



**Gain a competitive  
edge with your**

# **Linux strategy**

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A foundation for simplifying your  
hybrid cloud infrastructure



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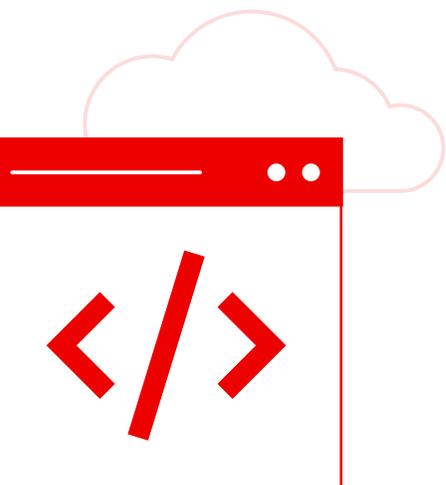
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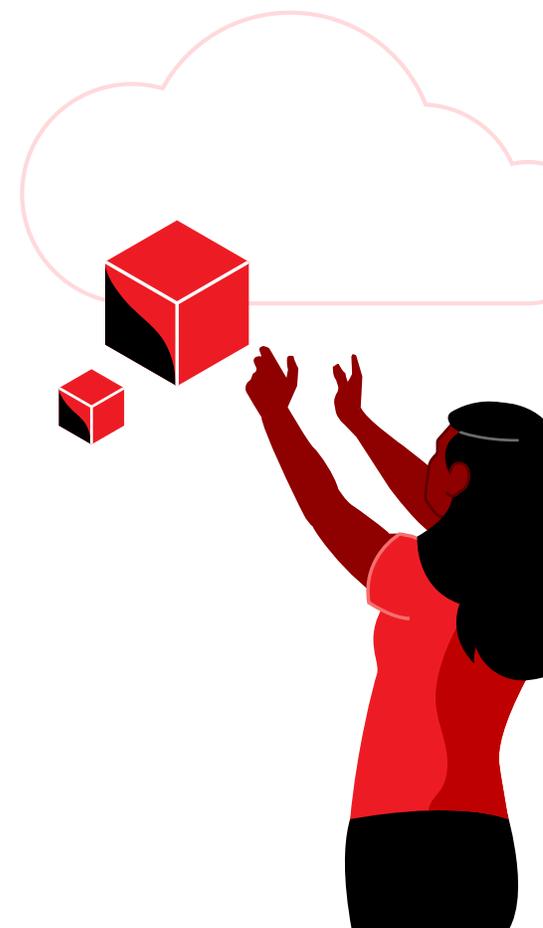
# Executive summary

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**Businesses around the globe—and in nearly every industry—recognize the advantages of using Linux® to achieve their IT innovation goals.**

As one of the most popular server operating systems (OS), Linux provides organizations with an ideal platform for adopting emerging technologies. It has become the de facto standard for developing and running highly available, reliable, and critical workloads, whether in the datacenter, in a cloud environment, or at the network edge.

In the age of cloud computing, the value of the enterprise OS is becoming redefined. As workloads increasingly move to cloud and hybrid environments, your choice of OS may seem incidental, but IT infrastructure is only as good as its foundation. That foundation should be your organization's underlying strategy—and the OS chosen should play a central role.

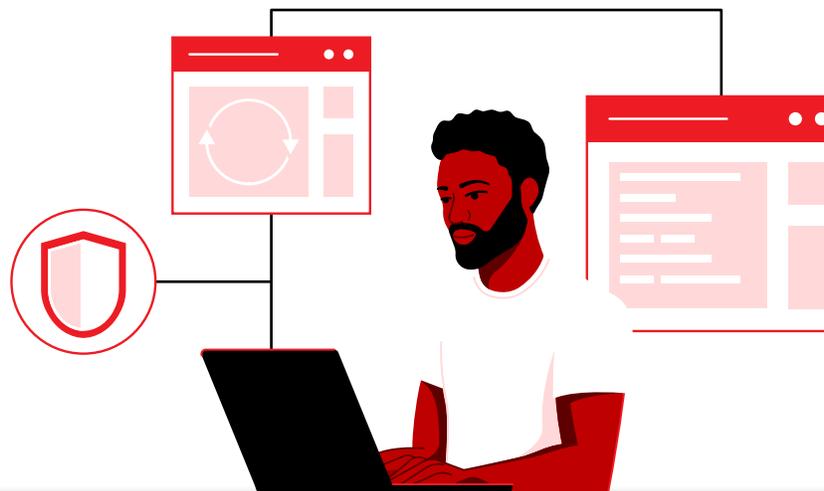


With the rise of edge computing, workloads have even moved beyond core datacenters and cloud environments. As a result, the choice of OS is no longer binary. The openness of Linux—and its presence on major cloud providers like Microsoft Azure to Amazon Web Services (AWS) to Google Cloud Platform—gives organizations the flexibility to choose between a multitude of paid and no-cost Linux distributions.



Choosing the right Linux platform is essential when managing increasingly complex IT challenges and competitiveness. But with such flexibility and so many options, how can your organization make the right choice?

