.ROOT-SERVERS.NET.
-E.ROOT-SERVERS.NET.           3600000      A     192.203.230.10
-;
-; formerly NS.ISC.ORG
-;
-.                             3600000      NS    F.ROOT-SERVERS.NET.
-F.ROOT-SERVERS.NET.           3600000      A     192.5.5.241
-;
-; formerly NS.NIC.DDN.MIL
-;
-.                             3600000      NS    G.ROOT-SERVERS.NET.
-G.ROOT-SERVERS.NET.           3600000      A     192.112.36.4
-;
-; formerly AOS.ARL.ARMY.MIL
-;
-.                             3600000      NS    H.ROOT-SERVERS.NET.
-H.ROOT-SERVERS.NET.           3600000      A     128.63.2.53
-;
```

```
-; formerly NIC.NORDU.NET
-;
-.                           3600000      NS    I.ROOT-SERVERS.NET.
-I.ROOT-SERVERS.NET.         3600000      A     192.36.148.17
-;
-; operated by VeriSign, Inc.
-;
-.                           3600000      NS    J.ROOT-SERVERS.NET.
-J.ROOT-SERVERS.NET.         3600000      A     192.58.128.30
-;
-; operated by RIPE NCC
-;
-.                           3600000      NS    K.ROOT-SERVERS.NET.
-K.ROOT-SERVERS.NET.         3600000      A     193.0.14.129
-;
-; operated by ICANN
-;
-.                           3600000      NS    L.ROOT-SERVERS.NET.
-L.ROOT-SERVERS.NET.         3600000      A     198.32.64.12
-;
-; operated by WIDE
-;
-.                           3600000      NS    M.ROOT-SERVERS.NET.
-M.ROOT-SERVERS.NET.         3600000      A     202.12.27.33
-; End of File
+
+; <<>> DiG 9.5.0b2 <<>> +bufsize=1200 +norec NS . @a.root-servers.net
+;; global options:  printcmd
+;; Got answer:
+;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 7033
+;; flags: qr aa; QUERY: 1, ANSWER: 13, AUTHORITY: 0, ADDITIONAL: 20
+
+;; OPT PSEUDOSECTION:
+; EDNS: version: 0, flags:; udp: 4096
+;; QUESTION SECTION:
+;.    IN NS
+
+;; ANSWER SECTION:
+.    518400 IN NS D.ROOT-SERVERS.NET.
+.    518400 IN NS E.ROOT-SERVERS.NET.
+.    518400 IN NS F.ROOT-SERVERS.NET.
+.    518400 IN NS G.ROOT-SERVERS.NET.
+.    518400 IN NS H.ROOT-SERVERS.NET.
+.    518400 IN NS I.ROOT-SERVERS.NET.
+.    518400 IN NS J.ROOT-SERVERS.NET.
+.    518400 IN NS K.ROOT-SERVERS.NET.
+.    518400 IN NS L.ROOT-SERVERS.NET.
+.    518400 IN NS M.ROOT-SERVERS.NET.
+.    518400 IN NS A.ROOT-SERVERS.NET.
+.    518400 IN NS B.ROOT-SERVERS.NET.
+.    518400 IN NS C.ROOT-SERVERS.NET.
+
+;; ADDITIONAL SECTION:
+A.ROOT-SERVERS.NET. 3600000 IN A 198.41.0.4
+A.ROOT-SERVERS.NET. 3600000 IN AAAA 2001:503:ba3e::2:30
+B.ROOT-SERVERS.NET. 3600000 IN A 192.228.79.201
```

