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Infrastructure Planning and Design

Exchange Online—Evaluating Software-plus-Services

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The Planning and Design Series Approach

This guide is one in a series of planning and design guides that clarify and streamline the planning and design process for Microsoft® infrastructure technologies.

Each guide in the series addresses a unique infrastructure technology or scenario. These guides include the following topics:

- Defining the technical decision flow (flow chart) through the planning process.
- Describing the decisions to be made and the commonly available options to consider in making the decisions.
- Framing the decision in terms of additional questions to the business to ensure a comprehensive understanding of the appropriate business landscape.

The guides in this series are intended to complement and augment the product documentation.

Infrastructure Architecture and Business Architecture

For additional information about business architecture tools and models, please contact your nearest Microsoft representative or watch the video about this topic, available at <http://channel9.msdn.com/ShowPost.aspx?PostID=179071>.

Feedback

Please direct questions and comments about this guide to satfdbk@microsoft.com.

Introduction to the Exchange Online— Evaluating Software-plus-Services Guide

Software-plus-services combines cloud-based services delivery, where an application is hosted as a service and provided to customers across the Internet, with the rich interactivity and high performance achieved by a locally installed client. The software-plus-services model ensures that people can access the applications and information they need even when they aren't connected to the Internet.

The benefits of using this model include a reduction in the up-front expense of software purchases through the use of on-demand pricing. It can also help by freeing up valuable capital, IT staff, and other costly resources for more effective, strategic use within the organization. As a trade-off, customers relinquish control over software versions or changing requirements.

The choice of a deployment model depends on several factors, including the level of in-house messaging expertise, the need for control and customization, and the overall priorities of the IT group. Because organizations have the flexibility to deploy Microsoft Exchange as a server or a service, business needs, rather than technology constraints, can drive the choice. This guide will evaluate three methods of providing e-mail services: on-premises deployment and the Microsoft Exchange Online Standard and Dedicated offerings.

On-Premises Deployment

On-premises deployment is a model where software is installed and runs on computers on the premises of the organization using the software, rather than at a remote facility. The on-premises model provides organizations with the flexibility to perform maintenance, upgrades, and customization at their convenience. However, this model requires considerable up-front capital for such expenses as hardware, software, licenses, IT personnel for maintenance, and physical building space.

Microsoft Exchange Online

Exchange Online is a hosted enterprise messaging solution that is based on Microsoft Exchange Server 2007. This service provides rapid deployment and easy scalability. Customers also receive automatic upgrades to the latest technology, ensuring an easy and seamless upgrade experience.

Exchange Online is available as two offerings: Standard and Dedicated. Both offerings provide a comprehensive messaging solution at a simple per-user monthly fee, but each offers different degrees of customization and feature availability.

Standard Offering

The Exchange Online Standard offering provides the core business capabilities of Microsoft Exchange Server as a hosted service delivered from a shared server, multi-tenancy environment.

Dedicated Offering

The Exchange Online Dedicated offering provides dedicated server(s) at Microsoft data centers to support each organization's messaging needs. It offers more flexibility in features and capabilities than the Standard offering and is designed for businesses having more than 5,000 seats, but it is optimized for 20,000 or more seats.

About Microsoft Online Services

Microsoft Online Services is part of a software-plus-services delivery model designed by Microsoft to provide secure, reliable, and scalable hosted communication and collaboration software solutions. It offers customers another choice in addition to traditionally hosted or on-premises solutions, allowing customers to make deployment decisions that best fit the needs of their organizations. Available Microsoft Online Services include Microsoft Office Live Meeting, SharePoint® Online, Exchange Online, Office Communications Online, and Dynamics CRM Online.

Who Should Use This Document

This guide is written specifically to help technical decision makers and IT professionals evaluate Exchange Online for their organizations. For the full picture on the Exchange Online approach to software-plus-services, technical decision makers, business decision makers, and IT professionals should read both this guide and the *Planning for Software-plus-Services MOF Companion Guide*, which will be released in December 2008 at <http://www.microsoft.com/mof>.

Exchange Online—Evaluating Software-plus-Services Process

This guide evaluates the Microsoft Exchange Online (Standard and Dedicated) and on-premises solution offerings in over 30 different areas of interest to technical decision makers, including client options, mail flow changes, operational impacts, and security concerns. The organization's needs will be rated in terms of importance, and the advantages and disadvantages of each offering will be evaluated against business requirements to provide a quantitative view of which offering will be best suited to serve the business's e-mail needs.

Decision Flow

The following figure provides a graphical overview of the steps in evaluating Exchange Online.

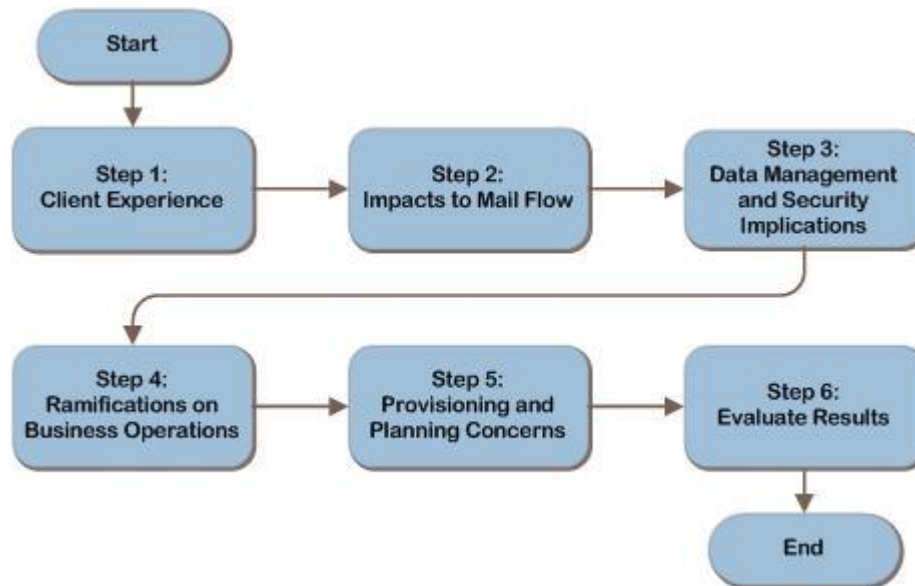


Figure 1. Exchange Online—Evaluating Software-plus-Services decision flow

Steps

This document contains six steps designed to guide the reader through the decision-making process about whether to use an on-premises e-mail service or the Microsoft Exchange Online Standard or Dedicated offering.

