



Cisco Small Business - NSS2000 Storage System

Whitepaper and User Case Scenarios



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Introduction

As a leader in networking and communications, Cisco® is already helping small businesses around the world work better. For many small businesses, data is critical. The majority of customer information, email, contracts, and sales leads are stored digitally. It is therefore becoming increasingly important for small business customers to have a secure and reliable back up system to protect their data in the event of a catastrophe. Cisco Small Business Networked Storage Solutions can offer customers the peace of mind of knowing their company's data is securely stored and can be accessed anytime and from anywhere.

The Cisco NSS2000 Small Business Storage solution is a 2-Bay Network Attached Storage (NAS) system and the latest member of the NSS storage product family.

Highlights:

- Small, versatile desktop form factor
- Lockable drives
- Support for RAID 0 and RAID1
- Gigabit Ethernet Interface
- Support for Microsoft Distributed File System
- 256 bit AES file encryption
- Virtualization target
- Silent (low noise level)

The NSS2000 is an ideal solution for small offices and workgroups.

The NSS2000 comes without HDDs. The latest approved vendor list (AVL) for HDDs is published on the [NSS2000 product page](#).



Key Features:

Small, versatile desktop form factor

The NSS2000 is a silent, low noise level desktop NAS device. It is ideal for environments where size and low noise levels matter, such as small offices or workgroup areas.

The small form factor allows it to fit easily on desktops or shelves, while the low noise level means it can operate without disturbing the day-to-day activities of the office.

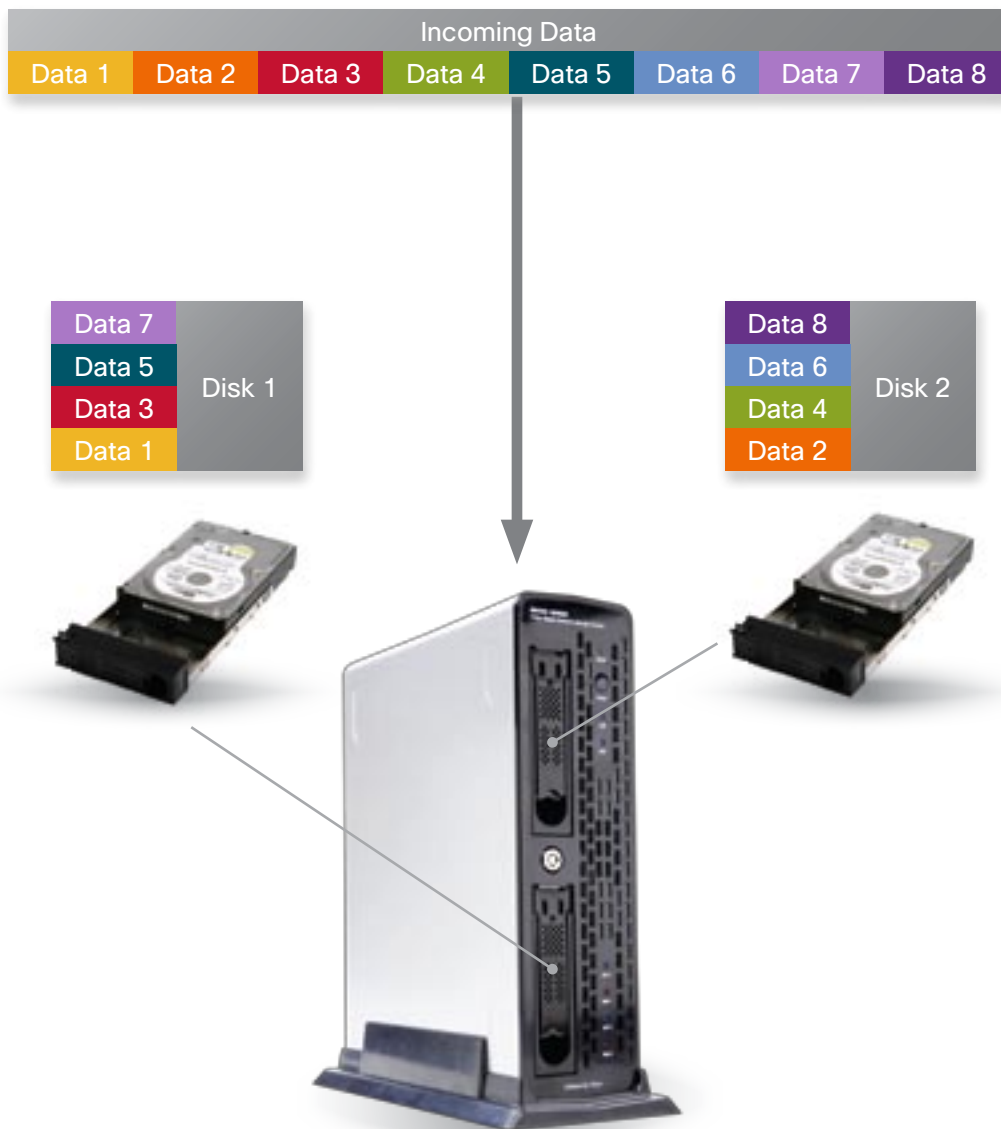
Lockable Drives



As a desktop device, the NSS2000 may be vulnerable to misuse. It is more exposed than units stored in lockable rack cabinets and therefore could be tampered with in error. The disk drives are therefore protected by locks to prevent unauthorized removal, and the chassis can be attached with Kensington locks to help prevent theft.

