

Icewm

The Icy Fountain of Youth

There are so many howtos about using older machines on networks that another one might seem entirely superfluous. What about using an older machine as a graphical desktop with the Ice Window Manager?

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Almost everyone will have some ancient hardware at home, and in most cases will be using it as a router. Putting older machines to work as desktops does not sound like a reasonable option, with modern desktop environments such as KDE being so demanding with respect to video and main memory, and hard disk capacity. If you are not afraid of alternative solutions and a bit of planning, you may still be able to run a GUI environment on your old hardware.

More RAM!

There is one minimum requirement for your hardware: If you can expand your main memory, do so. An X Window system is not really much fun, unless you have at least 32 MB RAM. Less memory will mean frequent swapping and this will bring your system to a standstill (especially if your hard disks are slow).

Additionally, you should use XFree version 3.3.6, even if your video adapter supports XFree 4.x. The more recent X server requires far more memory than the older version. Finally, you should consider restricting your applications to a

single **GUI toolkit**. The main contenders here are GTK or Tk thanks to the large selection of software based on them.

Spoilt for Choice

Besides the X server you will definitely need a small footprint window manager. *icewm* [1] is a good choice as it includes critical properties of a desktop environment, such as a taskbar with a clock and a start menu. Table 1 shows a selection of equally suitable window managers. As many of them do not provide a taskbar, the table also suggests some likely candidates.

Almost every major distribution includes *icewm*, so the installation should not be any trouble. You will probably find a package called *icewm-lite* or *icewm-light* on your distribution CDs, and it should contain a version of Icewm compiled with minimal options.

Depending on your distribution, the taskbar or even configuration features may be missing in this version.

Depending on your machine's equipment, you can opt for a more comfortable or less glitzy version, or even compile a version of *icewm*, to suit your own needs. Invoking `./configure --help` in the source code directory will display the available options.

The `--enable-lite configure` parameter generates a slim version of the program. If you additionally drop the *imlib* library the program will again lose weight, but this does impact the window manager's ability to add pretty graphics.

To launch *icewm*, you simply add a line such as:

```
exec /usr/X11R6/bin/icewm
```

to your `~/.xinitrc` or `~/.xsession` (depending on whether you use a console or GUI login). This setting is independent of your distribution; you might like to create a backup of your original file before adding the required line. If your distribution includes the package, your distributor will probably save you the trouble of this step and automatically launch *icewm* when you start up your X Window system.

A neat desktop should appear the first time you launch the program (Figure 1),

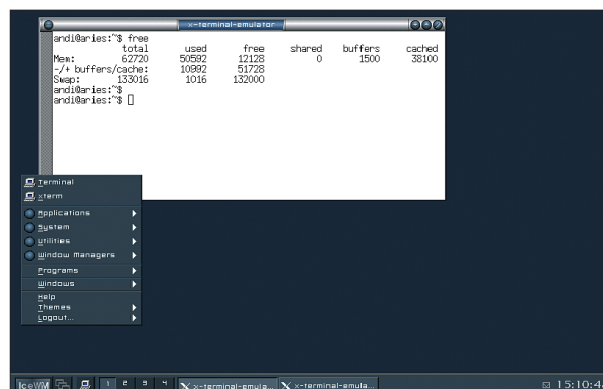


Figure 1: Default *icewm* configuration on Debian

DESKTOPIA

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and desktop operations should be self-explanatory.

The left button in the taskbar conceals the start menu – your distributor may well have placed a number of items in the menu. This is where you launch programs, change the window manager’s appearance, log off, or switch from the current desktop scheme to one of the three others (available by default).

The latter task can be performed more easily by clicking on one of the taskbar buttons, labelled 1 through 4. The task list also allows you to access a list of windows, and you can click on the display icon to open an X terminal.

The right hand area of the *icewm* taskbar includes a clock, includes symbols for your mailbox status and the CPU load. The symbols can be configured to open the matching application when you click them. In Debian’s case this means launching the *top* system monitor when you click the CPU load display. The unused, central part of the taskbar is designed to accommodate icons for the applications you need to launch.

