Managing Red Hat Enterprise Linux 8

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SIMPLIFY AND AUTOMATE
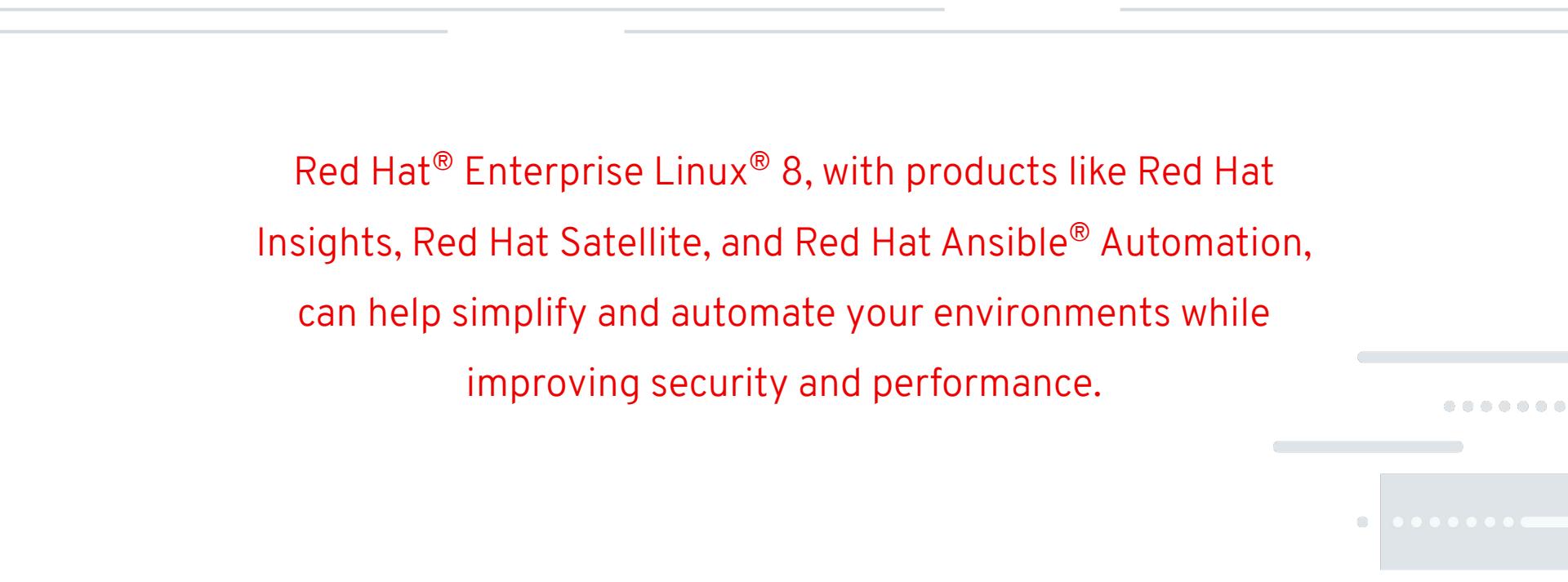
Red Hat® Enterprise Linux® 8, with products like Red Hat Insights, Red Hat Satellite, and Red Hat Ansible® Automation, can help simplify and automate your environments while improving security and performance.

