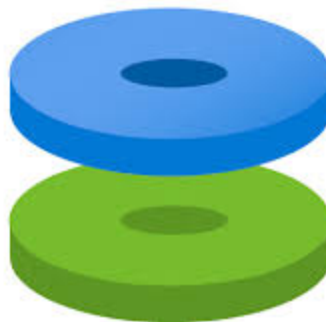




Stories 5 : Create a disks in azure and attach to VM.

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Azure Disks are block-level storage volumes managed by Azure and used with Azure Virtual Machines. Here are some key features and types of Azure Disks:

Key Features

1. **High Availability:** Azure Disks offer high availability and durability by replicating your data three times within the same Azure region.
2. **Scalability:** You can scale up to handle increased demand by adding more disks or upgrading to a larger disk size.
3. **Security:** Data is encrypted at rest and in transit.
4. **Managed Disks:** Azure manages the storage accounts for you, simplifying the management of your storage.

Types of Azure Disks

1. **Ultra Disks:** Provide high throughput, high IOPS, and consistent low latency for mission-critical workloads.
2. **Premium SSDs:** Ideal for I/O-intensive applications and offer low latency and high throughput.
3. **Standard SSDs:** Offer better performance and reliability than HDDs at a cost-effective price.
4. **Standard HDDs:** Suitable for less critical workloads with lower performance requirements.

Usage Scenarios

- **Virtual Machines:** Attach Azure Disks to VMs for persistent storage.
- **Databases:** Use Ultra Disks or Premium SSDs for database applications requiring high performance.
- **Backup and Restore:** Store backup data securely and restore it quickly when needed.

Creating and Managing Azure Disks

1. **Creating Disks:** You can create a new managed disk through the Azure portal, CLI, or PowerShell.
2. **Attaching Disks to VMs:** Disks can be attached to VMs as data disks for additional storage.
3. **Resizing Disks:** You can resize disks without downtime by changing the size through the Azure portal or CLI.
4. **Snapshot and Backup:** Create snapshots for point-in-time backups or use Azure Backup for more comprehensive backup solutions.

Lab :

Creating a data disk and attaching it to a Virtual Machine (VM) in Azure involves a few steps. Below are the steps using the Azure Portal:

Create and Attach a Data Disk to an Azure VM:

1. Sign in to the Azure Portal:

- Go to [Azure Portal](#).
- Sign in with your Azure account.

2. Navigate to "Virtual Machines":

- In the left navigation pane, click on "Virtual machines" or use the search bar to find and select it.

3. Select the VM:

- Click on the VM to which you want to attach the data disk.

4. Navigate to "Disks" under "Settings":

- In the VM details page, click on "Disks" under the "Settings" section.

5. Add Data Disk:

- Click on the "+ Add data disk" button.

6. Configure the Data Disk:

- Fill in the following details:
 - **Name:** Provide a name for the data disk.
 - **Source type:** Choose "None" if you want to create an empty disk.
 - **Account type:** Choose the storage account type (Standard HDD, Standard SSD, Premium SSD).
 - **Size (GiB):** Specify the size of the data disk in gigabytes.

7. Review + Add:

- Click on the "Review + add" button to review your configuration.

8. Add:

- Click the "Add" button to start creating the data disk.

9. Wait for Deployment:

- Azure will deploy the data disk. You can monitor the progress on the Azure Portal.

10. Attach the Data Disk to the VM:

- Once the data disk is created, go back to the VM's "Disks" section.
 - Click on the VM's OS disk or an existing data disk.
 - In the disk details page, scroll down to the "Disk management" section.
 - Click on "Attach existing disks" and select the newly created data disk.
- Configure in the VM:**
- Connect to the VM using RDP (for Windows) or SSH (for Linux).

The screenshot displays the Azure Portal interface for a virtual machine disk. The breadcrumb navigation at the top reads 'Home > Virtual machines > Imsvm | Disks'. The disk name is 'Imsvm_OsDisk_1_ced96a2a00d04c098653c0b4cb40dc07'. The left-hand navigation pane includes sections for Overview, Settings, and Monitoring, with 'Size + performance' and 'Encryption' highlighted. The main content area is divided into 'Essentials' and 'Metrics'. The 'Essentials' section lists properties: Resource group (ImsonvmRG), Disk state (Reserved), Location (East US (Zone 1)), Subscription (Pay-As-You-Go), Subscription ID (b7ff9584-8c96-405b-9679-3146ee164646), and Time created (12/28/2023, 10:49:53 AM). It also shows disk specifications: Disk size (30 GiB), Storage type (Standard SSD LRS), Managed by (Imsvm), Operating system (Linux), Completion percent (100), Max shares (0), Availability zone (1), and Security type (Trusted launch). Below this, there are two performance metrics: 'Disk Bytes/sec (Throughput)' and 'Disk Operations/sec (IOPS)', both showing a range from 80B/s to 100B/s. The 'Metrics' section at the bottom is partially visible.

Snapshot: A snapshot is a full, read-only copy of a virtual hard disk (VHD). You can use a snapshot as a point-in-time backup, or to help troubleshoot virtual machine (VM) issues. You can take a snapshot of both operating system (OS) or data disk VHDs.

Lock:

Disc:

Practicals

1. Create a snapshot for a vm
2. Create a disc out of snapshot and attach to VM
3. Create additional disc and add to vm
4. Resize existing disc of vm