

Chapter 5

Configuring Your Desktop

So you've installed Fedora Core, you've logged in, and you're facing a GUI desktop. What next? You've got two choices. Either leave it alone and just learn how to use what's in front of you, or customize it—make it bend to your will. Hey, I know! Let's do both! In this chapter, I'll explain how to use the desktop “out of the box,” and then I'll show you how to customize it by showing you how I customize my own desktop.

As mentioned in earlier chapters, what people refer to as “Linux” is actually multiple components that work together.

At the heart of all the software on your computer is the Linux kernel—the software that provides the core services that comprise an operating system.

You can work with the services that the kernel provides in a couple of ways. One way is through a terminal window and a set of text commands to manipulate the machine, much like old-time PC users used DOS to do their work.

But many people don't want to do this. They prefer a graphical user interface on top of the kernel, so they don't have to remember commands or long strings of fussy parameters—indeed, so they don't even have to know how to type!

With Windows, the operating system and the GUI on top of it are bound together so tightly that it's virtually impossible to run the OS without the GUI anymore. Furthermore, with Windows, you don't have a choice of GUIs. This is not the case with Linux.

The X Window System (commonly known simply as “X”) is a piece of software that runs on top of the Linux kernel and provides windowing capabilities. X has been through a number of versions, with version 11 finally gaining critical mass and developing widespread acceptance. This version is known as “X11” and you may have already seen references to it.

X11 has been through a number of upgrades, each of which has attempted to maintain backward compatibility. The current release number is 6, so you may also see references to “X11R6.” The first time you saw that string—X11R6—it probably seemed obscure to the point of distraction, but now it's not so bad, is it?

X is a foundation upon which people can create software applications that take advantage of those windowing capabilities. One particular breed of applications is known as “window managers”—and a number of people and groups have created them. As a result, there isn't just one GUI available for Linux; there are many—about a dozen, all told. Names of popular window managers that you might have heard of include Enlightenment, Metacity, Sawfish, and WindowMaker. But these are just window drawing packages—they handle how windows are drawn and how they appear, how they interact with each other, and so on. Everything that appears on the screen shows up in a window, and the window manager simply provides the engine to control the windows.

But there's more to a desktop than just windows. As you've already seen, there's a menuing system and a panel, to name a couple of obvious items. And there are tools that provide a GUI interface to the operating system (not just end-user applications). The rise in the number of window managers has brought forth a “super-class” of tools called desktop environments. These provide a complete interface to the operating system, including menus, panels, utilities and applications, and all sorts of other fun stuff. The two most popular desktops

are GNOME and KDE, and popular distributions include at least one of these desktops (and usually both).

For example, SuSE ships with KDE “out of the box.” Red Hat upset a lot of folks when it released Red Hat Linux 8.0, which presented the user with a combination of GNOME and KDE, using components of both in a theme called “Bluecurve.” Fedora Core continues that tradition, using Bluecurve as the default environment and theme.

You can install either GNOME or KDE, or both, during installation. Depending on your choice, you will get the applications that fit with the desktop environment you selected. For example, if you selected GNOME, you’ll get OpenOffice.org; if you selected KDE, you’ll get KOffice. If you chose both, you’ll get all applications from both desktop environments.

I’ll concentrate on GNOME and Bluecurve in this book, mentioning KDE when appropriate. If you’re interested in other window managers, you can find a central repository at <http://www.xwinman.org/>.

Using the desktop as-is

The first thing you’ll notice, regardless of whether you select GNOME or KDE during installation, is that the standard Fedora Core desktop is rather spartan. Because there isn’t a profit-oriented company behind any of the various desktop organizations, you won’t see a desktop full of icons that have been placed there for a goodly dose of lucre.

Instead, you’ll see three default icons: one that leads you to your home directory, one for trash, and one (“Start Here”) that gives you a convenient location for the items you typically want to use most often. See **Figure 1** for the basic GNOME desktop.

The KDE desktop isn’t any more complicated (see **Figure 2**).

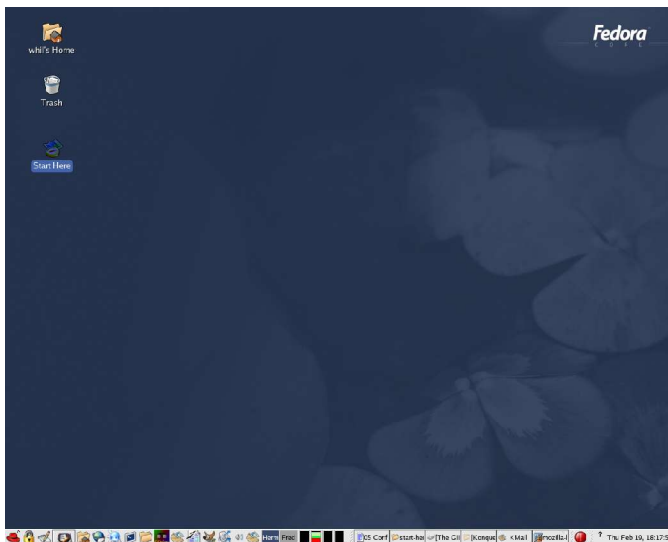


Figure 1. The default Fedora Core desktop with GNOME is rather spartan.

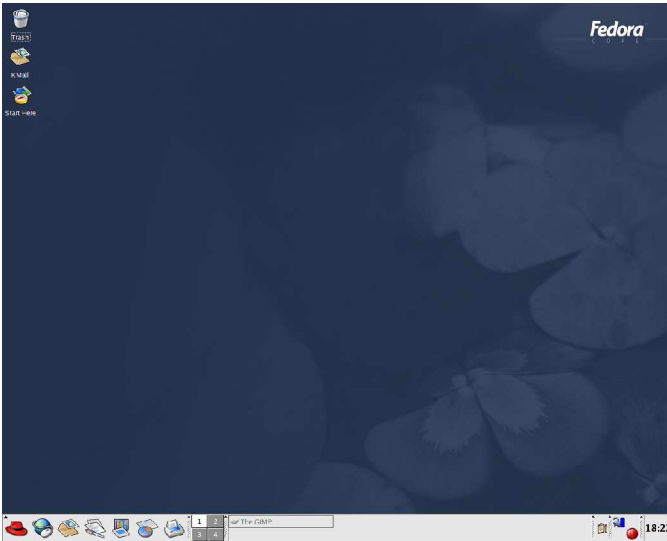


Figure 2. The default Fedora Core desktop with KDE is just as uncluttered as GNOME.

The bar at the bottom of the screen is called the “panel” and works much the same way that the taskbar does in Windows. You may have noticed that the bottom of the screen looks considerably different between Figures 1 and 2, but it’s not because GNOME and KDE are that different. Rather, it’s because I personally use GNOME as my default environment, and have customized the panel to suit my preferences. Figure 1 shows the panel loaded up with things I like and use on a regular basis. I’m also writing this book using OpenOffice.org on Fedora Core, so many applications appear in the panel because I’m taking screen shots as I write.

Conversely, the KDE panel is less populated because I don’t use it all that often, and didn’t have a reason to heavily customize it.

Switching between desktop environments

Fedora Core comes with both GNOME and KDE installed, and GNOME is the default environment. If you want to switch from GNOME to KDE, click Main Menu | Preferences | More Preferences | Desktop Switching Tool (see **Figure 3**).