QUICK FACTS

Kernel version
4.18x

System compiler
gcc 8.2, llvm 6.0

Hardware architecture
Intel/AMD 64-bit   ARM 64-bit
IBM Power LE   IBM z Systems

Default file system
XFS

Package management
Yum 4

Init system
systemd 239

Simplified content sets

RHEL Server → RHEL for x86_64

RHEL Workstation → RHEL for x86_64

RHEL HPC → RHEL for x86_64

RHEL for Arm → RHEL for ARM 64 - aarch64

RHEL for IBM z Systems → RHEL for IBM z Systems - s390x

RHEL for IBM Power LE → RHEL for Power LE - ppc64le
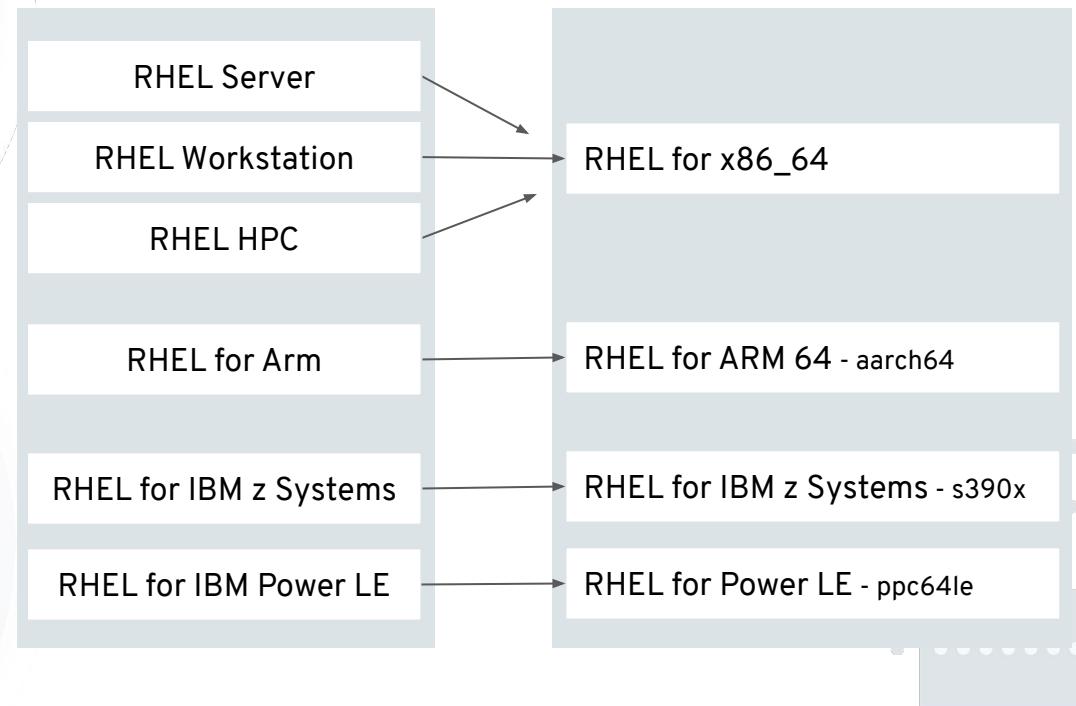
RHEL 8 Application Streams

More choices for your workload needs

Streams will cross major version boundaries

Consolidating repos

Time of support

Postgresql 12 stream

Postgresql 10 stream

Postgresql 9.6 stream

RHEL 8

RHEL 7
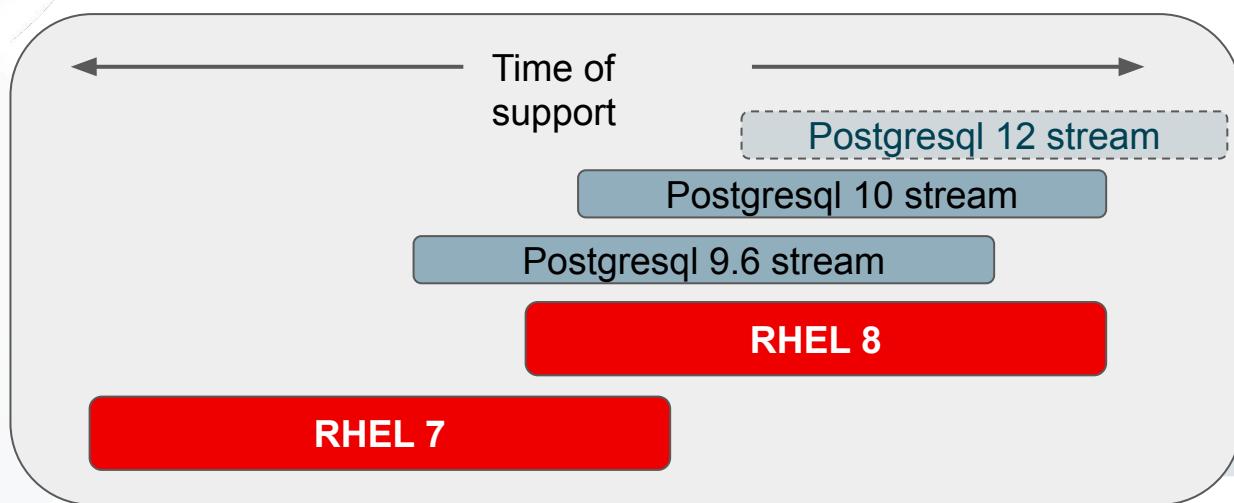
Simplified Repositories

RHEL 8

Application Streams	Supplementary	CodeReady Linux Builder
RHEL BaseOS		

RED HAT MANAGEMENT

Products and services

Red Hat Insights

Keeps Red Hat Enterprise Linux
running at its best

Red Hat Smart Management

Red Hat Satellite: How it works with new
Red Hat Enterprise Linux 8 features

Cloud services: overview, vulnerability,
compliance, and system comparison

RED HAT INSIGHTS

Included with your Red Hat Enterprise Linux subscription

Red Hat Insights assesses your Red Hat Enterprise Linux environment to help you proactively identify and remediate threats, avoiding outages and unplanned downtime.
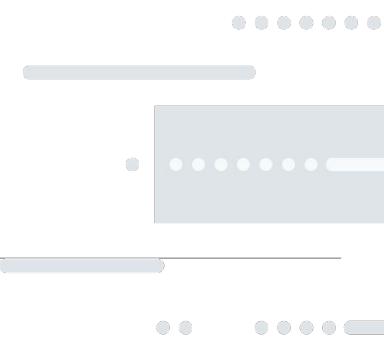
MANAGING INFRASTRUCTURE RISK

