
DELL Technologies
Dell PowerScale
Cloud Services
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Why Cloud File Storage

File data accounts for nearly 50% or organizations' on-premises data footprint. But only 10% of cloud data is file.

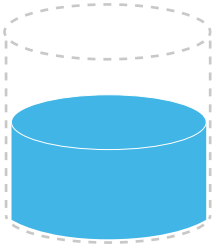
Despite the fact that file data is growing exponentially, it remains underrepresented in the public cloud due to several challenges:

- Poor user experience
- Scale and performance limitations
- Vendor cloud lock-in, data gravity and latency

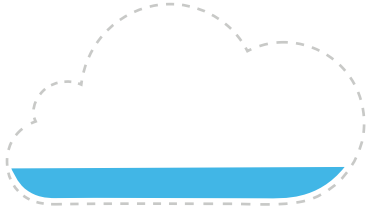
To accelerate hybrid cloud adoption for file data, organizations need:

- Interoperability with on-prem systems
- Scalable performance and capacity
- Enterprise-class data storage features

File data is growing, but is underrepresented in the cloud



~50%
of organizations' on-prem data*



~10%
of data in the cloud is file**

**Source: ESG, Performance Testing of Dell Technologies Cloud PowerScale for Google Cloud, June 2020*
***Source: IDC, "4Q19 Storage Software and Cloud Services Qview Update Presentation," March 2020*

Why Cloud Storage from Dell Technologies

Prior to Dell Technologies entering the market, there was no easy way for organizations to bring their high-performance file workloads to the cloud because of throughput bottlenecks, capacity limitations and missing storage features.

What you get from Dell Technologies

- Leader in Gartner Magic Quadrant for distributed file systems
- A complete portfolio of cloud storage services for file and block data
- Cloud Data Protection services
- Expertise in vertical markets which run complex, technical file-based workloads such as M&E, Life Sciences, AI, EDA, Analytics, Healthcare, High Frequency Trading and many more

Dell Technologies recognized by Gartner® as a Leader in distributed file systems and object storage for 6th consecutive year*

Figure 1: Magic Quadrant for Distributed File Systems and Object Storage

Source: Gartner (October 2021)

*Gartner, Inc. "Magic Quadrant for Distributed File Systems and Object Storage" by Julia Palmer, Jerry Rozeman, Chandra Mukhyala, Jeff Vogel, October 1, 2021.

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The Future is Multi-Cloud

Storage is one of the most critical elements of cloud adoption.

Global organizations are embracing a multi-cloud strategy

81% of respondents reported they are using more than one public cloud provider[1]

90% of G1000 organizations will have a **multi-cloud** strategy by 2024[2]

