Fedora Draft Documentation

User Guide

Using Fedora 14 for common desktop computing tasks

Fedora Documentation Project
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Using Fedora 14 for common desktop computing tasks  
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The Fedora User Guide is focused on the end-user looking to accomplish standard desktop computer user tasks, such as browsing the web, reading and sending email, and doing office productivity work.
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Preface

1. Document Conventions
This manual uses several conventions to highlight certain words and phrases and draw attention to specific pieces of information.

In PDF and paper editions, this manual uses typefaces drawn from the Liberation Fonts set. The Liberation Fonts set is also used in HTML editions if the set is installed on your system. If not, alternative but equivalent typefaces are displayed. Note: Red Hat Enterprise Linux 5 and later includes the Liberation Fonts set by default.

1.1. Typographic Conventions
Four typographic conventions are used to call attention to specific words and phrases. These conventions, and the circumstances they apply to, are as follows.

Mono-spaced Bold
Used to highlight system input, including shell commands, file names and paths. Also used to highlight keycaps and key combinations. For example:

To see the contents of the file my_next_bestselling_novel in your current working directory, enter the cat my_next_bestselling_novel command at the shell prompt and press Enter to execute the command.

The above includes a file name, a shell command and a keycap, all presented in mono-spaced bold and all distinguishable thanks to context.

Key combinations can be distinguished from keycaps by the hyphen connecting each part of a key combination. For example:

Press Enter to execute the command.

Press Ctrl+Alt+F2 to switch to the first virtual terminal. Press Ctrl+Alt+F1 to return to your X-Windows session.

The first paragraph highlights the particular keycap to press. The second highlights two key combinations (each a set of three keycaps with each set pressed simultaneously).

If source code is discussed, class names, methods, functions, variable names and returned values mentioned within a paragraph will be presented as above, in mono-spaced bold. For example:

File-related classes include filesystem for file systems, file for files, and dir for directories. Each class has its own associated set of permissions.

Proportional Bold
This denotes words or phrases encountered on a system, including application names; dialog box text; labeled buttons; check-box and radio button labels; menu titles and sub-menu titles. For example:

Choose System → Preferences → Mouse from the main menu bar to launch Mouse Preferences. In the Buttons tab, click the Left-handed mouse check box and click

1 https://fedorahosted.org/liberation-fonts/
Close to switch the primary mouse button from the left to the right (making the mouse suitable for use in the left hand).

To insert a special character into a gedit file, choose Applications → Accessories → Character Map from the main menu bar. Next, choose Search → Find… from the Character Map menu bar, type the name of the character in the Search field and click Next. The character you sought will be highlighted in the Character Table. Double-click this highlighted character to place it in the Text to copy field and then click the Copy button. Now switch back to your document and choose Edit → Paste from the gedit menu bar.

The above text includes application names; system-wide menu names and items; application-specific menu names; and buttons and text found within a GUI interface, all presented in proportional bold and all distinguishable by context.

**Mono-spaced Bold Italic or Proportional Bold Italic**

Whether mono-spaced bold or proportional bold, the addition of italics indicates replaceable or variable text. Italics denotes text you do not input literally or displayed text that changes depending on circumstance. For example:

```
To connect to a remote machine using ssh, type ssh username@domain.name at a shell prompt. If the remote machine is example.com and your username on that machine is john, type ssh john@example.com.

The mount -o remount file-system command remounts the named file system. For example, to remount the /home file system, the command is mount -o remount /home.

To see the version of a currently installed package, use the rpm -q package command. It will return a result as follows: package-version-release.
```

Note the words in bold italics above — username, domain.name, file-system, package, version and release. Each word is a placeholder, either for text you enter when issuing a command or for text displayed by the system.

Aside from standard usage for presenting the title of a work, italics denotes the first use of a new and important term. For example:

Publican is a DocBook publishing system.

### 1.2. Pull-quote Conventions

Terminal output and source code listings are set off visually from the surrounding text.

Output sent to a terminal is set in **mono-spaced roman** and presented thus:

```
books    Desktop  documentation  drafts  mss    photos   stuff  svn
books_tests  Desktop1 downloads      images  notes  scripts  svgs
```

Source-code listings are also set in **mono-spaced roman** but add syntax highlighting as follows:

```
package org.jboss.book.jca.ex1;
import javax.naming.InitialContext;
```
1.3. Notes and Warnings

Finally, we use three visual styles to draw attention to information that might otherwise be overlooked.

**Note**

Notes are tips, shortcuts or alternative approaches to the task at hand. Ignoring a note should have no negative consequences, but you might miss out on a trick that makes your life easier.

**Important**

Important boxes detail things that are easily missed: configuration changes that only apply to the current session, or services that need restarting before an update will apply. Ignoring a box labeled ‘Important’ will not cause data loss but may cause irritation and frustration.

**Warning**

Warnings should not be ignored. Ignoring warnings will most likely cause data loss.

2. We Need Feedback!

If you find a typographical error in this manual, or if you have thought of a way to make this manual better, we would love to hear from you! Please submit a report in Bugzilla: [http://bugzilla.redhat.com/bugzilla/](http://bugzilla.redhat.com/bugzilla/) against the product **Fedora Documentation**.

When submitting a bug report, be sure to mention the manual's identifier: **user-guide**

If you have a suggestion for improving the documentation, try to be as specific as possible when describing it. If you have found an error, please include the section number and some of the surrounding text so we can find it easily.
Introduction

1. Purpose and Audience
Welcome to the Fedora 14 User Guide! This guide is intended for users who have a working Fedora 14 system and are able to use a mouse and keyboard.

The purpose of this guide is twofold. First, it aims to orient new users with Linux or Fedora specific conventions and methods that they may not already be familiar with, even if they are comfortable using computers. Simultaneously, this document guides the user through carrying out common desktop tasks including (but not limited to) setting up email, using an office suite, and managing software.

Underneath all of this, the User Guide also diverges into basic command-line alternatives for many of the presented methods (like installing software) to help the newer user become familiar with using a terminal, and it points to more advanced guides for tasks that the ambitious user may be interested in but which are not immediately within the scope of this guide.

2. About this document
Volunteer contributors from the Fedora Documentation Project create this guide for each release of Fedora. If you have questions or suggestions about Fedora’s documentation, or if you would like to help document Fedora, please visit the Fedora Documentation Project web site\(^1\).

For assistance installing Fedora 14, please read the Fedora 14 Installation Guide, available from http://docs.fedoraproject.org/install-guide/f14/\(^2\).

Thank you for choosing Fedora.

---
\(^1\) https://fedoraproject.org/wiki/DocsProject
\(^2\) http://docs.fedoraproject.org/install-guide/f14/
The Fedora desktops

In contrast to most proprietary operating systems, Fedora 14 has several desktop environments or desktops that can display and launch available applications and manage the overall appearance of the screen. The desktop environment is sometimes referred to as the Graphical User Interface (GUI).

Three widely-used desktops included with Fedora 14 are:
- **GNOME**, which focuses on simplicity
- **KDE**, which includes a large collection of applications and customization features
- **Xfce**, a desktop with low hardware requirements, suitable for older computers

More Desktop Environments Exist!

Fedora’s extensive repository of software offers other desktops as well, such as [Fluxbox](http://fluxbox.org/) (minimalist desktop), [Sugar](http://sugarlabs.org/) (the desktop environment for the OLPC XO), and [LXDE](http://lxde.org/). To learn how to browse and install software from the repository, refer to Chapter 18, Managing software.

With few exceptions, applications included with a particular desktop environment run in other environments too. For instance, the [OpenOffice.org](http://openoffice.org) office suite runs on all three major desktop environments.

Some applications are created specifically for a particular desktop environment. For example, each major desktop has a preferred text editor. GNOME uses [Gedit](http://gedit.sourceforge.net) and KDE supplies [Kwrite](http://kde-people.kde.org/), but you can install and use these in either environment.

Fedora provides a wide choice of applications to browse the World Wide Web, create documents, and display and edit photos. This guide describes the most commonly installed applications on the most common desktop environments, as well as the useful alternatives.
Logging into the desktop

This section of the Fedora User Guide explains how to identify yourself (or log in) to your system. During the post-installation process, you created an identity with a user name and a password, called an account. If you have forgotten any of your user account details, refer to Section 2.3, “I Cannot Login: help!”. For additional information about the login process, refer to the section Section 2.2, “Logging in: a technical explanation”.

2.1. Logging in

When you restart or turn on your computer, it goes through a process called booting. During the boot process, your computer hardware powers on, performs a series of self-tests, and loads the operating system. Immediately after the computer has finished booting, the login screen appears. The login screen displays one or more user names, depending on the number of user accounts present.

To log in to your account

1. Enter your username, using one of the following methods:
   - Type your username and then press the Enter key. The username is case sensitive (capitalization matters; A is not the same as a).
   - Click on your username in the list of choices.

2. Customize your desktop environment

   This step is optional

   You do not normally need to choose a desktop, language, or keyboard. If you skip this step, Fedora will load the default environments for your computer.

   Use the pull down menus at the bottom of the screen to change your desktop language or keyboard layout. To use a desktop environment other than the default choice, use the Sessions combo box on the bottom of the screen to select the desktop you wish to load before you enter your password. The default is usually GNOME; refer to Chapter 1, The Fedora desktops for other choices. Note: The Sessions combo box will be shown only if more than one desktop environment is installed.

3. Enter your password in the text box and press the Enter key. Like your username, your password is case sensitive.

   Keep your password secret!

   To keep your password secret, the password field displays a dot for every character entered. As with any password, keep your account password private. Do not share it with anyone or write it down in plain view.

4. The desktop environment now loads. In some desktop environments, a small box containing a logo and some icons called a splash screen may temporarily appear. When your splash screen
(if you have one) disappears, your desktop is ready for use. You can now launch applications to access the Internet, manage files, and play media. These tasks are described in the following chapters.

2.2. Logging in: a technical explanation

Fedora is a multi-user operating system. Multiple users, each with different access privileges, can be logged into the computer at the same time.

During installation, you provided a password for the system administrator account, sometimes called the superuser. The user name for this account is root.

After installation, Fedora asked you to set up a normal user account. Use that account, or any other such normal account, for daily use of the system, and the root account for administrative and maintenance tasks.

This design has many benefits:

• Limited privileges reduce the possibility of doing significant damage to the entire system.

• Each user account has individual settings.

• Each user account maintains its data separate and private from others.

• A problem in one user account does not put the entire system at risk.

Do not log in as root!

Do not use the root account for routine purposes. A normal user account can run all the desktop applications, and greatly increases your security and safety. Applications that require root privileges prompt you for the root password when they need it. There is no need to log in as root to use them.

2.3. I Cannot Login: help!

A common mistake during login is accidentally having the Caps Lock key turned on. This situation can cause the login process to fail because usernames and passwords are case sensitive. If problems persist, re-enter your username and password a few times to ensure that you have typed them correctly.

Recovering the password for a user account is not a difficult process, but it is beyond the scope of this guide. You may wish to ask for help on user forums or chat rooms for further assistance.
Tour of the GNOME desktop

This chapter introduces the GNOME desktop in Fedora. The desktop becomes easier to use after you know some of the common terminology used, beginning with the GNOME desktop.

If you installed Fedora 14 from the Fedora 14 Live image, whether for 32-bit (i686) or 64-bit (x86_64) processors, GNOME is the installed desktop. You can find details of two alternative desktops in Chapter 4, Tour of the KDE desktop and Chapter 5, Tour of the Xfce desktop.

3.1. The GNOME Desktop

Figure 3.1. The GNOME Desktop

When you first log in to The GNOME Desktop, you will see two distinct areas:

• the Top Bar (the black bar at the top).

• the Desktop Area (the workspace area in the center that fills most of the screen).

A third area can be accessed by clicking the Activities button, or by moving the mouse to the top left hand Hot Corner. Alternatively, you can press the windows key on your keyboard. The area that appears is called the Activities overview.

3.1.1. The Top Bar

This bar stretches across the top of the screen. The left side contains:

• the Activities button.

• the name of the currently focused application.

In the center of the top bar is a clock.

The right side of the top bar is home to:
• the Universal Access menu.

• the Volume Control and Sound Preferences applet.

• the Bluetooth Manager applet (if your computer has Bluetooth connectivity).

• the Network Manager applet.

• the Power Manager applet (if your computer has a battery).

• the User Menu (showing your name).

3.1.1.1. Clock and calendar
Click the clock in the center of the top bar to see the current date, a month-by-month calendar, and a list of your upcoming appointments. You can also access the date and time settings and view your Evolution or Google calendars directly from the menu.

3.1.1.2. The Universal Access Menu
This menu allows you to enable or disable the following Universal Access features:
• High contrast
• Zoom
• Large Text
• Visual Alerts
• Sticky Keys
• Slow Keys
• Bounce Keys
• Mouse Keys

These features make it easier for everyone to use the GNOME desktop.

More Universal Access options can be found by clicking on Universal Access Settings.

3.1.1.3. Volume Control
The volume control allows you to quickly change the overall volume of sound on your computer. Click the icon to show a slider, and then use the mouse to drag the slider to the desired volume. Click on Sound Settings to change settings for sound input and output devices and system sounds.

3.1.1.4. Bluetooth Manager applet
If your computer has Bluetooth connectivity using either an internal or external Bluetooth adaptor, the Bluetooth Manager applet will appear in the top bar. Click on the applet to switch the Bluetooth adaptor on or off, connect to a new Bluetooth device, or send files over Bluetooth. Click Bluetooth Settings for more options.

3.1.1.5. Network Manager applet
The Network Manager applet allows you to quickly connect and disconnect from available networks, both wired and wireless. Left click on the applet to see what connections are enabled or available. You
can switch network devices on or off by clicking on the toggle button. Click on the name of a wireless network to connect to it. Click on **Network Settings** to see more information and preferences. See *Chapter 7, Connecting to the Internet* for more information.

### 3.1.1.6. Power Manager applet

If your computer has a battery, the Power Manager applet will appear in the top bar. This applet displays information regarding the status of your battery: whether it is on AC power or not, whether it is charging or not, and how much charge is remaining.

Click on the applet to see the remaining charge as a percentage. If you are running on battery power, you will also see an estimate of how much time is remaining before your battery runs out of charge. Click on **Power Settings** to change power management settings for your computer.

The Power Manager applet is not normally displayed if your computer does not have a battery.

### 3.1.1.7. The User Menu

If you click on your name in the right hand corner of the top bar, the user menu appears. From here you can perform a number of tasks:

- You can change your chat status to either **Available** or **Busy**. If you are using a compatible instant messaging client such as **Empathy**, this will change your availability status. Selecting **Busy** will also prevent most notifications, such as notifications regarding new emails and chat messages, from popping up. Very important notifications such as low battery warnings will still pop up, and all notifications will still be available in the Messaging Tray.

- You can change your password, language and other account settings by clicking on **My Account**.

- You can access key system settings by clicking on **System Settings**.

- You can **Lock Screen**, **Switch User**, or **Log Out**.

- You can **Suspend** your computer if your hardware allows this feature.

#### Switching your computer off

To switch your computer off, open the user menu and hold down the **Alt**. The **Suspend** option will change to **Power Off...**. Click on this option, keeping the **Alt** held down, to power off your computer. You can configure GNOME to switch off your computer when you press the power button by setting the appropriate option in **System Settings → Power**.

### 3.1.2. The Desktop Area

The default desktop area, or *workspace*, is where the windows of currently active windows are normally displayed.

You can switch between active applications by using the keyboard shortcut **Alt+Tab**. The application switcher will appear showing icons of active applications. **Alt+Tab** will cycle through the applications from left to right, while **Shift+Alt+Tab** will cycle from right to left. If an active application has more than one window open, you can also use **Alt+`** and **Shift+Alt+`** to cycle through the windows, where `` is the key above the Tab key on your keyboard.

You can also add more workspaces and cycle between them using **Control+Alt+Up** and **Control+Alt+Down**. You can move an active window to another workspace by using
Control+Shift+Alt+Up or Control+Shift+Alt+Down. If no workspace exists below the current one, a new one will be created automatically.

### 3.1.3. The Activities Overview

The Activities overview can be accessed by clicking the Activities button, by moving the mouse to the top left hand Hot Corner, or by pressing the meta key on your keyboard. The overview has several features to help you manage applications, files, windows and workspaces:

- The **dash** is the bar on the left hand edge of the overview. It displays the icons of favourite and active applications. Left-clicking on any icon in the list will launch that application, or bring up the most recently used window if it is already running. Right-click to choose between the application's available windows.

- The central area of the overview initially displays live thumbnails of all windows in the current workspace. Click any window to focus that window and exit the overview, or close the window by clicking on the X in the top right corner. You can also zoom in on any window by using the scroll wheel on your mouse. You can click and drag windows to and from workspaces, which are displayed in a bar on the right.

Click **Applications** above the window overview to switch to the application overview. The icons of all currently installed applications are displayed. Left-click on an application's icon to open it. Right-click to switch to a currently open window, open a new window, or add the application to your favourites on the dash. All of your applications are displayed in alphabetical order, but you can click on different categories listed on the right to help you find the application you want.

- You can search for applications, devices, bookmarked folders, and recently opened files by clicking on the search bar in the top right corner, or simply by beginning to type. Items matching the search term will appear in the main area. You can also click on the buttons at the bottom of the overview to search for the term using Wikipedia or Google in the default web browser.

You can leave the Activities overview at any time by clicking on a window or application icon to focus it. You can also press the meta key, which will return you to the last focused window on the current workspace.

### 3.1.4. Notifications and The Messaging Tray

Notifications of important events, such as new emails and chat messages or low battery warnings, will pop up at the bottom center of the screen. A single line will be displayed, but moving the mouse over it will reveal more information if it is available. Most applications allow you to switch their notifications on or off, and you can suppress non-critical notifications by setting your availability status to **Busy**.

*The Messaging Tray* can be viewed by moving the mouse to the bottom right hand corner of the screen. Notifications you have not responded to yet are stored here, displayed using the application's icon or a chat contact's avatar. Left-click on the icon to display the notification, and right-click to open the application or remove the notification. The Messaging Tray is always visible in the Activities overview.

In many cases it is possible to respond to a notification directly from the notification itself, without having to go to the application. For example, it is possible to reply to chat messages directly from their notifications, both when the notification first pops up and when it resides in the Messaging Tray.
Tour of the KDE desktop

This chapter introduces the KDE desktop in Fedora 14. It is easier to explain how to use the desktop throughout this guide after explaining some of the common terminology used with the KDE desktop.

4.1. The KDE desktop

If you installed Fedora 14 from the Fedora 14 KDE Live CD, KDE is the default desktop on your computer. If you installed Fedora 14 from the Fedora DVD, your the default desktop is GNOME, and KDE is available as an option at the login screen. Chapter 3, Tour of the GNOME desktop describes the GNOME desktop.

The KDE desktop has two main areas:
• The desktop area
• The KDE panel

The layout and location of these items can be customized, but the term used for each of them remains the same.

The desktop area is the large space where windows are displayed. Icons for the Home folder and Trash are located in the top left corner of this area, within a tinted area that represents the contents of a folder (in this case, the Desktop folder).

The KDE panel is located at the bottom, and spans the entire width of the screen. It features the Kickoff Application Launcher, Device Notifier and application launchers, displays the running applications as buttons, and gives access to the workplace switcher, calendar, and the clock.
Chapter 4. Tour of the KDE desktop

The following sections describe the KDE desktop area and the KDE panel in further detail.

4.2. The KDE desktop area

Before any additional icons are added to it, the desktop area is fairly empty and contains only a translucent area that represents the contents of the Desktop Folder at the top left of the screen. The Desktop Folder area contains icons for Home folder and Trash. You can add icons to the desktop for applications or places by finding them in the Kickoff Application Launcher menu, right-clicking them and clicking Add to Desktop.

