



# Red Hat Enterprise Linux

Highlights for Red Hat User Groups

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Red Hat Enterprise Linux





## Today's Topics

- ▶ Lifecycle events
  - RHEL 7 EOM and in-place upgrades!
  - RHEL 6 ELS ends and in-place upgrades!
  - CentOS Linux 7 EOL and conversions
- ▶ Modernizing your OS build and provisioning pipeline
  - RHEL image builder
- ▶ Insights modernizes management of RHEL
- ▶ Labs
  - image builder
  - leapp upgrades (7→8→9)
  - Insights CentOS Linux 7 conversions

# Key life cycle milestones



**CentOS Linux 7**  
**End of life**

June 30th, 2024



**Red Hat Enterprise Linux 7**  
**End of maintenance**

June 30, 2024 | Will require ELS add-on



**CentOS Stream 8**  
**End of life**

May 31st, 2024



**Red Hat Enterprise Linux 8**  
**Start of maintenance**

May 31, 2024



**Red Hat Enterprise Linux 6**  
**End of ELS support**

June 30, 2024

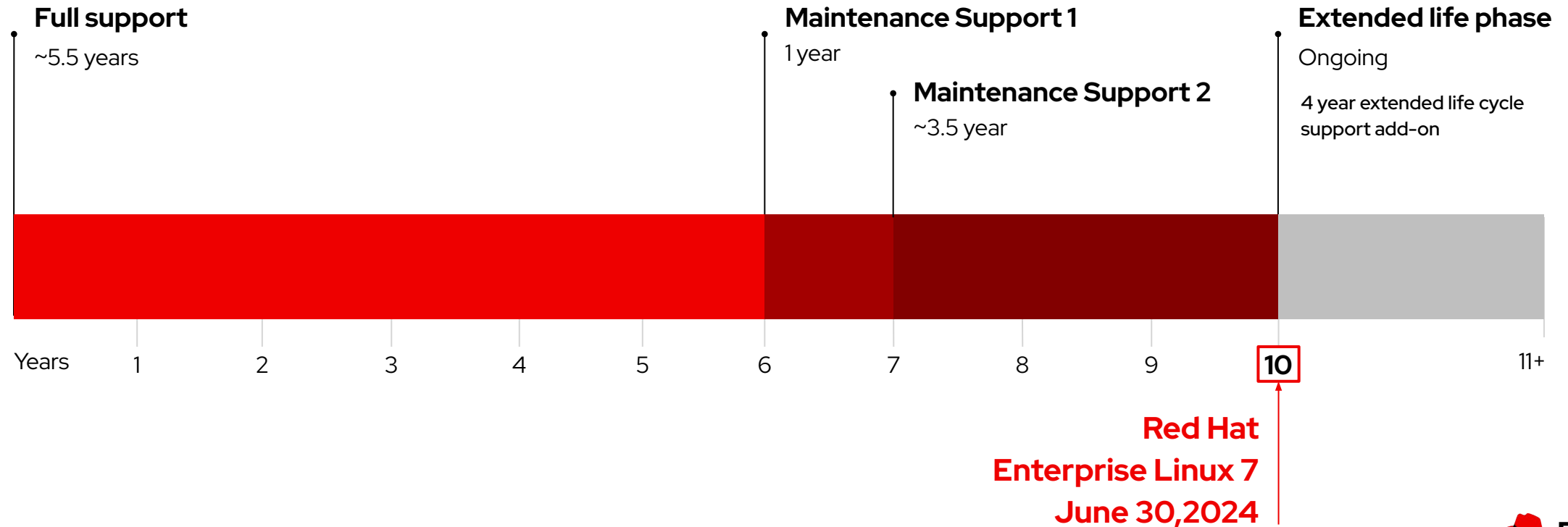


**Red Hat Enterprise Linux 9**  
**End of full support**

May 31, 2027

# On June 30, 2024

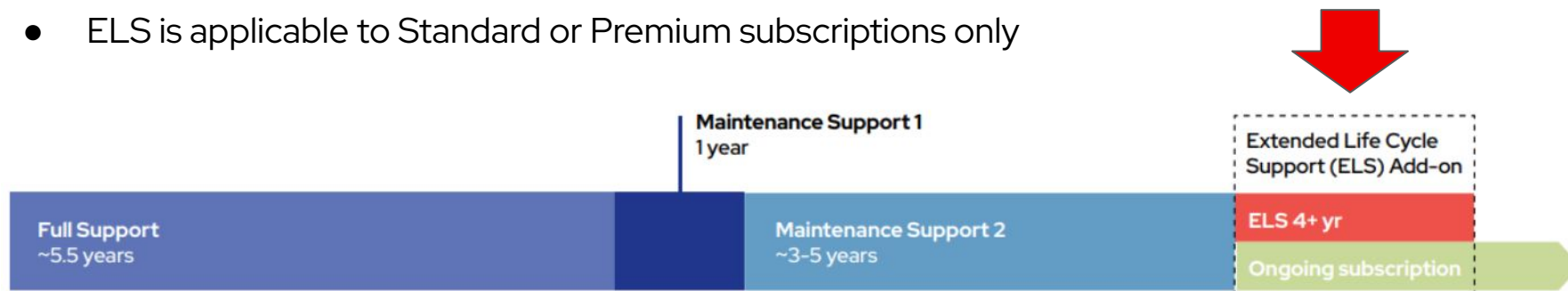
**Red Hat Enterprise Linux 7** will reach the end of Maintenance Support 2  
**Red Hat Enterprise Linux 6** extended lifecycle support ends



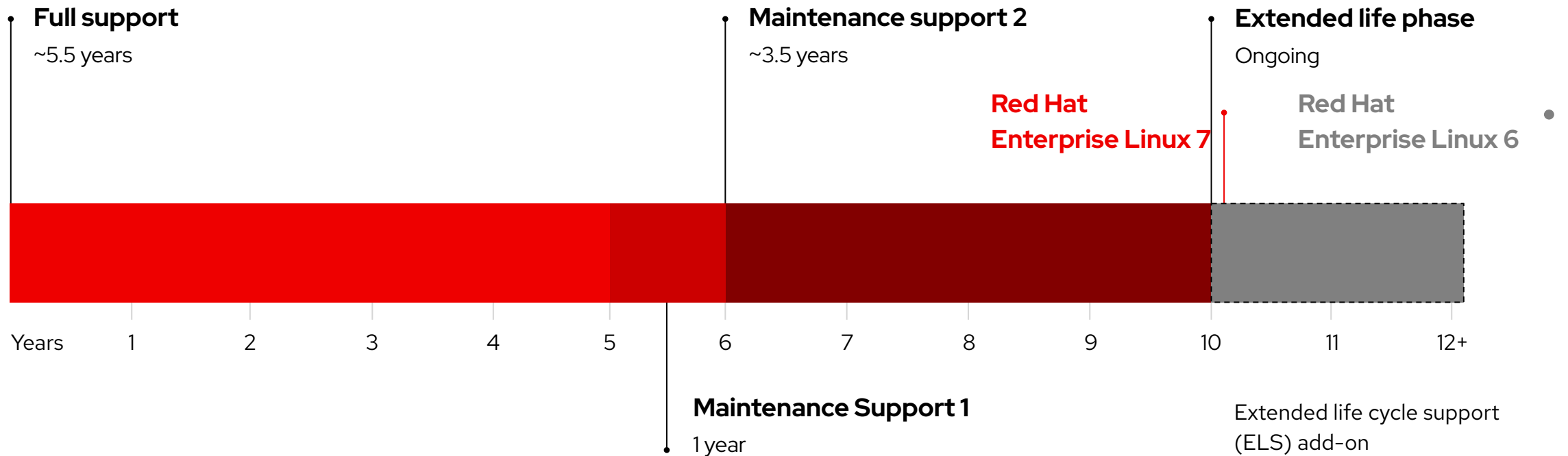
# RHEL 7 Extended Life Cycle Support (ELS) Add-on

Available during the Extended Life Phase, ELS delivers certain **critical-impact security fixes, selected urgent priority bug fixes, and troubleshooting** for the last minor release of a given version of RHEL (RHEL 7.9).

