Speaker introduction

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Introducing Red Hat Enterprise Linux 10

Address the Linux skills gap
With decades of Red Hat's Linux knowledge and expertise

Contain drift and accelerate delivery
With container tools and technologies

Make better decisions at build time
When it's typically easier and cheaper to make changes

Resist security attacks from hackers
When Quantum computers become prevalent

Leverage RHEL as a trusted AI foundation
With an extensive ecosystem of trusted partners and tools

New Marquee Features

1. Image Mode

Image Mode moves from "Tech Preview" to a GA, fully supported feature.

2. Command Line Assistant

AI augmented assistant (RAG model with Watson X, no additional licensing needed)

3. Post Quantum Encryption Capable

Technologies and framework for applying post quantum requirements when they become available

4. Insights Advisor in Satellite

Proactively analyze and remediate availability, performance, and security risks in disconnected environments

Address the Linux skills Gap

With decades of Red Hat's Linux knowledge and expertise

Red Hat Enterprise Linux Lightspeed

Addressing the Linux skills gap

Proactive guidance, knowledge, and recommendations

Command line assistant – use plain language to simplify the way you interact with RHEL

Leverage GenAI to easily automate tasks, accelerate workflows and troubleshoot RHEL systems, ultimately improving efficiency and reducing the skills gaps within IT organizations.

Red Hat Insights image builder package recommendations – make better decisions with recommendations and actionable guidance

Discover packages that are likely to be relevant—improve the RHEL experience and provide more value.

Insights image builder package recommendations

(Shift left)

Administrative access   Help ▾   Session ▾

rhel10-server.rh-lab.labs   running Red Hat Enterprise Linux 10.0 (Coughlan)

Search

System

Overview

Logs

Networking

Accounts

Services

Tools

Applications

Diagnostic reports

Kernel dump

SELinux

Software updates

Subscriptions

Terminal

Health

✔ System is up to date

✔ Insights: Not subscribed ⧉

👤 Last successful login: May 25, 03:01 PM
    from 192.168.1.63:3333 on web console
    through cockpit

Usage

CPU   0% of 2 CPUs

Memory   ▬▬▬▬▬   0.57 / 3.6 GB

System Information

Model	Red Hat KVM
Machine ID	624be438808446488ed8be6d3c21acc0
Up since	9 minutes ago

View hardware details

Configuration

Hostname	rhel10-server.rh-lab.labs
System time	May 30, 2025, 2:06 AM
Domain	Join a domain
Performance profile	virtual-guest
Cryptographic policy	DEFAULT
Secure shell keys	Show fingerprints