ANALYZE   IDENTIFY   PRIORITIZE   RESOLVE
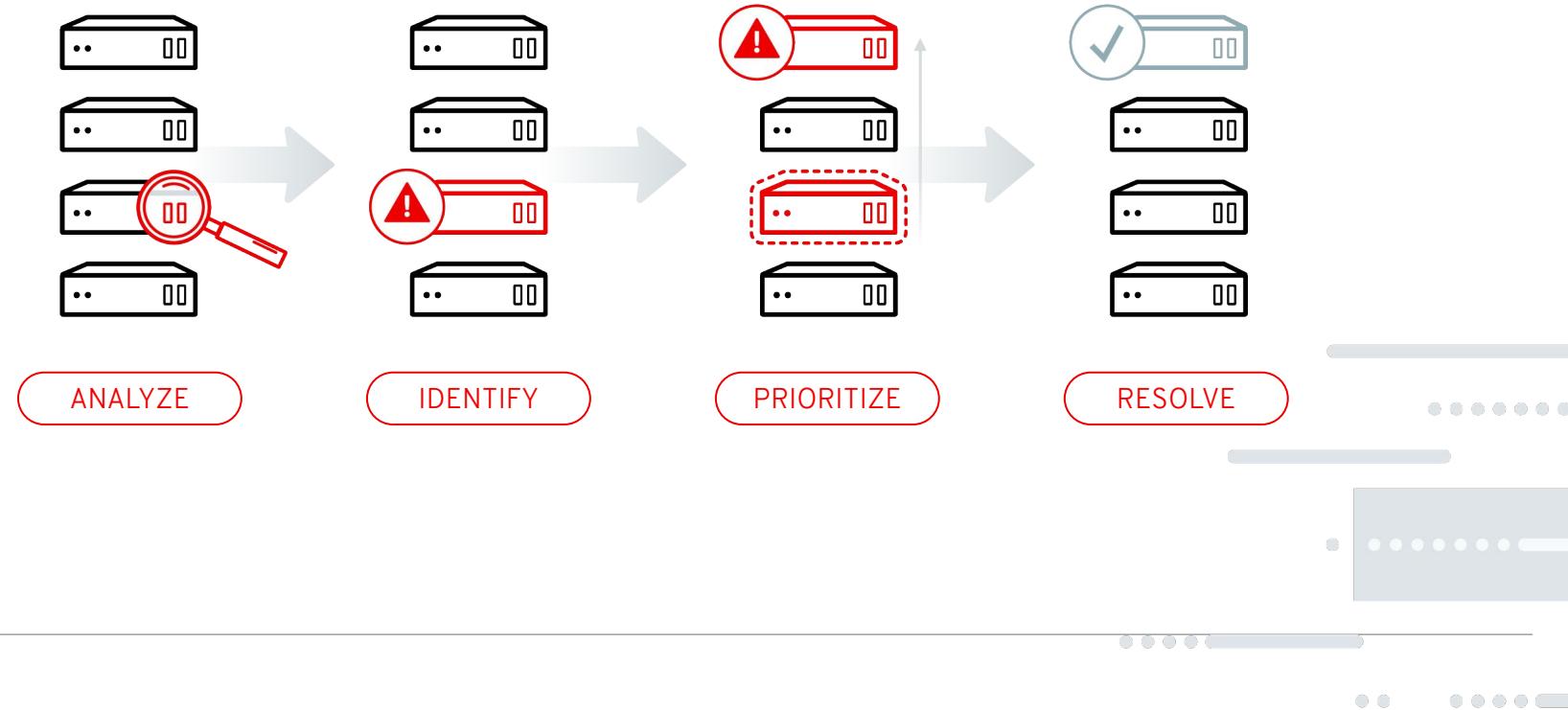
KEY RISKS DISCOVERED

Tailored resolution steps included for resolution
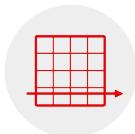
Performance issue
Network interface is not performing at maximum speed

Recommended action
Check cable, connections, and remote switch settings

Security risk detected
Privilege escalation

Recommended action
Apply mitigation and update the kernel

Availability
OpenShift operations fail if insufficient CPU or memory

Recommended action
Increase CPU and/or memory reservation

**Stability**
Filesystem has exceeded 95% capacity

Recommended action
Increase free space on the host.