Step 1: Client Experience

- Office Outlook Web Access
- Outlook Anywhere
- MAPI
- IMAP and POP
- Mobile Devices Using Exchange ActiveSync
- BlackBerry Devices
- Macintosh Clients
- Single Sign-On
- Unified Messaging
- Mailbox Sizes

Step 2: Impacts to Mail Flow

- SMTP Relay Services
- SMTP Smart Hosting
- Line-of-Business Application Integration
- Message Hygiene
- Connectors to Other Systems
- Transport Rules
- Public Folders

Step 3: Data Management and Security Implications

- Network Security
- Network Connectivity
- Data Isolation
- Auditing
- Archiving and Journaling
- Signing and Encrypting Messages
- Information Rights Management

Step 4: Ramifications on Business Operations

- Service Continuity
- Disaster Recovery Testing
- Service Level Agreements
- Adoption Rate for New Releases
- Scheduled Maintenance

Step 5: Provisioning and Planning Concerns

- Active Directory Integration
- Capacity and Performance Planning

Step 6: Evaluate Results

The sixth step will assist the reader in evaluating the results of the first five steps.

These first five steps are not sequential and can be performed in any order, but all should be completed in order to obtain the fullest picture of the suitability and importance of the various technologies.

Within each step, each topic is subdivided into four elements:

- Definition of the topic.
- A rating of the importance of the topic to the organization.
- A comparison of the functionality available with the Exchange Online Standard and Dedicated offerings and the on-premises technology.
- A rating of how well each offering addresses the business's requirements for the topic.

Additional context may also be included where relevant to help the decision maker evaluate the impact associated with the decision.

How to Use this Document

For the best results, technical decision makers should perform the following actions for each step:

1. Read the introduction to the step for a list of the topics covered within the section.
2. For each topic in the step, read the description of the topic and its function in the business.
3. In the “Importance Rating” section, determine how important the topic is to the organization by answering the provided question and recording the importance rating score for the topic in the table provided at the end of the section. (See Table 1 below for a sample.)

The importance rating options are 1–5:

1 = not important

2 = somewhat important

3 = important

4 = very important

5 = extremely important (must have)

4. In the “Solutions Rating” section, compare the functionalities of the Exchange Online Standard and Dedicated offerings and the on-premises solution. Rate each on its potential effectiveness in meeting the organization’s needs and record the scores in the table provided at the end of the topic. (See Table 1 below for a sample.) Note that in some cases the Standard and Dedicated offerings have been combined to avoid redundancy in the reading, but they should still be scored individually so that the formula in Step 6 works effectively.

The solution rating score options are 0–3:

0 = doesn’t apply/provides no benefit

1 = somewhat provides

2 = adequately provides

3 = exceeds expectations

5. Repeat the above process for the remainder of the steps and record the scores for each topic. Table 1 is a sample showing a completed table in which the results of steps 3 and 4 have been entered.

Table 1. Sample Rating Table

Topic	Importance Rating	Standard	Dedicated	On Premise
<Topic>	<1–5>	<0–3>	<0–3>	<0–3>
Example: SMTP Relay	4	0	2	3

6. In the appendix, the “Tally Sheet” job aid lists all of the steps and their respective topics. Transfer each of the raw scores from the table in each topic section to this table and determine the weighted score for each topic. The weighted score is generated by multiplying the importance rating by each offering’s original (raw) rating score. The weighted scores provide a comprehensive view of the comparisons between offerings, which will assist in deciding whether to stay with the on-premises solution or to migrate to either the Exchange Online Standard or Dedicated solution.

Summing each vertical column will reveal which offering has been rated to best meet the organization’s needs.

Applicable Scenarios

The guide assumes that the organization currently has Microsoft Exchange Server as the on-premises e-mail system. However, many of the discussion points will be applicable to evaluating Exchange Online against other e-mail systems or other hosting options.

Out of Scope

The guide does not discuss:

- Microsoft Online Services, other than Exchange Online.
- Windows Live™ network of Internet services or other consumer-oriented, cloud-based services.
- Utility service providers offering cloud computing, cloud computing platforms, cloud-based platform services, or cloud infrastructure services.

Step 1: Client Experience

This step addresses the messaging capabilities that most significantly influence the client experience. The topics covered in this step are:

- Office Outlook Web Access
- Outlook Anywhere
- MAPI
- IMAP and POP
- Mobile Devices Using Exchange ActiveSync
- BlackBerry Devices
- Macintosh Clients
- Single Sign-On
- Unified Messaging
- Mailbox Sizes

For each topic in this step, record the importance and solutions rating scores in the appropriate boxes in the table at the end of each topic.

Office Outlook Web Access

Microsoft Office Outlook® Web Access is an Internet browser-based version of Office Outlook that enables users to access their Exchange mailboxes without needing to install client software.

There are two versions of Outlook Web Access included in Exchange Server 2007: the Light client and the full-featured Premium client. Outlook Web Access Light is designed to optimize the experience for low bandwidth connections and browsers other than Microsoft Internet Explorer®. Outlook Web Access Premium is optimized for use with Internet Explorer and is a richer Web client experience.

Customizations may include multi-factor authentication, logon disclaimers, and specific feature enablement or disablement.

Importance Rating. Does the organization need to highly customize Outlook Web Access? Record the importance of this functionality in the table below.

Solutions Rating. With all three offerings, Outlook Web Access is available. The list below compares the specific functionalities of each solution:

- **Standard offering.** Supports both Outlook Web Access Premium and Light versions.
- **Dedicated offering.** Supports both Outlook Web Access Premium and Light versions. Dedicated allows for customization of the logon page to include usage guidelines or a disclaimer provided by the customer.
- **On-premises solution.** An on-premises environment offers the highest degree of customization and flexibility for Outlook Web Access including, for example, the ability to implement multi-factor authentication for additional security.

Evaluate how well each of the offerings addresses the business's requirements to customize Outlook Web Access and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Outlook Web Access	<1-5>	<0-3>	<0-3>	<0-3>

Outlook Anywhere

The Outlook Anywhere feature for Microsoft Exchange Server 2007 lets Microsoft Office Outlook 2007 and Outlook 2003 clients securely connect to their servers running Exchange Server over the Internet by using RPC over HTTP, without requiring a Virtual Private Network (VPN).

Outlook Anywhere is a later evolution of MAPI. For many organizations, it is an effective replacement for MAPI connectivity in Outlook since it provides the same functionality more securely and uses network bandwidth more effectively.

The Autodiscover service uses a user's e-mail address and password to provide profile settings to Outlook 2007 clients and supported mobile devices.

