

Practical expertise

TIPS AND TRICKS

We let you in on some secret, and not so secret, tips and tricks for working with Ubuntu.

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Ubuntu comes with several useful utilities for customizing your system and creating a new look for your computer interface. If you are interested in exploring some of the advanced techniques used by the experts, these handy Ubuntu tricks should get you started.

Switching Off 3D Effects

If the X.org driver for your graphics card supports 3D acceleration, then by default, Ubuntu 8.10 enables its 3D effects on the desktop. Ubuntu's developers have integrated the Compiz Compositing Manager into the desktop, and although tricks like window fades, drop shadows, true transparency, and the rest are all treats for the eye, they also can be the source of a significant drop in performance.

To switch these effects on or off, go to the menu item *System | Preferences | Appearance*, then click on the *Visual Effects* tab and choose the option *None*.

CompizConfig Settings Manager

If you want to keep the 3D effects and you want to configure more features in addition to those described in the previous tip, then you should install the `compizconfig-settings-manager` package from the Universe repository. This package contains the CompizConfig Settings Manager, which allows you to configure

every last detail of Compiz and its effects (see Figure 1). To start the program, enter `ccsm` either from the Run Application window (Alt + F2) or from the menu item *System | Preferences | Advanced Desktop Effects Settings*.

Configuring Monitor Resolution

Ubuntu comes with a graphical tool that leads you by the hand through the tricky steps of configuring your monitor. This practical utility can be found in the menu *System | Preferences* by choosing *Screen Resolution*, or enter `gnome-display-properties` in the Run Application window (Alt + F2).

The *Resolution* and *Refresh Rate* selection lists are fairly self-explanatory. The *Rotation* field allows you to configure settings when more than one monitor is connected. The drop-down boxes make it easy to select one of the available settings.

The *Detect Display* button begins a scan for available monitors. When one is found, you can then configure it. If you change your configuration on a regular basis, the activation box *Show Displays in Panel* provides a panel icon that lets you switch quickly between different settings.

The *Mirror Screens* box causes every monitor to show the same content.

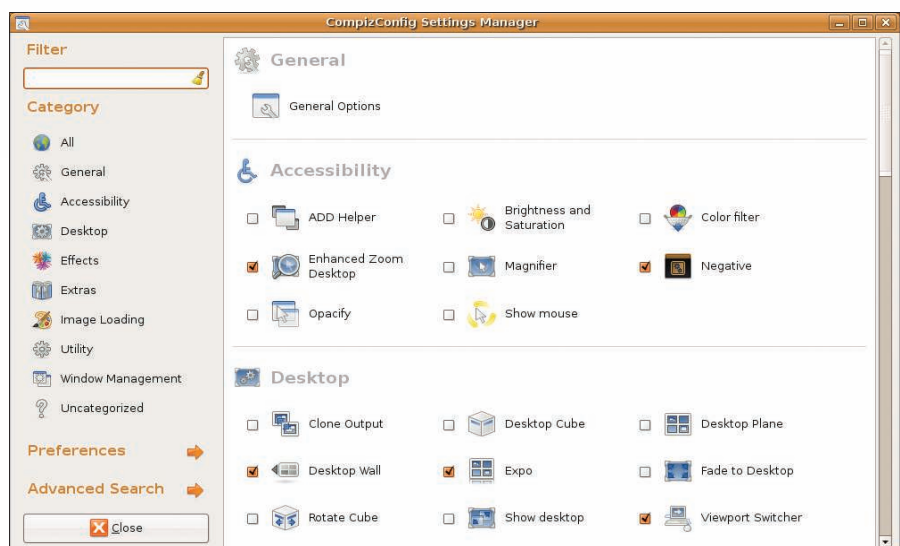


Figure 1: The CompizConfig Settings Manager gives you total control over the 3D effects.

Clicking *Apply* activates your new configuration, as does *Close*, which also terminates the resolution settings application.

Displaying Messages When Booting

By default, when you boot the computer, the system displays a splash screen with a progress bar (see Figure 2). However, if you want to follow what the system is doing behind the scenes, you have various ways to view the boot messages at your disposal.

