Notes for AZ-103/104 Exam:

- Maximum size of block blob is 4.75TB, append blob – 195GB, page blob – 8TB.
- Query language used by Log Analytics is Kusto.
- Pricing tiers for CDN: Standard Microsoft, Standard Akamai, Standard Verizon, Premium Verizon.
- Time for CDN profile to be created: Akamai – 1 minutes, Microsoft – 10 minutes, Verizon – 90 Minutes.
- For removing item from CDN you can:
    1. Set the container to private.
    2. Delete the item from the container or even delete the container.
- Azure File Share uses SMB protocol (445).
- Azure File Share support up to 5TB ONLY!
- Azure Advisor creates recommendation across cost, H.A (high availability), security, and performance.
- Events in the Activity Logs are retained for 90 days.
- Resource groups cannot be renamed.
- A resource or resource group can have 50 tags.
- Recovery Services Vault is used to manage both backup and site recovery.
- VaultCredentials file valid for 48 hours.
- 3 types of backup agents: MARS agent, DPM agent, VMSnapshot extension.
- 3 backup options for Azure VM: Azure Backup, Azure Site Recovery, Managed Snapshots.
- Protected Instance – A VM, an application server/workload, or a personal computer that has been configured to backup to Azure.
- Azure Alerts can have 3 states: New, acknowledged, closed.
- Soft delete – enables you to save and recover your data when blobs or blob snapshots are deleted.
- Maximum retention for a soft delete for blob storage is 365 days.
- Premium Storage supports LRS replication only.
- Premium Storage only supports Azure VM disks.
- Role assignment consists scope, role definition, and security principal.
- Only 5 billing alerts can be created for a single subscription.
- 4 Azure subscriptions: Enterprise Agreements (EA), Microsoft resellers, Microsoft partners, personal free account.
- Log Analytics agents use port 443 to report telemetry.
- AzCopy supports all operating systems.
- Temporary disk drive letter in Windows OS is: D:/
- Temporary disk drive in Linux OS is: /dev/sdb1/
- A blob type cannot be changed after creation.
- Resource locks – Only Owner and User access administrator can create or delete manage locks.
- VMs and VM scale sets are limited to 2048 characters.
- Tag Names limit – 512 characters.
- Tag Values limit – 256 characters.
- For storage accounts, the tag Name is limited to 128 characters.
- Tags can't be applied to classic resources.
- Network Watcher –Next Hop options- : Virtual appliance (Firewall, VPN device…), Virtual Network, Virtual Network Gateway, Internet and None.

- Health probe is used to monitor the status of your app. It adds or removes VMs from the load balancer based on their response to health checks.
- Load balancer's health probes protocols: HTTP, TCP.
- Service endpoint – provide the ability to secure Azure service resources to your VNet by extending VNet identity to the service.
- Adding a service endpoint can take 15 minutes.
- IP Assignment: Azure provides – Dynamic Assignment, User provides – Static Assignment.
- NSGs can be associated with a NIC or Subnet.
- DSC (Desired State Configuration) – a management platform in PowerShell that enables deploying and managing configuration data for software services as well as managing the environment in which these services run.
- Three components that exist in a DSC script:
    1. The configuration block.
    2. One or more node blocks.
    3. One or more resource blocks.
- Azure Disk Encryption will encrypt both OS and Data disks for Azure Backup.
- SSE (Storage Service Encryption) – Encryption at rest by automatically encrypting data before storing it.
- Azure VM's image format is VHD.
- Azure VM's to be migrated to Azure need to be Generation 1.
- Disk encryptions options: Windows – BitLocker, Linux – DMCrypt.
- Snapshots Consistency :
    1. Application consistent – captures memory content and pending I/O operations.
    2. File-system consistent – provides consistency by taking a snapshot of all files at the same time.
    3. Crash consistent – typically occurs if an Azure VM shuts down at the time of backup. Only the data that already exist in the disk at the time of backup is captured.
- ARM Templates – JSON files.
- ARM Templates – required - $schema, contentVersion, resources.
- ARM Templates – optional – parameters, variables, functions, output.
- ARM Templates Modes:
    1. Complete mode – Resource Manages deletes resources that exist in the resource group, but are not specified in the template.
    2. Incremental mode – Resource Manager leaves unchanged resources that exist in the resource group but are not specified in the template.
- Only users who are assigned an Azure P1 AD license can be a member of dynamic group.
- TCO (Total Cost of Ownership) – estimates the cost savings realized by migrating application workloads to Azure.
- Azure AD Application Proxy – provides secure remote access to on-premises web applications.
- 2 ways to configure custom domain name for storage account :
    1. Direct CNAME mapping.
    2. Intermediary domain mapping with 'ASverify'.
- Maximum capacity of data disk is 4095GB.
- Account Administrators using a Microsoft account must login every 2 years to keep the account active.

- To be able to query data from Activity Logs for a period of longer than 90 days up to the required period of 5 years, it will be necessary to configure a log profile and write the data to a storage account.
- Conditional Access – if-then statements, if a user wants to access a resource, then they must complete an action.
- Cloud tiering – an optional feature of Azure File sync in which frequently accessed files are cached locally on the server while all other files are tiered to Azure Files based on policy. Cloud tiering is not supported for server endpoints on the Windows system volumes, and only files greater than 64KiB in size can be tiered to Azure Files.
- Cloud endpoint – an Azure File Share that is part of a Sync group. Azure File Share can be a member of only 1 cloud endpoint, so it can be also a member of 1 sync group.
- Server endpoint – represents a specific location/path on a registered server.
- Service chaining – enables you to direct traffic from 1 VNet to a Virtual appliance or gateway in a peered network through UDR (User Defined Routes).
- Azure AD Connect – Staging Mode – You can make changes to the configuration and preview the changes before you make the server active.
- IdFix – used to fix errors with characters in UPNs that might affect Azure or Office 365.
- NtdsUtil – a maintenance utility that can move, defragment or repair issues with the Active Directory database.
- The combination of Partition Key and Row Key must be unique within Azure because it's used for load balancing and scaling, in addition to querying.
- Availability set must be exists before you create the VMs.
- When preparing a VM to be deployed into Azure, you need to convert a VHDX to VHD and the disk needs to be shrunk to 1TB or smaller.
- An Azure Recovery Services Vault must be in the same region as the resources it's protecting.
- Import job: you ship drives containing your data.
- Export job: you ship empty drives.
- WAImportExport tool – Blobs – v1, Files – v2.
- Logical operators that are supported by a policy rule – Not, allOf, anyOf.
- Generalized VMs don't support tags as well as classic resources.
- Service tags – a group of IP addresses prefixes.
- Application Security Groups – a logical collection of VMs NICs.
- Blob storage account doesn't supports Page blob.
- Identity Protection and Identity Governance such as PIM, access reviews are available only in Azure AD P2.
- Connect to Windows VM: RDP (3389), WinRM (5985, 5986).
- Connect to Linux VM: SSH (22), RDP (3389).
- Data Box Disk – 40TB, Data Box – 100TB, Data Box Heavy – 1PB.
- Outbound port 1688 reserved for KMS (Key Management Service).
- Azure reserves the first 3 and the last IP from the pool.
- Just-in-Time (JIT) – can be used to lock down inbound traffic to your Azure VMs.
- App Service – Web, Containers and API.
- VM Image (Specialized) – Includes the OS and all disks attached.
- PowerBI is used to report and provide visualizations for the Azure Backup Service.
- Disk caching – method for improving performance of VHDs, it's utilizes local RAM and SSD drives on underlying VM host. Standard and Premium disks. ReadOnly caching improves latency and potentially gain higher IOPS per disk.