

KDE Frameworks and Plasma 5 (aka KDE 5)

Previous major updates of this desktop environment have been as popular as the apocalypse. Fortunately, **Graham Morrison** is wielding Andúril this time.

DATA

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Writing two pages on the latest release of KDE 5 is a tough proposition. But this is a good thing. Were we to step into Bill and Ted's telephone box outside the Circle K and take ourselves back to 2008, surrounded by the fallout from the release of KDE 4, we'd be in a rather different situation. There would be so much to write about, nearly all of it negative, that we wouldn't know where to start. KDE 4.0 didn't work, because its users expected a fully fledged desktop upgrade and the first major release should have been an early alpha release instead. It took years before the sum of all the new technologies that were tested in 4.0 became a viable replacement for 3.x.

This should never have happened, and we think that the KDE team and many other open source projects learned from the experience – even though the Gnome team initially seemed to follow the same path with Gnome 3.0. KDE 5 avoids making the same

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mistakes, but not in the way you may be expecting. It's not a fully fledged desktop but nor is it a direct replacement for KDE 4, and

that's the difference. KDE 5 is being developed as a framework from which KDE 4 applications and technologies can migrate from their old systems to the new systems without stunting the development or progress of either and in a way that shouldn't cause any disruption.

KDE Frameworks 5 was released on 7 July. It contains around 50 different libraries that have been designed to be as modular and as portable as possible. These are split into four tiers, with

Everything in KDE 5 moves very elegantly, from the window transitions to the icon resizing.

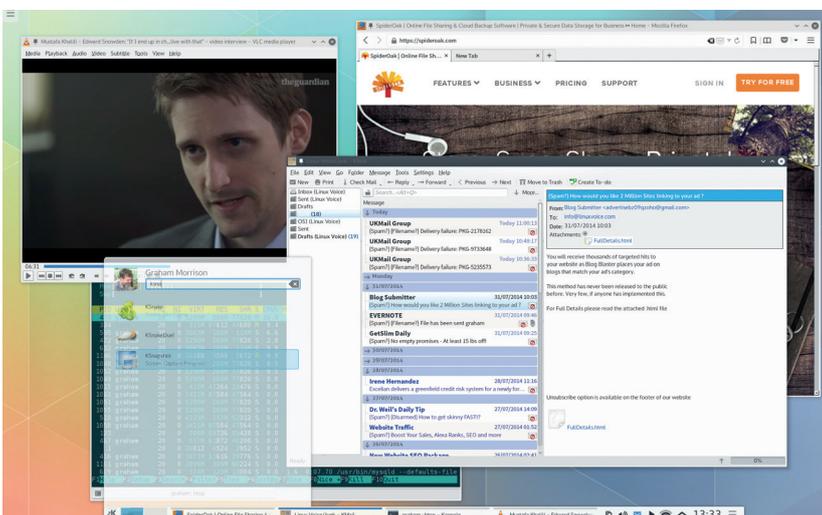
the majority of frameworks (21) falling into tier 1. This means their only dependency is *Qt 5*, which itself brings many, many performance and feature enhancements. Tier 1 frameworks include those that deal with archives, codecs, hardware integration and specific GUI additions, and developers can now include these without any further KDE dependencies, basically as a KDE-flavoured extension to the considerable features already offered by *Qt*. This will help many developers appeal to an audience who don't want to install the entire KDE desktop just to get hold of an application or two, and this should lead to the development of more KDE applications that run independently of the desktop.

What's waiting under the tree

This is all great for developers, we hear you say, but what about us humble users? Is there anything in KDE 5 we can click on now? The answer is yes, but it's far from ready. Released a week after frameworks 5, Plasma 5 is the beginnings of the KDE 5 desktop experience. At the moment, Plasma 5 consists of a new theme called Breeze, a new panel and notification system, a window and widget management system that's accelerated through OpenGL (ES), a new application launcher and a new interface to the Alt+F2 powerhouse known as *KRunner*. With the exception of the graphics acceleration, all of this could be done with KDE 4, and Breeze can already be made to run on older versions of KDE. The advantage with recreating these wheels for KDE 5 is that the design team can play to KDE 5's advantages, and that's exactly what they've done.

Breeze is a flat theme in the same style as Windows 7/8 with a default background that seems to borrow a triangular motif from the latest Ubuntu. The window borders are minimal and we like the pastel vs solarized colour palette. The system tray widgets look fantastic on our display, and we love the new notification system. As the KDE team themselves say, "interaction patterns are left intact", which we think means you interact with Plasma 5 in exactly the same way you interact with KDE 4. And we think is a very good thing indeed; KDE 4 works brilliantly, and there's no reason to mess around with the formula.