This e-book explores some factors to consider when choosing your Linux distribution or mix of distributions and why that choice is critical for innovation, performance, efficiency, and more.



## Linux: To pay or not to pay?

Cloud providers try to make it desirable to adopt no-cost Linux distributions, with many using their own Linux distributions to differentiate their cloud services. Choosing the right OS for your organization's needs requires a forward-thinking strategy. When developing this strategy, organizations need to consider the challenges they face in hybrid and multicloud environments, as well as the modern IT solutions they want to adopt, such as virtualization, edge computing, containerization, and cloud-native development.

For some, no-cost, do-it-yourself (DIY) Linux is the right choice, but a paid distribution could make your organization more innovative, competitive, and effective. IDC has found that the operational expense (OpEx) associated with maintaining no-cost, open source software is higher than subscription-based, open source software from Red Hat.<sup>1</sup>

<sup>1</sup>IDC White Paper, sponsored by Red Hat. "[Business value of Red Hat solutions compared to unpaid alternatives](#)," Document #US47607721, May 2021.

# Getting the most value from your Linux platform

## Why Linux?

IT organizations face tremendous pressure to deploy and manage services and solutions at an ever-increasing pace, often with limited resources and skills. To do this successfully, IT workloads need consistent reliability, availability, and security-focused capabilities. And that's where Linux comes in.

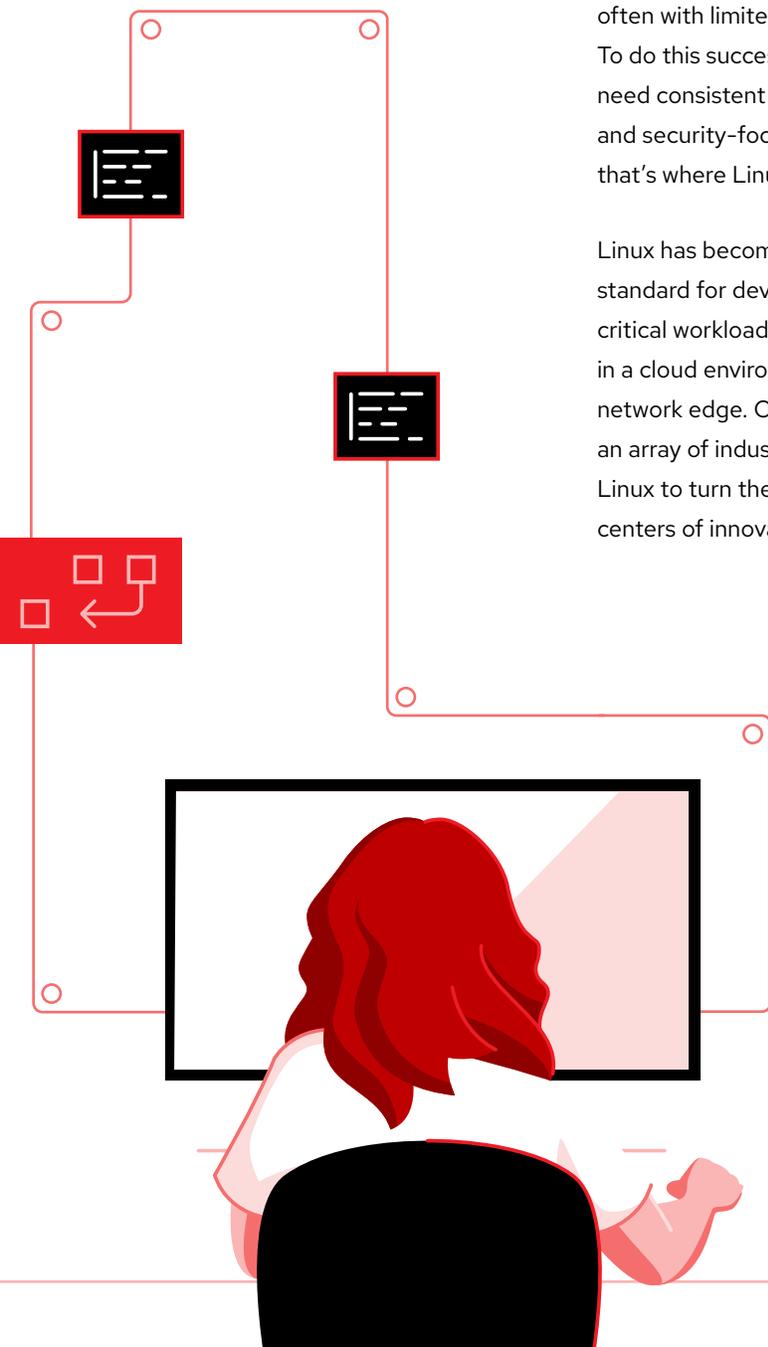
Linux has become a widely adopted standard for developing and running critical workloads in the datacenter, in a cloud environment, and at the network edge. Organizations across an array of industries and sectors use Linux to turn their IT environments into centers of innovation.

## Your Linux distribution matters

Deciding which Linux distribution your organization uses is just as vital to the success of your IT environment as the overall OS you choose. Choosing the right distribution can have a considerable effect on your IT environment's efficiency, performance, security, and operating costs.

