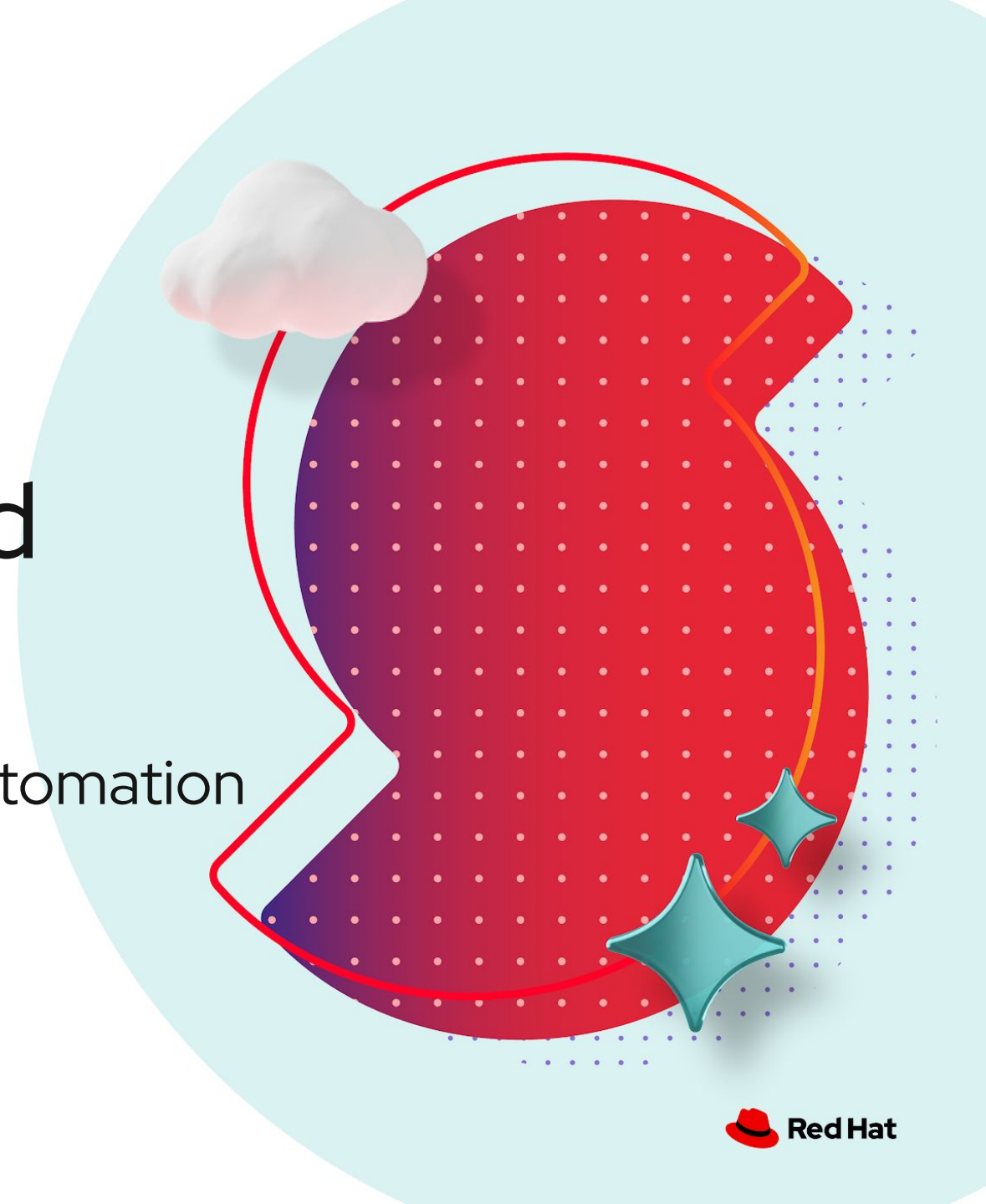




Connect

Deploy Any workload at the Edge

with RHEL Image Mode, Ansible Automation
Platform, and Edge Manager





Alessandro Rossi

RHEL Advocate
Red Hat



Juan van der Breggen

RHEL Advocate
Red Hat



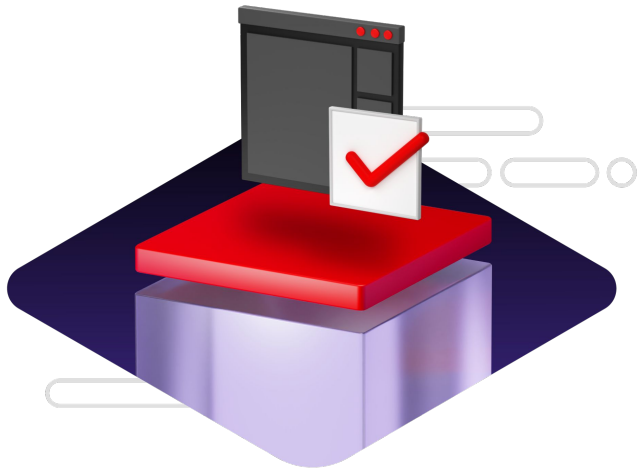
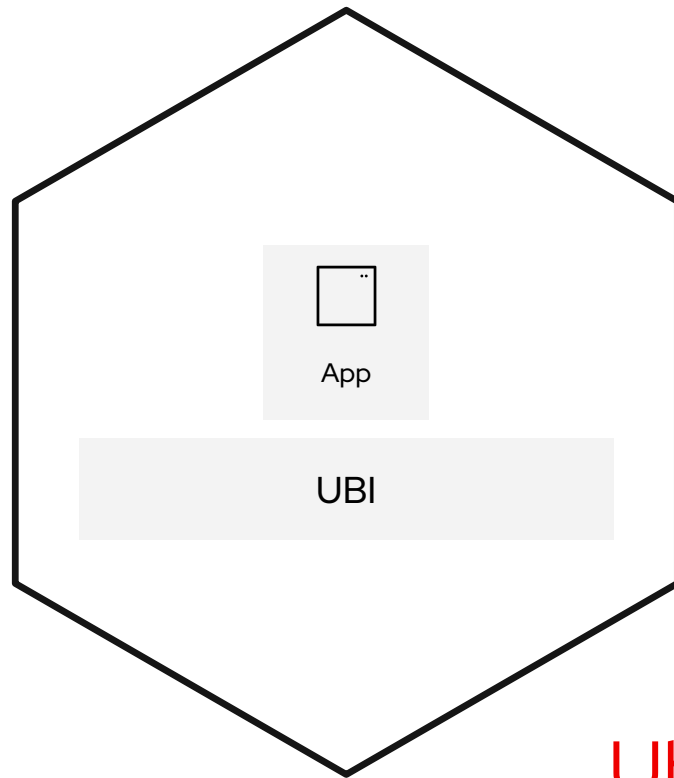


Image mode for RHEL - A brief introduction

Containers and the Cloud Native Revolution

Fundamentally changed how content is developed and delivered!



- ▶ Standardized packaging via OCI image format
- ▶ Standardized delivery via OCI registries
- ▶ Clarity and transparency of content
- ▶ Deployment portability & predictability

Ubiquitous across modern IT....