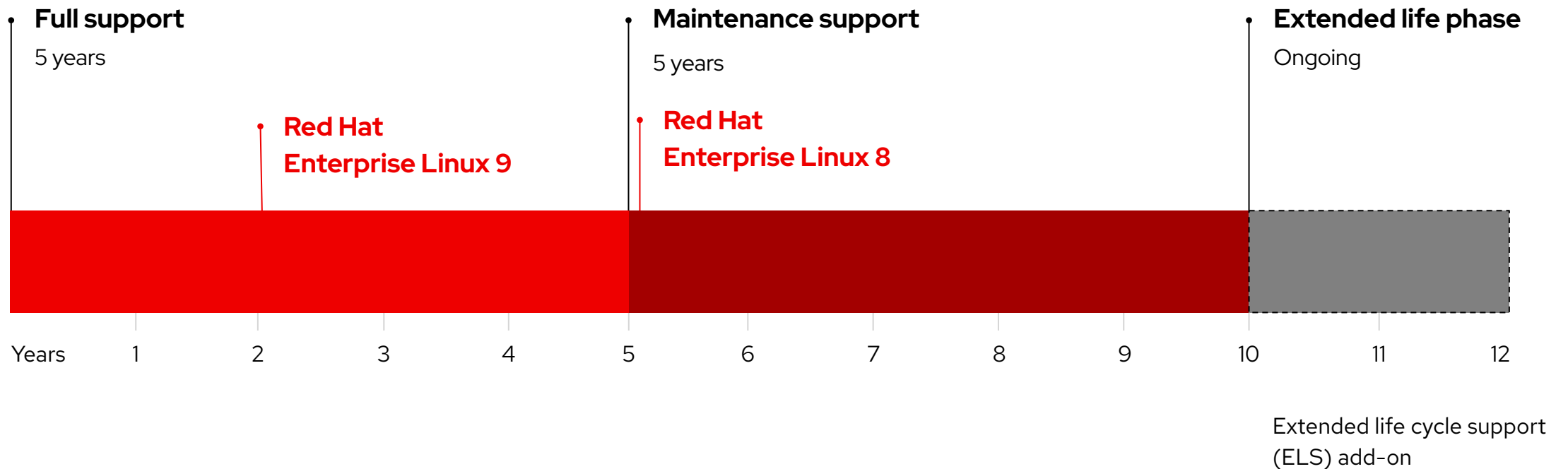
- Available from **July 1, 2024 through June 30, 2028**, only for RHEL 7
- Available in 1-year increments for up to **4 years**
- Supported architectures: x86\_64 (Intel and AMD), and s390x (IBM Z) - System z
- RHEL 7 ELS is also available through our **public cloud partners**
- ELS is applicable to Standard or Premium subscriptions only



# Red Hat Enterprise 6 and 7



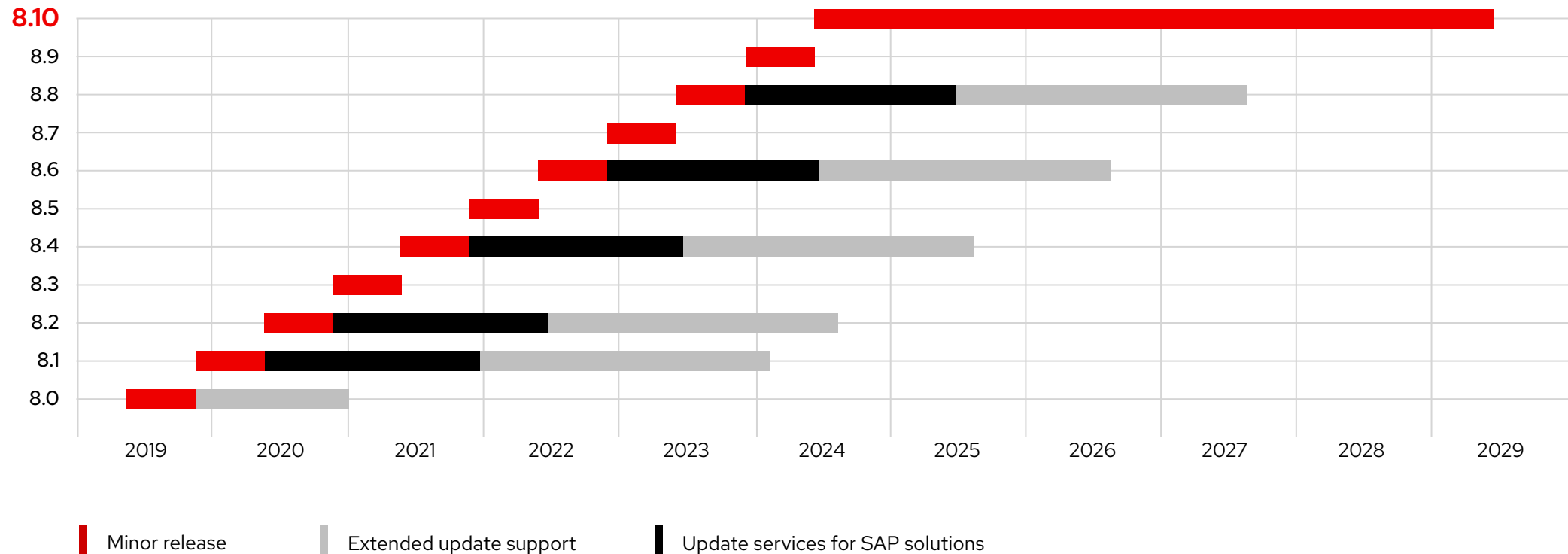
# Red Hat Enterprise Linux 8 and 9



Extended life cycle support (ELS) add-on

# Red Hat Enterprise Linux 8

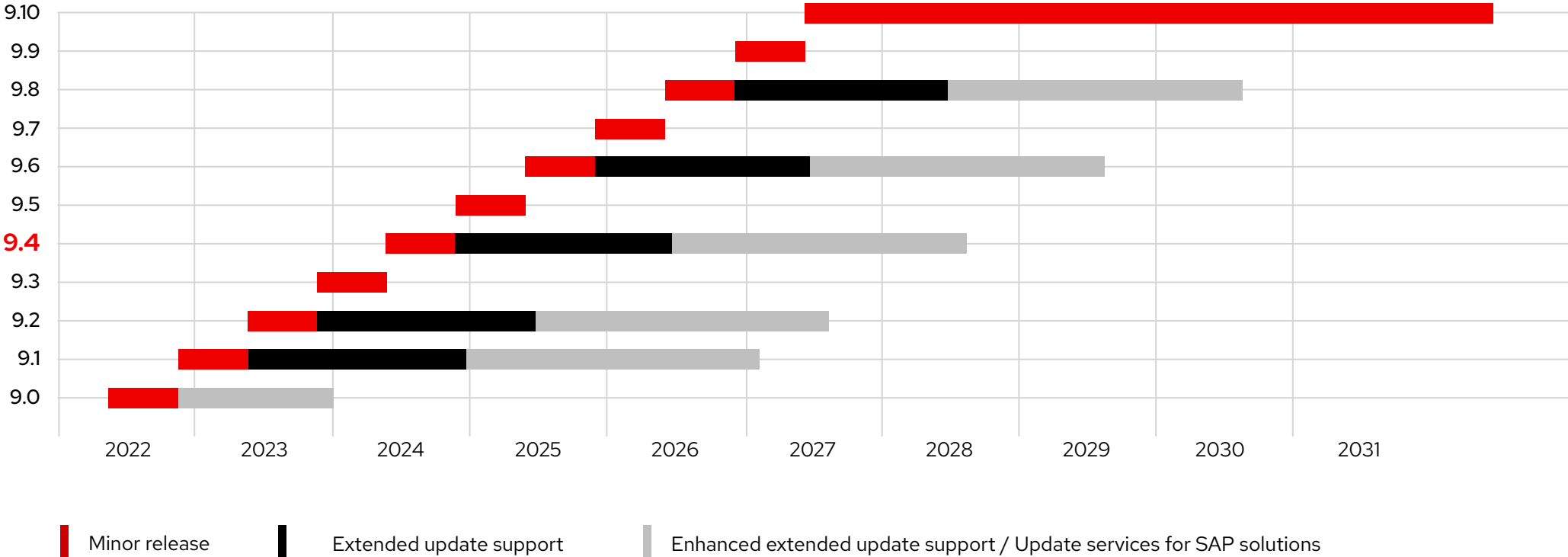
## Release timeline





# Red Hat Enterprise Linux 9

## Release timeline



# CentOS Linux 7 end of Life is 30 June 2024

**Convert now** via multiple options such as reduced price RHEL with optional 4 year extended life cycle support, no-cost developer subscription for teams, migrations at scale, and other migration offerings.