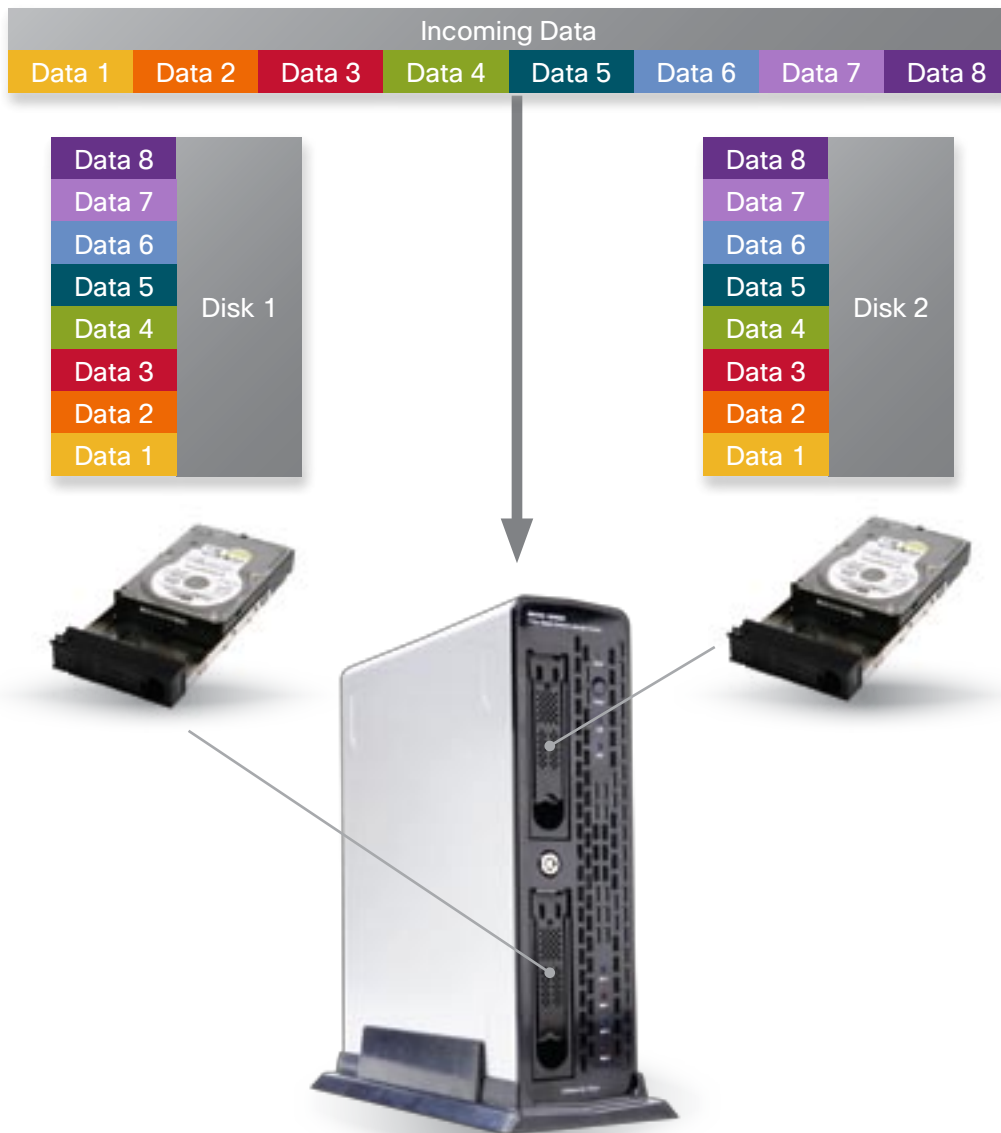
Support for RAID 0 and RAID 1

RAID 0



A RAID 0 provides the full capacity of the HDDs. From a performance perspective, there is virtually no loss. However, there is also no redundancy, as each data block is only stored on one HDD. RAID 0 is only recommended where a Cisco NSS4x00 or a Cisco NSS6x00 already exist within the network, as these can be used to back up the NSS2000.

RAID 1

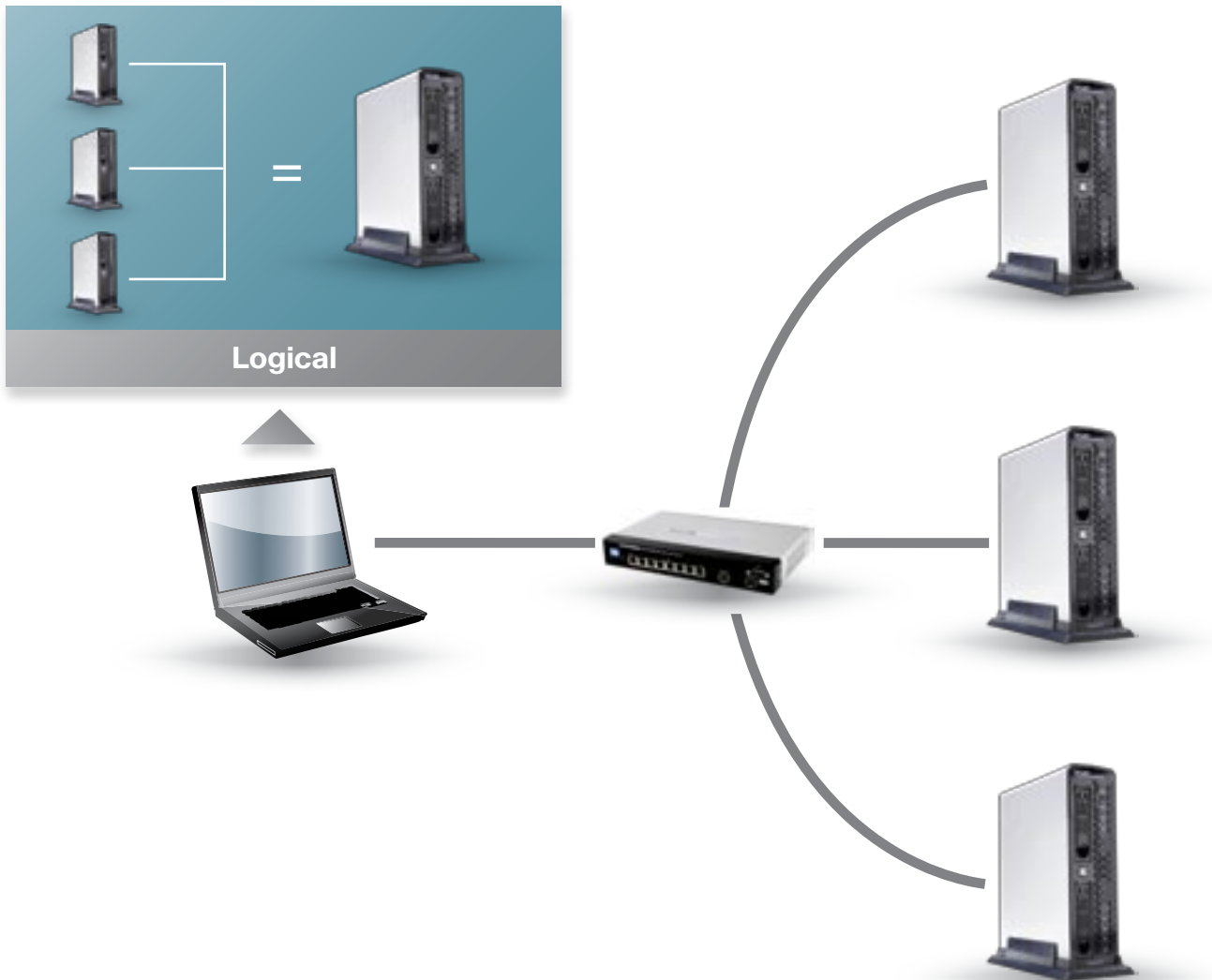


In a RAID 1 configuration, all data will be stored on both HDDs. This means that you only have the capacity of one disk (so-called 50% disk tax), but this level of redundancy provides strong data protection. A HDD can crash without loss of critical files. RAID 1 is recommended if the Cisco NSS2000 is used independently of other NSS devices.

Gigabit Ethernet Interface

The Gigabit Ethernet Interface enables optimal performance, getting the best from a conventional Fast Ethernet infrastructure (10/100 Mbit), or a full Gigabit Ethernet deployment.

