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AI and ML a challenge to consider to unlock your Data Capital

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Isilon advantages

Simple to manage

- Single volume, single file system architecture

Extreme performance

- All-Flash, Hybrid and Archive nodes

Massive scalability

- Scale performance and capacity predictably
- Expands easily from 10s of TB to 10s of PB

Automated storage tiering

- On-prem and a choice of cloud providers

Unmatched efficiency

- 80 percent storage utilization
- Data deduplication and compression options

Data protection and security

- Data replication and snapshots
- WORM, data at rest encryption, secure access zones

Operational flexibility

- Multiprotocol support

Data analytics support

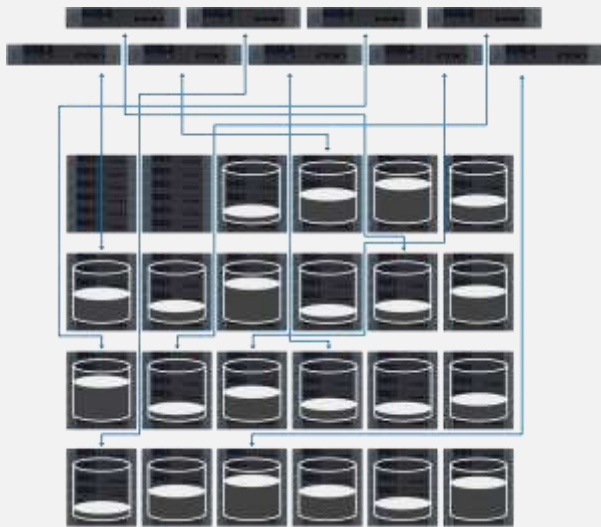
- Native Hadoop File System (HDFS)

Traditional NAS and Isilon

Complex and limited scalability vs. massive scalability and management simplicity

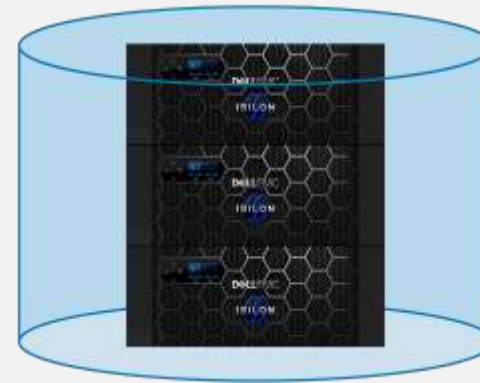


Traditional NAS



- Multiple volumes with legacy RAID
- Limited scalability
- Complex
- Silos of storage

Isilon Scale-Out NAS



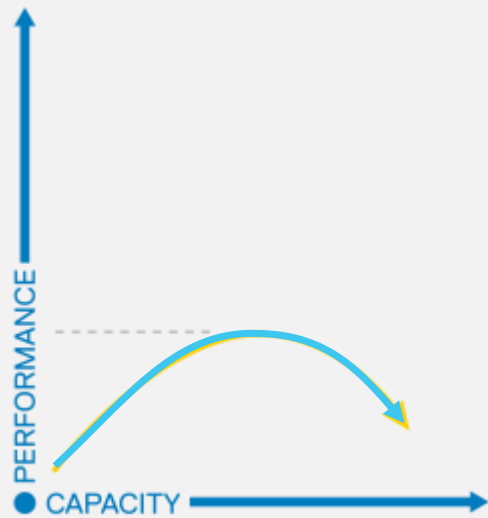
- Single volume, single file system
- Massive scalability
- Simple at any scale
- Data lake

Traditional NAS and Isilon



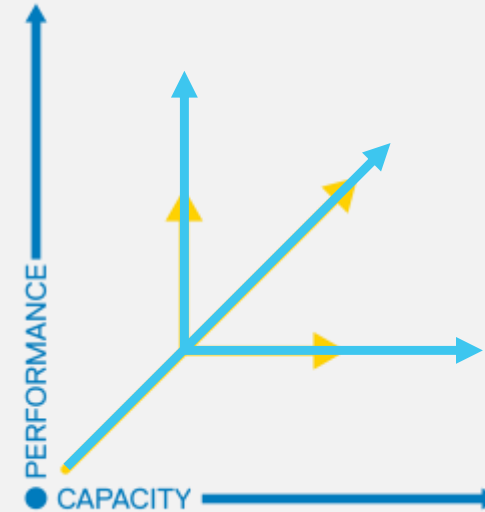
Performance bottlenecks vs. linear, predictable scalability of performance and capacity