Visit [red.ht/centos](https://red.ht/centos) to get started



# Red Hat Enterprise Linux upgrades



# Red Hat Enterprise Linux 7 end of maintenance

**Red Hat will no longer provide bug fixes, security fixes, hardware enablement or root-cause analysis unless you take action to either:**

- ▶ Upgrade to a newer, supported release of Red Hat Enterprise Linux (RHEL)
- ▶ Ensure you are on RHEL 7.9 and purchase an Extended Life Cycle Support (ELS) add-on subscription for additional time



## Helpful resources

End of maintenance for Red Hat Enterprise Linux 7 is almost here

Red Hat Enterprise Linux Life Cycle - Maintenance Support 2

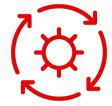
Announcing up to 4 years of Extended Life Cycle Support (ELS) for Red Hat Enterprise Linux 7

FAQ: RHEL 7 reaches End of Maintenance phase and transitions to Extended Life Phase

# In-place upgrades vs. re-deployment

In-place upgrade	VS	Re-deployment
Extend life of current hardware		Transition to new hardware
Potential time and cost savings		New, pristine deployment
Retains subscription		Transition to new Applications
Preserves configuration		Opportunity for new management/automation
Pre-Assessment guidance		Requires knowledge or assessment

# Multiple pathways to upgrade



## leapp upgrade tool

- ▶ CLI **leapp** tool –the foundational component for RHEL major release upgrades
- ▶ Graphical web console interface
- ▶ System analysis, safety checks, and recommended remediations
- ▶ Guided, single-node upgrade experience

Docs

[Leapp explained](#)

[Leapp upgrade FAQ](#)



## Red Hat Satellite integration

- ▶ Satellite integration of leapp tool for conversions at scale on-premises
- ▶ Automation for content synchronization and job templates for bulk upgrades

Docs

[Upgrade with Red Hat Satellite and leapp](#)

In-Place Upgrade Report for: localhost.localdomain

Title	Risk Factor	Description	Tags	Time
Repositories map file is invalid (/etc/leapp/files/repomap.csv)	High	Inhibitor	upgrade process	26.08.2019 15:18:04
OpenSSH configured to use removed ciphers	High	Inhibitor Remediation hint	authentication security network services	26.08.2019 15:23:56
OpenSSH configured to use removed mac	High	Inhibitor Remediation hint	authentication security network services	26.08.2019 15:23:56
Packages not signed by Red Hat found in the system	High	Remediation command	sanity	26.08.2019 15:23:57
LUKS encrypted partition detected	High	Inhibitor	boot encryption	26.08.2019 15:23:59
Possible problems with remote login using root account	High	Inhibitor Remediation hint	authentication security network services	26.08.2019 15:23:59
chrony using default configuration	Medium		services time management	26.08.2019 15:23:57
Postfix has incompatible changes in the next major version	Low		services email	26.08.2019 15:23:58
The subscription-manager release is going to be set to 8.0	Low		upgrade process	26.08.2019 15:23:58
Schedule SELinux relabeling	Low		selinux security	26.08.2019 15:23:58

# Identify the unknowns

## Pre-upgrade analysis report

### Types of custom checks

#### Risk factor:

**High** –very likely to result in a deteriorated system state

**Medium** –can impact both the system and applications

**Low** –should not impact the system but can have an impact on applications

**Info** –informational with no expected impact to the system or applications

#### Inhibitor:

- ▶ Will inhibit/hard stop the upgrade process
- ▶ System will remain in the pre-upgraded state if attempted to upgrade with inhibitors and go no further.

#### Remediation:

- ▶ An actionable solution to a reported problem
- ▶ Remediation command: can be executed directly through the web console
- ▶ Remediation hint: instructions on how to resolve the problem manually



## Accelerate your migration with Red Hat Consulting

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- ▶ **Create** snapshots to revert back to a known state if needed
- ▶ **Perform** the pre-upgrade analysis
- ▶ **Automate** suggested remediations to make upgrades easier
- ▶ **Track** progress with a reporting dashboard
- ▶ **Roll out** RHEL upgrades at scale



Visit [red.ht/consulting](https://red.ht/consulting)



# Preparation is the key to success

## Do you have Red Hat Enterprise Linux 7 running in your environment?

- ▶ Do you have a plans to upgrade?
- ▶ Which upgrade method is best for you?
  - An in-place upgrade with Leapp
  - A fresh install of RHEL 8 or 9
- ▶ Will you use in-house resources to upgrade RHEL 7 or will you need assistance?
- ▶ Will you be able to complete the upgrade project before June 30, 2024?
- ▶ Have you evaluated Hardware and Application compatibility?



## Helpful resources

- ▶ Upgrading your Red Hat Enterprise Linux infrastructure
- ▶ Top reasons to upgrade Red Hat Enterprise Linux
- ▶ Which version of Red Hat Enterprise Linux is best for me?
- ▶ What are Red Hat Enterprise Linux in-place upgrades?

# Our recommended approach

## In-place upgrades with automation



### Automate everything

Make RHEL upgrades a push-button service easily consumable by operations and/or application teams



### Adapt to your business

Automate remediations to deal with your standard tools, agents, and middleware



### Enable quick recovery

Eliminate application impact risk so there is never an excuse not to upgrade



### Track progress

Visualize pre-upgrade results and track progress of upgrades completed across the estate

Overview video:  
[Prepare now for RHEL 7 end of maintenance](#)

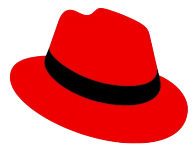
Full video:  
[Prepare now for RHEL 7 end of maintenance](#)

Blog:  
[How to automate upgrades before RHEL 7 end of maintenance](#)



# Perform upgrades at scale with Red Hat Satellite

Upgrade Red Hat Enterprise Linux with Red Hat Satellite and leapp



## Red Hat Satellite

- ▶ Deploy the leapp package and metadata file
- ▶ Perform pre-upgrade analysis
- ▶ View the pre-upgrade report to review any upgrade considerations
- ▶ **Deliver** remediations using the remote execution feature of Satellite
- ▶ Execute the upgrade using leapp



**Satellite and leapp upgrade**



## Large scale upgrade and modernization

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A large global financial services firm upgrades from Red Hat Enterprise Linux 7 to Red Hat Enterprise Linux 8 easier than ever before.

### Size:

- ▶ Approximately 30,000 Red Hat Enterprise Linux 7 systems

### Key driver:

- ▶ Wanted the latest and greatest capabilities

### Infrastructure details:

- ▶ Over 300 applications (custom and 3rd party)
- ▶ Mix of bare metal and virtual

### The process:

- ▶ In-place upgrade from Red Hat Enterprise Linux 7 to 8 with leapp
- ▶ 2 month PnT-led engagement
- ▶ Initial PoA took 1 week
- ▶ Write customer actors for custom applications leveraging Red Hat samples
- ▶ Engineering code review

# What users are saying about leapp?

via PeerSpot

"Red Hat Enterprise Linux Leapp was very helpful. It is very easy to use." [Data Platform Engineer at a large manufacturing company](#)

"I used Leapp for my upgrade from RHEL 7 to 8. It's an excellent utility tool. When I run the Leapp script, it tells me everything I need to take care of before I run a migration."

[System Administrator at a large healthcare company](#)

"Since I'm more focused on migrating, Leapp is awesome. We are able to do something that will work the way it's working. There are no issues or breaks."

