Microsoft® Official Course

Module 8

Planning and Configuring Message Transport

Microsoft®

Module Overview

- Overview of Message Transport and Routing
  Planning and Configuring Message Transport
  Managing Transport Rules

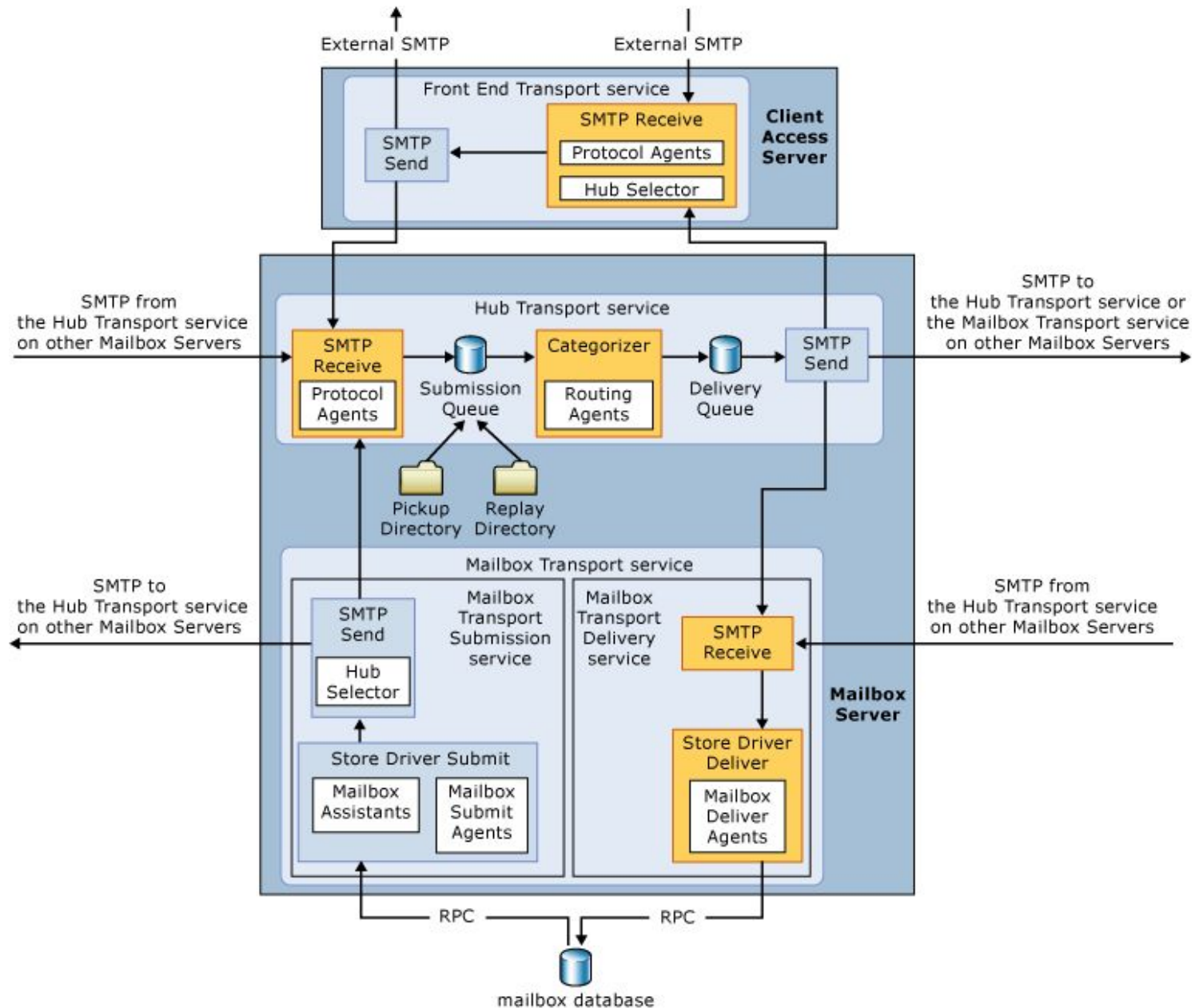# Lesson 1: Overview of Message Transport and Routing

- Message Transport Services
  Message Transport Components
  Message–Routing Changes in Exchange Server 2013
  Routing Destinations and Delivery Groups
  Mail Flow in Exchange Server 2013
  Routing in the Front End Transport Service
  Routing in the Mailbox Transport Service
  Modifying the Default Message Flow
  Tools for Troubleshooting SMTP Message Delivery
  Demonstration: How to Troubleshoot SMTP Message Delivery
  What Are Transport Agents?

