

MOC 6439 A Configuring and Troubleshooting Windows Server 2008 Application Infrastructure

Course Summary

Description

This course introduces students to a series of Windows Server 2008 technologies that are used in common business scenarios, and are often the technical underpinnings for business applications. It guides students through the installation, configuration, management and troubleshooting of a Windows Server 2008 technology infrastructure for a large, comprehensive business application, assisting them with the foundational knowledge required for success in supporting such technologies. It covers technologies in Windows Server 2008 and Windows Server 2008 R2 including Sp1.

Objectives

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

- Configuring Storage for Windows Server 2008 and Windows Server 2008 R2 Applications
- Configuring High Availability for Windows Server 2008 and Windows Server 2008 R2 Applications
- RDS in the Single-Server Configuration
- RDS in the Multiple-Server Configuration
- Securely Delivering RDS Applications to the Internet
- IIS Web Applications
- IIS FTP and SMTP Services
- IIS Server and SSL Management
- Microsoft SharePoint Foundation
- Windows Streaming Media Services

Topics

- Configuring Storage for Windows Server 2008 Applications
- Configuring High Availability for Windows Server 2008 Applications
- Configuring Remote Desktop Services
- RDS in the Multiple-Server Configuration
- Securely Delivering RDS Applications to the Internet
- IIS Web Applications
- IIS FTP and SMTP Services
- IIS Server and SSL Management
- Microsoft SharePoint Foundation
- Windows Streaming Media Services

Audience

This course is intended for IT Professional technical specialists who work in the complex computing environment of a medium to large company and are responsible for the underlying Microsoft technologies that support a business application infrastructure in Windows Server 2008 and Windows Server 2008 R2.

This course is also intended for IT professional technical specialists seeking to prepare for the *70-643: TS: Windows Server 2008 Application Infrastructure, Configuring* examination.

Prerequisites

Up to one year of experience managing Windows Server 2008 and/or Windows Server 2008 R2 in a medium-to-large networking environment of multiple physical locations. At least two years of experience configuring and managing Windows Vista or Windows 7 clients Experience managing applications and network technologies in an enterprise environment, which may include network services and resources such as messaging, databases, file and print, a firewall, Internet access, an intranet, Public Key Infrastructure, remote access, remote desktop, virtualization, and client computer management. Experience managing connectivity requirements such as connecting branch offices and individual users in remote locations to corporate resources and connecting corporate networks.

Duration

Five days

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Course Outline

I. Configuring Storage for Windows Server 2008 Applications

This module covers the storage options most commonly associated with Windows Server 2008 and Windows Server 2008 R2 instances today. It introduces storage architectures, mediums, and protocols, guides students through the configuration steps for connecting iSCSI storage, and introduces the concept of VHDs as storage and boot devices.

- A. Lesson 1: Storage Concepts in Windows Server 2008
- B. Lesson 2: Configuring iSCSI Storage for Windows Server
- C. Lesson 3: Working with Virtual Hard Disks

Lab : Lab A: Configuring iSCSI Storage for Windows Server 2008

- Exercise 1: Configuring iSCSI Storage Connections for Windows Server
- Exercise 2: Configuring the MPIO DSM
- Exercise 3: Configuring a Redundant iSCSI Connection Using MPIO

Lab : Lab B: Managing Virtual Hard Disks

- Exercise 1: Creating a Virtual Hard Disk
- Exercise 2: Mounting a Virtual Hard Disk in Windows Server
- Exercise 3: Configuring Windows Server to Startup from a Virtual Hard Disk

II. Configuring High Availability for Windows Server 2008 Applications

This module covers Windows Server 2008 and Windows Server 2008 R2's built-in platforms that facility high availability for business applications. These general-purpose platforms include Network Load Balancing and Windows Failover Clustering in both single-site and multiple-site configurations.