While the startup process is running, you can press Alt + F1. Messages reporting on system services that are starting or on hardware configurations fly by until the graphical login management program starts and shows its welcome screen.

Viewing Boot Messages after the Event with Dmesg

If the startup process goes by too fast for you to follow, launching *dmesg* from the command line will allow you to view the messages once the system has booted. Simply log in to the system as usual, start a terminal window (for example, by pressing Alt + F2 and entering *gnome-terminal* or *konsola*), and then type the following line:

```
dmesg | less
```

The pipe character (|) after the command forwards the output of *dmesg* to the Less tool. Then you can use the arrow keys to move up and down through the output, or you can press Q to return to the command line. Alternatively, you can save the startup messages to a file – for example:

```
dmesg > bootmessages.txt
```

All sorts of exciting things happen as the computer starts up.

If you want a detailed explanation of what you are seeing, YoLinux.com [1] has a tutorial of the boot process.

Combining the Splash Screen with Boot Messages

A simple modification to the Grub boot manager allows you to configure the system so that it shows both the boot messages and the splash screen.



Figure 2: Ubuntu's graphical splash screen appears while the system is booting and hides all the startup messages, showing just a progress bar instead.

First, you need to follow the procedure outlined in the previous tip and load the configuration file */boot/grub/menu.lst* into a text editor.

After that, scroll down to the entry for Ubuntu and remove the *quiet* option from the *kernel* line.

Instead of seeing

```
kernel /vmlinuz-2
2.6.27-4-generic root=2
... ro splash quiet
```

it now reads

```
kernel /vmlinuz-2
2.6.27-4-generic root=2
... ro splash
```

or something similar. The next time you start the computer, you will see the Ubuntu logo followed by messages about system services.

StartUp-Manager

If you don't like the idea of editing the configuration file directly in a text editor, install the StartUp-Manager program. This can be done by way of *Applications | Add/Remove...* or by entering the following at the command line:

```
$sudo apt-get install 2
startupmanager
```

StartUp-Manager provides you with an easy-to-use graphical interface for modifying your Grub configuration. After you install it, StartUp-Manager will appear under *System | Administration*. When you start the program, you must first enter your password to work as an administrator.

Main Options

The StartUp-Manager program is fairly self-explanatory, but a description of the main options follows.

- *Boot options*: This tab contains a *Timeout* field that allows you to specify the length of time that the Grub menu displays on the screen. The *Default operating system* drop-down list lets you define which operating system should be started by default if no other is selected. The *Resolution* and *Color depth* options in the *Display* section and the *Show boot loader menu*, *Show boot splash*, and *Show text during boot* options in the *Misc.* section all allow you to configure visual aspects of the boot loader as it goes about its business starting the system.
- *Appearance*: This tab allows you to define further options for the boot loader – such as the *Background* and *Text* colors – and to configure a boot loader theme (available for the standard Grub install only if you have gfxboot

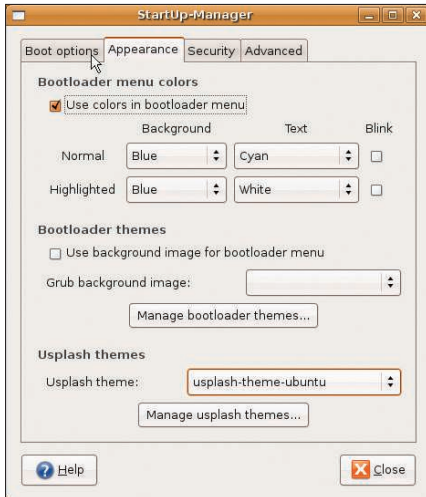


Figure 3: StartUp-Manager makes it easy to configure a new boot splash theme.

installed too) and a Usplash theme (also see the next tip).

- **Security:** This tab allows you to set various passwords: for the boot loader itself, for rescue mode, or for old boot options.

- **Advanced:** The final tab allows you to limit the *Number of kernels* that can be presented by the Grub menu. Any other entries that you have configured now will no longer appear in the boot menu. In the *Misc.* section of this tab, you are allowed to enable or disable boot menu options for the Memtest86 program (which checks the computer's RAM) and RecoveryMode (for use in emergencies) [2].

