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## **2824 – Implementing MS Internet Security & Acceleration Server 2004 5 Day**

This five-day instructor-led course provides students with the knowledge and skills to deploy and manage Microsoft Internet Security and Acceleration (ISA) Server 2004 as part of a larger security infrastructure. The course introduces security concepts unique to ISA Server 2004 and provides best practices for their implementation. This course includes information on both the Standard Edition and Enterprise Edition of ISA Server 2004.

### **WHO SHOULD ATTEND**

The audience will be IT Professionals who are responsible for implementing network and perimeter security measures, including Internet firewalls, application layer filters, and screened networks. They will also implement caching servers and additional mechanisms to protect public-facing Web servers. These individuals will have a need to simplify ongoing management, reduce support costs and prevent security breaches.

This course will also help to prepare individuals pursuing the MCSA: Security or MCSE: Security certification specializations

### **PEREQUISITES**

This course requires that students meet the following prerequisites:

- Successful completion of Course 2810: Fundamentals of Network Security, or equivalent knowledge of networking security.
- Successful completion of Course 2273: Managing and Maintaining a Microsoft Windows Server 2003 Environment, or equivalent knowledge of the Windows Server 2003 operating system and network concepts, or equivalent knowledge of Microsoft Windows 2000 Server operating system and network concepts.
- Experience implementing network resources such as Web, FTP, and Microsoft Exchange servers. Detailed knowledge about deploying these resources is not required.

#### Microsoft Certification exams

This course will help the student prepare for the following Microsoft Certified Professional exam:  
Exam 70-350: Implementing Microsoft Internet Security and Acceleration Server 2004

#### Course Materials

The student kit includes a comprehensive workbook and other necessary materials for this class.



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The following software is provided in the student kit:

- Evaluation copy of ISA Server 2004 for classroom use only.

## **AT COURSE COMPLETION**

After completing this course, students will gain the skills to:

- Describe the functionality provided by ISA Server 2004, and explain valid deployment scenarios for ISA Server 2004.
- Install and maintain ISA Server 2004, and install and configure ISA Server clients.
- Configure secure access to Internet resources for internal network clients using ISA Server 2004.
- Configure ISA Server 2004 as a firewall between the Internet and the internal network.
- Configure secure access to internal network resources for Internet clients who are using Web and server publishing rules.
- Configure ISA Server to provide secure access to Exchange Server for servers and clients located on the Internet.
- Implement application and Web filters on ISA Server 2004.
- Implement a virtual private network for remote clients and remote networks using ISA Server 2004.
- Implement Web proxy caching on ISA Server 2004.
- Plan an ISA Server 2004 Enterprise Edition deployment and install ISA Server 2004 Enterprise Edition.
- Implement ISA Server 2004 Enterprise Edition in a back-to-back firewall scenario.
- Implement ISA Server 2004 Enterprise Edition in a site-to-site VPN scenario.

## **LESSON TOPICS**

### **Module 1: Overview of Microsoft ISA Server 2004**

This module provides an introduction to ISA Server 2004. It introduces the core functionality provided by ISA Server 2004 and presents an overview of how ISA Server 2004 integrates with other security practices to form a defense-in-depth approach to network security. The module also describes the most common deployment scenarios for ISA Server 2004.

#### **Lessons**

- Introducing ISA Server 2004
- Deployment Scenarios for ISA Server 2004



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### **Lab : Lab A: Introducing ISA Server 2004**

- Designing an ISA Server Deployment at Contoso Pharmaceuticals
- Designing an ISA Server Deployment at Blue Yonder Airlines

After completing this module, students will be able to:

- Describe the features and functionality in ISA Server 2004 Standard Edition and Enterprise Edition.
- List common deployment scenarios for ISA Server.

### **Module 2: Installing and Maintaining ISA Server 2004**

This module describes how to install ISA Server 2004, how to install and configure the ISA Server client software, and how to maintain ISA Server 2004 after installation.

#### **Lessons**

- Installing ISA Server 2004
- Choosing ISA Server Clients
- Installing and Configuring Firewall Clients
- Advanced Firewall Client Configuration
- Securing ISA Server 2004
- Maintaining ISA Server 2004

### **Lab : Lab A: Installing and Maintaining ISA Server 2004**

- Performing an Unattended Installation of ISA Server 2004
- Migrating an ISA Server Configuration
- Securing ISA Server 2004

After completing this module, students will be able to:

- Install ISA Server 2004.
- Install and configure ISA Server 2004 clients.
- Improve the security of ISA Server.
- Maintain ISA Server.



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### **Module 3: Enabling Access to Internet Resources**

This module explains how to provide access to Internet resources for internal corporate clients while maintaining network security. The module discusses different ways to implement this and also how to configure rules for access.

