

04/09/2023

Azure Storage

Blob Storage, File Storage

Queue Storage, Table Storage

Disk Storage, Data Lake Storage

Shared Access Signature(SAS), Azure Backup

Azure Storage Accounts

Storage Account Types (General Purpose V2, Blob Storage, Premium)







Replication Options (LRS, GRS, ZRS)

Azure Storage Redundancy option (LRS, GRS, ZRS, RA - GRS, Premium and Ultra Risk Redundancy)

Azure Storage Tiers (Hot Access Tier, Cool Access Tier, Archive Access Tier)

Microsoft Azure

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Create a storage account

Basics

Advanced

Networking

Data protection

Encryption

Tags

Review

Resource group *

(New) Azurerg
[Create new](#)

Instance details

Storage account name ⓘ *

azuretraining

Region ⓘ *

(US) East US
[Deploy to an edge zone](#)

Performance ⓘ *

☒ Standard: Recommended for most scenarios (general-purpose v2 account)

☐ Premium: Recommended for scenarios that require low latency.


Redundancy ⓘ *

Geo-redundant storage (GRS)
☒ Make read access to data available in the event of regional unavailability

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Create a storage account

Basics Advanced **Networking** Data protection Encryption Tags Review

Network connectivity

You can connect to your storage account either publicly, via public IP addresses or service endpoints, or privately, using a private endpoint.

- Network access *
- ☒ Enable public access from all networks
 - ☐ Enable public access from selected virtual networks and IP addresses
 - ☐ Disable public access and use private access
- i** Enabling public access from all networks might make this resource available publicly. Unless public access is required, we recommend using a more restricted access type. [Learn more](#)

Network routing

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i Running final validation...

Basics Advanced Networking Data protection Encryption Tags **Review**

Basics

Subscription	npunext-1680261963256
Resource Group	Azurerg
Location	eastus
Storage account name	azuretraining44
Deployment model	Resource manager
Performance	Standard
Replication	Read-access geo-redundant storage (RA-GRS)

Advanced

Enable hierarchical namespace	Disabled
Enable network file system v3	Disabled

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azuretraining44_1693801309740 | Overview

Deployment

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Overview

Inputs

Outputs

Template

✓ Your deployment is complete

Deployment name: azuretraining44_16...

Subscription: npunext-1680261963256

Resource group: Azurerg

Start time: 9/4/2023, 9:52:01 AM

Correlation ID: ed22e7fe-d9be-467b-ad1e-4d971f

Deployment details

Next steps

Go to resource

Give feedback

Tell us about your experience with deployment

Cost Management

Get notified to stay within your budget and prevent unexpected charges on your bill.

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Data migration

Events

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Storage Mover

Data storage

Containers

File shares

Queues

Tables

Security + networking

Essentials

JSON View

Resource group (move) : Azurerg

Location : East US

Primary/Secondary Location : Primary: East US, Secondary: West US

Subscription (move) : npunext-1680261963256

Subscription ID : 8611f143-8cf4-47cb-b7d4-8b18969153e1

Disk state : Primary: Available, Secondary: Available

Performance : Standard

Replication : Read-access geo-redundant storage (RA-GRS)

Account kind : StorageV2 (general purpose v2)

Provisioning state : Succeeded

Created : 9/4/2023, 9:52:12 AM

Tags (edit) : Add tags

Properties Monitoring Capabilities (7) Recommendations (0) Tutorials Tools + SDKs

Blob service

Hierarchical namespace Disabled

Default access tier Hot

Blob anonymous access Disabled

Blob soft delete Enabled (7 days)

Container soft delete Enabled (7 days)

Security

Require secure transfer for REST API operations Enabled

Storage account key access Enabled

Minimum TLS version Version 1.2

Infrastructure encryption Disabled

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azuretraining44

Privacy settings

Feedback

Storage account metrics

The data provided is regularly updated about 2-4 times a day and published hourly. If your account has extremely large objects, it may be over a day between updates.

