

Optimized scaling in the cloud

New ways Ubuntu and Microsoft Azure drive high speed, reliability, and security

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Introduction: Ubuntu is everywhere— including Microsoft Azure

Developers love Ubuntu. It consistently runs everywhere from their desktop to the cloud or to their Internet of Things devices. That's why Ubuntu is the most popular operating system in the cloud and the go-to platform for scale-out and next-generation workloads. From development to production, enterprises enjoy a platform that works seamlessly across clouds and provides high security—and the same experience that developers have grown to love on desktops and servers works seamlessly on Azure. In fact, it's optimized by default for Azure. That's why it's not surprising that more than 70% of virtual machines running in the public cloud run on Ubuntu. It's the Linux distribution that underpins many of Azure's services, with over 900,000 new VMs launched every day.

Deploying at scale can increase complexity, which impacts critical maintenance operations such as security patching, compliance, and support. IT teams and developers are often held up by:

- Difficulty in prioritizing and automating security patching for a growing number of open-source software packages used by enterprise workloads.
- Inability to innovate quickly without running afoul of internal and external regulations and compliance requirements.
- Necessity to maintain legacy workloads in a secure production environment over time.
- Inadequate software licensing models that are not adapted to utility cloud computing for scale-out or cloud workloads.

Managing all these issues can keep talented staff tied up with “grunt work” tasks rather than the high-value strategic initiatives they would probably rather be doing. If they find that governance, security, and other issues continue to slow them down or leave unaddressed vulnerabilities, shadow IT processes and workarounds can crop up that put your company at risk. In this e-book, we'll help you solve these issues by switching to Ubuntu Pro optimized for Azure with enhanced security and compliance features. This will allow you to confidently scale your open-source infrastructure with reliability, speed, and peace of mind for superior performance.

Ubuntu Pro, simple enterprise scale-out

There are good reasons Ubuntu Pro is the go-to enterprise Linux—a lot of them—including:

Package variety to speed your projects from the beginning

Ubuntu provides 26,000+ source packages—and counting— dwarfing RHEL, which only has 1,800. That gives you a much broader footprint of support for workloads.

Freedom to choose your machine from general-purpose to high-performance computing

You'll also find support for an optimized version of Ubuntu Pro across a wide range of compute solutions available as Azure virtual machines. Whatever specialized machine you are looking for (storage, compute, memory, high-performance computing), Canonical (the publisher of Ubuntu) and Microsoft collaborate to create an optimized Ubuntu Pro image.

In a world that's fast moving to multi-platform computing, this freedom can be extremely important. Ubuntu also supports the broadest set of architectures on which enterprises can base workloads: Intel/AMD x86/x86/64, ARM-64, IBM POWER8 64-bit, IBM Z Systems S/390x, ARMHF, and POWERPC 32-bit.

A reliable release cadence, you can plan on... for the very long term

Ubuntu Pro is released like clockwork every two years with ten years of standard maintenance included* and a guaranteed upgrade path. In addition, Ubuntu interim releases are made available every six months.

This kind of regularity is unique for an enterprise Linux. Look at other vendors—you'll see they're far less predictable. For example, Red Hat Enterprise Linux (RHEL) 5 released March 2007; RHEL 6 in November 2010; and RHEL 7 in 2014. In contrast, you can count on a regular cycle from Ubuntu, so you know you're always working with the right iteration.

* For 18.04 LTS onwards. The maintenance period for Ubuntu Pro 14.04 LTS and 16.04 LTS is eight years.

Security by default so you can scale faster in full confidence

To maintain security and governance as you scale, you need comprehensive software, security, and IaaS support, such as Ubuntu Pro provides. It aggregates the support and management of open-source components into a single package within a flexible price plan aligned with Azure's per-hour billing model. This lowers the cost and decreases complexity compared to other alternatives in the marketplace. It also covers a full range of open-source infrastructure capabilities, providing value and efficiency from small- to large-scale enterprise Linux operations. You also get:

- Livepatch service, including critical kernel security fixes in seconds without rebooting, which increases automation and reduces downtime.
- Extended security maintenance (ESM) with security updates for Ubuntu LTS releases, which provides a fail-safe environment.
- Technology that's optimized for major cloud, hardware, and software providers certifying their technologies on Ubuntu.
- Compliance solutions that give you access to FIPS-certified modules to meet Common Criteria, as well as Defense Information Systems Agency Security Technical Information Guides (DISA STIGs), FedRAMP, and Peripheral Component Interconnect (PCI) compliance.
- Peace of mind for the security of your workloads, thanks to automatically applied security patches for hundreds of open-source applications, including Apache Kafka, MongoDB, RabbitMQ, Redis, and NodeJS.
- Options for 24/7 coverage with expert phone and web support for your Ubuntu deployments, including Kubernetes support.
- Infrastructure security with patches for Ubuntu infrastructure components.

Express case study

Six-figure savings: Infrastructure services save money in the short and long run

A major software development and hosting company that supports some of Germany's most successful businesses has been able to save its clients the six-figure application update costs. The company continued to run legacy code securely on existing infrastructure while it started using the extended security maintenance. In addition to delivering savings, security, and efficiency, this naturally boosts service quality and customer loyalty.

More complete coverage from the moment of launch

Ubuntu Pro for Azure takes your production environments to the next level. It's specifically designed to work with Azure and includes an optimized Azure kernel, improved boot speed, outstanding runtime performance, and advanced device support to match the features present in every Azure VM instance type. Canonical publishes images every day to ensure security is built in from the moment an instance launches. And to avoid the need to go across regions or out to the internet for updates, Ubuntu Pro provides content mirrors in every region.

With security and compliance services enabled by default, Ubuntu Pro also includes live kernel patching for instant security and longer uptimes as well as security patching of major open-source workloads. You can rely on components certified for FedRAMP, HIPAA, PCI, and ISO use cases. Plus, Ubuntu Pro is backed by a 10-year maintenance and security patching commitment by Canonical.

Find out for yourself how we've made the best Linux even better in the cloud.

[Explore Ubuntu Pro for Azure](#)