



The power of Red Hat Enterprise Linux

Flexibility, stability, and support
for your organization



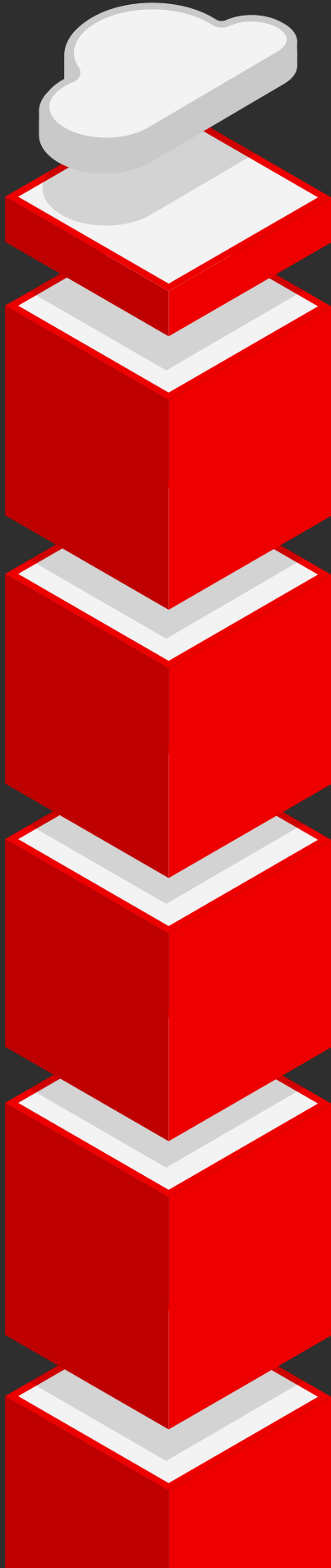


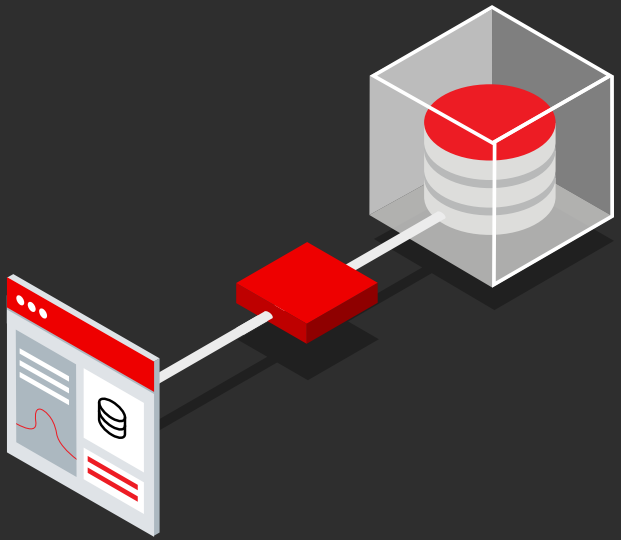
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Introduction

Why the choice of your operating system matters

By definition, an operating system (OS) is the system software responsible for managing any computer hardware and software resources your organization requires for its various operations.

Structurally, an OS sits between your hardware and the various services and applications that your team needs to interact with to do their jobs effectively and efficiently.

Your OS is also relied on to control the range of tasks your applications require, such as power management, performance management, threading, logging, and security. This ensures that your network of applications and services can perform efficiently and in harmony, no matter where the user is operating from.

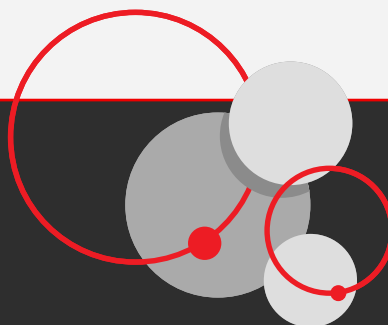
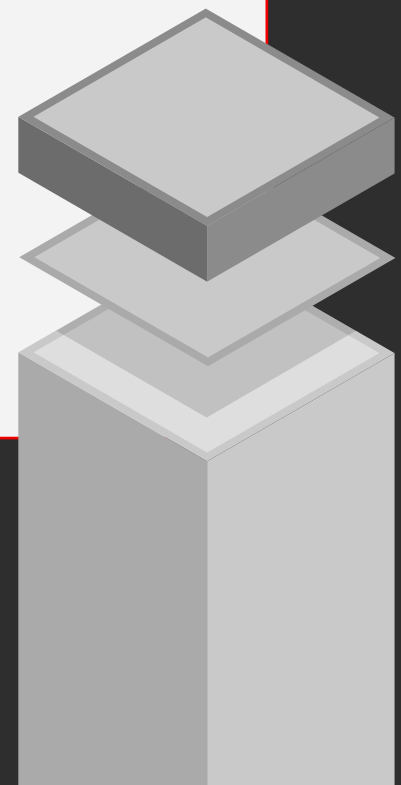
Unify your IT infrastructure with the right OS

Business leaders across industries are seeking an IT environment that can provide **flexibility, adaptability, resilience, and manageability.**

The ability to provide these factors is a direct reflection of your overall operating environment, and most importantly, your operating system.