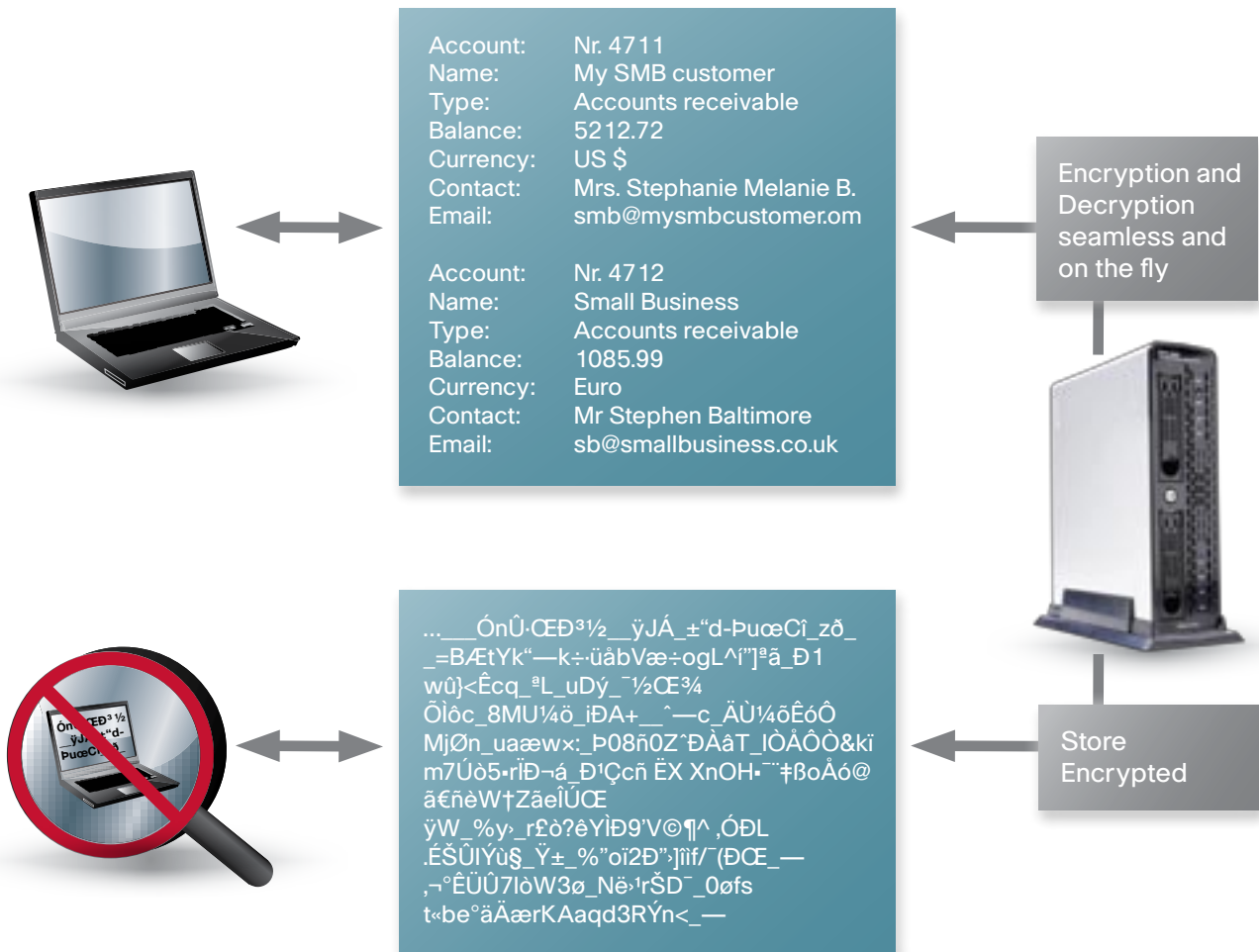
Support for Microsoft Distributed File System



Many small businesses work with Microsoft® platforms. In these environments, where users must remember where data is stored, each storage drive must be mapped.

With the Microsoft Distributed Files System (MSDFS), each Cisco Network Attached Storage device will be seen on the network as a single logical device. This means that users do not need to worry about where the specific data set is to be stored. The MSDFS capability also works with other Cisco NSS solutions; for example a NSS4000 and a NSS2000 can be combined as one logical device.

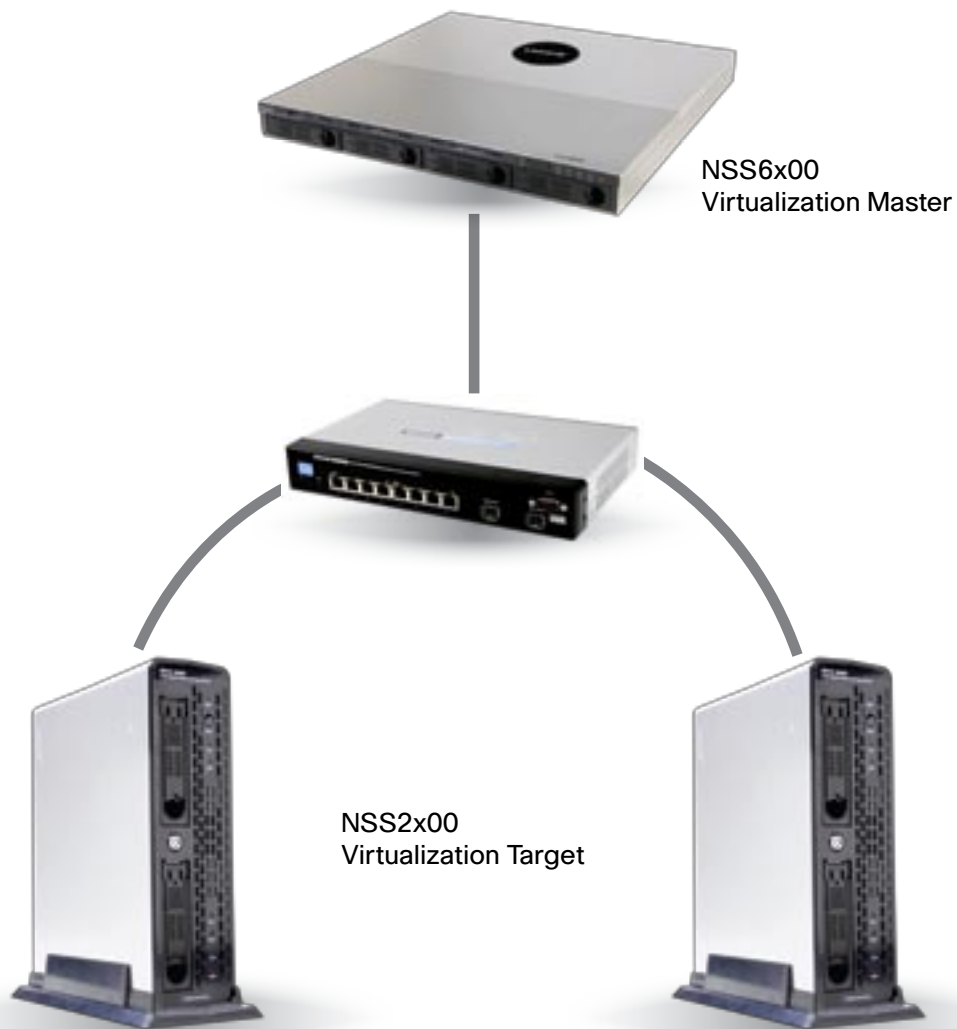
256 bit AES File Encryption



The on-disk encryption feature encrypts and decrypts the data stored on the Cisco NSS2000 on-the-fly. This ensures that data is useless if, for example, a hard drive is stolen. The encryption is seamless to the user.

