
Introduction

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Instructor Notes

Presentation:
30 minutes

The Introduction module provides students with an overview of the course content, materials, and logistics for Course 2276: *Implementing a Microsoft® Windows Server™ 2003 Network Infrastructure: Network Hosts*.

Required materials

To teach this course, you need the following materials:

- Delivery Guide
- Trainer Materials DVD

Preparation tasks

To prepare for this course, you must:

- Complete the Course Preparation Checklist that is included with the trainer course materials.

How to Teach This Module

This section contains information that will help you to teach this module.

Introduction

Welcome students to the course and introduce yourself. Provide a brief overview of your background to establish credibility.

Ask students to introduce themselves and provide their background, product experience, and expectations of the course.

Record student expectations on a whiteboard or flip chart that you can reference later in class.

Course materials

Tell students that everything they will need for this course is provided at their desk.

Have students write their names on both sides of the name card.

Describe the contents of the student workbook and the Student Materials compact disc.

Important This course has assessment items for each lesson, located on the Student Materials compact disc. You can use them as pre-assessments to help students identify areas of difficulty, or you can use them as post-assessments to validate learning.

Consider using them to reinforce learning at the end of the day. You can also use them at the beginning of the day as a review for the content that was taught on the previous day.

Tell students where they can send comments and feedback on this course.

Demonstrate how to open the Web page provided on the Student Materials compact disc by double-clicking **StartCD.exe** in the Student folder on the Trainer Materials DVD or compact disc.

Prerequisites

Describe the prerequisites for this course. This is an opportunity for you to identify students who may not have the appropriate background or experience to attend this course.

Course outline

Briefly describe each module and what students will learn. Explain how this course will meet students' expectations by relating the information that is covered in individual modules to their expectations.

Setup

Describe any necessary setup information for the course, including course files and classroom configuration.

Demonstration: Using Microsoft Virtual PC

Prior to performing this demonstration, start DEN-DC1 Virtual PC and DEN-CL1 Virtual PC. Do this well in advance because the virtual computers take time to get started.

In this course, students will use Microsoft Virtual PC 2004 to perform all the hands-on practices. Demonstrate how to use Virtual PC by performing the following procedures:

1. On your desktop, use the **Start** menu to open **Virtual PC 2004**.
2. In **Virtual PC 2004**, click the machine name for DEN-DC1, and then click **Start Up**. Mention that students can run two virtual machines at once using just 1 GB of memory.
3. Show the students that the system tray of the host computer contains an icon for Virtual PC. If Virtual PC is running but the window becomes hidden, you can reactivate the window by double-clicking the icon in the system tray.
Also, you can simply right-click the icon in the system tray to create, start, and configure virtual machines.
4. Show the students that the title bar of each virtual machine indicates which server they are accessing.
5. Switch to DEN-CL1, and then log on by pressing the ALT key on the right side of the keyboard at the same time that you press the DELETE key. Point out that the ALT key on the right side of the keyboard is referred to as both the RIGHT-ALT key and the HOST key in Virtual PC 2004 Help and menus. Log on as **Administrator** with a password of **Pa\$\$w0rd**.
6. Demonstrate Full-Screen mode by pressing RIGHT-ALT+ENTER. Repeat this key sequence to return to a window view.
7. Point out that the DEN-CL1 desktop indicates the word DEN-CL1.
8. Switch to DEN-DC1, and then log on as **Administrator** by pressing RIGHT-ALT+DELETE.
9. Point out that the DEN-DC1 desktop indicates the word DEN-DC1.
10. Use **ipconfig/all** at a command prompt at DEN-DC1, DEN-CL1, and the host computer to show the IP addresses configured for each. Use **ping** to show that DEN-DC1 and DEN-CL1 can ping each other, but cannot ping the host computer or any other computer on the host's network. For informational purposes, the IP address for DEN-DC1 is 10.10.0.2, and the IP address for DEN-CL1 is 10.10.0.20.
11. From DEN-CL1, show how to map drive Z to drive C of the host computer. Point out that students can use this mapped drive to access information stored on the host computer, and that they can create additional mapped drives using the **Settings** option on the **PC** menu of Virtual PC 2004.
12. Close DEN-DC1 and DEN-CL1, and point out that students can either commit or discard changes when closing Virtual PC. Tell students that the lab instructions will prescribe whether they should commit or discard changes each time they close Virtual PC.

