**Red Hat
Enterprise Linux**

Red Hat Enterprise Linux

What's new in RHEL 9.4 and 8.10

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What we'll discuss today

▶ Summit announcements

▶ Technical features

▶ Red Hat Satellite 6.16

▶ Red Hat Insights

▶ Q & A

Sources:
{RELEASE BLOG}
https://access.redhat.com/documentation/en-us/red_hat_enterprise_linux/9-beta/html/9.4_release_notes/index

What's New in RHEL 9.4 and 8.10

Red Hat Summit Announcements

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Image mode for Red Hat Enterprise Linux

Combining the power of RHEL with the benefits of containers
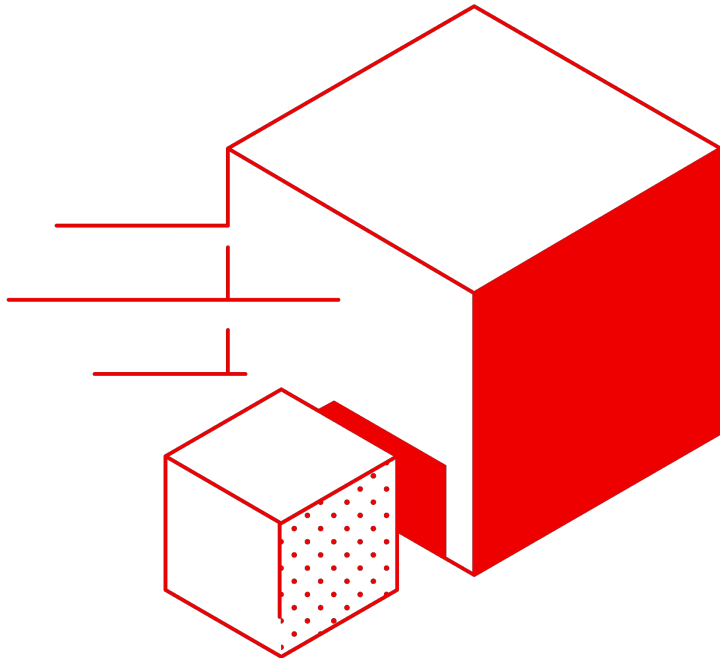
All RHEL users benefit from standardization
Simplify operating system (OS) portability across hybrid cloud environments

DevOps teams can reduce platform and application friction
Integrate the operating system into continuous integration and continuous delivery (CI/CD) and GitOps workflows

Security teams can make their jobs far less complex
Apply container security tools to the base elements of the operating system
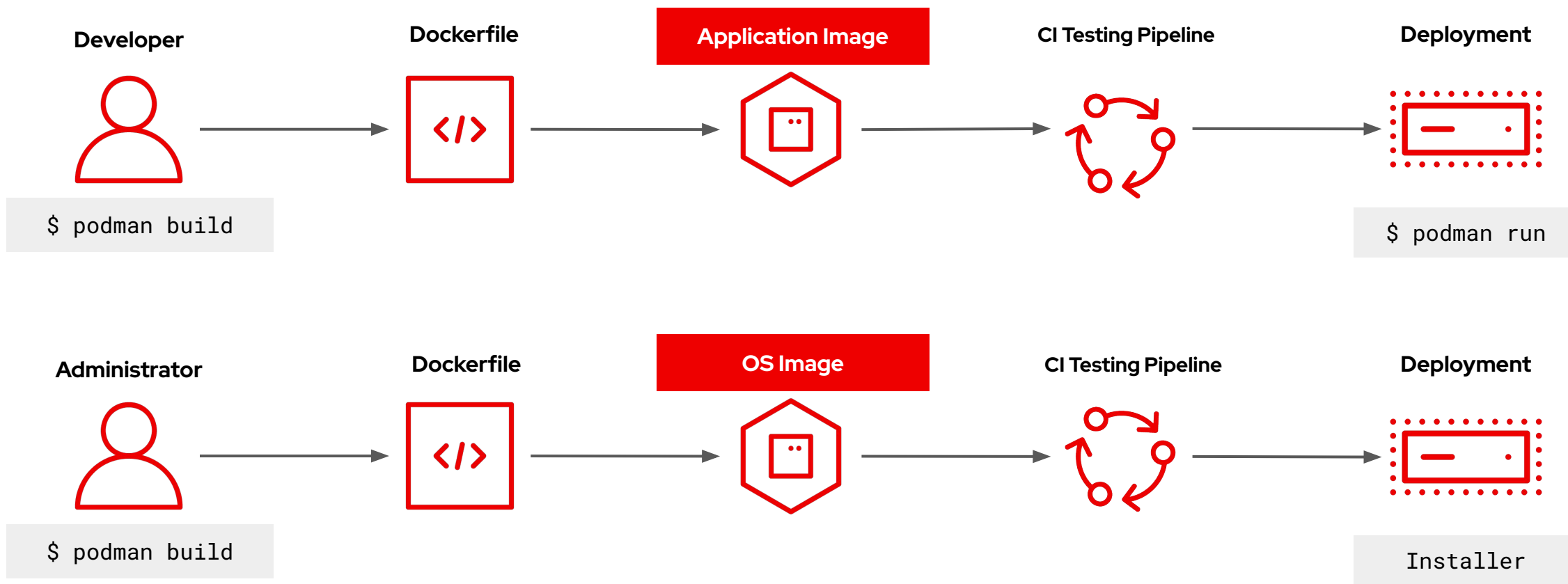
Solution providers can more easily deliver offerings
Build, test, and distribute Red Hat Enterprise Linux-based applications more easily

Container workflows now drive the operating system

Build, Test, Share, Deploy just like an application

Developer   **Dockerfile**   **Application Image**   **CI Testing Pipeline**   **Deployment**

`$ podman build`

`$ podman run`

Administrator   **Dockerfile**   **OS Image**   **CI Testing Pipeline**   **Deployment**

`$ podman build`

`Installer`

New!

