

HP Internet Security and E-Commerce Solutions

ESG11439LG0309

lab
guide



HP Internet Security
and E-Commerce
Solutions

ESG11439LG0309



training

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HP Internet Security and E-Commerce Solutions

Lab Guide

September 2003

Website Planning and Design

Module 1 Lab

Objectives

After completing this lab, you should be able to:

- Plan and design two e-commerce solutions.
- Create the basis for an e-commerce solution questionnaire.

Note

This is a conceptual lab only; there are no right or wrong answers.

Requirements

To complete the lab activities, you must have reviewed the materials found in the HP E-Commerce WBT.

Planning Different Solution Types

Given the follow scenario about two fictitious companies, complete the questions regarding implementing e-commerce solutions.

Scenario

You are planning two websites: one for a start-up company called Bang Ware Inc. and another for a 25-year-old service company called Little Duffers. The following table provides information about each company.

	Bang Ware Inc.	Little Duffers
Business	Sale of new retail clothing that has been altered to look used or weather-beaten	Personal golf instruction to school-aged children
Target market segments	<ul style="list-style-type: none">■ North America■ Affluent■ Ages 16-21	<ul style="list-style-type: none">■ North America and Europe■ Affluent■ Ages 25-65
Current IS infrastructure	<ul style="list-style-type: none">■ Limited IS infrastructure■ External ISP provided email■ No significant enterprise systems■ Key personnel have IT backgrounds	<ul style="list-style-type: none">■ Advanced IS infrastructure.■ Multiple file and print servers, application servers, database servers■ Help-desk and IS functions are outsourced
Current advertising	<ul style="list-style-type: none">■ Hard-copy catalog■ Word-of-mouth	<ul style="list-style-type: none">■ Magazine ads■ Trade shows■ Mass media

Considerations

Rate the following items on a scale of 1 to 10 (1 being least important and 10 being most important), based on their importance to the implementation of an e-commerce solution for each company.

1. Importance of an e-commerce site to company success:
Bang Ware
Little Duffers
2. Importance of outsourcing e-commerce components:
Bang Ware
Little Duffers
3. Importance of web-based advertising:
Bang Ware
Little Duffers
4. Importance of transaction security:
Bang Ware
Little Duffers
5. Importance of implementing a cost-effective load balancing solution:
Bang Ware
Little Duffers
6. Importance of logging and tacking site visitors:
Bang Ware
Little Duffers
7. Importance of maintaining a highly available site:
Bang Ware
Little Duffers
8. Importance of firewall and document security:
Bang Ware
Little Duffers
9. Importance of a phased approach to creating and e-commerce site:
Bang Ware
Little Duffers

10. Importance of planning the integration of an e-commerce solution:
 Bang Ware
 Little Duffers
11. Importance of secure communication with business partners:
 Bang Ware
 Little Duffers
12. Importance of implementing an Internet-based EDI solution:
 Bang Ware
 Little Duffers

E-Commerce Design Plan

In the space provided, give an overview of how you would design a DISA solution for each company.

[illegible]

In the Lab Summary, you will compare answers with other students to further develop your questionnaire.

[illegible]

Lab Summary

Compare answers from other students to further develop your e-commerce planning and design skills and help develop your questionnaire.

Note

The questionnaire should be considered a work-in-progress. The constantly changing infrastructure of e-commerce should facilitate the need to constantly update and revise your planning and design skills.

Sizing an E-Commerce Solution

Module 2 — Lab 1

Objective

After completing this lab, you should be able to use the ProLiant Sizer for E-Commerce Solutions to recommend an HP e-commerce solution.

Requirements

- Internet Explorer 5.5 or later
- Classroom access to the Internet

Note

If Internet access is not available in the classroom, most of the Sizer screens are shown in the lab documentation for review and discussion.

Introduction

The ProLiant Sizer for E-Commerce Solutions is a configuration-estimating tool that assists the user with sizing HP hardware for the following applications that will be used in this course:

- Microsoft Internet Information Services for Windows 2000
- Microsoft Commerce Server for Windows 2000

The Sizer provides a valid HP hardware configuration, given a specified peak load based on the information provided in the automated interview. The complete Bill of Materials (BOM) for each server recommended is provided in a series of HTML pages that can be printed and used for budgeting and ordering the recommended HP hardware.

Scenario

Parker Design Inc., of Sante Fe, New Mexico, is a relatively small designer and manufacturer of mountain bike components. The company sells its products to distributors and retailers; however, the company would like to sell products and services over the Internet to consumers.

There is no web server in place at the Parker office. The current website serves as a source of information about the company. Although there is an electronic catalog, there are no mechanisms in place for ordering. An ISP hosts the website.

Currently, the catalog consists of less than 100 products. However, Parker develops an average of 15 new products each year and some products are built to order.

The e-commerce solution must be scalable for potential growth yet economical. Because Parker only has two IT employees, the hardware must have remote management capabilities.

Parker sells to more than 500 distributors and retailers. The website must be capable of handling catalog browsing, special orders, and online purchases.

Use the ProLiant Sizer for E-Commerce Solutions tool to generate a hardware configuration based on the company's needs and plans for growth.

Connecting to the Compaq E-Commerce Solution Sizer

To access the Compaq E-Commerce Solution Sizer:

1. From a web browser, connect to **<http://www.hp.com/solutions/activeanswers>**. The ActiveAnswers Welcome page displays.
2. Click *Tools* in the left menu.
3. A list of tools for sizing and configuring solutions are listed. Click *View the available sizers* under Solution Sizers. If a Security Alert window displays, click *Yes* to proceed.
4. The ActiveAnswers website requires user registration. If you are a registered user, enter your user name and password in the fields. Click *submit*. Otherwise, click *Need to register?* to enter the necessary information to create an account.
5. Under Online Sizers, click *Proliant Sizer for E-Commerce Solutions*. The hp e-commerce solution sizer introduction page displays.
6. Click the *HP E-Commerce Solution Sizer* link at the bottom of the page. The Sizer opens a new window.



7. In the license and disclaimer agreement dialog box, select *Agree* → *Next*. The Solution Options screen displays.



8. In the Solutions Options dialog box, select *Microsoft Commerce Server 2000 for Windows 2000* and click *Next*. The Site Profile Selection screen displays.



The three site profiles consist of a single-server solution and DISA solutions. Selecting the correct profile is dependent on:

- Concurrent users

This is the peak number of users expected to hold a concurrent connection during the busiest times. If future growth vastly exceeds the capacity of the current site, then one of the more expandable solutions should be considered. It is important to plan the architecture and hardware for an e-commerce site according to perceived growth.

- Transactions per minute

The estimated transaction load is the number of transactions per minute that can be expected on the e-commerce site. This number is significant in that it has been tested against the servers profiled in the sizer to determine the type and number of ProLiant servers required to fulfill the site needs. Server capacity limits are based on a number of factors, including the percentage of transactions such as browsing, basket operations, purchases, and the relative costs of each activity.

The profile options are:

- Entry Level

Scalable and affordable, this e-commerce storefront solution is ideal as a dedicated storefront supporting up to an average of 425 concurrent users and 25 transactions per minute.

With single-server solutions, all content resides on one server. This is the recommended solution for small to medium businesses or for internal use as Departmental servers. Single-server solutions are available in tower and rack form factors.

- DISA

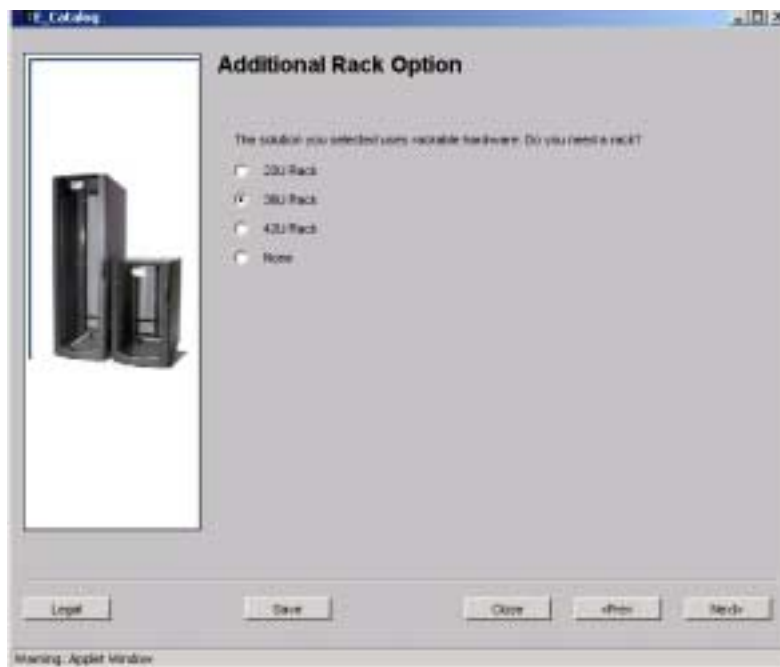
Ideal for large enterprises and ISPs, this multiserver configuration supports up to an average of 975 concurrent users and 65 transactions per minute.

- DISA H.A.

With maximum availability and scalability, this solution supports up to an average of 1460 concurrent users and 100 transactions per minute.

DISA solutions are suitable when availability, scalability, and fault tolerance are of utmost importance. These solutions implement multiple application and data servers. Site content is not the driving factor. With a DISA implementation, scalability to handle additional traffic is as simple as bringing another server online. DISA solutions are available in THE rack form factor only.

9. Select the *DISA* profile and click *Next*. The Additional Rack Option screen displays.



10. The Additional Rack Option dialog box selects the *36U Rack* by default. Click *Next*.
11. The Additional Monitor Option screen displays. Select *Existing Monitor* and click *Next*.
12. The Remote Insight Board Option screen displays. The Remote Insight Lights-Out Edition simplifies remote management by providing graphical access and full control of remote servers using a web browser. Select *Yes* and click *Next*.
13. The Additional Hardware Redundancy Option screen displays. Select *Yes* and click *Next*.
14. The CarePaq Services — Installation and Startup screen displays. The Carepaq Services provides the opportunity to purchase one-time hardware installation services. Select *None* and click *Next*.
15. The CarePaq Services - On-Site Services screen displays. Select *None* and click *Next*.

16. The Sizer Profile Summary screen lists the basic hardware configuration to meet your e-commerce solution performance and scalability requirements. Click *Next*.



17. The Submission Option screen displays. Click *Next*.
18. The Thank you screen displays. Click *Finish*.

19. If you have an Internet connection, results are presented in a browser window. The configuration summary portion of the screen provides you with the option to contact HP about the solution, load the solution in Microsoft Word 2000, print the solution, or restart the process.

Results - United States
Configuration ID # 7467299

Configuration Summary
Below is a summary of your configuration

To contact COMPAQ about solution, click

- System Type: ProLiant DL360 Model DL360R02 P1400-512K 256MB

Disk Data Area 1: SCSI / 18 GB, 10,000 RPM / 18 GB (Requested), 18.2 GB (Configured)

Disk Data Area 2: SCSI / 9 GB, 10,000 RPM / 0 GB (Requested), 0 GB (Configured)

Memory: 640 MB (Requested), 768 MB (Configured)
- System Type: ProLiant DL360 Model DL360R02 P1400-512K 256MB

Disk Data Area 1: SCSI / 18 GB, 10,000 RPM / 18 GB (Requested), 18.2 GB (Configured)

Disk Data Area 2: SCSI / 9 GB, 10,000 RPM / 0 GB (Requested), 0 GB (Configured)

Memory: 640 MB (Requested), 768 MB (Configured)
- System Type: ProLiant DL580R02 X1400-512K 2048 MB (2P)

Disk Data Area 1: SMART Array / 18 GB, 10,000 RPM / 18 GB (Requested), 36.4 GB (Configured)

Disk Data Area 2: SMART Array / 18 GB, 10,000 RPM / 54 GB (Requested), 72.8 GB (Configured)

Memory: 1024 MB (Requested), 2048 MB (Configured)

The Detailed Bill Of Materials section allows you to load a consolidated parts list in an Excel spreadsheet, load a consolidated parts list in an Excel spreadsheet with formulas, or send a parts list by email.

Detailed Bill Of Materials (BOM)

The complete list of parts required for your solution, broken out by server and rack components, is listed below:

Quantity	Part Number	Description	Estimated Retail Price* (USD)
1	233271-001	ProLiant DL360 Model DL360R02 P1400-512K 256MB	\$ 2,229.00
1	233273-B21	Pentium III 1400/512 processor	\$ 734.00
1	201693-B21	512-MB PC133-MHz Registered ECC SDRAM Memory Option Kit	\$ 282.00
1	Existing Monitor	Customer Supplied Monitor	
1	142673-B22	18.2 GB Wide Pluggable Ultra3 10K Drive (1")	\$ 319.00
Estimated SubTotal			\$ 3,564.00

System Parts (2):

In addition, a recommended rack placement of each system is illustrated and the rack layout indicates placement of each system.

Lab Summary

What type of solution was recommended for Parker Design?

.....

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Does the size of a company dictate which e-commerce solution is most suitable?
Explain.

.....

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.....

.....

.....

Objectives

After completing this lab, you should be able to:

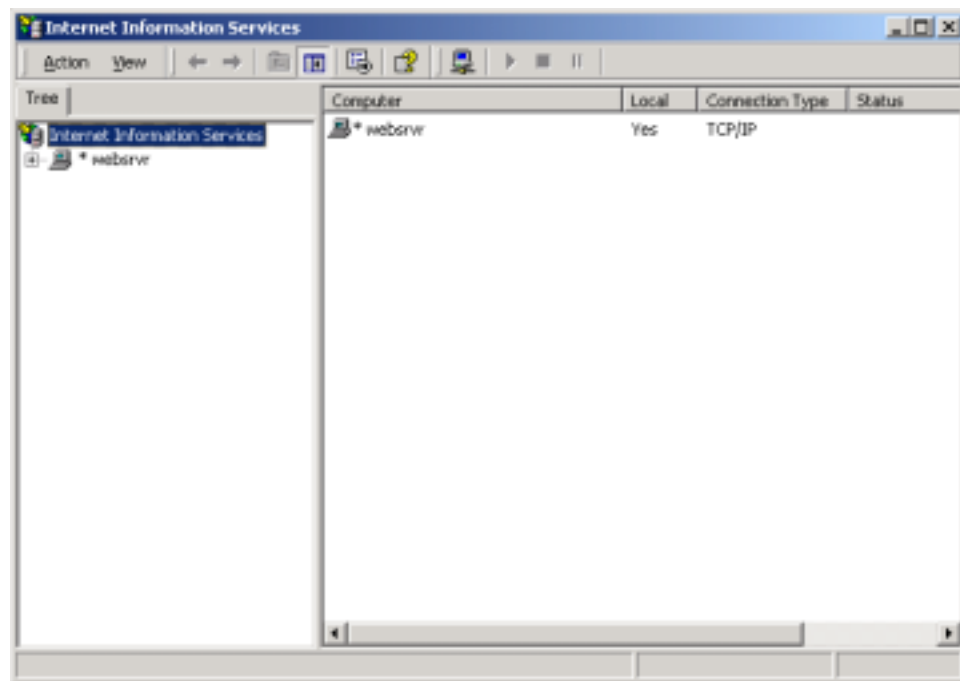
- Create a new Microsoft Internet Information Services (IIS) website.
- Perform basic IIS 5.0 administration tasks.
- Optimize Microsoft Windows 2000 for web server performance.

Create a Website

By default, Microsoft Commerce Server installs your site in the IIS Default Web Site. To provide additional security for your websites, you should create a new IIS website for each site you are planning to install with Commerce Server. When you use Commerce Server Site Packager to unpack your site, you can specify that it reside in the IIS website you created rather than in the Default Web Site.

To create a new website:

1. Create a new folder in the inetpub\wwwroot directory that will store your website files.
2. Click *Start* → *Programs* → *Administrative Tools* → *Internet Services Manager*.
3. In the Internet Information Services window, right-click the name of the computer on which you want to create the new IIS site. Select *New* → *Website*.

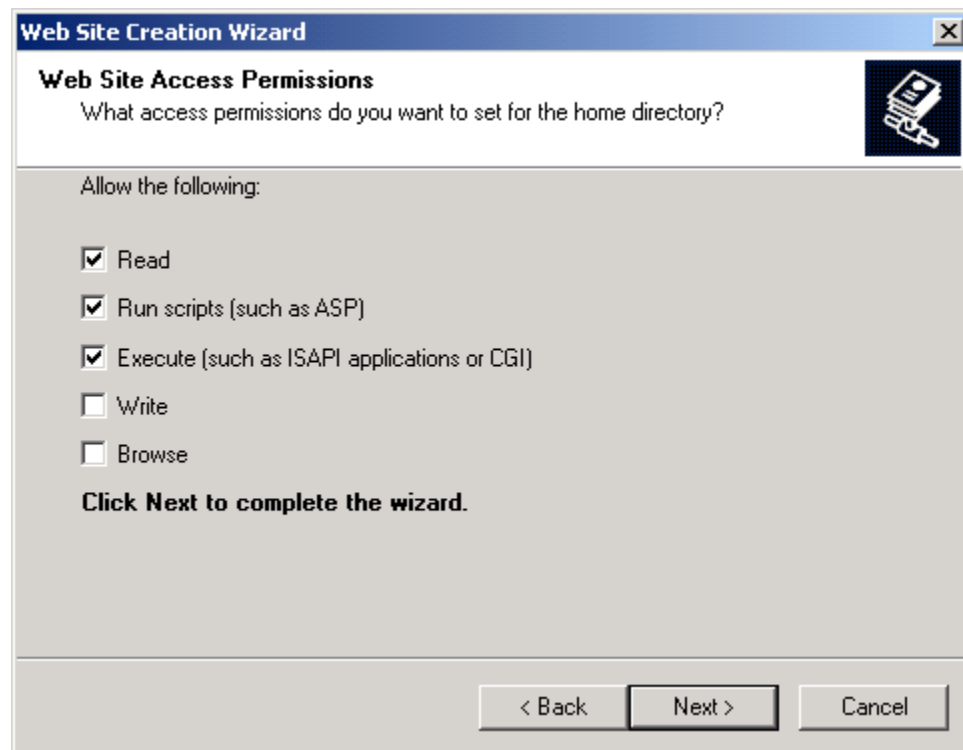


4. In the Website Creation Wizard dialog box, click *Next*.
5. In the Website Description dialog box, enter a name for the new website. This name will display as the site name in Internet Services Manager. Click *Next*.

6. In the IP Addresses and Port Settings dialog box, enter the following information:

In this field	Enter
Enter the IP address to use for this Website	Select the IP address assigned to the web server from the drop-down list.
TCP port this Website should use	Do not change the default port address (80).
Host Header for this site	You will not add additional sites to this IP address. Accept the default, <i>None</i> .

7. Click *Next*.
8. In the Website Home Directory dialog box, click *Browse* and select the location for the path. Leave the *Allow anonymous access to this Website* box checked.
9. Click *Next*.
10. In the Website Access Permissions dialog box, select the permissions as shown in the following figure and click *Next*.



11. Click *Finish* to close the wizard.

Optimizing IIS

It is critical to the success and scalability of your websites and web-based applications to design them with performance in mind. Microsoft recommends that you complete the following procedures to optimize IIS:

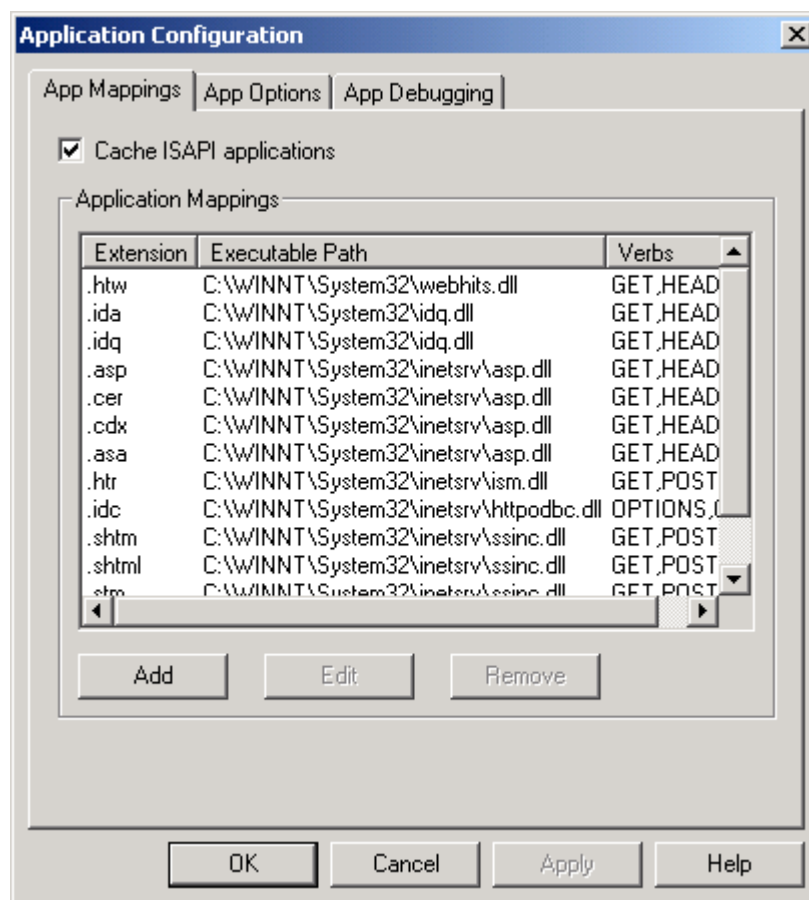
- Remove irrelevant mappings.
- For high-volume sites or for benchmarking, set the Performance bar to *More than 100,000*.
- Disable logging when not needed.
- If logging is enabled, log to a striped partition with a controller that allows write-back caching, especially if you see heavy usage on the log disk.



Important

These settings will **not** be changed in the lab. The steps to change the settings are provided so that you can become familiar with the procedures for changing the settings if you encounter a situation that requires you to do so.

Removing Mappings



IIS checks the extension of each file. Deleting unused mappings can eliminate this additional overhead.



Important

Do not delete any mappings in this exercise. These steps are provided for informational purposes only.

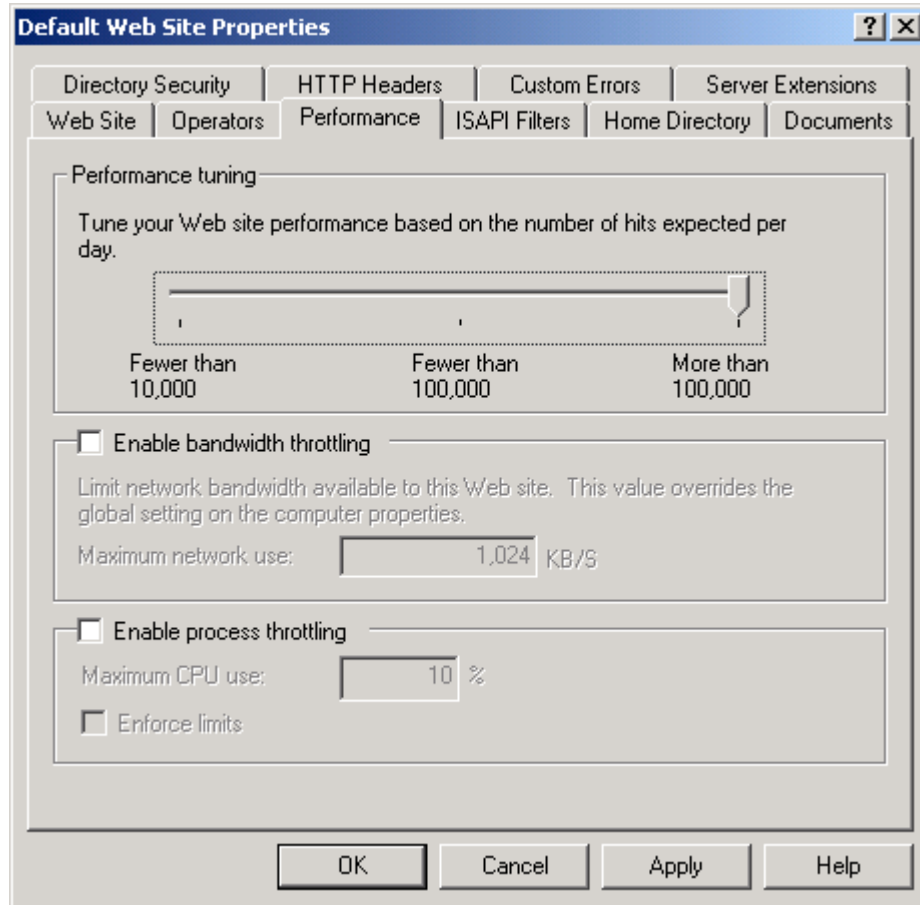
To view the mappings:

1. From Internet Services Manager, right-click the website created in the previous exercise and select *Properties*.
2. Select the *Home Directory* tab.
3. Click the *Configuration* button in the Application Settings section. A list of mappings displays.

If you know that your website does not contain content that corresponds to the mappings listed in this dialog box, you can delete those unused mappings. The .ASP extension is required for Commerce Server Solution Sites.

4. After you have reviewed the existing mappings, click *Cancel* → *OK*.

Adjusting Website Performance



The performance bar controls the amount of resources available to IIS. Because IIS expects heavy usage, it keeps additional resources available even if they are not in use. Adjust the Performance tuning setting only for high-volume sites.

Adjust the Performance for a High-Volume Site

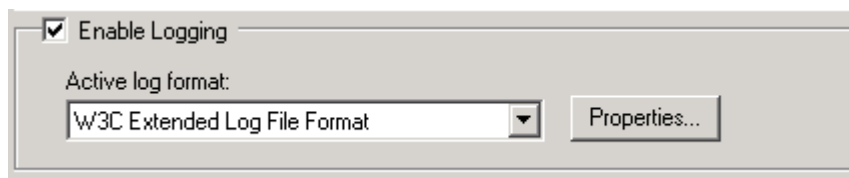
From the Internet Services Manager:

1. Right-click the website created in the previous exercise and select *Properties*.
2. Click the *Performance* tab.
3. Slide the performance tuning bar to the *More than 100,000* setting.
4. Click *OK*.

Bandwidth and Process Throttling

If your system is a dedicated web server, do not enable these features. This will limit the network traffic that can be generated by the web server and the processor usage to preserve bandwidth and threads for other applications.

Disabling Logging

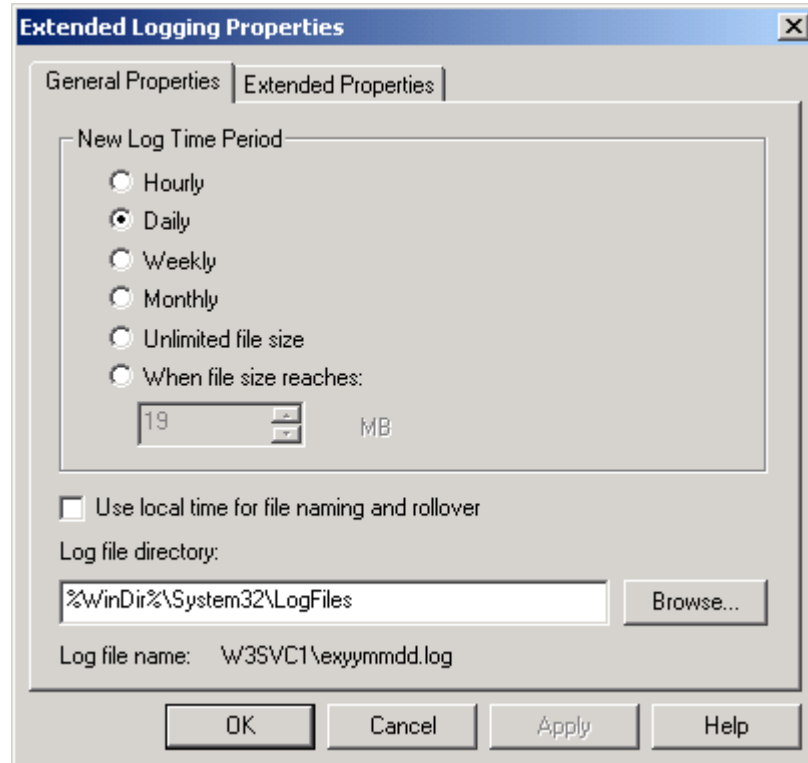


By disabling unneeded logging activity, you free up system resources and enhance performance.

