What Natty Narwhal has to offer

DESKTOP OR MORE?

Ubuntu rolls out a new release – with a new desktop, a new audio player, and a few useful tweaks under the hood.

BY KRISTIAN KISSLING

Ubuntu users around the world are pleased to welcome another new release into the alliterative menagerie – in this case, Ubuntu 11.04 "Natty Narwhal." As with previous versions, the playful animal code name serves to highlight some central goal or feature of the new release. When Mark Shuttleworth first announced the 11.04 release last August, he said, "The narwhal, as an Arctic (and somewhat endangered) animal, is a fitting reminder of the fact that we have only one spaceship that can host all of humanity …."

The emphasis was on the ecosystem, or in this case, the complex community ecosystem that nurtures and supports Ubuntu. And the "Natty" part means that this narwhal needs to be well dressed. Although Shuttleworth doesn't say it directly in his blog, there is no doubt about the new clothes on this newborn.

The big news for this release is the Unity desktop. Unity, which debuted in the netbook edition of Ubuntu, is now part of the mainstream Ubuntu release – a big step, with major repercussions for both users and developers. The reason for the change from Gnome? Canonical officials have stated it differently at different times, but it seems clear that they wanted more control over the destiny of their desktop – especially as they take on the challenge of tablets, multitouch, and all the other new developments that might spin out of the mobile revolution.

Ubuntu 11.04 still has the same collection of desktop programs, but you might have to look around for them the first time you log in to the new environment.

The underpinnings remain the same: In fact, Ubuntu even continues to use Gnome 2.32 [1] – in contrast to the original plans – because the developers recognized in January 2011 that it would be

very difficult to separate the Gnome underpinnings from the desktop.

An external package archive [2] makes Gnome 3 available to users interested in trying it out.

Gnome Option

The Unity desktop is also an interface for Gnome, but it requires 3D acceleration to work properly. Unity runs on machines with ATI or NVidia graphics adapters from the past five years [3]. If your computer has an integrated Intel graphics chip, it should be from 2005 or newer (GMA 950 and newer).

Five years is a long time in computer development. In 2005, the now widespread multicore processors gradually started to conquer the markets. Our 2010 user survey showed that 84 percent of our readers have machines with at least 1GB of RAM. An even larger percentage uses a multicore CPU or single-core CPUs running at clock speeds of more than 2GHz. So, it is very likely that Unity will run on your machine; however, Ubuntu also offers the legacy Gnome as an alternative. If your computer does not have 3D acceleration support, Ubuntu

gives you a 2D version of the Gnome desktop.

If you want to switch from Unity, log off the desktop and select either *Ubuntu Classic,* the 3D version, or *Ubuntu Classic (No effects)*, the 2D version, in the login manager (Figure 1). The Live CD checks whether your system fulfills the requirements for Unity. To do this, Ubuntu 11.04 executes a tool, */usr/lib/nux/unity_support_test -p*, at boot time and – depending on the results – takes you to the matching desktop (Figure 2).

Booting and Installing

The biggest changes to the Ubiquity Installer were implemented for the most recent release of Ubuntu, but the developers have done some polishing work. The hard disk partitioning tool has a more clear-cut structure. And, you can now update an existing Ubuntu via the installer. In this magazine, we will continue to look at the "traditional" approach of updating Ubuntu on the running system.

Good news for Wubi fans: This solution, which lets you test Ubuntu on Windows, has been through a thorough bug hunt. Ubuntu's bootloader expert, Colin Watson, discovered some very tricky bugs and fixed them, leaving an installer that runs more reliably. The installer, in the form of an *.exe* file, is normally found on the Ubuntu installation CDs, or you can download it from the Ubuntu website [4].

Applications

Some applications have learned new tricks in Ubuntu 11.04, too. One application that is particularly worthy of a mention is the Software Center, which now boasts a "reviews and ratings" feature (Figure 3). Users with a free Ubuntu One account can rate all the applications in the package manager with a system that
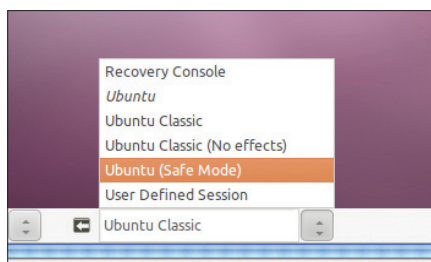
ranges to a maximum of five stars. Also, users can add comments, which appear in the Software Center, to vent their opinions on specific software.

These reviews will help newcomers in particular choose from the existing software. Troll comments can be reported and will be deleted. The community is already making extensive use of the feature, and it's certainly one of the highlights in the new Ubuntu. This feature will definitely influence the choice of software in future versions of Ubuntu.

