ubuntu

Snappy Ubuntu Core

A new, transactionally updated Ubuntu for clouds and devices.

Snappy Ubuntu Core is a new rendition of Ubuntu with transactional updates – a minimal server image with the same libraries as today's Ubuntu, but applications are provided through a simpler mechanism. The snappy approach is faster, more reliable, and lets us provide stronger security guarantees for apps and users – that's why we call them "snappy" applications.

Snappy apps and Ubuntu Core itself can be upgraded atomically and rolled back if needed – a bulletproof approach that is perfect for deployments where predictability and reliability are paramount. It's called "transactional" or "image-based" systems management, and we're delighted to make it available on every Ubuntu certified cloud.

"Ubuntu Core provides transactional updates with rigorous application isolation. This is the smallest, safest Ubuntu ever, on devices and on the cloud. We're excited to unleash a new wave of developer innovation with snappy Ubuntu Core!"

Mark Shuttleworth, founder of Ubuntu and Canonical

World-leading security

Snappy applications are confined by Canonical's AppArmor kernel security system, which delivers rigorous MAC-based isolation and human-friendly security profiles. In snappy editions of Ubuntu we can isolate applications from one another completely, just as we do on the mobile phone, making it much safer to install applications from a wide range of sources.
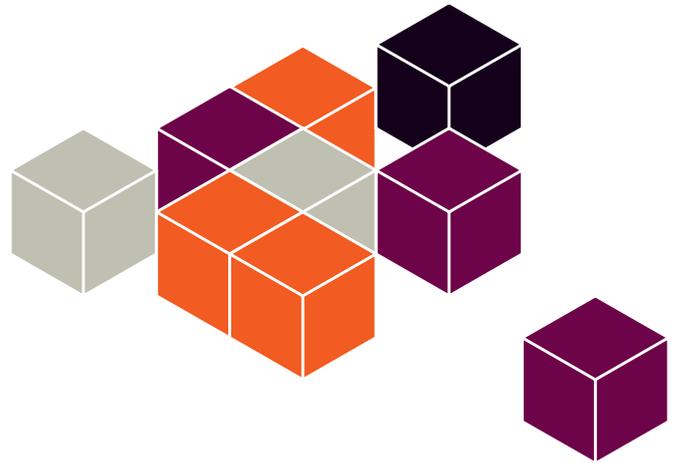
Safe, reliable updates

Snappy also delivers much more reliable updates, which means you can update your servers on the cloud faster and more confidently, fixing security problems automatically. When we update a snappy application we backup all your data before the update and rollback if the update fails for any reason, so your system is never in an incomplete state. Updates are guaranteed to succeed every time, and users can rollback to previous versions just as efficiently.

We set out to build a framework for perfect, worry-free updates so that the latest software with the best security can be deployed automatically on millions of cloud hosts and connected devices, keeping the internet safer and protecting your valuable applications and data.

Designed for Docker

Docker is the developer's favourite new tool, the best way to deliver applications straight from the workstation to the cloud. And a majority of those developers choose Ubuntu as their base operating system, with more than six times the adoption of the next most popular platform. Snappy Ubuntu Core makes an even crisper host for Docker deployments.

"Docker's transactional application delivery is shaping modern application development and DevOps practice, and snappy Ubuntu promises to bring the same transactional updates to the operating system itself. We're delighted to see the Docker ecosystem expand with this exciting new platform."

Ben Golub, CEO of Docker Inc

Amazing developer experience

Creating snappy Ubuntu apps is much easier than traditional packaging, simply bundle all the files you need in a single package and publish, then users can download it instantly. Snappy packages can be statically linked and include their own copies of any file they need. Developers can use the exact library versions they want, and they get to control when those libraries are changed, or use the core system libraries from Ubuntu if they prefer.

There is no need to become an Ubuntu developer or to comply with complex packaging rules in order to publish applications for Ubuntu Core, anybody can publish any application, easily and instantly, to a global audience.

Easily extensible with frameworks

The base Ubuntu Core is deliberately tiny – this makes it more secure, and more general. Rather than force users to adopt a particular tool, we offer frameworks that extend the base system cleanly. Frameworks can be provided by any vendor in collaboration with Canonical, and they can provide services to applications that depend on them.

How does it work?

The genesis of Ubuntu Core is our mission to deliver perfect system and application updates on phones – we created the snappy technology and application confinement system to ensure a carrier-grade update experience for Ubuntu mobile users and set a new standard for application security in the mobile era. Ubuntu Core brings that technology to the cloud and devices.

- The OS and application files are kept completely separate, as a set of distinct read-only images
- Transactional, image-based delta updates for the system and applications that can always be rolled back
- These files are read-only, which means they cannot be tampered with and can be updated perfectly and predictably every time
- Signatures and fingerprints ensure you're running exactly what was published by the developer, no funny business even if the bits came from the internet
- Delta management keeps the size of downloads to the bare minimum

Snappy architecture

There are four layers that make up a snappy machine: the hardware layer, provided by the device manufacturer or Canonical, the system layer, provided by Canonical, a layer of frameworks that extend the base system produced by vendors in collaboration with Canonical, and a set of snappy applications, provided directly by vendors. Updating any piece just means using the new version of a read-only image, reverting to a previous version is just as easy.

Apps	Apps	Apps
Frameworks	Frameworks	Frameworks
Ubuntu core		
Hardware		
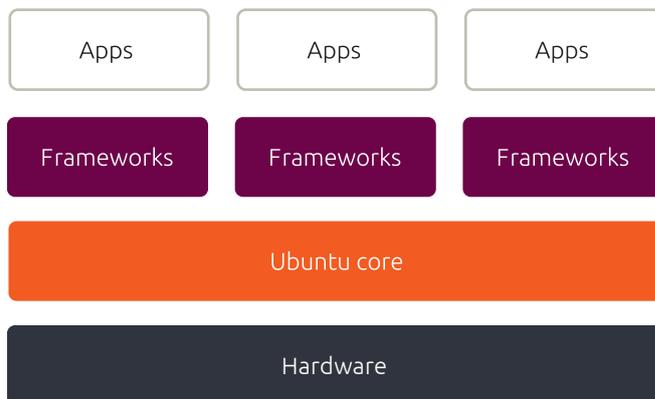
Try Snappy Ubuntu Core

Try Snappy Ubuntu Core today on these public cloud providers:

- Microsoft Azure
- Google Compute Engine
- Amazon Elastic Compute Cloud

Linux users can also try Ubuntu Core locally with KVM. Alternatively try our OVA and Vagrant images. Ubuntu Core can also be installed directly on ARM or X86 devices.

For more information: ubuntu.com/snappy

CANONICAL