```
+C.ROOT-SERVERS.NET. 3600000 IN A 192.33.4.12
+D.ROOT-SERVERS.NET. 3600000 IN A 128.8.10.90
+E.ROOT-SERVERS.NET. 3600000 IN A 192.203.230.10
+F.ROOT-SERVERS.NET. 3600000 IN A 192.5.5.241
+F.ROOT-SERVERS.NET. 3600000 IN AAAA 2001:500:2f::f
+G.ROOT-SERVERS.NET. 3600000 IN A 192.112.36.4
+H.ROOT-SERVERS.NET. 3600000 IN A 128.63.2.53
+H.ROOT-SERVERS.NET. 3600000 IN AAAA 2001:500:1::803f:235
+I.ROOT-SERVERS.NET. 3600000 IN A 192.36.148.17
+J.ROOT-SERVERS.NET. 3600000 IN A 192.58.128.30
+J.ROOT-SERVERS.NET. 3600000 IN AAAA 2001:503:c27::2:30
+K.ROOT-SERVERS.NET. 3600000 IN A 193.0.14.129
+K.ROOT-SERVERS.NET. 3600000 IN AAAA 2001:7fd::1
+L.ROOT-SERVERS.NET. 3600000 IN A 199.7.83.42
+M.ROOT-SERVERS.NET. 3600000 IN A 202.12.27.33
+M.ROOT-SERVERS.NET. 3600000 IN AAAA 2001:dc3::35
+
+;; Query time: 110 msec
+;; SERVER: 198.41.0.4#53(198.41.0.4)
+;; WHEN: Tue Feb 26 15:05:57 2008
+;; MSG SIZE  rcvd: 615
+
initscripts-8.45.17.EL-1.i386.rpm: /etc/rc.d/init.d/functions
---
+++
@@ -67,6 +67,10 @@
   [ -d "/proc/$i" ] && return 0
  done
  return 1
+}
+
+__readlink() {
+    ls -bl "$@" 2>/dev/null| awk '{ print $NF }'
 }

 # __umount_loop awk_program fstab_file first_msg retry_msg umount_args
totem-2.16.7-1.el5.i386.rpm: /etc/gconf/schemas/totem-handlers.schemas
---
+++
@@ -1,44 +1,5 @@
 <gconfschemafile>
     <schemalist>
-
-        <schema>
-            <key>/schemas/desktop/gnome/url-handlers/pnm/command</key>
-            <applyto>/desktop/gnome/url-handlers/pnm/command</applyto>
-            <owner>totem</owner>
-            <type>string</type>
-            <default>totem "%s"</default>
-            <locale name="C">
-                <short></short>
-                <long></long>
-            </locale>
-        </schema>
-
-
```

```
-         <schema>
-             <key>/schemas/desktop/gnome/url-
handlers/pnm/needs_terminal</key>
-             <applyto>/desktop/gnome/url-
handlers/pnm/needs_terminal</applyto>
-             <owner>totem</owner>
-             <type>bool</type>
-             <default>false</default>
-             <locale name="C">
-                 <short></short>
-                 <long></long>
-             </locale>
-         </schema>
-
-
-         <schema>
-             <key>/schemas/desktop/gnome/url-handlers/pnm/enabled</key>
-             <applyto>/desktop/gnome/url-handlers/pnm/enabled</applyto>
-             <owner>totem</owner>
-             <type>bool</type>
-             <default>true</default>
-             <locale name="C">
-                 <short></short>
-                 <long></long>
-             </locale>
-         </schema>
-

          <schema>
              <key>/schemas/desktop/gnome/url-handlers/mms/command</key>
@@ -158,45 +119,6 @@


          <schema>
-             <key>/schemas/desktop/gnome/url-handlers/rtsp/command</key>
-             <applyto>/desktop/gnome/url-handlers/rtsp/command</applyto>
-             <owner>totem</owner>
-             <type>string</type>
-             <default>totem "%s"</default>
-             <locale name="C">
-                 <short></short>
-                 <long></long>
-             </locale>
-         </schema>
-
-
-         <schema>
-             <key>/schemas/desktop/gnome/url-
handlers/rtsp/needs_terminal</key>
-             <applyto>/desktop/gnome/url-
handlers/rtsp/needs_terminal</applyto>
-             <owner>totem</owner>
-             <type>bool</type>
-             <default>false</default>
-             <locale name="C">
-                 <short></short>
```

```
-                    <long></long>
-                 </locale>
-           </schema>
-
-
-           <schema>
-                 <key>/schemas/desktop/gnome/url-handlers/rtsp/enabled</key>
-                 <applyto>/desktop/gnome/url-handlers/rtsp/enabled</applyto>
-                 <owner>totem</owner>
-                 <type>bool</type>
-                 <default>true</default>
-                 <locale name="C">
-                      <short></short>
-                      <long></long>
-                 </locale>
-           </schema>
-
-
-           <schema>
                  <key>/schemas/desktop/gnome/url-handlers/mmsh/command</key>
                  <applyto>/desktop/gnome/url-handlers/mmsh/command</applyto>
                  <owner>totem</owner>
shadow-utils-4.0.17-12.el5.i386.rpm: /etc/default/useradd
---
+++
@@ -5,3 +5,5 @@
 EXPIRE=
 SHELL=/bin/bash
 SKEL=/etc/skel
+CREATE_MAIL_SPOOL=yes
+
udev-095-14.9.el5.i386.rpm: /etc/udev/rules.d/50-udev.rules
---
+++
@@ -162,8 +162,6 @@
 SUBSYSTEM=="dvb", PROGRAM="/bin/sh -c 'K=%k; K=$${K#dvb}; printf
dvb/adapter%%i/%%s $${K%%%.*} $${K#*.}'", \
  NAME="%c", MODE="0660"

