

# Why should you upgrade your Red Hat Enterprise Linux ?

Red Hat understands the cost and complexity of keeping your Red Hat Enterprise Linux up to date. We suggest a practical approach that requires a degree of investment to produce a reduction in total cost of ownership and provides real benefits for your business.

# Agenda

- Fundamental Benefits
- Features and Functions Benefits
- Should you aim to upgrade all your systems ?
- How Red Hat can help

# Fundamental Benefits - Business

## Time to Market / Increase Revenue

- The latest major version of RHEL will be the fastest way to bring new or improved customer-facing services to market

## Cost Savings

- The latest major version of RHEL will be the lowest TCO platform over the project life-cycle

## Risk Management

- The latest version of RHEL will be the lowest risk platform (least number of vulnerabilities)

# Fundamental Benefits - Technical/Operational

## Minimise the Space of Concerns

- Reduce the number of *versions* of tools etc as well as the OS itself to let the team concentrate efforts

## Maximise Team Efficiency

- Newer versions of the OS will have better tools, included or from third-parties

## Maximise Infrastructure Utilisation

- Newer versions of the OS can use latest CPUs etc and be more performant

# Agenda

- ~~Fundamental Benefits~~
- **Features and Functions Benefits**
- Should you aim to upgrade everything ?
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# Features and Functions Benefits

Each new version will have some new features:

- Totally new features
- Replacement of functions
- Removal of redundant functions

Typically driven by:

- Red Hat customer demand
- Community trends
- Red Hat strategic direction

# RHEL 9 : Highlights

- Generally Available May 2022
- Linux Kernel 5.14 (from 4.x in RHEL 8)
- Enhancements to security and compliance
- Support for Edge deployments (image-based, no-touch)
- Updated developer tools (languages and libraries)
- Enhanced public cloud support
- Enhanced SAP and SQLserver support

# RHEL 9 Feature Benefits

Improving productivity in a hybrid world

What you need	RHEL 9 Capability
No-touch deployment	Edge support, Redfish support
Automated management	New system roles
Developer requirements for the latest languages & libraries	New appstreams
Security compliance	New security compliance certifications (updated FIPS, CIS...)



# RHEL 9 Feature Details:

## Support for no-Touch Deployments

### Edge deployment

- Grew out of IoT and network-edge use cases

### Standard image deployment format

- rpm-ostree

### Creation of multi-platform deployment images

- Image Builder

### Post-deployment customization

- System roles

# RHEL 9 Feature Details:

## Support for Automation

### System Roles

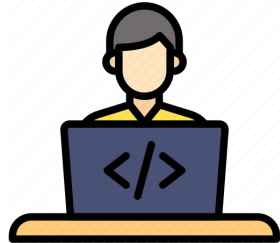
- Improved & expanded over system roles in RHEL 7 and 8
- Ansible playbooks for comprehensive system configuration and customization
- Guaranteed invariant between major and minor RHEL releases

# RHEL 9 Feature Details:

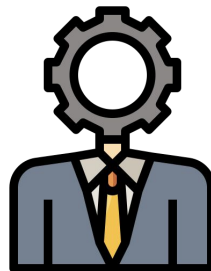
## Developer Tools Modernization

### Appstreams

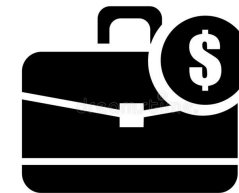
- Improved & expanded over system roles in RHEL 8
- Faster release cadence for languages, libraries
- New appstreams include:
  - LLVM
  - Nginx 1.20
  - PHP 8.0
  - Maven 3.6
  - Ruby 3.0
  - Perl 5.32
  - Glibc 2.32+
  - Go language



**Developers: Desire the latest & greatest tools**

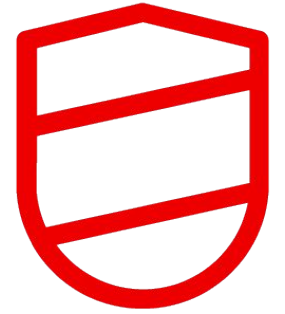


**Operations: Desire security compliance & supportability**



**Lines of Business: Desire stability and no downtime**

# RHEL 9 Feature Details: Security Enhancements



Security Profiles new or updated in RHEL 9

- FIPS
- CIS
- PCI-DSS
-

# RHEL 8 : Highlights

- Generally Available March 2019
- Linux Kernel 4.x18 (from 3.10 in RHEL 7)
- Move to Buildah/Podman for creating and hosting Linux Containers without the need for root access
- Image Builder to make creating your gold images easier
- Application Streams to simplify using 3rd party apps
- Performance improvements: get more from your hardware at no cost
  - <https://www.redhat.com/en/blog/red-hat-enterprise-linux-8-improves-performance-modern-workloads>

