Exam AZ-104: Microsoft Azure Administrator – Skills Measured

This exam was updated on March 26, 2021. Following the current exam guide, we've included a table that compares the old study guide to the current one by functional group.

Audience Profile

Candidates for this exam should have subject matter expertise implementing, managing, and monitoring an organization's Microsoft Azure environment.

Responsibilities for this role include implementing, managing, and monitoring identity, governance, storage, compute, and virtual networks in a cloud environment, plus provision, size, monitor, and adjust resources, when needed.

An Azure administrator often serves as part of a larger team dedicated to implementing an organization's cloud infrastructure.

A candidate for this exam should have at least six months of hands-on experience administering Azure, along with a strong understanding of core Azure services, Azure workloads, security, and governance. In addition, this role should have experience using PowerShell, Azure CLI, Azure portal, and Azure Resource Manager templates.

Skills Measured

NOTE: The bullets that follow each of the skills measured are intended to illustrate how we assess that skill. This list is not definitive or exhaustive.

NOTE: Most questions cover features that are General Availability (GA). The exam may contain questions on Preview features if those features are commonly used.

Manage Azure identities and governance (15–20%)

Manage Azure Active Directory (Azure AD) objects

- create users and groups
- manage user and group properties
- manage device settings
- perform bulk user updates
- manage guest accounts
- configure Azure AD join
- configure self-service password reset

Manage role-based access control (RBAC)

- create a custom role
- provide access to Azure resources by assigning roles at different scopes
- interpret access assignments

Manage subscriptions and governance

- configure Azure policies
- configure resource locks
- apply and manage tags on resources
- manage resource groups
- manage subscriptions
- manage costs
- configure management groups

Implement and manage storage (15–20%)

Secure storage

- configure network access to storage accounts
- create and configure storage accounts
- generate shared access signature (SAS) tokens
- manage access keys
- configure Azure AD authentication for a storage account
- configure access to Azure Files

Manage storage

- export from Azure job
- import into Azure job
- install and use Azure Storage Explorer
- copy data by using AZCopy
- implement Azure Storage replication
- configure blob object replication

Configure Azure files and Azure Blob Storage

- create an Azure file share
- create and configure Azure File Sync service
- configure Azure Blob Storage
- configure storage tiers for Azure Blob Storage
- configure blob lifecycle management

Deploy and manage Azure compute resources (20–25%)

Automate deployment of virtual machines (VMs) by using Azure Resource Manager templates

- modify an Azure Resource Manager template
- configure a virtual hard disk (VHD) template
- deploy from a template
- save a deployment as an Azure Resource Manager template
- deploy virtual machine extensions

Configure VMs

- configure Azure Disk Encryption
- move VMs from one resource group to another
- manage VM sizes
- add data disks
- configure networking
- redeploy VMs
- configure high availability
- deploy and configure scale sets

Create and configure containers

- configure sizing and scaling for Azure Container Instances
- configure container groups for Azure Container Instances
- configure storage for Azure Kubernetes Service (AKS)
- configure scaling for AKS
- configure network connections for AKS
- upgrade an AKS cluster

Create and configure Azure App Service

- create an App Service plan
- configure scaling settings in an App Service plan
- create an App Service
- secure an App Service
- configure custom domain names
- configure backup for an App Service
- configure networking settings
- configure deployment settings

Configure and manage virtual networking (25–30%)

Implement and manage virtual networking

- create and configure virtual networks, including peering
- configure private and public IP addresses
- configure user-defined network routes
- implement subnets
- configure endpoints on subnets
- configure private endpoints
- configure Azure DNS, including custom DNS settings and private or public DNS zones

Secure access to virtual networks

- create security rules
- associate a network security group (NSG) to a subnet or network interface
- evaluate effective security rules
- implement Azure Firewall
- implement Azure Bastion

Configure load balancing

- configure Azure Application Gateway
- configure an internal or public load balancer
- troubleshoot load balancing

Monitor and troubleshoot virtual networking

- monitor on-premises connectivity
- configure and use Network Performance Monitor
- use Azure Network Watcher
- troubleshoot external networking
- troubleshoot virtual network connectivity

Integrate an on-premises network with an Azure virtual network

- create and configure Azure VPN Gateway
- create and configure Azure ExpressRoute
- configure Azure Virtual WAN

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

Monitor resources by using Azure Monitor

- configure and interpret metrics
- configure Azure Monitor logs
- query and analyze logs
- set up alerts and actions

- configure Application Insights

Implement backup and recovery

- create a Recovery Services vault
- create and configure backup policy
- perform backup and restore operations by using Azure Backup
- perform site-to-site recovery by using Azure Site Recovery
- configure and review backup reports

Comparison Table

Former study guide up to March 26, 2021	New study guide as of March 26, 2021
Manage Azure identities and governance (15–20%) **Manage Azure AD objects** • create users and groups • manage user and group properties • manage device settings • perform bulk user updates • manage guest accounts • configure Azure AD Join • configure self-service password reset **Manage role-based access control (RBAC)** • create a custom role • provide access to Azure resources by assigning roles • interpret access assignments • manage multiple directories **Manage subscriptions and governance** • configure Azure policies • configure resource locks • apply tags • create and manage resource groups • manage subscriptions • configure Cost Management	**Manage Azure identities and governance (15–20%)** **Manage Azure Active Directory (Azure AD) objects** • create users and groups • manage user and group properties • manage device settings • perform bulk user updates • manage guest accounts • configure Azure AD join • configure self-service password reset **Manage role-based access control (RBAC)** • create a custom role • provide access to Azure resources by assigning roles at different scopes • interpret access assignments **Manage subscriptions and governance** • configure Azure policies • configure resource locks • apply and manage tags on resources • manage resource groups • manage subscriptions • manage costs

