Why Use Cisco Network Storage Systems for Your Business

Introduction

This white paper highlights two new additions to the Cisco® Small Business Network Storage System (NSS) line of products. The Cisco NSS2000 Series is a 2-bay network attached storage (NAS) system, and the Cisco NSS3000 Series is a 4-bay system. These desktop devices connect to the network through a switch and provide additional storage capacity and redundancy for important business data.

Highlights

- Small, versatile desktop form factor
- Lockable drives for greater security
- Support for redundant data backup (multiple RAID settings)
- Gigabit Ethernet interface
- Support for Microsoft Distributed File System
- 256-bit Advanced Encryption Standard (AES) file encryption for highly secure data storage
- Ability to combine NSS devices to expand storage capacity
- Quiet operation

The Cisco NSS2000 and NSS3000 Series are ideal for small offices and workgroups. Both are available either with or without hard drives. The NSS2000 model comes without hard drives, and the NSS2050 comes with two 250-GB hard drives preconfigured for easy setup and installation. Similarly, the NSS3000 comes without hard drives, and the NSS3100 comes with two 500-GB drives and two empty drive bays for expansion[1]. The latest approved vendor list for hard drives is published on Cisco.com at: http://www.cisco.com/en/US/products/ps9957/prod_technical_reference_list.html.

[1] The NSS3100 will soon be available in 2009.

Small, Versatile Desktop Form Factor

The Cisco NSS2000 and NSS3000 are quiet desktop devices, ideal for environments in which small size and low noise levels matter, such as small offices or workgroup areas. The small form factor allows the device to fit easily on a desktop or shelf, while the low noise level means it can operate without disturbing the day-to-day activities of the office.

Figure 1. Desktop network attached storage - NSS3000 (left) and NSS2000 (right)

Lockable Drives

The Cisco NSS2000 and NSS3000 Series include features that help prevent misuse or tampering. The disk drives in the NSS2000 are protected by locks to prevent unauthorized removal. The NSS3000 has a locking front panel that protects all of the drives. Both devices can be secured with a laptop-type lock to help prevent theft.

Support for Redundant Data Backup

The Cisco NSS2000 and NSS3000 Series give the user the option of choosing a redundant backup configuration for further data protection. The devices support several Redundant Array of Independent Disks (RAID) configurations that allow you to divide and replicate data among multiple disks. For example, a RAID1 configuration stores data simultaneously on two disks, in a configuration known as mirroring. This reduces the overall storage capacity but preserves data in case one of the hard drives fails. More RAID configurations are available on the NSS3000 because it supports up to four hard drives. For more information on which RAID settings are right for you, visit http://www.cisco.com/go/smallbusiness/storage or contact a Cisco certified partner.

Gigabit Ethernet Interface

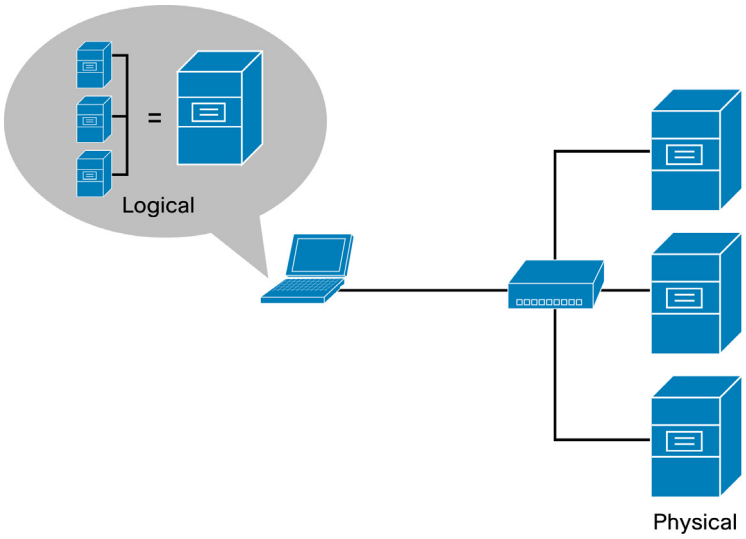
The Gigabit Ethernet interface increases the backup and restoration speeds of the Cisco NSS2000 and NSS3000, allowing it to get the best from either a conventional Fast Ethernet network or a full Gigabit Ethernet network deployment.

Support for Microsoft Distributed File System

Many small businesses work with Microsoft platforms. In environments in which users must remember where data is stored, each storage drive must be mapped. With the Microsoft Distributed Files System (MSDFS), you can map multiple storage devices so that they are seen by users as one location (Figure 2). This means that users do not need to worry about which NSS drive their data is stored on. The MSDFS capability also works with more than one NSS device; for example, a Cisco NSS4000 and an NSS2000 can be combined into one logical device.

Regardless of the operating system you are running on your computers or servers, they can all access the NSS storage device.