Right-clicking on the desktop presents a menu of actions related to the desktop area. For example, selecting Appearance Settings lets you change the desktop background and visual theme. You can also change the appearance of your desktop by clicking the plasma toolbox at the top right corner of the screen.

4.3. The KDE panel

By default, the KDE panel extends the full width of the bottom part of the screen and contains the following controls, called widgets:

- the Kickoff Application Launcher. In Fedora 14, this is represented by an icon of the Fedora “Infinity” logo. The Kickoff Application Launcher gives you access to software and storage locations on your computer, as well as allowing you to perform system-related tasks. It is described in more detail in Section 4.3.1, “The Kickoff Application Launcher”.

- the Pager, which allows you to switch between multiple desktops on your computer. Multiple desktops (or workspaces) have long been a feature of UNIX and Linux desktop environments. Each desktop provides a separate view with different applications running in it. Four desktops are configured by default. Clicking on one of the faded workspaces will change to that workspace, or you can switch between them by holding down the Alt key on your keyboard and pressing the F1, F2, F3, or F4 key. To add more desktops, right-click on the Pager, then click Pager Settings → Configure Desktops....

- the Task Manager, which displays buttons for any applications that are running. Clicking on one of these buttons brings that application to the foreground of your current view.

- the System Tray, which shows Klipper (a clipboard tool) and displays status notifications, such as the status of network connections or remaining battery power.

- a clock. Click on the clock to see a calendar, or right-click on it to change the way that the panel displays the time and date.

- the plasma toolbox for the panel. Clicking here allows you to change the size and proportions of the panel, and to re-arrange the order of the widgets that it displays.

Use the key combination Alt+Tab to switch between open windows

Holding down the Alt key and pressing the Tab key will open a small window containing icons of all of your open windows. Repeatedly pressing the Tab key cycles through the icons. Release both keys on your selection to pull it to the front
4.3.1. The Kickoff Application Launcher

The Kickoff Application Launcher contains:

- **Favorites** – your favorite applications and places. Right click on an application or folder icon to add it to this list. The initial list consists of:
  - **Web Browser** – Konqueror, the default web browser installed with KDE.
  - **System Settings**, which allows you to personalize your computer.
  - **File Manager**, which allows you to browse files and folders on your computer. The default file manager installed with KDE is **Dolphin**

- **Applications** – the applications installed on your computer, sorted into the following groups:
  - **Administration**
  - **Development**
  - **Education**
  - **Games**
  - **Graphics**
  - **Internet**
  - **Multimedia**
  - **Office**
  - **Settings**
  - **System**
  - **Utilities**
  - **Find Files/Folders**
  - **Help**
  - **Personal Files**

- **Computer** – information about your computer, and links to important places on it.
  - **Run Command**, which allows you to launch a piece of software by typing its name.
  - **Home**, your Home folder, the default storage location for your documents and media files.
  - **Network**, which displays information about your network connections and allows you to change network settings.
  - **Root**, the folder that contains every other file and folder in your file system.
Chapter 4. Tour of the KDE desktop

Warning

Do not move or delete items from this folder unless you are certain that you understand what you are doing. If you move or delete items within this folder, you might damage your installation of Fedora to the point where it can no longer function.

- **Trash**, which holds files and folders that you have deleted from your system.
- **Recently Used** – applications and documents that you used recently.
- **Leave** – options to finish working with your computer.
  - **Logout** ends your session, but leaves the computer running.
  - **Lock** leaves you logged in, but blanks the screen and prevents interaction with the computer until you type in your password.
  - **Switch User** leaves you logged in, but lets another user log in to the computer.
  - **Suspend to Disk** pauses your computer without logging out.
  - **Restart** restarts your computer.
  - **Shutdown** turns off your computer.
Tour of the Xfce desktop

This chapter introduces the Xfce 4 desktop in Fedora. It is easier to explain how to use the desktop after explaining some of the common terminology used with the Xfce 4 desktop.

5.1. The Xfce 4 desktop

One common reason for using the Xfce 4 desktop is to provide a feature-rich desktop environment for a desktop computer or a laptop with limited memory.

The Xfce 4 desktop has two distinct areas. From top to bottom, the areas are:

- the desktop area.
- the menu panel.

The layout and location of these items can be customized, but the term used for each of them remains the same.

The desktop area occupies most of the screen. The Home, File System, and Trash icons are located in the top left corner of this area.

The menu panel is located at the bottom of the screen. On the left part of the panel it contains a number of default icons that start software applications. On the right of the panel, from left to right, there is a Notification Area, a Trash button, a Workspace Switcher, a Show Desktop button, a Clock, and Switch User and Action buttons. In between the two sets of icons there is a Task List.

The following sections discuss the Xfce 4 menu panel and desktop area in further detail.
5.1.1. The Xfce 4 menu panel

This panel contains a number of launchers for common software. To customize the appearance of a launcher, right-click on it and select Properties.

- **Applications** contains all the programs.
- **Command Prompt** opens the console.
- **Editor** opens Mousepad, a generic text editor.
- **File Manager** opens Thunar, a file manager program.
- **Web Browser** opens Firefox, a popular web browser.
- **Notification Area** displays notices and applets from various applications, for example the network and power managers.
- **Trash** gives access to the Trash directory.
- **Workspace Switcher** allows you to switch to other workspaces. Four workspaces are provided by default.
- **Show Desktop** minimizes all open windows to show a clear work area.
- **Clock** is a generic clock that can be modified by right clicking on it.
- **Switch User/Action** are the buttons on which you click to switch to a different user, log out, restart, and shutdown Xfce.

The **Applications** button consists of several components:

- **Run Program**...
- **Terminal**
- **File Manager**
- **Web Browser**
- **Preferences**
- **Administration**
- **Accessories**
- **Development**
- **Games**
- **Graphics**
- **Multimedia**
- **Network**
- **Office**
- **Other**
- **System**
• **Help**, **About**, and **Quit** buttons.

Open applications appear as button icons in the middle part of the menu panel, known as the **Task List**.

The application window that has focus appears as a depressed button. Usually, this is the application whose window is on top of all others currently on the screen. To switch from one running application to another, click on the desired application's button in the task list.

**Use the key combination Alt+Tab to switch between open windows**

Holding down the Alt key while you tap the Tab key allows you to cycle through all open applications.

Customize the clock by right-clicking the clock on the right hand side of the panel and choose **Properties**. Properties allows you to:

• change to or from a digital clock style.

• change the clock's display to and from a 12 and 24 hour format.

• change the date format.

Change the appearance of the panel by right-clicking on it and selecting **Customize Panel**... To add new items, right-click on the area where the new item should appear and select **Add New Items**...  

### 5.1.2. The Xfce 4 desktop area

Before any additional icons are added to the desktop, the desktop area contains three icons by default:

• **Home** – this is where all files - such as music, movies and documents - belonging to the logged-in user are stored by default. There is a different home directory for each user and users cannot by default access each others’ home directories.

• **File System** – this contains all mounted volumes (or disks) on the computer; all of these are also available by clicking on the **Applications** menu and selecting **File Manager**.

**Warning**

Do not move or delete items from this folder unless you are certain that you understand what you are doing. If you move or delete items within this folder, you might damage your installation of Fedora to the point where it can no longer function.

• **Trash** – deleted files are moved here. Empty the **Trash** folder by right-clicking the Trash icon and clicking **Empty Trash**.
To permanently delete a file, and bypass the file’s move to Trash, hold down the **Shift** key when deleting the file.

Right-clicking on the desktop presents a menu of actions related to the desktop area. For example, clicking on **Desktop Settings...** lets you choose a different image or photograph to display on the desktop.
Media

When you insert or connect media such as a CD, DVD, hard drive, or flash drive, to your computer, the desktop enivironments in Fedora automatically recognizes the media and make it available for use. In GNOME, a Nautilus file manager window appears displaying the media’s contents, and you can also find the media in the Activities overview by typing files in the search bar (it will be listed under Places and Devices). On the KDE desktop an icon is placed in the bottom panel next to the pager.

In GNOME you should unmount media before removing it from the computer. To do this, right-click on the device’s icon and then select Unmount Volume or Eject, depending on what type of media you are using. During this process any remaining changes to the data on the media are written to the device, allowing safe removal without data loss. If you remove media without unmounting it first, you could cause data to be corrupted or lost.

There are several multi-media applications available for GNOME and KDE desktops. These applications will run in either Fedora desktop environment. To install software packages not already installed, refer to Chapter 18, Managing software. You can install applications either by using the PackageKit application or on the command line by using Yum.

6.1. ISO images

The instructions in this chapter refer to image files at various points. In this context, an image file (or disc image) is an archive file of an optical disc, in a format defined by the International Organization for Standardization (ISO). ISO image files typically have an .iso extension. The name ISO is taken from the ISO 9660 file system used with CD-ROM media, but an ISO image can also contain Universal Disk Format (UDF) file system because UDF is backward-compatible with ISO 9660. An ISO image includes all the data of files contained on the archived CD or DVD. They are stored in an uncompressed format.

In addition to data of the files it also contains all the file system metadata, including boot code, structures, and attributes. ISO images do not support multi-track, thus they cannot be used for audio CDs, VCD, and hybrid audio CDs.

6.2. Writing CDs or DVDs

Fedora includes support for writing to CDs and DVDs. This means that you can permanently burn files to CDs or DVDs for backup, file transport, or any other reason.

**Required hardware**

Not all optical drives (CD or DVD drives) are equipped to burn new media. An easy way to check whether that you can burn optical media is to look at the front of your disc drive. It should indicate the drive's capabilities. You can also look up the model of your drive on line. An even easier way is to simply try burning a disc; chances are, if you cannot select the option for burning discs, it is not a problem with Fedora; your drive simply does not support this operation.

6.2.1. Using Brasero in GNOME

Brasero is the default GNOME application for burning audio and video media. It can also be used to backup data or to burn an ISO image. To launch the program, go to the Activities overview. Type
the first few letters of the application's name, then click on the icon that appears or press Enter.
Alternatively, look for the Brasero icon in Applications → Accessories.

When first launched, the left side of Brasero features buttons to create a new project. This can be an audio project, data project, video project, or it can be a project to copy a disk or burn an image. Once you choose a new project type, Brasero will provide instructions for that project. For example, to burn and Audio CD, click the Audio Project button or select Project → New Project → New Audio Project. On the following screen click the plus icon to add open a file browser and select files for the project.

When you are ready to burn your CD/DVD, select the image or media at the bottom of the application and click the Burn... button. If you need to delay burning your media, you can save your project and return to it later. Use the Project menu for these options.

### 6.2.2. Using K3b to burn media in KDE

K3b is included on the Live-KDE media but is not installed by default from the Gnome Live CD or the DVD. If you do not have access to the Internet, you can use the Fedora DVD to install K3b. After you install K3b, using one of the methods described above, launch the program by clicking the Kickoff Application Launcher → Applications → Multimedia → K3b.

When the application opens the action buttons are displayed at the bottom of the window:
- New Data CD Project
- New Audio CD Project
- Copy Medium...
- More actions...

To add files to your K3b project, drag the files into the project pane at the bottom of the screen. Everything in this project pane will be burned to your optical medium.

When you are ready to burn the files or folders to disk click the Burn button. If you need to delay burning the media, you can use the menus at the top to save your work and return at a later time.

To burn an ISO image file, use the Tools → Burn Image. Navigate to and select the .iso image, then click the Start button.

### 6.3. Making bootable USB media

With the liveusb-creator tool, you can set up USB media to hold a bootable copy of Fedora. This allows you to run Fedora on a computer without making any changes to the computer's hard drive, as long as the computer is capable of booting from USB media, and is set up to do so.

To create a bootable copy of Fedora on USB media, you will need:
- a USB device with at least 1 GB of free space will work for most images but 2 GB of free space is strongly recommended. USB media often comes in the form of flash devices sometimes called pen drives, thumb disks, or keys; or as an externally connected hard disk device. Almost all media of this type is formatted as a vfat file system. You can create bootable USB media on media formatted as ext2, ext3, or vfat.
USB Image Writing is Non-destructive

Existing data on the media is not harmed and there is no need to repartition or reformat your media. However, it is always a good idea to back up important data before performing sensitive disk operations.

Unusual USB media

In a few cases with oddly formatted or partitioned USB media, the image writing may fail.

The Fedora installation using the Fedora Live CD will occupy about 1 GB. Beyond this, you might want to allocate space for Fedora to store files such as documents or software installations. These documents and programs will be available to you every time you start a computer with this USB media device, since they are stored on the device itself and not on the computer to which it is attached. This feature is a major advantage of running Fedora from Live USB media rather than from a Live CD.

- a copy of the Fedora Live CD or Fedora KDE Live CD, or a connection to the Internet. The liveusb-creator tool copies the files from a Fedora Live CD or Fedora KDE Live CD to create bootable USB media. If you do not have a Fedora Live CD or Fedora KDE Live CD, liveusb-creator can download a CD image from the Internet. However, because this CD image is a very large file, you might find this approach impractical if you do not have a broadband Internet connection.

- the liveusb-creator tool, for Fedora or Microsoft Windows. Instructions for obtaining this tool appear in the following sections specific to each operating system.

6.3.1. USB image creation in Windows


2. Follow the instructions given at the site and in the liveusb-creator program to create the bootable USB media.

6.3.2. USB image creation in Fedora

To install liveusb-creator in GNOME, go to the Activities overview. Type add into the search field, then select on the Add/Remove Programs icon that appears. Alternatively, look for the Add/Remove Programs icon in Applications → System Tools. This will open the Add/Remove Software application. Searching for liveusb-creator and install it by ticking on the box next to it and clicking on Apply.

You can also install the application from the command line with the following command:

```
# yum install liveusb-creator
```
To open `liveusb-creator`, go to the Activities overview. Type the first few letters of the application's name, then click on the icon that appears or press `Enter`. Alternatively, look for the `liveusb-creator` icon in Applications → System Tools. To create live USB media,

1. Enter the root password if prompted.

2. Choose whether to Use existing Live CD and specify its location on your comptuer, or to Download Fedora and select a file from the drop-down menu.

3. Select your Target Device for your Fedora installation, such as a USB memory stick.

4. select how much Persistent Storage you want. This is space that Fedora can use to hold documents and other files.

After you have made all of your choices just press the Create Live USB button to start the process.

Visit the liveusb-creator web page or the Fedora Wiki How to Create a Live USB page for more information.

Another option to create a USB Image is:

### Advanced usage

This content is written for the more advanced user. It assumes that you are comfortable with the command line and have a relatively good knowledge of Linux terminology. It is probably not necessary to using Fedora as a desktop user, but can help a desktop user expand his or her knowledge base and face more complicated troubleshooting issues.

1. Install the "livecd-tools package" on your system with the following command:

   ```bash
   su -c 'yum -y install livecd-tools'
   ```

2. Plug in your USB media.

3. Find the device name for your USB media. If the media has a volume name, look up the name in `/dev/disk/by-label` or use `findfs`

   ```bash
   su -c 'findfs LABEL="MyLabel"'
   ```

   If the media does not have a volume name, or you do not know it, use `blkid` or consult the `/var/log/messages` log for details:

   ```bash
   su -c 'less /var/log/messages'
   ```

4. Use the `livecd-iso-to-disk` command to write the ISO image to the media:

---

1. [http://fedorahosted.org/liveusb-creator](http://fedorahosted.org/liveusb-creator)
su -c 'livecd-iso-to-disk the_image.iso /dev/sdX1'

Replace \texttt{sdX1} with the device name for the partition on the USB media. Most flash drives and external hard disks use only one partition. If you have changed this behavior or have oddly partitioned media, you may need to consult other sources of help.
Connecting to the Internet

7.1. Introducing NetworkManager

In Fedora, connecting to the Internet and other kinds of networks is handled by NetworkManager. This application can be used to configure a wide variety of network interfaces and connections that allow you to access the Internet, a Local Area Network (LAN), or a Virtual Private Network (VPN).

For most networks, NetworkManager is able to do most of the configuration automatically:
- Using a wired (ethernet) connection is usually as simple as plugging in a cable from your router.
- With wireless networks, selecting your network from a list of available networks and entering the correct password is normally all that is required.

In both instances, you can check your network status, access various configuration options, and set up other types of network connection using the NetworkManager applet.

7.2. Using the NetworkManager Applet in GNOME

NetworkManager starts automatically when you log in, and is visible in GNOME as the NetworkManager applet icon in the top bar, on the top right of the desktop. The icon can display three kinds of information:
- If the computer is connected to a wired network, the icon shows a cable.
- If the computer is connected to a wireless network, the icon shows curved bands increasing in size from bottom to top. The color of the bands indicates the strength of the wireless signal - if the signal is at full strength, all of the bands will be white.
- If the computer is not connected to any networks, the icon shows two computers with a white cross between them.

Clicking on the NetworkManager icon provides a context sensitive menu. Each section of the menu corresponds to a type of networking interface available on your computer. Depending on the interfaces you have available, you may see:
- A section showing the status of available wired network interfaces.
- A section showing the status of available wireless network interfaces, which can be switched on or off using the toggle switch. Available wireless networks are listed below. If you are currently connected to wireless network, this network will be indicated by a white dot next to its name. If no wireless interfaces are available, this section will not be shown.
- A section showing the status of available mobile broadband connections. This may be through an internal modem, a tethered mobile phone, or a USB dongle.
- A section showing the status of available Virtual Private Network (VPN) connections, if you have created any.
- The final section allows you to access more advanced configuration options by clicking on Network Settings.

7.2.1. Connecting to a Wireless Network

To connect to a wireless network:
- Click on the NetworkManager applet icon to bring up the menu.
• Ensure that the Wireless toggle switch is set to ON.

• Select the name of the wireless network you want to connect to from the list of available wireless networks.

• If prompted for a password, enter the password for the wireless network you want to connect to. The password will be remembered automatically, so you should only have to do this once for each network.

• If the password is accepted and the connection is successful, the NetworkManager applet will display the curved bands icon, with the strength of the connection indicated by the number of bands that are white instead of grey.

**Why isn't the wireless section shown?**

The wireless section of the NetworkManager menu is only shown if Fedora detects that there is at least one wireless interface (such as an internal wireless card or external USB wireless adaptor) present with the correct driver installed. The drivers for a wide variety of wireless interfaces are included in the Linux kernel, and do not require installation. Other drivers are not included in the Linux kernel and must be obtained and installed; for some interfaces there is no available Linux driver. Please refer to [http://linuxwireless.org/en/users/Drivers](http://linuxwireless.org/en/users/Drivers) for an updated list of available Linux drivers.

If you are experiencing difficulties with wireless drivers, you can search the community-run Fedora Forums for help: [http://www.fedoraforum.org/](http://www.fedoraforum.org/).

### 7.2.2. Advanced Configurations

You can access advanced network settings and configure new networks by clicking on the NetworkManager applet icon and selecting Network Settings. Here you can do several things:

• Click on Wired to access detailed information about your wired connection, including hardware and IP addresses. You can configure advanced options, such as IPv4 and IPv6 settings, by clicking on Options.... You can also choose whether to connect to a network automatically when you log in, and whether it is available to other users set up on your machine.

• Click on Wireless to see similar information regarding your wireless connection. Selecting Options... allows you to set the wireless network type, configure IPv4 and IPv6 settings, and enter security details. You can also choose whether to connect to a network automatically when you log in, and whether it is available to other users set up on your machine.

• Click on Network Proxy to configure a network proxy.

• Click on the + button at the bottom of the left hand pane to add a new Virtual Private Network (VPN) connection. The new connection is then added to the list of available connections. Click on the name of a connection you have created to switch it on or off and to change settings. Click on the - button to remove it.