# RHEL 8 Feature Benefits

Improving productivity in a hybrid world

What you need	RHEL 8 Capability
1) Intelligent Operating System	Insights (SaaS/AI)
2) Faster and easier to deploy operating system	Image Builder, Single variant for multiple use case, In place upgrades
3) Enterprise Application Support	Key ISV offerings (SAP, SQL Server)
4) Security	System Wide Encryption Policy, Nftables / firewalld
5) Open Hybrid Cloud, Multi-cloud	AWS, Azure, Google, Bare-metal, virtual
6) Containers	New tools, universal base image
7) Open Source Innovation	Application Stream, Predictable release cadence (3 yr major, 6 mo minor)
8) DevOps	Web Console, Ansible System Roles

# Title

Text

# Agenda

- ~~• Fundamental Benefits~~
- ~~• Features and Functions Benefits~~
- **Should you aim to upgrade all your systems ?**
- How Red Hat can help



# Should you aim to upgrade everything ?

No !

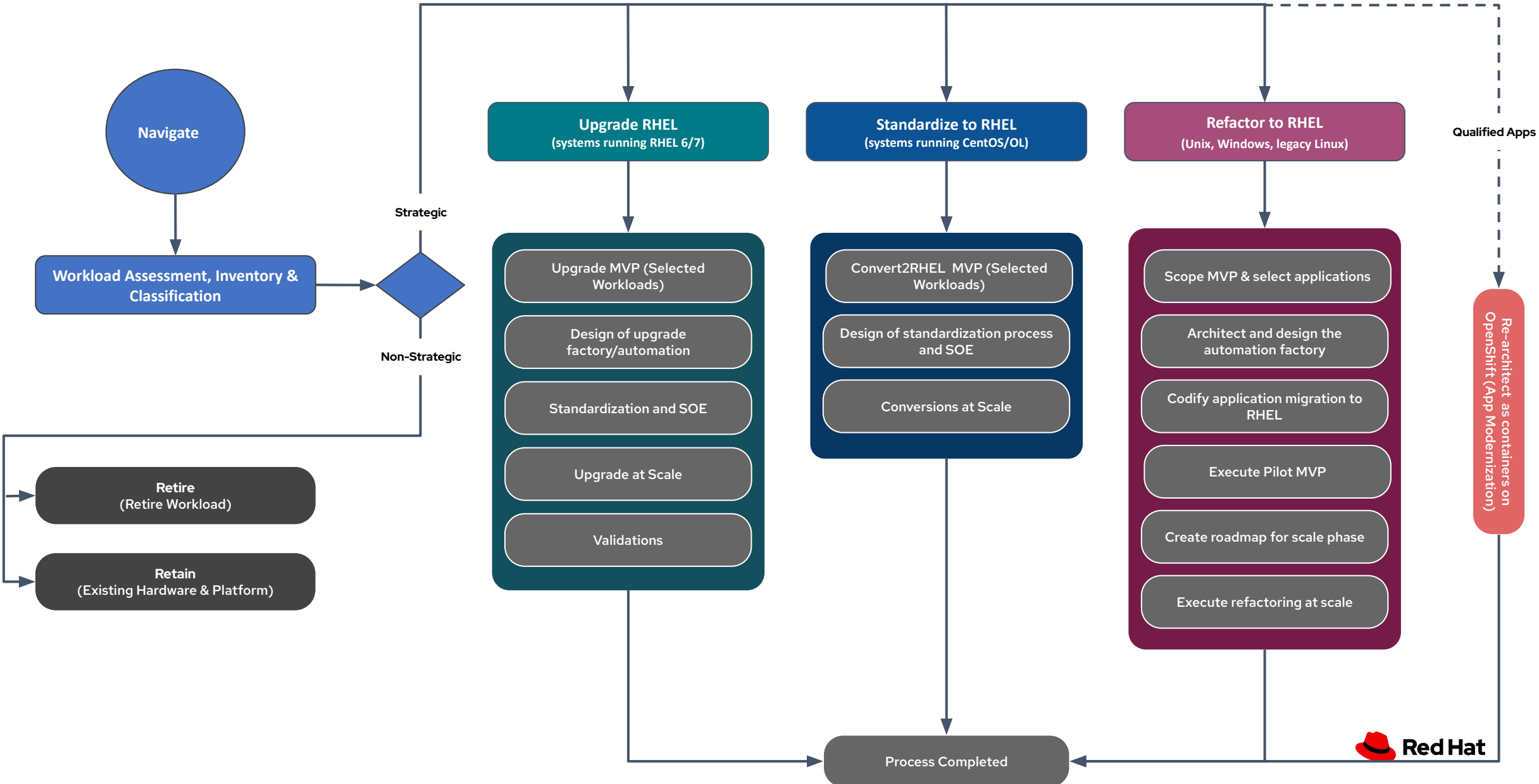
- Only upgrade the systems that should be upgraded
- ...but that's tautological

How do we identify the systems that should be upgraded ?

