

Solution Brief

NetApp HCI with NetApp Kubernetes Service and NetApp Cloud Volumes

World-class private cloud with hybrid multicloud and cloud-native capabilities—done easily

Key Benefits

Simplified Cloud-Native Deployment with NetApp Kubernetes Service

- Get Kubernetes as a service, hosted and managed by NetApp.
- Deploy containerized workloads easily to your NetApp® HCI private cloud or to your favorite public cloud.
- Use common, preconfigured containers, or bring your own containers.

Simplified Storage Provisioning with NetApp Cloud Volumes and Trident

- Easily deploy storage as a service from NetApp HCI.
- Integrate with major public cloud services through NetApp Cloud Volumes Service for AWS and Azure NetApp Files—access points to the NetApp Data Fabric.
- Get persistent volume claim management, unified across public and private clouds, with Trident.

Powerful and Flexible, Yet Simple to Manage

- Deploy containerized applications to public clouds and on-premises NetApp HCI installations by using a common interface through cloud.netapp.com.
- Take advantage of software related to NetApp Kubernetes Service, Cloud Volumes, and Trident—all managed by NetApp on your NetApp HCI deployment, with patches and upgrades applied remotely for you.
- Consolidate your self-managed VMware- and Red Hat-based private clouds, along with your NetApp managed environment, on the same NetApp HCI cluster.
- Benefit from cloud efficiency and simplicity with production-ready, enterprise-grade scalability and guaranteed performance.

Modern IT is emerging with a new set of expectations. Cloud-native, DevOps, infrastructure-as-a-service consumption, self-service—these concepts are becoming baseline expectations. Modern IT is expected to be implemented as a private cloud, and increasingly, IT needs extensive hybrid cloud and even multicloud capabilities for efficient development and workload portability.

Along with meeting these modern consumption and orchestration requirements, any enterprise-grade private cloud must also be robust. It must offer production-grade qualities such as scalability, predictable and guaranteed performance, and availability. NetApp HCI is the ideal base on which to build such a private cloud, and now NetApp offers advanced solutions to deploy an efficient, cloud-native control plane. These solutions include hybrid multicloud capabilities and advanced storage services that support efficient consumption models, enable cloudlike provisioning on premises, and provide a way into the NetApp Data Fabric.

NetApp Kubernetes Service

A NetApp HCI-based private cloud now lets you choose how you deploy your control plane. With NetApp Kubernetes Service, you can easily deliver cloud-native capabilities on premises by using a Kubernetes service hosted and managed by NetApp. You can also choose to deploy a VMware-based or Red Hat-based private cloud, instead of or in addition to using NetApp Kubernetes Service. There's no lock-in—just more options.

NetApp Cloud Volumes

NetApp HCI also offers NetApp Cloud Volumes, providing simplified self-service for deploying enterprise-grade file volumes in your private cloud. These volumes are compatible and interoperable with NetApp Cloud Volumes Service, available in major public clouds, allowing you to replicate data between clouds and take advantage of the NetApp Data Fabric architecture. Cloud Volumes includes Trident, which facilitates persistent volume claims management for containers, provisioned either by NetApp Kubernetes Service or other popular Kubernetes-based packages. If you like, you can use Cloud Volumes without containers, simply provisioning file shares to virtual machines. It's your cloud; it's your choice.

Deploy a Cloud Region, On Premises

We make it easy to deploy and keep your NetApp Kubernetes Service and Cloud Volumes environments current on your NetApp HCI system. We've built all the infrastructure needed, and we've automated the process for you. Simply deploy NetApp HCI through the NetApp Cloud Central portal, and your cloud infrastructure becomes a fully functioning cloud region, with updates and patches managed directly by NetApp.

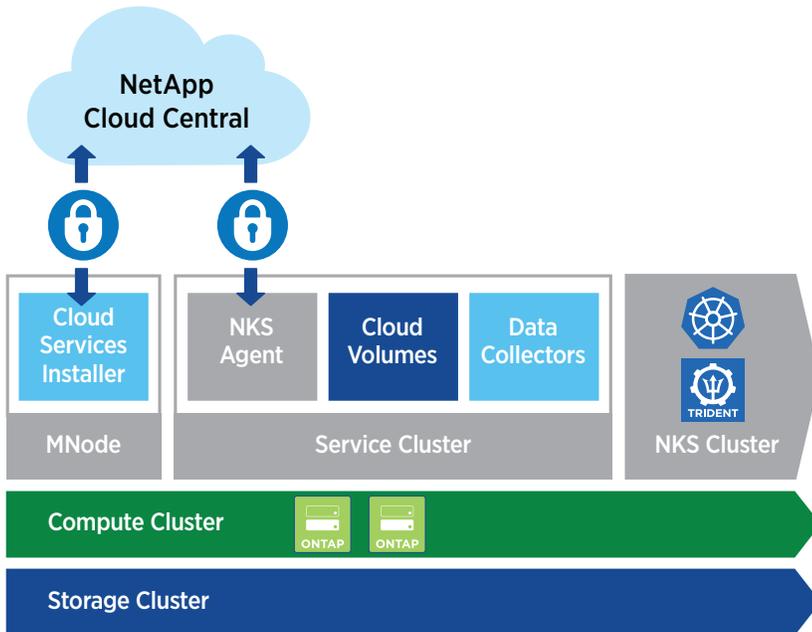


Figure 1) Solution architecture overview.

Architecturally, all of this new functionality is deployed in a service cluster on your NetApp HCI system, which is then managed centrally by NetApp. This approach is critical to future-proofing the implementation. As new services or changes to existing services are released, NetApp makes them available, applying patches and upgrades as required, and giving you the choice to implement optional features.

With these solutions, NetApp HCI becomes a true cloud region that is deployed on premises. It is designed to fit into your public cloud ecosystem as a hybrid multicloud component, and it radically simplifies deployment, maintenance, and administration of your private cloud. As always, NetApp HCI delivers simplicity along with true production-grade scalability for the enterprise along with guaranteed, predictable performance and high availability.

Contact NetApp to learn how you can build a better cloud.

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