

What's new in Ubuntu 9.04 Jaunty Jackalope

# ANNOUNCING THE RABBIT

Speed was the theme for the latest Ubuntu development effort, so what could be a better symbol than a mythical creature that is half antelope and half jackrabbit? Jaunty Jackalope offers faster boot times and lots of other improvements. **BY KRISTIAN KISSLING, NICK ALI, AND JOE CASAD**

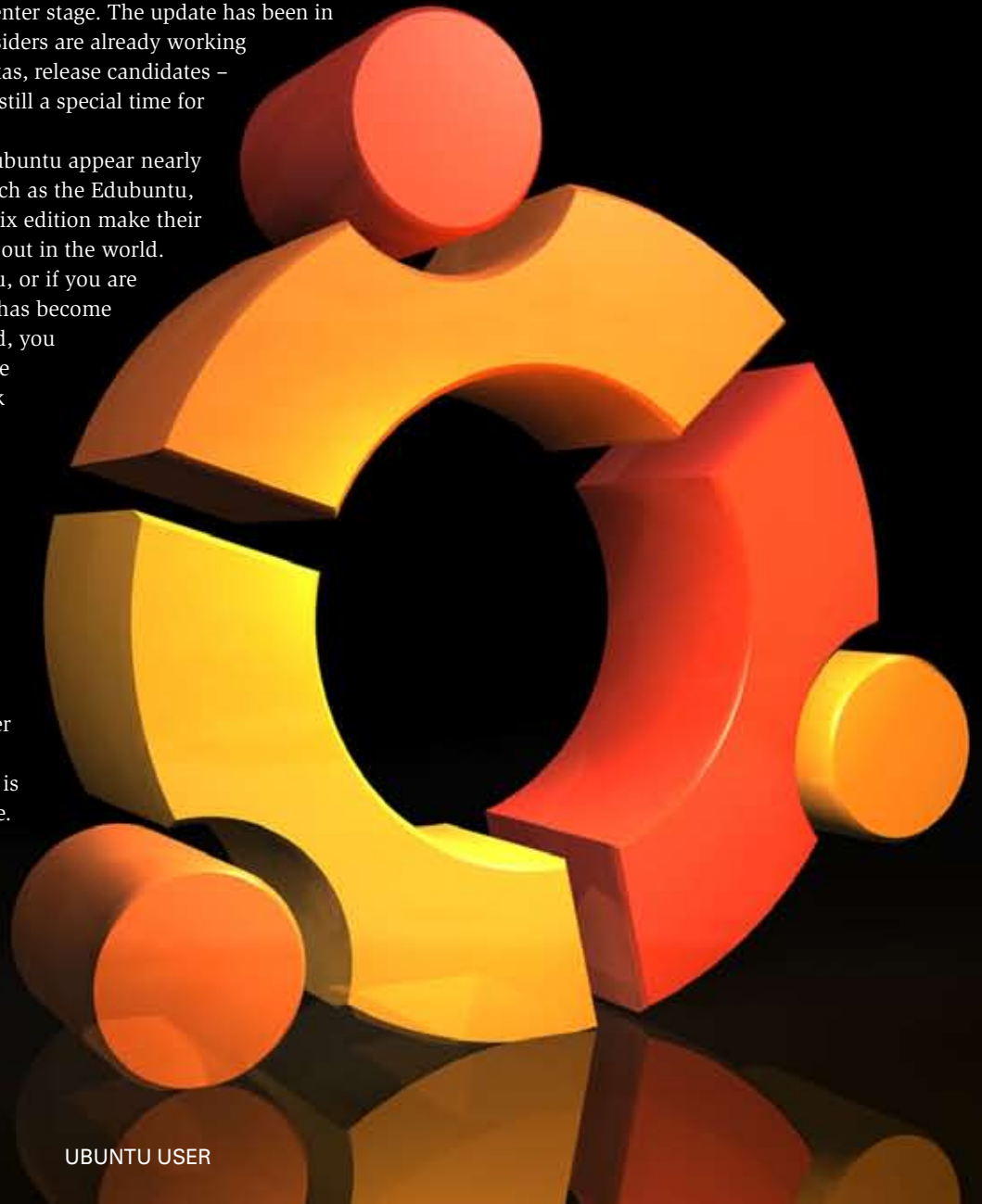
**O**n April 23, 2009, the final release of Ubuntu 9.04 rolls out to the public [1]. Download links light up around the world as the version known as “Jaunty Jackalope” hops to center stage. The update has been in the works for months, and Ubuntu insiders are already working with pre-release versions – alphas, betas, release candidates – but the moment of the final release is still a special time for any software development team.

Sister distributions Kubuntu and Xubuntu appear nearly simultaneously, and other projects such as the Edubuntu, Ubuntu Studio, and the Netbook Remix edition make their way to the public. Another Ubuntu is out in the world.