From the Internet Services Manager:

1. Right-click your new website and select *Properties*.
2. On the Website tab, deselect the *Enable Logging* check box to disable logging.
3. Click *OK*.

Optimizing Logging



If logging is enabled on your website, log to a striped partition with a controller that allows write-back caching, especially if you see heavy usage on the log disk.

Note

Do not change any settings in this exercise. These steps are provided for informational purposes only.

From Internet Services Manager:

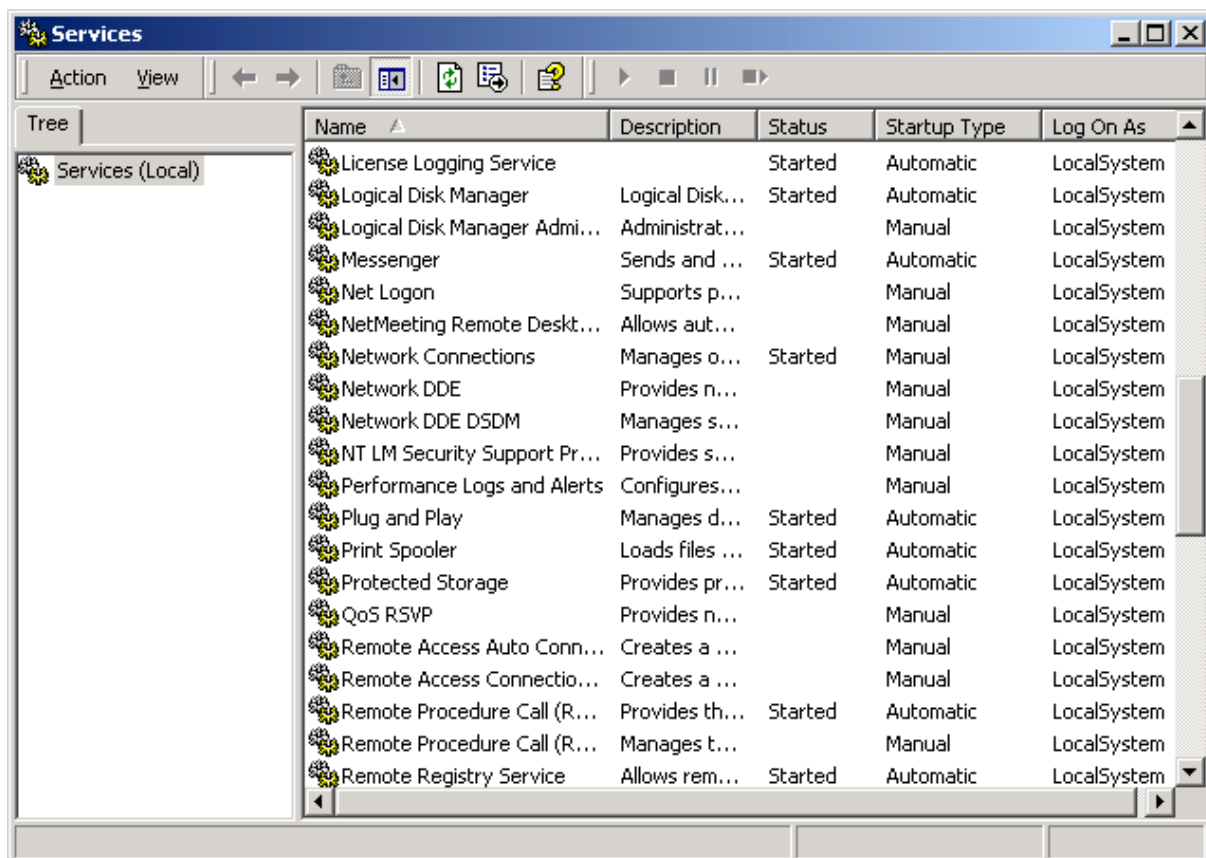
1. Right-click your new website and select *Properties*.
2. Click the *Properties* button in the Enable Logging pane.
3. Click *Browse* and select a directory that exists on a striped partition.
4. Click *OK* → *OK*.
5. Exit Internet Services Manager.

Optimizing Windows 2000 for Web Server Performance

HP recommends the following procedures for optimizing Windows 2000 Server for optimal web server performance:

- Remove nonessential system services.
- Set virtual memory to static.
- Minimize application performance boost.
- Maximize server services for network applications.
- Edit the Windows 2000 registry by:
 - Increasing the NIC maximum connection retry value.
 - Increasing the TCP/IP User Port and Window Size.
 - Releasing processor control on specific network cards.

Removing Nonessential System Services



When implementing a web server, some Windows 2000 services are unnecessary and can be eliminated. Some services that can typically be eliminated include:

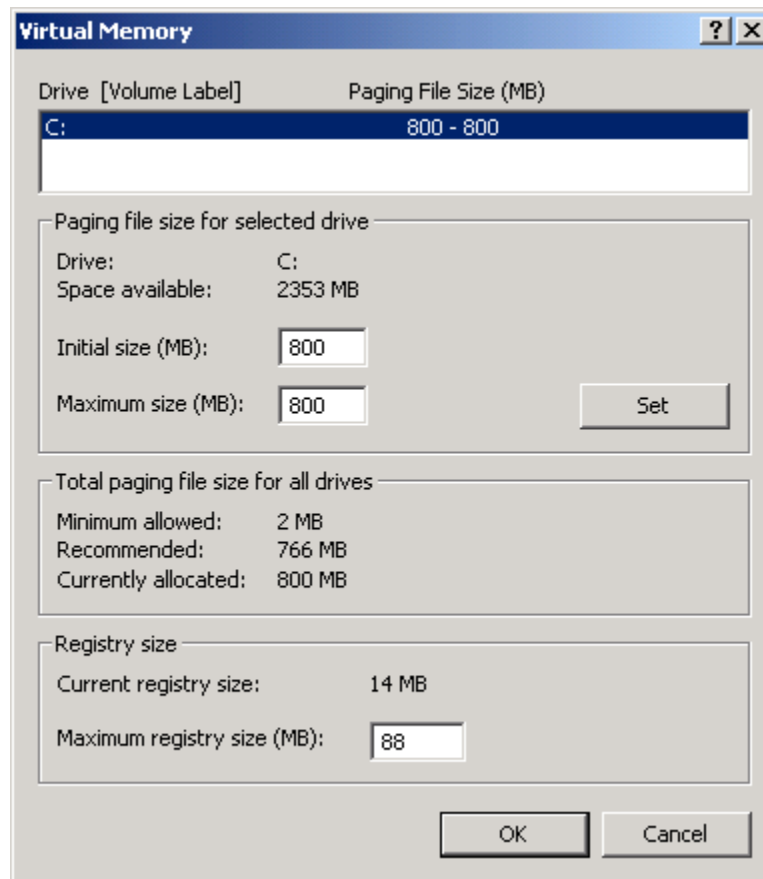
- License Logging Service
- Plug and Play
- Print Spooler

To remove a service:

1. Click *Start* → *Programs* → *Administrative Tools* → *Services*.
2. Right-click the service to be removed and click *Properties*.
3. Select *Manual* for *Startup Type*.
4. Click *OK*.

The service will not start when Windows 2000 is restarted.

Setting Virtual Memory to Static



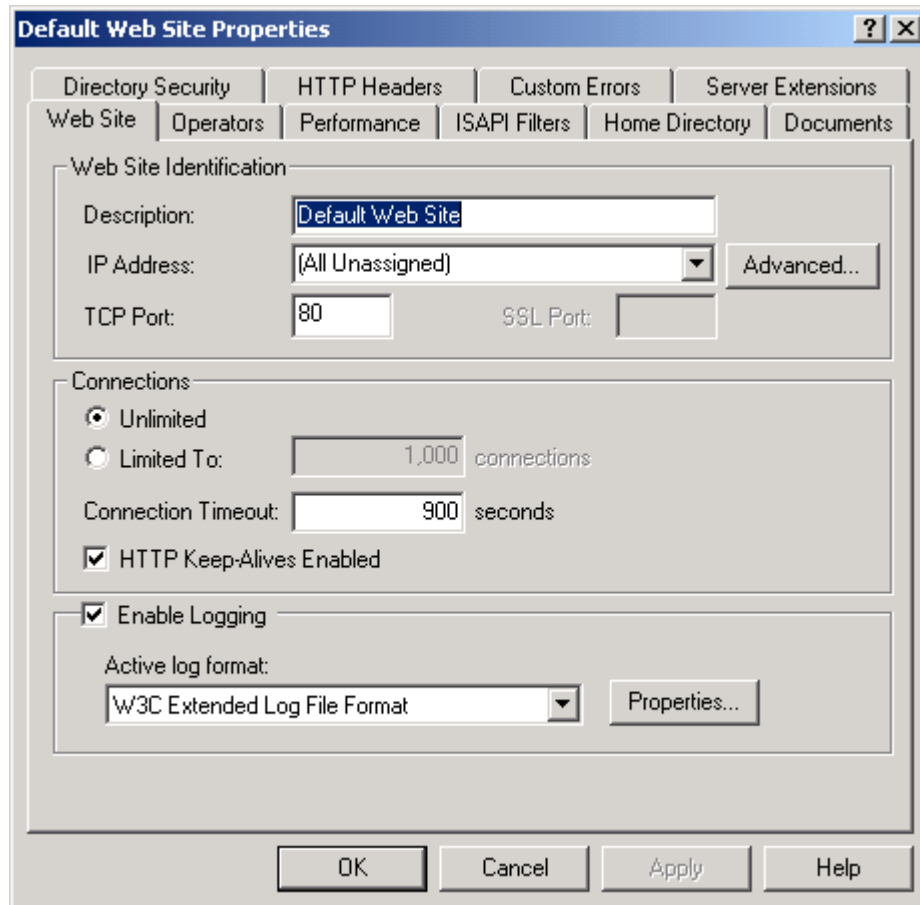
A paging file that must constantly expand and shrink requires additional processor and I/O overhead. Set the size of the paging file at two or two-and-a-half times the amount of installed physical memory.

1. From Control Panel, double-click the *System* icon.
2. Select the *Advanced* tab.
3. Click *Performance Options*.
4. In the Virtual memory pane, click *Change*. The Virtual Memory dialog box displays.
5. Set *Paging file size for selected drive* to a static size, such as 500MB, to minimize paging on the disk subsystem. Enter this value in both the *Initial size* and *Maximum size* fields. (A general rule is to set virtual memory to twice the amount of physical memory installed in the server, up to a maximum of 1GB.)
6. Click *Set* → *OK*.
7. Restart the system.

Lab Summary

View your website properties in IIS.

1. Click *Properties*. The Default Website Properties dialog box displays, which is used to adjust the settings for the web service.



2. Click the *Documents* tab. What file loads by default when a browser connects to this site?

.....

3. Click the *Directory Security* tab. Click *Edit* in the IP address and domain name restrictions pane. By default, who can access this website?

.....

4. Click *Edit* in the Anonymous access and authentication control pane of the *Directory Security* tab. Click *Edit* next to *Allow Anonymous Access*. What user account is used for anonymous access?

.....

Click *OK* → *OK* → *OK* to close the dialog boxes.

Prerequisite Software Installation and Configuration

Module 2 — Lab 3

Objectives

After completing this lab, you should be able to:

- Install SQL Server 2000 database and analysis components on the database server.
- Install SQL Server 2000 database and analysis service packs on the database server.
- Install SQL Server 2000 Client database and analysis components on the web server and workstation.
- Install SQL Server 2000 database and analysis service packs on the web server and workstation.

Prerequisite Software

SQL Server is a prerequisite for both Microsoft Content Management Server (MSCMS) and Commerce Server implementations. For MSCMS, the web server content resides in the database. Commerce Server, however, uses SQL Server to store product catalogs and user profile information.

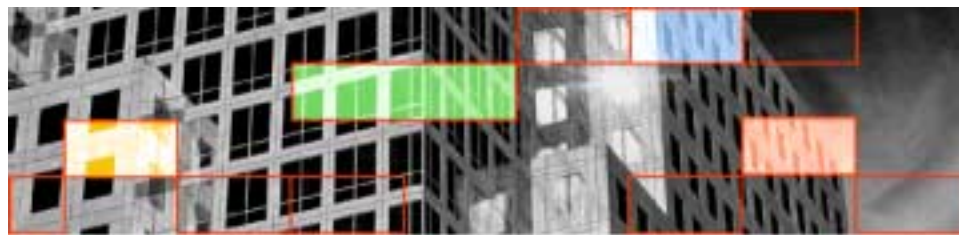
Although Active Directory is not required for Commerce Server if you are implementing a retail site, it is required for a supplier solution. Furthermore, MSCMS requires Active Directory to be installed because it uses Active Directory services interfaces. MSCMS also uses a Windows 2000 domain user account to assign rights to security objects.

Ideally, you need two computers to handle Active Directory efficiently. Each serves as a replicated domain controller.

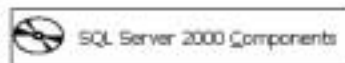
During the deployment process, be sure to document all server configurations (server names, roles, ports, and required services), operating system settings, and network configurations. This is a proactive measure that enables you to quickly troubleshoot problems or configure additional servers.

Installing SQL Server

1. Connect to the classroom share that contains the SQL Server 2000 installation files.
2. Copy the SQL Server 2000 directory to a folder on your server. This facilitates faster installation.
3. Run autorun.exe from the SQL Server 2000 directory to start the Setup program.
4. Select *SQL Server 2000 Components*.



Microsoft **SQL Server 2000** **Enterprise Edition**



SQL Server 2000 Components



SQL Server 2000 Prerequisites



Browse Setup/Upgrade Help

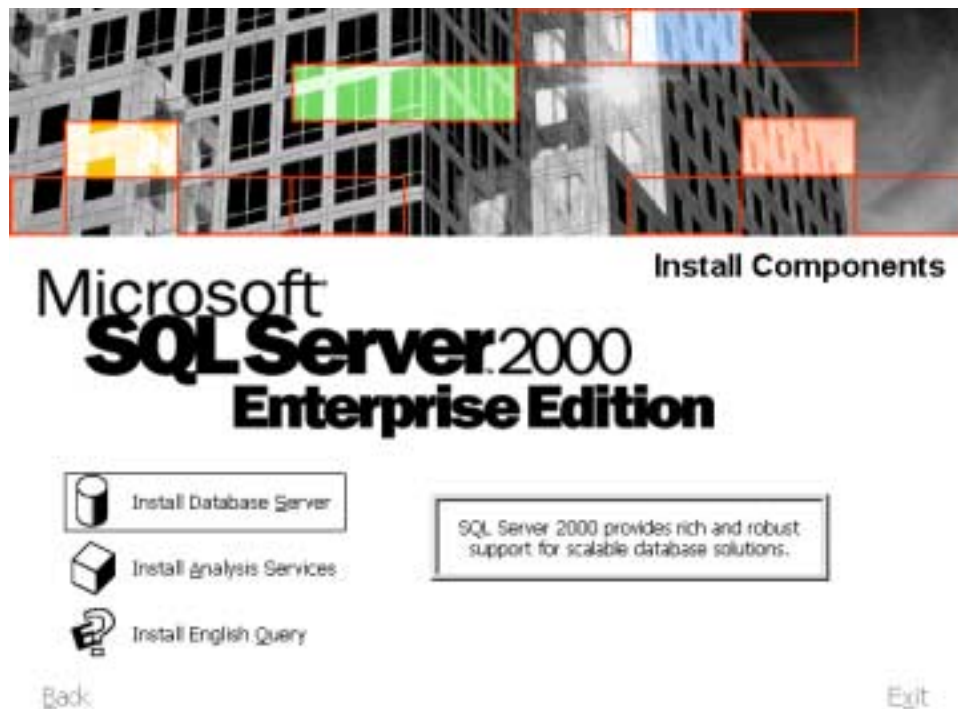


Read the Release Notes

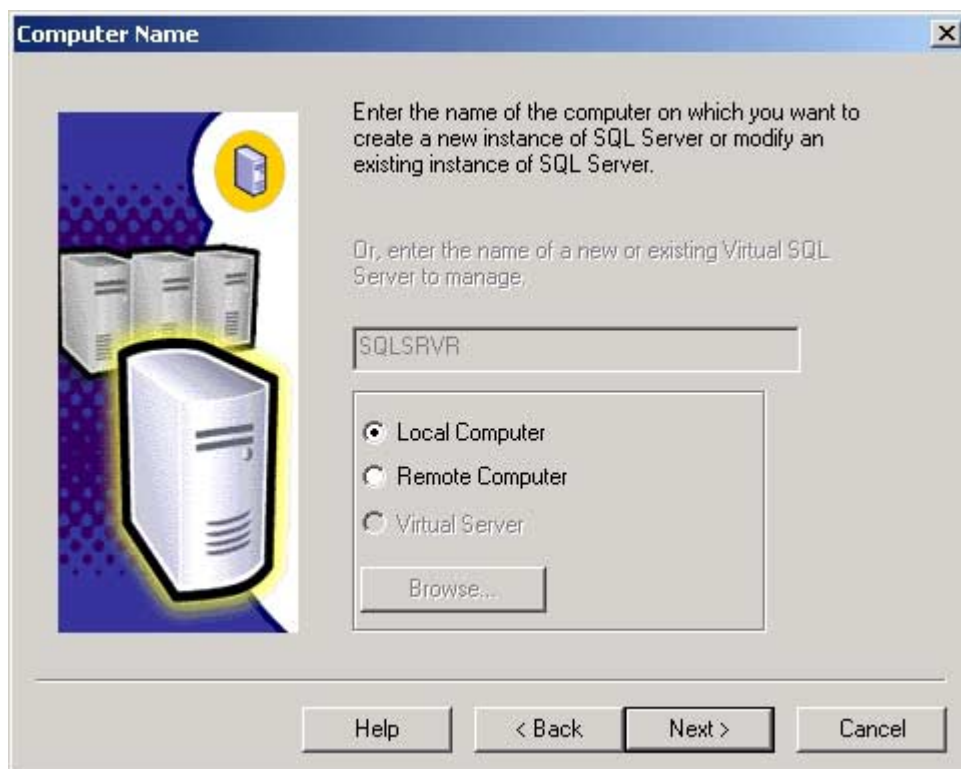


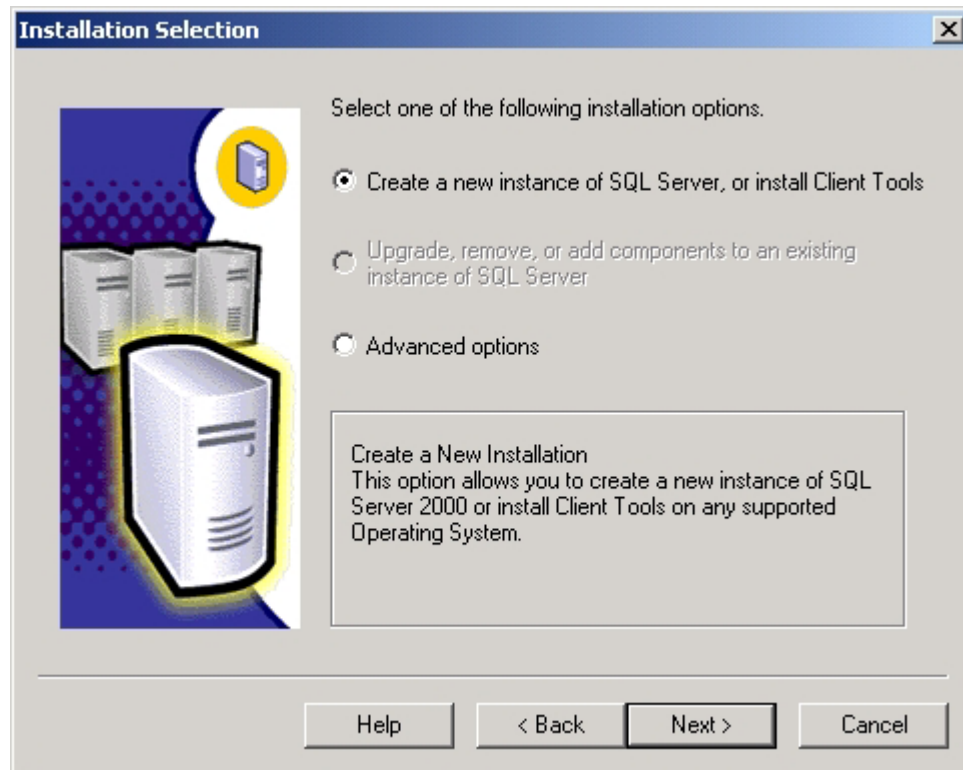
Visit Our Web Site

Exit

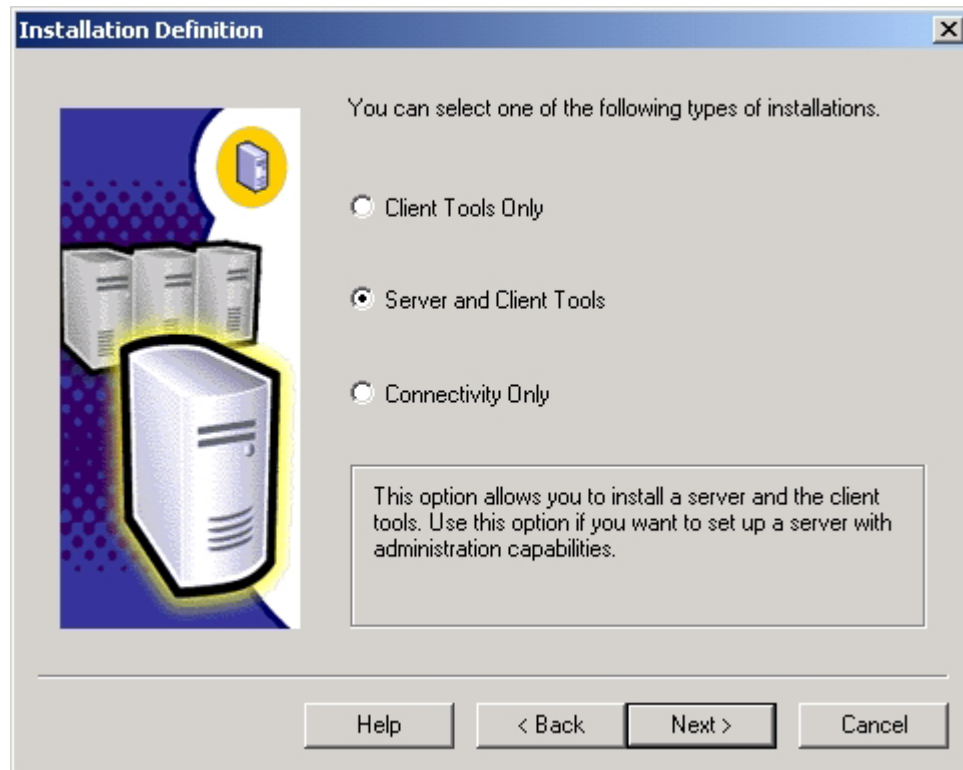


5. Click *Install Database Server* from the Install Components screen.
6. The Welcome screen displays. Click *Next* to start the Installation wizard.
7. In the Computer Name screen, the name of the computer should be grayed out and *Local Computer* selected. Click *Next*.

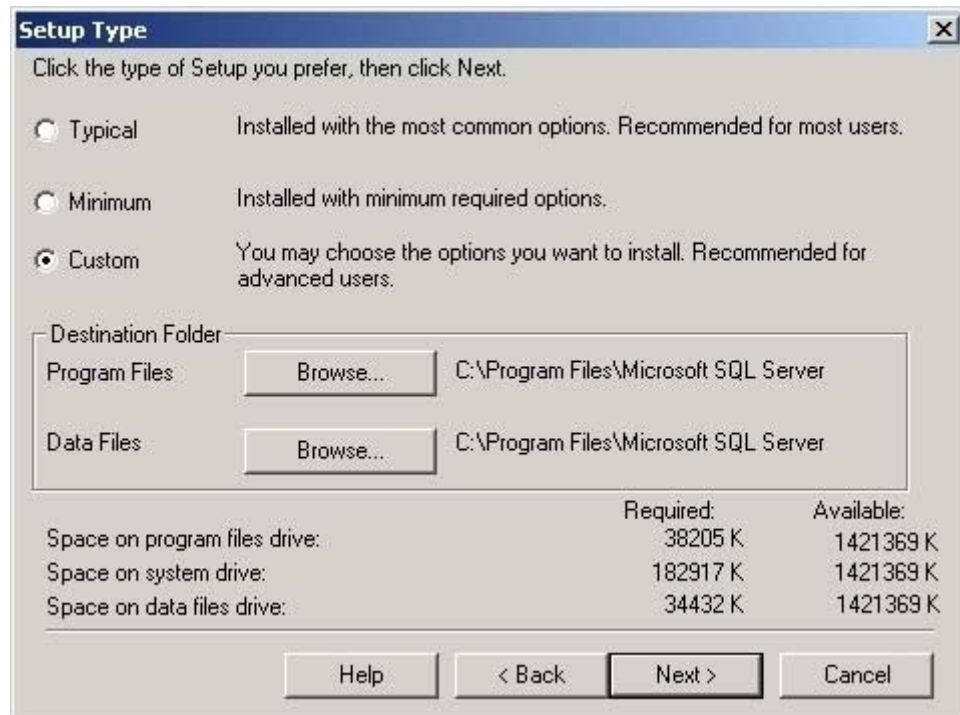




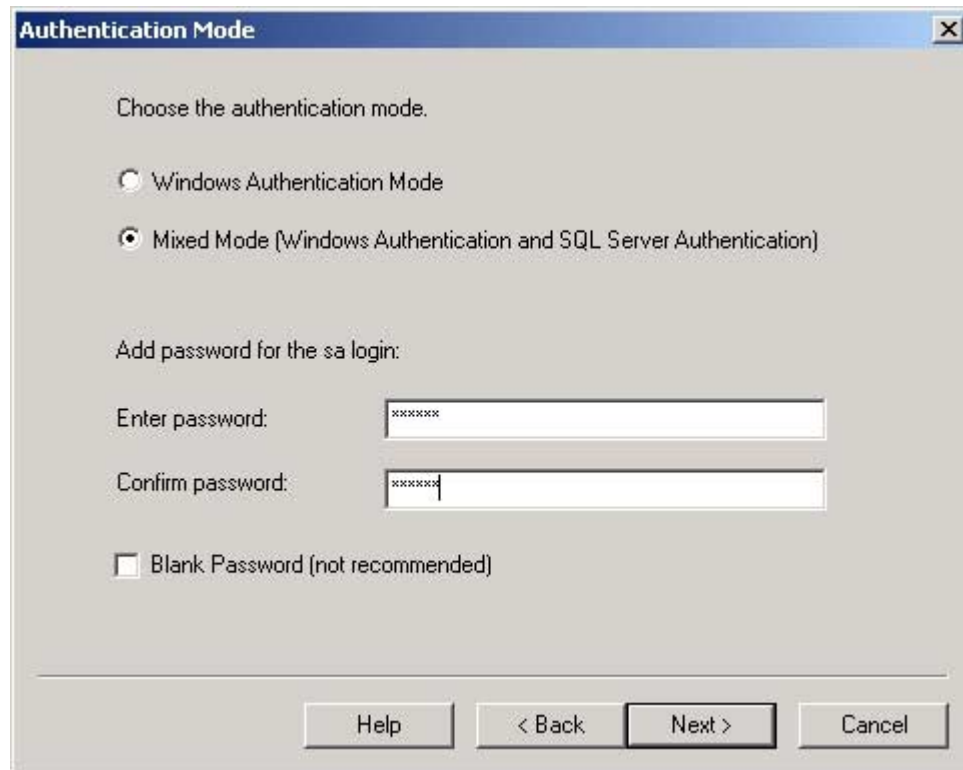
8. In the Installation Selection screen, select *Create a new instance of SQL Server, or install Client Tools*. Click *Next*.
9. Accept the default information on the User Information screen, and click *Next*.
10. The Software License Agreement screen displays. Click *Yes* to accept the terms.
11. Enter the CD key provided by the instructor on the CD-Key screen and click *Next*.