[Jose Gonzalez, Senior Engineer at Organon](#)

"We use the Leapp tool to manage the upgrades. It works smoothly on our Oracle databases. Leapp is straightforward to use." [Rich Owens, Server Engineer at a large retailer](#)



Upgrade your Red Hat Enterprise Linux infrastructure



Visit [red.ht/upgraderhel](https://red.ht/upgraderhel) to get started



Red Hat Enterprise Linux 7  
end of maintenance is June 30, 2024

# Convert from CentOS Linux with Convert2RHEL



# CentOS Linux 7 end of Life is 30 June 2024











**Convert now** via multiple options such as reduced price RHEL with optional 4 year extended life cycle support, no-cost developer subscription for teams, migrations at scale, and other migration offerings.

Visit [red.ht/centos](https://red.ht/centos) to get started



# Why move to Red Hat Enterprise Linux?

## Value of the Red Hat Enterprise Linux subscription

-  Monitor and manage your deployment environment
-  Ability to perform in-place upgrade
-  Consistently built and tested in the same environment
-  Government and security certifications
-  Certified by many hardware and software vendors
-  Certified to be used as a guest or host on cloud platforms
-  Includes advanced automation and management tools
-  Live kernel patches available
-  Fixed life cycle and extended life cycle offerings
-  Enterprise-level platform support

ORACLE  
Linux

CentOS Linux

 Rocky Linux™

 AlmaLinux



**Red Hat**  
Enterprise Linux

# In-place conversions vs. re-deployment

In-place conversion	VS	Re-deployment
Reuse current hardware/storage		Transition to new hardware
Potential time and cost savings		New, pristine deployment
Preserves configuration		Opportunity for new management/automation
Pre-conversion guidance		Requires knowledge or assessment

# New programs that make Red Hat Enterprise Linux more accessible



## Red Hat Enterprise Linux for Third Party Linux Migration ▶

For CentOS Linux users that need a competitively priced subscription and a simplified conversion process. Extended life cycle support available.

**Low cost** [Learn more](#)



## Red Hat Developer Subscription for Teams ▶

For organizations that run Red Hat in production and want to standardize on RHEL for development.

**No cost** [Learn more](#)

## Red Hat Academic program ▶

For degree-granting entities, research and academic institutions.

**Low cost** [Learn more](#)

## Red Hat Developer Subscription for Individuals ▶

For individual's use up to 16 physical or virtual nodes. Not for corporate or organizational use.

**No cost** [Learn more](#)

## Red Hat Open Source Infrastructure program ▶

For open source projects, communities, standards bodies and other not-for-profit software groups engaged with open source.

**No cost** [Learn more](#)

# Red Hat Enterprise Linux for Third Party Linux Migration offerings

Three low-cost offerings to ease your migration to Red Hat Enterprise Linux\*



Available on-site or in the cloud via Red Hat Cloud Access



Available via public cloud marketplaces

## Red Hat Enterprise Linux for Third Party Linux Migration

- ▶ Red Hat Enterprise Linux
- ▶ High Availability
- ▶ Convert2RHEL tool

## Red Hat Enterprise Linux for Third Party Linux Migration with ELS

- ▶ Red Hat Enterprise Linux
- ▶ High Availability
- ▶ Convert2RHEL tool
- ▶ Up to 4 years of Extended Life Cycle Support (ELS)

## Red Hat Enterprise Linux for Third Party Linux Migration with ELS

- ▶ Red Hat Enterprise Linux
- ▶ High Availability
- ▶ Convert2RHEL tool
- ▶ Up to 4 years of Extended Life Cycle Support (ELS)
- ▶ Hourly metered billing - on AWS today and slated for Azure in Q1

# Multiple pathways of Convert2RHEL



## Convert2RHEL tool

- ▶ Command line tool - the foundational component to convert compatible derivatives to RHEL
- ▶ System analysis, safety checks, and recommended remediations

Docs

Converting from an RPM-based Linux distribution to Red Hat Enterprise Linux



## Red Hat Satellite integration

- ▶ Satellite integration of Convert2RHEL for conversions at scale on-premises
- ▶ Automation for content synchronization and job templates for bulk conversions

Docs

Converting a Host to Red Hat Enterprise Linux with Red Hat Satellite  
Bulk convert2RHEL with Red Hat Satellite



## Red Hat Insights integration

- ▶ Connect systems to appear in Red Hat Insights Inventory
- ▶ Insights tasks for pre-conversion analysis and completing conversion
- ▶ Hosted solution, no infrastructure is required

Docs

Converting from an RPM-based Linux distribution to RHEL using Red Hat Insights



## Red Hat Satellite conversion toolkit

- ▶ Connect systems to private inventory and initiate pre-conversion analysis and complete conversions
- ▶ For connected and disconnected environments
- ▶ Infrastructure provided as appliance for any known footprint

Docs

Conversion toolkit tailored documentation  
Conversion toolkit blog

# Converting to Red Hat Enterprise Linux

with the `convert2rhel` tool

Convert from	Becomes
CentOS Linux 7	Red Hat Enterprise Linux 7
CentOS Linux 8	Red Hat Enterprise Linux 8
Oracle Linux 7	Red Hat Enterprise Linux 7
Oracle Linux 8	Red Hat Enterprise Linux 8
AlmaLinux OS 8	Red Hat Enterprise Linux 8
Rocky Linux 8	Red Hat Enterprise Linux 8

- ▶ Self-service migration tool helps avoid costly redeployment projects
- ▶ Maintain existing customizations, configurations, and preferences
- ▶ Once migrated to Red Hat Enterprise Linux, take advantage of everything a Red Hat Enterprise Linux subscription has to offer

# Red Hat Consulting: CentOS to RHEL Migration Assessment

[Available On AWS Marketplace](#)

## Offering

This assessment provides clients with expert recommendations to help them confidently plan and analyze their in-place conversion of AWS compute instances running CentOS Linux to supported Red Hat Enterprise Linux.

## Outcomes

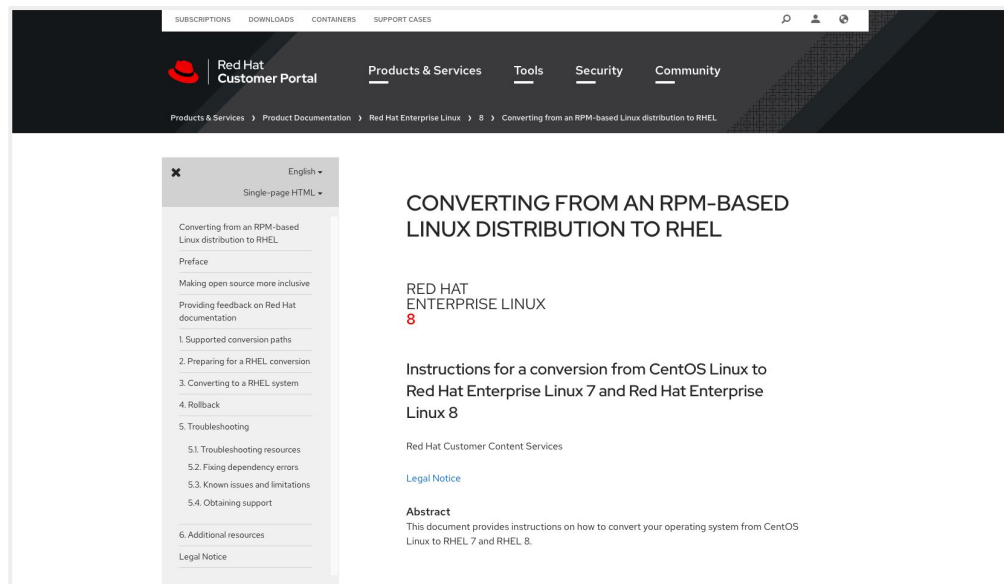
- Understanding of the CentOS Linux environment in AWS, including but not limited to:
  - Operational processes, Access controls and monitoring
  - OS Provisioning
  - Storage, Networking, Security
  - Workloads
  - Dependencies
- Understanding of the strategy and business value of the current implementation and migration

## Implementation

- As a separate body of work, Red Hat professional services can implement the recommended next steps if an organization chooses.

