



# Managing Windows Environments with Group Policy

Course ID#: 1410-901-08-W

Hours: 28

## Course Content

### Course Description:

In the, **Managing Windows Environments with Group Policy** course you will learn how to reduce costs and increase efficiencies in your network. You will discover how to consolidate the administration of an enterprise IT infrastructure with Group Policy, and you will learn to control and manage computer systems and domain users running Windows Server 2003, Server 2008 R2, XP, and Windows 7. Create Group Policies, implement administrative and security templates, and determine best practices when deploying software packages. Walk away with the experience and tools needed to optimize your enterprise systems and networks.

### At course completion students will be able to:

- Describe the features and functions of Group Policy
- Use Group Policy management tools to manage security policies
- Design a Group Policy infrastructure
- Describe the Group Policy processing architecture
- Back up, restore, import, and copy Group Policy Objects through the Group Policy Management Console
- Use Windows PowerShell to manage Group Policy
- Implement security using Group Policy
- Configure the desktop environment with Group Policy
- Configure roaming profiles and Folder Redirection
- Assign and publish software packages
- Implement AppLocker and software restriction policies
- Create and deploy Administrative Templates
- Configure Group Policy preferences

### Prerequisites:

Before attending this course, students must have:

- Experience with the Microsoft Windows Server 2003/8 environments and a fundamental understanding of Active Directory

### Audience:

This course is intended for Enterprise network staff responsible for help desk support, system administration, and network design.

### Topics:

The **Managing Windows Environments with Group Policy** course will cover the topics listed below.



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## Module 1: Introducing Group Policy

This module describes the basis of what Group Policy is and how it functions. It also describes the Group Policy features that are included in the newer Windows operating systems.

### Lessons

- What is Group Policy New Group Policy Features in Windows Server 2008 R2 and Windows 7
- Group Policy Scenarios
- Managing Group Policies
- Group Policy Features in Windows Server 2008 and Windows Vista

### Lab: Introducing Group Policy

- Exercise 1: Preparing Windows XP for Domain Policies
- Exercise 2: Preparing Windows Vista for Domain Policies
- Exercise 3: Preparing Windows 7 for Domain Policies

### After completing this module, students will be able to:

- Define Group Policy
- List the ways you can use Group Policy
- Describe the tools, features, and policies you can use to manage group policies
- Describe the new Group Policy features in Windows Server 2008, Windows Server 2008 R2, Windows Vista, and Windows 7

## Module 2: Using Group Policy Management Tools

This module describes the differences between local and domain policies and the Group Policy management tools you can use to manage these

policies. This module also describes the Group Policy refresh process and how to manually force a refresh ahead of the default interval

### Lessons

- Local and Domain Policies
- What is the Group Policy Management Console?
- Installing the GPMC
- Using the GPMS
- Understanding Group Policy Refresh

### Lab: Using Group Policy Management Tools

- Exercise 1: Working with Multiple Local Policies
- Exercise 2: Installing the GPMC on Windows XP
- Exercise 3: Installing the GPMC on Vista
- Exercise 4: Installing the GPMC on Windows 7
- Exercise 5: Basic Group Policy Management

### After completing this module, students will be able to:

- Describe the advantages of using domain policies instead of local policies
- List the capabilities of the Group Policy Management Console
- Describe the requirements for installing the Group Policy Management Console
- Explain how to use the different GPMC features to create and manage policies
- Describe the elements of the gpupdate command

## Module 3: Designing a Group Policy Infrastructure

This module details the steps a successful Group Policy deployment should follow, linking your design to how your company can best use the features. Essential network components and security design are also defined.



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## Lessons

- Overview of Active Directory
- Introducing the Design Stages for Implementing Group Policy
- Planning your Group Policy Design
- Designing Your Group Policy Solution
- Deploying Your Group Policy Solution
- Managing Your Group Policy Solution

## Lab: Designing a Group Policy Infrastructure

- Exercise 1: Creating an OU Structure for Group Policy
- Exercise 2: Delegating GPO Management
- Exercise 3: Creating Starter GPOs
- Exercise 4: Installing and Configuring the AGPM

## After completing this module, students will be able to:

- Describe the basic structure of Active Directory
- Describe the four stages of implementing Group Policy
- Explain how to plan Group Policy in accordance with a company's requirements
- Describe the guidelines that you should follow when you create new GPOs
- Explain how to deploy Group Policy based on the Active Directory structure
- Explain how to manage Group Policy by delegating administration and setting permissions

## Module 4: Understanding the Architecture of Group Policy Processing

This module details the concepts that you must grasp in order to troubleshoot Group Policy. The module also describes the options that are available to change the standard Group Policy processing sequence.

