Network Systems IV
Course of Study for I294

Description
The course of study for I294 outlines the sequence of learning activities to help you develop competence in the subject area of Network Systems IV. Your competence will be assessed as you complete I294 (MCSE Exam 70-294). This course of study may take up to nine weeks to complete depending on your educational background, your work experience, and the time that you are able to dedicate to your studies. Consult with your mentor if you wish to accelerate through this course of study. It is important that you follow the activities sequentially as you prepare for your assessment. This tool is also designed to help you become an independent learner by providing multiple learning methods.

Introduction
Welcome! My name is Jason Jia, the course of study mentor for I294 Network Systems IV. As one of the primary supporting resources helping you learn and pass the MCSE Server 2003 Exam 70-293, I will do my best to provide assistance in your studies whenever needed. The following is my contact information and my office hours for your reference:

Course of Study Mentor:  Jason Jia
E-mail: jjia@wgu.edu
Telephone:  866-895-9660 ext. 5148
Office Hours......................... Monday, 8:30am – 5:00pm, Eastern Time
                          Tuesday, 8:30am – 5:00pm, Eastern Time
                          Wednesday, 8:30am – 5:00pm, Eastern Time

Are you currently an information technology professional? Are you planning to become an information professional in the future? Perhaps you simply want to become an expert in the Windows Server 2003 operating system? The I294 (Network Systems IV) course provides you the opportunity to learn and master the Windows Server 2003 Professional.

Indeed, Microsoft Windows Server 2003 is one of the most widely used Windows Server operating systems in different industries today. This operating system provides robust functions of computing that no other previous Windows server operating systems, such as Windows NT Server 4.0 or Windows 2000 Server/Advance Server, has ever provided. Successfully mastering Windows Server 2003 provides a number of benefits, including the opportunity to become an expert in the field of information technology and the ability to improve productivity through installation, configuration, and troubleshooting computers running the server operating system as well as planning, implementing, troubleshooting, and maintaining a Microsoft Windows Server 2003 network environment.

If you have prior experiences with previous Microsoft server operating systems, including Windows NT Server 4.0 and/or Windows 2000 Servers/Advance Servers, it will be relatively easy for you to command Windows Server 2003 as it inherits a lot of attributes from those previous operating systems. According to this course of study, the total estimated time needed for studying and getting prepared for the I294 (MCSE Server 2003 Exam 70-294) is about eight weeks. Confidence, dedication, diligence, and perseverance are the key ingredients for successfully passing your I294 assessment (MCSE Server 2003 Exam 70-294).
Once you successfully pass your MCSE Server 70-294, you will become a Microsoft Certified Professional (MCP)—a highly reputable professional certification in the field of information technology. This certificate not only represents your achievement in successfully mastering the Windows Server 2003 operating system but also serves as a stepping stone for you to enter the IT industry if you are not currently an IT professional. If you are currently an IT professional, this certificate may potentially help you obtain a promotion by your current employer or even an increase in your salary. Most important of all, it will help you become more successful in your lifelong career in one way or another.

This course of study will serve as an effective tool in helping you successfully command the Windows Server 2003 operating system and pass your MCSE Server 2003 Exam 70-294 the first time you take it at a Prometric testing center. Please follow the weekly activities as guidelines in your studies of I294 so that you can maximize your learning outcomes. There are four competencies covered by the I294 course of study. They are:

**Competency 410.2.1: Planning & Implementing Active Directory Infrastructure**
The graduate can plan and implement an active directory infrastructure.

**Competency 410.2.2: Managing Users, Computers & Groups**
The graduate can manage users, computers, and groups.

**Competency 410.2.3: Managing & Maintaining Active Directory Infrastructure**
The graduate can manage and maintain an active directory infrastructure.

**Competency 410.2.4: Planning & Implementing Strategies**
The graduate can plan and implement user, computer, and group strategies.

**Competency 410.2.5: Planning & Implementing Group Policy**
The graduate can plan and implement group policy.

The textbook chapters assigned in this course cover each of these competencies and the competencies covered by the I294 (Microsoft 70-294) assessment (Microsoft refers to them as “skills being measured”).

The assessment is comprised of 55 questions, randomly selected from a pool of questions that must be completed between one and three hours, with a score of at least 700 out of 1000 total points. Once you submit proof of your passing score (i.e., mail/fax your score report to WGU), WGU will record your result in your AAP.

**Learning Resources:**


IT Academy e-Learning content for I294 (http://itacademy.microsofttelelearning.com)
Collection 2279: Planning, Implementing, and Maintaining a Microsoft Windows Server 2003 Active Directory Infrastructure includes Courses with labs: 4863, 4864, 4865, 4866, 4867, 4868, 4869, 4870, 4871, and 4872.
Week 1
Preparing for Success
To successfully complete I294, you need the appropriate resources to aid your learning. You should also prepare a calendar to schedule time devoted to your studies. Share your calendar with family and friends so they are aware of your obligations.

Acquire Learning Resources
Arrange to obtain the learning resources listed below so there will be no delays in your studies. These items are essential for you, as this document will guide you week by week in the use of these materials. Some of these items must be shipped to you, so be sure that your mailing address information is current. If you click your name on your AAP, you can check your contact information.

☐ Obtain Your Textbook

This is the required learning resource for Implementing Directory Services (I294). All required readings for I294, including the textbook, are available online at SkillSoft (http://wgu.skillport.com/SkillPortFE/login/login.cfm) free for you to access whenever you need them. Please follow this course of study and complete the required readings, hands-on practices, and questions and answers accordingly.

If you wish to purchase a hard copy of this textbook, you may also choose to buy a hard copy from the WGU Bookstore (EdMap) or another bookstore at your own cost. Please use the ISBN number(s) to make sure that you order the correct edition. The hard copy comes with two CDs: a 180-day trial version of Windows Server 2003 CD and a practice test CD. To access the learning resource online, please enroll through the learning resource tab of your AAP.

☐ Access IT Academy
URL: http://itacademy.microsofttelearning.com

Access the Microsoft e-learning content for I294 through the IT Academy website.

Enter the access code in the text field and confirm that you have read the license agreement. The access code for the I294 e-learning content:

8767-WAFV1-3758

You will need to sign in with a Windows Live ID. If you have a MSN Hotmail, MSN Messenger or Passport account, this is your Windows Live ID. If you do not already have one of these types of accounts, follow the instructions to sign up with a free Windows Live ID.

When you get logged in you will see your e-learning content; which you will begin in an upcoming activity:
• **Collection 2279:** Planning, Implementing, and Maintaining a Microsoft Windows Server 2003 Active Directory Infrastructure includes Courses with labs: 4863, 4864, 4865, 4866, 4867, 4868, 4869, 4870, 4871, and 4872.

## Access SkillSoft Modules

Make sure that you can access your SkillSoft account, since there is a Windows Server 2003 installation review that you will need to work through in Week 2 of this course of study. This requires the same log-on procedure into WGU’s Skillport portal as that of accessing your textbook (above). Visit [http://wgu.skillport.com/SkillPortFE/login/login.cfm](http://wgu.skillport.com/SkillPortFE/login/login.cfm) to log in. If you have any difficulty with your account or signing on, please contact the Learning Resources Department at learning@wgu.edu or 801/993-1334 for assistance.

## Prepare for Your Studies

You need to also make sure that you have the right setup of computer equipment and software to get started. You need to be able to access the online learning community that supports this course of study, and you need to know where to go to get help should you need additional support with your learning.

## Hands-on Labs

It is highly recommended that you have a spare computer with Windows Server 2003 installed for hands-on practice purposes. The hands-on labs are incorporated throughout the MCSA/MCSE Self-Paced Study Kit (Exam 70-294). Each chapter of the book provides a troubleshooting lab. These labs are designed to help you roll up your sleeves and dive into the content. Many of these labs will have you look at settings on your home computer and often times make changes to them. Be sure you are careful to backup your settings before making any changes to your system.

