

Solution Brief

Simplify Application Management with NetApp HCI and Red Hat OpenShift Container Platform

Accelerate business, empower DevOps, and simplify IT

Key Benefits

Accelerate Your Business

Rapidly build and deliver innovative applications to market and outpace your competition with a validated blueprint for a complete application delivery platform.

Empower DevOps

Unite developers and operations with an automated user experience that enables teams to more easily build, deploy, and scale applications with containers and Kubernetes on a simpler, hybrid cloud infrastructure.

Simplify IT

Deliver a private cloud application environment without the time or complexity associated with designing a custom platform.

In today's dynamically changing digital economy, applications and the data that drives them are the new face of the business. But it's no longer enough to deliver applications that are available anywhere, anytime, and on any device. They should also provide real-time updates and intelligent interactions that are fed by continuous data streams and feedback loops. To stay ahead of the competition, it's crucial to be able to quickly release or update applications, internal or external, exactly when and where they're needed.

Reducing Application Complexity

Many traditional developer and IT operations teams face a massive amount of complexity in building, configuring, maintaining, and scaling applications. Overall, these legacy processes can be challenging, manual, and error prone and can slow down application development and deployment. This slowdown can stem from infrastructure that is unreliable and difficult to scale, monolithic applications that can take weeks to configure and deploy, and a lack of communication and understanding between the development and operations teams.

Today's user expectations and business challenges are compelling a shift in the architectural design of applications. Known as cloud-native applications, these applications are designed to run and scale reliably and predictably in cloud environments. Cloud-native application architectures are designed to balance the need for development agility with the need to maintain the stability, availability, and durability of applications. They can achieve this balance by taking advantage of key technologies such as microservices and containers combined with agile IT processes such as [continuous integration/continuous delivery \(CI/CD\)](#) and a [DevOps](#) culture.

As more companies move to a cloud-native application development process, they are realizing that not every application can be—or should be—developed in a public cloud. Concerns such as data governance, regulatory compliance, and cost are creating pressure on you (and your competitors) to be more agile in your own data center.

However, planning, designing, and building a custom on-premises platform to support this new development process can be costly and complex and might take months or years to get into operation. Such a project can delay immediate business needs, put organizations behind the competition, and be expensive to maintain and update.

What is needed is an environment for building, deploying, and managing applications more rapidly and more securely, with faster development iterations and a supporting infrastructure. The infrastructure should be enterprise class, easier to consume and manage, and more resilient. It should also have high availability, scale more easily and linearly, and help support multiapplication development and deployment without performance degradation, across multiple hybrid clouds.

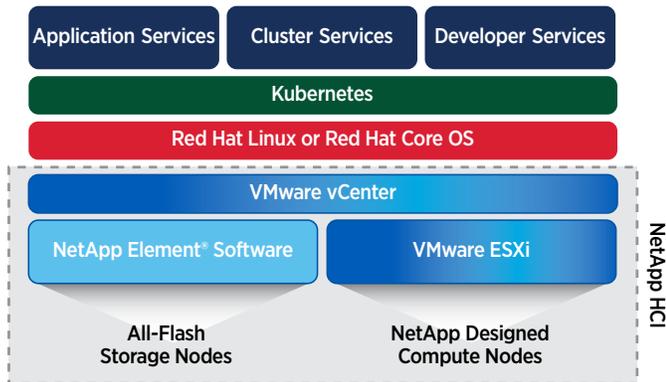


Figure 1) Solution Architecture.

Simplify Application Management with a NetApp Verified Architecture

NetApp is excited to announce a solution designed to address this challenge. Co-designed and co-developed by NetApp and Red Hat, this solution brings the efficiencies of containers and microservices to an “it just works” hybrid multicloud experience. It can accelerate your DevOps team, provide an environment for your private cloud, and consolidate existing enterprise applications.

This verified architecture uses Red Hat OpenShift Container Platform with NetApp® HCI to help simplify your design and deployment time, get your operations up and running more quickly, and help accelerate your business.

Accelerate Your Business

The Red Hat OpenShift Container Platform on NetApp HCI delivers a validated blueprint for a complete environment. This environment can simplify application delivery and accelerate your business by:

- Enabling you to outpace your competition and quickly deliver differentiated value by speeding the building, deployment, and management of new services
- Increasing your business’s velocity through a data-driven development model that can help you deliver innovative applications to market more rapidly and iteratively
- Reducing variable performance by providing granular control of every application, on demand, enabling more positive customer experiences

Empower DevOps Everywhere in Your Organization

Innovation doesn’t just happen in the IT department. This solution enables developers and operations teams to build,

deploy, and scale applications with Linux containers, Red Hat OpenShift, and the Kubernetes platform on a simpler, hybrid cloud infrastructure.

- Provide a self-service environment for provisioning, building, and deploying applications and their components.
- Enable robust and extensive code-based APIs and automation capabilities to make infrastructure management simpler.
- Provide enterprise-grade Kubernetes with strong security capabilities for policy-based controls and automation for application management.
- Reduce risk in case of failure by providing backup and recovery of applications, installation settings, user data, storage volumes, and critical databases through built-in capabilities.

Simplify IT

Deliver a private cloud application environment more easily, without the time or complexity associated with designing a custom platform.

- Use existing expertise and capabilities in a solution designed with proven NetApp and Red Hat technologies.
- Scale resources independently, enabling instant availability, as needed, without disruption.
- Enable one-call support for the entire solution through NetApp.
- Consolidate thousands of performance-hungry applications on one cluster without compromising performance, even at scale.

Built on Trusted NetApp and Red Hat Technologies

NetApp has collaborated and innovated with Red Hat for more than 15 years. Through a long relationship, NetApp and Red Hat have developed a strong technical and go-to-market alliance focused on providing innovative solutions that help our joint customers modernize, transform their IT infrastructure, and grow their business.

The NetApp Verified Architecture is built on proven NetApp and Red Hat technologies:

- [NetApp HCI](#) is designed for enterprise clouds to deliver infrastructure and platform services with simplicity, dynamic scale, and operational efficiency economics equivalent to public clouds.
- [Red Hat OpenShift Container Platform](#) unites developers and IT operations on a single platform to build, deploy, and manage applications consistently across on-premises and hybrid cloud infrastructures.
- [Trident](#) is a NetApp open-source project that enables microservices and containerized applications to leverage enterprise-class storage services (such as QoS, storage efficiencies, and cloning) to meet their persistent storage demands.

Where Can I Find More Information?

Visit our [solutions page on NetApp.com](#).

Download the [NetApp Verified Architecture](#).

Talk to your NetApp account manager.

About Red Hat

Red Hat is the world's leading provider of open source, enterprise IT solutions. Through a predictable, affordable subscription model, our customers get reliable, high-performance cloud, Linux, management, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. For more information, visit www.redhat.com.

About NetApp

NetApp is the data authority for hybrid cloud. We provide a full range of hybrid cloud data services that simplify management of applications and data across cloud and on-premises environments to accelerate digital transformation. Together with our partners, we empower global organizations to unleash the full potential of their data to expand customer touchpoints, foster greater innovation and optimize their operations. For more information, visit www.netapp.com. #DataDriven