An Evolving Landscape

Different flavors of RHEL now available depending on use case and environment

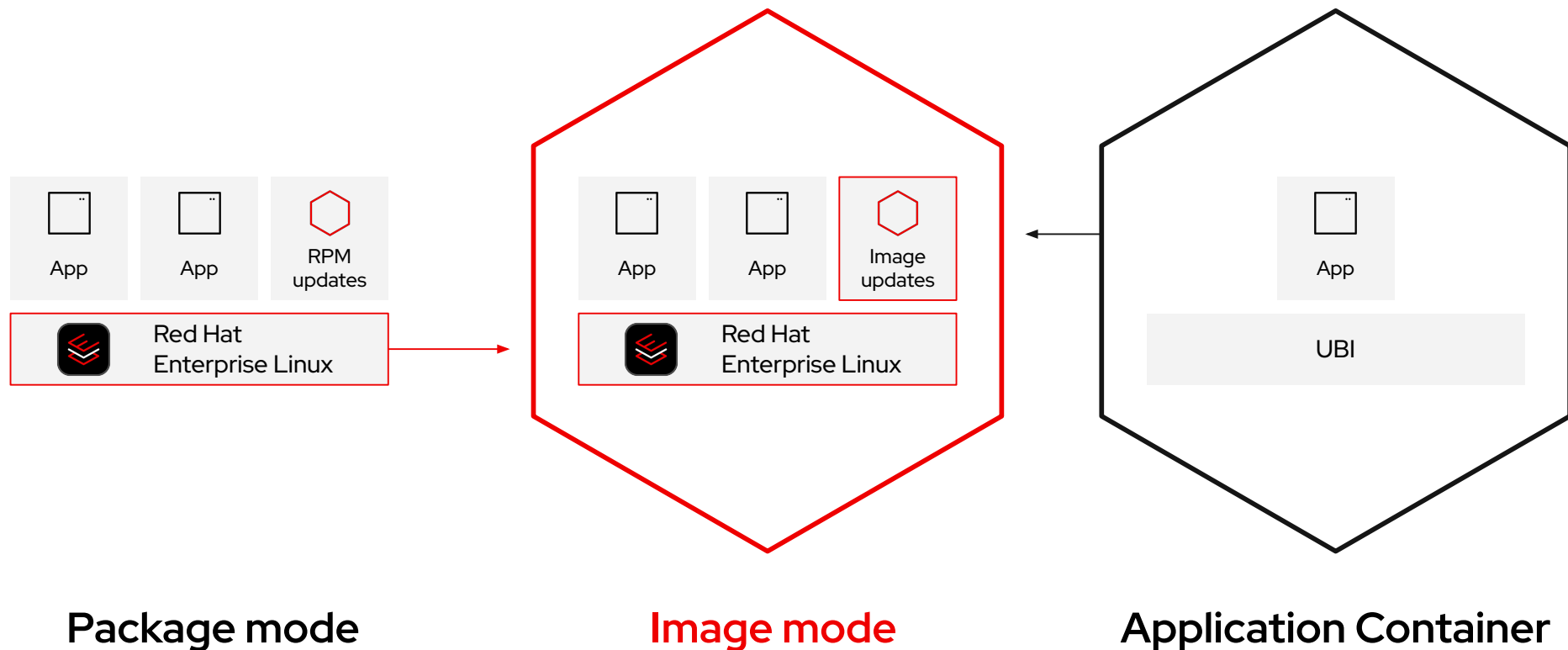
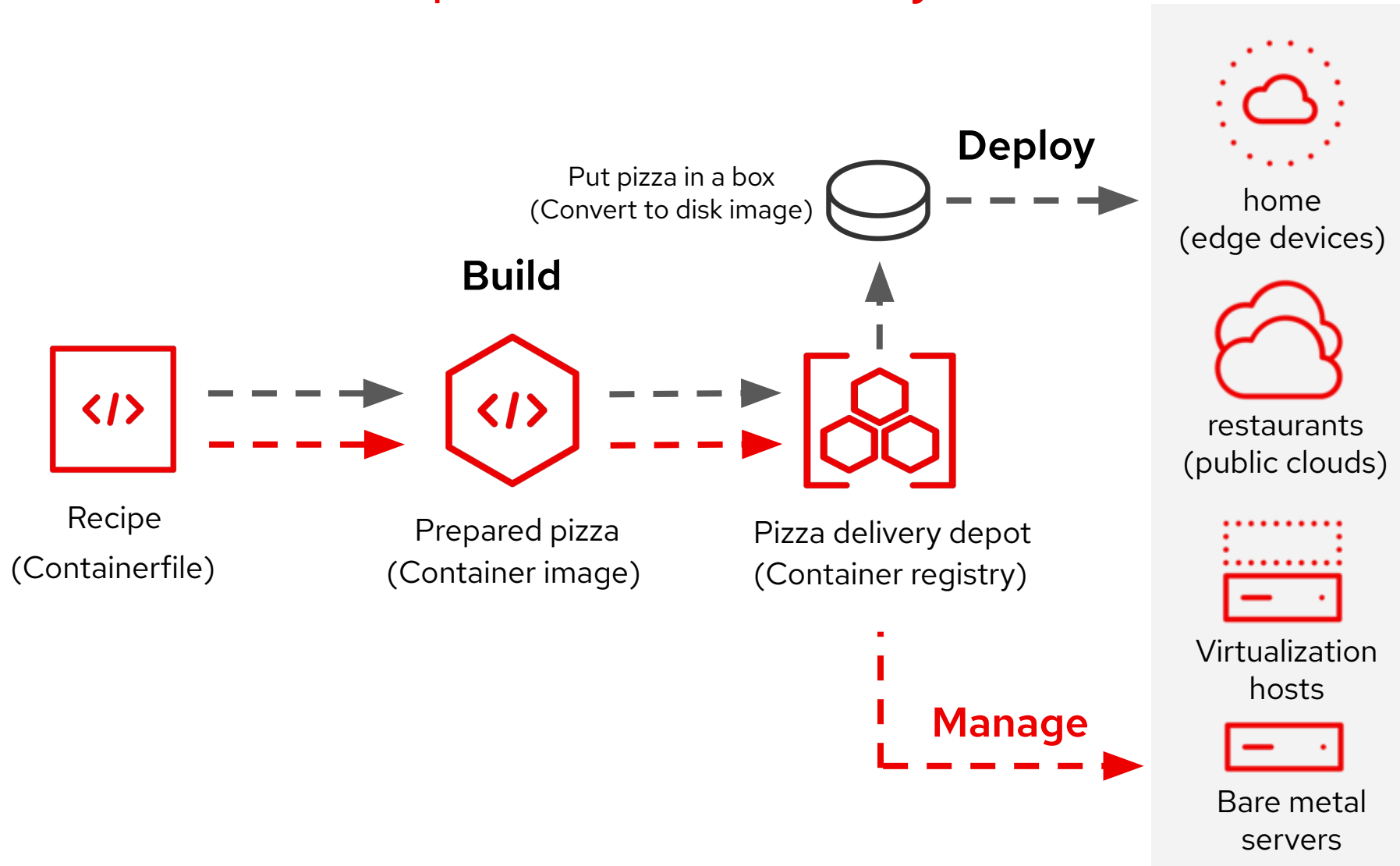


