

FlexPod and You

Navigating to and thru the core of the Modern DataCenter

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Course Modules

This course focuses on enabling you to do the following:

Module 3:

- FlexPod Architecture
- FlexPod Connectivity
- Designing FlexPod Configuration
- FlexPod Configuration Best Practice Recommendations

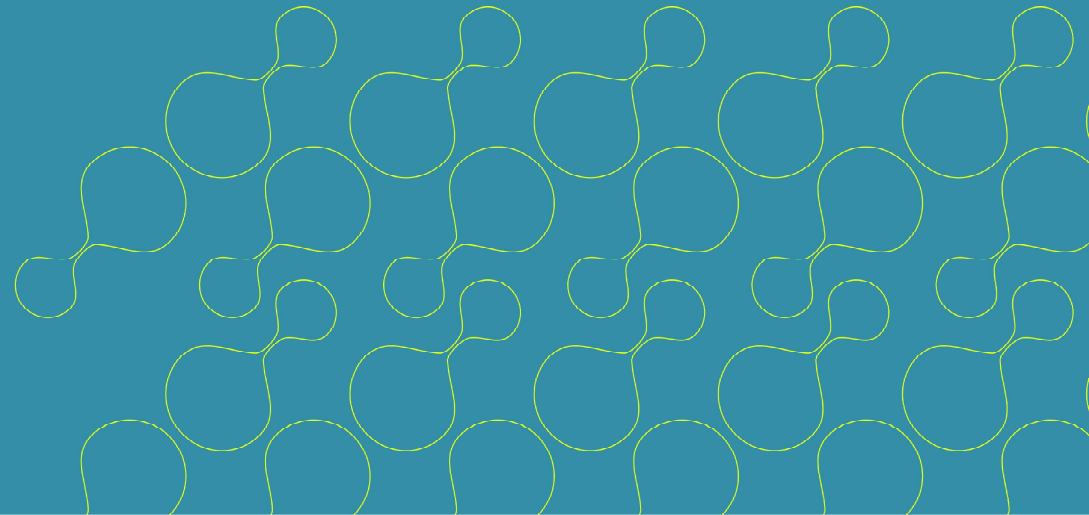


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Module 3

FlexPod Interconnectivity





FlexPod Components



NetApp FAS or AFF

+



Cisco Nexus Switch

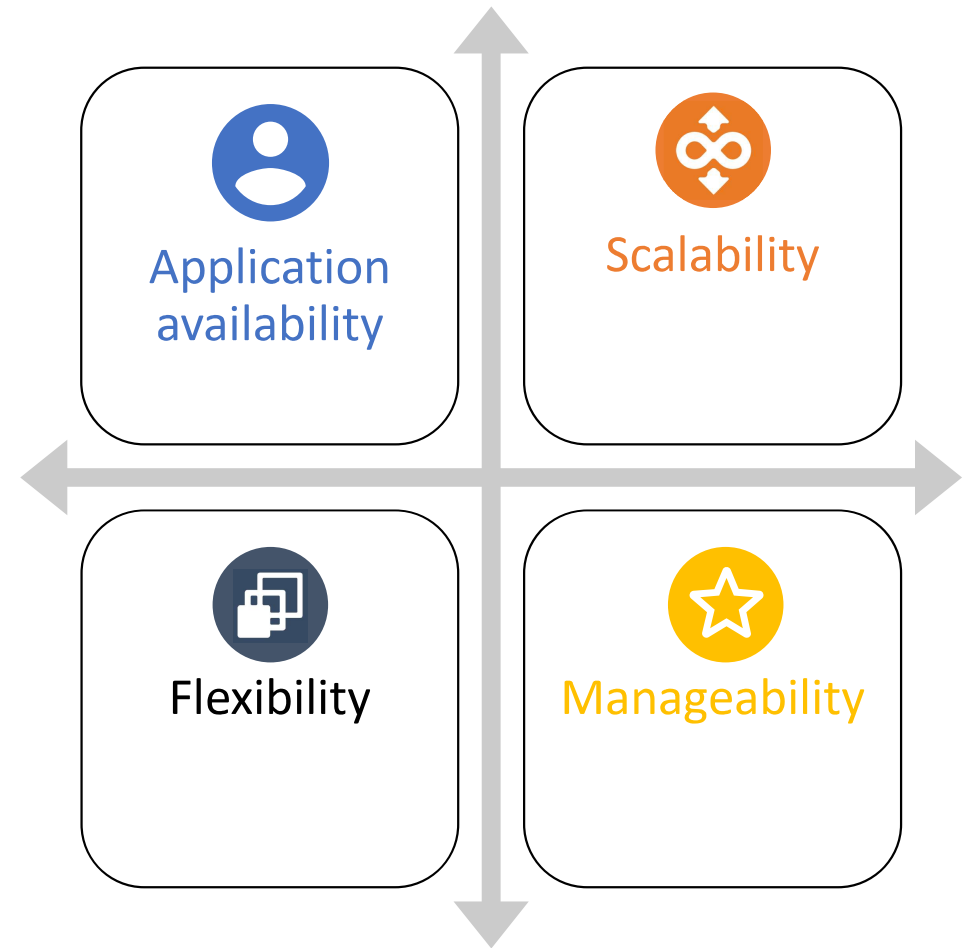
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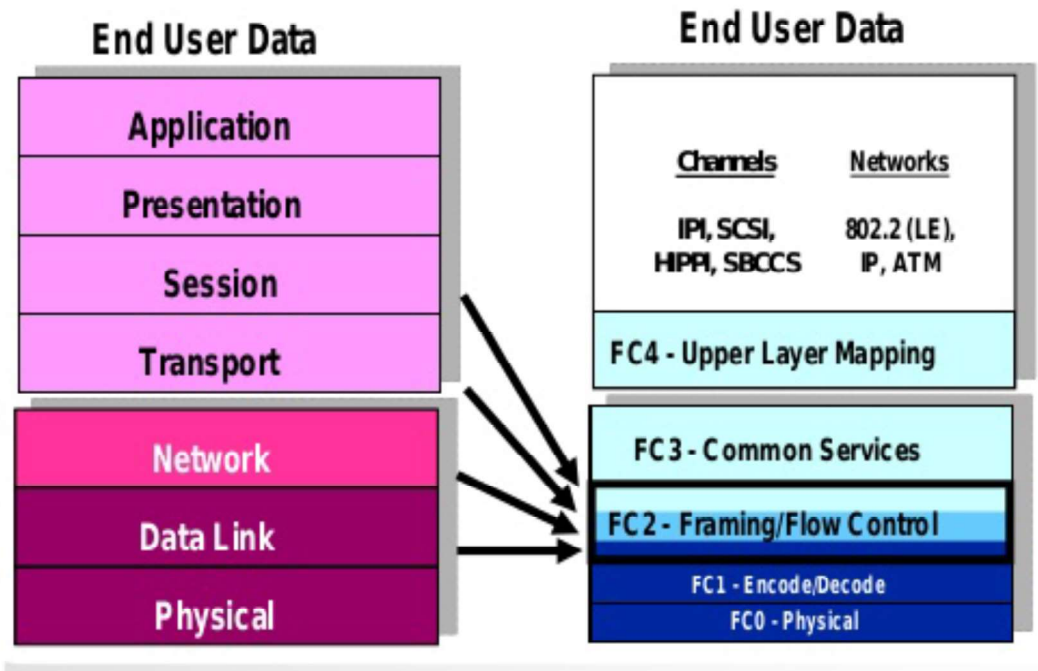
Cisco UCS

