**Microsoft Azure Fundamentals: Managing Azure Storage**

**Azure Storage Accounts**

* Cloud storage for various types of data
* Deployed as an Azure resource in a region and resource group

**Storage Account Contents**

* Binary large objects (blobs); standard files
* File shares (Azure Files)
* Queues (software messaging)
* Tables (key/attribute NoSQL storage)

**Storage Account Blobs**

· Blob = file

· File storage

· Organized within blob containers

· Storage account settings:

· Blob automated life cycle management

· Blob anonymous access

· Blob snapshots, versions

· Soft delete

**Blob Types**

* Block
* Page
* Append

**Storage Account File Shares (Azure Files)**

. Serverless shared folders in the cloud within a storage account

. SMB and NFS accessibility

· Accessible via drive mappings (SMB) and mount points (NFS)

**Storage Account Queues**

App component 1

Drops message in queue (7-day expiry by default)

App component 2

Reads message in queue; message is unavailable to other processes

**Storage Account Tables**

* NoSQL-based, schemaless design, supports querying
* Tables contain entities (similar to a row or record)
* Entities contain properties (key and value pairs); useful for storing data such as configuration settings and user profile data

**Storage Account Settings**

· Access keys

. Access to entire storage account

. Shared access signatures (SAS)

. Access to individual blob or a subset of data in the storage account

. Expires

. Encryption

. Microsoft-managed or customer-managed

. Geo-replication for high availability

**Azure Storage Account Management**

**Storage Account Tiers**

Hot: For data accessed frequently

Cool: For infrequently accessed data (every 30 days or more)

Archive: Offline storage for data accessed rarely; only set at blob level

**Shared Access Signature**

. Set at the storage account or blob level

. IP address restrictions

. Storage account allowed services

. Temporary access to blobs, file shares, queues, and tables

. Storage account allowed resource types

· Service, container, object

. Allowed permissions

· Read, write, delete, list, add, create, update, process, immutable storage, permanently delete

**Azure Storage Account Versioning**

· Useful when a blob is accidentally modified or deleted

· Data written to a blob creates a new version

· Deleting a blob leaves no current version; the previous current version becomes a previous version

· Disabling this feature does not remove existing blob versions

**Blob Life Cycle Management**

· Automates how blobs are automatically managed over time

· All storage account blobs or a specified subset

· Block blobs or append blobs

· Base blobs, snapshots, versions

· Based on blob last modification (days)

. Actions include delete, move to cool tier, move to archive tier