Microsoft® Official Course

Module 1

Deploying and Managing Microsoft® Exchange Server 2013
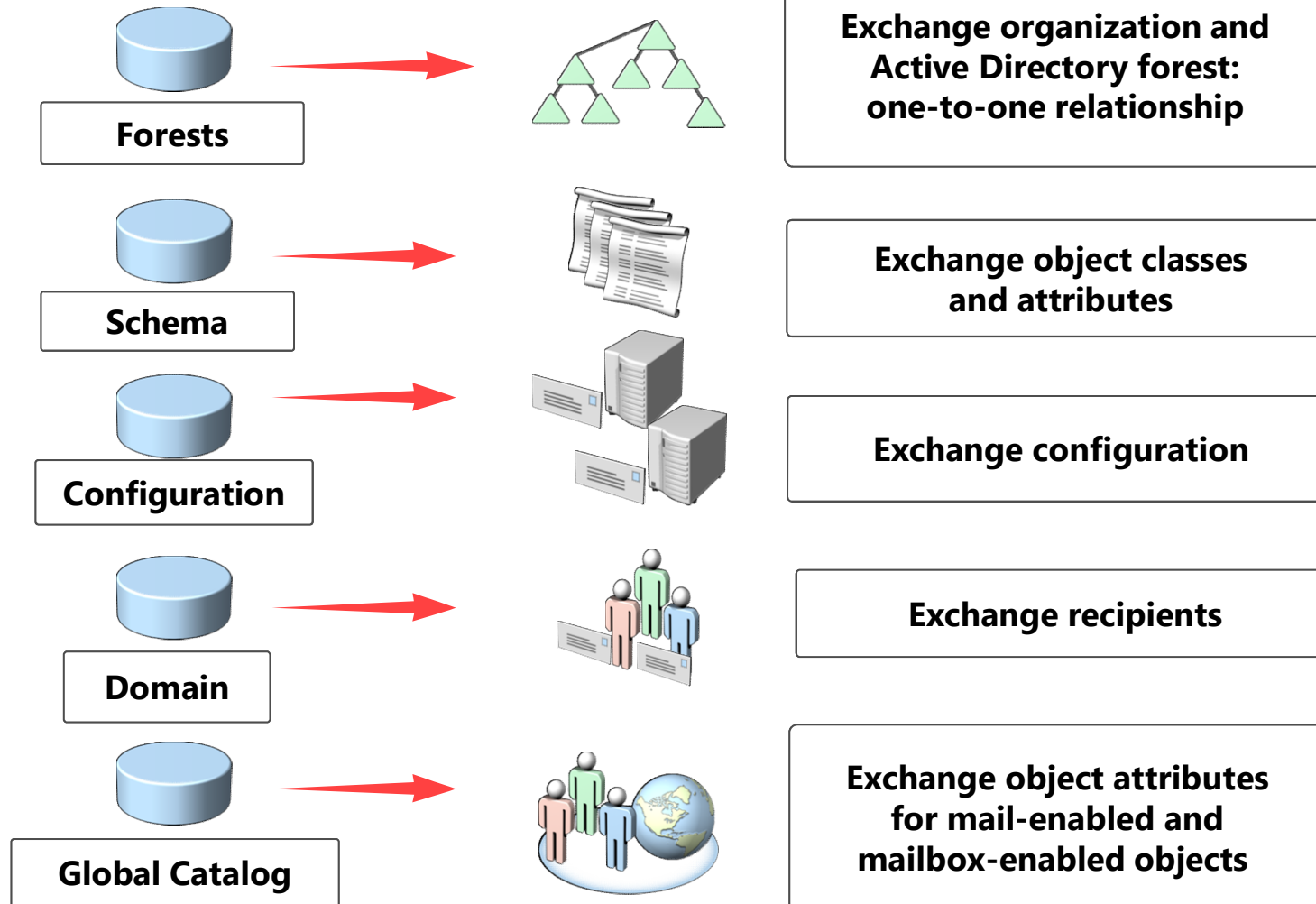
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Module Overview

- Exchange Server 2013 Prerequisites and Requirements
- Exchange Server 2013 Deployment
- Managing Exchange Server 2013

Lesson 1: Exchange Server 2013 Prerequisites and Requirements

- Active Directory Components and Exchange Server Integration
- DNS Server Requirements for Exchange Server 2013
- Software Requirements for Exchange Server 2013
- Hardware Requirements for Exchange Server 2013
- Infrastructure Requirements for Exchange Server 2013
- Preparing AD DS for Exchange Server 2013 Deployment