# Convert2RHEL migration options

## Option 1 Self-service



## Option 2 Recommended







## Accelerate your migration with Red Hat Consulting

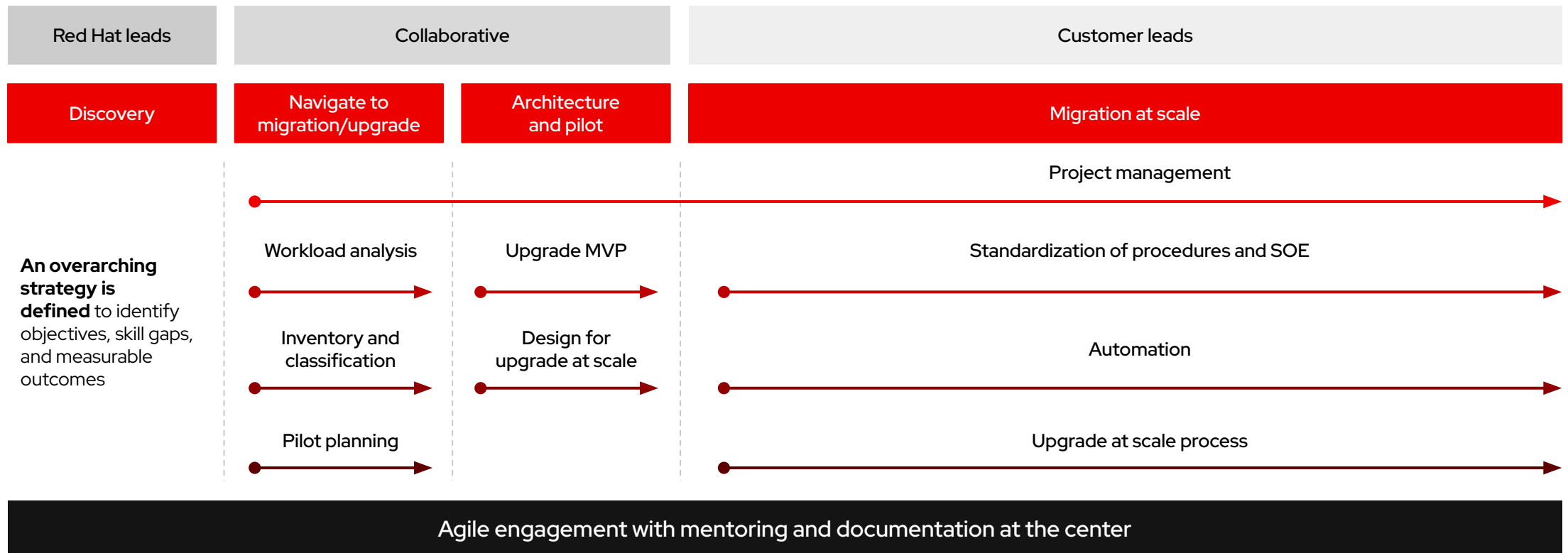
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- ▶ Work to identify tooling and the key sets of apps and workloads
- ▶ Create automation to help establish workflows
- ▶ Reduce risk for your mission critical applications and workloads



Visit [red.ht/consulting](https://red.ht/consulting)

# Red Hat Consulting migration engagement model





## Customer success with Convert2RHEL

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Large global media company  
converts from Oracle Linux  
to Red Hat Enterprise Linux  
to reduce cost

### Size:

- ▶ Approximately 28,800 Oracle Linux systems

### Key driver:

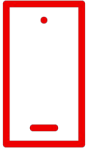
- ▶ Wanted to standardize on Red Hat Enterprise Linux
- ▶ Reduce cost

### Infrastructure details:

- ▶ Mix of bare metal and virtual
- ▶ 13,000 Oracle Linux 7
- ▶ 10,000 Oracle Linux 6.5
- ▶ 5800 Oracle Linux 6.3

### The process:

- ▶ Delivered as a Red Hat Consulting engagement



## Customer success with Convert2RHEL

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Large global consumer  
products company converts  
from CentOS Linux to Red Hat  
Enterprise Linux

### Size:

- ▶ 300 CentOS to RHEL for virtual datacenter and RHEL server

### Key driver:

- ▶ Expansion into new markets
- ▶ Migrate to a full cloud strategy

### Results:

- ▶ Reduced deployment times
- ▶ Increased competitiveness by decreasing time-to-market
- ▶ Homogeneity of OS
- ▶ Cloud-agnostic

# Conversions reference links



## Documentation

### Public landing page

[Red Hat Enterprise Linux migration process](#) ▶

### Official documentation

[Converting From an RPM-based Linux Distribution to RHEL](#) ▶

[Red Hat Satellite 6.13 - Chapter 7. Converting a host to Red Hat Enterprise Linux](#) ▶

[Convert2RHEL Support Policy](#) ▶

[Convert2RHEL FAQ](#) ▶

[Unsupported conversion scenarios enabled by the upstream tooling](#) ▶



## Blog posts and media

### Miscellaneous

[RHEL Migrations playlist on YouTube](#) ▶

[Blog: Bulk Convert2RHEL with Red Hat Satellite 6.10](#) ▶

[Blog: An Introduction to Convert2RHEL: Now officially supported to convert RHEL-like systems to RHEL](#) ▶

[Blog: Convert2RHEL adds official support for Oracle Linux conversions](#) ▶

# Image builder

Red Hat Enterprise Linux image builder  
and Red Hat Insights image builder



# Common operating system deployment challenges



## Complexity at scale

Numerous tools and complex configuration options vary based on chosen environments.



## Environment consistency

Consistent, high-quality images for each runtime environment are difficult to build and repeat.



## Provisioning time

Significant time and resources are required to install and optimize operating system (OS) installations.

# Image builder benefits

Streamline Red Hat Enterprise Linux system deployments across the hybrid cloud



**Facilitate** rapid deployment of images and updates



**Streamline** the path from development to production



**Deploy** to the cloud more easily and accelerate cloud workload migrations



**Configure** systems consistently across the hybrid cloud



**Mitigate** risk with the power of automation and workflows



**Implement** your chosen standard operating environment strategy



# Use cases for the hybrid cloud

Consistency across all runtime environments



## Public cloud

Accelerate cloud workload migrations and reduce provisioning time with build and push capabilities to AWS, Azure, and Google Cloud Platform.



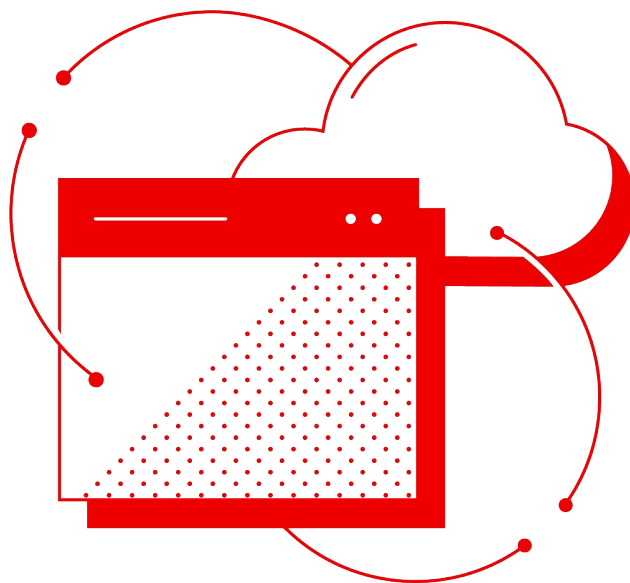
## Private cloud

Standardize private cloud infrastructure with consistent, streamlined images specifically optimized for virtual environments.



## Physical

Save time and make the most of existing and future application investments by creating customized OS “Gold” images to deploy across physical systems.