Image mode for Red Hat Enterprise Linux

Simple. Consistent. Anywhere.



Pizza service

BASE (RHEL Image Mode)

Standardized, consistent foundation



Regular
(standard)



Gluten Free
(hardened)

Sauce (Base Service)

The core services you offer



Web Server
(httpd)



Database
(postgresql)

Toppings (Configuration)

Application and/or config



The Pizza (Running System)

Base + Service + Configuration



The pizza shop provides the dough and the sauce
(IT owns the operating system and base service layer)

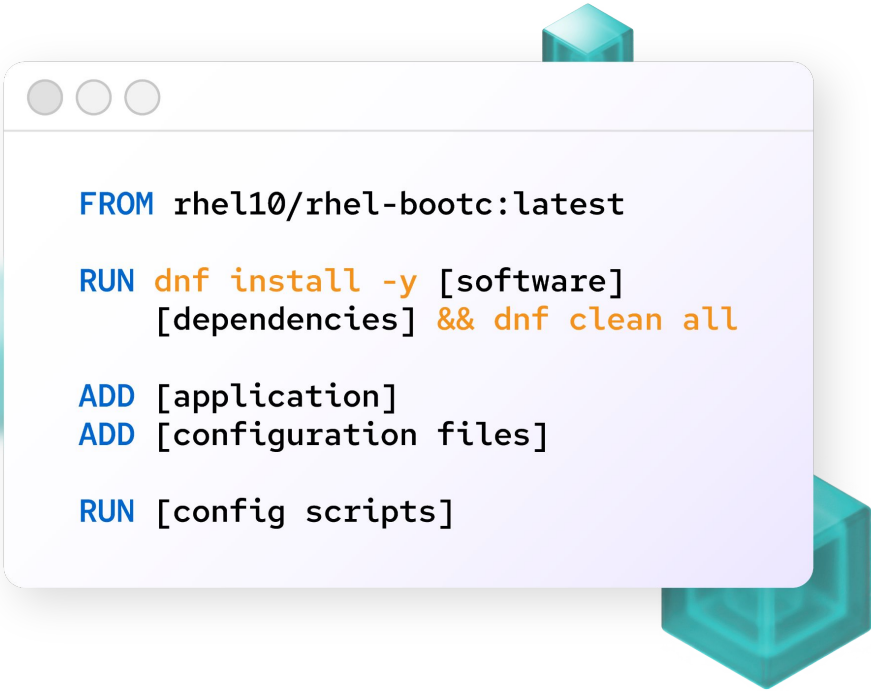
The customer decides the toppings
(owned by the application team)