- A. Lesson 1: Network Load Balancing Fundamentals
- B. Lesson 2: Implementing a Network Load Balancing Cluster
- C. Lesson 3: Windows Failover Cluster Fundamentals
- D. Lesson 4: Preparing for Failover Clustering
- E. Lesson 5: Implementing a Windows Failover Cluster

Lab : Lab A: Installing and Managing an NLB Cluster

- Exercise 1: Building an NLB Cluster
- Exercise 2: Configuring NLB Cluster Options

- Exercise 3: Testing the NLB Cluster
- Exercise 4: Managing an NLB Cluster

Lab : Lab B: Building a Windows Failover Cluster

- Exercise 1: Preparing Windows Server for Hosting a Failover Cluster
- Exercise 2: Running the Cluster Validation Wizard
- Exercise 3: Building a Failover Cluster
- Exercise 4: Validating a Successful Failover Cluster Creation

Lab : Lab C: Managing a Windows Failover Cluster

- Exercise 1: Creating Cluster Resources
- Exercise 2: Configuring Cluster Resource Dependencies
- Exercise 3: Configuring Resource Policies and Owners
- Exercise 4: Testing Cluster Fail Over

III. Configuring Remote Desktop Services

This module covers the introductory steps required to bring a single Remote Desktop Services Host server online and prepare it for remote application delivery to users. Students in this module will complete all aspects of the single-server configuration while preparing the environment for adding potential future servers.

- A. Lesson 1: Remote Desktop Services Overview
- B. Lesson 2: Configuring a Remote Desktop Services Host Server
- C. Lesson 3: Configuring the Remote Desktop User Experience
- D. Lesson 4: Deploying and Connecting to Remote App programs
- E. Lesson 5: Connecting Users to Applications with RD Web Access and RADC
- F. Lesson 6: Configuring Licensing for Remote Desktop Services

Lab : Lab A: Installing and Configuring an RD Session Host Server

- Exercise 1: Install the RD Session Host Role Service
- Exercise 2: Install an Application on the RD Session Host Server
- Exercise 3: Prepare the RD Session Host Server for Users
- Exercise 4: Connect to an RD Session Host with the RD Client

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Course Outline (cont'd)

Lab : Lab B: Customizing the User Experience

- Exercise 1: Configure RD Session Host Printing
- Exercise 2: Configure RD Session Host Device Redirection
- Exercise 3: Configure the Desktop Experience
- Exercise 4: Configure Multimedia Redirection
- Exercise 5: Configure IP Virtualization

Lab : Lab C: Deploying and Connecting to Remote App programs

- Exercise 1: Create a RemoteApp Program
- Exercise 2: Deploy a RemoteApp
- Exercise 3: Connect to a Deployed RemoteApp Program

Lab : Lab D: Connecting Users to Applications with RD Web Access and RADC

- Exercise 1: Install and Configure RD Web Access
- Exercise 2: Use RD Web Access to Connect to Remote App programs
- Exercise 3: Configure Single Sign-On
- Exercise 4: Configure RADC
- Exercise 5: Use Group Policy to Distribute RADC Settings
- Exercise 6: Use RADC to Connect to RemoteApp programs

Lab : Lab E: Configuring Licensing for RDS

- Exercise 1: Install and Configure and RD Licensing Server
- Exercise 2: Configure RD Session Host Servers for Licensing
- Exercise 3: Review Licensing Configuration and Diagnosis

IV. RDS in the Multiple-Server Configuration

This module covers the extra activities and knowledge required to expand a single Remote Desktop Services Host server environment to one with multiple RDSH servers in a farm configuration.

- Lesson 1: Building an RDS Server Farm
- Lesson 2: Monitoring the RDS Environment

Lab : Lab A: Building an RDS Server Farm

- Exercise 1: Install RDSH on NYC-RDSH2
- Exercise 2: Configure an RDSH Server via Group Policy
- Exercise 3: Configure RDCB and NLB to create an RDS Farm
- Exercise 4: Configure RD Roaming Profiles
- Exercise 5: Test the connection to an RDS Farm

Lab : Lab B: Monitoring the RDS Environment

- Exercise 1: Use the RD Manager to Administer User Sessions
- Exercise 2: Use WSRM to Monitor RDS Resource Usage
- Exercise 3: Configure Fair Share CPU Scheduling

V. Securely Delivering RDS Applications to the Internet

This module covers the additional activities that are necessary to build and secure a Remote Desktop Gateway server for the purposes of protecting RDS communication as it passes through untrusted networks such as the Internet

- Lesson 1: Remote Desktop Gateway Fundamentals
- Lesson 2: Installing and Managing the RDG

Lab : Lab: Installing and Managing the RDG

- Exercise 1: Installing and Configuring the RDG
- Exercise 2: Configuring RD CAPs and RD RAPs
- Exercise 3: Configuring SSO for User Connections
- Exercise 4: Testing RemoteApp Connections with the RDG

