

E-BOOK

 NetApp |  Red Hat

UNIFIED INFRASTRUCTURE FOR CONTAINERS AND VIRTUALIZATION



CONTENTS



Scalable and secure virtualized IT infrastructure	03	→
Market growth and trends	04	→
Top challenges that customers face today	05	→
Overcoming virtualization challenges	06	→
Real-world success stories	10	→
Actionable next steps	11	→
Navigate the future of IT with confidence	11	→
NetApp and Red Hat solve key challenges	12	→
About NetApp	14	→

SCALABLE AND SECURE VIRTUALIZED IT INFRASTRUCTURE

In today's fast-paced, data-driven world, you need robust, scalable, and efficient IT solutions for your business to stay competitive. NetApp and Red Hat deliver a partnership and joint solutions that complement each other perfectly. This e-book explores how NetApp and Red Hat together can help you prepare for the future, highlighting the advantages of their integration and the value that they bring to your organization.



MARKET GROWTH AND TRENDS

The container market expansion is driven by the need for faster application deployment and greater scalability.

Traditional virtualization is evolving with containers and AI, offering lightweight, portable, and efficient solutions for modern workloads. According to Gartner, containers will be the default choice for 75% of new applications by 2025. Forrester notes that 60% of enterprises are adopting containers for their production workloads. And Red Hat research indicates that 67% of organizations delay projects because of security concerns.

Organizations like yours are seeking solutions that offer better integration with cloud-native technologies, improved automation, and reduced TCO. These areas are where NetApp and Red Hat shine, providing a comprehensive and future-proof alternative.

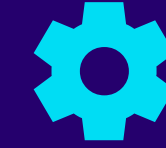


TOP CHALLENGES THAT CUSTOMERS FACE TODAY



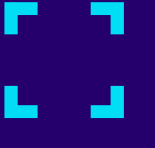
High licensing costs

Many organizations find the licensing costs associated with traditional virtualization solutions to be prohibitively expensive.



Complex management

Management of complex IT environments with multiple virtualization platforms can be challenging.



Scalability issues

As businesses grow, their IT infrastructure needs to scale efficiently without compromising on performance.



Integration with cloud-native technologies

To stay competitive, organizations are increasingly adopting cloud-native technologies.



Security and compliance

Maintaining data security and compliance with industry regulations is a top priority.



Automation needs

Automation of routine tasks is essential for improving efficiency and reducing manual errors.

A woman in a bright yellow jumpsuit is walking up a blue metal staircase. The staircase is part of a modern building with blue walls and railings. The scene is brightly lit, suggesting daytime.

OVERCOMING VIRTUALIZATION CHALLENGES

NetApp and Red Hat together provide a stable, cost-effective, flexible, and secure unified data management solution for containers and VMs. Your organization can reduce infrastructure complexity, deliver resources on demand, and speed cloud-native application development both on premises and in the cloud.

By overcoming these challenges, we help you focus on your core business activities. Our combined strengths center on three key areas: optimization, security, and automation.

