Study guide for Exam MS-220: Troubleshooting Microsoft Exchange Online

Purpose of this document

This study guide should help you understand what to expect on the exam and includes a summary of the topics the exam might cover and links to additional resources. The information and materials in this document should help you focus your studies as you prepare for the exam.

Useful links	Description
Review the skills measured as of April 18, 2023	This list represents the skills measured AFTER the date provided. Study this list if you plan to take the exam AFTER that date.
Review the skills measured prior to April 18, 2023	Study this list of skills if you take your exam PRIOR to the date provided.
Change log	You can go directly to the change log if you want to see the changes that will be made on the date provided.
How to earn the certification	Some certifications only require passing one exam, while others require passing multiple exams.
Certification renewal	Microsoft associate, expert, and specialty certifications expire annually. You can renew by passing a **free** online assessment on Microsoft Learn.
Your Microsoft Learn profile	Connecting your certification profile to Microsoft Learn allows you to schedule and renew exams and share and print certificates.
Exam scoring and score reports	A score of 700 or greater is required to pass.
Exam sandbox	You can explore the exam environment by visiting our exam sandbox.

Microsoft

Useful links	Description
Request accommodations	If you use assistive devices, require extra time, or need modification to any part of the exam experience, you can request an accommodation.
Take a practice test	Are you ready to take the exam or do you need to study a bit more?

Updates to the exam

Our exams are updated periodically to reflect skills that are required to perform a role. We have included two versions of the Skills Measured objectives depending on when you are taking the exam.

We always update the English language version of the exam first. Some exams are localized into other languages, and those are updated approximately eight weeks after the English version is updated. While Microsoft makes every effort to update localized versions as noted, there may be times when the localized versions of an exam are not updated on this schedule. Other available languages are listed in the **Schedule Exam** section of the **Exam Details** webpage. If the exam isn't available in your preferred language, you can request an additional 30 minutes to complete the exam.

Note

The bullets that follow each of the skills measured are intended to illustrate how we are assessing that skill. Related topics may be covered in the exam.

Note

Most questions cover features that are general availability (GA). The exam may contain questions on Preview features if those features are commonly used.

Skills measured as of April 18, 2023

Audience profile

Candidates for this exam identify, troubleshoot, and resolve issues with Microsoft Exchange Online, hybrid Exchange environments, and related Exchange components, technologies, and services.

Candidates work with customers and other stakeholders to understand the details of any issues. They also interact with administrators and peers that work with other related technologies.

Candidates should have experience with PowerShell and the Exchange PowerShell module. The support engineer should also have significant experience deploying, managing, and troubleshooting Exchange Online environments.

- Troubleshoot mail flow issues (20–25%)
- Troubleshoot compliance and retention issues (25–30%)
- Troubleshoot mail client issues (20–25%)

- Troubleshoot Exchange Online configuration issues (15–20%)
- Troubleshoot hybrid and migration issues (10–15%)

Troubleshoot mail flow issues (20–25%)

Troubleshoot Exchange Online mail flow issues

- Review and interpret message headers
- Review and interpret message trace results and policies associated with those results
- Determine whether a mail flow rule or conditional mail routing is affecting mail flow
- Identify rules that are evaluated and policies that are applied when sending or receiving email
- Troubleshoot issues where users cannot send or receive email and no NDR is generated or displayed
- Troubleshoot issues where email destined for one tenant is incorrectly routed to another tenant
- Troubleshoot delivery delays

Troubleshoot mail flow issues with external systems

- Read and analyze SMTP protocol logs for hybrid deployments and third-party systems
- Troubleshoot issues related to mail flow for hybrid deployments
- Troubleshoot mail flow using a third-party cloud service with Exchange Online
- Troubleshoot DNS-related mail flow issues
- Troubleshoot SMTP relay issues
- Troubleshoot SMTP certificate issues

Troubleshoot other mail flow issues

- Identify types of NDRs and interpret NDR data
- Determine which rules impact email attachments
- Determine which rules are triggered when an email arrives at a user's inbox
- Troubleshoot issues related to blocked attachment types
- Troubleshoot issues with corrupted inbox rules

Troubleshoot issues reported by Microsoft Defender for Office 365

- Determine why an email is marked as spam
- Determine why messages are being quarantined
- Determine whether the sender SPF, DMARC, and DKIM records are valid
- Troubleshoot anti-spam policies
- Troubleshoot messages that are categorized as false positive or false negative

Troubleshoot compliance and retention issues (25–30%)

Troubleshoot compliance issues

- Identify roles required to perform eDiscovery actions
- Describe Microsoft Purview compliance portal retention policies

Microsoft

- Troubleshoot eDiscovery issues
- Determine what types of holds are associated with an item
- Troubleshoot in-place and eDiscovery holds
- Search for and delete email messages in an organization
- Determine how to clear or purge recoverable item folders