As the foundation that facilitates the most crucial capabilities in your

organization, it is essential your OS is capable of providing standardization across your entire operating environment—including physical, virtual, private and public cloud, and the edge—to facilitate innovation and agility, allow for the automation of processes, deployment of new systems, and management of application life cycles.



What is an open source OS?

When looking for the right OS for your organization and its specific needs, it is best to first understand the two distinct types of operating systems, how they differ from each other, and the benefits they each provide.



Closed source operating system

A closed source operating system, also known as a proprietary operating system, such as Microsoft's Windows or Apple's macOS, is built with source code that is kept private and inaccessible by third parties, and therefore can only be customized by the code owner or through approved partner tools.



Open source operating system

A prime example of an open source operating system is Linux, which provides the ability for any and all users with the right skill set to modify the source code to fit the needs of their organization, and has an entire community of developers who create new tools and solutions that are available to any Linux users who would like to take advantage of them.

While both types of OSes are used extensively by enterprises across the world, open source software as a whole has been gaining in popularity in recent years, while proprietary software is dropping in popularity every year.¹

The 2022 State of Enterprise Open Source report by Red Hat predicts that in the next two years, proprietary software use by enterprises will drop from 45% to 37%, while the **usage of community-based open source is predicted to rise from 21% to 24%.**¹

With open source software gaining popularity, one of the most notable developments has been the rise of enterprise open source software, which comes with its own set of advantages when compared to community-based open source, including notable improvements in security and reliability.

As more enterprise software vendors begin to stake their claim in the open source community with their own open source solutions, it is predicted that enterprise open source software will see a rise in usage from 29% to 34% in the next two years.¹

¹ Red Hat report. "The State of Enterprise Open Source: A Red Hat Report." 22 Feb. 2022.



Predicted rise in enterprise open source software use¹



Benefits of an open source OS

An open source OS provides three main benefits that many organizations need for their operations that are often difficult to attain with a closed source OS: cost efficiency, reliability, and flexibility.



Cost efficiency

Because commercial open source operating systems are often less expensive than their closed source counterparts, and in some cases, are even provided by their creators completely without charge, open source OSes provide more cost efficiency than their closed source counterparts.



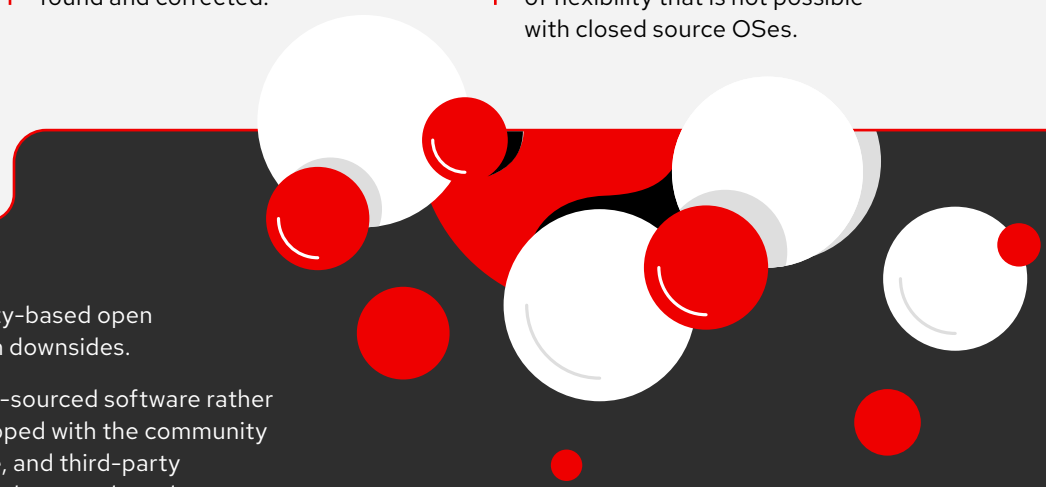
Reliability

Due to the fact that the source code of an open source OS is publicly available, it is reviewed by thousands of developers around the world, and any bugs or vulnerabilities existing within the source code are quickly found and corrected.



Flexibility

As an operating system with publicly available and customizable source code, with the right skills, your operating system can be and do whatever your organization needs from it, providing a level of flexibility that is not possible with closed source OSes.