Introducing image mode for Red Hat Enterprise Linux

Combining the power of RHEL with the benefits of containers

Package mode
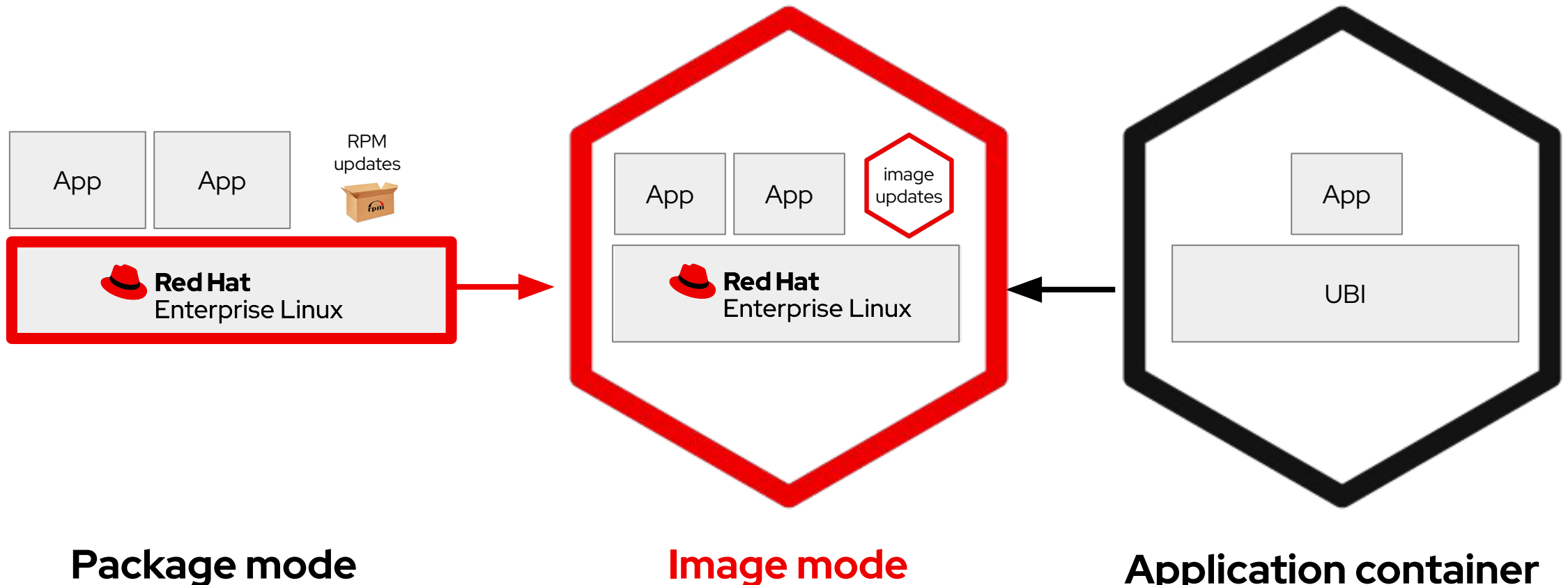
Image mode

Application container

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Image mode for Red Hat Enterprise Linux
Simple. Consistent. Anywhere.

