

Building the Hybrid Cloud with NetApp Data Fabric



The right cloud for the right workload powered by Cloud Volumes ONTAP

Deploy with a data-driven approach

Data-driven organizations seek to thrive, not just survive, in the face of digital disruption. Continuously adapting, responding and evolving quickly is more important than ever – and the cloud is the enabler for success. However, the inertia of data can make it difficult to move data and applications around the infrastructure without impacting operations, especially when dealing with huge volumes of data and limited bandwidth.

A 'right cloud' approach with data at its heart allows you to achieve these outcomes while overcoming underlying challenges and concerns such as governance, security, and control. Increasingly, Hybrid Cloud deployments – combining public, private and on-premise platforms – are ideal for realizing cloud benefits without compromise. The future of superior customer-experiences will involve data-driven and predictive systems. Competitive advantages are in store for organizations that can better understand and engage with what their customers want and need.

Fujitsu is the right partner to help you realize your Hybrid Cloud vision. Every workload runs exactly where it needs to be, in a custom-crafted solution that will give you greater agility to respond to changes, rapidly scale up (or down), and achieve more availability than ever before.

Managing hybrid cloud complexity with an end-to-end data fabric

No matter where your data is created – at the edge, in the cloud, or in the data center – your IT organization must keep it accurate, updated, complete, and accessible, with an eye toward cost-effectiveness. Consequently, the Hybrid Cloud demands an end-to-end Data Fabric that provides a single logical data management layer across all data sources.

Hybrid Cloud powered by NetApp Data Fabric

NetApp, a leader in cloud storage technology, helps you maximize the potential of your data in a Hybrid Cloud environment. The Data Fabric maximizes operational efficiency, protects critical data, and accelerates business outcomes. Fujitsu partners with NetApp to build and integrate the Data Fabric within the Hybrid Cloud.

A key element of the Data Fabric is NetApp Cloud Volumes ONTAP(CVO). It is the world's leading enterprise data management software delivering control, protection, flexibility, and efficiency to keep your data integrated and consistent across your choice of cloud platforms – AWS, Azure, and Google Cloud marketplaces.

Fujitsu Hybrid Cloud Vision – The right cloud for the right workload

Fujitsu: Your one-stop shop for Hybrid Cloud

There are many compelling reasons for enterprises to move to the cloud. These include faster time to market with cost savings, fast and scalable deployments, and centralized management. In most cases, a hybrid solution is best. Fujitsu has identified three factors that are key to choosing the right deployment model:

- Application-based cloud economics
- Governance and compliance requirements
- ROI implications over three years and beyond

With the right Hybrid Cloud strategy, organizations succeed in maintaining long-term control over their data and cloud economics in addition to data governance/compliance.

No matter where your journey starts, together with our strategic technology partner ecosystem and our global network of service partners, Fujitsu brings together all the products and services needed to support you on your transition to a Hybrid Cloud environment.

What can Fujitsu deliver for your Hybrid Cloud?

- Cloud suitability and assessment service
- Top performing infrastructure platforms
- Efficient data protection solutions
- Flexible consumption-based pricing model
- Hybrid Cloud consulting services
- Hybrid Cloud and multi-cloud transformation services
- Hybrid Cloud/multi-cloud managed services.