Importance Rating. How important is the secure, lightweight Outlook connectivity from Internet-facing and internal locations or clients? Record the importance of this functionality in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** Supports Outlook 2007 clients only.
- **Dedicated offering.** Outlook 2003 SP2 and Outlook 2007 clients are supported.
- **On-premises solution.** Supports Outlook 2003 and Outlook 2007.

Additional context. All three solutions support the use of the Autodiscover service. Customers evaluating the Standard offering may need to consider the implications of upgrading all their clients to Outlook 2007.

Evaluate how well each of the offerings addresses the business's requirements given the organization's client base of Outlook and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Outlook Anywhere	<1-5>	<0-3>	<0-3>	<0-3>

MAPI

Messaging Application Programming Interface (MAPI) has been the default protocol for on-network Outlook connectivity since its release. All versions of Outlook as well as some third-party messaging applications support connecting to Exchange through the MAPI protocol.

Importance Rating. How important is MAPI for Outlook or other e-mail-enabled applications in use in the organization? Record the importance of this functionality in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** No MAPI connectivity available.
- **Dedicated offering.** Allows for MAPI connectivity from the organization's corporate network to Exchange Online on request. Exchange Online does not support MAPI connectivity from clients connecting over the Internet.
- **On-premises solution.** Organizations can use MAPI for on-network connectivity and Outlook Anywhere for Internet connectivity.

Additional context. A key consideration for MAPI is whether the organization has business systems or user applications that require this connectivity.

Evaluate how well each of the offerings addresses the business's requirements for MAPI connectivity and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
MAPI	<1-5>	<0-3>	<0-3>	<0-3>

IMAP and POP

Internet Message Access Protocol (IMAP) and Post Office Protocol (POP) for inbound e-mail paired with SMTP for outbound e-mail are alternative combinations to MAPI or Outlook Anywhere. IMAP and POP do not offer the same fidelity of features as MAPI and Outlook Anywhere. However, IMAP and POP are sometimes used to connect third-party systems and e-mail clients to Exchange.

Importance Rating. Does the organization have clients or applications that use IMAP or POP protocols to access the e-mail system? Record the importance of this functionality in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** No IMAP or POP connectivity support.
- **Dedicated offering.** IMAP version 4 and POP version 3 access can be enabled from the organization's corporate network to Exchange Online on request, but it is not available for Internet-based clients. Access is encrypted using SSL.
- **On-premises solution.** The organization can enable IMAP or POP protocols to support internal and external clients or applications.

Evaluate how well each of the offerings addresses the business's requirements for IMAP or POP connectivity and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
IMAP and POP	<1-5>	<0-3>	<0-3>	<0-3>

Mobile Devices Using Exchange ActiveSync

Exchange ActiveSync is a communication protocol that enables mobile devices such as cell phones with rich, "over-the-air" access to e-mail messages, calendars, contacts, tasks, and other Exchange Server mailbox data. Exchange ActiveSync is available on both Windows Mobile®-based devices and Exchange ActiveSync-enabled devices. Exchange ActiveSync provides the ability to provision and enforce security policies on mobile devices—for example, to customize password settings, require encryptions, or disallow attachment downloading.

Importance Rating. Does the organization need to support mobile devices like smartphones, PDAs, and other devices? Record the importance of this criterion in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** Supports Windows Mobile 6 or later, or third-party mobile devices that use Exchange ActiveSync. No device policy customization is available. Erasing of the device can be initiated by the user via Outlook Web Access.

- **Dedicated offering.** Same as Standard, but also supports Windows Mobile 5 with Messaging and Security Feature Pack (MSFP) devices. A maximum of three device policies are allowed to be defined. Erasing of the device can be initiated by the user via Outlook Web Access.
- **On-premises solution.** Supports Windows Mobile 5 and later, as well as third-party mobile devices that use Exchange ActiveSync. Organizations can define many device policies. Erasing of the device can be initiated by the user via Outlook Web Access, or by the administrator through the Exchange Management Console.

Evaluate how well each of these offerings addresses the business's requirement to support mobile devices using Exchange ActiveSync and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Mobile devices using Exchange ActiveSync	<1-5>	<0-3>	<0-3>	<0-3>

BlackBerry Devices

A BlackBerry is a proprietary wireless device sold by Research in Motion (RIM) that supports e-mail, mobile telephone, text messaging, Internet faxing, and other wireless information services.

Importance Rating. Does the organization need to support BlackBerry devices? Record the importance of this criterion in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** A pilot hosted BlackBerry service for Exchange Online to support core e-mail functionality is available upon request at an extra charge. Functions include over-the-air e-mail, contacts with GAL integration, and calendar, as well as device wipe and PIN reset.
- **Dedicated offering.** BlackBerry Enterprise Server (BES) is available from Exchange Online at an extra charge to support core e-mail functionality.
- **On-premises solution.** The organization can choose to implement a BES server on-premises.

Evaluate how well each of these offerings addresses the business's requirement to support BlackBerry mobile devices and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
BlackBerry devices	<1-5>	<0-3>	<0-3>	<0-3>

Macintosh Clients

Apple computers running OS X can use an Internet browser like Safari to connect to Outlook Web Access Light, as well as connect to Exchange using a feature-rich e-mail client like the Microsoft Entourage® e-mail and personal information manager.

Importance Rating. How important is the support of Macintosh clients to the organization? Record the importance of this functionality in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** Safari access to Outlook Web Access Light is available. Apple OS X 10.4 (and later) and Entourage 2008 are supported; however, Free/busy and global address list (GAL) lookups are not available due to lack of public folders accessibility.
- **Dedicated offering.** Safari access to Outlook Web Access Light is available, as well as access from Office 2004 Entourage or later.
- **On-premises solution.** Safari access to Outlook Web Access Light is available, as well as access from Office 2004 Entourage or later.

Evaluate how well each of these offerings addresses the business's requirements to support Macintosh clients and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Macintosh clients	<1-5>	<0-3>	<0-3>	<0-3>

Single Sign-On

Single sign-on (SSO) in computers running Windows® is the ability of a user to log on once from his or her Windows device and then obtain access to all authorized resources without entering additional credentials.

Importance Rating. How important is providing single sign-on across multiple systems? Record the importance of this functionality in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** Provides a Microsoft Online Services Sign In application that runs on the desktop to provide access to a federated set of Microsoft Online Services, but the users' online credentials remain separate from their domain credentials.
- **Dedicated offering.** Is capable of single sign-on, assuming that Active Directory® forests are in place and synchronized.
- **On-premises solution.** In a typical on-premises Exchange implementation, the Windows-based client machines are authenticated directly or via trust relationships to the Active Directory forest hosting Exchange. This trust relationship allows for complete single sign-on with respect to Microsoft Online Services.