Once you’ve selected another desktop environment and clicked OK, you’ll discover that the desktop doesn’t change automatically. Instead, you have to perform an operation called “restarting the X window server,” or, sometimes more tersely, simply “restarting X.” And just how would one do that, you may wonder?

The simplest and most reliable way is to log out and log back in. When you log back in, the desktop you chose will be in charge.



Figure 3. *The Desktop Switcher allows you to change from one desktop environment to another.*

Basic operation of the desktop

Because GNOME is the default, I'm going to cover it in fair detail. However, I'll also discuss some KDE applets and features. As a result, this discussion assumes that you've installed all of GNOME and KDE as suggested in Step 21 of the "Installing Fedora Core" section in Chapter 2.

There are four primary components to the GNOME desktop environment:

- The desktop is the entire area on the screen except for the bar at the bottom.
- The panel (Linux-speak for the Windows taskbar) is the strip at the bottom that contains a variety of icons and widgets.
- The Main Menu (the Linux version of the Windows Start menu) is displayed by clicking on the red fedora icon at the far left of the panel.
- The system applets, which provide a graphical interface to using the OS, are found through various menu options via the Main Menu.

Desktop

The GNOME desktop looks and feels much like other graphical desktops, complete with icons, wallpaper (in Fedora Core, they're called Desktop Backgrounds), screensavers, and, when applications are open, windows. Double-clicking an icon on the desktop runs the program or opens the file associated with the icon. Right-clicking an open area of the desktop displays a context menu from which you can choose a different background.

Screensavers can be configured by clicking Main Menu | Preferences | Screensavers, as shown in **Figure 4**.

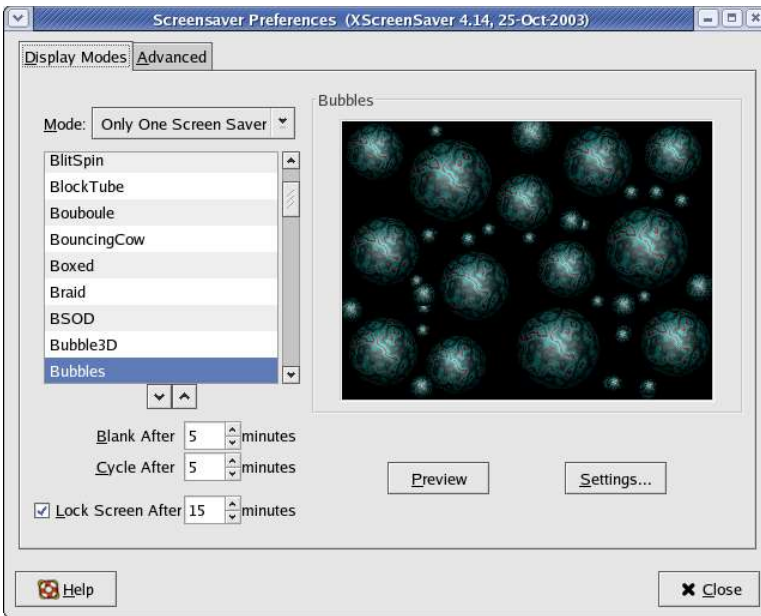


Figure 4. The Screensaver Preferences dialog provides access to dozens of screensavers.

Windows in GNOME work much the same as with Windows. The icons in the upper right serve to minimize, maximize (or revert to original size), and close the window.

The Window menu in the upper left has the typical Minimize, Maximize, Move, Resize, and Close options that you'd expect from using Microsoft Windows. The rollup menu item isn't found in Windows, but is known as "window shade" on Mac OS. The next couple of options in the Window menu, Put on All Workspaces, and Move to Workspace 1/2/3/4, refer to workspaces, a feature of Linux that isn't found in Windows. I'll discuss this in a later section. You can resize windows by using the sides and corners, while clicking and dragging on the title bar moves the window around. GNOME has a couple of nice touches that you don't find in Windows; these can be configured via Main Menu | Preferences | Window Preferences, as shown in **Figure 5**.

You can choose to automatically select a window simply by moving the mouse over it. (I've tried this and it's always driven me crazy because it doesn't bring the selected window to the front, but that's my own personal preference.) Double-clicking the title bar can either roll up the window (like a window shade) or maximize it. And you can move a window by holding down a key of your choice and then dragging the window, and resize the window by holding down the same key while also holding down the middle mouse button. The default key for both of these operations is Alt, but you can change it in the Window Preferences dialog.

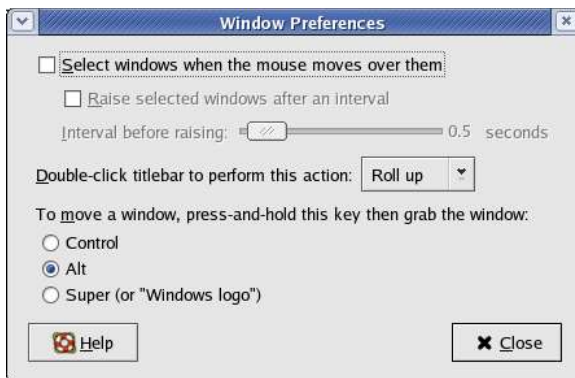


Figure 5. The Window Preferences dialog allows you to configure interaction with standard windows.

Panel

The panel is a wise and marvelous tool. Like the taskbar in Windows, it is divided into a number of areas. **Figures 6 and 7** illustrate my panel. I separated it into two halves because one screen shot would end up being so wide and so short that you couldn't see anything in the images.



Figure 6. The left half of my panel in GNOME.



Figure 7. The right half of my panel in GNOME.

On the far left of Figure 6, the Main Menu icon (the red fedora) is used to display a menu that launches a variety of functions and applications. Next to the Main Menu icon is a series of icons for commonly used applications. The panel is automatically populated during installation with some application launchers, such as the Mozilla browser and OpenOffice.org. Figure 6 shows the panel after I've customized it with the icons for the applications I use most often. I'll discuss how to customize the panel later in this chapter.

The right half of my panel, shown in Figure 7, also has some standard items and some customized items. The first icon on the left is the Workspace Switcher applet. Next to it is the System Monitor applet. Continuing to the right are a series of boxes that represent running applications. The area of the panel that contains all of the boxes is called the Taskbar. And finally, the far right of the panel is the Notification Area, where a number of icons display as appropriate. Let's look at each of these in more detail.

The Workspace Switcher (see **Figure 8**), always placed on the panel during installation, is a mechanism that is new to Windows users, but once you get used to it, you'll wonder how you ever got along without it. You're probably used to the problem of having so many windows

open on your desktop that it gets confusing which window does what—and using Alt-Tab to move between windows isn't as handy when you've got 15 or 20 in the list. Imagine if you could create separate desktops for groups of windows. All of the windows related to a single project would be on one desktop, while the windows that you always have open—such as your e-mail client, a Web browser, and perhaps a music jukebox or an IM application—would be contained in a separate window. A workspace is just that: a complete desktop that you can set up for a specific purpose. The Workspace Switcher allows you to switch between one workspace and another.

If you look closely at the Workspace Switcher in Figure 7, you'll see four squares arranged in a larger square. Each square represents one workspace. You'll see a number of small boxes inside the upper left box; those are individual application windows on the desktop in that workspace. If I'd had applications open in other workspaces, you'd see miniature windows in those workspace boxes as well, as in Figure 8.