Blob containers

Number of containers

Number of blobs

Total data stored

File shares

Number of file shares

Number of files

Total data stored

Tables

Number of tables

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Tables

Security + networking

Networking

Front Door and CDN

+ Container

Change access level

Restore containers

Refresh

Delete

Give feedback

Search containers by prefix

Name	Last modified	Anonymous access
<input type="checkbox"/> \$logs	9/4/2023, 9:52:37 AM	Private
<input type="checkbox"/> j-demo	9/4/2023, 10:20:26 AM	Container

New container

Name *

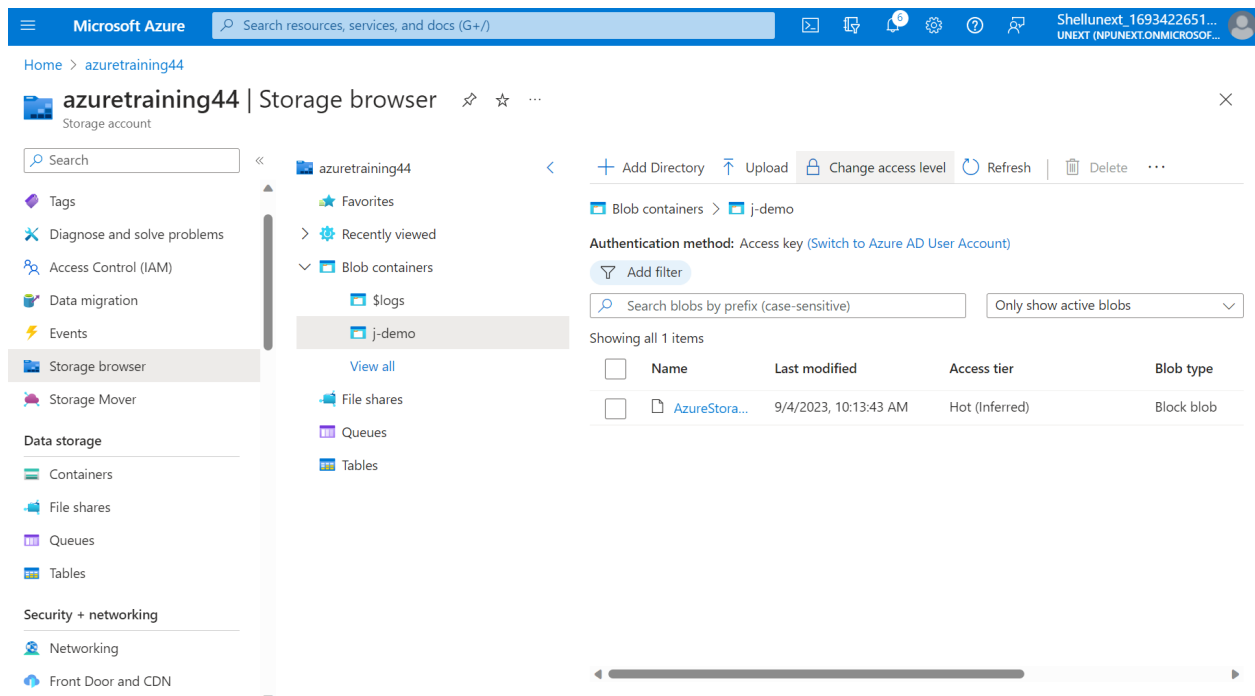
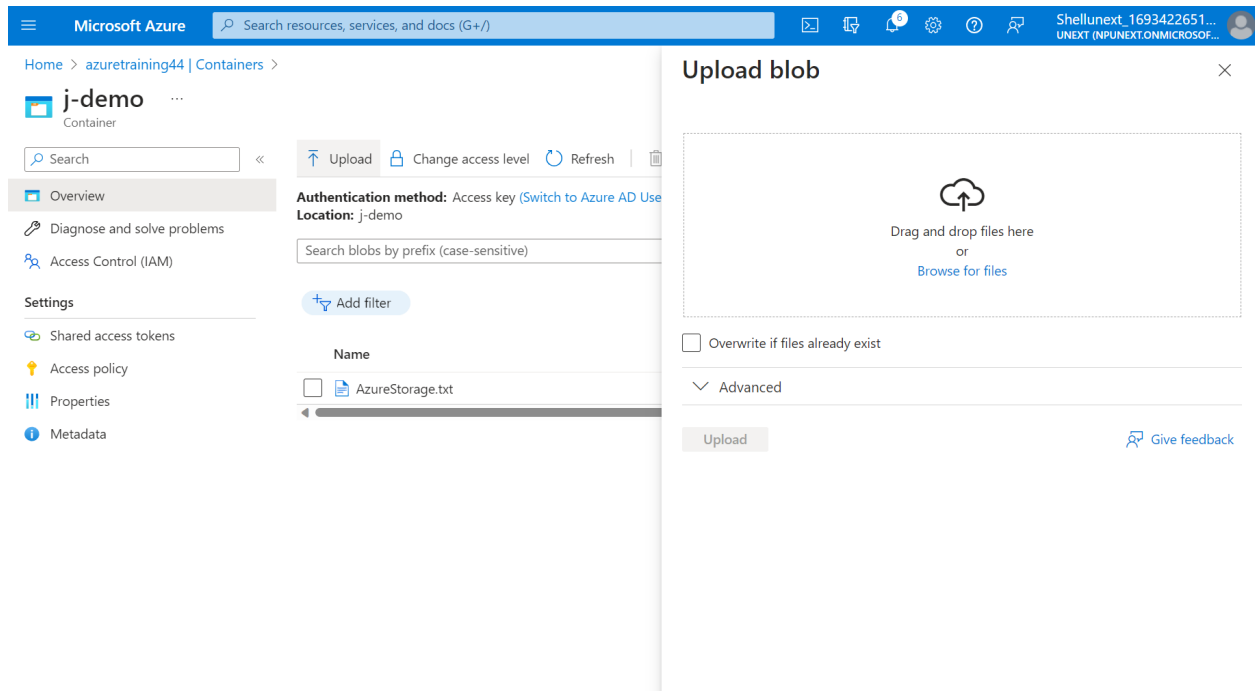
Anonymous access level ⓘ