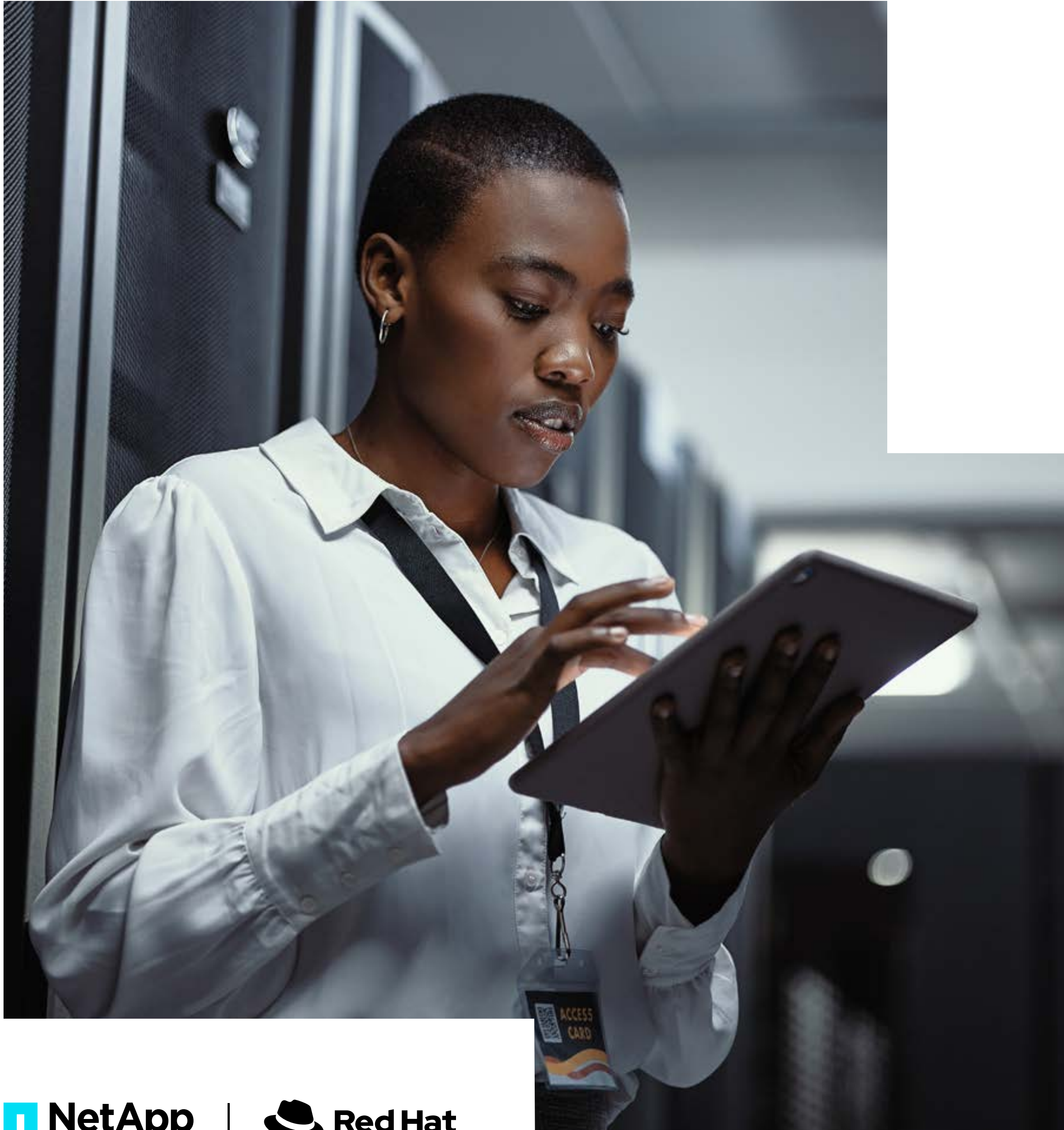
OPTIMIZATION

By integrating NetApp® advanced data management and storage solutions with Red Hat OpenShift Container Platform, your organization can optimize resource utilization and achieve significant cost savings.

OPTIMIZATION BENEFITS INCLUDE:

- ✓ **Hybrid cloud and unified data management.** Get seamless integration of NetApp and Red Hat technologies for hybrid cloud capabilities.
- ✓ **Lower TCO.** Achieve significant cost savings through optimal resource utilization.
- ✓ **Industry-leading container platform.** Take advantage of Red Hat OpenShift, named a Leader in the first-ever 2024 Gartner® Magic Quadrant™ for Cloud Application Platforms.
- ✓ **Simplified infrastructure.** Run VMs and containers on the same infrastructure.





SECURITY

A comprehensive security framework helps you maintain compliance and safeguards sensitive information, giving you peace of mind. Advanced data management capabilities also promote high availability and prevent data loss, maximizing your system uptime and maintaining business continuity.