Hypervisors	
VMware ESXi	Citrix Hypervisor
Microsoft Hyper-V	Oracle VM or Red Hat

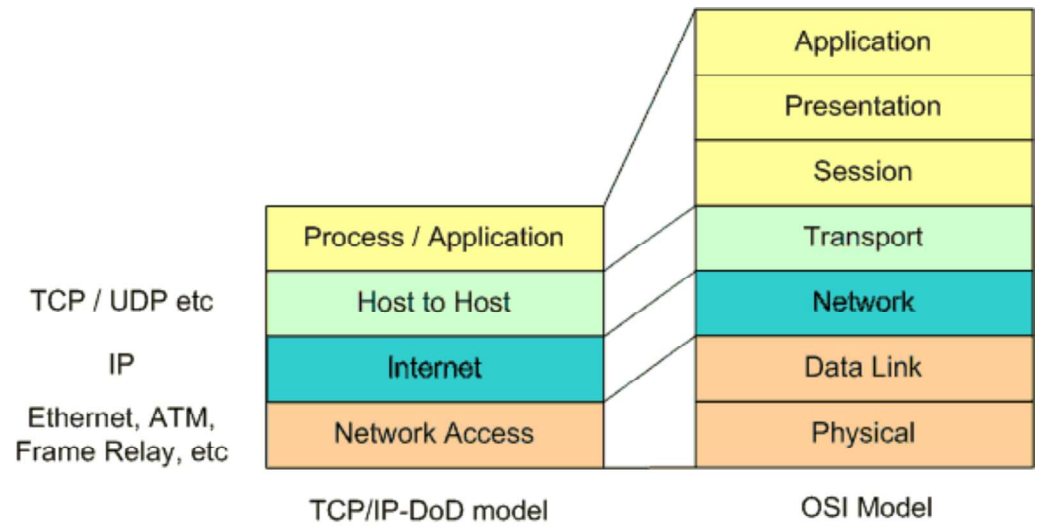
FlexPod Design Principles



OSI to FC Stack



DoD to OSI model



FlexPod FC Topology

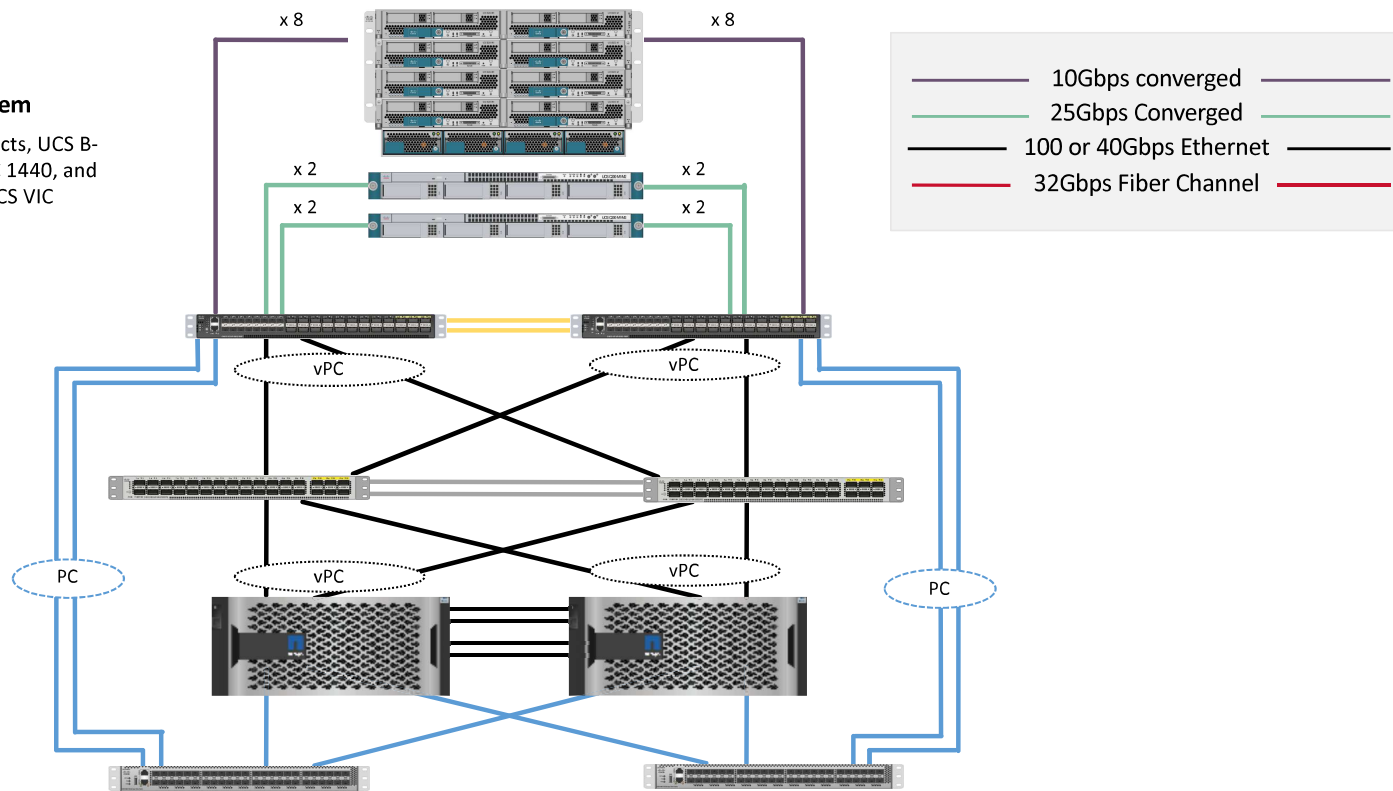
Cisco Unified Computing System

Cisco UCS 6454 Fabric Interconnects, UCS B-Series Blade Servers with UCS VIC 1440, and UCS C-Series Rack Servers with UCS VIC 1457

