

A Better Way to Do Block Storage for Cloud

Dell Technologies
APEX Multi-Cloud Data Services



Benefits of Public Cloud



Clouds are one of the most disruptive technology trends in decades. Multi-cloud connectivity lets customers take advantage of competition or differentiation between hyperscalers.

Whether you are making a shift away from being in the data center business, not wanting to buy traditional storage arrays anymore, or have a cloud-first strategy, you may be looking to turn to the cloud for these reasons:



DEPLOYMENT
AGILITY



SHORT-TERM
USE







PAY-PER-
USAGE



ALL-
INCLUSIVE

But there are still challenges.

In actuality, you are finding there are many pain points associated with leveraging cloud storage for Block Data.

 SCALABILITY	Cloud-based block storage has architectural limits. Underlying cloud block storage imposes capacity and performance limits.
 DATA GRAVITY	It's hard to get data from on-premises to the cloud, and complex to use data stored in one cloud in another cloud.
 EXPENSIVE	Data is subject to egress costs and transfer time, and costs are only known in arrears.
 COMPLEX	Traditional storage OS in a cloud requires multiple cloud VMs to implement a storage OS in a cloud. Complex for your on-premises IT staff.

It's a Multi-Cloud World

The future is multi-cloud and storage is one of the most critical elements of cloud adoption.

81%

of respondents reported they are using **more than one** public cloud provider¹

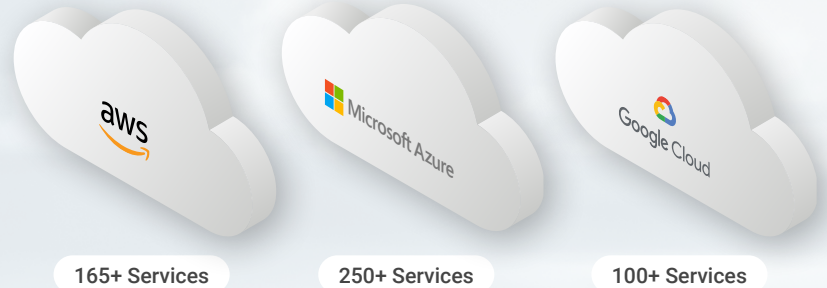
90%

of G1000 organizations will have a **multi-cloud** strategy by 2024²

As the public cloud services continue to grow, the competition between cloud providers drives innovation. As native cloud services evolve, they provide increasingly differentiated value propositions to organizations.

Implementing a multi-cloud strategy can allow users to select the cloud services that best meet their needs, unleashing competitive advantages and productivity gains that would be unattainable with a single cloud.

It's a multi-cloud world, and you need a solution that enables that.



¹Gartner, Lessons Learned from the most common mistakes made by cloud infrastructure adopters, May 2020

²IDC FutureScape: Worldwide Cloud 2019 Predictions

Elements of an Ideal Multi-Cloud Solution



▲
Data needs to be in close proximity to all major public clouds to meet specific low-latency thresholds.



▲
Compatibility with on-prem storage including scalability and native replication to the cloud; it should include familiar software which doesn't require additional training.



▲
Ability to reduce egress fees when taking the data out, or when accessing data from services and apps in other clouds.



▶
Avoid duplication of data. Multiple copies and larger volumes equal higher costs and complexity.



▶
Cross-cloud connectivity and a dynamic allocation of network bandwidth to various clouds with change on demand.

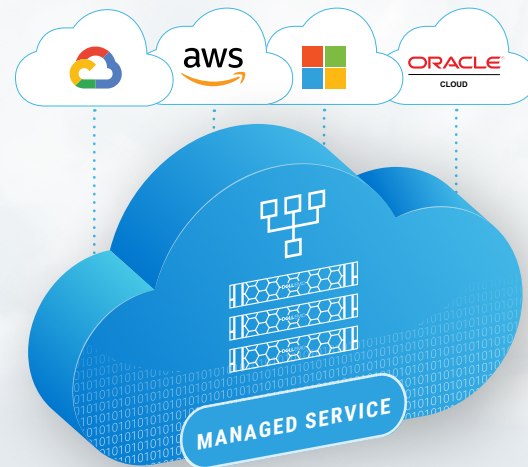
A Better Way to Leverage Public Cloud Capabilities to On-Premises Apps and Data

The applications that power your organization evolved to keep up with your organization and your infrastructure. They currently reside in a data center on your premises in a 3-tier architecture, with elements for processing, network and data storage.