Public clouds have many benefits

- flexibility of compute options
- variety of native cloud services

aws — 165+ services

Microsoft Azure — 251+ services

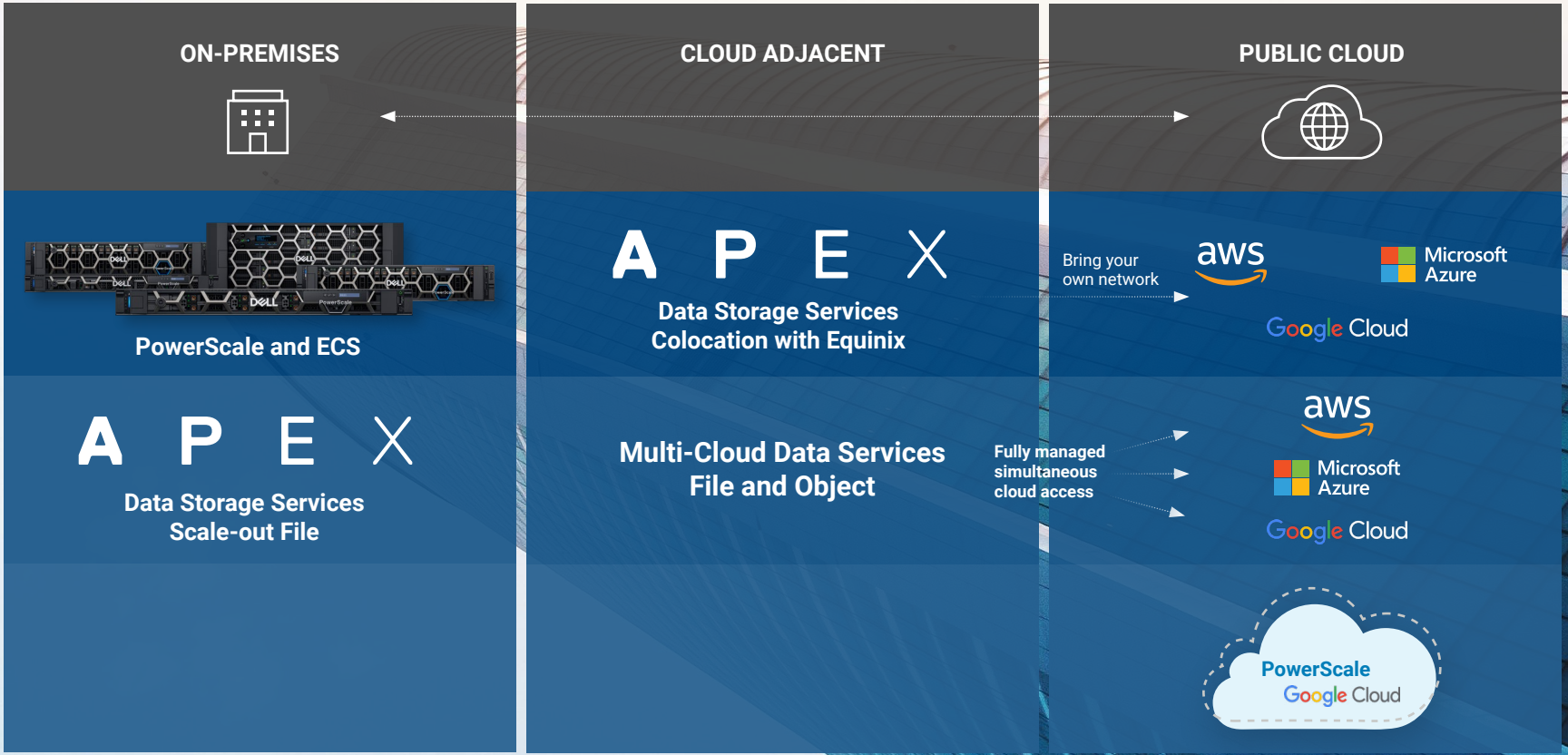
Google Cloud — 101+ services

But there are still challenges

Challenges	Dell Technologies Can Help Address
Cloud vendor lock-in	Easy access to your data in multiple clouds
Unpredictable economics	Simple and consistent cloud experiences delivered as-a-Service
Inconsistent performance	Optimized, predictable performance
Low availability	Reduced risk with access to multiple clouds
Skill gaps	Familiar hardware and software

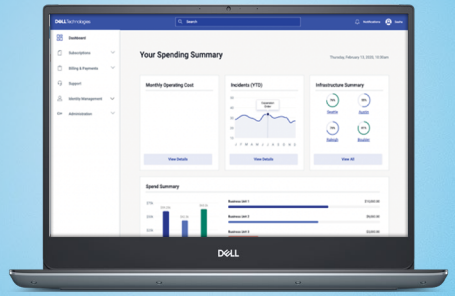
[1]*Gartner, Lessons Learned from the most common mistakes made by cloud infrastructure adopters, May 2020*
[2]*IDC FutureScape: Worldwide Cloud 2019 Predictions*

Consume PowerScale Anywhere Your Data Is



Private Cloud with APEX Data Storage Services

An as-a-Service portfolio of scalable and elastic storage resources designed for OpEx treatment.



