Red Hat Summit

Connect

Harness the power of containers to build, automate and standardise your OS

Introducing imode mode for Red Hat Enterprise Linux

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Infrastructure & organizational complexity

is still a problem...

Common challenges that involve the OS

- Different platforms require different tools, teams and expertise
- Testing and validation are time consuming
- Application support matrix
- No one budgets for maintenance and upgrades
- Negotiating between stakeholders
- Drift between images, instances, and runtime
- Immutable aspirations vs. mutable realities
- Image inventory, versioning, and pruning
- Let's not forget security!

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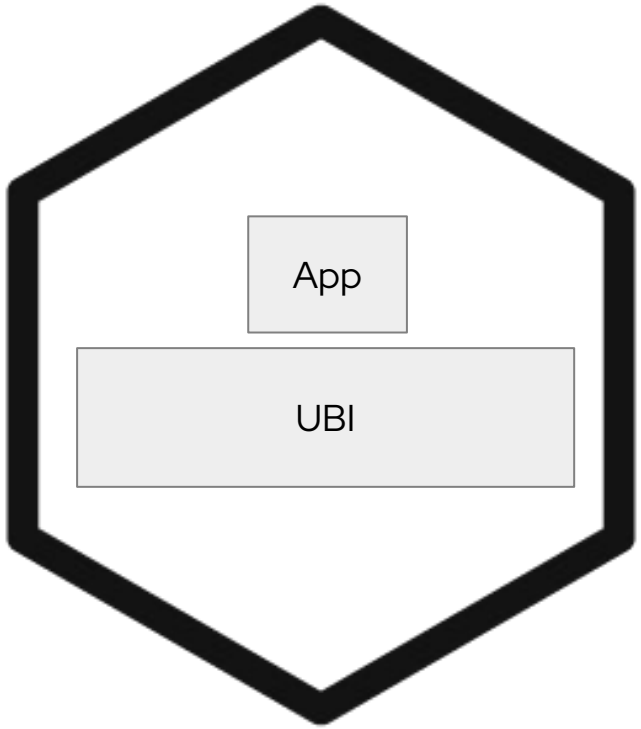
Containers revolutionized application deployment



- Standardized packaging via OCI image format
- Standardized delivery via OCI registry
- Clarity and transparency with the container file
- Deployment portability & predictability
- Rich ecosystem of security, automation, & orchestration tooling
- Rapid adoption and pervasive

...and they will also become the language of modern IT

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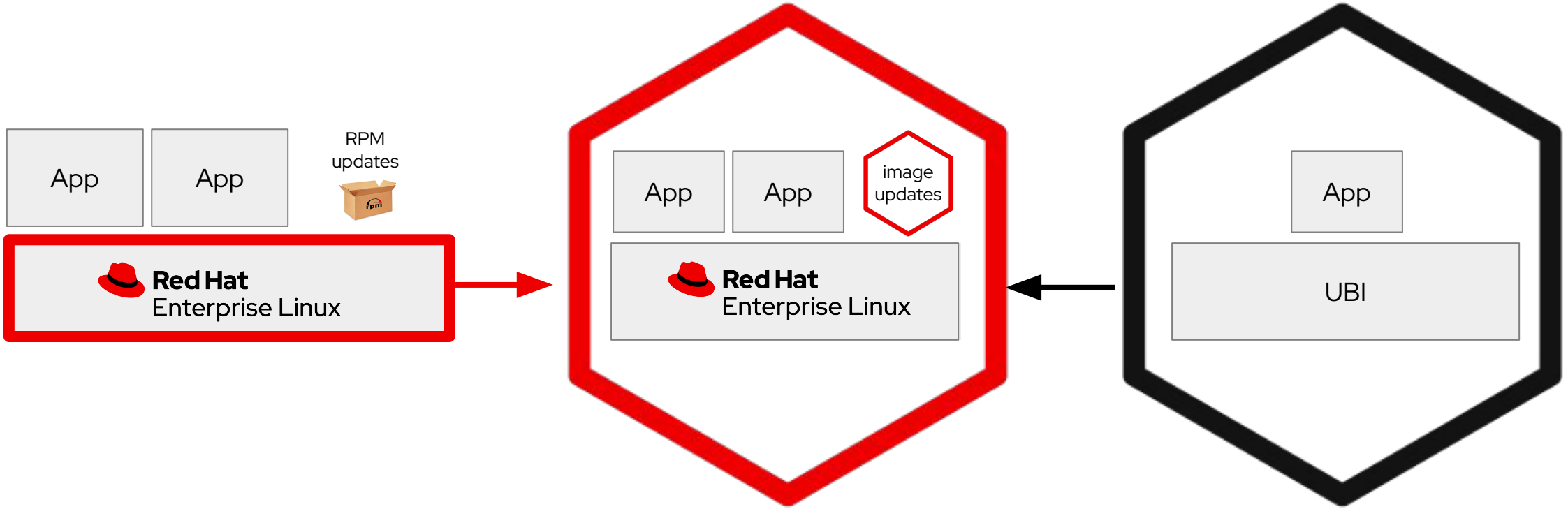
New!