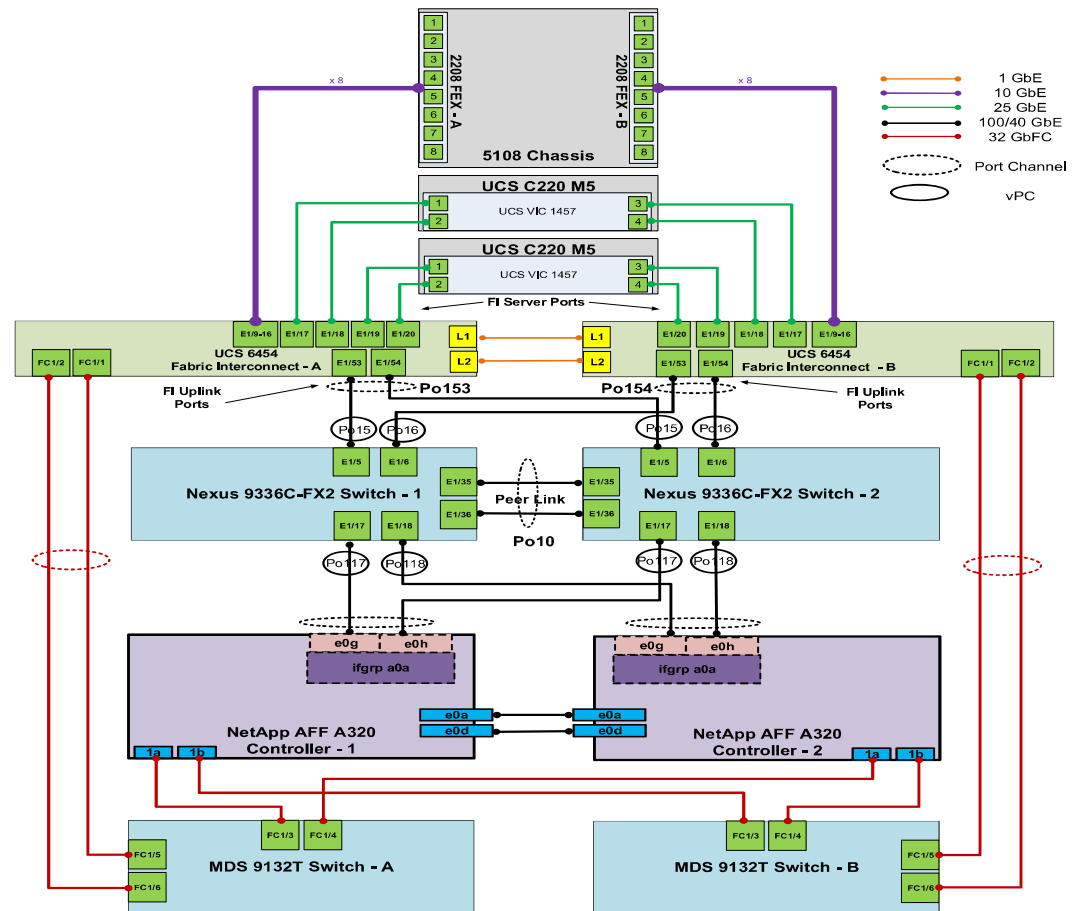
Cisco Nexus 9336C-FX2

NetApp Storage controllers AFF-A800

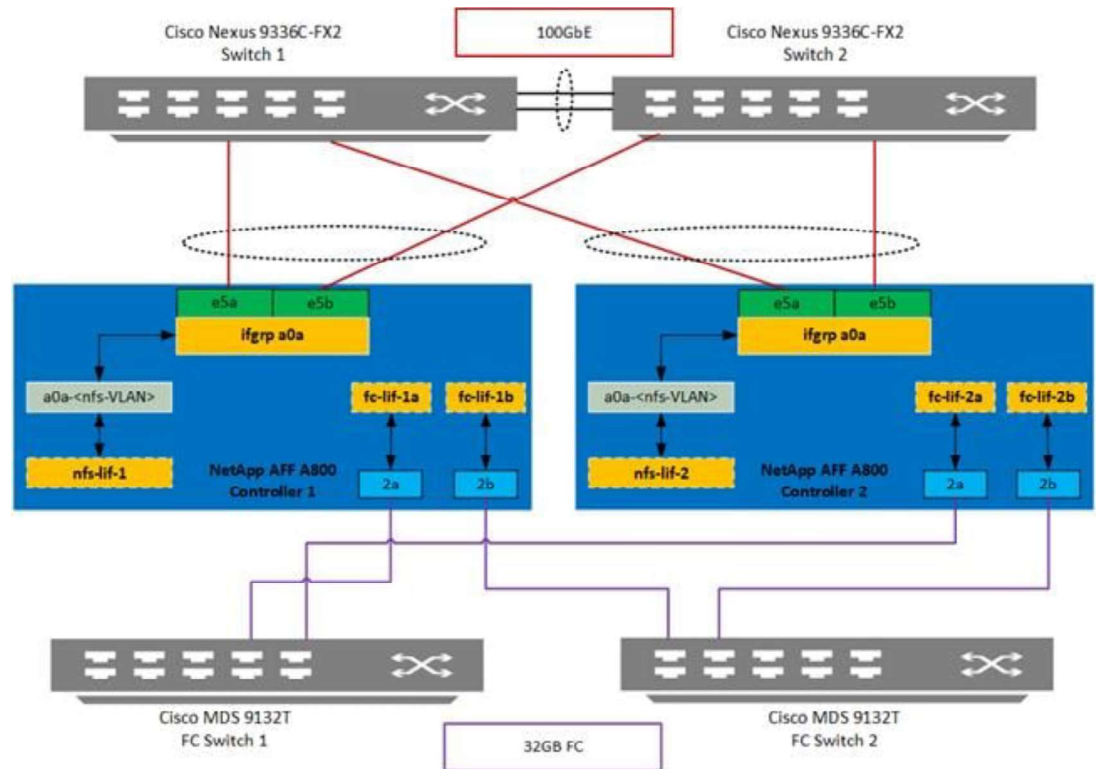
Cisco MDS 9148T or 9132T switch