You can conduct hands-on practice in the following ways:

1. You can use your current PC or laptop that runs Windows Server 2003 and do the hands-on practices based on the instructions of the practices associated with each of the activities in chapters in this course of study. It is highly recommended that you back up your data on a daily basis in case your PC or laptop malfunctions due to configurations resulting from those hands-on practices. You should also have your CD of Windows Server 2003 (not the 180-day trial version) handy in case you need to reinstall the Windows Server 2003 on your PC or laptop whenever necessary.

   *Note: Did you know that as a student at WGU you qualify for free Microsoft Software related to your degree program? You can download free software through MSDN AA. All students are enrolled in this program and you should have received an email with access instructions. If you have not received this email or cannot remember your login information, please contact your mentor.*

2. Another alternative is to have a spare PC or laptop ready, if applicable, so that you can conduct the hands-on practices after installing Windows Server 2003. This option is most favorable as you don’t have to worry about losing your data and time.
3. Finally, you can consider partitioning your current PC if your current PC/laptop is running Windows NT/2000/XP/Vista and if you have the software to help you partition your current hard drive on your PC/laptop. This option allows you avoid buying additional hardware (e.g., PC/laptop and/or hard drives) in order to conduct hands-on practices in this course of study. Please note that you still need to back up your data on a daily basis.

4. IT Academy includes resources and virtual labs that will provide you with hands on activities.

☐ Participate and Contribute to the Online Learning Community
Participation in and contribution to the online learning community, the Network Principle Learning Community, provides the advantage of sharing knowledge associated with Windows Server 2003 operating systems while also allowing all participants in the learning community the opportunity to freely exchange their learning experiences associated with Windows Server 2003. You are strongly encouraged to be an active participant in the Network Principle Learning Community by viewing and/or contributing to the discussions in discussion threads or blogs.

☐ Getting Help with Your Learning
As you are moving through the textbook, we strongly encourage you to complete the questions at the end of each chapter. If you have difficulty in answering questions or completing any of the tasks in each activity with confidence, we recommend you try one or more of the following:
- Look in the learning community to see if you can find similar questions posed by others.
- Reach out to your peers for assistance if possible.
- Contact your course of study mentor directly for help (please see the introduction of this course of study for contact information).

Planning and Implementing an Active Directory Infrastructure (Part I)
This section provides an overview of planning and implementing an active directory infrastructure within a Microsoft Windows Server 2003 network environment.

By understanding the fundamental concepts of Active Directory and its functions within a Microsoft Windows Server 2003 environment, you will be able to implement an Active Directory service forest and domain structure, create the forest root domain, install and configure an Active Directory domain controller, plan for flexible operations master role placement, plan for business continuity of operations master roles, manage an Active Directory forest and domain structure, troubleshoot Active Directory, and diagnose and resolve issues related to operations master role failures.

Competency 410.2.1: Planning & Implementing Active Directory Infrastructure
The graduate can plan and implement an active directory infrastructure.

Introduction to Active Directory
This topic is associated with chapter 1 of the textbook. In this section, you will learn how to plan and implement a strategy for placing global-level servers for directory services, planning for business continuity of operation master roles, installing and configuring a domain-level server for directory services, as well as implementing and configuring directory services topology.
Active Directory Overview
Read lesson 1 (pp. 4–19) and then complete the associated hands-on practice and lesson review at the end of lesson 1. Consider the following questions as you work through the lesson:

- Why do you need to deploy a directory service?
- Why there is a need to deploy Active Directory?
- What is primary purpose of deploying the schema in Active Directory?
- What are the components of Active Directory?
- What do Active Directory components consist of?
- Why should there be the global catalog in Active Directory?

Complete the following lesson review before moving to the next lesson:
- Lesson review (p. 1-19)

Understanding Active Directory Concepts and Administration Tasks
Read lesson 2 (pp. 21–34) and then complete the associated hands-on practice and lesson review at the end of lesson 2. Consider the following questions as you work through the lesson:

- What does Active Directory replication do?
- What are the security relationships between domains in a tree (trusts)?
- What are the components of change and configuration management?
- Why do you need Group Policy?
- How can you integrate DNS into Active Directory?
- What tasks are required for Active Directory administration?

Complete the following lesson review before moving to the next lesson:
- Lesson review (p. 1-34)

Planning the Active Directory Infrastructure Design
Read lesson 3 (pp. 36–41) and then complete the associated hands-on practice and lesson review at the end of lesson 3. Consider the following questions as you work through the lesson:

- What can an Active Directory infrastructure design do?
- How can you name the resource necessary to create an Active Directory infrastructure design?
- What are the steps necessary in the Active Directory infrastructure design process?

Complete the following lesson review before moving to the next lesson:
- Lesson review (p. 1-41)

Summary and Review
Complete the following:
- Questions and Answers (p. 1-45)

Installing and Configuring Active Directory
This topic is associated with chapter 2 of the textbook. This topic focuses on the skills necessary for implementing an Active Directory service forest and domain structure,
creating the forest root domain, and installing and configuring an Active Directory domain controller.

☐ Preparing for Active Directory Installation
Read lesson 1 (pp. 3–16) and then complete the associated hands-on practice and lesson review at the end of lesson 1. Consider the following questions as you work through the lesson:

• What should you say if your client asks you about Active Directory installation prerequisites?

Complete the following hands-on practices and lesson reviews before moving to the next lesson:

• Hands-on Exercise 1: Configuring a Static IP Address and Preferred DNS Server—Configuring a Static IP Address and Preferred DNS Server (p. 2–15)
• Lesson review (p. 2-16)

☐ Installing and Removing Active Directory
Read lesson 2 (pp. 18–36) and then complete the associated hands-on practice and lesson review at the end of lesson 2. Consider the following questions as you work through the lesson:

• What are the predefined processes in installing Active Directory using the Active Directory Installation Wizard?
• How can you install Active Directory using an unattended installation?
• What should you do in order to install Active Directory using the network or backup media?
• Is there a different approach in installing Active Directory using the Configure Your Server wizard?
• How should you remove Active Directory?

Complete the following hands-on practices and lesson review before moving to the next lesson:

• Hands-on Exercise 1: Installing and Removing Active Directory—Installing Active Directory (p. 2-33)
• Hands-on Exercise 2: Fixing a DNS Configuration and Installing Active Directory—Fixing a DNS Configuration (p. 2-34)
• Hands-on Exercise 3: Fixing a DNS Configuration and Installing Active Directory—Removing Active Directory from a Domain Controller (p. 2-34)
• Lesson review (p. 2-36)

☐ Verifying Active Directory Installation
Read lesson 3 (pp. 38–43) and then complete the associated hands-on practice and lesson review at the end of lesson 3. Consider the following questions as you work through the lesson:

• What is needed in order to verify Active Directory installation?

Complete the following hands-on practices and lesson review before moving to the next lesson:

• Hands-on Exercise 1: Verifying Active Directory Installation—To Verify Active Directory Installation (p. 2-42)
• Lesson review (p. 2-43)
Troubleshooting Active Directory Installation and Removal

Read lesson 4 (pp. 44–54) and then complete the associated hands-on practice and lesson review at the end of lesson 4. Consider the following questions as you work through the lesson:

- What are the proper procedures in troubleshooting the installation and removal of Active Directory?

Complete the following hands-on practices and lesson review before moving to the next lesson:

- Hands-on Exercise 1: Using Active Directory Installation Troubleshooting Tools (p. 2-54)
- Lesson review (p. 2-54)

Summary and Review

Complete the following:

- Case Scenario Exercise (p. 2-55)
- Troubleshooting Lab (p. 2-57)
- Questions and Answers (p. 2-62)

IT Academy e-Learning

URL: http://itacademy.microsoftelearning.com

Access the Microsoft e-learning content for I294 through the IT Academy website.