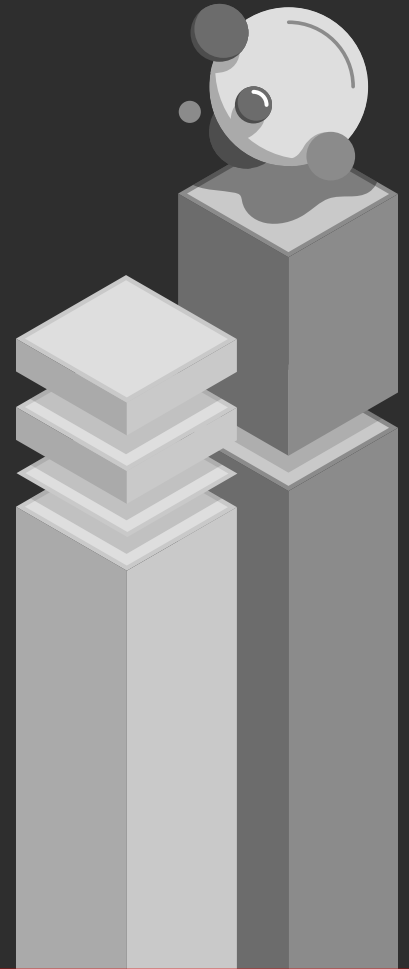


Despite these major advantages, community-based open source software does still come with certain downsides.

Most notable is the risk of using community-sourced software rather than a solution that is collaboratively developed with the community and then enhanced for security, compliance, and third-party certifications by an enterprise software developer and vendor.

Fortunately for organizations looking to use the upsides of open source software, these disadvantages are directly addressed by the emerging enterprise open source market.

Enterprise open source solutions are built with open source software that has been hardened by an enterprise software provider through testing and performance tuning, and then backed up by enterprise support and services, often including proactive security checks and updates.



Advantages of enterprise open source solutions

Enterprise open source software has become so essential to IT practices in the enterprise space that 95% of IT leaders say that enterprise open source is important to their organization's overall enterprise infrastructure and 80% of IT leaders expect to increase their use of enterprise open source software for emerging technologies.²

But what are the biggest advantages that these organizations are realizing with enterprise open source solutions?

Among the most notable advantages of enterprise open source software identified by IT leaders were higher quality software and better security. And while a lack of support is often listed as one of the biggest hesitations for organizations considering adopting enterprise open source², they almost always come with extensive support services.



Higher quality software

The heightened level of quality is achieved through the extensive testing and performance tuning that the enterprise open source software vendor conducts before putting the solution into the market, which lowers the risk of unknown or unexpected issues that can sometimes come with community-sourced software.



Security

89% of IT leaders stated the security of enterprise open source solutions was as good or better than the security of proprietary software, with the most common reasons being the availability of security patches that are well-documented and can be scanned for, the prompt availability of vulnerability patches from vendors, the fact that more people have had their eyes on the code, and the ability for their own teams to audit the code.¹



Support

Enterprise open source solutions almost always come equipped with extensive support tools and resources; commonly including phone and online incident support, support databases and portals, and automated security tools and updates. To this point, one of the top reasons listed by IT leaders in regards to why they prefer enterprise open source software vendors was their effectiveness in supporting technical challenges.¹

¹ Red Hat report. "The State of Enterprise Open Source: A Red Hat Report." 22 Feb. 2022.

Why Linux is the preferred open source OS

First things first: what is Linux?

Linux is a family of open source operating systems—all based on the original Linux kernel released in 1991—that are most commonly delivered as part of a larger overall package by various distributors, coming with a variety of capabilities and tools included.

As the world's most popular open source operating system² and third-most popular operating system overall³, Linux has long been a favorite for businesses operating modern and innovative IT practices, especially for those with a focus on software development.

Recent research shows that Linux is the second most popular PC operating system for software development, with 47% of developers using Linux as their PC operating system distribution.⁴

From a cloud perspective, the 2021 Linux Market study by Management Insight Technologies, an internal market study conducted on behalf of Red Hat, found 49% of respondents have Linux instances in the cloud, with 28% in the public cloud, and 21% in the private cloud.⁵

Its widespread adoption across industries and emerging technologies continues to grow, and over decades of testing, Linux has proven to be the ideal platform to support the innovative IT practices needed today.

Its popularity among modern businesses is most commonly associated with the flexibility and compatibility it provides.

► Flexibility

This flexibility is achieved in large part due to the fact that there is no need to install a complete suite, but instead only the components you require; allowing your organization to operate unencumbered by unnecessary tools or components.