Additional Context. The Standard offering will require distribution of the Sign In application, which adds complexity for both the users and administrators.

Evaluate how well each of these offerings addresses the business's requirements to support single sign-on and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Single sign-on	<1-5>	<0-3>	<0-3>	<0-3>

Unified Messaging

Unified Messaging lets users receive voice mail and faxes in their mailboxes, allowing them to access these messages from Outlook, Outlook Web Access, or mobile devices. A user can also dial in via a standard telephone and use voice commands to access his or her e-mail, calendar, contacts, and the company directory. Unified Messaging features require integration with the organization's on-premises phone system.

Importance Rating. How important is the availability of the Unified Messaging capability to the organization? Record the importance of this functionality in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard and Dedicated offerings.** Not available.
- **On-premises solution.** On-premises is the only offering that allows Exchange Server Unified Messaging to be deployed.

Evaluate how well each of these offerings addresses the business's requirements to support Unified Messaging integration and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Unified Messaging	<1-5>	<0-3>	<0-3>	<0-3>

Mailbox Sizes

The size of a mailbox is determined by the amount of data (for example, mail, notes, tasks, contacts, calendar, or journal information) that is stored on the server. Different types of workers may require different mailbox sizes depending on the amount and size of e-mail that they receive and need to keep.

Importance Rating. How important is the ability to customize mailbox sizes? Record the importance of this functionality in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** Allocated 1 GB per user, pooled across the company, with the company deciding each user's allocation of this pooled amount up to a maximum individual mailbox size of 4 GB.
- **Dedicated offering.** The customer chooses the size of each user's mailbox: 1, 2, or 5 GB, and is charged based on the selected size, not actual usage. Storage is not pooled across the company. An option for deskless workers with Web-only access and 100 MB of storage will be available in the first half of 2009.
- **On-premises solution.** Does not dictate any size limit on mailboxes.

Evaluate how well each of these offerings addresses the business's requirements to work within these size limits and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Mailbox sizes	<1-5>	<0-3>	<0-3>	<0-3>

Step Summary

This step covered some of the major client experience features provided by Exchange Online (Standard and Dedicated) and compared them with the functionality available through an on-premises system. The features were rated according to their effectiveness in fulfilling the business's needs. The scores will help guide the technical decision makers in objectively evaluating the impact of a change to Exchange Online from the clients' standpoints.

In the next step, options and changes to the mail flow will be evaluated.

Step 2: Impacts to Mail Flow

This step addresses some of the impacts to mail flow resulting from changing to an Exchange Online environment. The topics covered in this step are:

- SMTP Relay Services
- SMTP Smart Hosting
- Line-of-Business Applications Integration
- Message Hygiene
- Connectors to Other Systems
- Transport Rules
- Public Folders

Different features are available depending on which offering is chosen. An on-premises environment will offer the greatest level of customization, and Exchange Online Standard the least. The following sections will present the functionality of each solution so that the needs of the organization can be measured against them.

SMTP Relay Services

Simple Mail Transfer Protocol (SMTP) is a standard for e-mail transmissions across the Internet and is required in order for POP and IMAP clients to send e-mail. An SMTP relay service may be required for internal applications—for example, with an online banking server that needs to send e-mails to a customer who forgot his or her password.

Importance Rating. Does the organization have any applications that require an SMTP relay such as IMAP/POP clients or applications that need to send e-mail notifications to end users? Record the importance of this functionality in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** No SMTP relay services are provided.
- **Dedicated offering.** Provides SMTP relay services applications that require SMTP to send mail externally via the dedicated network connection to Exchange Online. A dedicated SMTP relay infrastructure may be necessary if the customer sends a significant amount of e-mail messages via SMTP relay.
- **On-premises solution.** An on-premises server running Exchange Server can be set up to act as an SMTP relay.

Additional Context. An organization could also choose to set up an SMTP relay using IIS on-premises if this capability is needed.

Evaluate how well each of these offerings addresses the business's requirements for SMTP relay services and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
SMTP relay services	<1-5>	<0-3>	<0-3>	<0-3>

SMTP Smart Hosting

Smart hosting is the ability to direct all outbound SMTP traffic to a specific system for additional processing, like content filtering or routing.

Importance Rating. Are other e-mail services used to provide additional processing such that the organization will be required to have SMTP smart hosts defined in the e-mail system configuration? Record the importance of this criterion in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** Cannot route e-mail to another messaging system.
- **Dedicated offering.** Can be configured to leverage smart hosts.
- **On-premises solution.** Can be configured to leverage smart hosts.

Evaluate how well each of these offerings addresses the business's requirements for smart hosting and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
SMTP smart hosting	<1-5>	<0-3>	<0-3>	<0-3>

Line-of-Business Applications Integration

Line-of-business (LOB) applications may include sales force automation, customer relationship management (CRM), or a variety of other applications. If these applications are currently in use in the organization, they may require integration with the e-mail system.

Exchange Web Services is an application programming interface that can be used by Simple Object Access Protocol (SOAP)-based applications to access Exchange data store items such as inboxes, calendars, and tasks.

Importance Rating. How important is the ability to integrate custom LOB applications into the messaging system? Record the importance of this functionality in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** Only offers communication with the Exchange system over Exchange Web Services.
- **Dedicated offering.** Standard protocols, including MAPI, POP, and IMAP, with limitations described in their respective sections, and Exchange Web Services are allowed. The organization will not be able to use applications like DLLs that require the ability to install software on e-mail servers.
- **On-premises solution.** The organization retains full control over communications between LOB applications and the e-mail system.

Additional Context. A security risk assessment is advisable before connecting LOB systems to any external computer system.

Evaluate how well each of these offerings addresses the business's requirements to provide the necessary LOB integration and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Line-of-business applications integration	<1-5>	<0-3>	<0-3>	<0-3>

Message Hygiene

Message hygiene refers to the removal of viruses and unsolicited commercial e-mail from the mail flow before reaching the end user.

Importance Rating. How important is a comprehensive message hygiene solution to the organization? Record the importance of this functionality in the table below.

Solutions Rating. With all three offerings, message hygiene is available. The list below compares the specific functionalities of each solution:

- **Standard offering.** Antispam protection is included in the Standard offering. Other than the options available by using the Outlook Junk E-mail Filter, the customer has no configuration options. All messages transported through the Exchange Online system are scanned for viruses.
- **Dedicated offering.** Customers can continue to use their own on-premises or hosted third-party spam filters through the use of DNS mail exchanger (MX) records and configuring the hygiene system to then forward messages on to Exchange Online, or they can sign up for the Exchange Hosted Services Filtering option. All messages transported through the Exchange Online system are scanned for viruses.
- **On-premises solution.** The customer has the most control over the antivirus and antispam configurations, but the customer also has a significant responsibility to ensure that these are configured correctly and in a timely fashion.