Traditional NAS



- Performance bottlenecks at scale
- Leads to inefficient storage silos
- Difficult to maintain SLAs

Isilon Scale-Out NAS



- Linear scalability
- Predictable performance and capacity growth
- Maintain or improve SLAs

TCO Optimization : AutoBalance Capacity and Performance

AutoBalance Across Nodes



Automation Balances Data

Reduces Costs, Complexity, Risk

Eliminates Hot Spots

NO data migrations

NO RAID

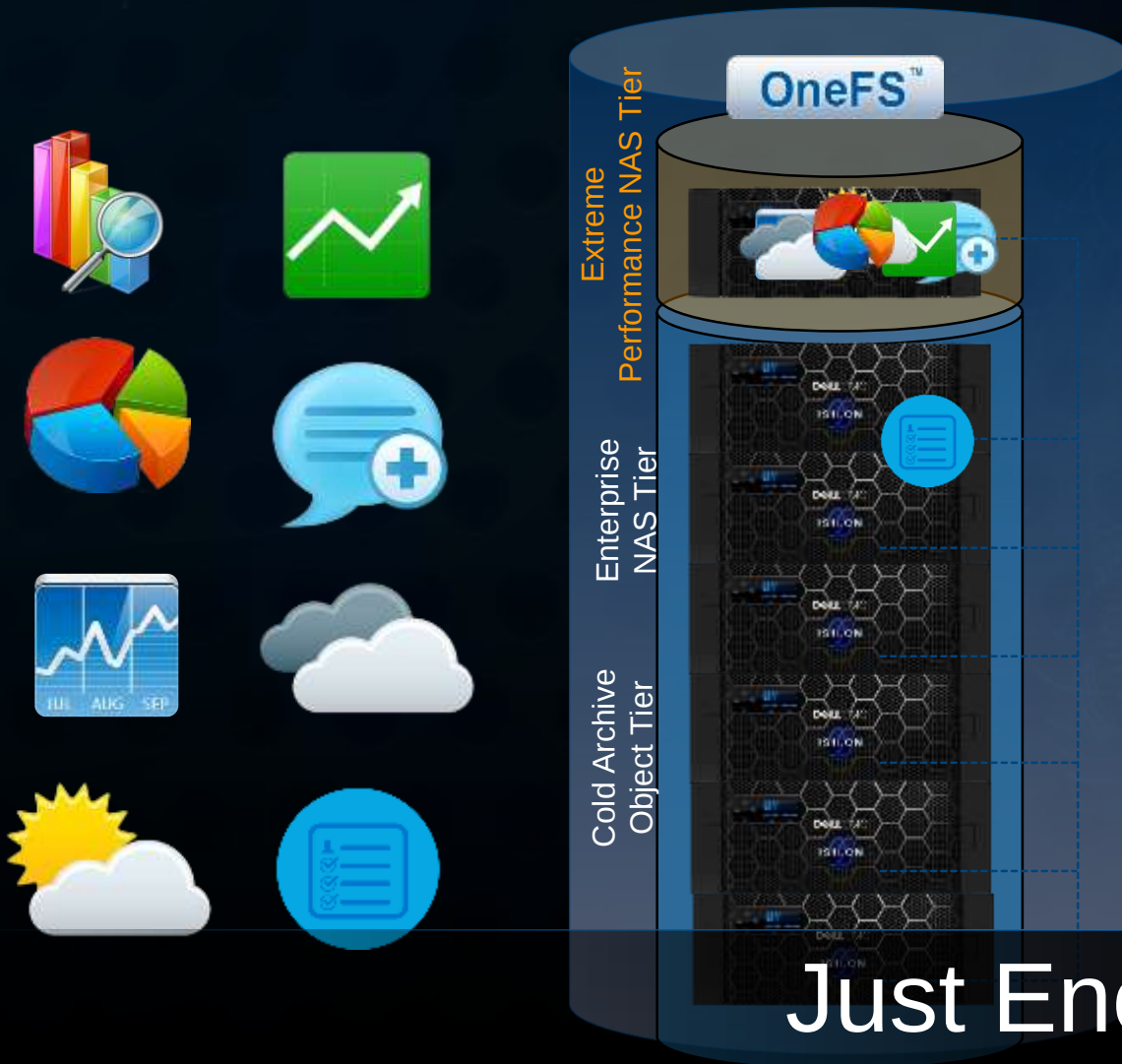
NO manual intervention

NO reconfiguration

NO server or client mount point or application changes

Delivers Over 80% Storage Utilization

TCO Optimization: Policy-Based Automated Tiering



HIGHEST PERFORMANCE

LOWEST TCO

- Tier Between Performance, Enterprise and Archive Nodes
- Transparent to Users and Applications