MORE THAN JUST SECURITY

Red Hat Insights currently has over 600 rules—here is how they stack up across categories
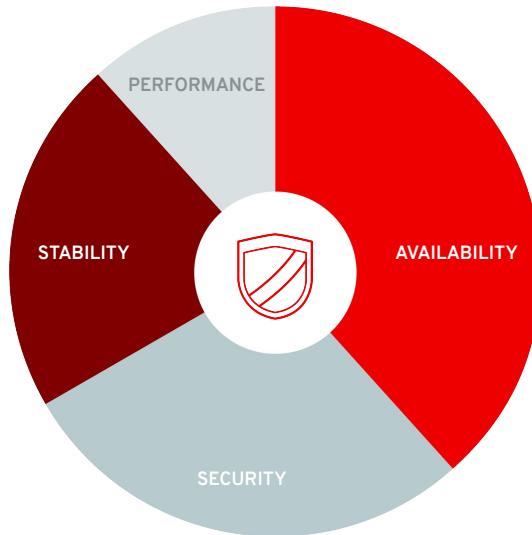
- **Availability** 38.6%
- **Security** 28.1%
- **Stability** 21.7%
- **Performance** 11.6%

Red Hat Insights

Overview

Rules

Inventory

Remediations

Documentation

Overview

Rule hits by severity

2 Critical affecting 19 systems

16 High affecting 110 systems

45 Medium affecting 569 systems

28 Low affecting 220 systems

Rule hits by category

91
Total hits

- Availability (16)
- Stability (14)
- Performance (4)
- Security (57)
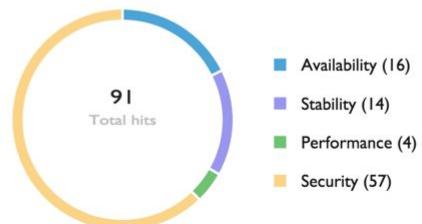
Get started with Red Hat Insights

Connect your first systems

Connect at least 10 systems to get a better awareness of issues and optimizations identified across your infastructure

Learn how to connect a system to insights

Remediate Insights findings with Ansible

Easily generate an Ansible playbook to quickly and effectively remediate Insights findings

Get started with Insights and Ansible Playbooks

Deploy Insights at scale

Get more out of Insights with more systems. Quickly connect systems with Ansible or Puppet

Download Ansible Playbook

Review playbook

RED HAT INSIGHTS

Now included with all Red Hat Enterprise Linux subscriptions

Buy

Get

**Red Hat**
Enterprise Linux

Red Hat
Insights

RED HAT SMART MANAGEMENT

Red Hat Smart Management helps
organizations optimize
and manage their Red Hat Enterprise Linux
environments, securing the foundation of their
IT infrastructure.
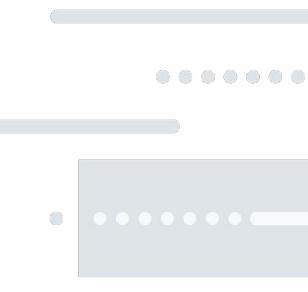
RED HAT SMART MANAGEMENT

Red Hat Satellite
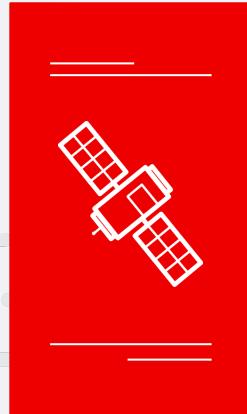
Cloud management services for Red Hat Enterprise Linux

+

Vulnerability

Compliance
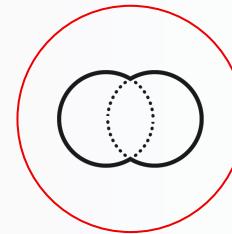
System comparison

CLOUD MANAGEMENT SERVICES FOR RED HAT ENTERPRISE LINUX

- Cloud-based management of Red Hat Enterprise Linux hosts

- Managing instances on-premise and in multi-cloud environments

- Focusing on the functionality that customers need

- Offering key benefits of Software-as-a-Service

CLOUD MANAGEMENT SERVICES SESSIONS

Managing Red Hat Enterprise Linux in a cloud-based world
- Day/Time: Wednesday, May 8, 11:30 a.m.-12:15 p.m.
- Speaker(s): Darshana Paithankar, Red Hat; John Spinks, Red Hat

Managing security with Red Hat Enterprise Linux environments
- Day/Time: Wednesday, May 8, 3:30 p.m.-4:15 p.m.
- Speaker(s): Mohit Goyal, Red Hat

RED HAT SATELLITE

Red Hat Satellite is a scalable platform to manage patching, provisioning, and subscription management of your Red Hat infrastructure, regardless of where it is running.