You can navigate between workspaces via a mouse click, or you can use the keyboard. To do so, press Ctrl-Alt to bring forward a dialog displaying all of the windows, as shown in Figure 8. Keeping the Ctrl-Alt keys depressed, use the up/down/left/right arrows to move to the window you want to switch to. Note that the focus doesn't automatically move from one row to the next; if you want to move from the upper right to the lower left, you need to press the left arrow and the down arrow, not the right arrow.

The System Monitor applet (see **Figure 9**), the set of four boxes to the right of the Workspace Switcher, isn't normally placed on the panel; I'll address it in the "Customize the desktop" section later in this chapter.

The Taskbar displays a box for each running application, as shown in **Figure 10**.



Figure 8. You can navigate the Workspace Switcher with the keyboard's arrow keys.



Figure 9. The System Monitor applet from the panel.

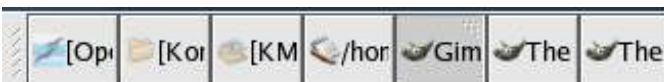


Figure 10. The Taskbar displays boxes for each running application.

Depending on the height of the panel (which you can customize), the application boxes in the Taskbar section may show up in one or more rows. The bars shrink as their number increases, to the point that the legend may not be readable anymore. Holding your mouse over a specific box will display a tooltip with the full name.

The Notification Area displays the time and the Red Hat Network Alert Notification Tool by default, as shown in **Figure 11**. This area also displays other icons during other operations. For example, when you print something, a printer icon will appear; when you gain root authentication (explained later), a key icon will be displayed. You can add other notification-type tools there as well; I'll cover the Weather Report applet later in this chapter.

Main Menu

Clicking the Main Menu icon opens a hierarchical menu bar, as shown in **Figure 12**. Clicking any of the menu items with an arrow pointing to the right opens a subsidiary menu, and so on. As you can see, menu items are grouped according to functional areas, instead of everything being grouped under one huge Program Files option, or hidden behind rarely used menu pads.

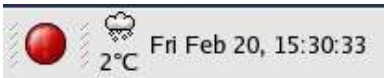


Figure 11. The Notification Area in the panel.

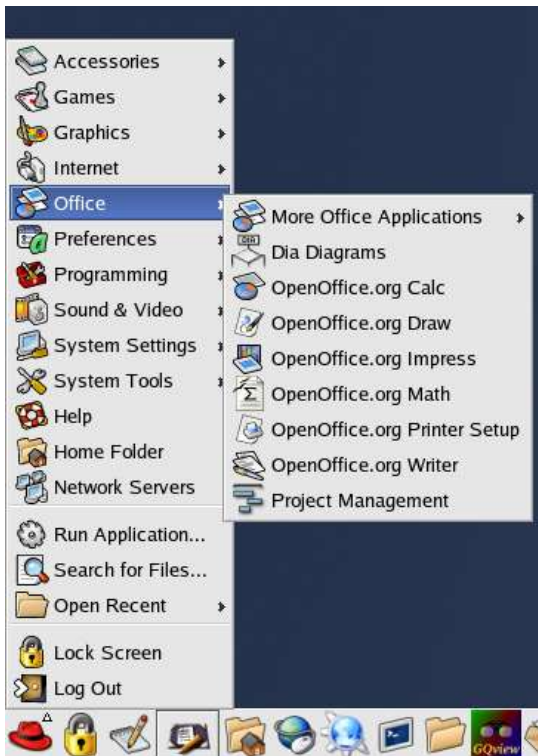


Figure 12. The Main Menu's items cascade into submenus.

However, because it's possible to install a large number of applications in any functional area, the installation program puts the most commonly used programs for the desktop environment you've selected in the Main Menu and moves the rest to a "More... applications" submenu. For example, if your desktop environment is GNOME, but you've installed KDE applications as well, the KDE programs will be placed on the "More..." menu.

Applets

You can control and manage your computer system by using GUI applets that are found under various menu options, similar to the applets found in Windows Control Panel. Here, again, things are a little different: Applets are separated according to function, instead of jamming them all in one place. For example, you can choose how the interface looks on your desktop by changing various options under Main Menu | Preferences. System settings, on the other hand, are found under (gasp) Main Menu | System Settings.

If you open both Main Menu | Preferences, and Main Menu | System Settings, you'll see a number of options that appear to be similar or downright identical. For example, consider the Login Photo option under Preferences and Login Screen under Systems Settings; also Network Proxy under Preferences and Network under Settings. And there are "Keyboard" and "Mouse" options on both. The options, however, lead to dialogs that provide different types of choices. **Figure 13** shows the Mouse Preferences, where you see options for using a left-handed mouse and setting the double-click speed.

In **Figure 14**, the Mouse Configuration dialog, you can choose which type of mouse is being used with the computer.

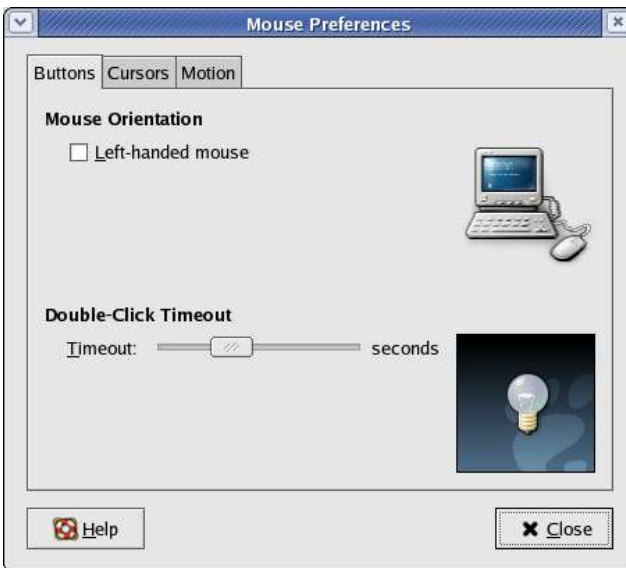


Figure 13. The Mouse Preferences dialog allows you to configure how the mouse reacts.

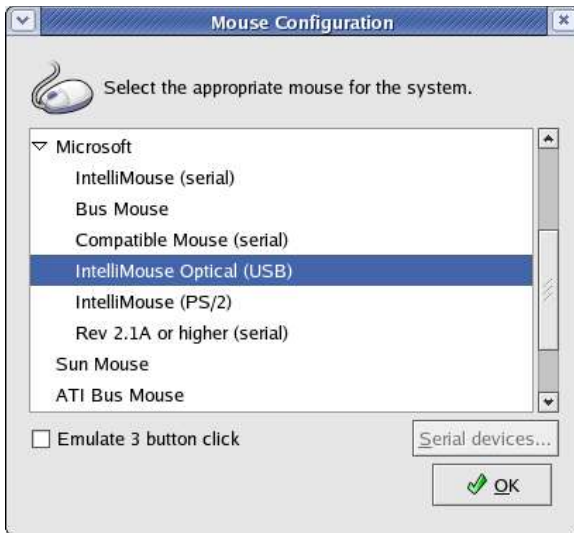


Figure 14. The Mouse Configuration dialog allows you to define the type of mouse attached to your computer.

As a power user, you don't need a "This is the ON switch" guide, leading you through the nose on each of these applets. Their usage will be obvious as you look through them. Thus, I suggest that you just spend a few moments scrolling through the various menu options under Preferences, System Settings, and System Tools to get a feel for what's available via a GUI-oriented applet. I'll cover some of them in more detail later on. By the way, it's important to mention again that these applets are simply graphical interfaces to programs that provide the ability to configure and customize the system. Every function you perform via an applet in the menu can also be done via commands. In fact, in many instances, the commands offer additional options that haven't yet migrated to the graphical applets.

