Red Hat
Enterprise Linux 9

9 reasons to explore Red Hat Enterprise Linux 9

Red Hat Enterprise Linux 9 delivers the hybrid cloud, simplified

Organizations are adopting hybrid cloud solutions more than ever before, and as a result, the IT challenges they face have become increasingly complex.

Further increasing that complexity, organizations also have to continually adapt their technology and processes to fulfill rapidly changing business demands, even as they maintain traditional systems. Every hybrid cloud environment is unique, so there is no single way to manage a complex hybrid cloud infrastructure.

As your infrastructure spreads from the datacenter to the cloud and out to the network edge, Red Hat® Enterprise Linux® 9 is the stable and scalable foundation you can count on. This consistency ensures simplified and centralized management across your hybrid cloud environments so everything else—your hardware, software, and cloud providers—can be different.

Read on to explore the nine things you should know about Red Hat Enterprise Linux 9.

1. Build Red Hat Enterprise Linux images your way

Red Hat Enterprise Linux 9 simplifies and streamlines the process of assembling your own customized operating system (OS) images, allowing you to select which of the latest content and security updates you apply. Remove the guesswork with a single, streamlined experience for creating consistent, supportable system images tailored to your chosen environments.

Red Hat Enterprise Linux Image Builder is available as an on-premise tool or as a hosted service available in the Red Hat Hybrid Cloud Console. Image Builder helps you optimize your existing infrastructure while accelerating future workload migrations and deployments. Image Builder also automatically handles the details for cloud, virtual machine, or physical hardware deployments, simplifying and accelerating image creation when compared   to manual methods. As a result, you can more quickly spin up new Red Hat Enterprise Linux systems on different platforms, according to your requirements.

2. Unlock performance with kernel 5.14 and new tools

At the heart of the Red Hat Enterprise Linux platform is the Linux kernel. The kernel manages and facilitates the relationship between the hardware and the applications built on top of it. Based on the upstream version of kernel 5.14, Red Hat Enterprise Linux 9 delivers newly improved performance for many key industry workloads and benchmarks.

Beyond the kernel itself, Red Hat continues to invest in applications and tools that provide organizations the ability to better identify performance issues, profile application performance, and provide data to help resolve issues faster or avoid them altogether. Red Hat Enterprise Linux 9 sees an expansion of the bcc-tools collection to now include new ways to identify latency in application interactions with the OS or between the OS and hardware-related activities.

Red Hat Enterprise Linux 9 also includes kernel live patching for all intermediate update releases. Organizations can continue to remediate security errata in their running kernel with a severity rating of Critical or Important without executing an additional maintenance operation and increasing unscheduled downtime.

3. Leapp: Your way to a simpler Red Hat Enterprise Linux 9 upgrade

Leapp is an in-place upgrade tool that simplifies how you upgrade your Red Hat Enterprise Linux environment by helping you to get to the newest version in less time and with less effort than traditional redeployment projects. Developed to help reduce risks associated with upgrading from major versions of Red Hat Enterprise Linux, Leapp can also reduce a system administrator's scope of work at the beginning and end of the upgrade process, while making OS version control less difficult.

Leapp's pre-upgrade analysis helps ensure application compatibility and remediate any issues. Leapp automatically highlights potential incompatibilities and even suggests how to fix them—like how an app should be reconfigured or which hardware driver to install. Then, Leapp can perform your in-place upgrade in minutes with limited downtime and latency, while maintaining your customizations, configurations, and preferences. Leapp supports upgrades from Red Hat Enterprise Linux 7 to 8 and Red Hat Enterprise Linux 8 to 9—specific details on supported paths can be found on the Red Hat Customer Portal.

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With Leapp, you get the control, confidence, and freedom you need to streamline your upgrade and start taking advantage of everything Red Hat Enterprise Linux 9 has to offer. Leapp is a self-service utility you can use on your own. Or, if you prefer additional assistance, our team of Red Hat consultants and trusted service partners can help you prepare for, run, and check the status of your upgrade.

4. Operating at the edge? So is Red Hat Enterprise Linux 9

Red Hat Enterprise Linux 9 provides you with the flexibility to adapt the platform to support your enterprise workloads close to where data is created and consumed—known as the edge. If you're deploying at the edge, Red Hat Enterprise Linux 9 helps increase workload resilience and security capabilities while also simplifying the inherent complexities that come with operating edge systems.