12. Select *Server and Client Tools* as the installation type on the Installation Definition screen and click *Next*.
13. Click *Next* on the Instance Name screen for a default installation.



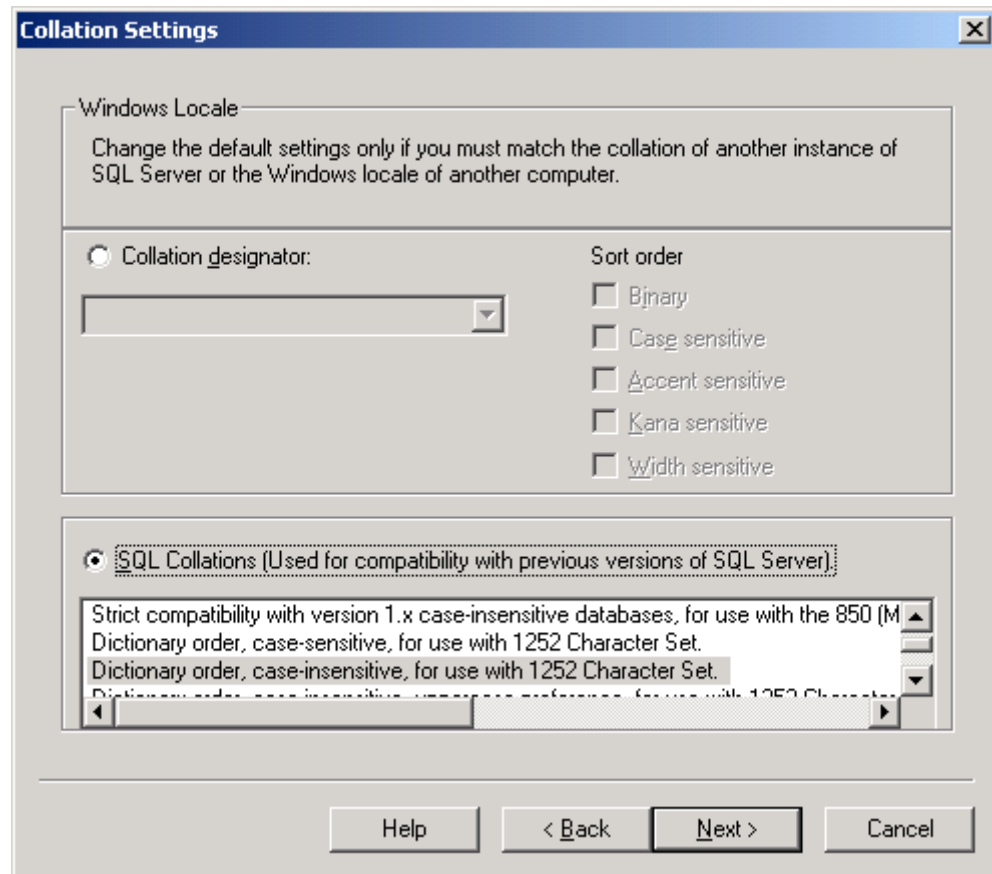
14. In the Setup Type dialog box select *Custom* and click *Next*.
15. Click *Next* to install the components listed.
16. Ensure that *Use a Domain User account* is selected in the Services Accounts dialog box. Enter the password for the Administrator account. The domain name should be the computer name. Click *Next*.



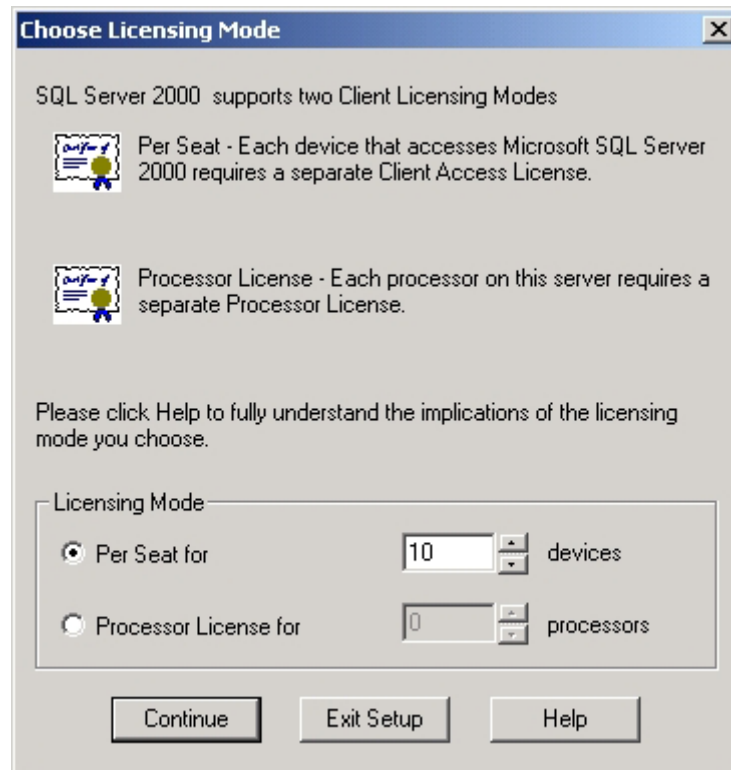
17. In the Authentication Mode screen, select *Mixed Mode (Windows Authentication and SQL Server Authentication)*. Enter the same password for the sa login as the Administrator account. This is for lab convenience only. Duplicate passwords are not recommended in a production environment. Click *Next*.

**Important**

Mixed Mode authentication is the only mode supported by Commerce Server.



18. Do **not** change the default selection in the Collation Settings dialog box. Click *Next*.
19. Click *Next* in the Network Libraries dialog box.
20. Click *Next* on the Start Copying Files dialog box.
21. Click *Next* to begin shutting down tasks.



22. Enter 10 in the *Per Seat for devices* field. Click *Continue*.
23. Click *Finish* to complete the Setup wizard.

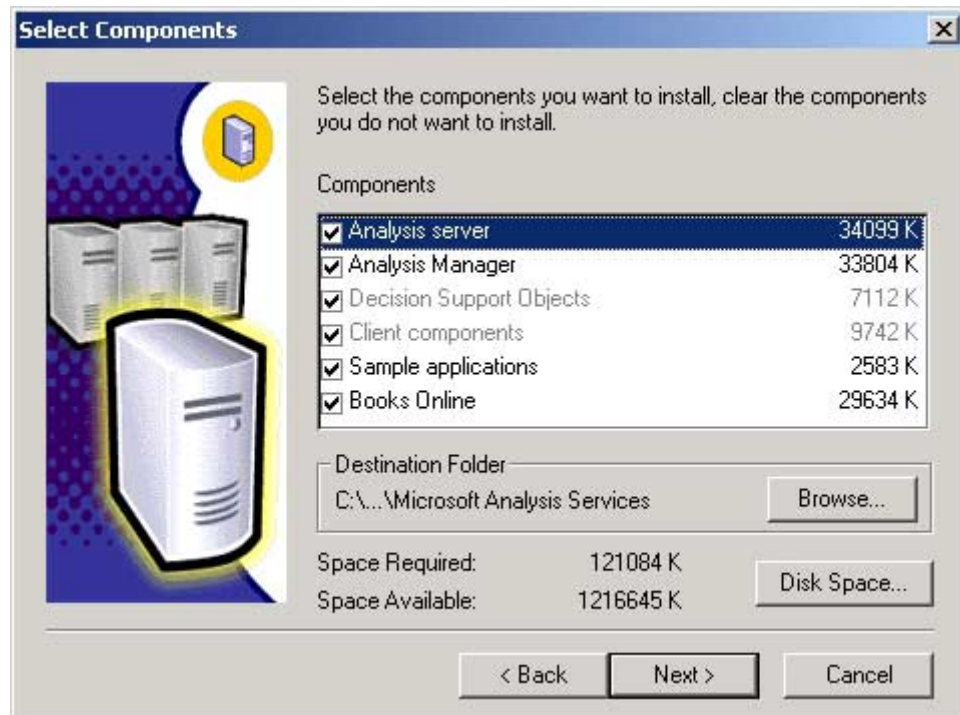
Installing SQL Server 2000 Analysis Services

Analysis Services must be installed on the data resource server. Perform the following steps to install the SQL Server 2000 Analysis Services.

1. Navigate to the directory that contains the SQL Server installation files.
2. Run `autorun.exe` to start the Setup program.
3. Click *SQL Server 2000 Components*.
4. Click *Install Analysis Services*.



5. The Welcome screen displays. Click *Next* to start the Installation wizard.
6. The Software License Agreement screen displays. Click *Yes* to accept the terms.



7. Ensure that all components are selected. Click *Next* to continue.
8. Click *Next* to create a data folder in the default destination folder.
9. Click *Next* to accept the default Program Folder for the location of program icons.
10. Click *Finish* to complete the Setup wizard.

Installing SQL Server 2000 Service Pack for Database Services

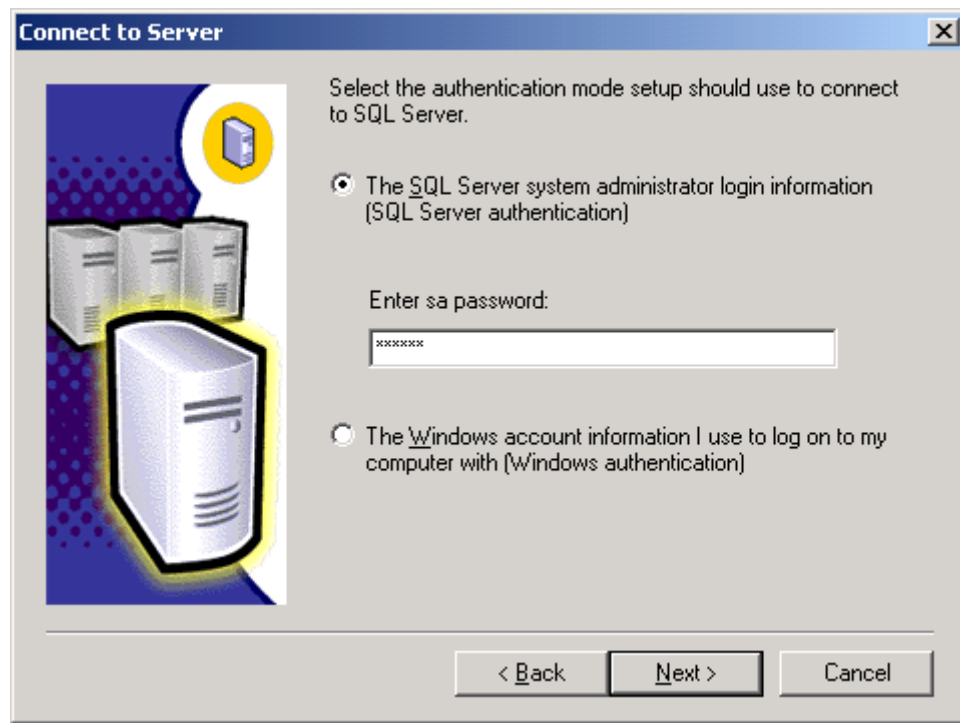
The Service Pack must be installed on the data resource server.

1. Navigate to the class folder that contains the SQL Server 2000 Service Pack.
2. Run `sql2ksp2.exe`.

Note

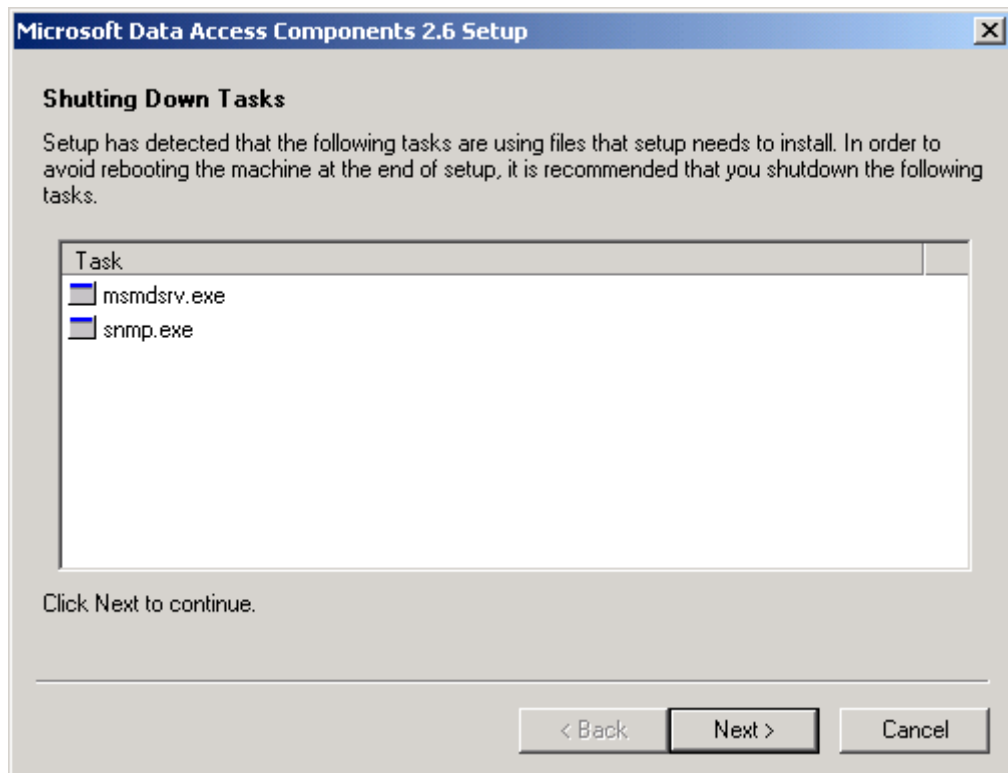
The instructor may use a later version of the SQL Server 2000 Service Pack for Database Services, which would result in running a different file name.

3. Click *Finish* to accept the default installation folder.
4. Click *Yes* to create the folder.
5. Click *OK* after the package has been extracted.
6. Run `C:\sql2sp2\Setup.bat`.
7. The Welcome screen displays. Click *Next* to start the Installation wizard.
8. The Software License Agreement screen displays. Click *Yes* to accept the terms.
9. There is only one instance of SQL Server so the *Default* check box is grayed out. Click *Next* on the Instance Name dialog box.
10. Select *The SQL Server system administrator login information* and enter the password for the sa account. Click *Next*.

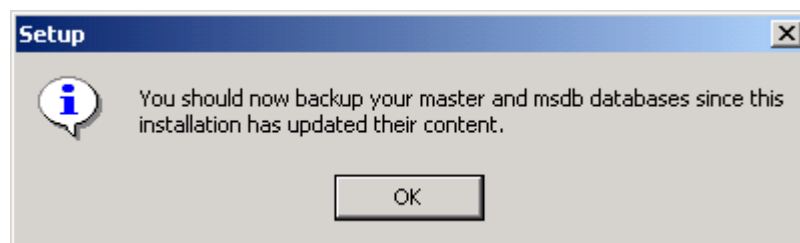


11. Click *Next* on the Start Copying Files dialog box.

12. Click *Next* to begin shutting down tasks.



13. Click *Finish* to begin installing the software.
14. Click *OK* on the prompt to back up databases.



15. Select *No, I will restart my computer later* and click *Finish*.

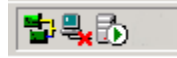
Installing SQL Server 2000 Service Pack for Analysis Services

Note

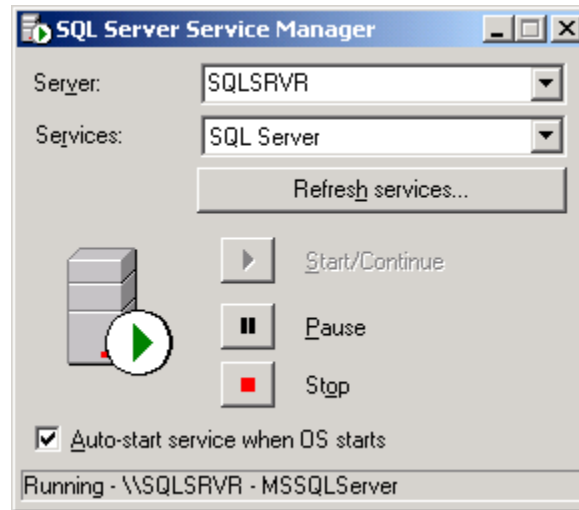
The instructor may use a later version of the SQL Server 2000 Service Pack for Analysis Services, which would result in running a different file name.

1. Run `sql2asp2.exe` from the class folder.
2. Click *Finish* to accept the default installation folder.
3. Click *OK* after the package has been extracted.
4. Run `C:\sql2sp2\msolap\install\Setup.exe`.
5. The Welcome screen displays. Click *Next* to start the Installation wizard.
6. The Software License Agreement screen displays. Click *Yes* to accept the terms.
7. Click *Finish* to complete the Setup wizard.
8. Restart the server.

Starting SQL Server Services



1. The SQL Server Service Manager should display in the System Tray after system startup. Right-click the SQL Server Service Manager icon and select *Open SQL Server Service Manager*.



2. If the SQL Server Service is not running, click the *Start/Continue* button.
3. In the Services drop-down menu, select *SQL Server Agent*, and then click the *Start/Continue* button.



4. Select *Auto-start service when OS starts* to ensure the Agent starts at server startup.
5. Close the SQL Server Service Manager.

Configuring the Administrator Login

Commerce Server 2000 installation requires access to the Administration database. The sa login should not be used for access to the Administration database. For security purposes, verify the Administrator login information for the Administration database.

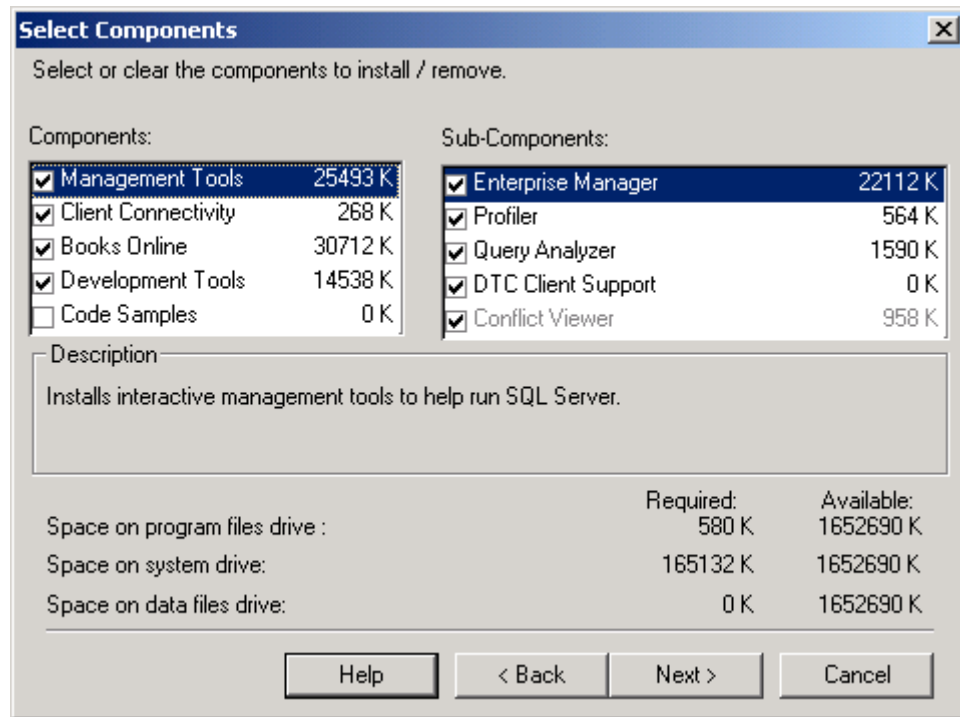
1. On the Data Resource server, select *Start → Programs → Microsoft SQL Server → Enterprise Manager*.
2. Expand *Microsoft SQL Servers → SQL Server Group → the Data Resource server name → Security → Logins*.
3. Right-click the *Administrator* login displayed in the right pane and select *Properties*.
4. Click the *Database Access* tab.
5. Highlight each database and select *db_owner* as the database role.
6. Click *OK*.
7. Close Enterprise Manager.

Installing SQL Server 2000 Client Tools

The SQL Server 2000 Client Tools must be installed on the web server computer if Commerce Server must connect to a remote SQL Server computer. The SQL Server 2000 Client Tools include Microsoft Data Access Components (MDAC) 2.6, which is a prerequisite for installing Commerce Server.

Perform the following steps to install the SQL Server 2000 Client Tools on the web server.

1. Share the folder on the system that contains the SQL Server installation files.
2. On the web server, map to the folder that contains the SQL Server installation files.
3. Run `autorun.exe` from the SQL Server 2000 directory to start the Setup program.
4. Select *SQL Server 2000 Components*.
5. Select *Install Database Server* from the Install Components screen.
6. The Welcome screen displays. Click *Next* to start the Installation Wizard.
7. In the Computer Name screen, the name of the computer should be grayed out and the *Local Computer* option selected. Click *Next*.
8. In the Installation Selection screen, select *Create a new instance of SQL Server, or install Client Tools*. Click *Next*.
9. Accept the default information on the User Information screen, and click *Next*.
10. The Software License Agreement screen displays. Click *Yes* to accept the terms.
11. Enter the CD key provided by the instructor on the CD-Key screen and click *Next*.
12. In the Installation Definition screen, select *Client Tools Only* and click *Next*.



13. In the Select Components screen, accept the default selections and click *Next*.
14. Click *Next* on the Start Copying Files screen.
15. Click *Finish* to complete the Setup wizard.

Installing SQL Server Client Tools on the Workstation

You will use the workstation to run the Commerce Server Business Desk client. If Microsoft Office 2000 is not installed on the workstation, you must install SQL Server 2000 Client Tools. MDAC 2.6 and the executables (dCube files) are required to build a cube in memory on the Business Desk client computer. Microsoft Office 2000 and SQL Server 2000 Client Tools install these features.

Perform the steps listed in the “Installing SQL Server 2000 Client Tools” section. You will need to map to the folder that contains the SQL Server installation files.

Installing SQL Server 2000 Analysis Services Client Tools

Analysis Services Client tools must be installed on the web computer. Perform the following steps to install the SQL Server 2000 Analysis Services Client tools.

1. Navigate to the directory that contains the SQL Server installation files.
2. Run `autorun.exe` to start the Setup program.
3. Click *SQL Server 2000 Components*.
4. Click *Install Analysis Services*.
5. The Welcome screen displays. Click *Next* to start the Installation wizard.
6. The Software License Agreement screen displays. Click *Yes* to accept the terms.
7. Accept the default installation components, and click *Next* to continue.
8. Click *Next* to create a data folder in the default destination folder.
9. Click *Next* to accept the default Program Folder for the location of program icons.
10. Click *Finish* to complete the Setup wizard.

Installing SQL Server 2000 Service Pack

The Service Pack must be installed on the web server.

1. Navigate to the class folder that contains the SQL Server 2000 Service Pack.
2. Run `sql2ksp2.exe`.
3. Click *Finish* to accept the default installation folder.
4. Click *Yes* to create the folder.
5. Click *OK* after the package has been extracted.
6. Run `C:\sql2sp2\Setup.bat`.
7. The Welcome screen displays. Click *Next* to start the Installation wizard.
8. The Software License Agreement screen displays. Click *Yes* to accept the terms.
9. Click *Next* on the Start Copying Files dialog box.
10. Click *Next* to begin shutting down tasks.
11. Click *Finish* to begin installing the software.
12. Select *No, I will restart my computer later* and click *Finish*.

Installing SQL Server 2000 Analysis Service Pack

The Service Pack must be installed on the web server.

1. Navigate to the class folder that contains the SQL Server 2000 Service Pack.
2. Run `sql2asp2.exe`.
3. Click *Finish* to accept the default installation folder.
4. Click *Yes* to create the folder.
5. Click *OK* after the package has been extracted.
6. Run `C:\sql2sp2\msolap\install\Setup.exe`.
7. The Welcome screen displays. Click *Next* to start the Installation wizard.
8. The Software License Agreement screen displays. Click *Yes* to accept the terms.
9. Click *Finish* to begin installing the software.
10. Select *Restart my computer* and click *Finish*.

Lab Summary

You installed SQL Server 2000 on the system designated as the data resource server and on the web server. Why do you think it is necessary to install SQL Server on the web server?

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If a system functions as the web server and data resource server, which installation steps can be eliminated?

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Why is it best to have a dedicated data resource server?

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Document Server Configuration

List any configuration changes made to the servers. This includes any user configuration information.

This image shows a full page of white paper with horizontal dotted lines, typical of primary school writing paper. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Objectives

After completing this lab, you should be able to:

- Install and configure Microsoft Commerce Server and the Commerce Server Service Pack.
- Install and configure the Commerce Server Retail Solution site.
- Access the retail website to make purchases.
- Run and review reports on website activity.

Requirements

- Access to a data resource server with:
 - SQL Server 2000
 - SQL Server Service Pack 2 or higher, which includes:
 - ◆ ADSI 2.5 or higher
 - ◆ MDAC 2.5 or higher
- Internet Explorer 5 or higher
- Microsoft Java VM
- IIS 5

Installing Commerce Server

The following steps guide you through installing Commerce Server using the complete installation option. You must close all other applications before proceeding.

Note

When you install Microsoft Commerce Server 2000, do not use "localhost" as the computer name in the URL or when you are prompted for the SQL Server name.

You must install Direct Mailer on a local SQL Server. Before installing Direct Mailer, verify that SQL Server Agent is started. If it is not started, Direct Mailer will not install.

To install Commerce Server:

1. Run the Setup program from the directory provided by the instructor. The Commerce Server 2000 Setup program starts.
2. Click *Commerce Server Installation*.
3. The Welcome screen displays. Click *Next* to start the Installation wizard.
4. Ensure that the prerequisites have been met for the Commerce Server installation. Click *Next*.
5. The Software License Agreement screen displays. Select *I accept the terms in the license agreement* and click *Next*.
6. In the Customer Information screen, type the 25-character product key provided by the instructor, and then click *Next*.
7. In the Destination Folder screen, accept the default installation folder. Click *Next*.
8. In the Setup Type screen, select *Web Server*, and click *Next*.
9. In the Administration Database Configuration screen, enter the following information.