## Lessons

- Using Active Directory Components to Deploy Group Policy Settings
- Understanding the Group Policy Deployment Order
- Modifying Group Policy Processing

## Lab: Exploring the Group Policy Processing Architecture

- Exercise 1: Working with Multiple GPO Levels
- Exercise 2: Using the Block Inheritance and Enforce Options
- Exercise 3: Implementing Security Filtering
- Exercise 4: Creating a WMI Filter
- Exercise 5: Working with Loopback Processing

## After completing this module, students will be able to:

- Describe the Active Directory components that you can use to deploy Group Policy
- Explain the order in which Group Policy is deployed in Active Directory
- Describe the methods that are available to modify Group Policy processing

## Module 5: Troubleshooting and Backing Up GPOs

This module explains how to use the RSoP tools to determine whether policies are being processed in the correct manner. This module discusses how to use the available tools to troubleshoot policy issues; back up, restore, import, copy, and search for GPOs; and migrate GPOs from one domain to another.

## Lessons

- Using Group Policy Troubleshooting Tools
- Integration of RSoP Functionality
- Using Logging Options



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- Backing Up, Restoring, Importing, and Copying GPOs
- Building Migration Tables

## Lab: Troubleshooting and Backing Up GPOs

- Exercise 1: Using Tools for Troubleshooting
- Exercise 2: Backing Up and Restoring GPOs
- Exercise 3: Group Policy Management Scripts

## After completing this module, students will be able to:

- Describe the Group Policy troubleshooting tools
- Describe the GPMC tools that have RSoP functionality
- Describe the GPO logging tools used to obtain more detail about the GPO processing issues
- Explain how to back up, restore, import, and copy GPOs using the GPMC
- Explain how to build migration tables

## Module 6: Using Windows PowerShell to Manage Group Policy

This module explains how to navigate and use basic Windows PowerShell commands and how to use Windows PowerShell to manage Group Policy. This module will also describe how you can use PowerShell logon scripts with Group Policy.

### Lessons

- Introduction to PowerShell
- Windows PowerShell Library for Group Policy
- Windows PowerShell-Based Logon Scripts

### Module 6 Continued:

#### Lab: Deploying Legacy Security Templates

- Exercise 1: Introduction to Using Windows PowerShell
- Exercise 2: Using PowerShell to Manage GPOs

## After completing this module, students will be able to:

- Describe the Windows PowerShell features
- Explain how to perform the basic Windows PowerShell operations
- Explain how to access the Windows PowerShell library for Group Policy
- List the third-party Windows PowerShell-based logon script tools

## Module 7: Implementing Security Using Group Policy

This module defines the Windows security model and describes the process of using Group Policy to implement user account, computer account, and domain security.

### Lessons

- Exploring the Windows Security Architecture
- Securing User Accounts
- Exploring Local Policies
- Hardening Computer Accounts
- Implementing Domain Security

## Lab: Implementing Security Using Group Policy

- Exercise 1: Installing the Microsoft GPOAccelerator
- Exercise 2: Configuring Enterprise Auditing through Group Policy Deployment
- Exercise 3: Configuring Standard Password Policies
- Exercise 4: Configuring Fine-Grained Password Policies
- Exercise 5: Configuring Restricted Groups
- Exercise 6: Using Security Templates

## After completing this module, students will be able to:

- Describe the Windows security architecture



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- Explain how to secure user accounts with Group Policy
- Describe the purpose of local policies
- Explain how to harden computer accounts
- Explain how to control the domain security policy with a GPO

## Module 8: Configuring the Desktop Environment with Group Policy

This module explains many of the settings that are available to configure and restrict the user desktop environment, such as Control Panel restrictions, Start Menu settings, and Windows Explorer configuration.