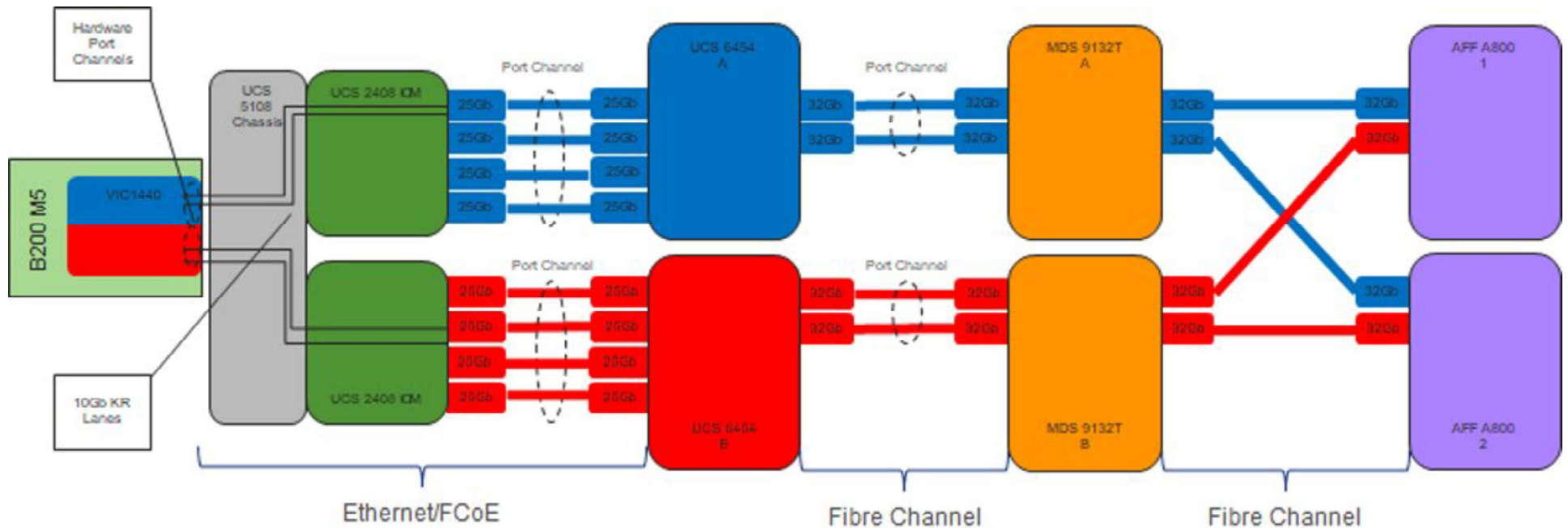
FlexPod FC Connectivity



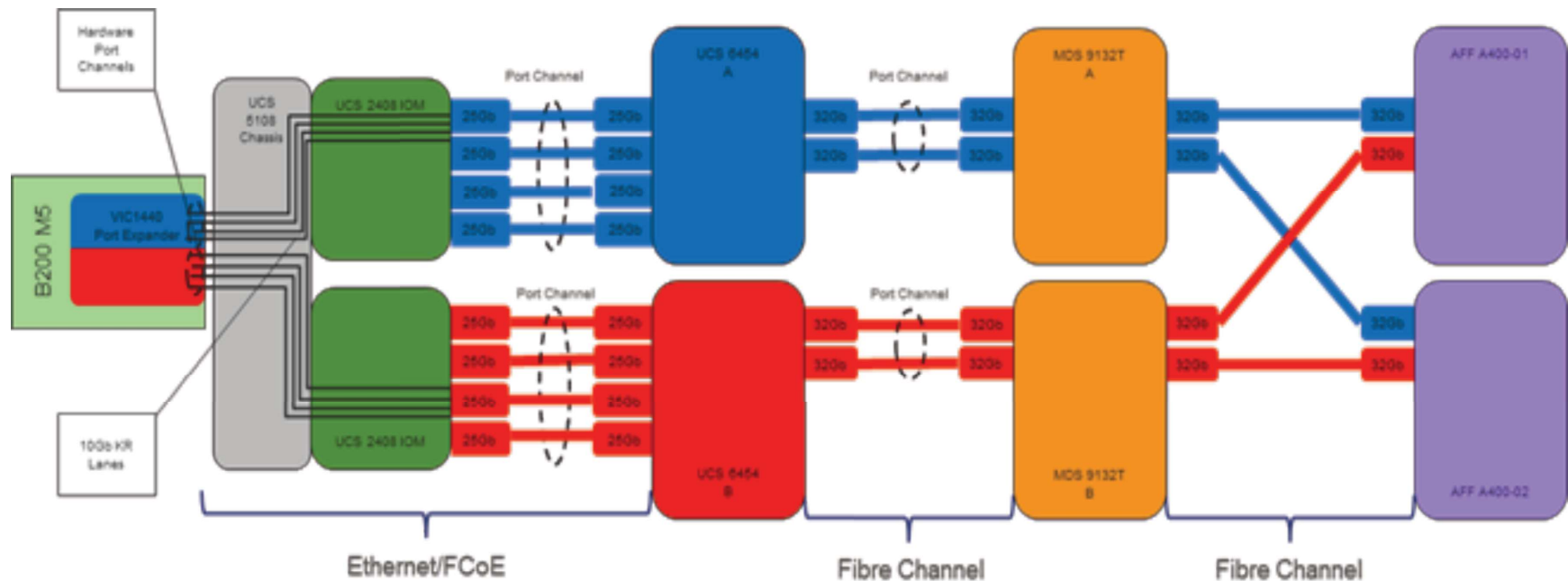
Fiber Channel Connectivity



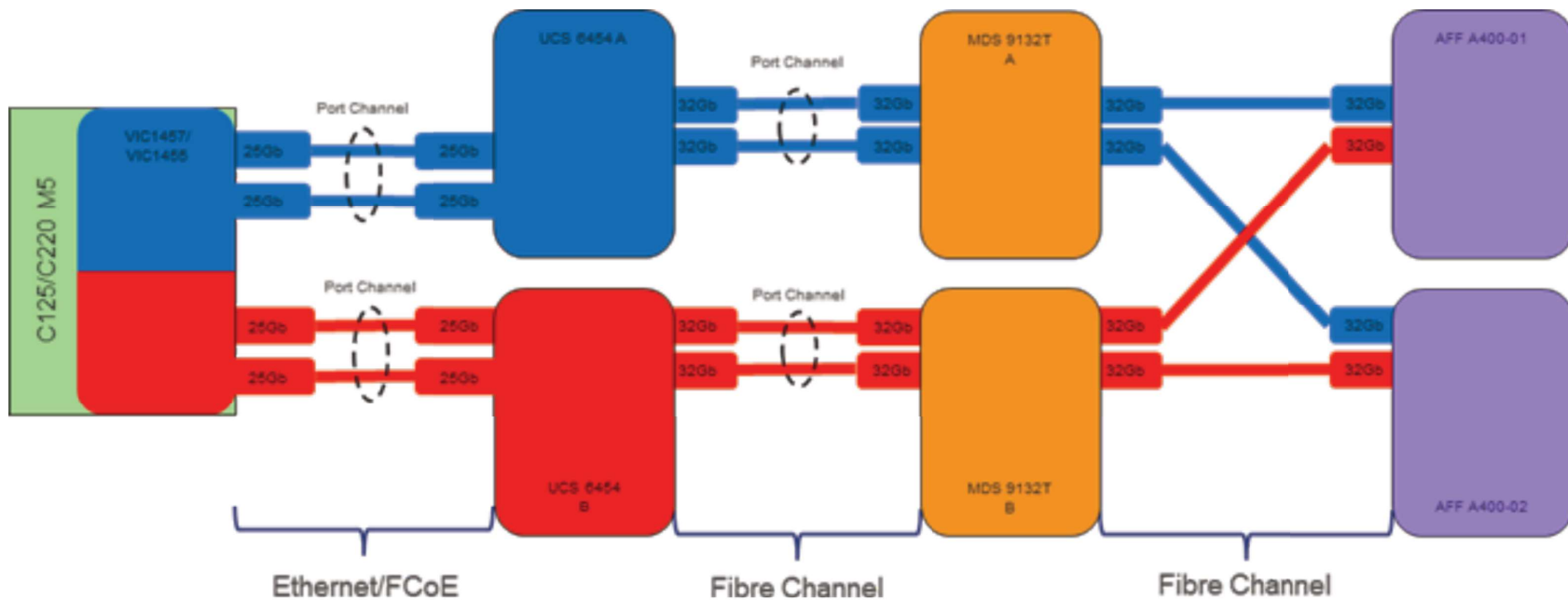