Deploy

Build

Convert

Containerfile

Container image

Container registry

Manage

Edge devices

Public clouds

Virtualization hosts
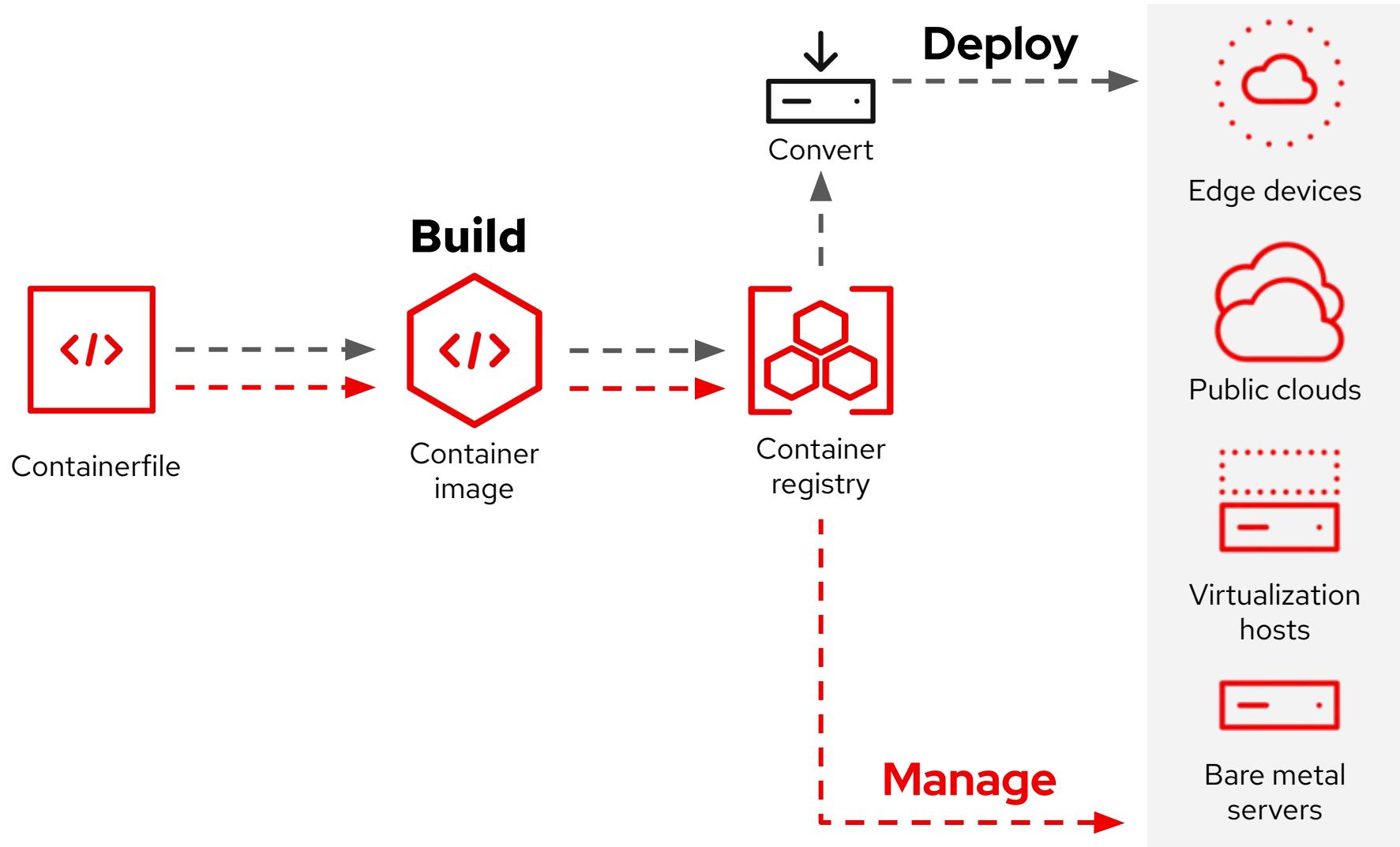
Bare metal servers

Red Hat

Image mode for RHEL

Encapsulate differences in a sequence of builds

Tech Preview

```
# Derive standard operating environment
FROM rhel9/rhel-bootc:latest

RUN dnf install -y [system agents]
[dependencies] && dnf clean all

COPY [unpackaged application]
COPY [configuration files]

RUN [config scripts]
```

```
# Derive database server from SOE
FROM corp-repo/corp-soe:latest

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

COPY [configuration files]

RUN [config scripts]
```

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bootc

A/B booting of container images

Tech Preview

`bootc upgrade`
Download and stage an updated container image.
  - ○ Automatic updates on by default. Configurable using bootc-fetch-apply-updates.timer

`bootc rollback`
Rollback to the previous state. Staged updates are discarded

`bootc switch`
Change to a different reference image

`bootc install`
Install container image **`to-disk`** or **`to-filesystem`**

- Man page
- https://github.com/containers/bootc
- https://github.com/containers/podman-desktop-extension-bootc

RHEL Lightspeed brings Linux to the next generation of IT talent

Intelligent, natural language processing capabilities designed to bridge the skills gap
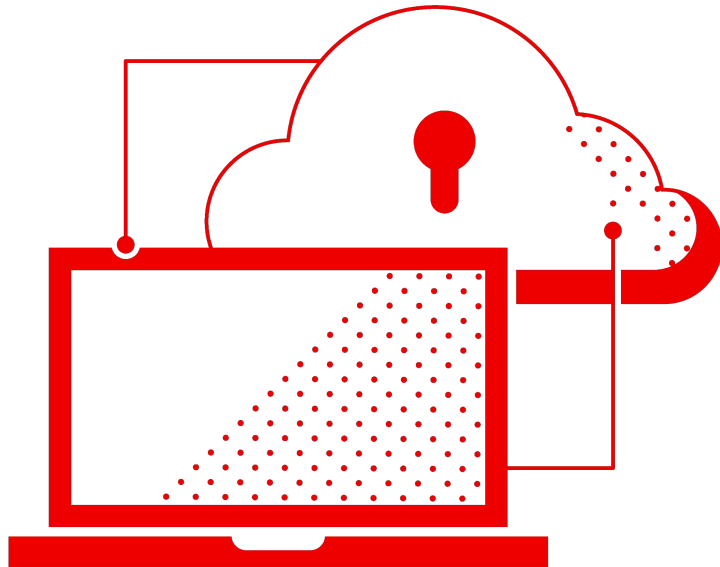
RHEL Lightspeed is currently in the planning stages.

