Study links and documents

Now for the major pieces of reading material. Microsoft documentation to cover the key topics. Consider all the links below essential reading for the exam unless they are marked as optional. Even if they are marked as optional, consider reading them to further clarify the subject matter and help you continue your learning path beyond the architect certification.

MANAGE AZURE IDENTITIES AND GOVERNANCE

[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

- [Creating a new user in Azure AD](#)
- [Add or delete users using Azure Active Directory](#)
- [Create a basic group and add members using Azure Active Directory](#)
- [New-AzureADUser](#)
- [Add or update a user's profile information using Azure Active Directory](#)
- [Edit your group information using Azure Active Directory](#)
- [Manage device identities using the Azure portal](#)
- [How To: Manage stale devices in Azure AD](#)
- [Bulk import group members (preview) in Azure Active Directory](#)
- [What is guest user access in Azure Active Directory B2B?](#)
- [Manage guest access with Azure AD access reviews](#)
- [Quickstart: Add guest users to your directory in the Azure portal](#)
- [How to: Plan your Azure AD join implementation](#)
- [Licensing requirements for Azure AD self-service password reset](#)
- [Tutorial: Configure hybrid Azure Active Directory join for managed domains](#)
- [Plan an Azure Active Directory 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

- [Tutorial: Create a custom role for Azure resources using Azure CLI](#)
- [Tutorial: Create a custom role for Azure resources using Azure PowerShell](#)
- [Add or remove role assignments using Azure RBAC and the Azure portal](#)
- [List role assignments using Azure RBAC and the Azure portal](#)
- [Understand deny assignments for Azure resources](#)
- [Understand how multiple Azure Active Directory tenants interact](#)

Manage subscriptions and governance

Configure Azure policies • configure resource locks • apply tags • create and manage resource groups • manage subscriptions • configure Cost Management • configure management groups

- [Overview of Management services in Azure](#)
- [What is Azure Policy?](#)
- [Tutorial: Create and manage policies to enforce compliance](#)
- [Quickstart: Create a policy assignment to identify non-compliant resources](#)
- [Lock resources to prevent unexpected changes](#)
- [Use tags to organize your Azure resources](#)
- [Manage Azure resource groups by using Azure PowerShell](#)
- [Manage Azure Resource Manager resource groups by using the Azure portal](#)
- [Create an additional Azure subscription](#)
- [Change your Azure subscription to a different offer](#)
- [What is Azure Cost Management and Billing?](#)
- [Quickstart: Explore and analyze costs with cost analysis](#)
- [Move resources to a new resource group or subscription](#)
- [Create management groups for resource organization and management](#)
- [Manage your resources with management groups](#)

IMPLEMENT AND MANAGE STORAGE

[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

- [Intro to Azure Storage](#)
- [Configure Azure Storage firewalls and virtual networks](#)
- [Storage account overview](#)
- [Create an Azure Storage account](#)
- [Upgrade to a general-purpose v2 storage account](#)
- [Delegate access with a shared access signature](#)
- [Grant limited access to Azure Storage resources using shared access signatures (SAS)](#)
- [Manage storage account access keys](#)
- [Azure Storage redundancy](#)

Manage data in Azure Storage

Export from Azure job • import into Azure job • install and use Azure Storage Explorer • copy data by using AZCopy

- [Use the Azure Import/Export service to *export* data from Azure Blob storage](#)
- [Use the Azure Import/Export service to *import* data to Azure Blob Storage](#)
- [Get started with Storage Explorer](#)
- [Get started with AzCopy](#)

Configure Azure Files and Azure Blog Storage

Create an Azure file share • create and configure Azure File Sync service • configure Azure blob storage • configure storage tiers for Azure blobs

- [What is Azure Files?](#)
- [Quickstart: Create and manage Azure file shares with the Azure portal](#)
- [Create an Azure file share](#)
- [Planning for an Azure File Sync deployment](#)
- [Deploy Azure File Sync](#)
- [Tutorial: Extend Windows file servers with Azure File Sync](#)
- [Quickstart: Upload, download, and list blobs with the Azure portal](#)
- [Azure Blob storage: hot, cool, and archive access tiers](#)

DEPLOY AND MANAGE AZURE COMPUTE RESOURCES

[Deploy and Manage Azure Compute Resources (25-30%)](#)

Configure VMs for high availability and scalability

Configure high availability • deploy and configure scale sets

- [Availability options for virtual machines in Azure](#)
- [Manage the availability of Windows virtual machines in Azure](#)
- [Tutorial: Create and deploy highly available virtual machines with Azure PowerShell](#)
- [What are virtual machine 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

- [Extend Azure Resource Manager template functionality](#)
- [Azure Resource Manager templates overview](#)
- [Tutorial: Create and deploy your first Azure Resource Manager template](#)
- [Update a resource in an Azure Resource Manager template](#)
- [Create a Windows virtual machine from a Resource Manager template](#)
- [Create a VM from a VHD by using the Azure portal](#)
- [Quickstart: Create and deploy Azure Resource Manager templates by using the Azure portal](#)
- [Download the template for a VM](#)
- [Custom Script Extension for Windows](#)
- [Use the Azure Custom Script Extension Version 2 with Linux virtual machines](#)

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

- [Azure Disk Encryption for Linux VMs](#)
- [Azure Disk Encryption for Windows VMs](#)