You can click on the Aeroplane Mode toggle switch in the bottom right hand corner of the Network Settings window to instantly toggle all network connections on or off.

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1 [http://www.novell.com](http://www.novell.com)
7.3. Using The KNetworkManager Applet in KDE

Just like its GNOME counterpart, KDE provides an applet interface for NetworkManager, known as KNetworkManager. This application development was started by Novell and provides an integrated QT-based experience with similar usage and configuration as its GNOME counterpart.

The KNetworkManager applet icon normally resides on the right hand side of the panel. Clicking on the icon brings up a menu showing a list of available network interfaces on the left, and the currently connected network and/or a list of available networks on the right.

Click on Manage Connections... to bring up the Network Connections Control Module. Here you can add or edit wired, wireless, mobile broadband, VPN, and DSL networks by clicking on the appropriate tab. If a particular type of network interface is not available, its tab will be greyed out.

7.3.1. Connecting to a Wireless Network

To connect to a wireless network:
• Click on the KNetworkManager applet icon to bring up the menu.

• Ensure that the Enable networking and Enable wireless boxes in the bottom left hand corner of the menu are both ticked.

• Select WLAN interface from the Interfaces list on the left.

• Select the name of the network you wish to connect to in the Connections list on the right. If the network you want isn't listed, you may need to click on Show More... to show more available networks.

• Enter the network's password if prompted. You may also need to unlock KWalletManager so the network password can be stored. You can then choose whether you want the password to be filled in automatically each time you connect to the network. If this is the first time you have used KWalletManager, you will be asked to create a new password to unlock the KWalletManager keychain.

• If the password is accepted and the connection successful, the KNetworkManager applet icon will change from an empty ethernet socket to a wireless icon with curved bands indicating the strength of the wireless signal.

Why isn’t the wireless section shown?

Wireless (WLAN) interfaces only appear in the Interfaces list if Fedora detects that there is at least one wireless interface (such as an internal wireless card or external USB wireless adaptor) present with the correct driver installed. The drivers for a wide variety of wireless interfaces are included in the Linux kernel, and do not require installation. Other drivers are not included in the Linux kernel and must be obtained and installed; for some interfaces there is no available Linux driver. Please refer to http://linuxwireless.org/en/users/Drivers for an updated list of available Linux drivers.

If you are experiencing difficulties with wireless drivers, you can search the community-run Fedora Forums for help: http://www.fedoraforum.org/.
7.4. Mobile Broadband

Once your card is inserted, you can easily create a Mobile Broadband connection, as indicated below. For many mobile broadband cards, NetworkManager can visualize in the NM applet icon, cellular signal strength and technology, and listen for signal strength changes or poll modem-manager for such changes while connected. In this way, you are able to know when the device has a signal and if it is roaming or not.

If you have a Bluetooth adapter and a mobile phone (GPRS) that supports Bluetooth DUN, you can pair the phone with the computer. If your phone and network provider allow it, you can then use NetworkManager to connect to the Internet using your mobile phone’s network connection. First, pair your phone with your computer using the Bluetooth Manager applet in the top bar. In the final screen of the Bluetooth pairing process, tick the checkbox that says Access the Internet using your mobile phone. A Mobile Broadband section will then appear in the NetworkManager applet menu.

### Supported Mobile Broadband

For a list of supported mobile broadband interfaces, look at [NetworkManager - Mobile Broadband](http://live.gnome.org/NetworkManager/MobileBroadband), on the gnome.org site. If your device is not supported, please contact the [mailing list](http://mail.gnome.org/mailman/listinfo/networkmanager-list) with information on your device.

7.4.1. Create a Mobile Broadband network connection

Click on the NetworkManager applet icon and ensure that the Mobile Broadband section is visible and that the toggle switch is switched to ON. Then click on the name of your mobile broadband interface. A wizard will open that will assist you in the configuration and ask for information about your provider. Specifically, you should know:

- Your mobile broadband provider’s name
- The name of your mobile broadband billing plan
- The name of your broadband billing plan APN (Access Point Name)

The wizard displays:
1. An information page that let you choose, if more than one are available, the Mobile device to configure.
2. A page where you select the Provider’s Country
3. A page where you select your Provider
4. A summary page of your selections.

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2 [http://live.gnome.org/NetworkManager/MobileBroadband](http://live.gnome.org/NetworkManager/MobileBroadband)
3 [http://mail.gnome.org/mailman/listinfo/networkmanager-list](http://mail.gnome.org/mailman/listinfo/networkmanager-list)
7.4.2. Setup a Mobile Broadband connection

Enter your information for the Mobile Broadband connection in following tabs.

- The Mobile Broadband tab specifies the number to dial when establishing a PPP data session with the GSM-based mobile broadband network. In most cases, leave the number blank and a number selecting the APN will be used automatically when required. The tab also specifies the username and password used to authenticate with the network, if required. Note that many providers do not require a username or accept any username.

- The PPP-Settings tab is used to configure the authentication and compression methods. In most cases the defaults are sufficient and the provider's PPP servers will support all authentication methods. Point-to-point encryption is not enabled by default but can be selected on this tab.

- The IPv4 Settings tab configures the Internet settings automatically (default), automatically for the addresses but manually for DNS settings, or completely manually.

7.5. Editing IPv4 and IPv6 Settings

NetworkManager automatically configures the IPv4 and IPv6 settings for your networks, but sometimes you may need to edit them by hand. The following options are available:

- Automatic (DHCP): Specifying this method, NetworkManager handles IP settings for you (this is the default setting).

- Automatic (DHCP) addresses only: Specifying this method, then only automatic DHCP is used and at least one IP address must be given in the DNS servers entry field.

- Manual: Specifying this method, static IP addressing is used and at least one IP address must be given in the DNS servers entry field.

- Link-Local Only: Specifying this method, a link-local address in the 169.254/16 range will be assigned to the interface.

- Shared to other computers: When this method is specified (indicating that this connection will provide network access to other computers), the interface is assigned an address in the 10.42.x.1/24 range, a DHCP and forwarding DNS server are started, and the interface is translated via NAT to the current default network connection.

- DNS Servers: List of DNS servers. For the Automatic (DHCP) method, these DNS servers are appended to those (if any) returned by automatic configuration. DNS servers cannot be used with the Shared to other computers or Link-Local Only methods as there is no upstream network. In

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4 https://bugzilla.redhat.com/
5 https://bugzilla.gnome.org/enter_bug.cgi
Automatic (DHCP) addresses only and Manual methods, these DNS servers are used as the only DNS servers for this connection.

- **Search domains**: List of DNS search domains. For the Automatic (DHCP) method, these search domains are appended to those returned by automatic configuration. Search domains cannot be used with the Shared to other computers or Link-Local Only methods as there is no upstream network. In Automatic (DHCP) addresses only and Manual methods, these search domains are used as the only search domains for this connection.

- **Routes...**: Forwarding table or routing table. Each IPv4 route structure is composed of 4 32-bit values; the first, Address being the destination IPv4 network; the second, Netmask the destination network, the third, Gateway being the next-hop if any, and the fourth, Metric being the route metric. For the Automatic (DHCP) method, given IP routes are appended to those returned by automatic configuration. Routes cannot be used with the Shared to other computers or Link-Local Only methods as there is no upstream network.

- **DHCP client ID**: The local machine which the DHCP server may use to customize the DHCP lease and options.

### 7.6. NetworkManager in a CLI

For those users who prefer the command line, Fedora includes two new tools for managing networks with NetworkManager at the command line.

#### 7.6.1. nmcli

nmcli, is the console command that makes NetworkManager available in a console. nmcli has the following format: nmcli [OPTIONS] OBJECT { COMMAND | help }.

- **OPTIONS**: allows you to view the output in terse -t or pretty -p mode.
- **OBJECT**: can be nm (NetworkManager status), con (NetworkManager connections) or dev (devices managed by NetworkManager)
- **COMMAND**: is the action on OBJECT

Type nmcli OBJECT help to see a list of the available actions. For example when OBJECT is nm, the COMMAND are:

```
nmcli nm help
Usage: nmcli nm { COMMAND | help }

COMMAND := { status | sleep | wakeup | wifi | wwan }

status
sleep
wakeup
wifi [on|off]
wwan [on|off]
```

So, running `nmcli nm status`, we have:

```
NM running:               running
NM state:                 connected
NM wireless hardware:     enabled
NM wireless:              enabled
```
Refer to `man nmcli` for more information.

### 7.6.2. nm-tools

The `nm-tool` utility provides information about NetworkManager, network interfaces, and wireless networks. For example:

```
$ nm-tool
NetworkManager Tool
State: connected
  Device: eth0  [System eth0]  --------------------------------------
  Type:              Wired
  Driver:            8139too
  State:             connected
  Default:           yes
  HW Address:        00:21:C0:C1:B3:29

  Capabilities:
    Carrier Detect:  yes
    Speed:           100 Mb/s

  Wired Properties
    Carrier:         on

  IPv4 Settings:
    Address:         192.137.1.2
    Prefix:          24 (255.255.255.0)
    Gateway:         192.137.1.1
    DNS:             192.137.1.1

$  
```

### 7.7. More Information About NetworkManager

For more information on NetworkManager, you can refer to:

- [NetworkManager Project Web-Site](http://live.gnome.org/NetworkManager/)
- [NetworkManager FAQ](http://live.gnome.org/DarrenAlbers/NetworkManagerFAQ)
- [NetworkManager in Fedora 13](https://fedoraproject.org/wiki/NetworkManager_in_Fedora_13) overview and interview with NetworkManager developer Dan Williams.
Accessing the Web

For Fedora, Mozilla Firefox is the default web browser when using GNOME, and Konqueror is the default web browser when using KDE. These browsers are used to access the Internet (World Wide Web). There are many other browsers available to suit different users' needs. Dillo is an example of a lightweight browser, and browsers such as lynx, w3m, and elinks are console based.

Besides being standards-compliant web browsers, Firefox and Konqueror have many features beyond basic web browsing. This chapter explains how to use some of the more popular features, and provides links to further information.

The Internet can also be used to transfer files. This chapter covers different methods of doing this using graphical applications as well as the command line. If you wish to transfer files using email, please refer to Chapter 9, Communications. This is often the best choice for smaller files such as pictures and documents.

8.1. Browsing web pages

Firefox and Konqueror are the suggested web browsers for most users. If you require a more lightweight browser (especially if you are using a slower system), you may want to try Dillo. If you are using the command line, then you may want to use lynx, w3m, or elinks. None of these programs are installed in Fedora by default, but can be installed using the instructions in Chapter 18, Managing software.

8.1.1. Using Firefox

To start Firefox in GNOME, click on Activities to bring up the Activities overview, and click on the Firefox icon in the dash on the left. This is the top icon by default - hover over the icons in the dash with the mouse to see the application's name.

Firefox has many more features than discussed here; you can find more information on Firefox at the Mozilla Firefox website: http://www.mozilla.org/support/firefox/.

8.1.1.1. Navigating the web

Fedora starts Firefox with a default home page that has links to useful Fedora-related sites. Navigate to other web pages by typing the web address – also called the universal resource locator, or URL – into the long navigation bar across the top of the Firefox window, replacing http://start.fedoraproject.org.

If you do not know the URL, enter a keyword (or words) into the search bar to the right of the navigation bar, then press the Enter key. The search engine used to perform your search can be changed by left-clicking the logo in the search box. You will be presented with a list of options including Google, Yahoo, eBay, Amazon, and Creative Commons.

Like other web browsers, Firefox makes it possible to save the address for a web page for future reference, by adding it to a list of bookmarks. Use the key combination Ctrl+D to bookmark a page you are viewing. To manage bookmarks, use the Bookmark menu from the top of the Firefox window. You can also create a live bookmark (a feed) that automatically checks for updates from a page with an RSS or Atom feed. If a feed is available for a particular web page, there will be an orange icon at the right hand edge of the address bar while you are visiting that page. Left click the feed icon and a preview of the feed is displayed. Select the method you would like to use to subscribe to the feed.
Use your favorite feed reader

Firefox can use a number of popular web-based options for subscribing to feeds, such as Bloglines, My Yahoo, and Google Reader, as well as Firefox's own live bookmarks. Another option is to use a stand-alone, desktop feed reader, such as Liferea.

8.1.1.2. Tabs

Open a new tab with Ctrl+T. A blank page is presented and a new bar is available under the navigation bar showing all open tabs; to switch between them left-click the desired tab. To close a tab you can either right click to access the context menu or press the red “X” on the tab.

Navigating a large number of open tabs can be difficult. To make it easier, use the arrow icon on the right hand side of the tabs toolbar. Click this to reveal a list of all open tabs that you can switch to by clicking on the relevant item.

8.1.1.3. Extensions

Firefox is designed to be moderately fast and lightweight. As a result, some functionality found in other browsers may not be available by default. To solve this problem the Firefox team made the browser extensible, so it is easy to create and integrate extensions that add new functionality to the browser.

To manage and install extensions, plug-ins, and themes, select the Tools → Add-ons menu entry. New extensions are found by visiting Mozilla’s Firefox add-on site at https://addons.mozilla.org/en-US/firefox/. To install an extension from this site follow the Add to Firefox link, and when prompted click Install Now.

Themes, plug-ins and search engines

Firefox can also be extended by adding new search engines to the search box, installing new themes to customize the look, and installing new plug-ins allowing the use of Java and other web technologies. All of these can be found at Mozilla’s Firefox add-ons site.

8.1.2. Using Konqueror

To start Konqueror in KDE, select KMenu → Applications → Internet → Web Browser. To start Konqueror in GNOME, select Applications → Internet → Konqueror.

Konqueror on the GNOME and Xfce desktops

Konqueror is installed by default with the KDE desktop, but not the GNOME or Xfce desktops. If you want to use Konqueror on the GNOME or Xfce desktops, you will need to install it first. Refer to Chapter 18, Managing software for instructions on adding new software to your system.
8.2. Transferring files

Advanced Usage

This content is written for the more advanced user. It assumes that you are comfortable with the command line and have a relatively good knowledge of Linux terminology. It is probably not necessary while using Fedora as a desktop user, but can help a desktop user expand his or her knowledge base and face more complicated troubleshooting issues.

Fedora includes several programs for transferring files between different computers on the same network (or on the Internet). One of the most common methods is called the File Transfer Protocol (FTP). There are several graphical programs available to use FTP, including FileZilla and gFTP. You can also use the command line utilities ftp, lftp, and sftp.

FTP is insecure

If you are transferring files over a public network (such as the Internet), you may not want to use FTP. FTP transfers can be easily intercepted, and FTP data is not encrypted. For more security, use SFTP, which encrypts your data over SSH.

8.2.1. Using FileZilla

FileZilla, an application with a simple, graphical interface, allows you to use the FTP protocol to transfer files over a network (and the Internet). Like many FTP applications, it has two important panes: a file browser for your local machine, and a file browser for the remote machine. This way, you can browse to a file on a remote server and drag-and-drop it to a folder on your local machine.

To install FileZilla, refer to Chapter 18, Managing software. You can install FileZilla by either using PackageKit or on the command line using Yum. More information about FileZilla is available at http://filezilla-project.org/.

FTP with web browsers

If you do not need to send a file, but only retrieve it, you can use Firefox, Konqueror, and many other web browsers. Just browse to the ftp server in the address bar, and make sure to specify that you want to use FTP. Generically, you would type ftp://ftp.server.com, where ftp.server.com is the address of the FTP server.

8.2.1.1. Connecting to a server

To connect to an FTP server in FileZilla, you must add the server to your Site Manager. You can open the Site Manager dialog in three ways:

* Click on File → Site Manager

* Click the first icon to the left on the tool bar
• Use the keyboard shortcut Ctrl+S

Click the New Site button when the Site Manager dialog is open. In the text entry box under My Sites (on the left side of the dialog), enter the name you want to use to refer to this new server. This name does not have any technical implications; choose something convenient for you.

On the right side of the dialog box, you will need to enter the following information:
Host
   This is the address of the server. If the server has a URL (such as ftp.server.com), you can type it in here. If you do not have a this, you will need to type in the IP address. An IP address is of the form A.B.C.D, where A, B, C, and D are integer values between 0 and 255 (inclusive).

Port
   Only enter a value in this field if the server you want to connect to is not using the default ports (port 21 for FTP, port 22 for SFTP).

Servertype
   Choose either FTP, SFTP, FTPS, or FTPES. Note that this section only discusses FTP and SFTP.

Logontype
   This field allows you to choose how you will authenticate with the server. This information should be provided to you by the server administrator.

User, Password, Account
   These fields are only active when certain Logontypes are used. If active, you should use them for your username, password, and account on the remote server.

Comments
   This field has no technical relevance. It may be convenient for you to make a note of something about the server here.

When you have filled out the fields, click OK to close the Site Manager or Connect to close the Site Manager and connect to the FTP server immediately. Clicking Cancel will ignore any changes you made to the Site Manager and close the dialog.

To connect to servers already added to Site Manager, open Site Manager and click on the server you want to connect to, and then click Connect.

8.2.1.2. Transferring files
Once connected successfully, status messages (in most cases) will appear in the top pane. The right-hand file browser pane will also display the contents of the directory.

To transfer a file, simply drag-and-drop it from one browser pane into the folder of the other browser pane. To disconnect from the server, press Control+D or select Server → Disconnect.

8.2.2. FTP on the command line
To use the ftp program, type ftp in the command line prompt. You should be put into an FTP shell that looks like this:

```
ftp>
```

Type help to get a list of commands, and help command for a simple description of that command. This guide will only cover a fraction of these commands; refer to the ftp manual page for further details.
8.2.2.1. Connecting to an FTP server
Use the `open` command to connect to an FTP server. The syntax for this is `open ftp.server.com port` where `ftp.server.com` is the server you want to connect to. Only specify a port if you are connecting to a server that uses a non-default port (the default is 21). Alternatively, you can connect to an FTP server as you start the `ftp` program. To do this, use the syntax `ftp ftp.server.com port`, where the port option is optional.

8.2.2.2. Downloading and Sending files
FTP is used to retrieve a file from a public server. Use the `get file` command, where `file` is the name or path of the file you want to retrieve. Use the `pwd` command to determine which directory you are currently in, and the `ls` command to view all files in that directory. Use the `cd` command to change directories.

Use the `put file` command to send a file to the server, where `file` is the name or path of the file you want to send. Use the `lcd` command to view all files in your local directory (not the remote server). You can also type `lcd directory` to change to a new directory on your local machine.

8.2.2.3. SFTP on the command line
Secure FTP (SFTP), is an encrypted version of FTP. It connects to a remote server through a secure socket layer using SSH. This means that it is a much more secure solution than traditional FTP. Use the command `sftp` to start the client. The syntax is similar to that of FTP.

8.2.2.4. Secure copy (SCP)
The `scp` command is another option for transferring files between two computers via SSH. `scp` attempts to use the same syntax as the traditional copy command (`cp`), but differs in that you can specify remote servers. The following is an example of using `scp` to send a file to a remote server, type:

```
$ scp localFile user@server:/destination/directory/
```

You can similarly fetch a file:

```
$ scp user@server:/path/to/wantedfile destinationFile
```

Or even between two remote servers:

```
$ scp user1@server1:/path/to/source user2@server2:/path/to/destination
```

In every case that you access a remote server, you will be prompted for your credentials (such as a username and password).
Communications

Fedora can be used to send electronic mail and communicate in real time with people around the world through instant messaging and chat rooms. In GNOME, Evolution is used to send electronic mail (email) by default. Evolution can also be used as a personal information manager, or PIM. You can maintain a calendar, manage a list of tasks, and keep an address book of contacts.

