Red Hat
OpenShift

5 ways IT operations teams benefit from Red Hat OpenShift

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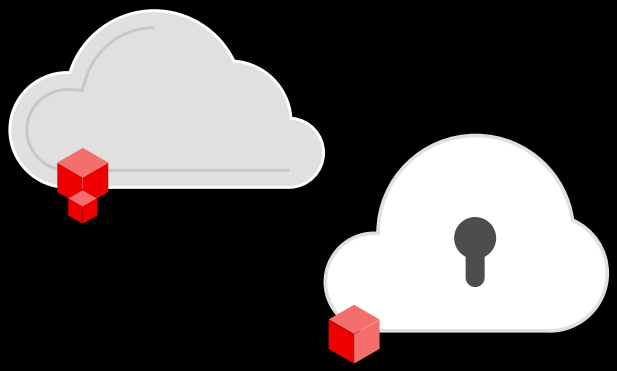


Introduction

Modern businesses rely on applications to streamline operations, enhance productivity, and improve customer experiences.

As technology continues to evolve, applications become critical for fostering collaboration, enhancing productivity, and maintaining competitive advantages in dynamic markets. However, ensuring consistency and security across multiple platforms and environments can significantly slow operations and make fast application deployment and management a challenge for organizations.

A unified application platform can help IT operations teams deliver and manage IT resources and applications when and where they're needed, without compromising security or control. As integrated technology stacks, application platforms include features and capabilities—as well as integrations with technology ecosystems—that simplify application development and delivery across hybrid cloud environments. Delivered as either managed or self-managed deployments, application platforms can help you consistently build, run, and maintain applications using the latest architectures, technologies, and processes.

64%

of organizations say IT operational efficiency is a benefit of their digital transformation efforts.[1]

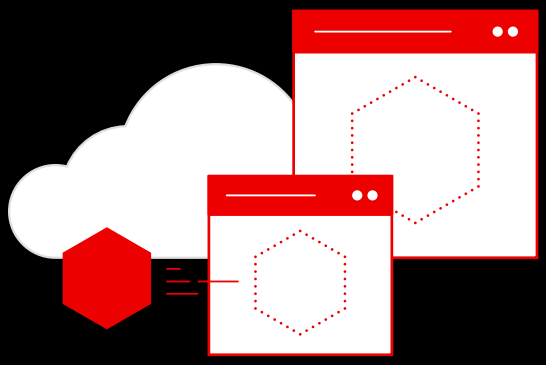
Red Hat delivers a comprehensive, consistent platform that helps you successfully develop, deploy, modernize, and manage applications. Built on the trusted foundation of **Red Hat® Enterprise Linux®**, **Red Hat OpenShift®** provides a unified, security-focused application platform for streamlined IT operations across hybrid cloud environments—including on-site datacenters, public cloud resources, and edge devices. It lets you build and deploy a range of applications—like cloud-native and artificial intelligence and machine learning (AI/ML) applications—at scale with increased consistency, visibility, security, and scalability. Additionally, Red Hat OpenShift Virtualization, integrations with the **Red Hat Application Foundations** portfolio, and a **broad partner ecosystem** let you use your choice of technologies to migrate, and modernize traditional applications and services.

This e-book reviews 5 key benefits of Red Hat OpenShift for IT operations teams.

1 F5 Networks. "2024 State of Application Strategy Report," April 2024.

Simplify IT operations with a unified application platform

Here are 5 key benefits of adopting Red Hat OpenShift as a unified application platform for IT operations teams.