Additional Context. Using an online service provider has the advantage of providing the organization's network with added protection from Internet e-mail denial of service attacks. Instead of targeting the organization's corporate network, the attacks are directed toward the service provider.

Evaluate how well each of the offerings addresses the business's message hygiene requirements and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Message hygiene	<1-5>	<0-3>	<0-3>	<0-3>

Connectors to Other Systems

Connectors are used to provide co-existence between Microsoft Exchange and Lotus Notes or Novell GroupWise e-mail systems.

Importance Rating. Does the organization plan to coexist with other e-mail systems? Record the importance of this functionality in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** No connectors are available for either system.
- **Dedicated offering.** Sharing of free/busy information is available for Notes; no coexistence is available for GroupWise.
- **On-premises solution.** Can have coexistence with both Lotus Notes and GroupWise systems.

Evaluate how well each of these offerings addresses the business's messaging integration requirements and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Connectors to other systems	<1-5>	<0-3>	<0-3>	<0-3>

Transport Rules

With transport rules, administrators and compliance officers can establish and enforce regulatory or corporate policies on internal or outbound e-mail flow or content. For example, rules can be created that would append a disclaimer to any message being sent externally. Rules can also be created to prohibit communication between members of distinct distribution lists or to include the compliance officer on the BCC line any time a specific phrase appears in the subject or content of a message.

Importance Rating. How important is the organization's need to monitor and alter the flow of mail based on policy? Record the importance of this criterion in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** No ability to define transport rules.
- **Dedicated offering.** Transport rules are permitted. Changes are requested by the customer via a service request, and Exchange Online implements them.
- **On-premises solution.** Transport rules can be defined and implemented by the organization.

Evaluate how well each of the offerings addresses the business's transport rules requirements and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Transport rules	<1-5>	<0-3>	<0-3>	<0-3>

Public Folders

Public folders are folders that companies can use to share a wide range of information, such as project and work information, discussions about a general subject, and classified ads. Access permissions determine who can view and use the folder.

Importance Rating. How important is the availability of public folders to the organization? Record the importance of this functionality in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** Public folders are not available.
- **Dedicated offering.** Provides access to public folders, up to 50 GB. Does not offer application hosting or custom workflow in public folders.
- **On-premises solution.** Companies have maximum flexibility to support public folders, custom forms, or workflow.

Additional Context. One consideration of the dedicated offering is the migration of existing content. In a dedicated mode, up to 25 GB of public folder content can be migrated from the on-premises environment.

Evaluate how well each of these offerings addresses the business's requirements for public folder access and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Public folders	<1-5>	<0-3>	<0-3>	<0-3>

Step Summary

This step addressed some of the mail flow considerations involved in adopting Exchange Online e-mail services. The features were rated according to their effectiveness in fulfilling the business's needs. The technical decision makers in the organization can use this scoring to help evaluate whether Exchange Online will be compatible with their needs.

The next step will discuss the data management and security impacts of moving to Exchange Online.

Step 3: Data Management and Security Implications

The need for information security in today's highly networked business environment is more important than ever. Information is arguably one of an enterprise's most valuable assets, so its protection from accidental exposure or predators from both within and outside the organization is a top IT priority. This step explores some of the data management and security implications of storing data either on-premises or under someone else's control.

The topics covered in this step are:

- Network Security
- Network Connectivity
- Data Isolation
- Auditing
- Archiving and Journaling
- Signing and Encrypting Messages
- Information Rights Management

Network Security

Network security is the safeguarding of electronic information owned by an organization as it is transported across the network, keeping it safe from loss including corruption and ensuring that access is restricted to authorized people and systems.

Importance Rating. How important is the confident and consistent application of security standards to the organization? Record the importance of this functionality in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard and Dedicated offerings.** Microsoft Exchange Online provides the following to protect data on the network:
 - **Security assessment.** A variety of security assessment processes are performed to protect the Exchange Online environment, as well as to ensure that any changes to that environment comply with such established policies and regulatory standards that are commercially reasonable to provide.
 - **Security compliance audit.** This audit is a continuous process in the Exchange Online environment. This assessment of the entire Microsoft Online Services infrastructure ensures that the latest compliance policies are in place and that antivirus signatures and required security updates are installed.
 - **Quarterly third-party security audits.** These help ensure that the security measures are up-to-date and effective.
 - **Regular penetration testing.** Provides an additional level of feedback to administrators.
 - **Physical access security.** Multifactor logon security is required for administrators, and physical access to the servers is controlled.
 - **Intrusion detection system.** An intrusion detection system is set up behind the firewalls to provide intrusion alert that is tracked 24 hours a day.
 - **Separate data networks.** All of the servers are on separate, non-routable subnets so that content within a server is not Internet-facing.

- **Transport security.** All mail transported within the Exchange Online infrastructure is encrypted with Transport Layer Security (TLS). The standard offering requires that all client-to-server communication be also protected with SSL.
- **SSL certificates.** With the Standard offering, Microsoft certificates are used for Outlook Anywhere, Outlook Web Access, and the Autodiscover service. In the Dedicated offering, the customer delegates the ability to obtain certificates for his or her domain to Microsoft. If the organization decides to use TLS to secure communications between an on-premises e-mail server and Exchange Online, the organization is responsible for obtaining and renewing that certificate.
- **On-premises solution.** From a security perspective, each on-premises environment is unique. All of the above measures can be implemented if the company so chooses. The business needs to have sufficient depth of knowledge to properly configure and maintain network security measures for its e-mail system.

Evaluate how well each of these offerings addresses the business's security requirements and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Network security	<1-5>	<0-3>	<0-3>	<0-3>

Network Connectivity

Network connectivity is defined for this guide as the physical and logical path that the client devices use to connect to the messaging system.

Importance Rating. How sensitive is the organization to changing the network topology? Record the importance of this functionality in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** Clients connect from the corporate network to Exchange Online via the organization's existing Internet connection.
- **Dedicated offering.** A dedicated circuit from the corporate network to Exchange Online is established.
- **On-premises solution.** Bandwidth needs must be met for both clients and external e-mail.

Additional Context. If looking at the Standard offering, the bandwidth of the Internet connection may need to be increased since even internal mail is routed through the Exchange Online system. The Microsoft Assessment and Planning tool can help the organization evaluate bandwidth needs for Exchange Online.

