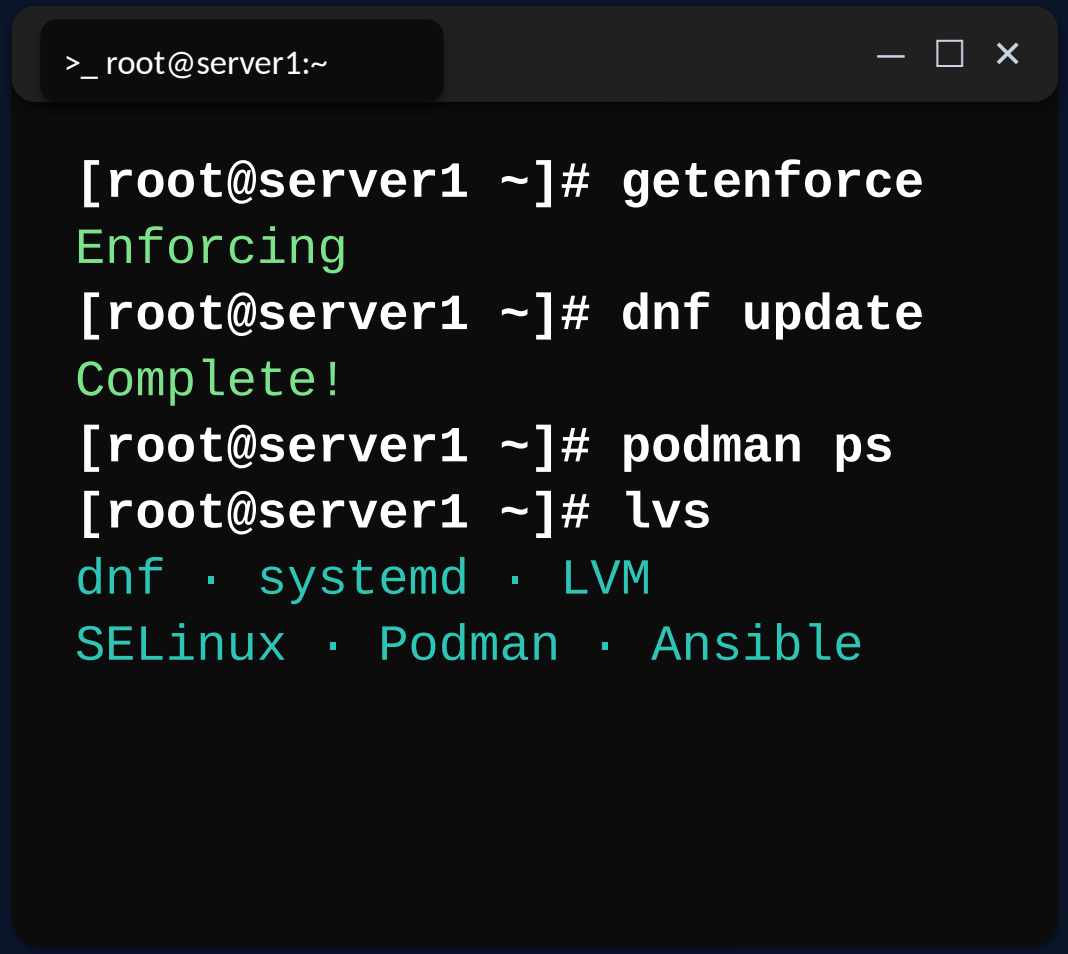


LESSON 1 OF 12

Red Hat Enterprise Linux

RHEL 9 & 10 · Admin · SELinux

RHEL 9 and 10: Versions, Lifecycle, Free Subscription & Lab

Full Course · RHEL 10.3 & 9.9 (Nov 2026)

What You Will Learn in Lesson 1

- What RHEL is and where it runs
- The family: Fedora, CentOS Stream, RHEL, Rocky and AlmaLinux
- RHEL 9 vs RHEL 10: what changed
- Versions and the 10-year lifecycle
- The no-cost Red Hat Developer subscription
- Hardware requirements and our lab: server1 and server2
- How this course is organized

What Is RHEL?