1 Streamline application deployment and delivery

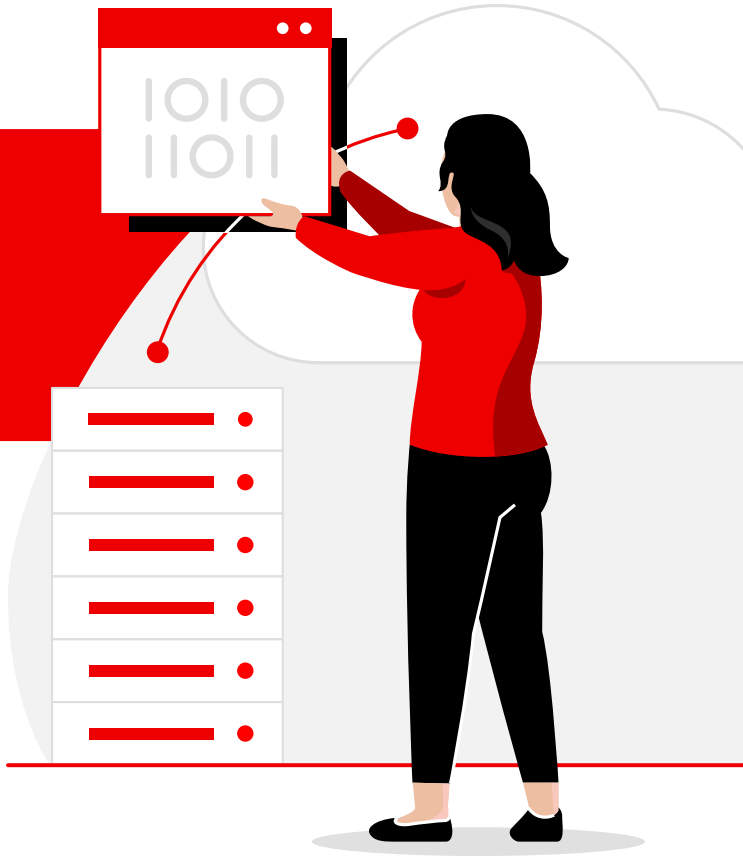
Efficient IT operations require reliable delivery of both cloud-native and traditional applications. To ensure consistent application deployment across environments, you need a common toolset with integrated and automated workflows like **continuous integration/continuous delivery (CI/CD)** pipelines.

Even so, building and maintaining toolsets and workflows can be a complex process, especially when integrating and testing technologies with your software development lifecycle. Today, many organizations manage a diverse mix of workloads—including traditional applications in virtual machines and container-based cloud-native microservices—and are working to incorporate AI/ML capabilities. Further, teams want the ability to extend these toolsets and workflows to all types of applications and environments, all with a consistent user experience.

With Red Hat OpenShift, you can design and build integrated pipelines and workflows that increase the consistency, efficiency, and speed of application deployments. Included with Red Hat OpenShift, **Red Hat OpenShift Pipelines** helps you create advanced CI/CD workflows that automatically scale to meet user demand by running each step in a separate container. By integrating Git repositories into your CI/CD pipelines with **Red Hat OpenShift GitOps**, you can define infrastructure and workload configurations with declarative code across environments for efficient, reliable application delivery. You can use both OpenShift Pipelines and OpenShift GitOps consistently for a variety of applications deployed across your entire hybrid cloud environment.

Red Hat OpenShift Virtualization—also included with Red Hat OpenShift—simplifies operations and provides consistency across virtual machines, containers, and serverless workloads. Red Hat OpenShift Virtualization lets you run both virtual machines and containers to standardize application deployment and maintenance across your hybrid cloud environment. With a common toolset across all applications, you can streamline management and modernization tasks and ease integration of advanced technologies like containers, **service meshes**, and AI/ML models. The **migration toolkit for virtualization (MTV)** helps you plan your modernization journey and move your applications to Red Hat OpenShift efficiently and in less time.

C-level roles cite improving operational efficiency as the top business priority for technology to address.[2]



2 *Nash Squared. "Nash Squared Digital Leadership Report 2023," November 2023.*

2 Deliver responsive, reliable user experiences

C-level roles say that improving customer experience and accessibility is a top-3 business priority for technology to address.[3] Maintaining application health and performance is key to delivering exceptional user experiences. Consistent application and infrastructure configuration, maintenance, and scaling can ensure efficient use of expensive hardware resources. Migrating workloads between on-site datacenters and public cloud infrastructure helps optimize application performance and meet changing user demand. And automated infrastructure management across environments can eliminate many time-consuming, error-prone tasks.

