

Study Guide

Exam AZ-720: Troubleshooting Microsoft Azure Connectivity

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
How to earn the certification	Some certifications only require one exam, while others require more. On the details page, you'll find information about what skills are measured and links to registration. Each exam also has its own details page covering exam specifics.
Certification renewal	Once you earn your certification, don't let it expire. When you have an active certification that's expiring within six months, you should renew it—at no cost—by passing a renewal assessment on Microsoft Learn. Remember to renew your certification annually if you want to retain it.
Your Microsoft Learn profile	Connecting your certification profile to Learn brings all your learning activities together. You'll be able to schedule and renew exams, share and print certificates, badges and transcripts, and review your learning statistics inside your Learn profile.
Passing score	All technical exam scores are reported on a scale of 1 to 1,000. A passing score is 700 or greater. As this is a scaled score, it may not equal 70% of the points. A passing score is based on the knowledge and skills needed to demonstrate competence as well as the difficulty of the questions.
Exam sandbox	Are you new to Microsoft certification exams? You can explore the exam environment by visiting our exam sandbox. We created the sandbox as an opportunity for you to experience an exam before you take it. In the sandbox,

Useful links	Description
Request accommodations	you can interact with different question types, such as build list, case studies, and others that you might encounter in the user interface when you take an exam. Additionally, it includes the introductory screens, instructions, and help topics related to the different types of questions that your exam might include. It also includes the non-disclosure agreement that you must accept before you can launch the exam.
Take a practice test	We're committed to ensuring all learners are set up for success. If you use assistive devices, require extra time, or need modification to any part of the exam experience, you can request an accommodation. Taking a practice test is a great way to know whether you're ready to take the exam or if you need to study a bit more. Subject-matter experts write the Microsoft Official Practice Tests, which are designed to assess all exam objectives.

Objective domain: skills the exam measures

The English language version of this exam was updated on October 18, 2022.

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

- Troubleshoot business continuity issues (5–10%)
- Troubleshoot hybrid and cloud connectivity issues (20–25%)
- Troubleshoot Platform as a Service issues (5–10%)
- Troubleshoot authentication and access control issues (15–20%)
- Troubleshoot networks (25–30%)

- Troubleshoot VM connectivity issues (5–10%)

Functional groups

Troubleshoot business continuity issues (5–10%)

Troubleshoot backup issues

- Review and interpret backup logs
- Troubleshoot Azure virtual machines backup issues including restarting a failed backup job
- Troubleshoot issues with Azure Backup agent
- Troubleshoot Azure Backup Server issues
- Troubleshoot scheduled backups

Troubleshoot recovery issues

- Troubleshoot Azure Site Recovery issues
- Troubleshoot site recovery in hybrid scenarios that include Hyper-V, VMware ESX, or Microsoft Endpoint Manager
- Troubleshoot restore issues when using Azure Backup Agent, Azure Backup, or Azure Backup Server
- Troubleshoot issues recovering files from Azure VM backup

Troubleshoot hybrid and cloud connectivity issues (20–25%)

Troubleshoot virtual network (VNet) connectivity

- Troubleshoot virtual private network (VPN) gateway transit issues
- Troubleshoot hub-and-spoke VNet configuration issues
- Troubleshoot global VNet peering connectivity issues
- Troubleshoot peered connections

Troubleshoot name resolution issues

- Troubleshoot name resolution in scenarios that use Azure-provided name resolution
- Troubleshoot name resolution in scenarios that use custom DNS servers
- Review and interpret DNS audit logs
- Troubleshoot name resolution for Azure private DNS zones
- Troubleshoot issues with DNS records at public DNS providers
- Troubleshoot domain delegation issues

Troubleshoot point-to-site virtual private network (VPN) connectivity

- Troubleshoot Windows VPN client configuration issues
- Troubleshoot OpenVPN VPN client configuration issues
- Troubleshoot macOS VPN client configuration issues

- Troubleshoot issues with certificate-based VPN connections
- Troubleshoot issues with RADIUS-based VPN connections
- Troubleshoot authentication issues in scenarios by using Microsoft Azure Active Directory (Azure AD), part of Microsoft Entra

Troubleshoot site-to-site virtual private network connectivity

- Review and interpret network logs and captured network traffic from a VPN gateway
- Determine the root cause for latency issues within site-to-site VPNs
- Review and interpret VPN gateway configuration scripts
- Reset a VPN gateway
- Troubleshoot VPN gateway issues by running Log Analytics queries

