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Course Outline

Monitoring and Troubleshooting Microsoft Exchange Server 2007 (5051A)
Course length: 2 days

Who Should Attend:

This workshop is intended for experienced enterprise-level messaging professionals who have at least 3 years experience working in the Information Technology field, including administering Exchange Servers

Course Summary:

Elements of this syllabus are subject to change.

At the end of this two-day workshop, specialists will be able to monitor and troubleshoot an Exchange Server 2007 messaging system. Students will learn how to correlate client and server issues and resolve those issues. They will also learn how to monitor systems and create reports from the monitoring data

Objectives:

After completing this course, students will be able to:
- Monitor and troubleshoot client performance and connectivity.
- Monitor and troubleshoot mail flow.
- Monitor and troubleshoot messaging servers.
- Troubleshoot calendars and public folders.
- Monitor and troubleshoot external and additional services.
- Identify trends in a messaging system.

Prerequisites:

Students must have an understating of the following:

- Understanding of server hardware. For example, the role of hardware components and understanding of potential hardware bottlenecks
- Basic knowledge of server and Exchange performance characteristics. For example, the importance of sample rates and sizes are and how they are used
- Experience using these tools and applications:
- Perfmon command
- MDBVUE tool
- Active Directory Management tools
- telnet commands
- nslookup command
- Internet Information Services (IIS) Admin
- Windows PowerShell
- Exchange QueueViewer
- Exchange Management Console
- Event Viewer
- Outlook
- ADMAP command
- Working knowledge of Windows server operating system. For example, how storage is configured, basic backup and restore techniques, and what a client/server application interaction means
- Working knowledge of network technologies. For example, what Transmission Control Protocol (TCP/IP) and Domain Name System (DNS) do and how to use them, basic routing concepts (Wide Area Networks (WAN) vs. Local Area Network (LAN) router vs. switch vs. hub)

✉ info@redynamics.com   ◆   ☎ (603) 7957 7228   ◆   🖷 (603) 7957 1228

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- Working knowledge of Active Directory. For example, how user objects are managed, what is stored in Active Directory partitions, basic architectures (domain, forest, sites, etc.), and how domain controllers are managed. Also, site and site connector configuration, schema and configuration partitions, and Global Catalogs
- Working knowledge of Exchange Server 2003. For example, what the different server roles are, how the different server roles interact, what protocols the server roles use to communicate, what roles the clients connect to, How messaging policies work, how Microsoft ActiveSync 4.2 interacts with Exchange Server, how to manage recipients in exchange and Active Directory (AD), how message hygiene interacts with the message flow
- Understanding of Exchange transport technologies. For example, connectors, routing via AD sites, the basic components of the Simple Mail Transport Protocol (SMTP) transport system, how the client connectivity protocols work (Post Office Protocol (POP), Internet Access Message Protocol (IMAP), SMTP)

Completion of the following courses, or equivalent knowledge
- Course 5047A: Introduction to Installing and Managing Microsoft Exchange Server 2007
- Course 5049A: Managing Messaging Security using Microsoft Exchange Server 2007

Time:
Class time is 9.00am – 4.30/5.00pm
Breaks are scheduled twice daily, one in the morning and another in the afternoon. Lunch is typically 12-1pm. This time may alter based on the trainers' discretion.

Course Material:
Course materials are provided. Our goal is to make sure your class meets your objectives, not ours. Therefore, all of our outlines are treated as guides to help steer the workshop. We may change or alter course topics to best suit the classroom situation.

Course Content:

Unit 1: Introduction to Exchange Server Monitoring and Troubleshooting

- After completing this unit, students will be able to explain how to monitor Exchange servers using Microsoft Operations Manager (MOM) and explain an Exchange troubleshooting model

- **Topics**
- Overview
- Introduction to Microsoft Operations Manager
- Introduction to Troubleshooting Exchange Server 2007
- Using MOM to Monitor Exchange Servers

- **Lab: Introduction to Exchange Server Monitoring and Troubleshooting**
- Developing a Monitoring and Troubleshooting Process

- **After completing this module, students will be able to:**
- Describe how this unit provides the basis for the information to be presented in the other units in the workshop
- Describe what MOM is.
- Provide an example of efficient troubleshooting logic for Exchange Server 2007.

- Explain how to monitor Exchange Servers using MOM.

- **Unit 2: Monitoring and Troubleshooting Client Performance and Connectivity**
- After completing this unit, students will be able monitor and troubleshoot mail flow.

- **Topics**
- Overview
- Tools for Monitoring Client Performance and Connectivity
- Process for Troubleshooting MAPI Clients
- Process for Troubleshooting Client Access Server Clients

- **Lab: Monitoring and Troubleshooting Client Performance and Connectivity**
- Monitoring Client Connectivity
- Troubleshooting Mailbox Log-On Issues
- Troubleshooting a Client Access Server Issue

- **After completing this module, students will be able to:**
- Identify tools for monitoring client performance and connectivity.
- Describe the process for troubleshooting MAPI clients.
- Describe the process for troubleshooting Client Access Server clients.
- Configure MOM to monitor client connectivity issues.
- Identify the cause for a MAPI connectivity issue and resolved the issue.
- Identify the cause for a remote client connectivity issue and resolved the issue.