Topic	Answer
Vendor	Red Hat, part of IBM since 2019
What you pay for	Subscription: updates, security fixes, certification and support
Source code	Open source; built from CentOS Stream
Where it runs	Bare metal, VMs, containers, AWS, Azure, Google Cloud, edge
Architectures	x86-64, ARM 64-bit, IBM Power, IBM Z
Certifications	RHCSA and RHCE are among the most respected Linux certifications

The Red Hat Family

Distribution	Role	Cost
Fedora	Upstream: new features first, new release every 6 months	Free
CentOS Stream	The next RHEL minor release, developed in the open	Free
RHEL	The supported enterprise product	Subscription
Rocky Linux	Community rebuild compatible with RHEL	Free
AlmaLinux	Community rebuild compatible with RHEL	Free
Oracle Linux	Oracle's RHEL-compatible distribution	Free / support

RHEL 9 vs RHEL 10

Area	RHEL 9 (2022)	RHEL 10 (2025)
Kernel	5.14	6.12
x86 CPU level	x86-64-v2	x86-64-v3 (about 2013+ CPUs)
Desktop	GNOME on Wayland or Xorg	GNOME on Wayland only; RDP for remote desktop
Packages	dnf 4 with modules	dnf 4, no modules; Application Streams
Security	SELinux, crypto policies	Adds post-quantum crypto, MCP server
New ways to deploy	Image builder	Image mode (bootc) is fully supported

Versions and Lifecycle

Version	Latest minor	Full support ends	Maintenance ends
RHEL 10	10.3 (Nov 11, 2026)	May 31, 2030	May 31, 2035
RHEL 9	9.9 (Nov 11, 2026)	May 31, 2027	May 31, 2032
RHEL 8	8.10 (final)	Ended May 2024	May 31, 2029
Minor releases	Every 6 months	During full support	Security fixes only after

The No-Cost Developer Subscription

Item	Details
Where	developers.redhat.com — create a free Red Hat account
What you get	RHEL for development and learning, up to 16 systems
Downloads	DVD (full) ISO and boot ISO for RHEL 10 and RHEL 9
Updates	Full access to Red Hat repositories after registering
Not for	Production business servers — those need a paid subscription
Alternative	Rocky Linux or AlmaLinux: free and compatible

Hardware Requirements

Item	Minimum	Recommended for the lab
CPU	x86-64-v3 (RHEL 10) or ARM 64	2 vCPUs per VM
RAM	2 GB (server, no GUI)	4 GB for server1, 2 GB for server2
Disk	10 GB	30 GB system disk + two 5 GB extra disks
Firmware	UEFI or BIOS	UEFI with Secure Boot
Host	Any 64-bit PC or Mac	16 GB RAM on the host
Hypervisor	KVM, VirtualBox, Hyper-V, VMware, UTM	Whatever you already have

Our Lab for This Course

Machine	OS	IP address	Purpose
server1	RHEL 10.3	10.0.0.11/24	Main server; most lessons
server2	RHEL 9.9	10.0.0.12/24	Second server: SSH, NFS, upgrade lesson
Network	lab network	10.0.0.0/24	Gateway 10.0.0.1, DNS 10.0.0.1
Users	root + student	—	We work as student and use sudo
Extra disks	server1	/dev/vdb, /dev/vdc	Storage and LVM in Lesson 7

Your First Look at RHEL

```
[student@server1 ~]$ cat /etc/redhat-release
Red Hat Enterprise Linux release 10.3 (Coughlan)
[student@server1 ~]$ uname -r
6.12.0-...el10.x86_64
[student@server1 ~]$ hostnamectl
[student@server1 ~]$ nproc ; free -h ; df -h /
[student@server1 ~]$ ld.so --help | grep supported     # x86-64-v3 (supported)?
```

How This Course Is Organized

Lessons	Topics
1–3	Versions and lab, installation and Cockpit, command line essentials
4–6	Users and permissions, software with dnf, systemd, boot and logs
7–8	Storage and LVM, networking, firewalld and SSH
9	SELinux — a full lesson
10–11	Apache, NFS, Podman; security, updates and upgrading 9 to 10
12	Scripting, Ansible, image mode, troubleshooting and RHCSA

Summary and Homework

- RHEL: the supported enterprise Linux; Fedora and CentOS Stream come first
- RHEL 10 for new servers; RHEL 9 is still everywhere
- Ten-year lifecycle; minor releases every six months
- Free developer subscription: up to 16 systems
- Homework: create your Red Hat account and download the RHEL 10 DVD ISO
- Homework: create the server1 and server2 VMs (no install yet)

Thank You! 🙏

Free videos & PDFs: www.MyWebUniversity.com

Slides for this lesson: MyWebUniversity.com/presentations

YouTube: @MyWebUniversity · @MyWebUniversity-Dari

Wahidullah Lutfy — Founder and Director of IT of MyWebUniversity, and CS teacher

Book: The Direct Path to Linux Ubuntu (Amazon · Barnes & Noble)

Learn it, then pass it on.