

Embrace Hyper-scale Storage Architecture to Drastically Increase Reliability and Lower Costs

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Storage architecture options for today's IT environment

DAS

SAN/NAS Array

**Hyperconverged
SDS**

**Hyperscale
SDS**

1970

1990

2010

2014

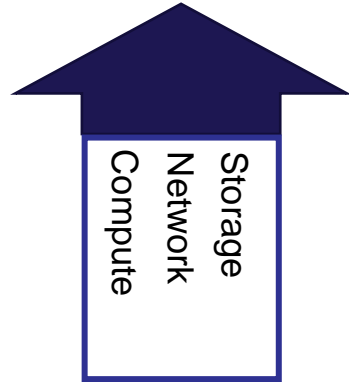
Hyperconverged or Hyperscale? One Size Fits None

Hyperconverged SDS

Linked scaling of storage relative to compute and networking

- Simple
- Best entry cost

- Environments that have limited storage needs/growth
- Small environments

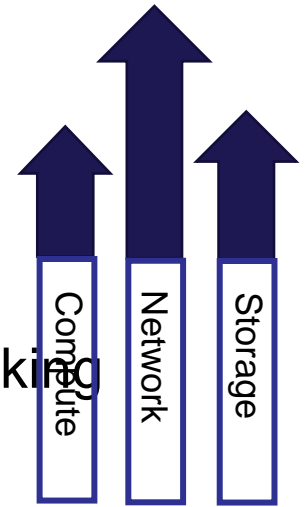


Hyperscale SDS

Independent scaling of storage relative to compute and networking

- Flexible
- Best cost at scale

- Mixed application environments
- Data intensive environments
- Larger environments



Why consider Hyper-Scale Software Defined Storage?

Done right, it should:



Fundamentally
reduces
storage cost

Array Model



Scale Out Open
Platform Model



Fundamentally
improves
performance

Speed



Performance
(Speed + Control)



Fundamentally
improves
agility

Static Environments



Dynamic
Environments



Does NOT
require a
“strategic
investment”

Hyperscale SDS Checklist:

- ✓ 100% **Software** that runs on open standard HW platforms
- ✓ Complete **Storage + Data Virtualization** (array replacement)
- ✓ **Scale Out** – System can grow seamlessly to any scale
- ✓ **Performant** – Array-like latency
- ✓ **Compatible** with today's VMware and application environments

How Does Hyperscale SDS compare to traditional arrays?



Array Model

RAID 5/6

Data Protection

Tightly coupled

Fault Architecture

Scale up

Scaling

Semi-Custom/
Proprietary

Hardware

SDS-HS Model

Replication/
Erasure Coding

Loosely coupled

Scale out

Industry Standard



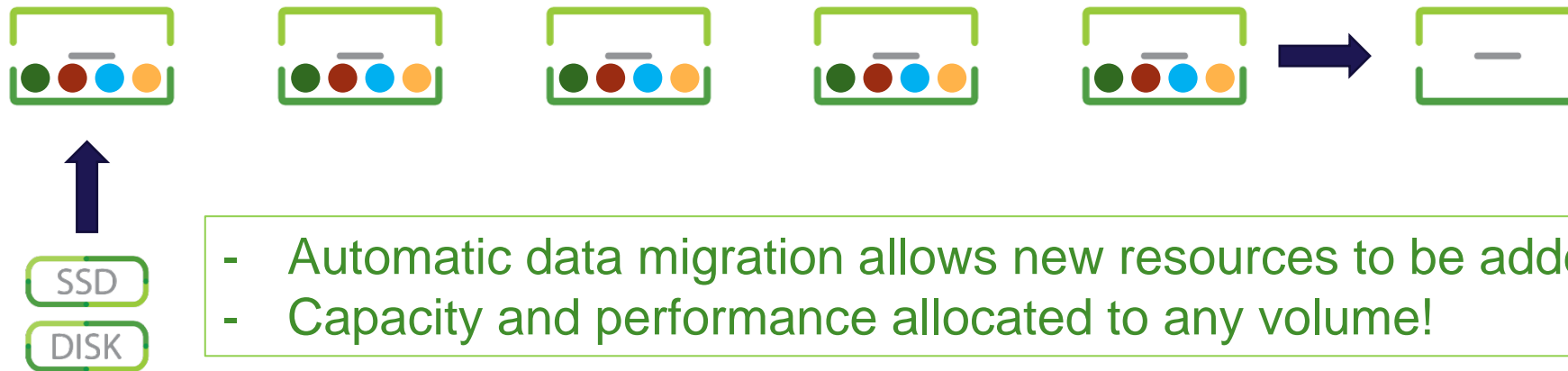
All Software-Defined Storage is Not Created Equal

System algorithms should distribute data evenly:



- Minimizes performance impact due to failures
- Immediate performance and capacity scaling

Storage Domains can be dynamically expanded and upgraded



- Automatic data migration allows new resources to be added on demand
- Capacity and performance allocated to any volume!