Customize the desktop

Once you're familiar with getting around the basic interface, you're more than likely to want to change things. In some cases the procedure for making changes will be obvious, but in others the process can be obscure.

Desktop

I personally prefer to keep my desktop clear of icons. As you saw in Figures 1 and 2, I keep nothing on the desktop beyond what comes with a standard installation. Other people, however, prefer to keep all sorts of goodies on their desktops.

There are several ways to add a shortcut to an application that's found on a menu. The easiest way is to open the menu (but not the application), and drag the menu item from the menu to the desktop. (You'll want the desktop to be visible when the menu is open; dragging into a document window will cause weird things to happen, but the level of weirdness depends on what type of window is open.)

You can also drag an application's icon from the panel onto the desktop; the original icon in the panel will stay there, and a copy will be placed on the desktop. A third way, although

considerably more complex, is to right-click on the desktop and select the Create Launcher option from the resulting context menu. The Create Launcher dialog, as shown in **Figure 15**, can be tricky to fill out if you don't know the name of the program that launches the application you want on the desktop.

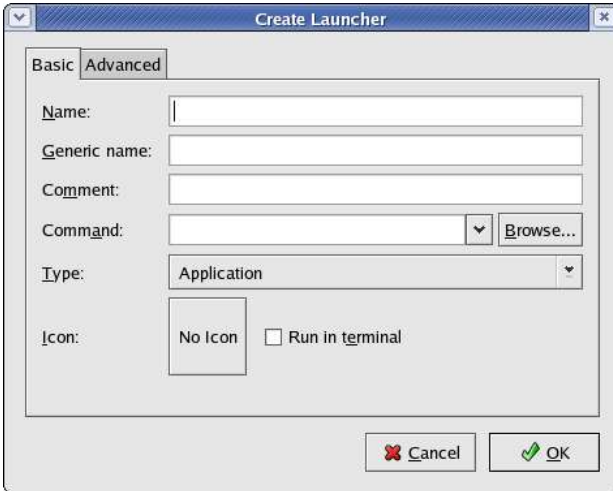


Figure 15. The Create Launcher dialog is similar to the Create Shortcut function in Windows.

The value in the Name field will appear in the tooltip when the mouse hovers over the icon in the panel, but the “Generic name” field isn’t used by the default icons installed on the panel.

You can also add an icon for a specific document to the desktop, which can be very handy if you work with a specific file on a regular basis. For example, I have an HTML page that contains dozens of URLs that I use on a regular basis. Whenever I want to open one of those URLs, I click the HTML Page icon on the desktop, and the Web browser opens with that page of URLs already loaded.

The easiest way to add a document shortcut to the desktop is to open your file manager, such as Nautilus or Konqueror, navigate to the document in question, and drag it to the desktop.

You can change the legend under an icon on the desktop as well as change the icon itself. To do so, right-click the icon and then select Properties to open the Properties dialog, as shown in **Figure 16**. You can change the legend by typing a new value in the Name text box, and select a different icon by clicking the Select Custom Icon button in the lower left corner.

Panel

I prefer to do most of my customization in the panel, because my work windows are usually covering the desktop but the panel is always visible. If you’re of like mind, here are a number of tricks.

First, on the left side of the panel, you can add and remove the applications available to launch. To remove, right-click the offending icon, and select the Remove From Panel menu item as shown in **Figure 17**.



Figure 16. The Calculator Properties dialog allows you to customize the appearance of the Calculator icon on the desktop.



Figure 17. Removing an icon from the panel.

In Figure 17, you'll note two other options: Lock and Move. If you want to rearrange the order of the icons in the panel, you can't simply click and drag them back and forth. If you attempt to do so, you'll find yourself dragging an icon on top of another one, which will actually attempt to load the first icon into the second icon as a document into an application. For example, suppose the icon for The GIMP (a graphics program) is to the right of the Mozilla Web browser icon, but you want it on the other side. If you drag the icon for The GIMP over the Mozilla Web browser icon, expecting the two to switch places, you'll be sorely disappointed. Instead, the system parameters for The GIMP will be displayed in an HTML format in a Mozilla Web browser window—most definitely not the effect you were looking for.

Instead, to move The GIMP icon to the left of Mozilla, right-click The GIMP icon and then select Move. Then move your mouse over The GIMP's icon, and the mouse pointer will turn into a four-headed arrow. As you move the mouse left and right along the panel, The GIMP's icon will move along with it, and other icons will scoot out of the way—this time, precisely the effect you're looking for. Once you've gotten the icon where you want it, click the

icon and the move operation will take effect. And for those times you don't want an icon to be moved, select the Lock menu option instead.

You can add an icon to the panel in many different ways. The first is to right-click an empty space in the panel and then select the Add to Panel menu item, as shown in **Figure 18**.

Select the "Launcher from menu" menu item, and the entire main menu will appear in a submenu. From there you can select which application you want to add to the panel.

Another way is to open the Main Menu via the red fedora, navigate to the menu item for the program you're interested in, right-click it to open the context menu, and select "Add this launcher to panel" from the context menu, as shown in **Figure 19**.



Figure 18. You can add a launcher for an application to the panel through the panel editing context menu.



Figure 19. You can also add a launcher to the panel through the application's own context menu.

Applications aren't the only things you might want to add to the panel. Another class of items are called "actions," and there are a whole bunch of good ones, as shown in **Figure 20**.

I always add the Lock and Show Desktop actions to my panel. The Lock action allows you to lock your workstation with a single mouse click—similar to pressing Ctrl-Alt-Del and selecting Lock Computer on a Windows computer. The Show Desktop action minimizes all windows on the desktop with one mouse click—very handy if you want to clear all the clutter away and find just that one window. If you have a lot of icons on your desktop, I imagine Show Desktop would be even handier. I find it handy to use Show Desktop to minimize all of the windows at once: If someone is in my office and I've got stuff on my screen that's none of their business, I can blank the screen with one keystroke.

The menu items in the Accessories menu, shown in **Figure 21**, can also be handy.



Figure 20. The Actions context menu has a number of handy options that can be added to the panel.



Figure 21. A number of accessories are available to be added to the panel.

As you've probably noticed throughout this chapter, I have the Clock and the Weather Report accessories in my Notification Area. The Weather Report is particularly fun; right-clicking its icon in the panel and selecting Preferences allows you to configure the location of the weather report as well as specify how often to update the display and its appearance, as shown in **Figure 22**. Yeah, I know—some of you are thinking, "Ummm, look out the window, Whil"—but those bright sunny days in Milwaukee after the first of the year can fool you; it may look gorgeous outside, but in actuality be 10 below zero.

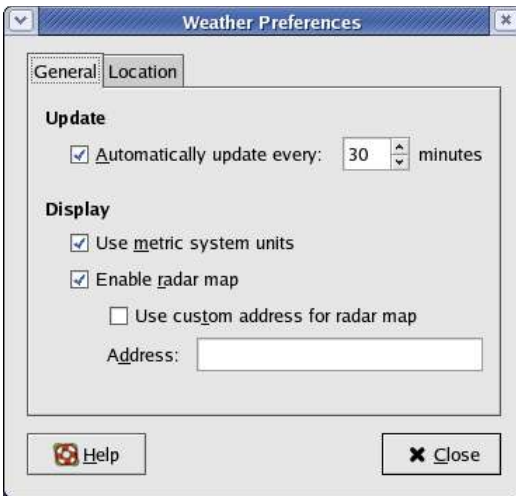


Figure 22. The Weather Preferences dialog provides a number of configuration options.



