

Study guide for Exam MS-740: Troubleshooting Microsoft Teams

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 January 20, 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 January 20, 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 Learn allows you to schedule and renew exams and share and print certificates.
Passing score	A score of 700 or greater is required to pass.
Exam sandbox	You can explore the exam environment by visiting our exam sandbox.
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.

Useful links	Description
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. 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 January 20, 2023

Audience profile

Candidates for this exam are support engineers who use advanced troubleshooting methods to support Microsoft Teams environments, analyze telemetry and log data, troubleshoot deployments, and tune performance. Candidates are expected to review logs and other data, infer the root cause of an issue, and provide a fix.

Candidates should have significant experience troubleshooting unified communications solutions with hands-on expertise specific to troubleshooting Microsoft Teams. In addition, candidates should have knowledge of basic networking, Azure fundamentals, telephony, PowerShell, data storage technologies, APIs, app security, authentication and authorization, security and compliance information, debugging, performance tuning, and monitoring.

- Troubleshoot Microsoft Teams voice issues (20–25%)
- Troubleshoot issues with Microsoft Teams meetings and live events (20–25%)
- Troubleshoot federation issues (5–10%)
- Troubleshoot issues signing into Microsoft Teams (10–15%)
- Troubleshoot teams and channels (10–15%)

- Troubleshoot issues with files (15–20%)

Troubleshoot Microsoft Teams voice issues (20–25%)

Troubleshoot audio and video flow issues

- Troubleshoot audio and video quality issues
- Analyze call data metrics by using Call Quality Dashboard
- Determine the root cause of flow issues by using network tracing tools and logs

Troubleshoot emergency calling issues

- Troubleshoot dynamic emergency calling
- Identify issues with emergency phone numbers and normalization rules
- Troubleshoot location detection failures
- Troubleshoot dial mask issues

Troubleshoot PSTN connectivity issues

- Troubleshoot issues pairing the Session Border Controller (SBC) with Microsoft Teams Phone
- Troubleshoot dial plan issues
- Troubleshoot Direct Routing call issues by analyzing SBC logs
- Troubleshoot audio conferencing issues including provisioning and configuration issues
- Troubleshoot Calling Plan issues

Troubleshoot issues with Microsoft Teams meetings and live events (20–25%)

Troubleshoot Microsoft Teams meetings and live events issues

- Troubleshoot scheduling issues
- Troubleshoot recording issues
- Troubleshoot sharing content issues
- Troubleshoot issues related to reports during and post-event
- Troubleshoot and optimize network configuration
- Troubleshoot issues joining meetings

Troubleshoot Microsoft Teams services

- Validate Audio Conferencing configuration
- Troubleshoot issues related to the Outlook add-in for Microsoft Teams
- Troubleshoot online and hybrid call queues and auto-attendant issues
- Troubleshoot user provisioning issues
- Troubleshoot issues with Microsoft Teams Phone features including voice mail, call forwarding, transfers, and contacts

Troubleshoot Microsoft Teams client issues

- Investigate Microsoft Teams client start up issues and crashes
- Troubleshoot causes for performance issues
- Investigate network issues including firewall, proxy, and VPN configurations
- Troubleshoot issues installing and updating client software
- Troubleshoot peer-to-peer (P2P) SIP call issues
- Troubleshoot issues enabling and configuring audio and video devices for Microsoft Teams
- Troubleshoot notification issues

Troubleshoot federation issues (5–10%)

Troubleshoot Microsoft Teams external federation issues

- Investigate external federation policy issues
- Verify allowed and blocked domain lists
- Troubleshoot issues related to Skype for Business hybrid environment

Troubleshoot Microsoft Teams in-tenant federation issues

- Troubleshoot message delivery issues
- Troubleshoot issues related to native chat functionalities
- Troubleshoot issues related to Skype for Business hybrid environment

Troubleshoot issues signing into Microsoft Teams (10–15%)

Troubleshoot account sign-in issues

- Troubleshoot issues with Azure Active Directory Seamless Single Sign-On (Azure AD Seamless SSO)
- Determine whether a user account or the device from which a user attempts to sign in is the cause of a sign-in issue
- Troubleshoot client sign-in issues by collecting and analyzing Microsoft Teams debug logs
- Troubleshoot Teams Rooms System (TRS) sign-in issues

Troubleshoot guest access issues

- Troubleshoot issues adding guest users to teams
- Troubleshoot call, message, and meeting issues for guest users
- Investigate invitations sent but not redeemed
- Investigate guest account sign-in issues

Troubleshoot teams and channels (10–15%)