- **Unit 3: Troubleshooting Access to Resources and Messages**
- After completing this unit, students will be able to troubleshoot access to resources and messages

- **Topics**
- Overview
- How Public Folder Access Works
- How Calendaring Works
- Process for Troubleshooting Client Access Server Issues

- **Lab: Troubleshooting Access to Messaging Contents**
- Troubleshooting a Public Folder Access Issue s
- Troubleshooting a Calendaring Issue
- Troubleshooting an Outlook Web Access (OWA) Access Issue
- Troubleshooting an E-Mail Message That Won't Open

- **After completing this module, students will be able to:**
- Describe how public folder access works.
- Describe how calendaring works.
- Describe the process for troubleshooting client access server issues.
- Identify the reason why a user at one location is unable to access a public folder and resolve the issue
- Identify the reason for a resource booking failure and resolve the issue.
- Identify the reason why a user cannot access resources through OWA and resolve the issue.
- Identify the reason why a user is unable to open a message in their mailbox and resolve the issue

- **Unit 4: Monitoring and Troubleshooting Mail Flow**
- After completing this unit, students will be able to monitor and troubleshoot mail flow.

- **Topics**
- Overview
- Tools for Monitoring Mail Flow
- Process for Troubleshooting Internal Mail Flow
- Process for Troubleshooting External Mail Flow

- **Lab: Monitoring and Troubleshooting Mail Flow**
- Configuring Monitoring of Message Queues
- Troubleshooting a Message Queue Bottleneck
- Troubleshooting an Undelivered E-Mail Message

- **After completing this unit, students will be able to:**
- Identify tools for monitoring mail flow.
- Describe the process for troubleshooting internal mail flow.
- Describe the process for troubleshooting external mail flow.
- Configure MOM to monitor message flow.
- Identify the cause for messages not being delivered in the organization and resolved the issue.
- Identify the cause for messages not being received from the Internet and resolved the issue.

- **Unit 5: Monitoring and Troubleshooting Mailbox Servers**
- After completing this unit, students will be able to monitor and troubleshoot mailbox servers.

- **Topics**
- Overview
- Tools for Monitoring Mailbox Servers
- Process for Troubleshooting Mailbox Servers
- Guidelines for Troubleshooting Mailbox Server Performance

- **Lab: Monitoring and Troubleshooting Mailbox Servers**
- Configuring monitoring of Mailbox servers
- Troubleshooting a Mailbox Log-on Issue
- Troubleshooting a Mailbox Store Mounting Issue

- **After completing this unit, students will be able to:**
- Identify tools for monitoring Exchange Mailbox servers.
- Implement a process for troubleshooting Exchange Mailbox servers.
- Describe guidelines for troubleshooting Exchange Mailbox server performance.
- Describe guidelines for resolving performance issues for Exchange Server roles.
- Configure MOM to monitor Mailbox servers.
- Identify the cause for users not being able to log on to their mailbox and resolve the issue.
- Identify reasons why a mailbox store cannot be mounted and resolve the issue.

- **Unit 6: Monitoring and Troubleshooting External and Additional Services**
- After completing this unit, students will be able to monitor and troubleshoot external and additional services

- **Lessons**
- Overview
- External and Additional Services Required by Exchange Server 2007
- External Services Required for Unified Messaging in Exchange Server 2007
- Tools for Monitoring External Services

- **Lab: Monitoring and Troubleshooting External and Additional Services**
- Configuring Monitoring of External Services
- Troubleshooting External Services
- Discussion: The Impact of External and Additional Services on Exchange Environments

- **After completing this unit, students will be able to**
- Identify external and additional services required by Exchange Server 2007.
- Identify external services required for Unified Messaging in Exchange Server 2007.
- Identify tools for monitoring external services.
- Configure monitoring for external services required for Exchange Server
- Identify the reason that Exchange Services failed to start and resolve the issue.
- Describe scenarios in which the failure of external services results in Exchange Server failures and how to address those failures

- **Unit 7: Identifying Trends in a Messaging System**
- After completing this unit, students will be able to identify and address trends in a messaging system.

- **Topics**
- Overview
- Tools for Identifying Trends in a Messaging System
- Information Required to Identify and Resolve Trends

- **Lab: Identifying Trends in a Messaging System**
- Creating Messaging Reports
- Evaluating Messaging Reports
- Recommending Configuration Changes

- **After completing this unit, students will be able to:**
- Describe tools for identifying trends in a messaging system.
- Apply considerations for identifying trends.
- Apply considerations for addressing trends.
- Create monitoring reports for an Exchange organization.
- Analyze monitoring reports to identify trends.
- Create proposals for addressing identified trends.

Certified Exam Info: This course will help the student prepare for the following Microsoft Certified Professional exam:
Exam 70-236: Implementing: Troubleshooting
Exam and Maintaining a MS Exchange Server 2007 Infrastructure