The compute tier uses virtual machines (VMs) while the data storage tier is best-in-class. And, these systems of record are built on block storage for high performance online and analytics processing.

Today's financial and technology requirements provide the opportunity, and mandate, to take advantage of public clouds. The challenge is to bring the best capabilities of the public clouds to your applications and data running on your premises. But how?

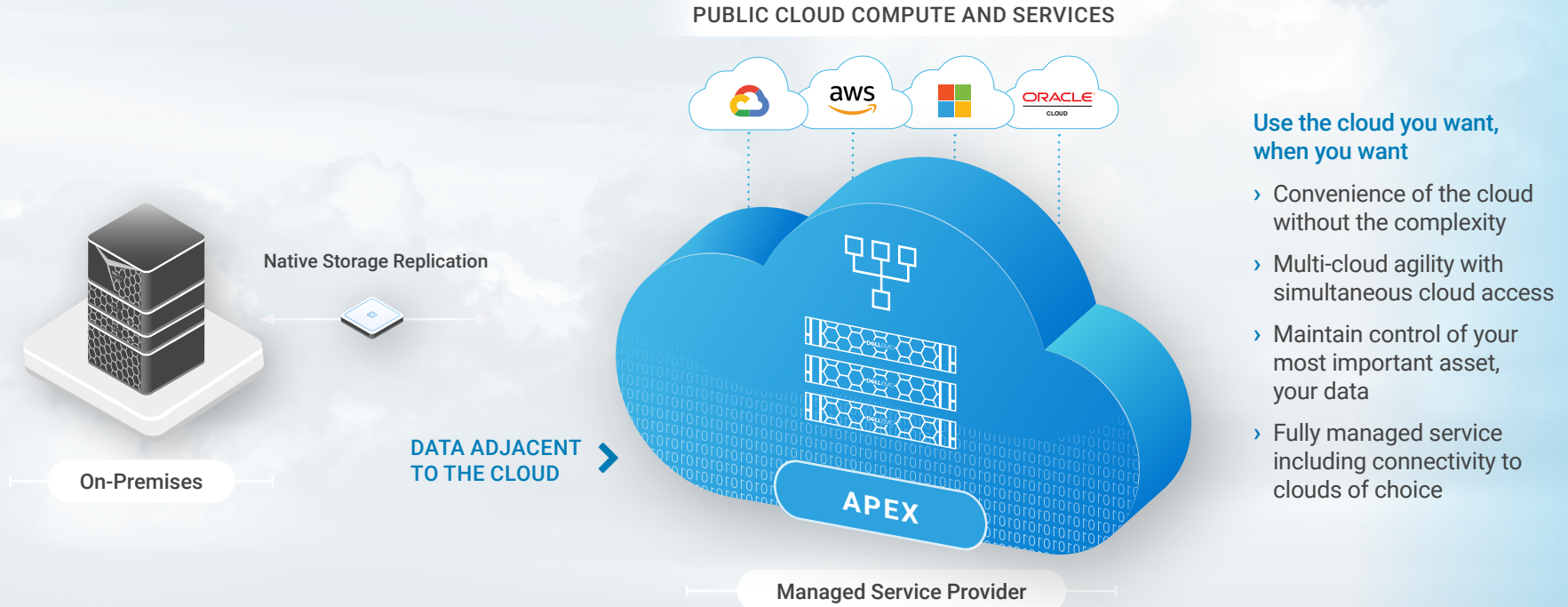
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SIMPLE | COST-EFFECTIVE | HIGH SCALABILITY & PERFORMANCE

APEX Multi-Cloud Data Services

The performance and scale of Dell Technologies storage combined with the economics and application services of the cloud.