Troubleshoot Azure ExpressRoute connectivity issues

- Determine whether routes are correctly configured and operational
- Validate the peering configuration for an ExpressRoute circuit
- Reset an ExpressRoute circuit
- Troubleshoot route filtering
- Troubleshoot custom defined routes
- Determine the root cause of latency issues related to ExpressRoute

Troubleshoot Platform as a Service issues (5–10%)

Troubleshoot PaaS services

- Troubleshoot PaaS connectivity issues
- Troubleshoot firewalls for PaaS services
- Troubleshoot PaaS configuration issues
- Determine the root cause for service-level throttling

Troubleshoot PaaS integration issues

- Troubleshoot issues integrating PaaS services with virtual networks
- Troubleshoot subnet delegation issues
- Troubleshoot issues with private endpoints and service endpoints
- Troubleshoot issues with Azure Private Link

Troubleshoot authentication and access control issues (15–20%)

Troubleshoot Azure AD authentication

- Determine why on-premises systems cannot access Azure resources
- Troubleshoot Azure AD configuration issues
- Troubleshoot self-service password reset issues
- Troubleshoot issues with multifactor authentication

Troubleshoot hybrid authentication

- Troubleshoot issues with Azure AD Connect and Azure AD Connect cloud sync
- Troubleshoot issues with integration between Azure AD and Azure Active Directory Domain Services (Azure AD DS)
- Troubleshoot issues with integration between Azure AD and Active Directory Federation Services (AD FS)
- Troubleshoot issues with pass-through authentication and password hash synchronization
- Troubleshoot issues with Azure AD Application Proxy

Troubleshoot authorization issues

- Troubleshoot role-based access control (RBAC) issues
- Troubleshoot issues storing encrypted passwords in Azure Key Vault
- Troubleshoot authorization issues related to Azure AD Conditional Access policies

Troubleshoot networks (25–30%)

Troubleshoot Azure network security issues

- Determine why Azure Web Application Firewall is blocking traffic
- Troubleshoot encryption and certificate issues for point-to-site and site-to-site scenarios
- Troubleshoot connectivity to secure endpoints

Troubleshoot Azure network security groups (NSGs)

- Troubleshoot NSG configuration issues
- Review and interpret NSG flow logs
- Determine whether one or more Azure network interfaces (NICs) are associated with an application security group (ASG)

Troubleshoot Azure Firewall issues

- Troubleshoot application, network, and infrastructure rules
- Troubleshoot network address translation (NAT) and destination network address translation (DNAT) rules
- Troubleshoot Azure Firewall Manager configuration issues

Troubleshoot latency issues

- Determine the root cause for Azure VM-level throttling
- Determine the root cause for latency issues when connecting to Azure VMs
- Determine the root cause for throttling between source and destination resources
- Troubleshoot bandwidth availability issues
- Determine whether resource response times meet service-level agreements (SLAs)

Troubleshoot routing and traffic control

- Review and interpret route tables
- Troubleshoot issues caused by asymmetric routing
- Troubleshoot issues with user-defined routes
- Troubleshoot issues related to forced tunneling
- Troubleshoot Border Gateway Protocol (BGP) issues
- Troubleshoot service chaining
- Troubleshoot routing configuration issues in Azure

Troubleshoot load-balancing issues

- Determine whether VMs in a load-balanced backend pool are healthy
- Troubleshoot issues with Azure Load Balancer
- Review and interpret load balancer rules
- Troubleshoot traffic distribution issues
- Evaluate the configuration of Azure Traffic Manager
- Troubleshoot issues with Azure Traffic Manager profiles
- Troubleshoot port exhaustion issues
- Troubleshoot issues with Azure Front Door
- Troubleshoot issues with Azure Application Gateway

Troubleshoot VM connectivity issues (5–10%)

Troubleshoot Azure Bastion

- Troubleshoot issues deploying Azure Bastion
- Troubleshoot connectivity issues
- Troubleshoot authorization issues

Troubleshoot just-in-time (JIT) VM access

- Validate connectivity with an Azure VM
- Troubleshoot JIT VM configuration issues
- Troubleshoot JIT VM authorization 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](#)

Study resources	Links to learning and documentation
Find documentation	Azure documentation Azure Active Directory (AD) Azure Policy Storage Storage Explorer Blob Storage
Ask a question	Microsoft Q&A Microsoft Docs
Get community support	Azure Community Support
Follow Microsoft Learn	Microsoft Learn - Microsoft Tech Community
Find a video	Exam Readiness Zone Azure Fridays Browse other Microsoft Learn shows