Private (no anonymous access)

Advanced

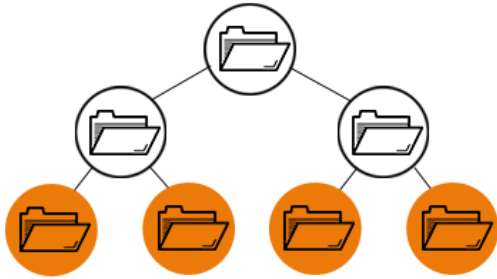
Create

Give feedback



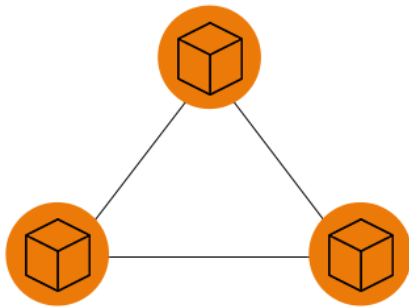
File Storage:

It is data stored as a single piece of information inside a folder just like we organize pieces of paper inside a folder.



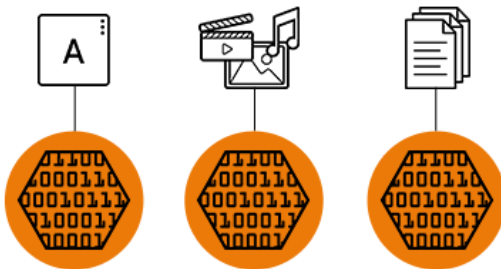
Block Storage:

It chops data into blocks and stores them as separate pieces. Each block of data is given a unique identifier, which allows the storage system to place the smaller pieces of data wherever is most convenient.



Object Storage:

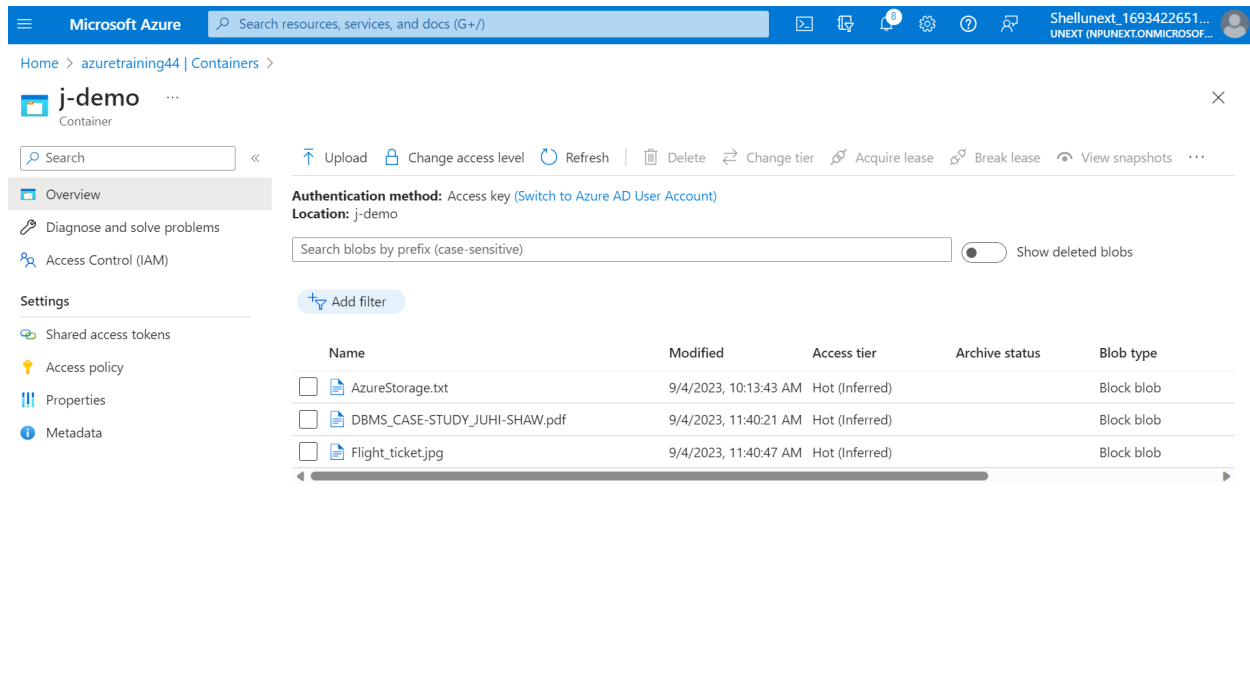
Also known as object based storage, is a flat structure in which files are divided/broken into pieces and spread out among hardware. In object storage, the data is broken into discrete units called objects and is kept in a single repository instead of being kept as files in folders or as blocks on servers.



Object storage requires a simple HTTP application programming interface (API) which is used by most clients in all languages.

Azure Blob Storage:

We can store different types of file formats like, image, video, pdf, txt etc all together in blob storage.



Azure storage offers different access tiers so that you can store your blob data in the most effective manner.

Azure Blob storage access tiers:

1. **Hot Tier:** It is an online tier optimized for storing data that is accessed or modified frequently. The hot tier has the highest storage costs, but the lowest access costs.
2. **Cool tier:** an online tier optimized for storing data that is infrequently accessed or modified. Data in the cool tier should be stored for a minimum of 30 days. The cool tier has lower storage costs and higher access costs compared to the hot tier.
3. **Cold tier:** an online tier optimized for storing data that is infrequently accessed or modified. Data in the cold tier should be stored for a minimum of 90 days. The cold tier has lower storage costs and higher access costs compared to the cool tier.
4. **Archive tier** - An offline tier optimized for storing data that is rarely accessed, and that has flexible latency requirements, on the order of hours. Data in the archive tier should be stored for a minimum of 180 days.

Azure storage capacity limits are set at the account level, rather than according to the access tier. You can choose to maximize your capacity usage in one tier, or to distribute capacity across two or more tiers.

Azure Queue Storage is a service for storing large numbers of messages. You access messages from anywhere in the world via authenticated calls using HTTP or HTTPS. A queue message can be up to 64 KB in size. A queue may contain millions of messages, up to the total capacity limit of a storage account. Queues are commonly used to create a backlog of work to process asynchronously.

Azure Cosmos DB and **Azure Storage** are cloud-based storage services. They differ in terms of their data models, scalability, querying capabilities and storage options. Here are the key differences between them:

1. **Data Model:** Azure Cosmos DB is a globally distributed, multi-model database service that supports various data models, including key-value, document, columnar, and graph. Azure Storage, on the other hand, primarily offers a simple object storage service with a key-value data model. It is designed for storing unstructured data such as blobs, files, queues, and tables.
2. **Scalability:** Azure Cosmos DB is built for global scalability and can automatically scale throughput and storage across multiple regions. It offers elastic scalability with fine-grained control over performance and cost. Azure Storage also provides scalability, but it requires manual configuration and management of storage accounts and blob containers to handle increased load. Scaling Azure Storage may involve sharding data across multiple storage accounts.
3. **Querying Capabilities:** Azure Cosmos DB supports rich query capabilities across various data models. It provides a SQL-like query language called SQL API for querying JSON documents. It also supports other APIs like Gremlin for graph data and MongoDB API for document-oriented querying. Azure Storage, on the other hand, does not offer built-in query capabilities. Retrieving data from Azure Storage typically involves directly accessing the stored objects using their unique keys.
4. **Storage Options:** Azure Cosmos DB provides storage for application data, along with built-in features like automatic indexing, data partitioning, and replication. It is a fully managed service that abstracts away the underlying storage implementation. Azure Storage, on the other hand, offers different types of storage options, including Blob storage for large object data, Queue storage for messaging, Table storage for structured NoSQL data, and File storage for file shares.
5. **Consistency Models:** Azure Cosmos DB offers multiple consistency models, allowing developers to choose the desired level of data consistency based on their application requirements. It provides options like strong consistency, bounded staleness, session consistency, and eventual consistency. Azure Storage, on the other hand, primarily provides eventual consistency for read operations. It may take some time for changes made to Azure Storage to propagate across different regions.