As another new feature, the Software Center complains if packages fail to comply with quality standards imposed by Ubuntu for clean packages. If you encounter such a package, you have the option to continue the installation anyway, by choosing to *Ignore and Install*, although this might impair the stability of your system. The warning also advises users to inform the maintainers of the issues with the package.

Canonical's developers have also been working hard on the Ubuntu One cloud platform. Cloud computing was the buzzword at CeBIT, and many companies will attempt to attract customers to their clusters in the future. Ubuntu One now supports faster synchronization; the software shows the progress in the launcher icon, and it uses the messaging function to deliver important messages.

Banshee (Figure 4), which replaces the Rhythmbox audio player, is also new. It can import Rhythmbox files and has a slightly larger feature scope than Rhythmbox. When you launch the audio player, you will find a Banshee entry in the Unity loudspeaker indicator, and you can use this to control the player. The software is really useful if you want to convert a large number of audio CDs quickly to the MP3 format. Just check the appropriate boxes in the preferences for audio CDs, and Banshee will automate the process of converting any CDs you slot into the drive.

Figure 2: An integrated test tool decides at boot time whether your computer will work better with Unity or the classic Gnome desktop.

Figure 1: If you don't like Unity, you can change desktops in the login manager and opt for a 2D or 3D variant of the classic Gnome.
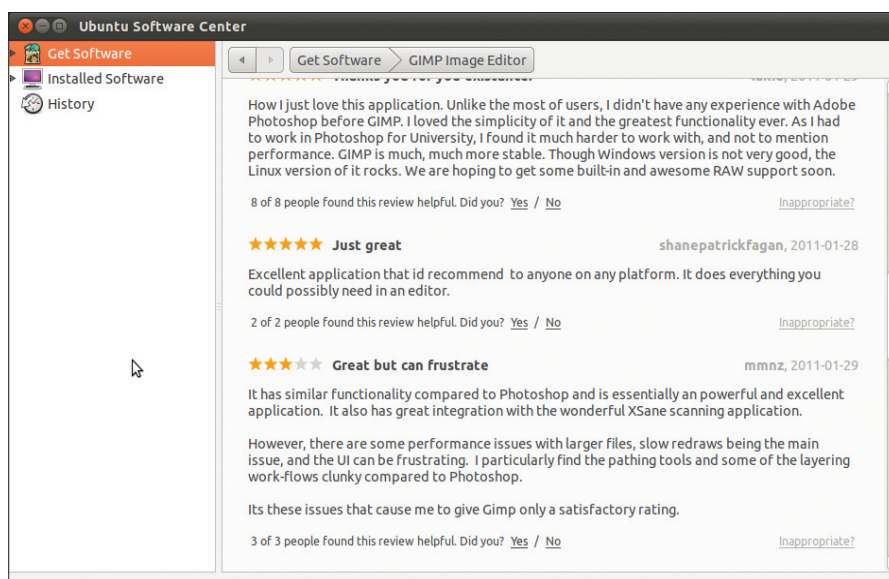

Figure 3: Users helping users: The newly integrated ranking function tells users which applications other Ubuntu users rate highly and which you should steer clear of.

LibreOffice, the OpenOffice fork, has become the standard office package in Ubuntu 11.04. Ubuntu has version 3.3.2 of the free office software, which has not departed greatly from its well-known OpenOffice path, thus far. Development work is well under way, and users can expect many new features in the future.

The fast image viewer, Shotwell, has now moved to version 0.9; it promises improvements in handling image collections. You can now print multiple photos, and sequential renaming of multiple images is now supported. Finally, the software supports the TIFF format and has improved rendering of underexposed RAW photos.

And, don't forget the standard browser: Firefox 4 loads websites twice to six times faster than its predecessor, mainly because of its improved JavaScript performance. The browser supports HTML5 and its new web technologies and formats, including WebGL (a 3D programming interface for browsers) and WebM (a container format for free audio and video codecs).

WebGL still seems to cause some issues on Linux. In the beta phase, the Firefox developers disabled WebGL for Linux completely because only the proprietary NVidia drivers were capable of displaying the content without crashing. Currently, you can (theoretically) use WebGL if you install the *libosmesa6* library. To do so, type *about:config* in the

Firefox URL bar to access configuration information; look for *webgl* and type the path to the */usr/lib/libOSMesa.so.6* file in the *Value* column for *webgl.osmesalib*. In testing, the browser was still reproducibly brought to its knees every time I launched a demo on a quadcore machine with a Radeon HD 5600 card.