OTHER PROTECTION FEATURES INCLUDE:

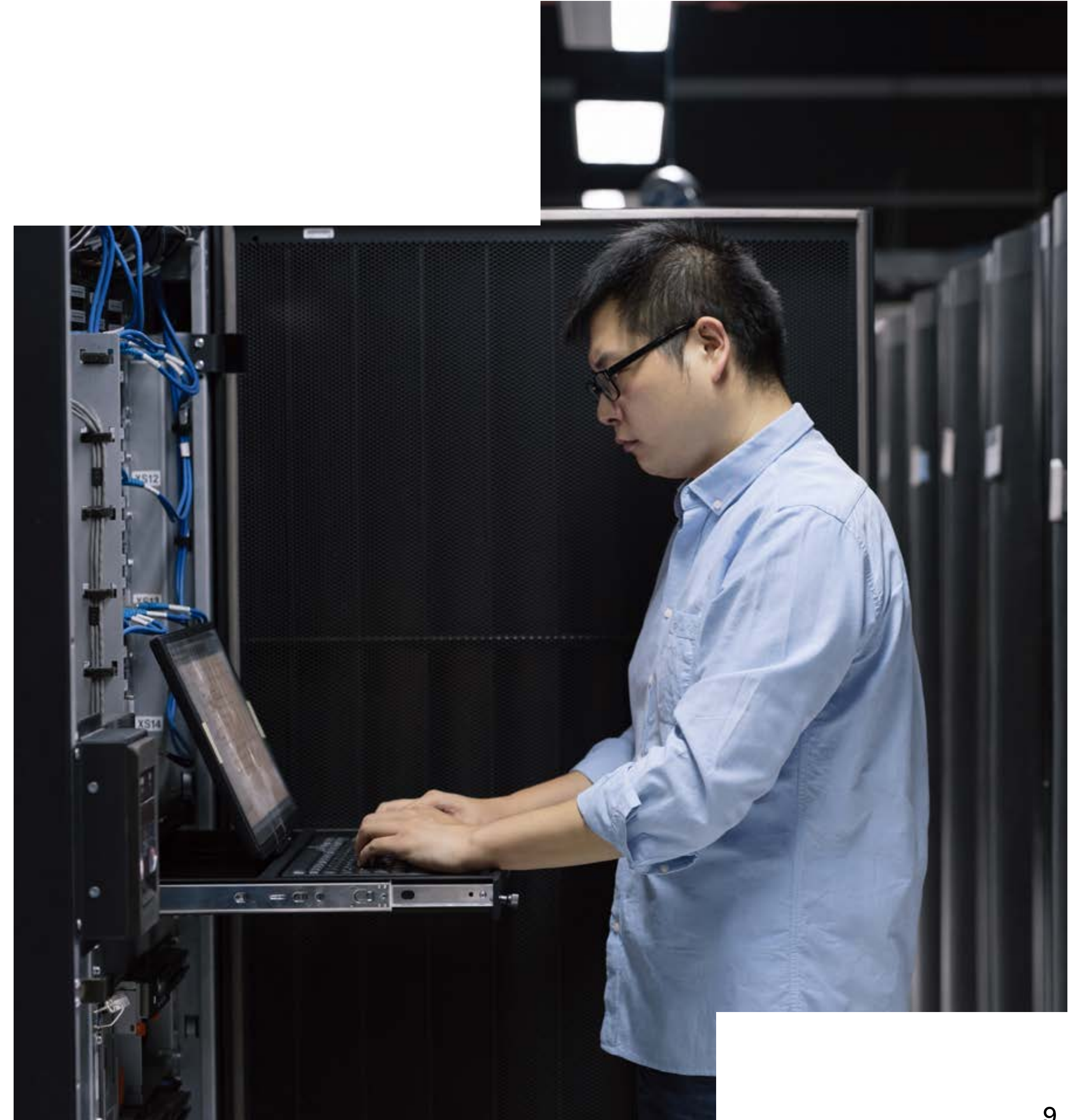
- ✓ **Enterprise-grade security.** Get robust protection and compliance across all your environments.
- ✓ **NetApp Ransomware Detection Confidence program.** Get advanced ransomware detection and prevention.
- ✓ **NetApp Trident™ protect.** Maintain high availability and prevent data loss.
- ✓ **Comprehensive security framework.** Gain peace of mind for both your on-premises and your cloud operations.