Figure 23. The Launcher Properties dialog allows you to edit properties of existing launchers.

Every item in the panel has either a Properties or a Preferences menu item. Generally, application launchers have a Properties menu item, through which you can edit the items found in the Create Launcher dialog as shown in **Figure 23**.

Applets generally have a Preferences menu item, through which you can configure the applet. Of course, the options that can be configured vary according to the applet.

You can customize the panel itself as well. Right-click an open area of the panel and select Properties, as shown in **Figure 24**. The Panel Properties dialog will appear, as shown in **Figure 25**.

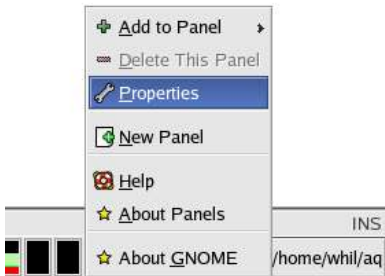


Figure 24. The panel-editing context menu also has a menu option for editing the panel's own properties.



Figure 25. The Panel Properties dialog allows you to customize the look and operation of the panel.

You can control where the panel shows up (I prefer it at the bottom but I've seen a fair number of other folks who prefer it at the top or at one of the sides), and how tall (or wide) it will be.

Selecting the Expand check box will stretch the panel all the way across the screen, even if there aren't enough icons to fill up all of the space. Not checking Expand causes the panel to be truncated on both sides, an effect I don't particularly care for.

You can cause the panel to disappear when the mouse cursor moves away from the panel and onto the desktop; moving the mouse back to the bottom of the screen (or wherever the panel is positioned) makes the panel appear again.

The "Show hide buttons" menu item causes buttons (optionally, with arrows on them) to appear on both sides of the panel. Clicking one of the buttons causes the panel to disappear—not by scrolling off the bottom, but off to the side.

You can also set a couple of panel preferences via Main Menu | Preferences | More Preferences | Panel, as shown in **Figure 26**.



Figure 26. The Panel Preferences dialog allows you to control other preferences for the panel.

Now that I've shown you how to operate and customize the panel, what about those tips you get from looking over someone's shoulder? Everybody's work needs and habits are different, but I'll share how I've selected the applications on my panel in the hopes that you'll find some useful applications as well.

Referring back to Figure 6, you see the lock applet immediately to the right of the Main Menu icon. I'm an impatient sort of guy; why spend the time waiting for the Main Menu to display so you can then spend several more seconds trying to select the Lock Screen menu option when simply clicking on the big lock icon does the same thing?

Next is the Text Editor application. While it's fashionable in some circles to carry on with Editor Wars ("The editor I use is much better than the editor you use"), I don't have time for it. GNOME's default graphical editor (gedit) is a simple text editor and that's all I need.

Third is the Show Desktop applet, which I discussed earlier in this section. To the right of that is the Home Folder applet, which loads the Nautilus file manager, shown in **Figure 27**.

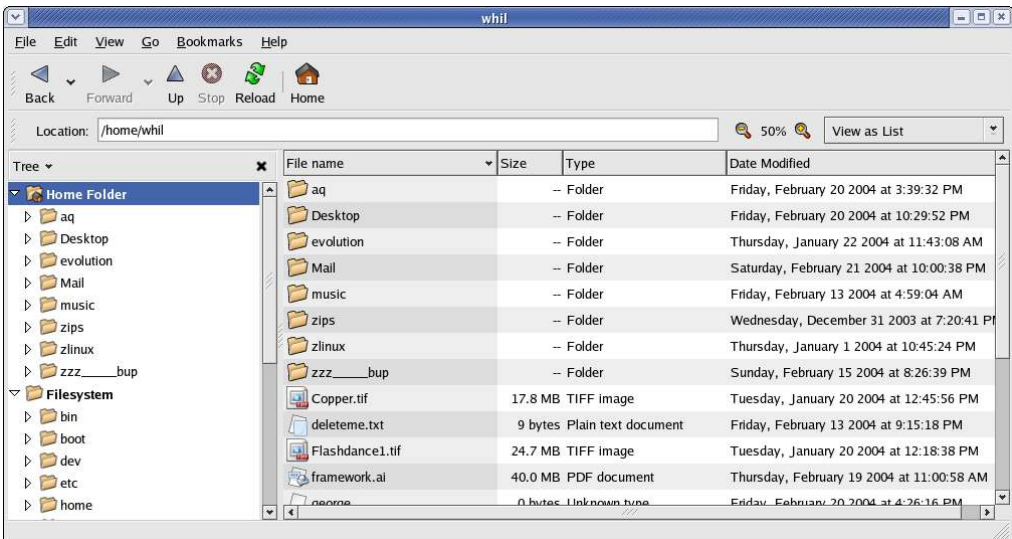


Figure 27. The Home Folder icon launches Nautilus with trees for my home folder and the entire file system.

This is a terrifically handy tool that helps me navigate through the file system. I'm a data-oriented guy, so I want easy access to my data in a graphical fashion, and a file manager is the way to get it. The Home Folder icon opens Nautilus with two folders automatically loaded in the tree view in the left pane: my own home folder, and the entire file system on my computer. I'll have a lot more to say about files, file managers, and file systems in Chapter 6, "Files, Directory Structures, and File Managers."

Next to the Home Folder icon are launchers for two browsers: Mozilla and Konquerer. The World Wide Web is still, in many places, the Wild, Wild Web, and as a result, pages render differently from one browser to another. I've found that if a site I visit doesn't render properly in one browser, it will look fine in the other, so I keep both handy.

There are enough times that it's useful to have a terminal window available, so the next item on my panel is a launcher for one.

The next icon, the manila folder, is another copy of Nautilus that is configured to open to the most recent folder I was working in. As my directory structure can get pretty deep, perhaps five or six levels at times, always starting out at the top level in my home folder means I have to spend time navigating through the folders. This launcher allows me to get right to where I was last working. I just opened Nautilus to the folder in question and dragged the window to the panel.

The next seven icons are all primary applications. GQViewer is an image viewer, which I use all the time for moving between screen shots in a chapter. The two icons with an envelope and a stamp are e-mail clients; one is Evolution and the other is Kmail. The document with the seagulls is OpenOffice.org Writer, which you can guess I use a lot (all my writing is done in OpenOffice.org). Screen shots and other graphic tasks are handled by The GIMP, music is played through XMMS, and the volume control icon allows me to adjust the sound level of the speakers as well.

Menus

You can add your own menu-launching icons to the panel, similar to the way you can add icons for regular applications or applets. Suppose you wanted to create a menu for accessories that you could access right from the panel. To do so, open Main Menu | Accessories, and right-click to open the context menu for the Accessories menu. Then select the "Entire menu" option at the bottom, as shown in **Figure 28**.

Click "Add this as menu to panel," and you'll have a new icon in the panel. Clicking the new icon displays an Accessories menu that duplicates the Main Menu | Accessories menu, as shown in **Figure 29**.

It is technically possible to edit the menus, both those accessed through the red fedora on the panel as well as those added to the panel. Editing includes adding new items, removing existing items, and changing the order of the items. (The menu options for adding and removing items are displayed in **Figure 30**.)



Figure 28. You can add an entire menu as a launcher.



Figure 29. The Accessories menu added to the panel as its own launcher.

