

Configuring and Administering Windows 7

Length: 5 days

Overview

This five-day instructor-led course provides students with the knowledge and skills to configure and administer Microsoft Windows 7 as a standalone installation or in a corporate environment as a part of a Windows Active Directory domain. It can also be used to prepare for exam 70-680 TS: Windows 7, Configuring.

The contents of the course provide students with the ability to create and deploy images, configure hardware and software, configure networking and backup and restore system information.

Audience Profile

This course is intended for novice and experienced Network Administrators, Desktop Support Technicians or other IT professionals who have a need to install, configure, and administer Microsoft Windows 7. This course can also serve as training preparation for the Windows 7 certification exams.

At Course Completion

After completing this course, students will be able to:

- Describe and choose the various versions of Windows 7.
- Perform a clean install of Windows 7.
- Create an image for deployment.
- Configure hardware devices.
- Configure software for compatibility.
- Configure networking including sharing resources.
- Configure DirectAccess for the network.
- Monitor and configure system performance.
- Perform backups and configure system restore.

Prerequisites

Before attending this course, students must have:

- Experience with previous versions of Windows operating systems such as Windows XP or Windows Vista.
- Some knowledge of Windows Server operating systems and Active Directory concepts.

In addition, students are expected to understand:

- Networking with TCP/IP including IPv4 and some IPv6 knowledge.
- A general understanding of user accounts and authentication.

Course Content

Module 1: Installing Windows 7

This module explains the various editions of Windows 7 and some of the core features of

the operating system. Students will learn the hardware requirements and upgrade paths to Windows 7. The module will also show students how to prepare an image of the operating system for deployment.

Lessons

Introduction to Windows 7
Installing Windows 7 Using Image-Based Installation
Migrating User Settings

Lab : Configure a Reference Computer for Imaging
Configure the Reference Computer
Clean the image with sysprep
Prepare the image for deployment

Lab : Capture an Image Using ImageX
Capture the image and copy to a network share

Lab : Deploy a Windows 7 Image
Prepare a virtual machine to receive the image
Prepare the disk and image the new computer
Configure the newly installed OS image

Lab : Migrate User Settings
Migrate settings to a server
Transfer user settings to new computer

Module 2: Configure Hardware and Software

This module explains how to install and configure hardware devices on Windows 7. Users will learn how to add hardware devices, install and update drivers and configure options. It also teaches the student how to configure application compatibility and how to lock down a Windows 7 computer using AppLocker.

Lessons

Configure Devices
Configure Application Compatibility

Lab : Install and Configure Devices
Add a printer
Configure printer properties
Configure properties for COM1
View device driver details
Configure Device Manager

Lab : Configure Application Compatibility
Configure application compatibility settings
Configure the Application Compatibility Toolkit

Lab : Configure Application Restrictions
Configure application execution permissions
Configure network zone rules for applications
Restrict application execution using AppLocker

Lab : Configure Internet Explorer
Configure the home page and browser history settings
Configure security settings in Internet Explorer
Configure content ratings in Internet Explorer
Manage Internet Explorer Add-ons
Configure Internet Explorer using Group Policy

Module 3: Configure the Network

This module explains how to configure the networking aspects of Windows 7. Students will be introduced to configuration of general network settings including TCP/IP network configuration using IPv4 and IPv6 settings. They will also learn about wireless network configuration. Students will also learn how to share resources across the network, configure the Windows Firewall for security, configure remote management using Remote Desktop and Remote Assistance, and troubleshoot network connectivity issues.

Lessons

Configure General Network Settings
Managing Wireless Networks
Sharing Resources
Configure TCP/IP

Troubleshooting Network Connectivity
Configure Windows Firewall
Configure Remote Management

Lab : Configure Network Discovery
Turn on and configure Network Discovery
Create a network map

Lab : Configure TCP/IP Settings
Configure Static IPv4 Settings
Configure IPv4 for Dynamic IP Addressing
Configure IPv6 Addressing
Using PING
Using ipconfig
Using tracert
Using nslookup

Lab : Configure Windows Firewall
Configure Windows Firewall Settings for the Private Network
Configure Windows Firewall for the Public Network
Configure Additional Programs Access
Configure Advanced Firewall Settings
Configure Inbound Rules
Configure Outbound Rules

Lab : Configure Remote Management
Configure Remote Desktop
Configure Remote Assistance
Secure Remote Assistance with Group Policy

Module 4: Sharing and Securing Resources

This module explains how to implement sharing of resources on the network with Windows 7 computers. Topics covered will introduce the student to share permissions and NTFS permissions. Students will also learn how configure and implement a HomeGroup using Windows 7 computers. Once the student understands how to share resources and make them available on the network, they will be introduced to securing the computer through the use of the User Account Control (UAC) features of Windows 7. They will also learn how to work with authentication and authorization to the computer and the use of digital certificates. Finally, the students will learn about the BranchCache feature of Windows 7 and

Windows Server 2008 R2.