## Multiple ways to use image builder



### Composer-cli | On premise

- ▶ Command line tool
- ▶ On-premises build node
- ▶ Included with Red Hat Enterprise Linux (RHEL) subscription



### RHEL web console | On premise

- ▶ Via interface in RHEL web console
- ▶ On-premises build node
- ▶ Included with RHEL subscription



### Red Hat Insights image builder | Hosted

- ▶ Cloud-hosted experience
- ▶ No infrastructure required
- ▶ Included with RHEL subscription
- ▶ [console.redhat.com](https://console.redhat.com)



# Steps for using image builder



## 1. Choose platform

Physical, private cloud, public cloud, or edge



## 2. Select image builder tool

**Red Hat Insights image builder**  
console.redhat.com

**RHEL image builder**  
On-premises private build



## 3. Create blueprint

Define and customize the image



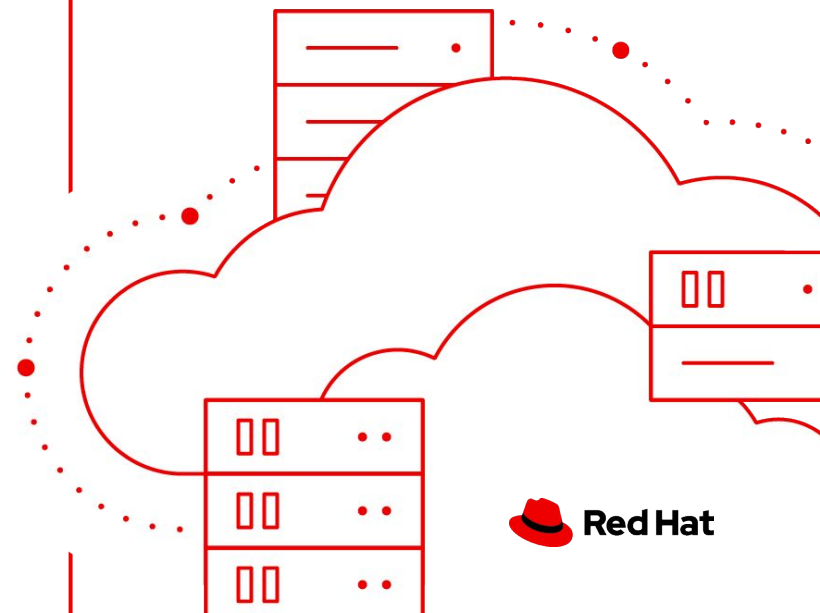
## 4. Build the image

Create a variety of images including Red Hat OpenStack, Amazon Web Services, VMware, and Microsoft Azure, and more



## 5. Deploy instance

Push image to the cloud provider of your choice or download to your datacenter





## Understanding the difference

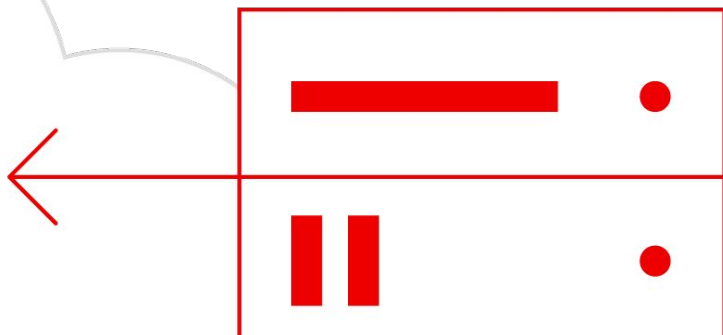
RHEL image builder vs.  
Insights image builder

# Red Hat Enterprise Linux image builder

Build on-premises, upload to platform



Manual  
Upload



Included with RHEL

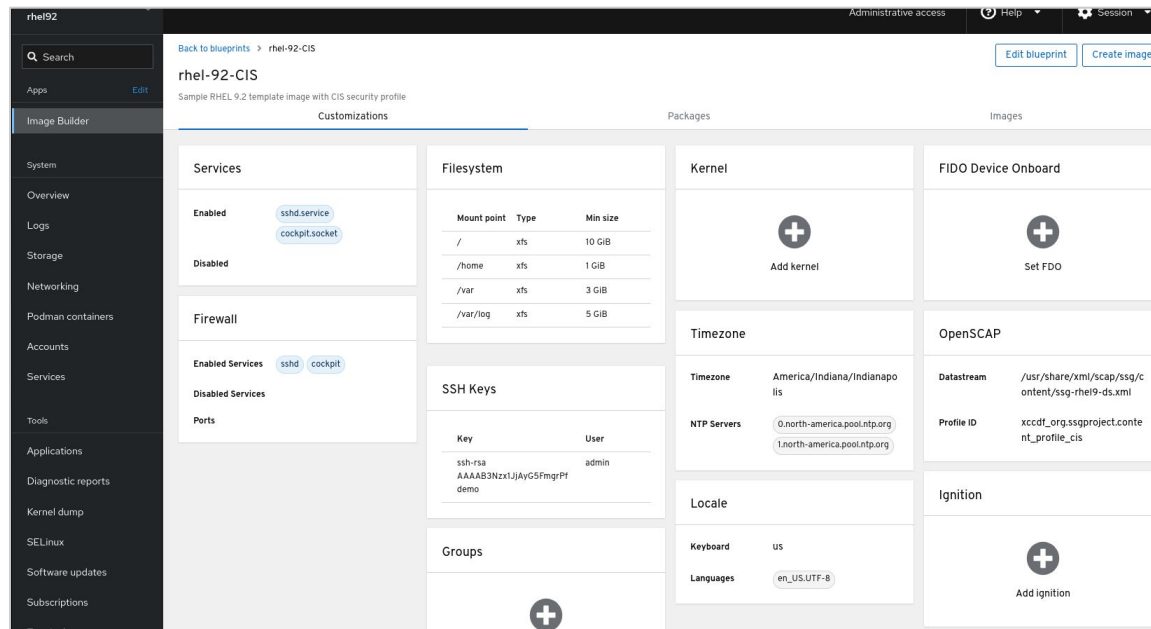
Installed on your own running RHEL system

Easily build and upload to:

- ▶ Amazon Web Services (AWS)
- ▶ Microsoft Azure
- ▶ Google Cloud Platform (GCP)
- ▶ Oracle Cloud Infrastructure (OCI)
- ▶ VMware vSphere Template Library

# Red Hat Enterprise Linux image builder

## What's available now?



## Versions of RHEL

- ▶ RHEL 8.latest (8.9)
- ▶ RHEL 9 latest (9.3)
- ▶ CentOS Stream 9\*
- ▶ CentOS Stream 8\*

## Supported cloud partners

- ▶ Amazon Web Services
- ▶ Google Cloud Platform
- ▶ Microsoft Azure

## Hybrid cloud image types

- ▶ Microsoft WSL2
- ▶ VMware vSphere platform (.vmdk)
- ▶ Virtual guest (.qcow2)
- ▶ Red Hat OpenStack, RHEL
- ▶ Physical system installer (.ISO)

## Configuration options

- ▶ Package selection
- ▶ Filesystems
- ▶ Extend configurations with cloud-init

# Red Hat Insights image builder

Build and launch



Provided as a service at [Red Hat Insights](#)

Build and launch to:

- ▶ Amazon Web Services (AWS)
- ▶ Microsoft Azure
- ▶ Google Cloud Platform (GCP)
- ▶ Oracle Cloud Infrastructure (OCI)
- ▶ Can also download for on-premises uses cases

Automatic  
Launch

# Red Hat Insights image builder

## What's available now?

Images ⓘ ?

The screenshot shows the 'Image output' configuration step in the Red Hat Insights image builder. The interface is divided into a left sidebar and a main content area. The sidebar lists steps: 1. Image output (selected), 2. Target environment, 3. Register, 4. File system configuration, 5. Content, 6. Details, and 7. Review. The main content area is titled 'Image output' and contains the following configuration options:

- Image builder allows you to create a custom image and push it to target environments.** [Documentation](#)
- Release \***: Red Hat Enterprise Linux (RHEL) 9
- Architecture \***: x86\_64
- Select target environments \***
  - Public cloud**: Amazon Web Services, Google Cloud Platform, Microsoft Azure, Oracle Cloud Infrastructure
  - Private cloud**
    - VMware vSphere
      - Open virtualization format (.ova) ⓘ
      - Virtual disk (.vmdk) ⓘ
    - Other**
      - Virtualization - Guest image (.qcow2)
      - Bare metal - Installer (.iso)

At the bottom, there are three buttons: 'Next' (highlighted in blue), 'Back', and 'Cancel'.

