intel Look Inside.™

Storage SW Solutions Catalog

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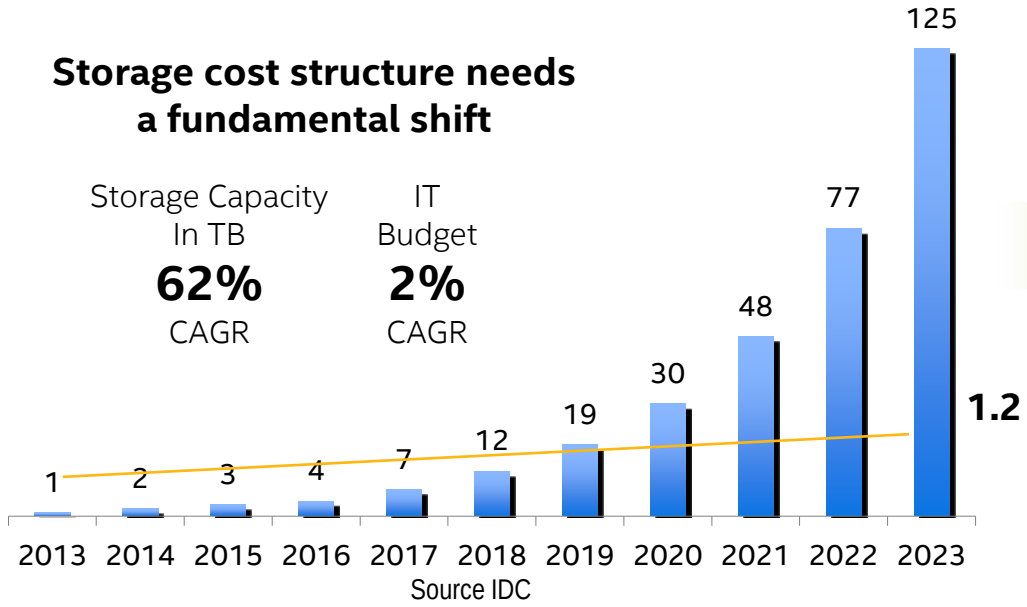
Contents

The Problem for IT

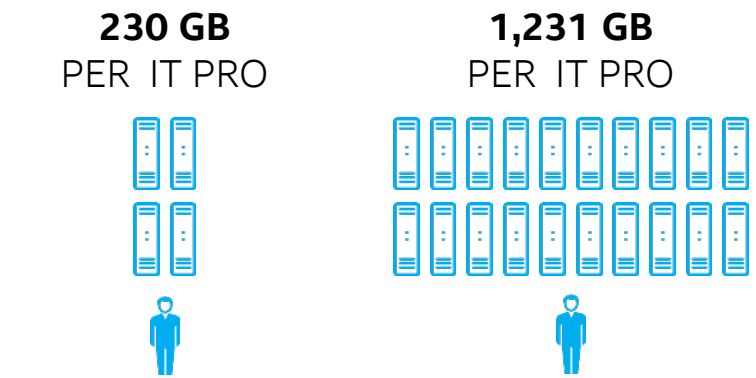
From 2013 to 2020, the digital universe will grow by a factor of 10, from 4.4 ZB to 44 ZB

It more than doubles every two years.

COST CHALLENGES CONTINUE TO **GROW**



IT PROS WILL SHOULDER A GREATER **STORAGE BURDEN**



Source IDC, 2014

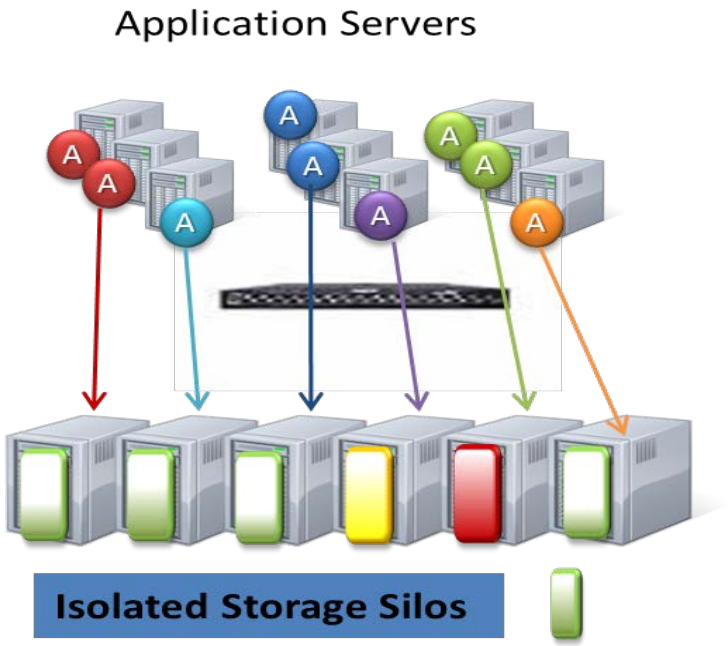
Data is growing at a rate unsustainable with today's infrastructure and labor costs

Source: IDC – The Digital Universe of Opportunities: Rich Data and the Increasing Value of the Internet of Things - April 2014

The Problem with Storage Infrastructure

Storage Silos (Traditional):

- Current technology is limiting
- Typically 1:1 Storage HW to Application
- Under utilized storage resources
- Isolated resources
- Policies unique to vertical solutions



Today's Answers:

Single Massive Storage System

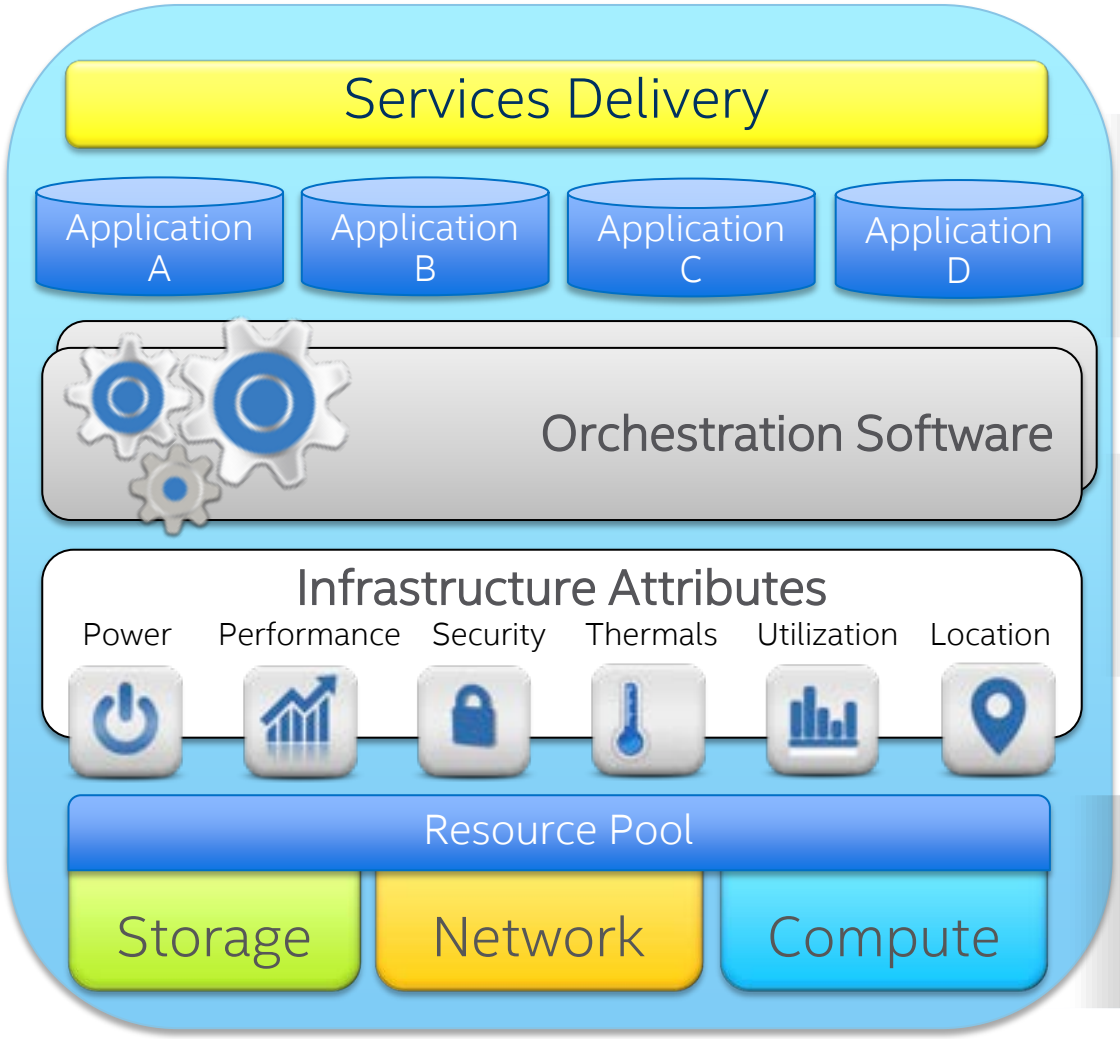
- \+ High Availability (Failover)
- − Limited Scale
- − Very costly (Cap-ex and Op-ex)

