70-532: Developing Microsoft Azure Solutions

The Microsoft Azure environment is constantly evolving. This document includes the most recent updates to Exam 70-532 that address both deprecated and new technologies and processes. These changes are effective as of March 10, 2016.

Objective Domain

Design and implement ~~Website~~ Web Apps (15-20%)

Deploy ~~website~~ Web Apps

- Define deployment slots; roll back deployments; implement pre and post deployment actions; create ~~hosting plans~~ App Service plans; migrate ~~websites~~ Web Apps between ~~hosting plans~~ App Service plans; create a ~~website~~ Web App within an ~~hosting plan~~ App Service plan

Configure ~~websites~~ Web Apps

- Define and use app settings, connection strings, handlers, and virtual directories; configure certificates and custom domains; configure SSL bindings and runtime configurations; manage ~~websites~~Web Apps by using the API, ~~Windows PowerShell~~ Azure PowerShell, and Xplat-CLI

Configure diagnostics, monitoring, and analytics

- Retrieve diagnostics data; view streaming logs; configure endpoint monitoring; configure alerts; configure diagnostics; use remote debugging; monitor ~~website~~ Web App resources

Implement web jobs

- Write web jobs using the SDK; package and deploy web jobs; schedule web jobs

Configure ~~websites~~ Web Apps for scale and resilience

- Configure auto-scale using built-in and custom schedules; configure by metric; change the size of an instance; configure Traffic Manager

Design and implement applications for scale and resilience

- Select a pattern; implement transient fault handling for services; respond to throttling; disable Application Request Routing (ARR) affinity

Create and Manage Virtual Machines (20-25%)

Deploy workloads on Azure Virtual Machines (VMs)

- Identify workloads that can and cannot be deployed; run workloads including Microsoft and Linux; create VMs

Create and manage a VM image or virtual hard disk

- Create specialized and reusable images; prepare images using SysPrep and Windows Agent (Linux); copy images between storage accounts and subscriptions; upload VMs

Perform configuration management

- Automate configuration management by using PowerShell Desired State Configuration and VM Agent (custom script extensions); configure VMs using a configuration management tool such as Puppet or Chef; enable remote debugging

Configure VM networking

- Configure reserved IP addresses, ~~access control list (ACL)~~ Network Security Groups (NSG), DNS at the ~~cloud service~~ virtual network level, load balancing endpoints, HTTP and TCP health probes, public IPs, firewall rules, direct server return, and keep-alive

Scale VMs

- Scale up and scale down VM sizes; configure auto-scale and availability sets

Design and implement VM storage

- Configure disk caching; plan for storage capacity; configure shared storage using Azure File service; configure geo-replication

Monitor VMs

- Configure endpoint monitoring; configure alerts; configure diagnostic and monitoring storage location

Design and Implement Cloud Services (20-25%)

Design and develop a cloud service

- Install SDKs; install emulators; develop a web role or worker role; design and implement resiliency including transient fault handling; develop startup tasks

Configure cloud services and roles

- Configure HTTPS endpoint and upload an SSL certificate, and instance count and size; configure network access rules, local storage, multiple ~~websites~~ Web Apps, custom domains, and dedicated and co-located caching; scale up and scale down role sizes; configure auto-scale

Deploy a cloud service

- Upgrade an automatic, manual, or simultaneous deployment; VIP swap a deployment; package a deployment; implement continuous deployment from

Visual Studio Online (VSO); implement runtime configuration changes using the portal; configure regions and affinity groups

Monitor and debug a cloud service

- Configure diagnostics using the SDK or configuration file; profile resource consumption; enable remote debugging; establish a connection using Remote Desktop cmdlets in ~~Windows PowerShell~~ Azure PowerShell; debug using IntelliTrace or the emulator

Design and Implement a Storage Strategy (20-25%)

Implement Azure Storage blobs and Azure Files

- Read data; change data; set metadata on a container; store data using block and page blobs; stream data using blobs; access blobs securely; implement async blob copy; configure Content Delivery Network (CDN); design blob hierarchies; configure custom domains; scale blob storage; implement Azure Premium storage

Implement Azure storage tables

- Implement CRUD with and without transactions; design and manage partitions; query using OData; scale tables and partitions

Implement Azure storage queues

- Add and process messages; retrieve a batch of messages; scale queues

Manage access

- Generate shared access signatures, including client renewal and data validation; create stored access policies; regenerate storage account keys; configure and use Cross-Origin Resource Sharing (CORS)

Monitor storage

- Set retention policies and logging levels; analyze logs

Implement SQL databases

- Choose the appropriate database tier and performance level; configure and perform point in time recovery; enable geo-replication; import and export data and schema; scale SQL databases

Manage application and network services (15-20%)

Integrate an app with Azure Active Directory

- Develop apps that use WS-federation, OAuth, and SAML-P endpoints; query the directory by using graph API

Configure a virtual network

- Deploy a VM into a virtual network; deploy a cloud service into a virtual network

Modify network configuration

- Modify a subnet; import and export network configuration

Design and implement a communication strategy

- Develop messaging solutions using service bus queues, topics, relays, and notification hubs; create service bus namespaces and choose a tier; scale service bus

Monitor communication

- Monitor service bus queues, topics, relays, and notification hubs

Implement caching

- Implement Redis caching; ~~implement~~ migrate solutions from Azure Cache Service to use Redis caching