The NSS2000 uses AES (Advanced Encryption Standard), a symmetrical encryption method that is also used for WPA2 (WiFi security), and to secure VPN tunnels.

Virtualization Target



Cisco Small Business Storage Solutions can be combined to create larger scale virtualized storage structures. A NSS6x000 is used as the virtualization master and controls the virtualized stack of NSS units - also known as virtualization targets.

Why Networked Attached Storage (NAS)?

Secure Your Data:

A computer or a hard disk can crash; it can be stolen or lost. It is relatively easy to restore the operating system (e.g. Microsoft Windows® or Linux) and the software programs, such as Microsoft Office, Open Office, Acrobat® Reader® or Mozilla FireFox.

But how do you restore data that is unique to your business? Customer data, financial records, contracts, agreements, source code, NDAs - these are the priceless lifeblood of an organization.

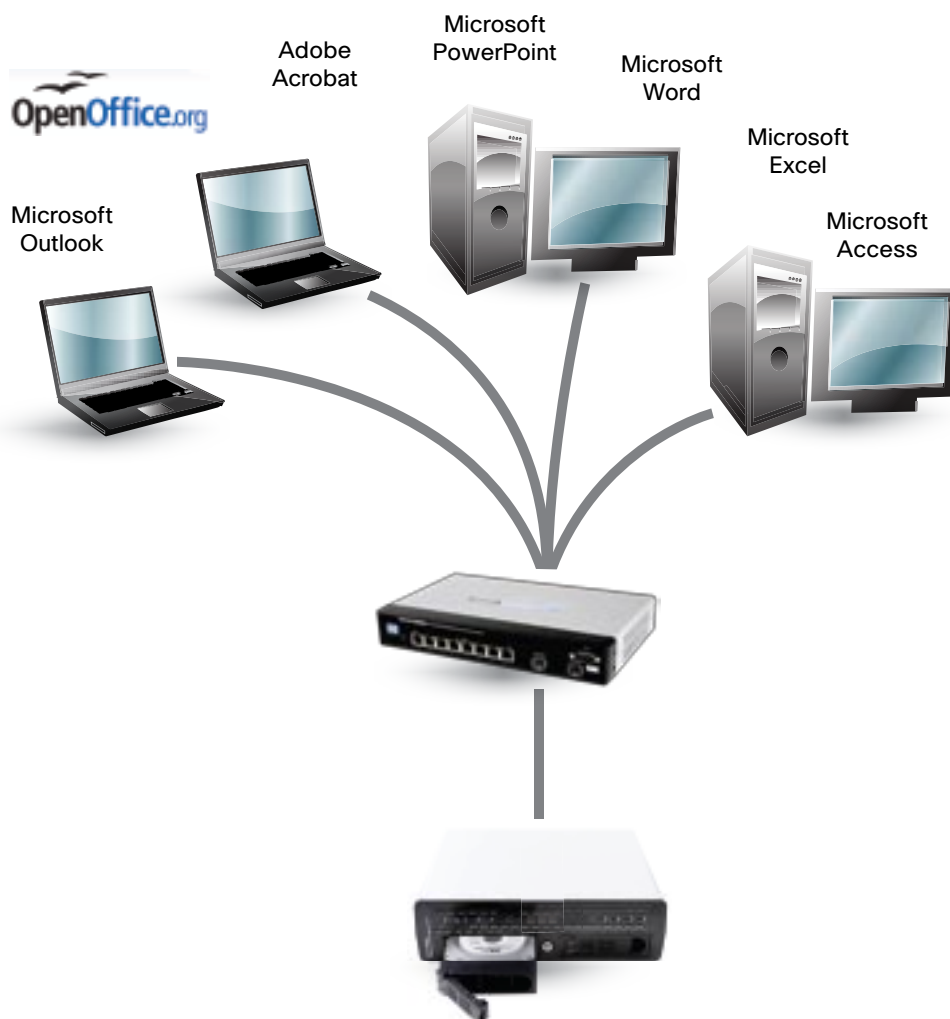
A NAS device offers a secure way of storing back-ups of valuable information and ensures that data can be recovered rapidly in the event of an emergency. Cisco's Continuous Data Protection (CDP) solution, supplied as standard with the Cisco NSS family, ensures that back-ups are performed automatically.

Collaboration and up-to-date information

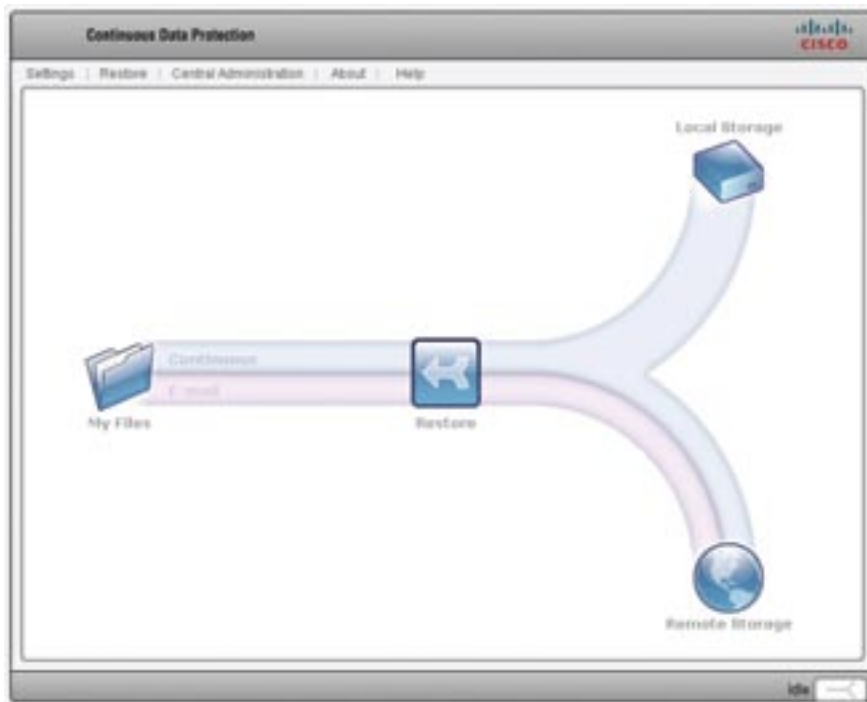
Where people are working in teams, they often generate multiple copies of files, making it difficult to keep track of the latest version. It can also be difficult to determine which member of the team has a particular file on their PC or laptop. Using Cisco NSS solutions, all documents can be stored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

What can a Cisco NSS2000 Storage System do for me?