New in Red Hat Enterprise Linux 9:

- **Edge management that helps you more securely manage and scale your deployments at the edge:** Access zero-touch provisioning, system health visibility, and security remediations from a single interface, which provides improved security control and peace of mind at every stage of an edge system's life cycle.
- **Automatic container updates and rollbacks that provide new levels of reliability for applications:** Building on the ability to automatically update container images, Podman can now detect if an updated container fails to start and automatically rollback.
- **Support for major release upgrades that reduces downtime and enhances operational efficiency for your edge deployments:** Efficiently upgrade to Red Hat Enterprise Linux 9 by transparently staging the OS upgrade in the background.
- **Simplified installer that lessens the administrative burden of managing deployments at the edge:** The centralized installer consistently deploys remote systems in the field or at a centralized location.
- **Edge onboarding that keeps security front and center:** The Fast Identity Online (FIDO) Device Onboarding (FDO) security standard for devices supports the automation of post-provisioning steps and remote onboarding to management platforms.

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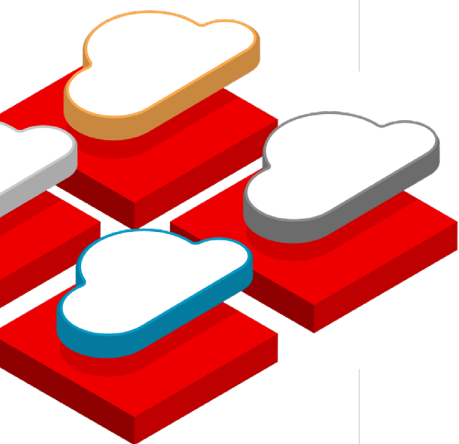
- **Default health checks that increase peace of mind and uptime:** The intelligent rollback framework now includes health checks to test network functionality with every update and rolls back to the previous version in the event of a failure.
- **GNOME Kiosk Mode, which keeps overhead low:** This ultra-light graphical environment is ideal for single-application use cases that require minimizing system overhead and user access.

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5. Expanding supported architectures to include ARM

We've expanded our catalog of supported architectures—in addition to Intel/AMD x86_64, IBM Power, IBM Z and LinuxONE, Red Hat has added Red Hat Enterprise Linux Server for ARM as well as Red Hat Enterprise Linux Server for HPC for ARM.

The ARM ecosystem has emerged over the last several years with server-optimized System-On-Chip (SoC) products, and solutions that are designed for cloud and hyperscale computing, telecommunications, and edge computing, as well as high-performance computing applications. ARM SoC designs take advantage of advances in CPU technology, system-level hardware, and packaging to offer additional choices to organizations looking to tightly integrate their hardware solutions.

Red Hat Enterprise Linux Server for ARM represents the culmination of a multiyear collaboration with the upstream community and our silicon and hardware partners. Red Hat Enterprise Linux for ARM pairs enterprise Linux features with the ARM architecture, delivering a reliable, high-performance platform that includes a consistent application environment across physical, virtual, and cloud deployments.

Allowing ARM manufacturers to self-certify their hardware into our certified partner ecosystem catalog has expanded the number of ARM devices that are supported. Along with this expansion, we've also now made it easier to purchase a Red Hat Enterprise Linux for ARM subscription directly from Red Hat, as well as through a preferred partner.

For more information about Red Hat Enterprise Linux Server for ARM or to request a trial version, please contact your CDW Red Hat Team or a Red Hat to get started ‣

6. Gain system-wide visibility with Red Hat Insights

Included in every Red Hat Enterprise Linux subscription, Red Hat Insights uses predictive analytics to assess environments, identify and prioritize operational and security risks, and simplify operations. Insights also enhances subscription tracking across hybrid cloud deployments, streamlining how you manage your Red Hat Enterprise Linux instances.

Red Hat continues to expand capabilities available in Insights to help organizations more efficiently manage their Red Hat Enterprise Linux systems, regardless of where they are deployed. To help tackle the complexities of multicloud deployment, the Insights resource optimization service helps organizations optimize the sizing of Red Hat Enterprise Linux in a public cloud. The service evaluates performance metrics to identify workload utilization and then provides visibility and recommendations for selecting an instance that is better suited for workload needs.

The Insights Malware Detection service adds an additional security assessment that analyzes all Red Hat Enterprise Linux systems for known malware signatures, providing detailed visibility into existing risks and helping teams quickly respond to vulnerabilities in their environment. And to help accelerate risk mitigation, push-button remediation is now available for systems connected directly to Insights using the Red Hat connector (rhc).

Insights is now available in the Splunk Marketplace and can be activated to bring visibility into your Red Hat Enterprise Linux infrastructure with the click of a button. This capability is the first of many planned partner integrations, which will allow you to efficiently create workflows within the applications you use day to day.

