

VERSION 10.2

THE DIRECT PATH TO RED HAT ENTERPRISE LINUX 10.2 Using Hyper-V Manager

DOWNLOAD • INSTALL • NEW FEATURES • UPGRADE?
(Y/N)

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```
# whoami

root

$ cat /etc/os-release

NAME="Red Hat Enterprise
Linux"

VERSION="10.2"

$ _
```

THE DIRECT PATH TO

RED HAT ENTERPRISE LINUX 10.2

[Download](#) • [Install on Hyper-V \(Windows 11\)](#) • [New Features](#) • [Should You Upgrade? \(Y/N\)](#)

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What We'll Cover

- ✦ What's new in RHEL 10.2 — the features every admin, developer, and student should know
- ✦ System requirements: the x86-64-v3 CPU baseline and why RHEL 9-era hardware may not qualify
- ✦ Downloading the official RHEL 10.2 ISO from the Red Hat Developer Program
- ✦ Configuring Hyper-V on a Windows 11 host to run RHEL 10.2 cleanly
- ✦ A full guided install, start to finish
- ✦ Should You Upgrade In Place from RHEL 9.x with Leapp — when it works and when it doesn't
- ✦ Where RHEL fits next to Rocky Linux, and what changes for certification exams

SECTION 1

Download & System Requirements

Downloading the official RHEL 10.2 ISO from the Red Hat Developer Program

<https://developers.redhat.com>

Getting the bits, the safe and supported way

System Requirements Before You Download

CPU Baseline

RHEL 10 requires an x86-64-v3 capable CPU — Intel Haswell (2013) or newer, AMD Excavator/Zen (2015) or newer. Older v2-only CPUs cannot boot RHEL 10 at all, virtualized or not.

Memory & Disk

Minimum 2 GB RAM (4 GB+ recommended for a comfortable desktop/demo experience). Plan for 20 GB+ of virtual disk for a full DVD install with AppStream packages.

Firmware

RHEL 10 installs cleanly under UEFI. You cannot switch an existing BIOS install to UEFI later — decide your firmware mode before you create the VM.

Downloading the RHEL 10.2 ISO

- ✦ Go to developers.redhat.com and sign up for the no-cost Red Hat Developer Subscription — this unlocks RHEL ISOs for individual, non-production use
- ✦ Under Downloads, select Red Hat Enterprise Linux, then version 10.2, architecture x86_64
- ✦ Choose the Binary DVD ISO (~10 GB) for a fully offline install with BaseOS + AppStream
- ✦ Always verify the SHA256 checksum listed on the download page against your downloaded file
- ✦ Save the ISO somewhere your Windows 11 host running Hyper-V can both reach easily, e.g. D:\ISOs\

SECTION 2

Hyper-V Setup on Windows 11

One clean VM, zero impact on your other guests

Building the VM (Run Hyper-V Manager)

- ✦ `createvm --name "RHEL10.2-Demo" --ostype "RedHat_64" --register`
- ✦ `modifyvm: --cpus 2 --memory 4096 --vram 128 --firmware efi --chipset ich9 --ioapic on`
- ✦ `modifyvm: --hvvirtex on --nested-hw-virt on --nestedpaging on --paravirtprovider kvm`
- ✦ `modifyvm: --cpu-profile host` (exposes the host's real x86-64-v3 flags to the guest)
- ✦ Storage: 40–60 GB dynamically allocated VDI on SATA; mount the DVD ISO on the optical controller

Windows 11 Host Gotchas

Core Isolation / Memory Integrity

If Windows 11's Memory Integrity (part of Core Isolation) is enabled, it can block VT-x from reaching VirtualBox. Either disable it in Windows Security, or confirm VirtualBox 7.x is running through the Windows Hypervisor Platform, which it uses automatically by default.

Keep Other VMs Powered Off

No shared settings exist between VMs — each is configured independently by name. As long as Auto-start isn't enabled on your other guest OSes, they simply sit off, using zero host CPU/RAM until you start them for a different demo.

SECTION 3

Guided Installation

Boot the ISO and walk through Anaconda

Installing RHEL 10.2 Step by Step

- ✦ Boot the VM from the mounted DVD ISO — the Anaconda installer splash appears
- ✦ Select language, then configure Installation Destination (automatic partitioning is fine for a demo VM)
- ✦ Set the time zone using the new text-based options (the old time zone map is gone in RHEL 10)
- ✦ Configure networking and hostname; enable the network device so registration works post-install
- ✦ Create the initial user — by default this account gets administrative (sudo) privileges unless you deselect it