If you follow the fortunes of Ubuntu, or if you are new to this stylish Linux system that has become a favorite with users around the world, you might be wondering what's new in the latest release. Following is a brief look at some of the newest features. But beyond all the tools and options, you'll also find new art, better performance, and more comprehensive hardware support. Ubuntu just keeps getting better.

## Booting

When Canonical CEO Mark Shuttleworth introduced Ubuntu version 9.04, he highlighted the need for faster boot times. The noticeably improved boot performance under Ubuntu 9.04 is not because of any particular software. Instead, the developers used Bootchart (see Figure 2) to identify hangers and stoppers in the boot process and remove the culprits. The hardware detection phase was traditionally fairly slow, and Udev parallelization saves a couple of valuable seconds.



Phoronix, which does extensive performance tests on Linux distributions, compared Ubuntu 8.10 boot times with a development release, Ubuntu 9.04 Alpha 4. Testing on a netbook, Ubuntu 8.10 took 29 seconds to start, and the Jaunty Alpha 4 took just 21 seconds. For more details on the Ubuntu 9.04 boot performance, see the blueprint at the Launchpad site [2].

## Cloud Computing

Many commercial cloud computing services are available today (for example, the well-known Amazon EC2 service), but third-party cloud vendors introduce risks. Issues such as security are important when considering a third-party vendor for such critical business needs.

This problem begs for an open source solution. Ubuntu 9.04 supports Eucalyptus [3], a set of tools designed to help you build your own cloud. Eucalyptus is interface-compatible with Amazon EC2, meaning anything you do on EC2 you can do with Eucalyptus.

## Notifications

The most hotly discussed feature of Ubuntu 9.04 is notifications. Ubuntu's new notification system is similar to Growls in Mac OS and the Mumbles Projects for Gnome. A notification is not associated with an action, and you don't need to click anything to make it go away. A message appears on the desktop (Figure 3), and then, after the information is presented, it simply disappears. At least 35 applications support Ubuntu's notification system, including Network Manager, Pidgin, and Evolution. Popular applications such as Firefox still need to integrate notification support.

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## New Kernel

One of the most obvious changes with Ubuntu 9.04 is the new Linux kernel version, which includes numerous new drivers (for Ethernet and WLAN cards, filesystems, and webcams), and also many other updates.

At the top of the list for 2.6.28 kernel innovations is support for the new Ext4 filesystem, the heir to the previous Ext3. Ext4 is faster and can handle more files than Ext3. A file can be as big as the whole filesystem; partitions and volumes of up to 1 exabyte (equivalent of one million terabytes) are supported.

If you want to update your legacy Ext 2 and Ext 3 filesystems to Ext 4, you will need to run the *grub-install* command to let the grub boot manager correctly identify the kernel. Also note that you won't be able to mount Ext 4 partitions in environments with kernel versions prior to 2.6.28.