Scale-Out Storage Systems

- \+ Pay as you Grow
- \+ Shareable capacities
- − Limited ability to automate SLA execution
- − Does not address under-utilized resources
- − Does not address all storage needs

"Today's Answers" don't solve tomorrow's problems

Software Defined Infrastructure (SDI)



SERVICE ASSURANCE

Policies and intelligent monitoring trigger dynamic provisioning and service assurance as applications are automatically deployed and maintained

PROVISIONING MANAGEMENT

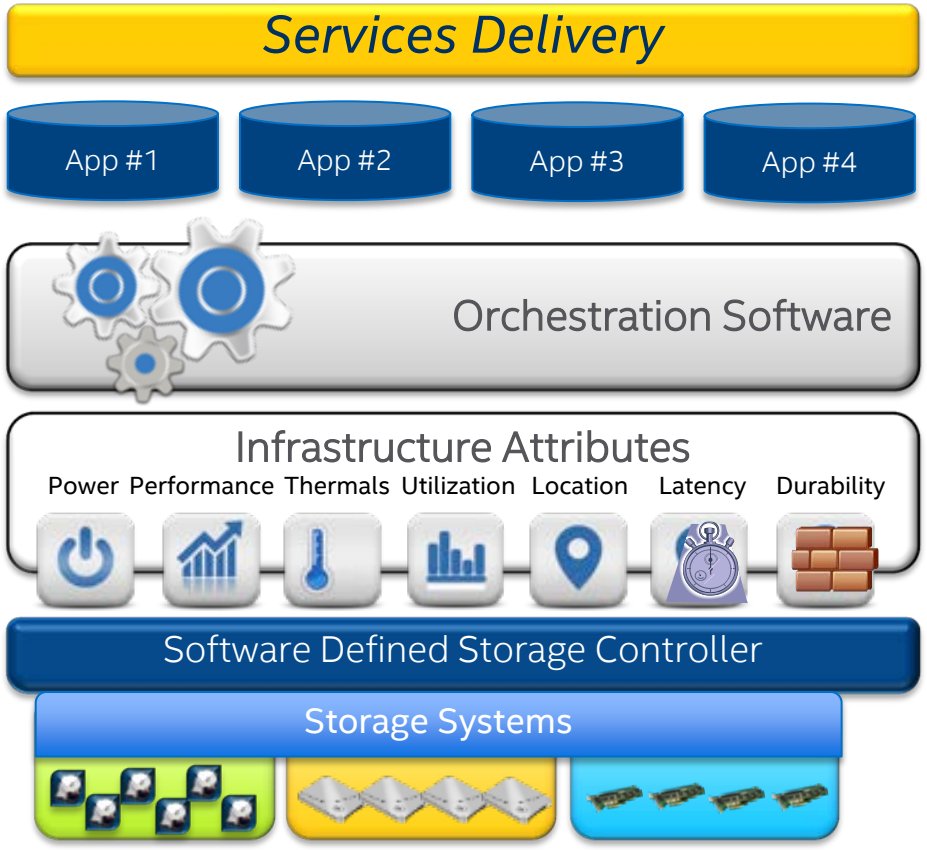
Orchestration provisions, manages and optimally allocates resources based on the unique requirements of an application

POOLED RESOURCES

Network, Storage and Compute elements are abstracted into resource pools

SDS – A Key Component of SDI

Dynamic, policy-driven storage resource management



- **Abstraction** of SW from HW, provides flexibility and scalability
- **Aggregation** of diverse provider solutions
- **Provisioning** of resources dynamically (pay-as-you-grow)
- **Orchestration** of diverse storage systems through an SLA to enable seamless application access

SDS is a **framework** that delivers a scalable, cost-effective solution to serve the needs of tomorrow's Data Center

SDS Architecture

Data Services

- Application that runs in data plane to optimize storage
- Ex: Predictive Analytics
- Ex: De-Duplication
- Ex: Tiering

Applications

Orchestrator

Northbound API

Data Services

SDS Controller

Southbound API

SDS Controller

- Visibility and Control of ALL storage resources
- Communication between Apps, Orchestrator and Storage Systems
- Allocates storage resources to meet SLA's

Storage System [SAN]

Storage System [Capacity]

Storage System [Performance]

Storage System [NAS]

Node | JBOD | Node | Node | Node | Node | Node | Node | Node | Node | Node | Node | Node

SDS Vision to Action:

SDS Framework is at an early stage

SDS Controllers are new - no fully functional, open and federated options

So - How to get started with SDS:

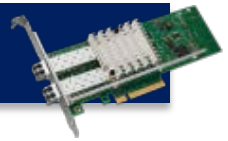
- Focus on the Storage System layer
- ISVs are at the forefront of the transformation – already selling SW decoupled from HW
- Implement SW-based storage systems built on standard, high-volume servers
  - Features like compression, de-duplication, and erasure coding efficiently use resources
  - Caching or tiering features present an opportunity to implement SSDs
- As SDS controllers become available, deploy them to manage diverse storage systems

Deploy SW building blocks today to allow seamless transition to SDS tomorrow

Solutions for SDS

CPU Platforms

Networking



SSDs

Software

Intel® Storage Acceleration Library

Intel® SDS Reference Designs

Open Source Storage Promoters

openstack, SwiftStack, MIRANTIS, redhat, inktank, nexenta

Storage Software vendors

vmware, Microsoft, Symantec, yottabyte, atlantis COMPUTING, DATAGRES, MPSTOR, PERMABIT TECHNOLOGY CORPORATION, Cloudian, PROPHETSTOR, Zerto, maxta, AMPLIDATA, pernixdata, SCALITY, Maginatics

Cloud SPs

Comms SPs

Enterprise

Enable the Server to Become the New Storage Appliance by Delivering Horizontal Ingredients for Proprietary and Open Solutions

