Storage Services

2. Storage Services

Cloud computing enables new scenarios for applications requiring scalable, durable and highly available storage for their data – which is exactly why Microsoft developed Azure Storage Service.

- Azure Storage is a PaaS service that you can use to store both unstructured and partially structured data.
- Azure Storage is massively scalable and elastic: It can store and process hundreds of terabytes of data to support the big data scenarios required by scientific, financial analysis, and media applications. Or you can store the small amounts of data required for a small business website.
- By default, you can create up to 100 storage accounts in a single Azure subscription. Each standard storage account can contain up to 500 TB of combined blob, queue, table and file data
- As the demands on your storage application grow, Azure Storage automatically allocates the appropriate resources to meet them. We are charged only for what we use.

It offers four types of storage services, depending on the type of data that they are designed to store:

1. **Blob Storage ->** Stores file data. A blob can be any type of text or binary data, such as a document, media file, or application installer. Blob Storage is sometimes referred to as Object storage

2. **Table Storage ->** Stores partially structured datasets. Table storage is a NoSQL key-attribute data store, which allows for rapid development and fast access to large quantities of data.

3. **Queue Storage ->** provides reliable messaging for workflow processing and for communication between components of cloud services.

4. **File Storage ->** Similar to blobs, these provide storage for unstructured files, but they offer support for file sharing in the same manner as traditional on-premises Windows file shares.

Azure Storage Account –

An Azure storage account is a secure account that gives you access to services in Azure Storage. Your storage account provides the unique namespace for your storage resources. There are two types of storage accounts:

1. A **standard storage** account includes Blob, Table, Queue, and File storage. Standard storage accounts are backed by magnetic drives (HDD) and provide the lowest cost per GB. They are best for applications that require bulk storage or where data is accessed infrequently.

2. A **premium storage** account is ideally supposed to be used for Azure Virtual Machine disks. Premium storage accounts are backed by solid state drives (SSD) and offer consistent low-latency performance

Access tiers are: Hot, Cool, Cold, and Archive

Hot-

1. Highest storage costs, but lowest access costs
2. Store data that is accessed frequently
3. By default, new storage accounts are created in the hot tier

Cool-

1. Lower storage costs, but higher access costs
2. Store data that is infrequently accessed (at least 30 days)
3. You can use a cool access tier for short-term backup.

Cold –

1. Lower storage costs and higher access costs compared to the cool tier.
2. Store data that is rarely accessed (at least 90 days).
3. You can use a cold access tier for storing large data sets in a cost-effective manner.

Archive –

1. Lowest storage costs, but the highest retrieval costs
2. Store data that is rarely accessed (at least 180 days)
3. Data needs to be stored for a long time.