Improve the productivity and efficiency of operations and developer teams by integrating AI into the operating system

Simplify enterprise planning and system administration, improve performance, and enhance security

Extend expertise to architects and operators, from the novice system administrator to the most senior architect

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Podman Desktop AI Lab simplifies AI adoption for developers

Brings key open source tools and AI models to local development environments
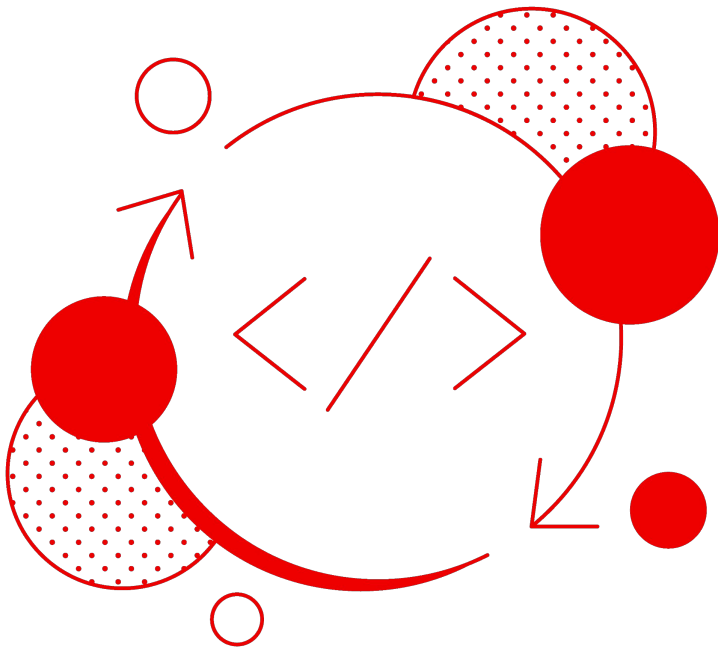
Build, test, and run generative AI–powered applications in containers

Use a recipe catalog to jump start applications like chatbots, text summarizers, and code generators

Experiment in a playground environment that gives users space to run large language models locally

Create prototypes using a curated list of lightweight and quantized open source models

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RHEL 9.4 simplifies standard operating environments across the hybrid cloud

New enhancements continue to improve efficiency, flexibility, and security

Red Hat Insights image builder
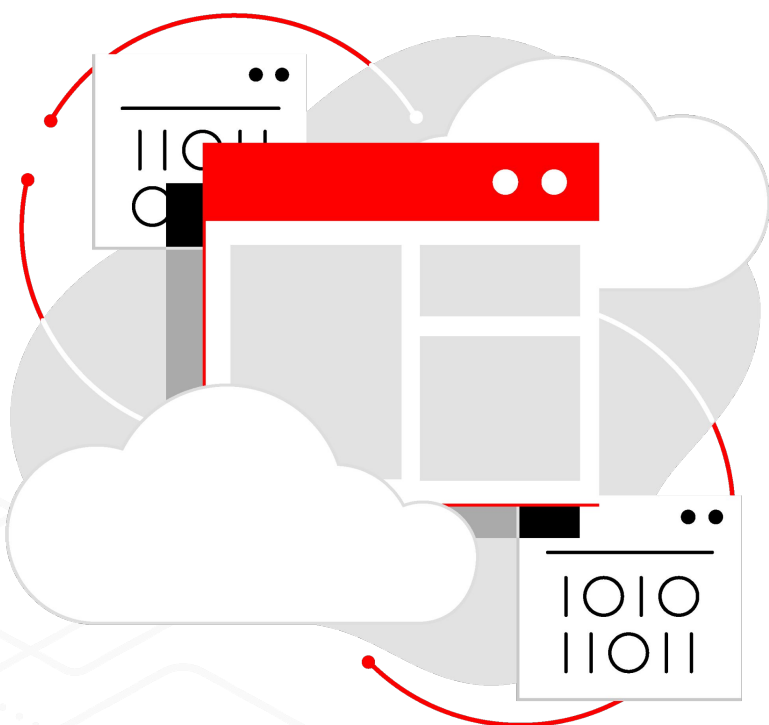enhanced with proactive guidance
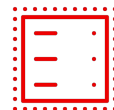
Full support for virtualization
on the ARM 64 platform

Includes passkey authentication
to simplify security and compliance

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Red Hat Insights with proactive guidance for image builder

Standardize foundational IT technologies to create a force multiplier

Coming soon

Proactively provides recommendations to create standard operating environment (SOE) images based on RHEL

Analyzes selected packages and recommends related, relevant packages to include

Recommends repositories to find packages that are not available in the currently selected repositories

Highlights upcoming life cycle milestones to prepare for possible upgrades

14

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Get full support for RHEL virtualization on the ARM 64K platform