Ecosystem of Storage SW Solutions

Overview Table: ISV Solutions

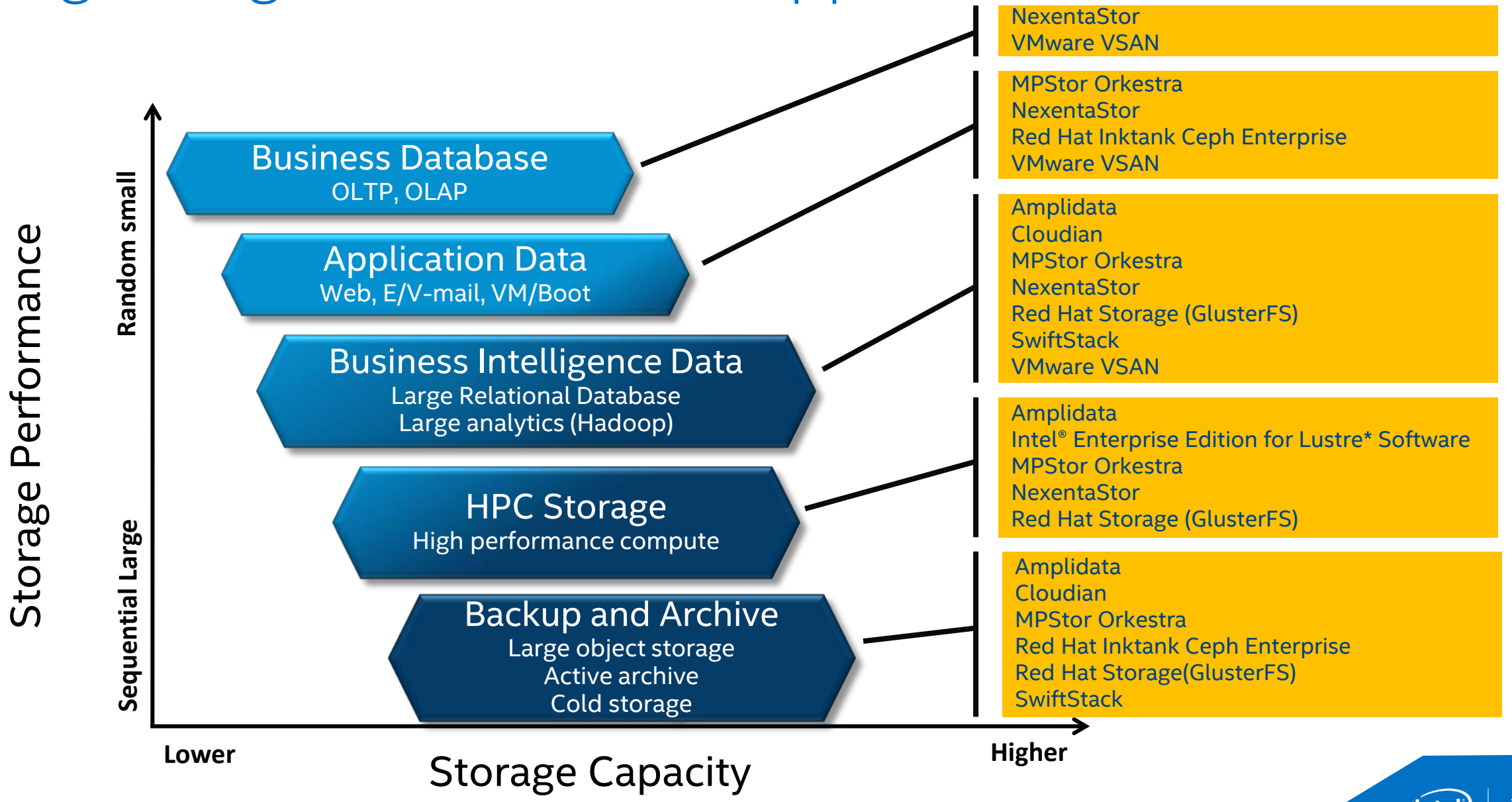
ISV	Storage Interfaces	Efficiency Technologies	Target Customers	Open Source	Operating Environ. /Orchestration	Target Usage models
Amplidata	Object Gateways: File & Block	Encryption, Erasure Code	CSPs, Enterprise, private Cloud	No	OpenStack, NFS, CIFS, AWS	▪ Tier 2+ ▪ Backup and Archive
Cloudian HyperStore	Object and File	Compression, Encryption Erasure Code, Tiering	CSP, Enterprise, private cloud	No	OpenStack, CloudStack, AWS	▪ Enterprise File Sync and Share ▪ OpenStack/CloudStack storage ▪ Cold storage/archival
Maxta Storage Platform (MxSP)	Block	Thin Provisioning, Compression, De-dupe, Dynamic Auto Tiering, Snapshots, HA	Enterprise, Private/Public Cloud, SMB	No	VMware	▪ Primary Storage ▪ Virtual Desktop Infrastructure ▪ Remote Office and Branch Office
MPStor	Block, File and Object	Thin Provisioning, Tiering, caching, snapshot	MSP, CSP, Private Cloud, SMB	Yes	OpenStack, VMware	▪ Scale out tiered storage across all fabric types ▪ Storage for Video ▪ SMB general purpose storage
NexentaStor	Block and File	Compression, de-dup, caching, ZFS-based data security	SMB to Enterprise, CSPs	Yes	OpenStack, CloudStack, VMware	▪ Cloud Hosting Providers ▪ Cheap & Deep High Performance ▪ Archiving databases
ProphetStor	Block	Thin provisioning, dynamic caching	Enterprise, CSP	No	OpenStack, VMware, Hyper-V	▪ Auto provisioning of heterogeneous storage. ▪ Traffic analytics and elastic resource control ▪ Local and remote DR for optimal RTO and RPO
Red Hat Inktank Ceph	Block and Object	Erasure coding, caching, thin provisioning	Enterprise, private cloud, CSPs	Yes	OpenStack	▪ Cloud storage (object and block) ▪ Cold and Archival storage
Red Hat Storage (GlusterFS)	File and Object	Encryption (at rest)	Enterprise, private cloud, CSP	Yes	AWS, NFS, CIFS, HDFS, S3	▪ Content storage (file) ▪ Big data analytics ▪ Backup storage
SwiftStack	Object	Erasure Coding	Enterprise, private cloud, CSP	Yes	OpenStack, AWS	▪ Cloud storage ▪ Archiving, Backup, DR ▪ Content repository, distribution
VMware Virtual SAN	Block	Thin provisioning, auto-tiering, replication, policy-based management (QoS)	Enterprise and Mid-market	No	VMware	▪ VDI ▪ Tier 2 production, Staging Test/Dev ▪ DR Target

Information provided by ISV. Not verified by Intel.

Overview Table: Intel Software Products for Storage

ISV	What they do	Target Customers	GTM: SW or Solution
Intel® Cache Acceleration Software	Cost-effective way to quickly improve application SLAs without modification to the application or storage architecture. Caches the most active data on Intel Data Center SSDs.	Enterprise servers and workstations	Software, sell through OEMs, distis, VARs, SIs Solution, sell with Intel Data Center SSDs
Intel® Enterprise Edition of Lustre* Software	Distributed, parallel storage software purpose-built for very high performance and scalability	Enterprises; academic institutions, government R&D; manufacturing; energy; earth sciences	Subscription-based support of value-added software via storage OEMs and system integrators

Storage Usage Models & ISV Support



AMPLIDATA

Target Customers:
Cloud Service Providers and Large Enterprises
Life Sciences, M&E, Video Surveillance, R&D, Oil & Gas, Government

Storage Interfaces:
HTTP/REST (S3 compatible), File, Block

Efficiency technologies:
Low power – Optimized for Intel-based COTS HW
BitSpread –15 nines durability with significantly less capacity overhead than RAID + replication
BitDynamics – Continuous data integrity audit and self healing
GeoSpread – Disaster prevention without replication
Dynamic non disruptive changes and upgrades – no data migration