Contain Drift, and Accelerate Delivery

With container tools and technologies

Standardizing and innovating with containers

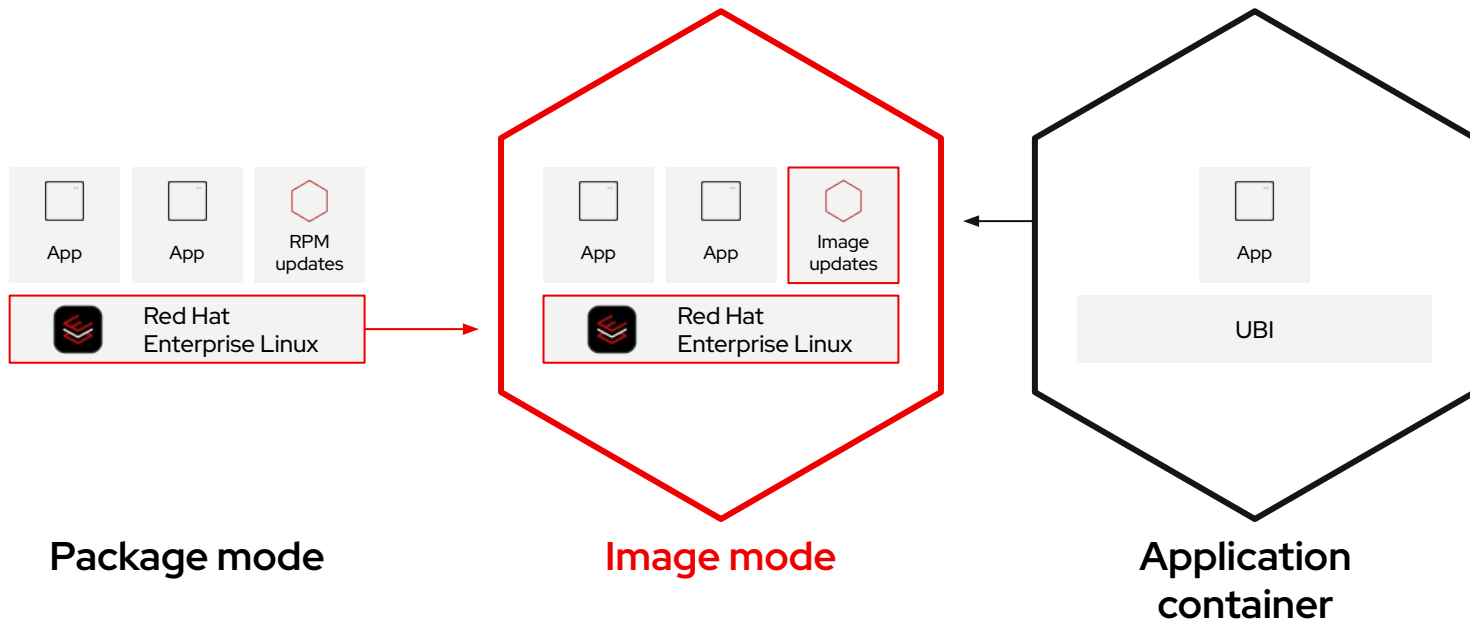|		
App	App	RPM updates

Red Hat Enterprise Linux

App	App	Image updates

Red Hat Enterprise Linux

App

UBI

Package mode　　　**Image mode**　　　**Application container**

Image mode for RHEL

A container-native workflow for the life cycle of a system

```
FROM rhel10/rhel-bootc:latest

RUN dnf install -y [software]
[dependencies] && dnf clean
all

ADD [application]
ADD [configuration files]

RUN [config scripts]
```

Build

Define your entire system—OS, applications, and dependencies—with just a bootc base image and container file. Leverage your existing container tools and pipelines for rapid image creation and testing.

Deploy

Easily convert to VM/cloud images, deploy on bare metal via the RHEL installer, or even reinstall on existing cloud images using bootc.

Manage

Engineered for modern GitOps and CI/CD workflows. Fully drive and automate systems via pipelines or scale control through Red Hat Insights, Satellite, and Ansible.

Image mode for RHEL

A uniform and convenient method for deploying the operating system

A container-native approach
to building, deploying, and
managing the operating system
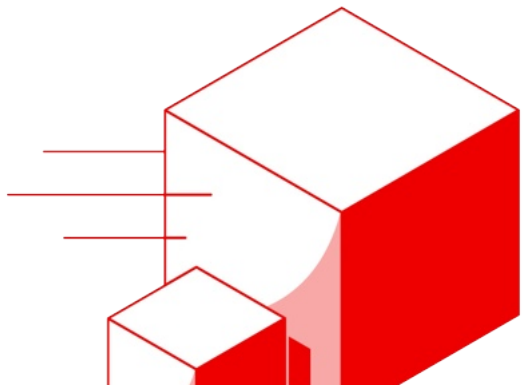
Bootc images from scratch

Gain full control over environments, enabling customized solutions for every need and ensuring precise control over included content
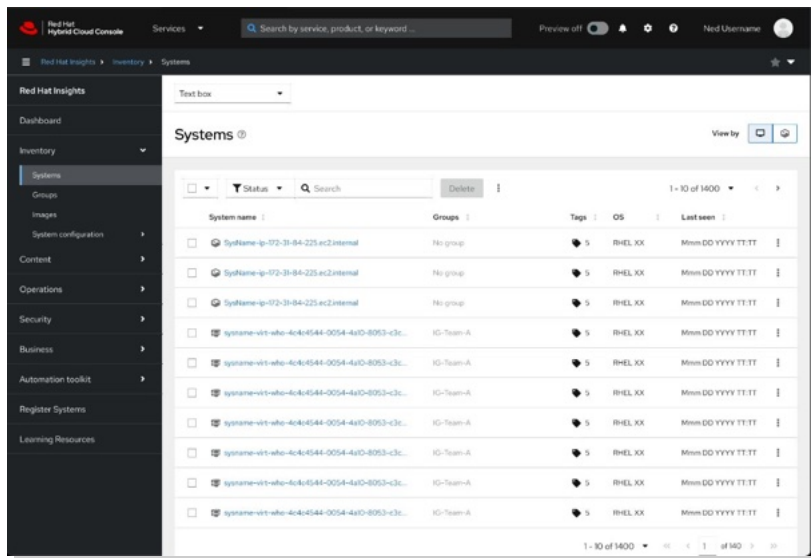
Compliance hardening

Apply the same security hardening profiles across package and image modes for RHEL systems to simplify compliance requirements

Flexible choice of management

Leverage your preferred management system

Red Hat Insights

Red Hat Insights
Image mode systems can be scanned for security and operational recommendations, and image updates.

Red Hat Satellite
6.17 brings image mode support across provisioning, client management, and an included container registry.

Ansible Automation Platform
Ansible can control content and configuration during build time and configuration at runtime. The community bootc collection simplifies client updates.