A continuing commitment to hardware ecosystem flexibility

Get more flexible allocation of resources with virtualization

Manage software-controlled configurations

Gain space and cost efficiency with virtual machines

Yubico has fully tested and verified passkey authentication on RHEL 9.4

Simplify security and compliance with passwordless authentication
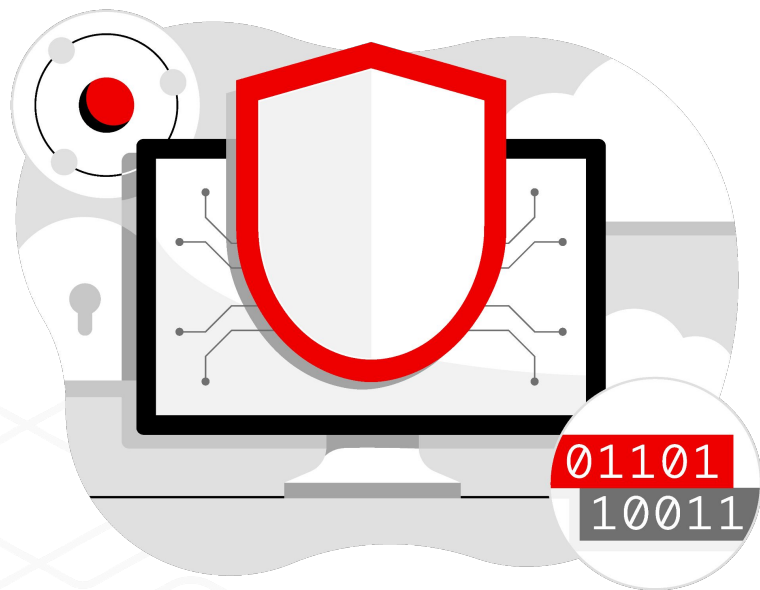
Multi-factor authentication
using FIDO2-compliant passkey

Complies with Zero Trust
Architecture security model

Strong authentication
for centrally managed users

01101
10011

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What's New in RHEL 9.4 and 8.10

Technical updates

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Technical updates

Workloads

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RHEL for SAP workloads

▶ On-demand Marketplace offers for RHEL for SAP

▶ Support for SAP HANA's "indexserver crash restart"

RHEL for SQL Server

▶ SQL Server 2022 now supported on RHEL 8 and 9

▶ Support for installing SQL Server 2022 on RHEL 9 via system role

Technical updates

Automation and management

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Red Hat Enterprise Linux web console

A user-friendly, web-based interface to help simplify management and monitoring of RHEL systems

▸ Support for virtual machine external snapshots (including live snapshots) (RHEL 9.4 only)

▸ Ability for web console to generate Ansible or shell script content for kernel dump configuration

▸ Tech Preview: Ability to configure a WireGuard VPN in the web console (RHEL 9.4 only)

▸ Enhancements to managing RHEL for Edge (rpm-ostree) deployments with the web console (RHEL 9.4 only)

Source:
https://www.redhat.com/en/interactive-labs/use-web-console-monitor-performance

RHEL system roles

A collection of supported Ansible roles included in a RHEL subscription to help automate consistent and repeatable OS tasks and configurations.

Role enhancements include:

- ▶ New system roles:
    - · fapolicyd
    - · bootloader
    - · LVM snapshot
    - · sudo
- ▶ System role support for RHEL for Edge (rpm-ostree) systems
- ▶ AD integration role support for dynamic DNS updates

Try it for yourself:
https://lab.redhat.com/tracks/rhel-system-roles

Technical updates
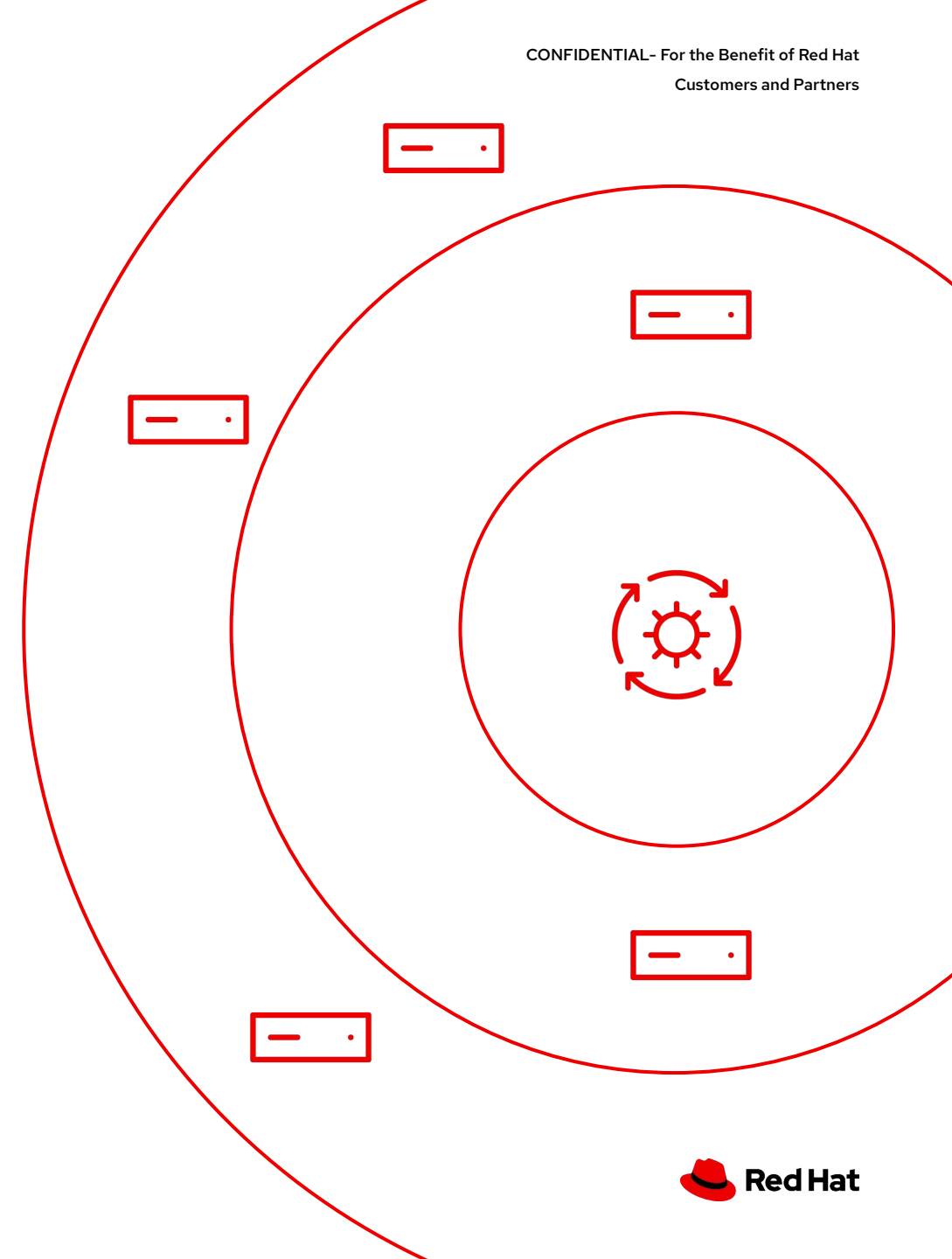
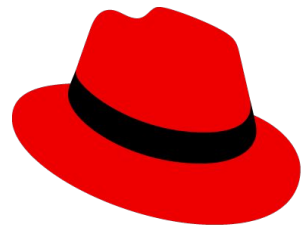# Services and addons