FC End-to-End B200M5 End-to-End Connectivity



FC End-to-End with B200M5 and Port expander



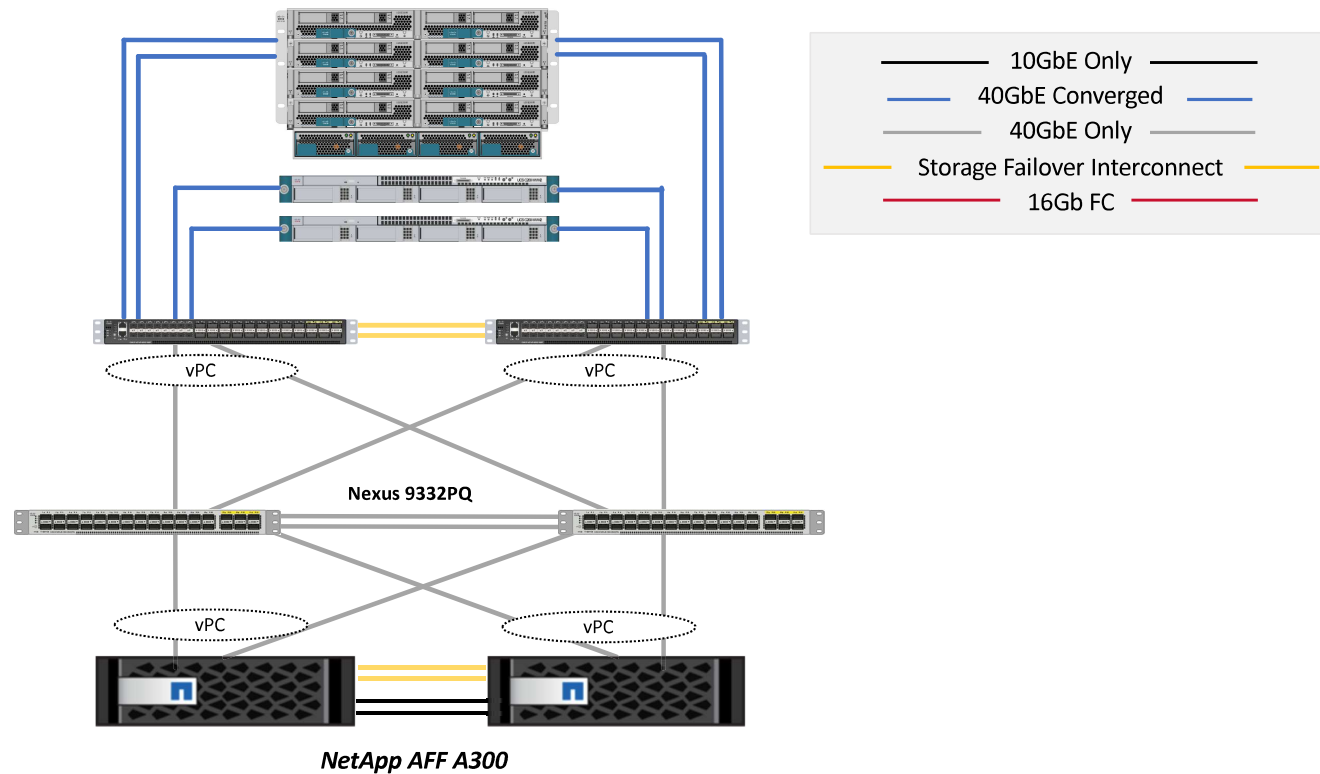
FC End-to-End Design with UCS C125/220 M5