► Compatibility

Not only can Linux run or execute any and all file formats, but it also has the power to facilitate the development and operation of your organization's most critical workloads in computing environments of all types and support a vast range of use cases, target systems, and devices.

In this e-book we explore the importance of an operating system like Linux, and specifically the benefits that Red Hat® Enterprise Linux® platform can bring to your organization.

² "Global market share held by computer operating systems 2012-2022, by month." Statista, 29 Aug. 2022.

³ "Operating systems market share of desktop PCs 2013-2022, by month." Statista, 27 July 2022.

⁴ "Software development operating system distribution globally 2018 to 2021." Statista, 21 Feb. 2022.

⁵ Red Hat e-book. "State of Linux in the public cloud: Annual review," 9 Aug. 2022.



Most popular

open source operating system²



Most popular

operating system overall³

Learn more about why the OS matters.

[Download e-book](#)



Chapter 1:



What is Red Hat Enterprise Linux?

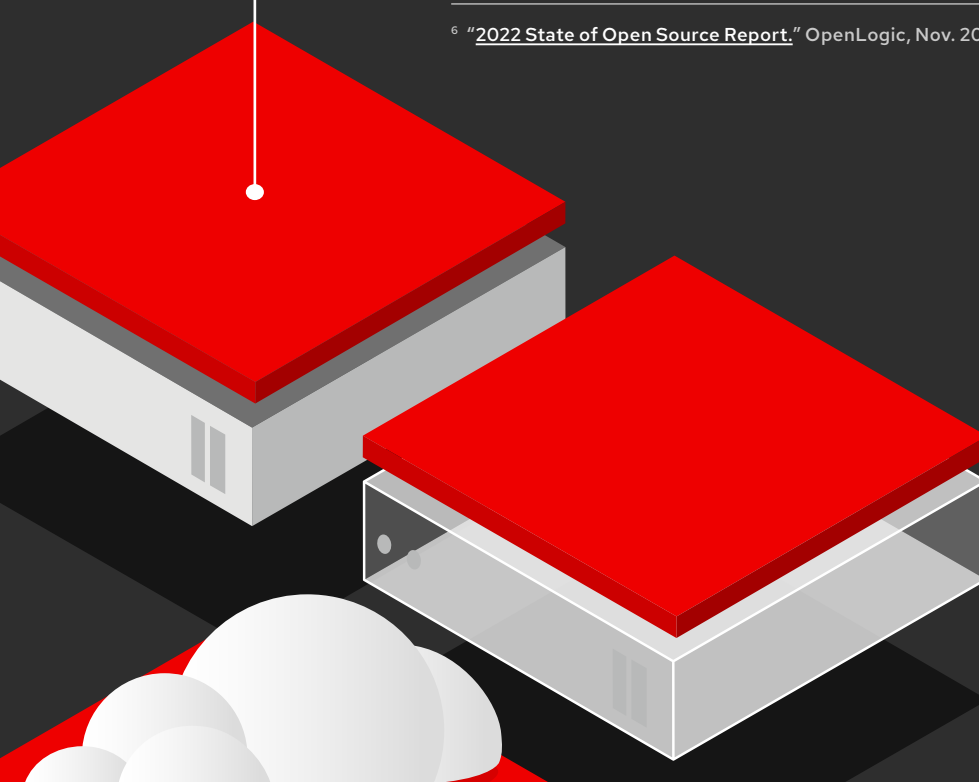
As one of the world's most popular enterprise Linux platforms⁶, [Red Hat Enterprise Linux](#) is certified for use with hundreds of cloud environments and with thousands of software and hardware vendors.

In addition to the compatibility it can provide organizations of all sizes looking to use a varied range of clouds or software solutions, it also provides the innovative capabilities needed by today's organizations with its access to an extensive network of tools and the support needed to manage any added complexities with its dedicated around-the-clock technical support.

With Linux distributions being available through every major public cloud provider—including Microsoft Azure, Amazon Web Services (AWS), Google Cloud, IBM Cloud, and Alibaba Cloud—with varying features, integrations, supports, and partnerships, it is vital you choose the right distribution for your organization and its needs.

With this in mind, how does Red Hat Enterprise Linux address the most common challenges faced by organizations of all sizes operating modern IT practices who are looking to optimize their resources with cost-efficient solutions?

⁶ ["2022 State of Open Source Report."](#) OpenLogic, Nov. 2022.