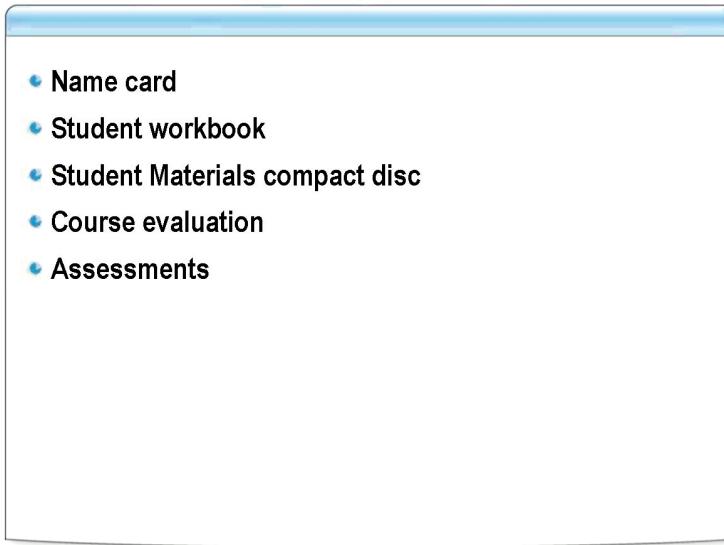
Microsoft Learning	Explain the Microsoft Learning curriculum, and present the list of additional recommended courses. Refer students to the Microsoft Learning Web page at http://www.microsoft.com/learning/ for information about curriculum paths.
Microsoft Learning Product Types	Tell students that Microsoft offers four different learning product types, and that each type has different components and emphasis. Identify the key differences among the types. It is important that students understand the differences among these product types as well as the focus of the product type that they are currently attending. This understanding is particularly important for students who are considering attending a clinic, workshop, or seminar so that their expectations are appropriate prior to registration and attendance.
Microsoft Certified Professional program	Inform students about the Microsoft Certified Professional (MCP) program, any certification exams that are related to this course, and the various certification options.
Multimedia: Job Roles in Today's Information Systems Environment	The multimedia file for this presentation is installed on the instructor computer. To open a multimedia presentation, click the animation icon on the slide for that multimedia presentation. This presentation is included in the prerequisite courses for this course and has probably already been seen by some, if not most, students. Determine whether playing it would be beneficial to your particular audience. If you play the presentation, explain that it helps explain the differences between the systems administrator and the systems engineer job roles. Emphasize that this course focuses on a subset of the systems administrator job role.
Facilities	Explain the class hours, extended building hours for labs, parking, restroom location, meals, phones, message posting, and where smoking is or is not allowed. Let students know whether your facility has Internet access that is available for them to use during class breaks. Also, make sure that the students are aware of the recycling program if one is available.

Introduction

- Name
- Company affiliation
- Title/function
- Job responsibility
- Networking experience
- Windows experience
- Expectations for the course

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Course Materials



- **Name card**
- **Student workbook**
- **Student Materials compact disc**
- **Course evaluation**
- **Assessments**

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The following materials are included with your kit:

- *Name card*. Write your name on both sides of the name card.
- *Student workbook*. The student workbook contains the material covered in class, in addition to the hands-on lab exercises.
- *Student Materials compact disc*. The Student Materials compact disc contains Web page that provides you with links to resources pertaining to this course, including additional readings, review and lab answers, lab files, multimedia presentations, and course-related Web sites.

Note To open the Web page, insert the Student Materials compact disc into the CD-ROM drive, and then in the root directory of the compact disc, double-click **StartCD.exe**.

