

Solution Brief

Google Cloud's Anthos on NetApp HCI

Develop, deploy, and modernize applications with a data fabric powered by NetApp

Key Benefits

Deploy Google Cloud's Anthos on Premises with NetApp HCI

- Modernize application development with Google Kubernetes Engine (GKE).
- Scale CPU, GPU, and storage resources independently with NetApp guaranteed performance.

Modernize Application Development with GKE

- Use NetApp Trident to enable data persistence for GKE.
- Get "write once, run anywhere" DevOps.

Mobilize Enterprise Workloads

- Deploy enterprise workloads across hybrid clouds.
- Optimize cost and scale for stateful applications.

Use NetApp Cloud Volumes ONTAP for Google Cloud Native Storage Services

- Use NetApp® Cloud Volumes ONTAP® storage management solutions for enterprise storage capabilities that run natively on Google Cloud.
- Enhance cost efficiency and data protection.

With Google Cloud's Anthos on NetApp HCI, you get a hybrid cloud deployment environment to support Google Kubernetes Engine (GKE). A data fabric that is delivered by NetApp and is disaggregated NetApp HCI gives you a true multicloud experience with full application mobility for both on-premises and Google Cloud environments.

Google Cloud's Anthos on NetApp HCI

As organizations look for ways to drive their digital transformation initiatives, hybrid cloud strategies are now a reality for most IT teams. NetApp and Google are advancing their strategic partnership to help you unlock the power of your data fabric with Google Cloud's Anthos and NetApp HCI private cloud services:

- **Data fabric.** NetApp helps you deploy a single data fabric that enables you to mobilize data and applications across public and private cloud environments. Together, Google and NetApp help you access data and resources anywhere and everywhere to move fast and to outpace competitors.
- **Anthos on NetApp HCI.** Anthos and NetApp HCI give you "write once, run anywhere" app flexibility with persistent data across your hybrid cloud infrastructure. You gain a cloud-native experience on your premises with a hybrid cloud infrastructure that can scale capacity and compute independently.
- **Private cloud services with NetApp HCI.** The NetApp HCI cloud-native on-premises infrastructure is fully tested and certified with Google Anthos. NetApp Element® software and automated deployment provide a true hybrid multicloud experience so that your IT team can deliver on-demand performance, scalability, and simplicity by using the NetApp quality-of-service (QoS) and disaggregated architecture.
- **NetApp Trident for persistent data.** A key element in enabling application mobility is NetApp Trident, an open source project that NetApp maintains for application container persistent storage. Trident is implemented as an external provisioner controller that runs as a pod itself, monitoring your volumes and completely automating the provisioning process.

