MOC6437 Designing a Windows Server 2008 Applications Infrastructure

Course Summary

Description

This course will prepare IT professionals for the role of Enterprise Administrator. Students will learn how to design application infrastructure solutions based on Windows Server 2008 to meet varying business and technical requirements.

Objectives

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

- Design IIS 7 Web farms.
- Optimize IIS 7 for performance and stability.
- Design IIS 7 for security.
- Design IIS 7 for reliability, recovery, and monitoring.
- Design and prepare a Terminal Services infrastructure.
- Design a Terminal Services maintenance strategy.
- Plan and configure a Windows Media Services infrastructure for live and on-demand delivery.
- Implement virtualization to consolidate servers, support legacy applications, and create a test environment.
- Determine virtualization appropriateness and virtual server provisioning.

Topics

- Designing IIS Web Farms
- Optimizing IIS Performance and Stability
- Designing IIS Security
- Design IIS Maintenance and UDDI
- Designing a Terminal Services Infrastructure
- Designing a Terminal Services Maintenance Strategy
- Design Windows Media Services Infrastructure Administration
- Design Virtualization Infrastructure
- Designing Virtualization Provisioning

Audience

The primary audience for this course is IT professionals (including Windows 2000/2003 enterprise administrators) interested in becoming a Windows Server 2008 Enterprise Administrator with a focus on application infrastructure such as Web and Terminal Services. The secondary audience for this course is Application Architects who want to know more about how to integrate Windows Server 2008 technologies into enterprise applications.

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Course Summary (cont'd)

Prerequisites

Before attending this course, students must have one or more of the following:

- Intermediate understanding of networking. For example, how TCP/IP functions, addressing (including DHCP), name resolution (DNS/WINS), and connection methods (wired, wireless, VPN), NET+ or equivalent knowledge
- Intermediate understanding of network operating systems. For example, Windows 2000, Windows XP, Windows Vista, Windows Server 2003 etc.
- Intermediate understanding of security best practices. For example, file system permissions, authentication methods, Kerberos etc.
- Intermediate knowledge of server and network hardware.
- Conceptual understanding of Active Directory (AD). For example, AD terminology, AD object types
- Hands-on experience with more than one application service such as:
- IIS
- Terminal Services
- Windows Media Services
- Virtual Server
- Hyper-V
- System Center Virtual Machine Manager

Duration

Three days

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Course Outline

I. Designing IIS Web Farms

The students will learn the process of designing IIS Web Farms with Windows Server 2008 and IIS 7. They will learn how to select the appropriate hardware and software platforms. They will learn techniques to leverage Web Farm Availability and Scalability. They will also learn how to select the proper content storage.

A. Overview of Hardware and Platform Options
B. Design Web Farm Availability and Scalability
C. Design Content Storage

Lab: Designing IIS Web Farms

- Design Hardware Platform
- Design Web Farm Availability and Scalability
- Design Web Site Availability and Scalability
- Design Web Site Configuration, Deployment and Consistency
- Design Web Site Content, Deployment and Consistency

After completing this module, students will be able to:

- Design an appropriate platform.
- Design Web farm availability and scalability.
- Design content storage.

II. Optimizing IIS Performance and Stability

The students will learn about optimizing IIS performance and stability.

A. Designing Application Pools
B. Designing Script Mapping
C. Designing Bandwidth Allocation
D. Design Web Site Logging

Lab: Optimizing IIS Performance and Stability

Design and Test Application Pools

- Design and Test Script Maps
- Design and Test Bandwidth Allocation
- Design and Test Web Site Logging
- Configuring a Web Server to Host Multiple Applications with Separate Application Pools

After completing this module, students will be able to:

- Plan new application pools.
- Plan to deploy script mapping.
- Plan bandwidth allocation per site or application.
- Plan Web site logging.

III. Designing IIS Security

In this module, the students will learn to establish and maintain very tight security using Microsoft IIS 7.

A. Design and Verify Transport Security
B. Design Authentication and Authorization
C. Design Delegation Administration

Lab: Designing IIS 7 Security

Design and Verify Transport Security

- Design and Verify Authentication and Authorization Methods
- Design and Verify Delegation Administration
- Configuring Authentication Types

After completing this module, students will be able to:

- Design and verify Transport Security (SSL).
- Plan site authentication and authorization.
- Plan delegation permissions and administrative access.

IV. Design IIS Maintenance and UDDI

The students will learn how to plan for an IIS installation, taking into account these new features. They will also learn how to deploy UDDI services.

A. Designing Internet Information Services Backup and Recovery
B. Specify Monitoring Requirements
C. Deploying UDDI Services
D. Tuning and Troubleshooting IIS 7

Lab: Design IIS Maintenance and UDDI

- Design a Web Server Backup and Recovery Strategy
- Design and Test Web Server Monitoring
- Design UDDI Deployment
- Troubleshooting Application Pool Instability

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Course Outline (cont'd)

- Enabling Shared Configurations
- Configuring Network Load Balancing

After completing this module, students will be able to:

- Design a Web server backup and recovery plan.
- Design for and utilize the IIS management pack for System Center.
- Design and test UDDI services.
- Troubleshoot IIS caching behavior.

