

# Study guide for Exam AZ-104: Microsoft Azure Administrator

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### **Document purpose**

As an attendee of the Exam Prep session for **Exam AZ-104: Microsoft Azure Administrator**, you can use this guide as a summary of the topics covered and to explore important links and additional resources. The information and materials found here can help you focus your studies as you prepare for the exam.

# **About Exam AZ-104: Microsoft Azure Administrator**

Exam AZ-104 is required to earn the **Azure Administrator Associate certification**.

This exam measures your ability to implement, manage, and monitor an organization's Azure environment.

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As a candidate for this exam, you can demonstrate your knowledge of administering Azure, along with your strong understanding of core Azure services, Azure workloads, security, and governance. In addition, you should have experience using PowerShell, Azure CLI, Azure portal, and Azure Resource Manager templates (ARM templates).

### Skills measured

For the full list of the skills that the exam measures, along with the level of experience and expertise that you'll need as an exam candidate, check out the <a href="Exam AZ-104 skills outline">Exam AZ-104 skills outline</a>.

### **Certification journey**

For an overview of the journey to Microsoft Certification, including prerequisites (if any) and follow-up resources, explore <u>The journey to Microsoft Certified: Azure</u> Administrator.

### **Exam overview**

For information on the exam, including the types of questions you may encounter, read <u>About Microsoft Certification exams</u>.

### **Objective domains**

This section itemizes the topics covered in the Exam Prep session and links to Microsoft documentation so you can review the topics in detail.

- Manage Azure identities and governance (15–20%)
- Implement and manage storage (10–15%)
- Deploy and manage Azure compute resources (25–30%)
- Configure and manage virtual networking (30–35%)
- Monitor and back up Azure resources (10–15%)

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### Manage Azure identities and governance (15–20%)

### Manage Azure Active Directory (Azure AD)

- Azure AD
- Azure AD—not "Active Directory in the cloud"
- Compare Active Directory to Azure AD
- Azure AD objects
- <u>User management</u>
- Securing accounts with Azure authentication
- <u>Setting up self-service password</u> resets
- Configure Azure AD join
- Configure Azure AD join—demo

### Manage subscriptions and governance

- Azure governance
- Manage subscriptions
- Azure Enterprise portal
- Configure management groups
- Resource groups
- Resource locks
- Configure Azure policies
- Resource tags

### Manage role-based access control (RBAC)

- RBAC
- RBAC scope
- Built-in Azure RBAC roles
- Azure AD roles
- Access control (identity and access management [IAM])—
   add/remove role assignments
- Activity logs

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### Implement and manage storage (10–15%)

#### Manage storage accounts

- Azure Storage overview
- Azure Storage services
- Replication strategies
- Accessing storage
- <u>Storage security—authorization</u>
   <u>options</u>
- Azure Key Vault: Customermanaged keys

# Configure Azure files and Azure Blob storage

- Files versus blobs
- Managing file shares
- Azure File Sync
- Azure File Sync components
- Azure File Sync—demo

#### Manage data in Azure Storage

- Azure Import/Export service
- Azure Storage Explorer
- AzCopy

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### Deploy and manage Azure compute resources (25–30%)

# Configure virtual machines (VMs) for high availability and scalability

- Configure VMs for high availability
- Fault domains and update domains
- Regions and Availability Zones
- Configure scale sets

# Automate deployment and configuration of VMs

- Overview of Azure Resource
   Manager/JSON
- Deploy resources to Azure
- Resource providers
- Azure Resource Manager templates
- <u>Use VM images in the Azure</u>
   Marketplace
- <u>Using Custom Script Extensions</u>

### Create and configure VMs

- Managing VM sizes
- Application workload connectivity options
- Moving VMs to another resource group
- Move VMs between different subscriptions—demo
- Azure Disk Encryption

### Create and configure containers

- Containers
- Azure Container Instances
- YAML files
- Docker
- <u>Create an Azure Container</u> <u>Instance</u>
- Azure Kubernetes Service (AKS)
- Set up a basic AKS cluster—demo

### Create and configure web apps

- Azure App Service
- Azure App Service plans

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### Configure and manage virtual networking (30–35%)

### Implement and manage virtual networking

- Overview of Azure networking
- Understanding network resources
- Architecture of Azure Virtual Network (VNet)
- Configuring VNet peering

#### Secure access to virtual networks

- Overview of network security groups (NSGs)
- Creating NSG rules
- How traffic is evaluated
- Application security group
- Set up NSG rules and apply to subnet—demo
- Overview of Azure Firewall
- Creating Azure Firewalls
- Azure Bastion service

# Monitor and troubleshoot virtual networking

Overview of Network Watcher

### Configure name resolution

- Overview of Azure DNS
- Create a private DNS zone and record using Azure portal
- Create a public DNS zone
- DNS record sets
- DNS delegation
- Configure Azure DNS—demo

#### Configure load balancing

- Overview of load balancers
- Key terms
- Overview of Application Gateway

### Integrate an on-premises network with an Azure virtual network

- Configure Azure VPN Gateway
- Compare intersite connection options
- Overview of Azure Virtual WAN

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### Monitor and back up Azure resources (10–15%)

### Monitor resources by using Azure Monitor

- Monitoring options
- Overview of Azure Monitor
- Azure Monitor log queries
- <u>Dashboards with multiple</u> <u>subscriptions</u>

#### Implement backup and recovery

- Overview of Azure Backup
- Compare Azure Backup and Azure Site Recovery
- Azure backup policies
- Overview of the MARS Agent
- Create a backup policy for an Azure VM—demo
- Backup reporting—demo

### **Additional study resources**

In addition to the documentation listed in the previous sections, we offer several resources to help you prepare for the exam and to stay up to speed and engaged with the Azure community. These resources range from formal training to blogs and even interviews with Microsoft team members.

Course AZ-104T00-A:  Microsoft Azure  Administrator	Take a four-day instructor-led course that covers how to administer Azure and that combines lectures with practical, hands-on exercises.
Course AZ-010T00-A: Azure Administration for AWS SysOps	Check out this two-day instructor-led course that explores how Azure differs from AWS and how Azure is administered. The course includes lectures, along with practical, hands-on exercises.
AZ-104 online learning paths	Don't miss these free, self-paced online resources to help you gain the skills needed to earn your certification.
AZ-104: Microsoft Azure Administrator - Microsoft Official Practice Test	Microsoft Official Practice Tests are self-study tools that prepare candidates for the Microsoft required exams. These practice tests are written by subject matter experts and are designed to ensure that all crucial exam objectives are covered in-depth.
Azure documentation	Stay informed on the latest products, tools, and features, and get information on pricing, partners, support, solutions, and more.

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Azure Community Support	Ask questions, get answers, and connect with Microsoft engineers and Azure community experts.
Microsoft Learn Community Blog	Get the latest information about certification tests and exam study groups.
<u>Channel 9</u>	Explore this community site for customers, which includes video channels, discussions, podcasts, screencasts, and interviews.
Azure Tuesdays with Corey	Corey Sanders answers your questions about Microsoft Azure.
Azure Fridays	Scott Hanselman, Partner Program Manager, speaks with Azure engineers as they demo capabilities and share insights.
Microsoft Azure Blog	Keep current on what's happening in Azure, including what's in preview and what's generally available, along with Azure news and updates, and much more.

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