

Hands-On Microsoft Windows Server 2008

Chapter 3 *Configuring the Windows Server 2008* *Environment*

Objectives

- Use Server Manager and ServerManagerCmd.exe to manage a server
- Install and remove server roles
- Configure server hardware
- Configure the operating system
- Use the Security Configuration Wizard to harden a server

Using Server Manager

- Server Manager
 - Groups administrative functions to make a server easier to manage
- Roles Summary feature
 - Displays log information to alert you to warnings or problems

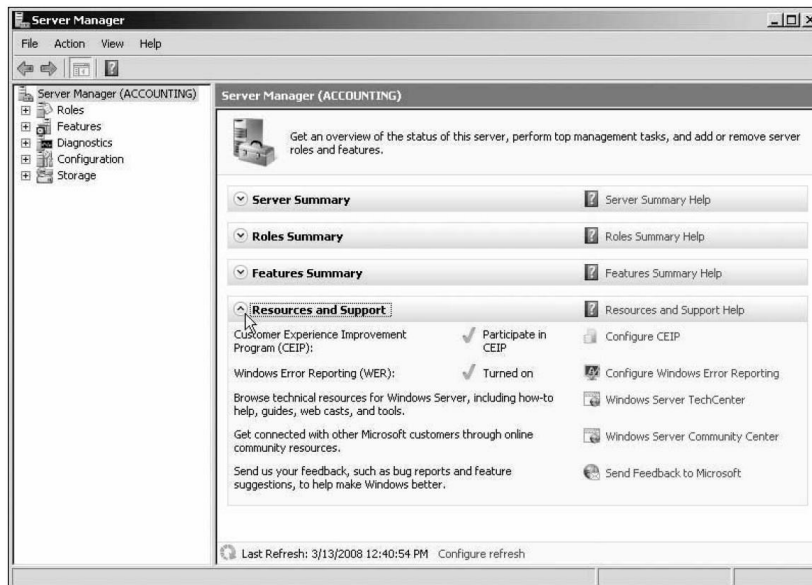


Figure 3-1 Server Manager window

Using Server Manager (continued)

- Activity 3-1: Getting to Know Server Manager
 - Time Required: Approximately 15 minutes
 - Objective: Learn how to start and use Server Manager

Installing and Removing Server Roles

- Two common roles for a Windows Server 2008 server
 - File Services role
 - Focuses on sharing files from the server or using the server to coordinate and simplify file sharing through Distributed File System (DFS)
 - Print Services role
 - Used to manage network printing services and it can offer one or more network printers connected to the network through the server itself

Installing and Removing Server Roles (continued)

- Activity 3-2: Installing and Removing Two Server Roles
 - Time Required: Approximately 20 minutes
 - Objective: Install and then remove the File Services and Print Services roles in Windows Server 2008

Using ServerManagerCmd.exe

- ServerManagerCmd.exe
 - It is the Command-line version of server manager
 - Used for:
 - Managing server roles
 - Manage features that are to be added or removed
- Management activities
 - Install a role or feature
 - Remove a role or feature
 - Query to determine what roles and features are installed

Using ServerManagerCmd.exe (continued)

- Management activities (continued)
 - Determine which features and services will be installed by a specific role, before actually installing that role
 - Restart the computer after installing or removing a role or feature
 - Specify particular features or services to install with a role

Configuring Server Hardware Devices

- Hardware devices can include the following:
 - Disk drives
 - Disk controllers
 - Network adapters
 - CD/DVD drives
 - Keyboard
 - Pointing devices
 - Monitor

Plug and Play

- **Plug and Play (PnP)**
 - The ability to automatically detect and configure newly installed hardware devices
- For this capability to work, PnP must be:
 - Built into the device
 - Enabled in the target computer's BIOS
 - Built into the computer operating system kernel
- PnP eliminates hours of time that server administrators and computer users once spent installing and configuring hardware

Using Control Panel and the Add Hardware Wizard

- The Add Hardware Wizard is used for the following tasks:
 - Invoke the operating system to use PnP to detect new hardware
 - Install new non-PnP hardware and hardware drivers
 - Troubleshoot problems you might be having with existing hardware
- The Add Hardware Wizard is started from Control Panel
- Windows Server 2008 provides two Control Panel view options: Control Panel Home and Classic View