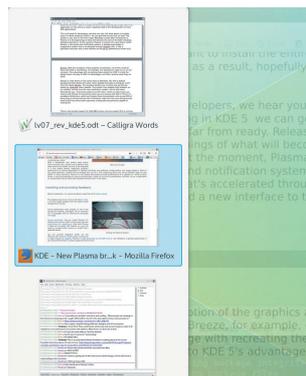
With its dependence on a launch menu and panel, some commentators accuse KDE of being stuck in the middle of the previous decade, but we're yet to see a convincing argument for doing things differently. The Windows 8 user interface is a disaster, both Gnome 3 and Unity are still trying hard to convince their users, and Apple's OS X hasn't really changed in over a decade. KDE's window management is



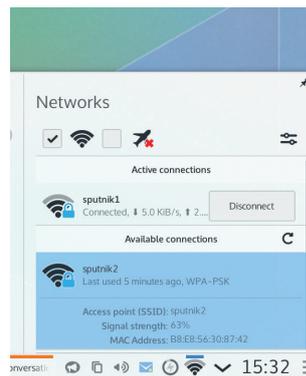
Plasma 5 in details



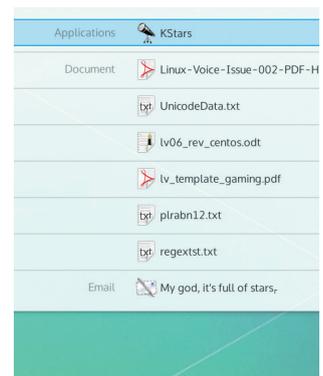
Launcher The launch menu now has pervasive search and a new flat look tied to your settings.



App switcher App and activity switching, and Plasma widgets, have all become more discreet.



Notifications One area now holds all notifications and the network manager settings.



KRunner The Alt+F2 launch system is now simpler and has had a graphical overhaul.

peerless, the desktop can be as minimal as you want it to be and you have access to an unrivalled number of configuration options. This is a desktop that can still be made to look and operate exactly how you want it to, but it takes effort.

High DPI

This initial release is supposed to support high-DPI screens, but we suspect this is coming for free from Qt 5. Its support in Plasma 5 suffers in the same way Qt does; it's very good at scaling GUI elements when it knows the pixel density of your screen, but there's no automatic way of telling it. And as you still need to use other applications, such as those from KDE 4 and those using GTK, it all quickly becomes a non-standard mess of changing font sizes and hoping for the best. As Aaron Seigo recently posted on Google+, "Fonts and screen DPI and scaling and kittens crying. Trust me, it all comes together."

The good news is that the KDE 5 high-DPI rendering looks fantastic on screens with a high pixel count – much better than KDE 4, and with more developers using laptops with unfathomable resolutions, this problem will hopefully receive some much-needed attention. And not too soon, in our opinion. This is a long overdue problem for Linux, and one where Ubuntu's Unity is currently leading the pack.

Don't upgrade yet!

As you might expect from an early release, there are enough teething problems with Plasma to stop us from recommending it now, especially on a machine you rely on. 'plasmashell' crashed five times over two weeks, and always restarted gracefully. We couldn't use the window manager's effects configuration page because there was an incredibly long delay whenever it loaded. It took many minutes to enable a single option, for example. Many of KDE's settings panels are missing, in particular the panel that configured a touchpad, which we found tricky. On our laptop,

brightness control worked when you pressed the button twice, while the buttons to control audio volume didn't work at all until we'd loaded the KDE 4 mixer. Both then had different on-screen display themes, and integration with *KWallet* didn't seem to work. Some apps were fine, whereas others – most importantly *KMail* – became unusable as they asked for a password every time they accessed the network.

KRunner has been humbled, not offering as many plugins at its KDE 4 counterpart, but hopefully that will come, and we can't believe the new battery applet looks so good and yet still doesn't tell you how much time is remaining, only a useless percentage. Convergence has also been mentioned, and there are different plasma shells for different form factors, but we've yet to see the point.

For everything else, there's KDE 4, and we don't think it will be long until Plasma 5 improves to the point where many people will be able to switch over. It will then be a case of waiting for apps to be ported to KDE 5 for the full native experience, a process that looks quite complex to our untrained eyes but not as difficult as KDE 3 -> KDE 4, and the process will be worth the transition.

KDE 5 looks good. It's faster and more efficient and it's the future. But until then, there's no disadvantage to sticking with KDE 4 and waiting a while before making the jump. 

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LINUX VOICE VERDICT

For developers, the upgrade is worth the effort. For users, it's going to take some time before this patient strategy pays off.