Geos supported:
Americas

Distis (where product can be purchased):
Amplidata

Training & Support offered:
Professional services & training

Pricing:
Software only capacity-based licensing

Links:
www.amplidata.com

Brief Overview Statement:

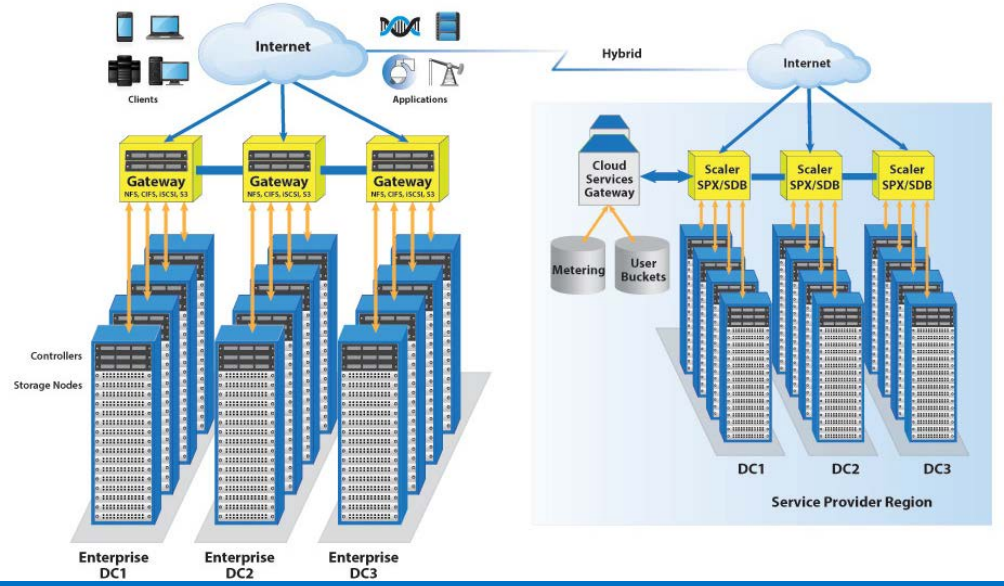
Amplidata offers object-based software defined storage software that enables a massively scalable mainstream storage solution. New Himalaya software in two versions – Service Provider/OEM edition and Enterprise edition. Runs on Intel-based COTS hardware. Offers unbreakable durability at greater than 15 nines, up to zettabyte scalability, and operates at a significantly lower cost than traditional storage systems.

Feature/Capability Highlights (top 3):

- Dynamic 3D elastic scalability to easily adapt to growing user requirements
  - Global namespace (# objects) and accessibility (service provider edition)
  - Capacity by adding one or more storage nodes
  - IO throughput by adding any number of high performance controller nodes
- Non-disruptive changes or upgrades – dynamic rebalancing without data migration
- Secure multi-tenant support with the flexibility to meet multiple SLAs

Storage Usage models:

- Tier 2+ (consolidate multiple tiers into one including disaster prevention)
- Archive and Backup



* Other brands and names are the property of their respective owners

Cloudian HyperStore

Target Customers:
Medium to large enterprises and regional cloud service providers

Storage Interfaces:
Object and File

Efficiency technologies:
Compression, encryption, tiering, erasure coding

Geos supported:
All

Distis (where product can be purchased):
Storage distributors and VARs

Training & Support offered:
Professional Services
Cloudian Certified Engineer Training

Pricing:
Capacity-based Pricing

Links:
Resources: http://www.cloudian.com/resources/#wp

Brief Overview Statement:

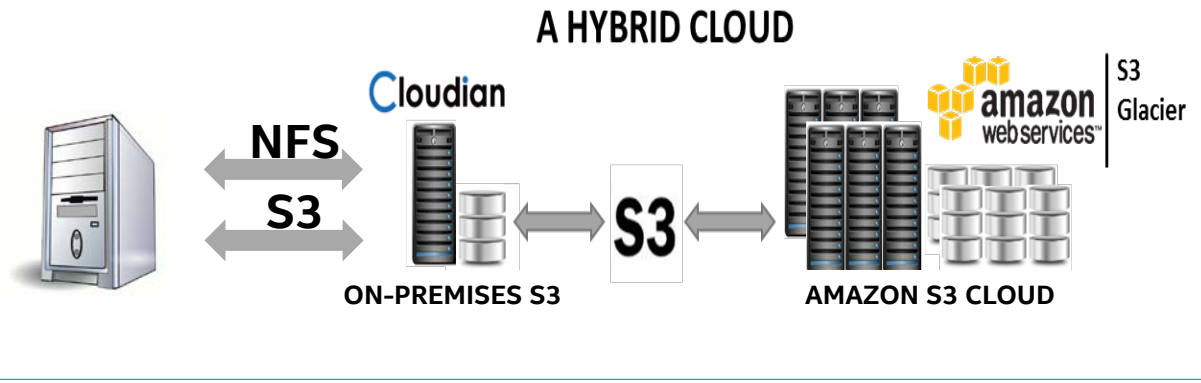
Object storage software designed to be run behind the firewall within the corporate datacenter on commodity X86 based hardware. This provides an Amazon S3 look and feel as a private storage cloud with infinite scale. All S3 applications run on premise as if they were interfacing directly to Amazon's cloud.

Feature/Capability Highlights (top 3):

- 100% Amazon S3 API compliance
- Multi-tenant, multi-region, multi-datacenter
- Data tiering to Amzon S3 and Glacier

Storage Usage models (top 3):

- Enterprise File Sync and Share
- OpenStack/CloudStack storage
- Cold storage/archival



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Maxta Storage Platform

Target Customers:
- Enterprises, Small and medium business, Public/Private Cloud service providers

Storage Interfaces:
- NFS, VM-centric storage

Efficiency technologies:
- Dynamic Auto Tiering, Snapshots, Zero-copy clones, Capacity optimization (Thin Provisioning, Compression and De-duplication), and Flash optimized

Geos supported:
- Americas, EMEA and APJ

Distis (where product can be purchased):
- Value Added Resellers and Distributors

Training & Support offered:
- Product Training (Web conference and/or face-to-face) and Hands on Labs

Pricing:
- Based on Raw Capacity and includes all storage features
- Perpetual and Subscription pricing options

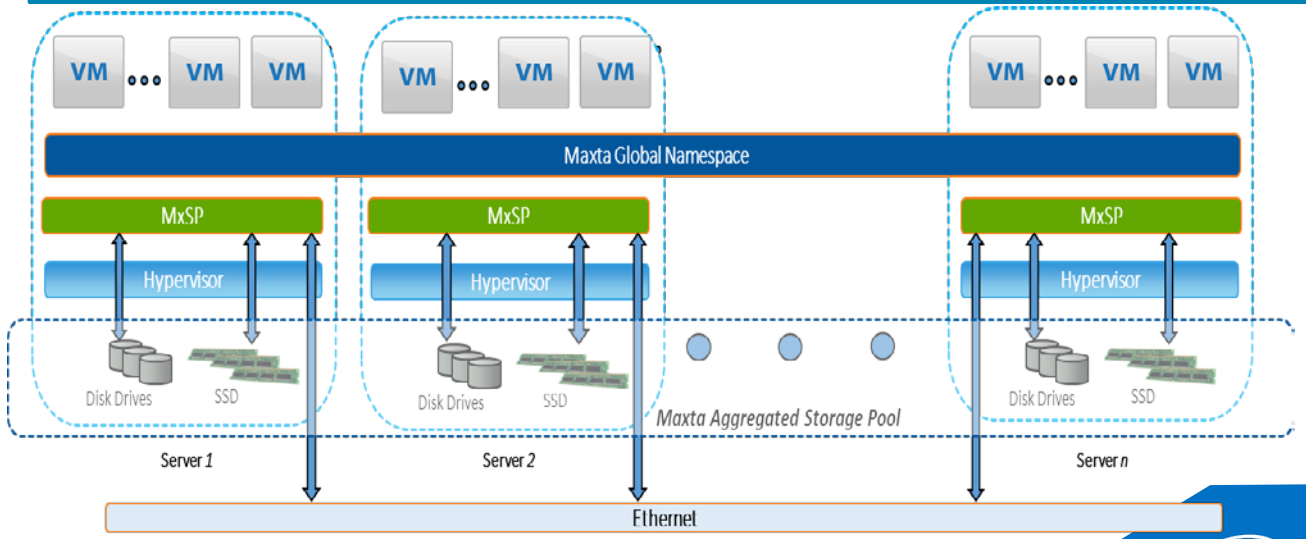
Links:
- http://www.maxta.com/resources

Brief Overview Statement:

Maxta's groundbreaking software-defined, VM-centric storage platform dramatically simplifies IT, while delivering significant cost savings. It enables the convergence of compute and storage on standard servers, leveraging server-side flash and disk drives to optimize performance and capacity. Maxta enables shared storage with enterprise-class data services and full scale-out without performance degradation.

Feature/Capability Highlights (top 3):
- Data Integrity and Dynamic Auto Tiering
- Snapshots and Zero-copy clones, Capacity
- Replication and High Availability

Storage Usage models (top 3):
- Primary Storage
- Virtual Desktop Infrastructure
- Remote Office and Branch Office



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MPSTOR Orkestra

Target Customers:
For Integrators, Enterprises or CSPs deploying storage in the datacenter or public/private cloud.

Storage Interfaces:
Block/File/Object over FC/SAS/Eth and FCOE fabrics

Efficiency technologies:
Snapshot, Thin Provisioning, Replication, Block to Object Back Up. Media Tiering, Media caching

Geos supported: USA, EMEA, ASIA

Distis (where product can be purchased):
Please consult sales@mpstor.com

Training & Support offered:
3 support packages and free online webinar based training.

Pricing:
Storage is priced per managed storage device (i.e HDD).

Links:
- http://mpstor.com/index.php/media-center-mainmenu/white-papers

Brief Overview Statement:

MPSTOR's software integrates in a single product scale out automated provisioning of Storage, Compute and Networking for OpenStack and VMWARE. MPSTOR solves the 6 big storage issues for datacentres of resiliency, diverse workload management, Capex&Opex, storage security, scalability and multiple consumer types.

Feature/Capability Highlights (top 3):
- Full featured Block, File and Object store across multiple fabrics and media types
- Single downloadable distribution for Open platforms
- Single distribution integrating storage, OpenStack, and plug-ins for multiple hypervisors

Storage Usage models (top 3):
- Elastic Block & Object stores for public or private clouds
- Video storage
- SMB Storage

* Other brands and names are the property of their respective owners

Nexenta Systems
NexentaStor v4.1

Target Customers:
SMB to Large Enterprises, Cloud Service Providers, HPC, Healthcare, State & Local Govt, ROBO, Education, Healthcare, Financial Services

Storage Interfaces:
Unified Block & File (NFS, CIFS/SMB, iSCSI, FC)

Efficiency technologies:
Inline de-dup, compression, advanced caching, ZFS-based data integrity

Geos supported:
NA, EMEA, APJ

Distis (where product can be purchased):
Ingram, TechData, et.al.

Training & Support offered:
Onsite training, regional training, Gold (9/5) and Platinum (24/7) Support

Pricing:
Priced per TB of raw capacity from 16TB – 1PB

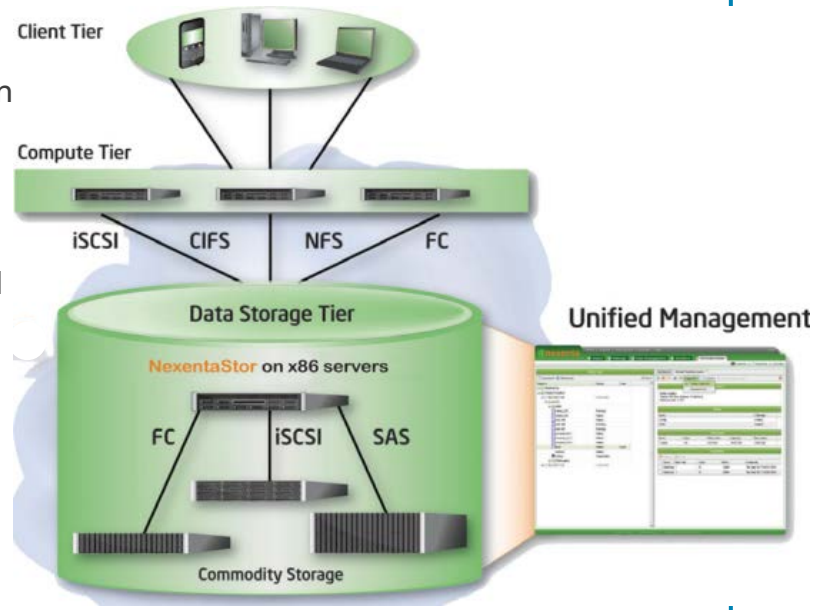
Links:
- Competitive comparison: http://blogs.gartner.com/gunnar-berger/the-real-cost-of-vdi-storage/
- Case Studies: http://nexenta.com/company/resources/case-studies
- White Papers: http://nexenta.com/company/resources/whitepapers
- Partner HW Solutions: http://nexenta.com/partners/nesa-program

Brief Overview Statement:

Software Defined Storage platform delivering Enterprise-class, High Performance Storage
Full-featured NAS/SAN software platform that can be installed on standard commercial hardware with capabilities that exceed the capabilities of legacy storage systems. NexentaStor is the leading hardware-independent Open Storage solution with a ZFS-based architecture. The key benefits of software-defined storage over traditional storage are increased flexibility, automated management, and cost efficiency.

Feature/Capability Highlights (top 3):

- Unified file and block services (NFS, CIFS/SMB, iSCSI, FC) unlimited snapshots and clones, inline data reduction with high performance, asynchronous replication
- Based on open source ZFS, with specific enhancements to add scalability, availability, and durability
- Very high performance from advanced caching – read I/O mostly served from DRAM, then SSD, then backend disk



Storage Usage models (top 3):

- Cloud Hosting Providers
- Cheap & Deep High Performance
- Archiving databases

ProphetStor Federator SDS

Target Customers: Enterprises, cloud service providers

Storage Interfaces: Block (iSCSI & FC)

Efficiency technologies:
Unified policy-based provisioning for different tiers of storage from different vendors, traffic modeling, dynamic caching, block-based disaster recovery

Geos supported: North America and APAC

Distis (where product can be purchased): Authorized reseller and system integrator