Just Enough Flash

Cloud Strategy

The future is multi-cloud

Competition drives innovation and the creation of new services



165 Services



251 Services



Google Cloud Platform



101 Services



Dell EMC wants to help our customers leverage all these services, not just a subset

Our strategy is “Data First”

Focus on the overall needs of data over the location of the data

- Few basic questions:

- What **type of data** is it? (Transactional vs. Non-transactional)
- **Where** is your data created? (In cloud or out of cloud)
- What is the **variability** of the compute used against it? (Highly variable or persistent)
- **Who** or what needs **access** to the data? (Compute, users, customers)
- What is your data **lifecycle**? (How to persist & archive)

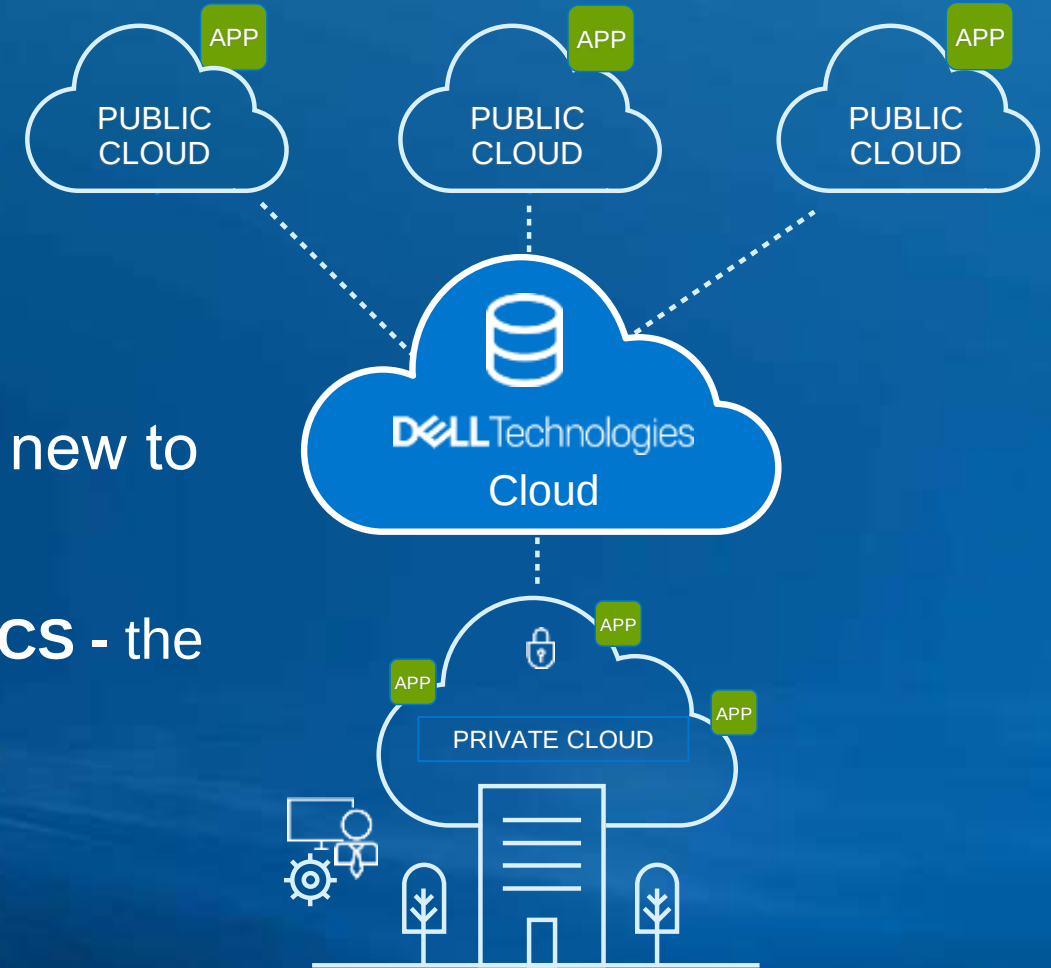
Let's look at the three types of Cloud Data

Transactional | Object | File

Object data

- 60% of data in the cloud is object, but it's new to most...