AUTOMATION

With automated workflows and intelligent data services streamlining operations, you can accelerate the development and deployment of cloud-native applications, enabling your organization to respond swiftly to business demands.

YOU CAN ACHIEVE AUTOMATION WITH:

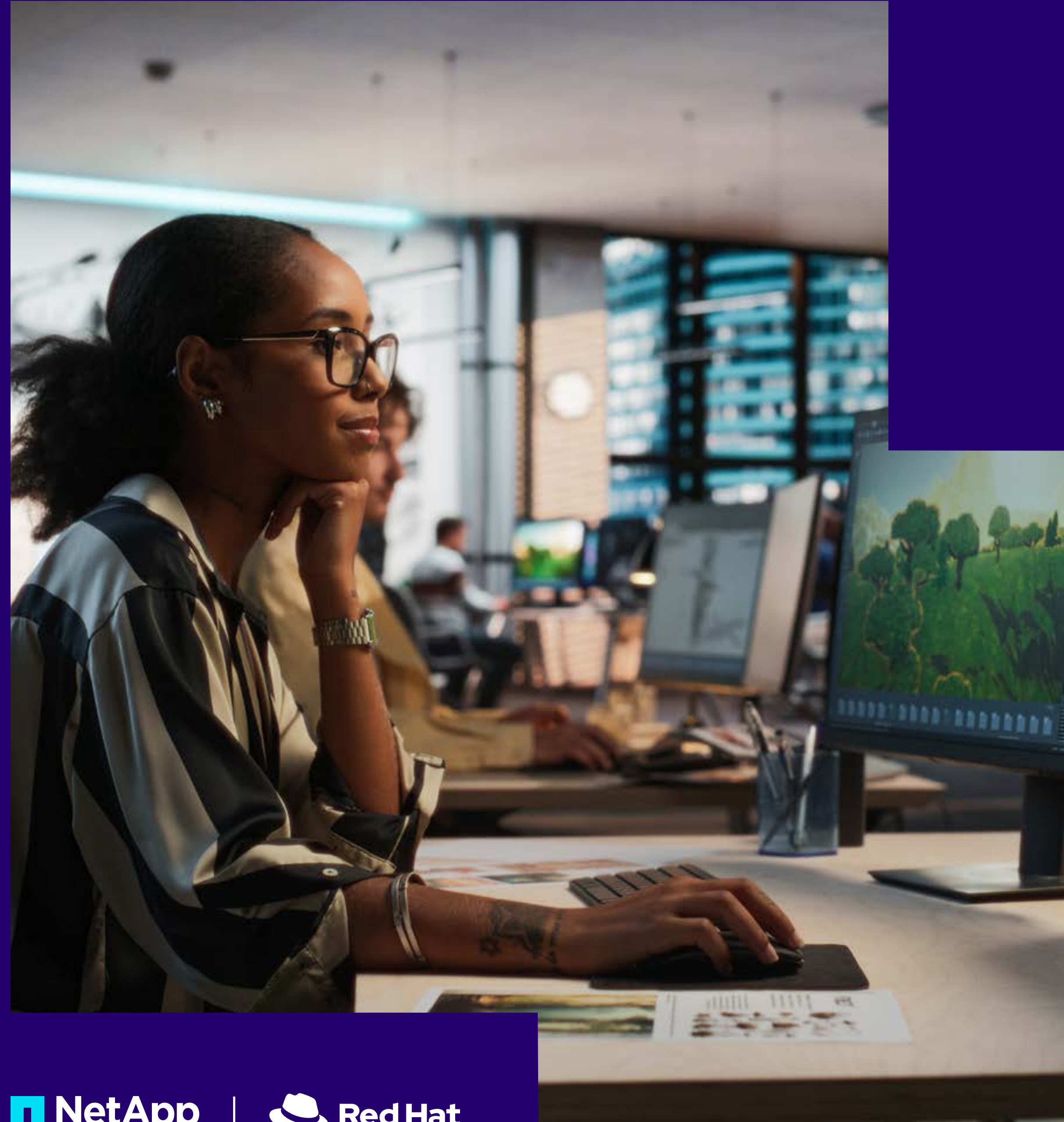
- ✓ **Automated workflows (NetApp Data Infrastructure Insights).**
Speed up your cloud-native application development.
- ✓ **Red Hat Ansible Automation Platform integrations.**
Get seamless configuration management and deployment.
- ✓ **Container Storage Interface (CSI)-compliant storage provisioning.** Get efficient automated storage management.
- ✓ **Advanced anomaly detection.** Quickly identify and resolve changes.