Training & Support offered: yes

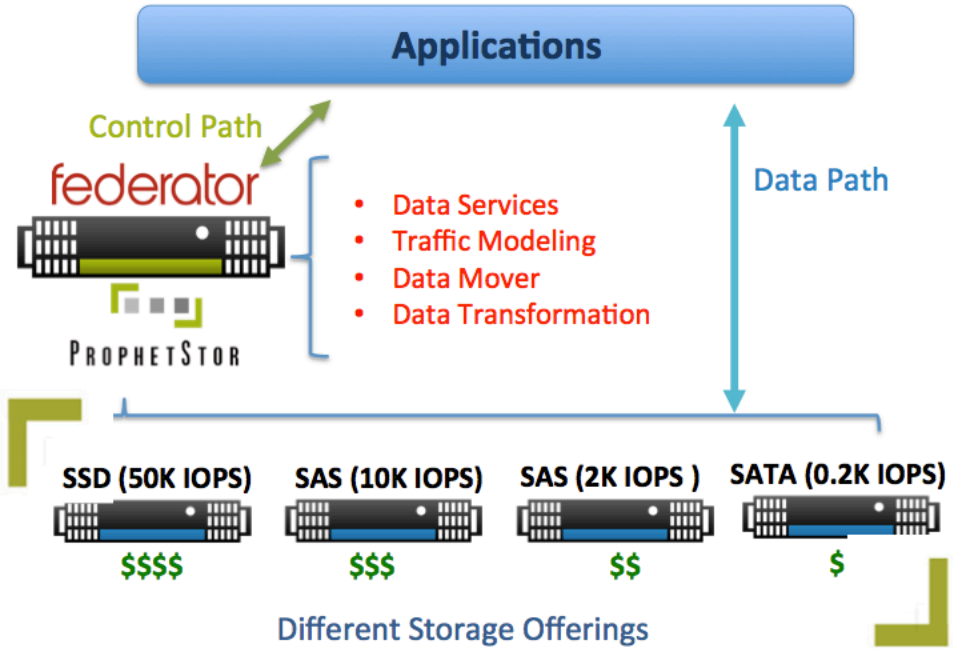
Pricing: Capacity based subscription and perpetual license

Links:
- http://www.prophetstor.com/file/FINAL_Federator_SDS_Datasheet_20140416.pdf
- HCL for Ubuntu for Federator: http://www.prophetstor.com/file/FINAL_Federator_SDS_Datasheet_20140416.pdf
- Federator connects to many storages through their Cinder driver listed here: https://wiki.openstack.org/wiki/CinderSupportMatrix

Brief Overview Statement:
A federated management framework including data services and analytics that enable cloud service providers and enterprises to reduce cost and improve data agility and time to value.

Feature/Capability Highlights (top 3):
- Unified policy-based provisioning for different tiers of storage from different vendors
- Traffic modeling, dynamic caching
- Block-based backup for rapid disaster recovery

Storage Usage models (top 3):
- Cloud computing automated provisioning and tiering
- Performance optimization by traffic analytics and elastic resource control
- Local and remote block-level disaster recovery



* Other brands and names are the property of their respective owners

Red Hat Storage

Target Customers:
Large enterprises
Private and public cloud providers
Service providers

Storage Interfaces:
Scale-out File storage (Hi-Perf, NFS, CIFS, HDFS), with optional object interface

Efficiency technologies:
Encryption (at rest)

Geos supported:
Global

Distis (where product can be purchased):
Direct and channel

Training & Support offered:
- Virtual sales training (1.5 hrs)
- Virtual SE training (17.5 hrs, with hands-on virtual servers)
- Reference architectures and technical webinars
- Worldwide support

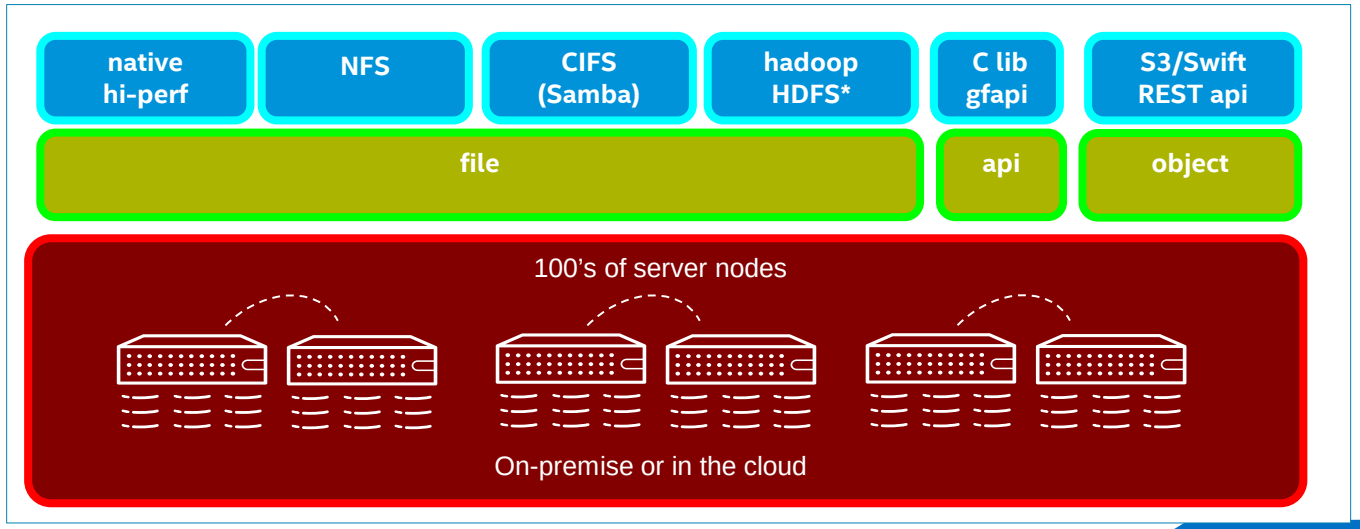
Pricing:
Priced per server

Links:
http://www.redhat.com/promo/liberate/ *(general collateral)*
http://www.redhatgrid.com/storage-test-drive/partnercompany *(co-branded campaign site)*

Brief Overview Statement:
Red Hat Storage connects clusters of standard x86 servers into a single pool of storage. Meets criteria for scale-out storage, with a shared nothing architecture and the ability to scale capacity independently from performance. Commercially supported version of GlusterFS community project.

Feature/Capability Highlights (top 3):
- Data protection (against server and site failures)
- Seamlessly extensible and self-healing
- Ships as ISO image for on-premise use or as an Amazon AMI for public cloud use

Storage Usage models (top 3):
- Content storage (large files, including video, audio, image, scientific, geospatial)
- Big Data analytics (Hadoop, Splunk, etc.)
- Backup storage



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Inktank by Red Hat
Red Hat Inktank Ceph Enterprise

Target Customers:
Large enterprises
Private and public cloud providers
Service providers

Storage Interfaces:
Object and block storage

Efficiency technologies:
Erasure coding
Cache tiering

Geos supported:
Global

Distis (where product can be purchased):
Direct and channel

Training & Support offered:
- Virtual, public, and private training available
- Reference architectures and technical webinars
- Offices in North America, support available worldwide

Pricing:
Priced per TB (capacity model)

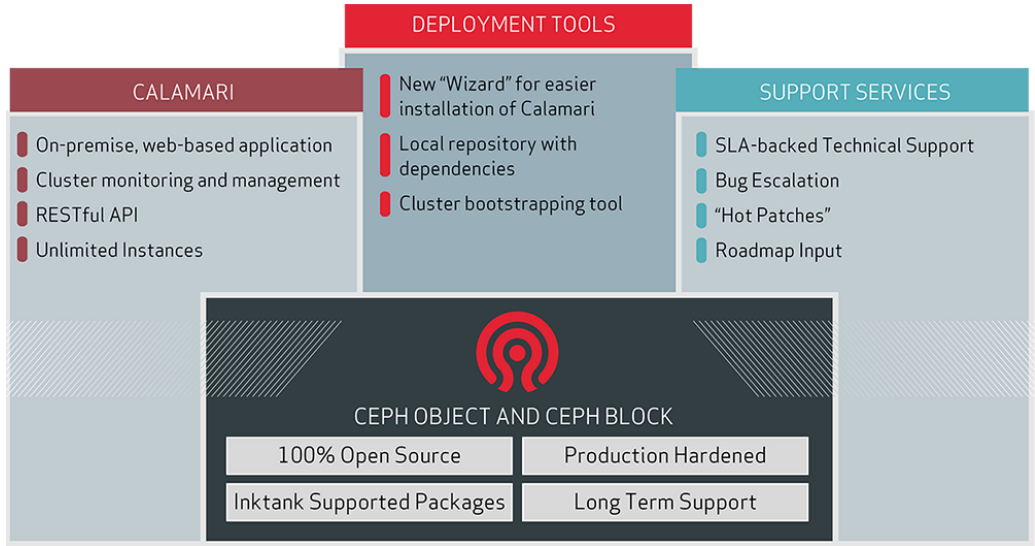
Links:
- Inktank Ceph Enterprise
- Resources and Professional Services
- Inktank University