In this field	Enter
SQL Server Computer	SQLSRVRn (reflects your student set)
SQL Server Login Name	Administrator
SQL Server Login Password	Enter the password for the Administrator account

Click *Next*.

**Important**

For security purposes, do not use the sa login for access to the Administration database. To change the login information for the Administration database after it is created, use SQL Server Enterprise Manager.

10. In the Service Accounts screen, enter the following information.

In this field	Enter
Username	Administrator
Password	Enter the password for the Administrator
Domain	Enter the computer name

Click *Next*.

11. Click *Install* to begin the installation process.
12. Click *Finish* to exit the Setup program. The PuP Packages window opens and displays the Blank Solution Site.
13. Restart the web server.

Installing Commerce Server Service Pack

Commerce Server Service Pack contains the latest updates and fixes. Follow these steps to install the service pack.

1. Run `CS2KSP2-EN.EXE` from the classroom folder.
2. Click *Browse* and select a location to extract the files.
3. Run `SP2SETUP.EXE` from the location in which the files were extracted.
4. Commerce Server Service Pack 2 informs you that you must install XML 3.0 after the Server Pack installation. Click *OK*.
5. Click *OK* to acknowledge that some services will be stopped.
6. The Welcome screen displays. Click *Next* to start the Installation Wizard.
7. The Software License Agreement screen displays. Select *I accept the terms in the license agreement* and click *Next*.
8. Click *Install* to begin the installation.
9. Click *Finish* to complete the Setup wizard.

There is no need to restart the web server.

Installing XML Parser

The Microsoft XML Parser Service Pack provides a number of bug fixes and provides server-safe HTTP access. To install the XML Service Pack:

1. Run `MSXML3SP2SETUP.EXE` from the classroom folder.
2. The Welcome screen displays. Click *Next* to start the Installation wizard.
3. The Software License Agreement screen displays. Select *I accept the terms in the license agreement* and click *Next*.
4. Click *Next* on the Customer Information dialog box.
5. Click *Install* to begin the installation.
6. Click *Finish* to complete the Setup wizard.

Installing Commerce Server on the Data Resource Server

Commerce Server must be installed on the data resource server to install the data warehouse and analysis services.

1. Run the Setup program from the directory provided by the instructor. The Commerce Server 2000 Setup program starts.
2. Click the *Commerce Server Components*.
3. The Welcome screen displays. Click *Next* to start the Installation wizard.
4. Ensure that the prerequisites have been met for the Commerce Server installation. Click *Next*.
5. The Software License Agreement screen displays. *Select I accept the terms in the license agreement* and click *Next*.
6. In the Customer Information screen, type the 25-character product key provided by the instructor, and then click *Next*.
7. In the Destination Folder screen, accept the default installation folder. Click *Next*.
8. In the Setup Type screen, select *Custom*, and click *Next*.
9. In the Custom Setup dialog box, modify the feature selections as shown in the table and click *Next* to continue.

For this feature	Select
Commerce Site Packages	<i>Will not be available</i>
Analysis and Data Warehouse	<i>Will be installed on local hard drive</i>
Predictor Service	<i>Will not be available</i>
Direct Mailer Service	<i>Will not be available</i>
SDK	<i>Will not be available</i>
Administration Tools	<i>Will not be available</i>
Online Documentation	<i>Will not be available</i>

10. In the Administration Database Configuration screen, enter the following:

In this field	Enter
SQL Server Computer	SQLSRVRn (reflects your student set)
SQL Server Login Name	Administrator
SQL Server Login Password	Enter the password for the Administrator account

Click *Next*.

11. In the Service Accounts screen, enter the following information.

In this field	Enter
Username	Administrator
Password	Enter the password for the Administrator
Domain	Enter the computer name

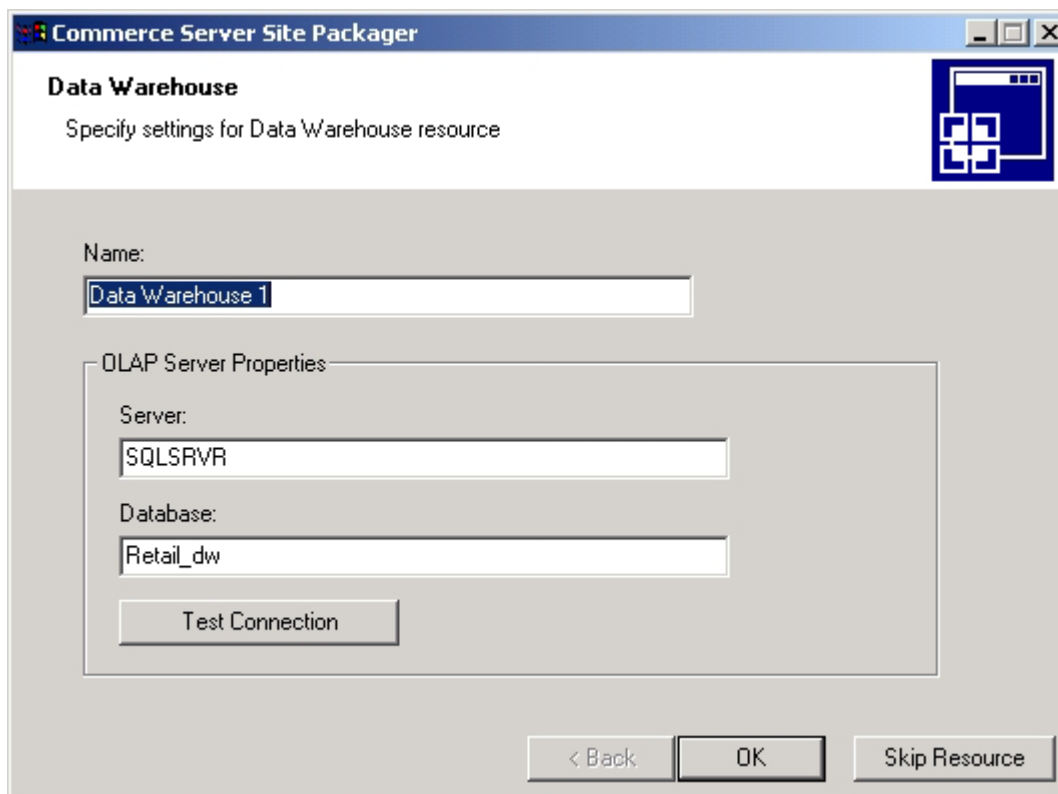
Click *Next*.

12. Click *Install* to begin the installation process.
13. Click *Finish* to exit the Setup program.
14. Restart the web server.

Installing the Commerce Server Solution Retail Site

The Commerce Server Solution Sites are ready-to-deploy storefronts. This lab unpacks the Solution Sites and deploys the Retail site. You must install Active Directory in order to use the Supplier site.

1. Run `CommerceServerSolution.exe` from the classroom folder.
2. The Commerce Server 2000 Solution Sites Setup program starts. Click *Next*.
3. The Software License Agreement screen displays. Select *I accept the terms in the license agreement* and click *Next*.
4. Click *Install* to begin the installation.
5. Click *Finish* to complete the Setup wizard.
6. Click *Start* → *Programs* → *Microsoft Commerce Server 2000* → *Commerce Site Packager*.
7. In the Commerce Server Site Packager screen, select *Unpack from a package file (.pup)*, and then click *Next*.
8. In the Unpack dialog box, click *Browse*.
9. In the Open dialog box, navigate to the `C:\Program Files\Microsoft Commerce Server\PuP Packages` folder, select *retail.pup*, and click *Open*.
10. When you are returned to the Unpack dialog box, select *Custom unpack*, and click *Next*.



Commerce Server Site Packager

Data Warehouse
Specify settings for Data Warehouse resource

Name:
Data Warehouse 1

OLAP Server Properties

Server:
SQLSRVR

Database:
Retail_dw

Test Connection

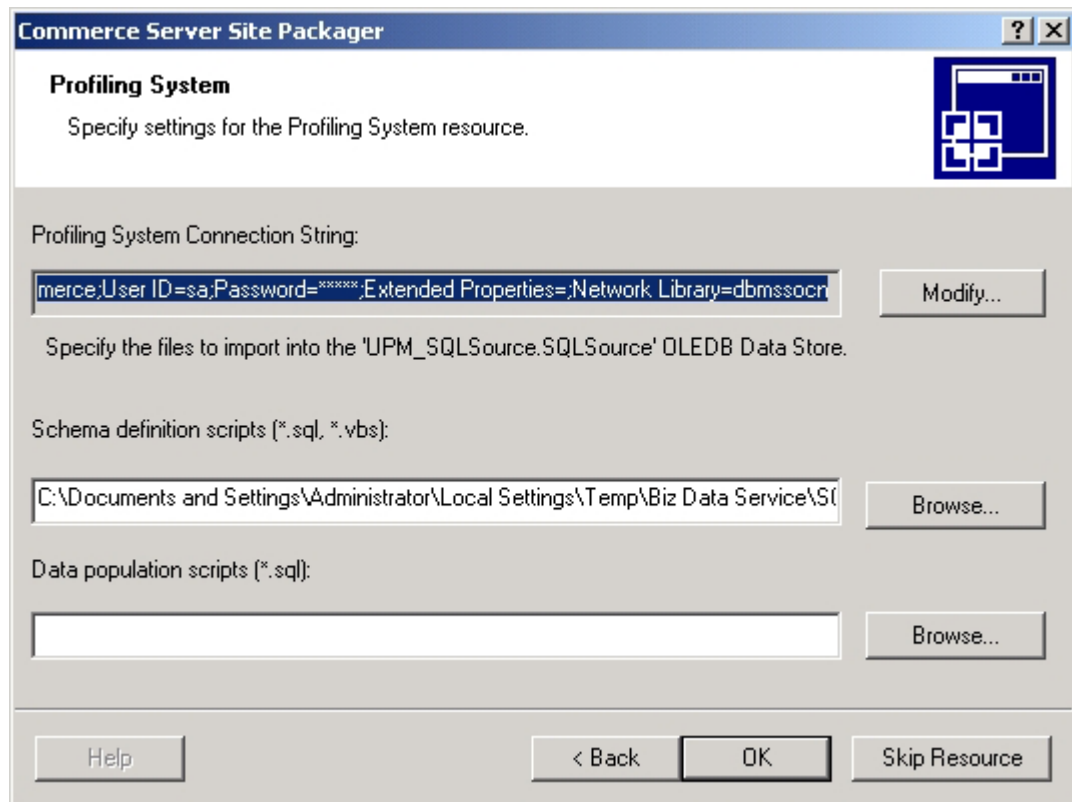
< Back OK Skip Resource

11. When the Data Warehouse dialog box displays, enter the following information.

In this field	Enter
Name	Enter <i>Data Warehouse n</i> , where n is your group number
Server	Enter <i>SQLSRVR</i>
Database	Enter <i>Retail_dw</i>

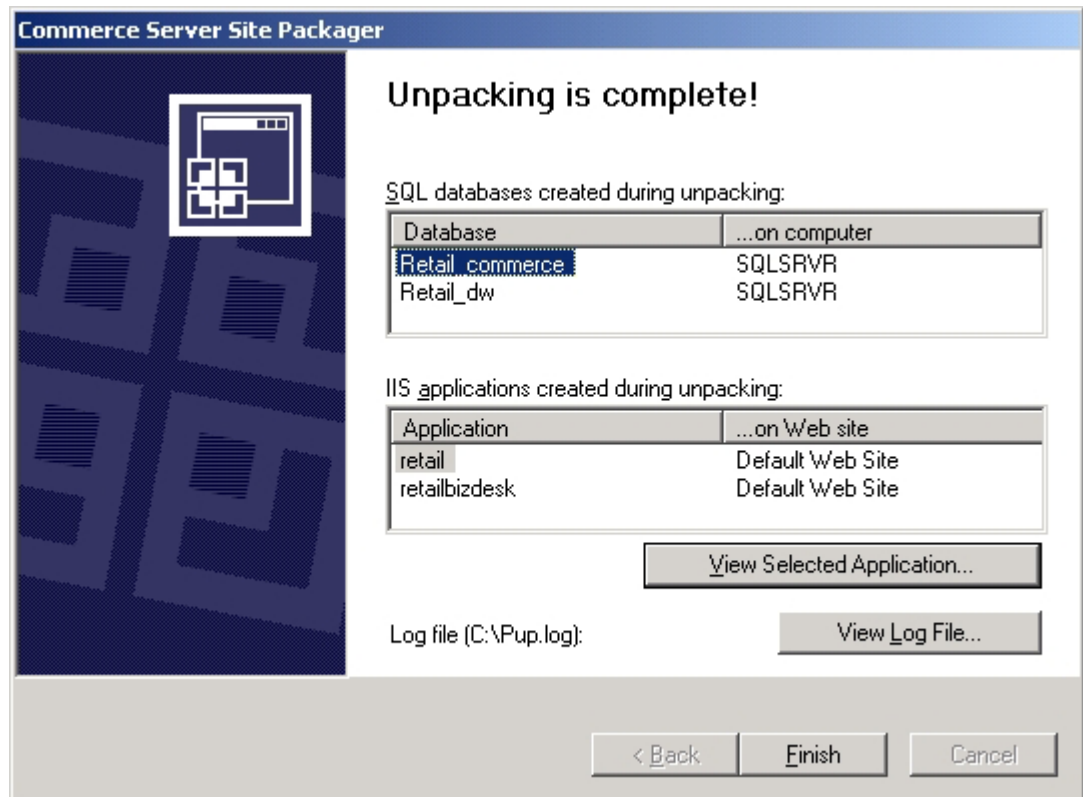
12. Click *Test Connection*. If the connection is not successful, click *Skip Resource*. Otherwise, click *OK*.

13. When the first Profiling System dialog box displays, accept the defaults and click *Next*.

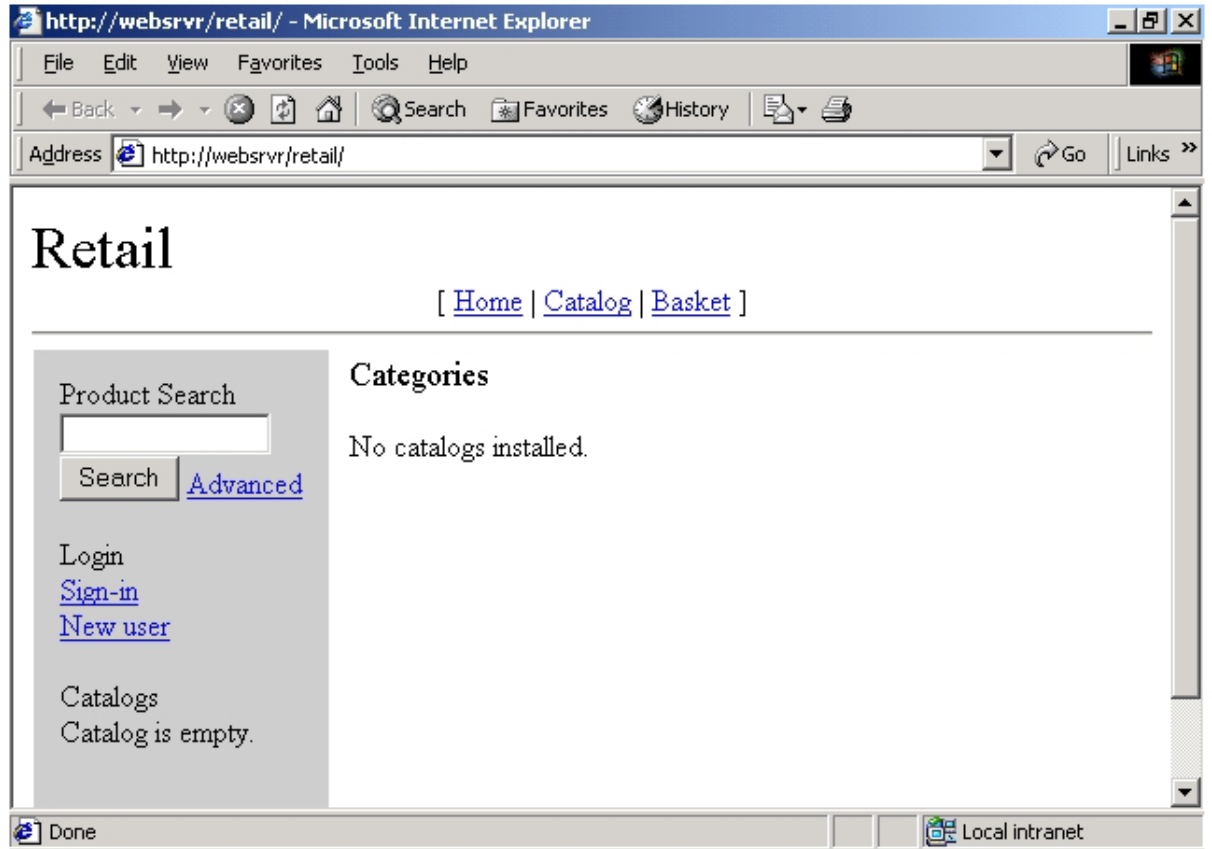


The image shows a Windows-style dialog box titled "Commerce Server Site Packager". Inside, the "Profiling System" section has the instruction "Specify settings for the Profiling System resource." Below this, there are three main configuration areas: "Profiling System Connection String:" with a text box containing "merce,User ID=sa,Password=*****;Extended Properties=;Network Library=dbmssocn" and a "Modify..." button; "Specify the files to import into the 'UPM_SQLSource.SQLSource' OLEDB Data Store."; and "Schema definition scripts (*.sql, *.vbs):" with a text box containing "C:\Documents and Settings\Administrator\Local Settings\Temp\Biz Data Service\SC" and a "Browse..." button. At the bottom, there is a "Data population scripts (*.sql):" section with an empty text box and a "Browse..." button. The bottom of the dialog features four buttons: "Help", "< Back", "OK", and "Skip Resource".

14. Accept the defaults in the second Profiling System dialog box and click *Next* → *OK*.

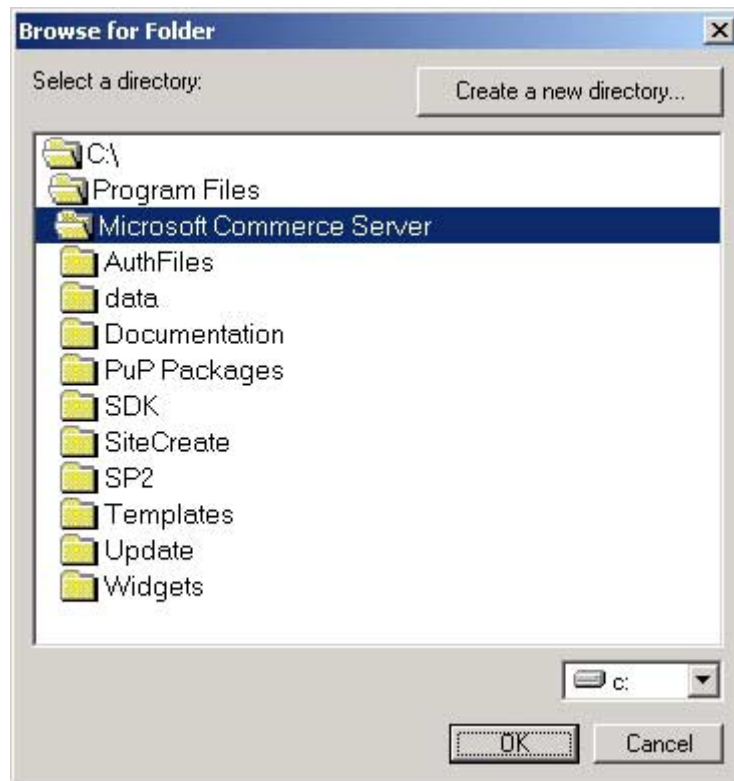


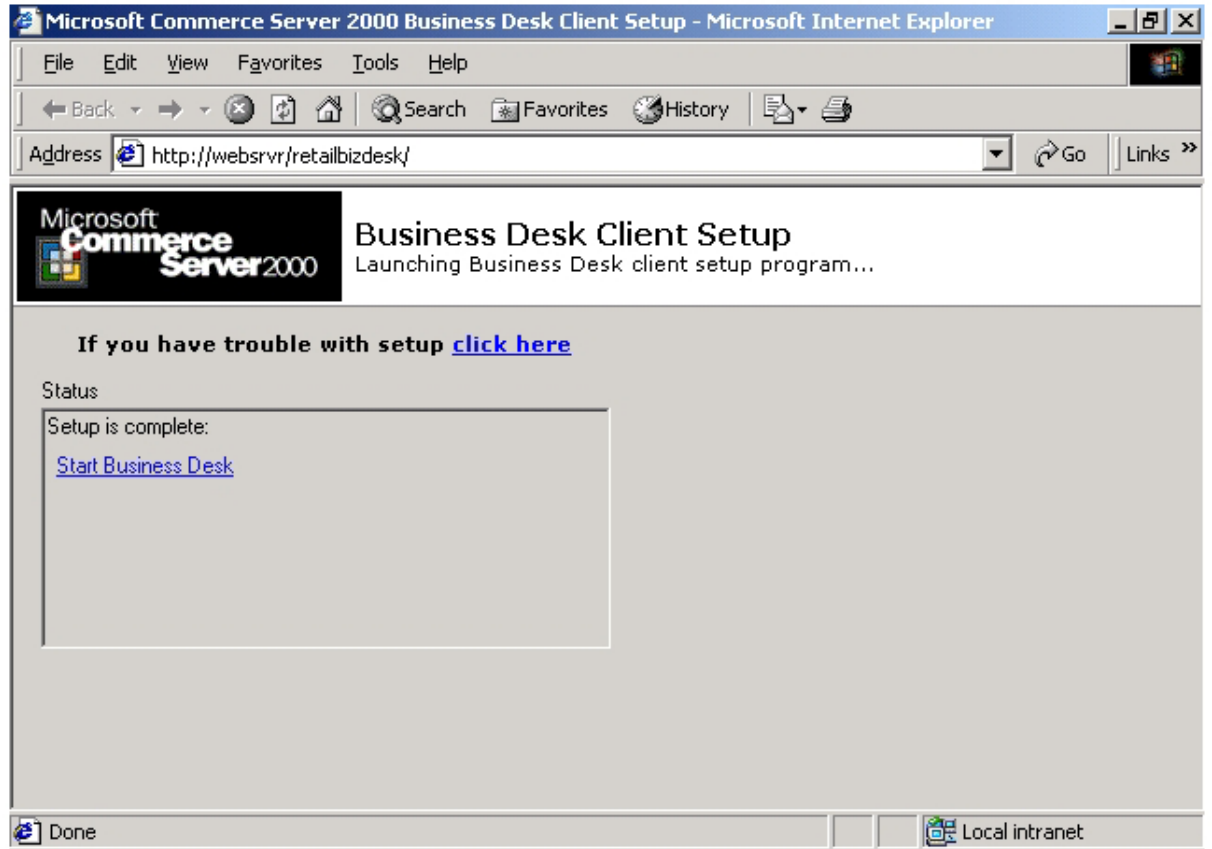
15. In the Unpacking is complete dialog box, review the list of SQL Server databases and IIS applications that were created. To review the list of events in the Site Packager log file, click *View Log File*.
16. Select *retail* in the IIS applications created during unpacking section and click *View Selected Application*.



17. The web browser opens the Retail site; however, no catalog is available.

18. Switch to the Site Packager window. Select *retailbizdesk* → *View Selected Application* to start the Business Desk Client Setup.
19. When you access the Business Desk Client Setup for the first time, a security warning displays. Select *Always Trust content from Microsoft Corporation* and click *Yes*.
20. Click *Create a new directory* and enter *BizDesk*. Click *OK* → *OK*.





21. Click *Start Business Desk*.
22. To close Site Packager, click *Finish*.

Preparing the Site

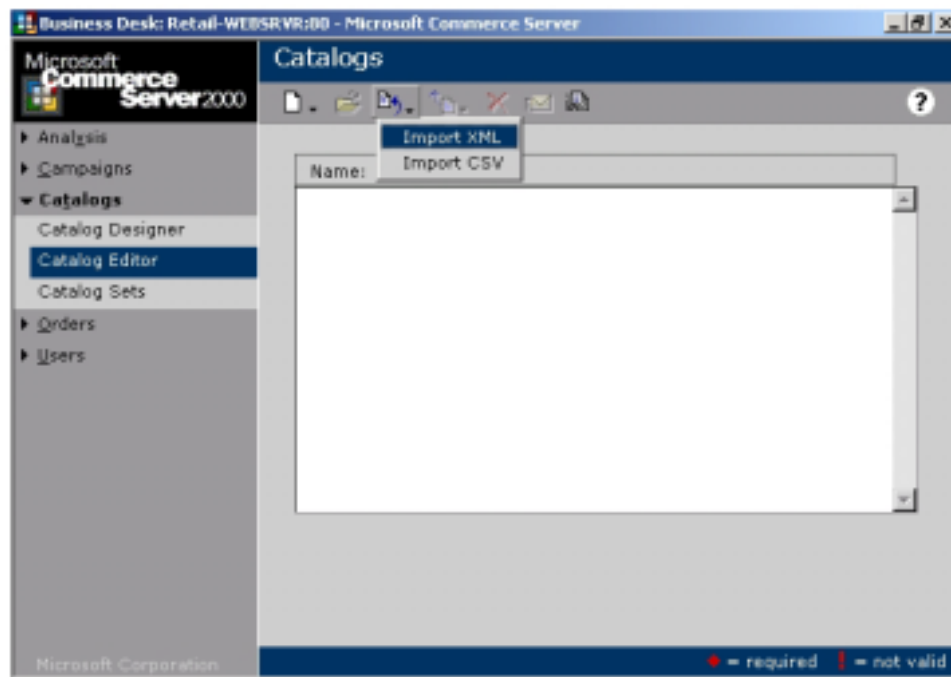
Business Desk is a Commerce Server Management tool that allows you to configure, manage, and analyze your website. Before you can open the Retail website for business, you must use Commerce Server Business Desk to perform the following tasks:

- Import a catalog
- Customize shipping methods
- Publish the catalog to the site

Import a Catalog

You can import an existing catalog or create a catalog schema. Due to time constraints, in this lab you will import the Books catalog.

1. Select *Catalogs* → *Catalog Editor*.



2. Click the *Import Catalog* icon and select *Import XML* from the drop-down list.
3. In the Import XML Catalog dialog box, enter `<class_folder_location>\bookfull.xml` in the File name field.
4. Click *OK* when the catalog import is successful.

5. Check the Application Log in the Event Viewer to ensure the following information events occurred.

Event	Description
Information	Creating full text indexes
Information	Importing Catalog "Books"
Information	Commerce Server Catalog Import started

6. Press *Alt+P* to refresh the Catalog page. Books displays in the Catalog Editor list.

Customize Shipping Methods

You must specify how Commerce Server should calculate the shipping costs: by the weight of the product, by the quantity the users purchase, or by the amount of the purchase subtotal.

1. In the Business Desk screen, select *Orders* → *Shipping Methods*.
2. Click the *New Shipping Method* icon → *Charge by SubTotal*. The *Charge by SubTotal – New* screen displays.