In KDE, Kmail is used to send email by default. While Kmail does not include a calendar, a calendar application called KOrganizer is included as part of the KDE PIM suite. There is also an application called Kontakt which groups KMail, KOrganizer and other KDE PIM tools into a single interface (comparable with GNOME’s Evolution).

Thunderbird is an open-source mail client maintained by Mozilla. It is very extensible, with an online plug-in library akin to Mozilla Firefox. Claws Mail is a more lightweight email client and news reader, which is also extensible via additional plug-ins. Claws Mail only supports plain text emails by default.

Empathy and Kopete are both Instant Messaging (IM) programs that allow you to talk to people in real-time using chat networks like AIM, Yahoo! Messenger, or Gmail chat. XChat is Fedora’s default graphical IRC client and Konversation is the default IRC client for KDE. ChatZilla is an IRC client installed and used via the FireFox web browser. These clients can all connect to IRC servers which provide chat rooms for people around the world to discuss specific topics.

9.1. Evolution

Evolution is a full featured email program. In addition to email, Evolution features a personal information manager (PIM), a calendar, task manager and an address book for your contacts. More documentation for Evolution is available at: http://www.gnome.org/projects/evolution/documentation.shtml

9.1.1. Configuring Evolution

To configure an email account:

1. To start Evolution in GNOME, click on Activities in the top bar to bring up the Activities overview, then click on the Evolution icon in the dash or type the first few letters of the application’s name and press Enter.

2. Running the software for the first time displays the Evolution Setup Assistant wizard. After the initial welcome screen you will have an opportunity to restore Evolution from a backup or click the Forward button to continue and answer questions with information provided by your ISP or email provider.
   - The Identity screen relates to personal information about the account, including Name, Organization, and Email Address. There is also a Reply-To field, which will allow you to specify that recipients of mail from this account can reply to a different email address than the one that sent the email.
   - The Receiving Email and Sending Email screens both require information from the e-mail provider. There are many server types available from the pull down menu. The most common protocols for receiving email are IMAP and POP. If your provider support IMAPs, choose IMAP as the Server Type then select an encryption method from the Security settings.

To add a new account in the future, or to modify an existing account, launch the preferences dialog from the Edit → Preferences menu. In the dialog that appears, press the Add button to launch the Evolution Account Assistant again.
9.1.2. Using Evolution

**Evolution** allows you to create, store and send email by clicking the appropriate buttons located on the top toolbar. Use the mouse to hover over each icon for a pop-up description of each button. You can also use the pull down menus to find each action as well as keyboard shortcuts for those actions. These actions include creating New email messages, Send/Receive queued emails, replying to the sender of an email or replying to all recipients of an email, printing an email, deleting an email, and moving to the next or previous email in the folder. There are also buttons to mark an email as Junk or Not Junk.

**Do not miss important emails**

Check your Junk folder frequently as you begin with Evolution and if needed, mark items that are Not Junk. Evolution will learn what is Junk and what is Not Junk with each item that you mark.

In the lower left section of Evolution are buttons to switch from the default email tasks to other tasks including Contacts, Calendar, Memos, and Tasks. As you select each of these components of Evolution the toolbar at the top will adjust to provide buttons for the most common actions.

**Using Contacts in emails**

As you read an email, right click on the sender's email address and select Add to Address Book... This will add an entry to your contacts. When sending an email, click the To: or CC: buttons to select recipients from your contacts.

9.2. Thunderbird


9.2.1. Configuring Thunderbird

To configure your email account you will need the email information provided by your ISP or email provider.

1. Open Thunderbird:
   - in GNOME, go to the Activities overview. Type the first few letters of the application’s name, then click on the icon that appears or press **Enter**. Alternatively, look for the Thunderbird icon in Applications → Internet.
   - in KDE, click Kickoff Application Launcher → Applications → Internet → Email menu entry.

---

2. The first time you start **Thunderbird** the **Account Wizard** opens to guide you through the setup of your account. If the **Account Wizard** does not open, select **File → New → Mail Account...** in the main window to open the wizard.

3. Fill in your name, email address, and password, and click **Continue**.

4. **Thunderbird** will attempt to detect your account settings automatically. If the automatic detection is successful, your account settings will appear.

5. If **Thunderbird** fails to automatically detect the account settings, enter the names of the **Incoming** and **Outgoing** servers. Choose **POP** or **IMAP**, and the appropriate secure setting if required. Select 'Re-test configuration'.

6. When **Thunderbird** has detected your account, select **Create Account**. Now **Thunderbird** connects to the server to download your email messages.

7. If the download fails, your email account may require secure connections. In this case, select **Edit → Account Settings → Server Settings** and select your secure setting. Often the setting is SSL, but this information should be provided by your email service.

---

9.2.2. **Moving your Thunderbird profile data from Windows to Fedora**

The **Thunderbird** data profile folder contains your email messages, addresses, and program settings. To move your profile data from Windows to Fedora requires that the data folder be copied to a CD/DVD, memory stick, or other mobile media. If you have set up multiple accounts in **Thunderbird**, they can be moved as well, one at a time, following these steps:

1. **Find your profile data folder**
   - In Windows 2000 or Windows XP, click **Start → My Computer → Local Disk (C:) → Documents and Settings → YourUserName → Application Data → Thunderbird → Profiles**. The profile data folder looks like **xxxxx.default**, where **xxxxx** is a sequence of random numbers and letters.
   
   **If you cannot find the Application Data folder**

   If you cannot find the **Application Data** folder, go to the top menu and select: **Tools → Folder Options → View** and check the box **Show Hidden Files and Folders**.

   If you still cannot find the folder, click: **Start → Run**, type **%AppData%** and press **Enter**.

   - In Windows Vista, click **Start → Computer → C: → Users → YourUserName → AppData → Roaming → Thunderbird → Profiles**. The profile data folder looks like **xxxxx.default**, where **xxxxx** is a sequence of random numbers and letters.
If you cannot find the Application Data folder

If you cannot find the **Application Data** folder, click **Start** → **Control Panel** → **Classic View** → **Folder Options** → **View** and check the box **Show Hidden Files and Folders**.

If you still cannot find the folder, click: **Start**, type `%AppData%` into the **Start Search** box and press **Enter**.

Copy your profile data folder to removable media

Right click on the profile data folder and select: **Send To** → **CD/DVD or memory stick**. Then press the **Back** button until you arrive at **My Computer** and check to make sure the folder was saved to the media.

3. **Copy your profile data folder to Fedora**

   **Set up your email account or email accounts first**

   To move the folder to Fedora you need to have your email account, or accounts, set up in **Thunderbird** on your Fedora installation. When you set up an email account, **Thunderbird** creates the profile data folder for that account. If this folder does not yet exist, you do not yet have a destination for the copy of the folder on your removable media. Refer to **Section 9.2.1, “Configuring Thunderbird”**.

   a. Open the Thunderbird profile data folder in Fedora:
      - In GNOME, go to the Activities overview and click on the **Files** icon in the dash, or type Files in the search bar and press **Enter**. In the **Nautilus** file manager window that appears, open the **View** menu and select **Show Hidden Files** to show hidden files. Navigate to `.thunderbird` → `xxxxxx.default`, where `xxxxxx` is a random sequence of letters and numbers. Note that this sequence will be different from the sequence that you saw in your **Thunderbird** installation on Windows.

   **If you cannot find the .thunderbird folder**

   If your Fedora installation originally had an early version of **Thunderbird** installed on it, your profile data folder might be under `.mozilla-thunderbird` instead of `.thunderbird`.

   If you cannot find either a `.thunderbird` or `.mozilla-thunderbird` folder within your **Home Folder**, press **Ctrl+H** to display **Hidden Files**.
Draft

Using Thunderbird

In KDE, click **Kickoff Application Launcher → Computer → Home**. Once **Dolphin** starts, show hidden files from the **View** menu, then navigate to **.thunderbird → xxxxxx.default**, where xxxxxx is a random sequence of letters and numbers. Note that this sequence will be different from the sequence that you saw in your **Thunderbird** installation on Windows.

**If you cannot find the .thunderbird folder**

If your Fedora installation originally had an early version of **Thunderbird** installed on it, your profile data folder might be under **.mozilla-thunderbird** instead of **.thunderbird**

If you cannot find either a **.thunderbird** or **.mozilla-thunderbird** folder within your **Home Folder**, press **Alt+**. to display **Hidden Files**.

b. In the **xxxxxx.default** folder, press **Ctrl+A** to select all files and folders, then press **Delete** to move them to the **Trash**. The folder should now be empty.

c. Plug in the media containing the folder you copied from Windows.

d. Open the media and click on the **xxxxxx.default** folder saved from Windows to open it. Click **Edit → Select All → Edit → Copy**

e. Move back to the empty **xxxxxx.default** window and click **Edit → Paste**.

f. Start **Thunderbird** and verify that you can see the email messages, addresses, and settings from your **Thunderbird** installation on Windows.

**9.2.3. Using Thunderbird**

The first time you press the **Get mail** button you are asked for your password. Type in your password and press **Enter** or click the **Ok** button. You might want to check the box **Use Password Manager to remember this password**. If you do, **Thunderbird** will automatically check your email without asking for your password in the future. Before choosing this option, remember that there is always some risk associated with storing a password. If your password and setup was correct, **Thunderbird** will now download your email messages from the server.

**Thunderbird** allows you to download and create email by clicking the appropriate buttons located on the toolbar at the top of the screen. **Get Mail** prompts **Thunderbird** to send and receive all email. **Write** opens a new email message dialog box. **Address Book** opens the email addresses you have on file. **Tag** Color-codes messages that are important or need follow-up.

Click on an email to view it in the message pane. Double-clicking on an email will open it in a new tab. Buttons at the top right of the email message give access to various functions. In addition to **Reply**, **Reply All**, **Forward**, and **Delete**, **Archive** compresses the message and stores it in the Archive, **Junk** marks the email as junk, and **Other Actions** provides access to other options, including **Save as...** and **Print**.
9.3. Claws Mail

Claws Mail is an email client and news reader built to be lightweight and easy to operate. Claws Mail features mostly basic functionality, but plugins can be used to add many of the features found in Evolution and Microsoft Office Outlook. To install Claws Mail, refer to Chapter 18, Managing software. You can install Claws Mail by either using PackageKit or on the command line by using Yum. More information about Claws Mail is available at: http://www.claws-mail.org/.

9.3.1. Configuring Claws Mail

To configure your email account you will need the email information provided by your Internet service or email provider:

1. Open Claws Mail:
   - in GNOME, go to the Activities overview. Type the first few letters of the application’s name, then click on the icon that appears or press Enter. Alternatively, look for the Claws Mail icon in Applications → Internet.
   - in KDE, click the Kickoff Application Launcher → Applications → Internet → Claws Mail menu entry for Claws Mail.

2. The first time you start Claws Mail the Claws Mail Wizard appears and will guide you through the set up of your account:

3. After the welcome screen, follow the dialogs to fill in your name, (sometimes it is guessed from the operating system) and your email address.

4. On the next page choose a protocol and enter details of how to retrieve your mail:
   - POP3
     Enter the server address, username, and password. Also select encryption in needed when connecting to your provider. If you do not enter your password here you will be prompted for it each time it is needed.
   - IMAP
     Enter the server address, username, password, encryption, and IMAP server directory. The password is optional, if you do not provide it here you will be prompted for it each time it is needed. The IMAP server directory is also optional, often it is not needed and can be left empty.
   - Local mbox file
     Enter the location of your local mailbox spool file. Values such as /var/mail/username or /var/spool/mail/username are common, username is your system login.

5. On the next page enter the address of your SMTP (Outgoing) server. Also fill in any authentication and encryption information that your provider requires for sending email.

6. If you chose either POP3 or Local mbox file, the next page will show the default where it will save your mail.

7. Click on the Save button to finish the configuration.

9.3.2. Using Claws Mail

Claws Mail allows you to create, store and send email by clicking the appropriate buttons located on the toolbar. Retrieving your email can be done from the toolbar button named Get mail or from the Receive submenu of the Message menu.
From the **Tools** menu you can collect addresses for the address book, configure filters, and manage certificates. The **Configuration** lets you configure accounts, filters, templates, actions, and tags.

**Claws Mail** by default is a lightweight and fast email client that handles plain text email only. With the addition of plugins **Claws Mail** can also render HTML email, handle vCalendar messaging, integrate with spamassasin, or report spam to various locations. Fedora packages many plugins as separate packages. To install additional plugins refer to *Chapter 18, Managing software*. You can install plugins by either using **PackageKit** or on the command line by using **Yum**. Use the search features to locate `claws-mail-plugin-*` packages. Additional plugins can also be found at [http://www.claws-mail.org/plugins.php](http://www.claws-mail.org/plugins.php).

### 9.4. Kmail

**Kmail** is the standard email client used in KDE it is installed by default from the Fedora KDE Live CD and is also included in the DVD. To start **Kmail** in KDE, click the **Kickoff Application Launcher** → **Applications** → **Internet** → **Mail Client** menu entry for **Kmail**.

#### 9.4.1. Configuring Kmail

Running the software for the first time displays a wizard to configure mail accounts or cancel and create an account later.

**Using IMAPS or POPs with KMail**

If your email provider requires the use of a secure connection such as IMAPS, you may need to configure the account at a later time. Not all configuration options are available through the connection wizard.

The dialog boxes will prompt you through:

- choosing an account type such as IMAP or POP
- specifying your account information including real name, email address, and organization,
- providing login information for your email account
- specifying server information for incoming and outgoing email

Finally, KDE may ask you to set a password for **KDEWallet** which manages account passwords across the KDE Internet applications.

To add a new account in the future, or to modify an existing account, click **Settings** → **Configure Kmail**. In the dialog that appears, select **Accounts** then press the **Add** button to add an account or **Modify** to modify an existing account.

#### 9.4.2. Using Kmail

**Kmail** allows you to create, store and send email by clicking the appropriate buttons located on the toolbar or by selecting the appropriate menu options. From the pull down menus, specifically the **Tools** menu, you can also manage the address book, configure encryption, and edit “Out of Office” replies. From the **Settings** you can configure filters, shortcuts, toolbars, accounts, and more. The **Help** menu provides access to the KMail Handbook, a KMail Introduction, and a “Tip of the Day” feature.
9.5. Empathy

Empathy is an instant messaging (IM) client that can access Gmail, MSN, AOL, Yahoo!, Jabber, and other IM and chat networks. Empathy is the default instant messaging client for the GNOME desktop. For further information please refer to: http://live.gnome.org/Empathy.

9.5.1. Configuring Empathy

To start and configure Empathy in GNOME, go to the Activities overview. Type the first few letters of the application's name, then click on the icon that appears or press Enter. Alternatively, look for the Empathy icon in Applications → Internet. In KDE, click on the Kickoff Application Launcher → Applications → Internet → IM Client menu entry for Empathy.

Starting Empathy for the first time goes directly into the Messaging and VoIP Accounts Assistant dialog. Choose to configure Empathy to use an existing account, create a new account, or see people online nearby.

Fedora does not register all accounts

Many IM networks require you to create an account before you can use them. In many of these cases, you cannot create the account in Empathy and will normally need to visit the website of the network to create an account. For example, you cannot use Empathy to create a Yahoo Instant Messenger account. Instead, you much first visit http://messenger.yahoo.com to set up the account, then access it using Empathy.

To configure Empathy to use an existing account follow these steps:

1. Select Edit → Accounts to bring up the Messaging and VoIP Account Assistant dialog, select the Yes, I'll enter my account details now button and click Forward.

2. Click the drop-down menu to show the available protocols and select the network appropriate for the account being created.

3. Enter details for the selected account, including Screen name and Password. Click on the Apply button to add the account to the account list and return to the main window.

To modify, delete, or add additional account, select Edit → Accounts from the main menu. Highlight an account to modify or delete or click the Add... button to configure an additional account.

9.5.2. Using Empathy

You can use the menus or double click on a Buddy to start a conversation. All supported protocols are available at the same time within Empathy. If you have setup several accounts, such as Yahoo, Google Talk, and AIM accounts, then all of your contacts for each of these accounts will be available to chat with at the same time, in the same contact list. Each conversation that is started with have menu options appropriate for the protocol of that account.

Select Edit → Preferences to customize themes, notifications, sounds, and more. The Room menu allows you to join a chat room. If you want to temporarily disable an account, select Edit → Accounts, select the account to disable, and uncheck the enabled box. Your account settings will be saved and you can enable the account at any time.
9.6. Pidgin

**Pidgin** is an instant messaging (IM) client that can access Gmail, MSN, AOL, Yahoo!, Jabber, and other IM and chat networks. For further information please refer to: [http://www.pidgin.im](http://www.pidgin.im)

In previous versions of Fedora, **Pidgin** was the default instant messaging program. If you upgrade Fedora from a previous version you will still have **Pidgin** installed and configured. If you have a fresh install of Fedora, **Empathy** is the default IM client. See Section 9.5, “Empathy” for more information. To install **Pidgin**, refer to Chapter 18, Managing software You can install **Pidgin** by either using the PackageKit or on the command line by using Yum.

9.6.1. Configuring Pidgin

To start and configure **Pidgin** in GNOME, go to the Activities overview. Type the first few letters of the application's name, then click on the icon that appears or press **Enter**. Alternatively, look for the **Pidgin** icon in **Applications → Internet**. In KDE, click on the **Kickoff Application Launcher → Applications → Internet → Instant Messenger** menu entry for **Pidgin**.

Starting **Pidgin** for the first time goes directly into the **Accounts** dialog. To configure a new account follow these steps:

1. Click on the **Add** button to bring up the **Add Account** dialog.

2. In the **Add Account** window, under **Login Options**, click on the right side of the Protocol drop-down menu to show the available protocols and select the network appropriate for the account being created.

3. Enter details for the selected account, including **Screen name**, **Password**, and **Alias**. Select **Remember password** if desired. Click on the **Save** button to add the account to the account list.

4. Once the account is added, the **Accounts** window displays the new account.

5. New accounts can be added in the future by navigating to the **Accounts → Manage Accounts** menu entry in the main **Pidgin** window.

9.6.2. Using Pidgin

All supported protocols are available at the same time within **Pidgin**. If you have setup several accounts in Pidgin, such as Yahoo, Google Talk, and AIM accounts, then all of your contacts for each of these accounts will be available to chat with at the same time, in the same contact list.


Not all features supported

**Pidgin** does not support some features of the included protocols. **Pidgin** is useful for chatting via text across different IM protocols, but not all the features in each IM system are supported. For example, video is not supported at this time.
Fedora does not register all accounts

Many IM networks require you to create an account before you can use them. In many of these cases, you cannot create the account in *Pidgin* and will normally need to visit the website of the network to create an account. For example, you cannot use *Pidgin* to create a Yahoo Instant Messenger account. Instead, you must first visit [http://messenger.yahoo.com](http://messenger.yahoo.com) to set up the account, then access it using Pidgin.

9.7. Kopete

*Kopete* is the Instant Messenger installed in KDE by default. To start the program in KDE, click the 
Kickoff Application Launcher → Applications → Internet → Instant Messenger menu entry for 
*Kopete*. For further documentation on *Kopete*, refer to: [http://kopete.kde.org/](http://kopete.kde.org/)

9.7.1. Configuring Kopete

To configure an account in *Kopete* select Settings → Configure... then click Add Account. Follow the dialog questions to choose a messaging service from the list then specify the account information for that service. Make sure to fill out the details on the other tabs. Once the account is added, click Next and choose the option to connect to the service and then click Finish.

*Kopete* comes with a wide range of messaging services such as:
• AIM
• Bonjour
• GroupWise
• ICQ
• Jabber
• Meanwhile
• WLM Messenger
• Testbed
• WinPopup
• Yahoo

You can add accounts for these services to *Kopete* using the steps above.