Red Hat Satellite
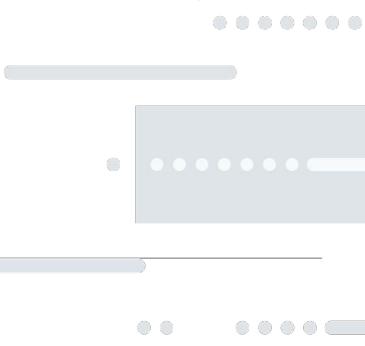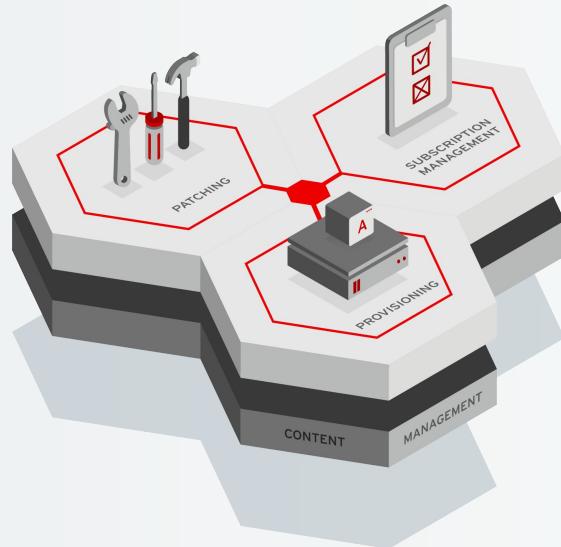
Standard operating environment with hosts that are the same across your environment

Reliability and resiliency using Red Hat Insights

Security with systems that are patched, up to date, and compliant with policies

Confidence in your subscription utilization

RED HAT SATELLITE 6.5

System management for Red Hat Enterprise Linux 8 hosts
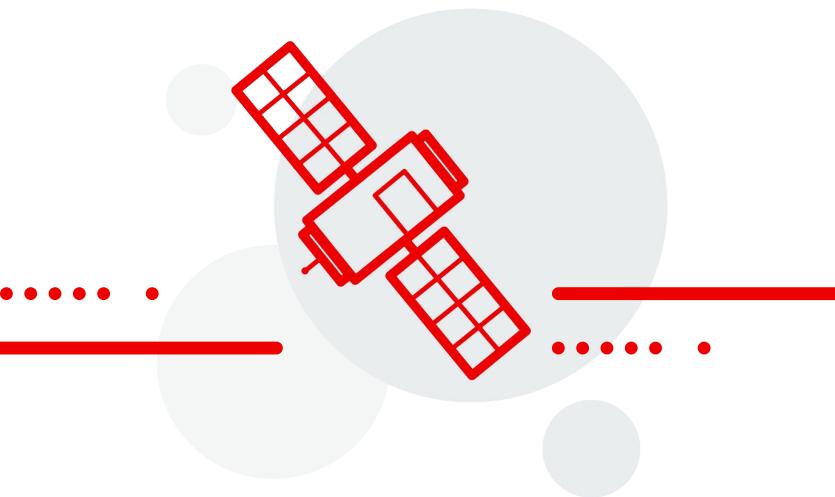
Patching
Patch Red Hat Enterprise Linux 8 hosts with Satellite

Provisioning
Provision Red Hat Enterprise Linux 8 hosts with Satellite

Application streams
Get basic module visibility and management with Red Hat Enterprise Linux 8

System purpose
State the intended use of a Red Hat Enterprise Linux 8 system

System roles
Run system roles on Red Hat Enterprise Linux hosts

If you want to manage Red Hat Enterprise Linux 8 clients, you must be running Satellite 6.5.

Satellite and Capsules must be installed on a Red Hat Enterprise Linux 7 Host

Red Hat Satellite

Admin User ∨

All Hosts ≫ 🔴 skylab.example.com ⇄

Found 83 reports from the last [7 ▾] days

Boot disk ∨   Run Ansible roles   Schedule Remote Job ∨   Back   Edit   Clone   Build   Run puppet   **Delete**

**Details**

Audits   Facts   Reports   YAML   Content

Compliance

Properties   Metrics   NICs

Properties

Status	⊘ OK
Compliance	⊘ Compliant
Configuration	⊘ No changes
Execution	⊘ Last execution succeeded
Errata	⊘ All errata applied
System Purpose	⊘ Matched
Subscription	⊘ Fully entitled
Build duration	N/A
Token	N/A
Domain	example.com
IP Address	10.0.180.180
MAC Address	2c:c2:60:49:a3:25
Puppet Environment	production
Architecture	x86_64
Operating System	RedHat 8.0
PXE Loader	
Location	Default Location

