

Applying Patches to SUSE Linux

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SUSE Linux comes with the graphical tools Software Updater, and YaST Online Update and the command line tool `rug` that assist you in getting and installing security updates and keeping your system up-to-date. Software Updater and `rug` are front-ends for the ZENworks Management Daemon (`zmd`).

The command line tool `rug` is described in detail in *Start-Up* (section “Update from the Command Line” in the chapter *System Configuration with YaST*). In addition to this, an example of how to use `rug` is available online at http://en.opensuse.org/Examples_using_rug.

Starting with SUSE Linux 10.1, the YaST Online Update has been integrated into the YaST Software Management module. This ensures that always the newest version of a package is installed. It is no longer necessary to run an Online Update after installing new packages. Starting *Software* → *Online Update* opens the Software Management with the *Patches* filter applied, so you only see packages that should be updated. Online Update can be configured with the following two YaST modules: *Online Update Setup* to configure automatic updates and *Installation Source* to manage patch sources. See *Start-Up*, chapter *System Configuration with YaST* for more information.

The Software Updater applet described in this paper serves as a graphical front-end, allowing you to easily apply security updates with just a few clicks. Novell offers a continuous stream of software security updates for SUSE Linux and makes them available on an FTP server and its mirrors. These servers are called *YUM services*. If you have configured the update settings during installation, Software Updater gets one of these servers assigned and is ready for use immediately after installation. If you have skipped the update configuration, see [Section 3.1, “Services”](#) (page 4) for information about how to set it up.

1 Getting Permissions

Installing packages on a Linux system requires `root` privileges. Software Updater and `rug` have their own user management system that allows users to install software updates. When a user first invokes an action that requires special privileges in Software Updater, a prompt for the `root` password appears. When the password has been verified, Software Updater automatically adds the user's account to the user management system with update permissions. To review or change these settings, use the `rug` user management commands (this requires `root` privileges).

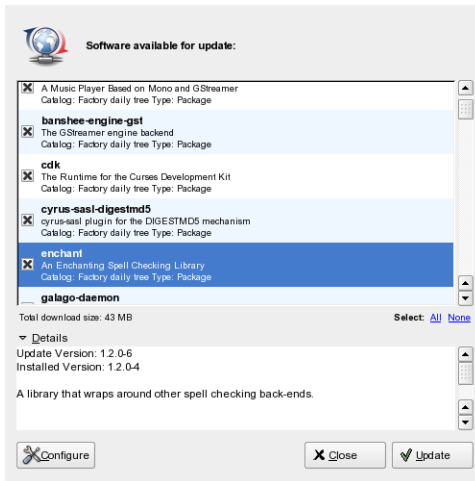
2 Obtaining and Installing Software Updates

Once a day, Software Updater automatically checks whether updates for your system are available (right-click the application icon and choose *Refresh* to force an immediate check). The Software Updater resides in the notification area (GNOME) or the system tray (KDE) of your panel as an icon depicting a globe, which changes to an exclamation mark on an orange background when there are new updates available.

Left-click the panel icon to open the updater window. It displays a list of patches available. Each patch has a short description and, if applicable, a category icon: Security patches are marked with a yellow shield. Optional patches are marked with a light blue circle. Recommended patches are not marked with an icon. Security patches are listed first, then recommended patches, and finally optional patches.

To get details about a certain patch, mark it with the mouse and click the *Details* link under the list window. To select a patch for installation, mark the patch's check box. Use the links *All* and *None* to select or deselect all patches. Clicking *Update* installs the selected patches.

Figure 1 *Selecting the Software Updates*



3 Configuring the Software Updater

To configure Software Updater, right-click the application icon and choose *Configure*. A window with three tabs opens: *Services*, *Catalogs*, and *Preferences*.

3.1 Services

Services are basically sources that provide software packages and information about these packages. The service tab lists all services available together with type and status information (if you cannot see the latter two, adjust the window size). Use *Remove Service* or *Add Service* to add or remove services. The following service types are available:

YUM

An HTTP, HTTPS, or FTP server using the RPM-MD format for the package data. Novell provides updates for SUSE Linux exclusively as YUM services. If you configured update during installation, either the official Novell YUM server or one of its mirrors is already present in the list.

If you have skipped the update configuration during installation, run the command `suse_register` on the command line or call the YaST module *Software → Product Registration* as user `root`. A YUM server is automatically added to Software Updater.

To add a YUM service manually, you need to know its URI. See http://en.opensuse.org/YUM_servers for a list of official Novell YUM mirrors. It is also possible to use <http://download.suse.com/update/10.1>. This link always redirects to a mirror in your vicinity. You can freely choose a name for the service—it is recommended to use a unique, descriptive name.