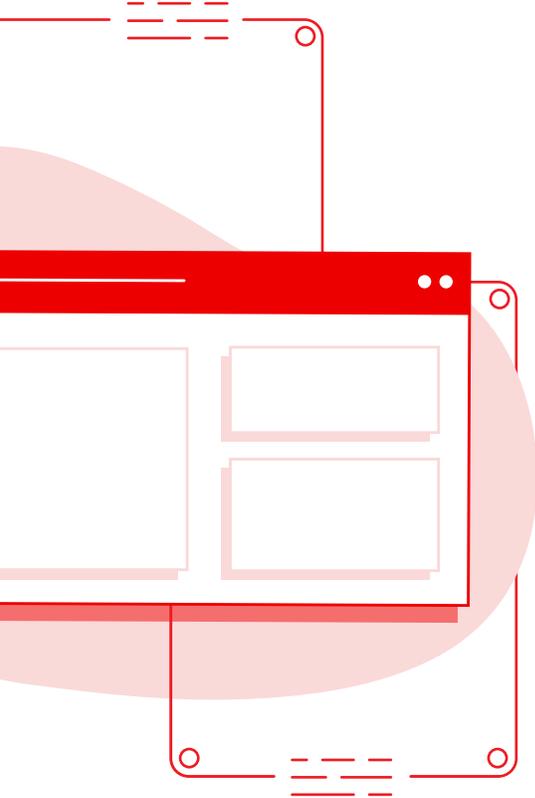
Using the right open source platform can support long-term growth. If your team can apply existing skills across environments, your organization will be better prepared to meet changing demands and support new workloads—improving employee and customer experiences while supporting a variety of powerful use cases, target systems, and devices.

Each distribution has its pros and cons. You must weigh your options based on how well the features, integrations, partnerships, and support experience fulfill your business requirements.



## Tips for choosing the right Linux platform

To create a modern IT infrastructure that supports innovation and long-term goals, there are four important areas to consider when selecting your Linux platform. You should look for a platform that:



**Streamlines operations.** The right Linux platform can streamline operations, so your teams spend less time on maintenance and more time innovating and delivering value. Look for a platform built for hybrid cloud development and that allows teams to develop, deploy, and scale without additional training. It should have management tools for your existing and emerging technologies, and built-in automation to simplify application deployment, scale, and management when in production.

**Minimizes risks.** Choose a distribution with features that mitigate security and compliance risks and help manage issues that could lead to them. Choose a platform that embraces government and industry standards around validations and certifications, and that uses development best practices to reduce security flaws in their code before shipping. Choose a platform that helps you reduce new threats by simplifying detection and management.

**Simplifies infrastructure.** Choose a Linux platform that can increase operational efficiencies. Infrastructure complexity reduces IT efficiency and increases management costs, stifling long-term innovation. A platform that supports a vast catalog of hardware, software, and cloud partnerships will

help accelerate innovation and boost agility. Investigate how predictive analytics can be used to reduce time spent on complex operational tasks by proactively detecting issues, analyzing configurations, and prescribing remediations.

**Is future-ready.** Strive for long-term success by selecting a Linux platform with the stability and longevity to handle your critical applications for at least 10 years. Choose a platform with predictable release cycles, end-of-maintenance dates, upgrade options, and compatibility so you can plan ahead. The platform should also have migration and automation tools that simplify the process for moving to the latest version or from other distributions. Consider the importance of support and integrations by choosing a platform that provides 24x7 technical support and an extensive software and hardware partner ecosystem.

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**For more  
about what to  
look for in your  
Linux platform**

**Get the  
checklist**

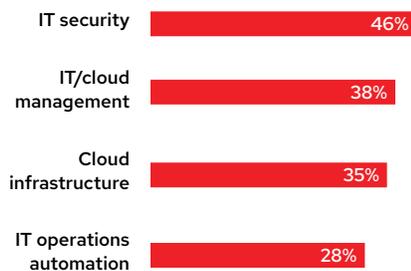
## Increase agility with a hybrid cloud approach and containerization

Relentless competition and changing regulatory compliance standards are forcing businesses to evolve, but inflexible, traditional infrastructures introduce complexity that often slows any progress.

IT teams are tasked with providing developers with the resources they need to move swiftly from idea to business value, but provisioning these resources at scale can be challenging. At the same time, IT teams are expected to maintain infrastructure control, security, and reliability—all without creating bottlenecks in the development life cycle.

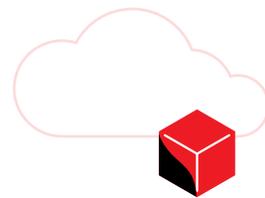
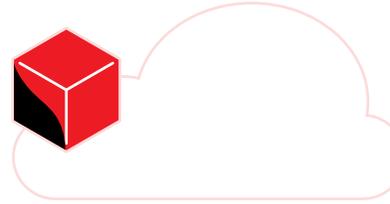
The combination of hybrid cloud and cloud-native technologies—like Linux containers, Kubernetes, and microservices—offers IT teams the agility and portability needed to readily deliver services to developers and lines of business.