Red Hat Insights advisor in Satellite

Proactively analyze and remediate availability, performance, and security risks in disconnected environments
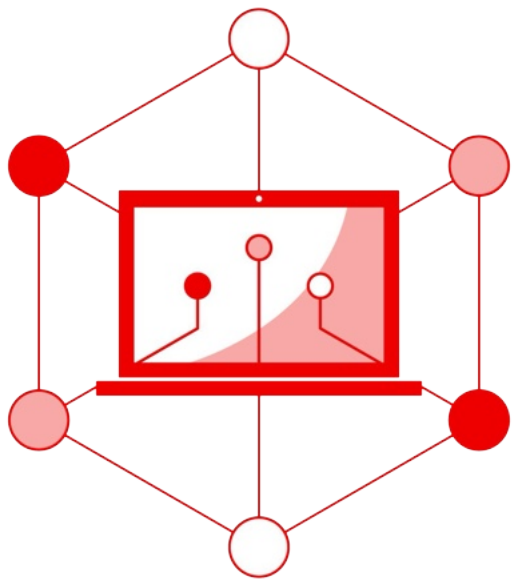
Use Insights advisor's business rules and logic – codified from decades of RHEL expertise – to monitor system configurations, detect risks, and prescribe remediations without sending data off-premises

▸ Flexible options for installing and upgrading

▸ Separation, minimal access, and ultimate control for highly regulated industries and geographies

▸ Proactive recommendations catch problems early, minimizing downtime

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(Tech Preview only in May 2025)

Red Hat Satellite 6.17

Support for RHEL 10

Inventory and manage systems running Red Hat Enterprise Linux 10

Image mode support

New support for provisioning, client management, and registry distribution for systems created with image mode for RHEL

Support for Flatpak content

Simplify importing, managing, and deploying updates via containers with support for Flatpak content, including both custom packages and Red Hat-provided applications

Secure boot support

Enhance security during provisioning workflows on bare-metal, VMware vSphere, and Libvirt platforms

IPv6 support

Deploy Satellite in an IPv6 environment, which helps address limitations of IPv4, including improved network efficiency and security

Demo time!