All Software-Defined Storage is Not Created Equal

Flexibility of access protocols, performance and protection



File: NFS



Object: S3, HDFS



Block: iSCSI



All-Flash



Hybrid



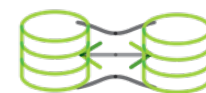
Archive



Continuous Data Protection

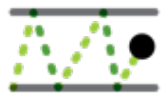


Automatic Snapshot



Volume Cloning

Modern analytics, and efficiency



Data Analytics &
Anomaly detection



Multi-tenancy



In-line data
deduplication



Cloud Integration

SDS Deployment Flexibility

Deployment Options

SOFTWARE



Open HW Model

Your choice of HW and configuration

APPLIANCE



Complete Solution

Flash, hybrid and archive configurations available

VM



Storage Recapture

Runs as VMs within your existing environment

CLOUD

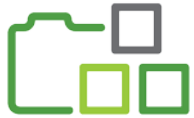


Public/Private Cloud

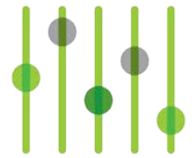
AWS, Azure, OpenStack

FORMATION | ONE

DYNAMIC STORAGE PLATFORM



Consolidate traditional SAN/NAS workloads to dramatically lower costs



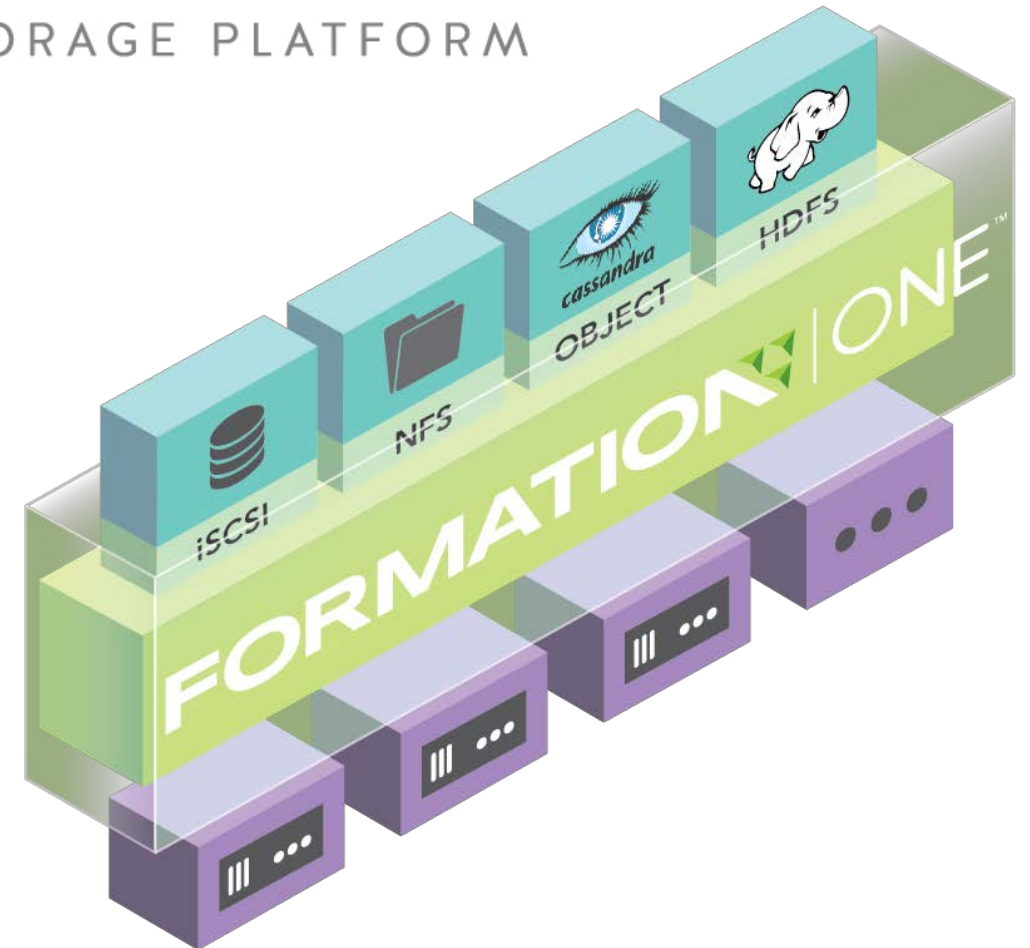
Deliver scale-out performance with dynamic tiering and QoS control



Automate and simplify management for greater business agility



Distributed architecture, compatible with modern cloud applications



FormationOne Capabilities



Dynamic

- Dynamically add performance and/or capacity
- Scale out from Terabytes to Exabytes
- Dynamic provisioning and policies



Multi-tenant Services

- Ability to segment volumes by tenant
- Policy-based security



Subscription Software

- OPEX not CAPX
- Pay for just what you need



Cloud-based analytics –TABS*

- Gain insight about your data use
- Best practices & recommendations
- Fault monitoring & Security



Open Hardware Model

- Use your preferred HW supplier and configurations
- Your choice of upgrade cycle
- Optional “Appliances”

* Telemetry and Alerting Bundled Services

Where to Start with Formation

Implement in projects:



ARRAY REPLACEMENT, CAPACITY GROWTH



PROJECT LEVEL TCO, ROI JUSTIFICATION

Start on the ground floor:



BACKUP/ACTIVE ARCHIVE
STORAGE



TIER 2 BUSINESS
APPLICATIONS



IT APPLICATIONS
(AUDIT/SECURITY)



TEST &
DEVELOPMENT

Ready to Learn More?

- Review the technical resources on www.formationds.com/demo
- Meet with a Formation Technical Specialist
- Schedule a 1-1 Demonstration, donate a goat!



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Q&A

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