In their effort to modernize IT, security and management are high priorities in the agendas of today's organizations. IT security is a top funding priority for nearly half of organizations (46%), followed by IT/cloud management (38%), cloud infrastructure (35%), and IT operations automation (28%).<sup>2</sup>



Red Hat® Enterprise Linux® offers the advanced security capabilities and management controls that hybrid cloud deployments require while providing exceptional stability, reliability, and performance. Red Hat OpenShift® is a leading enterprise Kubernetes platform that simplifies container orchestration for cloud-native applications and gives developers the tools to be more productive and innovative.

Read [Boost business agility by modernizing your IT with hybrid cloud and containers](#) for more information about Red Hat hybrid cloud solutions: Red Hat Enterprise Linux, Red Hat OpenShift, and Red Hat Enterprise Linux CoreOS. These open source solutions provide businesses with efficient, continuous, scalable, and dynamic infrastructure without compromising regulatory or financial requirements.



By the end of the year, **70%** of all enterprise workloads will be deployed in cloud infrastructure and platform services, up from **40%** in 2020.<sup>3</sup>

<sup>2</sup> Red Hat. "2022 Global Tech Outlook: A Red Hat report," 11 Nov. 2021.

<sup>3</sup> Gartner. "Hype Cycle™ for Cloud Security, 2021," 27 July 2021.

# Advantages of Linux

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**To achieve your organization's goals, you need a reliable OS that supports all applications across your infrastructure and can be configured and deployed at scale while maintaining assurances around life cycle and security.**

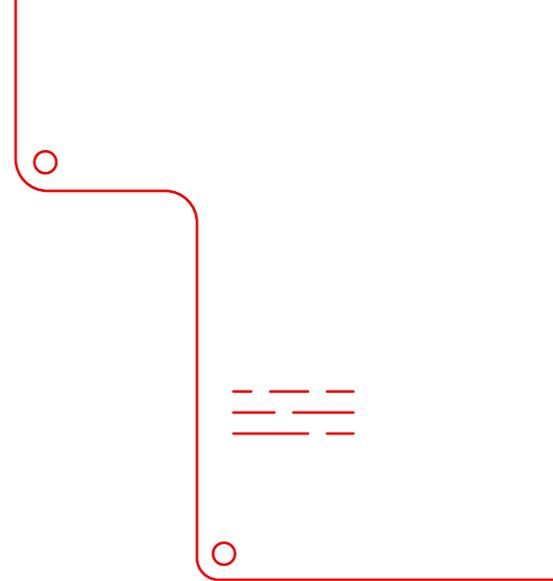
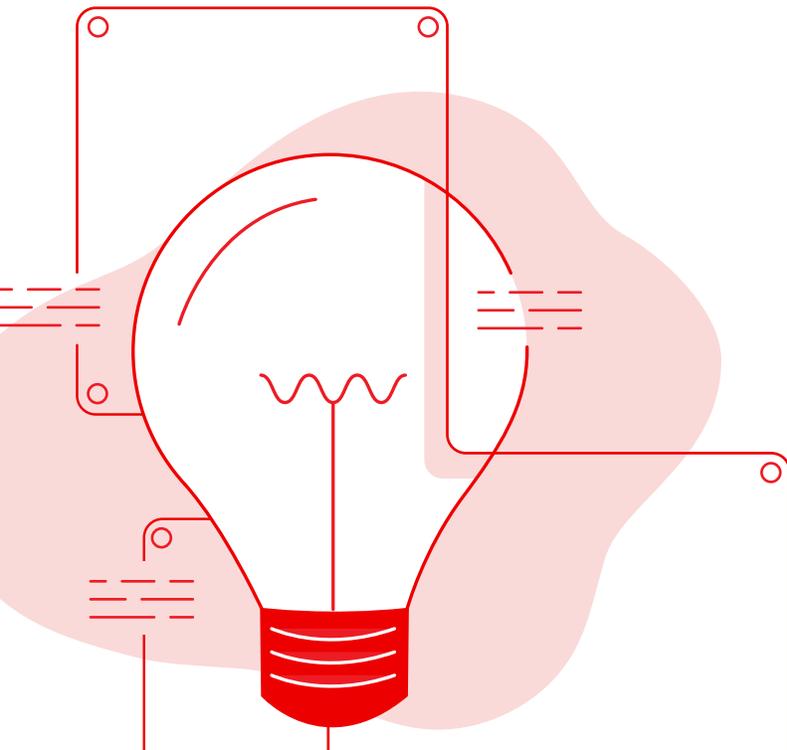
With Red Hat Enterprise Linux, your organization can gain flexibility, security capabilities, and consistency across hybrid cloud environments, helping you promote innovation and efficiency.

## **Supporting standardization across your environments**

Red Hat Enterprise Linux helps businesses standardize across hybrid cloud environments, whether on-premise, virtualized, in public cloud environments, or at the network edge. With today's competitive and regulatory pressures, businesses need a platform that delivers a streamlined management and developer experience, providing tools that help organizations build, operate, and scale their environments consistently, everywhere.