Brief Overview Statement:

Expanded now beyond the cloud to cold storage and archiving, Inktank Ceph Enterprise™ is a solution combining the most stable version of Ceph for object and block storage with a Ceph management platform, enhanced integration tools, and support services: everything needed to confidently run production Ceph clusters at scale.

Feature/Capability Highlights (top 3):
- Erasure coding (for archiving and cold storage)
- Cache tiering (for hot-to-cold data management)
- Ceph management platform (Calamari) (for monitoring and management)

Storage Usage models (top 3):
- Cloud storage
- Cold storage
- Archival storage



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SwiftStack, Inc.

Target Customers:
Company size doesn't matter - large data footprints do. Enterprises looking for private cloud storage, archiving, DR or content distribution and management that fall in all industries. Web 2.0 companies to support web and mobile apps is a shoe-in.

Storage Interfaces: Object, File

Efficiency technologies: Erasure Code, Replication

Geos supported: All

Distis (where product can be purchased): SwiftStack

Training & Support offered:
Yes, both on OpenStack Swift and also on SwiftStack (24x7 critical)

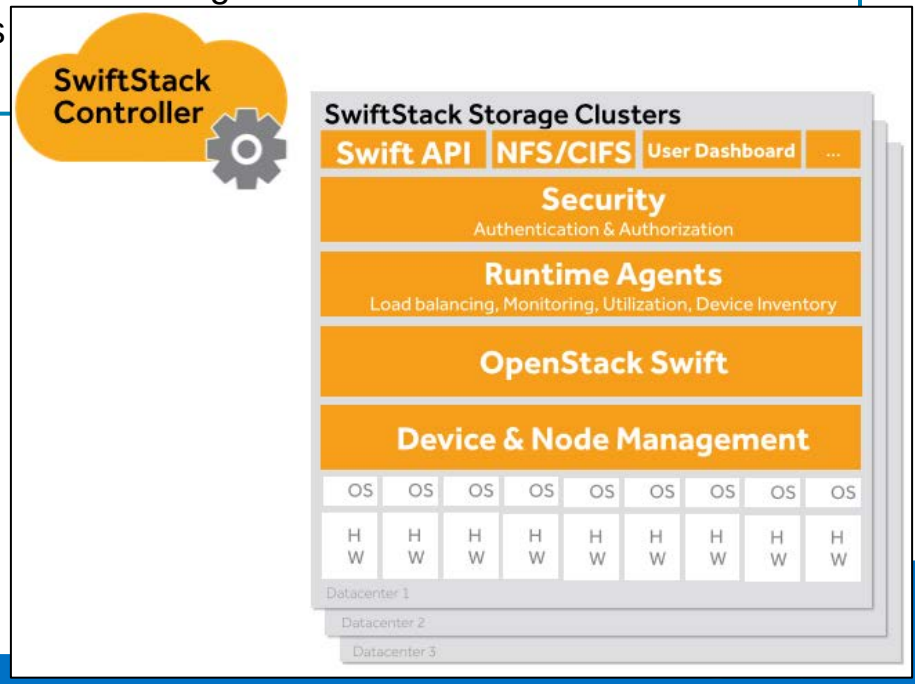
Pricing:
Yearly subscription for Usable TB under management

Links:
- Concur:https://swiftstack.com/static/global/media/CaseStudy_Concur_Final.pdf
- Disney Interactive: http://venturebeat.com/2013/09/10/why-disney-interactive-dug-into-a-few-open-source-toolboxes-for-its-cloud/
- Seagate Kinetic Platform in Action: https://www.youtube.com/watch?v=-TTflA2IMr8
- HP Helion: https://www.youtube.com/watch?v=XPUnRB9LIH8
- Fred Hutchinson Cancer Research Center: https://www.youtube.com/watch?v=ImrYe0CBL-E#start=0:00;end=25:06;cycles=-1;autoreplay=false;showoptions=false
- eBay, Pac-12 and HP Helion: https://swiftstack.com/blog/2014/06/25/ebay-pac12-and-hp-helion-use-swiftstack-2-0/

Brief Overview Statement:
SwiftStack powers enterprise customers with a durable, massively scalable, software defined object storage platform that seamlessly integrates with existing IT infrastructure and manages any standard hardware across multi-geographic data centers.

Feature/Capability Highlights (top 3):
- Massive uninterrupted scalability
- Simplicity of management:
- Seamless integration into the enterprise

Storage Usage models (top 3):
- Web and mobile application asset storage
- Private Cloud deployments
- Backup, archiving, DR



VMware Virtual SAN

Target Customers:
Enterprise, Commercial, and Mid-market – including Service Providers

Storage Interfaces: Block

Efficiency technologies:
Thin provisioning, auto-tiering, replication, storage policy-based management (QoS), load balancing

Geos supported: all geos

Distis (where product can be purchased):
All Distis where channel partner currently transacts VMware products

Training & Support offered:
Please check VMware Partner University for VSAN Sales, Technical Sales, and Post-Sales trainings

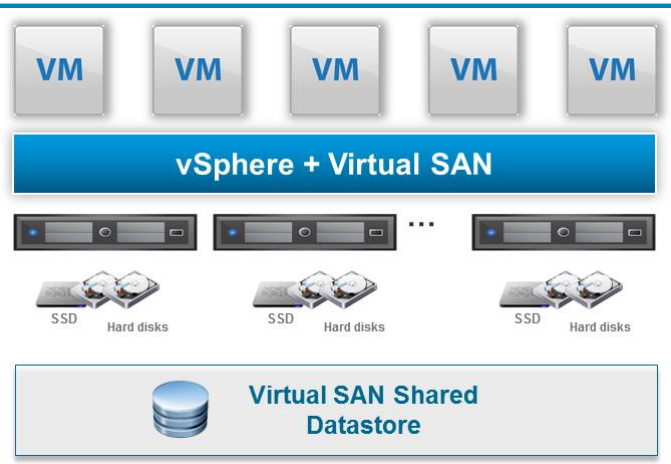
Pricing:
- Stand alone Virtual SAN priced per CPU
- Virtual SAN for Desktop priced per CCU (concurrent users)
- Included in the Horizon 6 Advanced and Enterprise Editions – priced per Named User or CCU

Links:
- Compatibility Guide Page: www.vmware.com/go/virtualsan-hcl
- Product Page: http://www.vmware.com/products/virtual-san/
- Hands-On-Lab: http://vmware.com/go/vsanlab
- 60-day Free Evaluation: http://www.vmware.com/go/try-vsan-en
- Community: https://communities.vmware.com/community/vmtn/vsan
- VMware Infrastructure Planner Tool: vip.vmware.com/salessignup

Brief Overview Statement:
Virtual SAN is a new software-defined storage tier for vSphere, and it is a hypervisor-converged storage embedded in the vSphere kernel. By clustering server-side hard disks and solid state drives (HDDs and SSDs), Virtual SAN creates a flash optimized, highly resilient shared datastore designed for virtual environments.