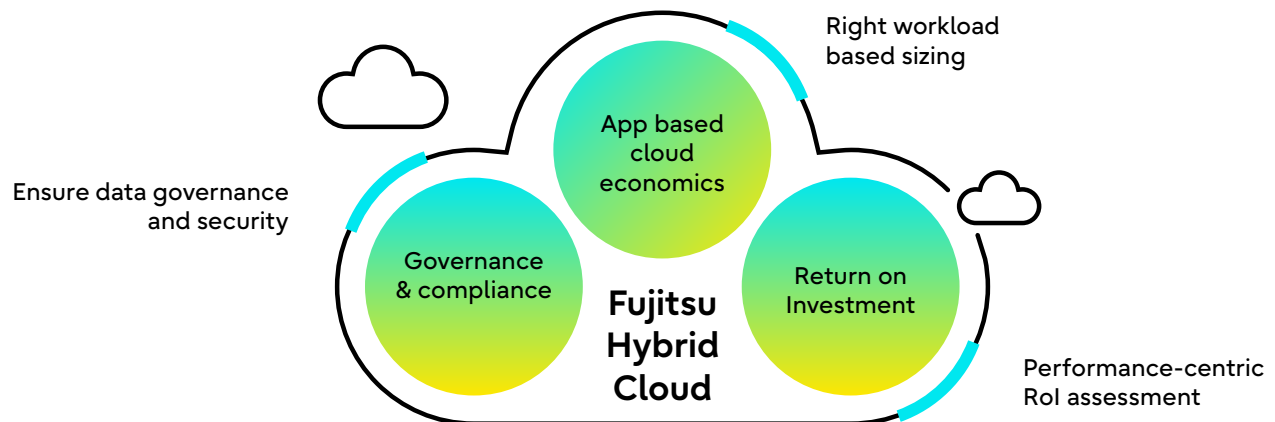


Figure 1: Fujitsu Hybrid Cloud Strategy

Accelerate your digital transformation with Data Fabric

Data Fabric simplifies data management in the Hybrid Cloud

Data Fabric is an architecture and set of data services that provide consistent capabilities across a choice of endpoints spanning on-premises and multiple Cloud environments. A unified Data Fabric between your data center and choice of clouds, simplifies management and gives you limitless flexibility to adapt as your needs change. It delivers consistent and integrated Hybrid Cloud data services for data visibility and insights, data access and control, as well as data protection and security.

What can the Data Fabric do for you?

Integrating the Data Fabric within the Hybrid Cloud supports a single user and management experience wherever the data resides – it also:

- Drives high performance and efficiency to the cloud while bringing simplicity to the enterprise
- Delivers a cloud-neutral data management and continuous optimization with ONTAP software

- Offers an open architecture to give you choice and investment protection – no silos
- Enables flexible consumption models
- Facilitates data protection, security, and compliance, no matter the location

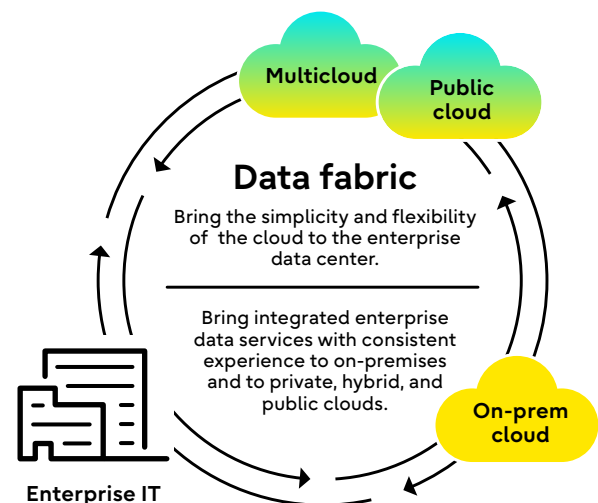


Figure 2: NetApp Data Fabric

Optimize your cloud storage costs and performance while enhancing data protection, security, and compliance with Cloud Volumes ONTAP

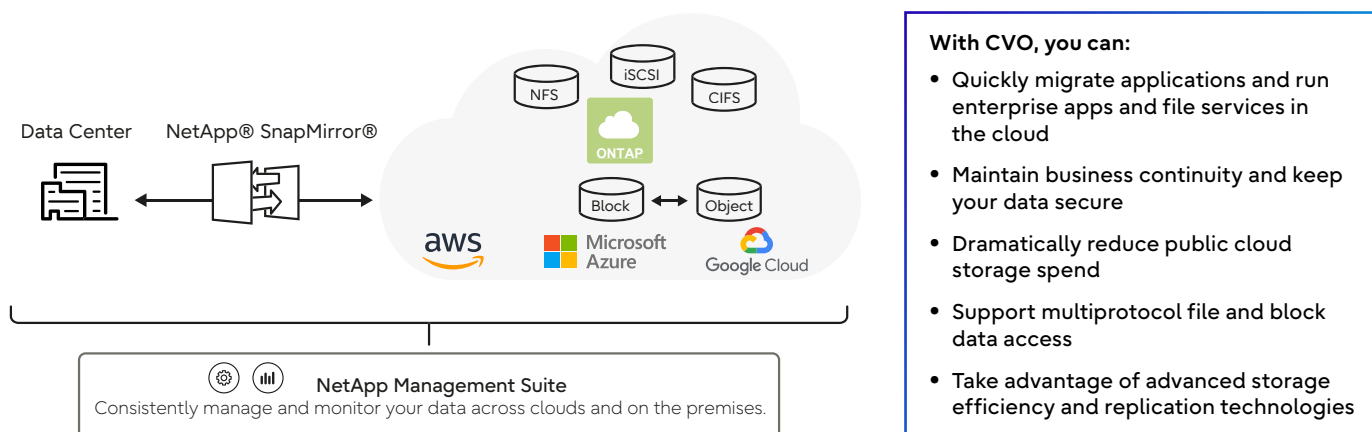


Figure 3: CVO: How does it work?

