PURESTORAGE®

Embark on a Mission to Hybrid Cloud

Your Guide to a Modern Data Experience™

aws

Countdown to Hybrid Cloud and Cloud-native

Today's businesses need to move and grow quickly—supported by flexibility and reliability. When you're launching into unknown territory, preparation is vital. Embracing a hybrid cloud infrastructure is no exception.

In this eBook, we'll explore key considerations when embarking on a mission to adopt hybrid cloud. Learn what differentiates on-premises and cloud—including application architecture, consumption and management, and storage. Pure Storage® and Amazon Web Services (AWS) help bridge that gap so you can effectively and efficiently launch an enterprise-grade hybrid cloud.

Let's prepare for takeoff!

What Does a Mission to Hybrid-cloud Infrastructure Look Like?

Before we skyrocket too far ahead, let's identify what hybrid cloud is—and why your enterprise should consider adopting it.

A unified hybrid cloud combines on-premises, private, and public cloud environments to enable flexible data and application mobility, operational agility, and unified management across your environment.

There are benefits of each component: on-premises offerings (think physical hardware in your data center) can provide the reliable, secure features and rich data services that enterprises demand—which add value for many Tier 1 workloads for businesses.

The cloud introduces elastic scalability and agility, giving you virtually unlimited resources—giving you the flexibility to keep growing.

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Why Hybrid?

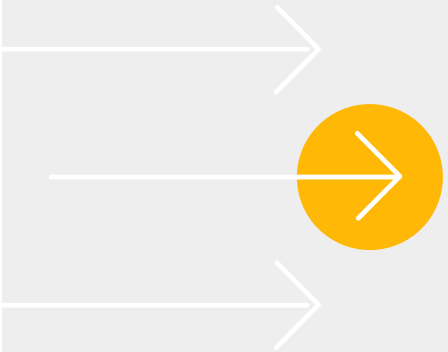
Hybrid is a growing reality.The hybrid cloud market is expected to grow at a compound annual growth rate of 17% between 2018 and 2023.[1] In fact, many enterprises are already using a hybrid approach. Enterprises are also leveraging the cloud to develop new applications, as opposed to on-premises environments.

According to 451 Research, 42% of organizations have a hybrid IT architecture in place, and an additional 29% are either in the process of implementing a hybrid architecture or have plans to do so.[2] They also note that 95% of new apps are developed in containers.[3]

[1] Hybrid Cloud Market Size, Share and Global Forecast to 2023, Markets and Markets, 2018

[2] Multicloud and Hybrid Cloud: The Path Forward for Storage Infrastructure, 451 Research, July 2020

[3] Kubernetes Turns Five: Cloud Native Goes Mainstream, 451 Research, 2019



Considerations Before You Start Your Voyage

Before throttling full speed ahead into hybrid cloud, let's make sure you're fully equipped to understand different application architectures, consumption models, and management experiences. You also need to consider resiliency, efficiency, and even different APIs.

Bottom line: You need to fully consider the capabilities of your on-premises private-cloud and public-cloud infrastructure in order to find the most effective hybrid-cloud design for your workloads.

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Consideration 1: Application Architecture

Every mission needs a map so you know where you're going and how to get there. This starts with your application architecture.

Application architectures on-premises and on the cloud have traditionally been very different, with enterprise applications deployed on-premises and apps built on the cloud, taking advantage of PaaS (Platform-as-a-Service).

With the rise of containerization and full-stack orchestration tools like Kubernetes, application mobility is becoming much more possible.

With Portworx® by Pure Storage and AWS you can leverage a complete and flexible Kubernetes data-services platform to run applications on the cloud at multiple stages of the application lifecycle. It offers a complete set of Kubernetes data services for containers, data protection, and support for software-as-a-service (SaaS) applications.

Consideration 2: Consumption and Management

Just as astronauts must manage their calories and exercise differently than on earth, so, too must you consider the differences in consumption and management models on-premises versus on the cloud.

While legacy on-premises environments offer capital expenditure (CAPEX) consumption and manual management, the cloud offers pay-per-use consumption with API control and access to everything.

Pure bridges these differences, giving you a common consumption model on-premises and on AWS. Pure Storage also provides consistent infrastructure management with **Pure1®**, our SaaS-based cloud data management platform, across your hybrid cloud deployment.

With Pure as-a-Service™ available in AWS Marketplace, customers can purchase Pure's on-premises arrays and Pure Cloud Block Store™ through a single license.

Consideration 3: Storage

Nowhere are the differences between cloud and on-premises more noticeable than storage:

Efficiency: On-premises enterprise arrays provide the highest data efficiencies with thin provisioning and deduplication but on the cloud, everything is traditionally thick provisioned, and you pay separately for capacity and performance.