Troubleshoot retention issues

- Describe retention tag types and actions
- Describe the process for calculating item retention age
- Troubleshoot issues creating and applying retention policies
- Review and interpret Messaging Records Management (MRM) mailbox diagnostics logs
- Interpret message properties used by message records management (MRM)

Troubleshoot Microsoft Purview Message Encryption and S/MIME issues

- Troubleshoot issues with messages that are not encrypted or decrypted as expected
- Troubleshoot issues where external users cannot decrypt messages but internal users can decrypt messages
- Troubleshoot issues reading, replying to, or forwarding protected messages from Microsoft 365 on mobile devices
- Troubleshoot mail flow rules
- Troubleshoot revocation issues for encrypted emails
- Troubleshoot S/MIME issues

Troubleshoot mailbox auditing issues

- Troubleshoot issues searching audit logs
- Troubleshoot user actions (for example user reports an item is deleted but they say they did not delete)
- Troubleshoot bulk actions including email creation, moves, modifications, and deletion
- Track non-owner actions
- Troubleshoot audit log retention period issues
- Troubleshoot auditing not working

Troubleshoot journaling

- Troubleshoot duplicate journal entries
- Troubleshoot email not being journaled
- Troubleshoot journal OME decryption issues

Troubleshoot mail client issues (20–25%)

Troubleshoot connectivity and authentication issues

- Describe how to obtain Microsoft Outlook client configuration information
- Troubleshoot Exchange authentication policies

Microsoft

- Troubleshoot client access rules
- Troubleshoot issues with modern authentication
- Troubleshoot Outlook on the web (OWA) sign in issues
- Troubleshoot Autodiscover issues
- Troubleshoot why Outlook client cannot connect to Exchange Online mailbox
- Troubleshoot Outlook desktop app continuously prompting for Exchange Online password

Troubleshoot calendaring issues

- Review and analyze mailbox and calendar diagnostic logs
- Troubleshoot broken manager/delegation issues
- Troubleshoot resource booking issues

Troubleshoot calendar sharing issues

- Troubleshoot permissions issues related to calendar sharing
- Troubleshoot issues publishing and accessing calendars shared with external users
- Determine why content for a published calendar is not up to date

Troubleshoot issues with mobile devices

- Identify mobile device access states and what the states indicate
- Review mobile devices statistics to confirm the reason for a block
- Review the Allow/Block/Quarantine (ABQ) list to identify blocked or quarantined devices
- Troubleshoot Exchange device access rules
- Review and interpret ActiveSync logs to troubleshoot Outlook Sync EAS connection issues
- Troubleshoot connectivity issues with native ActiveSync

Troubleshoot Exchange Online configuration issues (15–20%)

Troubleshoot provisioning issues

- Interpret and troubleshoot validation errors encountered during object provisioning
- Determine when to restore or recover an inactive mailbox
- Troubleshoot issues managing resource mailboxes
- Troubleshoot issues purging deleted users

Troubleshoot recipient issues

- Troubleshoot automatic email forwarding
- Troubleshoot matching issues with Microsoft Azure Active Directory (Azure AD), part of Microsoft Entra
- Troubleshoot distribution list membership issues (including dynamic distribution groups)
- Troubleshoot issues with archive mailboxes including auto-expanding archive mailboxes

Troubleshoot org-wide settings

- Troubleshoot domain setup and configuration issues

Microsoft

- Troubleshoot address book policies
- Troubleshoot address lists
- Troubleshoot allowed file types
- Troubleshoot mailbox plans
- Troubleshoot Client Access services (CAS) mailbox plans

Troubleshoot public folder issues

- Troubleshoot Exchange Online access to public folders
- Troubleshoot mail-enabled public folders
- Troubleshoot issues sending email to public folders
- Troubleshoot hybrid access to public folders
- Troubleshoot load-balancing issues for public folders

Troubleshoot hybrid and migration issues (10–15%)

Troubleshoot hybrid configuration issues

- Troubleshoot Hybrid Configuration wizard issues
- Troubleshoot hybrid mail flow issues
- Troubleshoot free/busy issues for hybrid deployments
- Troubleshoot issues synchronizing remote recipient attributes with Exchange Online

Troubleshoot migration issues

- Troubleshoot endpoint creation issues
- Review Migration users status report
- Troubleshoot slow migrations
- Troubleshoot Data Consistency Score (DCS) issues
- Troubleshoot failed migrations
- Troubleshoot public folder migration issues

Study resources

We recommend that you train and get hands-on experience before you take the exam. We offer self-study options and classroom training as well as links to documentation, community sites, and videos.