3. Enter *Standard Shipping* in the Name field.
4. Use the following table to enter shipping costs by subtotal.

Price, up to	Rate
Up to \$20.00	\$4.95
\$20.01 to \$40.00	\$5.95
\$40.01 to \$60.00	\$7.95
\$60.01 to \$80.00	\$10.95
\$80.01 to \$100.00	\$13.95
\$100.01 to \$150.00	\$16.95
\$150.01 to \$200.00	\$19.95
Over \$200.00	\$22.95

5. For amounts over \$200, select *over 200* → *Edit*. Enter \$22.95 and click *Accept*.
6. Click the *Save and Back to Shipping Methods List* icon.

Publish Your Catalog to Your Site

The catalog will not be available until it is published. This is done in the Catalog Editor.

1. Select *Catalogs* → *Catalog Editor*.
2. Click *Books* in the Catalog window.
3. Click the *Update Catalog* icon.

Accessing the Retail Website



After you have completed the previous steps, you are ready to test the Retail site to ensure that e-commerce storefront has been configured properly. Ask your neighbor to browse to your web server, and you should browse to your neighbor's web server.

1. From your web browser computer go to **http://ipaddress/Retail**, where *ipaddress* is address of your web server.
2. Click *New user* and enter your information.
3. Go to the Products page.
4. Select several items to purchase.
5. Select a shipping method and check out.

Running Reports

Commerce Server 2000 provides approximately 50 default reports. You can run both dynamic and static reports from the Reports module or you can schedule reports to be run automatically on a regular basis. Dynamic reports run in a matter of seconds and display in a separate window in a table format.

In this exercise, you will run a dynamic report displaying an executive summary of daily site usage.

1. Click *Analysis* → *Reports*.
2. In the Reports window, click  on the toolbar.
3. In the Find window, click the Find by drop-down list and select *Name*.
4. In the Name field enter *Usage Summary*.
5. Click the *Find Now* button.
6. In the Find window, select the *Usage Summary by Day of Week* report, and click  on the toolbar to run the report.
7. The report displays in a new window.
8. You can save the report for future reference by clicking *Save Report*.
9. In the Report Name field, enter *Daily Usage Summary*, and click *OK*.
10. Close the browser window.

Objectives

After completing this lab, you should be able to:

- Install Microsoft Content Management Server.
- Install Content Management Server Site Builder.
- Install the Content Management Server Service Pack.
- Install the sample site.
- Testing the website.
- Install Site Stager.

Requirements

- SQL Server 7 or SQL Server 2000
- SQL Server Service Pack 2 or higher, which includes:
 - ADSI 2.5 or higher
 - MDAC 2.5 or higher
- Internet Explorer 5 or higher
- Microsoft Java VM
- Microsoft IIS 5

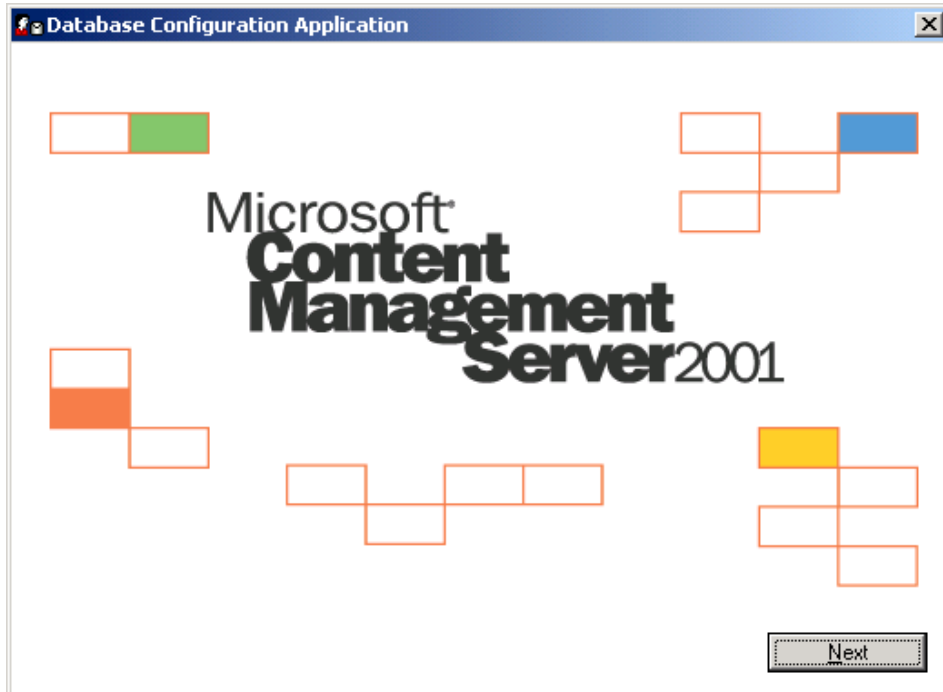
Installing Content Management Server

Content Management Server is installed in three phases. The installation program itself includes only the steps for installing files and setting up registry key information. The Database Configuration Application (DCA) and the Server Configuration Application (SCA) carry out the remaining functions.

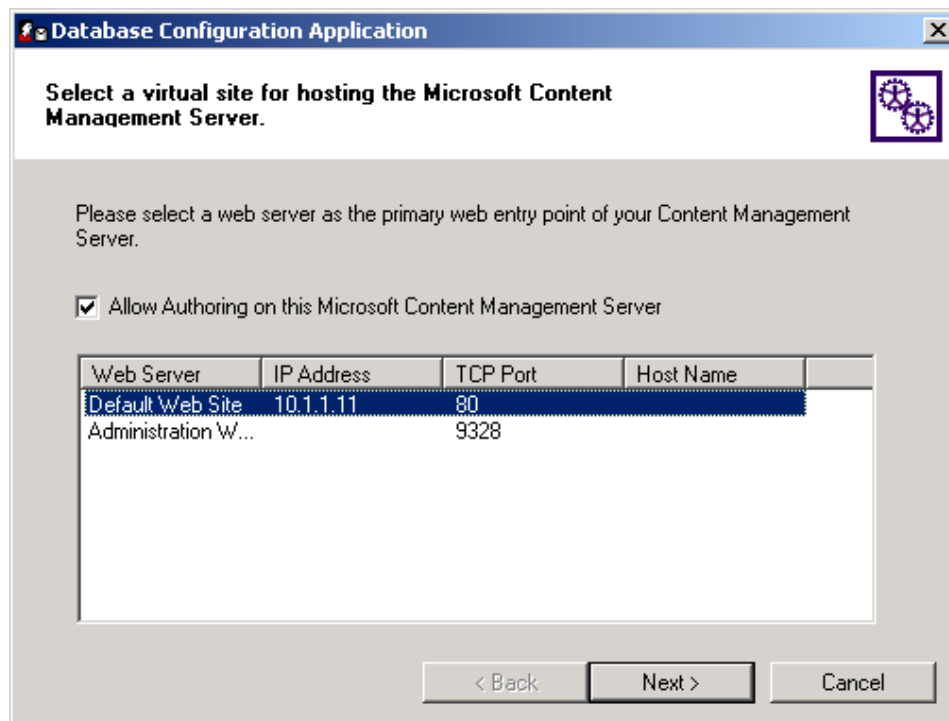
To install Content Management Server:

1. Run the setup program from the directory provided by the instructor. The Commerce Server 2000 Setup program starts.
2. Click *Install Components*.
3. Click *Install Server*.
4. The Welcome dialog box displays. Click *Next* to start the Installation wizard.
5. The License Agreement dialog box displays. Select *I accept the terms in the license agreement* and click *Next*.
6. The 3rd Party Software Requirements dialog box verifies that the prerequisites have been met for the Content Management Server installation. Each third-party component must have a status of *Pass*. Click *Next* if the requirements are met.
7. In the Customer Information dialog box, type the 25-character product key provided by the instructor, and then click *Next*.
8. In the Destination Folder dialog box, accept the default installation folder. Click *Next*.
9. In the Disk Cache Folder dialog box, accept the default folder. Accept the default cache size or enter a value of at least 50. Click *Next*.
10. Click *Install* in the Ready to Install the Program dialog box.
11. Click *Finish* when the installation is complete.

Installing the Database

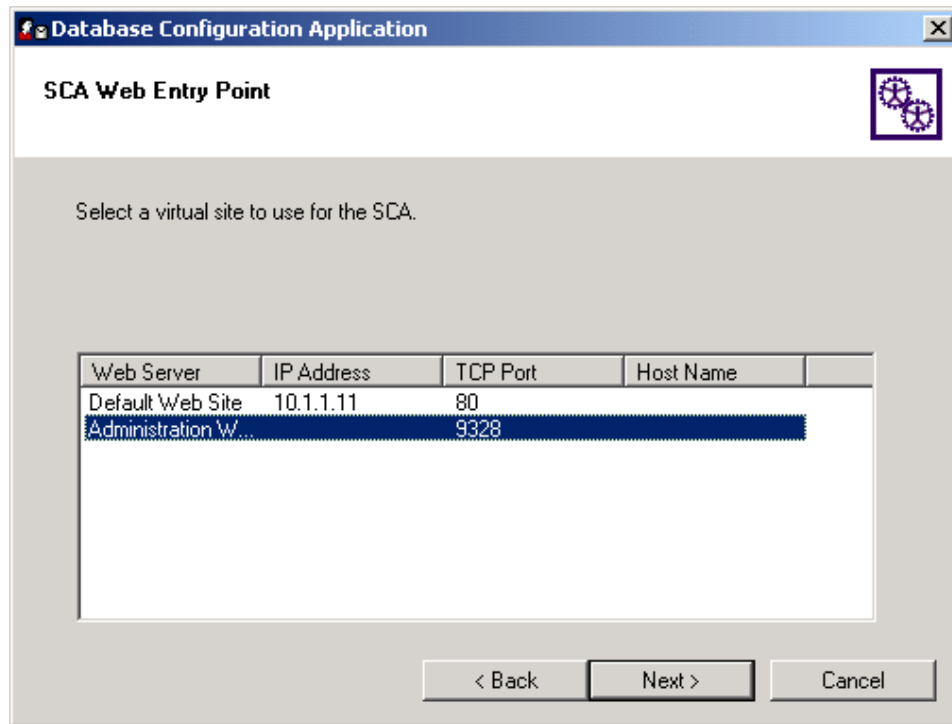


1. After the Database Configuration Application launches, click *Next*.

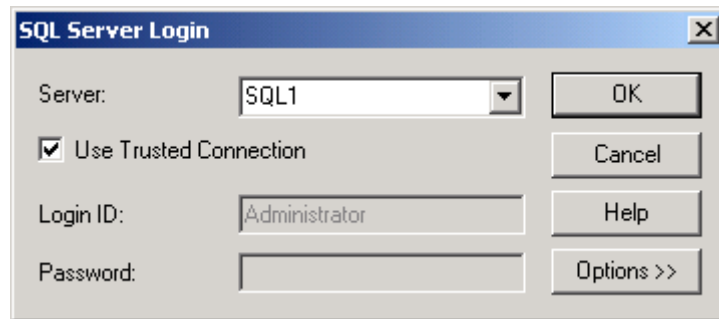


2. Select the IIS website that will serve as the entry point for Content Management Server. Click *Next*.

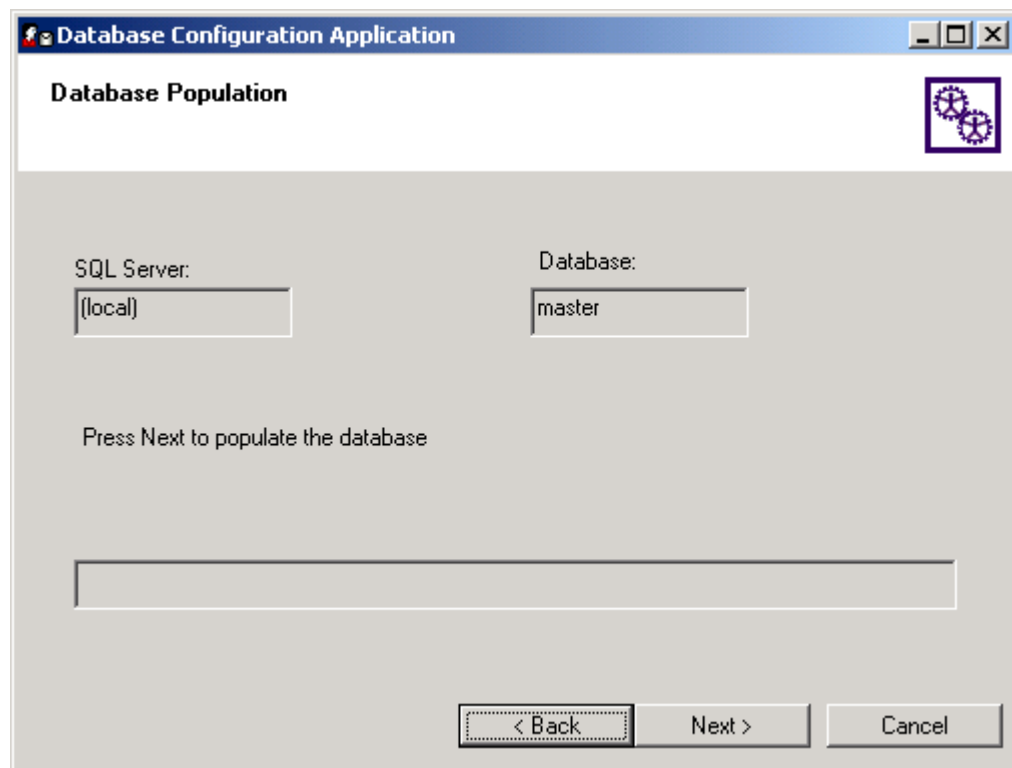
3. Select the IIS website that will serve as the entry point for the SCA. Click *Next*.

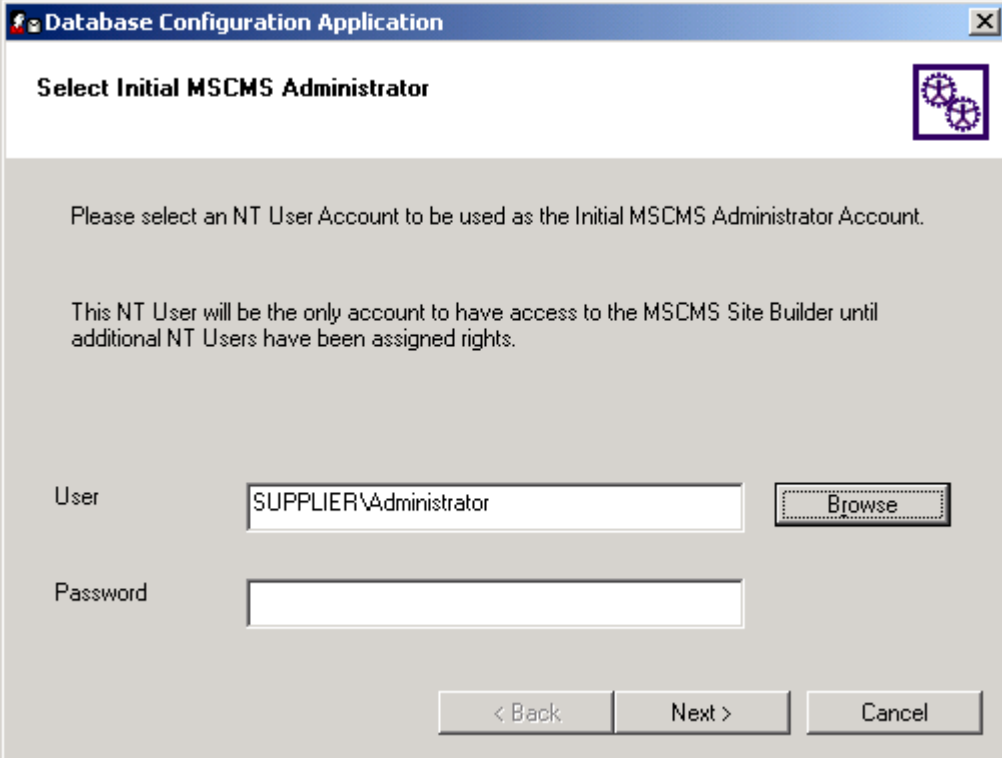


4. Click *Browse* and select the domain *Administrator* as the username for the Content Management Server System Account. Click *OK* and enter a password. Click *Next*.
5. Ensure that the account entered has the necessary rights to the database by selecting *Yes* if the dialog box displays confirming whether to grant the right.
6. If IIS is running on the server, a dialog box notifies you that the IIS service will be stopped. Click *Yes* to stop the service.
7. Click *Next* to select *SQL Server 7/2000* as the database platform.



8. Select the server name from the drop-down list and click the *Options* button. Select the *master* database and *English* as the language. Click *OK*.
9. Click *Yes* in the dialog box to install into an empty database.
10. Confirm that the SQL Server name and Database name fields contain the correct information. Click *Next* to populate the database with initial schema and data.





The screenshot shows a Windows-style dialog box titled "Database Configuration Application" with a close button (X) in the top right corner. The main heading inside is "Select Initial MSCMS Administrator", followed by a gear icon. Below this, there is instructional text: "Please select an NT User Account to be used as the Initial MSCMS Administrator Account." and "This NT User will be the only account to have access to the MSCMS Site Builder until additional NT Users have been assigned rights." The form contains two input fields: "User" and "Password". The "User" field contains the text "SUPPLIER\Administrator" and has a "Browse" button to its right. The "Password" field is empty. At the bottom, there are three buttons: "< Back", "Next >", and "Cancel".

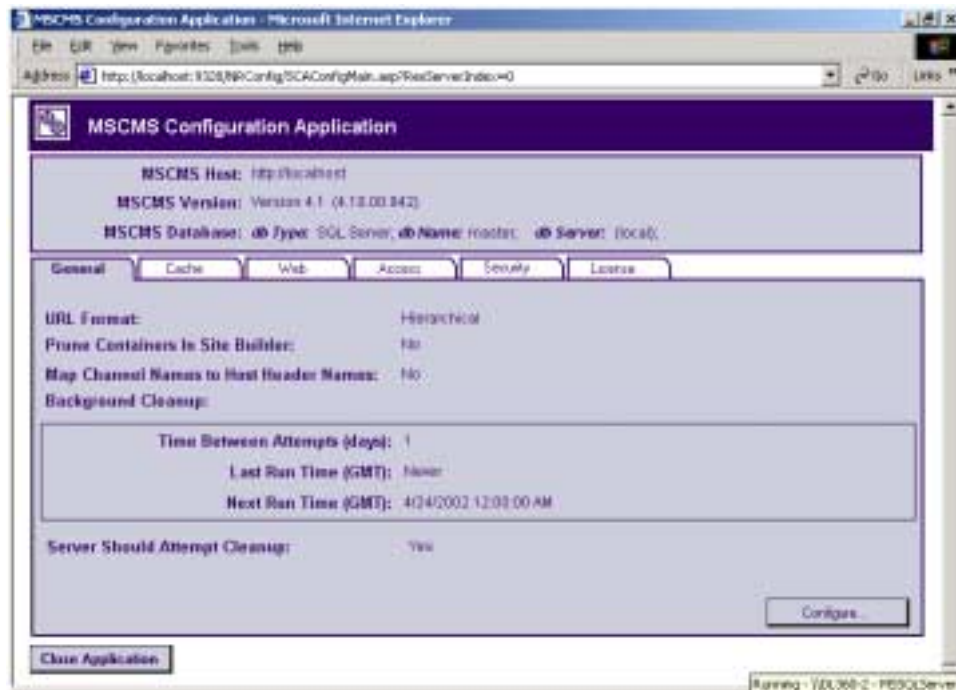
11. Enter the domain and user information. Initially, this will be the only account that can log on to Content Management Server. Use this account to set up Content Management Server access rights and hierarchies. Enter a password and click *Next*.

Note

This is not the same account as the Content Management Server System Account. This account is added to the database; the MSCMS 2001 System Account is not added.

12. In the MSCMS Site Stager Access Configuration dialog box, select *Yes – Restrict Access to Local Server Machine* and click *Next*.
13. The database installation process is complete. Ensure that the option to *Launch Server Configuration Application now* is checked. Click *Finish*.

After completing the database installation, the DCA automatically allows you to continue with the Server Configuration Application (SCA).



By default, the disk cache directory is installed on the same drive as Microsoft Windows. HP recommends either moving the IIS log files from the default location in the Windows directory to another drive or moving the disk cache directory to another drive. This prevents log files from accumulating and causing problems with the ability to cache data.

To change the cache configuration:

1. Click *Cache* → *Configure*.
2. Click *Browse* and select the new location. Click *OK*.
3. Enter *100* for the Maximum Disk Cache Size (MB).
4. Click *OK* to return to the MSCMS Configuration Application screen.

Note

There is a button for clearing the memory cache on the Cache tab. The server caches information in memory so that it does not have to go to the database to retrieve information that was recently accessed. Use the *Clear Memory* Cache button if the cache is not being synchronized with the database. Performing the clear operation has a minor impact on performance.

5. Click *Close Application*.

Installing Content Management Server Site Builder

Follow these steps to install Content Management Server Site Builder.

1. Run the setup program from the directory provided by the instructor. The Content Management Server 2000 Setup program starts.
2. Click *Install Components*.
3. Click *Install Site Builder*.
4. The Welcome screen displays. Click *Next* to start the Installation wizard.
5. The 3rd Party Software Requirements dialog box lists the prerequisites for the Site Builder installation. Click *Next*.
6. In the User Information dialog box, enter your name and click *Next*.
7. Click *Next* to accept the default installation folder in the Choose Destination Location dialog box.
8. In the Select Program Folder dialog box, accept the default program folder. Click *Next*.
9. Enter the name of the server in which Content Management Server is installed and click *Next*.
10. Click *Next* in the Start Copying Files dialog box.
11. Select *Yes, I want to restart my computer now* and click *Finish* to complete the setup wizard.

Installing Content Management Server Service Pack

Content Management Server Service Pack contains the latest updates and fixes. Follow these steps to install the service pack.

1. Run `CMS2001SP1.EXE` from the classroom folder.
2. Enter `c:\` as the location to extract the files and click *Unzip*. After the files have been extracted click *Close*.
3. Run `C:\CMSSP1\CMS2001_SP1_Install.exe`.
4. The Welcome dialog box displays. Click *Next* to start the Setup wizard.
5. The License Agreement dialog box displays. Select *I accept the terms in the license agreement* and click *Next*.
6. Server and Site Builder should be listed in the dialog box as components that will be updated. Click *Next*.
7. Click *Install* to begin the installation.
8. Click *Finish* to complete the Setup wizard.

There is no need to restart the web server.

Installing a Sample Website

The sample website provided for this lab features best practices for building a Microsoft Content Management Server website. It includes sample code for navigation and page templates, as well as sample project plans and technical specifications.

1. Run the setup program from the directory provided by the instructor. The Content Management Server 2000 Setup program starts.
2. Click *Install Components*.
3. Click *Install Sample Data*.
4. The Welcome dialog box displays. Click *Next* to start the Setup wizard.
5. The Pre-requisite Check dialog box lists the prerequisites for the MSCMS Sample Data installation. Click *Next*.
6. Select *Yes, I would like to install to import the sample data*. Click *Next*.
7. Enter `<domain>\Administrator` as the User Name and enter the Administrator password. Click *Next*.
8. Click *Install* to begin the installation.
9. To complete the installation, click *Finish*.

Accessing the Site

Site Builder is used to create the site structure and assign user roles and responsibilities. The structure of the sample website, Method Systems, is already in place. However, roles and responsibilities must be assigned.

Creating Users

Create the users who will fulfill the roles used by MSCMS.

1. Select *Start* → *Programs* → *Administrative Tools* → *Active Directory Users and Computers*.
2. Right-click *Users* and select *New* → *User*.
3. Create the following users.

First name	Last name	User logon name
Designer	1	Designer1
Author	1	Author1
Editor	1	Editor1
Moderator	1	Moderator1

4. Close the Active Directory Users and Computers windows.

Creating Rights Groups

To define the appropriate user roles, you must first create the associated rights groups.

1. Select *Start* → *Programs* → *Microsoft Content Management Server* → *Site Builder*.
2. Select *Login as Administrator* and click *Start*.
3. Click *User Roles* → *Administrator* in the User roles pane.
4. Select *File* → *New* → *Rights Group*. The group name *New Rights Group* displays in the Administrators pane.
5. Rename the group *Administrators Group*.
6. Repeat steps 3 through 5 for the Subscriber, Author, Editor, Moderator, Resource Manager, and Template Designer user roles.

Defining User Roles

Site Builder is used to define the roles of the users you created in Active Directory.

1. Click *Administrators* in the User roles pane.
2. Right-click *Administrator* in the Administrators pane and select *Properties*.
3. Select the *Group Members* tab and click *Modify*.
4. In the *NT Domains* pane, click the domain folder that is shown and select *Select from list of all groups and users*.
5. Select *Moderator* and click *Add*.
6. Click *OK* → *OK*.
7. Repeat steps 1 through 6 to add the Guest user to the Subscribers group and Author, Editor, Moderator, and Designer to the associated MSCMS user groups.

Enabling Site Access

The website will not be available until Guest access is enabled. This is done in the SCA.

1. Run the SCA. Select *Start → Programs → Microsoft Content Management Server → Server Configuration Application*.
2. Click the *Security* tab, then the *Configure* button.
3. Select *Yes* to allow guests on the site.
4. Click *Browse* next to the *Guest Login Account* field.
5. Click *OK* to continue browsing Active Directory.
6. Select the name of your group domain from the *NT Domain* field.
7. Select the *Guest* account and click *OK → OK*.
8. Click *Close Application → Yes* to exit the SCA.

Enabling the Channel for the Web Author

The following steps are required to make the channel available on the Web Author.

1. On the Web Authoring tab, select *Enable Web Author Access on this Channel*.
2. In the Folder field, browse to select a folder. Pages using the Web Author are generated in this folder. If a suitable folder does not exist, you need to create one, then return to this screen to assign the folder. To allow authoring on this channel, a folder must be associated with it.
3. In the Template Gallery box, browse to select the template gallery that stores Web Author templates. The template gallery you choose will be available to authors when they create pages for the Web Author.

The following steps outline a simple publishing cycle in the Web Author to illustrate the publishing process from the perspective of authors, editors, and moderators.

To create a page:

1. Launch Internet Explorer and enter the URL of the Method Systems Intranet website.
2. Log on as Author1.
3. Click *Switch to Edit Site*.

You can tell what a placeholder allows by which icons are present in the upper right-hand corner of a placeholder.

Running Reports

You can run a report on pages, resources, and template objects. The reports are based on those objects and their use. To run a report:

1. Select *Start* → *Programs* → *Microsoft Content Management Server* → *Site Builder*.
2. Click *Folders* to navigate the Method Systems folder hierarchy.
3. Click *Extranet* → *Customer Service* to view the contents of the folder.
4. In the Customer Service pane, right-click *Bulletin 2347* and select *Resource Report*.

The screenshot shows a web browser window titled "Microsoft Content Management Server [Administrator] - Microsoft Internet Explorer". The main content area is titled "Resource Report" and "Objects In Use By This Page". It displays the following information:

Page: Bulletin 2347
Location: /Folders/Method Systems/Extranet/Customer Service
Owner: Administrator

Resource Gallery Items

Name	Location	Owner	Mime	Preview
No Resource Gallery Items are in use by this Page				

Templates

Status	Is Replacement	Name	Location	Owner	Preview
Approved	--	Bulletins	/Templates/Method Systems/Extranet	Administrator	Preview

Placeholders

Name	Type
MSBulletins	HTML Edit Control

Testing the Website

After you have completed the previous steps, you are ready to test the Method Systems site to ensure that the site has been configured properly. Ask your neighbor to browse to your web server, and you should browse to your neighbor's web server.