Begin working through the course materials and lab for Course 4863: Introduction to Active Directory® Infrastructure in a Microsoft® Windows Server™ 2003 Environment

This resource was created by Microsoft and will help you prepare for your Microsoft certification exam.

Week 2

Planning and Implementing an Active Directory Infrastructure (Part II)

This section provides an overview of planning and implementing an active directory infrastructure within a Microsoft Windows Server 2003 network environment.

By understanding the fundamental concepts of Active Directory and its functions within a Microsoft Windows Server 2003 environment, you will be able to implement an Active Directory service forest and domain structure, create the forest root domain, install and configure an Active Directory domain controller, plan for flexible operations master role placement, plan for business continuity of operations master roles, manage an Active Directory forest and domain structure, troubleshoot Active Directory, and diagnose and resolve issues related to operations master role failures.
Competency 410.2.1: Planning & Implementing Active Directory Infrastructure
The graduate can plan and implement an active directory infrastructure.

**Installing and Managing Domains, Trees, and Forests**
This topic is associated with chapter 4 of the textbook. This topic focuses on the skills in planning and implementing an Active Directory infrastructure, including planning a strategy for placing global catalog servers, network traffic considerations, universal group membership caching, placement of operation masters roles, maintaining business continuity, implementation of the Active Directory and domain structure, implementation of Active Directory site topology, and delegation of administrative tasks.

☐ **Creating Multiple Domains, Trees, and Forests**
Read lesson 1 (pp. 3–16) and then complete the associated hands-on practice and lesson review at the end of lesson 1. Consider the following questions as you work through the lesson:

- How can you possibly create additional domains, trees, and forests?
- Why should you use multiple domains, trees, and forests in a client’s site?
- What is the rationale behind multiple domains, trees, and forests?

Complete the following hands-on practices and lesson review before moving to the next lesson:

- Hands-on Exercise 1: Creating a Child Domain—Creating a Child Domain (p. 4-16)
- Lesson review (p. 4-16)

☐ **Renaming and Restructuring Domains and Renaming Domain Controllers**
Read lesson 2 (pp. 18–21) and then complete the associated hands-on practice and lesson review at the end of lesson 2. Consider the following questions as you work through the lesson:

- What are a few examples of tools that can be used to rename and restructure a domain?
- How should you rename a domain controller if requested?

Complete the following hands-on practices and lesson review before moving to the next lesson:

- Hands-on Exercise 1: Renaming a Domain Controller—Renaming a Domain Controller (p. 4-21)
- Lesson review (p. 4-21)

☐ **Managing Operations Master Roles**
Read lesson 3 (pp. 23–37) and then complete the associated hands-on practice and lesson review at the end of lesson 3. Consider the following questions as you work through the lesson:

- What are the forest-wide operations master roles?
- What is the domain-wide operations master role?
- Where should the operations master be located?
- Is there a way to view the operations master role assignment?
- How can you transfer the operations master role assignment?
- Why is there a need to seize the operations master role assignment?
Complete the following hands-on practices and lesson review before moving to the next lesson:

- Hands-on Exercise 1: Viewing and Transferring Operations Master Role—Viewing Operations Master Role Assignments (p. 4-37)
- Hands-on Exercise 1: Viewing and Transferring Operations Master Role—Transferring an Operations Master Role Assignment (p. 4-37)
- Lesson review (p. 4-37)

☐ Managing Trust Relationships

Read lesson 4 (pp. 39–68) and then complete the associated hands-on practice and lesson review at the end of lesson 4. Consider the following questions as you work through the lesson:

- What are the correct procedures in naming the trust protocols used in Windows Server 2003?
- What kind of trust types are used in Windows Server 2003?
- How should you explain the process of creating a shortcut, realm, external, or forest trust?
- What should you do if you want to create shortcut, realm, external, and forest trusts?
- What are the considerations if you want to administer shortcut, realm, external, and forest trusts?

Complete the following hands-on practices and lesson review before moving to the next lesson:

- Hands-on Exercise 1: Managing Trust Relationships—Creating an Additional Forest (p. 4-67)
- Lesson review (p. 4-68)

☐ Summary and Review

Complete the following:

- Troubleshooting Lab (p. 4-69)
- Case Scenario Exercise (p. 4-71)
- Questions and Answers (p. 4-75)

☐ IT Academy e-Learning

URL: http://itacademy.microsofttlearning.com

Access the Microsoft e-learning content for I294 through the IT Academy website.

Begin working through the course materials and lab for Course 4864: Implementing a Windows Server 2003 Active Directory Forest and Domain Structure.

Begin working through the course materials and lab for Course 4871: Managing Operations Masters in a Microsoft® Windows Server™ 2003 Active Directory® Environment.

These resources were created by Microsoft and will help you prepare for your Microsoft certification exam.
Need more? Here is a Great Review

SkillSoft provides an excellent way to review the Windows Server 2003 planning and maintaining network infrastructure areas you may have struggled with in the textbook. This course module is located in the “My Plan” area of your SkillSoft account. Navigate to “My Plan > IT Undergraduate > AEV1 > 70-294: Planning, Implementing, and Maintaining a Microsoft Windows Server 2003 Active Directory Infrastructure, Second Edition.” Start and review the “Introduction to Active Directory” lesson. Three topics are covered in individual instructional modules, each of which includes exercises and a self-assessment: Active Directory Overview, Understanding Active Directory Concepts and Administration Tasks, and Planning the Active Directory Infrastructure Design.

Remember, if you are feeling confused after completing all the activities for this topic area, please visit the Networking Principles Learning Community or contact the academic mentor directly.

Week 3

Managing and Maintaining an Active Directory Infrastructure

This section provides an overview of planning, implementing, and managing a directory service root structure, domain structure, and a directory service site, as well as monitoring directory replication and file replication services.

By understanding the functional concepts related to administering Active Directory, you will learn about how to plan, implement, and maintain directory services, including root structure, domain structure, trust relationships, schema modifications, and replication schedules. This section also covers monitoring directory replication and file replication in addition to troubleshooting directory service issues.

Competency 410.2.3: Managing & Maintaining Active Directory Infrastructure

The graduate can manage and maintain an active directory infrastructure.

Administering Active Directory

This topic is associated with chapter 3 of the textbook. This topic focuses on the skills in setting an Active Directory forest and domain functional level based on requirements, managing schema modifications, adding or removing a UPN suffix, restoring Active Directory directory service, performing an authoritative restore operation, performing a non-authoritative restore operation, and diagnosing and resolving issues related to the Active Directory database.

Using Active Directory Administration Tools

Read lesson 1 (pp. 3–15) and then complete the associated hands-on practice and lesson review at the end of lesson 1. Consider the following questions as you work through the lesson:

- What are the roles and responsibilities of the Active Directory Users and Computers administrative console?
- What is the purpose of using the Active Directory Sites and Services administrative console?
• Why do you need to use the Active Directory Domains and Trusts administrative console?
• What is the primary application of the Active Directory Schema snap-in?
• How can you change the domain functional level?
• Is there an effective way to change the forest functional level?
• How can you use the Windows support tools that pertain to Active Directory?

Complete the following hands-on practices and lesson review before moving to the next lesson:
• Hands-on Exercise 1: Viewing Active Directory Administrative Tools—Viewing Active Directory Administrative Consoles (p. 3-14)
• Hands-on Exercise 2: Viewing Active Directory Administrative Tools—Installing and Viewing the Active Directory Schema Snap-in (p. 3-15)
• Hands-on Exercise 1: Viewing Active Directory Administrative Tools—Installing and Viewing the Active Directory-Specific Windows Support Tools (p. 3-15)
• Lesson review (p. 3-15)

☐ Customizing MMCs
Read lesson 2 (pp. 18–27) and then complete the associated hands-on practice and lesson review at the end of lesson 2. Consider the following questions as you work through the lesson:
• Do you know how to create customized MMCs?
• Can you demonstrate to a client how to modify customized MMCs?