Tackling modern challenges with a modern OS platform

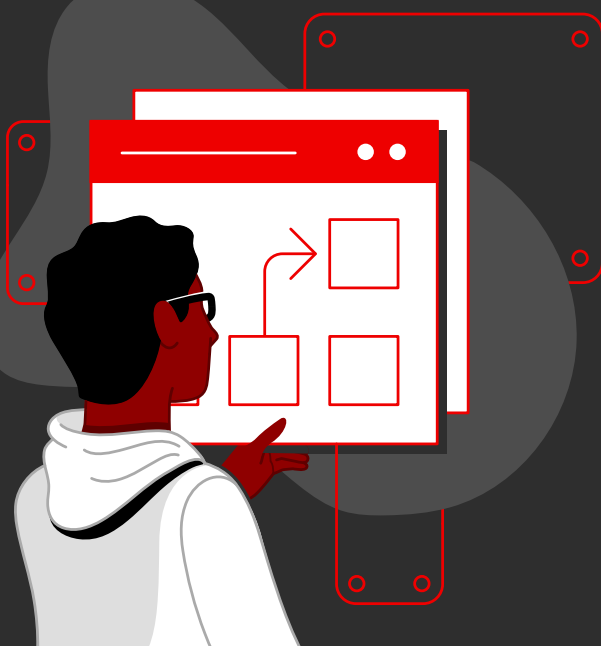
One of the greatest challenges organizations face is finding an OS that provides the consistency and efficiency needed to manage the added complexities of modern IT practices across your entire IT environment.

By delivering consistency across your IT environment and its various infrastructures—including physical, virtual, private and public clouds, and edge deployments—Red Hat Enterprise Linux helps you to manage your applications, workloads, and services with the same tools, no matter the location.

Other common challenges that organizations operating modern IT practices face include the need to create a more secure and reliable IT environment and the need to speed up time to value on critical business workloads.

These challenges are directly addressed by the built-in tools and support of a Red Hat Enterprise Linux subscription.

Among numerous other benefits, existing customers using Red Hat Enterprise Linux have achieved a host of operational improvements in comparison to unpaid open-source solutions, according to independent research from IDC⁷.



Reliable and security-focused IT environment

81%

less unplanned downtime⁷

Consistency and efficiency

38%

more efficient IT infrastructure teams⁷

Lower operational costs

35%

lower infrastructure costs⁷

Speed up time to value

26%

faster application development cycles⁷

17%

more productive development teams⁷

Learn why using Red Hat Enterprise Linux to support business activities will provide a \$1.7 trillion boost to customers in increased revenue and resource optimization.

[Read the IDC whitepaper](#)

⁷ IDC White Paper, sponsored by Red Hat. "The Business Value of Red Hat Solutions and Cost Relationship to Unpaid Alternatives." Document #US47607721, May 2021.

Chapter 2:

What a Red Hat Enterprise Linux subscription provides

As your organization looks to tackle the challenge of finding the right OS—most notably one that provides the consistency and efficiency needed to manage modern IT practices—it is important to note that, in addition to the extensive benefits a Linux OS can provide, it also requires the right tools and support to ensure it is properly managed.

With Red Hat Enterprise Linux, you will be provided with those tools and support as part of your subscription, which will allow your technical team the freedom to continue innovating without the burden of managing those needs.

With Red Hat Enterprise Linux, you have:



Flexibility and control over your entire IT environment



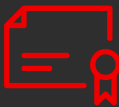
Access to the latest Linux innovations



Supported deployments anywhere



Enterprise-grade support and security



Access to the latest innovations in Red Hat's certified partner ecosystem



Visibility into emerging technologies

Get more information on what a Red Hat Enterprise Linux subscription includes in this detailed guide.

[Read more](#)



Flexibility and control across IT environments, versions, and costs

Every organization has unique needs and requirements that require the ability to tailor an IT environment to fulfill those needs, without exceeding support and cost constraints.

A Red Hat Enterprise Linux subscription provides that needed level of flexibility through:



Portability across IT environments

Because your subscription is not tied to any specific installation location, cloud provider, or hardware, you can apply your subscriptions to a wide selection of physical, virtual, cloud, or edge systems and move them as needed to fit your organization's unique needs and requirements.



Support for all maintained versions

With access to and support for every actively maintained version of Red Hat Enterprise Linux, your subscription allows your organization to manage upgrades based on a schedule that meets your unique needs, while ensuring guaranteed support in the future with standardization on major releases for up to 10 years.



Increased control and flexible costs

A Red Hat Enterprise Linux subscription gives you more immediate control over your IT expenses by shifting them from capital expenses (CapEx) to operational expenses (OpEx) while providing a higher level of control over the extent of those costs with a range of customizable levels of support to meet your organization's needs at a budget that makes sense for you. Red Hat also works with cloud providers to offer convenient purchasing options for joint customers. You can bring your own subscription, pay as you go (on demand), use cloud provider committed spend, and even work directly with Red Hat to build a custom plan tailored to your specific needs.