- *Course evaluation*. Near the end of the course, you will have the opportunity to complete an online evaluation to provide feedback on the course, training facility, and instructor.
- *Assessments*. There are assessments for each lesson, located on the Student Materials compact disc. You can use them as pre-assessments to identify areas of difficulty, or you can use them as post-assessments to validate learning.

To provide additional comments or feedback on the course, send e-mail to support@mscourseware.com. To inquire about the Microsoft® Certified Professional program, send e-mail to mcphelp@microsoft.com.

Prerequisites

- A+ certification or equivalent knowledge and skills
- Completion of Course 2274, *Managing a Microsoft Windows Server 2003 Environment*, or equivalent knowledge and skills

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This course requires that you meet the following prerequisites:

- A+ certification or equivalent knowledge and skills.
- Completion of Course 2274: *Managing a Microsoft® Windows Server™ 2003 Environment*, or equivalent knowledge and skills.

Course Outline

- **Module 1: Reviewing the Suite of TCP/IP Protocols**
- **Module 2: Assigning IP Addresses in a Multiple-Subnet Network**
- **Module 3: Configuring a Client IP Address**
- **Module 4: Configuring a Client for Name Resolution**
- **Module 5: Isolating Common Connectivity Issues**

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Module 1, “Reviewing the Suite of TCP/IP Protocols,” reviews the suite of Transmission Control Protocol/Internet Protocols (TCP/IP) protocols. By understanding the function of each protocol and how the protocols relate to each other, you have the context for understanding network administration tasks and network troubleshooting.

Module 2, “Assigning IP Addresses in a Multiple-Subnet Network,” explains how to construct and assign IP addresses and how to isolate addressing issues associated with the IP routing process.

Module 3, “Configuring a Client IP Address,” discusses how to configure an Internet Protocol (IP) address for a client computer running Windows Server 2003 on a network running the TCP/IP protocol suite. System administrators must be able to configure a client to use a static IP address and configure a client to obtain an IP address automatically.

Module 4, “Configuring a Client for Name Resolution,” discusses how Network Basic Input/Output System (NetBIOS) names are resolved into IP addresses. To ensure that clients can communicate on a TCP/IP network, system administrators must know how to configure clients to use the various types of name resolution mechanisms provided by the Microsoft Windows® operating systems.

Module 5, “Isolating Common Connectivity Issues,” describes the most common types of connectivity issues and how to isolate them by using a variety of network utilities.

Setup

- The virtual environment is configured as one Windows Server 2003 domain: Contoso.msft
- DEN-DC1 is the domain controller
- DEN-SRV1 is a member server
- DEN-CL1 is a workstation running Windows XP Professional, Service Pack 2
- Server computers are running Windows Server 2003, Enterprise Edition, Service Pack 1

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Classroom setup

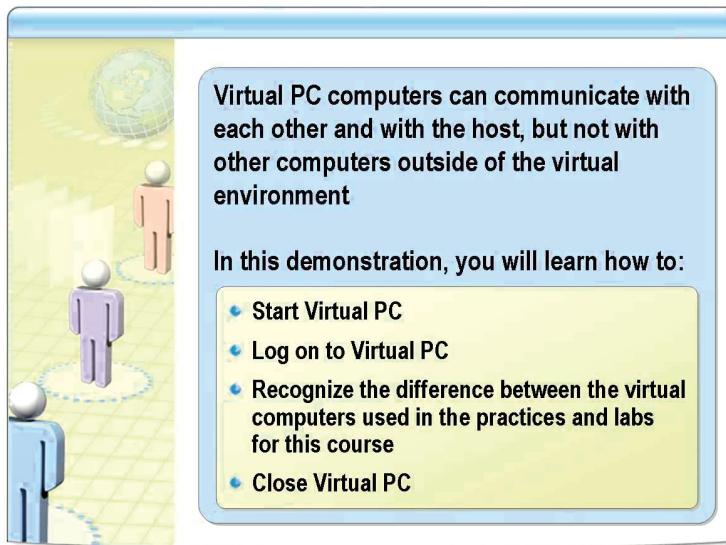
Each student machine has Windows XP Professional installed and is running Microsoft Virtual PC 2004.