NetApp Cloud Volumes ONTAP (CVO)

Based on ONTAP cloud data management software, NetApp Cloud Volumes ONTAP is an advanced universal storage platform that extends from your data center to the cloud. It is a powerful solution designed for the most complex workloads, with data protection and storage efficiency features, all available in AWS, Azure, Google Cloud, and hybrid environments.

Simplified management across a hybrid cloud environment is made possible by critical software components:

- Cloud Manager simplifies cloud storage management by providing a front-end cloud management and monitoring system for ONTAP storage systems in on-premises, hybrid, or cloud environments.
- SnapMirror™ storage replication technology enables you to set up your Hybrid Cloud by connecting your data storage, thus ensuring unified replication and faster recovery.
- Cloud Backup helps back up your cloud data to object storage with a simple, integrated backup service.
- Cloud Insights gives you complete infrastructure and application visibility, helping you control the performance and utilization of your cloud workloads.
- Cloud Data Sense sets the standard for enhancing your organization's data privacy program with built-in and AI-driven data privacy controls. It provides your organization with complete coverage for all of your data sources in the Hybrid Cloud.

Harness the power of Hybrid Cloud with CVO

With CVO, you get advanced data management that enhances service levels, saves time for IT and DevOps, and reduces storage management and associated costs.

- **Backup and Disaster Recovery in the Cloud:** Back up on-premises data in the cloud to reduce complexity and cut costs, while protecting data that is already in the cloud. Recover from data corruption or loss with efficient data snapshots and disaster recovery copies which are easily configured, cost effective, and support seamless failover, failback, restore, and recovery processes that meet minute-level SLAs.
- **Cloud Optimization & Portability:** Save time and money by using the same storage and advanced ONTAP data management software across hybrid and multi-cloud environments, including disaster recovery, high availability, Dev/Test and DevOps, sandbox, reporting, data tiering, workload hosting, and training.
- **Enterprise File Services:** Enjoy consistent, reliable storage and data management with multi-protocol support for different cloud platforms. Leverage multi-protocol support (NFS, SMB, iSCSI) for your data and file shares, and meet the demands of both Unix/Linux and Windows-based workloads.
- **Security and Compliance:** In addition to the security and privacy features offered by the hyperscalers, it can provide NetApp managed encryption which gives you the ability to manage encryption keys on your own premises.
- **Application Modernization:** Optimize business data stored in database applications and enterprise resource planning systems by migrating the data to public clouds and building new applications with speed and agility.

Containers make modern application development easy!

Containers have taken on increasing significance for application development in the digital age. Accelerate your containerized workloads in the Hybrid Cloud with the following technologies:

- CVO and Kubernetes: Trident is a CSI-compliant external dynamic storage orchestrator for Kubernetes that supports all the Data Fabric components including Cloud Volumes ONTAP

- Improve DevOps workflows using Trident with popular container platforms like Kubernetes, OpenShift, Docker EE, and Rancher
- NetApp Astra is a fully managed, application-aware data management service for Kubernetes-based apps
- Managing persistent storage for stateful applications


Accelerate your Hybrid Cloud success with Fujitsu

Hybrid Cloud is fast becoming the new normal. No matter where your journey starts, together with our strategic technology partner ecosystem and our global network of service partners, Fujitsu can bring all the products and services together to support you on your transition to a Hybrid Cloud environment.

With Fujitsu, you can blend private, public cloud and on-premises infrastructure, all underpinned by one Data Fabric – this lets you take the journey to Hybrid Cloud at your own pace while maintaining complete control and access to your most valuable asset: your data.

What our customers say?

"Using the ONTAP Select on PRIMERGY solution, processes in production and logistics in our two plants in Wahlstedt are supported best. We wanted a virtualization solution decoupled from the hardware that is easy to use and offers a wide range of data services to pave the way to a Hybrid Cloud. The combination of operating software from NetApp and PRIMERGY servers from Fujitsu turned out to be a perfect match."



Peter Kleen
Head of
IT-Services
at Lichtenheldt



**Han
Schuitemaker**
Technology
Architect,
myBrand

"myBrand has set itself an objective to become the best-ranked SAP service provider, offering the best-in-class solution to our customers. We are convinced that we will need the NetApp software in order to reach this goal."

Another NetApp solution delivered by Fujitsu.

Learn more about Fujitsu Hybrid Cloud at:
www.fujitsu.com/global/services/hybrid-cloud/
www.fujitsu.com/global/netapp