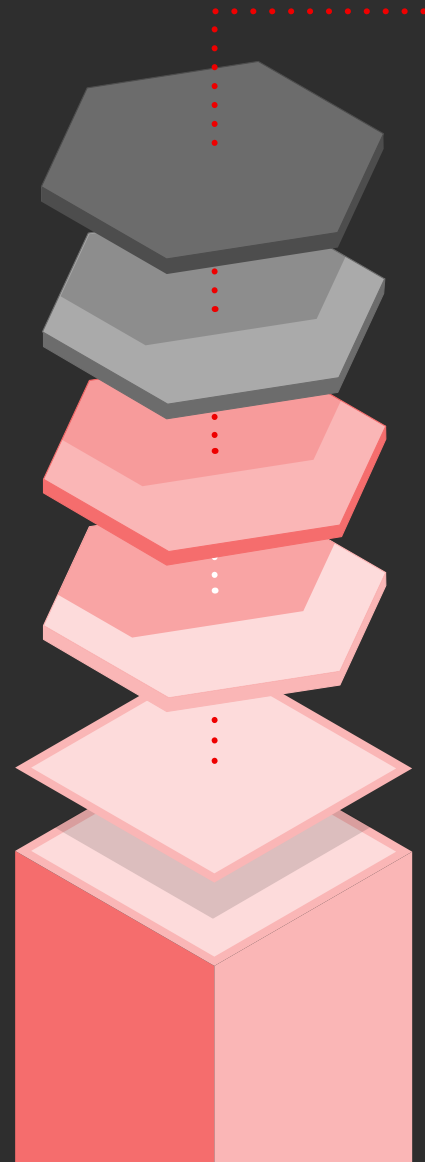


Gain access to the latest Linux innovations

With a Red Hat Enterprise Linux subscription, you gain access to the latest enterprise-ready Linux innovations available—all of which are certified for use with Red Hat's wide-ranging portfolio of software, automation, and management technologies including Red Hat Smart Management, Red Hat® Ansible® Automation Platform, Red Hat® OpenStack® Platform, and Red Hat® OpenShift®.

But a Red Hat Enterprise Linux subscription is about more than access to innovative products.

As the foundation on which the full Red Hat portfolio is built, a Red Hat Enterprise Linux subscription is packaged to deliver specific support levels, life cycle updates and maintenance, visibility into the Red Hat Enterprise Linux roadmap, and tools for upgrading, patching, automating, and analyzing your environment, all of which will be outlined in greater detail in the following sections.





Supported deployments anywhere from the datacenter to the edge

The range of use cases that can be supported through Red Hat's certified partner ecosystem becomes increasingly important as enterprises continue to diversify where they deploy their workloads, with the cloud continuing to increase in usage every year, and edge deployments becoming a necessity for enterprises that need to have compute resources closer to the source.

At Red Hat, we understand that organizations like yours have unique requirements when it comes to incorporating cloud strategies into your IT estate. That's why Red Hat Enterprise Linux offers maximum flexibility—delivering a consistent, stable environment that meets you wherever you may be on your cloud journey.

Red Hat Enterprise Linux is certified for use with hundreds of cloud partners, including Microsoft Azure, Amazon Web Services, Google Cloud Platform, IBM Cloud, and Alibaba Cloud. Featuring jointly engineered capabilities that are optimized for cloud use, Red Hat delivers a consistent yet flexible experience in public, private, hybrid, and multicloud infrastructures.

And as edge deployments continue to gain in popularity, let's take a closer look at how a Red Hat Enterprise Linux subscription provides support for your enterprise.



Over
50%
of new enterprise IT infrastructure will be deployed at the edge⁸

Taking your enterprise to the edge

As more enterprises begin turning to edge deployments, with predictions showing that by 2023 over half of new enterprise IT infrastructure will be deployed at the edge rather than centralized datacenters,⁸ support for edge deployments is becoming increasingly important.

With Red Hat Enterprise Linux, you receive the ideal foundation for edge deployments on small infrastructure environments, with the cross-infrastructure consistency, workload portability, and streamlined operations needed to facilitate the move of traditional and containerized workloads from your datacenter to your edge locations.

Additionally, Red Hat Enterprise Linux provides custom edge-optimized operating system images to support a diverse range of workloads running at any type of remote sites, the reliable image and system updates needed to limit operation interruptions in deployments with limited bandwidth or low connectivity, and intelligent rollbacks to help you avoid downtime when managing large numbers of devices and locations.

⁸ "Share of global enterprise IT infrastructure deployed at the edge 2019 and 2023." Statista, 21 Feb. 2022.