Message Transport Services

Message Transport Services:

- Front End Transport service
    - Runs on the Client Access server role
    - Performs SMTP proxying
- Hub Transport service
    - Runs on the Mailbox Server role
    - Routes messages between the Front End Transport Service and the Mailbox Transport Service
- Mailbox Transport service
    - Runs on the Mailbox Server role
    - Consists of two components: Mailbox Transport Submission and Mailbox Transport Delivery
    - Is the only service that handles RPC communication with the database

Message Transport Components

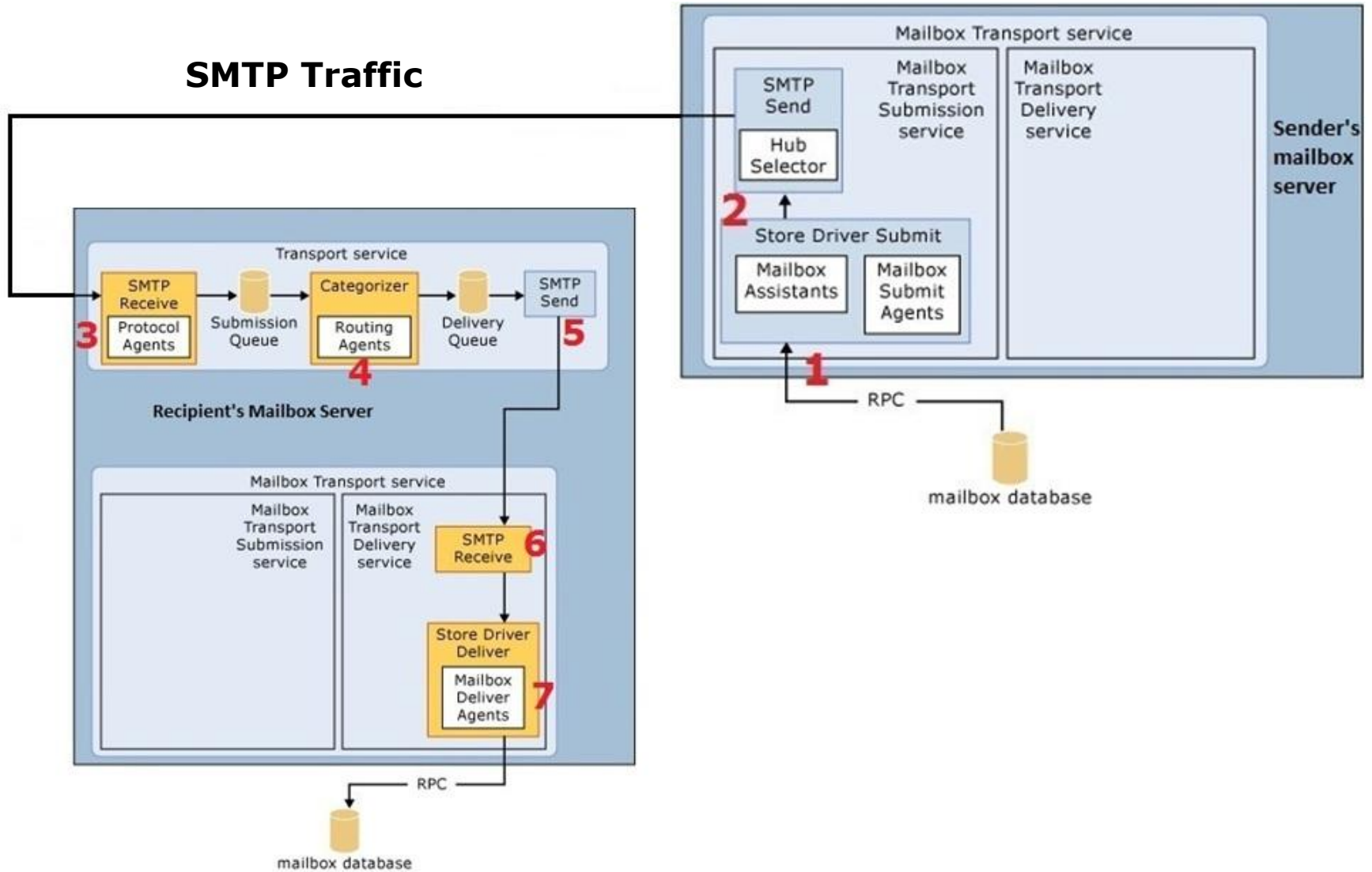# Message–Routing Changes in Exchange Server 2013