With Red Hat OpenShift, you can manage application lifecycles across hybrid and multicloud environments. Proactively administer applications with comprehensive logging, monitoring, and application performance management tools. Detect and remediate service failures before they become critical issues. Control clusters, services, and roles for multiple teams from a centralized administrative console. Manage diverse environments and resources simply and efficiently with configuration and infrastructure automation. And gain visibility and control by adopting **Red Hat Advanced Cluster Management for Kubernetes** to manage all of your Kubernetes clusters—within Red Hat OpenShift and other Kubernetes distributions—at scale.

76%

of technical professionals and executive leaders cite customer experience as a top IT initiative.[4]

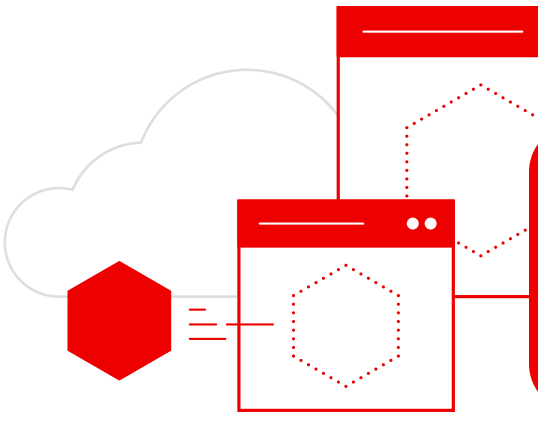
*3 Nash Squared. "**Nash Squared Digital Leadership Report 2023**," November 2023.*
*4 Flexera. "**State of Tech Spend Report 2023**," October 2023.*

3 Increase collaboration with development teams

In many organizations, IT operations and development teams work collaboratively to define, implement, and provision environments. However, this can be challenging when you need to support multiple teams—each with different needs—in a single environment. Tools and processes may not scale or it may be difficult to deploy them across your entire hybrid cloud environment. Specialized knowledge and skills—along with considerable time—may be needed to successfully evaluate, integrate, and secure diverse toolsets. Finally, tool vendors' release schedules and support lifecycles may not align with your business needs.

Red Hat OpenShift helps you create standardized environments and define best practices across development, test, staging, and production environments for consistent application delivery. With self-service capabilities and automated infrastructure operations, you can help your organization adopt new technologies in less time through simple access to curated tools, processes, and practices. And by incorporating consistent DevOps practices into your processes and tools, you can improve collaboration, reduce errors, and enhance security and compliance measures across operations and development teams.

With Red Hat OpenShift, collaboration goes beyond your organization to teams of Red Hat experts. Red Hat provides support that extends from the operating system to developer tools, helping you modernize, migrate, and develop applications with expert services, detailed guidance, and practical tools that incorporate culture, process, and technology.



39%

of organizations say managing the complexity of multiple tools and APIs is a challenge when deploying applications in multiple clouds.[4]

5 F5 Networks. "2023 State of Application Strategy Report," 2023.

4 Simplify hybrid and multicloud operations

Across industries, organizations are increasingly adopting hybrid and multicloud strategies to take advantage of the unique capabilities and services offered by different infrastructures. In fact, 73% of organizations have adopted a hybrid cloud strategy that involves using resources in at least 1 private and 1 public cloud environment.[6]

However, deploying workloads across environments that use disparate application stacks—including different operating systems and container management tools and versions—can be challenging. To operate efficiently and protect sensitive systems, applications, and data, you need common, comprehensive management, security, and governance tools and processes across your environments.

