Microsoft Azure Fundamentals
Training Bootcamp

Module Completion & Exam Hints

Introduction to Azure Storage

- Azure Storage is Microsoft's cloud storage solution for modern data storage scenarios

- Azure Storage includes the following data services:
  - Azure Blobs – scalable object store
  - Azure Files – managed file share
  - Azure Queues – messaging store
  - Azure Tables – NoSQL structured data

Storage Account

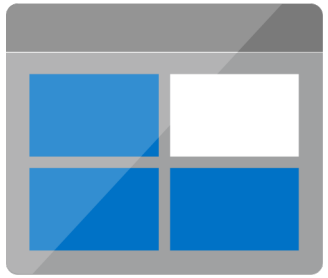
Microsoft Azure Fundamentals
Training Bootcamp

Azure Blob Storage

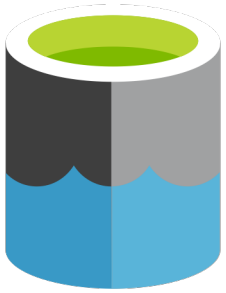
Azure Blobs Overview – Unstructured Data

- Azure Blob storage is Microsoft's object storage solution for the cloud, optimized to store massive amounts of unstructured data (text or binary data)

- Azure Blob storage supports Azure Data Lake Storage Gen2; Azure big data analytics capabilities, stores both structured and unstructured data



Blob Storage

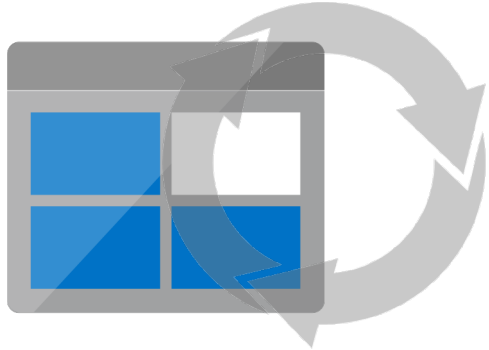


Data Lake Storage

Azure Blob Storage Lifecycle & Access Tiers

- Azure storage offers three access tiers:
  - Hot – frequently accessed data
  - Cool – infrequently accessed data (stored min. 30 days)
  - Archive – rarely accessed data (stored min. 180 days)

- Storage Lifecycle Policy :
  - HOT → COOL → ARCHIVE

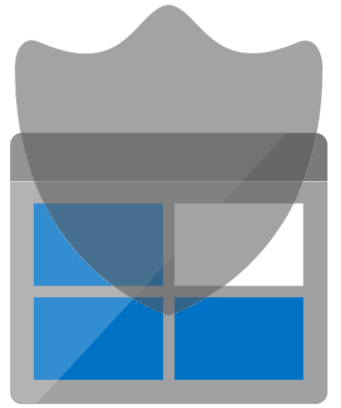


Blob Storage Lifecycle

Azure Storage Encryption

- Azure Storage automatically encrypts your data in Azure Cloud

- Encryption is done using:
  - Microsoft-managed encryption keys (Azure Storage Service Encryption-SSE)
  - Customer encryption keys (client-side encryption)

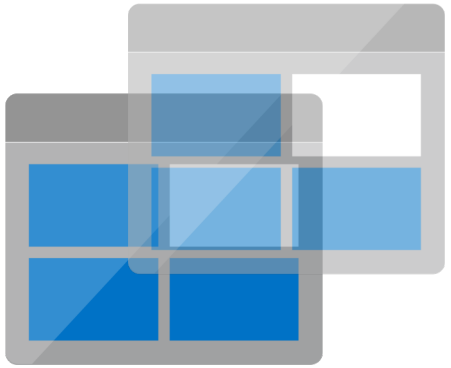


Storage Encryption

Azure Storage Replication

- Microsoft Azure always replicates data in your storage account to ensure durability and high availability

- Storage Replication options:
  - Locally Redundant Storage (LRS) – 3 copies, same DC
  - Zone-RS (ZRS) – 3 copies in 3 AZs
  - Geo-RS (GRS) – data in 2nd DC
  - RA-GRS – RA to data in 2nd DC
  - Geo-Zone-RS (GZRS) – 2 regions, 1st 3AZs
  - RA-GZRS – RA to data in 2nd DC