## **Accelerate innovation wherever it occurs**

With Red Hat Enterprise Linux as a foundation, IT can spend less time maintaining hybrid cloud environments and more time can be used to support the workloads and applications that bring value to the organization—wherever they are deployed. Using built-in automation to manage repeatable and redundant tasks makes deploying, scaling, and managing applications in production less time-consuming. And automating manual processes around activities like implementing security capabilities, updates, patches, and configuration changes can reduce the vulnerabilities that human error can often introduce.





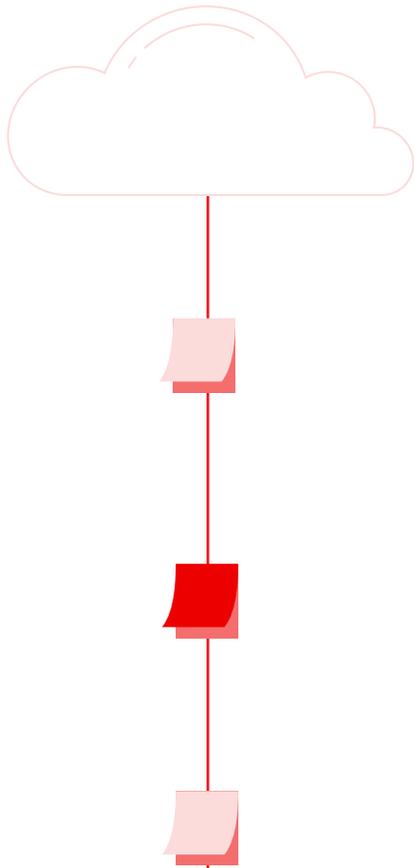
### **A stable and security-focused foundation**

Red Hat Enterprise Linux offers stability, consistency, and trust to build a strong security-focused foundation. New applications can be scaled and emerging technologies introduced with the confidence that the organization is meeting regulatory and industry requirements. Integrated and automated controls monitor the IT infrastructure so new threats are more easily detected and resolved while managing compliance, performance, availability, and stability.

### **Operate with confidence**

The combination of an extensive software, hardware and cloud ecosystem, comprehensive support options over a long life cycle, and integrated development, management, and security tools makes Red Hat Enterprise Linux a reliable platform for boosting innovation and performance across hybrid cloud environments.

# The Red Hat approach



Build and operate your hybrid cloud environment with speed to value and security-focused capabilities.

Red Hat Enterprise Linux creates a high-value foundation for modern IT infrastructure. To meet the demands placed on IT teams, today's operating environments must provide flexibility, consistency, and resiliency, as well as focus on three vital and cooperative areas.