- Changes in message routing in Exchange 2013 are:
  - Routing is aware of DAGs
  - Transport service runs on Mailbox Server
  - Queuing for remote destinations is more precise
  - Linked connectors have been deprecated

Routing Destinations and Delivery Groups

- Routing destinations:
  - Mailbox database
  - Connector
  - Distribution group expansion server

- Delivery Groups:
  - Routable DAG
  - Mailbox delivery group
  - Connector source servers
  - AD DS site
  - Server list
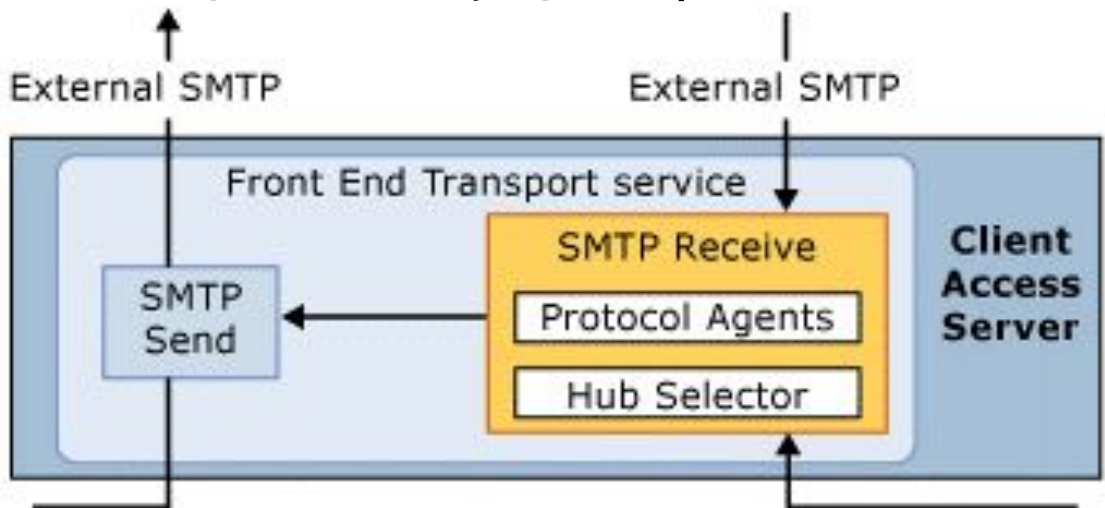
Mail Flow in Exchange Server 2013

- Front End Transport Service acts as a SMTP proxy for all incoming and outgoing connections

- It communicates only with Hub Transport service on the Mailbox server

- You can use the following delivery groups:
  - Routable DAG
  - Mailbox delivery group
  - AD DS site

- Mailbox Transport service:
  - Is stateless and runs on each Mailbox server
  - Communicates with the Hub Transport service and the local mailbox database