## Versions of RHEL

- ▶ RHEL 8.latest (8.9)
- ▶ RHEL 9 latest (9.3)
- ▶ CentOS Stream 9\*
- ▶ CentOS Stream 8\*

## Supported Cloud Partners

- ▶ Amazon Web Services
- ▶ Google Cloud Platform
- ▶ Microsoft Azure

## Hybrid-Cloud Image Types

- ▶ Microsoft WSL2
- ▶ VMware vSphere platform (.vmdk)
- ▶ Virtual guest (.qcow2)
- ▶ Red Hat OpenStack, RHEL
- ▶ Physical system installer (.ISO)

## Configuration options

- ▶ Package selection
- ▶ Filesystems
- ▶ Extend configurations with cloud-init



## Image Customizations

	RHEL image builder (RHEL 9.3)	Insights image builder (December 2023)
Edit, import, export blueprints	✓	Coming soon!
Packages	✓	✓
Kernel	✓	Planned, via blueprints
File system	✓	✓
Services	✓	Planned, via blueprints
Firewall	✓	Planned, via blueprints
Users, groups, SSH keys, Hostname	✓	Planned, via blueprints & Edge
Timezone and locale	✓	⊗
Security profiles (OpenSCAP)	✓	Coming soon!
Extensible using cloud-init	✓	✓
FIDO device onboarding	✓	✓ in edge management
Ignition (first boot configurations)	✓	✓ in edge management
Launch instances in cloud	⊗	✓
Build and upload to environment	✓	⊗
Auto-register new instances	Planned, via blueprints	✓

# Create images for multiple architectures and platforms

Either version gives you the flexibility you need



## Hardware architectures

- ▶ Intel/AMD x86\_64 public clouds have x86 and arm
- ▶ ARM aarch64
- ▶ IBM Power ppc64le
- ▶ IBM Z s390x



## Cloud and virtualization platforms

- ▶ Public clouds, including AWS, Azure, GCP, OCI\*
- ▶ Hybrid and Private cloud
- ▶ Openshift Virtualization
- ▶ OpenStack
- ▶ VMware and MS Hyper-V



Give RHEL image builder a try



Using web console  
to build virtual  
machine images



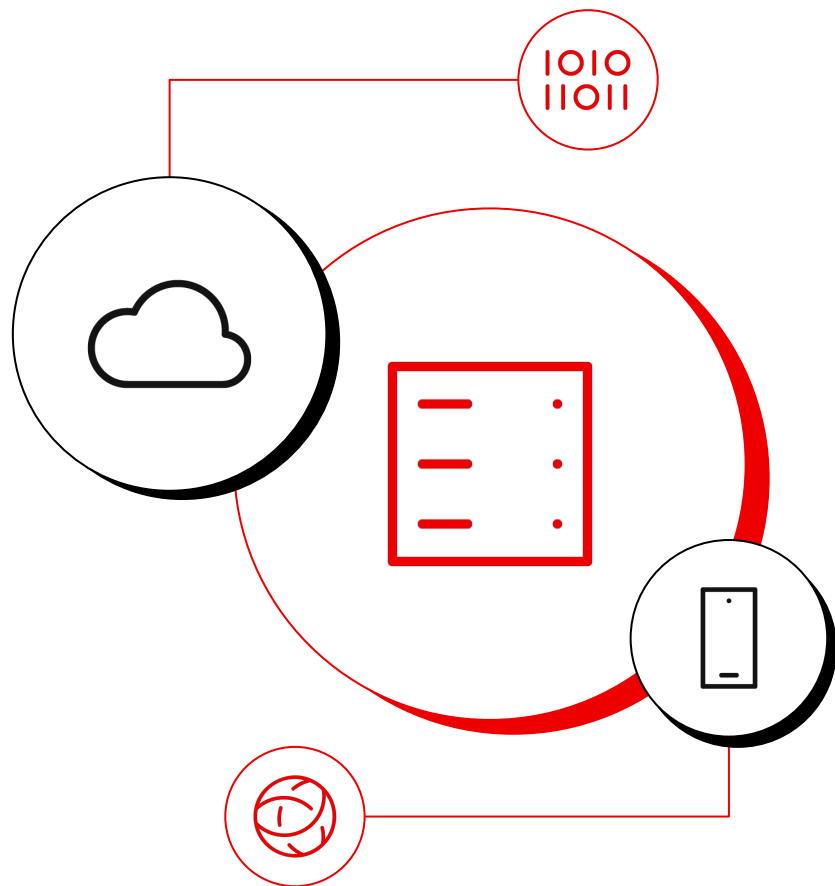
Design and build  
virtual machine images  
using command-line tools

# Insights modernizes management of RHEL



# Management for all

Expanding Red Hat Insights capabilities for Red Hat Enterprise Linux

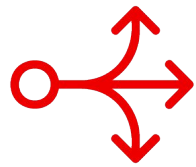


## Making it easier to manage systems anywhere

- ▶ Simplified end-to-end system management experience to increase efficiency
- ▶ Delivered as a service - no infrastructure overhead
- ▶ Interactive guidance to lower the learning curve
- ▶ Included with your subscription

# Modern management for Red Hat Enterprise Linux

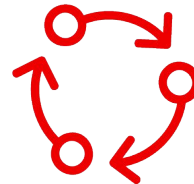
Red Hat Insights: delivered as a service and included with your subscription



Provision

## Define & Deploy

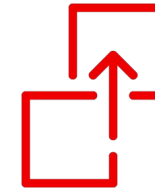
Define images and deploy to cloud.



Maintain

## Find & Fix

Identify and remediate security, patch, and compliance issues.



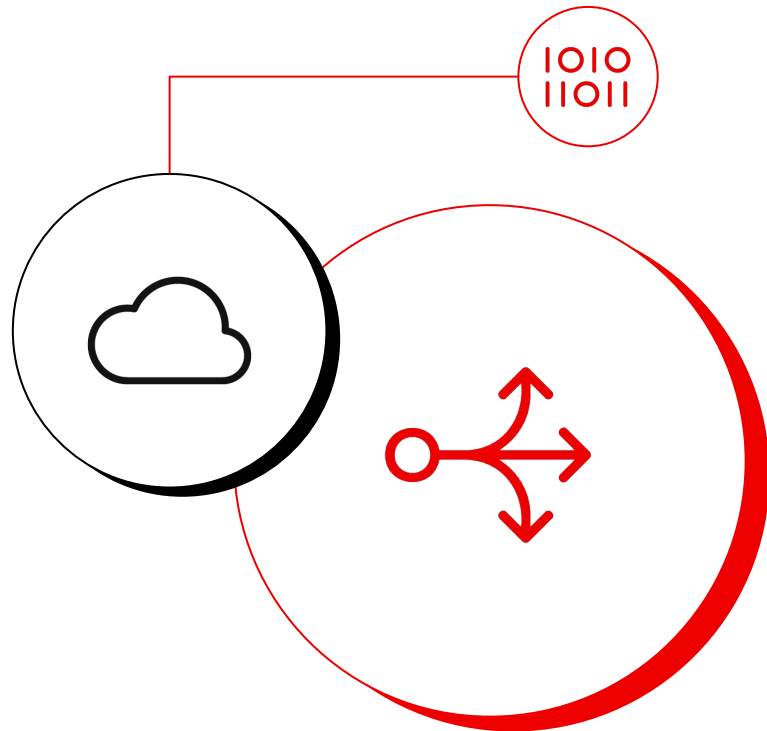
Convert / Upgrade

## Analyze

Run assessments to determine readiness for upgrade or conversion.