1. Security

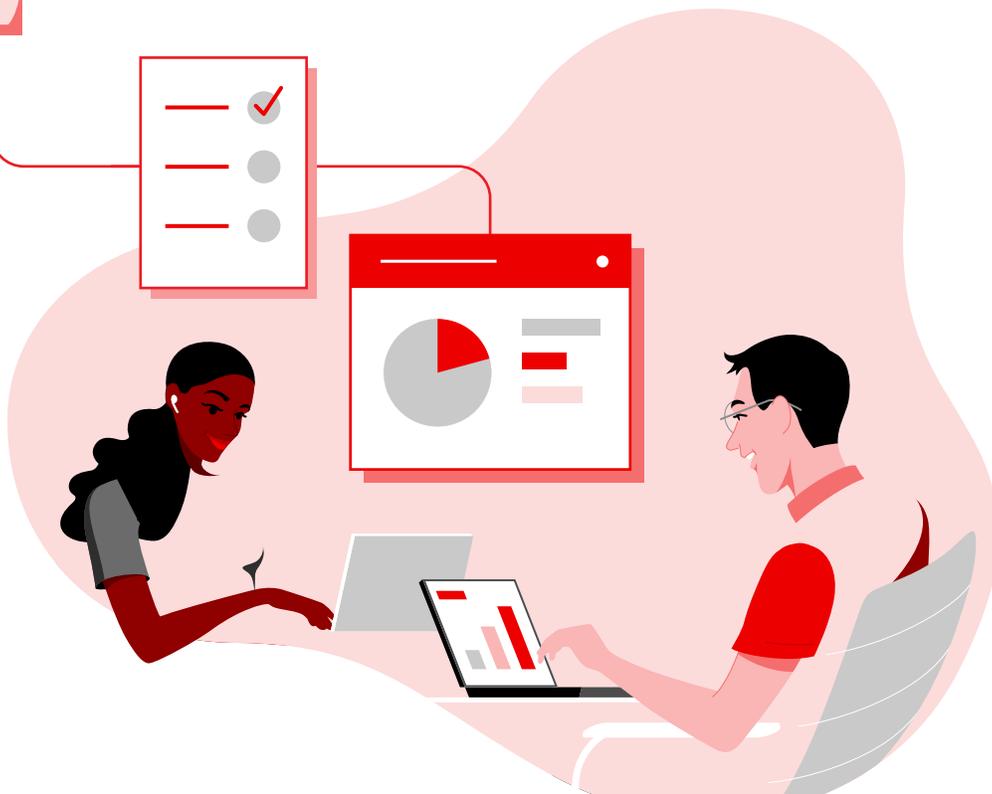


2. Automation



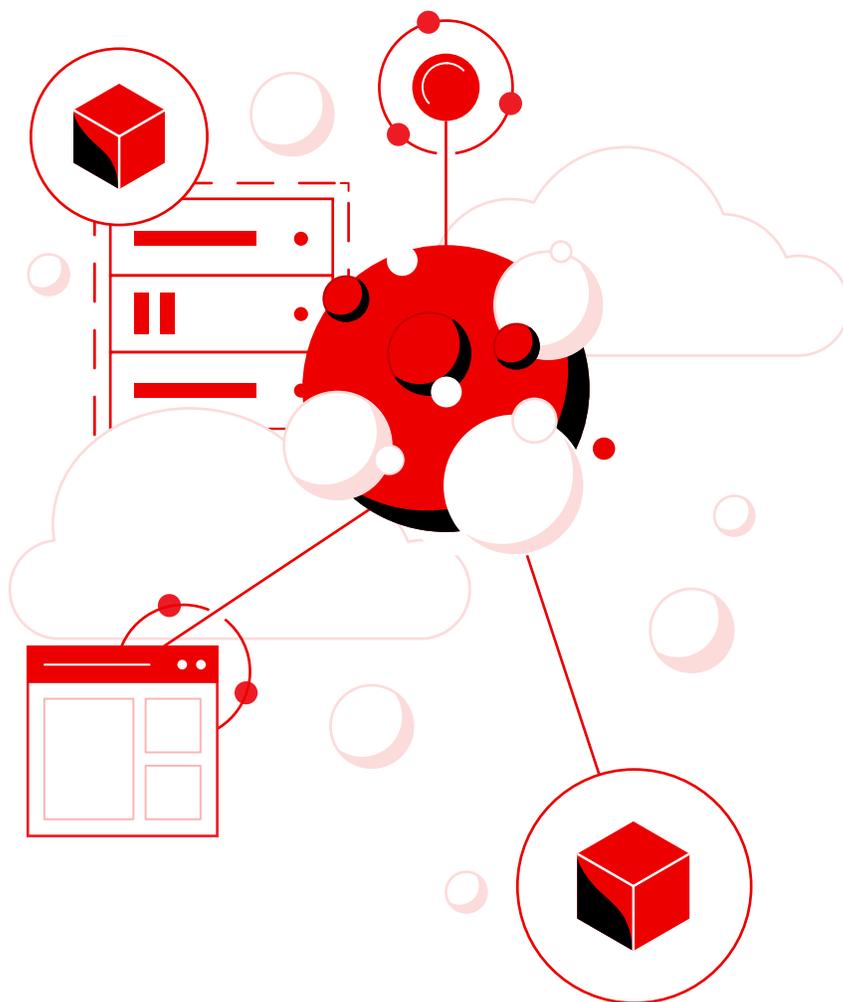
3. Life cycle management

Red Hat Enterprise Linux allows you to use the same tools to manage application workloads and services across physical, virtual, hybrid cloud, and edge deployments—providing consistency across enterprise footprints.



## More than an OS: A foundation to build on

With Red Hat, organizations can deploy a complete stack of powerful open source technology stack, while reducing deployment friction and cost, and accelerating time to value. When used at the foundation for products like Red Hat Ansible® Automation Platform, Red Hat OpenShift, and other Red Hat solutions and services, Red Hat Enterprise Linux delivers security capabilities, performance, interoperability, and innovation benefits that extend throughout the infrastructure.



## 6 benefits of using Red Hat Enterprise Linux

Red Hat Enterprise Linux provides benefits across six key areas, including:

- Security resources and tools.
- Developer-friendly design.
- Integrated analytics and remediation.
- Streamlined management and automation.
- Flexibility and long-term life cycle support.
- Partnerships and certifications.



## 1. Built-in security resources and tools

Keeping up with the latest security trends and best practices is difficult and adopting modern DevSecOps approaches can often amplify these challenges. Red Hat Enterprise Linux offers built-in security features and certifications that simplify how organizations mitigate vulnerabilities while maintaining compliance and security at scale.

Red Hat Enterprise Linux security features include:

- A dedicated Red Hat Product Security team, scanning and remediation software, and continuous access to new resources to help you ensure compliance.
- Automated security tools, regular security grades and live patches, and accessible experts to help keep your IT environment up to date and focused on security.
- Certification to stringent security standards—such as Federal Information Processing Standard (FIPS) 140-2, Common Criteria (CC), and Security Technical Implementation Guides (STIGs)—and a trusted software supply chain provide confidence and uncompromised security across industries and use cases.
- Access to kernel live patches for critical Common Vulnerabilities and Exposures (CVEs) at no additional cost, allowing you to minimize downtime without compromising security.
- A subscription to Red Hat Insights that lets organizations create Secure Content Automation Protocol (SCAP) policies and rapidly perform system scans to verify compliance with security policies.