File Services

LOCATION

- ✓ Data Center
- Dell-managed Colocation

DATA SERVICE

- ✓ File services
- Block services

PERFORMANCE

- Capacity optimized
- ✓ Balanced
- Performance optimized

BASE CAPACITY

Base capacity (TB)

100

Min: 50

TERM

- ✓ 12 months
- 36 months

Focus on outcomes, not infrastructure

SIMPLICITY, so you can remove complexity to deliver more value to your organization.

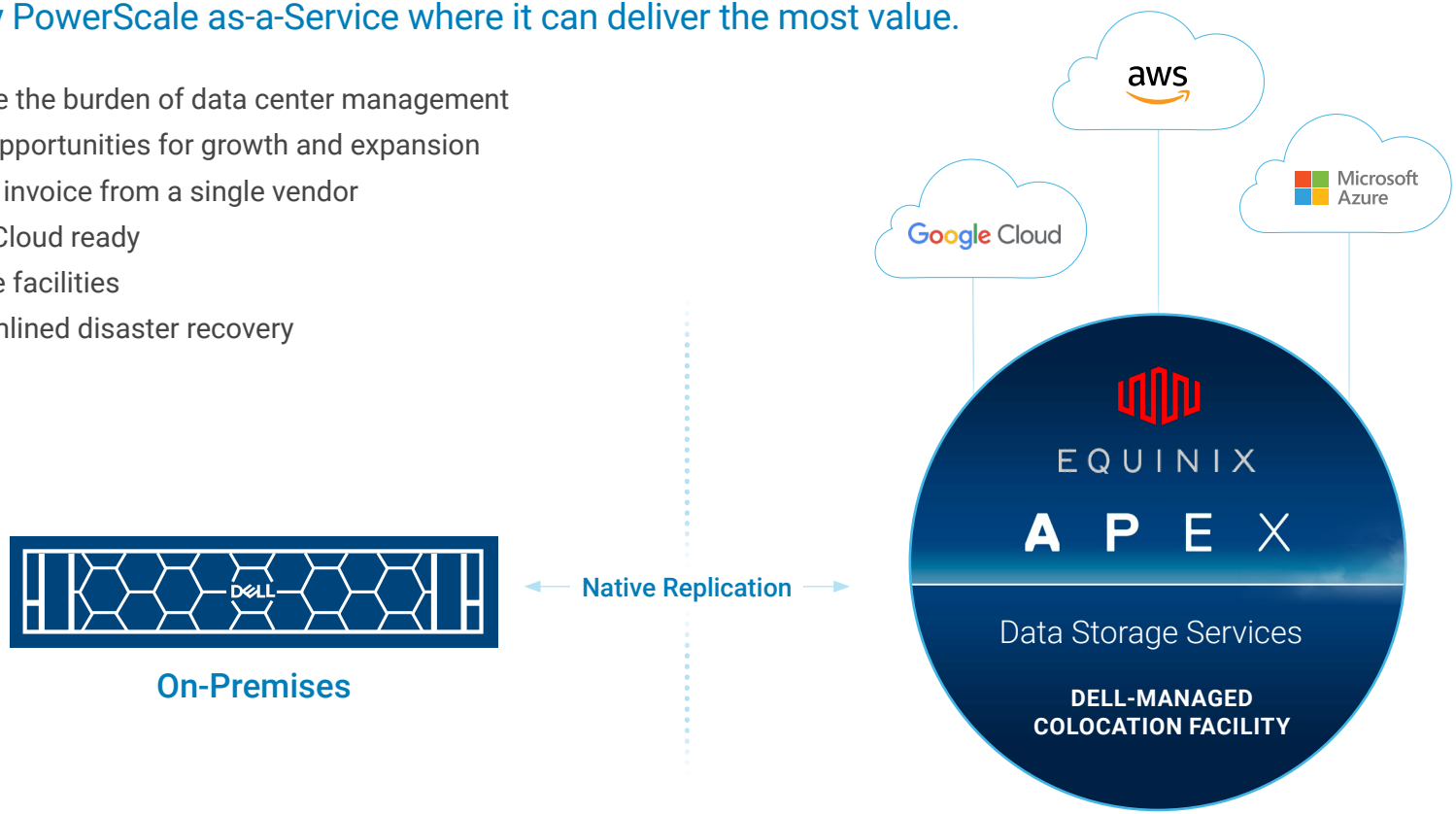
AGILITY, so you can manage unpredictability by responding dynamically to changing business needs.