Secure your Business Data – PC and Laptop back-up:

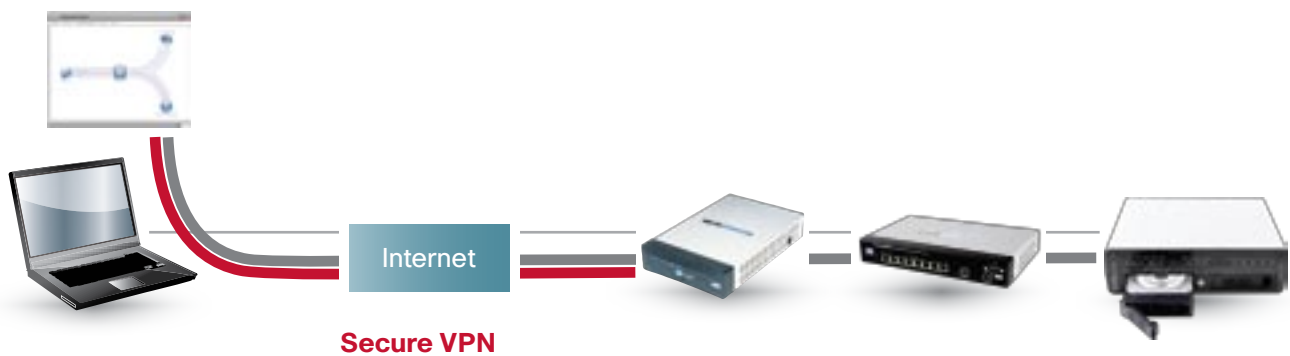


It is not enough simply to provide a storage device. Busy people still have to make time to use it properly. With Cisco CDP, the human factor in any back-up plan can be reduced because it allows for automated back-up and storage of critical files. It also means that busy people can get on with productive work, without having to worry about time lost to an important but distracting administrative process.



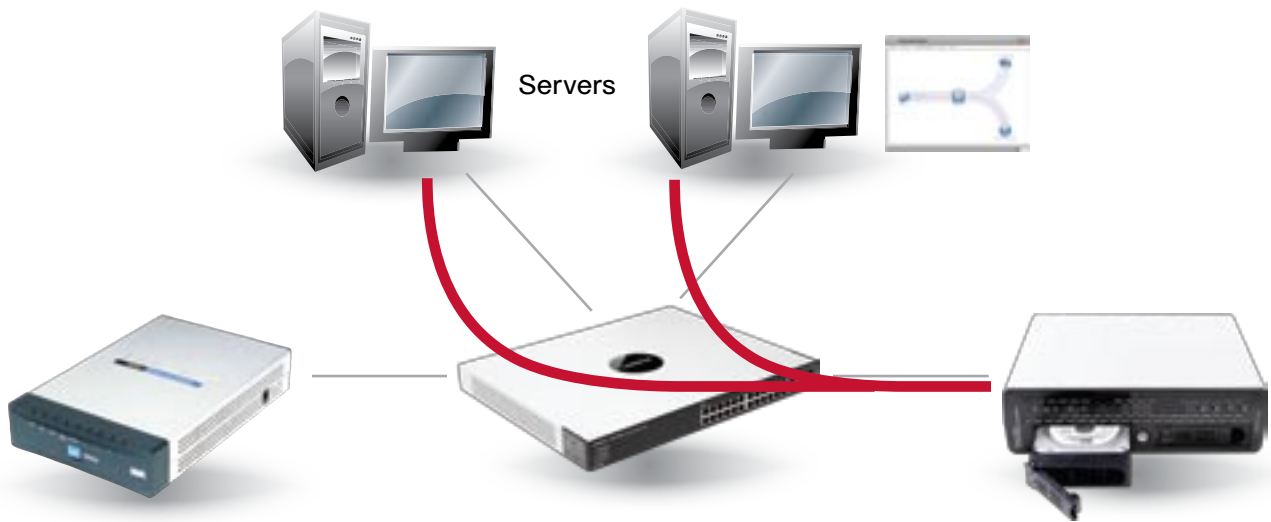
The files to be included in the back-up can be selected by application, file extension and directory.

As workforces become increasingly mobile, it is important 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 application to store the back-up files on the NAS. The process is seamless for the user; as soon as the VPN tunnel is established, Cisco CDP automatically starts the data transfer process in the background.

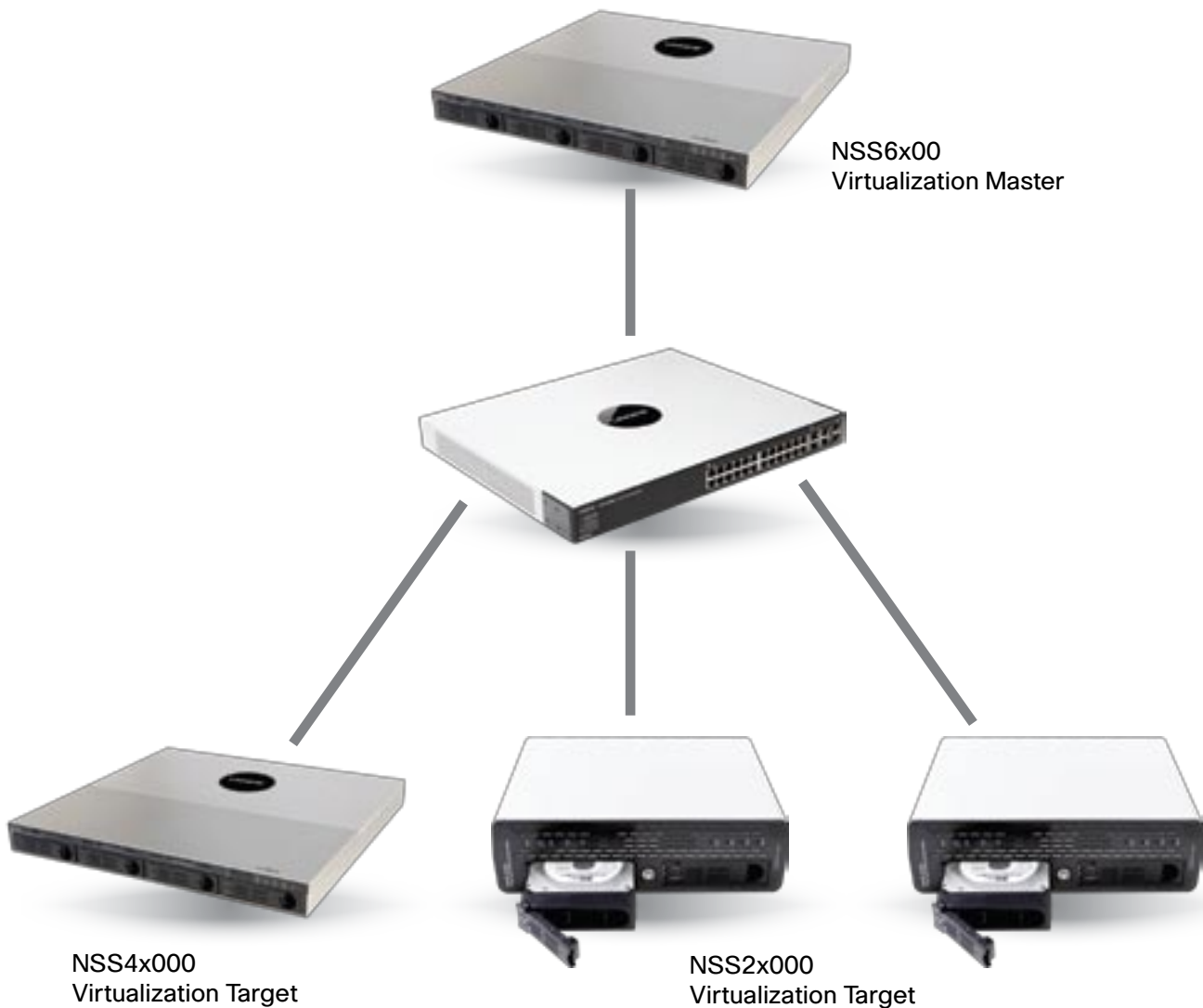
Secure your Business Data – Server Back-up:



Servers usually contain valuable data as well – anything from web pages to confidential financial information.

The Cisco NSS2000 provides cost effective back-up of server data, with CDP back-up software to ensure that critical files and data are backed-up continuously.

Virtualization – Integrate into a larger Storage Solution:



As part of the Cisco NSS family, the Cisco NSS2000 can be incorporated in a virtualized storage deployment, in which multiple disk arrays are used as a single storage facility. The Cisco NSS6000 serves as the virtualization master, and the Cisco NSS2000 can be used as a virtualization target. From user's point of view, the whole array of multiple devices works as a single unit. This scalability is invaluable for small businesses, allowing them to integrate additional storage as they grow, without abandoning their existing investment in Cisco NSS storage solutions.

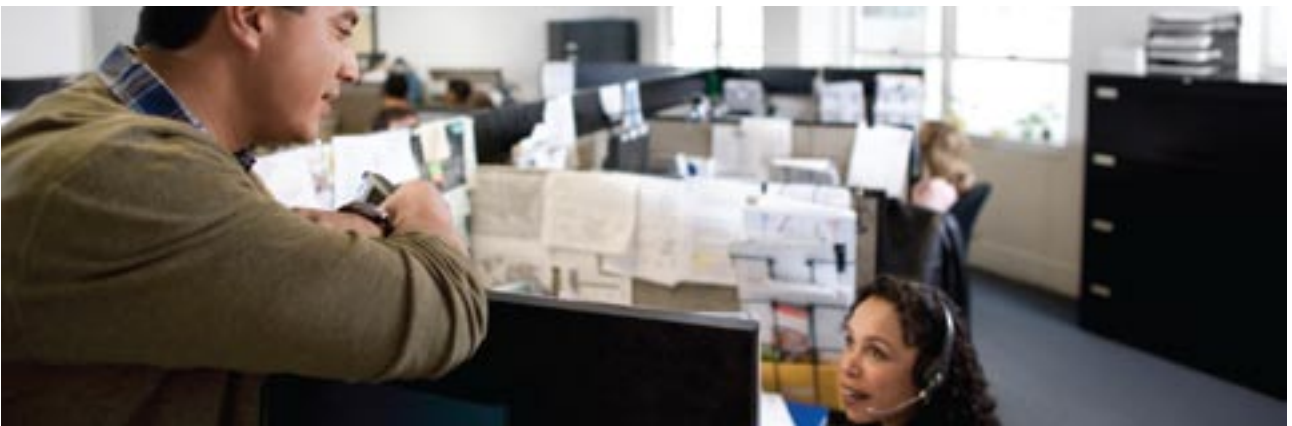
Store your Surveillance Recordings



The Cisco NSS2000 is ideal for the storage of the large files created by surveillance video footage. The built-in setup wizards include a dedicated wizard optimized for video surveillance. Wireless cameras, such as the WVC2300, or wired cameras, such as the PVC2300, can be used in conjunction with the Cisco NSS2000. Where Cisco Small Business VPN technology is used, the stored videos can also be accessed remotely over a secure connection.

Where does the NSS2000 NAS fit into the network?

The Cisco Small Business NSS2000 is suitable for networks serving anywhere from 10 to 100 users. It provides the flexibility that today's small businesses need and ensures safe storage of critical data.



Where does it fit – Workgroup?



By definition, workgroups share a lot of data, with each member of the team needing quick and easy access to the files. The Cisco NSS2000 is well suited to use by individual workgroups, helping to optimize bandwidth across the overall network by reducing the volume of traffic that needs to travel beyond workgroup for storage and back-up. Local deployments of this kind also ensure that access to the NAS is delivered at maximum performance.

For more valuable data, workgroup NAS devices can be backed-up to a centralized storage array - typically, a virtualized solution with a Cisco NSS6000 as the master, or perhaps to a networked Cisco NSS4000, depending on the capacity required.

Where does it fit – Small Business NAS?



This is an excellent storage and back-up deployment for a small business. It provides the peace of mind that key data are protected, while automating the processes involved, leaving workers free to focus on their business priorities.