Troubleshoot issues with apps

- Troubleshoot issues accessing apps in Microsoft Teams
- Troubleshoot app setup issues

- Troubleshoot issues installing apps in Microsoft Teams

Troubleshoot issues with Microsoft Teams channels

- Troubleshoot issues related to channel email integration
- Troubleshoot replication issues including member management
- Troubleshoot creation and deletion issues
- Troubleshoot issues related to channel tabs

Troubleshoot issues with files (15–20%)

Troubleshoot peer-to-peer (P2P) private chat files issues

- Investigate access rights for users
- Investigate issues related to OneDrive conditional access policies
- Troubleshoot OneDrive provisioning issues

Troubleshoot file issues for private channels

- Verify that the SharePoint site for the channel is accessible
- Verify SharePoint access permissions
- Verify that the SharePoint site collection link is intact

Troubleshoot file issues for standard channels

- Verify SharePoint access permissions
- Verify that the SharePoint site collection link is intact
- Troubleshoot file synchronization issues and missing files

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 January 20, 2023	Skill area as of January 20, 2023	Change
Audience profile		Minor
Troubleshoot Microsoft Teams voice issues	Troubleshoot Microsoft Teams voice issues	% of exam increased
Troubleshoot audio and video flow issues	Troubleshoot audio and video flow issues	Major
Troubleshoot emergency calling issues	Troubleshoot emergency calling issues	Minor
Troubleshoot direct routing issues	Troubleshoot PSTN connectivity issues	Minor

Skill area prior to January 20, 2023	Skill area as of January 20, 2023	Change
Troubleshoot issues with Teams meetings and live events	Troubleshoot issues with Microsoft Teams meetings and live events	Minor
Troubleshoot live events issues	Troubleshoot Microsoft Teams meetings and live events issues	Minor
Troubleshoot Teams services	Troubleshoot Microsoft Teams services	Major
Troubleshoot Teams client issues	Troubleshoot Microsoft Teams client issues	Major
Troubleshoot messaging issues		Removed
Troubleshoot federation issues	Troubleshoot federation issues	% of exam decreased
Troubleshoot issues interoperating with Skype for Business		Removed
Troubleshoot Teams federation issues	Troubleshoot Microsoft Teams external federation issues	Minor
	Troubleshoot Microsoft Teams in-tenant federation issues	Added
Troubleshoot issues signing into Teams	Troubleshoot issues signing into Microsoft Teams	% of exam decreased; Minor
Troubleshoot account and network issues		Removed
Troubleshoot member sign-in issues	Troubleshoot account sign-in issues	Major
Troubleshoot guest access issues	Troubleshoot guest access issues	Minor
Troubleshoot teams and channels	Troubleshoot teams and channels	No change
Troubleshoot issues with apps	Troubleshoot issues with apps	Minor
Troubleshoot issues with Teams channels	Troubleshoot issues with Microsoft Teams channels	Minor
Troubleshoot issues with files	Troubleshoot issues with files	No change

Skill area prior to January 20, 2023	Skill area as of January 20, 2023	Change
Troubleshoot person-to-person (P2P) private chat files issues including issues access and sharing issues	Troubleshoot peer-to-peer (P2P) private chat files issues	Minor
Troubleshoot file issues for private channels	Troubleshoot file issues for private channels	Minor
Troubleshoot file issues for public channels	Troubleshoot file issues for standard channels	Minor

Skills measured prior to January 20, 2023

- Troubleshoot Microsoft Teams voice issues (15–20%)
- Troubleshoot issues with Microsoft Teams meetings and live events (20–25%)
- Troubleshoot federation issues (10–15%)
- Troubleshoot issues signing into Microsoft Teams (15–20%)
- Troubleshoot teams and channels (10–15%)
- Troubleshoot issues with files (15–20%)

Troubleshoot Microsoft Teams voice issues (15–20%)

Troubleshoot audio and video flow issues

- Troubleshoot audio and video quality issues
- Troubleshoot call drops
- Investigate issues with call quality and dropped calls by using Call Quality Dashboard, network tracing tools, and logs

Troubleshoot emergency calling issues

- Troubleshoot dynamic emergency calling
- Identify issues with emergency phone number normalization rules
- Troubleshoot location detection failures
- Troubleshoot missing locations in outbound calls and missing addresses
- Troubleshoot dial mask issues

Troubleshoot direct routing issues

- Troubleshoot issues pairing the Session Border Controller (SBC) with the phone number service
- Troubleshoot dial plan issues, including normalization rules
- Identify the root cause of direct-dialing call issues by reviewing the SBC log
- Troubleshoot audio conferencing issues, including provisioning and configuration issues