Use:

- Strategic importance
- Risk to the business
- Projected longevity
- On-going maintenance effort

# Modernization Workflow



**Title**

Text

# Agenda

- ~~• Fundamental Benefits~~
- ~~• Features and Functions Benefits~~
- ~~• Should you aim to upgrade all your systems?~~
- **How Red Hat can help**

# How Red Hat can help

- Continue this conversation in more depth
  - Tools, tips & techniques
- In-place upgrades
  - RHEL 8->9
  - Third major release supporting in-place upgrades
- Red Hat Consulting
  - Help to formulate an upgrade program
  - Execution of the program
  - Automation of the program

**Title**

Text

# Thank you

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# Additional slides that may be useful

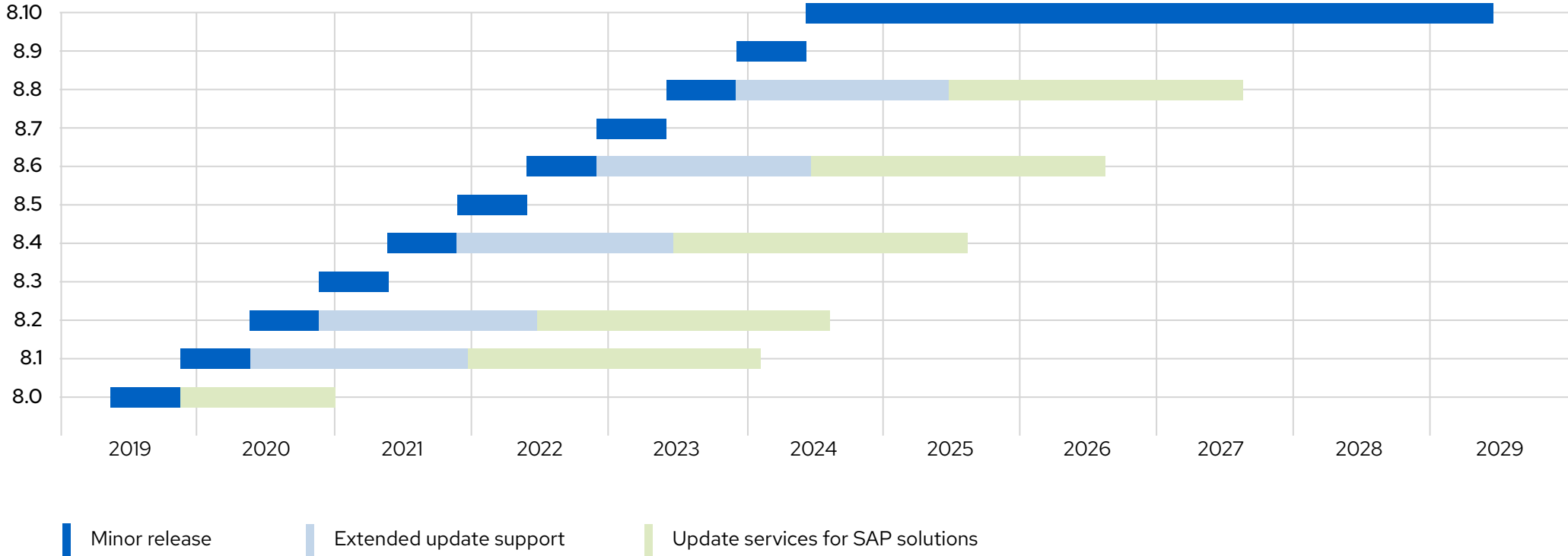
Slides Follow



## In-place Upgrades vs Re-deployment

	In-place Upgrade	Re-Deployment
01	Preserves configuration	Wipes out existing configuration
02	Bypass subscription management	Machines have to be re-subscribed
03	Saves time and cost	Additional time and Cost
04	Lower bar of seniority required	Requires expertise to ensure success

# Red Hat Enterprise Linux 8



# Lifecycle

	General availability	Full support ends	Maintenance support 1 ends	Maintenance support or maintenance support 2 ends	Extended life cycle support (ELS) add-on ends	Extended life phase ends	Last minor release
6	November 10, 2010	May 10, 2016	May 10, 2017	November 30, 2020	June 30, 2024	Ongoing	6.10
7 (ARM)	November 13, 2017	August 6, 2019	August 6, 2020	November 30, 2020	Not Applicable	Ongoing	7.6
7 (POWER9)	November 13, 2017	August 6, 2019	August 6, 2020	May 31, 2021	Not Applicable	Ongoing	7.6
7 (System z (Structure A))	April 10, 2018	August 6, 2019	August 6, 2020	May 31, 2021	Not Applicable	Ongoing	7.6
7	June 10, 2014	August 6, 2019	August 6, 2020	June 30, 2024	June 30, 2026	Ongoing	7.9
8	May 7, 2019	May 31, 2024	Not Applicable	May 31, 2029	TBD	TBD	8.10