Deploy an Image Mode based RHEL9 system on KVM and register it to Satellite

Upgrade to RHEL10 using Satellite

Remediate disconnected systems with Red Hat Insights Advisor in Satellite
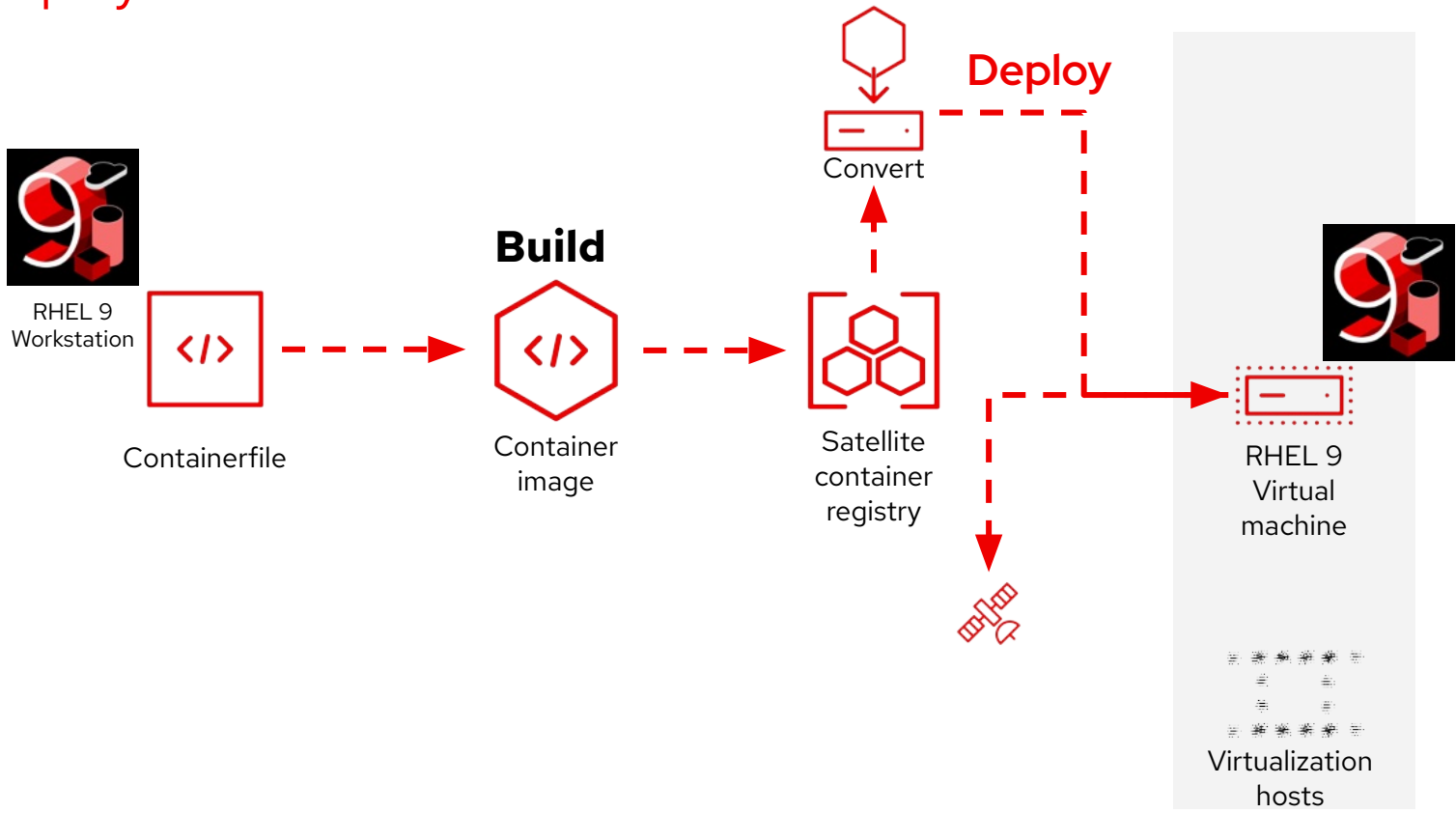
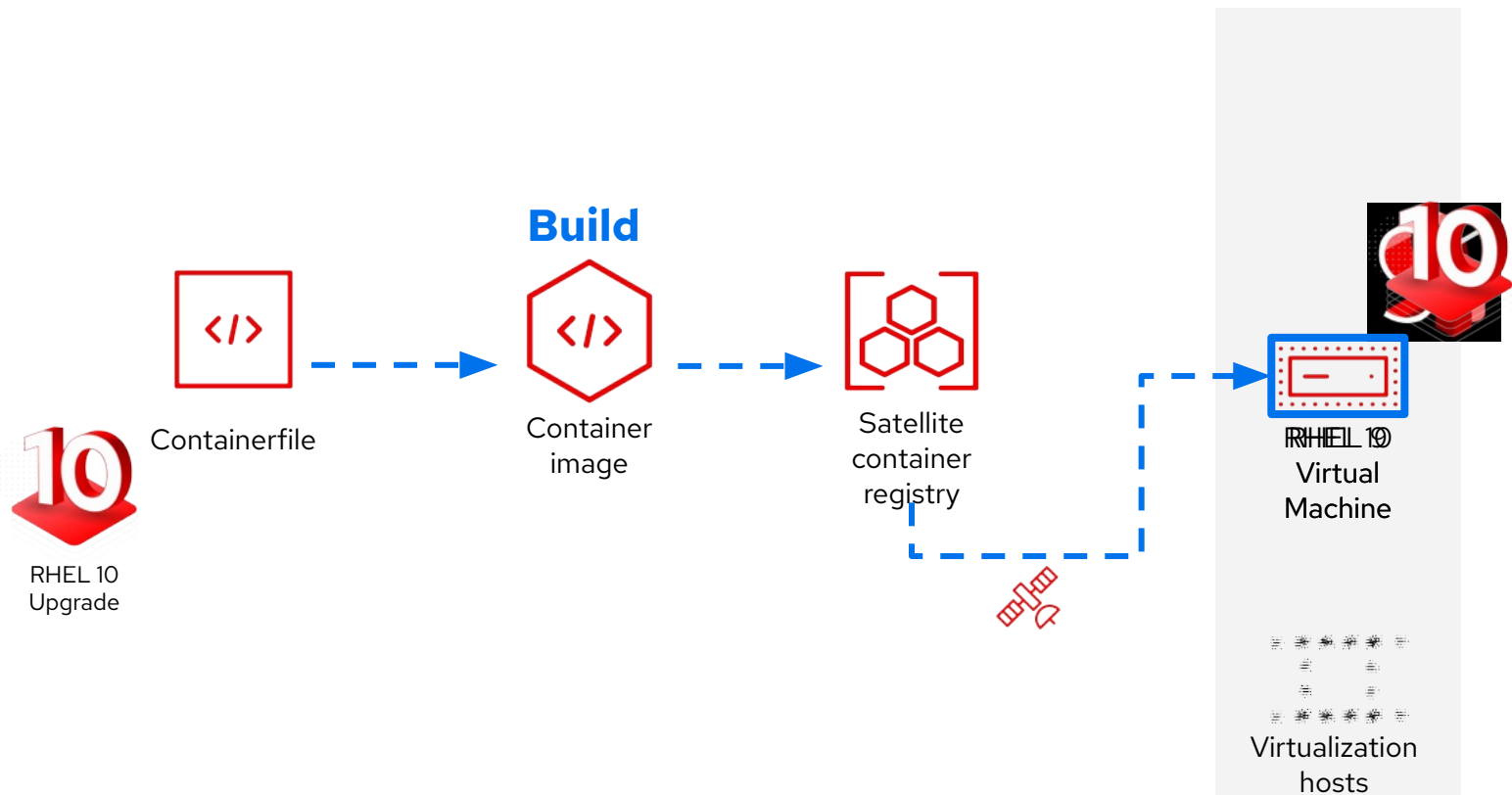Deploy an Image Mode based RHEL9 system on KVM and register it to Satellite

Deploy an Image Mode based RHEL9 system on KVM and register it to Satellite

Upgrade to RHEL10 using Satellite

Image mode Demo

Upgrade the workstation to RHEL 10 using Satellite

Build

Containerfile

Container image

Satellite container registry

RHEL 10 Virtual Machine

RHEL 10 Upgrade

Virtualization hosts

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Deploy an Image Mode based RHEL9 system on KVM and register it to Satellite