9.8. XChat

*XChat* is an IRC chat program. It allows you to join multiple IRC channels (chat rooms) at the same time, talk publicly, private one-on-one conversations and is capable of transferring files. To install *Xchat*, refer to *Chapter 18, Managing software* You can install *Xchat* by either using the *PackageKit* or on the command line by using *Yum*. More information is available at [http://xchat.org/](http://xchat.org/).
9.8.1. Configuring XChat

1. When you open XChat the XChat: Network List window appears. Fill in your choices for your Nick name, username and realname. Your username can be anything you like.

2. Now choose a network to join from the Networks window. Select the one you want by clicking it. For example, most Fedora projects use the FreeNode network to host chat rooms.

3. Select Edit which opens another window listing the network you selected. For now make sure the box Use global user information is checked. Go down to the Favorite Channels field and type in the channel you want to join. You can also click on the small button to the right of the field which will bring up a window where you can Add, Remove and Edit your channels. Most networks require # placed before the name of the channel. For example, #fedora-doc is where you ask about writing and updating this and other documentation. The #fedora chat room is a good place to find help using fedora.

4. Click the Close button.

5. Select Connect and you are connected to your channel.

9.8.2. Using XChat

On the top menu bar select Applications → Internet → XChat IRC. Click the Connect button and you are attached to the networks and channels that you selected above.

You can configure your preferences for XChat while attached to the network. On the top menu bar select Settings → Preferences and choose your text, background and sound preferences. You can also configure alerts and logging. Once logging to the disk is enabled in the preferences, right click on the channel name and and select Settings to enable or disable logging for an individual channel.

XChat defaults to showing each channel as a tab. Either right click the channel name or select Xchat and click Detach to view a channel in a separate window.

9.9. Konversation

Konversation is the default IRC application for the KDE Desktop. You can find details at http://konversation.kde.org/.

9.9.1. Configuring Konversation

To configure Konversation select:

1. Kickoff Application Launcher → Applications → Internet → IRC Client.

2. The Servers List window pops up and has a default network listed. Select New or click on the default network then select Edit.
   a. Type in your chosen network in the Network Name: field.
   b. Under Identity click Edit and add your user names.
   c. Check the box Connect on application start-up to attach automatically when you open Konversation

3. In the Auto Join Channels window:
   a. Click on the default channel listed then Edit or just click the Add button to ad your choice.
   b. Type in your desired channels, and passwords if needed, then click the Ok button.
4. You are returned to the **Edit Network** window. Select the **Ok** button. Now click the **Connect** button at the bottom right in the **Servers List** window to attach to the network and your channels.

### 9.9.2. Using Konversation

Choose **Kickoff Application Launcher → Applications → Internet → IRC Client**.

If you selected the **Connect on application startup** then **Konversation** will automatically attach to your networks and channels.

To customize colors, highlighting, logging, and more, select **Settings → Configure Konversation**.

### 9.10. ChatZilla

**ChatZilla** is an IRC chat program from Mozilla. It is easy to use and is a highly extensible IRC client. It has all the usual features including a built-in list of standard networks, easy searching and sorting of available channels, logging, DCC chat and file transfers. For more information go to [http://chatzilla.hacksrus.com/faq/](http://chatzilla.hacksrus.com/faq/).

#### 9.10.1. Installing ChatZilla

You can install **ChatZilla** using **Firefox**.

1. Launch **Firefox** and from the top menu bar select **Tools → Add-ons**.
2. In the box to the left of the **Browse All Add-ons** link, type **ChatZilla** and press **Enter**.
3. Select **Add to FireFox** then **Install Now**. You may get a message to re-start **Firefox**.

#### 9.10.2. Configuring ChatZilla

1. Open **Firefox**.
2. On the top menu bar click **Tools → Chatzilla**.
3. The **ChatZilla** window opens where you will see the word *Client* as a tab near the bottom. In the main window are welcome messages with links to additional help and at the bottom of that window are links to a few of the most popular Networks. If your Network is among them just click on the link and **ChatZilla** will attach to it as a new tab.
4. To configure your chosen networks so they automatically connect, go to **Chatzilla → Preferences**, make sure that **Global Settings** is selected and choose the **Startup** tab. Scroll down to the **Auto-connect URLs** window, click **Add**, and type in your network. For example, `irc://your.network`, click **OK** to add the entry then **Ok** to exit the preferences window.
5. To configure channels in a network so they automatically connect, select **Chatzilla → Preferences** then select the Network and click on the **Lists** tab. To automatically join a channel, click **Add** by the Auto-Perform box and type `/join #your-channel` then click **OK**. Add any username to the Nickname list or the Notify List then click **Ok** to save all changes.

#### 9.10.3. Using ChatZilla

1. Open **Firefox**.
2. On the top menu bar click **Tools → Chatzilla** and you will automatically attach to your networks and channels.

**Note**

It is not necessary to have your channels connect when you start **ChatZilla**. Once you have attached to your networks you can select **IRC → Join channel** and type in your favorite channel, or part of it in the **Quick Search** box. Then click on the **Join** button when your channel appears in the box. But you will have to do these steps each time unless you setup **ChatZilla** to attach automatically.
Printing

Despite the increasing availability of electronic services, there are still times when it is necessary or desirable to print documents. Fortunately, Fedora makes printing easy. This chapter covers connecting to a single printer and connecting to an existing print server. Like many other aspects of Fedora, printing can be configured by a graphical program or with command-line tools. In this chapter, the focus is primarily on the graphical program, with some discussion of the basic command-line tools.

10.1. Adding a Single Printer

Most users need to connect to a single printer, often connected to the computer by a USB cable, although some printer models have built-in network cards for wired or wireless connection to your local network.

10.1.1. Adding a USB printer

10.1.1.1. Adding a USB printer in Gnome

For a USB printer, Fedora makes the setup as easy as possible: simply plug the USB cable into the computer. You'll be prompted to install print drivers if they aren't already installed, and Fedora will detect which ones you need in most cases.

Click **Install** to begin installing the drivers. You may also need additional packages apart from the print drivers. If you are asked to confirm installation of these packages, click **Continue** to install them. You will then be asked to authenticate. Type in the password for the root account and click **Authenticate**. When this process completes, the printer is installed and ready for use.

10.1.1.2. Adding a USB printer in KDE

The KDE printing applet automates the installation of many models of printer. Simply plug the printer in and in a few seconds it will be added to the system. The printer information will be set automatically. If you'd like to change the settings, go to KMenu → Applications → Settings → System Settings and then click on Printer Configuration. USB printers will appear under the Local Printers section.

10.1.2. Adding a network printer

In some cases, the printer might not be in reach of a USB cable, or it might be shared by several different computers. One way to solve this is to print over the network. Some printer models come with built-in or optional network cards for either wired or wireless connection. This allows the printer to be anywhere with a network connection, even if it's in a different room.

10.1.2.1. Adding a network printer in Gnome

Even if the printer is on your local network, connecting is still easy. To start, open the printing configuration. In GNOME, this is under System → Administration → Printing. Click the Add button, and enter the root password. The system will scan for printers. If yours is detected, it will be listed on the left-hand side. If not, you'll need to know the protocol and address to use to connect. Consult your printer's owner's manual for this information.

Once the printer is selected, click **Forward**. You may be asked to choose a driver. The drivers for many popular printers are already available. Select the make for your printer and click **Forward**. You'll then have the option to select the model, and if there are multiple drivers, to select the driver as well.
In most cases, you'll want the driver marked "(recommended)". Click **Forward**. If your printer model is not found, you'll need to click **Back** and provide your own driver. The printer manufacturer's website will often have the driver (also called a "PPD file") you need.

In the last window, you'll be asked for some information to describe the printer. For the **Printer Name**, you should select a short, easy-to-remember name such as "laserjet". The **Description** and **Location** fields are optional. You can use those to provide information about the features of the printer and it's location. Once you've entered the information, click **Apply** You'll then be prompted for the root password. Enter it in the text box and click **Authenticate**. As the final step, you have the option to print a test page. Click **No** or **Yes** as you prefer.

**10.1.2.2. Adding a network printer in KDE**

In KDE, you first have to launch the System Settings program. Press **Alt+F2**, type `kdesu kcmshell4 system-config-printer-kde` and press **Enter**. Type in your root password in the dialog box that appears and click **OK**. Select **New Printer** and click **New Network Printer**. Select the appropriate connection for your printer, and enter the required information for that connection type. Click **Forward** to proceed.

In the last window, you'll be asked for some information to describe the printer. For the **Printer Name**, you should select a short, easy-to-remember name such as "laserjet". The **Description** and **Location** fields are optional. You can use those to provide information about the features of the printer and it's location. Once you've entered the information, click **OK**. The printer is now added to the system.

**10.2. Connecting to a print server**

If there are multiple computers on your network, one of them may be serving as a print server, providing connection to one or more printers to the rest of the network. Print servers can run on a wide variety of hardware and operating system combinations, but Fedora makes it easy to connect to a wide variety of print servers.

**Firewall settings for printing**

By default, CUPS uses TCP port 631 for network communication. If you're connecting to a print server running CUPS, ensure the server firewall allows connections on port 631.

**10.2.1. Connecting to a print server in Gnome**

Connecting to an existing print server is similar to adding a single printer. To start, open the printing configuration. In GNOME, this is under **System → Administration → Printing**. In the **Printing** window, select **Server → Connect...**. In the **CUPS server** field, enter the host name or IP address of your print server (for example: `print.example.com` or `192.168.1.10`) and check **Require encryption** if desired. Then click **Connect**. It may take a few seconds to connect to the print server, but you should see all of the printers on the server in your printer list.

**10.2.2. Connecting to a print server in KDE**

KDE does not have an option for connecting to all queues on a remote printer. To add printers connected to a print server, follow the directions above.
10.2.3. Connecting to a print server from the CUPS configuration files

Regardless of the desktop environment in use, a computer can be connected to a CUPS print server by editing the file `/etc/cups/client.conf`. By default, this file exists, but is empty. To connect to a CUPS print server, add the line

```
ServerName server
```

where `server` is the host name or IP address of the server. All of the available print queues on that system will immediately be shown on the client computer.

10.3. Send a Print Job

Now that you have one or more printers installed, you probably want to use them. Most applications use the standard `File → Print` convention, but some may have a slightly different menu structure. However the printing menu is presented to you, you'll probably have several options you can change for your print job. Common options are printing in black and white versus color, or selecting the paper size and layout. Of course, your printer will need to support these options for them to work. If you have multiple printers installed, you can select which printer to use.

**Selecting a default printer**

If you have multiple printers, there's probably one that you'll want to use the most often. You can select a default printer in your Printing menu by right-clicking the printer you want to be the default and select `Set As Default`. Most applications will honor this setting.

**Printing from the command line**

Some tasks involve using the command line to run commands. Fortunately, there's a way to print from the command line, too. You can use the `lpr` to print a file. For example, `lpr myfile.txt` prints the file `myfile.txt`. You can specify the printer to use with the `-P` option. The argument to `-P` is the short name of the printer. If you installed a printer called "laserjet", you would print your file with `lpr -P laserjet filename`.

The default printer can also be set by setting the `PRINTER environment variable`. Environment variables are set with the `export` command:

```
export PRINTER=printername
```

To make the change persistent, add the above line to your `~/.bash_profile` file.
Office Applications

In today's communication-oriented world, the ability to create, view, and edit content-rich documents is an important feature of any operating system. In Fedora, you have the option to select from many of options when it comes to document and spreadsheet editing.

In Windows, you may have been familiar with the Microsoft Office suite of products. Programs like Microsoft Word, Excel, and Publisher all have multiple counterparts in the realm of free software. Each of these free and open source products has a distinct flavor; some are minimalistic with few options and a simplistic interface, some are feature-rich with capacities even beyond proprietary options, and many others fall in between these extremes. This chapter will help you survey your options and choose the right application for you.

11.1. Office Suites Overview

One of the most popular open source Office Suites is LibreOffice. This suite is included with Fedora and is also available for many other operating systems including Windows. Documentation for LibreOffice is available at http://www.libreoffice.org/get-help/documentation/.

LibreOffice is currently very similar to OpenOffice.Org, another open source office suite, and they share much of the same codebase. If you are familiar with OpenOffice.Org you will find that most of the working methods you are used to will be the same in LibreOffice.

The KOffice suite is optimized for the KDE desktop environment. The KOffice applications also create documents and files in open standards formats including OpenDocument (.ODF), Rich Text Format (.RTF), and HTML. For the most up-to-date information on all of KOffice's program offerings, visit the official KOffice site at http://www.koffice.org/. This site also includes detailed documentation and help for each individual KOffice program.

GNOME does not provide a suite but instead has a number of individual office applications optimized for GNOME. For more information on using these applications refer to http://live.gnome.org/GnomeOffice

11.2. Word Processing

A word processor is an extension of the classic text editor. While text editors can write and store words and sentences to files, word processors take this a step further by allowing the user to format his work with colors and fonts. Word processors also allow users to format the way a document will appear on the printed page by managing page margins, paper size, and document orientation (portrait or landscape).
This section will explore the popular word processors available in Fedora, and help you become familiar with the abilities and usage of each.

### 11.2.1. LibreOffice Writer

Writer is the word processing component of LibreOffice. Writer is arguably the most powerful of the open source word processors in the sense that it has the most features. Writer, like all of LibreOffice, is available for most operating systems including Linux, OS X, and Windows.

If you have used a word processor before, Writer may seem immediately familiar to you. The interface displays a large page where you can type your document, and there are several toolbars across the top of the window with which you can choose formatting options and advanced features like mail merging or embeddable media.

From the View menu you can customize which toolbars are visible. Some toolbars will appear as needed. For example, when a table is inserted, a floating toolbar with options to manage the table appears. For more information, read Writer’s product description at [http://www.libreoffice.org/features/writer/](http://www.libreoffice.org/features/writer/) or access the documentation under Help → Contents.

### 11.2.2. KWord

KWord is the KOffice word processing program. Open KWord by selecting the Kickoff Application Launcher → Office → Word Processor entry for KWord.

The first window contains options for opening New, Recent or Existing documents, the type of Template for a new document, as well as a menu bar.

On the menu bar,
- choose File to create a New file, Open, Close or Import a file, or Quit the application.
- choose the Settings drop-down menu select Show Toolbar, Configure Shortcuts or Configure Toolbars.
- click Help to open the KWord Handbook or Report a Bug. You can also access the KWord Handbook by pressing the F1 key.

After selecting a template click the Use This Template button and check the box Always use this template if you want to make it the program default.

The next window has two menu panels on the top, the document work area on the left, and several dockers on the right. The Tools Options docker provides text style edits such as bold, italic, and font type, size, and color. Other Dockers provide shapes, statistics, and tools. Configure dockers and toolbars from the Settings pull down menu.

The bottom panel shows the number of pages in the document, which page is in the work area window and the Zoom in percentage.

### 11.2.3. Abiword

Abiword is a word processor with many of the everyday capabilities of LibreOffice Writer or Microsoft Word, but the omission of some advanced but less used features makes it significantly more lightweight. Since Abiword does not depend on the Java virtual machine like Writer does, you may find

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1 [http://www.libreoffice.org/features/writer/](http://www.libreoffice.org/features/writer/)
that it runs more quickly on older machines. Abiword's interface is similar to that of Writer and most other word processors.

For more information, use Abiword's built-in help or open the online manual at http://www.abisource.com/support/manual/.

11.3. Spreadsheets

Spreadsheets are commonly used to lay out data in a grid format or for tracking simple financial information. All of the spreadsheets discussed in this section have the ability to merge cells, split screens, format text, and define formulas and macros. They also all have some advanced features for automatic calculations, projections, graphs, and importing of raw data.

11.3.1. LibreOffice Calc

Calc is the intuitive, flexible, yet powerful spreadsheet program in the LibreOffice suite. When started, Calc presents a new untitled document with menu and toolbars across the top. On the bottom are tabs for each sheet and notations of your current location and zoom level.

From the View menu you can customize which toolbars are visible. The Tools and Data menus allow for advanced data manipulation such as solving optimization problems, creating scenarios for comparison, and pull in raw data from other databases. For more information, read Calc's product description at http://www.libreoffice.org/features/calc/ or access the documentation under Help → Contents.

11.3.2. KSpread

KSpread is the KOffice spreadsheet program. Open KSpread by selecting the Kickoff Application Launcher → Office → Spreadsheet entry for KSpread.

The first window contains options for opening Recent or Existing documents, the type of Template for creating a new document, as well as a menu bar.

On the menu bar,

- choose File to create a New file, Open, Close or Import a file, or Quit the application.
- choose the Settings drop-down menu to select Toolbars Shown, Configure Shortcuts or Configure Toolbars.
- Click Help to open the KSpread Handbook or Report a Bug. You can also access the KSpread Handbook by pressing the F1 key.

After selecting a template click the Use This Template button and check the box Always use this template if you want to make it the program default.

The next window has two toolbar panels on the top, the spreadsheet, spreadsheet tabs running along the bottom, and dockers on either side with additional tools. Select which toolbars and dockers are visible from the Settings menu item at the top. You can now add data and formulas, merge cells, change fonts and colors, insert charts and more.

The row of icons under the top menu bar contains the most frequently used functions plus a few icons for data manipulation.

Several Dockers surround the spreadsheet. The Tool Options shows the contents of the cell and allows for adding formulas. There are also Styles and Shapes dockers visible by default.
The panel at the bottom shows in bold which spreadsheet is currently selected and how many worksheets are in the file. Worksheets can be added with a right mouse click on a worksheet tab. This pop-up window allows Rename the Sheet, Insert, Remove, Hide or Show the Sheet and provides access to Sheet Properties.


### 11.3.3. Gnumeric

Gnumeric is a spreadsheet optimized for the GNOME desktop. Gnumeric is a good spreadsheet alternative for those that needs a program which uses less memory then the larger LibreOffice or KOffice suites. In exchange for a lightweight program, Gnumeric has fewer toolbars and not all other spreadsheet formats can be imported. Gnumeric does have solver, scenario, and simulation tools but other advanced tools which can be applied to very large sets of data may not be supported.


### 11.4. Presentations

A Presentation program is designed to assist a speaker and energize the audience. Both LibreOffice Impress and KOffice KPresenter offer the ability to create dynamic presentation containing not only text but also animations, images, sounds, and more.

#### 11.4.1. LibreOffice Impress

LibreOffice Impress is used to create multimedia presentations. Like many other presentation programs, Impress supports 2D and 3D clip art, special effects, and animation. Like all LibreOffice components, Impress can import or save as other presentation formats.

When Impress is first opened a presentation wizard launches to assist in the initial layout of a new presentation. You can open an existing presentation, start an empty presentation, or work on a new presentation from a template. For new presentations, the wizard then offers a choice of backgrounds and output mediums followed by a choice of slide transition and presentation types. Finally, when creating a new presentation, the wizard asks for some basic idea to start your title page. With a template, the wizard will also offer a choice of pages to include.

Once a presentation is opened, toolbars are placed around the main slide. You can customize which toolbars are visible from the View menu. Each toolbar can also be undocked and placed in different locations. For more information, read Impress's product description at [http://www.libreoffice.org/features/impress/](http://www.libreoffice.org/features/impress/) or access the documentation under Help → Contents.

#### 11.4.2. KPresenter

KPresenter is the KOffice application for creating and performing presentations.

Open KPresenter by selecting the Kickoff Application Launcher > Office > Presentation entry for KPresenter.

The first window contains options for opening Recent or Existing documents, the type of Template or Screen Presentation you want, as well as a menu bar.

On the menu bar, you can:
- choose File to create a New file, Open or Import a file, or Quit the application.
• choose the Settings drop-down menu select Show Toolbar, Configure Shortcuts or Configure Toolbars.