Dell EMC Cloud Data Services powered by ECS - the world's first cloud neutral object data store



Put your data in a position to server applications in any cloud without lock-in!

Let's look at 3 types of data and their characteristics

Transactional | Object | File

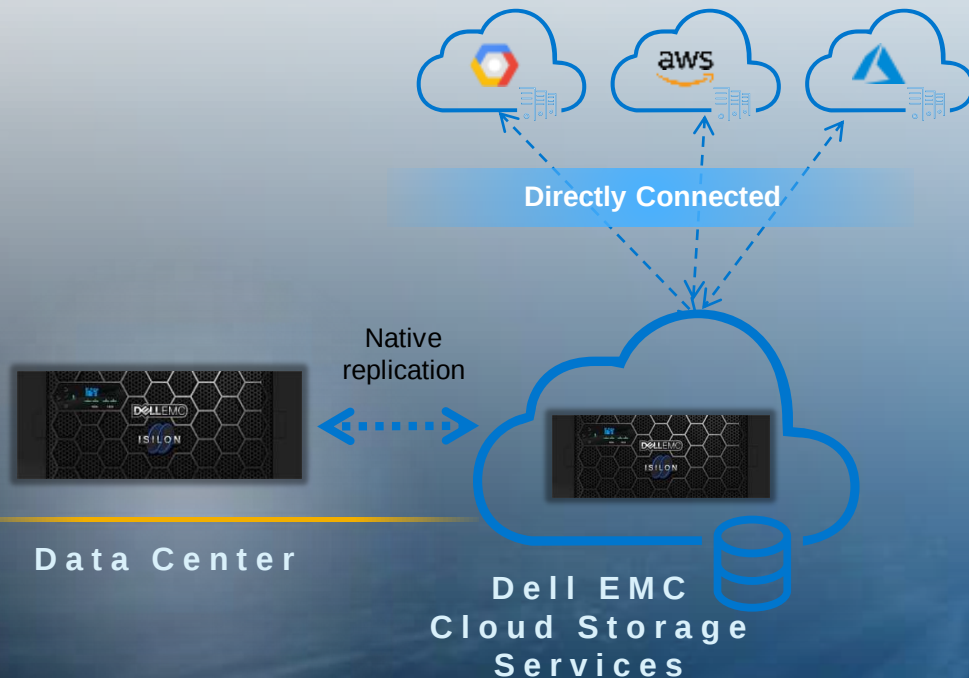
File data

- The Final Frontier of the cloud, **the most challenging** of the three
 - Unlike block and object data, it is used directly by people (vs. only applications)
 - It often has both, capacity and performance requirements – Large capacity & Perf.
- Represents 50-80% of all data, but in the cloud it's less than 2%
- Today there is a market gap for scalable, high-performance, enterprise-grade file storage in the cloud

