

IT222

Microsoft Network Operating System II

[Onsite]

Course Description:

This course serves as an extension on Microsoft network server technologies. Issues on infrastructure administration are discussed. Aspects of active directory technologies will be introduced.

Prerequisite(s) and/or Corequisite(s):

Prerequisite: IT221 Microsoft Network Operating System I

Credit hours: 4

Contact hours: 50 (30 Theory Hours, 20 Lab Hours)

Syllabus: Microsoft Network Operating System II

Instructor: _____

Office hours: _____

Class hours: _____

Major Instructional Areas

1. Active Directory on Server 2008
2. Forest
3. Site
4. Replication
5. Global Catalog
6. Flexible Single Master Operations (FSMO) Roles
7. Users and Groups
8. Organizational Unit (OU) Strategy
9. Secure Authentication
10. Group Policy
11. Maintenance and Troubleshooting
12. Backup and Recovery

Course Objectives

1. Analyze the role of a Domain Name System (DNS) with Active Directory on Windows Server 2008.
2. Explain the structure of Active Directory on Windows Server 2008.
3. Compare Active Directory in the previous versions of Windows Server.

4. Install and configure an Active Directory forest with multiple domains.
5. Design the physical structure of Active Directory by using sites and site links.
6. Explain the function of the Global Catalog.
7. Explain the purpose of FSMO roles.
8. Describe user and group administration using Active Directory.
9. Explain different methods of secure authentication in Active Directory.
10. Configure an OU strategy to allow for the delegation of administrative tasks.
11. Apply Group Policy in Active Directory.
12. Configure Active Directory to control user and computer settings.
13. Manage software using Group Policy.
14. Explain the methods of planning and implementing Group Policy.
15. Apply the methods of troubleshooting and maintaining Active Directory.
16. Explain the tools used for maintaining and troubleshooting Active Directory.

SCANS Objectives

SCANS is an acronym for Secretary's Commission on Achieving Necessary Skills. The committee, created by the National Secretary of Labor in the early 1990s, created a list of skills and competencies that the committee feels are necessary for employees to function in a high-tech job market.

1. Demonstrate competence in selecting a technology to achieve desired results.
2. Demonstrate competence to understand the overall intent and proper procedure for setting up and operating machines, which includes computers and programming systems.
3. Demonstrate competence in maintaining and troubleshooting technology, which includes identifying, understanding, and performing routine preventative maintenance.
4. Demonstrate competence in performing the tasks of communicating and interpreting information.
5. Demonstrate competence in using computers to process information, which includes entering, modifying, retrieving, storing, and verifying data and other information.

Course Outline

Note: All graded activities, except the Project, are listed below in the pattern of <Unit Number>.<Assignment Number>. For example, Lab 2.1 refers to the 1st lab activity in Unit 2.

Unit	Activities
1—Introduction to and Installation of Active Directory on Windows Server 2008	<ul style="list-style-type: none"> • Content Covered: <ul style="list-style-type: none"> <i>Microsoft® Official Academic Course 70-640: Windows Server® 2008 Active Directory® Configuration:</i> <ul style="list-style-type: none"> ○ Chapter 1, “Overview of Active Directory Domain Services” ○ Chapter 2, “Implementing Active Directory” • Writing Assignments: 1.1 • Labs: 1.1-1.3
2—Methods of Working with Active Directory Sites	<ul style="list-style-type: none"> • Read from <i>Microsoft® Official Academic Course 70-640: Windows Server® 2008 Active Directory® Configuration:</i> <ul style="list-style-type: none"> ○ Chapter 3, “Working with Active Directory Sites” • Writing Assignments: 2.1-2.2 • Labs: 2.1
3—Global Catalog and FSMO Roles	<ul style="list-style-type: none"> • Read from <i>Microsoft® Official Academic Course 70-640: Windows Server® 2008 Active Directory® Configuration:</i> <ul style="list-style-type: none"> ○ Chapter 4, “Global Catalog and Flexible Single Master Operations (FSMO) Roles” • Writing Assignments: 3.1-3.2 • Labs: 3.1
4—Active Directory Administration	<ul style="list-style-type: none"> • Read from <i>Microsoft® Official Academic Course 70-640: Windows Server® 2008 Active Directory® Configuration:</i> <ul style="list-style-type: none"> ○ Chapter 5, “Active Directory Administration”