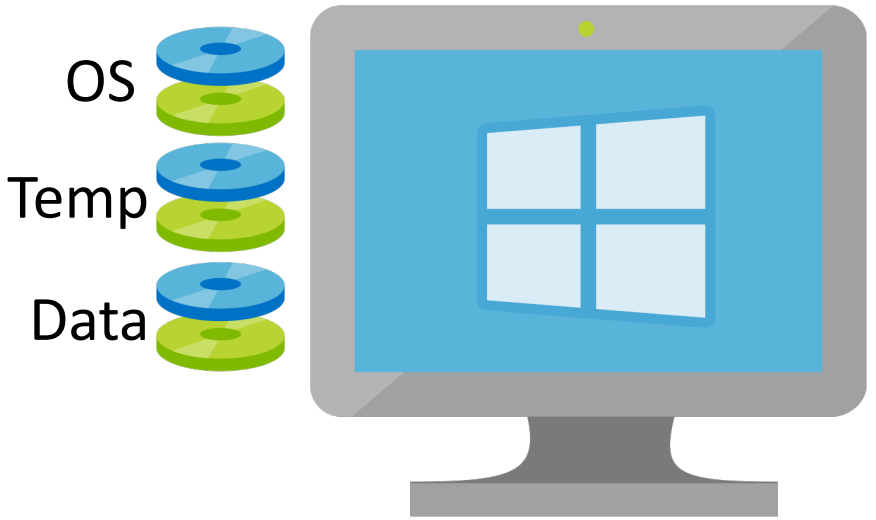
Storage Replication

Microsoft Azure Fundamentals
Training Bootcamp

Azure Managed Disks

Azure Disk Roles

- In Azure, there are currently three main disk roles:
  - OS disk (Windows, Linux)
  - Temporary disk
  - Data disk



- OS disk – pre-installed OS
- Temporary disk – short-term storage
  - Data persists normal VM reboot
  - Power off – data is lost
- Data disk – Persistent data

Microsoft Azure Fundamentals
Training Bootcamp

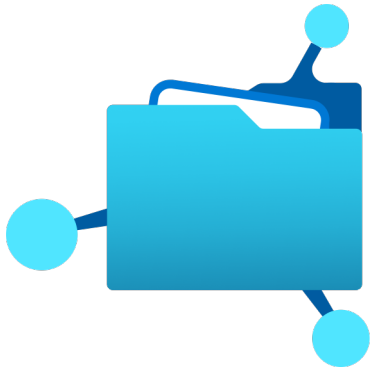
Azure Files Storage

Azure Files – File share in Azure Cloud

- Azure Files offers fully managed file shares in the cloud that are accessible via SMB protocol

- Azure Files shares can be mounted (attached) by both on-premises and cloud machines

- Applications can mount a file storage share to access file data, just as a desktop application would mount a typical SMB share