7. Not yesterday's Linux

Red Hat Enterprise Linux is well known for its stability, but it also offers organizations choice and flexibility. **With Red Hat Enterprise Linux 9, organizations can continue to choose the version of popular applications and language runtimes they use on Red Hat Enterprise Linux.**

Introduced in Red Hat Enterprise Linux 8, application streams allow Red Hat to add new versions of software to the latest distribution. As new features and capabilities are added to updated databases, web servers, and application frameworks, you can evolve your application stack based on your organization's needs. And if the pace of these updates doesn't suit your

organization's use cases, Red Hat also provides long-life versions of these popular applications and frameworks.

Red Hat Enterprise Linux 9 also expands the usage of Flatpaks. This Red Hat curated repository allows you to install desktop applications that are distributed as supported Flatpaks, which are curated with the same diligence we apply to RPM packaged software.

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## 8. Life cycle management that balances efficiency and consistency

A Red Hat Enterprise Linux subscription offers flexible yet stable life cycle options to support your business and security requirements. You can choose from multiple supported versions, upgrade on your schedule, and adopt new features when you need them. Effectively manage the life cycle of your critical applications and workloads with access to published predictable release cycles, end-of-maintenance dates, upgrade options, and compatibility information.

With the release of Red Hat Enterprise Linux 9, Red Hat continues to deliver releases in a predictable cadence—three years between major releases and six months between minor releases. This schedule offers consistency that allows your teams to plan IT maintenance and application refreshes with confidence.

With a 10-year major release life cycle and our commitment to preserve application stability with each minor update, Red Hat helps organizations to achieve a critical balance between accessing the latest technologies, frameworks and programming languages and maintaining a stable platform to run their business.

Ongoing access to advanced security features, updates, and guidance helps organizations implement continuous security strategies to protect their operations. Red Hat offers Extended Update Support for certain Red Hat Enterprise Linux releases, which allows organizations to stay on an extended update schedule for up to two years. When extended support is selected for an eligible release, organizations receive security updates for issues rated Critical and Important, extending stability when it's needed most.

Learn more about the policy **and the** value of a Red Hat Enterprise Linux subscription ▶
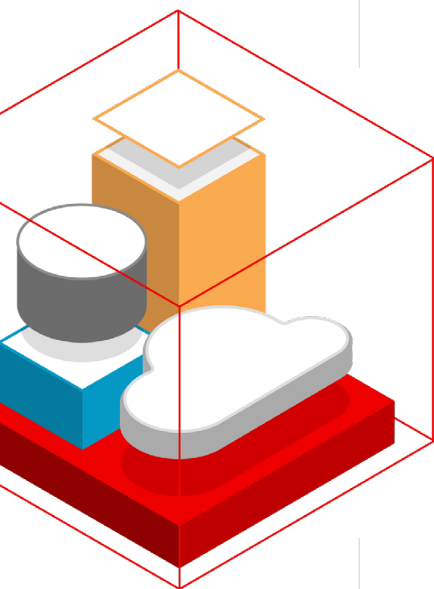
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9. Built in the open—with upstream communities and Red Hat partners

Red Hat Enterprise Linux 9 is the first major release for this product built within CentOS Stream. As a result, its features and code were first available in CentOS Stream before being released in Red Hat Enterprise Linux.

CentOS Stream is an open source development platform which allows you to develop, test, and contribute to a continuously delivered distribution upstream to Red Hat Enterprise Linux. Existing between Fedora and Red Hat Enterprise Linux, CentOS Stream provides greater transparency and more opportunities for community, partner, and customer participation.

CentOS Stream provides early access to the same code Red Hat developers and engineers use to produce the next version of Red Hat Enterprise Linux. Because CentOS Stream code becomes the next minor release of Red Hat Enterprise Linux, you can contribute directly to Red Hat Enterprise Linux and test your workloads before new releases.

This increased transparency lets you share feedback on upcoming minor releases before they are published. If you identify needed functionality that is not in the current version of Red Hat Enterprise Linux, you can propose a change to CentOS Stream. You can also provide code directly to CentOS Stream. Red Hat developers evaluate your proposal or code to determine next steps. Accepted changes are tested, verified, and included in CentOS Stream and the next minor release of Red Hat Enterprise Linux.

Find out more about Red Hat Enterprise Linux 9

Now that you know more about how Red Hat Enterprise Linux 9 can simplify your hybrid cloud experience, you can explore the benefits firsthand with a Red Hat product trial.

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