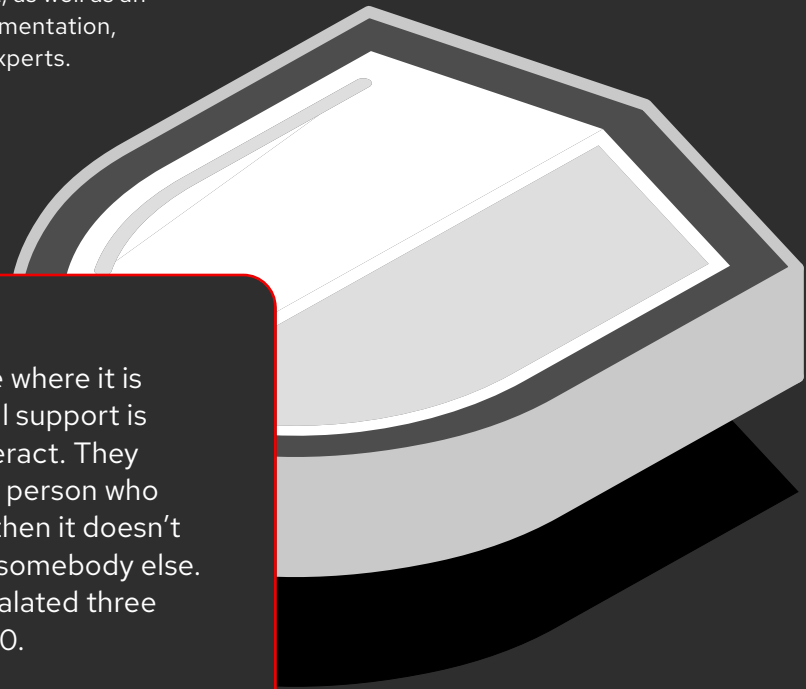




Enterprise-grade support and security that goes beyond best practices

First and foremost, your Red Hat Enterprise Linux subscription provides you with access to phone and online incident support to provide your organization peace of mind as it operates in the complex IT environments needed for modern innovative IT practices.

For organizations that require more than support and advised best practices, you can access Red Hat's knowledge base support portal, which delivers information about ongoing security vulnerabilities and the critical steps it takes to mitigate their impact, as well as an extensive database of reference architectures, documentation, videos, and collaborative discussions with Red Hat experts.



Red Hat offers excellent support in a sphere where it is difficult to find good support....The technical support is superior to many vendors with whom we interact. They pay attention. Rarely will I run into a support person who doesn't seem to know what they are doing, then it doesn't take very long to get the issue escalated to somebody else. Out of a hundred cases, I have probably escalated three times. I would rate the support as 10 out of 10.

Erik Windholm,
Sr. Enterprise Engineer at
a transportation company⁹

⁹ Windholm, Erik. "Erik Windholm's unbiased review of Red Hat Enterprise Linux." Peerspot, accessed 30 June 2022.

Some other ways that Red Hat Enterprise Linux provides the support and security you need to run an efficient, reliable, and security-focused IT environment in your organization.



Multilevel security and simplified compliance

Through your Red Hat Enterprise Linux subscription, you can provide your organization with multilevel protection from threats, flexible security tools, and simpler ways to maintain compliance.

This is accomplished through a dedicated security team, scanning and remediation tools, and ongoing access to new resources to help you ensure your organization's continuous compliance, as well as automated security tools, regular updates and patch releases, and accessible security intelligence and expertise to improve your organization's threat protection.

And finally, with certification to stringent security standards, you can enable your organization to use Red Hat Enterprise Linux across any and all industries and situations without compromising security or compliance requirements.



Integrated analytics with remediation, management, and automation

Red Hat Insights—a Software-as-a-Service that comes included in all active Red Hat Enterprise Linux subscriptions—proactively collects analytics across your entire environment, allowing you to rely on it to identify security threats, bottlenecks, and misconfigurations that could directly affect the availability, performance, and stability of any aspects of your IT environment.

And with the ability of Red Hat Enterprise Linux to integrate with other Red Hat management and automation tools such as Red Hat Smart Management and Red Hat Ansible Automation Platform, your organization can achieve efficiency in all aspects of operations.





Optimize your resources

Red Hat Insights Resource Optimization provides a single, consistent service for analyzing Red Hat products running on public cloud, hybrid cloud, and on-premise, analyzing platforms and applications to predict issues, recommend actions, and track costs so workloads can be managed with increased visibility.

It is designed to help Red Hat Enterprise Linux customers gain insight and control over their public cloud spending by recommending the right size of public cloud system for a particular use case.