Active Directory Components and Exchange Server Integration

Forests → Exchange organization and Active Directory forest: one-to-one relationship

Schema → Exchange object classes and attributes

Configuration → Exchange configuration

Domain → Exchange recipients

Global Catalog → Exchange object attributes for mail-enabled and mailbox-enabled objects

DNS Server Requirements for Exchange Server 2013

- Exchange Server 2013 uses DNS to locate AD DS domain controllers and to register its SRV records

- Exchange Server 2013 uses following record types:
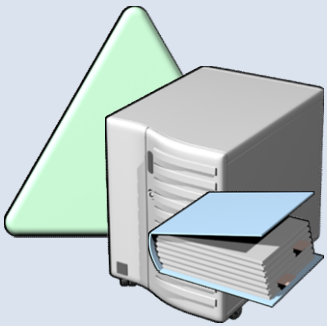 - SRV records
  - Host records
  - MX records

Software Requirements for Exchange Server 2013

- Exchange Server 2013 can be installed on:
  - Windows Server 2012 Standard or Datacenter
  - Windows Server 2008 R2 Standard with SP1
  - Windows Server 2008 R2 Enterprise with SP1
  - Windows Server 2008 R2 Datacenter RTM or later

- Additional components needed:
  - Microsoft .NET Framework 4.5
  - Windows Management Framework 3.0
  - Remote Server Administration Tools for AD DS
  - Microsoft Unified Communications Managed API 4.0, Core Runtime 64-bit
  - Microsoft Office 2012 Filter Pack 64-bit
  - Microsoft Office 2012 Filter Pack SP1 64-bit

Hardware Requirements for Exchange Server 2013

Resource	Requirements
Processor	• Intel 64-bit architecture • AMD64 architecture
Memory	• 8 GB recommended • Additional memory required based on server role and load
Disk	• 1.2 GB free disk space for Exchange Server files • 200 MB free on the system drive • Additional space for mailbox storage
File System	• NTFS file system for all drives

Infrastructure Requirements for Exchange Server 2013

Infrastructure Component	Requirements
Active Directory	• Schema master must be running Windows Server 2003 (SP2), Windows Server 2008, Windows Server 2008 R2 or Windows Server 2012 • All global catalog servers must be running Windows Server 2008,Windows Server 2008 R2 or Windows Server 2012 • Domain and forest functional levels must be at least Windows Server 2003
DNS	• Must be configured to enable domain controller and global-catalog server name resolution

Preparing AD DS for Exchange Server 2013 Deployment

Setup parameter	Description
/PrepareAD /OrganizationName: "organizationname"	• Prepares the global Exchange objects • Creates the Exchange universal security groups in the root domain • Prepares the current domain
/PrepareSchema	• Prepares the schema for the Exchange Server 2013 installation
/PrepareDomain **/PrepareDomain** *domainname* **/PrepareAllDomains**	• Prepares the domain where Exchange Server recipients are located

Lesson 2: Exchange Server 2013 Deployment

- Exchange Server Role Architecture in Exchange Server 2013
- Deployment Options for Exchange Server 2013
- Exchange Server 2013 Hybrid Deployment with Office 365
- Upgrade and Migration Options
- Deploying Exchange Server 2013 as Virtual Machines
- Discussion: Implementing Exchange Infrastructure in a Virtual Environment
- How to Install Exchange Server 2013 Using the Setup Wizard
- How to Install Exchange Server 2013 in Unattended Mode
- Demonstration: Installing Exchange Server 2013
- Post-Installation Tasks

Exchange Server Role Architecture in Exchange Server 2013

- Server roles in Exchange Server 2013:
  - Client Access Server - handles all secure mail messages between on-premise and exchange online organizations
  - Mailbox Server – on-premises recipeint mailboxes

- Client Access Server provides:
  - Client authentication
  - Redirection and proxy services
  - Support for client protocols (HTTP,POP,IMAP,SMTP)

- Mailbox Server provides:
  - Mailbox and public-folder database
  - Transport services
  - Unified Messaging
- Client connectivity is only established using RPC over HTTPS

Deployment Options for Exchange Server 2013

- Exchange Server 2013 versions:
  - Standard
  - Enterprise

- Exchange Server CAL:
  - Standard - For both the Standard and Enterprise editions of Exchange Server
  - Enterprise

