Exam AZ-300: Microsoft Azure Architect Technologies – Skills Measured

The content of this exam was updated on December 4, 2019. Please continue scrolling to the red line section below to view the changes.

Deploy and configure infrastructure (40-45%)

Analyze resource utilization and consumption

- configure diagnostic settings on resources
- create baseline for resources
- create and test alerts
- analyze alerts across subscription
- analyze metrics across subscription
- create action groups
- monitor for unused resources
- monitor spend
- report on spend
- utilize Log Search query functions
- view alerts in Azure Monitor logs
- visualize diagnostics data using Azure Monitor Workbooks

Create and configure storage accounts

- configure network access to the storage account
- create and configure storage account
- generate shared access signature
- implement Azure AD authentication for storage
- install and use Azure Storage Explorer
- manage access keys
- monitor activity log by using Azure Monitor logs
- implement Azure storage replication
- implement Azure storage account failover

Create and configure a VM for Windows and Linux

- configure high availability
- configure monitoring
- configure networking
- configure storage
- configure virtual machine size

- implement dedicated hosts
- deploy and configure scale sets

Automate deployment of VMs

- modify Azure Resource Manager template
- configure location of new VMs
- configure VHD template
- deploy from template
- save a deployment as an Azure Resource Manager template
- deploy Windows and Linux VMs

Create connectivity between virtual networks

- create and configure Vnet peering
- create and configure Vnet to Vnet connections
- verify virtual network connectivity
- create virtual network gateway

Implement and manage virtual networking

- configure private IP addressing
- configure public IP addresses
- create and configure network routes
- create and configure network interface
- create and configure subnets
- create and configure virtual network
- create and configure Network Security Groups and Application Security Groups

Manage Azure Active Directory

- add custom domains
- configure Azure AD Identity Protection
- configure Azure AD Join
- configure self-service password reset
- implement conditional access policies
- manage multiple directories
- perform an access review

Implement and manage hybrid identities

- install and configure Azure AD Connect
- configure federation

- configure single sign-on
- manage and troubleshoot Azure AD Connect
- troubleshoot password sync and writeback

Implement solutions that use virtual machines (VM)

- provision VMs
- create Azure Resource Manager templates
- configure Azure Disk Encryption for VMs
- implement Azure Backup for VMs

Implement workloads and security (25-30%)

Migrate servers to Azure

- migrate servers using Azure Migrate
- backup and restore data

Configure serverless computing

- create and manage objects
- manage a Logic App resource
- manage Azure Function app settings
- manage Event Grid
- manage Service Bus

Implement application load balancing

- configure application gateway
- configure Azure Front Door service
- configure Azure Traffic Manager

Integrate on premises network with Azure virtual network

- create and configure Azure VPN Gateway
- create and configure site to site VPN
- configure Express-Route
- configure Virtual WAN
- verify on premises connectivity
- troubleshoot on premises connectivity with Azure

Implement multi factor authentication (MFA)

- configure user accounts for MFA

- configure fraud alerts
- configure bypass options
- configure trusted IPs
- configure verification methods

Manage role based access control (RBAC)

- create a custom role
- configure access to Azure resources by assigning roles
- configure management access to Azure
- troubleshoot RBAC
- implement Azure policies
- assign RBAC roles

Create and deploy apps (5-10%)

Create web apps by using PaaS

- create an Azure App Service Web App
- create documentation for the API
- create an App Service Web App for containers
- create an App Service background task by using WebJobs
- enable diagnostics logging

Design and develop apps that run in containers

- configure diagnostic settings on resources
- create a container image by using a Dockerfile
- create an Azure Kubernetes Service
- publish an image to the Azure Container Registry
- implement an application that runs on an Azure Container Instance
- manage container settings by using code

Implement authentication and secure data (5-10%)

Implement authentication

- implement authentication by using certificates, forms-based authentication, tokens, or Windows-integrated authentication
- implement multi-factor authentication by using Azure AD
- implement OAuth2 authentication
- implement Managed identities for Azure resources Service Principal authentication

Implement secure data solutions

- encrypt and decrypt data at rest and in transit
- encrypt data with Always Encrypted
- implement Azure Confidential Compute
- implement SSL/TLS communications
- create, read, update, and delete keys, secrets, and certificates by using the KeyVault API

