

ITMC 1040

Course Syllabus

1. Name of Course: Managing and Maintaining a Microsoft Windows Server 2003 Environment

2. Number of Clock Hours: 48

3. Course Description:

This course provides students with the knowledge and skills that are required to manage accounts and resources, maintain server resources, monitor server performance, and safeguard data in a Microsoft Windows Server 2003 environment. MOC 2273.
Prerequisites: ITMT 1000.

4. Course Objectives

After completing this course, students will be able to:

- Create and populate organizational units with user and computer accounts.
- Manage user and computer accounts.
- Create and manage groups.
- Manage access to resources.
- Implement printing.
- Manage printing.
- Manage access to objects in using organizational units.
- Implement Group Policy.
- Manage the user and computer environment by using Group Policy.
- Audit accounts and resources.
- Prepare to administer server resources.
- Configure a server to monitor system performance.
- Monitor system performance.
- Manage device drivers by configuring device driver signing and restoring a device driver.
- Manage hard disks.
- Manage data storage.
- Manage disaster recovery.
- Maintain software by using Microsoft Software Update Services.

- Maintain Windows Server 2003 security.

5. Rationale:

Upon completion of this course, students will have a better understanding of Microsoft Windows 2003, the most popular operating system in use today.

6. Required Materials:

Microsoft Official Curriculum, MOC 2273, included.

7. Evaluation

Those who participate in class discussions, complete course lab work, and miss no more than three class meetings will be awarded 4.8 continuing education units.

8. Course Outline

Part 1: Managing a Microsoft Windows Server 2003 Environment

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Module 1: Introduction to Administering Accounts and Resources

This module explains how to administer accounts and resources on computers running Microsoft Windows Server 2003 software in a networked environment.

Lessons

- Multimedia: Introduction to Administering Accounts and Resources
- The Windows Server 2003 Environment
- Logging on to Windows Server 2003
- Using the Run As Feature for Administration
- Installing and Configuring Administrative Tools
- Creating an Organizational Unit

Lab: Creating Organizational Units

- Creating an Organizational Unit

After completing this module, students will be able to:

- Describe the Windows Server 2003 environment.
- Log on to a computer running Windows Server 2003.
- Use the Run as feature to perform administrative tasks.
- Install and configure the administrative tools.
- Create an organizational unit.

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Module 2: Managing User and Computer Accounts

This module explains how to modify user and computer accounts on computers running Microsoft Windows Server 2003 in a networked environment.

Lessons

- Creating User Accounts
- Creating Computer Accounts
- Modifying User and Computer Account Properties
- Creating a User Account Template
- Managing User and Computer Accounts
- Using Queries to Locate User and Computer Accounts in Active Directory

Lab: Managing User and Computer Accounts

- Creating User Accounts
- Creating Computer Accounts
- Using Queries to Locate Objects
- Modifying User and Computer Properties

After completing this module, students will be able to

- Create user accounts.
- Create computer accounts.
- Modify user and computer account properties.
- Create a user account template.
- Manage user and computer accounts.
- Use queries to locate user and computer accounts in Active Directory directory

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Module 3: Managing Groups

This module explains how to perform various administrative functions using groups.

Lessons

- Creating groups.
- Managing group membership.
- Strategies for using groups.
- Using default groups.

Lab: Creating and Managing Groups

- Creating Global and Domain Local Groups
- Managing Group Membership
- Managing Default Groups

After completing this module, students will be able to:

- Create groups.
- Manage group membership
- Apply strategies for using groups
- Manage default groups.

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Module 4: Managing Access to Resources

This module explains how to enable resource access with permissions, manage access to files and folders using permissions, and manage permission inheritance.

Lessons

- Overview of Managing Access to Resources
- Managing Access to Shared Folders

- Managing Access to Files and Folders Using NTFS Permissions
- Determining Effective Permissions
- Managing Access to Shared Files Using Offline Caching

Lab: Managing Access to Resources

- Creating and Sharing Folders
- Configuring NTFS Permissions
- Publishing Shared Folders
- Testing Permissions
- Configuring Automatic Caching

After completing this module, students will be able to

- Manage access to resources.
- Manage access to shared folders.
- Manage access to files and folders by using NTFS permissions.
- Determine effective permissions.
- Manage access to shared files by using offline caching.

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Module 5: Implementing Printing

This module explains how to implement printing in a Windows Server 2003 environment.

Lessons

- Multimedia: Introduction to Printing in the Windows Server 2003 Family
- Installing and Managing Access to Printers
- Managing Printer Drivers
- Implementing Printer Locations

Lab A: Implementing Printing

- Installing Printers and Setting Printer Locations and Permissions
- Searching for Printers and Testing Permissions

After completing this module, students will be able to

- Explain printing in the Windows Server 2003 family.
- Install and manage access to printers by using printer permissions.
- Manage printer drivers.
- Implement printer locations.