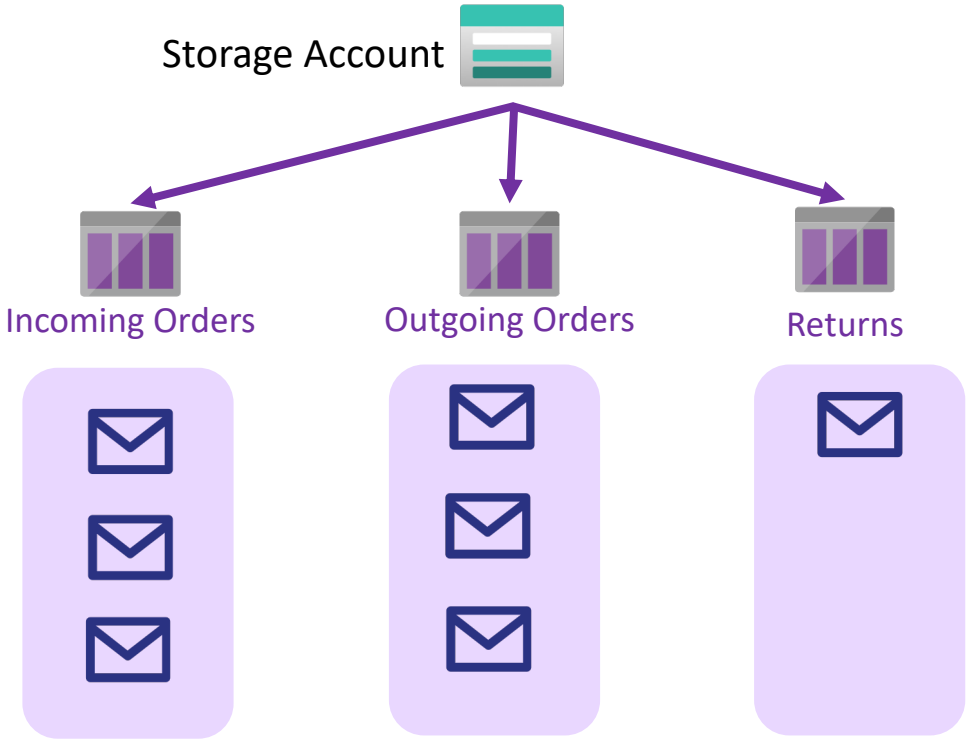
Azure Files

Microsoft Azure Fundamentals
Training Bootcamp

Azure Queues Storage

Azure Queues Overview – Messaging Store

- Azure Queues Storage is a service for storing large numbers of messages; enables reliable messaging between application components



