

Implementing a Microsoft® Windows® 2000 Network Infrastructure

Delivery Guide

Course Number: 2153B

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About This Course

This section provides you with a brief description of the course, audience, suggested prerequisites, and course objectives.

Description

This course is for new-to-product support professionals who will be responsible for installing, configuring, managing, and supporting a network infrastructure that uses the Microsoft® Windows® 2000 Server products. It also provides students with the prerequisite knowledge and skills required for course 2154, *Implementing and Administering Microsoft Windows 2000 Directory Services*. This course also supports those students who are on the Microsoft Certified Systems Engineer (MCSE) Windows 2000 certification track.

The content in this course applies to Windows 2000 Professional, Windows 2000 Server, and Windows 2000 Advanced Server, except as noted within the course.

Audience

This course is intended for new-to-product support professionals who will be responsible for performing the following tasks:

- Configuring the Dynamic Host Configuration Protocol (DHCP) Server service
- Configuring the Domain Name System (DNS) Server service
- Configuring Windows Internet Name Service (WINS)
- Configuring network security by using Public Key Infrastructure (PKI)
- Configuring network security by using Internet Protocol Security (IPSec)
- Configuring remote access to a network
- Supporting remote access to a network
- Integrating extended remote access capabilities by using Internet Authentication Service (IAS)
- Configuring Windows 2000 as a network router
- Configuring Internet access for a network
- Configuring a Web server
- Deploying Windows 2000 Professional by using Remote Installation Services (RIS)
- Managing a Windows 2000 network
- Identifying and resolving network connectivity problems by using Windows 2000 troubleshooting tools and utilities
- Enabling network connectivity among NetWare, Macintosh, and UNIX networks.

Student Prerequisites

This course requires that students meet the following prerequisites:

- Successful completion of course 2152, *Implementing Microsoft Windows 2000 Professional and Server*, or equivalent skills and knowledge, including the ability to:
 - Install or upgrade to Windows 2000
 - Configure the Windows 2000 environment
 - Connect Windows 2000–based client computers to networks
 - Create and manage user accounts
 - Manage access to resources by using groups
 - Manage data by configuring the NTFS file system
 - Provide network access to file resources
 - Configure disks and partitions
 - Monitor and optimize Windows 2000
 - Implement Windows 2000 security
 - Configure printing
 - Configure Windows 2000 for mobile computing
 - Configure and manage disks and partitions
 - Implement disaster protection
 - Install and configure Terminal Services
 - Implement Windows 2000–based client computers
 - Implement Windows 2000–based servers
- An understanding of Transmission Control Protocol/Internet Protocol (TCP/IP)

Course Objectives

At the end of the course, students will be able to:

- Configure the DHCP Server service.
- Configure the DNS Server service.
- Configure WINS; configure network security protocols.
- Configure network security by using PKI.
- Configure network security by using IPSec.
- Configure remote access to a network.
- Support remote access to a network.
- Extend remote access capabilities by using IAS.
- Configure Windows 2000 as a network router.
- Configure Internet access for a network.
- Configure a Web server.
- Deploy Windows 2000 Professional by using RIS.
- Manage a Windows 2000 network.
- Identify and resolve network connectivity problems by using Windows 2000 troubleshooting tools and utilities.
- Enable network connectivity among NetWare, Macintosh, and UNIX networks.

Course Timing

The following schedule is an estimate of the course timing.
Your timing may vary.

Day 1

Start	End	Module
9:00	9:30	Introduction
9:30	10:00	Module 1: Introduction to the Microsoft Windows 2000 Networking Infrastructure
10:00	10:30	Module 2: Automating IP Address Assignment by Using DHCP
10:30	10:45	Lab A: Creating and Authorizing a DHCP Server
10:45	11:00	Break
11:00	11:30	Module 2: Automating IP Address Assignment by Using DHCP, continued
11:30	12:00	Lab B: Configuring a DHCP Scope
12:00	1:00	Lunch
1:00	2:00	Module 2: Automating IP Address Assignment by Using DHCP, continued
2:00	2:30	Module 3: Implementing Name Resolution by Using DNS
2:30	2:45	Break
2:45	3:30	Lab A: Installing and Configuring the DNS Server Service
3:30	4:00	Module 3: Implementing Name Resolution by Using DNS, continued
4:00	4:45	Lab B: Maintaining and Troubleshooting a DNS Server
4:45	5:00	Module 3: Implementing Name Resolution by Using DNS, continued