CONTROL, so you can reduce risk with flexible storage services that enable a true hybrid cloud strategy.

Equinix Colocation with APEX Data Storage Services

Deploy PowerScale as-a-Service where it can deliver the most value.

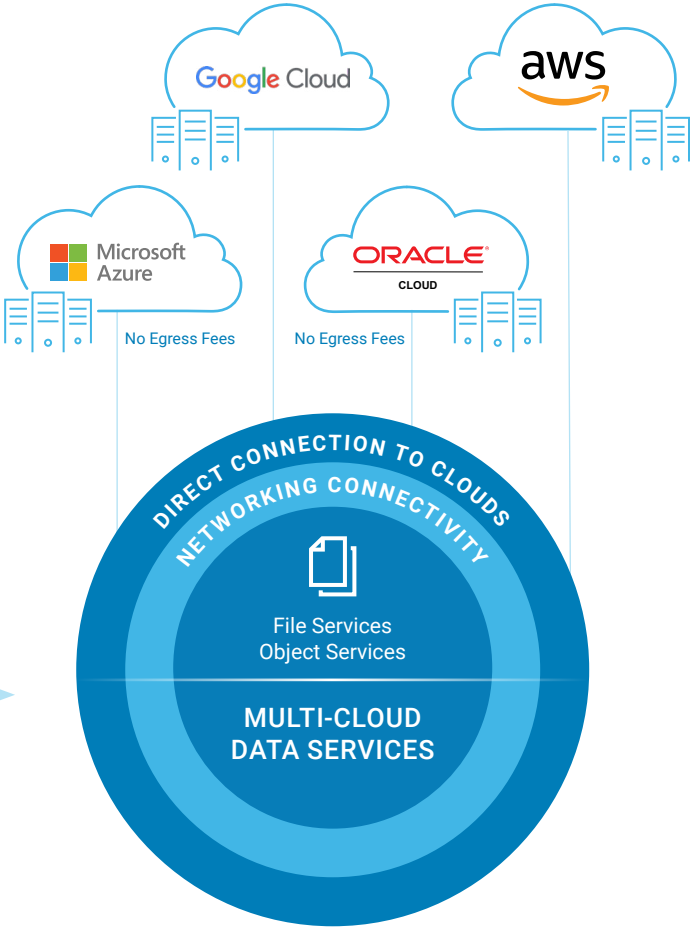
- Relieve the burden of data center management
- New opportunities for growth and expansion
- Single invoice from a single vendor
- Multi-Cloud ready
- Secure facilities
- Streamlined disaster recovery



Multi-Cloud Data Services Enabled by Faction

Extend market leading PowerScale and ECS storage to public clouds of choice.

- Easily switch or add clouds without moving data
- Reduce risks and costs with no conversion or refactoring of workloads
- Accelerate time to innovation with rapid deployment and capacity on demand



Multi-Cloud Use Cases for File Data

Businesses are innovating by using the best cloud services in these segments.

Life Sciences

- Accelerate time-to-insight for clinical genomic sequencing, drug design, and cancer research with multi-cloud AI and analytics solutions.

Healthcare

- Use one cloud for DR, another for processing (PACS) data, and a third for backups — all while improving diagnostic speed for service providers.

Big Data Analytics

- Leverage native HDFS on PowerScale with best in class performance.
- Use efficient storage for in-place analytics in public cloud.

Energy

- Use AI tools to analyze PBs of information contained in satellite images and seismic surveys used to improve the effectiveness of drilling operations.

Automotive

- Leverage global multi-cloud sensor and metadata management for ADAS.
- Use high-speed, low latency connection to the public cloud for AI/ML.

Media and Entertainment

- Leverage the best in breed tools from the public cloud of choice to collaborate throughout the production cycle on media.

