

## Course Overview

LabSim is used for CIST 2413. The activities in CIST 2413 prepare students for the Microsoft 70-642 Technology Specialist exam: Windows Server 2008 Network Infrastructure, Configuring. It focuses on the details of configuring the infrastructure of a network. Students will complete designated activities for CIST 2413 as indicated on each assignment sheet. All activities will be completed by the end of the course.

Before taking this course, students should have a basic understanding of computers, including the following skills:

- Turning on a computer and using a mouse and keyboard.
- Using basic productivity software including word processing applications.
- Saving files created by common applications.
- Browsing the Internet and using an e-mail client.
- IP addressing and services
- Names resolution
- File and print services
- Network access and remote access
- Monitoring network services

The following icons are placed in front of lesson items in LabSim to help students quickly recognize the items in each section:



= Demonstration



= Exam



= Lab/Simulation



= Text lesson or fact sheet



= Video

**Log into LabSim and complete the tasks listed under Resources for each of the items listed below:**

The **Total Time** for each section is calculated by adding the approximate time for each section which is calculated using the following elements:

- Video/demo times
- Approximate time to read the text lesson (the length of each text lesson is taken into consideration)
- Simulations (5 minutes is assigned per simulation. This is the amount of time it would take for a knowledgeable student to complete the lab activity. **New students will take much longer than this depending upon their knowledge level and computer experience.**)
- Questions (1 minute per question)

## Module 0 – Introduction

This module introduces Microsoft's recommendations of the technical experience a candidate should have before attempting the certification test. Students will become familiar with server and remote management tools. This module provides the mathematical calculations of how to convert numbers from binary to decimal and hexadecimal. This mathematical foundation is necessary for students to understand the IPv4 and IPv6 addresses they will be studying in the course.

## Section 0.1: Introduction

This section introduces the instructor and the concepts that will be covered in this course.

Video/Demo

Time

**Log into LabSim and complete the tasks listed under Resources for each of the items listed below. As you complete them Checkoff the boxes:**

- |                          |   |      |
|--------------------------|---|------|
| <input type="checkbox"/> |  0.1.1 Course Introduction | 1:09 |
|--------------------------|---|------|

Total Time: About 5 minutes

## Section 0.2: Server Management

Summary

This section discusses a new management console, Server Manager, used to install and manage server components. Details include:

- Server Manager elements:
  - Role
  - Role services
  - Feature
- Windows PowerShell cmdlets that support Server Manager in Windows Server 2008 R2
- The role of Server Core
  - Limited GUI support
  - Limited set of server roles
  - Features available in Windows Server 2008 R2
  - Other limitations:
    - No windows Shell
    - Limited managed code support
    - Only MSI support for unattended mode installs
  - Managing a server core system

Students will learn how to:

- Configure and manage a server using the Server Manager.
- Install roles on a Server Core server.




Configuring Server 2008 Network Infrastructure Objectives

- 102. Configure Dynamic Host Configuration Protocol (DHCP)
- 201. Configure a Domain Name System (DNS) server.

**Log into LabSim and complete the tasks listed under Resources for each of the items listed below. As you complete them Checkoff the boxes:**

Video/Demo

Time

- |                          |   |              |
|--------------------------|---|--------------|
| <input type="checkbox"/> |  0.2.1 Using Server Manager            | 6:39         |
| <input type="checkbox"/> |  0.2.3 Server Core                     | 1:37         |
| <input type="checkbox"/> |  0.2.4 Installing Roles on Server Core | <u>6:05</u>  |
| <i>Total</i>             |   | <i>14:21</i> |

Total Time: About 20 minutes

## Section 0.3: Remote Management

### Summary



This section examines using the following remote management tools to manage a server:

- Remote Desktop
- Remote Desktop Gateway
- MMC snap-ins
- Remote Server Administration Tools (RSAT)
- Windows Remote Shell

Students will learn how to:

- Enable Remote Desktop on a Server Core.
- Enable remote management of the firewall.
- Open firewall ports to allow remote use of MMC snap-ins.

**Log into LabSim and complete the tasks listed under Resources for each of the items listed below. As you complete them Checkoff the boxes:**

Video/Demo	Time
<input type="checkbox"/>  0.3.1 Remote Management	4:06
<input type="checkbox"/>  0.3.2 Managing Server Core	14:45
<i>Total</i>	<i>18:51</i>

Total Time: About 25 minutes

## Section 0.4: Mathematical Foundations

### Summary

This section explains the mathematical calculations to convert the following numbering systems:


- Base 2 - Binary
- Base 10 – Decimal
- Base 16 - Hexadecimal

For students to understand IPv4 and IPv6 addresses they will need to know how to convert from binary to decimal and hexadecimal.

### Configuring Server 2008 Network Infrastructure Objectives

- 101. Configure IPv4 and IPv6 Addressing.

**Log into LabSim and complete the tasks listed under Resources for each of the items listed below:**

Video/Demo	Time
<input type="checkbox"/>  0.4.1 TCP/IP Mathematics	12:13

Total Time: About 15 minutes