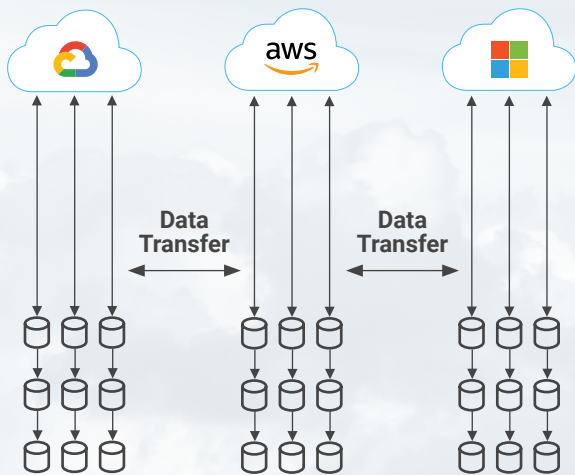


Use the cloud you want, when you want

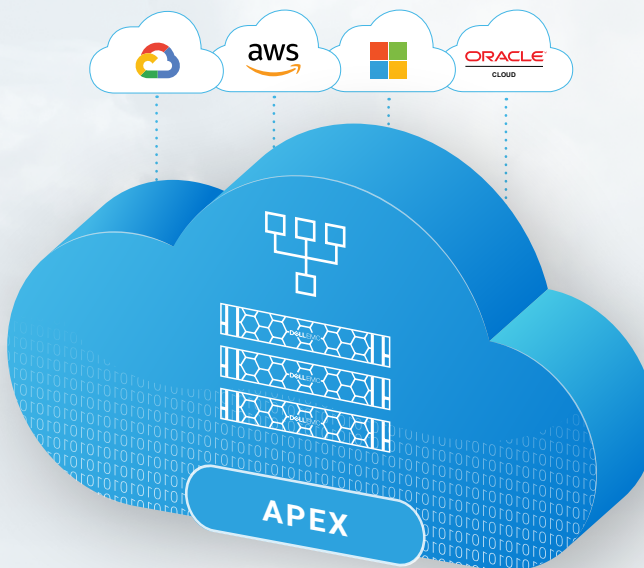
- › Convenience of the cloud without the complexity
- › Multi-cloud agility with simultaneous cloud access
- › Maintain control of your most important asset, your data
- › Fully managed service including connectivity to clouds of choice

Take Advantage of True Multi-Cloud with Data in the Cloud

SIMPLE | Cost-Effective | High Scalability & Performance



No easy or cost-effective way to move data between public clouds



APEX Multi-Cloud Data Services

- › Connect application data to cloud or clouds of choice
- › Take advantage of the cloud services you want without moving data between clouds
- › Fully managed service with single management console, with appliance and networking management invisible

