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HPE Scalable Storage with Intel® Enterprise Edition for Lustre*

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HPE Apollo 4000 Family: Early Innovation to Market Leadership

2014:
Leading innovation

2015:
Extending HPE leadership in storage servers and emerging solutions

Apollo 4000 Storage Server Family

SL4540 Gen8

Apollo 4200
(2U / 28 LFF
or 50 SFF)

Purpose built as
Enterprise Bridge to
Scale Out Storage

Apollo 4530
(4U / 3 nodes x 15 LFF)

Purpose built for
Hadoop / Big
Data

Apollo 4510
(4U / 1 node x 68 LFF)

ITPRO RECOMMENDED
www.itpro.co.uk

Purpose built for
Object Storage

Apollo 4520
(4U / 2 nodes x 46 LFF)

Purpose built
Clustered
Storage

VERTICA   HPE Helion   lustre
Microsoft

ceph   SCALITY   openstack CLOUD SOFTWARE   hadoop   intel

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HPE Apollo 4520: System Details

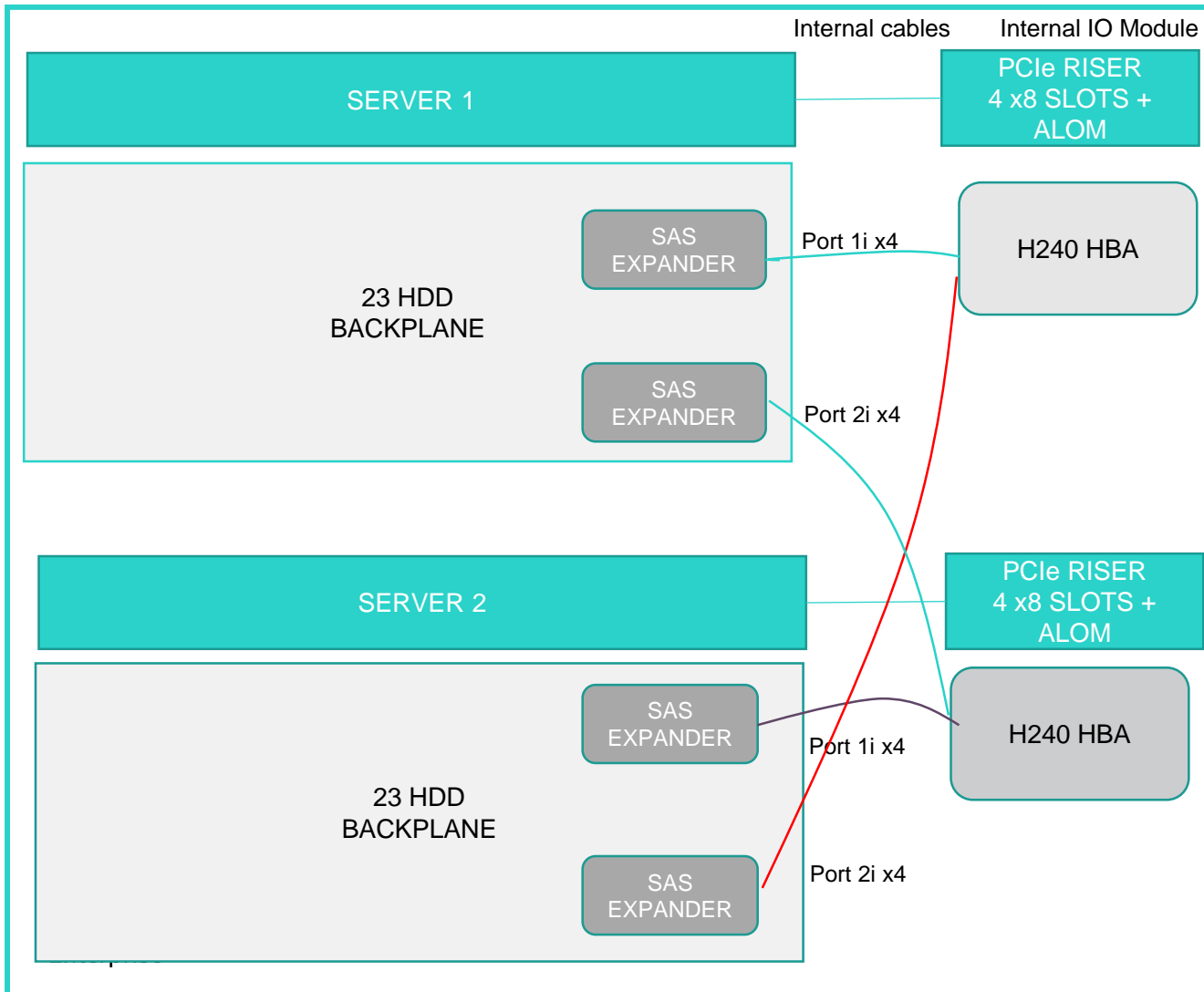Apollo 4520: Purpose-built for HPC Storage