Evaluate how well each of these offerings addresses the business's requirements based on how much change would be required and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Network connectivity	<1-5>	<0-3>	<0-3>	<0-3>

Data Isolation

Data isolation is the ability to secure the access to data to only those people with the appropriate authorization to read, edit, or delete the data. Certain regulatory requirements may specify the logical and/or physical protections needed.

Importance Rating. How important is the isolation of data to the organization? Record the importance of this functionality in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** The Standard offering uses a multi-tenancy model where multiple organizations' data are hosted together although no organization can access the data of another organization. The ability to isolate different groups of users within the organization is not available.
- **Dedicated offering.** Because each customer is on a different server, customer data will be isolated by default. However, the ability to isolate different groups of users within the organization is not available.
- **On-premises solution.** Data isolation can be invoked down to the individual mailbox level, if needed.

Evaluate how well each of these offerings addresses the business's requirements for data isolation and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Data isolation	<1-5>	<0-3>	<0-3>	<0-3>

Auditing

Auditing is the ability to identify when logical or physical changes were made to systems. Details typically include who made the change and when it was made. Items commonly audited are user permissions and system access.

Importance Rating. Does the organization have requirements to be able to regularly audit messaging? Record the importance of these criteria in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** None.
- **Dedicated offering.** Auditing is done through service requests and tracked through the event log.
- **On-premises solution.** Auditing can be implemented as needed.

Evaluate how well each of these offerings addresses the business's requirements for auditing and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Auditing	<1-5>	<0-3>	<0-3>	<0-3>

Archiving and Journaling

Archiving is the ability to keep e-mail for a specific duration of time. Journaling is the ability to automatically create copies of all e-mails sent or received.

Importance Rating. Does the organization have a need for archiving or journaling? Record the importance of this criterion in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** The Exchange Hosted Archive (EHA) service is available at an additional cost. Journaling is only available for EHA customers. Microsoft administers the archiving infrastructure, but the customer retains control over which mailboxes are archived, the rules, and configuration options.
- **Dedicated offering.** Archiving and journaling are available via Proofpoint at an additional cost. Proofpoint administers the archiving infrastructure, but the customer retains control over which mailboxes are archived, the rules, and configuration options.
- **On-premises solution.** Archiving and journaling can be implemented.

Evaluate how well each of these offerings addresses the business's requirements for archiving and journaling and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Archiving and journaling	<1-5>	<0-3>	<0-3>	<0-3>

Signing and Encrypting Messages

Secure Multipurpose Internet Mail Extensions (S/MIME) enables users to send signed and encrypted e-mail.

Importance Rating. Does the organization need to send signed or encrypted e-mails? Record the importance of this criterion in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** Provides support for signing and encrypting e-mails with S/MIME certificates. Outlook will publish and store certificates in Exchange Online.
- **Dedicated offering.** Provides support for signing and encrypting e-mails with S/MIME certificates by synchronizing certificate information from the customer's environment to the Microsoft Online Services–managed environment as part of the Active Directory synchronization.
- **On-premises solution.** Supports signing and encrypting e-mails with S/MIME.

Evaluate how well each of these offerings addresses the business's requirements for signing and encrypting messages with S/MIME and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Signing and encrypting messages	<1-5>	<0-3>	<0-3>	<0-3>

Information Rights Management

Information Rights Management (IRM) allows individuals to prevent sensitive information from being read, printed, forwarded, or copied by unauthorized users. After permission for a message has been restricted by using IRM, the access and usage restrictions are enforced wherever the information is located because the permissions to access an e-mail message are stored in the message file itself.

Importance Rating. Does the organization need to control what happens to messages after they are sent? Record the importance of this criterion in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard and Dedicated offerings.** Supports the usage of Windows Rights Management Services (RMS) for e-mail and attachments, but the organization must provide the Windows Rights Management infrastructure.
- **On-premises solution.** IRM can be implemented through Windows Rights Management Services (RMS).

Evaluate how well each of these offerings addresses the business's requirements for IRM and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Information Rights Management	<1-5>	<0-3>	<0-3>	<0-3>

Step Summary

This step assisted technical decision makers in evaluating the risks associated with storing the organization's e-mail both on-premises and under someone else's control. Because providing protection from accidental compromise and predators from both within and outside the organization is an essential IT priority, the "Data Management and Security Implications" step addressed some of the considerations involved in ensuring information security in today's highly networked business environment.

The features were rated according to their effectiveness in fulfilling the business's needs. The scores will help guide the technical decision makers in objectively evaluating the data management and security impacts of a change to Exchange Online.

The next step will discuss the ramifications of moving to Exchange Online for business operations.

Step 4: Ramifications on Business Operations

Before deciding whether to use online services, existing on-premises e-mail services, or a combination of e-mail services, it is important to carefully examine the ramifications of this decision on business operations.

The topics covered in this step are:

- Service Continuity
- Disaster Recovery Testing
- Service Level Agreements
- Adoption Rate for New Releases
- Scheduled Maintenance

These topics will be used in evaluating the business operations concerns in this step, but they do not necessarily represent a comprehensive list. Each organization must consider its unique environment and needs.

Service Continuity

Messaging service continuity is the ability of an organization to continue to send and receive e-mail in the event of a failure of a component of the infrastructure.

Importance Rating. How important is service continuity to the organization? Record the importance of this topic in the rating table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard and Dedicated offerings.** Exchange Online Services design incorporates the following resiliency features:
 - **Data protection.** Multiple copies of customer data are stored within the data center and also remotely at a separate geographic location.
 - **Data center redundancy.** Microsoft data centers feature the ability to transfer operations to alternative, geographically separate data centers if this becomes necessary. The failover process is managed by Microsoft and requires no intervention from customers when service is resumed.
- **On-premises solution.** Service continuity in an on-premises environment depends on the level of hardware and data center redundancy that the organization chooses to deploy. Many organizations have deployed clustering inside the data center but do not have geographic redundancy of their e-mail services and data.

Additional Context. In all three offerings, the business will still need to evaluate its exposure in other areas, for example:

- Service continuity of other integrated services like antispam or antivirus.
- From a user's perspective, service continuity can be affected by failures in any of the following: client systems, network connectivity, or Internet availability.

Evaluate how well each of these offerings addresses the business's requirements for service continuity and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Service continuity	<1-5>	<0-3>	<0-3>	<0-3>

Disaster Recovery Testing

Disaster recovery is the ability to restore services and data after a catastrophic failure. Disaster recovery testing is the ability to prove that disaster recovery is possible.