Unit	Activities
	<ul style="list-style-type: none"> • Writing Assignments: 4.1-4.2 • Labs: 4.1
5–Security Planning and Administrative Delegation	<ul style="list-style-type: none"> • Read from <i>Microsoft® Official Academic Course 70-640: Windows Server® 2008 Active Directory® Configuration</i>: <ul style="list-style-type: none"> ○ Chapter 6, “Security Planning and Administrative Delegation” • Writing Assignments: 5.1 • Labs: 5.1
6–Introduction to Group Policy	<ul style="list-style-type: none"> • Read from <i>Microsoft® Official Academic Course 70-640: Windows Server® 2008 Active Directory® Configuration</i>: <ul style="list-style-type: none"> ○ Chapter 7, “Introduction to Group Policy” • Exam I • Writing Assignments: 6.1 • Labs: 6.1
7–Configuration and Implementation of Group Policy	<ul style="list-style-type: none"> • Read from <i>Microsoft® Official Academic Course 70-640: Windows Server® 2008 Active Directory® Configuration</i>: <ul style="list-style-type: none"> ○ Chapter 8, “Configuring the User and Computer Environment Using Group Policy” ○ Chapter 9, “Performing Software Installation with Group Policy” • Writing Assignments: 7.1 • Labs: 7.1-7.2
8–Planning and Implementing Group Policy	<ul style="list-style-type: none"> • Read from <i>Microsoft® Official Academic Course 70-640: Windows Server® 2008 Active Directory® Configuration</i>: <ul style="list-style-type: none"> ○ Chapter 10, “Planning a Group Policy Management and Implementation Strategy” • Writing Assignments: 8.1

Unit	Activities
	<ul style="list-style-type: none"> • Labs: 8.1
9—Active Directory Backup and Restore	<ul style="list-style-type: none"> • Read from <i>Microsoft® Official Academic Course 70-640: Windows Server® 2008 Active Directory® Configuration</i>: <ul style="list-style-type: none"> ◦ Chapter 11, “Active Directory Maintenance, Troubleshooting, and Disaster Recovery” • Writing Assignments: 9.1 • Labs: 9.1
10—Active Directory Maintenance	<ul style="list-style-type: none"> • Read from <i>Microsoft® Official Academic Course 70-640: Windows Server® 2008 Active Directory® Configuration</i>: <ul style="list-style-type: none"> ◦ Chapter 11, “Active Directory Maintenance, Troubleshooting, and Disaster Recovery” • Writing Assignments: 10.1 • Project
11—Course Review and Exam	<ul style="list-style-type: none"> • Exam II

Instructional Methods

The Microsoft Network Operating System II course will advance your career by helping you acquire skills to securely manage an Active Directory infrastructure and differentiate between its logical and physical aspects.

You will use the textbook, lab and classroom sessions, and electronic resources such as Web references to speed up and enhance your learning.

Throughout the course, you will get an opportunity to apply and test your knowledge through exercises, exams, and labs. The activities and assignments are practical and directly relate to the objectives of the course.

The classroom session will include lectures with a demonstration of procedures and an illustration of concepts. Whenever possible, instructors will use real-world examples and scenarios for illustrating the objectives being taught. The lectures are based on the content in the course textbook.

Instructional Materials and References

Student Textbook Package

- *Microsoft® Official Academic Course 70-640: Windows Server® 2008 Active Directory® Configuration. Hoboken, NJ: John Wiley and Sons, 2009.*
- *Microsoft® Official Academic Course 70-640 Lab Manual: Windows Server® 2008 Active Directory® Configuration. Hoboken, NJ: John Wiley and Sons, 2009.*

References

ITT Tech Virtual Library

Log on to the ITT Tech Virtual Library at <http://www.library.itt-tech.edu/> to access online books, journals, and other reference resources selected to support ITT Tech curricula.

Books

You may click “Books” or use the “Search” function on the home page to find the following books.

Books24x7

- Matthews, Marty. *Microsoft Windows Server 2008: A Beginner's Guide. U.S.: McGraw-Hill/Osborne, 2008.*

Ebrary

- Ford, Jerry Lee. *Microsoft Windows Powershell Programming for the Absolute Beginner. U.S.: Course Technology, 2006.*

Other References

The following resources may be found **outside** of the ITT Tech Virtual Library, whether online or in hard copy.

Web sites

- Microsoft TechNet: Resources for IT Professionals
Provides information about Microsoft products, tools, and technologies for IT professionals
<http://technet.microsoft.com/en-us/default.aspx> (accessed June 28, 2010).
- Paul Thurrott's SuperSite for Windows
Provides articles about Microsoft's server products, platforms, and broader

strategies

<http://www.winsupersite.com/server/Default.asp> (accessed June 28, 2010).

- Petri IT Knowledgebase
Provides a collection of Windows Server 2008-related articles, tips and tricks, white papers, and useful tools
<http://www.petri.co.il/windows-server-2008.htm> (accessed June 28, 2010).

All links to Web references outside of the ITT Tech Virtual Library are always subject to change without prior notice.

Course Evaluation and Grading

Evaluation Criteria Table

The final grades will be based on the following categories:

CATEGORY	WEIGHT
Writing Assignments	20%
Labs	30%
Exam I	15%
Exam II	15%
Project	20%
Total	100%

Note: Students are responsible for abiding by the Plagiarism Policy.

Grade Conversion Table

The final grades will be calculated from the percentages earned in the course, as follows:

A	90-100%	4.0
B+	85-89%	3.5
B	80-84%	3.0
C+	75-79%	2.5
C	70-74%	2.0
D+	65-69%	1.5
D	60-64%	1.0
F	<60%	0.0

(End of Syllabus)