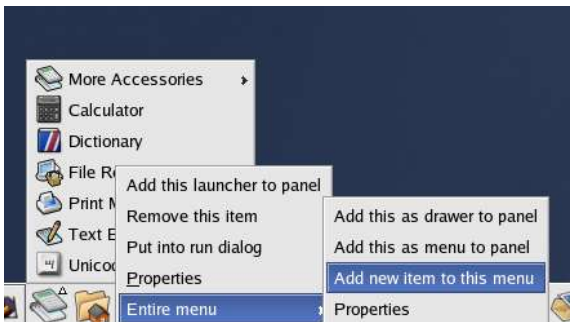


Figure 30. Options for editing a menu.

However, as of Fedora Core 1, menus shouldn't be customized due to some unresolved problems with the underlying engine. The details on the bug are found here:

http://bugzilla.redhat.com/bugzilla/show_bug.cgi?id=81215.

A workaround, to be used at your own (great) risk, is here:

http://www.wse.jhu.edu/newtnotes/main_file.php/sysadmin/55/.

Applets

Fedora Core comes with a number of handy applets that can be added to the panel. Which ones you find useful is, of course, a matter of personal preference. Here are three that I find indispensable.

Notification tool

The one applet that everyone should have on their panel is the Red Hat Alert Notification Tool: the red/blue/green icon that indicates whether or not updates to the system are available. The use of this applet is discussed at length in Chapter 3, "Updating Fedora Core."

While goofing around with the menu as you're customizing the various areas, it is possible for the Alert Notification Tool icon to disappear, and that can cause a fair amount of consternation. (For example, clicking the Exit menu item shown in Figure 6 in Chapter 3 will make the icon vanish.) Here's how to bring it back.

First, the Red Hat Network Alert Notification Tool icon resides in an area of the panel called the Notification Area. This entire area can vanish itself, and that is terribly frustrating. To bring the Notification Area back, right-click in a blank area of the panel to open the panel-editing context menu, as shown in Figure 24 earlier in this chapter.

Sometimes it can be tricky to find a blank area. As you can see in Figures 6 and 7, my panel is so jammed up with icons that it's nearly impossible. If you're having trouble finding a blank area that displays a panel-editing context menu, try closing all of your running applications to open an area on the left side of the panel. If that doesn't work, try shrinking the size of the panel (say, from 30 pixels tall to 20 pixels tall). One result of this action will be to shrink the icons in the panel, thus leaving room between them.

Once you've found a blank area in which to right-click, select the "Add to panel" option (the top menu item in the list), and then select Utility | Notification Area. A new area will appear in the left side of the panel.

Once the Notification Area is available, right-click in it, select Add to Panel again | Launcher from menu | System Tools | Red Hat Network Alert Icon. This adds a somewhat oversized icon as shown in in **Figure 31**.

This, unfortunately, is not yet what you want. What it does do, however, is give you a way to get back the real RHN Alert Notification Tool. Click the Alert icon and you'll get the real Notification Tool icon next to it, as shown in **Figure 32**.

The icon will initially be blue, because it hasn't yet connected to find out if there are updates available.

At this point, you can right-click the big green Alert icon, select "Remove from panel," and you're back where you wanted to be. Yeah!

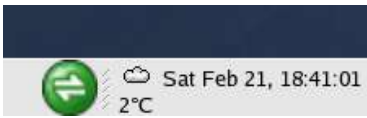


Figure 31. Adding the Red Hat Network Alert icon to the panel.



Figure 32. Adding the Red Hat Network Alert Notification Tool icon to the panel.

System monitor

Another applet that I keep open is the System Monitor. To get to it, click Add to panel | Utility | System Monitor. The applet will be added to the panel next to the Workspace Switcher, discussed earlier in this chapter.

First, you'll want to configure the System Monitor. Right-click the applet in the panel and select Preferences to open the System Monitor Preferences dialog, as shown in **Figure 33**.

The check boxes at the top allow you to choose which resources will be displayed in the applet in the panel. When I get a new machine, I check the first four—Processor, Memory, Network, and Swap Space—and watch them for several weeks as I go about my daily work, in order to see how the machine is doing.

The Processor monitor rarely shows much activity, because this workstation with a 2 GHz processor is used primarily for writing, sending e-mail, browsing the Web, and creating an occasional screen shot. No heavy compiles or other computationally demanding activities.

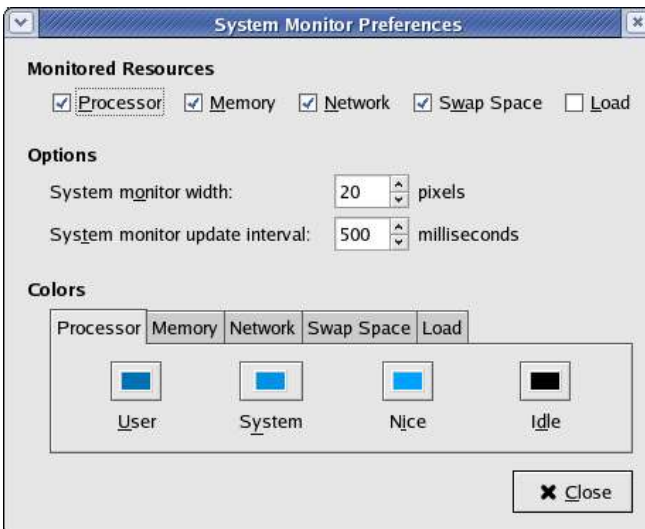


Figure 33. Use the System Monitor Preferences dialog to configure the System Monitor applet in the panel.

Memory (1 GB) starts out with minimal usage, but as the day goes along, more and more memory starts getting used up. A frequent question on various Linux mailing lists concerns the usage of memory: “I have 512 MB of RAM and Linux is using almost all of it! What is wrong?” The answer is that nothing is wrong! Linux is doing what it is supposed to—taking advantage of the memory it can access to cache programs and data. It’s not leaking memory due to poorly behaved programs, or being wasted on unnecessary tasks. If you’re still unconvinced, look at it from the opposite point of view. Suppose you had a ton of memory in your computer, and your operating system and applications hardly used any of it. What would have been the point of buying all that memory? It would be like buying an 18,000-square-foot mansion but using only one 250-square-foot room.

The third monitor I keep open watches the network traffic. It’s interesting to see when network traffic spikes—and occasionally serves to remind me that a slow file save or other seemingly pokey operation may simply be due to a lot of traffic over the wire all of a sudden.

The fourth monitor looks at swap-space usage, and with 1 GB of memory, swap space is hardly ever used. I’ll probably turn that monitor off in a bit, because it’s not providing useful information any longer.

At the bottom of the System Monitor Preferences dialog, you can choose which colors you want to use in each monitor. The default values of those colors are so close to each other that I spent a bit of time tweaking them so they’d be more differentiated.

Once you’ve configured the System Monitor, you’ll want to use it. You can hold your mouse cursor over a monitor and it’ll give you a tooltip that describes the current load of the resources being monitored. For example, holding the mouse over the Memory monitor results in a “Memory: 100% in use” tooltip, as shown in **Figure 34**.

Right-clicking the System Monitor applet and then selecting Open System Monitor gives you more information about the various resources. The Process Listing tab, as shown in **Figure 35**, shows you a list of all processes, together with the user, the memory the process is taking, the CPU load, and the process ID.

You can change which processes are displayed by using the View drop-down list in the upper right corner of the dialog.