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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Red Hat Enterprise Linux AI

Foundation Model Platform

Seamlessly develop, test, and run Granite family large language models (LLMs) for enterprise applications.

Granite family models

Open source-licensed LLMs, distributed under the Apache-2.0 license, with complete transparency on training datasets.

InstructLab model alignment tools

Scalable, cost-effective solution for enhancing LLM capabilities and making AI model development open and accessible to all users.

Optimized bootable model runtime instances

Granite models & InstructLab tooling packaged as a bootable RHEL image, including Pytorch/runtime libraries and hardware optimization (NVIDIA, Intel and AMD).

Enterprise support, lifecycle & indemnification

Trusted enterprise platform, 24x7 production support, extended model lifecycle and model IP indemnification by Red Hat.

One RHEL, two modes

	Package mode	Image mode
Image creation	Image builder	Container tools
Updates	Packages (`dnf`)	Images (`bootc`)
Update distribution	rpm repository	Container registry
Management	Red Hat Insights, Satellite*, Ansible*	
Deployment footprint	Bare metal, VM, cloud, edge	

* On image mode roadmap

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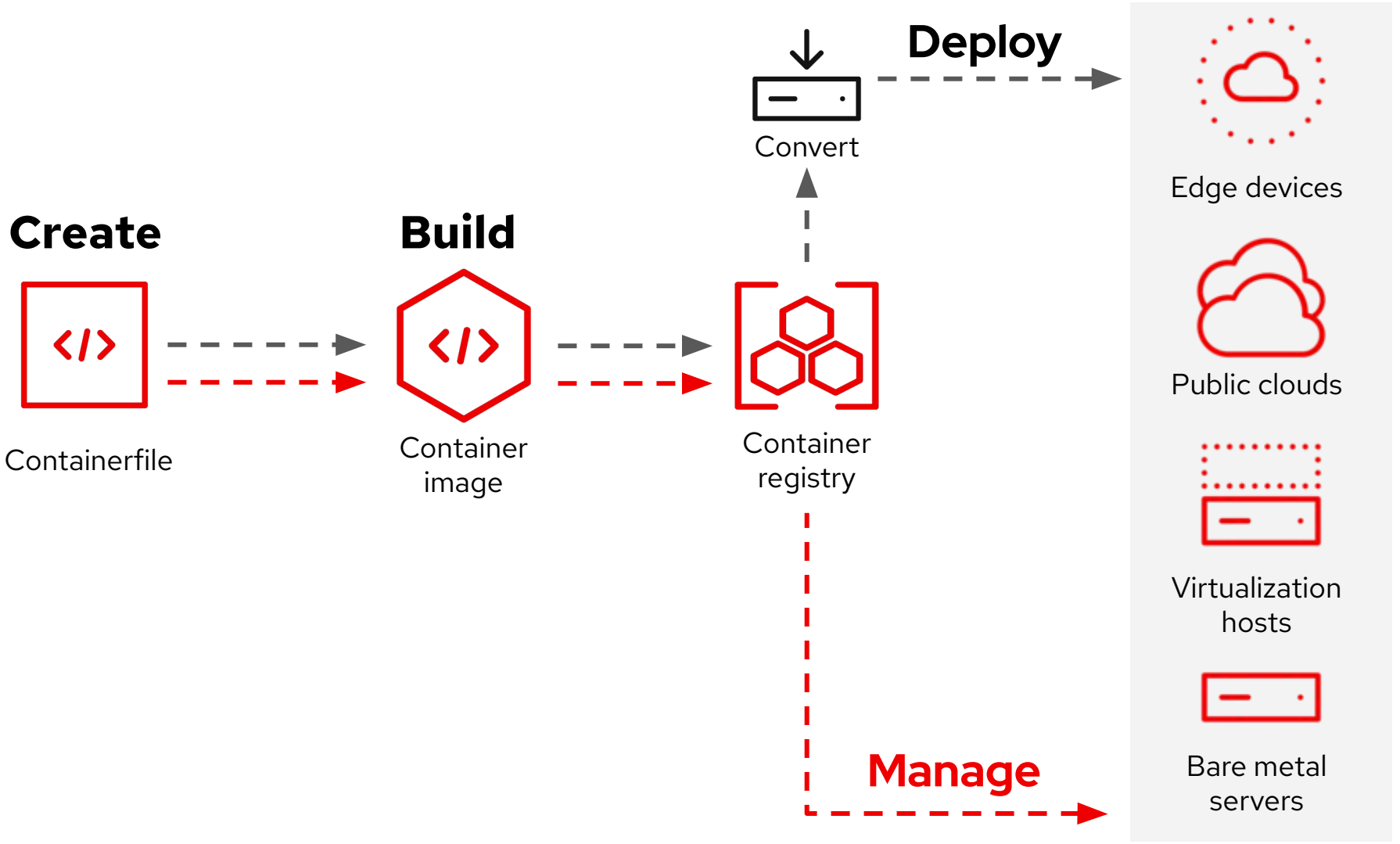
Image mode for Red Hat Enterprise Linux