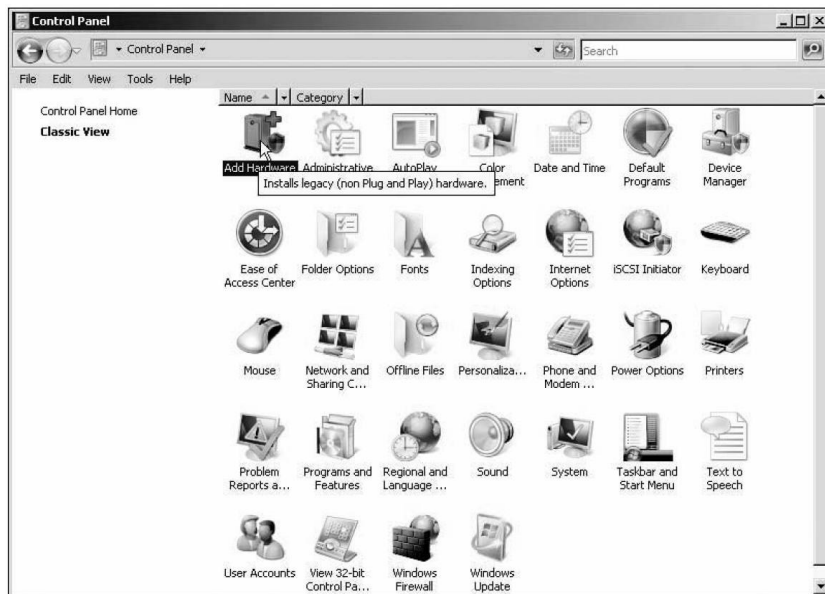


Figure 3-4 Selecting the Add Hardware applet to start the Add Hardware Wizard

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Using Control Panel and the Add Hardware Wizard (continued)

- Device Manager
 - Used to check for a resource conflict and to examine other properties associated with a device
 - Provides a graphical view of all hardware currently installed on your computer
 - Can also be used to:
 - Verify if hardware installed is working properly
 - Update device drivers
 - Disable a device
 - Uninstall a device
 - Configure the settings for a device

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Using Control Panel and the Add Hardware Wizard (continued)

- Activity 3-4: Resolving a Resource Conflict
 - Time Required: Approximately 10 minutes
 - Objective: Use Device Manager to resolve a resource conflict

Using Control Panel and the Add Hardware Wizard (continued)

- Driver signing
 - When a driver is verified, a unique digital signature is incorporated into it
 - When Windows Server 2008 determines that a device driver is not signed, it gives you a warning
 - Device drivers that are unsigned cannot be loaded in x64 versions of Windows Server 2008

Using Control Panel and the Add Hardware Wizard (continued)

- Use the System File Checker
 - Scan all system files to verify integrity
 - Scan and replace files as needed
 - Scan only certain files
- The System File Checker can be manually run from the Command Prompt window

Using Control Panel and the Add Hardware Wizard (continued)

- Activity 3-5: Manually Running the System File Checker
 - Time Required: Approximately 5 minutes to learn about the command options and 10–30 minutes to run the test
 - Objective: Use the System File Checker to verify system files

Configuring the Operating System

- After the operating system has been installed
 - It can be configured to optimize performance and meet very specific requirements

Configuring Performance Options

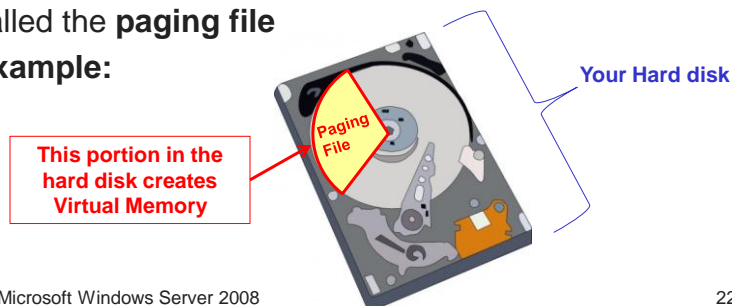
- Configuring processor scheduling and Data Execution Prevention
 - Processor scheduling
 - Allows you to configure how processor resources are allocated to programs
 - **Data Execution Prevention (DEP)**
 - Monitors how programs use memory to ensure they are not causing memory problems