VI. IIS Web Applications

This module covers the primary use of IIS as a Web application platform. Students will learn to set up and maintain a Web site and application configuration based upon business and developer requirements. Although ASP.NET Web sites are commonly maintained by developers, IT professionals are typically called upon to configure the platform and assist with maintenance. This module will cover IIS 7.5 and IIS 7.0 and outline distinctions between them but will focus on IIS 7.5 as in Windows Server 2008 R2

- Lesson 1: IIS Functional Overview
- Lesson 2: Creating IIS Web Sites and Applications
- Lesson 3: Managing IIS Web Sites and Applications

Lab A: Creating IIS Web Sites and Applications

- Exercise 1: Configuring IIS Server Settings
- Exercise 2: Configuring an Application Pool
- Exercise 3: Creating and Configuring a Web Site
- Exercise 4: Configuring Basic Settings for a Web Application
- Exercise 5: Backing Up IIS Configuration Settings
- Exercise 6: Configuring a Virtual Directory

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Course Outline (cont'd)

Lab : Lab B: Managing IIS Web Sites and Applications

- Exercise 1: Configuring ASP.NET
- Exercise 2: Configuring ASP.NET Application Settings
- Exercise 3: Configuring ASP.NET Security

VII. IIS FTP and SMTP Services

This module covers IIS' other major feature areas such as file transfer and email functionality. These features are commonly used to support Web sites, and this module will discuss how to properly configure these features in accordance with best practices and based upon business requirements.

- Lesson 1: Implementing and Configuring IIS FTP Sites
- Lesson 2: Implementing and Configuring IIS SMTP Sites

Lab : Lab: Implementing FTP and SMTP

- Exercise 1: Installing FTP and SMTP
- Exercise 2: Configuring and Testing FTP
- Exercise 3: Configuring and Testing SMTP

VIII. IIS Server and SSL Management

This module focuses on IIS' security-related features, including SSL, logging, delegated permissions, remote administration, and other features. Students will practice a variety of scenarios that reflect common real-world business requirements.

- Lesson 1: Monitoring and Logging IIS
- Lesson 2: Managing IIS and SSL Security
- Lesson 3: Managing IIS Administrative Delegation and Remote Administration

Lab : Lab A: Managing IIS and SSL Security

- Exercise 1: Configuring SSL Bindings
- Exercise 2: Configuring IP Address Blocking
- Exercise 3: Configuring Logging
- Exercise 4: Testing and Validating the Configuration

Lab : Lab B: Configuring Remote and Delegated Administration in IIS

- Exercise 1: Configuring IIS Remote Administration
- Exercise 2: Configuring IIS Delegated Administration
- Exercise 3: Configuring IIS Feature Delegation

IX. Microsoft SharePoint Foundation

This module covers the installation and configuration of this evolution of Windows SharePoint Services. Students

will learn to set up and configure a basic document-sharing site that meets many common organizational and project requirements. It will focus on SharePoint Foundation 2010 as implemented in Windows Server 2008 and Windows Server 2008 R2

- Lesson 1: Installing and Configuring SharePoint Foundation
- Lesson 2: SharePoint Foundation Integration

Lab : Lab: Installing and Configuring SharePoint Foundation

- Exercise 1: Install SharePoint Foundation 2010
- Exercise 2: Create an initial SharePoint site and document library
- Exercise 3: Delegate site permissions
- Exercise 4: Backup and recover the SharePoint site
- Exercise 5: Configure SharePoint Timer jobs
- Exercise 6: Configure usage and Report logging
- Exercise 7: Resetting the lab environment

X. Windows Streaming Media Services

This module looks at the Media Services features of the Windows Server 2008 and Windows Server 2008 R2 platform, and introduces students to key concepts such as Real-Time Streaming Protocol, authentication, authorization, and more. Students will learn to install and configure Media Services to support use of the system features.

- Lesson 1: Installing and Configuring Streaming Media Services
- Lesson 2: Securing Streaming Media

Lab : Lab A: Installing and Configuring Media Services

- Exercise 1: Installing the Media Services Role
- Exercise 2: Configuring On-Demand Streaming and RTSP
- Exercise 3: Configuring Bandwidth and Connection Limits
- Exercise 4: Verify and Tune Media Services delivery
- Exercise 5: Configuring Web-based Administration of Media Services

Lab : Lab B: Configuring Media Services Content Security

- Exercise 1: Configuring Authentication for a Publishing Point
- Exercise 2: Restricting Access to Files to Specified Users