Feature	Server tray details
Processors	Up to 2 **Intel® Broadwell Xeon E5-2600v4** processors
Memory	**16** DIMMs (8 per processor), registered, DDR4(1866/2400) w/ ECC
Drive Support	• Apollo 4520: 46 LFF SAS(12 Gb)/SATA(6 Gb) drives in 2 server • Includes support of SFF drives in converter • SAS expander • Support for Dual M.2 SSDs
Network	Dual-Port 1GbE with FlexibleLOM support **Support for EDR InfiniBand and Omni-Path planned**
Expansion	Up to **4 Low Profile PCIe Gen3 Slots** **Support for x16 HPC I/O module planned**
Display	SUV port, Video, Power/Health/UID Buttons and LEDs
Management	iLO 4 + one optional dedicated iLO NIC port
Other Features	**4U chassis height**, hot-plug redundant fans, HP Gen9 Flex Slot power supplies (AC and DC versions), Support for dual M.2 SSDs
JBOD Expansion	Support to daisy chain D60X0 JBODs

New features denoted with green text

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Unique Failover Capability Built In to Apollo 4520
Cluster-in-a-Box Configuration

Internal cables   Internal IO Module

SERVER 1	PCIe RISER 4 x8 SLOTS + ALOM

23 HDD BACKPLANE

SAS EXPANDER   Port 1i x4   H240 HBA

SAS EXPANDER   Port 2i x4

SERVER 2	PCIe RISER 4 x8 SLOTS + ALOM

SAS EXPANDER   H240 HBA

Port 1i x4

23 HDD BACKPLANE

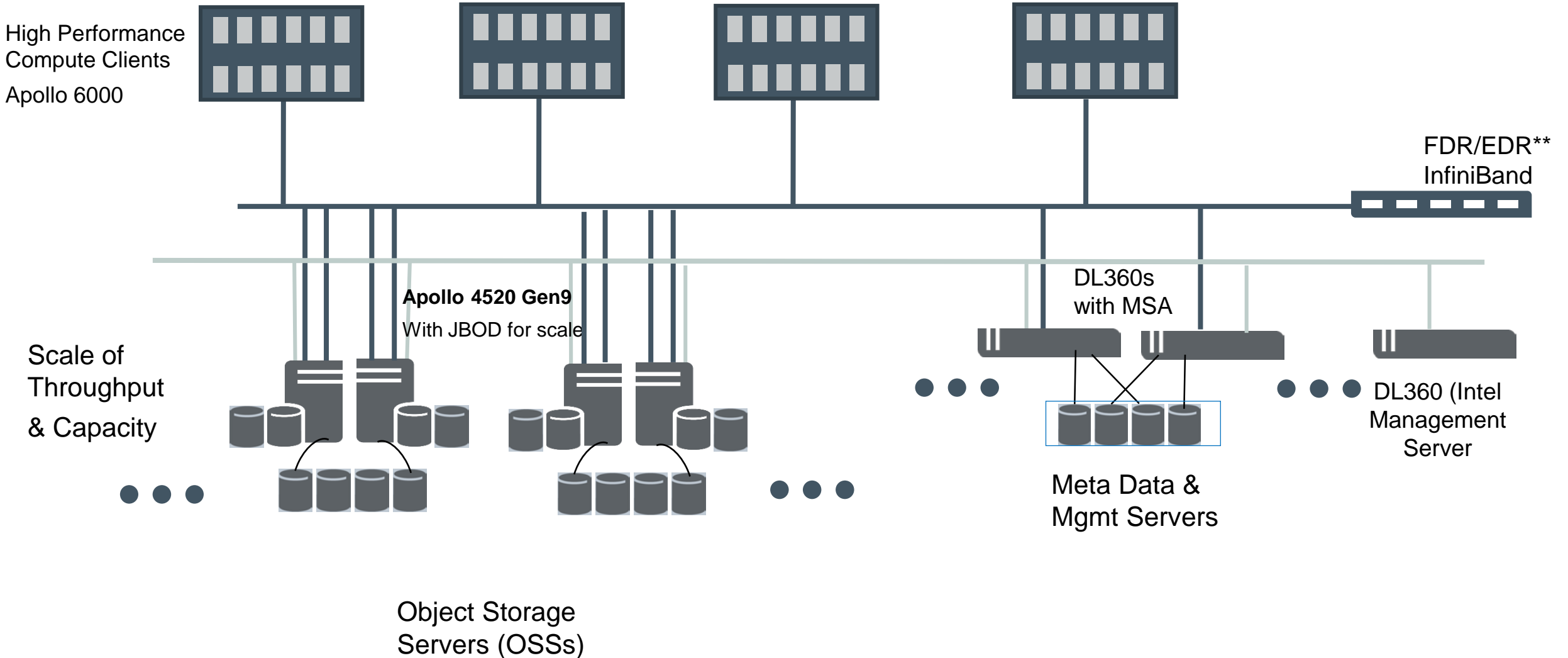SAS EXPANDER   Port 2i x4

- All mini SAS cables are internal

- Option for single or dual controllers per I/O module, depending on performance requirements