Simple. Consistent. Anywhere.



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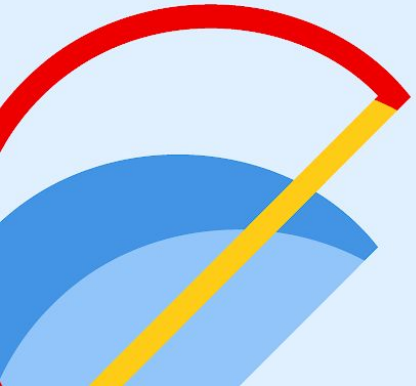
DEMO

1. Create
2. Build
3. Deploy
4. Manage



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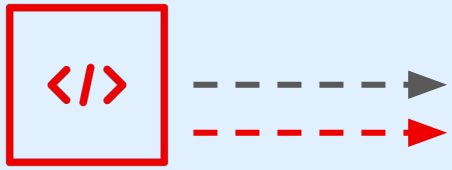
DEMO: Image mode for RHEL

Create



Containerfile /
Dockerfile

- Use container standards
- Build and enhance SOE concept - Standard Operating Environment
  - Standardized base image - stability
  - Easy versioning
  - Simple to add application and its dependencies
- Abstract away OS for developers
  - Application code in top layers

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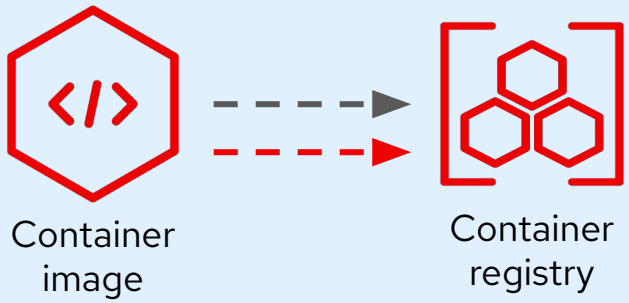
DEMO: Image mode for RHEL

Build



- Use container standard tools
  - Podman, OpenShift and container registries
- Efficiency and Reusability
  - Faster builds with shared, cached layers
- Faster testing of application (local)
  - Requires less resources - Container vs VM
- Easy scan and sign your build image
  - Use registry or more advanced tools like ACS
  - Scan both base container image and final image with application