Complete the following hands-on practices and lesson review before moving to the next lesson:
• Hands-on Exercise 1: Customizing an MMC—Creating a Custom MMC (p. 3-27)
• Hands-on Exercise 2: Customizing an MMC—Adding a Snap-In to an Existing MMC (p. 3-27)
• Hands-on Exercise 3: Customizing an MMC—Removing an Extension to a Snap-In on an Existing MMC (p. 3-28)
• Lesson review (p. 3-28)

☐ Backing Up Active Directory
Read lesson 3 (pp. 30–42) and then complete the associated hands-on practice and lesson review at the end of lesson 3. Consider the following questions as you work through the lesson:
• Do you have the knowledge and skills necessary for backing up Active Directory data at a local computer?
• Do you know the steps necessary for scheduling and running an unattended backup of Active Directory data?
• Is there an effective way to delete an unattended backup of Active Directory data?

Complete the following hands-on practices and lesson review before moving to the next lesson:
• Hands-on Exercise 1: Backing Up Active Directory—Creating an Active Directory Backup (p. 3-41)
• Hands-on Exercise 2: Backing Up Active Directory—Scheduling an Active Directory Backup Operation (p. 3-41)
• Hands-on Exercise 3: Backing Up Active Directory—Deleting a Scheduled Active Directory Backup Operation (p. 3-41)
• Lesson review (p. 3-42)

☐ Restoring Active Directory
Read lesson 4 (pp. 44–53) and then complete the associated hands-on practice and lesson review at the end of lesson 4. Consider the following questions as you work through the lesson:
  • What is the difference between non-authoritative and authoritative restore?
  • What is the step-by-step process in restoring Active Directory?

Complete the following hands-on practices and lesson review before moving to the next lesson:
  • Hands-on Exercise 1: Restoring Active Directory—Restoring Active Directory (p. 3-53)
  • Lesson review (p. 3-53)

☐ Summary and Review
Complete the following:
  • Case Scenario Exercise (p. 3-55)
  • Troubleshooting Lab (p. 3-56)
  • Questions and Answers (p. 3-62)

Configuring Sites and Managing Replications
This topic is associated with chapter 5 of the textbook. This topic introduces skills necessary for planning a strategy for placing global catalog servers, evaluating network traffic considerations when placing global catalog servers, evaluating the need to enable universal group membership caching, creating and configuring application directory partitions, implementing an Active Directory site topology, configuring site links, configuring preferred bridgehead servers, managing an Active Directory site, configuring replication schedules, configuring site link costs, configuring site boundaries, monitoring Active Directory replication failures, monitoring Active Directory replication, troubleshooting Active Directory, and diagnosing and resolving issues related to Active Directory replication.

☐ Understanding Sites and Replication
Read lesson 1 (pp. 3–9) and then complete the associated hands-on practice and lesson review at the end of lesson 1. Consider the following questions as you work through the lesson:
  • Can you demonstrate the process of information being replicated within sites and between sites?
  • Why do you need to set up site links, site link bridges, and bridgehead servers?

Complete the following lesson review before moving to the next lesson:
  • Lesson review (p. 5-9)

☐ Configuring Sites
Read lesson 2 (pp. 11–23) and then complete the associated hands-on practice and lesson review at the end of lesson 2. Consider the following questions as you work through the lesson:
  • What is the rationale in deciding when to create a site?
  • Is there a criterion in deciding when to place a domain controller in a site?
• What are the conditions if you need to create a domain controller object between sites?
• What should you do if you want to move a domain controller object between sites?
• What are the steps necessary to change a site license server?

Complete the following hands-on practices and lesson review before moving to the next lesson:
• Hands-on Exercise 1: Configuring Sites—Renaming and Creating Sites (p. 5-21)
• Hands-on Exercise 2: Configuring Sites—Creating Subnets and Associating Them with Sites (p. 5-21)
• Hands-on Exercise 3: Configuring Sites—Moving a Domain Controller Object to a Site (p. 5-22)
• Lesson Review (p. 5-23)

Configuring Intersite Replication
Read lesson 3 (pp. 25–39) and then complete the associated hands-on practice and lesson review at the end of lesson 3. Consider the following questions as you work through the lesson:
• How should you create site links?
• What can you do to configure site link attributes?
• Under what kind of circumstances should you designate a preferred bridgehead server?
• When do you need to create and configure connection objects?

Complete the following hands-on practices and lesson review before moving to the next lesson:
• Hands-on Exercise 1: Configuring Intersite Replication—Renaming and Creating Sites (p. 5-38)
• Hands-on Exercise 2: Configuring Intersite Replication—Configuring Site Links (p. 5-38)
• Lesson review (p. 5-38)

Configuring Global Catalog Servers
Read lesson 4 (pp. 41–46) and then complete the associated hands-on practice and lesson review at the end of lesson 4. Consider the following questions as you work through the lesson:
• What if you want to determine when to designate a domain controller as a global server?
• Are there any recommended approaches in creating a global catalog server?
• What do you need to do in advance if you want to remove a global catalog server?
• Is there a way to enable the universal group membership caching log-on feature?

Complete the following lesson review before moving to the next lesson:
• Lesson review (p. 5-46)

Configuring Application Directory Partitions
Read lesson 5 (pp. 48–57) and then complete the associated hands-on practice and lesson review at the end of lesson 5. Consider the following questions as you work through the lesson:
• What is the rationale behind an application directory partition?
Do you know how to configure an application directory partition?
Are there any recommendations in managing an application directory partition?

Complete the following lesson review before moving to the next lesson:
  • Lesson review (p. 5-57)

☐ Monitoring and Troubleshooting Replication
Read lesson 6 (pp. 59–71) and then complete the associated hands-on practice and lesson review at the end of lesson 6. Consider the following questions as you work through the lesson:
  • Why do you need to use the Replmon.exe tool to manage Active Directory Replication Monitor graphical tool?
  • If asked, will you be able to use Replmon to perform various replication monitoring and troubleshooting tasks?
  • Why should you use the Dcdiag.exe utility in Windows Server 2003 with SP1?
  • Is there a way to use Repadmin to perform various application monitoring and troubleshooting tasks?
  • How should you use Dsastat.exe to perform various monitoring and troubleshooting tasks?

Complete the following lesson reviews and hands-on practices before moving to the next lesson:
  • Hands-on Exercise 1: Monitoring and Troubleshooting Active Directory Replication—Using Replmon (p. 5-70)
  • Hands-on Exercise 2: Monitoring and Troubleshooting Active Directory Replication—Using Repadmin (p. 5-70)
  • Lesson review (p. 5-71)

☐ Summary and Review
Complete the following:
  • Case Scenario Exercise (p. 5-74)
  • Troubleshooting Lab (p. 5-73)
  • Questions and Answers (p. 5-79)

☐ IT Academy e-Learning
URL: http://itacademy.microsoftelearning.com

Access the Microsoft e-learning content for I294 through the IT Academy website.

Begin working through the course materials and lab for Course 4869: Implementing Sites to Manage Active Directory Replication in a Windows Server 2003 Environment.

Begin working through the course materials and lab for Course 4870: Implementing the Placement of Windows Server 2003 Active Directory Domain Controllers.

These resources were created by Microsoft and will help you prepare for your Microsoft certification exam.
Week 4
Planning and Implementing User, Computer, and Group Strategies

This section provides an overview of the policies and rules in planning and implementing users, computers, and groups within a Microsoft Server 2003 network.

By understanding the functional concepts related to planning and implementing user, computer, and group strategies, you will learn to plan and implement effective strategies in creating and managing user accounts, computer accounts, and group accounts.