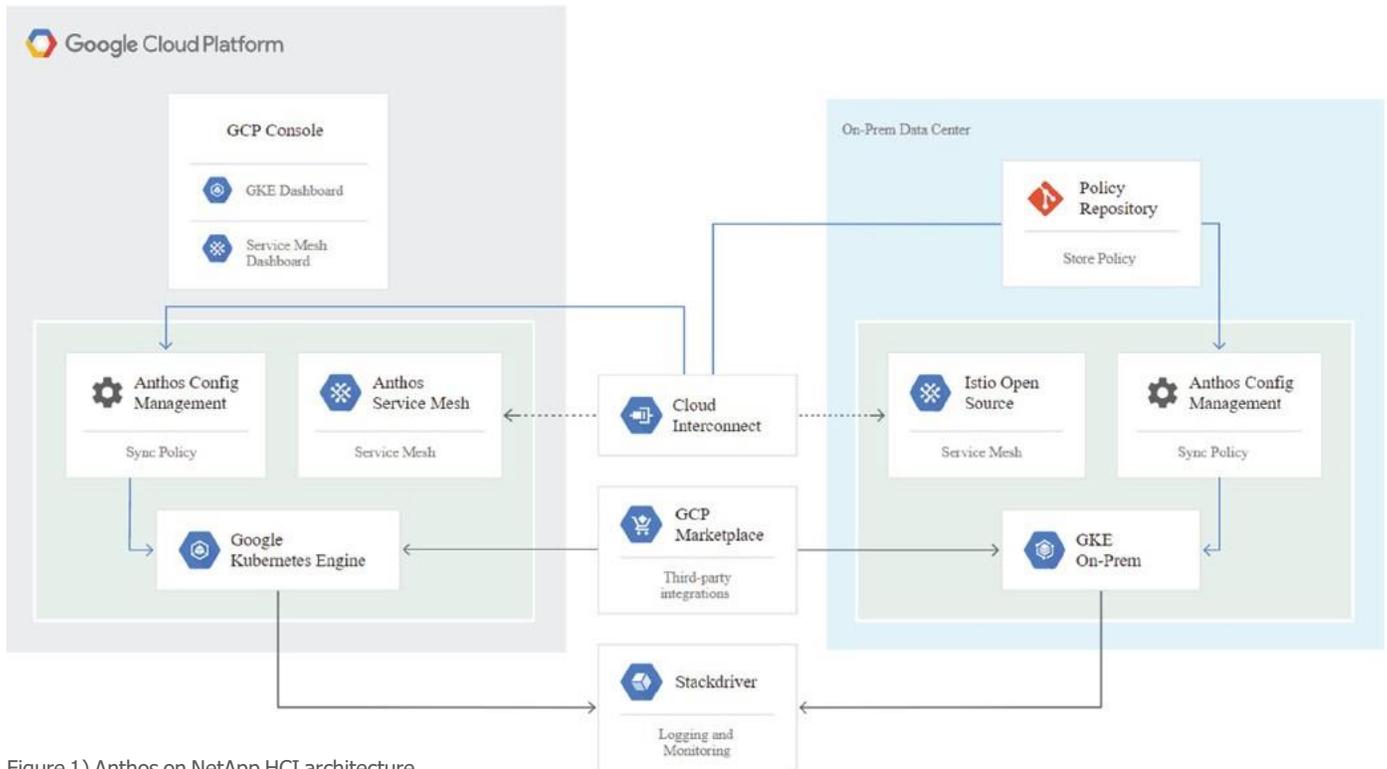


Figure 1) Anthos on NetApp HCI architecture.

Deploy, Develop, and Modernize Applications with Anthos and NetApp HCI

Google Cloud's Anthos on NetApp HCI enables private cloud platform as a service (PaaS) for GKE, so your organization can develop, deploy, modernize, and mobilize applications on premises and on Google Cloud. Anthos is built on open source technologies that run on premises in containers that are hosted on VMware-based infrastructure. This solution emphasizes the use of containers and Service Mesh, Stackdriver, and other transformational technologies, so your organization can achieve consistent application development cycles and production-ready workloads in both local and cloud-based environments.

Figure 1 is a deployment overview of the certified solution. For full deployment details about the Anthos solution, see the [NetApp Google solutions page](#).

NetApp HCI Validated Design for Google Cloud's Anthos

GKE On-Prem with NetApp HCI

GKE On-Prem is an extension of Google Kubernetes Engine, deployed in your own private data center. Your organization can deploy to Kubernetes clusters on your premises the same applications that are designed to run in containers in Google Cloud. GKE On-Prem offers the following benefits:

- **Achieve cost savings.** You can realize significant cost savings by using your own physical resources for your application deployments instead of having to provision resources in your Google Cloud environment.
- **Develop then publish.** Your team can leverage on-premises deployments while applications are in development. Applications can be tested in the privacy of your local data center before you make them publicly available in the cloud.
- **Meet security requirements.** If you have increased security concerns or sensitive datasets that cannot be stored in the public cloud, you can meet organizational requirements by running your applications in the security of your own data center.

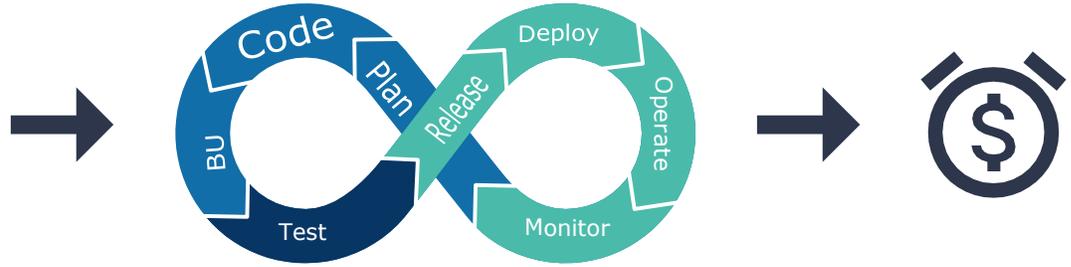


Figure 2) Anthos on NetApp HCI architecture.

Anthos and NetApp HCI Enable Cloud-Native Development Organizations to Write Once and Run Anywhere

Running a modern enterprise means being constantly disrupted by unpredictable competitive challenges. Traditional approaches for using technology are too slow and can't deliver innovation at the pace at which business ecosystems are changing. To quickly adapt to these changing business needs, your enterprise IT department must become agile. By embracing new cloud-native tools, your IT developers can become more effective in implementing innovative solutions, reducing the time to value for new mission-critical business applications.

With the Anthos on premises with NetApp HCI solution from Google and NetApp, your IT team can modernize and seamlessly deploy your existing workloads across public and private cloud domains. Support for GKE accelerates DevOps and optimizes deployment timelines for new apps, and NetApp HCI automated services provide QoS capabilities to deliver high performance, automation, simplicity, and scalability for hybrid cloud environments.

About NetApp

NetApp is the global leader for hybrid cloud data services. 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