



Ubuntu

26.04 LTS

Resolute Raccoon

The Definitive Guide to
Installation, Administration,
and Enterprise Deployment



GNOME 50
Wayland-only session



Linux Kernel 7.0
Latest and greatest



Rust in the Core
Utilities and sudo



systemd 259
Mandatory cgroup v2



Security First
TPM-backed full-disk
encryption



Post-Quantum Ready
OpenSSH & OpenSSL
with PQC defaults



Accelerated
NVIDIA CUDA &
AMD ROCm support



5 YEARS
STANDARD SUPPORT
through April 2031



UP TO 10 YEARS
with Ubuntu Pro

STEVE T.

Canonical

Ubuntu 26.04 LTS Resolute Raccoon: The Complete Guide

Everything you need to know about Canonical's latest long-term support release.

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This book is available at

<https://leanpub.com/ubuntu2604ltsresoluteraccoonthecompleteguide>

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Introduction: Why Ubuntu 26.04 Matters

In the history of Linux distributions, certain releases stand out as turning points. Red Hat Enterprise Linux 7 introduced systemd and container readiness to enterprise computing. Ubuntu 18.04 made snap packages and cloud-native tooling mainstream. Each LTS release carries the weight of millions of production systems that depend on it for the next five to ten years.

Ubuntu 26.04 LTS, codenamed Resolute Raccoon, is one of those turning points. It arrived on April 23, 2026, after a development cycle that began in October 2025, and it carries a set of changes that will reshape how users interact with their systems and how administrators secure them. The most visible shift is the desktop: GNOME 50 now runs exclusively on Wayland, ending two decades of X11 as the default display protocol for Ubuntu's primary desktop environment. The most consequential shift is deeper in the system: core utilities like `ls`, `cp`, and `mv` are now provided by a Rust-based implementation called `utils`, and the `sudo` command has been replaced by `sudo-rs`, a memory-safe rewrite that eliminates entire classes of vulnerability.

These changes did not arrive in isolation. They are part of what Canonical calls the "oxidation" program, a systematic migration of security-critical C code into Rust, a language whose compiler prevents buffer overflows, use-after-free bugs, and data races at compile time. The Linux kernel itself now includes an official, stable Rust API for writing kernel modules, and Ubuntu 26.04 ships with the first batch of Rust-based kernel drivers.

The security story extends far beyond memory safety. Ubuntu 26.04 introduces TPM-backed full-disk encryption as a first-class installer option, meaning your disk encryption key is sealed to the Trusted Platform Module chip on your motherboard and unlocks automatically only when the boot environment has not been tampered with. OpenSSH ships with post-quantum key exchange algorithms enabled by default, using the hybrid `mlkem768x25519-sha256` scheme that combines classical X25519 with the NIST-standardized ML-KEM (formerly CRYSTALS-Kyber) algorithm. If a quantum computer capable

of breaking traditional elliptic-curve cryptography is ever built, your SSH connections will still be secure.

For developers and data scientists, the release brings something that has been requested for years: native NVIDIA CUDA and AMD ROCm packages directly from the Ubuntu repositories. No more wrestling with external PPAs or manually downloaded runfiles. A simple `sudo apt install cuda-toolkit` or `sudo apt install rocm` gives you a tested, supported AI/ML toolkit that receives updates through the normal system update process.

The infrastructure changes are equally significant. `systemd 259` removes support for `cgroup v1` entirely, meaning Ubuntu 26.04 is the first release where containers must run under the unified `cgroup v2` hierarchy. The `initramfs` generator has switched from `initramfs-tools` to `Dracut`, bringing better NVMe-over-Fabrics support and more robust early-boot initialization. `APT`, the package manager, has been upgraded to version 3.2, which introduces transaction history with full rollback capability, a feature that will save administrators from hours of troubleshooting when a bad package upgrade breaks their system.

This book assumes you want to understand these changes, not just accept them. It is written for the system administrator who needs to migrate a fleet of servers from Ubuntu 24.04 to 26.04 without waking up to a cascade of service failures. It is written for the developer who wants to set up a modern toolchain with Rust, Go, Python, and Java on a single machine. It is written for the home user who just downloaded the ISO and wants to know what happens next, why the folder icons look different, and whether the new terminal emulator is better than GNOME Terminal.

The chapters that follow take you on a structured journey. We begin with what Ubuntu 26.04 is and why this particular release matters, then move through installation and first-boot setup. From there, we build your command-line fluency, cover system administration essentials, and dive deep into security hardening. We then explore networking, virtualization, containers, cloud deployment, development workflows, troubleshooting, performance tuning, customization, and finally enterprise-scale management.

Every chapter includes practical examples you can run on your own systems. Commands are tested against Ubuntu 26.04 LTS (Resolute Raccoon) and reflect the actual package versions shipped in the final release. Where features are still evolving or where different sources disagree, we say so explicitly rather than presenting speculation as fact.

Ubuntu 26.04 is a resolute release, and this book is written to help you be resolute too, whether you are deploying it on a single laptop or a thousand servers.

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