- You can use following delivery groups:
  - Routable DAG
  - Mailbox delivery group
  - AD DS site
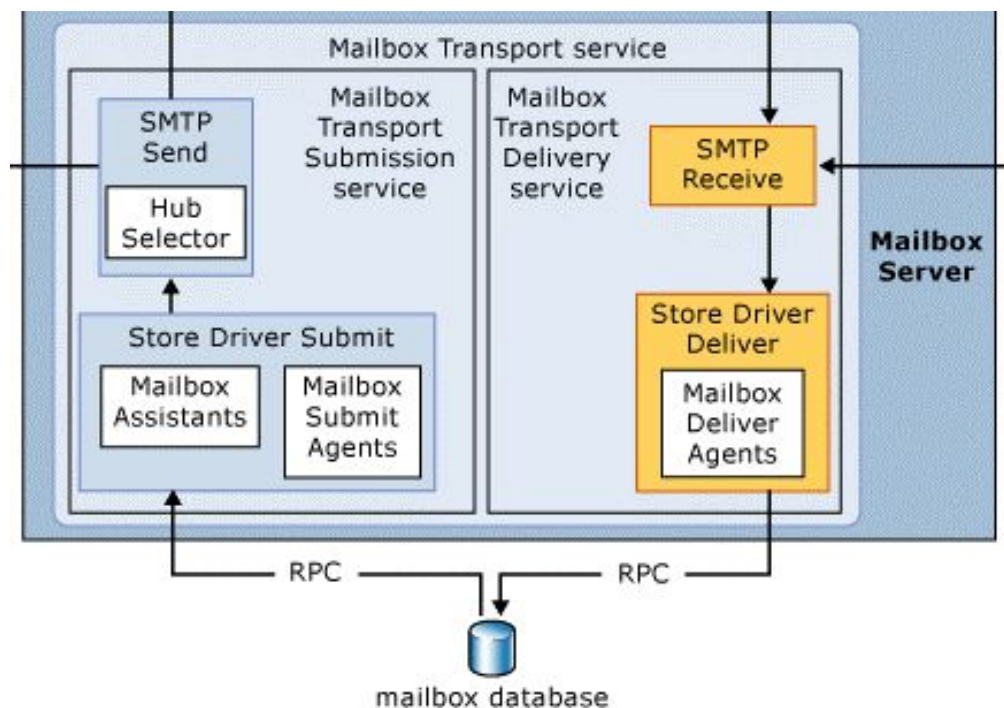
Modifying the Default Message Flow

- You can modify default message flow by performing the following:
  - Configuring Hub Sites
    - Set-ADSite –Identity sitename –HubSiteEnabled $true cmdlet
  - Configuring Exchange-Specific Routing Costs
    - Set-AdSiteLink –Identity ADsitelinkname –ExchangeCost value
  - Configuring Expansion Servers for Distribution Groups

Tools for Troubleshooting SMTP Message Delivery

- Queue Viewer
  - Use to view and manage undelivered messages
- Tracking logs and Delivery reports
  - Use to confirm message delivery
- Protocol Logging
  - Use to provide detailed protocol-level information
- Telnet
  - Use to check if the SMTP port responds, or to directly send a SMTP mail to a connector
- Remote Connectivity Analyzer website
  - Use to test connectivity to Exchange services from the Internet

Demonstration: How to Troubleshoot SMTP Message Delivery

In this demonstration, you will see how to use SMTP troubleshooting tools

What Are Transport Agents?

- Transport agents process email messages that pass through the transport pipeline

- Default Transport agents:
  - Transport Rule agent
  - Journaling agent
  - Active Directory Rights Management Services Prelicensing agent

- It is possible to create and install custom transport agents

Lesson 2: Planning and Configuring Message Transport

- Planning Exchange Messaging Transport
- Demonstration: Reviewing Mail-Flow Settings
- Planning Accepted Domains and Remote Domains
- Demonstration: Creating and Configuring Accepted and Remote Domains
- What Is an SMTP Connector?
- Demonstration: How to Create and Configure SMTP Connectors
- What Are Foreign Connections?

Planning Exchange Messaging Transport

- You can manage message transport on:
  - Client Access server
  - Mailbox server
  - Edge Transport server
  - Non-Microsoft SMTP Gateway
- When planning message transport consider:
  - Email domains
  - Point that initially accepts SMTP connections
  - SMTP traffic inspection
  - SMTP relaying needs
  - SMTP traffic inside your organization
  - Secure SMTP traffic
  - Communicate with systems that does not use SMTP

Demonstration: Reviewing Mail–Flow Settings

In this demonstration, you will see available options for managing message flow

Planning Accepted Domains and Remote Domains

- Accepted domains define SMTP domain names for which the Exchange server will accept email

- Accepted domains can be:
  - Authoritative domains
  - Internal relay domains
  - External relay domains

- Remote domains define SMTP domains that are external to your Exchange organization

- You can set following properties for Remote domains:
  - Out-of-office message delivery
  - Message format options including acceptable character sets

Demonstration: Creating and Configuring Accepted and Remote Domains

In this demonstration, you will see how to create new accepted and remote domains

What Is an SMTP Connector?