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Module 6: Managing Printing

This module explains how to set up a network-wide printing strategy to meet the needs of users and troubleshoot installation or configuration problems.

Lessons

- Changing the Location of the Print Spooler
- Setting Printer Priorities and Scheduling Printer Availability
- Configuring a Printing Pool and Redirecting Print Queues

Lab: Managing Printing

- Installing Printers and Creating a Printing Pool
- Setting Printer Priorities and Availability

After completing this module, students will be able to

- Change the location of the print spooler.
- Set printing priorities and schedule printer availability.
- Configure a printing pool and redirect print queues.

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Module 7: Managing Access to Objects in Organizational Units

This module explains the permissions available for managing access to Active Directory objects, how to move objects between organizational units in the same domain, and how to delegate control of an organizational unit.

Lessons

- Modifying Permissions for Active Directory Objects
- Delegating Control of Organizational Units

Lab: Managing Access to Objects in Organizational Units

- Modifying the Delegation of Control Wizard and Delegating Permissions
- Testing the Delegated Permissions
- Granting Permissions to the Legal Organizational Unit and Creating a Taskpad
- Testing the Delegated Permissions

After completing this module, students will be able to

- Modify permissions for Active Directory objects.
- Delegate control of organizational units.

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Module 8: Implementing Group Policy

This module explains the purpose and function of Group Policy in a Microsoft Windows Server 2003 environment. It also explains how to implement Group Policy objects (GPOs) and manage GPOs.

Lessons

- Implementing Group Policy Objects
- Implementing GPOs on a Domain
- Managing the Deployment of Group Policy

Lab: Implementing a GPO

- Disabling and Deleting a GPO
- Creating and Linking Multiple GPOs
- Filtering the GPOs to Exempt Selected Users
- Backing Up and Importing GPO Settings

After completing this module, students will be able to

- Implement GPOs.
- Implement GPOs in a domain.
- Manage the deployment of Group Policy.

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Module 9: Managing the User Environment by Using Group Policy

This module explains how to use Group Policy to assign scripts, restrict group membership and access to software and configure folder redirection. As well, this module explains how to determine which GPOs are being applied on a computer.

Lessons

- Configuring Group Policy Settings
- Assigning Scripts with Group Policy
- Restricting Group Membership and Access to Software
- Configuring Folder Redirection
- Determining Applied GPOs

Lab: Managing the User Environment by Using Group Policy

- Creating and Applying a GPO to the Graphics Organizational Unit
- Assigning a Logon Script to Connect to a Printer
- Using a GPO to Configure the Members of the Backup Operators Group
- Using the Group Policy Results Wizard to Verify the Policy Settings

After completing this module, students will be able to

- Configure Group Policy settings.
- Assign scripts with Group Policy.
- Restrict group membership and access to software.
- Configure Folder Redirection.
- Determine Applied Group Policy objects (GPOs).

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Module 10: Implementing Administrative Templates and Audit Policy

This module provides a broad overview of security in Microsoft Windows Server 2003. It also explains how to deploy security templates and test computer security policy and how to configure auditing and manage security logs..

Lessons

- Overview of Security in Windows Server 2003
- Using Security Templates to Secure Computers
- Testing Computer Security Policy
- Configuring Auditing
- Managing Security Logs

Lab: Managing Security Settings

- Creating a Custom Security Template
- Importing and Deploying the Custom Template

After completing this module, students will be able to

- Explain user rights and audit policies in Windows Server 2003.
- Use security templates to secure computers.
- Test computer security policy.
- Configure auditing.
- Manage security logs.

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Part 2: Maintaining a Microsoft Windows Server 2003 Environment

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Module 1: Preparing to Administer a Server

This module explains how to administer a server. It describes how to manage servers remotely, what tools to use, and the rights and permissions that are needed to administer a server.

Lessons

- Introduction to Administering a Server
- Configuring Remote Desktop to Administer a Server
- Managing Remote Desktop Connections

Lab A: Preparing to Administer a Server

- Enabling Remote Desktop
- Creating a Shared Folder on a Remote Computer
- Connecting to a Remote Console Session
- Creating runas Shortcuts to Administration Tools

After completing this module, students will be able to:

- Explain the tasks, tools, and rights that are required to administer a server.
- Configure Remote Desktop for Administration and client preferences.
- Manage remote desktop connections.

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Module 2: Preparing to Monitor Server Performance

This module explains how to monitor server performance by using performance tools, configure and manage performance logs, configure and manage alerts, and manage system monitor views.