Delivery Service
(container registry)



Image mode for Red Hat Enterprise Linux

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

Deploy

Manage

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



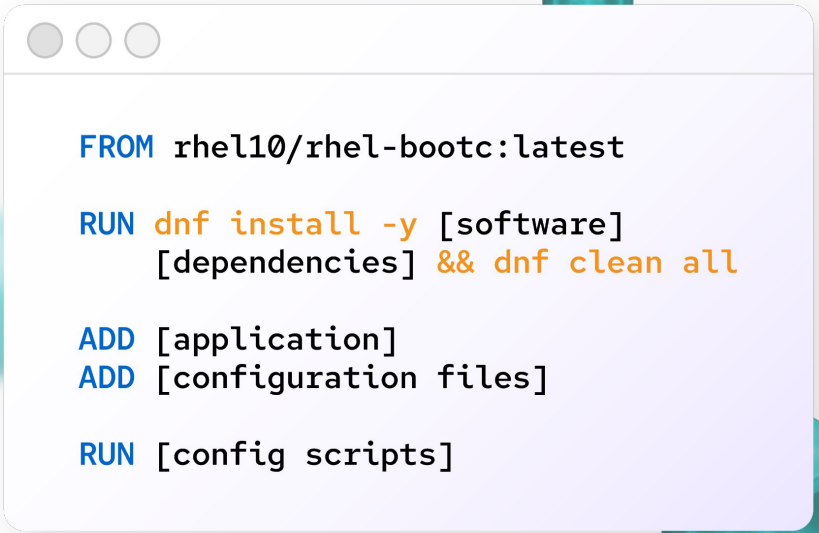
Many ways to build

- Podman CLI
- Podman Desktop
- CI/CD and Automation Tools



Image mode for Red Hat Enterprise Linux

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



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FROM rhel10/rhel-bootc:latest