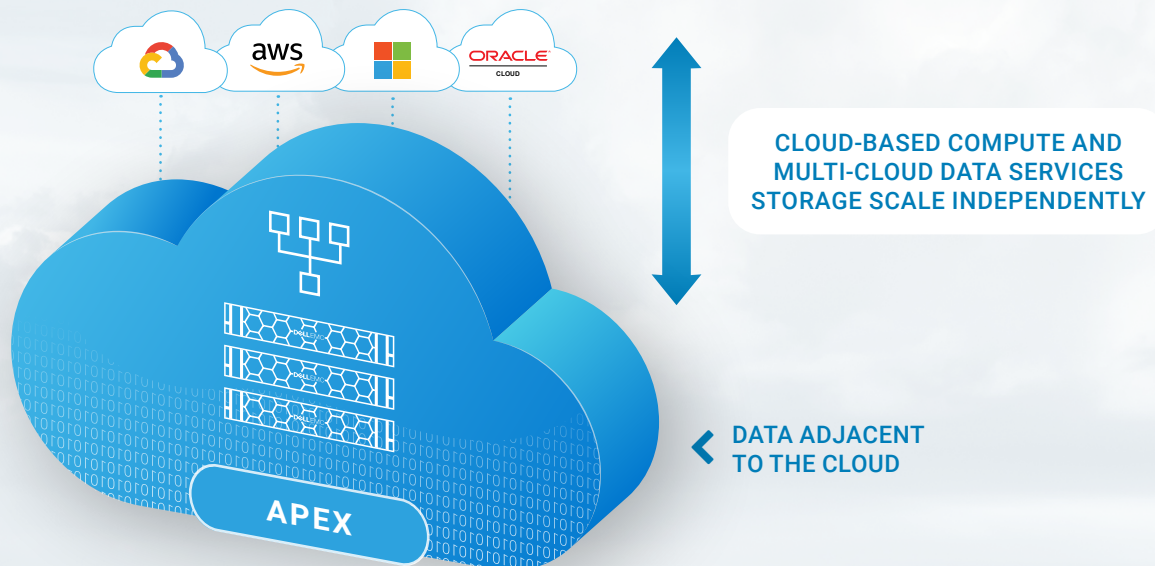
◀ DATA ADJACENT TO THE CLOUD

Pay Only For What You Need

Simple | **COST-EFFECTIVE** | High Scalability & Performance

APEX Multi-Cloud Data Services

- › Eliminate excessive egress fees
- › No cloud vendor lock-in with data independent of the cloud
- › Retain advantages of public cloud, with the rich features of purpose-built storage
- › Scale storage and compute independently, only pay for the compute you need
- › Subscription model does not require CapEx investment*



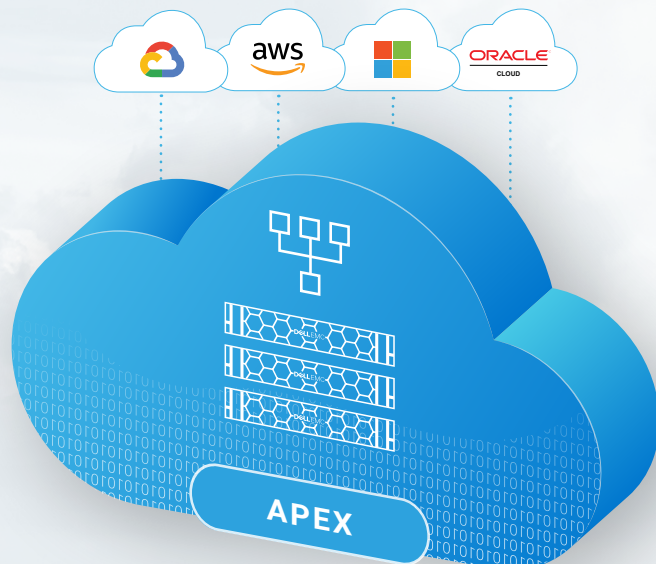
*OpEx treatment is subject to customer internal accounting review and policies

Get the Performance and Scale You Need to Power Your Most Demanding Applications in the Cloud

Simple | Cost-Effective | **HIGH SCALABILITY & PERFORMANCE**

The public cloud has performance and scale limitations that make it difficult to support demanding enterprise applications.

DATA ADJACENT
TO THE CLOUD ➔



Because you are using enterprise-class infrastructure:

- › Block Services with APEX Multi-Cloud Data Services
- › Easy data movement from on-premises to near cloud with native replication
- › Dynamic allocation of the network bandwidth to various clouds with change on demand scale-up and scale-out architecture
- › Sub-millisecond storage performance
- › Connect the world's fastest storage arrays to the cloud, through the fastest connections available from the cloud providers*

*Based on Dell EMC internal analysis of max bandwidth (64K blocks) of the PowerMax 8000 (350GB/s) versus max bandwidth of competitive mainstream arrays, August 2020. Actual performance will vary.

How to Use Your Block Data in Public Clouds

RUN PACKAGED SOFTWARE

Run your favorite applications in the cloud just like you run them on-premises.

MOVE VMWARE WORKLOADS

Cloud vendors provide facilities to run VMware-based workloads.

COMPLEMENT ON-PREM INFRASTRUCTURE

Use cloud-based resources to do more of what you already do in your data centers.

GET DATA OFFSITE

Move data offsite for backup and combine it with cloud-based compute to build a disaster recovery approach.