-KERNEL=="dm-[0-9]*", ACTION=="add", OPTIONS+="ignore_device"
-
 # alsa devices
 KERNEL=="controlC[0-9]*", NAME="snd/%k"
 KERNEL=="hw[CD0-9]*",  NAME="snd/%k"
@@ -175,6 +173,9 @@
 # input devices
 KERNEL=="mice",   NAME="input/%k"
 KERNEL=="mouse*",  NAME="input/%k"
+
+KERNEL=="event*", SYSFS{idVendor}=="03f0",
SYSFS{device/interface}=="Virtual Mouse",
SYSFS{device/bInterfaceProtocol}=="02", NAME="input/%k",
SYMLINK+="input/hp_ilo_mouse"
+
 KERNEL=="event*",  NAME="input/%k"
 KERNEL=="js*",    NAME="input/%k", SYMLINK+="%k"
```

```
 KERNEL=="ts*",    NAME="input/%k"
@@ -218,8 +219,6 @@
 KERNEL=="scd[0-9]*",  SYMLINK+="cdrom cdrom-%k"
 KERNEL=="pcd[0-9]*",  SYMLINK+="cdrom cdrom-%k"
 KERNEL=="fd[0-9]*",   SYMLINK+="floppy floppy-%k"
-KERNEL=="nst[0-9]", BUS=="scsi",  SYMLINK+="tape tape-%k", MODE="0660"
-KERNEL=="nosst[0-9]", BUS=="scsi",  SYMLINK+="tape tape-%k", MODE="0660"

 # Section for zaptel device
 KERNEL=="zapctl",       NAME="zap/ctl"
@@ -259,16 +258,18 @@

 ACTION!="add", GOTO="persistent_end"

-KERNEL=="nst[0-9]", IMPORT{parent}=="ID_*"
-KERNEL=="nst[0-9]", SUBSYSTEM=="scsi", ENV{ID_SERIAL}=="",
IMPORT{program}="scsi_id -g -x -s %p -d $tempnode"
-KERNEL=="nst[0-9]", SUBSYSTEM=="scsi", ENV{ID_SERIAL}=="",
IMPORT{program}="scsi_id -g -x -a -s %p -d $tempnode"
-KERNEL=="nst[0-9]", SUBSYSTEM=="scsi", ENV{ID_SERIAL}=="?*",
SYMLINK+="tape/by-id/$env{ID_BUS}-$env{ID_SERIAL}-nst"
+KERNEL=="dm-[0-9]*", GOTO="persistent_end"
+
+KERNEL=="nst[0-9]*", IMPORT{parent}=="ID_*"
+KERNEL=="nst[0-9]*", SUBSYSTEM=="scsi_tape", ENV{ID_SERIAL}=="",
IMPORT{program}="scsi_id -u -g -x -s %p -d $tempnode"
+KERNEL=="nst[0-9]*", SUBSYSTEM=="scsi_tape", ENV{ID_SERIAL}=="",
IMPORT{program}="scsi_id -u -g -x -a -s %p -d $tempnode"
+KERNEL=="nst[0-9]*", SUBSYSTEM=="scsi_tape", ENV{ID_SERIAL}=="?*",
SYMLINK+="tape/by-id/$env{ID_BUS}-$env{ID_SERIAL}-nst"

 # type 8 devices are "Medium Changers"
 KERNEL=="sg*", IMPORT{parent}=="ID_*"
-KERNEL=="sg*", SUBSYSTEM=="scsi", SYSFS{type}=="8", ENV{ID_SERIAL}=="",
IMPORT{program}="scsi_id -g -x -s %p -d $tempnode"
-KERNEL=="sg*", SUBSYSTEM=="scsi", SYSFS{type}=="8", ENV{ID_SERIAL}=="",
IMPORT{program}="scsi_id -g -x -a -s %p -d $tempnode"
-KERNEL=="sg*", SUBSYSTEM=="scsi", SYSFS{type}=="8", ENV{ID_SERIAL}=="?*",
SYMLINK+="tape/by-id/$env{ID_BUS}-$env{ID_SERIAL}"
+KERNEL=="sg*", SUBSYSTEM=="scsi_generic", SYSFS{type}=="8",
ENV{ID_SERIAL}=="", IMPORT{program}="scsi_id -g -u -x -s %p -d $tempnode"
+KERNEL=="sg*", SUBSYSTEM=="scsi_generic", SYSFS{type}=="8",
ENV{ID_SERIAL}=="", IMPORT{program}="scsi_id -g -u -x -a -s %p -d $tempnode"
+KERNEL=="sg*", SUBSYSTEM=="scsi_generic", SYSFS{type}=="8",
ENV{ID_SERIAL}=="?*", SYMLINK+="tape/by-id/$env{ID_BUS}-$env{ID_SERIAL}"