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Deploy

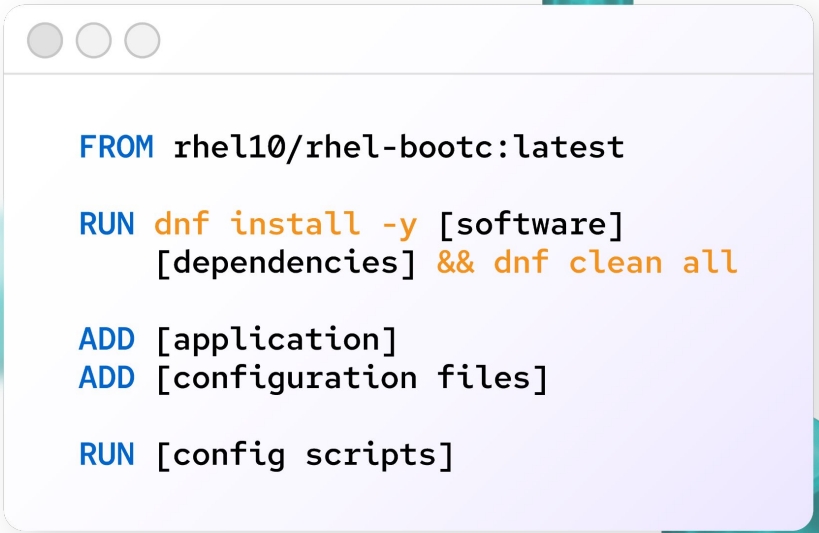
Manage

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



Image mode for Red Hat Enterprise Linux

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



```
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```

Build

Deploy

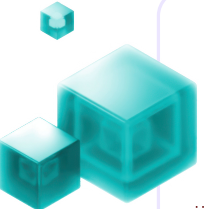
Manage

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



Flexible management

Use your preferred management system



Red Hat Lightspeed

Secure and update images

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

Red Hat Satellite

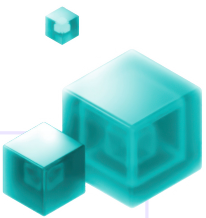
Provisioning and client management

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

Red Hat Ansible Automation Platform

Content and configuration control

Control content and configuration during build time and configuration at runtime. The community bootc collection simplifies client control.

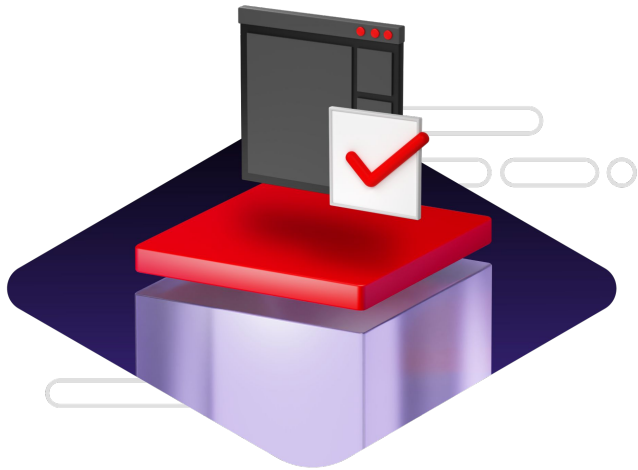


Red Hat Edge Manager

Fleet management for edge devices

It streamlines managing an entire fleet of edge devices with robust security capabilities, scalability, and flexibility with end-to-end lifecycle management and monitoring at the edge.





Red Hat Ansible Automation Platform

Red Hat Ansible Automation Platform 2.7

Automate at scale on a proven foundation

Your team isn't just preparing for the future, you're automating for it. And our latest release delivers new features, platform enhancements, and strategic integrations that will help you continue to build a resilient, trusted foundation for the next generation of IT operations.



- ✓ **Unlock more value from automation** with an **automation dashboard** to help measure automation performance and make data driven decisions and new content collections to extract more value from existing IT investments.