Runtime

last 7 days

■ Config Retrieval
■ Runtime

Time in Seconds

15

10

5

0

Apr 10   Apr 11   Apr 12   Apr 13   Apr 14   Apr 15   Apr 16

Resources

last 7 days

■ Applied
■ Failed
■ Failed restarts
■ Skipped
■ Restarted

4

3

2

RED HAT ENTERPRISE LINUX 8 SUPPORT

RED HAT ENTERPRISE LINUX 8 PATCHING

Red Hat Satellite

Default Organization ▾   Any Location ▾

Admin User ▾

Monitor

Content

Containers

Hosts

Configure

Infrastructure

Insights

Access

Administer

All Hosts > Create Host

Host   Ansible Roles   Virtual Machine   **Operating System**   Interfaces   Puppet Classes   Parameters   Additional Information

Architecture *   x86_64

Operating system *   No options available for selected Architecture

Provisioning Method *   ○ Boot disk based   ● Network Based   ○ Image Based

Build   ☑ Enable this host for provisioning

Media Selection   ● Synced Content   ○ All Media
                        Select the installation media that will be used to provision this host. Choose 'Synced Content' for Synced Kickstart Repositories or 'All Media' for other media.

Synced Content   Red_Hat_Enterprise_Linux_8_for_x86_64_-_BaseOS_...

Partition Table *   No options available for selected Operating System

What ever text(or ERB template) you use in here, would be used as your OS disk layout options if you want to use the partition table option, delete all of the text from this field

Root Pass *   Password must be 8 characters or more

Provisioning Templates ⟳ Resolve

Display the templates that will be used to provision this host

RED HAT ENTERPRISE LINUX 8 PROVISIONING

Red Hat Satellite

Default Organization ⌄   Any Location ⌄

Monitor

Content

Tasks   Packages ⌄   Errata   Module Streams   Traces

Available Module Streams

name = nodejs OR name = postgresql   ✖   Search ⌄

Name	Stream		Installed Profile	Actions
nodejs	10			Actions ⌄
nodejs	8			Actions ⌄
postgresql	10			Actions ⌄
postgresql	9.6			Actions ⌄

Showing 1 - 4 of 4   « ‹   1   of 1   › »

Red Hat Satellite

Default Organization ▾   Any Location ▾

Admin User ▾

Monitor
Content
Containers
Hosts
Configure
Infrastructure

Basic Information

Name: rdu-db01.example.com
UUID: 9a381c83-7834-49ed-8cf8-7dd2f25d1f46
Description:
Type: kvm
Katello Agent :   ⓘ Not installed
Virtual Guests: 0 Content Hosts
Registered Through: satellite65.example.com

Subscriptions

Subscription Status: ✓ Fully entitled
Details:
Auto-Attach: Yes

Installable Errata

Security: ⚠ 0
Bug Fix: 🐞 0
Enhancement: ➕ 0

Content Host Content

Release Version:
Content View: Default Organization View
Lifecycle Environment :

☑ Library
☐ Development
☐ Staging
☐ Production

System Purpose

System Purpose Status: ✓ Matched

Service Level (SLA):

Usage Type: ✓ Production

Role: ✓ Red Hat Enterprise Linux

Add o

ent Host Status

tered: 2019-04-15 15:42:56 -0400

Architecture   x86_64

RED HAT ENTERPRISE LINUX 8 SYSTEM PURPOSE

Ansible Roles

Filter ... • Search • Import • Documentation

▲ Name	Hostgroups	Hosts	Imported at	Actions
fix-selinux	0	0	less than a minute ago	Delete
linux-system-roles.kdump	0	0	less than a minute ago	Delete
linux-system-roles.network	0	0	less than a minute ago	Delete
linux-system-roles.postfix	0	0	less than a minute ago	Delete
linux-system-roles.selinux	0	1	8 days ago	Delete
linux-system-roles.timesync	0	0	less than a minute ago	Delete
RedHatInsights.insights-client	0	1	8 days ago	Delete
rhel-system-roles.kdump	0	0	less than a minute ago	Delete
rhel-system-roles.network	0	0	less than a minute ago	Delete
rhel-system-roles.postfix	0	0	less than a minute ago	Delete
rhel-system-roles.selinux	0	0	less than a minute ago	Delete
rhel-system-roles.timesync	0	0	less than a minute ago	Delete
tomcat_role	0	1	4 days ago	Delete

20 ▲ per page   1-13 of 13   « ‹ 1 of 1 › »

RED HAT ENTERPRISE LINUX 8 SYSTEM ROLES

RED HAT ENTERPRISE LINUX SYSTEM ROLES

With Ansible

Ansible playbooks

Shipping Roles

- Network, SELinux, TimeSync, kdump, Postfix (tech preview)

```
hosts: all
role: rhel-system-roles.subsystem
```