Dell EMC Cloud Storage Services for Isilon

Directly connected cloud storage services

AVAILABLE TODAY

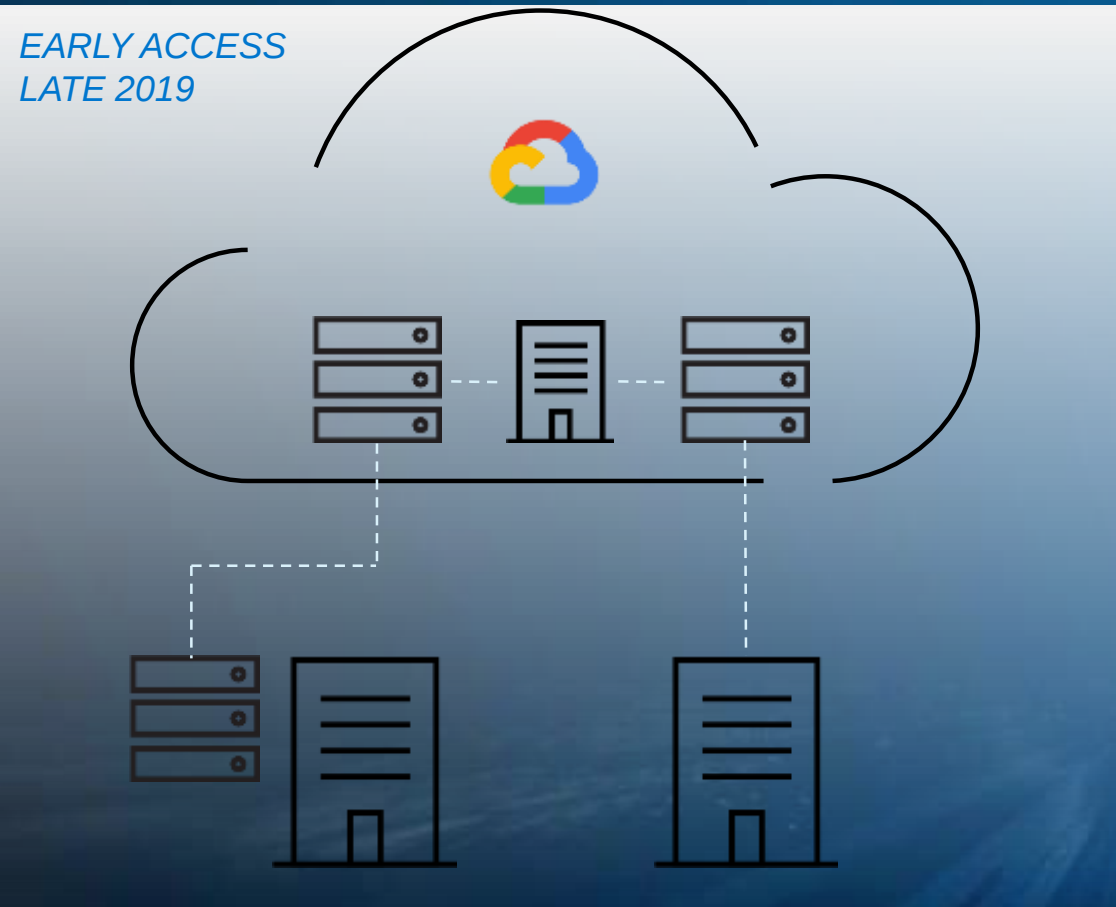


- Consume Isilon as a service in a cloud exchange
- Direct connectivity to major cloud providers
- One copy of data natively accessible to multiple cloud providers
- No egress charges

You don't have to own the hardware or manage it, but you do get the full capabilities of Isilon presented as a local share/mount to each cloud of your choice.

Dell EMC Cloud Storage Services for Isilon

Fully integrated Google Native Service



A cloud-managed storage service for GCP customers

- A fully integrated solution for GCP users
- A versatile set of file service tiers

Cloud native consumption models

- Automatic provisioning

Cloudlike UX and operations

We are working with other cloud providers to bring a co-engineering, co-sponsored offering to market by year end

Command center view of all data: ClarityNow



Data management software for cloud insights and data mobility

Data discovery

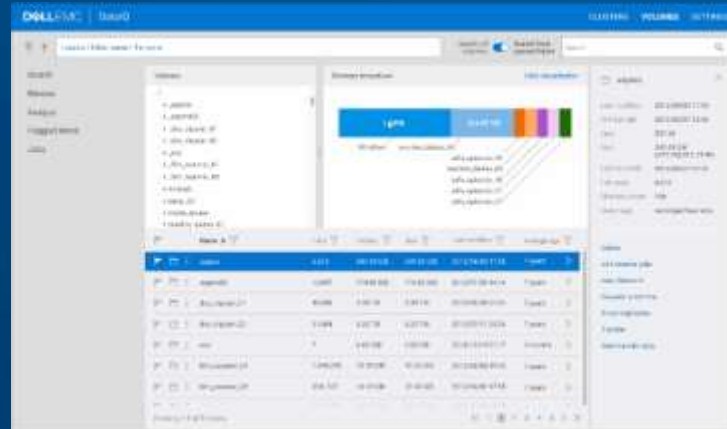
Ultra-fast scan, search and indexing across billions of files