Upgrade to RHEL10 using Satellite

Remediate disconnected systems with Red Hat Insights Advisor in Satellite

satellite.rh-lab.labs/

incognito

Red Hat Satellite

Red Hat   Raleigh

Admin User

Overview

Search

Generated at May 15, 12:56 PM   Manage ⌄   ⊕ Documentation

Monitor ⌄

Dashboard

Host Statuses

Facts

Audits

Jobs

Reports ›

Satellite Tasks ›

Content ›

Hosts ›

Insights ›

Configure ›

Infrastructure ›

Administer ›

Sync Overview

Product	Status	Finished
EPEL 8	Syncing Complete.	6 days ago
EPEL 9	Syncing Complete.	6 days ago
Red Hat Enterprise Linux...	Syncing Complete.	6 days ago
Red Hat Enterprise Linux...	Syncing Complete.	6 days ago
Red Hat Enterprise Linux...	Syncing Complete.	6 days ago

Latest Jobs

Name	State	Started
Insights remediations for selected issues	succeeded	2 minutes ago
Run insights-client --register	failed	21 minutes ago
Run insights-client --register	failed	22 minutes ago
Run insights-client --register	failed	28 minutes ago
Insights remediations for selected issues	failed	29 minutes ago

Compliance Reports Breakdown

ⓘ

No Data Available

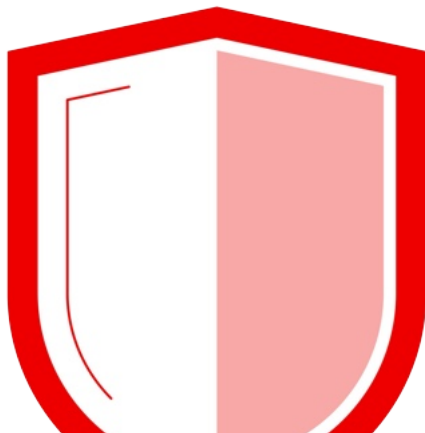### Latest Compliance Reports

No reports available

Make better decisions at build-time

When it's typically easier and cheaper to make changes

Compliance hardening for image mode for RHEL

Enhance the security architecture, promote immutability, and reduce the attack surface

Improved security practices within the DevSecOps framework

Improved cybersecurity

Minimize the challenges organizations face while trying to execute best-practice cybersecurity measures

Reduced barriers

Reduce common barriers of time constraints, resource limitations, and knowledge gaps

Improved capabilities

Provide organizations with the necessary capabilities to leverage security expertise within diverse environments

Red Hat Insights planning for RHEL

Plan ahead for RHEL and AppStream lifecycle updates, and gain insights into the RHEL roadmap

Gain access to lifecycle information, and plans for upcoming minor releases.

Centralizes roadmap and lifecycle details for AppStreams and RHEL minor releases – allowing administrators to proactively plan upgrades, maintain support, and anticipate the impact of upcoming feature releases and deprecations..
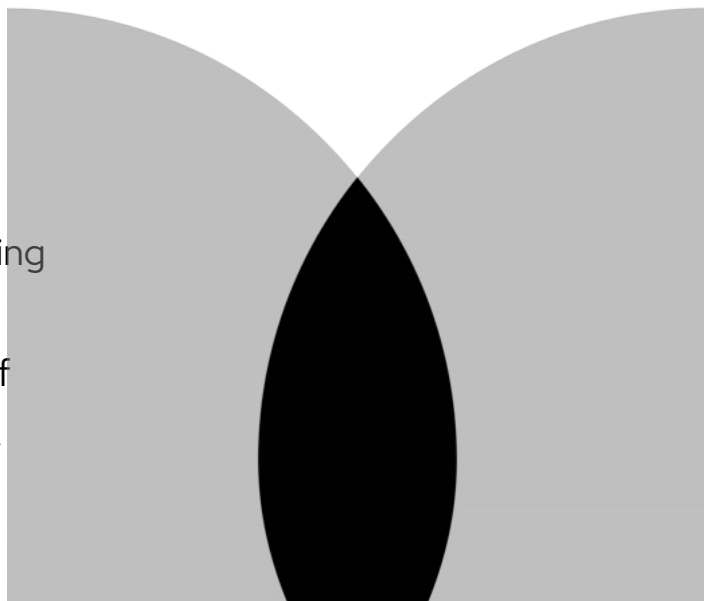
RHEL and AppStream life cycle information
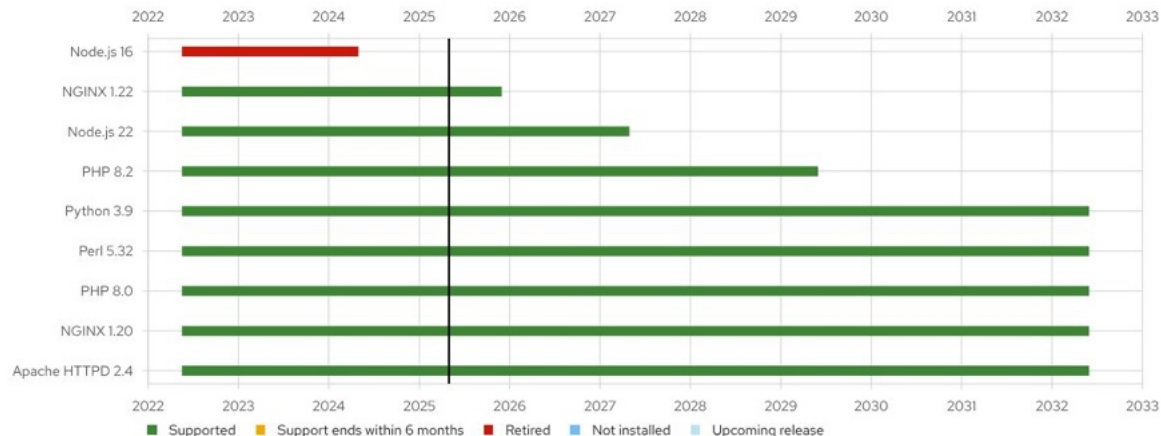
AppStream life cycle information also available in Insights image