- [Quickstart: Create and encrypt a Windows virtual machine with the Azure portal](#)
- [Move a Windows VM to another Azure subscription or resource group](#)
- [Sizes for Windows virtual machines in Azure](#)
- [Resize a Windows VM](#)
- [Attach a managed data disk to a Windows VM by using the Azure portal](#)
- [Attach a data disk to a Windows VM with PowerShell](#)
- [Common PowerShell commands for Azure Virtual Networks](#)
- [How to open ports to a virtual machine with the Azure portal](#)
- [Create and manage a Windows virtual machine that has multiple NICs](#)

Create and configure containers

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

- [Azure Kubernetes Service (AKS)](#)
- [Quickstart: Deploy an Azure Kubernetes Service (AKS) cluster using the Azure portal](#)
- [What is Azure Container Instances?](#)
- [Quickstart: Deploy a container instance in Azure using the Azure CLI](#)
- [Quickstart: Deploy a container instance in Azure using the Azure portal](#)

Create and configure Web Apps

Create and configure App Service • create and configure App Service Plans

- [App Service overview](#)
- [Create an ASP.NET Core web app in Azure](#)
- [Azure App Service plan overview](#)
- [Manage an App Service plan in Azure](#)

CONFIGURE AND MANAGE VIRTUAL NETWORKING

[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

- [Virtual network peering](#)

- [Create, change, or delete virtual network peering](#)
- [Tutorial: Connect virtual networks with virtual network peering using the Azure portal](#)
- [Configure private IP addresses for a virtual machine using the Azure portal](#)
- [Quickstart: Create a virtual network using the Azure portal](#)
- [Create, change, or delete a network interface](#)
- [Add, change, or delete a virtual network subnet](#)
- [Create, change, or delete a virtual network](#)

Configure name resolution

Configure Azure DNS • configure custom DNS settings • configure a private or public DNS zone

- [Create, change, or delete a virtual network peering](#)
- [Name resolution for resources in Azure virtual networks](#)
- [Use Azure DNS to provide custom domain settings for an Azure service](#)
- [How to manage DNS Zones in the Azure portal](#)
- [Quickstart: Configure Azure DNS for name resolution using the Azure Portal](#)
- [Tutorial: Host your domain in Azure DNS](#)
- [Quickstart: Create an Azure private DNS zone using the Azure portal](#)

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

- [Work with security roles](#)
- [Create, change, or delete a network security group](#)
- [Tutorial: Deploy and configure Azure Firewall using the Azure portal](#)
- [Create an Azure Bastion host](#)

Configure load balancing

Configure Application Gateway • configure an internal load balancer • configure load balancing rules • configure a public load balancer • troubleshoot load balancing

- [Application Gateway configuration overview](#)

- [Quickstart: Direct web traffic with Azure Application Gateway using Azure PowerShell](#)
- [Tutorial: Balance internal traffic load with a Basic load balancer in the Azure portal](#)
- [Create an internal load balancer by using the Azure PowerShell module](#)
- [Quickstart: Create a Load Balancer to load balance VMs using the Azure portal](#)
- [Troubleshoot Azure Load Balancer](#)

Monitor and troubleshoot virtual networking

Monitor on-premises connectivity • use Network Performance Monitor • use Network Watcher • troubleshoot external networking • troubleshoot virtual network connectivity

- [Step-By-Step: Monitoring On-Premise Active Directory via Azure AD Connect Health](#)
- [Diagnose on-premises connectivity via VPN gateways](#)
- [Network Performance Monitor solution: Performance monitoring](#)
- [What is Azure Network Watcher?](#)
- [Create an Azure Network Watcher instance](#)
- [Troubleshoot Virtual Network Gateway and Connections using Azure Network Watcher Azure CLI](#)
- [Troubleshoot connections with Azure Network Watcher using the Azure portal](#)

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

- [Tutorial: Create and manage a VPN gateway using PowerShell](#)
- [Create a route-based VPN gateway using the Azure portal](#)
- [Create a Site-to-Site connection in the Azure portal](#)
- [ExpressRoute overview](#)
- [Tutorial: Create and modify an ExpressRoute circuit](#)
- [About Azure Virtual WAN](#)
- [Tutorial: Create a Site-to-Site connection using Azure Virtual WAN](#)
- [Connect a VPN Gateway (virtual network gateway) to Virtual WAN](#)

MONITOR AND BACK UP AZURE RESOURCES

Monitor resources by using Azure Monitor

Configure and interpret metrics • configure Log Analytics o implement a Log Analytics workspace • query and analyze logs • set up alerts and actions • configure Application Insights

- Metrics in Azure Monitor
- Advanced features of Azure Metrics Explorer
- Quickstart: Monitor an Azure resource with Azure Monitor
- Get started with Log Analytics in Azure Monitor
- Get started with log queries in Azure Monitor
- Overview of log queries in Azure Monitor
- Create, view, and manage metric alerts using Azure Monitor
- Metric Alerts with Dynamic Thresholds in Azure Monitor
- Create Metric Alerts for Logs in Azure Monitor
- Manage Application Insights resources using PowerShell

Implement backup and recovery

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

- Configure Azure Backup reports
- Back up a virtual machine in Azure
- How to restore Azure VM data in Azure portal
- Restore a disk and create a recovered VM in Azure
- Create a Recovery Services vault
- Manage Azure VM backups with Azure Backup service
- About Site Recovery
- Set up disaster recovery of on-premises VMware virtual machines or physical servers to a secondary site