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Satellite 6.16

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Ship Date: November 5, 2024

- Simple Content Access only
- Online Backup
- Container Push
- Integrated OpenSCAP remediation
- RHEL 9 Support
- New Hosts UI (Tech Preview)
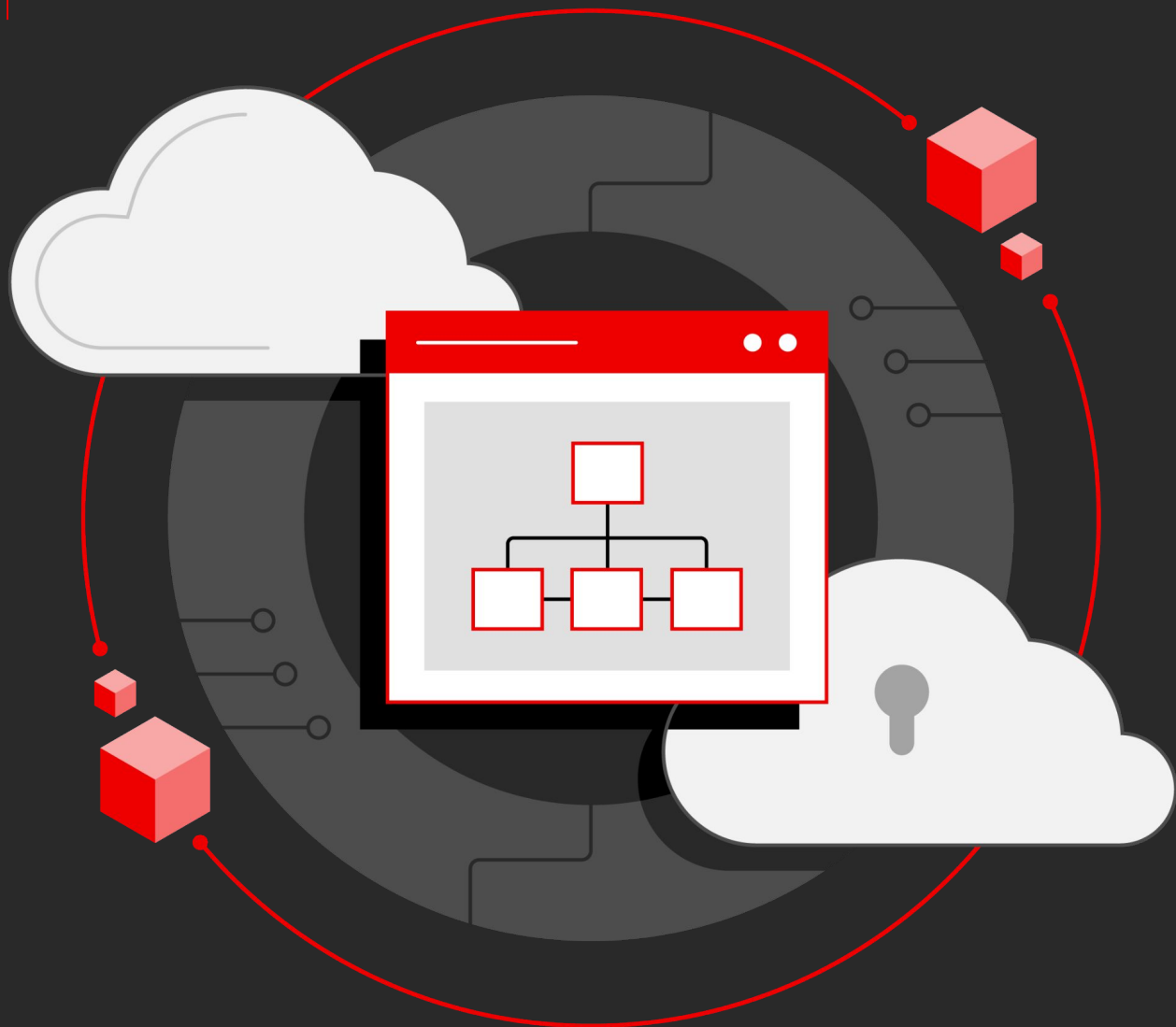
Simple Content Access

▸ In 6.16, Satellite only supports Simple Content Access content access mode..