Additional packages

Blueprints created with Images include all required packages.

> ℹ️ **Search for package groups**
> Search for package groups by starting your search with the '@' character. A single '@' as search input lists all available package groups.

| 🔍 nodejs ✕ | Available | Selected | | 1 – 10 of 22 ▼ ‹ |

Included repos ⑦   Other repos ⑦

		Name	Application stream	Retirement date	Package repository
›	☐	nodejs	18	❗ Apr 2025	Red Hat
›	☐	nodejs	20	⚠️ Apr 2026	Red Hat
›	☐	nodejs	22	✅ Apr 2027	Red Hat
›	☐	nodejs-devel	18	❗ Apr 2025	Red Hat
›	☐	nodejs-devel	20	⚠️ Apr 2026	Red Hat
›	☐	nodejs-devel	22	✅ Apr 2027	Red Hat

Next   Back   Review and finish   Cancel

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Red Hat Enterprise Linux roadmap

RHEL 10 Image Builder

Build for the cloud, on-premises, or even for WSL

Improved User Interface

More closely matches the Insights Image Builder feature set and UI

Expanded formats

Supports public cloud, bare metal, virtual machines, and WSL

Cloud-optimized Red Hat Enterprise Linux

Accelerate cloud adoption

Focus on initiatives that move your business forward, rather than spending time on operational functions

- Benefit from seamless integration with the cloud provider's services
- Leverage integrated management tools to speed operations
- Apply built-in cloud-specific configurations that ensure performance, integration and observability for your cloud-based workloads
- Deploy a stable surface to build on without having to worry about the underlying technology

Hyperscaler optimized cloud offerings:

‣ Red Hat Enterprise Linux for AWS
‣ Red Hat Enterprise Linux for Azure
‣ Red Hat Enterprise Linux for Google Cloud