Competency 410.2.2: Managing Users, Computers & Groups
The graduate can manage users, computers, and groups.

Implementing an OU Structure
This topic is associated with chapter 6 of the textbook. This topic focuses on the skills in planning an administrative delegation strategy, planning an organizational unit (OU) structure based on delegation requirements, planning an OU structure, analyzing the administrative requirements for an OU, analyzing the Group Policy requirements for an OU structure, implementing an OU structure, creating an OU, and moving objects within an OU hierarchy.

Understanding OUs
Read lesson 1 (pp. 3–8) and then complete the associated hands-on practice and lesson review at the end of lesson 1. Consider the following questions as you work through the lesson:

- What is the rationale behind the OU hierarchy models for delegation of administration?

Complete the following lesson review before moving to the next lesson:
- Lesson review (p. 6-8)

Creating an OU Structure
Read lesson 2 (pp. 10–14) and then complete the associated hands-on practice and lesson review at the end of lesson 2. Consider the following questions as you work through the lesson:

- How can you demonstrate the process of creating OUs?

Complete the following hands-on practices and lesson review before moving to the next lesson:
- Hands-on Exercise 1: Creating an OU—Planning an OU Structure (p. 4-6-12)
- Hands-on Exercise 2: Creating an OU—Creating Top-Level OUs (p. 4-6-13)
- Hands-on Exercise 3: Creating an OU—Creating Second-Level OUs (p. 4-6-13)
- Lesson review (p. 6-14)

Administering OUs
Read lesson 3 (pp. 15–22) and then complete the associated hands-on practice and lesson review at the end of lesson 3. Consider the following questions as you work through the lesson:
Do you know how to rename OUs?
Do you know how to move OUs?
Do you know how to delete OUs?
Are there any recommendations when setting OU properties?
What do you need to do in order to move objects between OUs?

Complete the following hands-on practices and lesson review before moving to the next lesson:
• Hands-on Exercise 1: Administering OUs—Renaming, Deleting, and Moving OUs (p. 6-21)
• Hands-on Exercise 2: Administering OUs—Setting OU Properties (p. 6-21)
• Hands-on Exercise 3: Administering OUs—Moving Objects Between OUs (p. 6-22)
• Lesson review (p. 6-22)

☐ Summary and Review
Complete the following:
• Case Scenario Exercise (p. 6-23)
• Troubleshooting Lab (p. 6-25)
• Questions and Answers (p. 6-29)

☐ IT Academy e-Learning
Activity: IT Academy e-learning
URL: http://itacademy.microsoftelearning.com

Access the Microsoft e-learning content for I294 through the IT Academy website.

Begin working through the course materials and lab for Course 4865: Implementing a Windows Server 2003 Active Directory Organizational Unit Structure.

This resource was created by Microsoft and will help you prepare for your Microsoft certification exam.

Administrating User Accounts
This topic is associated with chapter 7 of the textbook. This topic focuses on the skills in planning a user authentication strategy and planning a smart card authentication strategy.

☐ Understanding User Accounts
Read lesson 1 (pp. 1–10) and then complete the associated hands-on practice and lesson review at the end of lesson 1. Consider the following questions as you work through the lesson:
• What is the difference between a local user account and a domain user account?
• Why do you need built-in accounts?
• Why do you need to implement user account naming conventions?
• Why is it necessary to implement user account password requirements?
• How can you walk a client through the process of using smart cards to authenticate users?
Complete the following lesson review before moving to the next lesson:
- Lesson review (p. 7-11)

☐ Creating User Accounts
Read lesson 2 (pp. 11–23) and then complete the associated hands-on practice and lesson review at the end of lesson 2. Consider the following questions as you work through the lesson:
- Will you be able to create domain user accounts?
- What if you want to modify domain user account properties?

Complete the following hands-on practices and lesson review before moving to the next lesson:
- Hands-on Exercise 1: Creating, Modifying, and Verifying Domain User Accounts—Creating Domain User Accounts (p. 7-21)
- Hands-on Exercise 3: Creating, Modifying, and Verifying Domain User Accounts—Verifying the Creation of User Accounts (p. 7-22)
- Lesson review (p. 7-25)

☐ Managing User Profiles and Home Folders
Read lesson 3 (pp. 25–41) and then complete the associated hands-on practice and lesson review at the end of lesson 3. Consider the following questions as you work through the lesson:
- What is the difference between a local user profile, a roaming user profile, a mandatory user profile, and temporary user profile?
- What should you do if you want to configure a local user profile?
- Why do you need to manage a roaming user profile?
- How can you manage a mandatory user profile?
- What are the recommendations when managing home folders?

Complete the following hands-on practices and lesson review before moving to the next lesson:
- Hands-on Exercise 1: Managing User Profiles—Creating and Testing a Roaming User Profile (p. 7-37)
- Hands-on Exercise 2: Managing User Profiles—Creating and Testing a Mandatory User Profile (p. 7-38)
- Hands-on Exercise 3: Managing Home Folders (p. 7-41)
- Lesson review (p. 7-42)

☐ Maintaining User Accounts
Read lesson 4 (pp. 43–52) and then complete the associated hands-on practice and lesson review at the end of lesson 4. Consider the following questions as you work through the lesson:
- What is an effective way to rename, disable, enable, and delete user accounts?
- Can you recommend a way to unlock user accounts?

Complete the following hands-on practices and lesson review before moving to the next lesson:
- Hands-on Exercise 1: Administering User Accounts—Disabling and Enabling a User Account (p. 7-47)
• Hands-on Exercise 2: Administering User Accounts—Resetting the Password for a User Account (p. 7-47)
• Lesson review (p. 7-48)

☐ Summary and Review
Complete the following:
• Case Scenario Exercise (p. 7-49)
• Troubleshooting Lab (p. 7-50)
• Questions and Answers (p. 7-54)

☐ IT Academy e-Learning
URL: http://itacademy.microsoftelearning.com

Access the Microsoft e-learning content for I294 through the IT Academy website.

Begin working through the course materials and lab for Course 4866: Implementing Windows Server 2003 Active Directory User, Group, and Computer Accounts.

This resource was created by Microsoft and will help you prepare for your Microsoft certification exam.

Administrating Groups
This topic is associated with chapter 8 of the textbook. This topic focuses on planning security group hierarchy and group strategy. In order to administer a Server 2003, you need to work with groups. Groups allow you to assign permissions to larger organizational units, thus allowing you to update/change and revoke permissions rather than having to assign permission to individual users.

☐ Understanding Groups
Read lesson 1 (Understanding Groups) and then complete the associated hands-on practice and lesson review at the end of lesson 1. By the time you finish this lesson, you’ll be able to explain why it is important to create groups, the different types of security and distribution types you can assign to groups, and plan a group strategy for your server environment.

☐ Creating and Administering Groups
Read lesson 2 (Creating and Administering Groups) and then complete the associated hands-on practice and lesson review at the end of lesson 2. If you were put into a situation where you were in charge of administering groups, would you be able to: create, delete, and add members to a group? When you are done with this lesson, you should be able to do exactly that.

Be sure to do the Practice at the end of this lesson. It will give you hands on experience with creating global groups and add members.
Administration Strategies
Read lesson 3 (Administration Strategies) and then complete the associated hands-on practice and lesson review at the end of lesson 3. Consider the following questions as you work through the lesson:

- Why shouldn’t you run your computer as an administrator?
- What group should administrators use to log on?
- How do you use Run As to start a program as an administrator?

- Be sure to read the lesson review and summary at the end of Lesson 3.

Summary and Review
Complete the following:

- Case Scenario Exercise
- Troubleshooting Lab
- Questions and Answers

Week 5
Planning and Implementing Group Policy (Part I)
This section provides an overview of the skills in planning and implementing effective group policies within a Microsoft Server 2003 network.