Data classification

Analysis and tagging of project data
Detailed reporting

Data mobility

Self-service archives; on-prem to cloud data mobility



Isilon



ECS



3rd party file
and object



Public cloud

Isilon Analytics

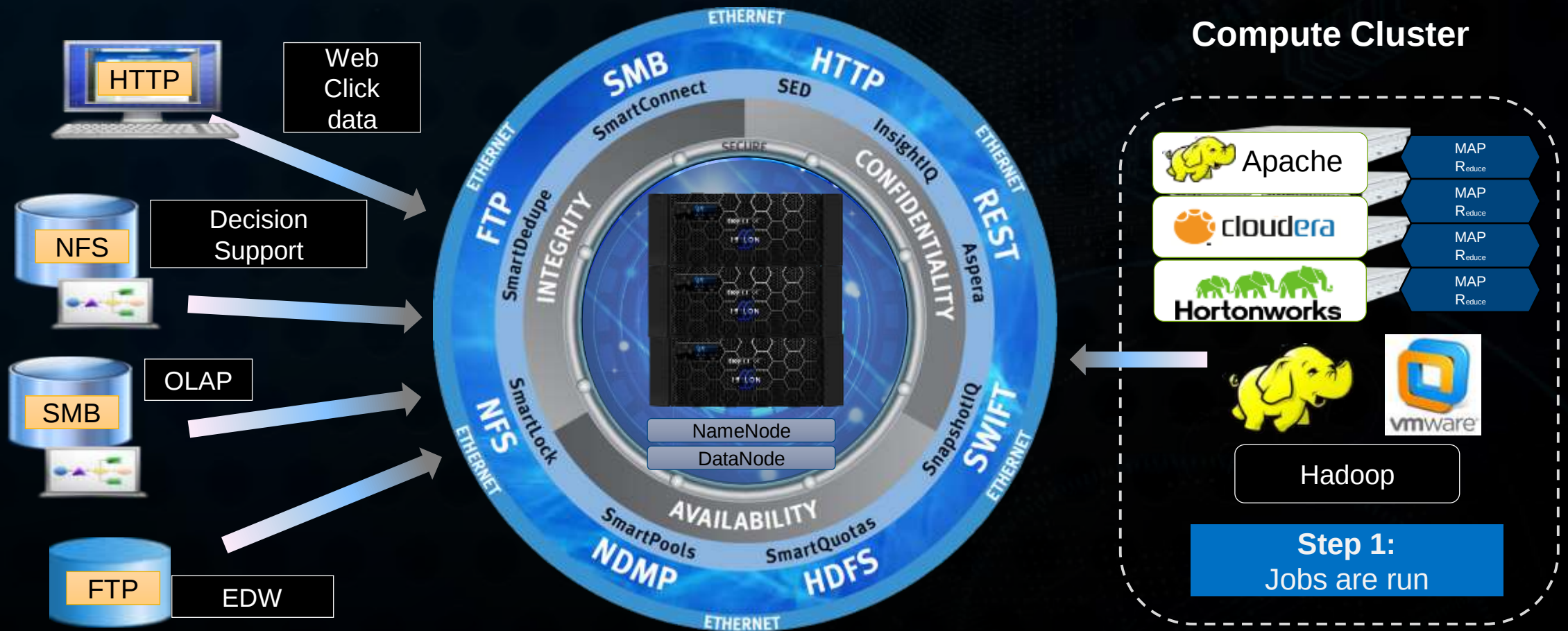
Hadoop Market Leadership



Other Growing Use Cases for Hadoop with Isilon:

1. Saving Storage Capacity! 80% more efficient!!
2. True Multi-Tenancy!
3. Easier to manage and smaller foot print.
4. Consolidation of Hadoop Clusters

HDFS: Isilon Shared Data lake



Leveraging existing Isilon and building Integrated Solutions for Deep Learning as an overlay

Ready Solution for AI:
Deep Learning with Intel



Ready Solution for AI:
Deep Learning with NVIDIA



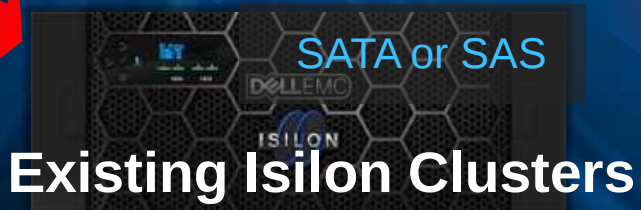
Reference architecture
Isilon with NVIDIA DGX-1



Automatic Tiering

Automatic Tiering

Automatic Tiering



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Pivotal

RSA

Secureworks

virtustream

vmware