This product has been discontinued

Solution Overview

Cisco UCS Mini Software-Defined Storage with StorMagic SvSAN for Remote Offices

BENEFITS

Cisco UCS® and StorMagic SvSAN deliver a solution to the edge:

- Single addressable storage pool across multiple nodes
- Simple, factory-preconfigured solution
- Quick to deploy: designed with ROBO environments in mind
- Centralized storage management across multisite deployments

What if you could extend the power of the Cisco Unified Computing System™ (Cisco UCS®) to the edge of organizations of any size with unified computing, storage, and networking?

Challenges

Customers need to support business-critical applications with no downtime and with reduced capital and operating costs. Especially in distributed IT environments, which typically have few IT resources onsite, and external storage deployments at every site are expensive and complicated to set up and maintain.

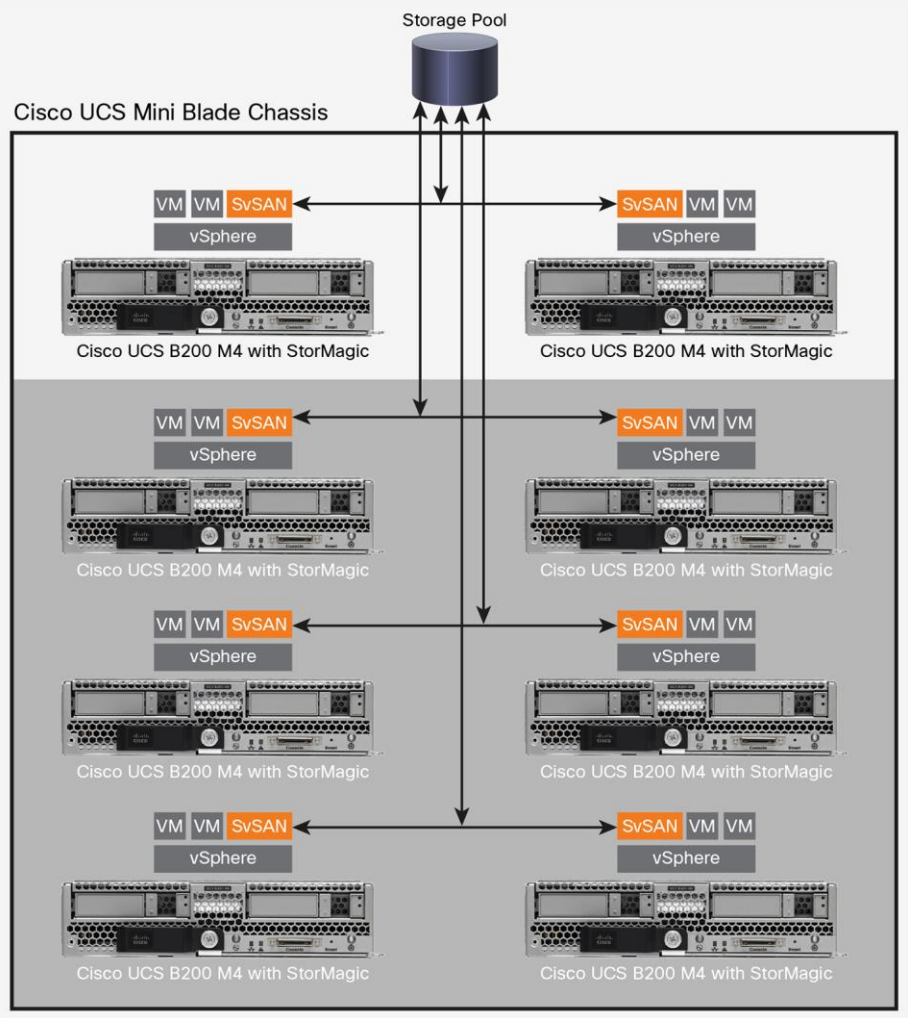
Cisco and StorMagic Solution

Cisco and StorMagic have designed an enterprise-class software-defined storage solution that addresses the needs of remote, branch-offices (ROBO) environments and is simple to deploy and manage. The solution is built on best-in-class Cisco UCS servers, an industry-leading hypervisor, and software-defined storage components from StorMagic (Figure 1):

- Cisco UCS Mini provides a robust, scalable, unified computing, storage, and networking platform in a compact form factor.
- VMware vSphere is industry-leading server virtualization software.
- StorMagic SvSAN virtual storage appliance (VSA) delivers highly available shared storage services, essential for implementing advanced virtualization features such as VMware vMotion and Distributed Resource Scheduler (DRS).