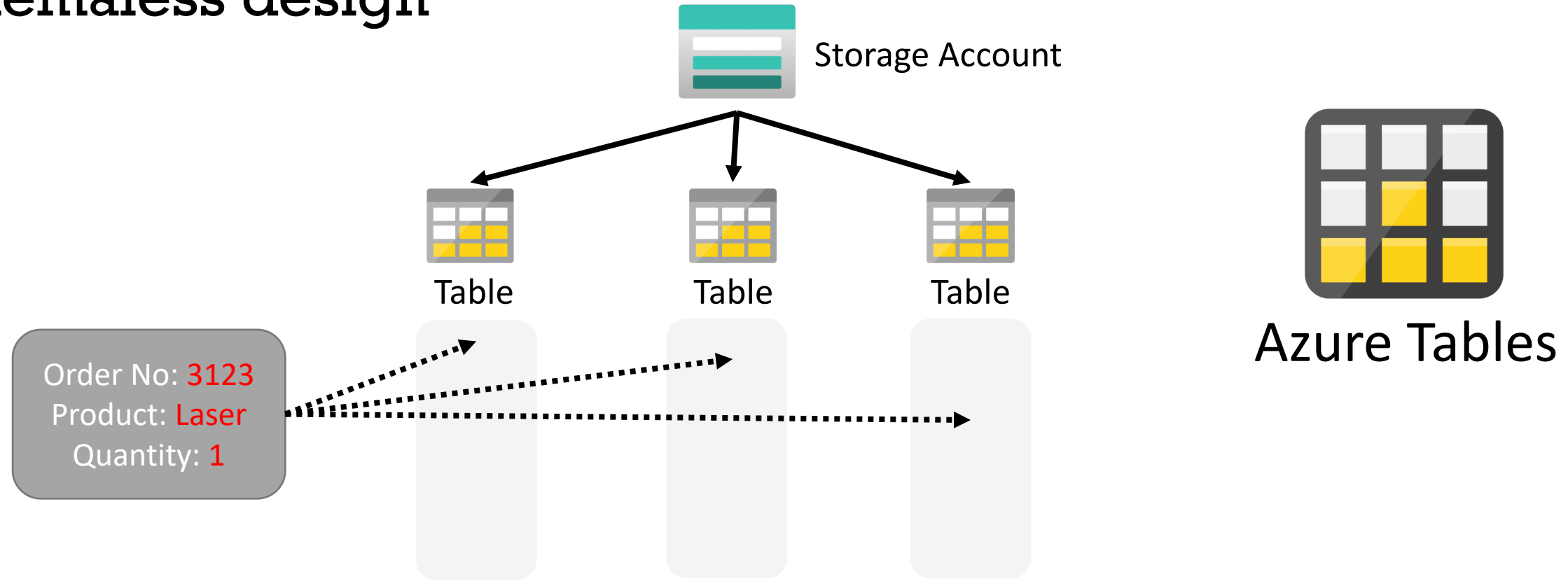
Azure Queues

Microsoft Azure Fundamentals
Training Bootcamp

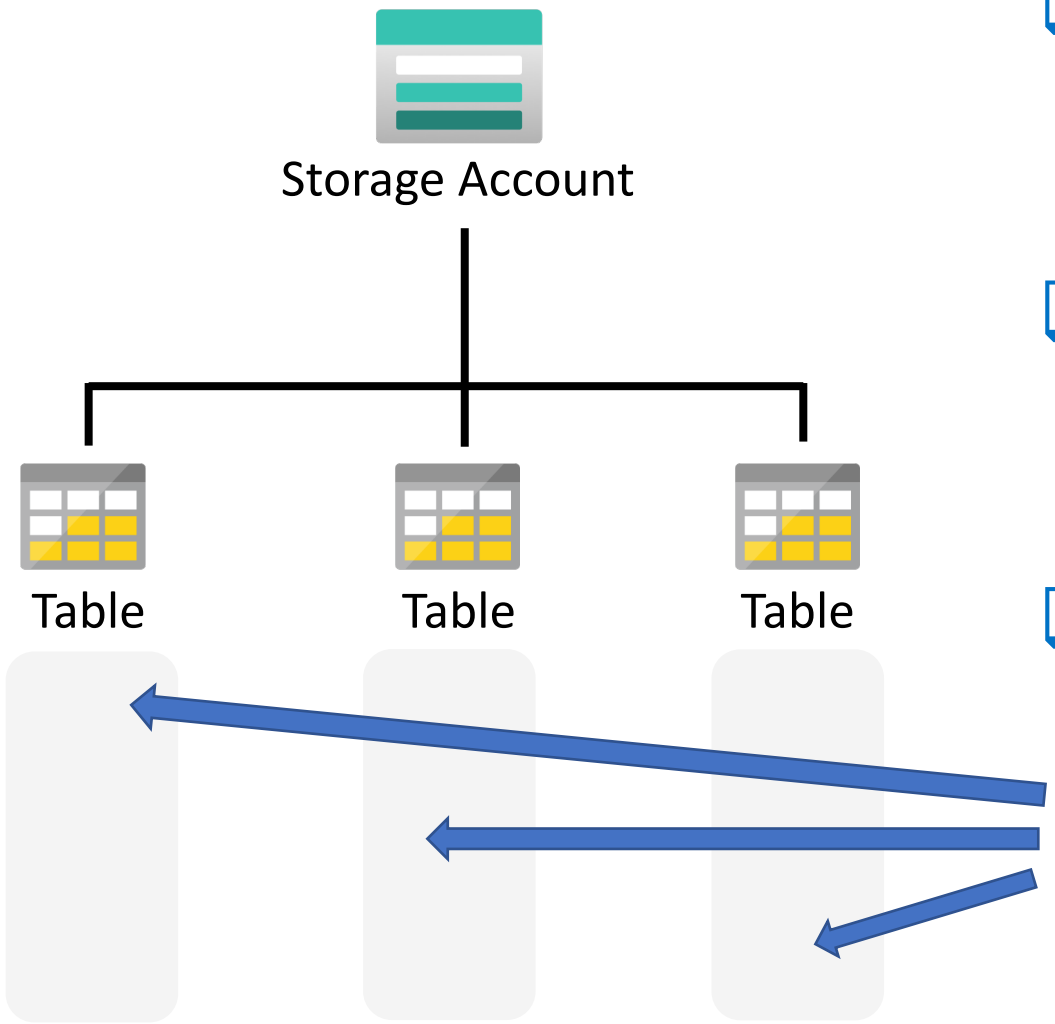
Azure Tables Storage

Azure Tables – NoSQL Structured Data

- Highly scalable Azure NoSQL database, storing structured NoSQL data, providing a key/attribute store with a schemaless design



Azure Tables Storage Overview



- Storage account
  - Multi-purpose storage service
  - Process up to 20.000 rows/s
- Table
  - Collection of rows (entity)
  - Process up to 2000 rows/s
- Entity – collection of properties (columns and values)

Order No: 3123
Product: Laser
Quantity: 1

Azure Storage - Quiz

Microsoft Azure Fundamentals

Microsoft Azure Fundamentals
Training Bootcamp

Thank you