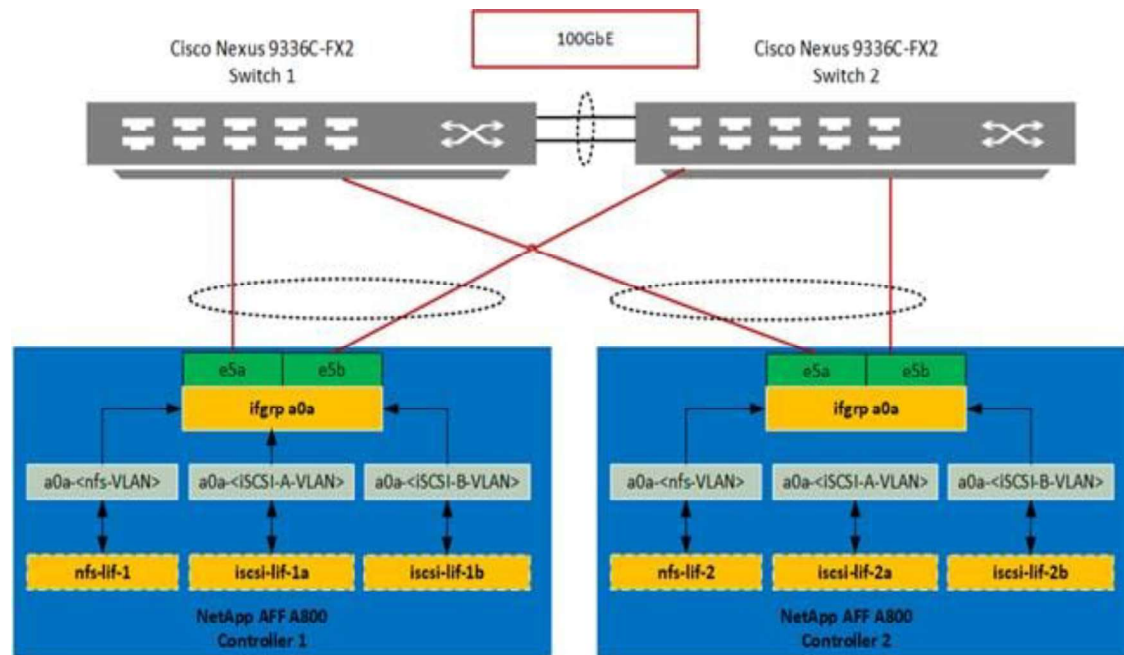
FlexPod ISCSI/IP Topology

Cisco UCS

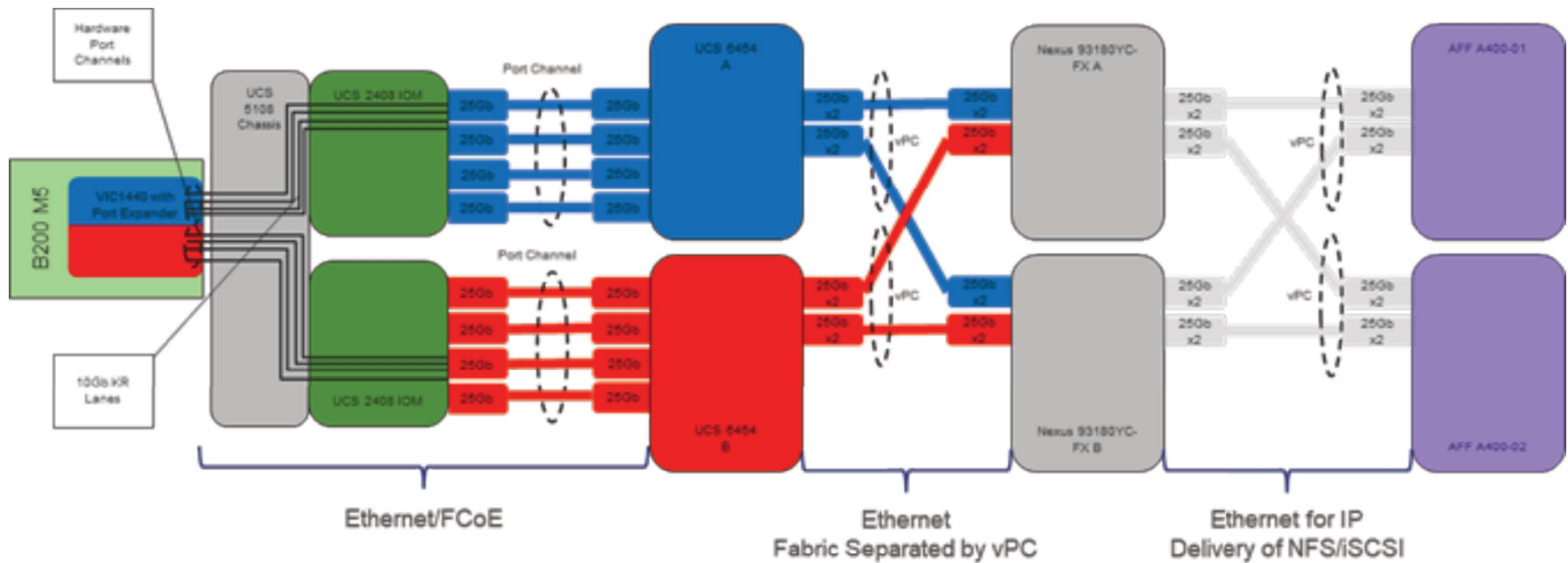
Cisco UCS 6332-16UP Fabric Interconnects and Cisco UCS B and C Series Servers