Importance Rating. How important is disaster recovery testing? Record the importance of this topic in the rating table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** No disaster recovery testing is available.
- **Dedicated offering.** Dedicated offering provides for one disaster recovery test per year with 180 days prior written notice from the customer.
- **On-premises solution.** With on-premises, the regularity of disaster recovery testing depends on the priorities and capabilities of the organization's IT department.

Evaluate how well each of these offerings addresses the business's requirements for disaster recovery testing and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Disaster recovery testing	<1-5>	<0-3>	<0-3>	<0-3>

Service Level Agreements

A service level agreement (SLA) is a written agreement documenting the target percentage of time a service must be available and assigning penalties if it is not.

Importance Rating. How important are SLAs to the organization? Record the importance of this topic in the rating table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard and Dedicated offerings.** Exchange Online offers 99.9 percent scheduled uptime. Organizations will be financially compensated when this uptime is not met.
- **On-premises solution.** The business and end users have expectations about the availability of their messaging service. Most organizations, however, don't formalize these expectations in the form of actual SLAs, in particular because penalties are not paid for downtime.

Evaluate how well each of these offerings addresses the business's requirements for SLAs and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Service level agreements	<1-5>	<0-3>	<0-3>	<0-3>

Adoption Rate for New Releases

Periodically, new versions of Exchange become available. Some companies need and want to be among the first to adopt the latest available technology. Other companies prefer to allow the product's usage in the market to mature before deciding to upgrade.

Importance Rating. How important is it for the organization to move to the newest release? Record the importance of this topic in the rating table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard and Dedicated offerings.** Organizations have a window of up to 12 months following a product's release to move to the new version, and the Microsoft Exchange Online data center team performs the system upgrade. Notification will be provided, along with relevant information about the new release for the end users. Customers may need to upgrade the client software.
- **On-premises solution.** In an on-premises environment, customers have full control over when and if to adopt a new version.

Evaluate how well each of these offerings addresses the business's goals for product adoption and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Adoption rate for new releases	<1-5>	<0-3>	<0-3>	<0-3>

Scheduled Maintenance

Scheduled maintenance windows are defined as the period of time during which administrators will deploy changes that may affect the customer-facing services in the production environment.

Importance Rating. Does the organization need to manage its own maintenance windows? Record the importance of this criterion in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard and Dedicated offerings.** Changes occur during windows approximately every other weekend and at least twice per month, generally on Saturdays between 4–8 P.M. Pacific Time (UTC-8).
- **On-premises solution.** Businesses can set standard maintenance windows that work well within the business.

Additional Context. Customers may need to adapt their business practices to the pre-established Exchange Online schedule.

Evaluate how well each of these offerings addresses the business's requirements for managing maintenance windows and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Scheduled maintenance	<1-5>	<0-3>	<0-3>	<0-3>

Step Summary

In this step, some of the business-level concerns of a migration to Exchange Online were evaluated. The features were rated according to their effectiveness in fulfilling the business's needs. The scores will help guide the technical decision makers in objectively evaluating the impact of a change to Exchange Online.

The next step will discuss the provisioning and planning concerns associated with moving to Exchange Online.

Step 5: Provisioning and Planning Concerns

Provisioning is the creation, modification, and deletion of mailboxes, distribution groups, and contacts within a system. This can be done through automation, delegated administration portals, or manually using native tools like Active Directory Users and Computers for Active Directory domains. Capacity and performance planning can be a challenge for IT departments as they try to balance future needs with budget limitations.

The topics covered in this step are:

- Active Directory Integration
- Capacity and Performance Planning

Active Directory Integration

Active Directory is a Microsoft directory service. It is used to provision, store, and manage users, groups, passwords, and contacts, among other objects. It is the basis for the global address list (GAL) that Outlook clients use.

There are two scenarios for Exchange Online. In the first scenario, the organization has no corporate Active Directory, and therefore provisions all users, mailboxes, distribution groups, and so on, through a Web-based management console in the Exchange Online system. In the second scenario, the organization has a corporate Active Directory and integrates the corporate and Exchange Online directories using synchronization tools.

Importance Rating. How important is integrating Active Directory with the Exchange Online system? Record the importance of this functionality in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard offering.** There are two choices: a Web-based management console for managing users, or the Microsoft Online Services Directory Synchronization (DirSync) Tool. DirSync allows administrators to continue using familiar tools, like Active Directory Users and Computers. DirSync establishes a one-way synchronization of all domains in the on-premises Active Directory forest with Microsoft Online, but it does not change the source Active Directory. It will synchronize all users, contacts, and groups having e-mail addresses.
If the customer needs an account shut down immediately without waiting for replication, he or she can call for expedited service to open a ticket.
- **Dedicated offering.** Exchange Online provides a tool called MMSSPP that replicates the organization's Active Directory into the Exchange Online environment.
If the customer needs an account shut down immediately without waiting for replication, he or she can call for expedited service to open a ticket.
- **On-premises solution.** In a typical on-premises environment, there is a single Active Directory, so no integration is necessary.

Additional Context. Smaller companies may need to learn a new tool if the Admin Portal is used to manage users. Although the DirSync or MMSSPP tools can synchronize Active Directory with Microsoft Online Services, this adds complexity and the synchronization process is potentially a single point of failure.

Evaluate how well each of these offerings addresses the business's requirements for integrating directories and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Active Directory integration	<1-5>	<0-3>	<0-3>	<0-3>

Capacity and Performance Planning

Capacity planning is the process of ensuring that sufficient resources exist to meet the demands of the messaging system—for example, having enough memory, disk, and so on. Performance planning refers to the process of ensuring that the responsiveness of the system meets business requirements—for example, how fast data travels through the system.

Importance Rating. How important is it to ensure that the messaging system meets the speed, storage, and growth needs of the organization? Record the importance of this functionality in the table below.

Solutions Rating. The list below compares the specific functionalities of each solution:

- **Standard and Dedicated offerings.** Exchange Online data center administrators monitor hardware usage and plan for the installation of additional hardware when needed to meet capacity and performance requirements. When these thresholds are exceeded, Microsoft will automatically make the needed adjustments to maintain the resources. In addition, Exchange Online gives customers the flexibility to easily scale up or scale down the e-mail system.
- **On-premises solution.** The organization is responsible for determining capacity and performance limits, as well as scaling the hardware and support organization accordingly.

Evaluate how well each of these offerings addresses the business's requirements for capacity and performance planning and record the ratings in the table below.