Red Hat Enterprise Linux system roles

Network	SELinux	TimeSync	kdump
6.0	—	7.0	—	8.0

RED HAT ENTERPRISE LINUX SYSTEM ROLES

With Ansible

Ansible Playbooks

Upstream development

- Storage, logging, metrics, SAP HANA®, firewall, tuned

Future ideas

- NFS, subscription management, authentication

```
hosts: all
role: rhel-system-roles.subsystem
```

Red Hat Enterprise Linux system roles

Network	SELinux	TimeSync	kdump
Storage	Logging	Metrics	Firewall
6.0	—	7.0	—	8.0

IMAGE BUILDER

Tooling to enable automated creation of customized Red Hat® Enterprise Linux® OS images

Content in	Backend builders / REST API / GUI / CLI	Content out
Red Hat content	GUI CLI	DVD installers
Custom		Disk img
Third party	REST API	FileSystem img
Third party		Virtual img
	Cloud img
Content in	Backend builders	**Content out**
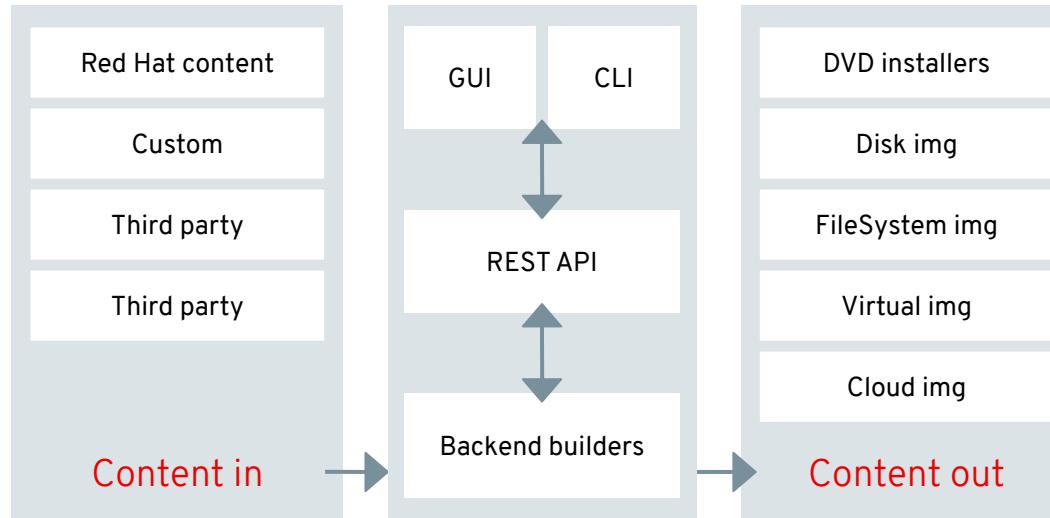
OUTPUT IMAGE TYPES

Current Capabilities

Introduced in
Red Hat Enterprise Linux 7

❯ Live Bootable ISO (.iso)

❯ QEMU QCOW2 Image (.qcow2)

❯ Raw Partitioned Disk Image (.img)

❯ Ext4 File System Image (.img)

Introduced in
## Red Hat Enterprise Linux 8

❯ Amazon Machine Image (.ami)

❯ Azure Disk Image (.vhd)

❯ VMware Virtual Machine Disk (.vmdk)

❯ OpenStack (.qcow2)

IMAGE BUILDER

Integration with Red Hat Satellite
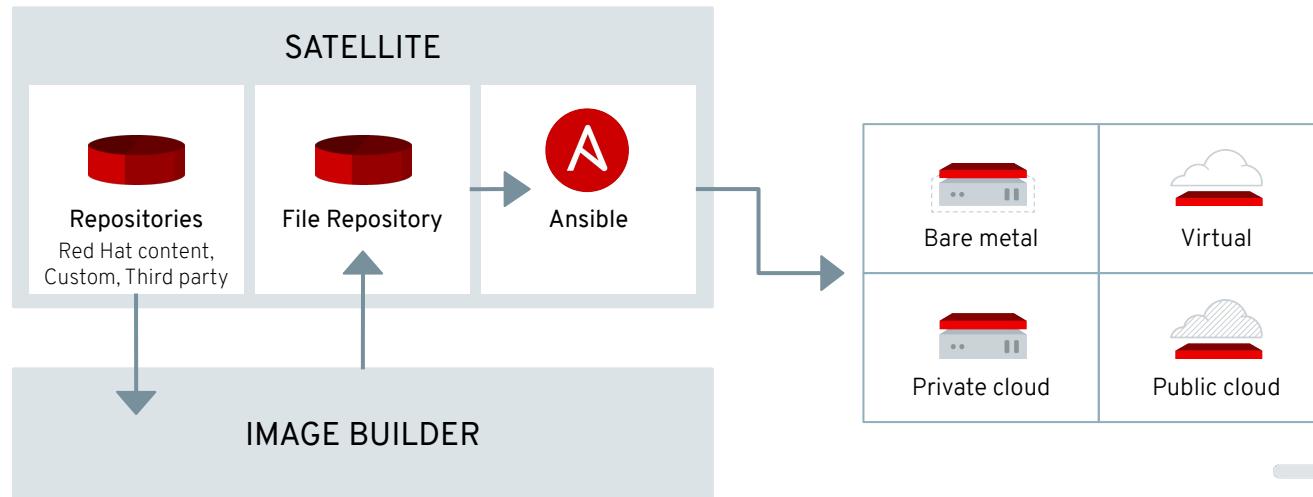
RED HAT ENTERPRISE LINUX 8 & SATELLITE