ZYPP

ZYPP services are the YaST installation sources added with *Software → Installation Source* in YaST. Use the Software Updater or YaST to add installation sources. The source from which you initially installed (DVD or CD-ROM in most cases) is preconfigured. If you change or delete this source, replace it with another valid installation source (ZYPP service), because otherwise you cannot install new software.



Terminology

The terms YaST installation source, YaST package repository, and ZYPP service are the same name for a source from which you can install software.

Mount

With *Mount*, embed a directory mounted on your machine. This is useful if you are, for example, in a network that regularly mirrors the Novell YUM server and exports its content to the local network. To add the directory, provide the full path to the directory in *Service URI*.

NU

NU stands for Novell Update. This service is not available for SUSE Linux.

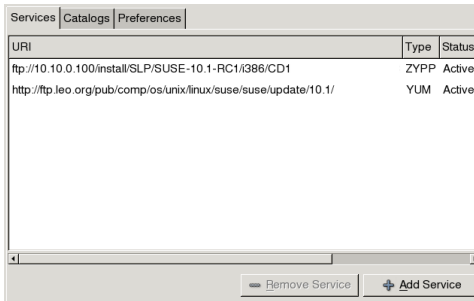
RCE and ZENworks

Opencarpet, Red Carpet Enterprise, or ZENworks services are only available if your company or organization has set up these services within your internal network. This may, for example, be the case if your organization is using third-party software for which updates are deployed on a single server.

Summary

After SUSE Linux is installed, two services are preconfigured: your installation source (DVD, CD-ROM, or network resource) as a ZYPP service and a SUSE Linux update server as YUM service, which was added during product registration. See [Figure 2, “Preconfigured Services”](#) (page 6). Normally there is no need to change these settings. If you do not see a YUM service, open a `root` shell and execute the command `suse_register`. A service is added automatically.

Figure 2 *Preconfigured Services*



The screenshot shows a window titled "Services" with tabs for "Services", "Catalogs", and "Preferences". The "Services" tab is active, displaying a table with two rows of preconfigured services. The table has columns for "URI", "Type", and "Status". The first row shows a ZYPP service with the URI `ftp://10.10.0.100/install/SLP/SUSE-10.1-RC1/386/CD1` and an Active status. The second row shows a YUM service with the URI `http://ftp.leo.org/pub/comp/os/unix/linux/suse/suse/update/10.1/` and an Active status. At the bottom of the window, there are two buttons: "Remove Service" and "Add Service".

URI	Type	Status
<code>ftp://10.10.0.100/install/SLP/SUSE-10.1-RC1/386/CD1</code>	ZYPP	Active
<code>http://ftp.leo.org/pub/comp/os/unix/linux/suse/suse/update/10.1/</code>	YUM	Active

3.2 Catalogs

Services are able to provide packages for different pieces of software or for different software versions (typically RCE or ZENworks services do so). These are organized in different categories called *catalogs*. Subscribe or unsubscribe from a catalog by marking or unmarking the check box in front of it.

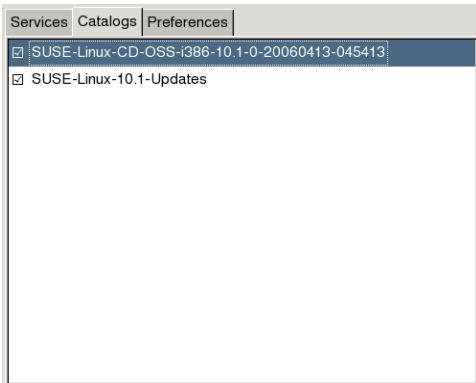
At the moment, the SUSE Linux services (YUM and ZYPP) do not provide different catalogs. Each service only has one catalog. If the Software Updater was configured during installation or with `suse_register`, it subscribes to the YUM and ZYPP catalogs automatically. If you manually add a service, you must subscribe to its catalogs.



Unsubscribing from Catalogs

To be able to install packages from a catalog, you need to be subscribed to this catalog. If you unsubscribe, the packages from this catalog are still listed in the update window, but you can not install them.

Figure 3 *Catalogs*



3.3 Preferences

On the *Preferences* tab, specify whether Software Updater should be launched at start-up or not. As user `root`, you can also modify the Software Updater settings. As a nonprivileged user, you can only view the settings. Refer to the `rug` man page for an explanation of the settings.

Figure 4 *Preferences*