#### **Lessons**

- ISA Server 2004 as a Proxy Server
- Configuring Multi-Networking on ISA Server
- Configuring Access Rule Elements
- Configuring Access Rules for Internet Access

#### **Lab : Lab A: Enabling Access to Internet Resources**

- Configuring ISA Server Access Rule Elements
- Configuring ISA Server Access Rules
- Testing ISA Server Access Rules

After completing this module, students will be able to:

- Describe access to Internet resources and how ISA Server 2004 enables access.
- Describe how ISA Server 2004 works as a proxy server.
- Configure multiple networks on ISA Server.
- Configure access rule elements.
- Configure ISA Server to provide access to Internet resources.

### **Module 4: Configuring ISA Server 2004 as a Firewall**

This module explains how to configure ISA Server 2004 to provide firewall capabilities and restrict traffic into and out of the network. The module describes how to configure firewall policies and rules to provide specific functionality.

#### **Lessons**

- Using ISA Server as a Firewall
- Examining Perimeter Networks and Templates
- Configuring System Policies
- Configuring Intrusion Detection and IP Preferences

#### **Lab : Lab A: Configuring ISA Server as a Firewall**

- Restoring Firewall Access Rules



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- Modifying the ISA Server System Policy
- Testing the Policy Modifications

After completing this module, students will be able to:

- Describe the core functionality provided by firewalls and how this functionality is implemented in ISA Server 2004.
- Describe the different types of perimeter network types and use ISA Server network templates to deploy perimeter networks.
- Configure system policies.
- Configure intrusion detection and IP preferences on ISA Server 2004.

### **Module 5: Configuring Access to Internal Resources**

This module explains how to configure Web and server publishing rules to publish internal network resources to the Internet without compromising internal network security.

#### **Lessons**

- Introduction to Publishing
- Configuring Web Publishing
- Configuring Secure Web Publishing
- Configuring Server Publishing
- Configuring ISA Server Authentication

#### **Lab : Lab A: Configuring Access to Internal Resources**

- Configuring ISA Server Authentication and Secure Publishing
- Testing the ISA Server Configuration

After completing this module, students will be able to:

- Describe how ISA Server 2004 can be used to configure access to internal resources.
- Configure Web publishing.
- Configure secure Web publishing.
- Configure server publishing.
- Configure ISA Server authentication.
- Configure publishing for additional services.



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## **Module 6: Integrating ISA Server 2004 and Microsoft Exchange Server**

This module explains how Microsoft Exchange Server is a critical network service that is virtually always accessible from the Internet and how ISA Server 2004 can be used to provide security for Exchange Server and for securing client connections to Exchange.

### **Lessons**

- Issues in E-Mail Security
- Configuring ISA Server to Secure SMTP Traffic
- Configuring ISA Server to Secure Web Client Connections
- Configuring ISA Server to Secure Client Connections

### **Lab : Lab A: Integrating ISA Server 2004 and Microsoft Exchange Server**

- Enabling RPC over HTTP Client Connections
- Configuring a Forms-Based Authentication for Microsoft Outlook Web Access

After completing this module, students will be able to:

- Describe the issues in e-mail security.
- Configure ISA Server to secure Simple Message Transfer Protocol (SMTP) traffic.
- Configure ISA Server to secure client connections.
- Configure ISA Server to secure Web client connections.

## **Module 7: Advanced Application and Web Filtering**

This module explains how application and Web filtering can be used for very specific filtering of traffic that flows through the ISA Server. The module shows how to configure application and Web filtering to provide advanced protection for the internal network.

### **Lessons**

- Advanced Application and Web Filtering Overview
- Configuring HTTP Web Filters
- Configuring Additional Application and Web Filters

### **Lab : Lab A: Advanced Application and Web Filtering**

- Identifying an Application Method and Signature
- Modifying the HTTP Web Filter



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After completing this module, students will be able to:

- Describe how application filtering and Web filtering work.
- Configure HTTP Web filters.
- Configure other application and Web filters.

### **Module 8: Configuring Virtual Private Network Access for Remote Clients and Networks**

This module explains how to provide access to the internal network for remote users while maintaining network security by implementing a virtual private network (VPN). The module shows how to configure ISA Server 2004 to provide a VPN solution.

#### **Lessons**

- Virtual Private Networking Overview
- Configuring Virtual Private Networking for Remote Clients
- Configuring Virtual Private Networking for Remote Sites
- Configuring VPN Quarantine Control Using ISA Server 2004

After completing this module, students will be able to:

- Describe how VPNs work and the components required to configure VPNs.
- Configure ISA Server to enable VPNs for remote clients.
- Configure ISA Server to enable VPNs for remote sites.
- Configure ISA Server to enable VPN quarantine service.

### **Module 9: Implementing Caching to Improve Browsing Performance**

This module explains how ISA Server can cache content that clients request from the Internet to provide a quicker response to the client. This module discusses how to configure caching for maximum efficiency.