Lessons

Configure Shared Resources
Configuring HomeGroup Settings
Configure User Account Control (UAC)
Configure Authentication and Authorization
Configure BranchCache

Lab : Configure Shared Resources
Configure Shared Folders in Computer Management
Configure Shares Using Windows Explorer
Configure properties for COM1
Share a printer

Lab : Configure HomeGroup Settings
Configure HomeGroup

Lab : Configure User Account Control (UAC)
Configure UAC Prompt Behaviors
Configure UAC Group Policy Settings
Configure Account Policies

Lab : Configure Authentication and Authorization
Configure Generic Credentials using Credential Manager
Configure a Certificate-Based Credential
Backup the Credential Manager Vault
Restore the Vault from a Backup
Configure NTFS Permissions and View Effective Permissions

Lab : Configure BranchCache
Configure BranchCache with Active Directory for Hosted Cache Mode
Configure BranchCache Using netsh for Client-Side Distributed Cache Mode

Module 5: Windows 7 and Mobile Computing

This module will teach the student how to work with the features in Windows 7 for mobile users. Students will learn how to configure and implement BitLocker and BitLockerToGo for securing files on hard drives and removable storage devices. Mobile users often make use of offline files and this module will introduce students to

offline files in Windows and how to configure for offline use and resolve synchronization issues. Students will also learn how to configure other mobility options such as power settings and remote connections such as dial-up and VPN.

Finally students will learn about a new feature in Windows 7 for remote users known as DirectAccess. This new technology eliminates the need to create and configure VPN connections over Remote Access Services. Instead DirectAccess allows secure connections directly from the client computer over the Internet.

DirectAccess requires careful configuration and specific components to be implemented. Students will learn how to configure a complete DirectAccess implementation with the final lab allowing them the opportunity to perform all the setup and configuration necessary to make DirectAccess work including a simulated Internet environment.

Lessons

- Configure BitLocker and BitLocker ToGo
- Configuring DirectAccess
- Configure Mobility Options
- Configure Offline Files
- Configure Remote Connections

Lab : Working with BitLocker

- Encrypt a disk drive
- Remove BitLocker encryption from a drive
- Configure a data recovery agent

Lab : Working with Offline Files

- Configure Offline Files
- Manage Offline File Settings

Lab : Manage Offline File Settings

This lab includes 36 total exercise and takes the student through the installation and configuration of DirectAccess using all the necessary servers and client computers. Some configuration is already in place such as a Domain Controller and an Internet server

Students will configure a certification authority, a DirectAccess server, and internal application server and a client

computer in a scenario similar to what they will configure in an office environment.

Module 6: Monitoring and Maintaining Windows 7

This module will teach the student how to configure updates in Windows 7 to ensure their computers are getting the necessary updates to keep them secure and performing at peak efficiency. Students will also learn how to monitor the system through the use of various tools to determine where performance issues exist and then how to configure performance settings to increase responsiveness.

The module also discusses how to manage the disks on a computer including how to create and manage partitions using Disk Management and how to create virtual hard drives (VHDs).

Lessons

- Configure Updates
- Manage Disks
- Monitor Systems
- Configure Performance Settings

Lab : Configure Windows Updates

- Schedule Automatic Updates
- View Installed Updates
- Configure Windows Update using Group Policy

Lab : Manage Disks

- Create Disk Volumes
- Extend a Volume, Shrink, and Delete Volumes
- Extend Partitions Across Disks (Spanned Volumes)
- Convert a Disk to Dynamic
- Create a VHD
- Initialize Disks
- Using diskpart
- Defragment a Drive

Lab : Monitor Systems

- Configure the Event Log Settings
- Clear and Archive Logs
- Filter Event Logs and Create Custom Views
- Create Subscriptions

Configure Performance Monitor
Create Data Collector Sets
Generate a System Diagnostics Report

Lab : Configure Performance Settings
Configure Page File settings
Configure Drive Caching
Configure Power Settings
Adjust Performance Settings

Module 7: Backup and Recovery

This module will teach the student how configure backup and restore for data files on the computer. Students will also learn about System Restore points and System Recovery options. The labs reinforce the use of system recovery options and restore points by demonstrating the use of each to protect data and other files.

Lessons

Configure Backup
Configuring System Recovery Options

Lab : Configure Backup
Backup the computer
Modify a backup schedule
Restore a backup

Lab : Configure System Recovery
Configure System Restore Points
Restore the Computer to a Previous State

Lab : Configure File Recovery
Configure File Recovery Options
Create a File and Restore Point
Restore a Previous Version of a File
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