1. From your web browser computer go to **http://*ipaddress*/Method+Systems**, where *ipaddress* is address of your web server.
2. Click each topic to navigate the site.

Installing Site Stager

Site Stager is an optional MSCMS component that allows you to convert website content to HTML files that can be copied to another server regardless of the platform. To install Site Stager:

1. Run the setup program from the directory provided by the instructor. The Commerce Server 2000 Setup program starts.
2. Click *Install Components*.
3. Click *Install Site Stager*.
4. The Welcome dialog box displays. Click *Next* to start the Installation wizard.
5. The Site Stager Install Prerequisites dialog box lists the prerequisites for the installation. Click *Next*.
6. In the Choose Destination Location dialog box, accept the default installation folder. Click *Next*.
7. In the Select Program Folder dialog box, accept the default program folder. Click *Next*.
8. In the Destination User Account dialog box, click *Browse*. Select an AD user account that provides the security context under which Site Stager downloads and creates files and directors, and click *OK*. Click *Next* to continue.
9. Accept the default Site Map URL and click *Next*.
10. Select *Yes, I want to restart my computer now* and click *Finish* to complete the Setup wizard.

Objective

After completing this lab, you should be able to:

- Install and configure the Web Application Stress Tool.
- Install and configure Microsoft Network Load Balancing (NLB).
- Manage a load-balanced server array.

Requirements

- Retail website installed and configured in Module 3 Lab
- Microsoft Web Application Stress tool

Install the Microsoft Web Application Stress Tool

The Microsoft Web Application Stress (WAS) tool is a simulation tool developed to realistically reproduce multiple browsers requesting pages from a web application.

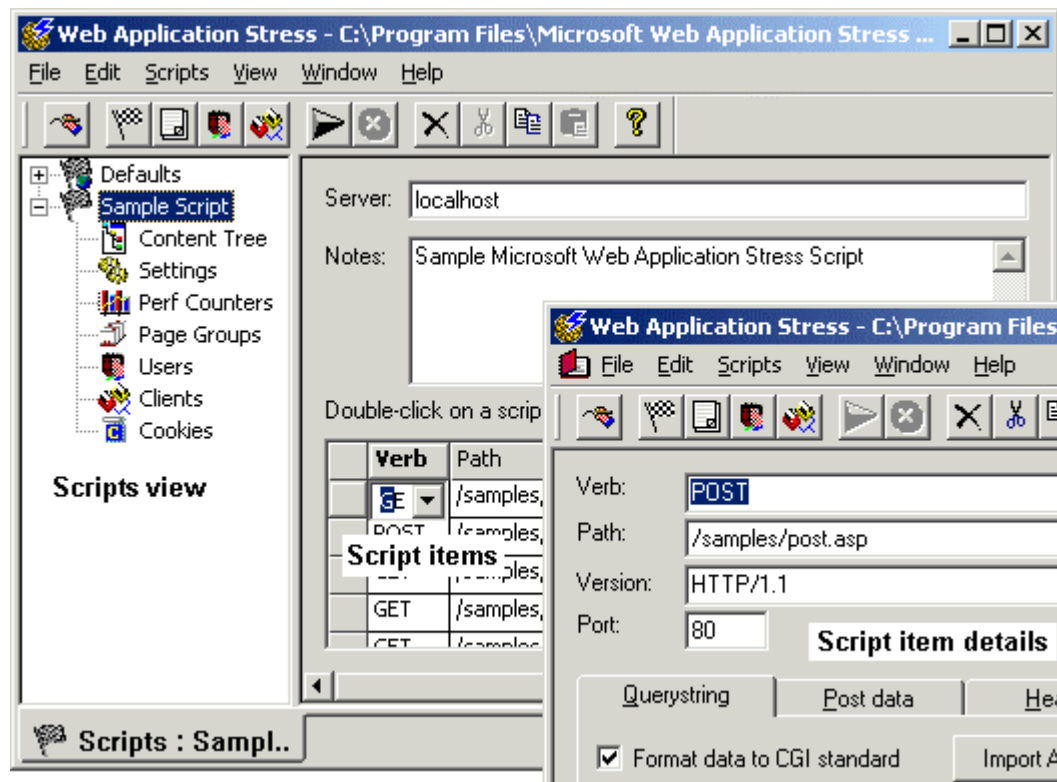
To install the WAS tool:

1. Run `wastsetup.exe` from the class folder.
2. The Software License Agreement screen displays. Click *Yes* to accept the terms.
3. Click *Next* on the Select Destination screen to accept the default location for program files.
4. After the installation is complete, click *OK* → *Finish*.
5. Use Windows Explorer to copy the Samples folder to the root directory of the Retail website folder (`inetpub\wwwroot\retail`).

Configuring the WAS Tool

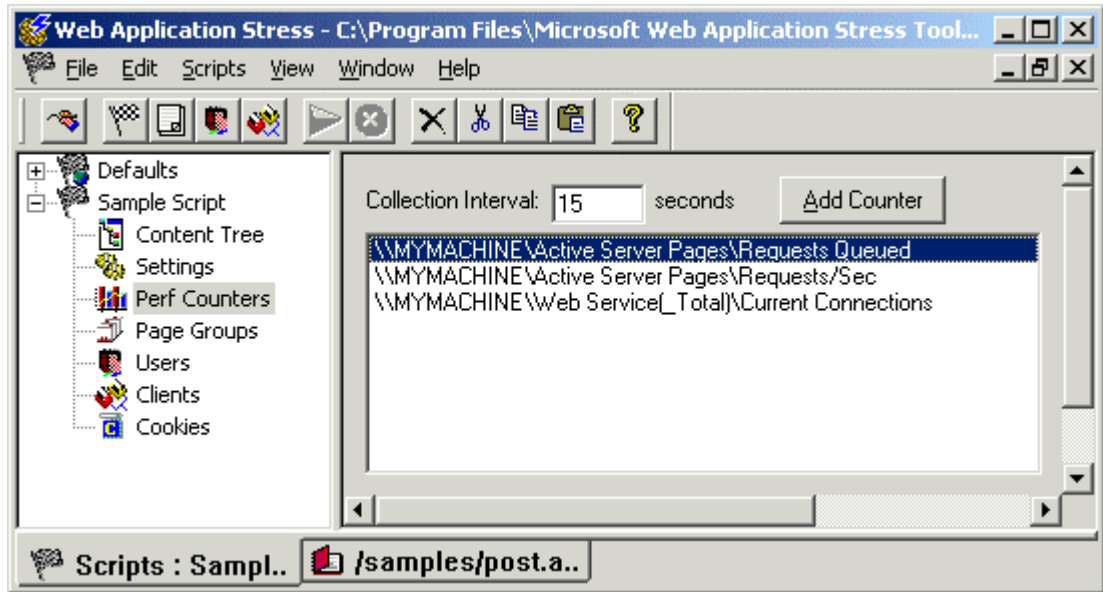
After installing and opening WAS for the first time, a script is created called Sample Script. Review this script to become familiar with some of the features in the WAS tool.

1. Select *Start* → *Programs* → *Microsoft Web Application Stress Tool* → *Microsoft Web Application Stress Tool*.
2. Close the Create new script dialog box.
3. The left pane of the main WAS window is known as the script view. This view displays all of the scripts stored in the current WAS database. The Defaults and Sample Script are displayed in the script view.
4. Expand and click *Sample Script*. There are seven script items in the Sample Script. Each script item uses a special feature of WAS.

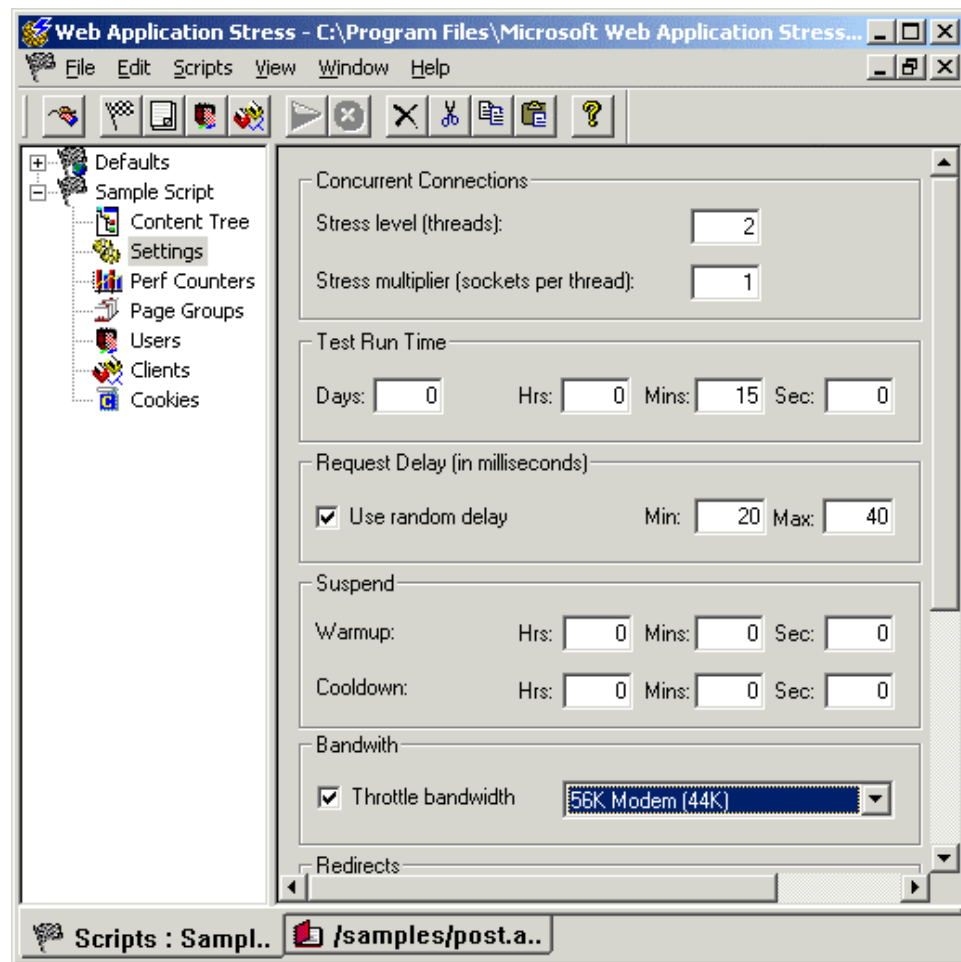


5. The *Verb* value of one of the script items shown in the right window is *POST*. Highlight the row header to the left of the *POST* script item, then double-click. This opens the script item details view. From this view you can edit the querystring name-value pairs, change POST data, modify the header, and enable SSL.
6. Click *OK* to close the script item details view.

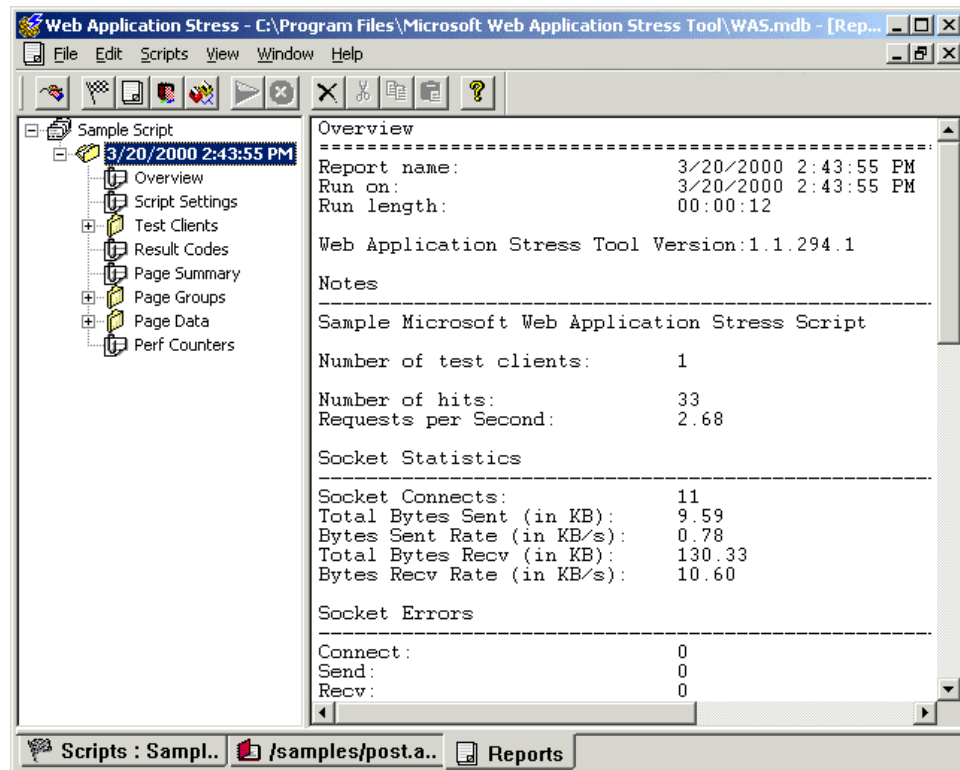
7. Select *Perf Counters* from the script tree and click *Add counter*. It may take a moment to load the Add Counters dialog when this button is clicked for the first time. Add the following counters:
 - Web Service: Get Requests/sec
 - Web Service: Post Requests/sec
 - System: % Total processor time
 - Active Server Pages: Requests/sec



8. Change the Collection Interval to every 5 seconds. Capturing the correct performance monitor counters is critical to obtaining the correct data to analyze when the test completes.



9. Select *Settings* and view the settings that can be configured for a script. You may also set the default settings for all new scripts by selecting the *Defaults* node and changing those options. Keep in mind that the settings in the *Defaults* node will not affect existing scripts, such as the *Sample Script*.
10. Click *Sample Script* and select *Scripts* → *Run*. Allow the test to complete.



11. Select *View* → *Reports* to open the Reports view. Expand the Sample Script report to display all of the report nodes. There should be at least one node titled with the date and time in which your latest test was started. Expand and select the top level of this report node to view a summary of this test.

Installing and Configuring Network Load Balancing

To install NLB:

1. Select *Start* → *Settings* → *Control Panel* and double-click *Network and Dial-up Connections*.
2. Right-click the Local Area Connection on which Network Load Balancing is to be installed, and click *Properties*. The Local Area Connection Properties dialog box displays.
3. Under *Components checked are used by this connection*, select *Network Load Balancing*.
4. Click *Properties*. Select the *Cluster Parameters* tab in the Network Load Balancing Properties dialog box.
5. In the *Primary IP address* field enter the IP address assigned to the Retail site in IIS.
6. Enter the associated subnet mask for the IP address in the *Subnet mask* field.
7. Select *Multicast support*.
8. Click the *Host* tab and enter the dedicated IP address.
9. Enter the associated subnet mask for the IP address in the *Subnet mask* field.
10. Click *Advanced*, and then click *Add*.
11. Enter the server array IP address in the space for IP address, followed by the appropriate subnet mask. This IP address corresponds to the Primary IP address of the server array that you entered in the Network Load Balancing Properties dialog box under Cluster parameters.
12. After you have finished, click *OK* → *OK* to return to the Local Area Connection Status dialog box.
13. Right-click the Local Area Connection on which Network Load Balancing is to be installed, and click *Properties*.
14. Click *Internet Protocol (TCP/IP)*, and then click *Properties*.
15. Set up TCP/IP for Network Load Balancing.
16. Repeat these steps on each host to be used in your Network Load Balancing server array.

These settings are recorded in the registry and the changes are applied when you click *OK* in the Network Load Balancing Properties dialog box. Clicking *OK* stops Network Load Balancing (if it is running), reloads the parameters, and then restarts cluster operations.

NLB Administration

To stop Network Load Balancing:

1. Select *Start* → *Programs* → *Accessories* → *Command Prompt*.
2. At the command prompt, enter `wlbs stop`. Load balancing operations are immediately stopped on the local server array host.

To stop cluster operations on all cluster hosts, type `wlbs stop` followed by the server array IP address or server array name.

Note

When you use `wlbs stop`, any client connections already in progress are interrupted. To avoid interrupting active connections, consider using the `drainstop` cluster control command.

You can restart cluster operations on the local cluster host by either restarting the computer or entering `wlbs start` at the command prompt. Similarly, you can restart cluster operations on all cluster hosts by entering `wlbs start` followed by the server array IP address or server array name.

Objectives

After completing this lab, you should be able to:

- Optimize memory usage.
- Optimize network bandwidth.
- Monitor web server performance using System Monitor.

Optimizing Memory Usage

Servers are generally configured to give preference to the File System Cache over the working sets of processes when allocating memory space. The setting *Maximize Throughput for File Sharing* often causes the IIS pageable code to be written to disk, which results in lengthy processing delays. To avoid these processing delays, modify the server properties to the maximize data throughput for network applications.

To change server properties:

1. On the desktop, double-click *My Computer* and select *Network and Dial-up Connections*.
2. Right-click *Local Area Connection* and select *Properties*.
3. Select *File and Printer Sharing for Microsoft Networks* → *Properties*.
4. On the Server Optimization property tab, select *Maximize data throughput for network applications*.

Concurrent Connections

To control the number of concurrent connections:

1. Click *Start* → *Programs* → *Administrative Tools* → *Internet Services Manager*.
2. Right-click the Retail site, click *Properties*, and select the Web Site tab.
3. Select *Limited To* in the Connections panel. Enter the maximum number of connections you want to allow.

Optimizing Network Bandwidth

To ensure optimal bandwidth, you can also verify that HTTP Keep-Alives are enabled. To verify the state:

1. Click *Start* → *Programs* → *Administrative Tools* → *Internet Services Manager*.
2. Right-click the website and select *Properties*.
3. Select the *Performance* tab and verify that the *HTTP Keep-Alives Enabled* option is checked.

Performance Monitoring

You begin monitoring your sites by planning for capacity and by configuring your monitoring tools to keep monitoring overhead low. You should create monitoring configurations that can be saved and copied to other computers using the System Monitor in the Microsoft Management Console (MMC). A monitoring configuration will help you highlight data center issues and visualize traffic flow through your system. Creating this configuration can also help you to understand any site software issues and to see how the software is interrelated.

System Monitor

System Monitor measures the performance of the computer on which it is installed or other computers on a network. System Monitor uses a series of counters that track data, such as the number of processes waiting for disk time, the number of network packets transmitted per second, and the percentage of processor utilization. With this data, you can create charts, set alerts, and format reports that enable you to gauge and tune system performance. Data can be displayed as it is collected, stored in log files for later use and comparison, or both.

To set a performance counter:

1. Click *Start*, → *Programs*, → *Microsoft Commerce Server*, and then click *Commerce Server Manager*.
2. Click *System Monitor* to open the performance console.
3. In the performance console, click the plus sign (+) on the System Monitor toolbar to add performance counters to your server.
4. In the Add Counters dialog box, select the ASP counters listed in the Student Guide.
5. Click *Add* to add all counters you have selected, and then click *Close*.
6. Run the Sample Script of the WAS tool. Compare the reports of other students.

Objectives

After completing this lab, you should be able to:

- Install IIS Lockdown tool.
- Install Microsoft URLScan security tool.
- Install Internet Scanner.
- Correct network vulnerabilities.

Requirements

- IIS Lockdown version 2.0 or later
- URLScan version 2.0 or later
- Internet Scanner version 6.2.1

Installing IIS Lockdown

IIS Lockdown Wizard turns off unnecessary features, which reduces the options available to attackers. To provide multiple layers of protection against attackers, URLscan, with customized templates for each supported server role, is integrated into the IIS Lockdown wizard.

On the web server:

1. Run `iislockd.exe` to start the Internet Information Services Lockdown Wizard.
2. Click *Next*.
3. Select *I agree* and click *Next*.
4. In the Select Server Template window, select the *Commerce Server 2000* template. Click *Next*.
5. Ensure that the *Install URLScan filter on the server* check box is selected and click *Next*.
6. Review the changes that will be made to IIS configuration of the web server on the Ready to Apply Settings screen. Click *Next*.
7. The security settings lists in the Status pane of the Applying Security Settings window are applied. When the process is finished, click the *View Report* button to view the changes in the log.
8. Close the report log window. Click *Next*.
9. Click *Finish*.

Installing URLScan

The URLScan security tool screens all incoming requests to an IIS web server. If a request does not comply with the rule set created by the administrator, it is blocked. Blocking specific HTTP requests prevents potentially harmful requests from reaching the server and causing damage.

The URLScan security tool is comprised of two files: `Urlscan.dll` and `Urlscan.ini`, and these files are packaged together in `Urlscan.exe`. The instructor will inform you of the location of the `urlscan.exe` file.

On your client computer:

1. Create a new folder on the `C:\` root directory with the name `lockdown_files`.
2. Open a command prompt window.
3. Locate the directory of the IIS Lockdown Wizard specified by your instructor.
4. Execute the following command to extract the URLScan files.

```
iislockd.exe /q /c /t:c:\lockdown_files
```
5. Open the IIS snap-in.
6. Right-click the server name under Internet Information Services in the MMC, then select *Properties*.
7. Verify that WWW Service is displayed in the Master Properties drop-down list, and click Edit.
8. Choose the *ISAPI Filters* tab, and then click *Add*.
9. In the Filter Properties window, type `urlscan`, and enter the full path to `urlscan.dll` in the Executable field.
10. Select *OK* to close each dialog box.
11. Restart IIS.

When properly installed, URLScan will run automatically whenever IIS is started. To confirm the operation of URLScan, locate the log file, `urlscan.log`, in the directory that contains `urlscan.dll`.

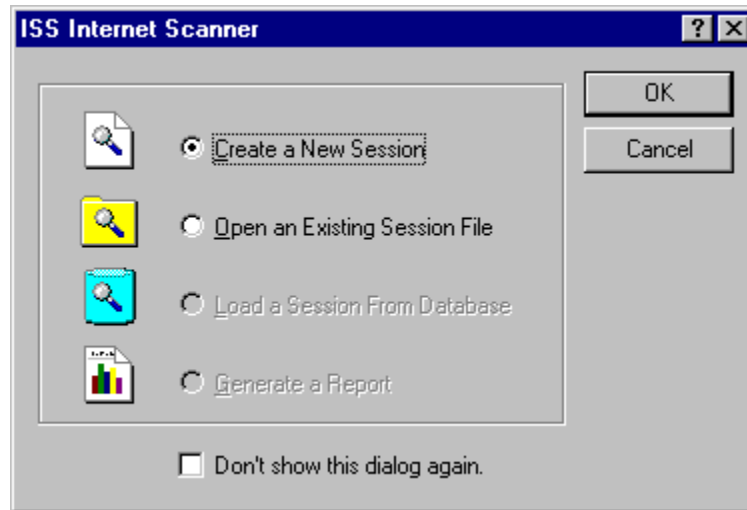
Installing Internet Scanner

On the client computer:

1. Run the executable file, `issnt.exe`.
2. Click *Next* on the Welcome screen.
3. Review the license agreement and click *Yes*.
4. Review the latest features and changes in the What's New in Internet Scanner 6.2.1 screen. Click *Next*.
5. Click *Next* to accept the destination folder where Setup will install files.
6. Review the settings and click *Next*. Setup will begin copying the program files.
7. Click *Finish* to restart the computer.

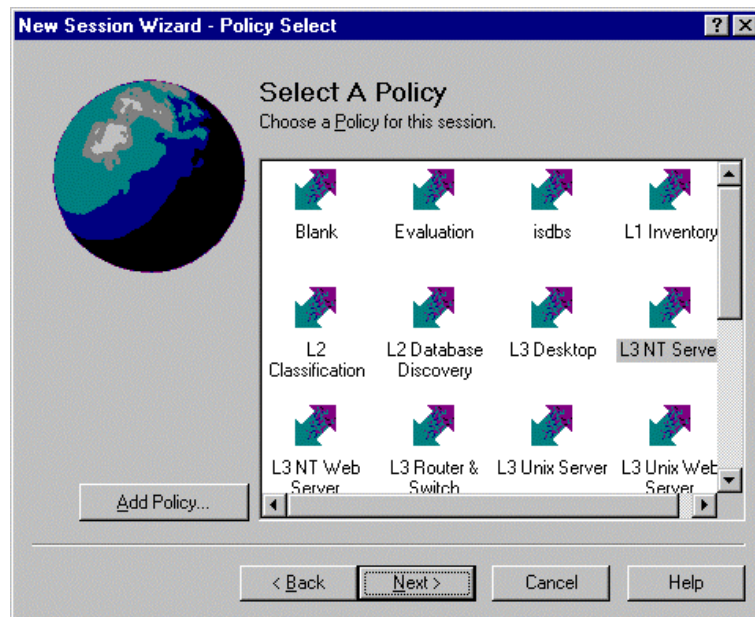
Configuring Internet Scanner

1. Click *Start* → *Programs* → *ISS* → *Internet Scanner 6.2.1* → *Internet Scanner 6.2.1*.
2. A warning dialog box displays indicating that no valid license keys were found. Click *OK*.



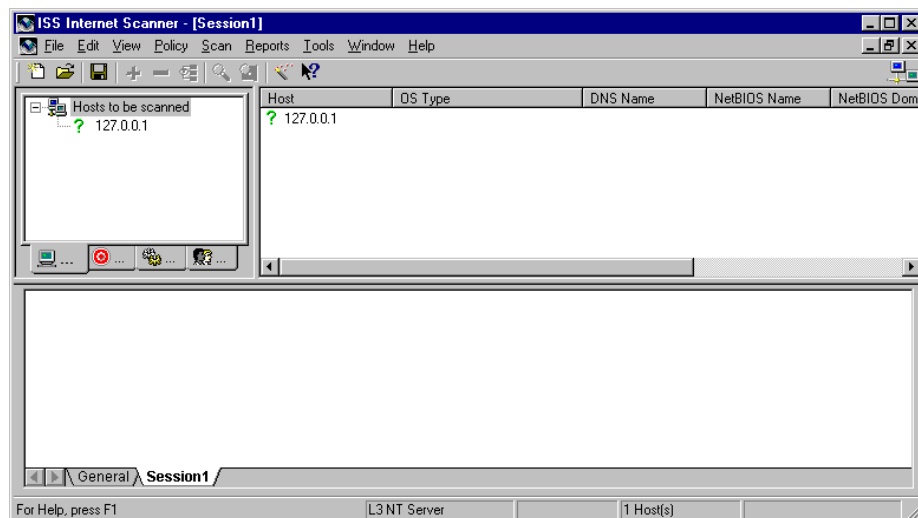
3. Select *Create a New Session* → *OK*. The Select Key dialog box displays indicating that no valid keys were detected and that the session will be configured to scan only the local host. That is fine for this purposes of this lab. Click *Next*. The Select a Policy dialog box displays.

4. Click *Next* in the Select a Key dialog box. The New Policy Wizard runs.



5. Highlight *L3 NT Server* and click *Next*.
6. In the New Session Wizard – Scan Session Information dialog box, add a comment such as *Lab Scan*; then click *Finish*.

The ISS Scanner console screen opens and displays the names of the hosts to be scanned.



Running a Vulnerability Assessment Scan

In this part of the lab, you will:

- Scan for vulnerabilities.
- Analyze the vulnerabilities.
- Correct the vulnerabilities (optional).
- Rescan the network to verify that vulnerabilities have been resolved (optional).