The name of the domain is contoso.msft. The domain is named after Contoso, Ltd., a fictitious company that has offices worldwide.

The domain controller is named DEN-DC1, and there is a member server named DEN-SRV1. Both computers are running Windows Server 2003 Enterprise Edition with Service Pack 1 (SP1). The workstation computer is named DEN-CL1 and is running Windows XP Professional with Service Pack 2 (SP2).

The domain has been populated with users, groups, and computer accounts for each administrator to manage.

Demonstration: Using Microsoft Virtual PC



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In this demonstration, your instructor will help familiarize you with the Virtual PC environment in which you will work to complete the practices and labs in this course. You will learn:

- How to open Virtual PC.
- How to start Virtual PC.
- How to log on to Virtual PC.
- How to switch between full screen and window modes.
- How to tell the difference between the virtual machines that are used in the practices for this course.
- That the virtual machines can communicate with each other and with the host, but they cannot communicate with other computers that are outside of the virtual environment. (For example, no Internet access is available from the virtual environment.)
- How to close Virtual PC.

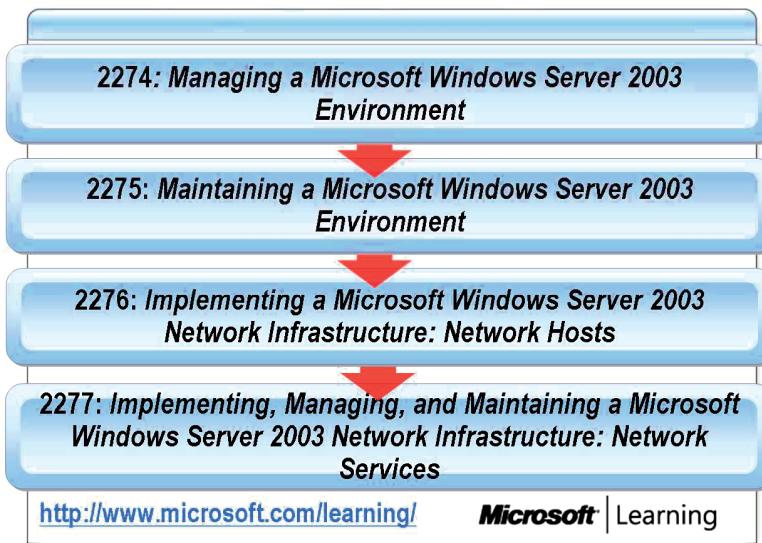
Keyboard shortcuts

While working in the Virtual PC environment, you may find it helpful to use keyboard shortcuts. All Virtual PC shortcuts include a key that is referred to as the HOST key or the RIGHT-ALT key. By default, the HOST key is the ALT key on the right side of your keyboard. Some useful shortcuts include:

- ALT+DELETE to log on to the Virtual PC
- ALT+ENTER to switch between full screen mode and window modes
- ALT+RIGHT ARROW to display the next Virtual PC

For more information about Virtual PC, see Virtual PC Help.

Microsoft Learning



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Microsoft Learning develops Official Microsoft Learning Products for computer professionals who design, develop, support, implement, or manage solutions by using Microsoft products and technologies. These learning products provide comprehensive, skills-based training in instructor-led and online formats.

Additional recommended learning products

Each learning product relates in some way to other learning products. A related product may be a prerequisite; a follow-up course, clinic, or workshop in a recommended series, or a learning product that offers additional training.

It is recommended that you take the following courses in this order:

2274: *Managing a Microsoft Windows Server 2003 Environment*

2275: *Maintaining a Microsoft Windows Server 2003 Environment*

2276: *Implementing a Microsoft Windows Server 2003 Network Infrastructure: Network Hosts*

2277: *Implementing, Managing, and Maintaining a Microsoft Windows Server 2003 Network Infrastructure: Network Services*

Other related learning products may become available in the future, so for up-to-date information about recommended learning products, visit the Microsoft Learning Web site.

Microsoft Learning information

For more information, visit the Microsoft Learning Web site at <http://www.microsoft.com/learning/>.