By understanding the fundamental concepts of server availability, you will be able to perform maintenance on an object; find out an object by viewing its attributes; delegate administrative tools to provide other administrators, groups, or users with the ability to manage the functions in domains or containers according to their needs; plan your group policy strategy; implement your group strategy; create password policy for domain users configure user environment; and establish audit policies and audit security logs, etc.

Competency 410.2.4: Planning & Implementing Strategies
The graduate can plan and implement user, computer, and group strategies.

Administering Active Directory Objects
This topic is associated with chapter 9 of the textbook. This topic focuses on the skills in planning a user authentication strategy and delegating permissions of an organizational unit (OU) to a user or security group.

Locating Active Directory Objects
Read lesson 1 (pp. 3–13) and then complete the associated hands-on practice and lesson review at the end of lesson 1. Consider the following questions as you work through the lesson:

- What is recommended in identifying the types of Active Directory objects?
- You would like to use the Find option to locate Active Directory objects. How can you achieve this goal?
- If you want to use the Dsquery command to locate Active Directory objects, where should you start?
- Is there a good way to save the query by using the saved queries feature?

Complete the following hands-on practices and lesson review before moving to the next lesson:
• Hands-on Exercise 1: Locating Objects in Active Directory—Creating User Accounts for Practice (p. 9-10)
• Hands-on Exercise 2: Locating Objects in Active Directory—Locating Users Using the Find Option (p. 9-11)
• Hands-on Exercise 3: Locating Objects in Active Directory—Locating Users Using the Dsquery Command (p. 9-11)
• Hands-on Exercise 4: Locating Objects in Active Directory—Saving a Query (p. 9-11)
• Lesson review (p. 9-13)

☐ Controlling Access to Active Directory Objects
Read lesson 2 (pp. 15–34) and then complete the associated hands-on practice and lesson review at the end of lesson 2. Consider the following questions as you work through the lesson:

• What does it take to view and assign standard permissions for an object?
• Are there any other alternatives that you can use to view, assign, and edit special permissions for an object?
• If you want to view effective permissions for an object, what should you do first?
• How can you possibly set inheritance for a standard or a special permission?
• Is there a recommended approach in removing a security principal and its permissions?
• What steps should you take in order to remove special permissions for an object?
• What measure should you take in order to transfer ownership of an object?

Complete the following hands-on practices and lesson review before moving to the next lesson:

• Hands-on Exercise 1: Controlling Access to Active Directory Objects—Assigning Standard and Special Permissions (p. 9-32)
• Hands-on Exercise 2: Controlling Access to Active Directory Objects—Setting Inheritance for a Permission (p. 9-32)
• Hands-on Exercise 3: Controlling Access to Active Directory Objects—Removing Security Principals and Their Permissions (p. 9-33)
• Lesson review (p. 9-34)

☐ Delegating Administrative Control of Active Directory Objects
Read lesson 3 (p. 36–41) and then complete the associated hands-on practice and lesson review at the end of lesson 3. Consider the following questions as you work through the lesson:

• What are the proper procedures in delegating administrative control of domains, OUs, and containers?

Complete the following lesson review before moving to the next lesson:

• Lesson review (p. 9-41)

☐ Summary and Review
Complete the following:

• Case Scenario Exercise (p. 9-43)
• Troubleshooting Lab (p. 9-42)
• Questions and Answers (p. 9-48)
Implementing Group Policy
This topic is associated with chapter 10 of the textbook. This topic focuses on the skills in planning group policy strategy, planning a strategy for configuring the user environment with group policy, planning a strategy for configuring the computer environment with group policy, configuring the user environment by group policy, and deploying a computer environment by group policy.

Understanding Group Policy
Read lesson 1 (pp. 3–21) and then complete the associated hands-on practice and lesson review at the end of lesson 1. Consider the following questions as you work through the lesson:

• What are the functions of group policies?
• What are the functions of the group policy object editor?
• What are the functions of administrative templates?
• What should you say if you want to explain how security groups can be used to filter group policy?

Complete the following lesson review before moving to the next lesson:

• Lesson review (p. 10-21)

Group Policy Planning Strategies
Read lesson 2 (pp. 23–28) and then complete the associated hands-on practice and lesson review at the end of lesson 2. Consider the following questions as you work through the lesson:

• What is needed in order to plan group policy settings?
• Why there is a need to plan administrative control of GPOs?

Complete the following lesson review before moving to the next lesson:

• Lesson review (p. 10-29)

Implementing a GPO
Read lesson 3 (pp. 30–46) and then complete the associated hands-on practice and lesson review at the end of lesson 3. Consider the following questions as you work through the lesson:

• Where can you start to implement a GPO?
• Do you know how to modify a GPO?

Complete the following hands-on practices and lesson review before moving to the next lesson:

• Hands-on Exercise 1: Implementing a GPO—Implementing GPO (p. 10-44)
• Hands-on Exercise 2: Implementing a GPO—Testing a GPO (p. 10-45)
• Lesson review (p. 10-46)

Summary and Review
Complete the following:

• Case Scenario Exercise (p. 10-48)
• Troubleshooting Lab (p. 10-51)
• Questions and Answers (p. 10-56)

IT Academy e-Learning
URL: http://itacademy.microsoftlearning.com
Access the Microsoft e-learning content for I294 through the IT Academy website.

Begin working through the course materials and lab for **Course 4867: Implementing Group Policy in a Microsoft® Windows Server™ 2003 Active Directory® Environment**.

This resource was created by Microsoft and will help you prepare for your Microsoft certification exam.

### Week 6

**Planning and Implementing Group Policy (Part II)**

This section provides an overview of the skills in planning and implementing effective group policies within a Microsoft Server 2003 network.

By understanding the fundamental concepts of server availability, you will be able to perform maintenance on an object; find out an object by viewing its attributes; delegate administrative tools to provide other administrators, groups, or users with the ability to manage the functions in domains or containers according to their needs; plan your group policy strategy; implement your group strategy; create password policy for domain users configure user environment; and establish audit policies and audit security logs, etc.

**Competency 410.2.5: Planning & Implementing Group Policy**
The graduate can plan and implement group policy.

**Administrating Security With Group Policy**
This topic is associated with chapter 13 of the textbook. This topic focuses on the skills in creating a password policy for domain users, configuring the user environment by using group policy, automatically enrolling user certificates by using group policy, deploying a computer environment by using group policy, automatically enrolling computer certificates by using group policy, and troubleshooting the application of group policy security settings.

- **Understanding Active Directory Security**
  Read lesson 1 (pp. 3–11) and then complete the associated hands-on practice and lesson review at the end of lesson 1. Consider the following questions as you work through the lesson:
  - Do you know how to modify security configuration settings in a GPO?
  - Complete the following lesson review before moving to the next lesson:
    - Lesson review (p. 13-11)

- **Implementing Software Restriction Policies**
  Read lesson 2 (pp. 13–28) and then complete the associated hands-on practice and lesson review at the end of lesson 2. Consider the following questions as you work through the lesson:
  - Why do you need to establish software restriction policies?
• What are the default security levels?
• How can software be identified by software restriction policies?
• How can you set the default security level?

Complete the following lesson review before moving to the next lesson:
• Lesson review (p. 10-29)

☐ Implementing an Audit Policy
Read lesson 3 (pp. 30–43) and then complete the associated hands-on practice and lesson review at the end of lesson 3. Consider the following questions as you work through the lesson:
• Why do you need to perform auditing?
• What is the rationale to plan an audit strategy and determine which events to audit?
• Is there a way to easily set up auditing on files, folders, and printers?
• What is the proper procedure of setting up auditing on Active Directory objects?