- Deployment scenarios:
  - Single-server deployment – both CAS and Mailbox installed on premise
  - Multiple-server deployment –more than one server
  - Hybrid deployment -

Exchange Server 2013 Hybrid Deployment with Office 365

- Hybrid Exchange Deployment provides following features:
    - Mail routing with a shared domain namespace
    - Unified global address list
    - Free/busy and calendar sharing
    - Centralized control of mail flow
    - A single Outlook Web App URL
    - Ability to move existing mailboxes to the cloud
    - Centralized mailbox management
    - Cloud-based message archiving

- Additional components needed for hybrid deployment:
    - Microsoft Federation Gateway
    - Active Directory synchronization

Upgrade and Migration Options

Exchange Version	Exchange Organization Coexistence
Exchange Server 2003 and earlier versions	Not supported
Exchange 2007	Supported
Exchange 2010	Supported
Supported	Not supported with Exchange 2013 Preview. Coexistence with Exchange 2007 and Exchange 2010 will be supported with Exchange 2013 RTM

Deploying Exchange Server 2013 as Virtual Machines

- You can deploy all Exchange Server roles on virtual machines running on a supported virtualization platform

- Do not use snapshots with Exchange virtual machines

- Do not combine high availability features for Mailbox Servers in Exchange Server 2013 with highly available virtual machines

- Design virtual hardware by using the same criteria that you use for your physical hardware

How to Install Exchange Server 2013 Using the Setup Wizard

Installation steps in the Exchange Server setup wizard include:

1. Check for Updates
2. License Agreement
3. Recommended Settings
4. Server Role Selection
5. Installation Space and Location
6. Exchange Organization
7. Malware Protection Settings
8. Readiness Checks

Post-Installation Tasks

- Verify services functionality

- Secure your Exchange Server:
  - Restrict physical access
  - Restrict communication
  - Reduce the attack surface
  - Restrict permissions

- Install and configure additional software (optional):
  - Antivirus software
  - Anti-spam software
  - Backup software
  - Monitoring tools and agents

Lesson 3: Managing Exchange Server 2013

- Managing Exchange Server 2013
- What Is Exchange Server Administration Center?
- Managing User Mailbox Properties with Outlook Web App
- What Is Windows PowerShell?
- Windows PowerShell Syntax
- Accessing Help in Windows PowerShell
- What Is Exchange Management Shell?
- Exchange Management Shell Administration Examples
- Demonstration: Using Exchange Administration Tools to Manage Exchange

Managing Exchange Server 2013

Methods for Exchange Server 2013 management:

- Exchange Administration Center
- Outlook Web App options
- Exchange Management Shell

What Is Exchange Server Administration Center?

Cross-premises navigation

Tabs

Notifications

Me tile and Help

Mailboxes - Microsoft Exchange - Windows Internet Explorer

https://server01/ecp/default.aspx

Favorites   Web Slice Gallery

Mailboxes - Microsoft Exchange

Page ▾ Safely ▾ Tools ▾

ENTERPRISE   OFFICE 365

Administrator ▾ Help ▾

ALERTS

Migration batch 'Batch1' is in progress. 0 of 1 completed. It was started by Administrator on 6/28/2012 10:11:24 AM. View details

Recipients

Permissions

Compliance Management

Organization

Protection

Mail Flow

Mobile

Public Folders

Unified Messaging

Servers

Hybrid

Mailboxes   Groups   Resources   Contacts   Shared   Migration

Type to search

DISPLAY NAME	MAILBOX TYPE	E-MAIL ADDRESS
Administrator	User	Administrator@tailspintoys.com
Amy E. Alberts	User	amy@tailspintoys.com
Antonio Alwan	User	antonio@tailspintoys.com
Cigdem Akin	User	Cigdem@tailspintoys.com
Dimple Arya	**User**	**Dimple@tailspintoys.com**
James Alvord	User	james@tailspintoys.com
Jay Hamlin	User	Jay@tailspintoys.com
Kim Akers	User	Kim@tailspintoys.com
Kweku Ako-Adjei	User	kweku@tailspintoys.com
Michael Allen	User	michael@tailspintoys.com
Pilar Ackerman	User	Pilar@tailspintoys.com
Tomas Anderson	User	tomas@tailspintoys.com

1 selected of 512 total

Dimple Arya

User mailbox
Dimple@tailspintoys.com
Title:
Office:
Work phone:

Phone and Voice Features

Unified Messaging: Disabled
Enable

Mobile Devices
Disable Exchange ActiveSync
Disable Outlook App for Exchange
View Details

Compliance

Archiving: Disabled
Enable

Local intranet | Protected Mode: Off   100%

Left navigation

Tool bar

List view

Details pane

Managing User Mailbox Properties with Outlook Web App

- Users can manage the following features by using Outlook Web App:
  - Outlook Web App settings
  - Manage inbox rules
  - Message tracking
  - Manage site mailboxes
  - Manage mobile devices
  - Manage text messaging
  - Group memberships
  - Recover deleted messages
  - Block and allow lists
  - Change their password
  - Manage apps

What Is Windows PowerShell?