Ext4 is not without controversy. Testers have found is-

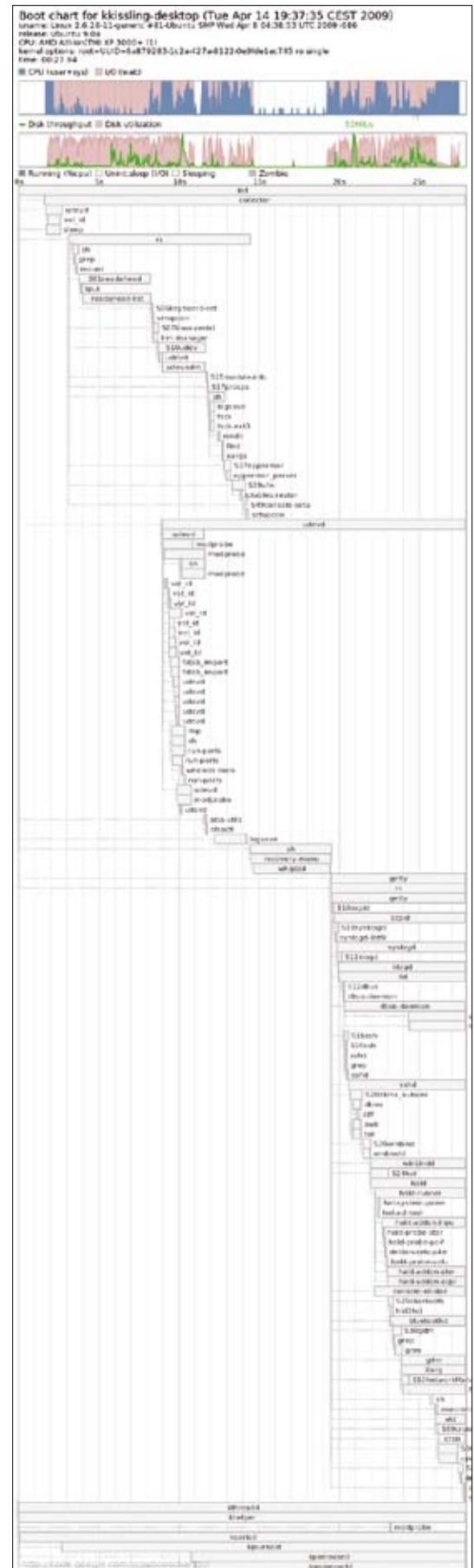


Figure 1: Members Ubuntu team gather in London to celebrate the Jaunty release.

Figure 2: Bootchart lets Linux users measure the time required by active component during the boot process.



Figure 3: A notification from the microblogging service identi.ca.

sues with the way applications update files and how Ext4 writes to the disk. Discussions are ongoing in the community. In the meantime, Ubuntu 9.04 does not use Ext4 as the default filesystem for fresh installs, but it is an option if you want to partition a drive manually when installing from the Live CD.

The new audio drivers provided by the kernel now support “jack sensing” – that is, they auto-detect microphones and loudspeakers. Various code changes also improve Linux’s handling of DVB hardware, webcams, and various other devices.

## Desktop

Many of the improved applications in Ubuntu 9.04 result from improvements to the Gnome 2.26 desktop, which offers simpler file sharing and better multiple-monitor support.

## PulseAudio

PulseAudio brings a new sound server to Ubuntu that lets users individually set the volume for each sound application.



Figure 4: Thanks to PulseAudio, you can individually set the volume for applications.



Figure 5: The new 3.0 version of OpenOffice with PDF import and other features.

The software has a questionable stability record, and anybody interested in using it will need to install the *gnome-volume-control-pulse* package via the package manager. After restarting, you will see two small loudspeaker icons in the panel. You need to remove the one with the vertical slider. To do so, right click the icon, and select *Remove from panel*. Right clicking the remaining icon and selecting *Preferences* in the drop-down takes you to the PulseAudio configuration dialog. You can now set the volume for individual programs in the *Applications* tab (see Figure 4).

## OpenOffice

Version 3 of OpenOffice (Figure 5) has been around since October 2008, but it was released too late to make the Ubuntu 8.10 freeze. The major Version 3 release included with Ubuntu 9.04 introduces a number of changes. For example, OpenOffice now supports PDF import, thus giving users (restricted) PDF editing ability. The developers point to the extensibility of the office suite via extensions that work in a similar way to Firefox add-ons. Users can download an exten-

sion to add its functionality to the office software. Thanks to improved support for OOOXML – Microsoft’s XML file format – the software now does a much better job of importing documents from Office 2007, but OpenOffice still fails to import highly complex OOOXML documents.

## Janitor Tool

Ubuntu 9.04 also introduces a janitor tool. This helpful garbage collection service disposes of files and packages that you no longer need (Figure 6). You might need to install 10 independent libraries just to add a single application package. If you delete the application, the Synaptic package manager will still keep the other library packages on the hard drive. The Janitor can identify and resolve this kind of problem. But there has been some criticism of the tool – at least in the early alpha versions of Ubuntu 9.04. The janitor reportedly deleted some software that users had installed manually. A cautious approach is your best bet.

## Ekiga

Ekiga 3.0 comes with a free video telephony tool for Linux. Although Ekiga is not compatible with the popular Skype, it is a useful replacement if the people you want to contact all have Linux. The developers have completely reworked the program’s interface, at the same time improving the video quality. Ekiga 3.0



collaborates with Evolution and will even import Evolution address books.

## Pidgin

The Pidgin Instant Messenger tool, formerly Gaim, is a useful choice for occasional Internet chatting. Pidgin lets you talk to users with messengers such as AIM, Google Talk, ICQ, MSN, IRC, and Yahoo, although the Pidgin client will not necessarily support video functionality for all these providers.

## Kubuntu and Xubuntu

KDE users who congregate on the Kubuntu side of the landscape will also find many changes with the latest release. Kubuntu 9.04 [4] comes with KDE 4.2.2. Amarok has always been one of the most popular apps for KDE, and many people consider it the best media player available. Kubuntu 9.04 includes Amarok 2, a complete overhaul of previous versions. The user interface lets you view lyrics and albums from the same artist together. Much of the work for Amarok 2 went into integrating online services such as Last.fm, Jamendo, Magnatune, and SHOUTcast.