Configuring Performance Options (continued)

- Activity 3-7: Configuring Processor Scheduling and DEP
 - Time Required: Approximately 10 minutes
 - Objective: Learn where to set up processor scheduling and system memory protection

Configuring Performance Options (continued)

- Configuring virtual memory
 - **Virtual memory**
 - Disk storage used to expand the capacity of the physical RAM installed in the computer
 - The area of disk that is allocated for this purpose is called the **paging file**
 - **Example:**



Configuring Performance Options (continued)

- Tips for placement of the paging file:
 - Server performance is better if the paging file is not placed on the boot partition
 - **Boot partition** The partition that contains the default operating system (*the default operating system is the one that directly appears to you after you turn on your computer*)
 - If there are multiple disks, performance can be improved by placing a paging file on each disk

Configuring Startup and Recovery

- You can configure the following system startup options:
 - Which operating system to boot by default, if more than one operating system is installed
 - How long to display a list of operating systems from which to boot
 - How long to display a list of recovery options, if the computer needs to go into recovery mode after a system failure

Configuring Startup and Recovery (continued)

- In the event of a system failure, you can configure these options:
 - Writing information to the system log
 - Whether to start automatically after a system failure
 - How and where to write debugging information

Configuring Startup and Recovery (continued)

- Activity 3-11: Configuring Startup and Recovery
 - Time Required: Approximately 5 minutes
 - Objective: Configure startup and recovery options

Configuring Power Options

- The Power Options that you can set are as follows:
 - Select a power plan
 - Require a password on wakeup
 - Choose what the power button does
 - Create a power plan
 - Choose when to turn off the display
- Three power plans are already created: balanced, power saver, and high performance
- The option to create a power plan enables you to customize a power plan

Configuring Power Options (continued)

- Activity 3-12: Configuring Power Options
 - Time Required: Approximately 5 minutes
 - Objective: Configure the balanced power plan

Using the Security Configuration Wizard

- **Security Configuration Wizard (SCW)**
 - Used for analyzing and configuring security settings on a server
- SCW examines the roles a server plays
 - And then tries to adjust security to match these roles

Using the Security Configuration Wizard (continued)

- Through the SCW, you can:
 - Disable unnecessary services and software
 - Close network communication ports and other communication resources that aren't in use
 - Examine shared files and folders to help manage network access through access protocols
 - Configure firewall rules

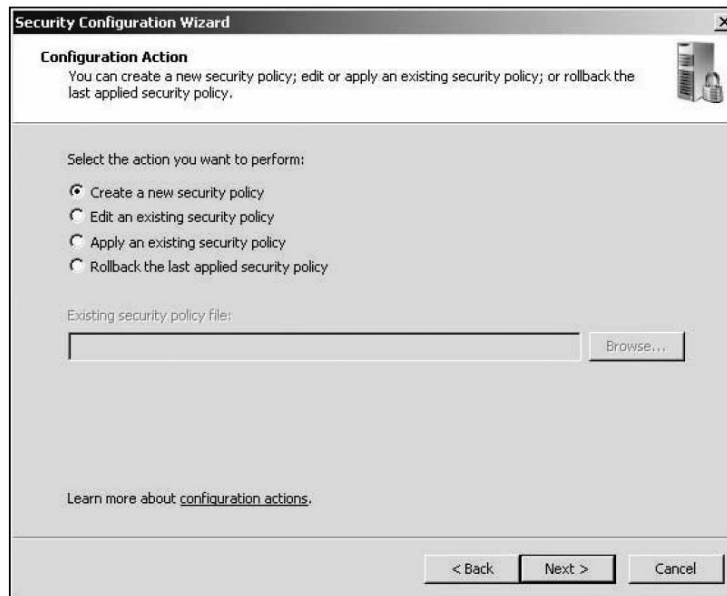


Figure 3-18 Creating a new security policy

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Using the Security Configuration Wizard (continued)

- Activity 3-15: Using SCW to Configure a Security Policy
 - Time Required: Approximately 20–30 minutes
 - Objective: Create a new security policy

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