- PowerShell is an object-based management environment

- PowerShell is an engine that enables administrators to:
  - Create automation scripts
  - Perform batch modifications
  - Access unavailable settings

- PowerShell provides a foundation upon which the GUI-based administrative tools of Microsoft can rest:
  - Actions can be accomplished in its command-line console
  - Actions can be invoked within GUIs by running PowerShell commands in the background

Windows PowerShell Syntax

- Cmdlet names are a pairing of verbs and nouns, such as:

Verb	Noun	Cmdlet
Get	EventLog	Get-EventLog
Set	ExecutionPolicy	Set-ExecutionPolicy
New	VM	New-VM

- Use cmdlet parameters to modify actions and provide configuration information. Parameters include:
  - **Named.** *-EventLog System, -UserName John*
  - **Switch.** *-Verbose, -Debug, -Confirm*
  - **Positional.**
    - *Get-EventLog System*
    - *Get-EventLog –LogName System*

- Common parameters: *-WhatIf, -Debug, -Verbose, -Confirm*

Accessing Help in Windows PowerShell

- To access the Help documentation, run **Get-Help**, followed by the cmdlet name, or run the cmdlet name, followed by the **–help** parameter:

> **Get-Help Get-EventLog**
> **Get-EventLog -help**

- **Get-Help** has parameters to adjust the amount of help displayed. These parameters include:
  - *-detailed*
  - *-examples*
  - *-full*
  - *-online*

- Other cmdlets that you can use for accessing help include Update-Help, Show-Command, Get-Command, and tab completion

What Is Exchange Management Shell?

- Exchange Management Shell is a command-line interface for administering Exchange Server 2013

- Exchange Management Shell includes the following features:
  - Provides more than several hundreds cmdlets for Exchange Server 2013 administration
  - Offers an extensible scripting engine
  - Applies RBAC permissions

Exchange Management Shell Administration Examples

- Enable-Mailbox -Identity adatum\Bart

- New-MailboxExportRequest -Mailbox Bart -FilePath \\LON-EX1\PSTFileShare\Bart_Mailbox.pst

- Get-MailboxStatistics -Database MailboxDatabase

- New-MailboxDatabase -Name MailboxDatabase -Server LON-Ex1

- Get-ExchangeServer -Status | Format-List

- New-DynamicDistributionGroup -Name DDG -Alias DDGAlias -OrganizationalUnit OU -IncludedRecipients MailboxUsers

- New-MoveRequest -Identity 'user1'-TargetDatabase Executives

Demonstration: Using Exchange Administration Tools to Manage Exchange

- In this demonstration, you will see how Exchange Administration Tools are used to manage Exchange Server 2013

Lab: Deploying and Managing Exchange Server 2013

- Exercise 1: Evaluating Requirements and Prerequisites for an Exchange Server 2013 Installation
- Exercise 2: Deploying Exchange Server 2013
- Exercise 3: Managing Exchange Server 2013

Logon Information

Virtual machines:
20341A-LON-DC1-B
20341A-LON-EX1-B
User name: Adatum\Administrator
Password: Pa$$w0rd

Estimated Time: 60 minutes

Lab Scenario

You are working as a messaging administrator in the A. Datum corporation. Your organization is preparing to install its first Exchange Server 2013 server. As an initial task, you will deploy Exchange Server 2013 in a test environment. Before installing Exchange Server 2013 in the test environment, you must first verify that the AD DS is ready for the installation. You also must verify that all computers that will run Exchange Server 2013 meet the prerequisites for installing Exchange. Once the environment is prepared, you will deploy Exchange Server 2013.

Lab Review

- What should you install on Windows Server 2012 before starting the Exchange Server 2013 installation?

- How can you perform an Exchange Server installation?

- How can you verify whether the Exchange installation is successful?

Module Review and Takeaways

- Review Questions
- Tools
- Best Practice
- Common Issues and Troubleshooting Tips