Feature/Capability Highlights (top 3):
- Radically simple VM based policy-driven storage (no more LUNs/Volumes & no RAID config)
- High Performance (2M IOPS from 32 clusters) with granular and linear scaling
- Lowers TCO by as much as 50% compared to traditional storage. Runs on standard x86 servers and easy to provision and manage

Storage Usage models (top 3):
- Virtual Desktop (VDI) workload
- Tier 2 production and Staging Test/Dev
- DR Target



Intel® Cache Acceleration Software

Brief Overview Statement:

Cost-effective way to quickly improve application SLAs without modification to the application or storage architecture

Storage Usage Models (top 3):

- Big Data
- Virtualization
- Database

Target Customers/Segments (end user):

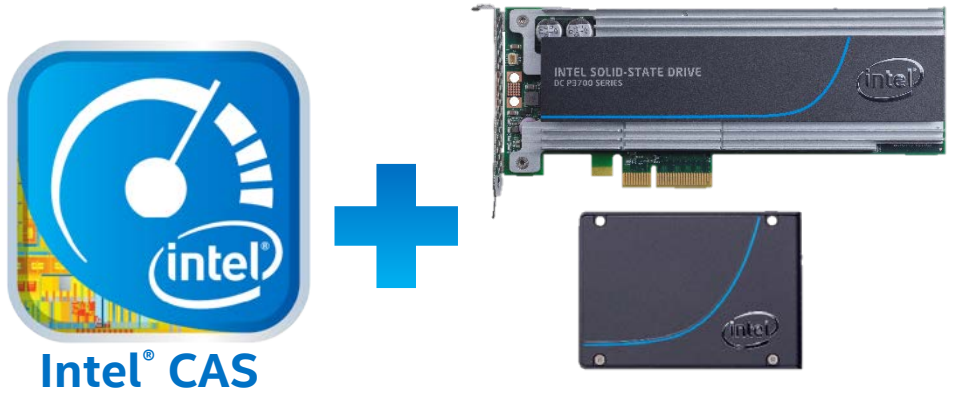
- Any I/O bound application including:
  - Database (e.g., Microsoft SQL, Oracle, MySQL)
  - Business intelligence, sales analytics (SAP, SAS)
  - Customer CRM, marketing analysis (e.g., NAV)
  - Business process, financial analysis, logistics

Feature/Capability Highlights:

- Selective Optimized Caching
- SSD Performance without Migration Cost
- Built in Data Integrity

Hardware Options:

- Any standards based server
- Any Intel® Data Center SSD



Intel® CAS

Intel® Cache Acceleration Software

Training/Support Model:

www.intel.com/CAS

- Free 30 day trials available on-line
- Free I/O Assessment tool on-line
- Available through distributors and resellers worldwide
- Support available through Intel call centers

Intel® Enterprise Edition for Lustre* software

Target Markets and Customers:
Government research, academic, large scale enterprises with technical applications, energy exploration, earth sciences, weather and climate, manufacturing
Private and public cloud providers
Service providers

Storage Interfaces: Very fast and highly scalable scale-out parallel storage with block interface to object-based data

Efficiency technologies:
Unique software 'connectors' that lower the barrier to adoption for Hadoop MapReduce applications; tiered storage (HSM) framework for integration with leading ISV solutions; intuitive UI simplifies management complexity and raised storage productivity

Geos supported: Global

Distribution: Global OEM and integrator partner network

Training & Support offered:
- Virtual, public, and private training available for partners & end users
- Reference architectures and technical webinars

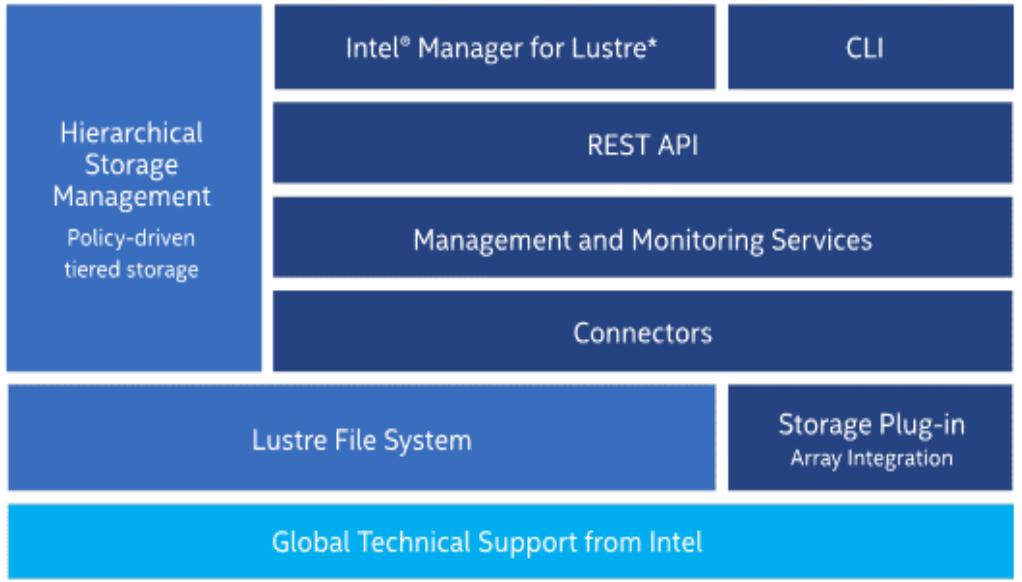
Pricing: Annual subscription-based pricing based on number of object storage servers

Links:
- http://lustre.intel.com
- Selling tools and collateral available via IREF
  https://iref.intel.com/GetDoc.aspx?RefLibObjectID=0902007c80034777&Latest=True

Brief Overview Statement:
Purpose-built for high performance computing, Intel® EE for Lustre adds vital features not found in standard Lustre software. These features help lower management complexity and cost – and expose interfaces that can be used for further integration. The software 'connectors' allow HPC users to more easily work with Hadoop for analytics.

Feature/Capability Highlights (top 3):
- Massive throughput and scaling supporting virtually unlimited number of clients
- Intel® Manager for Lustre UI simplifies management complexity
- Unique software 'connectors' for Hadoop MapReduce on HPC

Storage Usage models (top 3):
1. High throughput scale-out parallel storage designed for high performance computing
2. Hadoop MapReduce workloads targeted for deployment on HPC class resources
3. Tiered storage for data intensive computing configurations coupling Lustre & ISV tools



Summary

Expansive Data Growth	*Breaks traditional storage models, but creates new opportunities*
Intel Components	*The foundation for your storage solutions*
ISV Storage Software	*Deliver innovative solutions to market, paving the way for SDS tomorrow*

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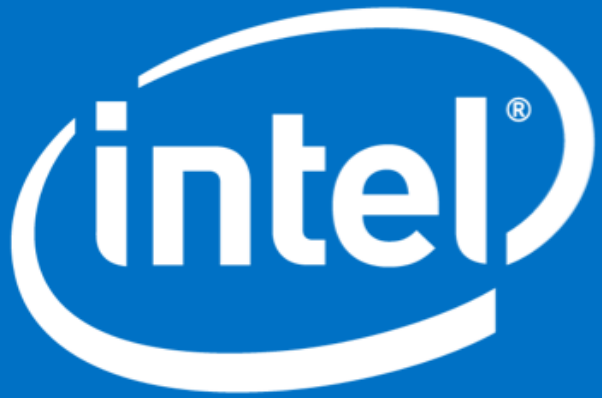
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