 SUBSYSTEM!="block", GOTO="persistent_end"

@@ -289,11 +290,13 @@
 KERNEL=="sd*[!0-9]|sr*", ENV{ID_SERIAL}=="",
IMPORT{program}="/lib/udev/scsi_id -g -x -s %p -d $tempnode"
 KERNEL=="sd*[!0-9]|sr*", ENV{ID_SERIAL}=="",
IMPORT{program}="/lib/udev/scsi_id -g -x -a -s %p -d $tempnode"
 KERNEL=="dasd*[!0-9]", IMPORT{program}="/lib/udev/dasd_id --export
$tempnode"
-KERNEL=="st*|sd*[!0-9]|sr*|dasd*[!0-9]", ENV{ID_SERIAL}=="?*",
```

```
SYMLINK+="disk/by-id/$env{ID_BUS}-$env{ID_SERIAL}"
+KERNEL=="nst[0-9]*|st*|sd*[!0-9]|sr*|dasd*[!0-9]|cciss?c",
ENV{ID_SERIAL}=="?*", SYMLINK+="disk/by-id/$env{ID_BUS}-$env{ID_SERIAL}"

 # for partitions import parent information
 KERNEL=="sd*[0-9]|dasd*[0-9]", IMPORT{parent}=="ID_*"
-KERNEL=="sd*[0-9]|dasd*[0-9]", ENV{ID_SERIAL}=="?*", SYMLINK+="disk/by-
id/$env{ID_BUS}-$env{ID_SERIAL}-part%n"
+KERNEL=="cciss?c[0-9]d[0-9]", ENV{ID_SERIAL}!="?*",
IMPORT{program}="scsi_id -g -x -s %p -d $tempnode", ENV{ID_BUS}="cciss"
+KERNEL=="cciss?c[0-9]d[0-9]", ENV{ID_SERIAL}!="?*",
IMPORT{program}="scsi_id -g -x -a -s %p -d $tempnode", ENV{ID_BUS}="cciss"
+KERNEL=="sd*[0-9]|dasd*[0-9]|cciss*p[0-9]", ENV{ID_SERIAL}=="?*",
SYMLINK+="disk/by-id/$env{ID_BUS}-$env{ID_SERIAL}-part%n"

 # by-path (shortest physical path)
 KERNEL=="*[!0-9]|sr*", ENV{ID_TYPE}=="?*",
IMPORT{program}="/lib/udev/path_id %p", SYMLINK+="disk/by-path/$env{ID_PATH}"
dhcp-3.0.5-7.el5.i386.rpm: /etc/rc.d/init.d/dhcrelay
---
+++
@@ -1,82 +1,123 @@
 #!/bin/sh
 #
-# dhcrelay      This shell script takes care of starting and stopping
-#               dhcrelay.
+### BEGIN INIT INFO
+# Provides: dhcrelay
+# Default-Start:
+# Default-Stop:
+# Should-Start:
+# Required-Start: $network
+# Required-Stop:
+# Short-Description: Start and stop the DHCP relay server
+# Description: dhcrelay provides the Dynamic Host Configuration Protocol
(DHCP)
+#             relay server.  This is required when your DHCP server is on
+#             another network segment from the clients.
+### END INIT INFO
 #
-# chkconfig: - 66 34
+# The fields below are left around for legacy tools (will remove later).
+#
+# chkconfig: - 65 35
 # description: dhcrelay provides a relay for Dynamic Host Control Protocol.
+# processname: dhcrelay
+# # pidfile: /var/run/dhcrelay.pid

-# Source function library.
-. /etc/rc.d/init.d/functions
-
-# Source networking configuration.
-. /etc/sysconfig/network
-
-# Source dhcrelay configuration. We can't default a DHCPSERVERS entry!
-if [ -f /etc/sysconfig/dhcrelay ] ; then
```