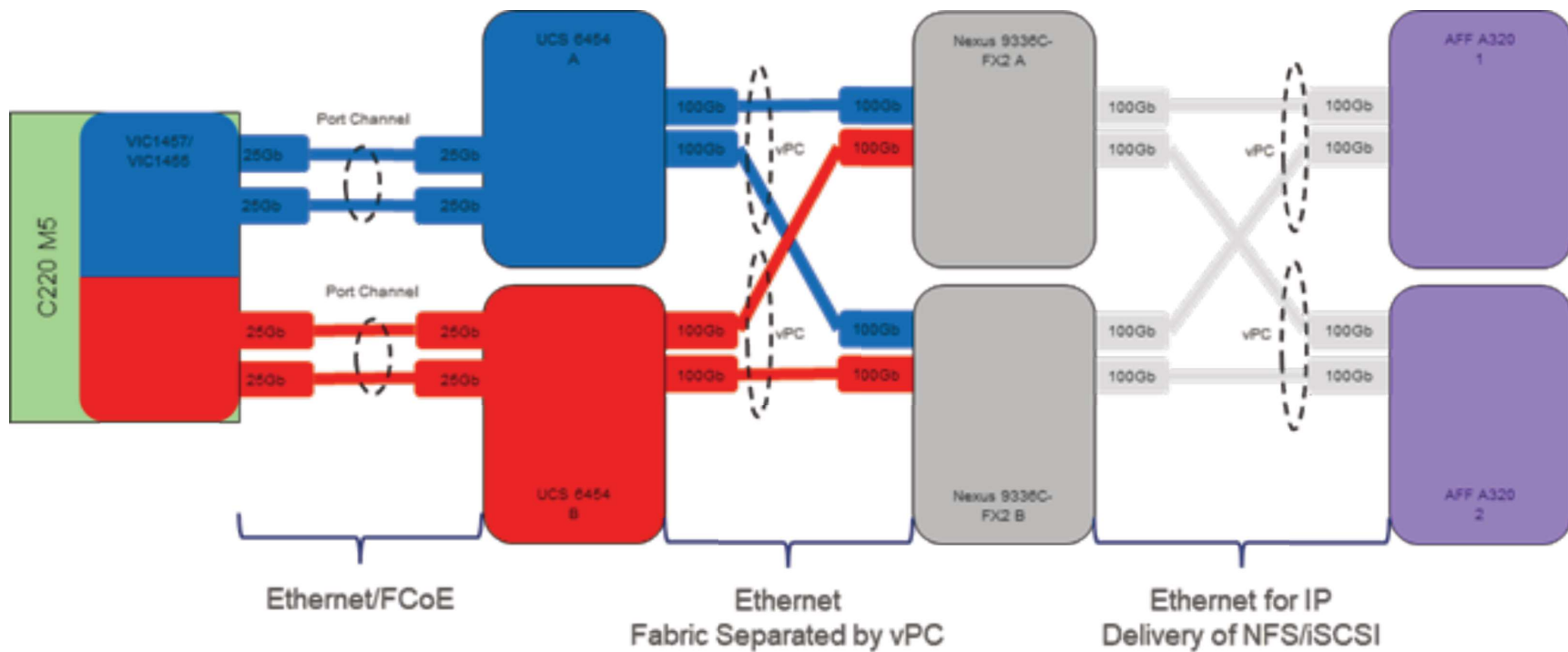
ISCSI/IP Connectivity



IP End-to-End Connectivity with B200M5 and Port expander



IP End-to-End Connectivity with C220M5/125M5

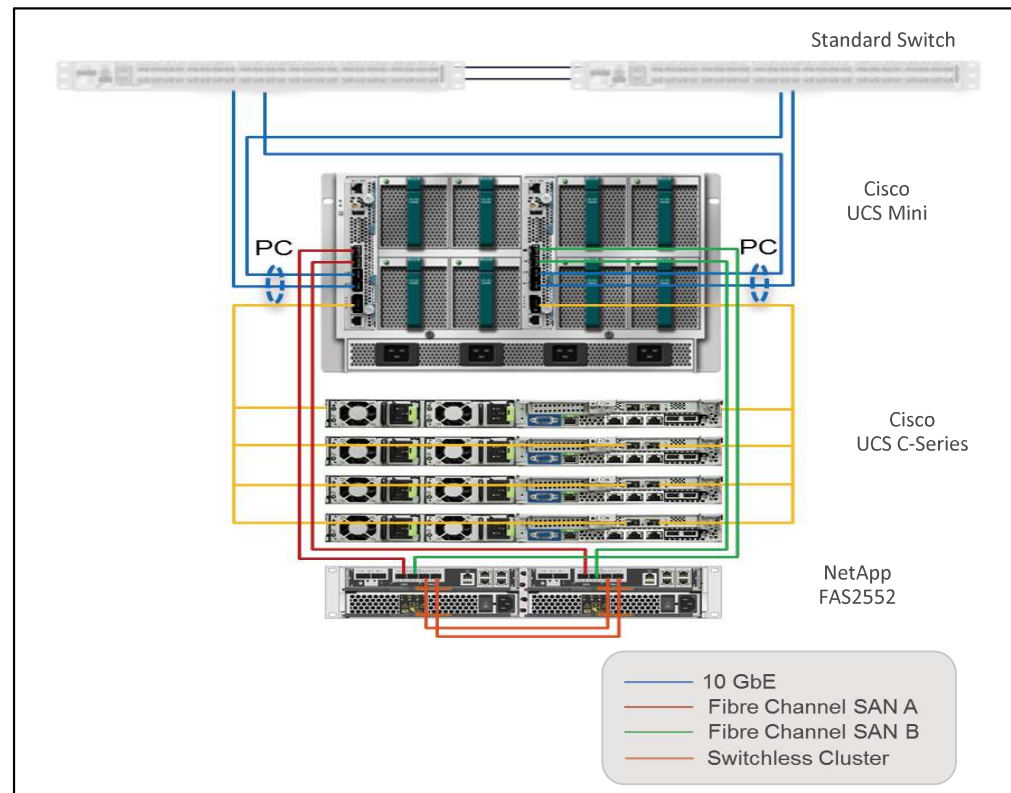


FlexPod Express with Cisco UCS Mini

Cisco UCS Direct-Attached FAS using FC scale points

Scale points

- Cisco Unified Computing System (Cisco UCS) Mini supports a maximum of 12 servers in this model
 - 4 additional Cisco UCS C-Series compute platforms
- NetApp® FAS2500 supports
 - 24 internal drives
 - Maximum 144 drives (internal/external)
 - Maximum 749TB