REAL-WORLD SUCCESS STORIES

Organizations like DreamWorks have deployed NetApp and Red Hat solutions, achieving increased agility, reduced costs, and improved performance. And industry applications in healthcare, financial services, and manufacturing demonstrate the tangible benefits of these integrated solutions.

You can achieve similar results by adopting our proven technologies.



ACTIONABLE NEXT STEPS

Are you ready to explore and to implement NetApp and Red Hat solutions? Participate in our workshops, labs, and demonstrations to get hands-on experience. To support effective implementation in your organization, comprehensive guides and documentation are available from [NetApp](#) and [Red Hat](#).

Take the first step toward transforming your IT infrastructure today by [contacting our experts](#) and setting up a consultation.

NAVIGATE THE FUTURE OF IT WITH CONFIDENCE

The partnership between NetApp and Red Hat offers a powerful combination of technologies that meet the complex needs of modern enterprises like yours. By making full use of our strengths, you can achieve greater efficiency, performance, and security while reducing costs. As we continue to innovate, our collaborative solutions will remain at the forefront of the IT industry, driving success for your business. Let NetApp and Red Hat help you navigate the future of IT with confidence and ease.



NETAPP AND RED HAT SOLVE KEY CHALLENGES

1. HOW CAN I REDUCE THE HIGH LICENSING COSTS ASSOCIATED WITH MY CURRENT VIRTUALIZATION SOLUTION?

Answer: NetApp and Red Hat offer cost-effective solutions that significantly reduce TCO. Red Hat OpenShift Virtualization provides a flexible and stable platform for your VMs. NetApp's efficient storage solutions, coupled with Red Hat's automation capabilities, optimize resource utilization, further driving down your costs.

2. HOW DO I MANAGE THE COMPLEXITY OF MY IT ENVIRONMENT WITH MULTIPLE VIRTUALIZATION PLATFORMS?

Answer: NetApp and Red Hat simplify IT management through unified solutions that integrate seamlessly. Red Hat OpenShift provides a consistent platform for managing your containerized applications, while NetApp intelligent data infrastructure maintains unified data management across your hybrid and multicloud environments. Tools like NetApp Trident automate storage provisioning in Kubernetes, reducing complexity and your operational overhead.

3. CAN I SCALE MY INFRASTRUCTURE EFFICIENTLY AS MY BUSINESS GROWS?

Answer: Yes, with NetApp and Red Hat, you can scale your infrastructure effortlessly. NetApp storage solutions offer high performance and scalability to meet your growing data demands. Red Hat OpenShift provides a scalable platform for deploying and managing your containerized applications and VMs, so your infrastructure can grow with your business needs.

4. HOW DO I INTEGRATE WITH CLOUD-NATIVE TECHNOLOGIES WHILE MAINTAINING PERFORMANCE AND RELIABILITY?

Answer: NetApp and Red Hat are designed to integrate seamlessly with cloud-native technologies. NetApp Trident provides dynamic storage provisioning for Kubernetes, maintaining high performance and reliability for your containerized applications. Red Hat OpenShift offers a robust platform for developing and deploying cloud-native applications, enabling you to take advantage of the full potential of cloud technologies.