• configure management groups	• configure management groups
Implement and manage storage (10–15%) **Manage storage accounts** • configure network access to storage accounts • create and configure storage accounts • generate shared access signature • manage access keys • implement Azure storage replication • configure Azure AD Authentication for a storage account **Manage data in Azure Storage** • export from Azure job • import into Azure job • install and use Azure Storage Explorer • copy data by using AZCopy **Configure Azure files and Azure blob storage** • create an Azure file share • create and configure Azure File Sync service • configure Azure blob storage • configure storage tiers for Azure blobs • configure blob lifecycle management • configure blob object replication	**Implement and manage storage (15–20%)** **Secure storage** • configure network access to storage accounts • create and configure storage accounts • generate shared access signature (SAS) tokens • manage access keys • configure Azure AD authentication for a storage account • configure access to Azure Files **Manage storage** • export from Azure job • import into Azure job • install and use Azure Storage Explorer • copy data by using AZCopy • implement Azure Storage replication • configure blob object replication **Configure Azure files and Azure Blob Storage** • create an Azure file share • create and configure Azure File Sync service • configure Azure Blob Storage • configure storage tiers for Azure Blob Storage • configure blob lifecycle management
Deploy and manage Azure compute resources (25–30%) **Configure VMs for high availability and scalability**	**Deploy and manage Azure compute resources (20–25%)** **Automate deployment of virtual machines (VMs) by using Azure Resource Manager**

- configure high availability
- deploy and configure scale sets

Automate deployment and configuration of VMs

- modify Azure Resource Manager (ARM) template
- configure VHD template
- deploy from template
- save a deployment as an ARM template
- automate configuration management by using custom script extensions

Create and configure VMs

- configure Azure Disk Encryption
- move VMs from one resource group to another
- manage VM sizes
- add data discs
- configure networking
- redeploy VMs

Create and configure containers

- create and configure Azure Kubernetes Service (AKS)
- create and configure Azure Container Instances (ACI)

Create and configure Web Apps

- create and configure App Service
- create and configure App Service Plans

templates

- modify an Azure Resource Manager template
- configure a virtual hard disk template
- deploy from a template
- save a deployment as an Azure Resource Manager template
- deploy virtual machine extensions

Configure VMs

- configure Azure Disk Encryption
- move VMs from one resource group to another
- manage VM sizes
- add data disks
- configure networking
- redeploy VMs
- configure high availability
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Create and configure containers

- configure sizing and scaling for Azure Container Instances
- configure container groups for Azure Container Instances
- configure storage for Azure Kubernetes Service (AKS)
- configure scaling for AKS
- configure network connections for AKS
- upgrade an AKS cluster

Create and configure Azure App Service

- create an App Service plan
- configure scaling settings in an App Service plan
- create an App Service
- secure an App Service
- configure custom domain names
- configure backup for an App Service

	• configure networking settings • configure deployment settings
Configure and manage virtual networking (30–35%) **Implement and manage virtual networking** • create and configure VNET peering • configure private and public IP addresses, network routes, network interface, subnets, and virtual network **Configure name resolution** • configure Azure DNS • configure custom DNS settings • configure a private or public DNS zone **Secure access to virtual networks** • create security rules • associate an NSG to a subnet or network interface • evaluate effective security rules • deploy and configure Azure Firewall • deploy and configure Azure Bastion Service **Configure load balancing** • configure Application Gateway • configure an internal load balancer • configure load balancing rules • configure a public load balancer • troubleshoot load balancing **Monitor and troubleshoot virtual networking** • monitor on-premises connectivity	**Configure and manage virtual networking (25–30%)** **Implement and manage virtual networking** • create and configure virtual networks, including peering • configure private and public IP addresses • configure user-defined network routes • implement subnets • configure endpoints on subnets • configure private endpoints • configure Azure DNS, including custom DNS settings and private or public DNS zones **Secure access to virtual networks** • create security rules • associate a network security group (NSG) to a subnet or network interface • evaluate effective security rules • implement Azure Firewall • implement Azure Bastion Service **Configure load balancing** • configure Azure Application Gateway • configure an internal or public load balancer • troubleshoot load balancing **Monitor and troubleshoot virtual networking** • monitor on-premises connectivity • configure and use Network Performance Monitor • use Azure Network Watcher • troubleshoot external networking • troubleshoot virtual network connectivity

• use Network Performance Monitor • use Network Watcher • troubleshoot external networking • troubleshoot virtual network connectivity **Integrate an on-premises network with an Azure virtual network** • create and configure Azure VPN Gateway • create and configure VPNs • configure ExpressRoute • configure Azure Virtual WAN	**Integrate an on-premises network with an Azure virtual network** • create and configure Azure VPN Gateway • create and configure Azure ExpressRoute • configure Azure Virtual WAN
Monitor and back up Azure resources (10–15%) **Monitor resources by using Azure Monitor** • configure and interpret metrics • configure Log Analytics • query and analyze logs • set up alerts and actions • configure Application Insights **Implement backup and recovery** • configure and review backup reports • perform backup and restore operations by using Azure Backup • create a Recovery Services Vault • create and configure backup policy • perform site-to-site recovery by using Azure Site Recovery	**Monitor and back up Azure resources (10–15%)** **Monitor resources by using Azure Monitor** • configure and interpret metrics • configure Azure Monitor logs • query and analyze logs • set up alerts and actions • configure Application Insights **Implement backup and recovery** • create a Recovery Services vault • create and configure backup policy • perform backup and restore operations by using Azure Backup • perform site-to-site recovery by using Azure Site Recovery • configure and review backup reports