Window Management

Windows converts will be pleased to hear that the *Click to Raise* model is the default window handling procedure. The last application to be launched is automatically placed in the foreground (“raised”) and thus capable of accepting input. Clicking on another window shifts the focus to this window and moves it in turn to the foreground. In contrast to *Click to Focus* it does not matter whether you click on the title bar or on the middle of the window.

No matter what theme you choose, there will be at least three buttons that close, minimize and maximize your windows. There may also be an additional button that opens the window menu, which you can also access by right clicking the title bar. If you drag the mouse over the edge or one of the bottom corners of a window, the mouse pointer changes, allowing you to hold down the left mouse button and change the window size.

A button appears in the taskbar for every window displayed on the desktop. You can use the button to restore minimized or hidden windows to the foreground. To access windows on other desktops, click on the window icon to the right of the start button (Figure 2).

A Matter of Taste

If you are unhappy with the default settings, you can create an *.icewm* directory in your home directory and copy the sample configuration to it. If you are compiling the window manager yourself, the sample directory is located in */usr/local/lib/X11/icewm.rpm* based distributions place the sample settings in */usr/X11R6/lib/X11/icewm*, and Debian users should look in */etc/X11/icewm*.

You can customize your *~/icewm* copy to your heart’s desire; also note that the comments in sample files and the *icewm* help, which is accessible via the start menu in newer versions of the window manager, provide valuable tips.

If your computer cannot display higher than 800x600, you can make room on



Figure 2: Access to windows on other desktops via a menu

the desktop with the taskbar’s **autohide** function. Edit the following line:

```
#TaskBarAutoHide=0 # 0/1
```

in the *preferences* file containing the basic *icewm*s configuration to:

```
TaskBarAutoHide=1 # 0/1
```

The string *0/1* that follows the second comment sign, #, shows the possible values, where *0* denotes “false” and *1* denotes “true”. The line *TaskBarDoubleHeight=1* adds a second floor to the taskbar, adding a quicklaunch window where you can type the name of the application you want to launch and press [Enter]. For console based application, such as *top*, simply terminate the entry with [Ctrl-Enter] instead. The following entries:

```
OpaqueMove=0  
OpaqueResize=0
```

which are responsible for drawing window content while moving and resizing windows, allow more economical use of your machine’s resources. The *icpref* [2] tool provides menus for a large number of options for configuration, and that *iceme* [3] allows you to configure the manager’s menus.

Table 1: Alternative Window Managers and Taskbars		
Window Managers	Description	Website
<i>blackbox</i>	small footprint, quick with neat graphics	http://sourceforge.net/projects/blackboxwm
<i>fluxbox</i>	<i>blackbox</i> code based with some enhancements	http://fluxbox.sourceforge.net/
<i>aewm</i>	small footprint and plain Window Manager	http://www.red-bean.com/~decklin/aewm
<i>pwm</i>	saves your resources, interesting window concept [4]	http://modeemi.cs.tut.fi/~tuomov/pwm
<i>larswm</i>	minimalist for keyboard fans	http://www-personal.umich.edu/~larsb/larswm
Panels		
<i>fbpanel</i>	panel with clock and application launcher	http://fbpanel.sourceforge.net/
<i>hpanel</i>	simple panel with desktop switcher	http://www.phrat.de/hpanel-o.2.tar.gz
<i>fspanel</i>	miniature (less than 10 Kb footprint) panel with switcher	http://www.chatjunkies.org/fspanel/

GLOSSARY

GUI toolkit: Program library that provides functions for programming graphical user interfaces, which are used for creating menus and dialog boxes. The “Gimp Toolkit”, GTK, and Qt are popular GUI toolkits.

autohide: hides the taskbar if not in use. The taskbar re-appears when you drag the mouse over the bottom of the screen.

INFO

[1] *Icewm*: <http://www.icewm.org/>

[2] *Icpref*: <http://packages.debian.org/stable/x11/icpref.html>

[3] *Iceme*: <http://iceme.sourceforge.net/>