Figure 2. Support for Microsoft Distributed File System



256-Bit AES File Encryption

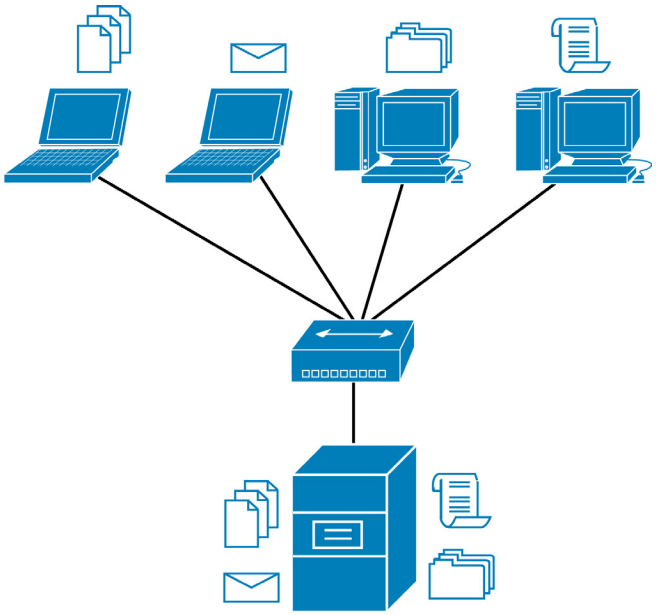
The on-disk encryption feature of the Cisco NSS2000 and NSS3000 encrypts and decrypts stored data on the fly, without any action needed by the user. If a hard drive is stolen, the data becomes useless. Both devices use AES (Advanced Encryption Standard), a strong encryption method, to protect your data.

Why Networked Attached Storage?

Data Security

A computer or hard disk can crash; it can also be stolen or lost. It is relatively easy to restore the operating system and the software you use. But how do you restore the data that is unique to your business? Customer data, financial records, contracts, agreements, source code--these are the lifeblood of an organization. A NAS device offers a highly secure way of storing backups of your valuable information and helps ensure that data can be recovered rapidly in the event of an emergency (Figure 3). Cisco's Continuous Data Protection (CDP) for Files software works with all Cisco Small Business NSS products and helps ensure that backups are performed automatically throughout the workday, not just late at night.

Figure 3. Secure your Business Data – PC and Laptop back-up



Collaboration and Up-to-Date Information

When people are working in teams, they often generate multiple copies of files, making it difficult to keep track of the latest version. It can also be difficult to determine which members of the team have a particular file on their PC or laptop. Using Cisco NSS solutions, users can store all documents in a single, central place, allowing fast and easy access to the right version for the right people--even when working remotely.

What Can Cisco Small Business Network Storage and Protection Products Do for Me?

It's not enough simply to provide a storage device. Busy people still have to make time to use it properly. Cisco CDP for Files software reduces the human factor in your backup plan because it allows critical files to be backed up and stored automatically. As a result, busy people can get on with productive work, without losing time to an important but distracting administrative process.

The files to be included in the backup can be selected by application, file extension, and directory. As the workforce becomes increasingly mobile, it is important to ensure that data is also backed up while employees are working away from the office.

Cisco Small Business VPN technology allows remote workers to stay connected to the company email server and other networking resources. It also enables the Cisco CDP for Files application to store the backup files on the NAS. The process is transparent to the user: As soon as the VPN tunnel is established, Cisco CDP automatically starts the data transfer process in the background.

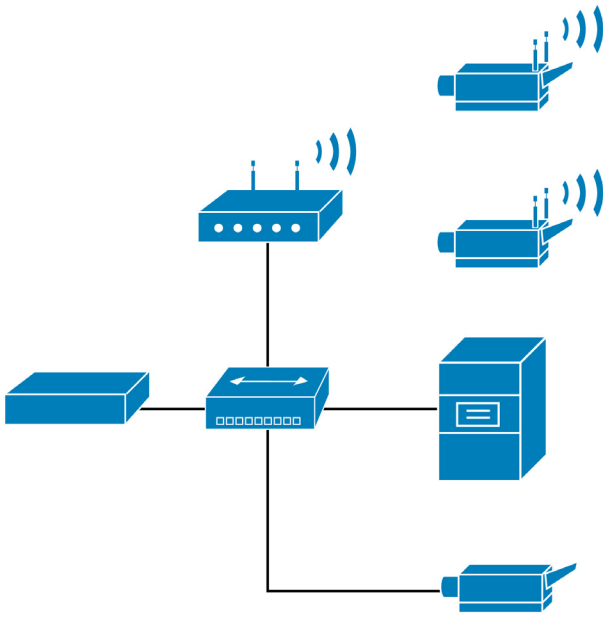
Provide Scalability

Over time, as your storage needs increase, it is easy to scale your storage solution by adding additional NSS devices. As part of the Cisco NSS line of products, the Cisco NSS2000 and NSS3000 can be incorporated in a “virtualized” storage deployment, in which multiple storage devices appear as a single storage location. However, using the NSS6000 to control and manage all of the storage devices gives you greater flexibility in determining how folders and files appear. From the user’s point of view, all of the devices work as a single unit. This scalability enables you to add additional storage capacity as your needs grow, without abandoning your existing investment in NSS solutions.