- ✦ Begin Installation, then reboot into your new RHEL 10.2 system and register with subscription-manager

SECTION 4

What's New in RHEL 10.2

What every admin, developer, and student must know

RHEL Lightspeed: AI in the Terminal

- ✦ RHEL Lightspeed is an AI-powered command line assistant built into RHEL 10
- ✦ Ask plain-language questions directly at the shell — e.g. "why did my SSH session fail?"
- ✦ Answers are grounded in Red Hat's own knowledge base and documentation, not generic web search
- ✦ Lightspeed also extends to Insights: image builder now gives AI-driven package recommendations at build time
- ✦ Why it matters: it shortens the ramp for junior admins and speeds up troubleshooting for everyone else

Image Mode: RHEL Deployed Like a Container

- ✦ Image mode (bootc) lets you build, ship, and update the base OS itself as a container image
- ✦ The same image can target bare metal, a VM, or the cloud — one build, consistent everywhere
- ✦ This closes configuration drift between fleets of machines the way container images already do for apps
- ✦ Traditional package-based installs are still fully supported — image mode is an option, not a requirement

Security: Post-Quantum, Encrypted DNS, and More

Post-Quantum Cryptography

RHEL 10 is the first enterprise Linux to ship FIPS-aligned post-quantum algorithms across OpenSSL, GnuTLS, NSS, and OpenSSH — protecting data being harvested today against future quantum decryption.

Other Security Highlights

Encrypted DNS support out of the box • OpenSSH 9.9 • new Sequoia PGP tools (sq, sqv) alongside GnuPG • a sudo RHEL system role for fleet-wide sudo policy management via Ansible.

Kernel, Developer Tools & New Architectures

- ✦ Linux kernel 6.12, GCC 14.2, glibc 2.39, Python 3.12, Perl 5.40
- ✦ Wayland replaces the X.org Server as the default display protocol; RDP replaces VNC for remote graphical access
- ✦ RHEL for WSL is now a validated platform — a full RHEL dev environment on Windows without a traditional VM
- ✦ Developer preview of RHEL 10 for RISC-V; continued support for x86_64, ARM64, IBM Z, and Power
- ✦ InstructLab and the vLLM serving runtime ship in-box, making RHEL 10 AI-workload-ready out of the box

Know Before You Migrate: Breaking Changes

- ✦ x86-64-v3 is now the CPU floor — v2-only hardware cannot run RHEL 10 at all
- ✦ NIC teaming is removed entirely; use network bonding instead
- ✦ New users get sudo/administrative privileges by default at install time unless explicitly deselected
- ✦ cockpit-composer is deprecated, replaced by the cockpit-image-builder plugin
- ✦ Disk images (AWS, KVM, etc.) no longer carry a separate /boot partition

SECTION 5

Upgrading from RHEL 9.x to 10.x

My recommendation is to fresh Install 10.x version first and then migrate all the applications, test and verify everything in Development. Clone the same process in a newly production environment.

In-place with Leapp, or a clean install — know the trade-offs

In-Place Upgrade with Leapp (**Disclaimer: Not My Recommendation**)

- ✦ Red Hat officially supports an in-place RHEL 9 → RHEL 10 upgrade using the Leapp utility
- ✦ Install leapp-upgrade, run 'leapp preupgrade' first — review /var/log/leapp/leapp-report.txt for blockers
- ✦ Packages signed with RSA/SHA-1 will block the upgrade; replace or remove them before proceeding
- ✦ You cannot switch the boot loader from BIOS to UEFI during a Leapp upgrade — that requires a fresh install
- ✦ Custom or third-party applications may need custom Leapp actors; these are unsupported by Red Hat
- ✦ For fleets, Red Hat recommends the image-mode approach instead: build, test, and roll out a RHEL 10 image
- ✦ Consult the official Red Hat Enterprise 10.X and 9.X migration and create a ticket with Red Hat in case you need to send the sosreport to Redhat Support Engineers/Developers.

You're ready for RHEL 10.2

- ✦ Subscribe for the companion Rocky Enterprise Linux 10.2 walkthrough
- ✦ Full written guide and command reference: MyWebUniversity.com
- ✦ "The Direct Path to Linux Ubuntu" and the upcoming UNIX & Linux 101 series — available on Amazon KDP and Barnes & Noble Press
- ✦ Questions? Drop them in the comments — every one gets a reply