- ✓ **Achieve new levels of scale** using a **self-service portal** empowers platform admins to provide a streamlined “point-and-click” Ansible automation experience to a broader set of users within the organization.
- ✓ **Harness generative AI for more efficiency** with the **Ansible Lightspeed intelligent assistant** to provide contextual support for faster troubleshooting, platform onboarding, and the day-to-day management of automation.

Ansible Automation Platform & Image Mode for RHEL

The perfect match



With **Ansible Automation Platform** you can:

- ✓ Automate image creation
- ✓ Orchestrate the deploy of the systems
- ✓ Manage and coordinate updates/upgrades
- ✓ Perform configurations and maintenance of the servers

Ansible Automation Platform & Image Mode for RHEL

Automate image creation

Build, test, secure your Image Mode container images

By supporting complex workflows, Ansible Automation Platform can simplify and automate the image creation phase.

- Build the container image
- Perform security/vulnerability scans
- Test and validate your images
- Push the image

With **Event-Driven Ansible Controller**, you can also define triggers to automatically build the images based on events (tag/commit creation, ITSM ticket, etc.)



Ansible Automation Platform & Image Mode for RHEL

Orchestrate the deploy of the systems

Deploy RHEL across the Hybrid Cloud, automatically

With support for bare-metal servers, Cloud providers and Hypervisors, it's easy to convert and deploy Image Mode container Images to the Hybrid Cloud.

- Convert the container image
- Create templates or disk images
- Deploy RHEL at scale



Ansible Automation Platform & Image Mode for RHEL

Manage and coordinate updates/upgrades

Updating RHEL Server has never been easier!

With Ansible Automation Platform you can orchestrate updates across all your servers and even create complex workflows that update, verify and rollback the system in case something goes wrong.