```
- . /etc/sysconfig/dhcrelay
- [ -n "$DHCPSERVERS" ] || exit 0
-else
- exit 0
-fi
-
-# Check that networking is up.
-[ ${NETWORKING} = "no" ] && exit 0
-
-[ -f /usr/sbin/dhcrelay ] || exit 0
+. /etc/init.d/functions

 RETVAL=0
-prog="dhcrelay"
+
+prog=dhcrelay
+dhcrelay=/usr/sbin/dhcrelay
+lockfile=/var/lock/subsys/dhcrelay
+pidfile=/var/run/dhcrelay.pid
+conf=/etc/sysconfig/dhcrelay
+
+# The dhcrelay daemon uses the sysconfig file for configuration information.
+# There is no native configuration file for this program and you must
specify
+# its settings on the command line.
+[ -f /etc/sysconfig/dhcrelay ] && . /etc/sysconfig/dhcrelay
+
+configtest() {
+    [ -x $dhcrelay ] || exit 5
+    [ -f $conf ] || exit 6
+    [ -z "$DHCPSERVERS" ] && exit 6
+    RETVAL=0
+    return $RETVAL
+}

 start() {
- # Start daemons.
- echo -n $"Starting $prog: "
- daemon /usr/sbin/dhcrelay \
-  $([ -n "$INTERFACES" ] && for int in $INTERFACES ; do echo -n " -i $int"
; done) \
-  $DHCPSERVERS
- RETVAL=$?
- echo
- [ $RETVAL -eq 0 ] && touch /var/lock/subsys/dhcrelay
- return $RETVAL
+    [ -x $dhcrelay ] || exit 5
+    [ -f $conf ] || exit 6
+
+    pidofproc $prog >/dev/null 2>&1
+    RETVAL=$?
+    [ $RETVAL -eq 0 ] && return $RETVAL
+
+    echo -n $"Starting $prog: "
+    daemon $dhcrelay $([ -n "$INTERFACES" ] && for int in $INTERFACES ; do
echo -n " -i $int" ; done) $DHCPSERVERS 2>/dev/null
```

```
+    RETVAL=$?
+    echo
+    [ $RETVAL -eq 0 ] && touch $lockfile
+    return $RETVAL
 }

 stop() {
- # Stop daemons.
- echo -n $"Shutting down $prog: "
- killproc dhcrelay
- RETVAL=$?
- echo
- [ $RETVAL -eq 0 ] && rm -f /var/lock/subsys/dhcrelay
- return $RETVAL
+    pidofproc $prog >/dev/null 2>&1
+    if [ $? -ne 0 ]; then
+        RETVAL=7
+        return $RETVAL
+    fi
+
+    echo -n $"Shutting down $prog: "
+    killproc $prog -TERM
+    RETVAL=$?
+    [ $RETVAL = 0 ] && rm -f $lockfile
+    echo
+    return $RETVAL
 }

-# See how we were called.
+if [ ! -x $dhcrelay ]; then
+    RETVAL=5
+    exit $RETVAL
+fi
+
+if [ $# -gt 1 ]; then
+    RETVAL=2
+    exit $RETVAL
+fi
+
 case "$1" in
-  start)
- start
- ;;
-  stop)
- stop
- ;;
-  restart|reload)
- stop
- start
- RETVAL=$?
- ;;
-  condrestart)
- if [ -f /var/lock/subsys/dhcrelay ]; then
-     stop
-     start
-     RETVAL=$?
```

```
- fi
- ;;
-   status)
- status dhcrelay
- RETVAL=$?
- ;;
-  *)
- echo $"Usage: $0 {start|stop|restart|condrestart|status}"
- exit 1
+    start)
+        start
+        RETVAL=$?
+        ;;
+    stop)
+        stop
+        RETVAL=$?
+        ;;
+    restart|force-reload)
+        stop && start
+        RETVAL=$?
+        ;;
+    try-restart|reload)
+        RETVAL=3
+        ;;
+    condrestart)
+        if [ -f $lockfile ]; then
+            stop && start
+            RETVAL=$?
+        fi
+        ;;
+    configtest)
+        configtest
+        RETVAL=$?
+        ;;
+    status)
+        status $prog
+        RETVAL=$?
+        ;;
+    *)
+        echo $"Usage: $0
{start|stop|restart|condrestart|configtest|status}"
+        RETVAL=3
+        ;;
 esac

 exit $RETVAL
```