Complete the following hands-on practices and lesson review before moving to the next lesson:
• Hands-on Exercise 1: Implementing Audit Policies—Planning a Domain Audit Policy (p. 13-40)
• Hands-on Exercise 2: Implementing Audit Policies—Setting Up an Audit Policy (pp. 13-41)
• Hands-on Exercise 3: Implementing Audit Policies—Planning a Domain Audit Policy (p. 13-42)
• Lesson review (p. 13-43)

☐ Administering the Security Log
Read lesson 4 (pp. 45–54) and then complete the associated hands-on practice and lesson review at the end of lesson 4. Consider the following questions as you work through the lesson:
• What should you do if you want to view the security log?
• Where are the events in the security log?
• Where should you start if you want to filter events shown in the security log?
• How do you configure the security log?
• What are the proper procedures in archiving the security log?

Complete the following hands-on practices and lesson review before moving to the next lesson:
• Hands-on Exercise 1: Administering the Security Log—Viewing and Filtering the Security Log (p. 13-53)
• Hands-on Exercise 2: Administering the Security Log—Configuring the Security Log (p. 13-54)
• Lesson review (p. 13-54)

☐ Using Security Templates
Read lesson 5 (pp. 56–66) and then complete the associated hands-on practice and lesson review at the end of lesson 5. Consider the following questions as you work through the lesson:
• What are security templates?
• Why do you need to use the predefined security templates?
Complete the following hands-on practices and lesson review before moving to the next lesson:
- Lesson review (p. 13-66)

☐ Using Security Configuration and Analysis
Read lesson 6 (pp. 69–79) and then complete the associated hands-on practice and lesson review at the end of lesson 6. Consider the following questions as you work through the lesson:
- Why do you need to use the Security Configuration and Analysis tool?
- How can you analyze a security configuration?
- What is necessary to configure security by using the Security Configuration and Analysis console?
- Is there a way you can export a security configuration to a security template?

Complete the following hands-on practices and lesson review before moving to the next lesson:
- Hands-on Exercise 1: Implementing a GPO—Using Security Configuration and Analysis—Accessing the Security Configuration And Analysis Console (p. 13-78)
- Lesson review (p. 13-79)

☐ Summary and Review
Complete the following:
- Case Scenario Exercise (p. 13-80)
- Troubleshooting Lab (p. 13-82)
- Questions and Answers (p. 13-86)

Week 7
Planning and Implementing Group Policy (Part III)
This section provides an overview of the skills in planning and implementing effective group policies within a Microsoft Server 2003 network.

By understanding the fundamental concepts of server availability, you will be able to perform maintenance on an object; find out an object by viewing its attributes; delegate administrative tools to provide other administrators, groups, or users with the ability to manage the functions in domains or containers according to their needs; plan your group policy strategy; implement your group strategy; create password policy for domain users configure user environment; and establish audit policies and audit security logs, etc.

Competency 410.2.5: Planning & Implementing Group Policy
The graduate can plan and implement group policy.

Deploying Software with Group Policy
This topic is associated with chapter 12 of the textbook. This topic focuses on the skills in distributing software by using group policy, troubleshooting issues related to group policy
application and deployment, maintaining installed software by using group policy, distributing updates to software distributed by group policy, and configuring automatic updates for network clients using group policy.

Understanding Software Deployment With Group Policy
Read lesson 1 (pp. 3–11) and then complete the associated hands-on practice and lesson review at the end of lesson 1. Consider the following questions as you work through the lesson:

- What are the hardware requirements for deploying software by using group policy?
- What can be considered as the tools provided for software deployment?
- How can you tell the differences between assigning applications and publishing applications?
- Why should you use Windows Installer packages?
- What are the three types of Windows Installer packages?
- What are the steps necessary for deploying software?

Complete the following lesson review before moving to the next lesson:

- Lesson review (p. 12-10)

Deploying Software With Group Policy
Read lesson 2 (pp. 13–33) and then complete the associated hands-on practice and lesson review at the end of lesson 2. Consider the following questions as you work through the lesson:

- What preparations do you need to make before deploying a software deployment?
- What are the correct procedures in creating a GPO for software deployment?
- Where can you specify software deployment properties for a GPO?
- What should you do in order to add Windows Installer packages to a GPO?
- Where should you use Windows Installer package properties?

Complete the following hands-on practices and lesson review before moving to the next lesson:

- Hands-on Exercise 1: Deploying Software with Group Policy—Preparing Server 2 (p. 12-29)
- Hands-on Exercise 2: Deploying Software with Group Policy—Setting up an SDP (p. 12-30)
- Hands-on Exercise 3: Deploying Software with Group Policy—Configure a GPO for Software Deployment (p. 12-30)
- Hands-on Exercise 4: Deploying Software with Group Policy—Testing Software Deployment (p. 12-31)
- Hands-on Exercise 5: Deploying Software with Group Policy—Configure a GPO for Software Deployment (p. 12-31)
- Lesson review (p. 12-32)

Maintaining Software Deployment With Group Policy
Read lesson 3 (pp. 35–40) and then complete the associated hands-on practice and lesson review at the end of lesson 3. Consider the following questions as you work through the lesson:
• You want to redeploy an application deployed with group policy. What are the requirements to achieve this goal?
• What is needed in order to upgrade an application deployed with group policy?
• How can you possibly remove an application deployed with group policy?

Complete the following lesson review before moving to the next lesson:
• Lesson review (p. 12-40)

Troubleshooting Software Deployed With Group Policy
Read lesson 4 (pp. 42–47) and then complete the associated hands-on practice and lesson review at the end of lesson 4. Consider the following questions as you work through the lesson:
• What is required in order to troubleshoot software deployed with group policy?

Complete the following lesson review before moving to the next lesson:
• Lesson review (p. 12-47)

Summary and Review
Complete the following:
• Case Scenario Exercise (p. 12-48)
• Troubleshooting Lab (p. 12-50)
• Questions and Answers (p. 12-55)

IT Academy e-Learning
URL: http://itacademy.microsofttelearning.com

Access the Microsoft e-learning content for I294 through the IT Academy website.

Begin working through the course materials and lab for Course 4868: Deploying and Managing Software Using Windows Server 2003 Active Directory Group Policy.

This resource was created by Microsoft and will help you prepare for your Microsoft certification exam.

Managing Active Directory Performance
This topic is associated with chapter 14 of the textbook. This topic focuses on the skills in troubleshooting Active Directory service as well as monitoring File Replication service replication.

Monitoring Performance With Service Logs and System Monitor
Read lesson 1 (pp. 2–17) and then complete the associated hands-on practice and lesson review at the end of lesson 1. Consider the following questions as you work through the lesson:
• Is there any reason why you need to use directory service log in the Event Viewer console?
• What is the goal of using file replication service log in the Event Viewer console?
• Why should you use System Monitor?
• You want to use System Monitor to monitor performance counters. What should you do first?

Complete the following hands-on practices and lesson review before moving to the next lesson:
• Hands-on Exercise 1: Using System Monitor—Verifying Performance Counters in System Monitor (p. 12-29)
• Lesson review (p. 14-17)

☐ Monitoring Performance with Performance Logs and Alerts
Read lesson 2 (pp. 19–34) and then complete the associated hands-on practice and lesson review at the end of lesson 2. Consider the following questions as you work through the lesson:
• What are the functions of counter logs, trace logs, and alerts?
• How can you use Performance Logs and Alerts to create counter logs, trace logs, and alerts?
• What do you need to do in order to view counter logs?

Complete the following hands-on practices and lesson review before moving to the next lesson:
• Hands-on Exercise 1: Using Performance Logs And Alerts—Creating a Counter Log (p. 14-33)
• Hands-on Exercise 2: Using Performance Logs And Alerts—Creating an Alert (p. 14-34)
• Lesson review (p. 14-34)

☐ Implementing a GPO
Read lesson 3 (pp. 36–42) and then complete the associated hands-on practice and lesson review at the end of lesson 3. Consider the following questions as you work through the lesson:
• What is the recommended approach in troubleshooting Active Directory performance with the directory service log?
• What are the step-by-step procedures in troubleshooting Active Directory performance with the Performance console?