DATA ADJACENT
TO THE CLOUD



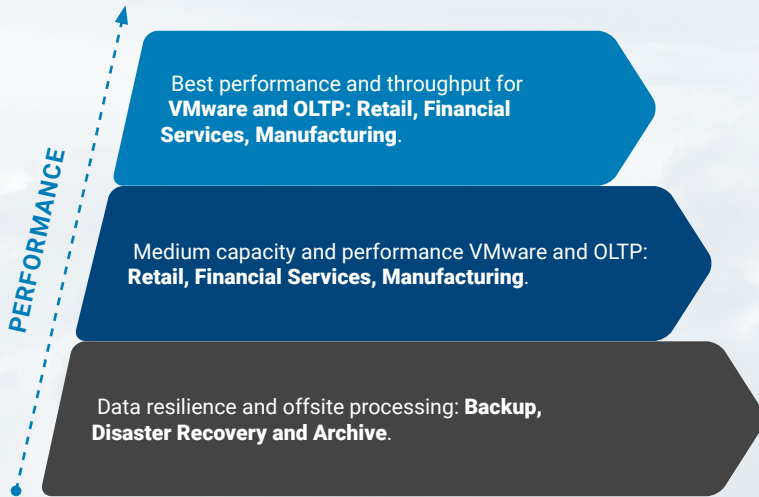
DIRECT CONNECTION TO CLOUDS



Managed Service Provider

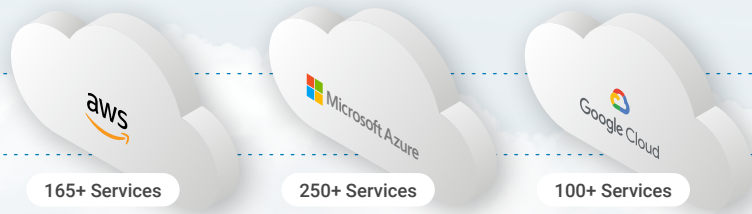
About Block Services with APEX Multi-Cloud Data Services

Predictable pricing and performance tiers to match the workload.



Combine the Benefits of Public Cloud...

Ubiquity of Compute Options + Variety of Software Services



...with the Benefits of Enterprise-class Storage

+Multi-Cloud Agility

+Cost-Effective

+PBs of Scalability

+Designed for 6-9's*

+Managed Service

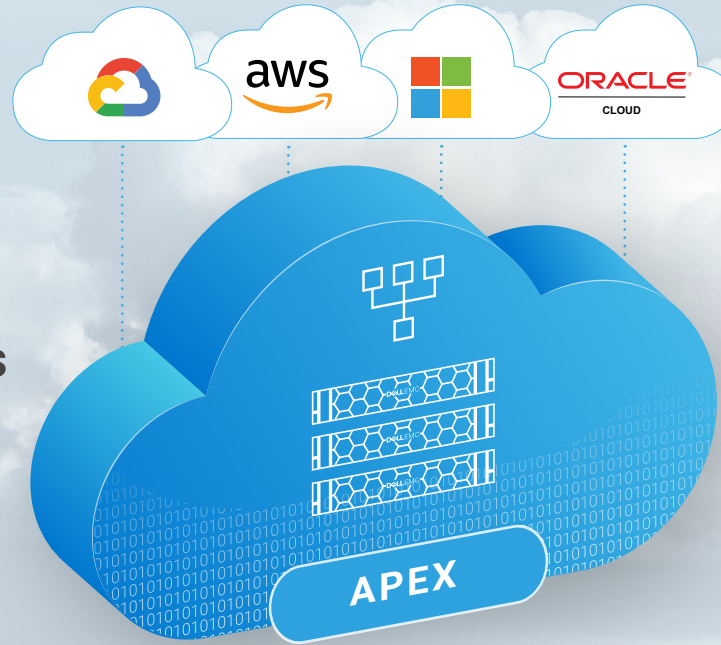
+High Performance



*Based on the Dell EMC specification for a single PowerMax 2000 or 8000 array, August 2020. Actual system availability will vary.

What Are You Trying to Do in the Cloud?

There's a **better** way...



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Learn more at DellTechnologies.com/Multi-Cloud-Services