• click Help to open the KPresenter Handbook or Report a Bug. You can also access the KPresenter Handbook by pressing the F1 key.

After selecting a template click the Use This Template button and check the box Always use this template if you want to make it the program default.

The next window has two menu panels on the top, a workspace, and a number of dockers with additional tools. From the top menu, choose Settings to customize which Dockers are visible or customize the Toolbar or Shortcuts. You presentation can not be created with styles, shapes, text in different fonts or colors, images, and more.


11.5. gLabels

gLabels is a light-weight GNOME application for creating labels, business cards, and labels for CD and DVDs.

To start gLabels in GNOME, go to the Activities overview. Type the first few letters of the application's name, then click on the icon that appears or press Enter. Alternatively, look for the gLabels icon in Applications → Office. In KDE, click on Kickoff Application Launcher → Applications → Office → gLabels Label Designer.

When you open a new file from the icon or the menus at the top, you will have a chance to choose a template for your labels. From the menus or toolbars you can then add objects such as text, box, line, ellipse, images, or barcodes. You can then resize, move, or align the objects. You can customize the view, magnification, and toolbars. The panel at the bottom of the work window allows you to configure the appearance of your data, such as font selection, alignment, bolding, and italics, as well as text and line color.

For more information on using gLabels, refer to the gLabels website at http://glabels.sourceforge.net/.
Financial software

Fedora offers software financial software for both the GNOME and KDE environments. **GnuCash** is the financial software recommended for users with the GNOME desktop environment, and **KMyMoney** is recommended financial software for the KDE environment. Although each financial software application is recommended for a specific desktop environment, remember both will work on any Fedora desktop environment. Both applications can be used for personal and business, and configured for online banking.

**GnuCash** and **KMyMoney** are not installed by default from the Live or Install DVD. If you do not have access to the Internet, you can install them from the Fedora Install DVD. Refer to Chapter 18, Managing software for instructions. You can install them by either using the **PackageKit** application or on the command line by using **Yum**.

### 12.1. GnuCash

**GnuCash** allows you to track personal and business bank accounts, stocks, income and expenses, and is based on double-entry accounting principles.

For additional help using the application, refer to [http://www.gnucash.org/docs.phtml](http://www.gnucash.org/docs.phtml) documents.

#### 12.1.1. Configuring GnuCash

To configure GnuCash:

1. To start **GnuCash**, go to the Activities overview. Type the first few letters of the application’s name, then click on the icon that appears or press **Enter**. Alternatively, look for the **Gnucash** icon in **Applications → Office**. Click the **Close** button to close the **Tip of the Day** window.

2. From the **Welcome Window** select which wizard you want to open and click the **OK** button.

3. Select **Create a new set of accounts** and click the **Forward** button on the **New Account Hierarchy Setup** window.

4. Choose your currency and click the **Forward** button.

5. Select all of the boxes next to the accounts you want to create in the **Categories** window, then push the **Forward** button.

6. Follow the directions in the **Setup selected accounts** window, then click **Forward**.

7. Click the **Apply** button to finish your account setup.

8. To import a Quicken .qif file, select the box then press the **Forward** button.

9. Select the .qif file to load and click the **Forward** button.

10. Now you have the option to load more QIF files for additional accounts. Select the **Forward** button.

11. Pressing the **Forward** button guides you through **Matching QIF accounts** with **GnuCash account**, **Matching QIF categories** with **GnuCash accounts**, and currency selection.

12. Click the **Apply** button to import your data, or the **Back** button to review your matchings.

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1 [http://www.gnucash.org/docs.phtml](http://www.gnucash.org/docs.phtml)
12.1.2. Using GnuCash

To open GnuCash, go to the Activities overview. Type the first few letters of the application's name, then click on the icon that appears or press Enter. Alternatively, look for the GnuCash icon in Applications → Office. The Accounts tab opens.

The top menu bar allows you to manipulate your accounts. You can:
• Edit, Delete and Create new accounts.
• Set Preferences.
• Schedule Transactions.
• Do transfers.
• Reconcile an account.
• Enter Stock Splits.
• Add Customers, Vendors, and Employees for a business.
• Set Reminders.
• Generate Reports.
• Setup Online Banking.
• Edit Prices of inventory.
• Access the General Ledger.

Double click on an account to bring up a check book type register for that account. The top menu bar changes to allow manipulation of transactions. This menu includes the options above, plus you can:
• Change the view of the ledger from Basic Ledger to Auto-Split Ledger, Transaction Journal, or Double Entry.
• Cut, Copy, Paste, Duplicate, Delete, Void, and Enter transactions.
• Set Billing Terms for customers.
• Create Bills, Invoices, and Vouchers.

12.1.3. Setting up online banking

Online banking setup begins from the Accounts window or the Register.
1. On the top menu bar select Tools → Online Banking Setup.
2. The Initial Online Banking Setup window lists what you need to complete the setup.
3. Click the Forward button.
4. Select the Start AqBanking Wizard in the Start Online Banking Wizard window.
5. The Configuration window Intro provides a summary of what you can do.
6. Type in the information required in the Users, Accounts, and Backends tabs on the top of the window.
7. Select the OFX-Direct Bbackend if you are not sure which one to use.
8. You may need to call your bank to get their server URL. If you chose the **OFX-Direct** backend it is likely their URL is [https://ofx.yourbank.com/](https://ofx.yourbank.com/).

9. Return to the **Start Online Banking Wizard** and click the **Forward** button.

10. Check the appropriate boxes under the **New?** column to match the bank accounts with your **GnuCash** accounts.

11. Click the **Forward** button.

12. Click the **Apply** button to finish.

13. To download your bank transactions select the **Accounts** or **Register** tab then: **Actions** → **Online Actions** → **Get Transactions** or → **Get Balance** and fill in the information asked for to complete the operation.

### 12.2. KMyMoney

**KMyMoney** is a double entry accounting software package, for personal and small business use.

For additional help using **KMyMoney**, refer to [http://kmymoney2.sourceforge.net/faq.html](http://kmymoney2.sourceforge.net/faq.html).

#### 12.2.1. Configuring KMyMoney

1. Open **KMyMoney** by selecting **Kickoff Application Launcher** → **Applications** → **Office** → **Personal Finance Manager**.

2. Click the **Next** button on the **Welcome to KMyMoney** screen.

3. Type in the information and press **Next**.

4. Select your currency and click **Next**.

5. Now type in the information for your bank account. Then select **Next** again.

6. Find your country and click on the + next to its name.

7. Select the type of account you want setup, then click **Next**. You can select multiple types of accounts.

8. Press the **Next** button.

9. You can keep the default path where **KMyMoney** will save your files, type in a path, or browse by clicking the button maked with a small folder on the right of the path window.

10. Click the **Finish** button and your **Home** window opens.

11. Open the account register by clicking on your account's link in **Your Financial Summary** window.

12. Click the **Show KMyMoney welcome page** link at the bottom to:
   - Get started and setup my accounts.
   - Use an existing KMyMoney data file.
   - Learn how to use KMyMoney.
   - Visit the KMyMoney Website.
• Get help from the KMyMoney community
• See What's New in this Version.

12.2.2. Setting up online banking
1. Click the Institutions icon on the left panel to make sure your bank information is linked to your new account.

2. Highlight your account under the bank in the main window.

3. On the top menu, choose Account → Map Account and the program will load a list of financial institutions in the Online Banking Account Setup window.

4. Type the name of your bank in the Search bar, or scroll down the list to find it.

5. Click on your bank’s name to select it then press the Next button.

6. Fill in your Username and Password.

7. Choose an option for Identify as and click the Next button.

8. This window shows the accounts you have available at the bank. Click on the whichever one you want to link to your KMyMoney account and click Next.

9. Click the Finish button to complete the setup.

10. Press the blue icon on the top menu to Update the Account or select Account → Account update also on the top menu bar.

11. The program connects to your bank and the Account selection window asks you to which KMyMoney account you want to download information. You also have the option here to Create a new account.

12. Select your account and click Ok.

13. The Statement stats - KMyMoney window summarizes the information downloaded. Click the OK button.

14. Click the Ledger icon on the left menu panel to see the loaded information.
Playing multimedia

Media formats not supported by default in Fedora

Because of licensing and patent encumbrances, Fedora cannot ship with certain audio and video playing capabilities, known as codecs. An example is the MP3 codec. Refer to Section 13.1, “The Fedora Project's approach to multimedia support” for more information.

Fedora includes several tools for listening to audio and viewing video on both the GNOME and KDE desktops. These applications will run in either Fedora desktop environment. To install software packages not already installed, refer to Chapter 18, Managing software. You can install applications by either using the PackageKit application or on the command line by using Yum.

Fedora provides the following applications for audio and video by default:

- **Amarok** is a music player that features tools for organizing music, CDs, Internet radio stations, and more, and is included in KDE by default.
- **Brasero** is an application for copying and making audio, video, and data CDs and DVDs in GNOME.
- **Cheese Webcam Booth** takes photos and videos with your webcam is installed in GNOME and KDE.
- **Dragon Player** is a simple video player in KDE.
- **JuK** is a collection and playlist manager as well as a music player installed in KDE.
- **Kaffeine** is an application for viewing videos in KDE.
- **KMix** is a Sound Mixer for KDE.
- **KsCD** is an application for listening to audio CDs in KDE.
- **Rhythmbox** is a music player that features tools for organizing and listening to music, CDs, Internet radio stations, and more, and is included in GNOME by default.
- **Sound Juicer** is an application for converting CDs to music files (also known as ripping) in GNOME.
- **Totem Movie Player** is an application for viewing videos in GNOME.

To open these programs in the GNOME desktop, go to the Activities overview. Type the first few letters of the application's name, then click on the icon that appears or press Enter. Alternatively, look for the application in Applications → Sound and Video.

In the KDE desktop, click on their entries in the Kickoff Application Launcher → Applications → Multimedia menu.

13.1. The Fedora Project's approach to multimedia support

In short, the Fedora Project encourages the use of open formats in place of restricted ones.
Fedora includes complete support for many freely-distributable formats. These include the Ogg media, Vorbis audio, Theora video, Speex audio, and FLAC audio formats. These freely-distributable formats are not encumbered by patent or license restrictions, and provide powerful and flexible alternatives to popular yet restricted formats such as MP3 that are not legally distributable with Fedora. For more information, refer to the Fedora Multimedia wiki at https://fedoraproject.org/wiki/Multimedia.

13.2. GNOME multimedia applications

The following multimedia applications are installed by default in the GNOME desktop:

13.2.1. Cheese Webcam Booth

Cheese Webcam Booth takes photos and videos with your webcam.

13.2.1.1. Using Cheese Webcam Booth

The top menu provides the following operations and options:

- Selecting Cheese you can choose to turn on the Countdown timer, Take a photo or Record, depending on if you selected Photo or Video button, see the Fullscreen, and Quit the application.

- Edit lets you turn on Effects, Move to Trash, Move All to Trash, and change the Preferences.

- Clicking on Help > Contents, or pressing F1, opens the Cheese Manual.

The tabs, between the windows, are shortcuts of the choices in top menu.

More information is available on the Cheese website at http://www.gnome.org/projects/cheese

13.2.2. Rhythmbox Music Player

Rhythmbox Music Player plays CDs, internet radio, and is a music collection manager.

The first time you launch the Rhythmbox Music Player, an assistant will help you import your music. On the second panel of the assistant, click the Browse button and select the folder where your music is stored, normally in your home directory under Music.

13.2.2.1. Using Rhythmbox Music Player

The main functions of the Rhythmbox Music Player window are:

- The top panel Menubar which has all of the menus to perform tasks. Press F1 or click Help → Contents on the menubar to open the manual.

- The second Toolbar panel accesses the player functions and provides details about the track that is playing.

- A Time Slider, under the Toolbar panel, displays the position of the read of a track and allows you to jump to another part of a track.

- In the left window the Source List lets you access your music library, internet radio, internet, your portable music player, your playlists, and CDs. This consists of:
  - The Rhythmbox Music Player library, where all of the imported tracks are saved.
  - The Radio with internet radio stations.
  - Podcasts.
  - Online Stores:
• All **Playlists** (normal and smart).

• **Audio CDs** inserted into the computer's drives.

• Portable players, such as an MP3 player, plugged in to your computer.

If you have a wheel mouse you can adjust the volume by placing the cursor on the volume icon and turning the wheel.

In the **Browser**, the rectangle window right of the **Source List**, you can browse and filter the **Library** tracks by **genre**, **artist**, or **album** name. It also provides a **Search** function.

The **Tracks** list is the bottom window and contains the lists of the tracks that belong to the source you selected.

The **Statusbar** is the panel that runs along the bottom that displays information about the source you selected.


### 13.2.3. Audio CD Extractor (Sound Juicer)

**Audio CD Extractor (Sound Juicer)** lets you extract the audio from CDs and convert them to audio files your computer can play. This program also plays CDs.

#### 13.2.3.1. Using Sound Juicer

To enter track data, insert an audio CD and **Sound Juicer** will locate and retrieve the data from MusicBrainz (a free service). If MusicBrainz cannot match the CD you have the option to enter the track information manually. The notifier will also ask you if you want to submit your album to the MusicBrainz database. You will need to open a MusicBrainz account to submit albums to their database.

To enter track data manually:

1. Fill in the text boxes for the **title**, **artist**, **year**, **genre**, and **disc** of the CD.

2. Below that is a list of the audio tracks on the CD. You can determine the **track title** and **artist** for each track.

To edit the title of a track, first select the track, then click on the title. When you have finished entering the title, press the **Enter** key. Each track of the CD is automatically updated if they matched the artist before the edit.

**Extracting Track Data:**

1. Select the tracks you want to save by clicking on the boxes in front of the tracks. You can also use **Edit → Select All** or **Edit → Deselect All**.

2. Click the **Extract** button. This will change to a **Stop** button when the program begins to extract the data. You will see an icon next to the track being extracting.

Press **F1**, or **Help → Contents** to see the manual.

For more information see the Sound Juicer website at [http://burtonini.com/blog/computers/sound-juicer](http://burtonini.com/blog/computers/sound-juicer)

### 13.2.4. Totem Movie Player

**Totem Movie Player** plays DVDs, CDs, and VCDs.
13.2.4.1. Using Totem Movie Player

• To open an audio or video file in Totem Movie Player, select Movie → Open. Select the file you want and click the Add button. You can also drag a file into the Totem Movie Player window. If Totem Movie Player displays error messages when you try to play a file, refer to the information about codecs at http://www.gnome.org/projects/totem/#codecs.

• Click Movie → Open Location to open a file by URL location.

• Movie → Play Disc will play a DVD, VCD, or CD.

• Movie → Eject will eject the disc.

• Under the Eject option is the Playlist.

• Movie → Play and Movie → Pause will play or pause the disc.

• Choosing Movie → Properties opens the sidebar which displays the properties of the file.

• From the Edit menu you can Take a Screenshot or Create a Screenshot Gallery, turn the Repeat Mode or Shuffle Mode on or off, Clear the playlist, configure Plugins and set Preferences.

• View allows you to go to Fullscreen, Fit Window to Movie, set the Aspect Ratio, Switch Angles, Show Controls, Subtitles, and show or hide, the Sidebar.

• Go will let you go to the DVD, Title, Audio, Angle and Chapter menus, the Next Chapter or Movie the Previous Chapter or Movie, Skip to a track, and Skip Forward or Backwards.

• The Sound drop-down menu lets you change Language and turn the Volume Up or Down.

• You can open the manual by selecting Help → Contents or pressing the F1 key.

For more information visit the Totem Movie Player website at http://projects.gnome.org/totem/.

13.2.5. Brasero

Brasero can burn music or data to a CD. Refer to Section 6.2.1, “Using Brasero in GNOME” or the Brasero website at http://projects.gnome.org/brasero for more information.

13.2.6. GNOME multimedia applications in the repository

These applications are not usually installed by default but are in the repository. To install these packages, refer to Chapter 18, Managing software. You can install applications by either using PackageKit or on the command line by using Yum.

13.2.6.1. GNOMEBaker

GNOMEBaker can burn music or data to a CD. the GNOMEBaker website at http://www.biddell.co.uk/gnomebaker.php for more information.

13.3. KDE multimedia applications

The KDE desktop groups multimedia applications together in the Kickoff Application Launcher → Applications → Multimedia menu.
13.3.1. Amarok

Amarok is a CD player and music collection manager. For more information refer to the Amarok website at http://amarok.kde.org/

13.3.1.1. Using Amarok

- Click Play Media to play existing sound files, go to a Previous Track, Play/Pause, Stop go to the Next Track or Quit the application.
- Playlist lets you Add Media, Add Stream, Save Playlist, Undo, Redo, Clear Playlist, Repeat and choose Random play.
- Tools lets you access the Cover Manager Script Manager and to Update Collection.
- Under Settings you can Configure Shortcuts and Configure Amarok.
- Clicking Help > Amarok Handbook, or pressing the F1 key opens the manual.
- On the left side of the application window you can select the Files you want to play, Playlist, Collections or access the internet for music, podcasts and radio stations. Details about your selection are displayed in the window to the right.
- The bottom center icons are: + adds a widget, - deletes a widget, the arrows let you go to a Previous or Next Group, and you can Zoom in or out.
- In the Playlist window you can do a Search, go to the Next or Previous selection, and Search Preferences. The options along the bottom allow you to Clear Playlist, Show Active Track, Undo, Redo, Save a Playlist, and Export a Playlist As.

13.3.2. Dragon Player

Dragon Player is a simple video player. For more information refer to the Dragon Player website at http://dragonplayer.org/

13.3.2.1. Using Dragon Player

- When Dragon Player is opened, buttons on the left-hand side give the options to Play File or Play Disc. If you choose one of these the program loads the file.
- Selecting Play > Play Media allows you to play a DVD, VCD, or Video File, Play/Pause lets you pause and re-start the movie, Stop will stop the playback, and Quit closes the application.
- The Settings menu lets you choose the Full Screen Mode, Aspect Ratio, Subtitles, Audio Channels, to Configure Shortcuts and Toolbars or to Show Toolbar.
- Help → Dragon Player Handbook, or pressing the F1 key, opens the manual.

13.3.3. JuK

JuK is a collection and playlist manager as well as a music player. For more information refer to the JuK website at http://developer.kde.org/~wheeler/juk.html

13.3.3.1. Using JuK

- When the application opens you can choose to Add or Remove a Folder, and Import playlists, from the pop-up window.
• Selecting File on the top menu bar, you can choose to open a New file, Open an existing file, Add Folder, Rename, Edit, Search, Duplicate, Reload, Remove Save, Save As or Quit the application.

• Edit allows you to Undo, Cut, Copy, Paste, Clear or Select All.

• Under View you can configure JuK to Show the Search Bar, Show Tag Editor, Show History, Show Play Queue or Columns, Resize Playlist Columns Manually and View Modes (Default, Compact or Tree).

• From the Player drop list you select to Random Play, Loop Playlist, Play, Pause, Stop, Next, Previous and Play the Next Album.

• Tagger lets you Save or Delete tags, Refresh, Guess Tag Information open the Cover Manager and Rename a File.

• From the Settings menu you can choose which Toolbars to display, Show Splash Screen on Startup, Dock in System Tray, Stay in System Tray on Close, Open Track Announcement, Tag Guesser, File Renamer and Configure Shortcuts or Toolbars.

• The second menu panel displays icons of the most used commands, which are also located in the top menu bar.

• The right window is home to your collection or playlist.

• The main window displays information about the file, such as: Track Name, Artist, Album, Cover, Track, Genre, Year and Length.

• To open the manual select Help > JuK Handbook or press the F1 key.

Closing JuK

Clicking the X in the upper-right corner of the window closes the JuK window but keeps the program running in the system tray. This allows the music to keep playing without the window open. To quit completely, use File → Quit.