#### **Lessons**

- Caching Overview
- Configuring General Cache Properties
- Configuring Cache Rules
- Configuring Content Download Jobs

#### **Lab : Lab A: Configuring Caching on ISA Server 2004**

- Testing and Monitoring ISA Server Caching



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After completing this module, students will be able to:

- Describe how caching is implemented on ISA Server 2004.
- Configure caching properties on ISA Server 2004.
- Configure cache rules on ISA Server 2004.
- Configure content download jobs on ISA Server 2004.

### **Module 10: Monitoring ISA Server 2004**

This module explains how administrators can use monitoring features of ISA Server to track network activity and monitor ISA Server performance.

#### **Lessons**

- Monitoring Overview
- Configuring Alerts
- Configuring Session Monitoring
- Configuring Logging
- Configuring Reports
- Monitoring Connectivity
- Monitoring Services and Performance

#### **Lab : Lab A: Configuring Caching on ISA Server 2004**

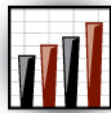
- Exercise 1: Testing the Alerts Feature
- Exercise 2: Testing the Reporting Feature
- Exercise 3: Testing the Connectivity Monitoring Feature

After completing this module, students will be able to:

- Describe how to use monitoring features on ISA Server 2004.
- Configure alerts on ISA Server 2004.
- Configure session monitoring, logging, and reports on ISA Server 2004.
- Configure monitoring of connectivity on ISA Server 2004.
- Monitor services and performance on ISA Server 2004.

### **Module 11: Implementing ISA Server 2004 Enterprise Edition**

This module will focus on the concepts related to planning and implementing an ISA Server 2004 infrastructure. This module will highlight the differences between ISA Server 2004 Standard Edition and Enterprise Edition and explain how to implement the Enterprise Edition features.



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### Lessons

- Overview of ISA Server 2004 Enterprise Edition
- Planning an ISA Server 2004 Enterprise Edition Deployment
- Implementing ISA Server 2004 Enterprise Edition

After completing this module, students will be able to:

- Describe the differences between ISA Server 2004 Enterprise Edition and ISA Server 2004 Standard Edition.
- Plan an ISA Server 2004 Enterprise Edition deployment.
- Install, configure and manage ISA Server 2004 Enterprise Edition.

### Module 12: Implementing ISA Server 2004 Enterprise Edition: Back-to-Back Firewall Scenario

The primary focus of this module is the lab where the students will implement ISA Server Enterprise Edition in a back-to-back firewall configuration that includes network load balancing and shared caching. The module information will introduce the complexities of implementing a back-to-back firewall configuration and then provide guidelines for deploying this configuration. In the lab, the students will implement and test a back-to-back firewall scenario. This module should prepare students to implement a scalable back-to-back firewall solution using ISA Server Enterprise Edition based on a minimal but realistic set of business requirements.

### Lessons

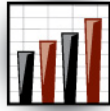
- Implementing a Back-to-Back Firewall Scenario

### Lab : Lab A: Implementing the Back-to-Back Firewall Scenario

- Exercise 1: Enabling Network Load Balancing for the Main\Front-End Array
- Exercise 2: Configuring the Front-End Array Server
- Exercise 3: Configuring Firewall Rules for Resource Access

After completing this module, students will be able to:

- Describe the issues involved with deploying ISA Server Enterprise Edition in a back-to-back firewall scenario, and describe solutions to those issues.
- Implement ISA Server 2004 in a back-to-back firewall scenario.



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## **Module 13: Implementing ISA Server 2004 Enterprise Edition: Site-to-Site VPN Scenario**

The primary focus of this module is the lab where the students will implement ISA Server Enterprise Edition in a branch office site-to-site VPN scenario that include VPN network load balancing. The module information will introduce the complexities of implementing a branch office site-to-site VPN scenario and then provide guidelines for deploying this configuration. In the lab, the students will implement and test the deployment scenario. This module should prepare students to implement a scalable site-to-site VPN solution using ISA Server Enterprise Edition. The scenario will demonstrate how to implement a site-to-site VPN scenario that reflects a minimal but realistic set of business requirements.

### **Lessons**

- Implementing the Site-to-Site VPN Scenario

### **Lab : Lab A: Implementing ISA Server Enterprise Edition**

- Exercise 1: Enabling NLB and CARP for the Main/Front-End Array
- Exercise 2: Configuring the Main-Office Array for a Site-to-Site VPN
- Exercise 3: Deploying ISA Server Services in a Remote Site
- Exercise 4: Configure the Remote Site for a Site-to-Site VPN

After completing this module, students will be able to:

- Describe the issues involved with deploying ISA Server Enterprise Edition in a site-to-site VPN scenario, and describe solutions to those issues.
- Implement ISA Server 2004 in a site-to-site VPN scenario.