- Trigger the update
- Perform testing on the updated systems
- Manage the backup of persistent data in /var
- Rollback the system if needed
- Integrate with ITSM and monitoring systems to keep track of updates or notifying users.
- Implement rolling upgrade strategies for critical systems



Ansible Automation Platform & Image Mode for RHEL

Perform configurations and maintenance of the servers



Different way to deploy, same RHEL Experience

Image Mode introduces a new way of deploying and managing the OS lifecycle, but the “Day 2” experience is the same!

With Ansible Automation Platform, you can:

- Apply runtime configurations (network, storage, etc.)
- Containers and virtualization management
- Monitoring and maintenance

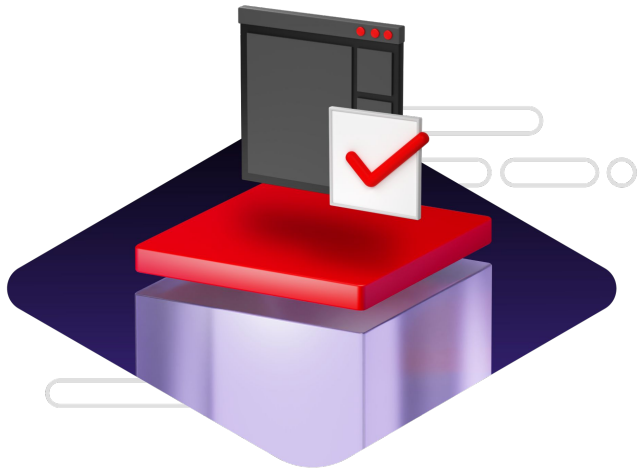
Ansible Automation Platform & Image Mode for RHEL

Get started now!



Try out some ready-to-use community examples and quickstarts for **Ansible Automation Platform**, and start automating Image Mode for RHEL.

<https://gitlab.com/redhat/cop/rhel/rhel-image-mode-aap>



Red Hat Edge Manager

Red Hat Edge Manager

Comprehensive fleet management



Simple

Intuitive edge operations

Opinionated management options



Scalable

Policy-driven deployment

Resilient pull-mode management

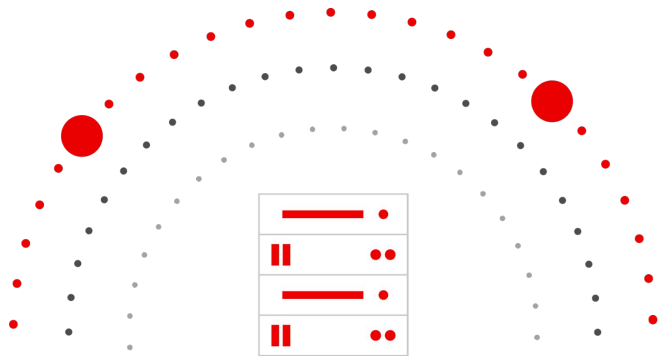


Optimized for edge

Reliable lifecycle management

Hardened device communications

Proactive device insights





Edge device



Applications

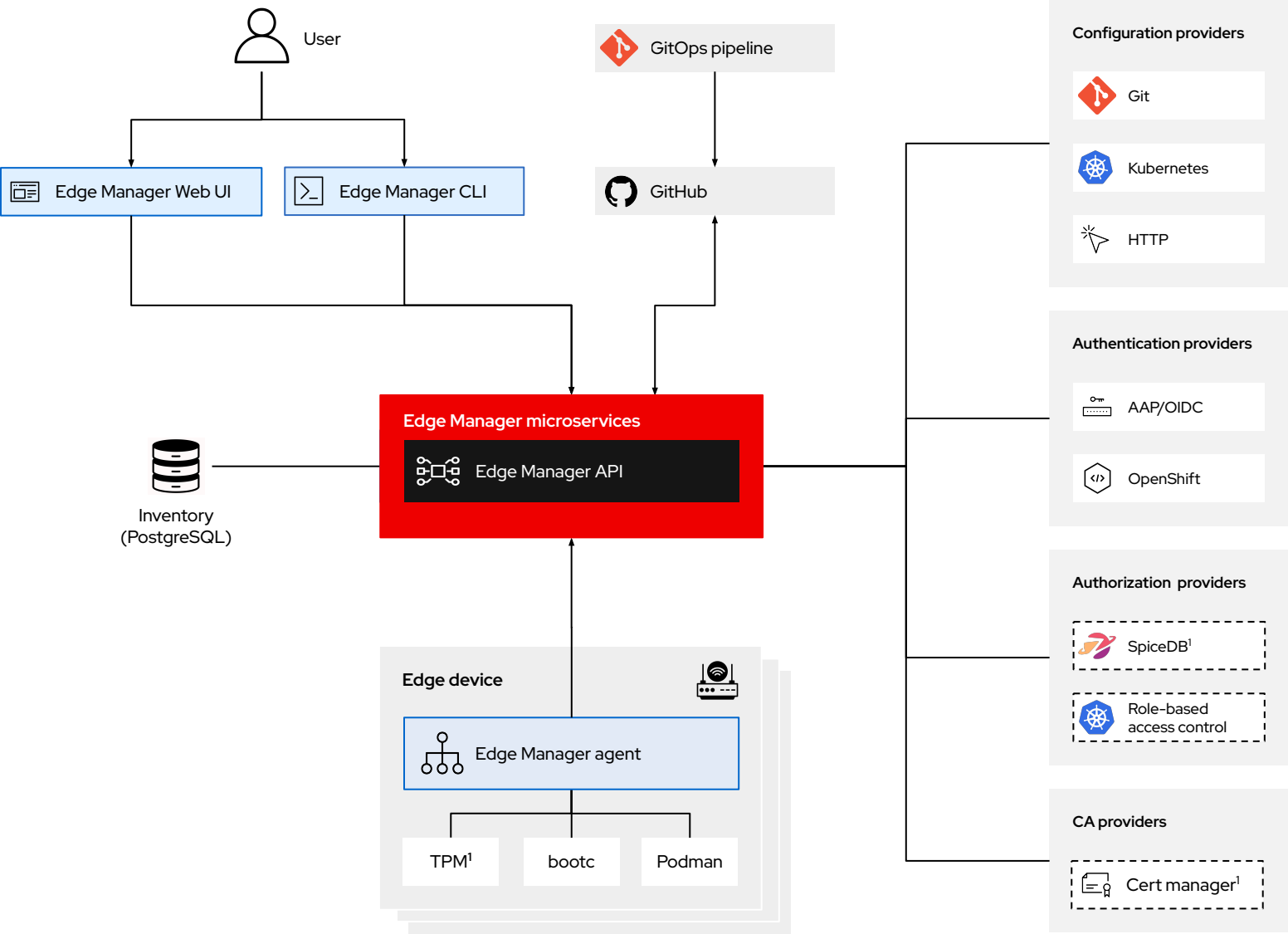


Host Configurations

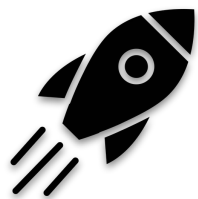


Operating system image

Edge Manager Architecture



Pluggable Architecture for Configuration, Authentication, Authorization, and CA provider integration



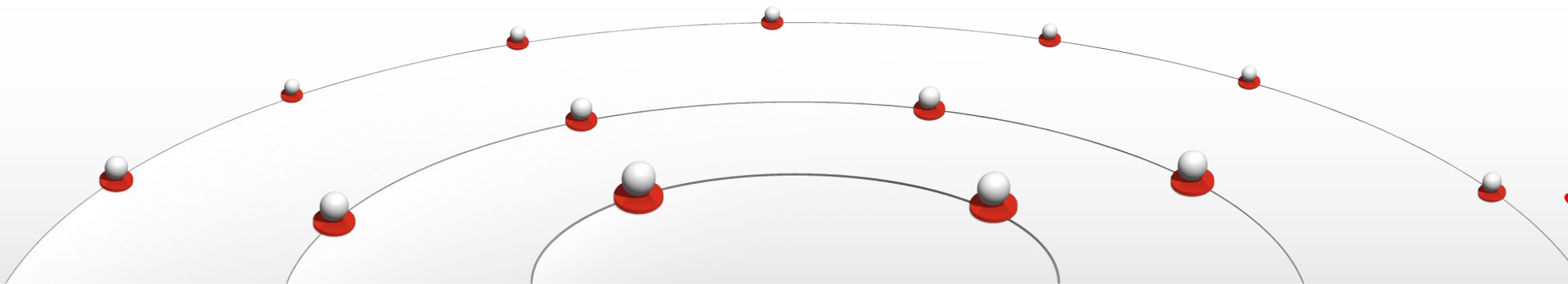
Deploy



Onboard



Manage





Connect

Thank you



linkedin.com/company/red-hat



facebook.com/redhatinc



youtube.com/user/RedHatVideos



x.com/RedHat