▸ More information here.

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Online Backups

▸ With online backups, only services that affect the consistency of the backup are shut down while the backup process is running.

▸ Stops workers (so no syncs, no REX jobs), but otherwise Satellite remains operational and jobs are queued.

▸ Online backups replaces snapshot backups.

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Container Push

▸ Containers are pushed to a specified organization and product.

▸ User authentication is required for pushes.

▸ The Satellite container registry follows OCI specifications.

▸ Any method of pushing containers to a registry should work out of the box.

▸ Storage of image mode images is supported but official support of image mode targeted for 6.17.

RHEL 9 Support

▸ Three upgrade methods:

- Leapp

- Backup and Restore

- Satellite Clone

Red Hat management tools

Navigate Infrastructure Complexity

Insights
Gain a clear view across your Red Hat deployments, helping you better manage your hybrid, on-premises, and cloud environments.

Satellite
Enables you to improve the reliability, availability, security and compliance of your RHEL systems.

Web Console
A web-based management interface to simplify deployment, daily administration and complex tasks

RHEL System Roles
A collection of supported Ansible roles that ensure consistent workflows and streamline the execution of manual tasks

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Insights

Red Hat

How does Red Hat Insights help me?

Use Red Hat's expertise and knowledge to evaluate and manage your systems

- ▸ Provision new systems in the cloud or on-premises

- ▸ Configuration review to make sure systems are setup correctly

- ▸ Easily identify interoperability issues from the hypervisor or cloud, through the OS, and through the application stack

- ▸ Centralized view of all CVEs, patches, and compliance risks

- ▸ Identify drift to make sure systems are the same

- ▸ Know how many subscriptions you are using in seconds

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Red Hat Insights
Aligning themes to services across platforms

	Business Track and optimize spending	Operations Improve stability and performance	Security Reduce risk
Red Hat Enterprise Linux	Subscriptions Resource Optimization	Advisor, drift, inventory, image builder, patch	Vulnerability, compliance, malware, policies
Red Hat OpenShift	Subscriptions/metering, cost management	Advisor	Vulnerability
Red Hat Ansible Automation Platform		Advisor, Drift	Policies

Red Hat Insights

Efficient
hybrid-cloud scale

Red Hat Satellite and Cloud Connectivity

Satellite subscription enables push-button remediation of issues identified by Insights, with and without Satellite

Execute playbook

Plan summary

Total systems
345 systems

Plan progress ⑦
2/37 problems resolved

Last run
9/9 actions completed
2 days ago
View activity

Plan settings
Autoreboot: **Enabled**   ↻ 84 systems require reboot
Turn off auto reboot

Red Hat Insights

Cloud Connector

Satellite

Capsule I

Capsule II

Host A

Host B

Host C

Host D

Host X

Host Y

aws

▲ Azure

IBM **Cloud**

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Cloud Connector
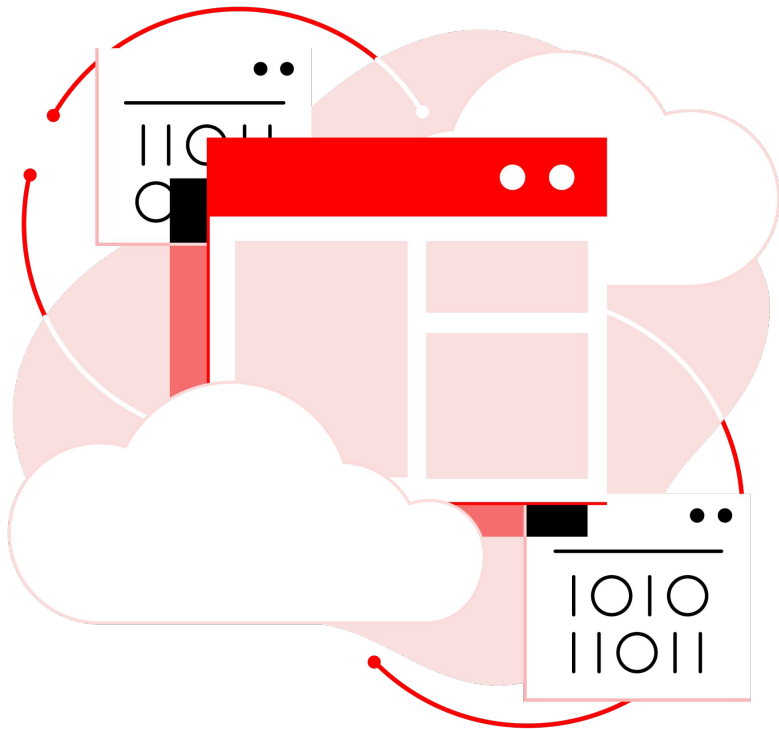Connects your federated Satellite infrastructure to Insights to execute remediation playbooks at scale.