Satellite Future Plans

Plan to adopt Red Hat Enterprise Linux 8 with Satellite quickly

- Sat 6.5 supports RHEL 8 clients
- Sat 6.6 will allow you to run Satellite on RHEL 8

  - Easily access the RHEL Web Console of every managed node

  - Post 6.6, some new features will only work on RHEL 8

  - Post 6.6 will help migrate your Satellite from RHEL 7 to RHEL 8

  - Eventually Satellite will only run on RHEL 8

RESOURCES & NEXT STEPS

CALL TO ACTION:

- Activate Red Hat Insights

- Use Red Hat Smart Management
  - Evaluations are available for Satellite
  - Learn more about the new cloud management services for Red Hat Enterprise Linux

UXD
EXPERIENCE MATTERS

Take this survey to share feedback about Image Builder.

http://bit.ly/rhel2019

Visit the User Experience Design team in the **Feedback Zone**.

Ecosystem Expo
Exhibit Hall A

Help Identify Top Tasks for Red Hat Enterprise Linux
Got 5 minutes? Come talk to us and help identify the most important tasks in Red Hat Enterprise Linux!
Sara

To try out Image Builder and learn more, attend
The definitive RHEL 8 Beta hands-on lab

Multiple RHEL lab sessions - Visit our Booth!

Building OS images for physical, virtual, and cloud environments with image builder
- Wednesday, May 8, 11:30 - 12:15

Create custom images suitable for deploying systems using Red Hat Enterprise Linux image builder
- Tuesday, May 7, 9:00 - 11:00

Building a RHEL gold image for Microsoft Azure
- Tuesday, May 7, 12:30 - 2:30
- Tuesday, May 7, 3:30 - 5:30
- Thursday, May 9, 2:00 - 4:00

RED HAT MANAGEMENT SESSIONS

Visit ITO and Automation Booths for more info

Managing Red Hat Enterprise Linux in a cloud-based world
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- Speaker(s): Darshana Paithankar, Red Hat; John Spinks, Red Hat

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- Day/Time: Wednesday, May 8, 3:30 p.m.-4:15 p.m.
- Speaker(s): Mohit Goyal, Red Hat

Hands-on integrated management lab
- Day/Time: Thursday, May 9, 10:45 a.m.-12:45 p.m.
- Session type:Instructor-led lab

Hands on with Red Hat Satellite 6.5 [Replay]
- Day/Time: Thursday, May 8, 1:00 p.m.-3:00 p.m
- Day/Time: Thursday, May 9, 2:00 p.m.-4:00 p.m
- Session type: Instructor-led lab

RHEL Resources

Documentation:

[Red Hat Enterprise Linux 8](#)

[RHEL Image Builder](#)

[RHEL System Roles](#)

[RHEL Web Console](#)

Videos:

[Collection of RHEL 8 Videos](#)

Insights Resources

Webpages and Docs:

- Red Hat Insights Product page - http://access.redhat.com/insights/
- Red Hat Insights Customer Portal - https://access.redhat.com/products/red-hat-insights/
- Red Hat Insights Documentation - https://access.redhat.com/documentation/en-us/red_hat_insights/1.0/
- Red Hat Insights Blog Site - https://access.redhat.com/blogs/insights

Satellite Resources

- **Red Hat Satellite Blog - https://satelliteblog.redhat.com/**
- **Red Hat Satellite Product page - https://red.ht/2n0sMRI**
- **Red Hat Satellite Customer Portal - https://red.ht/1vjlu78**
- **Red Hat Satellite Documentation - https://red.ht/2W8CAua**
- **Red Hat Consulting offering: Transition to Red Hat Satellite 6 - https://red.ht/2UN6keP**

Training:

- **RH053: Satellite Technical Overview - https://red.ht/2XTPexv**
- **RH053 is also available on Udemy - https://bit.ly/2Cbdh3A**
- **RH403: Red Hat Satellite 6 Administration - https://red.ht/2dBHay5**