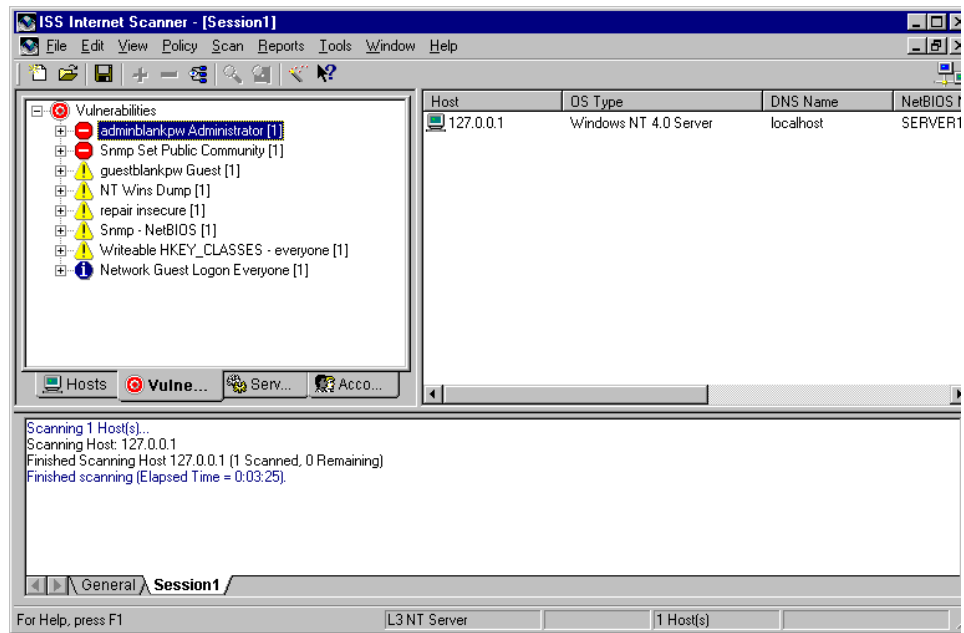
To run the scan:

1. From the ISS console, highlight *127.0.0.1*.
2. Click *Scan* → *Scan Now*. The scan will take four to eight minutes to complete.

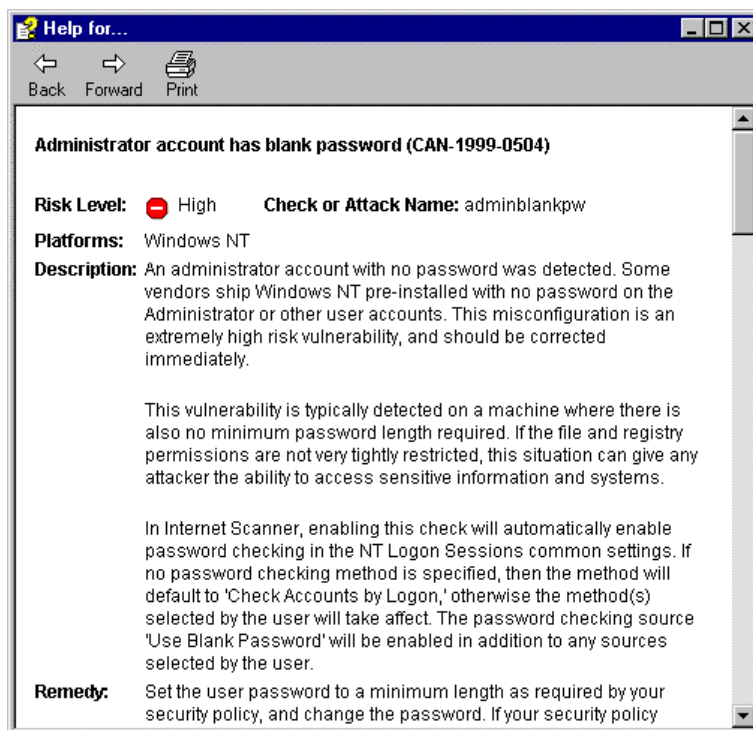
Analyzing the Vulnerabilities

ISS Internet Scanner provides information that helps you analyze and correct the vulnerabilities it detects.

1. When the scan is finished, highlight the IP address for your firewall server.
2. Click the *Vulnerabilities* tab.
3. Expand the listing of vulnerabilities in the upper left pane.



4. Right-click a vulnerability and select *What's This?* to observe details about the detected vulnerability.



5. Note the vulnerability and how to fix it.

Lab Challenge

If time permits, complete the following tasks:

- Correct any vulnerability that was detected on your firewall server.
- Evaluate the vulnerabilities that were detected on your client server. Choose one or two vulnerabilities and take the steps necessary to correct them.
- Rescan the firewall and client and verify that all vulnerabilities have been corrected.

Lab Review

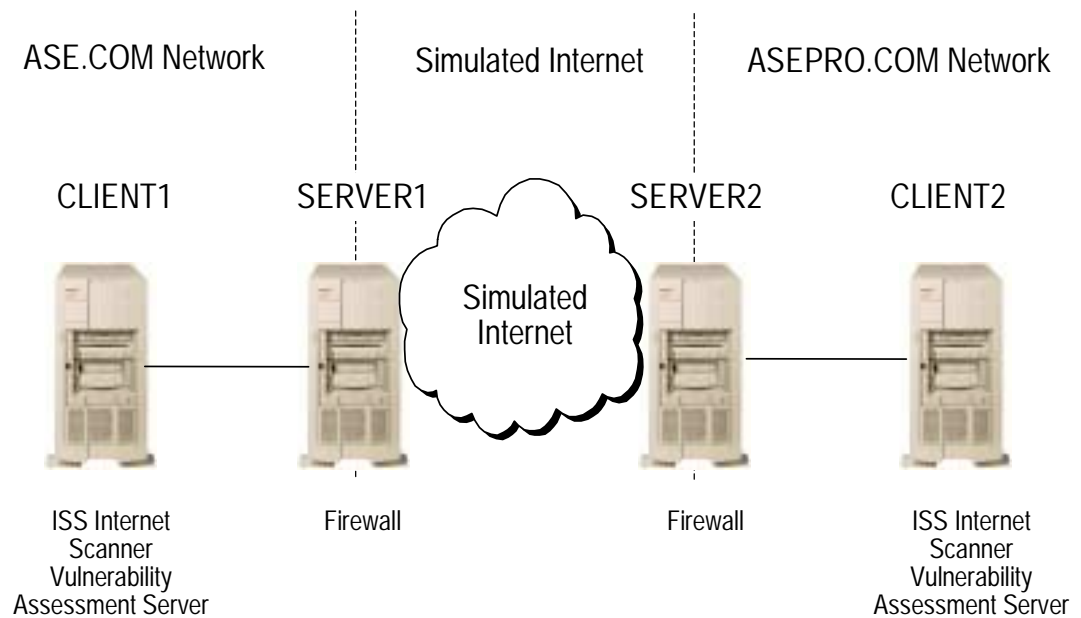
1. How might a security scan affect the performance of your network?
.....
.....
2. When should you run vulnerability assessment scans?
.....
.....
3. Is it possible to eliminate all vulnerabilities in a network? Why or why not?
.....
.....
.....
.....

Objectives

After completing this lab, you should be able to:

- Install an ISS RealSecure network sensor.
- Install a RealSecure server sensor.
- Install RealSecure Workgroup Manager.
- Customize an automated installation file to deploy a server sensor on multiple servers.
- Use the RealSecure automated installation feature to install a server sensor.
- Configure Workgroup Manager to communicate with network and server sensors.
- Test the network sensor and server sensors.

Lab Scenario



You are a network administrator working in either the ASE.COM or the ASEPRO.COM network. Your assignment is to complete the following tasks:

- Install ISS Internet Scanner on your vulnerability assessment server.
- Scan your network for vulnerabilities.
- Correct any detected vulnerabilities and rescan.

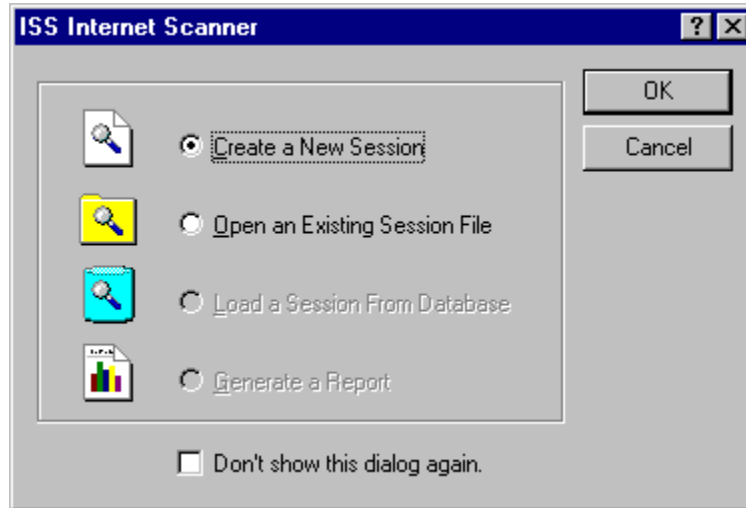
Installing Internet Scanner

On your client computer:

1. Run *ISSNT.EXE* from the location specified by your instructor.
2. When the Welcome screen displays, select *Continue*.
3. A dialog box will display indicating that ISS Internet Scanner 6.1 is not supported on NT Server. For the purposes of this lab, click *Yes* to proceed.
4. In the Welcome screen, click *Next*.
5. Select *Yes* to accept the User License Agreement.
6. Select *Next* to accept the destination directory.
7. Select *Next* in the Choose Destination dialog box. The files will be copied to the destination directory.
8. A question dialog box will display asking if you want ISS to modify some parameters to optimize performance. Answer *No* on this dialog box.
9. Click *OK* in the Setup Complete dialog box.
10. Click *OK* in the Information dialog box.
11. Click *No* when asked if you want to view the README file.
12. Click *OK* to restart the computer.

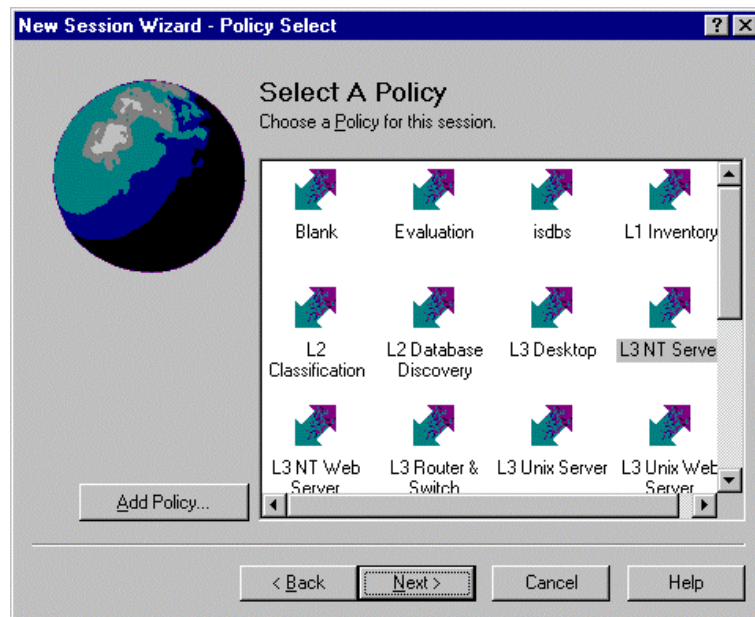
Configuring Internet Scanner

1. Click *Start* → *Programs* → *ISS* → *Internet Scanner 6.1* → *Internet Scanner 6.1*.
2. A warning dialog box displays indicating that no valid license keys were found. Click *OK*.



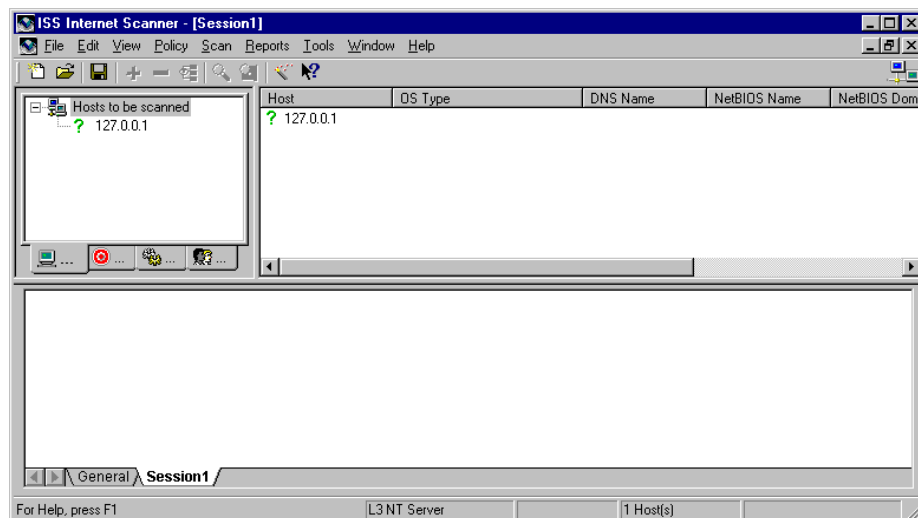
3. Select *Create a New Session* → *OK*. The Select Key dialog box displays indicating that no valid keys were detected and that the session will be configured to scan only the local host. That is fine for this purposes of this lab. Click *Next*. The Select a Policy dialog box displays.

4. Click *Next* in the Select a Key dialog box. The New Policy Wizard runs.



5. Highlight *L3 NT Server* and click *Next*.
6. In the New Session Wizard - Comment dialog box, add a comment such as *Lab Scan*; then click *Finish*.

At this point, the ISS Scanner console screen opens and displays the names of the hosts to be scanned.



Running a Vulnerability Assessment Scan

In this part of the lab, you will:

- Scan for vulnerabilities.
- Analyze the vulnerabilities.
- Correct the vulnerabilities (optional).
- Rescan the network to verify that vulnerabilities have been resolved (optional).

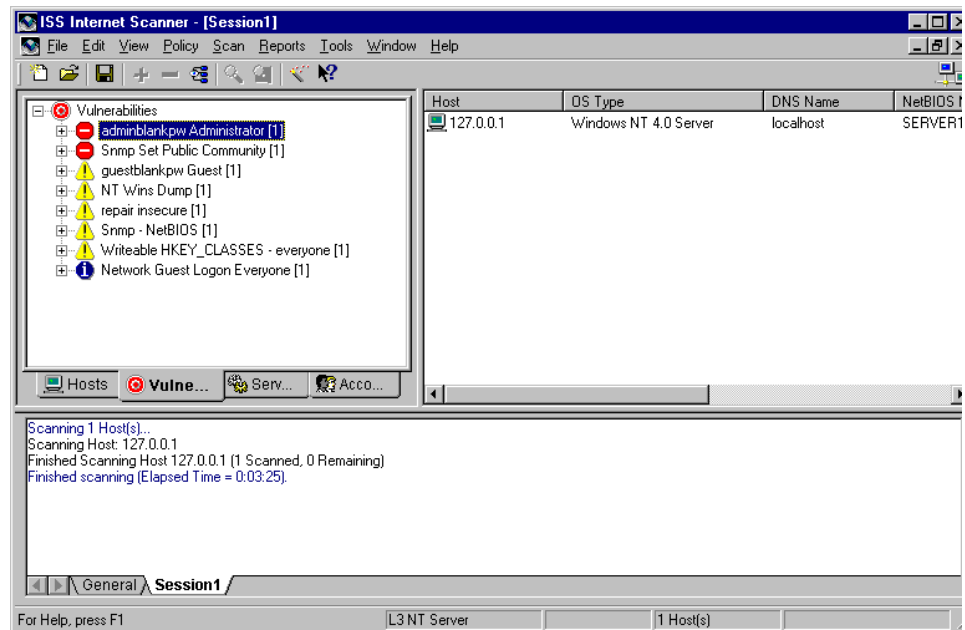
To run the scan:

1. From the ISS console, highlight *127.0.0.1*.
2. Click *Scan* → *Scan Now*. This scan will probably take four to eight minutes to complete.

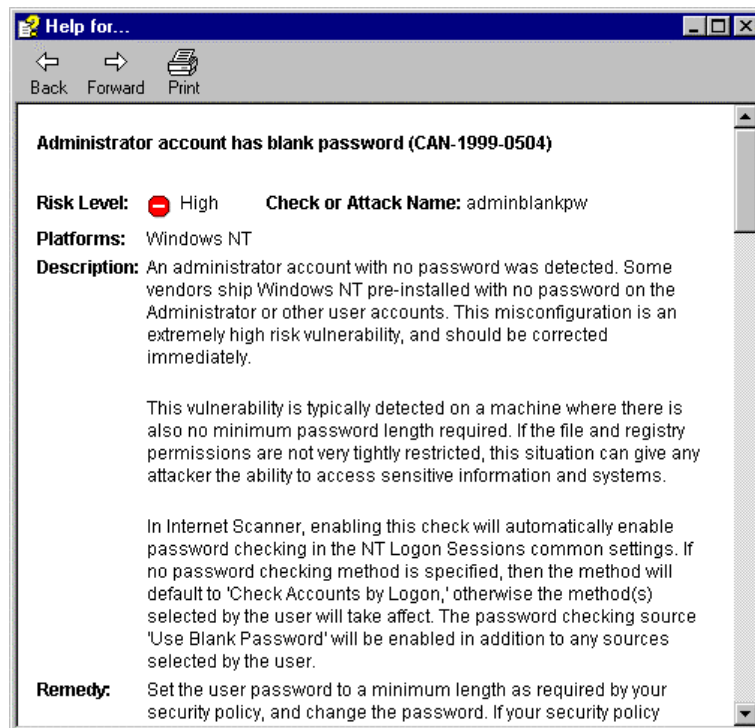
Analyzing the Vulnerabilities

Security Scanner provides information that helps you analyze and correct the vulnerabilities it detects.

1. When the scan is finished, highlight the IP address for your firewall server.
2. Click the *Vulnerabilities* tab.
3. Expand the listing of vulnerabilities in the upper left pane.



4. Right-click on a vulnerability and select *What's This?* to observe details about the detected vulnerabilities.



5. Note the vulnerability and how to fix it.

Lab Challenge

If time permits, complete the following tasks:

- Correct any vulnerabilities that were detected on your firewall server.
- Evaluate the vulnerabilities that were detected on your client server. Choose one or two vulnerabilities and take the steps necessary to correct them.
- Rescan the firewall and client and verify that all vulnerabilities have been corrected.

Lab Review

1. How might a security scan affect the performance of your network?
.....
.....
2. When should you run vulnerability assessment scans?
.....
.....
3. Is it practical to eliminate all vulnerabilities in a network? Why or why not?
.....
.....
.....
.....

Objectives

After completing this lab, you should be able to:

- Install and configure Microsoft ISA.
- Control incoming requests using web publishing rules and routing rules for ISA server security.
- Observe how the ISA configuration affects website performance.

Verifying Preliminary Network Configuration

Before starting this lab, verify the following:

- Microsoft Windows 2000 is installed.
- Service Pack 2 (or later) is installed.
 - Click *Start* → *Run*, enter *WINVER* and press *Enter* to view the service pack version.
- Microsoft Internet Explorer 5.5 (or later) is installed.
- You have access to the ISA and Enterprise Firewall software.
- Networking configuration is correct and each machine can ping each connected machine.

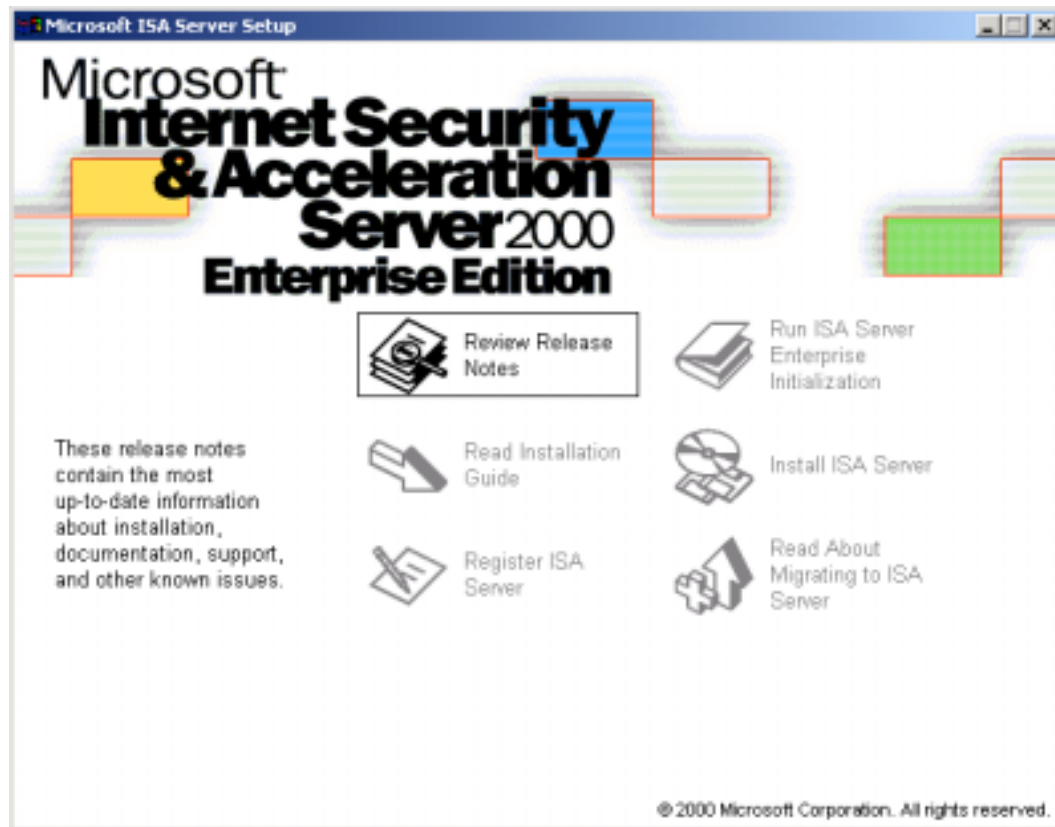
Installing and Configuring Microsoft ISA

This course uses an evaluation copy of Microsoft ISA.

1. Run the ISA evaluation file at the command prompt to extract the files to the default folder.

```
Is2k_ee_eval_rtw.exe
```

The main setup menu displays.



2. Select *Install ISA Server*. At the Welcome screen, click *Continue*.
3. Enter the product key number provided by the instructor, click *OK* → *OK*.
4. On the License Agreement screen, select *I Agree*.
5. For the installation type, select *Full Installation*.
6. A dialog box displays indicating the computer cannot join an array. Select *Yes* to install ISA as a stand-alone server.
7. Select *Firewall mode* and click *Continue*.
8. When warned about the stopping of the IIS service, click *OK*.

9. Enter the IP address range for your student group configuration.

Example

Group 1 configuration	
From	192.168.1.10
To	192.168.1.100

Click *Add*.

10. The ISA Server uses the local address table (LAT) to differentiate between the internal and external networks. Begin by selecting *Construct Table*.
11. Select your internal NIC and click *OK*.
12. At the Setup Message dialog box, click *OK*.
13. Verify the accuracy of the table and click *OK*.
14. Select *Start ISA Server Getting Started Wizard* and click *OK*.
15. Click *OK* on the setup completion dialog box. The ISA Management console displays.

Configure ISA Server

Before creating rules ISA Server must be configured to listen for incoming web requests. The incoming web request properties specify which IP addresses and ports on the ISA Server computer listen for incoming web requests. The incoming web request properties also determine the necessary authentication required when accessing internal servers.

To configure ports for listening:

1. In the console tree of ISA Management, expand *Servers and Arrays*.
2. Right-click the name of your firewall server and select *Properties*.
3. Select the *Incoming Web Requests* tab.
4. Click *Add*.
5. Select the name of the firewall server from the Server drop-down list.
6. Select the external IP address of the firewall server
7. Type the name of the server as the display name.
8. Click *OK* → *Apply* → *OK* → *OK*.
9. Right-click the name of your firewall server and select *Disconnect* to stop the firewall service.
10. In the Configure Servers and Arrays panel, click *Connect To*.
11. Select *Connect to this stand-alone server* and click *OK*.

Controlling Incoming Requests

ISA Server allows you to configure rules that determine which requests should be sent downstream to a server located behind the ISA Server computer. The ISA Server computer impersonates the website because its IP address is the one associated with the DNS name of the site. By impersonating the published server to the external world, ISA Server offers an additional layer of security.

Create a Destination Set

When rules are created, the destinations that are accessible must be specified. Destination sets specify the path on the web server that contains the website content.

1. In the ISA Management console expand the firewall server name and *Policy Elements*.
2. Right-click the *Destination Sets* folder and select *New → Set*.
3. Enter a name and description, and click *Add*.
4. For Add/Edit Destination, enter the IP address of the web server.
5. In the Path field enter *Retail* as the directory. Click *OK → OK*.

Create a Web Publishing Rule

Web publishing rules determine how ISA Server intercepts incoming requests for Hypertext Transfer Protocol (HTTP) objects on an internal web server and how ISA Server should respond on behalf of the web server. Requests are forwarded downstream to the web server located behind the ISA Server computer.

To create a web publishing rule:

1. Expand Publishing.
2. Click *Web Publishing Rules*.
3. In the Publish Web Servers pane, click *Create a Web Publishing Rule*.
4. The Welcome to the New Web Publishing Rule Wizard displays. Type a name for the web publishing rule and click *Next*.
5. In the Destination Sets dialog box, select *All internal destinations* from the drop-down list. Click *Next*.
6. In the Client Type dialog box select *Any request*. Click *Next*.
7. In the Rule Action dialog box, select *Redirect the request to this internal web server (name or IP address)*. Enter the IP address of the web server and click *Next*.
8. Click *Finish*.
9. Two entries display under Web Publishing Rules. The one named Last is installed by default. Its purpose is to deny any access not explicitly granted by the administrator.

Test the Published Web Server

1. Go to your client and enter the URL for the web server for another student group. Ask another group to access your web server.
2. On the ISA Server console the new session displays listing the IP address.

System Hardening

To further secure ISA Server, use the built-in System Hardening Wizard. This wizard locks down the underlying Windows 2000 operating system by disabling services unrelated to ISA Server.

1. In the ISA Management console expand your firewall server name. Select *Computer*.
2. Right-click your server in the right pane and select *Secure*.
3. The ISA Server Security Configuration Wizard Welcome screen displays. Click *Next*.
4. In the Select Security Level dialog box, select *Dedicated* and click *Next*.
5. At the Congratulations page, click *Finish*.
6. A dialog box displays indicating the security settings process has completed. Click *OK*.
7. The System Hardening Wizard uses Windows 2000 security features to run one of the standard predefined security templates. To examine the templates, choose Start → Run, enter:

`mmc /a`
8. Select *Console* → *Add/Remove Snap-in*.
9. Click *Add*, scroll down the list, and double-click *Security Templates*. Click *Close* → *OK*.

By comparing some of the security objects in a standard template such as *basicdc* to *hisecdc* (the high-security domain controller policy template), you should observe numerous differences, such as enforcement of password policies.

ISA Alerts

The alert service acts as a dispatcher and as an event filter. It is responsible for trapping events, checking whether certain conditions are met, and executing corresponding actions. To view the full list of events ISA Server tracks:

1. In the ISA Management console expand the firewall name then *Monitoring Configuration*. Select the *Alerts* folder.
2. Double-click the *IP packet dropped* alert.
3. A red dot by the icon indicates the alert is disabled. On the General tab, select *Enable*.
4. Click the *Events* tab. To make it easier to see the alert in action, change *Number of occurrences before the alert is issued* to one.
5. Click the *Actions* tab. When triggered, an alert can send out e-mail notification, execute any program, or start and stop a service. Leave the default *Report to Windows 2000 event log* selected, and click *OK*.
6. To test the alert, run the following command from the command line:

```
NET USE \\<ISAservername>\<administrativeshare>
```

The administrative share is normally C\$, C being the installation drive, so the command for the test machine would be:

```
NET USE \\FIREWALLn\C$
```

7. Select *Start* → *Programs* → *Administrative Tools* → *Event Viewer* to view the Application Log. You will find one or more warnings in the log.