Quassel is now the default IRC application in Kubuntu. IRC is a great way to get support and connect with the rest of the Ubuntu community. (Most Ubuntu

projects have their own IRC channels.) What makes Quassel interesting is that it can run in a distributed manner. The core component of Quassel can run continuously on a server and stay connected to various IRC networks. Client Quassel components can then connect to the core and use IRC normally. When the client disconnects and reattaches later, the IRC sessions will continue just as if the client had never disconnected.

Not to be left out, Xubuntu [5] also arrives with some promising new features. Ubuntu's Xubuntu variant is a favorite of users who want a streamlined desktop. Xubuntu 9.04 includes the latest Xfce 4.6 desktop environment, which offers better desktop integration. Thunar, the file manager, now has context menus that let you open applications, exit user sessions, or access help documentation. The mixer now works with GStreamer, which means that it supports multiple sound systems. Other features include a new session manager and a new settings manager.

## Support and Community

If you're looking for advice online, the Ubuntu Forums [6] offer a first level of support for many Ubuntu newcomers. The forum system even includes a subforum for new users: Absolute Beginner Talk. Other forums range from gaming to networking and wireless. Threads are monitored continuously by volunteer moderators to make sure no one is posting malicious commands.

One aspect of Ubuntu that is different from other distributions is the presence of local communities (LoCos). Similar to LUGs (Linux user groups), LoCos advocate, promote, translate, develop, and otherwise try to improve Ubuntu. LoCos are not meant to replace LUGs but, instead, they work with existing LUGs to evangelize and support users. Almost 200 LoCos have formed all over the world. If you are looking for a way to connect with Ubuntu users in your area,

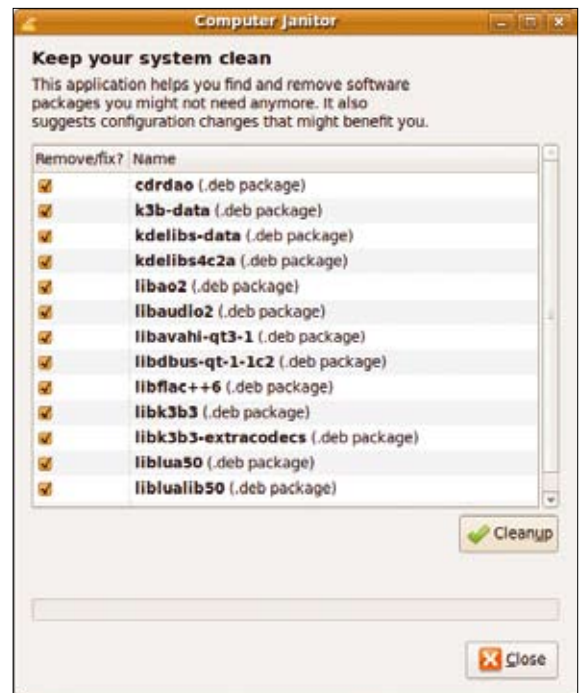


Figure 6: The new Ubuntu Janitor is designed to handle orphaned files, but its approach might be too aggressive at times.

check out the LoCo team list in the Ubuntu wiki [7].

## Read On

Welcome to *Ubuntu User* magazine. Read on for news, views, and informative discussions of some of the best tools of the Ubuntu environment. You'll learn about virtualization, firewalls, Windows integration, and the steps for building your own website.

If you are new to Ubuntu, you might want to start with our exclusive Discovery Guide section, which shows you how to set up your Ubuntu system and helps you put Ubuntu to work on some common tasks. ■

## Don't Zap

Long-standing Ubuntu users will probably notice the "Don't Zap" option. Whereas previous versions let users quit the desktop by pressing `Ctrl+Alt+Backspace` as a short-cut to the Gnome login window, this option is no longer available. Many users will probably consider this change a disadvantage. The new approach is to use the `Alt + PrtScr + K` keyboard shortcut, which the kernel has supported for many a moon, to handle the job. This shortcut also restarts sleeping desktops.

To reestablish the previous shortcut, you need to reinstate the original `/etc/X11/xorg.conf` configuration file status. To do so, press `Alt+F2` and type `gksu gedit` to launch an editor with administrative privileges. Open the file and add the following lines to `xorg.conf`:

```
Section "ServerFlags"
    Option "DontZap" "False"
EndSection
```

Then restart your system.

## INFO

- [1] Ubuntu: <http://www.ubuntu.com/>
- [2] Boot time details: <https://blueprints.launchpad.net/ubuntu/+spec/jaunty-boot-performance>
- [3] Eucalyptus: <https://help.ubuntu.com/community/Eucalyptus>
- [4] Kubuntu: <http://www.kubuntu.org/>
- [5] Xubuntu: <http://www.xubuntu.org/jaunty/countdown>
- [6] Ubuntu Forums: <http://ubuntuforums.org/>
- [7] Ubuntu LoCo Teams: <https://wiki.ubuntu.com/LoCoTeams>