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Solution > Infrastructure

Cisco Unified Computing System and NetApp Storage for Windows Consolidation

THE CHALLENGE

If your Windows environment is like most environments, you've got multiple Windows file servers and application servers each running on standalone server hardware with direct-attached storage (DAS) or multiple small storage area networks (SANs). The results are low server and storage utilization—20% is not uncommon—and an environment that's difficult and expensive to manage. You spend hours administering patches, antivirus protection, and security across all your servers and managing associated storage, including adding new capacity. Backup and recovery are complicated; backup windows are too long; availability is lower than you'd like; and, when it comes time to make additions or changes, your environment lacks the flexibility to adapt quickly to your needs.

THE SOLUTION

With Cisco unified computing and NetApp® storage for Windows environments, you can increase utilization and help reduce costs by pooling all your Microsoft Windows applications and data on a single unified server and storage system. Consolidating your applications onto fewer servers—using popular server virtualization technologies such as Microsoft Hyper-V™, VMware® ESX, or Citrix XenServer—can help further increase the benefits.

The Cisco Unified Computing System (UCS) simplifies the way servers, networks, storage, and applications are deployed. The Cisco Unified Computing System consolidates the compute resources, cabling, and I/O of the traditional Windows server, network, and storage networking components. This simplification, coupled with consolidating your Windows storage on NetApp, can reduce your costs by eliminating the need for separate file servers and inefficient DAS while consolidating small heterogeneous SANs, reducing the total amount of storage you need.

With the joint Cisco and NetApp Windows consolidation solution, you can increase your storage and server infrastructure utilization while increasing resiliency. Management is simplified, and all your applications and data are in one place, so you can back up and recover quickly using a single integrated set of data protection tools.

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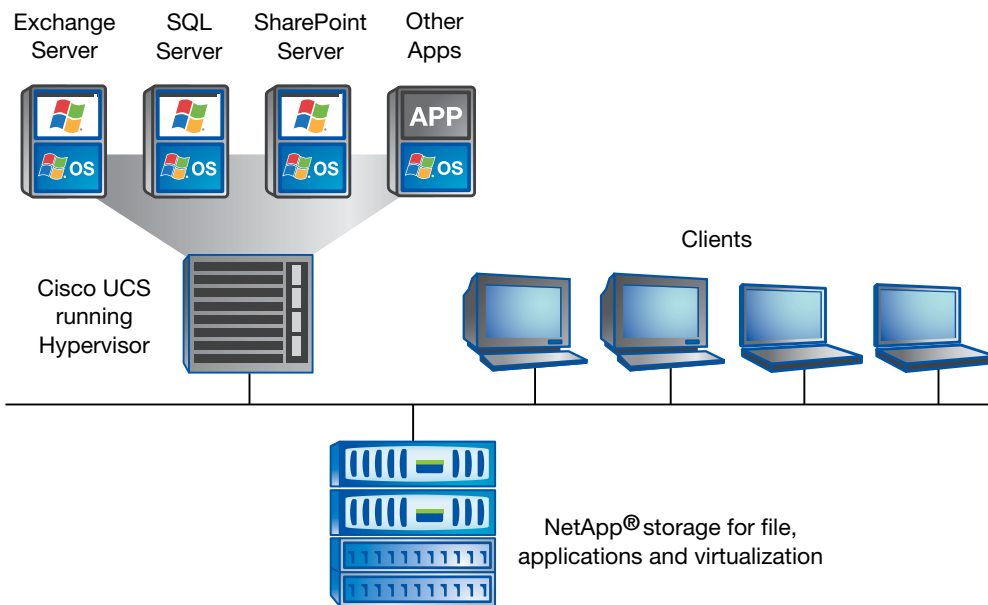**PARTNER OF THE YEAR**
WINNER

Figure 1) Windows Consolidation solution using Cisco and NetApp.

As a result, application and Windows availability increases, and you can spend more time on value-added tasks.

SLASH COSTS AND INCREASE EFFICIENCY

Cost savings can begin with simplifying the entire data center architecture. Cisco combined with NetApp can simplify and integrate the compute, network, and storage infrastructures into an easily managed entity.