13.4. KMix

KMix is a sound mixer that allows you to control volume settings for sound inputs to and outputs from your computer. For more information refer to the KMix website at http://docs.kde.org/stable/en/kdemultimedia/kmix/index.html

13.4.1. Using KMix Sound Mixer

The application window has three sections with different controls: Output, Input and Switches. These sections contain volume sliders, switches for enabling/disabling record or playback, and multiple-choice selectors.

• Output controls are playback-related, like the Master volume control.

• Input controls are recording-related, like Capture.

• Switches has all controls allowing you to switch some functionalities ON or OFF (like Mic Boost (+20dB)), and multiple-choice controls (like Mic Select: Mic1 or Mic2).
KMIX also features LEDs.
- Green for playback
- Red for recording
- Yellow is for special soundcard functions

Most of these controls have a context menu, you can access by a right mouse click on the icon.
- For Split Channels the right slider controls right side volume, and the left controls left side volume.
- Muted can be on or off.
- You can select Hide to hide this device

To configure KMIX from the menubar choose Preferences > Use Settings > Configure KMIX The options are:
- Dock into panel will dock in the systray when pressing the window Close button.
- Show labels will display labels for each of the sound devices.
- Show lines to mark positions on the sliders.

13.5. KsCD
KsCD is a simple CD player.

13.5.1. Using KsCD
The button cluster on the left side contains:
- Play in the center.
- Previous to the left.
- Next on the right side.
- Stop on the bottom.
- Eject on the top.

The center window displays information about the file being played.

The icons along the bottom allow you to setup Random play, Loop, Tracklist, and Mute.

The three buttons on the top and center right are:
- Volume control – place your cursor on the white dot, hold down the right mouse key and drag it to the desired level.
- The - button lets you minimize KsCD.
- The X icon closes the application.

13.6. K3b
K3b is a CD and DVD burning application. Refer to Section 6.2.2, “Using K3b to burn media in KDE” or the K3b website at http://www.k3b.org/ for more information.
13.7. Multimedia applications in the repository

The applications below are not usually installed by default but are in the repository. To install these packages, please read Chapter 18, Managing software. You can install applications either by using the PackageKit application or on the command line by using Yum.

13.7.1. Kaffeine

Kaffeine is a media player that can play streaming content, DVBs, DVDs, and CDs. To get streaming content over the web, you need a Mozilla plug-in for the program, which is available from http://sourceforge.net/project/downloading.php?groupname=kaffeine&filename=kaffeine-mozilla-0.2.tar.bz2&use_mirror=internap. For more information about Kaffeine generally, refer to the JuK website at http://kaffeine.kde.org/

13.7.1.1. Using Kaffeine Media Player

The first window that opens contains five shortcut icons:

- **Play File** plays a file from the computer.
- **Play Audio CD** plays the CD in your CD drive.
- **Play Video CD** plays a CD that contains video files.
- **Play DVD** plays a DVD.
- **Digital TV** plays TV input from a capture card.

On the left side of the window are four small icons:

- The **Start** tab on top brings up the first window, wherever you are in the program.
- The **Playback** tab opens the Player Window.
- Selecting the next tab opens the **Playlist**.
- The bottom tab takes shows the **Television** provides TV controls and output.

The toolbar along the bottom of this window allows you to **Play**, **Pause**, **Skip Backward** or **Forward**, **Stop**, and **Adjust the Volume**.

The top menu panel has:

- **File** which allows you to **Open a File**, **URL** or **Directory**, **Open a DVD**, **VCD**, **Audio CD** and **Network Broadcasting**. You can also **Save Stream**, **Save a Screenshot**, **Quit with Options**, or **Quit**.

- From the **View** menu you have the options for the **Full Screen Mode**, **Minimal Mode**, **Toggle Playlist/Player**, **Enable Auto Resize** or **Keep Original Aspect**.

- Selecting **Player** gives you the option to **Play**, **Pause**, **Stop**, go to the **Next** track or **Previous** track, **Fast Forward**, **Slow Motion**, and **Jump to Position**. You can also **Navigate** a DVD, CD, **Video**, configure **Subtitles**, access **Track Info** and enable or disable **Plugins**.

- The **Playlist** drop-down lets you **Shuffle**, **Repeat**, **Download covers**, **Clear Current Playlist**, start a **New Playlist**, **Import**, **Save** or **Remove a Playlist**.

- **Settings** allow you to select a **Player Engine** (Xine or GStreamer), choose the **Toolbars**, **Configure Shortcuts**, **Toolbars** and **Kaffeine Player**, and to set **xine Engine Paramenters**.

- Clicking **Help > Kaffeine Player Handbook** or pressing the **F1** key, opens the manual.
13.8. MP3 players

Personal digital media players can be used to store and listen to music away from a computer. These are often referred to as MP3 players, which is a potentially misleading name. Not all of these players use MP3 files to store music.

Many MP3 players can be mounted as storage mediums, and music can be added to them just like a file can be added to any other disk. See Chapter 6, Media for more information.

Some players, however, require special applications to transfer music.

13.8.1. Grip

Grip is a CD player and a ripper for the GNOME desktop. It provides an automated frontend for MP3, and other audio format, encoders, letting you transform the disc straight into MP3s. Internet disc lookups are supported for retrieving track information. Details are available on the Grip website at http://nostatic.org/grip/doc/index.html

Grip is not installed by default but it is in the repository for installation with either using the PackageKit application or on the command line by using Yum. Refer to Chapter 18, Managing software for more information.

13.8.2. iPod connectivity

There are several high-quality tools available for Linux users to manage media content on the iPod. Among them are gtkpod, YamiPod, and tools built into media players such as AmaroK, Rhythmbox, and Banshee.

Gtkpod is not installed by default from the Live-CD or the DVD. If you do not have access to the Internet, you can use the Fedora DVD to install Gtkpod. You can install applications by using PackageKit, or on the command line by using Yum. Refer to Chapter 18, Managing software for more information.

Start Gtkpod by clicking Applications → Music and Video → gtkpod in GNOME or Kickoff Application Launcher → Applications → Multimedia → iPod Manager.

For further help on iPod support through Gtkpod, refer to the Gtkpod website at http://www.gtkpod.org/about.html.

13.9. Further information

For more information on freely-distributable audio and video formats and how to use them, refer to the Xiph.Org Foundation's web site at http://www.xiph.org
Playing games

A Fedora installation includes a selection of games by default. You can also select additional game packages during or after installation. To install new games on your Fedora system, refer to Chapter 18, Managing software. Most packages have games as part of their name. You can find more information about games for Fedora at https://fedoraproject.org/wiki/Games. For more information about the games in this list, refer to the Help menu within each individual game.

You do not need to switch desktops to play games

You can play KDE games while logged into GNOME and GNOME games while logged into KDE. Graphical environment components are very modular. When you install the game packs any dependencies will also be installed. You may need additional packages to view the online help.

14.1. Default GNOME games

The following GNOME games are installed by default from the Live Image or Install DVD:

Aisle Riot Solitaire
- is a collection of solitare card games.

Iagno
- is a A Reversi-like disk flipping game.

Mines
- is a clone of a popular puzzle game.

Sudoku
- is a popular logic puzzle where you place numbers in a grid.

To play a game, go to the Activities overview. Type the first few letters of the game's name, then click on the icon that appears or press Enter. Alternatively, see the Applications → Games menu for a full list of installed games.

14.1.1. Additional GNOME games

Additional GNOME games are available in a variety of styles and genres, including board games such as Chess, card games such as Freecell, puzzle games such as Klotski, arcade games such as Robots, and tile matching games such as Mahjongg. These are only a sample of the games provided.

To play the additional games, install the package gnome-games-extra using the PackageKit application or from the command line by using Yum. Refer to Chapter 18, Managing software for help installing new software. Be sure to also install the separate Help Files for gnome-games which provides the instruction for playing each game. From the command line, the package name is gnome-games-help.

14.1.2. How to play the games

With Help Files for gnome-games installed, you can click on the Help → Contents menu in each game to get help on how to play the game.
14.2. Default KDE games

Many KDE games are not installed by default from the Live-CD or the DVD. If you do not have access to the Internet, you can use the Fedora DVD to install them, either using the PackageKit application or on the command line by using Yum. Refer to Chapter 18, Managing software for help installing new software. The kdegames package contains games for the current version of KDE and the kdegames3 package contains additional games which have not yet been ported to KDE4.

The KDE games pack includes popular games similar to those provided by the GNOME games pack such as Kfourinline, Ksudoku, Kreversi, and many more. A sampling of other games included in the KDE games pack that may not be in other game packs include:

Kapman
   Pac-man type game

KGoldrunner
   A Lode Runner type of game

KJumpingCube
   A territory capture game

KNetWalk
   A network construction game

KSquares
   Connect the dots to make squares

Kubarick
   3D game based on Rubik's Cube

LSkat
   A card game

Shisen-Sho
   A mahjongg like game
Managing photos

Most USB-compatible cameras will work automatically with Fedora and require very little configuration. If your digital camera offers a choice of USB connection types, set the camera’s USB setting to PTP, or point-to-point mode. Consult your camera’s user manual to determine if this option is available and how to choose it. If it is not available, the default settings should be sufficient.

15.1. Connecting Your Camera

To connect the camera to your Fedora system:
1. Make sure your camera is powered off.
2. Connect a USB cable from the camera to your computer.
3. If your camera requires you to select a knob or dial setting before connecting it to a computer, make that selection now.
4. Power the camera on.

When your camera powers on, Fedora will recognise the device and launch any software that you have configured to import and manage photos, for example the Shotwell Photo Manager on the GNOME desktop or the digiKam photo management program on the KDE desktop.

15.2. Managing photos on the GNOME desktop

After your camera powers on, an informational window should appear on your desktop. From the drop-down menu you can select:

- **Open with Shotwell Photo Manager.** When the Shotwell window appears, select your camera in the left hand pane. When Shotwell asks if it can unmount the camera from the filesystem, click Unmount. Your photos will appear in the main pane. Select the photos you want to import and choose Import Selected, or choose Import All.
- **Open folder** to view the files in the file manager.
- **Open with Other Application** and select the appropriate application.

If you decide you do not want to import photos, click the Do Nothing button. If you do not want to see this dialog each time you connect a camera, you can select the Always perform this action option in conjunction with any option to make the choice permanent.

Other ways of accessing your photos are:

- Click on the desktop device icon that contains the photos.
- Click Places on the top menu bar, and then click the camera or other device that stores your photos.

15.2.1. Organizing and viewing photos

If you have imported your photos using Shotwell, click on Photos in the left hand pane to view them. You can use Shotwell’s powerful event and tagging features to group your photos and make them easier to manage.
15.2.1.1. Categorising by Event
When you import your photos, Shotwell looks for information embedded by the camera in the images indicating the time and date at which they were taken. You can then browse your photos by date by clicking on Events in the left hand pane. A single photo representing all the photos taken on each date will appear in the main pane. Double-click on a specific date to see all the photos taken on that date.

You can rename each event to something more appropriate by right-clicking on the date in either pane - for example, ‘Fri 25 Dec 2009’ can become ‘Christmas Day’. You can also merge events into longer timeframes - for example, ‘Christmas Eve’, ‘Christmas Day’ and ‘Boxing Day’ can be merged into a single event called ‘Christmas’.

15.2.1.2. Categorizing by Tag
You can add tags to your photos by selecting them in the main pane and choosing Tags → Add Tags.... To add more than one tag at once, enter them as a comma-separated list, without spaces.

Once you have added your tags, a new menu option called Tags will appear in the left hand pane. Click on a tag name to see all the photos under that tag. You can modify, rename and remove tags by selecting the appropriate option in the Tags menu.

15.2.1.3. Publishing Photos to the Web
You can publish your photos to Facebook, Flickr or Picassa Web Albums from within Shotwell. Select the photos you want to publish in the main pane and click Publish in the bottom bar, or choose File → Publish... in the top menu bar. A dialog box will appear in which you can select the service you want to publish to, and log in if you are not already logged in.

When you log in via Shotwell for the first time, you must allow Shotwell Connect to be enabled on your account. Once this has been set up, you will be given options regarding the size and viewing permissions of the uploaded photos. Select your desired options and choose Publish. Your photos will now be uploaded to your online account.

15.3. Managing photos on the KDE desktop
The KDE desktop uses digiKam to import and organize your photos. DigiKam also provides image editing features through the showFoto program.

When you turn on a camera connected to your computer, or plug in device containing photos such as a USB flash drive, Fedora will notify you by opening a window from the Device Notifier located at the left of the KDE panel. If you do not see a window, click the Device Notifier to open the window manually. You should see the camera or other storage device listed in the window. Click on the device, and a dialog box will open to ask What do you want to do?. Click Download Photos with digiKam and OK.

15.3.1. Importing photos with digiKam
When you first start digiKam, it prompts you for a default location in which to store your photos, and will suggest the Pictures folder inside your Home folder. It will also ask for a location to store a database that it will create to store information about your photos. DigiKam will use this database to help you organise and manage your photos and will again suggest the Pictures folder as the location for this database. For both the default picture location and the database location, you can type in the name of a folder on your computer, browse to a folder by clicking on the folder icon, or accept the defaults. When you have made your choices, click OK and the main digiKam window will open, together with a separate window to show you the files on the camera or storage device.
In this dialog, you can select or deselect photos to import by clicking on the corresponding thumbnail. To select all photos, click any photo and then press the key combination Ctrl+A. To deselect all photos, press Ctrl+Shift+A. Once you have selected all the photos that you want to import, click the Download Selected button. To cancel the import process before you begin the download, close the window. To cancel the process once the download is underway, click the Cancel button.

DigiKam asks you for a name for this group of pictures, which it calls an album. Either click on an existing album on the list, or click New Album and provide a name for the album. DigiKam will suggest the current date as a name for the album, but you might want to choose a name that will better help you to remember the subject of these photos. When you have selected an album, click OK and DigiKam will import the photos to your computer.

To clear the photos from your camera, click Image → Delete Selected to delete just the images you imported to your computer, or click Image → Delete All to delete all images from your camera.

15.3.2. Organising photos with DigiKam

A tag is a piece of information that you add to DigiKam’s database that helps you to identify a photo again in future. For example, you might tag a photo with the names of the people who appear in it, the location at which the photo was taken, or the name of an occasion.

To tag an image, right-click on it, then click Apply Tag, then place checks against one or more tags from the list. To add a new tag to the list, click Add New Tag and then apply it to the photo. When DigiKam displays the image in future, any tags that you have applied will appear below the picture. Applying tags does not alter the photo itself, and you will not damage your photo by tagging it. DigiKam stores tags separately from the photos.

To search for images with a particular tag, click the Search button, type the tag into the search box, and press Enter. DigiKam will display all the images to which you have applied that tag.
Sharing your desktop

Use this capability carefully

Remote desktop sharing can be a serious security risk. You should leave it turned on only when needed and should not leave it active.

Fedora lets you share your desktop remotely across a network, so that a user at a different computer can view and – with your permission – interact with your computer. This is useful for receiving technical support from a remote location or for demonstrating a desktop feature to another user. You may also find it to be a useful way to remotely access files on your desktop from another computer.

Fedora uses a method called Virtual Networking Computing (VNC) to enable remote desktop sharing. Therefore, the remote viewer must use VNC as well. Apple OS X uses VNC by default, but Microsoft Windows uses a different method to share desktops, called Remote Desktop Connection (RDC). To access your Fedora desktop from a computer with a Microsoft Windows operating system, that computer will need a VNC viewer. TightVNC is a free and open-source VNC program available for Linux and Microsoft Windows from http://www.tightvnc.com/.

16.1. GNOME

To activate desktop sharing, go to the Activities overview. Type remote into the search bar, then click on the Remote Desktop icon that appears or press Enter. Alternatively, look for the Remote Desktop icon in Applications → Other. This opens the Remote Desktop Preferences window.

To share your desktop securely:
1. Under Sharing, tick the box labeled Allow other users to view your desktop.
2. Next, tick the box next to Allow other users to control your desktop.
3. Under Security, tick the box next to You must confirm each access to this machine.
4. Next, check Require the user to enter this password and enter a password. This should not be your account’s password; pick a new password that you will only reveal to the remote viewer.
5. Finally, click on the Close button.

Be sure to inform the person performing remote technical support or remote viewing the assigned password. When the person connects to your desktop, click on the Yes button when asked for confirmation.

Once the remote viewing feature is no longer needed, turn off desktop sharing:
1. Select System → Preferences → Remote Desktop.
2. Uncheck the Allow other users to view your desktop box.
3. Click the Close button.
16.1.1. Viewing someone else's desktop

To view someone else's desktop over the Internet or other network connection, go to the Activities overview. Type remote into the search bar, then select the **Remote Desktop Viewer** icon that appears. Alternatively, look for the **Remote Desktop** icon in **Applications** → **Other**. This opens the **Remote Desktop Viewer** window.

To connect to the remote desktop you wish to view, click on **Connect**. You will need the host name of the machine you wish to connect to, as well as the remote access password if required. For help in configuring a remote desktop connection, click on **Help** → **Contents** or press **F1**.

16.2. KDE

To activate desktop sharing in KDE, select **Kickoff Application Launcher** → **Applications** → **System** → **Desktop Sharing**. This opens the **Desktop Sharing** control module window. There are two methods by which you can share your desktop:

- You can create an invitation. By default, invitations are only valid for one hour. This lessens the chance of forgetting to disable Desktop Sharing, and is a good option if you only need it enabled temporarily.

- You can leave Desktop Sharing turned on at all times.

To create a Desktop Sharing invitation, open the Desktop Sharing window as described above, click **New Personal Invitation** and give the information to the person you want to invite. Alternatively you can share the same information via email by clicking on **New Email Invitation**.

If you want to have Desktop Sharing running at all times:

- In the Desktop Sharing window, click **Configure** → **Security** then check the box **Allow uninvited connections**.

- Next, check **Confirm uninvited connections before accepting** (optional, but recommended).

- If you wish to approve each connection individually check **Ask before accepting connections**

- A password should be set for security; enter one in the **Uninvited connections password**: box. This should not be your user account password.

- Select the **Network** tab at the top of the window, check **Use default port** and make a note of the port listed.

- Finally, click on the **Apply** button followed by the **OK** button.

The person connecting to your computer remotely will need your IP address or hostname, followed by a : and the port number that you noted above. When the person connects to your desktop, click on the **Yes** button when asked for confirmation.

Once the remote viewing feature is no longer needed, turn off desktop sharing:

1. Select **Kickoff Application Launcher** → **Applications** → **System** → **Desktop Sharing**.

2. Uncheck the **Allow uninvited connections** box.

3. Click the **Apply** button.
16.3. Other desktops

Various desktop environments may offer their own graphical assistants for desktop sharing, but the VNC server program can be used from the command line to accomplish this task on almost any desktop environment. Setting up this service is beyond the scope of this guide.
Customizing the desktop

Fedora allows you to customize the "look and feel" of your desktop environment. All of the settings that determine the appearance of your desktop are referred to collectively as a theme.

17.1. Changing the theme

Most desktop environments, including GNOME and KDE, allow you to install new themes to tweak the appearance of the desktop. The process for installing a theme varies for each desktop. You can find the process for installing themes under GNOME and KDE in this chapter, and most desktop environments include installation instructions in their own documentation.

17.1.1. Changing the theme in GNOME

To change the desktop theme, you must install the `gnome-tweak-tool` application. Refer to Chapter 18, Managing software for instructions on how to install new software. `gnome-tweak-tool` allows you to install and switch GNOME Shell themes, change icon, window manager, and cursor themes, and alter fonts and font sizes, among many other settings and preferences.