The solution is orderable via a single SKU and is shipped preconfigured and installed with ESXi from the Cisco factory, making ordering simple and installation quick for customers.

Figure 1. Cisco UCS Mini with StorMagic SvSAN



Benefits: Accelerate IT at the Edge

The IT requirements for small and medium-sized businesses (SMBs) and enterprise organizations with multiple remote sites that provide critical customer-facing services are similar to those for large data centers. IT requires local servers, storage, and networking resources to help ensure application availability and deliver the required performance without relying on low-bandwidth, high-latency WANs or cloud services. IT may also need to meet regulatory or compliance data management requirements.

The difference is that smaller organizations typically need simple, quick-to-deployment solutions requiring fewer servers and modest storage capacities compared to equivalent data center solutions. In many cases, these smaller satellite locations have limited or no full-time IT staff members, necessitating remote centralized monitoring and management.

Solution Components

The Cisco UCS Mini software-defined solution with StorMagic SvSAN is built on the following components:

- Cisco UCS Mini
- VMware vSphere
- StorMagic SvSAN VSA

Cisco UCS Mini

Cisco UCS Mini is a total unified computing edge-scale solution that delivers enterprise capabilities, such as server, storage, and 10 Gigabit Ethernet networking, in an easy-to deploy, compact form factor optimized for SMBs and ROBO IT environments.

Cisco UCS Mini provides a scalable solution with the proven management simplicity of Cisco UCS Manager.

Cisco UCS Mini supports a wide variety of Cisco UCS B-Series Blade Servers. All supported servers can be mixed and matched to customize a Cisco UCS Mini solution for your specific needs and applications. The Cisco UCS Mini with StorMagic solution consists of the following components:

- Cisco UCS 5108 Blade Server Chassis
- Cisco UCS B200 M4 Blade Servers with StorMagic SvSAN
- Cisco UCS 6324 Fabric Interconnect

Cisco UCS 5108 Blade Server Chassis

The Cisco UCS 5108 Blade Server Chassis accommodates up to eight half-width Cisco UCS B200 M4 Blade Servers and two Cisco UCS 6324 Fabric Interconnects (Figure 2).

The 6-rack-unit (6RU) chassis can be mounted in an industry-standard 19-inch rack, or it can be placed on any sturdy surface. The dual-voltage (110 and 220) AC power supplies make Cisco UCS Mini ready for global deployment.

Figure 2. Cisco UCS 5108 Blade Server Chassis

Cisco UCS B200 M4 Blade Servers Factory Pre-configured with StorMagic and vSpehere

Delivering enterprise-class performance, versatility, and density without compromise, the Cisco UCS B200 Blade Server can be quickly deployed to provide virtualized server computing and storage resources (Figure 3).

Figure 3. Cisco UCS B200 M4 Blade Server

Cisco UCS B200 M4 with StorMagic is built on the latest Intel® Xeon® processor E5-2600 v3 family, offering exceptional levels of performance, flexibility, and I/O throughput to run the most demanding applications.

The Cisco UCS B200 M4 can be configured with one or two multicore Intel Xeon processors and can scale up to 1.5 terabytes (TB) of memory. It uses two hot-pluggable SAS and SATA hard disk drives (HDDs) or solid-state drives (SSDs) and comes with 10 Gigabit Ethernet connectivity.

SvSAN is factory installed with vSphere, with an option for customer onsite installation. For more information, see the server data sheets and tech specs at http://www.cisco.com/c/dam/en/us/products/collateral/servers-unified-computing/ucs-b-series-blade-servers/b200m4-stormagic-specsheet.pdf.

For more information about the Cisco UCS Mini solution, please visit http://www.cisco.com/go/ucsmini.

Cisco UCS 6324 Fabric Interconnect

The Cisco UCS 6324 Fabric Interconnect extends the Cisco UCS networking capabilities into environments that require a small footprint (Figure 4). It provides the management and communication backbone for the chassis.