V. Designing a Terminal Services Infrastructure

The students will learn how to design a terminal services infrastructure including how to design a terminal services licensing strategy and how to design for remote access with TS Gateways, TS Session Broker, RemoteApp programs, and TS Web Access.

A. Design Terminal Services Licensing
B. Specify Terminal Services Connection Properties
C. Design Device Redirection
D. Design Terminal Services Gateways
E. Design Terminal Services Broker
F. Design RemoteApp Programs
G. Design Web Access

Lab: Designing a Terminal Services Infrastructure

- Design and Test Terminal Services RemoteApp Programs
- Design and Test Terminal Services Corporate Desktop
- Design and Test Terminal Services Gateway and Web Access
- Design and Test Terminal Services Gateway Policies, Connection Authorization Policies, and Resource Access Policies

After completing this module, students will be able to:

- Design Terminal Services (TS) Licensing.
- Specify Terminal Services Connection Properties.
- Design Device Redirection.
- Design Terminal Services Gateways.
- Design Terminal Services Broker.
- Design RemoteApp Programs.
- Design Web Access.

VI. Designing a Terminal Services Maintenance Strategy

The students will be introduced to design and implementation planning using Windows System Resource Manager (WSRM) policies for application resource and reporting. The students will also learn about group policy settings for terminal servers and how to design high availability for terminal services. Finally, the students will learn to specify monitoring, maintenance, and recovery requirements and procedures for terminal services.

A. Design Windows System Resource Manager (WSRM) Policies for Application Resource and Reporting
B. Specify Group Policy Settings for Terminal Servers
C. Design High Availability
D. Specify Monitoring Requirements
E. Specify Maintenance and Recovery

Lab: Designing Terminal Services Maintenance

- Design and test highly available Terminal Services
- Design and test Group Policy for Terminal Services
- Design and test resource management for Terminal Services
- Design and test monitoring for Terminal Services
- Optimizing Terminal Services Performance

After completing this module, students will be able to:

- Design Windows System Resource Manager (WSRM) policies for application resource and reporting.
- Specify Group Policy settings for terminal servers.
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Course Outline (cont'd)

- Design high availability (both terminal servers and session directory servers).
- Specify monitoring requirements.
- Specify maintenance and recovery.

VII. Design Windows Media Services Infrastructure Administration

The students will learn about designing Windows Media Services in Windows Server 2008. They will become familiarized with live and on-demand content delivery.

A. Design Windows Media for Live Streaming
B. Windows Media Services for On-Demand Content
C. Improving Performance for On-Demand Content
D. Monitoring Windows Media Services

Lab: Design a Windows Media Services Infrastructure

- Design Windows Media Services for Live Streaming
- Design WMS Infrastructure for On-Demand Content
- Troubleshooting Poor Performance of On-Demand Content
- Design and Test Monitoring of Windows Media Services

After completing this module, students will be able to:

- Design Windows Media Services infrastructure for live streaming.
- Design Windows Media Services infrastructure for on-demand content.
- Troubleshoot poor performance of on-demand content.
- Plan for monitoring of Windows Media Services.

VIII. Design Virtualization Infrastructure

The students will implement virtualization to consolidate servers, deploy branch office infrastructure servers, support legacy applications, and create a test environment.

A. Virtualization of a Test Server Environment
B. Virtualization and Migration of Legacy Applications
C. Design and Test a Virtualized Development Environment

Lab: Design Virtualization Infrastructure

- Design a Test Server Consolidation Strategy
- Design and Test Virtualization and Migration of Legacy Server
- Design and Test Development Environment Isolation Using Virtual Server

After completing this module, students will be able to:

- Create a design document for server consolidation and virtualization.
- Create a design document for legacy server hosting.
- Identify and document key business and technical requirements for creating an isolated development environment.

IX. Designing Virtualization Provisioning

The students will learn how to determine virtualization appropriateness and virtual server provisioning. The students will also learn the importance of customizing virtual servers to standard configurations and also learn about virtual server deployment.

A. Design Virtual Server Provisioning Workflow Model
B. Evaluate Appropriateness for Virtualization
C. Evaluate Customization to Standard Configuration
D. Design Deployment for Virtualization

Lab: Design Virtualization Provisioning

Design Virtual Server Host Configuration

- Design Virtual Server Provisioning using System Center

After completing this module, students will be able to:

- Design virtual server provisioning workflow model.
- Evaluate appropriateness for virtualization.
- Evaluate customization to standard configuration.
- Design Windows Deployment Services.

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