### Lessons

- Exploring Script Types and Controlling Script Execution
- Defining the Desktop, Start Menu, and Taskbar Settings
- Defining the Control Panel Settings
- Defining the Windows Components Settings
- Configuring the Printer Management and Pruning Settings
- Defining the Network Settings

### Lab: Configuring the Desktop Environment with Group Policy

- Exercise 1: Using Logon Scripts
- Exercise 2: Configuring Desktop Settings
- Exercise 3: Managing Windows Components
- Exercise 4: Configuring Printers with Group Policy
- Exercise 5: Managing Network Settings

### After completing this module, students will be able to:

- Describe the startup, shutdown, logon, and logoff scripts and settings.

- Identify the many ways to control the user desktop, Start menu, and taskbar settings
- Explain how to restrict the Control Panel settings
- Explain how to restrict operations that users can perform in Windows Explorer, Windows Internet Explorer, and Remote Desktop Services
- Explain how to configure the printer management and pruning settings
- Describe the network settings

## Module 9: Configuring Roaming Profiles and Folder Redirection

This module explains how to use roaming profiles and Folder Redirection to maintain the user's personal files and settings.

### Lessons

- Managing User Profiles
- Configuring Folder Redirection
- Using Folder Redirection and Roaming Profiles Together

### Lab: Configuring Roaming Profiles and Folder Redirection

- Exercise 1: Preparing for Profiles and Folder Redirection
- Exercise 2: Configuring Folder Redirection
- Exercise 3: Managing Roaming Profiles

### After completing this module, students will be able to:

- Explain how to customize the processing of user profiles and roaming user profiles
- Explain how to redirect user folders to a server
- Describe what happens when roaming profiles and Folder Redirection are both enabled

## Module 10: Assigning and Publishing Software Packages

This module explains how to use Group Policy for deploying software.



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## Lessons

- Using MSI Packages to Distribute Software
- Using Group Policy as a Software Deployment Method
- Deploying Software
- Setting Up Distribution Points
- Using the Systems Center Configuration Manager to Distribute Software

## Lab: Assigning and Publishing Software Packages

- Exercise 1: Preparing for Distribution
- Exercise 2: Creating Custom Software Packages
- Exercise 3: Repackaging Applications
- Exercise 4: Deploying Software Packages

## After completing this module, students will be able to:

- Describe the basic elements of an MSI package
- Determine when to build or repackage your own
- Define the requirements for distributing software via Group Policy
- Describe when you might want to assign and publish software
- Explain how to upgrade and remove packages
- Explain how to set up distribution points for software deployment
- List the advantages of using SCCM to distribute software instead of Group Policy

## Module 11: Implementing Software Restriction Policies and AppLocker

This module explains the deployment of software restriction policies including the essential components, rules, and the order of precedence of such policy. You will learn how to use software restriction policies to prevent users from running unauthorized software reducing the likelihood that

viruses, Trojan horses, or spyware might intrude upon the environment.

## Lessons

- What is a Software Restriction Policy?
- Creating a Software Restriction Policy
- Using additional Rules to Help Identify Software
- What Makes an Effective Software Restriction Policy
- Using AppLocker in Windows Server 2008 R2 and Windows 7

## Lab: Implementing AppLocker and Software Restrictions Policies

- Exercise 1: Enforcing Software Restriction Policies
- Exercise 2: Using AppLocker to Restrict Software

## After completing this module, students will be able to:

- Define software restriction policies
- Explain how to create software restriction policies
- Describe the additional rules that you can apply to software restriction policies
- Describe the characteristics of an effective software restriction policy
- Describe the AppLocker features

## Module 12: Creating and Deploying Administrative Templates

This module explains the logic behind administrative templates, when to use them, and the basics of how to write them. This module also explains how to deploy templates by loading legacy ADM templates into the Group Policy Management Editor, and copying ADMX templates to the Central Store.

## Lessons

- Introducing ADM Templates





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- Standard ADM Templates
- Custom ADM Templates
- Using the New ADMX Templates
- Converting and Creating Custom ADMX Templates
- Using the ADMX Central Store

## **Lab: Working with ADMX Templates and the Central Store**

- Exercise 1: Importing ADMX Files
- Exercise 2: Implementing the ADMX Central Store
- Exercise 3: Converting Legacy ADM Files
- Exercise 4: Creating a Custom ADMS File

## **After completing this module, students will be able to:**

- Describe the benefits of using ADM templates
- List some of the ADM templates that are included with each version of Windows
- List tips that you can use to write your own customer ADM templates
- Describe the advantages of using the new ADMX file format
- Identify which tool converts the ADM templates to ADMX templates and also creates new ADMX templates
- Define ADMX Central Store