Multi-Cloud Advantages

The multi-cloud strategy offers businesses the ability to switch between different public clouds in order to:

Defy Data Gravity

- Unlock innovation when sharing a common data set between clouds.
- Eliminate data gravity and avoid storing multiple, out-of-sync copies of the data.

Avoid Vendor Lock-in

- Benefit from the unique native cloud services from different providers.
- Reconsider investing in a single cloud which may limit future opportunities.
- Watch out for growing egress costs.

Mitigate Risk

- Lower your exposure to cyberthreats that can overwhelm a single cloud.
- Distribute your cloud strategy across multiple providers to reduce exposure to a single point of failure.

Optimize Performance

- Choose the right cost/performance ratio of a cloud service for each workload.
- Get the best price by combining cloud services; for example, Azure's low-priority VMs, AWS spot instances, and Google Cloud's preemptible VMs.

Choose What Service You Need from Each Public Cloud

Microsoft Azure

CHOOSE FROM 165+ SERVICES

EXAMPLES:
Azure Machine Learning
Azure Kubernetes
Linux Virtual Machines
Security Center
Azure Firewall

aws

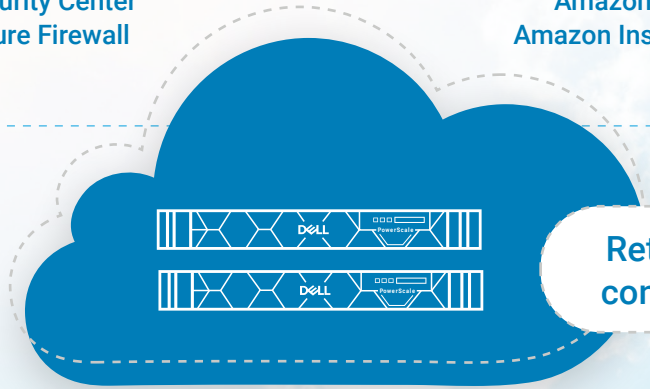
CHOOSE FROM 252+ SERVICES

EXAMPLES:
Amazon EC2
Amazon SageMaker
Amazon DynamoDB
Amazon S3
Amazon Inspector

Google Cloud

CHOOSE FROM 102+ SERVICES

EXAMPLES:
CloudSQL
Cloud Load Balancing
BigQuery
AutoML
AI Platform



Retain control while maintaining a single, consistent data repository on PowerScale

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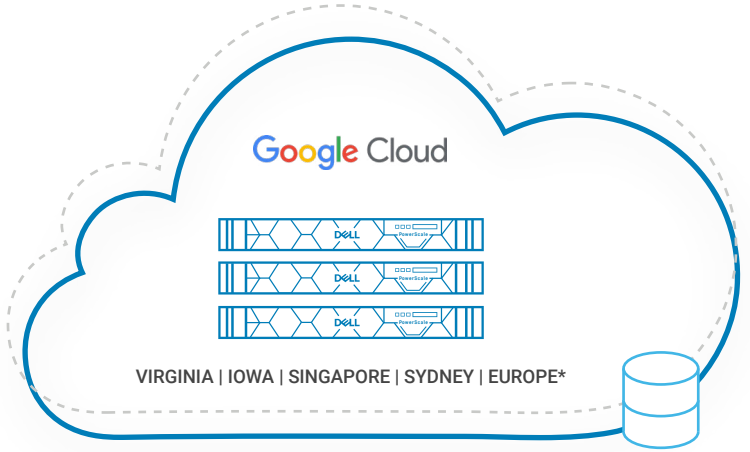
PowerScale for Google Cloud

Power your most demanding file workloads in the public cloud.

- An integrated native Google Cloud service operated by Dell Services and backed by enterprise SLAs
- Google Marketplace integrated billing and support
- Easily combined with the Google Cloud compute and analytics services
- Predictable pricing based on four performance-optimized tiers
- A fully managed cloud service

On-Premises

Native Replication



Combining the performance and scale of Dell PowerScale with the economics and simplicity of public cloud.