Resiliency and reliability: With on-premises storage, you have highly reliable arrays with high availability. On the cloud, you have lower availability but higher durability and built-in global replication.

APIs: APIs are different for your on-premises and cloud storage, or any two different storage arrays, making application mobility less than seamless.

Pure Cloud Data Services

Pure Storage Cloud Block Store for AWS

- Software-defined cloud storage delivered natively on AWS
- High availability across availability zones
- Durability for mission-critical applications on the cloud
- Non-disruptive upgrades
- Always-on AES 256 data-at-rest encryption
- Industry-leading data reduction with deduplication, compression, and always-on thin provisioning

Purity CloudSnap™

- Portable snapshots wrap off-array snapshots in metadata, enabling optimized restores to any FlashArray™ or Pure Cloud Block Store instance
- Incremental, space-saving snapshots with fast and cost-effective replication
- Backup to Amazon Simple Storage Service (Amazon S3) with fast and easy restore into Pure Storage Cloud Block Store

Portworx Kubernetes Data Services

- Unified Kubernetes data services offering persistent storage, data protection and migrations
- Meet the needs of your cloud-native developers and DevOps teams with a single data platform
- Improve application reliability with Kubernetes-granular storage, data availability, backup, and DR
- Stop over-provisioning storage capacity on the cloud so you can cut your cloud storage bill in half

Pure FlashBlade® for AWS Outposts

- Leverage low-latency, high-performance unified fast file and object storage (UFFO) platform with Amazon S3 API support in tandem with AWS services, APIs, and tools
- Deliver a hybrid cloud platform with all-flash performance, cloud scalability and operational simplicity
- Quickly and easily connect FlashBlade to an AWS Outpost rack
- Stay up to date with an Evergreen™ architecture and non-disruptive upgradese

Pure Storage: an AWS Select Technology Partner

At Pure Storage, we designed our systems to support a cloud experience from day one. With Evergreen and Pure as-a-Service, we give you a cloud-like experience on-premises that easily connects to the public cloud so you can simplify the way your business runs, improve agility, and accelerate innovation. We are your trusted advisor helping you adopt the best solution for your business.

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Accelerate Your Journey to Cloud-native Apps

Kubernetes and containers are essential to a cloud-native stack. The right data services platform can help accelerate your journey to a cloud native enterprise.

Portworx by Pure Storage provides you with a complete Kubernetes data-services platform so you can build, automate, and protect cloud-native applications. It is a data services platform purpose-built for this new world.

Portworx enables your developers to build and update enterprise applications faster, without compromising on security, data protection, and enterprise policies. Provide your SaaS architects with a scalable and reliable Kubernetes storage platform. Your teams can automate data protection for containerized applications with optimized cloud-native disaster recovery and backups for all Kubernetes-based workloads.

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Enable Artificial Intelligence with Modern Analytics Capabilities

Get unified fast file and object (UFFO) storage capabilities to meet your modern data and application needs. FlashBlade and AWS Outposts provide the foundation for scalable hybrid storage on the edge to help you optimize your IT strategy and achieve a competitive advantage.

UFFO storage leverages low latency and high throughput to power graphics processing units (GPUs) and load images for machine-learning inference. FlashBlade offers UFFO storage across an analytics pipeline concurrently, providing multi-dimensional access to a variety of data sets, sizes, and types.

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Pure Storage Cloud Block Store for AWS

- Delivers enterprise-grade cloud reliability for mission-critical applications.
- Helps you achieve your mission to truly realize and leverage the best of both on-premises and cloud worlds.
- Runs natively on Amazon Elastic Compute Cloud (Amazon EC2), Amazon Elastic Block Store (EBS), and Amazon S3.
- Available in AWS Marketplace.

Your Crew on the Mission: Pure Storage and AWS

Pure Storage delivers a unified experience across your hybrid cloud and support for cloud-native apps by providing consistent data services, automation tools, and a common management and consumption experience. You get performance and durability bundled together, with added enterprise features.

Pure Storage on AWS:

- Provides a consistent data plane so you can leverage AWS for data protection and simplify mobility.
- Enhances cloud storage for mission-critical apps with advanced high availability capabilities, reliability, predictable performance and always-on data encryption.
- Helps reduce costs and improve overall cloud economics with industry-leading data efficiencies.
- Offers a Kubernetes data services platform to simplify persistent storage for containers.

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Use Cases Made Possible with Pure Storage Cloud Block Store and AWS

Leverage AWS for data protection

Run efficient DevTest on AWS

Implement Kubernetes data services platform

Migrate apps and data seamlessly

Add unified file and object storage

Mission: Unified Hybrid Cloud Accomplished!

Experience a consistent data experience across on-premises and AWS environments.

LEARN MORE ABOUT PURE STORAGE

PS1966-01 12/2020

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