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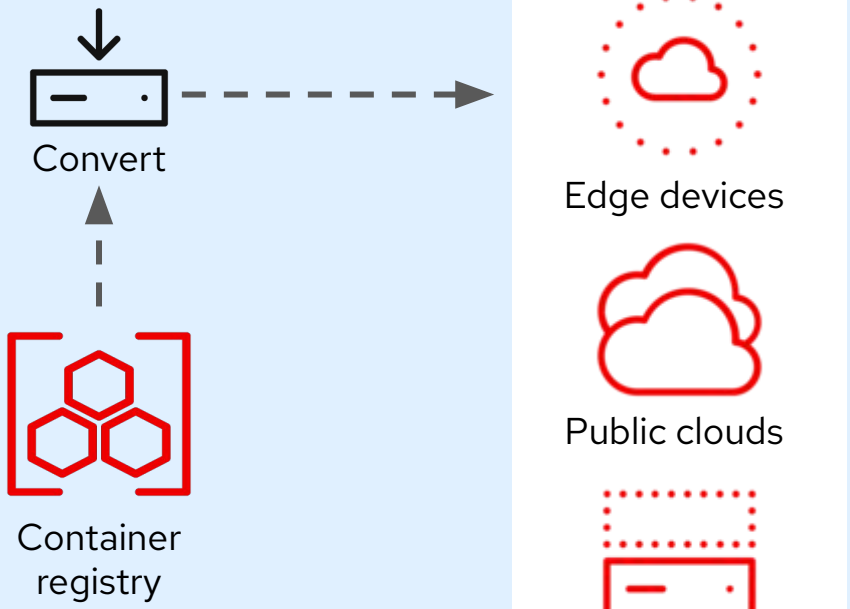
DEMO: Image mode for RHEL

Deploy



- Easy to convert container image to other formats (OVA, AMI, QCOW2, ISO, etc.)
- Deploy in any environment
  - Standard deployment processes
    - Stage environment
    - Prod environment etc

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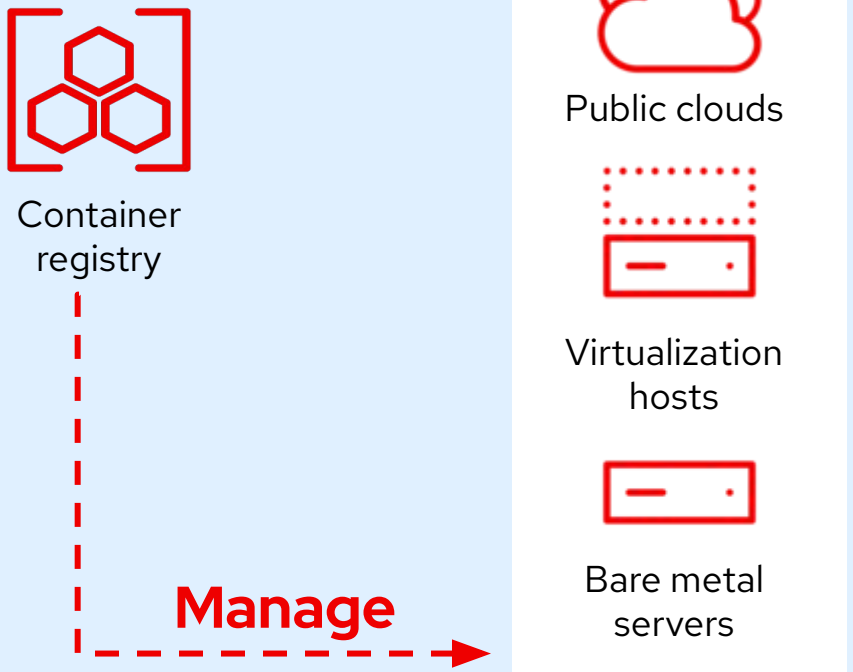
DEMO: Image mode for RHEL

Manage



- Upgrade / Rollback
  - Image vs rpms
- With:
  - Red Hat Insights
  - Red Hat Satellite*
  - Ansible Automation Platform