Microsoft Learning Product Types



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Microsoft Learning offers four types of instructor-led products type. Each is specific to a particular audience type and level of experience. The different product types also tend to suit different learning styles. These types are as follows:

- Microsoft Official Courses are for information technology (IT) professionals and developers who are new to a particular product or technology and for experienced individuals who prefer to learn in a traditional classroom format. Courses provide a relevant and guided learning experience that combines lecture and practice to deliver thorough coverage of a Microsoft product or technology. Courses are designed to address the needs of learners engaged in planning, design, implementation, management, and support phases of the technology adoption lifecycle. They provide detailed information by focusing on concepts and principles, reference content, and in-depth, hands-on lab activities to ensure knowledge transfer. Typically, the content of a course is broad, addressing a wide range of tasks necessary for the job role.
- Microsoft Official Workshops are for knowledgeable IT professionals and developers who learn best by doing and exploring. Workshops provide a hands-on learning experience in which participants use Microsoft products in a safe and collaborative environment based on real-world scenarios. Workshops are the learning products where students learn by doing through scenario and through troubleshooting hands-on labs, targeted reviews, information resources, and best practices, with instructor facilitation.
- Microsoft Official Clinics are for IT professionals, developers and technical decision makers. Clinics offer a detailed “how to” presentation that describes the features and functionality of an existing or new Microsoft product or technology, and that showcases product demonstrations and solutions. Clinics focus on how specific features will solve business problems.

- Microsoft Official Seminars are for business decision makers. Through featured business scenarios, case studies, and success stories, seminars provide a dynamic presentation of early and relevant information on Microsoft products and technology solutions that enable decision makers to make critical business decisions. Microsoft Official Seminars are concise, engaging, direct-from-the-source learning products that show how emerging Microsoft products and technologies help our customers serve their customers.

Microsoft Certified Professional Program

Exam number and title	Core exam for the following track	Elective exam for the following track
70-291: <i>Implementing, Managing, and Maintaining a Microsoft Windows Server 2003 Network Infrastructure</i>	MCSA	n/a



<http://www.microsoft.com/learning/>

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Microsoft Learning offers a variety of certification credentials for developers and IT professionals. The Microsoft Certified Professional (MCP) program is the leading certification program for validating your experience and skills, keeping you competitive in today's changing business environment.

Related certification exams

This course helps students to prepare for Exam 70-291: *Implementing, Managing, and Maintaining a Microsoft Windows Server 2003 Network Infrastructure*.

Exam 70-291 is the core exam for the Windows Server 2003 Microsoft Certified Systems Administrator (MCSA) certification.

MCP certifications

The MCP program includes the following certifications:

- MCDST on Windows XP

The Microsoft Certified Desktop Support Technician (MCDST) certification is designed for professionals who successfully support and educate end users and troubleshoot operating system and application issues on desktop computers running the Windows operating system.

- MCSA on Microsoft Windows Server 2003

The Microsoft Certified Systems Administrator (MCSA) certification is designed for professionals who implement, manage, and troubleshoot existing network and system environments based on the Windows Server 2003 platform. Implementation responsibilities include installing and configuring parts of systems. Management responsibilities include administering and supporting systems.

- MCSE on Windows Server 2003

The Microsoft Certified Systems Engineer (MCSE) credential is the premier certification for professionals who analyze business requirements and design and implement infrastructure for business solutions based on the Windows Server 2003 platform. Implementation responsibilities include installing, configuring, and troubleshooting network systems.

- MCAD

The Microsoft Certified Application Developer (MCAD) for Microsoft .NET credential is appropriate for professionals who use Microsoft technologies to develop and maintain department-level applications, components, Web or desktop clients, or back-end data services, or who work in teams developing enterprise applications. The credential covers job tasks ranging from developing to deploying and maintaining these solutions.

- MCSD

The Microsoft Certified Solution Developer (MCSD) credential is the premier certification for professionals who design and develop leading-edge business solutions with Microsoft development tools, technologies, platforms, and the Microsoft Windows DNA architecture. The types of applications MCSDs can develop include desktop applications and multi-user, Web-based, N-tier, and transaction-based applications. The credential covers job tasks ranging from analyzing business requirements to maintaining solutions.