The fabric interconnect modules are installed in the Cisco UCS 5108 Blade Server Chassis, delivering high-bandwidth (up to 500 Gbps), low-latency interblade server network connectivity. The fabric interconnects enable up to 15 servers (up to eight Cisco UCS B-Series Blade Servers and up to seven direct-connect Cisco UCS C-Series Rack Servers) to be networked together, reducing the need for top-of-rack switches and the overall complexity and footprint of the solution.

Figure 4. Cisco UCS 6324 Fabric Interconnect

StorMagic SvSAN

SvSAN is a software-only storage solution that helps enable customers to eliminate downtime for business-critical applications at remote sites, where disruption directly equates to loss in service and revenue. SvSAN helps ensure high availability through a virtualized shared storage platform, so that business-critical edge applications remain operational.

The StorMagic solution target customers that have from 1 to 10,000 remote sites, with applications for which uptime is essential, but with no local IT resources available.

SvSAN provides an intuitive, standardized management interface that allows multiple SvSANs, spread across remote sites, to be managed and provisioned quickly and simply, either locally or remotely, from a central location. SvSAN's efficient and flexible architecture and its modular approach enable it to meet the ever-changing and increasingly demanding storage requirements within any organization.

SvSAN can aggregate the disk capacity from each Cisco UCS Mini blade server at a single site and across multiple sites to create a single addressable pool of storage, making it accessible to all the blade servers.

SvSAN's unique benefits include:

- Abstraction of storage services away from traditional storage arrays, making it a critical component of a software-defined storage strategy
- Elimination of the need for a physical SAN

- Virtualization of internal blade disk drives
- High availability in a simple two-server solution
- At least 33 percent lower capital acquisition costs for distributed environments
- Over 40 percent lower total cost of ownership (TCO) through reduced power and cooling costs, decreased sparing and maintenance costs, and reduced need for dedicated IT resources
- Greater application uptime
- Centralized storage management for the entire multisite infrastructure
- Rapid, scripted deployments and updates of multiple sites simultaneously with automated provisioning
- Optimal flexibility that can scale as storage requirements grow
- Fast resynchronization through the restore capability, enabling users to replace a failed server with a new one and automatically rebuild their environments

VMware vSphere

vSphere is an industry-leading hypervisor. It enables servers to be virtualized and consolidated onto less hardware, making the infrastructure simpler and more efficient and reducing both capital and ongoing operational costs.

With virtualization, server resource utilization increases, and applications are deployed more quickly and become more agile. vSphere's advanced hypervisor features, such as high-availability clustering, vMotion, and DRS, enhance business-continuity and disaster-recovery capabilities for the virtualized infrastructure, improving service uptime and reducing lost revenue by reducing both planned and unplanned downtime.

For more information about vSphere, see http://www.vmware.com/products/vsphere/.

Use Cases

The combination of Cisco UCS Mini and SvSAN provides an excellent solution for SMB and ROBO environments for many industry sectors, including:

- Retail: Systems such as stock control, customer and staff management, and point-of-sale optimization
- Government: Diplomatic communication platforms
- Defense: Battlefield control systems
- Manufacturing: Process control
- Financial services: Customer transactions
- Restaurant and hospitality: Booking and kitchen-ordering systems
- Transportation: Vehicle positioning and monitoring
- Energy production: Remote power-generation-plant control
- Medical: Picture archiving and communication system (PACS)

Why Cisco?

Cisco has significant experience in listening to customer requirements and providing technology innovation for the enterprise data center. Cisco delivers standards-based solutions backed by a broad partner ecosystem of industry leaders to provide end-to-end customer solutions. Unified computing elevates the traditional product classification of network, server, storage, operating systems, and applications to a vision that encompasses the whole data center. Cisco, as one of the largest technology providers in the world, has the resources, expertise, and customer focus to deliver on this vision.

Cisco Capital

Financing to Help You Achieve Your Objectives

Cisco Capital® can help you acquire the technology you need to achieve your objectives and stay competitive. We can help you reduce capital expenditures. Accelerate your growth. Optimize your investment dollars and ROI. Cisco Capital financing gives you flexibility in acquiring hardware, software, services, and complementary third-party equipment. And there's just one predictable payment. Cisco Capital is available in more than 100 countries. Learn more.

Next Steps

For more information about Cisco UCS, please visit http://www.cisco.com/go/ucsmini or contact your local Cisco representative.

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