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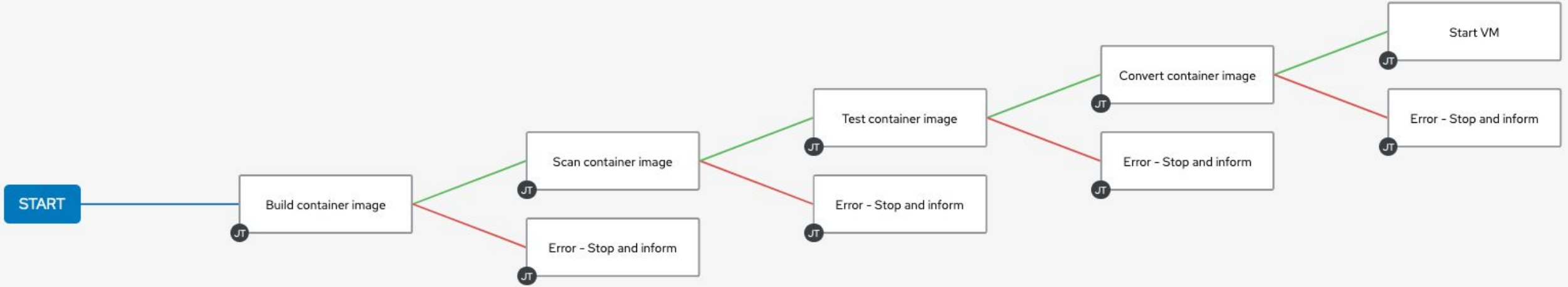
Image mode for Red Hat Enterprise Linux

Automate the workflow



Containerfile
Dockerfile
(Git)

Build, tag,
push image

Image scan
Image check

Smoke
test

Convert to:
ISO
AMI
OVA
QCOW2
...

Deploy
workload
into
Stage

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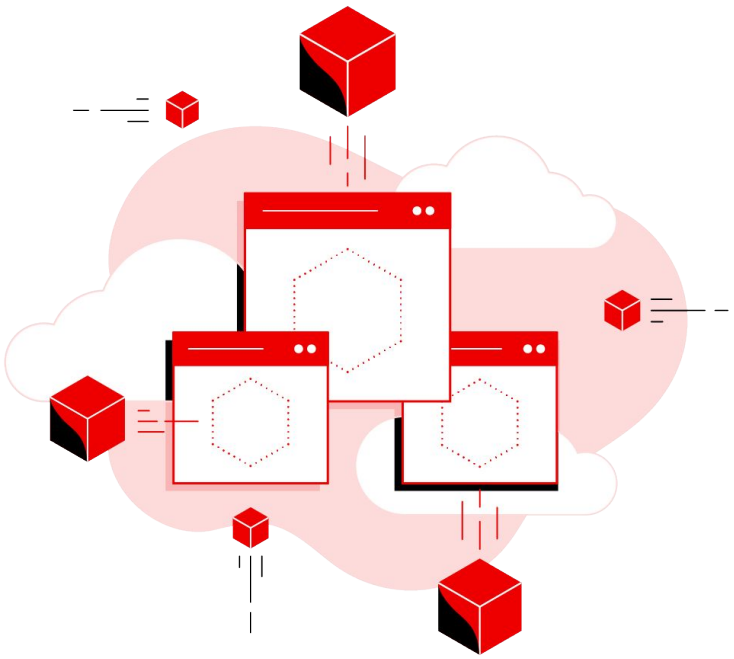
Image mode creates opportunities to think differently



- **All RHEL users** will benefit from standardization, simplicity and portability across all of their environments that span the hybrid clouds
- **DevOps teams** can easily plug RHEL into their CI/CD & GitOps workflows, easing the friction that exists between the platform and the application.
- **Security teams** can apply container security tools, from scanning and validation to cryptography and attestation to the base elements of the operating system, making their jobs far less complex.
- **Solution providers** will love how easy it is to build and distribute their offerings on the trusted RHEL platform

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Enterprise Linux

Give image mode for Red Hat Enterprise Linux a try!

Visit red.ht/imagemode
to learn more

Now available in tech preview

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