Insights and Satellite

Use Insights to get a centralized view of all hosts in your environment, even across multiple Satellites

What's New in RHEL 9.4 and 8.10
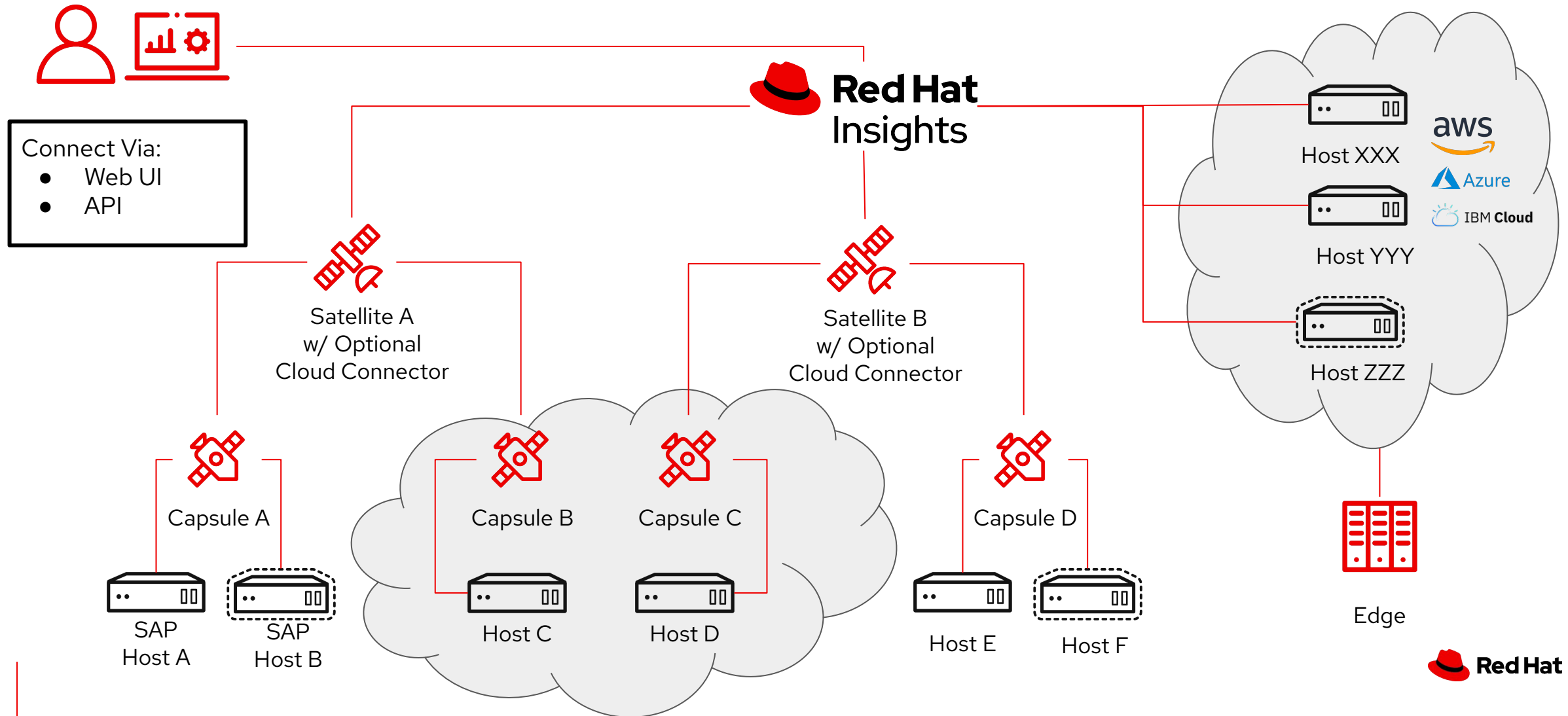
Product lifecycle

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RHEL Minor Release Changes

There will be no betas for minor releases moving forward.

▶ Does not impact **major** release betas

▶ Begins with RHEL 9.5 (2024–H2)

▶ Get installation media through image builder and packages through Beta channels

Read more:

[Upcoming improvements to Red Hat Enterprise Linux minor release betas](#)

Key life cycle milestones

CentOS Linux 7
End of life

June 30th, 2024

CentOS Stream 8
End of life

May 31st, 2024

Red Hat Enterprise Linux 6
End of ELS support

June 30, 2024

Red Hat Enterprise Linux 7
End of maintenance

June 30, 2024 | Will require ELS add-on

Red Hat Enterprise Linux 8
Start of maintenance

May 31, 2024

Red Hat Enterprise Linux 9
End of full support

May 31, 2027

The Route to RHEL 10

We continue to depend on our open source development model from Fedora to CentOS Stream to RHEL.

Upcoming:

- ▸ CentOS Stream 10

- ▸ RHEL 10 Beta

- ▸ RHEL 10 GA (Expected Mid–2025)

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Q&A

Red Hat Enterprise Linux

Thank you

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