New Usplash Themes for Startup

Depending on which version of the distribution you are using (Ubuntu,

Kubuntu, Edubuntu, etc.), a different version of the splash screen is displayed when booting. However, each specific theme is interchangeable and can be used by each of the other Ubuntu derivatives.

With the Synaptic package manager utility, search for the keyword *usplash* and install the version that you want.

Activate Theme

Once installed, you can activate the new theme in one of two ways. The first method is to select the new theme from the *Usplash theme* drop-down list on the *Appearance* tab of the StartUp-Manager application (see Figure 3).

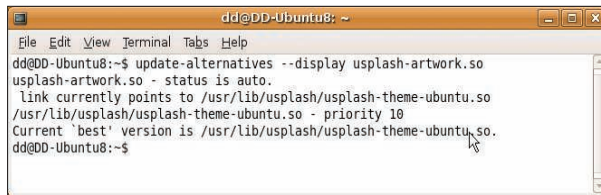


Figure 4: The Alternatives system defines settings for default applications (in this case, the Usplash screen).

In the second method, fans of the command line can use the *update-alternatives* program to adjust the settings in the Alternatives system.

The command

```
update-alternatives --display ?
usplash-artwork.so
```

shows which splash screen is currently selected. The output from this command will be something like: *link currently points to /usr/lib/usplash/usplash-theme-ubuntu.so*.

Alternative Themes

To select a different boot splash theme from the alternatives, use the *update-alternatives* command again, but use the *--config* parameter this time. Now the program displays a brief selection dialog in the console, showing which alternatives are available (see Figure 4). The entry indicated by an asterisk represents the current setting.

Either you must press the Enter key to keep the default setting or you have to

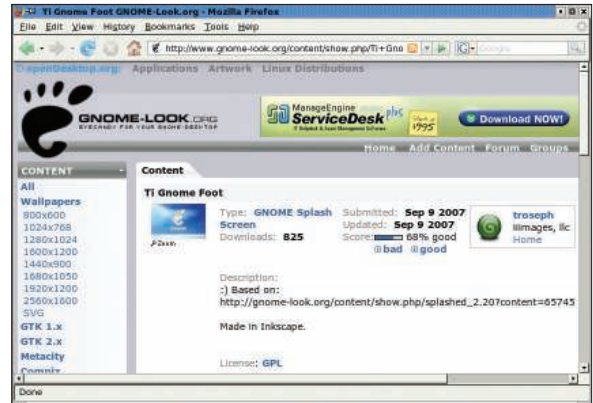


Figure 5: Search for Usplash themes at Gnome-Look.org.

type the number of an alternative selection followed by Enter.

Usplash Themes from the Internet

Websites such as Gnome-Look.org [3] and KDE-Look.org [4] have a number of other Usplash themes that you can download (search for *usplash*) (Figure 5). After downloading and unpacking the theme, you should copy the file with the *.so* extension (which contains the image, color scheme, etc. to be used) to the correct location; for example:

```
sudo cp chrome-theme.so ?
/usr/lib/usplash
```

Then use the command

```
sudo update-alternatives ?
--install /usr/lib/usplash/?
usplash-artwork.so /usr/lib/?
usplash/chrome-theme.so 50
```

to update the list of alternatives (also see the previous tip).

Now you can activate the new theme as the default either by running *update-alternatives --config* etc., as above, or by setting the corresponding option in the StartUp-Manager. ■

GLOSSARY

Alternatives: Debian and its derivative Ubuntu use the Alternatives system to define a default application for a group of programs (e.g., text editors, web browsers, or window managers), preselecting an application for the user. All of these alternatives are created in the form of symlinks in the directory */etc/alternatives*, from which they link to the default program. The alternatives are managed by the *update-alternatives* program.

INFO

- [1] "Linux: Init process and PC boot procedure," by Greg Ippolito, <http://www.yolinux.com/TUTORIALS/LinuxTutorialInitProcess.html>
- [2] RecoveryMode: <https://wiki.ubuntu.com/RecoveryMode>
- [3] Gnome-Look.org: <http://www.gnome-look.org/>
- [4] KDE-Look.org: <http://www.kde-look.org/>