The Cisco Unified Computing System is the first step and represents a simplification over the way that servers and networks are deployed today. It reduces the number of network access-layer switches by eliminating the switching inside the blade server chassis. It integrates compute resources around a unified I/O fabric that supports both standard Ethernet protocol as well as Fibre Channel using Fibre Channel over Ethernet (FCoE) encapsulation. The system can eliminate the limitations of fixed I/O configurations with an I/O architecture that can be changed through software on a per-server basis to provide you needed connectivity using a just-in-time deployment model.

With a NetApp storage solution, you can consolidate management for all your Windows data, including file serving, and automate daily tasks with our policy-based

management tools. You can speed up deployment and install new solutions and services in minutes, not hours or days. Your Windows administrators can manage Windows file systems and application storage directly and easily.

A range of storage efficiency technologies, including NetApp Snapshot™ copies, thin provisioning, deduplication, and tiered storage, are built right in and can help further reduce your costs. Our integrated deduplication technology can help achieve real space savings: estimates are 30% to 50% for primary storage and up to 95% for backups. With NetApp, administrator and infrastructure efficiency can go up, and your overall costs can go down.

IMPROVE DATA PROTECTION

The Cisco Unified Computing System consolidated infrastructure offers additional benefits for NetApp data management and IT cost reduction. One of the ways the Cisco Unified Computing System can be architected is using NetApp storage as both the boot mechanism for the various operating systems and as the data storage for the applications. This booting across the Cisco Unified Computing System fabric allows you to remove a source of traditional overhead and inefficiency.

Long, disruptive backup windows are a thing of the past, along with all those calls to restore lost files, documents, and so on. With NetApp, you can quickly create space-efficient backup copies of Windows data using our Snapshot technology and disk-to-disk backup capabilities.

For Windows application data, our SnapManager® software suite integrates directly with popular Microsoft applications, including Microsoft Exchange, SharePoint® Server, and SQL Server®, to make sure backups are quick and always in a consistent state. You can easily automate management of your Windows application data with predefined policies.

Additionally, individual users can quickly locate previously backed-up data, and restore individual files, with minimal assistance of an administrator. Depending on your system configurations, administrators can restore a corrupted database, individual mailboxes, or other application data quickly and easily to keep applications going strong.

With the joint Cisco and NetApp Windows consolidation solution, you can dramatically increase your storage and server infrastructure utilization while increasing resiliency.

KEEP YOUR WINDOWS ENVIRONMENT RUNNING

The Cisco Unified Computing System coupled with the NetApp unified storage architecture not only can save you cost and increase business agility; it also can be a critical solution for keeping your enterprise Windows environment operational. The fully redundant, and scalable design of the UCS enhances business resiliency by tightly integrating into various high-availability technologies across the entire infrastructure. From a compute and network perspective, this includes redundant power supplies, network fabric interconnects, and the ability to migrate virtual machines dynamically and maintain their state with system profiles.

Our storage solution can protect both your Windows files and Windows application data for reliable and dependable data access, whether that means quickly restoring a mailbox or recovering from a natural disaster. With NetApp you choose the solution that is right for your needs and your budget.

NetApp helps you address all the possible causes of downtime, from operator errors to network/site outages. We start with proven availability technologies such as active-active clustering, which delivers

high availability without leaving valuable resources idle, and RAID-DP®, which protects you against multiple disk failures. Availability is further extended through your choice of additional technologies to help protect your data, culminating in synchronous mirroring with failover when your environment requires it.

INFRASTRUCTURE THAT SCALES

A Cisco and NetApp joint unified infrastructure solution for Windows can reduce the time to service customers, whether it is adding new storage, adding new servers, or rapidly redeploying existing resources to meet growth or strategic changes. You need an information infrastructure to be agile enough to respond quickly to changing business needs and service levels.

Consolidating multiple, independent compute and storage deployments into one central pool of simple-to-manage NetApp storage and the Cisco Unified Computing System allows you to easily share resources, prioritize workloads, and add new capacity and capabilities. Additionally, on storage you can quickly and automatically grow, shrink, or reallocate storage volumes, so you never have to leave resources sitting idle.

GETTING STARTED

Get started down the path of consolidating your Windows environment by contacting your local Cisco and NetApp value-added reseller, who can help you understand and assess your environment and give you valuable insight on how you can lower costs, simplify administration, and improve availability with a NetApp and Cisco solution.

NetApp

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NetApp creates innovative storage and data management solutions that accelerate business breakthroughs and deliver outstanding cost efficiency. Discover our passion for helping companies around the world go further, faster at netapp.com.