Study resources	Links to learning and documentation
Get trained	[Choose from self-paced learning paths and modules or take an instructor-led course](#)
Find documentation	[Microsoft 365 documentation	Microsoft Docs](#)
Ask a question	[Microsoft Q&A	Microsoft Docs](#)
Get community support	[Microsoft 365 - Microsoft Tech Community](#)
Follow Microsoft Learn	[Microsoft Learn - Microsoft Tech Community](#)
Find a video	[Exam Readiness Zone](#) [Browse other Microsoft Learn shows](#)

Change log

Key to understanding the table: The topic groups (also known as functional groups) are in bold typeface followed by the objectives within each group. The table is a comparison between the two versions of the exam skills measured and the third column describes the extent of the changes.

Skill area prior to April 18, 2023	Skill area as of April 18, 2023	Change
Audience profile		Minor
Troubleshoot mail flow issues	**Troubleshoot mail flow issues**	No % change
Troubleshoot Exchange Online mail flow issues	Troubleshoot Exchange Online mail flow issues	No change
Troubleshoot mail flow issues with external systems	Troubleshoot mail flow issues with external systems	Minor
Troubleshoot other mail flow issues	Troubleshoot other mail flow issues	Minor
Troubleshoot issues reported by Microsoft Defender for Office 365	Troubleshoot issues reported by Microsoft Defender for Office 365	No change

Microsoft

Skill area prior to April 18, 2023	Skill area as of April 18, 2023	Change
Troubleshoot compliance and retention issues	**Troubleshoot compliance and retention issues**	No % change
Troubleshoot compliance issues	Troubleshoot compliance issues	No change
Troubleshoot retention issues	Troubleshoot retention issues	No change
Troubleshoot Microsoft Purview Message Encryption and S/MIME issues	Troubleshoot Microsoft Purview Message Encryption and S/MIME issues	No change
Troubleshoot mailbox auditing issues	Troubleshoot mailbox auditing issues	No change
Troubleshoot journaling	Troubleshoot journaling	No change
Troubleshoot mail client issues	**Troubleshoot mail client issues**	No % change
Troubleshoot connectivity and authentication issues	Troubleshoot connectivity and authentication issues	Minor
Troubleshoot calendaring issues	Troubleshoot calendaring issues	Minor
Troubleshoot calendar sharing issues	Troubleshoot calendar sharing issues	No change
Troubleshoot issues with mobile devices	Troubleshoot issues with mobile devices	No change
Troubleshoot Exchange Online configuration issues	**Troubleshoot Exchange Online configuration issues**	No % change
Troubleshoot provisioning issues	Troubleshoot provisioning issues	No change
Troubleshoot recipient issues	Troubleshoot recipient issues	No change
Troubleshoot org-wide settings	Troubleshoot org-wide settings	No change
Troubleshoot public folder issues	Troubleshoot public folder issues	No change
Troubleshoot hybrid and migration issues	**Troubleshoot hybrid and migration issues**	No % change
Troubleshoot hybrid configuration issues	Troubleshoot hybrid configuration issues	No change
Troubleshoot migration issues	Troubleshoot migration issues	Minor

Microsoft

Skills measured prior to April 18, 2023

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Troubleshoot mail flow issues (20–25%)

Troubleshoot Exchange Online mail flow issues

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Troubleshoot mail flow issues with external systems

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- Troubleshoot SMTP certificate issues

Troubleshoot other mail flow issues

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- Determine which rules are triggered when an email arrives at a user's inbox
- Troubleshoot issues related to blocked attachment types

Microsoft

- Troubleshoot issues with corrupted inbox rules

Troubleshoot issues reported by Microsoft Defender for Office 365

- Determine why an email is marked as spam
- Determine why messages are being quarantined
- Determine whether the sender SPF, DMARC, and DKIM records are valid
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- Troubleshoot messages that are categorized as false positive or false negative

Troubleshoot compliance and retention issues (25–30%)

Troubleshoot compliance issues

- Identify roles required to perform eDiscovery actions
- Describe Microsoft Purview compliance portal retention policies
- Troubleshoot eDiscovery issues
- Determine what types of holds are associated with an item
- Troubleshoot in-place and eDiscovery holds
- Search for and delete email messages in an organization
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Troubleshoot retention issues

- Describe retention tag types and actions
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- Troubleshoot Autodiscover issues
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Troubleshoot calendaring issues

- Review and analyze mailbox and calendar diagnostic logs
- Troubleshoot broken manager/delegation issues
- Troubleshoot Resource Booking Assistant issues

Troubleshoot calendar sharing issues

- Troubleshoot permissions issues related to calendar sharing
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Troubleshoot Exchange Online configuration issues (15–20%)

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Troubleshoot hybrid and migration issues (10–15%)

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Troubleshoot migration issues

- Troubleshoot endpoint creation issues
- Review migration users and move requests
- Troubleshoot slow migrations

- Troubleshoot Data Consistency Score (DCS) issues
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- Troubleshoot public folder migration issues