5. HOW CAN I KEEP MY DATA SECURE AND COMPLIANT WITH INDUSTRY REGULATIONS?

Answer: NetApp and Red Hat provide comprehensive security and compliance solutions. NetApp offers data protection features such as encryption, snapshots, and replication, while Red Hat includes security enhancements like Security-Enhanced Linux (SELinux) and OpenSCAP. Together, they meet industry-specific compliance requirements, such as HIPAA, the General Data Protection Regulation (GDPR), and the Payment Card Industry Data Security Standard (PCI DSS). They also enhance your overall security posture with tools like Red Hat Ansible Tower and NetApp Storage Workload Security (formerly Cloud Secure).

NETAPP AND RED HAT SOLVE KEY CHALLENGES

6. HOW DO I AUTOMATE ROUTINE TASKS TO IMPROVE EFFICIENCY AND TO REDUCE MANUAL ERRORS?

Answer: Red Hat Ansible Automation Platform, combined with NetApp automation tools, streamlines your ITOps by automating routine tasks. This automation reduces manual errors and frees up your IT team to focus on strategic initiatives. Automated storage provisioning with NetApp Trident and infrastructure management with Ansible Automation Platform facilitate efficient and error-free operations.

7. HOW CAN I MIGRATE TO A FLEXIBLE AND COST-EFFECTIVE SOLUTION WITHOUT SIGNIFICANT DOWNTIME?

Answer: The NetApp Shift toolkit simplifies and accelerates the migration from VMware environments to Red Hat OpenShift Virtualization. The Shift toolkit enables rapid migration of your VMs, minimizing downtime and disruption. You get a smooth transition to a more flexible and cost-effective virtualization solution. Red Hat also offers a migration toolkit.

8. HOW DO I MAINTAIN HIGH PERFORMANCE FOR DEMANDING WORKLOADS IN A VIRTUALIZED ENVIRONMENT?

Answer: NetApp's high-performance storage solutions combined with Red Hat OpenShift Virtualization deliver the performance that your demanding workloads need. Real-time analytics from NetApp Data Infrastructure Insights help optimize your IT environment, so your applications run smoothly and efficiently.

9. HOW CAN I FUTURE-PROOF MY IT INFRASTRUCTURE TO ADAPT TO EMERGING TECHNOLOGIES?

Answer: NetApp and Red Hat are committed to continual innovation, helping to make your IT infrastructure future-proof. Enhanced integration with emerging technologies like AI, machine learning, and edge computing keeps your infrastructure up to date. NetApp Data Infrastructure Insights and Red Hat's open hybrid cloud strategy provide the flexibility and scalability that you need to adapt to future technological advancements.

10. HOW DO I ACHIEVE SEAMLESS INTEGRATION AND INTEROPERABILITY BETWEEN DIFFERENT IT COMPONENTS?

Answer: NetApp and Red Hat solutions are designed to integrate seamlessly with each other and with other IT components. Preconfigured solutions, API integrations, and collaborative tools like Red Hat Ansible Playbooks promote smooth communication and interoperability between platforms. This unified approach simplifies deployment and management, providing a cohesive IT environment.



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, virtualization, and Kubernetes technologies. We help customers develop cloud-native applications, integrate existing and new IT applications, and automate and manage complex environments with award-winning support, training, and consulting services. www.redhat.com

About NetApp

NetApp is the intelligent data infrastructure company, combining unified data storage, integrated data services, and CloudOps solutions to turn a world of disruption into opportunity for every customer. NetApp creates silo-free infrastructure, harnessing observability and AI to enable the industry's best data management. As the only enterprise-grade storage service natively embedded in the world's biggest clouds, our data storage delivers seamless flexibility. In addition, our data services create a data advantage through superior cyber resilience, governance, and application agility. Our CloudOps solutions provide continuous optimization of performance and efficiency through observability and AI. No matter the data type, workload, or environment, with NetApp you can transform your data infrastructure to realize your business possibilities. www.netapp.com



[Contact Us](#)