Lessons

- Introduction to Monitoring Server Performance
- Performing Real-Time and Logged Monitoring
- Configuring and Managing Counter Logs
- Configuring Alerts

Lab A: Preparing to Monitor Server Performance

- Selecting the Appropriate Monitoring Technique

After completing this module, students will be able to:

- Establish a performance baseline.
- Perform real-time and logged monitoring.
- Configure and manage counter logs.
- Configure alerts.

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Module 3: Monitoring Server Performance

This module explains how to collect performance data by monitoring primary server subsystems. It also covers how to identify system bottlenecks by using the Performance console and Task Manager in Microsoft Windows Server 2003.

Lessons

- Multimedia: The Primary Server Subsystems
- Monitoring Server Memory
- Monitoring Processor Usage
- Monitoring Disks
- Monitoring Network Usage
- Monitoring Best Practices

Lab A: Monitoring Server Performance

- Create and Configure Alerts
- Configure the Messaging Service
- Finding a High CPU Usage Process
- Finding a High Memory Usage Process

After completing this module, students will be able to:

- Explain how the four primary server subsystems affect server performance.
- Monitor server memory.
- Monitor processor usage.
- Monitor disks.

- Monitor network usage.
- Use best practices for monitoring server performance.

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Module 4: Maintaining Device Drivers

This module explains how to maintain device drivers.

Lessons

- Configuring Device Driver Signing Options
- Using Device Driver Rollback

After completing this module, students will be able to:

- Configure device driver signing.
- Restore the previous version of a device driver.

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Module 5: Managing Disks

This module explains how to manage disks and how to use the tools to manage and set up disks.

Lessons

- Preparing Disks
- Managing Disk Properties
- Managing Mounted Drives
- Converting Disks
- Creating Volumes
- Creating Fault-Tolerant Volumes
- Importing a Foreign Disk

Lab A: Managing Disks

- Recovering from a Failed Mirrored Drive

After completing this module, students will be able to:

- Initialize and partition a disk.
- View and update disk properties.
- Manage mounted drives.
- Convert a disk from basic to dynamic and from dynamic to basic.
- Create volumes on a disk.
- Create fault-tolerant volumes.
- Import disks.

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Module 6: Managing Data Storage

This module explains the Encrypting File System (EFS), which contributes to the safe storage of data and helps to keep the network from harm. It also explains how to administer disk quotas.

Lessons

- Managing File Compression
- Configuring File Encryption
- Configuring EFS Recovery Agents
- Implementing Disk Quotas

Lab A: Managing Data Storage

- Troubleshooting Disk-Quota Entries
- Recovering an Encrypted File

After completing this module, students will be able to:

- Manage NTFS file compression.
- Configure file encryption.
- Configure an EFS recovery agent.
- Implement disk quotas.

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Module 7: Managing Disaster Recovery

This module explains how to plan for a computer disaster and how to use the features of Windows Server 2003 to prevent a disaster or recover when one occurs.

Lessons

- Preparing for Disaster Recovery
- Backing Up Data
- Scheduling Backup Jobs
- Restoring Data
- Configuring Shadow Copies
- Recovering from Server Failure

Lab A: Managing Disaster Recovery

- Backing Up the System State Data
- Recovering from a Corrupt Registry by Using Last Known Good Configuration
- Recovering from a Corrupt Registry by Restoring System State Data

After completing this module, students will be able to:

- Prepare for disaster recovery.
- Back up data.
- Schedule backup jobs.
- Restore data.
- Configure a shadow copy.
- Recover from server failure.

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Module 8: Software Maintenance Using Windows Server Update Services

This module explains how to use Microsoft Windows Server Update Services to manage and distribute critical software updates that resolve known security vulnerabilities and other stability issues.

Lessons

- Introduction to Windows Server Update Services
- Installing and Configuring Windows Server Update Services
- Managing Windows Server Update Services

Lab A: Software Maintenance Using Windows Server Update Services

- Create a Test Computer Group
- View the Status of Updates and Computers
- Back up WSUS

After completing this module, students will be able to:

- Describe Microsoft WSUS.
- Install and configure servers to use WSUS.
- Manage WSUS.

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Module 9: Software Maintenance Using Windows Server Update Services

This module describes how to secure Microsoft Windows Server 2003. The module provides an overview of securing servers, core server security, hardening servers, and the Microsoft Baseline Security Analyzer tool.

Lessons

- Introduction to Securing Servers
- Implementing Core Server Security
- Hardening Servers
- Microsoft Baseline Security Analyzer

Lab A: Software Maintenance Using Windows Server Update Services

- Using the Security Configuration Wizard
- Configuring a Group Policy Object for Member Servers

- Scanning a Range of Computers by Using MBSA

After completing this module, students will be able to:

- Describe how servers are secured.
- Explain core server security.
- Harden servers in various roles.
- Use Microsoft Baseline Security Analyzer.