Because you could have a lot of processes running on your machine, note that you can expand the window vertically in order to show as many processes as you desire. Also note that you can use the arrows on the left side of the primary processes to expand or contract subprocesses for certain items. For example, The GIMP has subprocesses for script-fu—if you don’t want to see that information, click on the arrow and the script-fu line will be rolled up.



Figure 34. The System Monitor applets each have tooltips that provide a quick summary of resource usage.

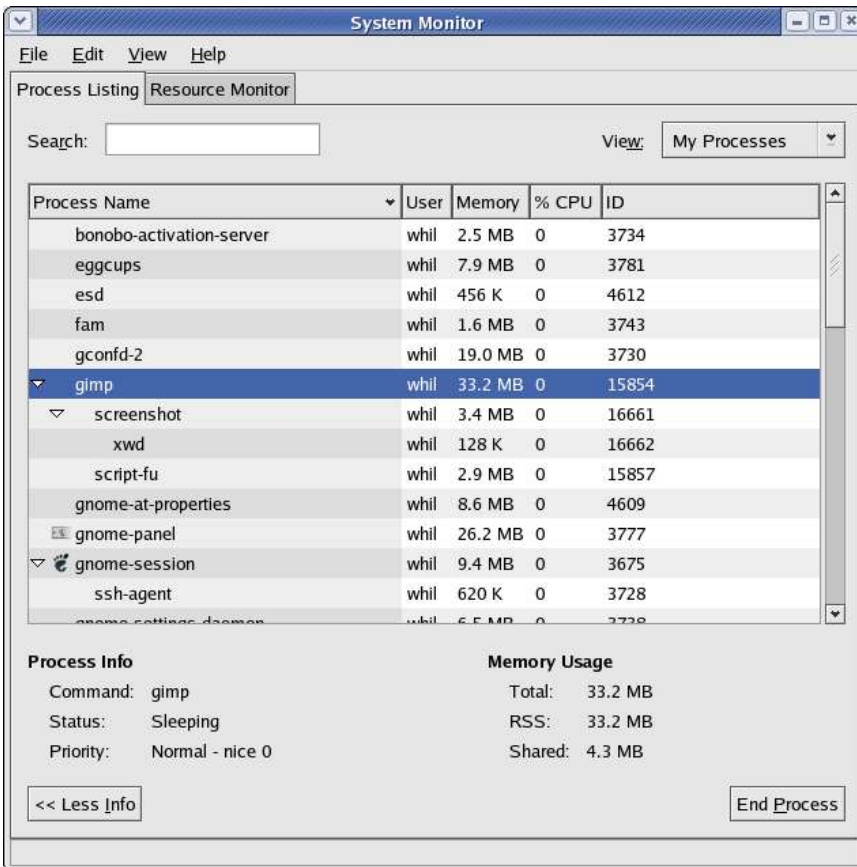


Figure 35. The System Monitor applet has several views of the running processes on your computer.

The Resource Monitor tab provides graphical displays of CPU load, as well as Memory and Swap history, mapped against time, as shown in **Figure 36**. The usage of storage devices is shown in the Devices list box; it's the quickest way to see disk space usage at a glance—both for local and networked drives.

I found this applet to be very useful to learn more about my machine when I was getting started, and I still use it to keep tabs on unusual circumstances—sort of a “management by exception” approach.

Clock

The panel comes installed with the Clock applet, which displays the time. You can configure this applet by right-clicking it and selecting Preferences to bring forward the Clock Preferences dialog as shown in **Figure 37**.

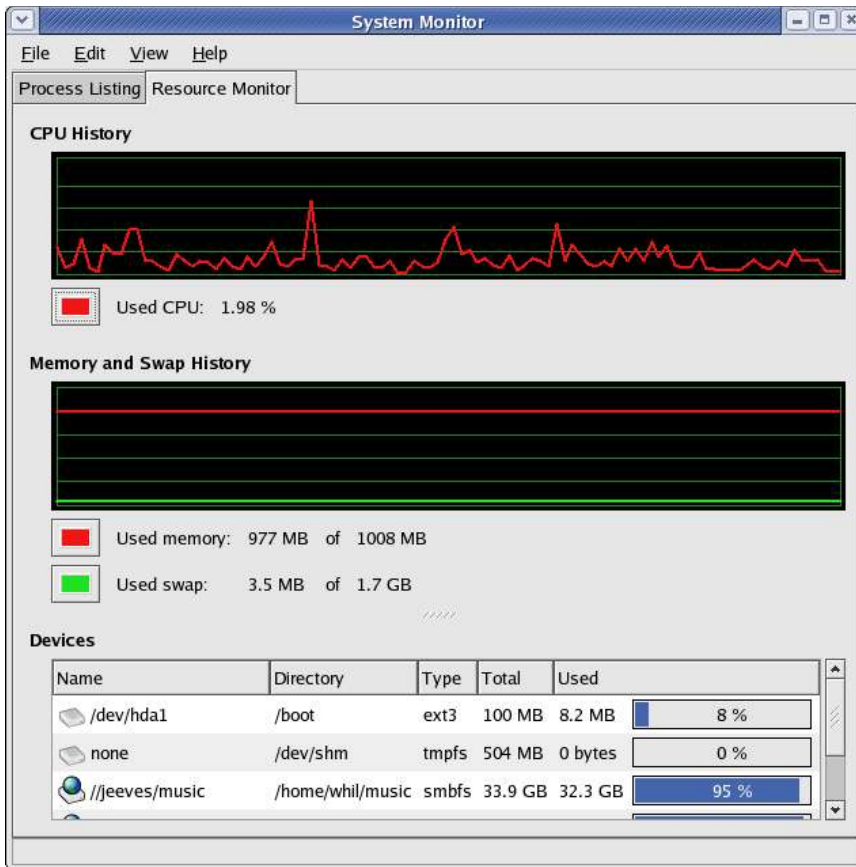


Figure 36. The Resource Monitor tab of the System Monitor applet shows a variety of information about your computer.



Figure 37. The Clock Preferences dialog allows you to configure the Clock applet.

You have four choices for clock type: 12 hour, 24 hour (my favorite), Unix time, and Internet time. The first two are obvious but the last two might not be. Unix time displays the time in seconds that have elapsed since January 1, 1970. Programmers (and other geeks) are primary users of Unix time. It would be reasonable for the phrase “Internet time” to have you

envisioning a clock with the hour and minute hands spinning around wildly, and indeed, I'm wondering why someone hasn't done that. The actual definition of Internet time, however, references Biel Mean Time, which is a global time. Biel Mean Time is the same everywhere in the world, and uses the meridian in Biel, Switzerland, the home of Swatch, as its reference. In other words, with Biel Mean Time, it's the same time everywhere in the world. No more time zones or other arbitrary demarcations of time differences. The day is divided into 1000 beats, so that 1 beat is 1 minute, 26.4 seconds. The current Internet time is shown by the symbol @ plus three digits, ranging from @000 to @999. Thus, a person in Switzerland, a person in Florida, and a person in Hawaii could all hold a conference call at 750 Biel Mean Time, which would be 6 p.m. (local) for the first person, noon EST for the second, and 1 a.m. for the third.

You can also configure whether or not to display seconds (if appropriate), the date, and Universal Coordinated Time (Greenwich Mean Time). You can set the date and time via the Adjust Date & Time menu item in the Clock applet's context menu. You'll need to log in as root in order to do so, because you're changing system properties. Doing so brings forward the Date/Time Properties dialog, as shown in **Figure 38**.