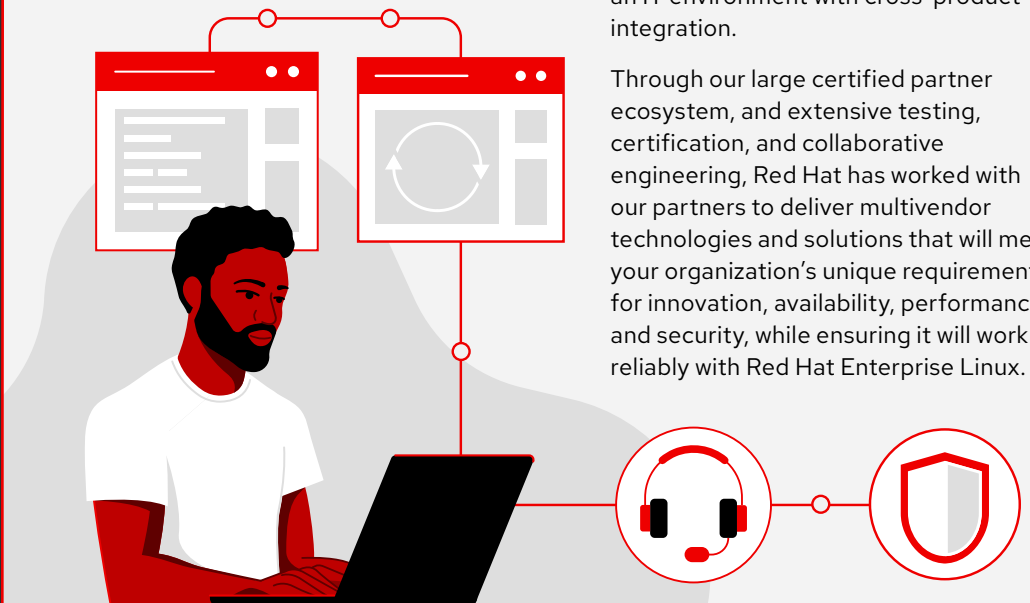


A certified partner ecosystem for all IT environments

Red Hat has fostered close partnerships with all of the industry-leading hardware, software, and cloud vendors. With your Red Hat Enterprise Linux subscription, those partnerships provide the flexibility of choice you need to ensure innovation and stability within your IT environment.

That certified partner ecosystem provides your organization with a wide range of choices in architectures and versions through a trusted software supply chain, all of which are certified for use with Red Hat products and come with interoperability across your IT environment, allowing you to build an IT environment with cross-product integration.

Through our large certified partner ecosystem, and extensive testing, certification, and collaborative engineering, Red Hat has worked with our partners to deliver multivendor technologies and solutions that will meet your organization's unique requirements for innovation, availability, performance, and security, while ensuring it will work reliably with Red Hat Enterprise Linux.





Plan your IT roadmap with visibility into emerging technologies

Many forward-thinking organizations place a heavy focus on maintaining visibility into emerging technologies and how they may affect their operations.

This most commonly includes a focus on using that visibility into prioritizing which of those technologies would best serve their organizational needs, and laying out an IT roadmap that plans for the incorporation of those technologies.

With a subscription to Red Hat Enterprise Linux, you are given advanced visibility thanks to Red Hat's proactive efforts to identify important emerging technologies for their customers and alert them to any new features coming soon.



This allows Red Hat Enterprise Linux customers to accurately plan their IT roadmap in advance as they await Red Hat developing those technologies into enterprise-ready applications that meet future IT needs.

In addition to gaining this level of visibility, you can have a direct influence on the development of any new applications or features coming on the horizon.

The collaborative nature of Red Hat's relationship with their customers includes a mandate to learn about, assess, and incorporate the needs of those customers into future development.



This allows you to plan for any future applications or features, and even have a direct influence on how they are developed.

Due to the extent of Red Hat's customer network, your organization can also benefit from the cross-industry improvements to Red Hat products that were developed in collaboration with other customers.

All of this will allow your organization to stay ahead of the technological curve as businesses continue to modernize their processes every year.

Learn about how to realize value and benefits across seven key operational areas with Red Hat Enterprise Linux.

[Download e-book](#)



Chapter 3:

Get started with Red Hat Enterprise Linux

Through your Red Hat Enterprise Linux subscription you will gain access to the various tools, security features, and support resources you need to create the consistent, secure, reliable, and intelligent operating system your organization needs to operate modern IT practices.

As we have covered in this e-book, this includes:



Flexibility and control over your entire IT environment



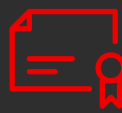
Access to the latest Linux innovations



Supported deployments anywhere



Enterprise-grade support and security



Access to the innovation of Red Hat's certified partner ecosystem



Visibility into emerging technologies



Interested in learning more about Red Hat Enterprise Linux and the powerful capabilities and benefits it can provide your organization? Please visit redhat.com/rhel.

Ready to get started?

Try a 60-day Red Hat Enterprise Linux trial today.