- SMTP connectors are Exchange Server components that support one-way SMTP connections

- Default SMTP Receive connectors:
  - Default <server name> (HubTransport)
  - Client Proxy <server name> (HubTransport)
  - Default FrontEnd <server name> (FrontendTransport)
  - Outbound Proxy Front End <server name> (FrontendTransport)
  - Client Frontend <server name> (FrontendTransport)

- No default SMTP Send connectors are created, so they must be created manually

Demonstration: How to Create and Configure SMTP Connectors

In this demonstration, you will see how to create and configure SMTP connectors

What Are Foreign Connectors?

- To send messages to non–SMTP messaging system, you can use the Foreign connectors

- Foreign connectors use Drop folder and file transfer mechanism

- To create and manage Foreign connectors, use:
  - New–ForeignConnector
  - Set–ForeignConnector
  - Get–ForeignConnector

- Consider using delivery agents as an alternative to Foreign connectors

Lesson 3: Managing Transport Rules

- What Are Transport Rules?
  Configuring Transport Rules
  Planning Transport Rules
  Demonstration: Creating Transport Rules
  What Are Data–Loss Prevention Policies?
  Demonstration: Configuring Data Loss Protection Policies

What Are Transport Rules?

- Transport rules restrict message flow or modify message contents for messages in transit

- Transport rules have the following chracteristics:
  - They are stored in the AD DS Configuration partition
  - They are applied by all Mailbox servers
  - They are used to apply compliance requirements

Configuring Transport Rules

Transport rules have the following components that you should configure:

- Conditions
  - Specify which email message components are used to identify the email messages

- Actions
  - Specify the processes to be applied to messages

- Exceptions
  - Specify which email messages to exclude from having an action applied

- Predicates
  - Are used by conditions and exceptions to define what part of an email message will be examined

Planning Transport Rules

- When planning for transport rules:
  - Plan conditions and exceptions carefully

  - Plan for transport rule priority and order

  - Use regular expressions to check message contents

  - Test the application of transport rules to avoid rule conflicts or duplication

  - Plan for transport rule limitations with encrypted and digitally signed messages

  - Document the transport rule configurations

Demonstration: Creating Transport Rules

In this demonstration, you will see how to create a Transport rule in the Exchange Administration Center

What Are Data-Loss Prevention Policies?

- Data Loss Protection policies enforce compliance requirements for business-critical data being sent by email

- When implementing Data Loss Protection you can choose to:
    - Use the Data Loss Protection templates provided by Microsoft
    - Use policy files created by a third-party vendor
    - Create a custom policy

- Policy Tips can notify users if they are violating policy before they send email

Demonstration: Configuring Data Loss Protection Policies

In this demonstration, you will see how to create custom Data Loss Protection policies

Lab: Planning and Configuring Message Transport

- Exercise 1: Configuring Message Transport
  Exercise 2: Troubleshooting Message Delivery
  Exercise 3: Configuring Transport Rules and
  Data-Loss Prevention Policies

Logon Information
Virtual Machines   20341B-LON-DC1
                20341B-LON-CAS1
                20341B-LON-MBX1
                20341B-LON-CL1

User Name   **Adatum\Administrator**
Password   **Pa$$w0rd**

Estimated time: 45 minutes

You are a messaging administrator in A. Datum Corporation, which is a large multinational organization that has offices in several cities. Your organization has deployed Exchange Server 2013. You need to configure Exchange Server to send messages to the Internet and receive messages from the Internet. You also need to ensure that you can troubleshoot message transport, if necessary. At the end, you need to implement some configure message transport rules, according to the corporate security policy.

- What would you need to configure to enable outbound Internet email from each A. Datum location?
  A user reports that she sent a message to a user in another company two hours ago, and the message has not arrived. How would you troubleshoot this?

Module Review and Takeaways

- Review Question
  Tools
  Best Practice
  Common Issues and Troubleshooting Tips