# Provision

Define images and deploy to cloud

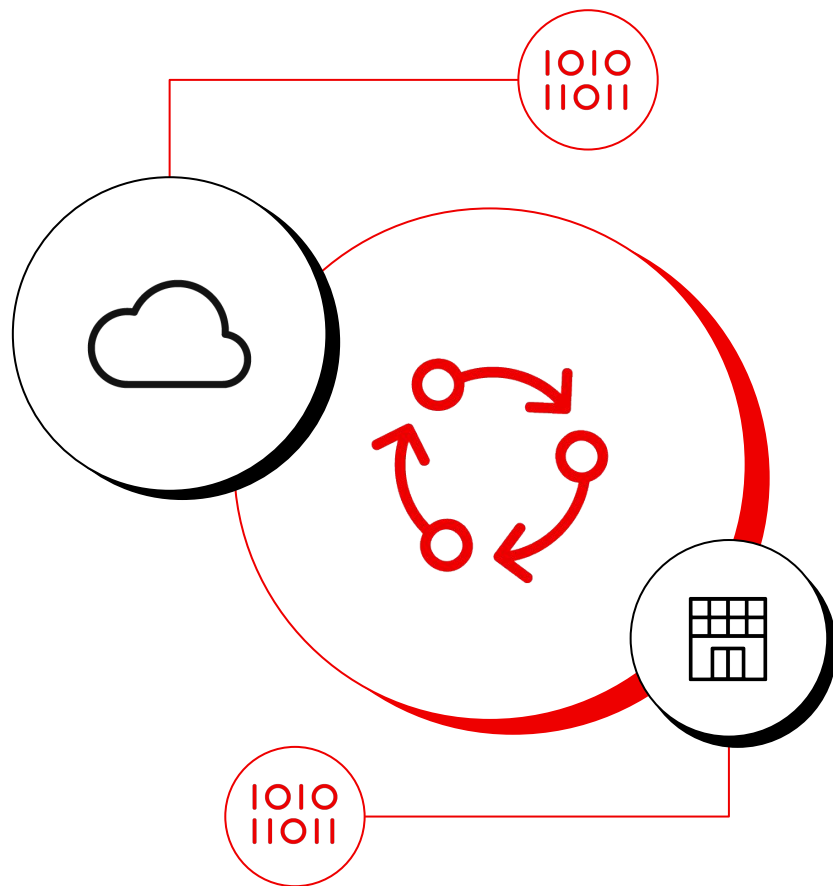


## Standardize on custom image builds

- ▶ Build custom images that are portable across cloud and on-premises environments.
- ▶ Add third-party RPM repositories to include third-party software.
- ▶ Easily deploy hosts to the cloud by launching images directly to AWS, Azure, and Google Cloud.

# Maintain

Fix security, patch, and compliance issues



## Remediate issues on RHEL systems

- ▶ Generate remediation playbooks to address security, patch, and compliance issues.
- ▶ Remediate systems on-premises or in the cloud by executing playbooks directly from Insights.
- ▶ Configure patch templates to control which hosts receive which patches.



# Streamline conversions with Red Hat Insights

Analyze and convert CentOS Linux 7 systems to RHEL

## Why use Insights for conversions?

- ▶ Delivered as a service, using Insights means *no need for additional infrastructure*.
- ▶ *Analyze and convert systems at scale and across environments* - on premises and in the cloud.

## How to use Insights for conversions

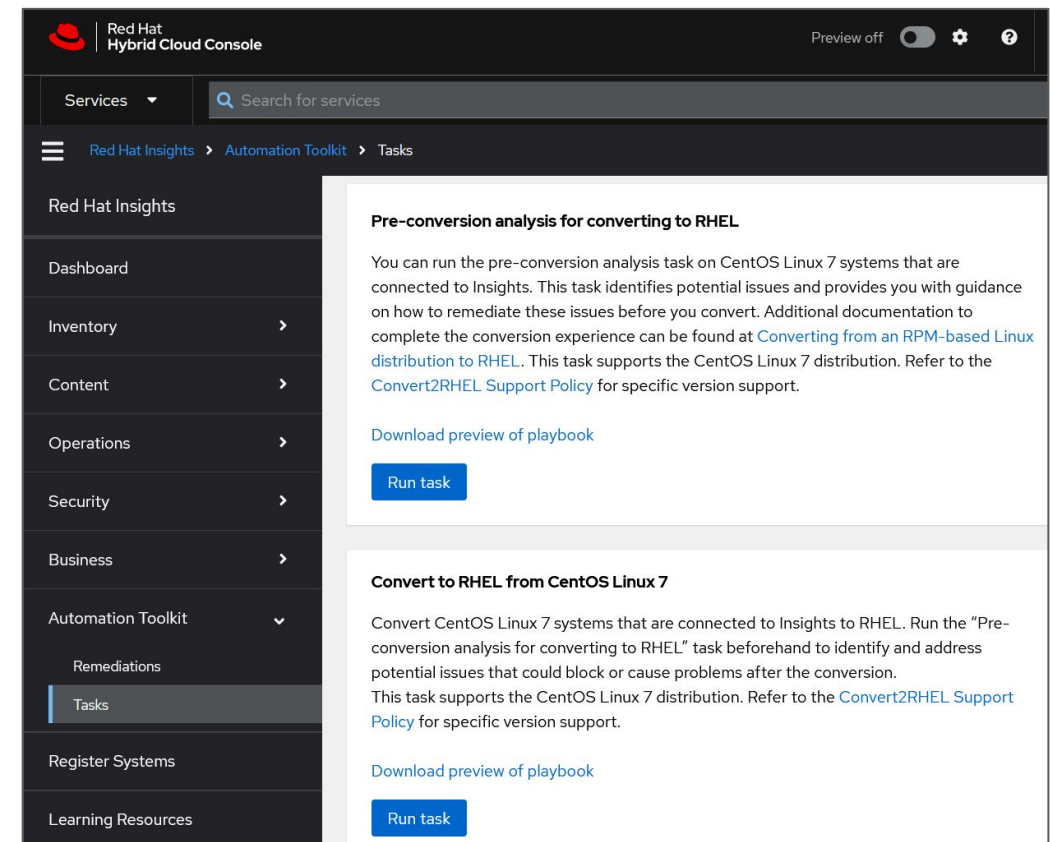
1. **Register CentOS Linux 7 systems** to display in the Insights inventory list
2. **Initiate a pre-conversion task** to analyze CentOS Linux 7 systems and get remediation advice to address issues that could complicate or prevent conversion.
3. **Run a conversion task** after resolving issues identified by the pre-conversion analysis.

# Introducing CentOS Linux 7 to RHEL conversions from the cloud

Red Hat Insights can analyze and convert systems across environments at scale

## With Red Hat Insights, users can now:

- Connect their CentOS Linux 7 systems to Red Hat Insights.
- View CentOS Linux 7 systems in the Insights inventory alongside RHEL systems.
- Initiate a **new task for pre-conversion analysis** which can be used as a planning guide for migrating many systems at once. This will provide guidance on how to proceed and identify potential issues.
- Initiate a **new task to convert** the CentOS Linux 7 systems that are ready for conversion.



## Pre-conversion analysis for converting to RHEL

### Task description

For connected systems running Linux distributions that are supported for converting to Red Hat Enterprise Linux (RHEL), run the pre-conversion analysis to identify potential issues before you convert. Use this task to understand the impact of a conversion to your systems and provide remediation guidance. Additional documentation to complete the conversion experience can be found at [Converting from an RPM-based Linux distribution to RHEL](#). This task supports the CentOS Linux 7 distribution. Refer to the [Convert2RHEL Support Policy](#) for specific version support.

[Download preview of playbook](#)

### Systems to run tasks on

**Eligible systems include systems connected to console.redhat.com with rhc, or Satellite with Cloud Connector.**

4 selected

1 - 4 of 4

Display name

Name	Tags	OS	Last seen
<input checked="" type="checkbox"/> centos7-rhel	0	CentOS Linux 7.9	15 minutes ago
<input checked="" type="checkbox"/> centos7-05	0	CentOS Linux 7.9	2 hours ago
<input checked="" type="checkbox"/> centos7-02	0	CentOS Linux 7.9	3 hours ago
<input checked="" type="checkbox"/> centos7-01	0	CentOS Linux 7.9	6 hours ago

1 - 4 of 4



## Convert2RHEL Conversion

Convert2RHEL Conversion

You can run the conversion task on CentOS Linux 7 systems that are connected to Insights. This Task converts CentOS Linux 7 systems to RHEL 7.

Run task

Systems	Run start	Run end	Initiated by	Systems with alerts
1	15 Nov 2023, 19:08 UTC	15 Nov 2023, 19:31 UTC (23 min)	tmoney@redhat	-

Filter by name



1 - 1 of 1

System name	Message
centos-linux-7	No problems found. The system was converted successfully.
>	Package up to date check fail
>	Third party packages detected
>	Unable to fetch recent kernels
>	Excluded packages removed

## We would love to talk to you!

Our Red Hat User Experience team would love to talk to you about your experience using console.redhat.com, Image Builder, Red Hat Insights, Convert2RHEL, or any Red Hat Product!

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Enterprise Linux

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# Thank you

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