Top reasons to upgrade Red Hat Enterprise Linux

1 Accelerate innovation

Red Hat® Enterprise Linux® now combines production stability with developer agility with a feature called Application Streams (AppStreams).

Multiple versions of application components are now delivered and updated throughout the lifespan of a Red Hat Enterprise Linux release providing greater flexibility to customize Red Hat Enterprise Linux without impacting the underlying stability of the platform or specific deployments.

AppStreams content includes resources to accelerate application development, such as language runtimes and compilers, and infrastructure resources like databases, web servers, cache servers, and identity management.

AppStreams content is updated throughout the Full Support phase of a Red Hat Enterprise Linux major version. New component versions are distributed when significant new features and improvements are available. Organizations can choose the version of an application stream that is the best fit for them, whether that is moving to newer runtimes or versions to get additional features or standardizing on a specific version to gain continuity and less complexity.

Each stream defines its lifecycle, which is closer to the natural life of the application rather than the base operating system (OS) lifecycle. They may also have various installation profiles, which help define a specific use case and will determine which packages are installed on the system.

See all the available application streams for Red Hat Enterprise Linux.

2 Streamline manual tasks

With Red Hat Enterprise Linux, automation and management capabilities provide a consistent, stable administrative experience to streamline the deployment and management of the OS. A combination of automated, repeatable workflows and web-based Linux administration helps:

▸ Ensure consistent and repeatable configuration within the OS to reduce technical burdens and allow streamlined administration.

▸ Minimize manual tasks and execute them consistently across physical, virtual, private and public cloud environments, and edge footprints.

▸ Make Linux less intimidating for administrators to do traditionally complex tasks without extensive experience.

Key automation content includes:

▸ Red Hat Enterprise Linux system roles.

  ▸ System configuration.

  ▸ Security.

  ▸ System roles for SAP.

  ▸ Microsoft SQL Server role.

  ▸ Identity Management (IdM) content.

  ▸ System performance information and metrics.

▸ Red Hat Lightspeed-generated playbooks for remediation, including security, patching, and configuration use cases.

3 Improve resilience and operational excellence

Organizations may find it difficult to react to threats, outages, and unplanned downtime and proactively improve the performance of their workloads.

Your Red Hat Enterprise Linux subscription includes access to Red Hat Lightspeed (formerly Red Hat Insights), which provides AI-powered management and advanced security capabilities. Gain visibility into business, operations, and security risks to proactively identify and mitigate issues across your infrastructure.

4   Consistent enterprise security

Several new features of Red Hat Enterprise Linux help you address your security and compliance mandates.

Session recording allows you to track when and how systems are used by recording all command-line inputs for any terminal session and is configurable for specific users and groups and creates a user-friendly, reviewable audit session.

Kernel live patching is available for Red Hat Enterprise Linux minor releases with the ability to apply crucial kernel security patches without rebooting.

System-wide cryptographic policies allow the user to define/ select a standard set of cryptographic algorithms that are applied to subsystems, including Transport Layer Security (TLS), internet protocol security (IPsec), Domain Name System Security Extensions (DNSSEC), Kerberos, and Secure Shell (SSH).

Security policies define the requirements for compliance across various sectors. Security Content Automation Protocol (SCAP) is a method for reporting specific security standard compliance and automating policy compliance. Red Hat Enterprise Linux provides you with improved open source security compliance solution (OpenSCAP) tooling, which can remediate your noncompliant systems.

5   Upgrade with confidence

Leapp helps you perform an in-place upgrade and allows you to migrate from one major version of Red Hat Enterprise Linux to the next. If you use Red Hat Enterprise Linux 7, you could upgrade to 8, or from 8 to 9 without reinstalling your server.

This upgrade allows you to access the latest enhancements, fixes, and patches, as well as refresh the longevity of the system onto a version of Red Hat Enterprise Linux with a longer active support lifespan.

With Leapp, you have a single automatable path to migrate to the latest Red Hat Enterprise Linux version, which retains the original subscription attached to the system, custom repositories, and third-party applications.

6   Improve your IT lifecycle planning

Organizations have traditionally reduced system changes and bypassed updates to avoid interruptions in daily operations. Older software can become more susceptible to security and stability risks over time, and businesses could miss opportunities for new features to improve performance, scale, and manageability.

Red Hat's published, predictable release cadence, 10 years of support for major releases and 2 years of support for select minor releases, lets organizations plan for long-term success.

Your Red Hat Enterprise Linux subscription offers flexible, stable, and security-focused life ycle options to support your business by allowing you to choose from multiple supported versions and preserve system capability and avoid obsolescence.

7   Streamlined management

The command-line interface (CLI) may be intimidating to those accustomed to using graphical or web-based tools for systems administration. Red Hat Enterprise Linux comes with the web console by default, offering a lightweight and user-friendly interface to administer systems from your web browser.

With the web console, administrators can efficiently perform tasks such as managing:

▸ Users and groups.

▸ Software packages and repositories.

▸ System services.

▸ Red Hat subscriptions.

▸ Networking, including the firewall.

▸ Performance monitoring and adjustments.

▸ Storage management.

You can use the web console to view logs, join a domain, and even get a console to your server.

The functionality of the web console can extend to manage:

▸ KVM-based virtual machines.

▸ Containers using Red Hat Enterprise Linux container tools.

▸ Building and deploying Red Hat Enterprise Linux images for public and private cloud providers.

Within the web console, you can prepare your system to be upgraded to the next major version of Red Hat Enterprise Linux with Leapp. The preupgrade reports give you clear instructions to prepare your system and could even offer single-click remediations.

8 A container-ready platform

The portability of applications and containers built on Red Hat Enterprise Linux helps organizations remain consistent and meet evolving transformation and innovation goals.

Red Hat Enterprise Linux includes container tools to create, run, and manage Linux containers with an enterprise lifecycle.

Included in the tools are:

▸ Buildah - a tool for building and modifying Open Containers Initiative (OCI) compliant images.

▸ Podman - a daemonless tool for running, managing, and debugging containers and pods, providing docker-like syntax.

▸ Skopeo - a tool to inspect, sign, and transfer container images.

Enhancements to systemd run your containers as services even as non-root users allowing you to run your applications more safely and in a more security-focused and portable way.

Podman can detect if a newer version of a container image is available and can automatically download the image and redeploy the container. It also supports automatic rollback should the updated container fail to start and provides new levels of reliability for applications.

Podman can capture the definitions of local pods and containers to assist with the transition to more sophisticated orchestration environments like Red Hat OpenShift®.