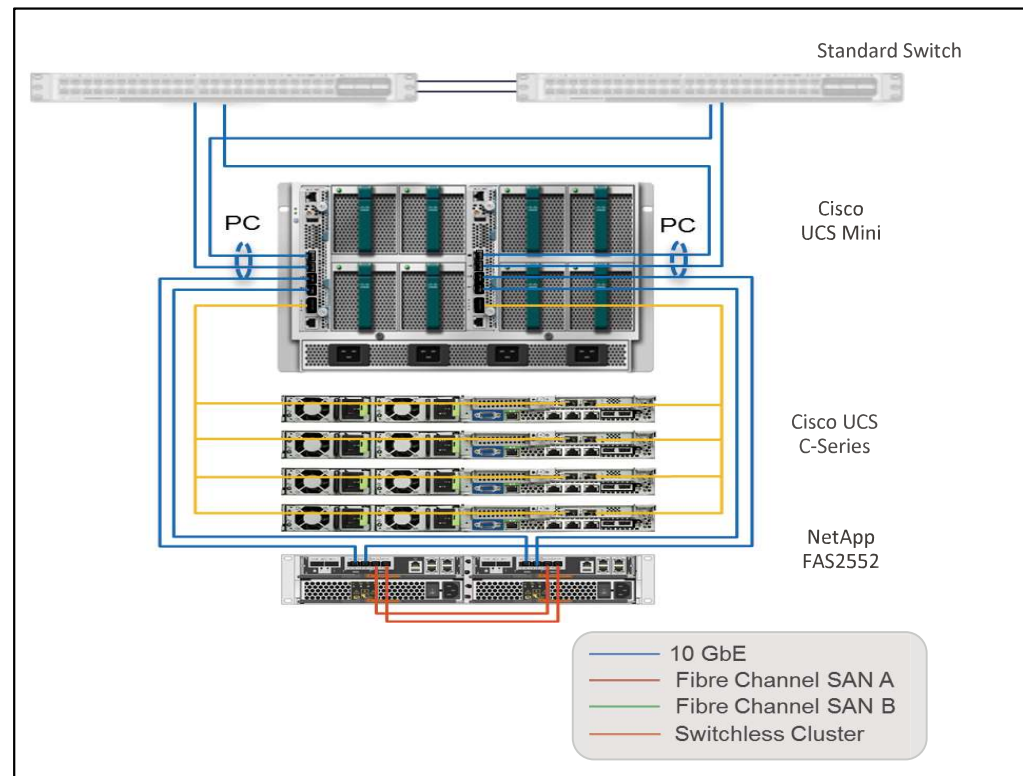


FlexPod Express with Cisco UCS Mini

Cisco UCS Direct-Attached FAS using Ethernet scale points

Scale points

- Cisco Unified Computing System (Cisco UCS) Mini supports a maximum of 12 servers in this model
 - 4 additional Cisco UCS C-Series compute platforms
- NetApp® FAS2500 supports
 - 24 internal drives
 - Maximum 144 drives (internal/external)
 - Maximum 749TB



FlexPod References

NETAPP HARDWARE:

- <https://www.netapp.com/data-storage/san-storage-area-network/>
- <https://www.netapp.com/data-storage/aff-a-series/>
- <https://flexpod.com/three-dimensional-flexpod-tour/#3dtool>
- <https://www.netapp.com/data-storage/all-flash-documentation/>
- <https://www.netapp.com/data-storage/san-storage-area-network/documentation/>
- <https://www.netapp.com/pdf.html?item=/media/10379-tr4515pdf.pdf>
- <https://mysupport.netapp.com/matrix/#welcome>

FlexPod References

CISCO INTEROP:

Cisco HCL

- <https://ucshcltool.cloudapps.cisco.com/public/>

FlexPod Design Guides

- <https://www.cisco.com/c/en/us/solutions/design-zone/data-center-design-guides/flexpod-design-guides.html>

Spec Sheets

- <https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/datasheet-c78-739291.html>
- <https://www.cisco.com/c/dam/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/b200m5-specsheet.pdf>
- <https://www.cisco.com/c/dam/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/6400-specsheet.pdf>
- <https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/datasheet-c78-742624.html#ProductsSpecifications>
- <https://www.cisco.com/c/en/us/products/collateral/servers-unified-computing/ucs-c-series-rack-servers/datasheet-c78-739279.html>

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LINUX INTEROP:

Redhat - <https://access.redhat.com/articles/3078>

- <https://access.redhat.com/support/policy/updates/errata/>

SuSE - <https://www.suse.com/lifecycle/>

- <https://documentation.suse.com/sles/15-SP2/html/SLES-all/cha-x86.html#sec-x86-requirements>
- <https://documentation.suse.com/sles/12-SP5/html/SLES-all/art-sle-installquick.html>

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WINDOWS INTEROP:

Server Interop

- <https://www.windowsservercatalog.com/results.aspx?bCatID=1283&cpID=0&avc=126&ava=0&avq=0&OR=1&PGS=25>

System requirements

- <https://docs.microsoft.com/en-us/windows-server/get-started/system-requirements>
- <https://docs.microsoft.com/en-us/windows-server/get-started-19/sys-reqs-19>
- [https://docs.microsoft.com/en-us/previous-versions/windows/it-pro/windows-server-2012-r2-and-2012/dn303418\(v=ws.11\)](https://docs.microsoft.com/en-us/previous-versions/windows/it-pro/windows-server-2012-r2-and-2012/dn303418(v=ws.11))

Thank You