Complete the following lesson review before moving to the next lesson:
• Lesson review (p. 14-42)

☐ Summary and Review
Complete the following:
• Case Scenario Exercise (p. 14-44)
• Troubleshooting Lab (p. 14-45)
• Questions and Answers (p. 14-49)

☐ IT Academy e-Learning
URL: http://itacademy.microsofttelearning.com

Access the Microsoft e-learning content for I294 through the IT Academy website.
Begin working through the course materials and lab for **Course 4872: Maintaining Active Directory® in a Microsoft® Windows Server™ 2003 Environment**.

This resource was created by Microsoft and will help you prepare for your Microsoft certification exam.

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**Week 9**

**Practice Test Review**

Review all material using a practice exam format. The practice tests are supplied by ExamForce and SkillSoft TestPrep.

**SkillSoft TestPrep**

Review all material using the practice exam format. The practice tests are supplied by SkillSoft TestPrep. The goal of using the Test Prep available through Skillsoft is NOT as the end-all-be-all judge of whether or not you can pass the actual certification exam. You should use this test prep to help you determine where the holes in your learning are. This tool, along with ExamForce (described in the next activity) are solely to help you identify which areas within this course of study you may need to spend more time with. This is a review of the competencies you learned and your readiness to take the Planning, Implementing, and Maintaining a Microsoft Windows Server 2003 Active Directory Infrastructure (Exam 70–294) exam.

**ExamForce**

ExamForce has two parts: a testing engine and a database. It is a powerful tool because it is adaptive; i.e., it chooses questions from its database based on user weaknesses, while still providing enough questions from strong areas to maintain strength. It divides what is presented into Passes. Once you have completed three Passes, you are ready to sit for the actual exam.

**Enroll in ExamForce**

Go to the I294 Learning Resources tab to enroll on your AAP. You may not enroll until you have completed this COS. Shortly after enrolling, usually within 1-2 business days, you will receive an email from ExamForce with your license key and instructions. Follow them carefully to download both the test engine and the database. **NOTE:** ExamForce databases are quite large, possibly over 100 MB. After installation, you will occasionally receive the opportunity to download and install updates. Download and install major updates with caution because they erase your History! Minor updates do not do this. Check with your mentor before accepting a major update.

**Take the Pretest.**

This is not the same as the pre-assessment that you took at the beginning of your studies. The Pretest Mode sets up initial conditions for the next Activity, Adaptive Drill Mode. Before moving on, though, take a look at the report produced from your Pretest. It will
show you which exam objectives represent weaknesses for you. Additionally, it refers you to sections of its built-in review text for additional explanation.

**Adaptive Drill Mode**

Once you have reached the Adaptive Drill Mode, do not install major updates from ExamForce as this will erase your history. This warning will mention the fact that you have chosen to download a major database update. Please do not select the option to update.

You will be given a series of questions to respond to. **Passes are units of progress through the ExamForce database that systematically work on your weak areas while maintaining your strengths.** The ExamForce learning resource allows you to take notes as you work through the questions. If you get a question incorrect, you will be referenced to the appropriate section and chapter in the included textbook. There is a built in historical analysis system to track and monitor your activities. In order for your assessment referral to be approved, you MUST successfully complete all three phases of assessment readiness within the historical analysis system. Your results must be emailed to your mentor for confirmation.

**Email the Historical Analysis to Your Mentor**

When all three Passes are complete, email the report to your mentor. It is required as part of your record prior to approving a referral for the certification exam. The Historical Analysis report is always available either from the History button at the top of the ExamForce application, or from the Historical Analysis button in the Adaptive Drill tab. You may choose to email it using several formats, but WGU requires a pdf version, so select that option.

**Congratulations**

Upon completion of the practice exams, you have already successfully accomplished the goals of mastering the competencies set forth by WGU. By studying the chapters, lesson reviews, and the hands-on practice associated with each competency, you have acquired the knowledge and skills necessary for passing your I294 assessment in addition to your competency in mastering Planning, Implementing, and Maintaining a Microsoft Windows Server 2003 Active Directory Infrastructure, Second Edition. If you feel that you are still not confident with the I294 assessment, please go over the competencies and their associated chapters before taking your I294 assessment.

**Review of Competencies and Associated Chapters**

As demonstrated above, this course of study covers six competencies of I294. The six competencies and their associated chapters are:

**Competency 410.2.1: Planning & Implementing Active Directory Infrastructure**

The graduate can plan and implement an active directory infrastructure.

- **Chapter 1: Introduction to Active Directory**
- **Chapter 2: Installing and Configuring Active Directory**
- **Chapter 4: Installing and Managing Domains, Trees, and Forests**
Competency 410.2.2: Managing Users, Computers & Groups
The graduate can manage users, computers, and groups.
• Chapter 6: Implementing an OU Structure
• Chapter 7: Administrating User Accounts
• Chapter 8: Administrating Groups

Competency 410.2.3: Managing & Maintaining Active Directory Infrastructure
The graduate can manage and maintain an active directory infrastructure.
• Chapter 3: Administrating Active Directory
• Chapter 5: Configuring Sites and Managing Replication

Competency 410.2.4: Planning & Implementing Strategies
The graduate can plan and implement user, computer, and group strategies.
• Chapter 9: Administrating Active Directory Objects
• Chapter 10: Implementing Group Policy

Competency 410.2.5: Planning & Implementing Group Policy
The graduate can plan and implement group policy.
• Chapter 12: Deploying Software with Group Policy
• Chapter 13: Administrating Security with Group Policy
• Chapter 14: Managing Active Directory Performance

Transfer/Application to Work
Acquiring knowledge from textbooks is only part of the learning process. The ultimate goal of learning is to turn knowledge into skills that can be readily applied in the practical field. The following are some recommendations for transferring knowledge acquired through textbooks into practical skills real work environment:
• Emphasis on hands-on practices: Practice makes perfect. Hands-on practices help turn short-term memory into long-term memory. Finally, personal experiences also help reinforce learning outcomes.
• Research on solutions through various channels: There are many ways to research solutions on issues associated with Planning and Maintaining a Microsoft Windows Server 2003 Network Infrastructure, Second Edition. Since new issues may appear in the real work environment, textbooks are not good enough to cover all of them. Learning through research helps explore new solutions to new problems.
• Collaborate and cooperate with peers or other students: There are different ways of learning, including the use of cooperation and collaboration to facilitate learning processes. Working with your coworkers, fellow classmates, and other students in the learning community will definitely have a positive impact on your learning outcomes.

Next Steps: Take the Assessment
Once you have completed all the tasks associated with the competencies, chapters, activities, lesson reviews, hands-on practices, and preassessment(s), you can start scheduling for the actual assessment at a Prometric testing center. The following are the steps necessary for making arrangements for the actual assessment:
1. Refer for your I294 assessment by logging into your AAP. Click on the I294 link, and then the “Assessment Referral” tab.
2. Follow the step-by-step procedures necessary for referring for your assessment and submit the referral as needed.
3. Once your mentor has approved the referral, you will receive a voucher number by e-mail from the Vendor Assessment Department. **Hold onto this email; you will need it for step 5.**
4. With the voucher number, you will need to contact Prometric Testing Center ([http://www.prometric.com/TestTakers/default.htm](http://www.prometric.com/TestTakers/default.htm)) to arrange the actual date for the real assessment.
5. After the exam, submit your test results according to the instructions received in the voucher e-mail received in step 3, above.
6. Please contact your mentor if your AAP does not reflect the status of your assessment results after 3 business days.

Our best wishes for you as you take the I294 assessment.

**Feedback**
If you wish to provide feedback on this Course of Study, please contact Cheryl Bagshaw at cbaqshaw@wgu.edu.