Observing the Effects of the Installation

During installation, ISA hardened the operating system by disabling nonessential services.

To observe the changes that ISA made to the operating system, complete the following steps:

1. Select *Control Panel* → *Services* to open the Services dialog box on your firewall server.
.....
.....
2. Which service did ISA add? What is its status?
.....
.....
3. Select *Control Panel* → *Services* to open the Services dialog box on a server that does not have ISA installed.
4. Compare the services that are running on the two computers. List the services that ISA disabled during installation.
.....
.....
.....
.....
.....
5. On your firewall server, open *Control Panel* → *Devices*. Did ISA disable any HP devices? If so, which ones?
.....
.....
6. On your firewall server, open *Control Panel* → *Network* → *Protocols*. What change did ISA make?
.....
.....

Installing and Using Trend Micro Products

Module 10 Lab

Objectives

After completing this lab, you should be able to:

- Install and configure Trend Micro ServerProtect.
- Install and configure Trend Micro Interscan WebProtect.
- Install and configure Trend Micro Virus Control System.

Requirements

- Microsoft ISA Server 2000

Lab Scenario

You are a network administrator working in the Method Systems or Retail network. Your assignment is to complete the following tasks:

- Install and configure an information server and a normal server using Trend Micro ServerProtect.
- Install and configure Trend Micro WebProtect.
- Install and configure Trend Micro Virus Control System.

Trend Micro ServerProtect

In this part of the lab, you will:

- Install ServerProtect on your firewall computer.
- Configure ServerProtect options.
- Run a manual scan on your client.

Key Concepts

ServerProtect facilitates management of network-wide configuration and administration by using a domain structure.

ServerProtect domains are simply a grouping of Windows NT servers running ServerProtect. These domains are configured much like Windows NT domains, but should not be confused with them. ServerProtect does not use the Windows NT domain structure. Therefore, it is necessary to create a ServerProtect domain when you install the software.

ServerProtect domains are grouped under assigned information servers to facilitate management of domain configuration.

In this lab, you will configure your server as an information server and assign a domain name. However, you will not add domains or assign other servers to join the domain.

Installing Server Protect

On your firewall computer run the Server Protect setup program.

1. Extract the Server Protect files from `sp535_nt.zip` into the `c:\temp\sp535_nt` folder.
2. Execute the Server Protect setup program.
`C:\temp\sp535_nt\setup.exe`
3. Click *Next* on the Welcome screen
4. Click *Yes* to accept the Software License Agreement. Setup checks the boot sector of the firewall server for viruses.
5. Click *Yes* to continue the Setup.
6. Setup then asks you to provide user information, including the serial number of the software. This lab uses a 30-day trial version so leave the field blank. Click *Next* to continue the setup.
7. The Select Components screen displays. Select the following check boxes.
 - *Install server as a ServerProtect Information Server*
 - *Install server as a ServerProtect Normal Server*
 - *Install Management Console to local machine*

Note

Do not change the target installation folder. Install all components in the same directory.

Click *Next*.

8. Select *Personal program folder* so that only the Administrator can view the ServerProtect program from the Windows Start menu. Click *OK*.
9. Double-click the target server and accept the default installation path for installing ServerProtect Information Server files. Click *OK*.
10. Enter the password, *Hp_training* and a virtual domain name that matches your student set such as *GROUPI*. A password and virtual domain name prevents unauthorized access to the Information Server from either the Management Console or the setup program. Click *Next*.
11. The Start Copying Files dialog box displays. Check the information shown. If it is correct, click *OK* to continue the setup program; otherwise, click *Back* to modify the information. ServerProtect now starts copying all program components and starts all services.
12. After all program components have been copied, the setup program displays the Setup Complete screen. Select the *I want to view the README file* and the *Launch ServerProtect Management Console* check boxes. Click *Finish* to close the setup program.

13. The Select an Information Server dialog box displays. To ensure that the server list is current, click *Refresh*.
14. Select the host name of the firewall server from the list. This is the information server that the Management Console will control. If the host name of the firewall server does not display, enter either the host name or the IP address.
15. Click *OK* to save your changes.

1. The Configure ServerProtect dialog box displays.



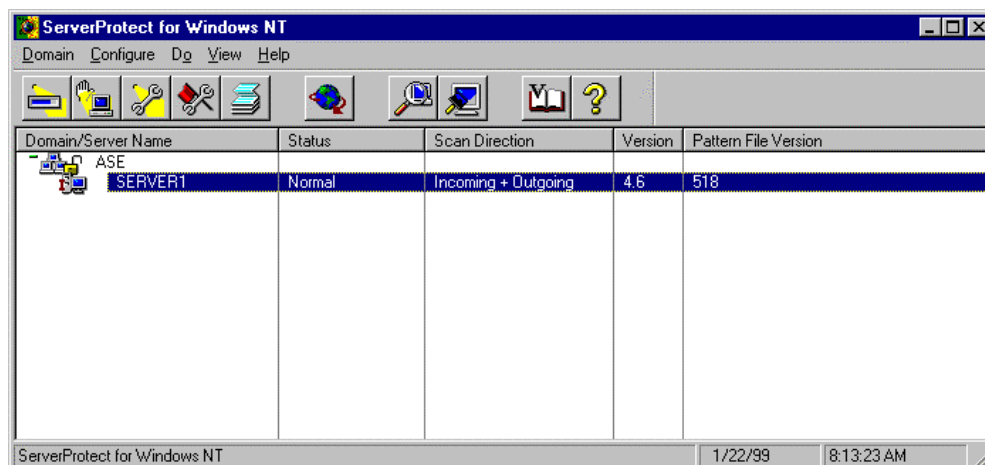
The Configure ServerProtect window lets you specify the default configuration of the server. As you click on an option, information about that option displays on the right side of the dialog box.

2. In the Action To Take field, select *Move* as the action to perform if a virus is detected.
3. In the Real-Time Scan Direction dialog box, select *Incoming/Outgoing*; then click *Next*. The ServerProtect files are copied.
4. In the Select Service Account dialog box, select *Default System Account* → *OK*.
5. In the Setup Complete screen, deselect the *View Readme File option*; then click *Finish*.

Configuring ServerProtect

During installation, you created a domain and established an information server.

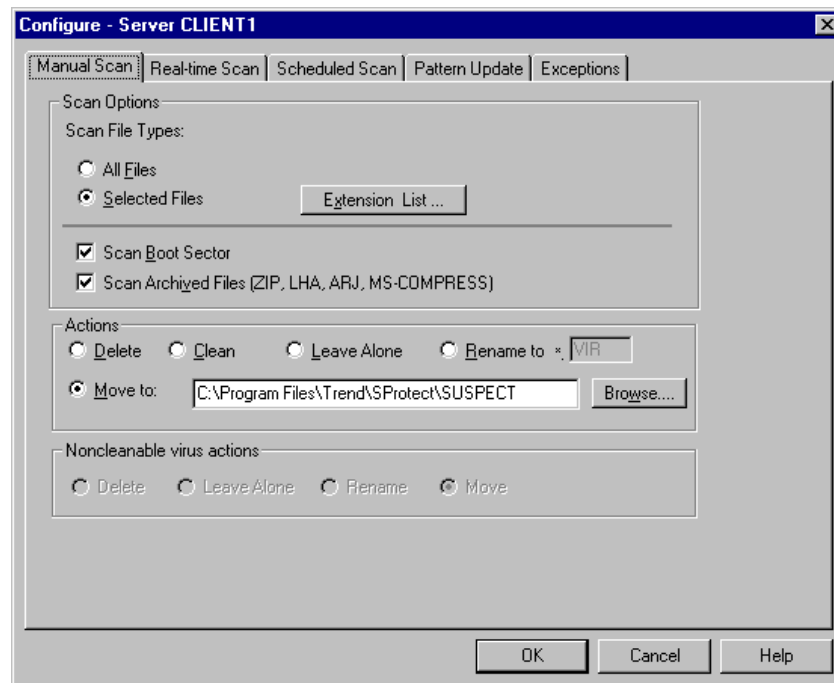
To run ServerProtect, click *Start* → *Programs* → *ServerProtect* → *ServerProtect*. The ServerProtect console displays.



To configure ServerProtect:

1. Highlight your ServerProtect computer in the left pane.
2. Click *Domain* → *Unlock*.
3. Enter the password *vprotect*.

4. Click *Configure* and select one of the scan options.

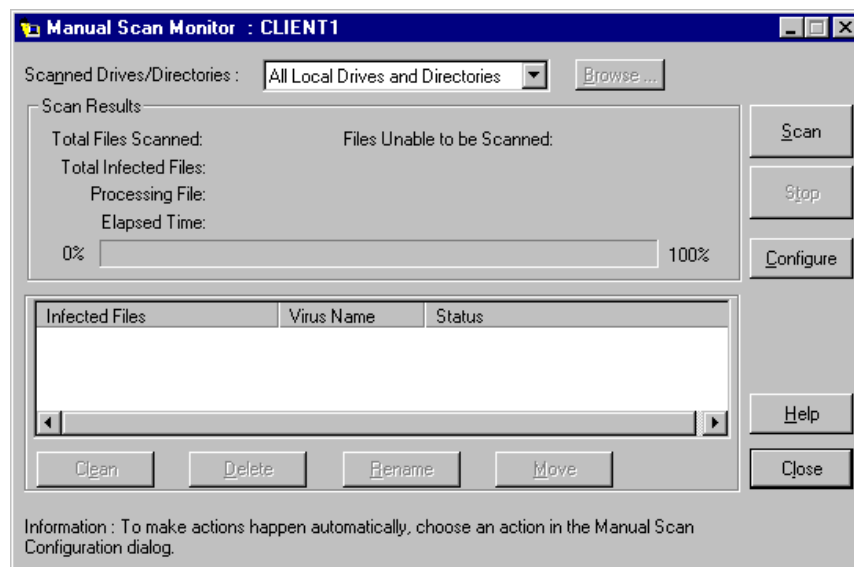


5. Click through each of the tabs and observe the configuration options that are available for each scan type.
6. Click *OK* → *Close* when finished.

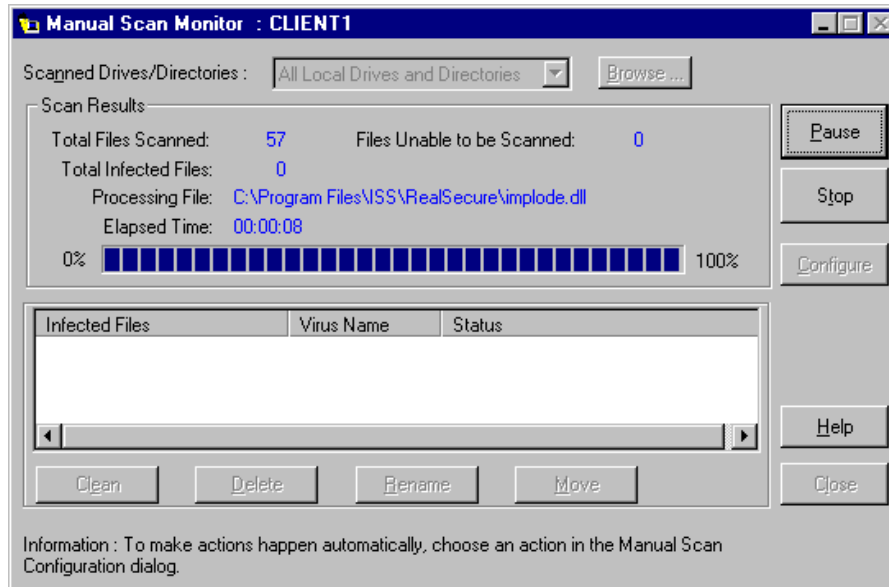
Running a Scan

To run a manual scan on the computer:

1. Click *Do* → *Manual Scan*. The Manual Scan Monitor screen displays.



2. Click *Scan*. The scan will initiate.



3. Click *OK* when the Scanning Complete dialog box displays.

Installing InterScan WebProtect

On your firewall computer run the WebProtect setup program.

1. Extract the WebProtect files from `iswp30.zip` into the `c:\temp\iswp` folder.
2. Execute the WebProtect setup program
`C:\temp\iswp\setup.exe`
3. Click *Next* on the Welcome screen
4. Click *Yes* to accept the Software License Agreement.
5. From the User Information screen, enter your name, company's name and serial number. Leave the serial number line blank to install the 30-day trial version. Click *Next* to continue.
6. You will be prompted to Choose Destination Location screen for the program files. The default is the WebProtect folder. Click *Next* to install the program files in the `c:\Program File\Trend\InterScan\WebProtect` directory.
7. The Select Program Folder window displays. Here you can add the InterScan WebProtect for Microsoft ISA Program Group folder. Click *Next* to use the default folder.
8. You will be prompted to the WebProtect Configuration IP Address and IIS Port screen. Provide the correct IP address of your system and the IIS Port number (80 is the default IIS port number). Click *Next*.
9. You will be prompted to restart IIS before you can run the Trend InterScan WebProtect Configuration. Click *Yes* to restart now and begin configuring the program.
10. When you are prompted to restart the Web Proxy, click *Yes*.
11. Click *Finish* on the Setup Complete screen to finish the installation.

Note

The ISA Application filter, HTTP redirector, should be activated on the ISA Server so that the FireWall can redirect all http requests to the Web proxy to make sure all traffic will pass through InterScan WebProtect.

Configuring InterScan WebProtect

All configuration tasks are accessed the from InterScan WebProtect main window, which you can access from web browser.

To display the main window:

1. Either select *Start → Programs → InterScan WebProtect for ISA → WebProtect Configuration* or enter the following WebProtect URL in a web browser:

`http://IPaddress:port/dir/cgi-bin/webprotect.htm`

where IP address is the IP address of the firewall server, port is the IIS running port number and dir is the directory in which InterScan WebProtect for ISA Server is installed.

Example

`http://127.0.0.1:8888/WebProtect/cgi-bin/webprotect.htm`

2. If password security has been set up, the Authentication window will display. Type the user name and password and click *OK*.

The URL link to web configuration will not work if one of the following conditions occurs:

- The user used a wrong IP address during the program installation.
- The IP address of the computer was changed after installing InterScan WebProtect for ISA.
- The IIS running port number on the computer was changed.

To resolve this problem:

1. Open Windows Explorer and locate the file, `/WebProtect/webprot.url`.
2. Right-click `webprot.url` and select *Properties*.
3. In the Web Document tab enter the correct IP address and IIS port number in the URL text box; then click *Apply → OK*.

Configuring Notification Options

To create alerts that indicate the presence of infected files:

1. From the main menu select *Scan Configuration* → *Notification*.
2. In the Message properties field, enter the email address of the sender and subject.
3. Under Notification, check *Notify the following* and enter the user name of the recipients using a comma to separate multiple entries.
4. Type the contents of the message in the Message Text field.

Example

InterScan WebProtect for ISA has found a virus/malicious code in HTTP traffic.

5. Under Notification Server, enter the hostname (or IP address) and SMTP Port number information.
6. Click *Save* to apply your changes.

Selecting Action on Viruses

InterScan WebProtect can be configured to clean, quarantine, delete, or pass a file when a virus is detected.

To configure the Action on Viruses function of InterScan WebProtect:

1. From the main menu click *Scan Configuration* → *Virus Action*.
2. Specify *Clean* as the action for WebProtect to take when it detects an infected file. This removes the virus code from infected files and delivers the files to the recipient.

Viewing the Server Log

InterScan WebProtect maintains a server log, which keeps a record of the date and exact time for the following program events:

- Virus Pattern File updates
- Virus Pattern File loading
- InterScan WebProtect startup
- InterScan WebProtect shutdown

To view the server log:

1. From the main menu select *Log* → *View Server Log*.
2. From the View Server Log screen, select *View all dates*, to see all the logs available

Deleting Log Files

Because InterScan WebProtect creates and saves new log data daily, accumulating data may eventually consume a lot of disk space. If some log files are no longer needed, delete them manually or automatically.

Deleting Log Files Manually

1. From the main menu select *Log* → *Delete Log*. The Log Maintenance window displays.
2. Under Delete Logs, select *All logs*.
4. To clear log files for selected dates only, click *Specific logs*. Next, in the scrollable list, highlight the log file(s) to delete (click the entries, while holding the Ctrl key to multiple select).
5. Click *Delete* to proceed with the deletion. If you change your mind, restore the previous settings by clicking *Restore*.

The program will display a message on the screen to verify that the log files were removed.

Note: Please note that the deleted files will be listed in the Delete Log window until you refresh it.

Deleting Log Files Automatically

Instead of deleting old log files manually, you can set WebProtect to do it at regular intervals. This feature is especially useful if your system handles a large volume of file traffic.

To enable automatic log file deletion:

1. Go to the main menu and select *Log > Schedule Delete*. The Configure Autodelete window displays.

Check *Enable Autodelete*.

In the text box, enter the number of days you want to retain log files before deleting them. If you enter one (1) in this field, the program will save logs for the current day and the day before. The maximum number of days you can enter is 90.

3. Click *Save* to save your settings and enable automatic log file deletions.

Trend Micro Virus Control System

Trend Virus Control System (VCS) is installed first on a Windows NT server. In a separate installation, agents are deployed to other servers running antivirus programs. The computers that receive the agents act as clients to the Trend VCS server. Each group of Trend VCS agents and the server they are registered to constitute a Trend VCS domain.

Key features of VCS include:

- All Trend products on the network can be configured from the VCS console.
- Virus pattern file updates and program upgrades can be centrally deployed.
- VCS maintains a virus log of virus events for the entire network.
- Users can perform on-demand scans of diskettes, hard drives, and network drives using the HouseCall feature of VCS.

Communication between the VCS server and VCS agents occurs using a secure HTTP technology. Trend VCS is published by the WWW service of Microsoft IIS installed on the VCS server.

Installing the VCS Server

The Trend VCS server installs on a Windows NT computer. This component provides the user interface (console).

In this lab, you will install Trend VCS **on your client computer**. This computer has Microsoft IIS installed, which is a prerequisite for Trend VCS.

To install Trend VCS:

1. Run *tvcsserversetup.exe* from the Trend CD or from another directory specified by the instructor. If you run this program from the CD, it is located in the *programs\tvcs\english* directory.
2. Trend VCS will prompt you to approve a change in permissions for interactive and network users. Click *Yes*.
3. In the Welcome screen, click *Next*.
4. In the Software License Agreement screen, click *Yes*.
5. In the Enter User Information screen, enter your name and company. If the instructor has provided a serial number, enter it. Otherwise, leave the field blank to install the 30-day trial version. Click *Next*.
6. In the Select Database screen, select the *Built-in Database* option and then click *Next*.
7. In the Trend VCS Password screen, enter and confirm a password, and then click *Next*.
8. The Proxy Information for Pattern Update screen enables you to specify a proxy server to access the Internet. For this lab, click *Next* to bypass this step.
9. Click *Next* to accept the file destination.
10. Click *Next* to accept the default folder. Files will be copied.

During the installation, the WWW Publishing Service will be stopped and restarted.

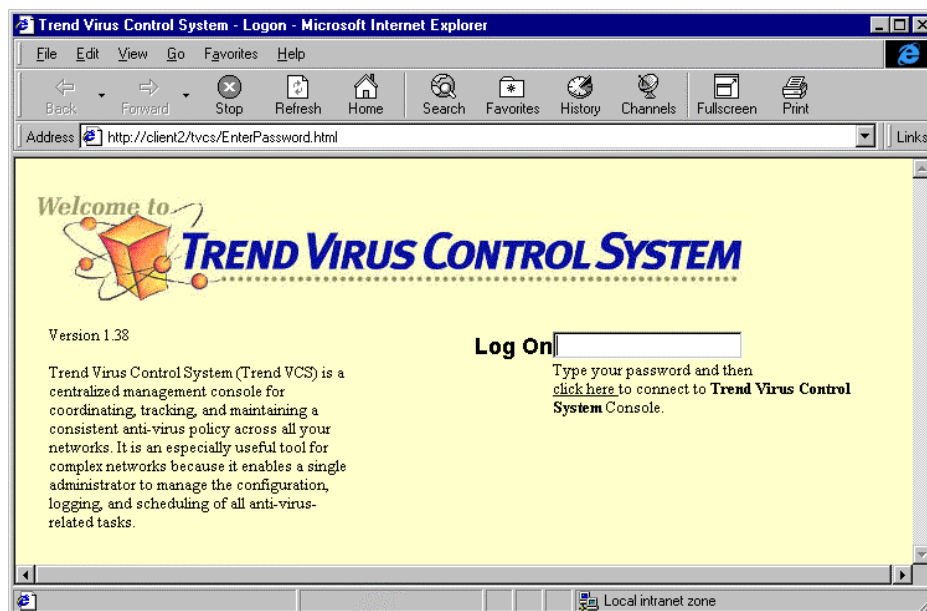
Running Trend VCS

To run the Trend VCS console:

1. Click *Start* → *Programs* → *Trend Virus Control System* → *Trend VCS Console*. Internet Explorer will launch and the Trend login screen will display.

Note

Trend VCS can also be managed through MMC.



2. Enter the password and click the *Click here* link. The TVCS console displays.



From this screen, you can manage the antivirus products running on the network.

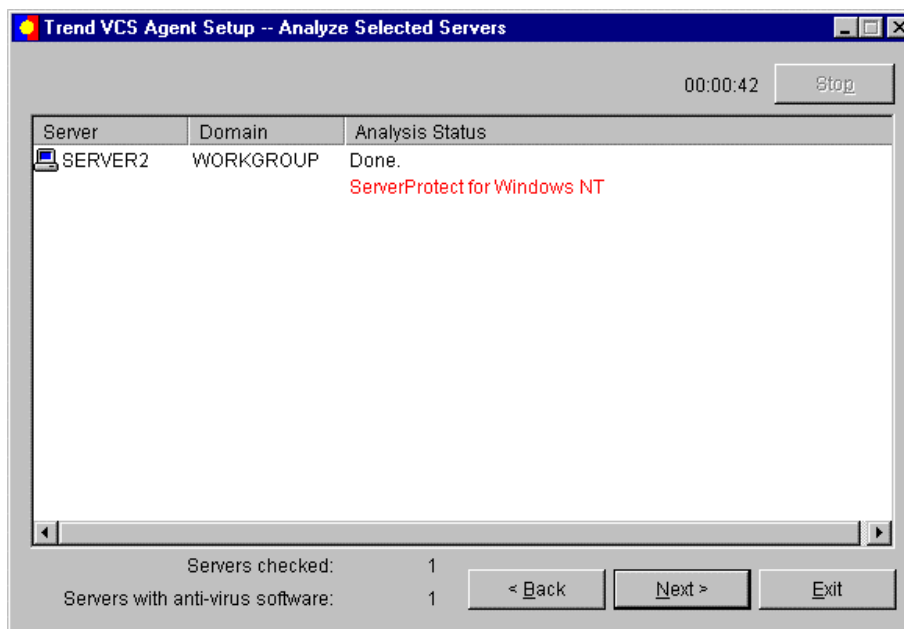
Installing the VCS Agents

Your firewall server has Trend ServerProtect installed. You can configure the Trend VCS console to manage ServerProtect by installing agents on your firewall server.

An agent is a component of Trend VCS that allows the existing server-based antivirus programs to communicate with Trend VCS.

To install the agents:

1. From the computer running ServerProtect (Server1 or Server2), run *TvcsAgentSetup.exe* from the CD or from a location provided by the instructor. If you are running from the CD, this program is found in *programs\tvcs\english*.
2. In the Trend VCS Agent Setup Welcome screen, click *Next*.
3. Click *Yes* in the License screen.
4. In the Select Anti-Virus Product screen, select the option for Anti-virus products running on Windows NT; then click *Next*.
5. The installation program will scan for servers. Double-click the Workgroup icon.
6. Highlight *Server1* or *Server2*; then click *Add*.
7. Click *Next*. The Login screen displays.
8. Enter the Administrator password (if any); then click *Log On*. The Analyze Selected Server screen displays.



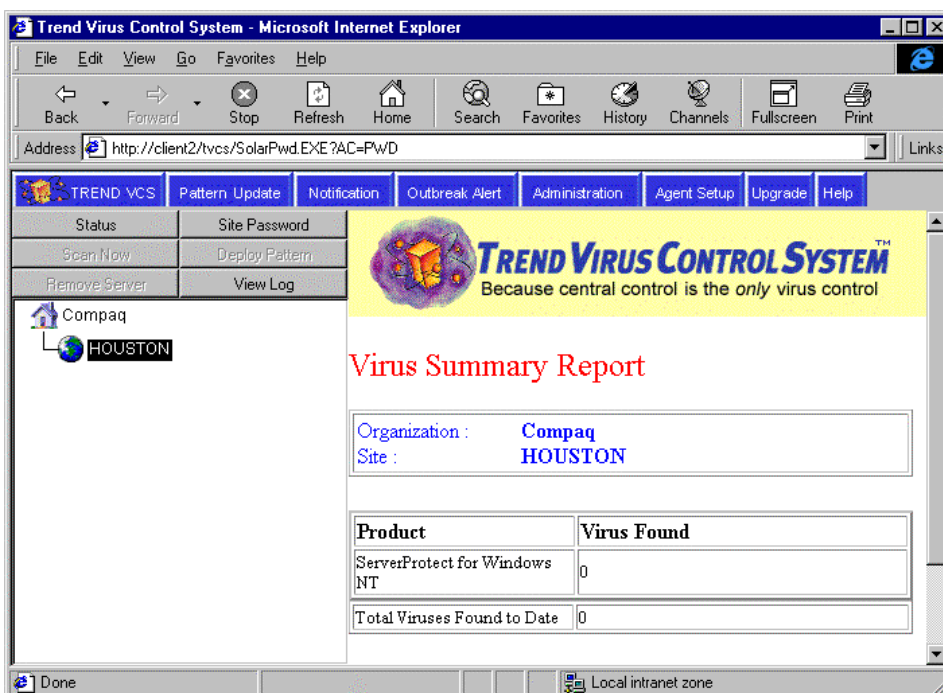
9. Notice that the installation program has detected the antivirus software that is installed on the server. Click *Next* → *Next*.
10. In the Proxy Information screen, click *Next*.
11. In the Trend VCS Server Information screen, enter the IP address of the computer running Trend VCS (*10.10.10.2* or *11.11.11.2*). Click *Next*.
12. In the Agent Information screen, enter a site name for the server; then click *Install*.
13. Click *OK* → *Next* → *Done*.

Verifying Management in Trend VCS

After the agents have been configured, you should be able to view the information about the server running ServerProtect in the VCS console.

To view server information:

1. From your client computer, run the Trend VCS console by clicking *Start* → *Programs* → *Trend Virus Control System* → *Trend VCS Console*. The web browser opens and displays the VCS console.
2. Double-click the icon in the left pane that represents your Trend VCS domain.
3. Highlight the name of the site that displays below the domain. Information about that site will display in the right pane.



You can now administer the site using Trend VCS.

Lab Review

1. What is a ServerProtect domain?

.....

.....

2. What is an information server?

.....

.....

3. What is the benefit of using Trend Micro Virus Control System?

.....

.....

4. What are the two main components of Trend VCS?

.....

.....