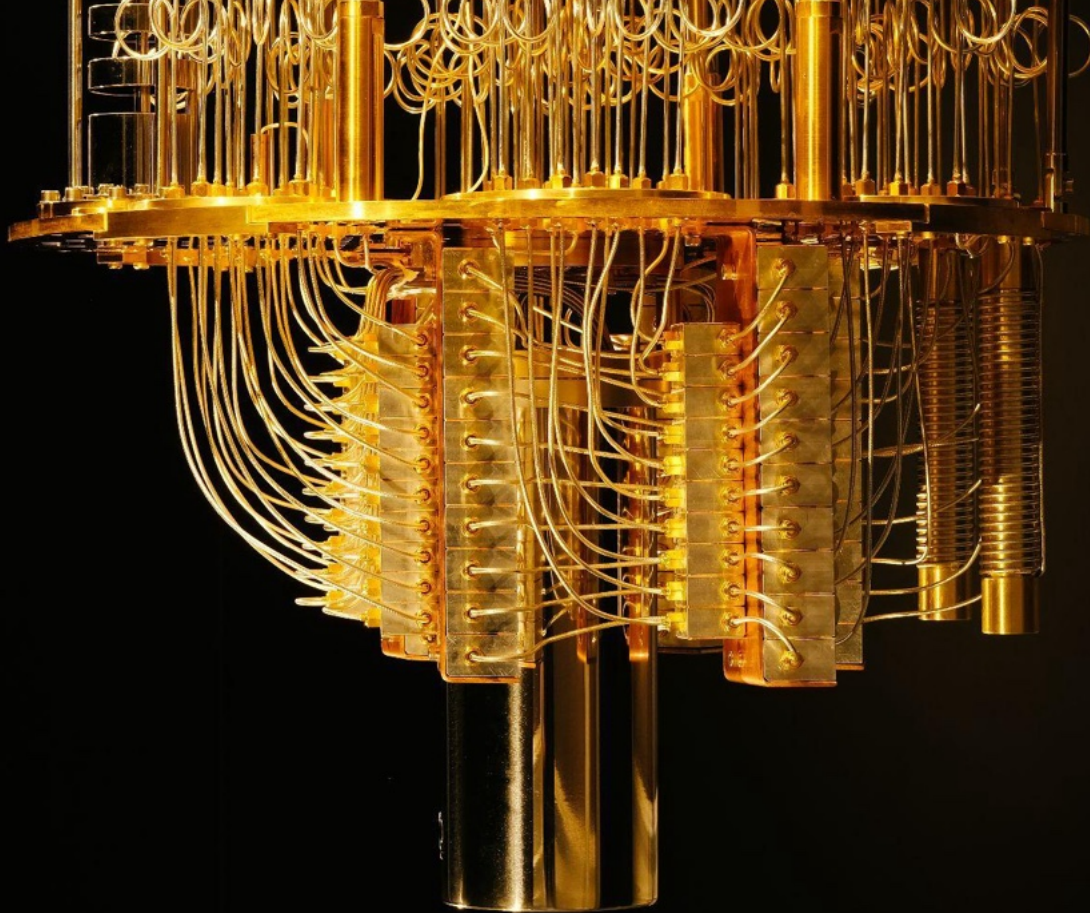# Resist security threats

When Quantum computers become prevalent

RHEL 10 includes

Key Exchange

ML-KEM

Digital Signatures

ML-DSA

Resist security attacks from hackers

When quantum computers become prevalent

Equip for future

Increase efficiency

Reduce risk

The best defense is
a strong partner.

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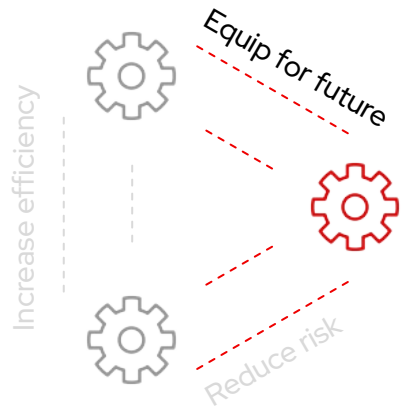
▶ **RHEL 10 is the first Linux distribution to be post-quantum capable** with new quantum-resistant algorithms (and more to come) so you can prepare now, for future compliance mandates

  ○ OpenSSL
  ○ ML-KEM (FIPS 203)
  ○ ML-DSA (FIPS 204)

PQC is a future challenge, but the threat is already here
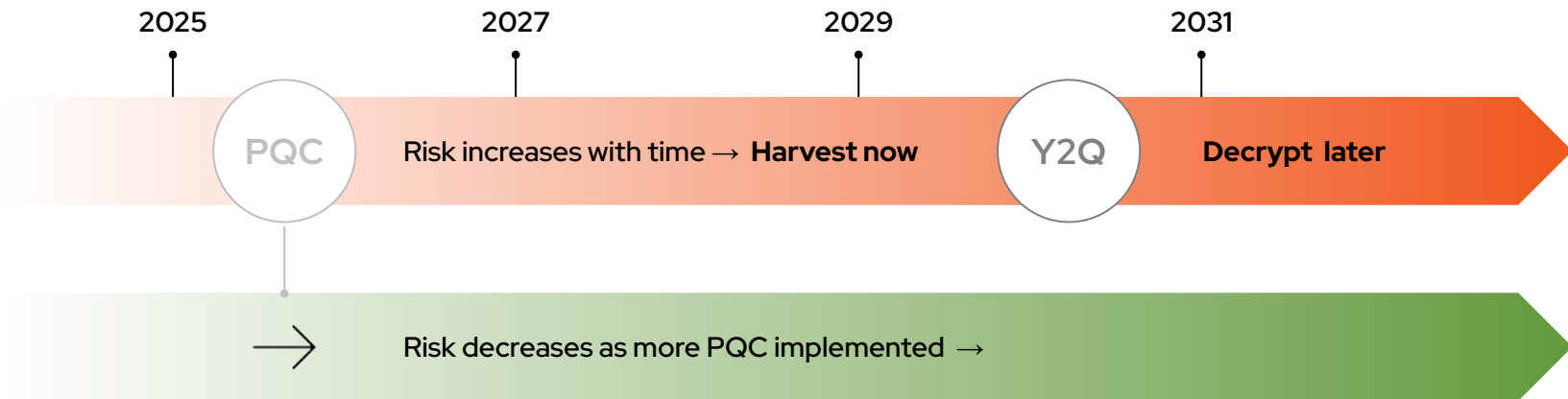
2025   2027   2029   2031

PQC   Risk increases with time → **Harvest now**   Y2Q   **Decrypt later**

→   Risk decreases as more PQC implemented →

Organizations adopting PQC today are protecting their data now **and in the future**

Y2Q Year when quantum starts defeating current encryption | **PQC** Start of PQC adoption

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Making it easy to use FIPs validated crypto