You have two choices: either manually set the date and time, and hope your computer keeps time correctly, or have your computer connect to a remote time server to synchronize with an atomic clock. To do this, select the Enable Network Time Protocol check box. You'll need an Internet connection to use this option.

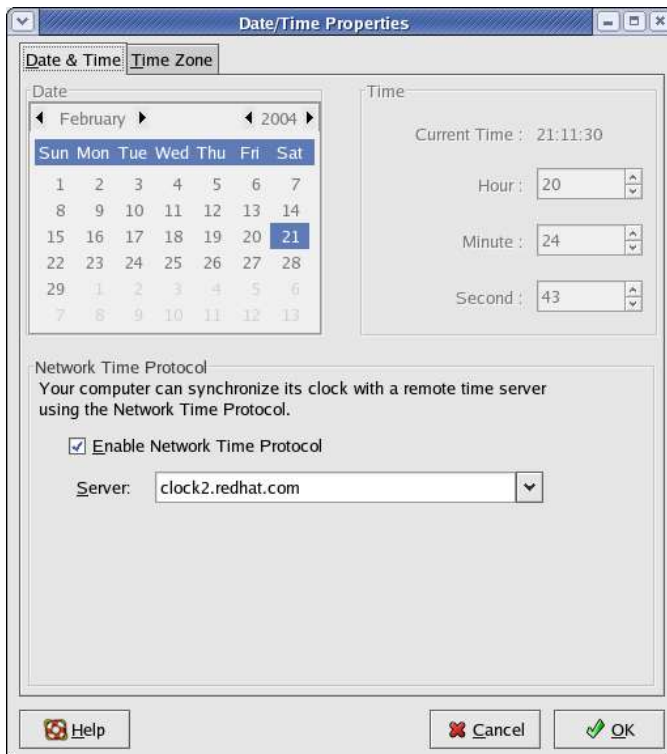


Figure 38. The Date/Time Properties dialog allows you to configure how your Clock applet knows what the date and time is.

In this day and age, it seems everything has a clock: microwaves, VCRs and DVDs, even refrigerators and your sneakers. And as the saying by Robert Anton Wilson goes, “A man with a watch knows what time it is. A man with two is never quite sure.” As a result, knowing that at least my *computer* is accurate is something I like to know.

You can choose one of the two existing servers in the Server box, or type one of your own choosing. You can find more information about Network Time Servers at

http://www.nist.gov/public_affairs/update/upd000103.htm.

Note that if you configuring a medium or high security level during installation (or if you changed it later with the Security Level dialog found under Main Menu | System Settings | Security Level), the firewall rules will by default block the connection to a time server unless you change them manually.

The final applet I keep running is the Weather Report applet, found by clicking Add to panel | Accessories | Weather Report. You can configure it by right-clicking and selecting Preferences. Options in the Preferences dialog, as shown in **Figure 39**, allow you to automatically fetch the weather update every so often, and display either in Imperial (Fahrenheit) or Metric (Celsius) units. The Location tab of the Preferences dialog contains a large list of locations worldwide, based on airports.

Once you’ve configured Weather Report, you’ll want to use it. The applet shows a summary of conditions right there in the panel, as seen in Figures 7 and 31 earlier in this chapter. Double-clicking the applet’s icon in the panel or right-clicking and selecting the Forecast menu item brings forward the Forecast dialog. Two of the three tabs in the Forecast dialog are shown in **Figure 40**.

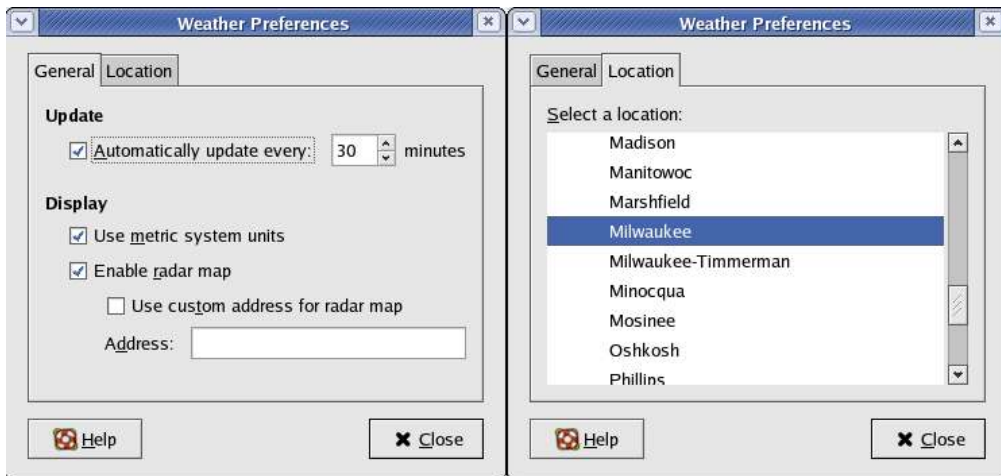


Figure 39. The Weather Preferences dialog has two tabs that allow you to configure aspects of the Weather Report applet.

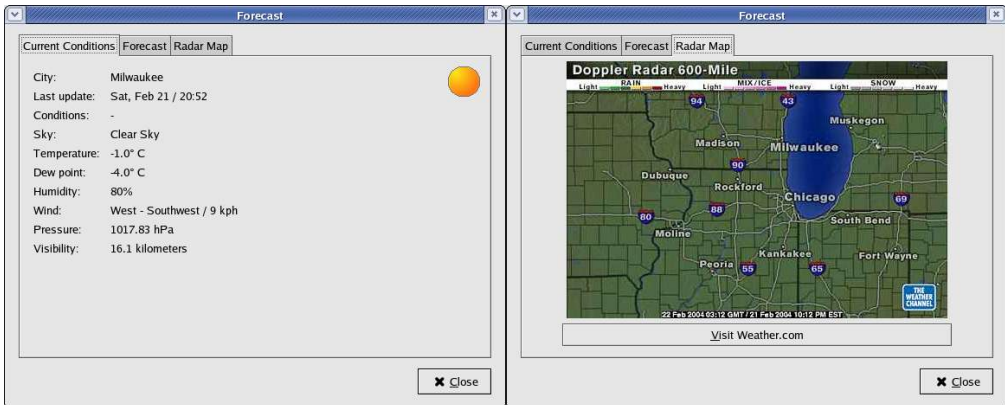


Figure 40. The Weather Report applet has three tabs (two shown) that display information about the weather in a selected locale.

The Current Conditions tab shows a summary of the weather at the location identified in the Preferences, while the Radar Map shows a recent scan of the area in question. The Forecast tab (not shown) is simply a lengthy text description of the weather forecast.

The Weather Report applet is updated as you configured it in the Preferences dialog, but you can force an immediate update by right-clicking the applet's icon and selecting Update from the context menu.

Summary

Fedora Core offers a nearly unlimited number of methods to customize the interface, and I've just touched on a few ways that I've tweaked my system. Plan on spending some time going through the multitude of options in the various preference dialogs to customize your own desktop, and have it your way!

The purpose of this chapter is to get you started with Linux on your desktop, but of course there's a lot more than what I can cover here. In addition, new versions of Fedora Core are released on a regular basis. I'll keep you up to date by writing new articles as well as posting updates related to this book. These materials can be found on Hentzenwerke's Web site, www.hentzenwerke.com. Click "Catalog" and navigate to the page for *Linux Transfer for Windows Power Users*.