Red Hat OpenShift gives you a consistent application platform for all of your workloads—traditionally architected or cloud-native—across hybrid and multicloud environments. With common toolsets, pipelines, and workflows across on-site datacenters, public cloud environments, and edge deployments, Red Hat OpenShift increases application portability and provides a consistent, scalable development and deployment experience everywhere. You can deploy Red Hat OpenShift as a **fully managed cloud service** on AWS, Microsoft Azure, Google Cloud, and IBM Cloud. Each cloud service offers complete, full-stack environments, all necessary services, simple self-service options, and expert 24x7 site reliability engineering (SRE) support via service-level agreements (SLAs). Or you can select and deploy a **self-managed edition** of Red Hat OpenShift with multicluster management, security, compliance, and data management capabilities that work across infrastructures.

Learn more about Red Hat OpenShift cloud services.

Red Hat Advanced Cluster Management for Kubernetes supplies lifecycle management, policy-based governance, and health monitoring for Red Hat OpenShift clusters at scale. You can deploy applications, manage multiple clusters, and enforce policies across clusters from a single console. And with **Red Hat OpenShift Platform Plus**—a combined offering for security-focused application delivery and innovation that includes Red Hat Advanced Cluster Management—you can simplify management of clusters and environments and increase the security and reliability of your application deployments.

6 *Flexera. "**Flexera 2024 State of the Cloud Report**," 2024.*

5

Enhance security throughout your application stack

23% of organizations were subjected to major IT security or cyberattacks in the last 2 years.[7] And IT operations teams continue to face new challenges in ensuring the security and compliance of hybrid and multicloud environments at scale, across technology stacks, and through application lifecycles. Comprehensive monitoring solutions across infrastructures are necessary to detect and remediate vulnerabilities and potential threats. Consistent user identity management and access controls for both on-site datacenters and public cloud environments are crucial to prevent unauthorized access. And uniform policies across deployments are required to maintain compliance with government, industry, and corporate regulations.

Using continuous compliance and security checks throughout your application lifecycles, Red Hat OpenShift delivers a trusted, modern, scalable approach to protecting your entire technology stack. Security features in **Red Hat Enterprise Linux**—like Linux namespaces, Security-Enhanced Linux (SELinux), CGroups, and Secure Computing Mode (seccomp)—isolate and protect workloads. An integrated **container registry** lets you scan for vulnerabilities and cryptographically sign applications for trusted identification. Trusted content for building container images helps mitigate potential vulnerabilities in critical software infrastructure. Granular deployment policies let you enforce quotas, isolation, and access protections. Strong encryption controls help protect sensitive data like platform secrets and application configurations. And security-focused operational capabilities—including authentication, authorization, and secret management—ensure trust between users and applications.

82%

of organizations are taking actions to address software supply chain security.[8]

Red Hat Advanced Cluster Security for Kubernetes continuously scans your applications and environment against industry-standard deployment and runtime policies—including Center for Internet Security (CIS) benchmarks—to protect your environment from malicious applications and misconfigurations. It monitors, collects, and evaluates system-level events like process execution, network connections and flows, and privilege escalation within each container in your Kubernetes environments. Combined with behavioral baselining and allowlisting, Red Hat Advanced Cluster Security detects anomalous activities that may indicate active malware, cryptomining, unauthorized credential access, intrusions, or lateral movement.

*7 Nash Squared. "**Nash Squared Digital Leadership Report 2023**," November 2023.*
*8 F5 Networks. "**2023 State of Application Strategy Report**," 2023.*

Get started today

Red Hat OpenShift simplifies IT operations and application delivery, so you can rapidly meet user demands and focus on strategic initiatives. Streamline application delivery, deliver exceptional user experiences, collaborate more effectively, manage diverse environments more efficiently, and enhance security across your organization.

Experience Red Hat OpenShift first hand, at no cost

The Red Hat Level Up Program gives eligible customers fully supported access to Red Hat OpenShift for their team, department, or organization initiatives at no-cost for 1 year.

Try it for free

Get help from the experts

Red Hat Consulting experts can help you build a reliable, flexible foundation for hybrid cloud workloads to lower operational costs, reduce downtime, and increase productivity.

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