For more information about `gnome-tweak-tool`, please see the application's website: https://live.gnome.org/GnomeTweakTool.

17.1.2. Changing the theme in KDE

By default KDE uses `Oxygen` as its theme, with many more available from http://www.kde-look.org/.

To change the theme, click Kickoff Application Launcher → Computer → System Settings → Appearance. Click the Application Appearance item and then click Style.

To change the theme, select one from the list and click the Apply button at the bottom of the window.

You can download additional icons and themes for KDE by installing the `kdeartwork-icons` and `kdeartwork` packages. You can install these packages by either using the PackageKit or on the command line by using Yum. Refer to Chapter 18, Managing software for instructions.

17.2. Changing the background

17.2.1. Changing the background in GNOME

To change the background image on your desktop, click on your name in the right hand corner of the top bar, and select System Settings. In the System Settings window that appears, click on Background. Here you can choose from a selection of GNOME wallpapers, or use the dialogue box to choose an image from the Colors and Gradients category or from your Pictures folder.

You can add images from anywhere on your computer by clicking on the + button in the bottom left had corner. Any images you select will automatically appear in the Wallpapers category in the future, so you don't have to go searching for them again.

In the bottom right hand corner of the Background window there are two buttons. The left hand button allows you to change the color of the desktop, if the image you have selected doesn't fit the screen exactly. The right hand button allows you to select how you want your chosen image to be displayed: tiled, zoomed to fill the screen, centered, scaled, or streched in either both directions (Fill) or lengthways only (Span).
17.2.2. Changing the background in KDE
To change the background in KDE, right-click an empty area of the desktop, and select the Desktop Settings option. When the Desktop Setting - Plasma Workspace window appears, you can select a new wallpaper style from the drop-down menus, or get new ones by clicking the Get New Wallpapers... button. You can also use an image from your computer as the wallpaper by clicking the Open... button.

17.3. Customizing file browsing behavior

17.3.1. Customizing file browsing behavior in GNOME
By default, GNOME uses the Nautilus file manager. In Fedora 14, Nautilus defaults to opening in Browser mode which uses one window with Forward and Back buttons. You can change this behavior to the previous default where a new window is opened each time you open a folder.

To change this, open Nautilus and select Edit → Preferences. Change to the Behavior tab and tick the box that says Open each folder in its own window.

Many other preferences can be set from the Preferences window. Additionally, the gnome-tweak-tool application gives access to several extra Nautilus options. You can install gnome-tweak-tool from the Fedora repositories. Refer to Chapter 18, Managing software for instructions on how to install new software.

Applications → Add/Remove Software then searching for gtweakui will provide the program to install. The program's location can be found under System → Preferences.

17.3.2. Customizing file browsing behavior in KDE
By default, KDE uses the Dolphin file manager. To modify the appearance of Dolphin windows, open the program by clicking the Kickoff Application Launcher → Applications → System → File Manager icon for Dolphin. At the top of the Dolphin window, click Settings → Configure Dolphin. The tabs in the Dolphin Preferences window allow you to specify the folder that Dolphin displays when it starts, the size of the icons it displays, the font it uses to label icons, and many other options.

17.4. Customizing input methods
For many people, there is a need to switch between input methods such as Japanese or Chinese character sets. This is handled in Fedora 14 by ibus.

To enable, disable, or select the type of input method in GNOME:
• Click on your name in the right hand corner of the top bar, and select System Settings.

• In the System Settings window that appears, click on Region and Language.

• Change to the Layouts tab.

• In the left hand pane you can add additional keyboard layouts by clicking on the + button. You can also reorder the layouts, and see a keyboard map of the currently highlighted layout.

• In the right hand pane you can choose whether to use the same keyboard layout for all windows, or allow different layouts for each window.

• When you add additional keyboard layouts, a menu appears in the top bar allowing you to change between layouts.
To set a keyboard shortcut for switching keyboard layouts:
• In the Region and Languages window, change to the Layouts tab.
• Click on Options....
• Click on the + button next to Key(s) to change layout.
• Tick the box next to the keyboard shortcut you would like to use.

In KDE, click Kickoff Application Launcher → Applications → Settings → Input Method. You can also get to these settings from the command line with im-chooser.

Once enabled, configure the preferences by clicking the Input Method Preferences button. The first tab allows you to customize the keyboard shortcuts. The second tab allows you to add and remove input methods and set the preferred input method. The third tab has advanced settings. You can customize preferences later by right clicking the ibus applet and selecting Preferences or from the command line with ibus-setup.

17.5. Comiz-Fusion
The Comiz Fusion Project brings 3D desktop visual effects that improve usability of the X Window System and provide increased productivity though plugins and themes contributed by the community giving a rich desktop experience.

There may be problems with running Comiz Fusion if you do not have a 3D-capable video card.

The Fedora Project does not enable Comiz Fusion by default and therefore, if you want to use it, you will need to install it first. Refer to Chapter 18, Managing software for instructions on managing software. You will need the compiz-gnome or compiz-kde depending on which desktop you use.

When you have installed Comiz Fusion, you can launch the program by going to the Activities overview and searching for it in GNOME or Kickoff Application Launcher → Applications → Settings → Comiz Switcher in KDE.

17.6. Widgets>

17.6.1. GDesklets
GDesklets are Calendar, Weather, and Quote of the day widgets for the GNOME desktop. Refer to Chapter 18, Managing software for instructions on how to install new software. When you search for GDesklets in Add/Remove Software, gdesklets is the program that needs to be installed and the other programs listed are the plugins. You will need to install both GDesklets and the GDesklets-goodweather plugin. Click the Apply button and enter the root password when prompted. The packages can also be installed by using Yum at the command line.

When you have installed the software, you can access GDesklets by searching for it in the Activities overview or by looking in the Accessories category. Selecting the GDesklets will load up a program with all available plugins. Select the uncategorized category and double-click GoodWeather Display.
Chapter 17. Customizing the desktop

After a few moments the desklet will appear on the desktop and allow you to move it to a preferred location on the desktop.

Note

Where you initially place it is not important. The desklet can be moved at any time by right-clicking on the desklet and choosing move desklet.

To configure the weather desklet, right-click and select configure desklet. A dialog will appear with general settings. Modifying the location can be done by going to http://www.weather.com/. At the very top of the weather.com website is a search box for local weather information. Type in the location. After searching the code for the location will be found in the url. For example, the weather for Perth, Australia is at the following link: http://www.weather.com/outlook/travel/business/traveler/local/ASXX0089?from=search_city.

To use that information, note the location code – in this example, ASXX0089 – enter it into the weather desklet, and select Close button. The weather information will be available after the next update interval.

To get additional plugins visit http://gdesklets.de/

17.6.2. KDE plasmoids

Plasmoids are widgets for the KDE desktop. You can add plasmoids by clicking the plasma toolbox icon located at the top right of the desktop or right-hand edge of the panel and then clicking Add Widgets.... You can also add plasmoids by right-clicking on the desktop and panel and clicking Add Widgets....

When you install the KDE desktop, a number of plasmoids are installed on your system by default, although most of them are not visible until you add them to your desktop or panel. These include various clocks, calendars, small games, and widgets that present you with information about the status of your computer hardware or about multimedia files as you play them. When you click the Add Widgets... menu option, the plasma toolbox presents you with a list of the widgets currently available to you, along with short descriptions of each one. The plasma toolbox also gives you the option to Get New Widgets either by downloading from KDE-Look.org, or by installing ones that you have previously downloaded and saved to your computer.
Managing software

18.1. Using PackageKit
Fedora 14 uses a program called PackageKit to assist the user with installing and removing software. Any application from the Fedora repositories, including the ones described in this user guide, can be installed with the following method.

To start PackageKit in the GNOME environment, go to the Activities overview. Type add into the search field, then select on the Add/Remove Programs icon that appears. Alternatively, look for the Add/Remove Programs icon in Applications → System Tools. This will open the Add/Remove Software application. Use the command gk-application to start the graphical application from the command line. Details for installing and removing software with the Add/Remove Software application can be found below.

To start PackageKit in the KDE environment, click KMenu → Applications → System → Software Management. This starts the kpackagekit application. The KDE Software Management browse section works similar to a file browser and contains descriptions of the applications. The application uses install and remove buttons and there is a Help icon in the bottom left corner if you need additional assistance.

18.1.1. Installing software in GNOME
Here is how to install software using Add/Remove Software in the GNOME desktop environment.

In the Search Box with the magnifying glass icon, type the name of the application you wish to install. If you are unsure of the specific application you need to install, you can also type keywords in this box, just like you would for an internet search engine.

Next, click the Find button – The message Querying appears in the lower left corner briefly and then zero or more listings will appear that match your search query.

Tick the box next to the description of the application or applications you wish to install. The message Downloading repository information appears in the lower left corner. The window area below the list of packages contains additional information about the selected software.

Select any additional packages to install or remove at this time by changing tick boxes next to the package name.

Finally, click the Apply button. This starts the installation process and concurrently installs or removes any additional packages where you modified the tick box. Follow any prompts to install additional packages.

Unless an error is displayed, the application is now installed (or removed) on your computer.

18.1.2. Removing software in GNOME
To remove software using PackageKit, you should follow the standard installation procedure, but untick boxes beside the programs you wish to uninstall instead of ticking boxes to install new programs.
Software Installed Outside of PackageKit

If the box is already unticked, then the program is probably not already installed. If you are sure that you have selected the right application, but it still appears to not be installed, then it may have been installed using a method other than PackageKit. If, for example, the program was compiled and installed from source, then it may not register as installed in PackageKit. If this is the case, you will need to find an alternate method of removing it. If it was installed from source, you may find more information in the source distribution's Readme file.

The message **Downloading repository information** appears in the lower left corner. The window area below the list of packages contains additional information about the selected software.

Select any additional packages to install or remove at this time by changing tick boxes next to the package name.

Finally, click the **Apply** button. This starts the removal process and concurrently installs or removes any additional packages where you modified the tick box. Follow any prompts to remove additional packages, such as dependencies that only your newly uninstalled program relied upon.

Unless an error is displayed, the application is now removed from your computer.

### 18.2. Using the command line interface

Another way to install or remove an application is to use the command line and **Yum**, the Yellowdog Update Manager. This can be a much faster process than the PackageKit method, but requires the user to use the command line. If this feels uncomfortable, the PackageKit method may be a more familiar way to manage software.

#### 18.2.1. Installing software

To open the **Terminal** command line application, go to the Activities overview. Type the first few letters of the application's name, then click on the icon that appears or press **Enter**. Alternatively, look for the **Terminal** icon in **Applications ➔ System Tools**.

Type:

```
su -c 'yum install application'
```

Where *application* is the name of the program you wish to install.

If you are unsure of the exact name of your desired installation, you can search your installed repositories for a keyword:

```
su -c 'yum search keyword'
```

Where *keyword* is the word you wish to search for among the names and descriptions of programs in the available repositories.
After using the **yum install** command, you will be prompted for the computer's root password. Type in the root password and press **Enter**. You will not see the password as you type. The terminal will start giving information about the application, and end with **Is this ok [y/N]**. Oftentimes, the installation of an application will require that other programs, called **dependencies**, are installed as well. These are programs or utilities upon which your selected application relies.

If you wish to continue installation after seeing the dependencies and their disk space requirements (which may be unexpectedly considerable), type:

```markdown
y
```

The terminal downloads the necessary files and completes the installation of your application.

This is an example of the transaction for installing **tsclient**:

<table>
<thead>
<tr>
<th>Package</th>
<th>Arch</th>
<th>Version</th>
<th>Repository</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installing:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tsclient</td>
<td>i386</td>
<td>0.132-6</td>
<td>base</td>
<td>247 k</td>
</tr>
<tr>
<td>Installing for dependencies:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>rdesktop</td>
<td>i386</td>
<td>1.4.0-2</td>
<td>base</td>
<td>107 k</td>
</tr>
</tbody>
</table>

To ensure that downloaded packages are genuine, **Yum** verifies the digital signature of each package against the public key of the provider. The **Yum** utility also imports the repository public key if it is not already installed on the rpm keyring. For more information on keys and keyrings, refer to the **Fedora Security Guide**.

This is an example of the public key import:

```markdown
warning: rpmts_HdrFromFdno: Header V3 DSA signature: NOKEY, key ID 4f2a6fd2
public key not available for tsclient-0.132-6.i386.rpm
Retrieving GPG key from file:///etc/pki/rpm-gpg/RPM-GPG-KEY-fedora
Importing GPG key 0x4F2A6FD2 "Fedora Project <fedora@redhat.com>"
Is this ok [y/N]:
```

If **Yum** asks you to verify a public key, and you believe the key is genuine, press **Y** to import the key and authorize the key for use. If you press **N** or **Enter**, **Yum** stops without installing any packages. Ensure that you trust any key's owner before accepting it - most providers that offer installable repositories will also provide the public key separately so you can check to see if it matches the one found by **Yum**.
Chapter 18. Managing software

Once all of the packages required for the transaction are successfully downloaded and verified, yum applies them to your system.

**18.2.2. Removing software**

To open the **Terminal** command line application, go to the Activities overview. Type the first few letters of the application's name, then click on the icon that appears or press **Enter**. Alternatively, look for the **Terminal** icon in **Applications → System Tools**.

Type:

```
su -c 'yum remove application'
```

Where *application* is the name of the program you wish to remove.

If you are unsure of the exact name of your desired installation, you can search your installed repositories for a keyword:

```
su -c 'yum search keyword'
```

Where *keyword* is the word you wish to search for among the names and descriptions of programs in the available repositories.

After using the **yum remove** command, you will be prompted for the computer's root password. Type in the root password and press **Enter**. You will not see the password as you type. The terminal will start giving information about the application, and end with **Is this ok [y/N]**: If dependencies that were installed with the application are unneeded by other applications, you may be prompted to remove these as well.

If you wish to continue the software removal, type:

```
y
```

The terminal deletes the necessary files and completes the removal of your application.

**18.2.3. Updating software with Yum**

To update the generic package *my-package* to the latest version, type:  
```
su -c 'yum update my-package'
```

Enter the password for the root account when prompted.

**New Software Versions Require Reloading**

If a piece of software is in use when you update it, the old version remains active until the application or service is restarted. Kernel updates take effect when you reboot the system.
Kernel Packages

Kernel packages remain on the system after they have been superseded by newer versions. This enables you to boot your system with an older kernel if an error occurs with the current kernel. To minimize maintenance, yum automatically removes obsolete kernel packages from your system, retaining only the current kernel and the previous version.

To update all of the packages in the package group PackageGroup, enter the command: `su -c 'yum groupupdate "PackageGroup"'` Enter the password for the root account when prompted.

Updating the Entire System

To update all of the packages on your Fedora system, use the command: `su -c 'yum update'` Enter the password for the root account when prompted.
Appendix A. Contributors

Note — Translator credits

Due to technical limitations, the translators credited in this section are those who worked on previous versions of the Fedora User Guide.

To find out who translated the current version of the guide, visit https://fedoraproject.org/wiki/Fedora_14_Documentation_Translations_-_Contributors. These translators will receive credit in subsequent versions of this guide.

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\(^{27}\) http://fedoraproject.org/wiki/User:Zachfedora
\(^{28}\) http://fedoraproject.org/wiki/User:Mamasun
\(^{29}\) http://fedoraproject.org/wiki/User:Akostyuk
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\(^{31}\) http://fedoraproject.org/wiki/User:Laubersm
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• Jens Maucher\textsuperscript{33} (translator - German)
• Dmitry Melnikov (translator — Russian)
• Marco Mendonça (translator — Portuguese )
• Sérgio Mesquita\textsuperscript{34} (translator — Portuguese)
• microcai (translator - Chinese, Simplified)
• Miloš Komarčević\textsuperscript{35} (translator — Serbian)
• David Nalley\textsuperscript{36} (writer, editor)
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• Rodrigo Padula\textsuperscript{38} (translator — Brazilian Portuguese)
• Yuliya Poyarkova\textsuperscript{39} (translator - Russian)
• Sergey Raspopov\textsuperscript{40} (translator - Russian)
• Jonathan Roberts\textsuperscript{41} (writer)
• Misha Shnurapet\textsuperscript{42} (translator - Russian)
• Tian Shixiong\textsuperscript{43} (translator - Chinese, Simplified)
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• Nathan Thomas\textsuperscript{46} (writer)
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\textsuperscript{32} \url{http://fedoraproject.org/wiki/User:Alexeym}
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\textsuperscript{35} \url{http://fedoraproject.org/wiki/User:Kmilos}
\textsuperscript{36} \url{http://fedoraproject.org/wiki/User:Ke4qqq}
\textsuperscript{37} \url{http://fedoraproject.com/wiki/DanOBrien}
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\textsuperscript{42} \url{http://fedoraproject.org/wiki/User:Shnurapet}
\textsuperscript{43} \url{http://fedoraproject.org/wiki/User:Tiansworld}
\textsuperscript{44} \url{http://fedoraproject.org/wiki/User:Tomspur}
\textsuperscript{45} \url{http://fedoraproject.org/wiki/User:Peti}
\textsuperscript{46} \url{http://fedoraproject.org/wiki/User:Nathant}
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Appendix A. Contributors

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- Geert Warrink\(^{51}\) (translator - Dutch)
- Marc Wiriadisastra\(^{52}\) (writer)
- Yangkejin (translator - Chinese, Simplified)
- Kirk Ziegler\(^{53}\) (writer, editor)

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## Appendix B. Revision History

<table>
<thead>
<tr>
<th>Revision</th>
<th>Date</th>
<th>Authors</th>
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<tr>
<td>15.9.0</td>
<td>Mon Aug 15, 2011</td>
<td>Nathan Thomas</td>
<td>Updates for GNOME 3.0.</td>
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| 14.0.0   | Fri Oct 29, 2010 | Ben Cotton, Susan Lauber                    | Updates for Fedora 14 version  
Update Playing Multimedia BZ#588582  
New Printing unit (Ben Cotton) BZ#508025 |
| 13.0.1   | Fri Apr 24 2010 | Luigi Votta, Ruediger Landmann, Susan Lauber | Additional updates for Fedora 13 version  
New Connecting to the Internet with Network Management unit (Luigi)  
Rewrite of Office applications (Susan)  
pointer to recognition of current fabulous translation team. (Ruediger) |
| 13.0.0   | Tues Apr 6 2010 | Eli Madrinich, Nathan Thomas, David Nalley, Paul Frields, Ruediger Landmann, Susan Lauber | Update for Fedora 13 version |
| 12.0.4   | Mon Mar 29 2010 | Eli Madrinich, Susan Lauber                  | Bumping revision to reflect a number of updates from "bug stomping day"  
Fixed bug#538628  
Fixed grammar and format issues  
Merged recommendations from Murry's email |
| 12.0.3   | Sat Feb 06 2010 | Nathan Thomas                               | Update Xfce desktop descriptions for v4.6 BZ#551197 |
| 12.0.2   | Tue Jan 12 2010 | Nathan Thomas                               | Update Thunderbird instructions for v3.0 BZ#532186 |
| 12.0.1   | Fri Jan 8 2010  | Nathan Thomas                               | Change name of the desktop environment combo box from "Desktop" to "Sessions". |
Appendix B. Revision History

Add note stating that the desktop environment combo box will be shown only if more than one desktop environment is installed.

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<td>Ruediger Landmann</td>
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<td>Ruediger Landmann, Susan Lauber, Kirk Ziegler</td>
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<td>Update for Fedora 11, Convert to Docbook XML</td>
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<td>0.6.0</td>
<td>Sat Feb 24 2007</td>
<td>Matt Bird, Cody DeHaan, Damien Durand,</td>
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<td>John Babich, Paul W. Frelds, Dimitris Glezos,</td>
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<td>Bart Couvreur</td>
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