- Each server tray has access to all 46 LFF drives

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Enterprise Lustre Storage Environment Architecture

Scale Out Configuration

High Performance Compute Clients

Apollo 6000

FDR/EDR** InfiniBand

Apollo 4520 Gen9

With JBOD for scale

DL360s with MSA

Scale of Throughput & Capacity

DL360 (Intel Management Server

Meta Data & Mgmt Servers

Object Storage Servers (OSSs)

** Future offering

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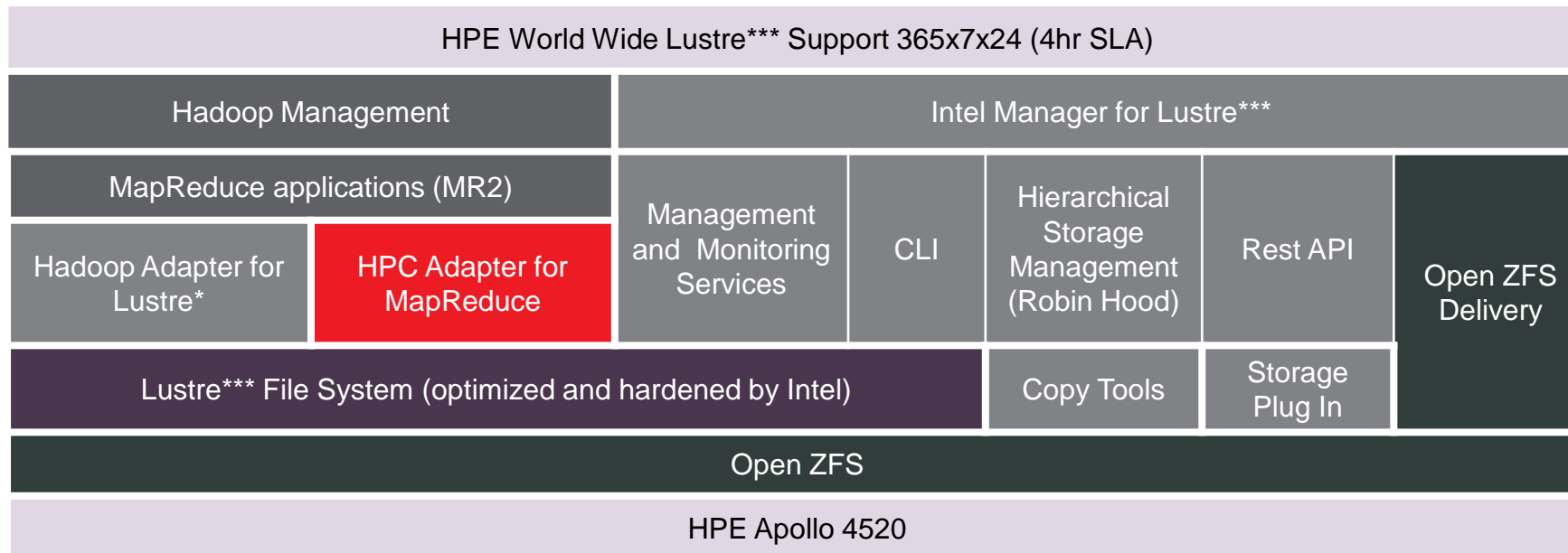
HPE Scalable Storage with Intel EE for Lustre*

- **Highly Available Cluster in a Box**
- **Comes with deployment services for installation of Intel® Enterprise Edition for Lustre***
- **Delivered in an "Appliance Like" Manner**
- **Available in Various Configurations**

Apollo 4520

HPE World Wide Lustre*** Support 365x7x24 (4hr SLA)					
Hadoop Management	Intel Manager for Lustre***				
MapReduce applications (MR2)	Management and Monitoring Services	CLI	Hierarchical Storage Management (Robin Hood)	Rest API	Open ZFS Delivery
Hadoop Adapter for Lustre* / HPC Adapter for MapReduce					
Lustre*** File System (optimized and hardened by Intel)		Copy Tools	Storage Plug In		
Open ZFS					
HPE Apollo 4520					

Open source software

Intel value-added software functionality

Note: Hadoop 'connector' supports Cloudera Distribution for Hadoop 5.0.1 and Apache™ Hadoop® 2.3

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