- MCDBA on Microsoft SQL Server™ 2000

The Microsoft Certified Database Administrator (MCDBA) credential is the premier certification for professionals who implement and administer SQL Server databases. The certification is appropriate for individuals who derive physical database designs, develop logical data models, create physical databases, use Transact-SQL to create data services, manage and maintain databases, configure and manage security, monitor and optimize databases, and install and configure SQL Server.

- MCP

The Microsoft Certified Professional (MCP) credential is for individuals who have the skills to successfully implement a Microsoft product or technology as part of a business solution in an organization. Hands-on experience with the product is necessary to successfully achieve certification.

- MCT

Microsoft Certified Trainers (MCTs) demonstrate the instructional and technical skills that qualify them to deliver Official Microsoft Learning Products through a Microsoft Certified Partner for Learning Solutions.

Certification requirements

Requirements differ for each certification category and are specific to the products and job functions addressed by the certification. To become a Microsoft Certified Professional, you must pass rigorous certification exams that provide a valid and reliable measure of technical proficiency and expertise.

For More Information See the Microsoft Learning Web site at <http://www.microsoft.com/learning/>.

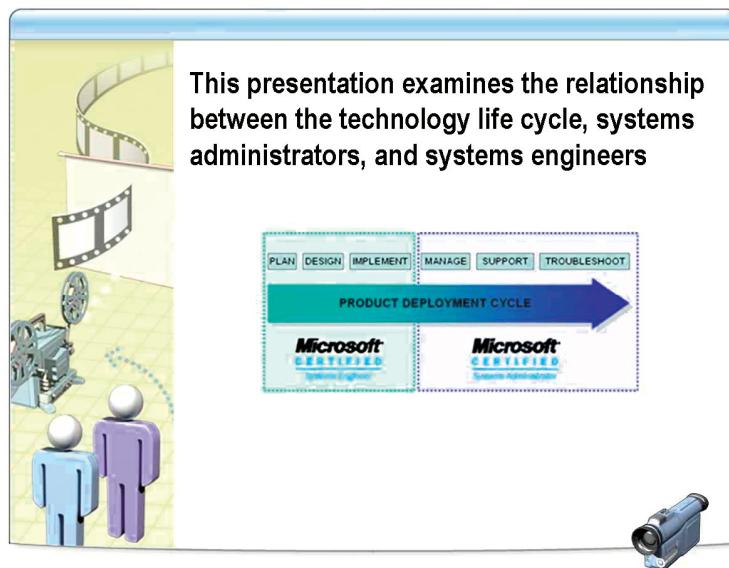
You can also send e-mail to mcphelp@microsoft.com if you have specific certification questions.

**Acquiring the skills
tested by an MCP exam**

Official Microsoft Learning Products can help you develop the skills that you need to do your job. They also complement the experience that you gain while working with Microsoft products and technologies. However, no one-to-one correlation exists between Official Microsoft Learning Products and MCP exams. Microsoft does not expect or intend for the courses to be the sole preparation method for passing MCP exams. Practical product knowledge and experience is also necessary to pass MCP exams.

To help prepare for MCP exams, use the preparation guides available for each exam. Each Exam Preparation Guide contains exam-specific information such as a list of topics on which you will be tested. These guides are available on the Microsoft Learning Web site at <http://www.microsoft.com/learning/>.

Multimedia: Job Roles in Today's Information Systems Environment



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File location

To view the *Job Roles in Today's Information Systems Environment* presentation, open the Web page on the Student Materials compact disc, click **Multimedia**, and then click the title of the presentation. Do not open this presentation unless your instructor tells you to do so.

Facilities

A collage of icons representing various facilities and services. It includes a computer monitor and keyboard, a building, a clock, a telephone, a person sitting at a desk with a coffee cup, and a roll of paper.

- Class hours
- Building hours
- Parking
- Restrooms
- Meals
- Phones
- Messages
- Smoking
- Recycling

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