Troubleshoot issues with Teams meetings and live events (20–25%)

Troubleshoot meetings and live events issues

- Troubleshoot meeting creation and scheduling issues
- Troubleshoot recording issues, including policies related to recording
- Investigate issues sharing content and viewing reports
- Troubleshoot reporting issues, including issues with attendance reports and moderated questions
- Troubleshoot attendee access and playback issues
- Troubleshoot and optimize networks for Teams live events
- Investigate issues connecting to the service and joining meetings

Troubleshoot Teams services

- Validate Microsoft Audio Conferencing licensing
- Troubleshoot dial pad issues
- Troubleshoot phone number provisioning issues
- Troubleshoot issues with the Outlook add-in for Teams
- Troubleshoot issues enabling and configuring audio and video devices for Teams
- Troubleshoot online and hybrid call queues and auto-attendant issues
- Troubleshoot user provisioning issues, including licensing users, phone number assignments, and policies
- Troubleshoot issues with phone system features
- Investigate phone system set up and configuration issues

Troubleshoot Teams client issues

- Troubleshoot Teams client start up issues and crashes on Windows, Mac, and Linux devices
- Troubleshoot Investigate causes for high memory or CPU usage
- Investigate network issues, including network latency
- Analyze web traffic and review HTTP status codes by using Fiddler and other tools
- Troubleshoot issues installing and updating client software
- Troubleshoot performance issues, including long times for uploading files and chats slow to load or send
- Troubleshoot call set up issues
- Troubleshoot issues adding participants to meetings

Troubleshoot messaging issues

- Troubleshoot message delivery issues
- Troubleshoot issues attaching files and content to messages
- Troubleshoot chat notification issues

Troubleshoot federation issues (10–15%)

Troubleshoot issues interoperating with Skype for Business

- Investigate chat issues when interoperating with Skype for Business
- Troubleshoot federation issues between Teams and Skype or Skype for Business
- Troubleshooting Interop chat scenarios

Troubleshoot Teams federation issues

- Troubleshoot federation policies and domain lists
- Verify tenant configuration settings including allowed and blocked domain lists and type of federation

Troubleshoot issues signing into Teams (15–20%)

Troubleshoot account and network issues

- Verify Active Directory Federation Services (AD FS) health including endpoint availability and synchronization status
- Troubleshoot issues with Azure Active Directory Seamless Single Sign-On (Azure AD Seamless SSO)
- Identify reasons for blocked accounts by reviewing web log data
- Verify user virtual private network (VPN) configuration settings including split tunneling and client version
- Validate network configuration settings including firewall ports, IP ranges, and proxy configuration issues

Troubleshoot member sign-in issues

- Investigate authentication issues
- Verify whether an applied conditional access policy prevents sign in
- Determine whether a user account or the device from which a user attempts to sign in is the cause of a sign in issue
- Troubleshoot client sign-in issues by collecting and analyzing Teams debug logs
- Troubleshoot Teams Rooms System (TRS) sign-in issues by analyzing log data from Teams Room devices
- Investigate points of failure in the sign-in process flow

Troubleshoot guest access issues

- Troubleshoot issues adding guest users to teams
- Troubleshoot call, message, and meeting issues for guest users by checking the guest meeting, guest messaging, and guest calling configuration policies
- Audit invitations sent but not used and inactive accounts
- Validate configuration settings for federated message flow
- Review Azure sign-in logs and audit logs for the domain which hosts Teams

Troubleshoot teams and channels (10–15%)

Troubleshoot issues with apps

- Configure Teams to allow or block an app
- Validate app permission policies
- Validate app setup policies

Troubleshoot issues with Teams channels

- Check user permissions, team policies, and tenant policies
- Verify and troubleshoot channel email settings
- Troubleshoot tenant replication issues in teams and channels
- Troubleshoot deletion issues in teams and channels

Troubleshoot issues with files (15–20%)

Troubleshoot person-to-person (P2P) private chat files issues, including access and sharing issues

- Verify access rights for the user
- Troubleshoot Teams client configuration policies
- Troubleshoot issues provisioning users

Troubleshoot file issues for private channels

- Verify that the SharePoint site for the channel is accessible
- Verify SharePoint access permissions
- Confirm that the SharePoint site collection link is intact

Troubleshoot file issues for public channels

- Verify SharePoint access permissions
- Determine whether the name for a channel or team have been changed
- Confirm that the SharePoint site collection link is intact
- Troubleshoot file synchronization issues and missing files