Develop for the cloud and for Azure storage (15-20%)

Configure a message-based integration architecture

- configure an app or service to send emails
- configure Event Grid
- configure the Azure Relay service
- create and configure a Notification Hub
- create and configure an Event Hub
- create and configure a Service Bus
- configure queries across multiple products

Develop for autoscaling

- implement autoscaling rules and patterns (schedule, operational/system metrics
- implement code that addresses singleton application instances
- implement code that addresses transient state

Develop solutions that use Cosmos DB storage

- create, read, update, and delete data by using appropriate APIs
- implement partitioning schemes
- set the appropriate consistency level for operations

Develop solutions that use a relational database

- provision and configure relational databases
- configure elastic pools for Azure SQL Database
- implement Azure SQL Database managed instances
- create, read, update, and delete data tables by using code

See below changes as of December 4, 2019

Deploy and configure infrastructure (40-45%)

Analyze resource utilization and consumption

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- create baseline for resources
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- analyze alerts across subscription
- analyze metrics across subscription
- create action groups
- monitor for unused resources
- monitor spend
- report on spend
- utilize Log Search query functions
- view Alerts in ~~Log~~ Azure ~~Analytics~~ Monitor logs
- visualize diagnostics data using Azure Monitor Workbooks

~~stream logs to external SIEMs~~

Create and configure storage accounts

- configure network access to the storage account ~~(including Storage Firewall, Service Endpoints and Private Endpoints)~~
- create and configure storage account
- generate shared access signature
- implement Azure AD authentication for ~~Blob and Queue~~ storage

~~Enable Azure AD Domain Services authentication over SMB for Azure Files~~

- install and use Azure Storage Explorer
- manage access keys
- monitor activity log by using Azure Monitor ~~Log~~ logs ~~Analytics~~
- implement Azure storage replication
- implement Azure storage account failover

Create and configure a VM for Windows and Linux

- configure high availability

~~Configure VMs for lowest possible latency (Accelerated Networking, Proximity Placement groups, etc.)~~

- configure monitoring
- configure networking
- configure storage
- configure Virtual Machine Size
- ~~Use~~implement dedicated hosts

~~Take advantage of VM Reserved Instances~~

~~Configure Virtual Machine Size~~

- deploy and configure scale sets

Automate deployment of VMs

- modify Azure Resource Manager template
- configure location of new VMs
- configure VHD template
- deploy from template
- save a deployment as an Azure Resource Manager template
- deploy Windows and Linux VMs

~~Implement solutions that use virtual machines (VM)~~

~~Provision VMs~~

~~Create Azure Resource Manager templates~~

~~Configure Azure Disk Encryption for VMs~~

Create connectivity between virtual networks

- create and configure Vnet peering
- create and configure Vnet to Vnet ~~VPN~~ connections
- verify virtual network connectivity
- create virtual network gateway

Implement and manage virtual networking

- configure private IP addressing
- configure public IP addresses
- create and configure network routes
- create and configure network interface
- create and configure subnets
- create and configure virtual network
- create and configure Network Security Groups and Application Security Groups

~~Leverage NSG Service Tags.~~

- ~~Create and configure network interface~~
- ~~Create and configure subnets~~

- ~~Create and configure virtual network~~

Manage Azure Active Directory

- add custom domains
- configure Azure AD Identity Protection
- configure Azure AD Join

~~Configure Enterprise State Roaming~~

- configure self-service password reset
- implement conditional access policies
- manage multiple directories
- perform an access review

Implement and manage hybrid identities

- install and configure Azure AD Connect
- configure federation
- configure single sign-on
- manage and troubleshoot Azure AD Connect
- troubleshoot password sync and writeback

Implement solutions that use virtual machines (VM)

- provision VMs
- create Azure Resource Manager templates
- configure Azure Disk Encryption for VMs
- implement Azure Backup ~~Soft delete~~ for VMs

Implement workloads and security (25-30%)

