



HPE M-SERIES SWITCHES FOR HPE NIMBLE STORAGE dHCI, ACCELERATED BY NVIDIA MELLANOX SPECTRUM



What is HPE Nimble Storage dHCI?

HPE Nimble Storage dHCI is an intelligent platform with the flexibility of converged and the simplicity of HCI. It disaggregates compute and storage and integrates hyperconverged control to give enterprises simple infrastructure management on a flexible architecture. Built with HPE ProLiant and HPE Nimble Storage, this platform provides the flexibility to scale compute and storage independently for unpredictable growth and the data resiliency and performance needed for business-critical apps.

With six-nines measured availability, customers no longer have to worry about constantly fighting IT fires such as outages or application disruptions and can instead focus on growing their business. Low-latency performance enables even large virtual machines to be deployed safely, and efficiency is maintained even for unpredictable growth with independent scaling of compute and storage capacity. The ability to consolidate more VMs per HPE Nimble Storage dHCI server node lowers virtualization costs, while the ability to manage HPE Nimble Storage dHCI from vCenter allows users to focus less on managing infrastructure and more on managing their business.



HPE Nimble Storage dHCI

Why M-Series Ethernet Switches for HPE Nimble Storage dHCI?

Switching solutions in HPE Nimble Storage dHCI environments must accommodate both compute and storage traffic and therefore require high-bandwidth, non-blocking, and consistently low latency. M-series offers an incredibly diverse and attractive feature set suited for the HPE Nimble Storage dHCI solutions. It provides shared buffer space to balance port speed and throughput capabilities to manage fairness, a unique half-width form factor that maximizes rack space, and flexible port count choice. Powered by NVIDIA® Mellanox® Spectrum® switch silicon, this switch architecture is ideal for new, modern workloads like software defined storage (SDS), Hyperconverged Infrastructure (HCI) and Cloud computing environments.

The Mellanox Spectrum® Open Ethernet family includes a broad portfolio of fixed form factor switches, ranging from 16 through 128 ports and with speeds from 1Gb/s to 100Gb/s, allowing the construction of purpose-built data centers at any scale with any desired blocking ratio.



HPE SN2010M

Top 7 Reasons Why M-Series for HPE Nimble Storage dHCI

1	Cost-Optimized	Reduce upfront costs with ½ width and ½ port-enabled options Optimize Cost Per/Port with Fewer Unused/Stranded Ports
2	Form Factor & Scalability	Deploy (2) half-width SN2010M or (2) full-width SN2410M for full redundancy in a rack unit
3	Flexible Pricing	Flexible purchase options (CapEx or OpEx)
4	Investment Protection	Support for commonly connected 10, 25, 40 and 100GbE spanning multiple generations of server/storage solutions, optimized for HPE Nimble Storage iSCSI traffic
5	Storage Optimized	Optimized for Block storage traffic Flexible 16MB Shared Buffer (Spectrum) and Flexible 42MB Shared Buffer (Spectrum-2)
6	Performance	High Performance (up to 100GbE), Ultra-low-latency (300 nanoseconds), Zero-Packet-Loss Most switch ASICs average 800-1200ns latency with packet loss*
7	Support	Nimble Support takes first support call for HPE Nimble Storage, Nimble Storage dHCI, HPE ProLiant DLs and HPE M-series Ethernet Switches <ul style="list-style-type: none"> > Comprehensive, proactive support > Dedicated experts > Centralized management and reporting > Frees up IT resources > Rapid incident resolution



SN2410M

*Tolly Report, March 2016 "Mellanox Spectrum vs. Broadcom StrataXGS Tomahawk 25GbE & 100GbE Performance Evaluation Evaluating Consistency & Predictability"

See how easy it is to select the M-series switch when configuring your dHCI solution:

OCA Config 1 > Nimble Storage dHCI Base Config #1

This is a single solution configuration.

HPE Nimble Storage dHCI

Please select one of the following options to get started:

Configure HPE Nimble Storage dHCI

Configure HPE Nimble Storage dHCI as an HPE HCI specialist

Please select the desired size of dHCI configuration

Nimble External Storage Arrays

ProLiant Servers

Switches

Refer the table for some additional notes:

Remarks:

Nimble Base Array must be selected
Nimble Base Array Networking Adapter m
Min 2 / Max 20 ProLiant DL360 or DL380 s
Select Server Network PCIe Adapter. (Min
Min 2 Switches required to select.

The base configurator is driven by sele
configuration, the servers / storage / switc
by selecting the model from the Compone

SERVERS:

Each DL server requires a pair of internal e

This is a single solution configuration.

HPE Nimble Storage

Refer the table for some addi

Please select one of the following options to get started:

Please select the desired size of dHCI configuration

Nimble External Storage Arrays

ProLiant Servers

Switches

Select Switch Block Type

(Q9E63A) HPE SN2010M 25 GbE 18SFP28 4QSFP28 Half Width Switch ▼

(JH398A) HPE FF 5940 4-Slot Switch

(R0P78A) HPE SN2010M 18SFP28 4QSFP28 C2P TAA Swch

(Q9E63A) HPE SN2010M 25 GbE 18SFP28 4QSFP28 Half Width Switch ←

(Q2F23A) HPE SN2100M 100 GbE 16QSFP28 Half Width Switch

(Q4M28A) HPE SN2100M 100 GbE 16QSFP28 Switch

Remarks:

The base configuraton is configuration, the servers , by selecting the model from

SERVERS:

Each DL server requires a at the DL server level of th

STORAGE:

The storage configuration NOTE: Once the menu vie the solution wizard.

Selection of at least 1 Netw

All Base arrays come with FIO Adptr)

Users can designate the 2

For more information please contact mellanoxforhpe@mellanox.com

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HPE Nimble Storage dHCI	Worldwide	David Wang	David.Wang@hpe.com
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M-series Switches	Worldwide	Faisal Hanif	hanif@hpe.com
NVIDIA Mellanox portfolio	Worldwide	Frank Arrazate	franka@nvidia.com
NVIDIA Mellanox portfolio	Worldwide	Matt Hitt	mhitt@nvidia.com
HPE StoreFabric	Americas	Matt Wineberg Kristi Link	Wineberg@hpe.com Kristi.Link@hpe.com

