Cisco FlexPod IP Shared Storage Solution for Small and Medium-Size Businesses

Solution Brief
November 2012

In Collaboration with NetApp

Cisco and NetApp collaborate to deliver FlexPod® IP Shared Storage to support small to medium-size workloads.

Now small and medium-size businesses, departments, and branch offices can gain the simplicity, flexibility, and efficiency of FlexPod solutions. The Cisco FlexPod IP Shared Storage Solution can be deployed in minutes to support small to medium-size workloads. The solution extends the Cisco and NetApp FlexPod program of precertified, flexible infrastructure to accelerate the deployment of cost-effective virtual solutions that help ensure interoperability and reduce risk.

The solution integrates all the components necessary to quickly deploy an IP-based shared storage solution. It consists of Cisco UCS® C-Series Rack Servers, Cisco UCS fabric interconnects, Cisco Nexus® fabric extenders, and NetApp® FAS storage (Figure 1). This is a hypervisor-agnostic solution with VMware vSphere 5.0 as the first product tested. The solution provides a highly scalable and reliable platform for a variety of virtualized workloads that can support branch or remote offices, midsize deployments of Microsoft Exchange Server or Microsoft SharePoint Server, and the development and testing of applications. This solution enables small and medium-size businesses and branch offices to take advantage of the power of virtualization without the complexity entailed in designing and implementing custom solutions.

Highlights

Reduced Risk
- Uses a tested and certified FlexPod® architecture
- Is highly available and reliable, helping ensure continuous application access

Rapid Deployment
- Using Cisco Unified Computing System™ (Cisco UCS®) and NetApp® storage, the solution provides intelligent infrastructure that is ready out of the box

Reduced-Cost Approach
- Through simplified infrastructure, reduces both capital and operating expenses for lower total cost of ownership (TCO)

Uncompromised Performance
- Founded on a balanced approach to resources, including high-performance Intel® Xeon® processors, 20 Gbps of I/O per server, and NetApp FAS storage

Investment Protection
- Uses Cisco UCS Manager to manage computing and networking hardware managed through Cisco UCS Manager, and with tight integration with VMware vSphere software, customers have a solution that builds on staff knowledge and best practices

Solution Benefits

The solution helps organizations quickly deploy the tools they need to lower total cost of ownership (TCO), reduce complexity, and improve operation efficiency. This solution has been sized for smaller workloads, with low pricing. It uses smaller-capacity components, but offers the same
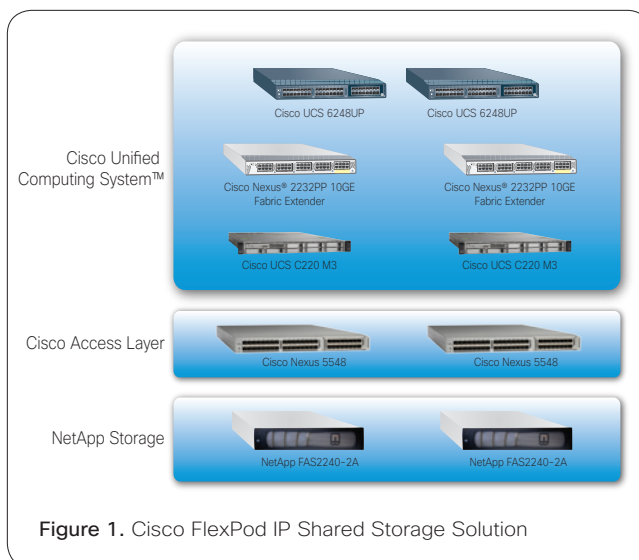

Cisco Unified Computing System™
- Cisco UCS 6248UP
- Cisco UCS 6248UP
- Cisco Nexus® 2232PP 10GE Fabric Extender
- Cisco Nexus® 2232PP 10GE Fabric Extender
- Cisco UCS C220 M3
- Cisco UCS C220 M3

Cisco Access Layer
- Cisco Nexus 5548
- Cisco Nexus 5548

NetApp Storage
- NetApp FAS2240-2A
- NetApp FAS2240-2A

Figure 1. Cisco FlexPod IP Shared Storage Solution

Table 1. The Solution's Computing Components Can Be Ordered with a Single Part Number

Element	Cisco SmartPlay Solution Components
Virtualization	VMware vSphere 5.0 with VMware vCenter 5.0
Computing	4 Cisco UCS C220 M3 Rack Servers, each with: • 2 Intel Xeon processors E5-2650 (2 sockets and16 cores) • 64 GB of memory • Redundant power supplies • Cisco UCS P81E Virtual Interface Card (VIC)
Networking	10-Gbps unified fabric supported through: • 2 Cisco UCS 6248UP Fabric Interconnects • 2 Cisco Nexus 2232PP 10GE Fabric Extenders • 2 Cisco Nexus 5548UP Switches • Low-latency Twinax cabling
Storage	2 NetApp FAS2240-2A storage systems • 374 terabytes (TB) of unformatted capacity • 2 dual 10 Gigabit Ethernet ports • Fibre Channel Protocol (FCP), Small Computer System Interface over IP (iSCSI), Network File System (NFS), and Common Internet File System (CIFS) storage protocols • Data ONTAP Essentials

consistent architecture that allows it to scale transparently for larger FlexPod configurations as your business needs change.

The Cisco Unified Computing System™ (Cisco UCS) combines computing, networking, virtualization, and storage-access resources in a single unified system. The system is self-aware and self-integrating, with model-based management simplifying and accelerating the deployment of applications and services. Server management is available through Cisco UCS Manager and integration with VMware vCenter which extends powerful and flexible virtualized management across the environment.

VMware vSphere 5.0 helps organizations consolidate their servers and reduce capital expenses by requiring less computing, networking, and storage infrastructure. It reduces operating expenses because there are fewer components to manage.

NetApp FAS is unified storage that delivers both IP SAN storage and network-attached storage (NAS) in a single platform optimized for virtualization. NetApp OnCommand storage management delivers simplicity, efficiency, and flexibility to the management and monitoring of storage. Integration with VMware vCenter further simplifies management.

Easy Ordering

Cisco FlexPod IP Shared Storage Solution deployment is accelerated through the Cisco® Smart Play program (Table 1). A single part number can be used to order the solution's computing and networking components, while the storage and virtualization software components can be purchased separately. The Cisco Smart Play program makes it easy to quickly deploy a powerful, secure virtualized environment in your enterprise without the expense or risk entailed in designing and building your own custom solution.

For More Information

For more information about the Cisco Smart Play solution for the FlexPod IP Shared Storage Solution, please visit http://www.cisco.com/go/smartplay.

For more information about Cisco FlexPod solutions, please visit http://www.cisco.com/go/flexpod.