User Case Scenarios

Architects



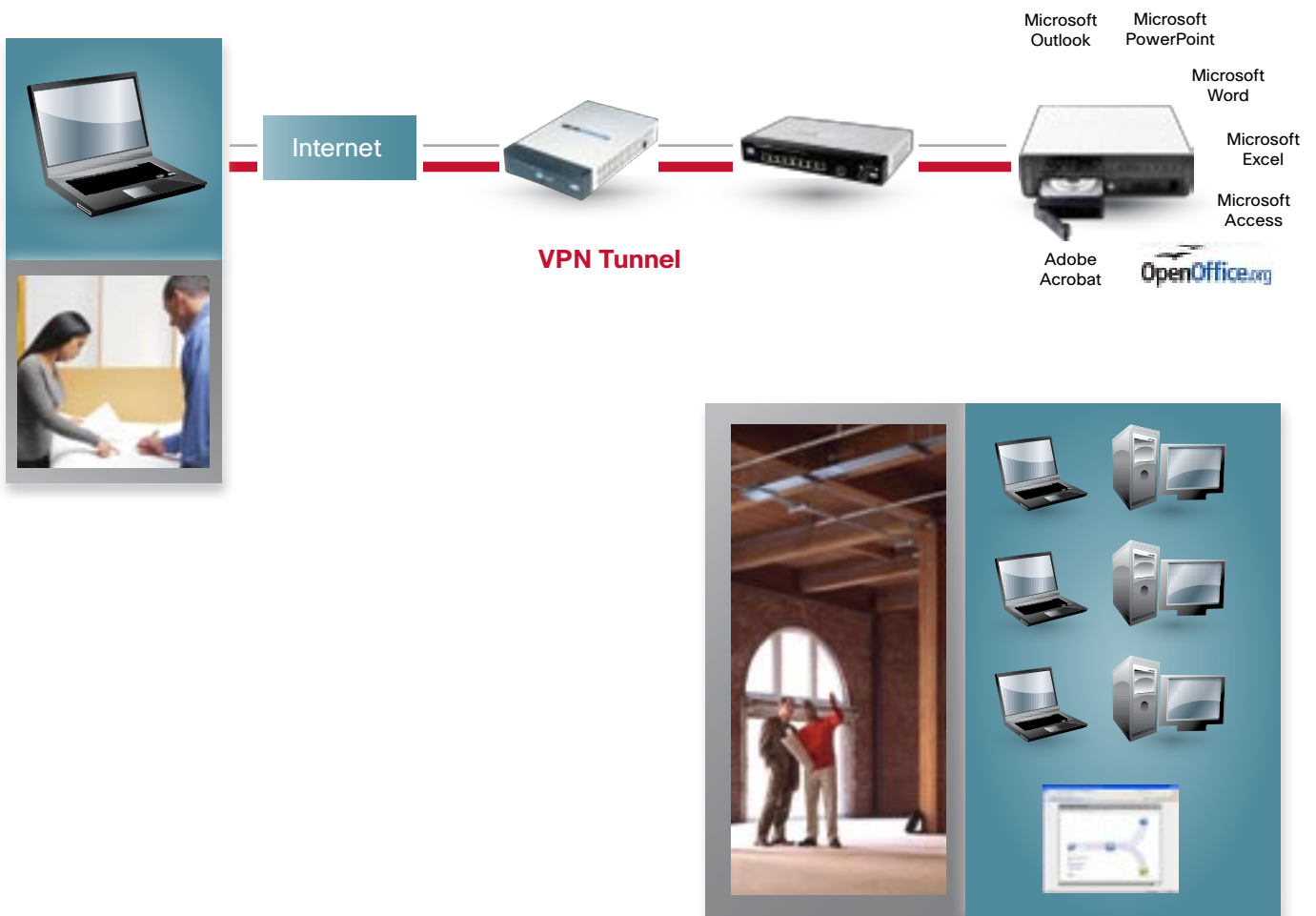
Scenario:

An Architect's practice generates many large files. CAD files and key project data - often highly complex calculations - must be securely stored and protected against loss or damage. In particular, the libraries and component libraries that drive maximum productivity out of CAD applications, must be maintained and made readily accessible.

Solution Offering

Cisco NSS2000 offers a user-friendly, state-of-the-art and expandable storage solution, with Cisco Continuous Data Protection software to ensure that all selected data from local machines are regularly updated to the NAS.

A Cisco Small Business Router allows secure remote access to the NAS using VPN technology.



This allows the remote, on-site architect to access the latest drawings from colleagues in the office. The practice can maximize the usage of existing resources and gain the productive benefits of improved collaboration.

Upsell Opportunities

Video Surveillance

The practice may gain a number of benefits from a video surveillance deployment:

- 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 practice web site
- creation of time-lapsed movies of a construction, for example by storing a picture every 10 minutes

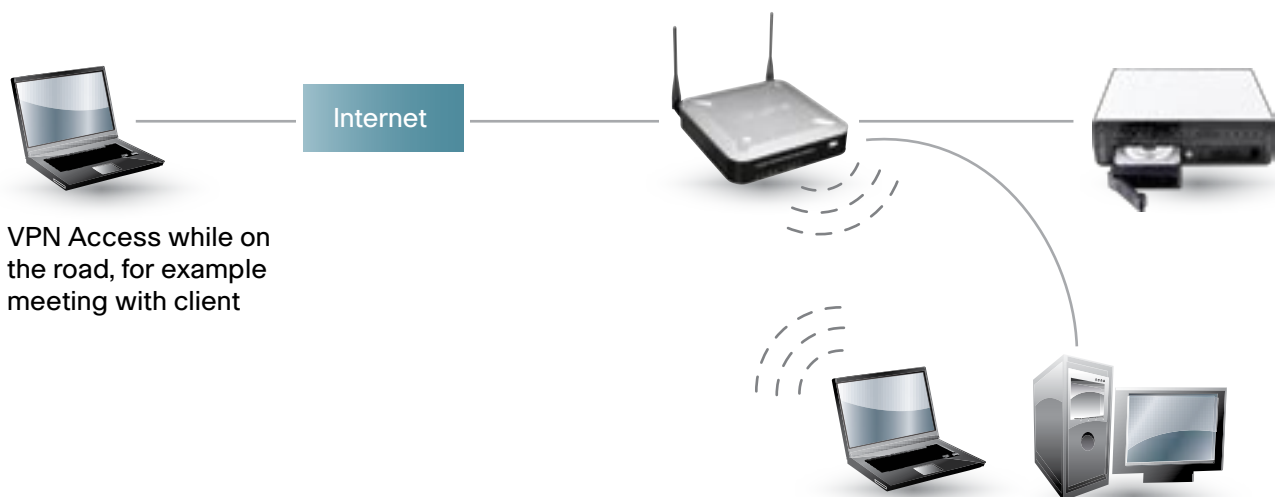
Where does it fit in the network?

Depending on the company size, the NSS2000 fits either at the workgroup level or at the core. Cisco CDP runs on each workstation and laptop to ensure that all data are 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, or regionally-based sales or engineering staff can operate from home offices.

Scenario:



VPN Access while on the road, for example meeting with client

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. The critical issue is protection of critical data.

Solution Offering

The Cisco NSS2000 offers the capacity to ensure safe storage and back-up, with Cisco CDP to automate and manage the process. A Cisco Series Router also offers safe and secure access when out of the office, while the on-disk encryption function ensures protection of the data on the disk, with no need for additional software.

Upsell Opportunities

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

Where does it fit in the network?