Day 2

Start	End	Module
9:00	9:30	Day 1 review
9:30	10:15	Module 4: Implementing Name Resolution by Using WINS
10:15	10:30	Break
10:30	11:00	Module 4: Implementing Name Resolution by Using WINS, continued
11:00	11:45	Lab A: Installing and Configuring WINS
11:45	12:00	Module 4: Implementing Name Resolution by Using WINS, continued
12:00	1:00	Lunch
1:00	2:00	Module 5: Configuring Network Security by Using Public Key Infrastructure
2:00	2:45	Lab A: Installing and Configuring Certificate Services
2:45	3:00	Break
3:00	3:30	Module 5: Configuring Network Security by Using Public Key Infrastructure, continued
3:30	4:00	Module 6: Configuring Network Security by Using IPSec
4:00	4:45	Lab A: Configuring TCP/IP for Secure Connections by Using IPSec
4:45	5:00	Module 6: Configuring Network Security by Using IPSec, continued

Day 3

Start	End	Module
9:00	9:30	Day 2 review
9:30	10:15	Module 7: Configuring Remote Access
10:15	10:30	Break
10:30	11:00	Module 7: Configuring Remote Access, continued
11:00	11:45	Lab A: Configuring a VPN Connection
11:45	12:00	Module 7: Configuring Remote Access, continued
12:00	1:00	Lunch
1:00	1:30	Module 8: Supporting Remote Access to a Network
1:30	2:15	Lab A: Creating a Remote Access Policy and Profile
2:15	2:30	Break
2:30	2:45	Module 8: Supporting Remote Access to a Network, continued
2:45	3:00	Lab B: Troubleshooting Remote Access
3:00	3:15	Module 8: Supporting Remote Access to a Network, continued
3:15	4:15	Module 9: Extending Remote Access Capabilities by Using IAS
4:15	4:45	Lab A: Configuring Internet Authentication Service
4:45	5:00	Module 9: Extending Remote Access Capabilities by Using IAS, continued

Day 4

Start	End	Module
9:00	9:30	Day 3 review
9:30	10:15	Module 10: Configuring a Windows 2000–Based Server As a Router
10:15	10:30	Break
10:30	11:00	Lab A: Configuring Windows 2000 As a Static Router
11:00	11:30	Module 10: Configuring a Windows 2000–Based Server As a Router, continued
11:30	12:00	Lab B: Configuring a Windows 2000–Based Router
12:00	12:15	Module 10: Configuring a Windows 2000–Based Server As a Router, continued
12:15	1:15	Lunch
1:15	1:45	Module 11: Configuring Internet Access for a Network
1:45	2:15	Lab A: Configuring Internet Access by Using NAT
2:15	2:30	Module 11: Configuring Internet Access for a Network, continued
2:30	3:00	Module 12: Configuring a Web Server
3:00	3:15	Break
3:15	3:45	Lab A: Configuring a Web Server
3:45	4:15	Mod 13: Deploying Windows 2000 Professional by Using RIS
4:15	4:45	Lab A: Deploying Windows 2000 Professional by Using Remote Installation Services
4:45	5:00	Mod 13: Deploying Windows 2000 Professional by Using RIS, continued

Day 5

Start	End	Module
9:00	9:30	Day 4 review
9:30	10:15	Module 14: Managing a Windows 2000 Network
10:15	10:30	Break
10:30	11:30	Lab A: Managing a Windows 2000 Network
11:30	12:00	Module 14: Managing a Windows 2000 Network, continued
12:00	1:00	Lunch
1:00	1:30	Module 15: Troubleshooting Windows 2000 Network Services
1:30	2:15	Lab A: Troubleshooting Routing
2:15	2:30	Break
2:30	3:00	Module 15: Troubleshooting Windows 2000 Network Services, continued
3:00	3:30	Lab B: Troubleshooting Network Problems by Using Network Monitor
3:30	3:45	Module 15: Troubleshooting Windows 2000 Network Services, continued
3:45	4:00	Module 16: Configuring Network Connectivity Between Operating Systems
4:00	4:15	Lab A: Configuring Gateway Services for NetWare
4:15	4:30	Module 16: Configuring Network Connectivity Between Operating Systems, continued
4:30	4:45	Lab B: Configuring File Services and Print Services for Macintosh
4:45	5:00	Module 16: Configuring Network Connectivity Between Operating Systems, continued

Trainer Materials Compact Disc Contents

The Trainer Materials compact disc contains the following files and folders:

- *Default.htm*. This file opens the Trainer Materials Web page.
- *Readme.txt*. This file contains a description of the compact disc contents and setup instructions in ASCII format (non-Microsoft Word document).
- *2153a_ms.doc*. This file is the Manual Classroom Setup Guide. It contains the steps for manually setting up the classroom computers.
- *2153A_sg.doc*. This file is the Classroom Setup Guide. It contains a description of classroom requirements, a description of the classroom configuration, and classroom setup instructions.
- *Errorlog*. This folder contains three documents:
 - The Change Log documents all the changes that were made from the previous version of the course to the current version. The page numbers from the previous and current versions are provided to help you locate the changes.
 - The Error Log documents the known errors in this course and their fixes. Because changes to classroom setup and labs may have introduced new errors, the courseware development team did not make any changes that would require retesting of these components.
 - The Feedback form contains a template for recording any errors and corrections that you find in the course, and information about how to send this feedback to the courseware development team at Microsoft.
- *Fonts*. This folder contains fonts that are required to view the Microsoft PowerPoint® presentation and Web-based materials.
- *Manual*. This folder contains the manual setup guide.
- *Powerpnt*. This folder contains the PowerPoint slides that are used in this course.
- *Pptview*. This folder contains the PowerPoint Viewer, which is used to display the PowerPoint slides.
- *Setup*. This folder contains the standard Microsoft Official Curriculum automated setup scripts that install and configure Windows 2000 on the instructor and student computers.
- *Studntcd*. This folder contains the Web page that provides students with links to resources pertaining to this course, including additional readings, review and lab answers, lab files, multimedia presentations, and course-related Web sites.
- *Tools*. This folder contains the post-installation scripts that are used to configure the instructor and student computers specifically for this course.
- *Tprep*. This folder contains the Trainer Preparation Presentation, a narrated slide show that explains the instructional strategy for the course in addition to presentation tips and caveats. To open the presentation, on the Trainer Materials Web page, click **Trainer Preparation Presentation**.

Student Materials Compact Disc Contents

The Student Materials compact disc contains the following files and folders:

- *Default.htm*. This file opens the Student Materials Web page. It provides students with resources pertaining to this course, including additional reading, review and lab answers, lab files, multimedia presentations, and course-related Web sites.
- *Readme.txt*. This file contains a description of the compact disc contents and setup instructions in ASCII format (non-Word document).
- *AddRead*. This folder contains additional reading pertaining to this course.
- *Answers*. This folder contains answers to the module review questions and hands-on labs.
- *Appendix*. This folder contains appendix files for this course.
- *Courses*. This folder contains the self-paced courses that are included with this course.
- *Fonts*. This folder contains fonts that are required to view the PowerPoint presentation and Web-based materials.
- *Labfiles*. This folder contains files that are used in the hands-on labs. These files may be used to prepare the student computers for the hands-on labs.
- *Simulation*. This folder contains files that are used for the simulated labs in this course.
- *Media*. This folder contains files that are used in multimedia presentations for this course. If this course does not include any multimedia presentations, this folder does not appear.
- *Webfiles*. This folder contains the files that are required to view the course Web page. To open the Web page, open Windows Explorer, and in the root directory of the compact disc, double-click **Default.htm**.
- *Wordview*. This folder contains the Word Viewer that is used to view any Word document (.doc) files that are included on the compact disc. If no Word documents are included, this folder does not appear.

Document Conventions

The following conventions are used in course materials to distinguish elements of the text.

Convention	Use
◆	Indicates an introductory page. This symbol appears next to a slide title when additional information on the topic is covered on the page or pages that follow it.
bold	Represents commands, command options, and portions of syntax that must be typed exactly as shown. It also indicates commands on menus and buttons, icons, dialog box titles and options, and icon and menu names.
<i>italic</i>	In syntax statements, indicates placeholders for variable information. Italic is also used for introducing new terms, for book titles, and for emphasis in the text.
Title Capitals	Indicate domain names, user names, computer names, directory names, folders, and file names, except when specifically referring to case-sensitive names. Unless otherwise indicated, you can use lowercase letters when you type a directory name or file name in a dialog box or at a command prompt.
ALL CAPITALS	Indicate the names of keys, key sequences, and key combinations—for example, ALT+SPACEBAR.
monospace	Represents code samples, examples of screen text, or entries that you type at a command prompt or in initialization files.
[]	In syntax statements, enclose optional items. For example, <i>[filename]</i> in command syntax indicates that you can choose to type a file name with the command. Type only the information within the brackets, not the brackets themselves.
{ }	In syntax statements, enclose required items. Type only the information within the braces, not the braces themselves.
	In syntax statements, separates an either/or choice.
►	Indicates a procedure with sequential steps.
...	In syntax statements, specifies that the preceding item may be repeated.
.	Represents an omitted portion of a code sample.
.	
.	