Store Your Surveillance Recordings

The Cisco NSS2000 and NSS3000 are ideal for storing large files created by surveillance video footage. The built-in setup wizards include a dedicated wizard optimized for video surveillance. Wired or wireless cameras, such as the small business Cisco IP surveillance cameras, can be used in conjunction with the NSS2000 and NSS3000 (Figure 4). With Cisco Small Business VPN technology, the stored videos can also be accessed remotely over a secure connection.

Figure 4. Store your Surveillance Recordings



Use Case Scenarios

Architects Scenario

An architecture firm generates many large files. CAD files and key project data--often involving highly complex calculations--must be stored securely and protected against loss or damage. In particular, the libraries and component libraries that allow a firm to derive maximum productivity from its CAD applications must be maintained and made readily accessible.

Solution Offering

The Cisco NSS3000 offers a user-friendly, state-of-the-art, expandable storage solution, with Cisco Continuous Data Protection for Files software to help ensure that all selected data from local machines is regularly updated to the NAS.

A Cisco Small Business Router allows highly secure remote access to the NAS using VPN technology. This allows a remote, on-site architect to access the latest drawings from colleagues in the office, enabling the firm to maximize its usage of existing resources and gain the benefits of improved collaboration.

Additional Products to Consider

Video Surveillance

The business may gain a number of benefits from a video surveillance deployment, including:

- Monitoring of the office, including monitoring after hours, with motion detection
- Monitoring of construction sites, including monitoring after working hours
- Live streaming of construction site activity to the firm's website
- Creation of time-lapse movies of a construction project--for example, by storing a picture every 10 minutes

Where Does It Sit in the Network?

Depending on the company size, the Cisco NSS3000 fits either at the workgroup level or at the core. Cisco CDP for Files runs on each workstation and laptop to help ensure that all data is backed up.

Home Office

Work is what you do and not a place you go. More and more people are working in a more flexible way--either from home or while on the road. In particular, freelance workers and regionally based sales or engineering staff often operate from home offices.

Scenario

The size of the business is irrelevant. Loss of data can be as damaging to a major enterprise as it can to a one-person business. It is important to protect critical data.

Solution Offering

The Cisco NSS2000 offers the capacity to ensure safe storage and backup, with Cisco CDP for Files to automate and manage the process. The on-disk encryption function helps ensure protection of the data on the disk, with no need for additional software. A Cisco Small Business Router with VPN also offers safe and secure access when out of the office.

Additional Products to Consider

An 802.11n wireless access point, such as the Cisco WAP4400N, provides more freedom to work wherever it is most comfortable or convenient, from the office or studio to the garden or the dining room table.

Where Does It Sit in the Network?

The NAS is directly connected either to the router or to a switch.

Accountants

Storage and data security are major concerns for accounting teams within organizations or at specialist accountancy firms.

Scenario

Financial information is highly sensitive and is also a vital business asset. Any loss or damage could be fatal for a small business. In addition, there must be tight control over who has access to the data, especially for a private accountancy practice, which may hold the records of many different client companies.

Solution Offering

The Cisco NSS2000 provides the capacity, flexibility, and security required by accounting teams and practices. In particular, the on-disk encryption avoids the need for third-party encryption software and for training staff in the use of encryption processes.

Additional Products to Consider

A Cisco Small Business Router with VPN for remote access could offer strong benefits to accountancy teams, as would Wi-Fi technology based on 802.11n, with the latest Wi-Fi security.

Where Does It Sit in the Network?

Depending on the company size, the Cisco NSS2000 may be the sole solution needed, or it may be used by a workgroup and backed up to a Cisco NSS3000, NSS6000, or NSS4000.

Creative Agency

All of the NSS products work well in a Macintosh environment. Graphics, video, and music files take up large amounts of bandwidth, making speed a key issue for the network. The Cisco NSS3000 offers Gigabit connections and is therefore one of the strongest links in the network.

Scenario

The agency stores the content it produces, such as artwork for a new brochure that is ready to be sent for printing, on the Cisco NSS3000.

Solution Offering

The secure FTP capabilities of the Cisco NSS3000, operating in combination with a Cisco Small Business Router with VPN, enables the print company to download the data from the agency's NAS. Access rights can be assigned on a per-user basis, so the print house can access only the files that are made available to it. The VPN functions within the NAS and the router to help ensure end-to-end security.

Additional Products to Consider

The agency could make good use of 802.11n Wi-Fi technology, with the latest Wi-Fi security, while Gigabit Ethernet switches would help accelerate the transfer of large, content-rich files.

Where Does It Sit in the Network?

In a small agency, the Cisco NSS3000 may be the only NAS product. As the agency grows, the NSS3000 could be used at the workgroup level or as part of a virtualized array in the core.

For More Information

Visit http://www.cisco.com/go/smallbusiness/storage.

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