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

Accountants

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

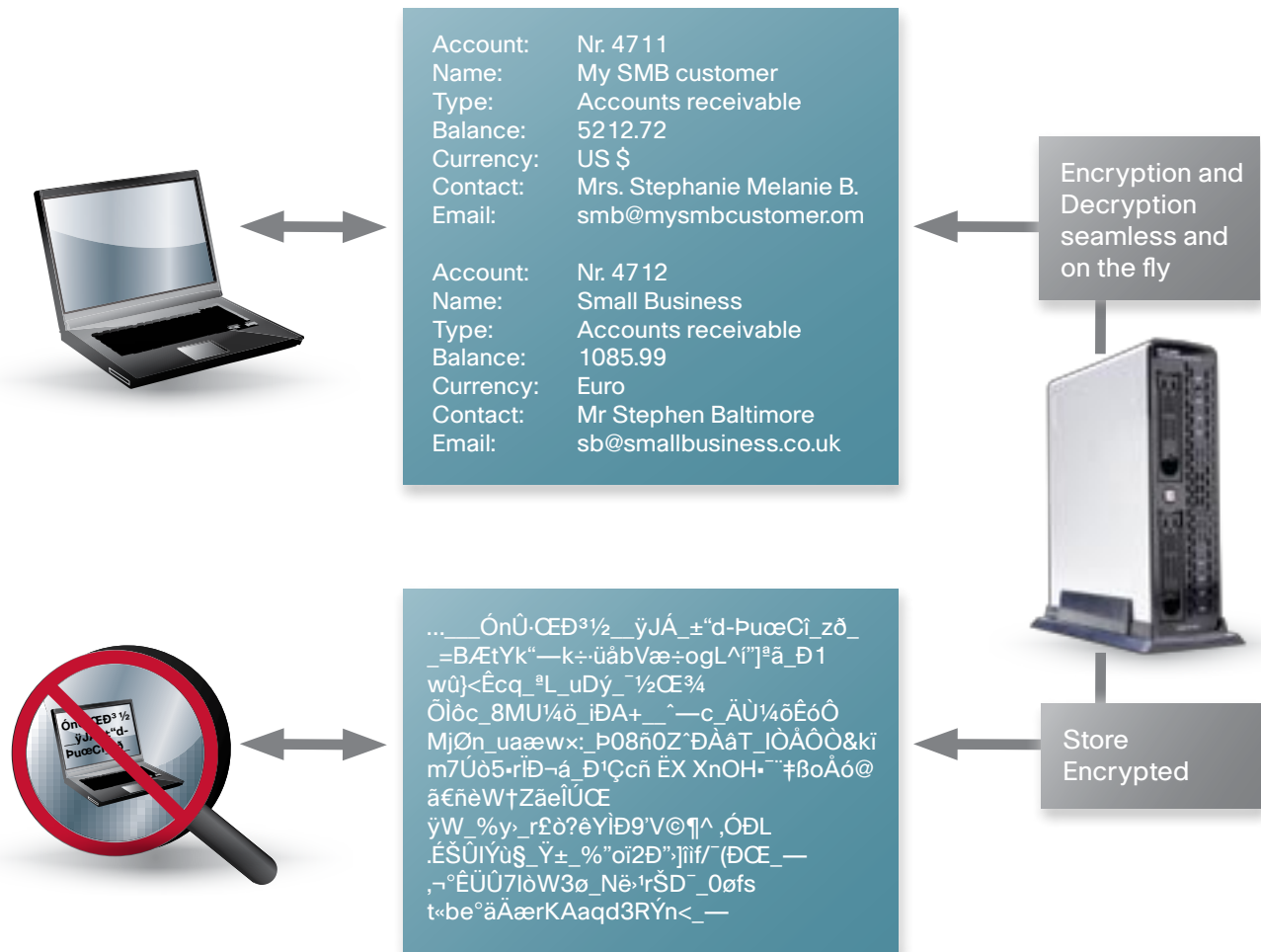
Scenario:

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 functionality avoids the need for third-party encryption software, and for training on encryption processes.



Upsell Opportunities:

A Business VPN router for remote access could offer strong benefits to accountancy teams, as would WiFi technology based on 802.11n, with the latest WiFi security.

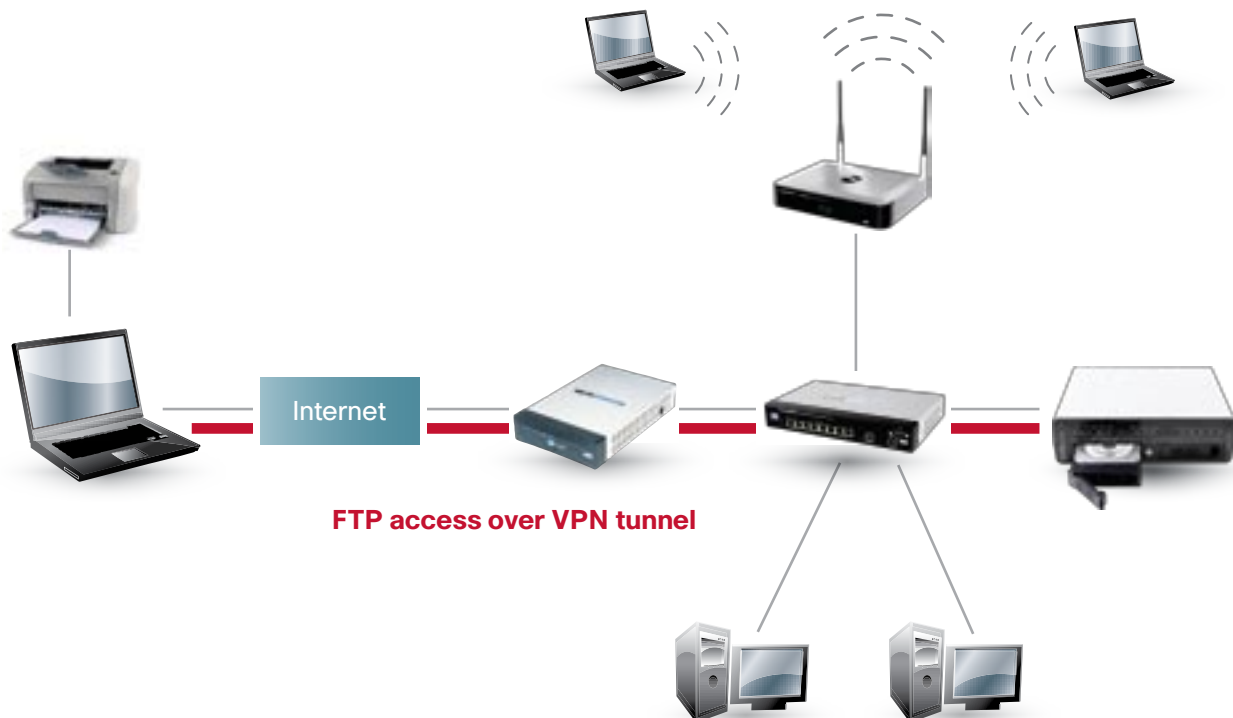
Where does it fit in the network?

Depending on the company size, the Cisco NSS2000 may be the sole solution, or it may be used by a workgroup and backed-up to a Cisco NSS6x000 or a Cisco NSS4x000 Series.

Creative Agency

The Cisco NSS2000 works well in a Mac environment. Graphics, video and music files take up large amounts of bandwidth, making speed a key issue for the network. The Cisco NSS2000 offers Gigabit connections and is therefore one of the strongest links in the network.

Scenario:



The content produced by the agency is stored on the Cisco NSS2000. In this scenario, artwork for a new brochure has been approved by the client and can be sent for printing.

Solution Offering

The secure FTP capabilities of the Cisco NSS2000 Series, operating in combination with a 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 only access the files that are made available to them. The VPN functions within the NAS and the router ensure end-to-end security.

Upsell Opportunities:

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

Where does it fit in the network?

In a small agency, the Cisco NSS2000 may be the only NAS. As soon as the agency grows, it works on a desktop at the workgroup level, as part of a virtualized array.



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