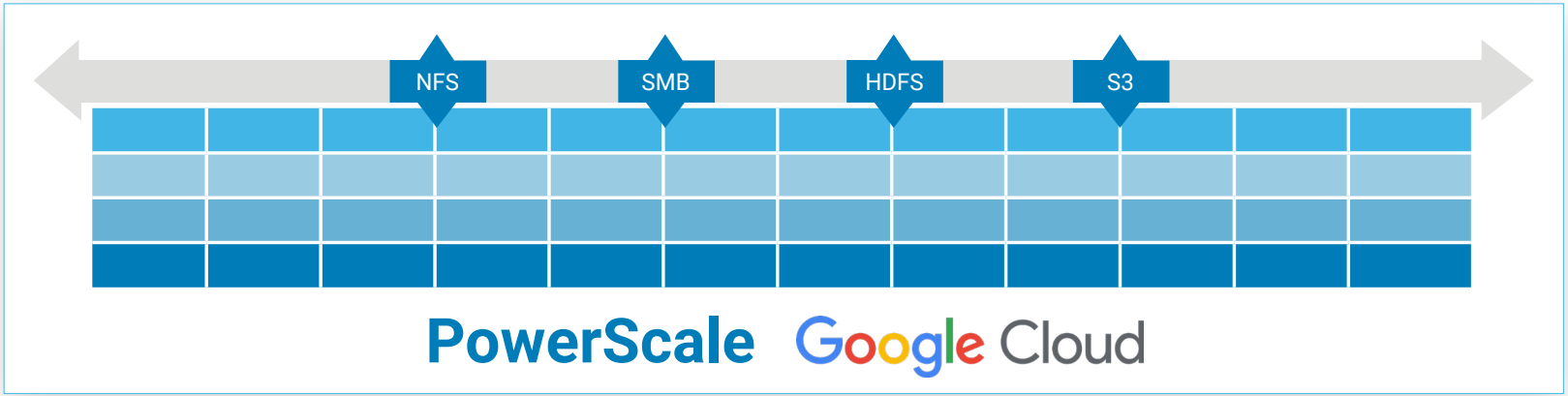
Check with your Dell sales contact for the complete list of locations

Performance for the Most Demanding File Workloads

scale-out capacity up to
33 PiB effective
in a single namespace

scale-out performance up to
18.6 GB/s per 100 TiB
throughput with sub-millisecond latency

multi-protocol • native replication • snapshots
Enterprise-class data features



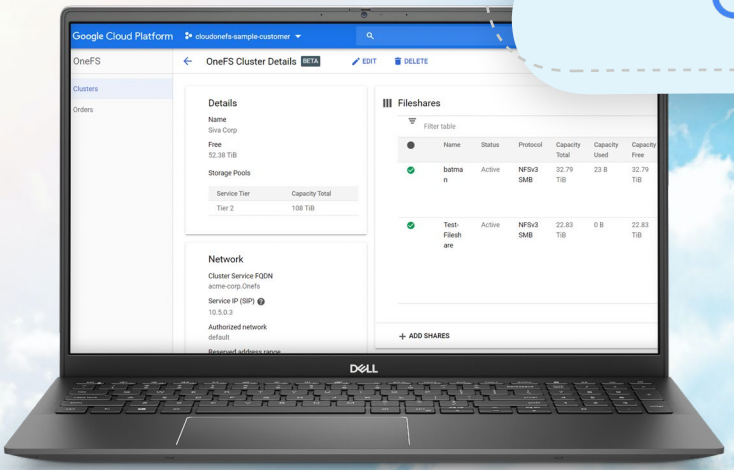
Native Cloud Experience

Completely integrated into Google Cloud.

- Available from Google Marketplace
- Provisioning, configuration and management of OneFS clusters in Google Cloud Console
- Single bill and support from Google
- Predictable pricing and guaranteed performance
- Complete lifecycle management from Dell Technologies experts

PowerScale

Google Cloud



Backed by Enterprise SLAs

Next Steps

For More Information About Cloud Services Powered by PowerScale **Click Here**