Topic	Importance Rating	Standard	Dedicated	On-premises
Capacity and performance planning	<1-5>	<0-3>	<0-3>	<0-3>

Step Summary

This step discussed provisioning mailboxes, distribution groups, and contacts within a system. It was determined that this can be done automatically or through administration portals. In addition, capacity and performance planning differences were noted and evaluated. The features were rated according to their effectiveness in fulfilling the business's needs. The scores will help guide the technical decision makers in objectively evaluating the impact of a change to Exchange Online from a provisioning and planning perspective.

The next step will tally the results of the evaluation process.

Step 6: Evaluate Results

In this step, the comparison ratings for each topic will be tallied so that a logical decision about which solution will best fit the needs of the organization can be made. At this point, each of the topics has been rated in terms of its importance to the business. Each offering has been rated in its effectiveness to meet the business's needs.

Weighted Scoring

In the appendix, the "Tally Sheet" job aid lists all of the steps and their respective topics. Transfer each of the raw scores from the table in each topic section to this table and determine the weighted score for each topic. The weighted score is generated by multiplying the importance rating by each offering's original (raw) rating score. The weighted scores provide a comprehensive view of the comparisons between offerings, which will assist in deciding whether to choose an on-premises solution or to migrate to either the Exchange Online Standard or Dedicated solution.

Summing each column will reveal which offering has been rated to best meet the organization's needs.

Analyze the Results

If one offering's score is significantly higher than the rest, then this offering obviously best meets the needs of the organization. However, a set of similar scores may indicate that a particular offering does not necessarily better fit the needs of the organization than other offerings. In this case, it may be prudent to focus on the results of the topics that were rated to be most important to the company.

During the course of evaluation, the organization may have also realized that there was a capability that it simply must have, and either on-premises or one of the Exchange Online offerings did not provide it. This also can make the decision fairly obvious.

Note that this analysis only provides a technical assessment of the decision to move e-mail services to an Exchange Online environment and that there may be other factors influencing the business's decision.

Next Steps

Although outside the scope of this document, a cost-benefit analysis may be in order to determine which offering is the best fit for the organization from a financial standpoint.

If it was determined that Exchange Online Standard will meet the needs of the organization, the Microsoft Assessment and Planning Toolkit, available at <http://www.microsoft.com/MAP>, can be used to provide an assessment of the client computers in the organization, as well as of the IT environment as a whole, to determine readiness for Microsoft Online Services. The toolkit can also be used as an aid in the provisioning process for Exchange Online, but note that it does not assess readiness for the Dedicated offering of Exchange Online. For more information on the Dedicated offering, contact bpisrvis@microsoft.com.

Trial Exchange Online

A 30-day trial of the Business Productivity Online Suite, including Exchange Online, is available to U.S. customers. Go to <https://mocp.microsoftonline.com> to sign up.

Co-Existence with On-Premises

Exchange Online allows the flexibility to choose a deployment model that combines on-premises and online functionalities—by geography, workload, or roles. For example, customers can decide to deploy Exchange Server in their own data centers for users in their headquarters and have their branch office users subscribe to Exchange Online.

If there is an existing local Exchange Server e-mail environment, it's possible to continue to use that environment while evaluating Exchange Online. Establish one-way synchronization from the local Active Directory directory service to Microsoft Online to migrate groups of users and mailbox content from the local Exchange Server environment to Exchange Online. During this phase, some of the organization's mailboxes will be hosted on the local Exchange Server environment, and others will be hosted in Exchange Online.

Migration to Online Services is covered in detail in the "Migrate to Microsoft Online" white paper, available at <http://go.microsoft.com/fwlink/?LinkId=128821>. This white paper discusses the details of integrating an existing Active Directory with Microsoft Online services, and how to migrate existing e-mail services from Microsoft Exchange, POP3, and IMAP4 e-mail servers.

Conclusion

The software-plus-services strategy designed by Microsoft is about choice, creating freedom in functionality and delivery. In order for companies to choose a best fit, they need to weigh the advantages and disadvantages of each mode of delivery against their organization's priorities. This guide was designed to provide technical decision makers with information about offerings and a means to document their organization's requirements and goals when making the decision whether to retain existing on-premises e-mail services or to migrate either in full or partially to the Exchange Online solution.

Feedback

Please direct questions and comments about this guide to satfdbk@microsoft.com.

Additional Reading

- Microsoft Online Services Customer Portal <https://mocp.microsoftonline.com/>
- Microsoft Online Services Administration Center <https://admin.microsoftonline.com/>
- Microsoft Exchange Online <http://www.microsoft.com/online/exchange-online.mspix>
- Microsoft Online Customer Portal <http://technet.microsoft.com/en-us/library/bb981188.aspx>
- Microsoft Exchange Server 2007 <http://www.microsoft.com/exchange/>
- Exchange Server 2007 TechCenter <http://technet.microsoft.com/en-us/library/bb124558.aspx>

Appendix: Tally Sheet

Step 1: Client Experience

Feature	Importance Rating	Raw			Weighted		
		Standard	Dedicated	On-Premises	Standard	Dedicated	On-Premises
Office Outlook Web Access							
Outlook Anywhere							
MAPI							
IMAP and POP							
Mobile devices using Exchange ActiveSync							
BlackBerry devices							
Macintosh clients							
Single sign-on							
Unified messaging							
Mailbox sizes							
Section Subtotals							

Step 2: Impacts to Mail Flow

Feature	Importance Rating	Raw			Weighted		
		Standard	Dedicated	On-Premises	Standard	Dedicated	On-Premises
SMTP relay services							
SMTP smart hosting							
Line-of-business applications integration							
Message hygiene							
Connectors to other systems							
Transport rules							
Public folders							
Section Subtotals							

Step 3: Data Management and Security Implications

Feature	Importance Rating	Raw			Weighted		
		Standard	Dedicated	On-Premises	Standard	Dedicated	On-Premises
Network security							
Network connectivity							
Data isolation							
Auditing							
Archiving and journaling							
Signing and encrypting messages							
Information Rights Management							
Section Subtotals							

Step 4: Ramifications on Business Operations

Feature	Importance Rating	Raw			Weighted		
		Standard	Dedicated	On-Premises	Standard	Dedicated	On-Premises
Service continuity							
Disaster recovery testing							
Service level agreements							
Adoption rate for new releases							
Scheduled maintenance							
Section Subtotals							

Step 5: Provisioning and Planning Concerns

Feature	Importance Rating	Raw			Weighted		
		Standard	Dedicated	On-Premises	Standard	Dedicated	On-Premises
Active Directory integration							
Capacity and performance planning							
Section Subtotals							

Step 6: Evaluate Results

	Weighted		
	Standard	Dedicated	On-Premises
Cumulative Totals			

Acknowledgments

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