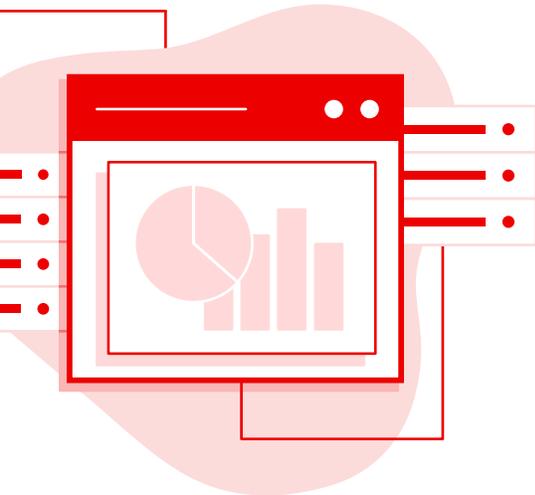
## 2. Application Streams provides a developer-friendly environment

Red Hat Enterprise Linux boosts developer agility while providing a stable production environment. It includes features and tools that accelerate application development processes, including tool selection, coding, installation, and setup.

Red Hat Enterprise Linux development features include:

- A broad selection of programming languages and runtimes, compilers, open source databases, web and cache servers, and emerging development tools can be delivered via Applications Streams (AppStreams) to ease application development and deployment.
- AppStreams delivered and updated frequently that offer the latest stable versions of languages, tools, and databases developers need when supporting teams using earlier versions.
- Access to tools for container development, including Buildah for building containers, Podman for running containers, and Skopeo for sharing containers.





### 3. Red Hat Insights for integrated analytics and remediation

All Red Hat Enterprise Linux subscriptions include Red Hat Insights, a Software-as-a-Service (SaaS) offering that helps you proactively identify and fix issues in the IT environment. Red Hat Insights collects analytics from across the enterprise to provide actionable intelligence to boost the IT environment's efficiency and reliability.

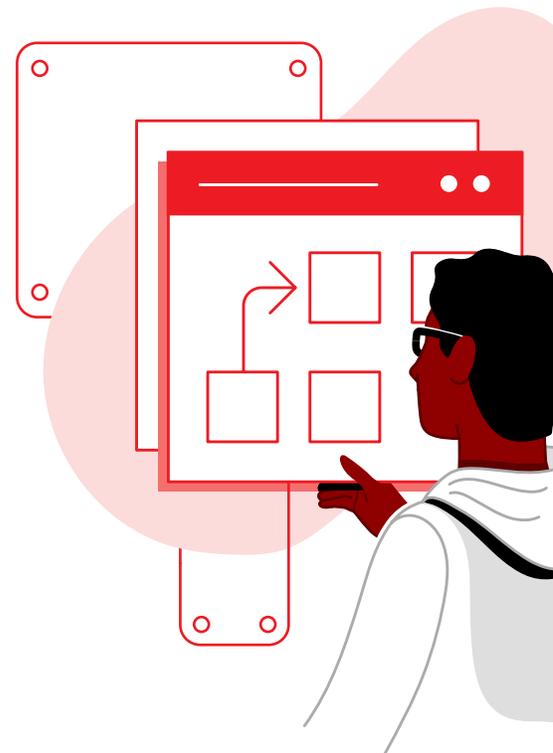
Red Hat Insights also boosts security capabilities, delivering continuous vulnerability alerts and targeted guidance to help you maximize uptime and avoid emergencies caused by security issues, noncompliant settings, unpatched systems, and the impact of configuration drift on DevOps, microservices, or cloud security.

### 4. Automation to streamline management

Red Hat Enterprise Linux streamlines OS management and simplifies day-to-day administration—providing a consistent and repeatable experience through the standardization and automation of repeatable workflows. It integrates with Red Hat Ansible Automation Platform and Red Hat Smart Management providing flexible and powerful automation and infrastructure management capabilities.

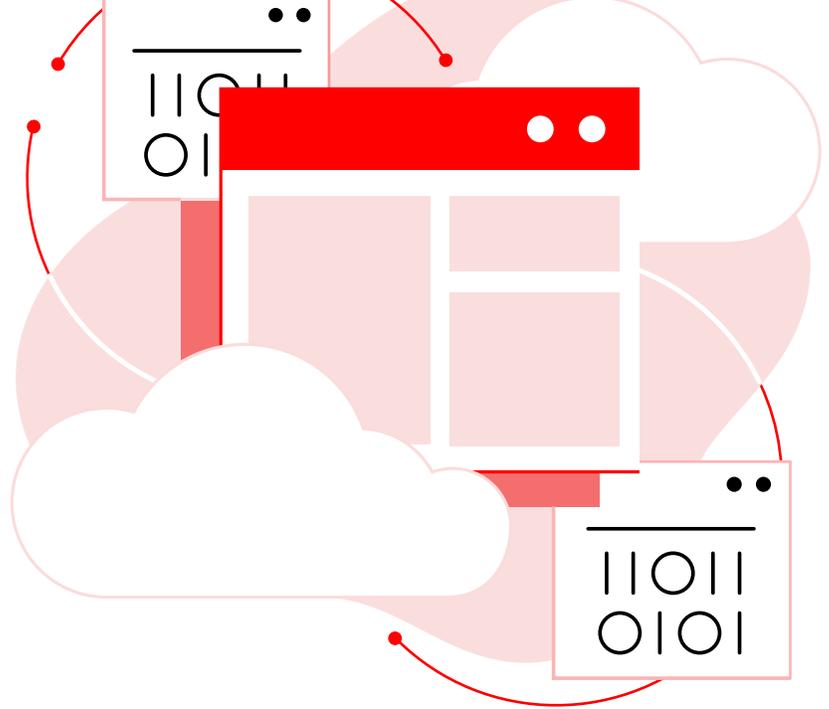
Red Hat Enterprise Linux includes:

- **Built-in workflow automation tools and integration with Red Hat advanced management and automation tools for easier administration of your hybrid environment.**
- **System roles—a collection of workflows subscribers can use to configure interfaces and execute tasks quickly and consistently across different Red Hat Enterprise Linux versions with the same automation playbook.**
- **Access to Red Hat Smart Management and Red Hat Ansible Automation Platform to more effectively provision, patch, configure and control development, test, and produce systems at scale.**



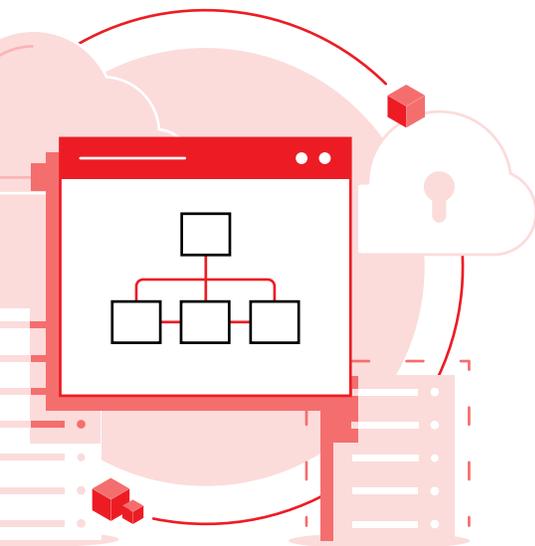
## 5. Flexibility for support across the life cycle

With multiple supported versions, Red Hat Enterprise Linux provides you the sustainable, flexible, stable, and security-focused platform you need to support your business requirements, with the ability to upgrade and adopt new features on your schedule—when the business requires it. Red Hat simplifies IT planning with published long-term release cycles and life cycle options.



Red Hat Enterprise Linux support features include:

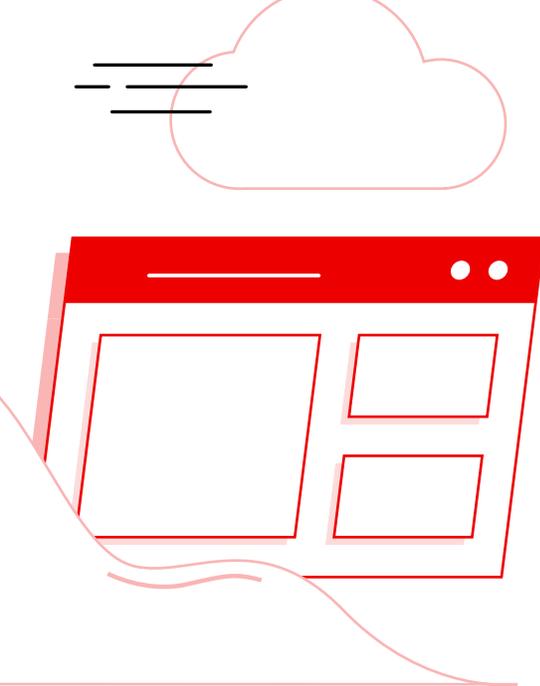
- A predictable, published cadence of releases, with up to 10 years of updates and support for major releases and two years for minor releases.
- A consistent kernel version for each major release and associated minor releases, ensuring application and hardware stability for the entire release life cycle.
- In-place upgrade tools to help you move to newer versions of Red Hat Enterprise Linux more efficiently when you're ready to migrate.



## 6. An ecosystem of partnerships and certification

Red Hat partners with industry leaders in hardware and software and is certified for use with all major cloud providers so you gain greater flexibility, increased stability, and more capacity for innovation. The Red Hat team cultivates a large, certified partner ecosystem so organizations can choose the technologies, products, and platforms that will most effectively help them reach their goals, confident they will work reliably with Red Hat Enterprise Linux.

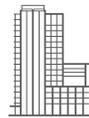
Key Red Hat partners include SAP, Microsoft, Intel, Dell Technologies, Google, and AWS.



## See firsthand the difference Red Hat Enterprise Linux offers

Start a no-cost, 60-day subscription for Red Hat Enterprise Linux Server and unlock your IT infrastructure's potential. You'll receive access to Red Hat Smart Management and Red Hat Insights as well as the award-winning Red Hat Customer Portal, where you'll find documentation, discussion forums, helpful videos to get you started, and much more.

[Start your trial today](#)



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### About Red Hat

Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.

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