Another new features is App Tabs, which let you create permanent tabs for your favorite sites (Twitter, Facebook, etc.). Firefox 4 is also more secure: Websites now explicitly inform the browser of legitimate and dubious content, thus making cross-site scripting attacks more difficult. If Firefox 4 discovers a website with an HTTP Strict Transport Security (HSTS) entry, it automatically uses the secure HTTPS protocol for the connection.

Under the Hood

Fewer changes have been made to the Ubuntu underpinnings this time, and not all of the original plans have been implemented. Migrating to Gnome 3 was always going to be a tricky issue. And the multitouch framework has not reached the status it should have. However, if you have the right device, or the right software, gesture-based controls will work. The X server, which moves to version 1.10 in Ubuntu 11.04, now has rudimentary support for the XInput 2.1 X extension.

Another new feature is the introduction of the Nux framework (Nux, Nux-

Core, NuxGraphics), which acts as an intermediary between OpenGL and Gtk. It acts as a toolkit for 3D applications and maps more or less every Gtk+ widget. Nux also works independent of the platform on Windows and Linux.

The biggest change to Kernel 2.6.38 is certainly the "magic patch." Thanks to automatic process grouping, this patch makes sure the CPU distributes its valuable time more efficiently among processes.

This feature is not just theoretical; the performance boost is clearly noticeable – or at least Linus Torvalds says so. On top of this, the kernel now supports AMD Fusion. These APUs (Accelerated Processing Units) are due for release this year and combine CPUs and GPUs on a single chip, thus leveraging the impressive computational power of today's graphics chips.

Apart from this, the kernel includes improvements to the ext4, Btrfs, and XFS filesystems and integrates a Mesh protocol with the "funny ha-ha" name of B.A.T.M.A.N (Better Approach To Mobile Ad hoc Networking). Additionally, the kernel now uses polling to check regularly for external devices (USB disks, etc.). This used to happen one layer higher up in the architecture, which led to several issues, such as processes being interrupted and drives being destroyed.

Conclusions

The change to Banshee, the improvements to the Software Center, and the updates for touch technology round out the release, but the big news with Ubuntu 11.04 is the new Unity desktop. The new look is definitely worth investigating, even if you decide to go for the classic Gnome desktop instead. Unity is highly usable but not quite finished. Stay tuned. ∎
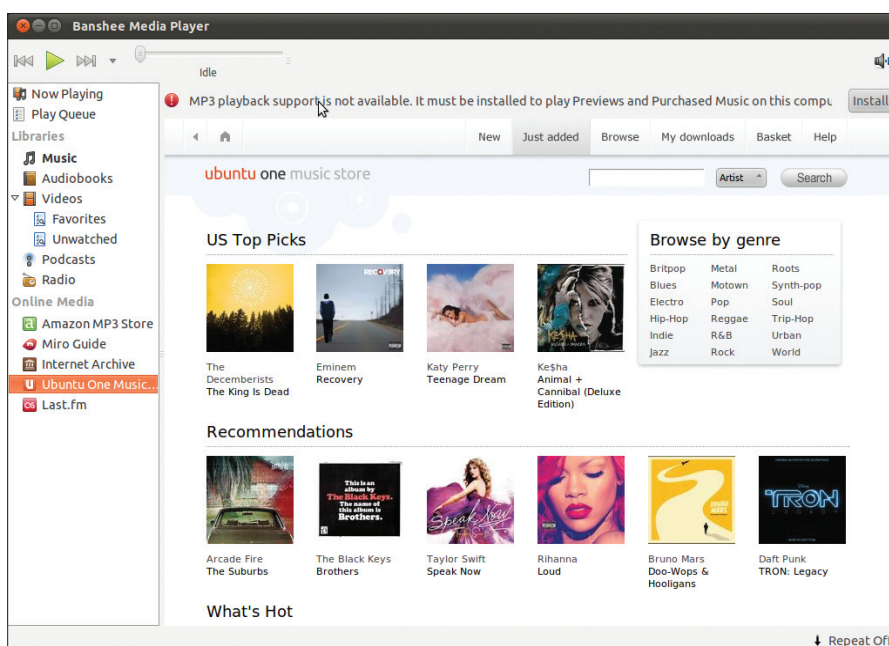

Figure 4: Banshee is not just a convenient audio player, it is also a very useful tool for automating the process of converting audio CDs.

INFO
[1] Gnome 2 instead of Gnome 3: *http://bit.ly/dObAqo*
[2] Gnome 3 PPA: *https://launchpad.net/~gnome3-team*
[3] Hardware requirements: *http://bit.ly/dNrxcl*
[4] Wubi download: *http://www.ubuntu.com/desktop/get-ubuntu/windows-installer*