Migrate servers to Azure

- ~~Assess VMWare, HyperV VMs and physical servers Migrate by using Azure Site Recovery Migrate(ASR)~~
- ~~Migrate using P2V~~
- Migrate ~~VMWare, HyperV VMs and physical~~ servers using Azure Migrate
- ~~*Configure Storage*~~
- ~~*Create a backup recovery services vault*~~
- ~~*Prepare source*~~
- *Backup and restore data*
- ~~*Deploy Azure Site Recovery (ASR) agent*~~

- ~~*Prepare virtual network*~~

Configure serverless computing

- create and manage objects
- manage a~~n~~ Logic App resource
- manage Azure Function app settings
- manage Event Grid
- manage Service Bus

Implement application load balancing

- ~~Choose load balancing technology~~
- Configure~~, implement and troubleshoot~~ application gateway
- ~~Configure application gateway load balancing rules~~
- ~~Implement application gateway front end IP configurations~~
- ~~Troubleshoot application gateway load balancing~~
- Configure ~~and implement~~ Azure Front Door service
- ~~Configure and implement~~Configure Azure Traffic Manager

Integrate on premises network with Azure virtual network

- create and configure Azure VPN Gateway
- create and configure site to site VPN
- configure Express-Route
- configure Virtual WAN
- verify on premises connectivity
- troubleshoot on premises connectivity with Azure

Implement multi factor authentication (MFA)

- ~~Enable MFA for an Azure tenant~~
- configure user accounts for MFA
- configure fraud alerts
- configure bypass options
- configure trusted IPs
- configure verification methods

Manage role based access control (RBAC)

- create a custom role
- configure access to Azure resources by assigning roles
- configure management access to Azure

- troubleshoot RBAC
- implement ~~RBAC~~ Azure ~~policies~~Policyies
- assign RBAC roles

Create and deploy apps (5-10%)

Create web app~~lication~~s by using PaaS

- create an Azure app service ~~web~~ Web ~~app~~ App ~~by using Azure CLI, Powershell, and other tools~~
- create documentation for the API ~~by using open source and other tools~~
- create an App Service Web App for Containers
- create an App Service background task by using WebJobs
- enable diagnostics logging

Design and develop app~~lication~~s that run in containers

- configure diagnostic settings on resources
- create a container image by using a Dockerfile
- create an Azure ~~Container~~ Kubernetes Service ~~(ACS/AKS)~~ ~~cluster by using the Azure CLI~~
- ~~create an Azure Container Kubernetes Service (ACS/AKS) cluster by using the Azure Portal~~
- publish an image to the Azure Container Registry
- implement an application that runs on an Azure Container Instance
- ~~implement container instances by using Azure Container Service (ACS/AKS), Azure Service Fabric, and other tools~~
- manage container settings by using code

Implement authentication and secure data (5-10%)

Implement authentication

- implement authentication by using certificates, forms-based authentication, tokens, or Windows-integrated authentication
- implement multi-factor authentication by using Azure AD ~~options~~
- implement OAuth2 authentication
- implement Managed Identities for Azure resources Service Principal authentication

Implement secure data solutions

- encrypt and decrypt data at rest and in transit
- encrypt data with Always Encrypted
- implement Azure Confidential Compute

- implement SSL/TLS communications
- create, read, update, and delete keys, secrets, and certificates by using the KeyVault API
- ~~manage cryptographic keys in the Azure KeyVault~~

Develop for the cloud and for Azure Storage (15-20%)

Configure a message-based integration architecture

- configure an app or service to send emails
- configure Event Grid
- configure the Azure Relay sService
- create and configure a Notification Hub
- create and configure an Event Hub
- create and configure a Service Bus
- configure queries across multiple products
- ~~Configure an app or service with Microsoft Graph~~

Develop for autoscaling

- implement autoscaling rules and patterns (schedule, operational/system metrics
- implement code that addresses singleton application instances
- implement code that addresses transient state

Develop solutions that use Cosmos DB storage

- Create, read, update, and delete data by using appropriate APIs
- Implement partitioning schemes
- Set the appropriate consistency level for operations

Develop solutions that use a relational database

- Provision and configure relational databases
- Configure elastic pools for Azure SQL Database
- Implement Azure SQL Database managed instances
- ~~Implement Azure Database for MySQL and PostgreSQL deployment~~
- Create, read, update, and delete data tables by using code