Maintain compliance

FIPS

Validate the Federal Information Processing Standards (FIPS) cryptographic standards separately so that any CVE fixes related to Open SSL or crypto libraries can be performed without the need to obtain a new FIPS validation certificate.
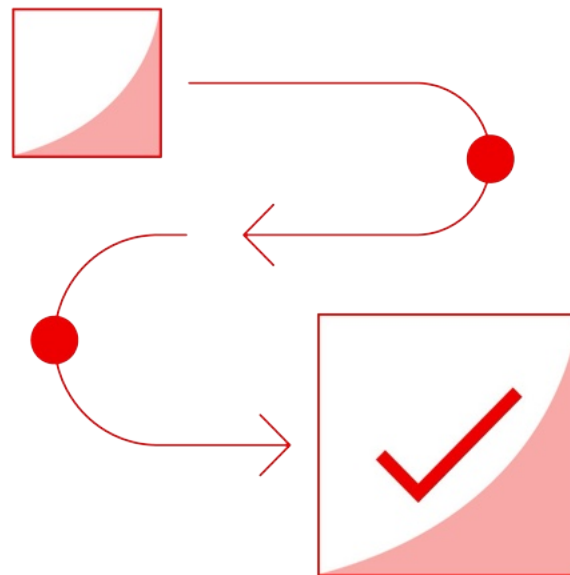
RHEL Security Select Add-on

Accelerate the rate at which organizations receive requested RHEL CVE fixes

Increases the rate at which organizations receive requested CVE fixes

▸ Organizations can now purchase RHEL Security Select 10-pack Add-On of CVE fixes associated with their ELS or EEUS/EUS subscriptions, allowing for fixes upon request.

▸ Individual RHEL Security Select Single Add-Ons for CVE fixes beginning with CVE 11 and onward can be ordered at a valued price.

▸ An ELS/EEUS subscription is necessary to qualify for the RHEL Security Select Add-On.

▸ Organizations may acquire this offering like ELS, and it can be backdated to align with the start date of their EUS/ELS subscription.

▸ The RHEL Security Select Add-On provides a Service Level Agreement (SLA) of 90 days.

▸ Only available with Premium RHEL
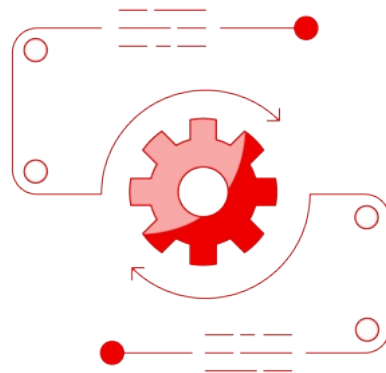
RHEL extensions repository

Red Hat delivers high-quality software in a convenient location with minimal maintenance requirements

The RHEL extensions repository will include developer tools, open source libraries, and niche utilities that make RHEL valuable to developers and system administrators

These packages will be:

- ▸ Efficient process to access high value packages

- ▸ Validated by Red Hat

- ▸ Community-supported, having gone through Red Hat's Secure Supply Chain

- ▸ Consumable and manageable within the Red Hat ecosystem
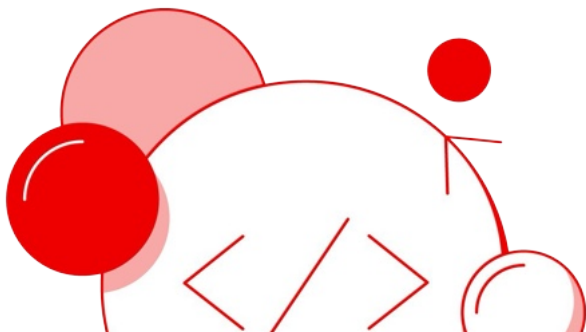
Other Notable Features

Package Changes

Packages removed or deprecated with RHEL 10

XOrg Removal

RHEL 10 will be Wayland-only. With the removal of Xorg, several other technologies leave too, specifically GTK2 and Motif.

VNC Removal

VNC relies on the older X technologies which are no longer included in RHEL10. RDP is the remote graphical desktop alternative. RDP has now replaced VNC for remote graphical installations as well.

SCAP Workbench Removal

Used GTK2, which was removed with Xorg. SCAP Workbench has not been re-written to function with Wayland, and consequently has been removed

Tomcat returns

Tomcat is now included in RHEL (it initially returned in a minor release update of RHEL 9). It had been removed from RHEL8.

CPU Changes

x86-64-v3 : Instruction Set Architecture version 3 (ISAv3)
Haswell or greater Intel CPUs, Excavator or greater AMD CPUs
Not all CPU platforms are v3 compliant (Some Atom)

i686 removed :
No software compiled for i686 support will be included. This affects
32-bit multi-lib support

Upcoming events to mark in your agenda

**Open Source Summit
Europe**
(Red Hat is global sponsor)
25-27 August, RAI
Amsterdam

**Red Hat Technical
Journeys**
On demand, virtual

redhat.com/en/events

**Red Hat Summit: Connect
2025**
15 October 2025,
Utrecht, NL

25 September 2025,
Brussels, BE

14 January 2026
Zurich, CH

Thank you

Red Hat is the world's leading provider of enterprise open source software solutions. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500.

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