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Access keys

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Data management

Redundancy

Data protection

Object replication

Blob inventory

Static website

Lifecycle management

Azure search

Settings

Enabling static websites on the blob service allows you to host static content. Webpages may include static content and client-side scripts. Server-side scripting is not supported. As data is replicated asynchronously from primary to secondary regions, files at the secondary endpoint may not be immediately available or in sync with files at the primary endpoint. [Learn more](#)

Static website

Disabled Enabled

An Azure Storage container has been created to host your static website.
[\\$web](#)

Primary endpoint

https://azuretraining44.z13.web.core.windows.net/

Secondary endpoint

https://azuretraining44-secondary.z13.web.core.windows.net/

Index document name

index.html

Error document path

error.html

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Container

Search

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Access Control (IAM)

Settings

Shared access tokens

Access policy

Properties

Metadata

Editor (preview)

Authentication method: Access key (Switch to Azure AD Use)

Location: \$web

Search blobs by prefix (case-sensitive)

Add filter

Name
<input type="checkbox"/> css
<input type="checkbox"/> fonts
<input type="checkbox"/> images
<input type="checkbox"/> js

Upload blob

Drag and drop files here or
[Browse for files](#)

☐ Overwrite if files already exist

Advanced

Blob type

Block blob

☒ Upload .vhd files as page blobs (recommended)

Block size

4 MiB

Access tier

Hot (Inferred)

Upload to folder

icon

Blob index tags

Key	Value
-----	-------

Microsoft Azure

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Editor (preview)

Authentication method: Access key (Switch to Azure AD User Account)

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Search blobs by prefix (case-sensitive)

Add filter

Name
<input type="checkbox"/> css
<input type="checkbox"/> fonts
<input type="checkbox"/> images
<input type="checkbox"/> js
<input type="checkbox"/> about.html
<input type="checkbox"/> contact.html
<input type="checkbox"/> index.html
<input type="checkbox"/> searvices.html
<input type="checkbox"/> shop.html

Upload blob

Drag and drop files here
or
Browse for files

☒ Overwrite if files already exist

Advanced

Blob type
Block blob

☒ Upload .vhd files as page blobs (recommended)

Blob size
4 MiB

Access tier
Hot (Inferred)

Upload to folder
images/portfolio

Blob index tags

Key

Value

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Properties

Metadata

Editor (preview)

Authentication method: Access key (Switch to Azure AD User Account)

Location: \$web

Search blobs by prefix (case-sensitive)

Show deleted blobs

Add filter

Name	Modified	Access tier	Archive status	Blob type
<input type="checkbox"/> css				
<input type="checkbox"/> fonts				
<input type="checkbox"/> images				
<input type="checkbox"/> js				
<input type="checkbox"/> about.html	9/4/2023, 2:25:34 PM	Hot (Inferred)		Block blob
<input type="checkbox"/> contact.html	9/4/2023, 2:25:34 PM	Hot (Inferred)		Block blob
<input type="checkbox"/> index.html	9/4/2023, 2:25:34 PM	Hot (Inferred)		Block blob
<input type="checkbox"/> searvices.html	9/4/2023, 2:25:34 PM	Hot (Inferred)		Block blob
<input type="checkbox"/> shop.html	9/4/2023, 2:25:34 PM	Hot (Inferred)		Block blob

Successfully uploaded blob(s)

Successfully uploaded 5 blob(s).

Save Discard Give feedback

Enabling static websites on the blob service allows you to host static content. Webpages may include static content and client-side scripts. Server-side scripting is not supported. As data is replicated asynchronously from primary to secondary regions, files at the secondary endpoint may not be immediately available or in sync with files at the primary endpoint. [Learn more](#)

Static website

Disabled Enabled

An Azure Storage container has been created to host your static website.
[\\$web](#)

Primary endpoint ⓘ

<https://azuretraining44.z13.web.core.windows.net/>

Copied

Secondary endpoint ⓘ

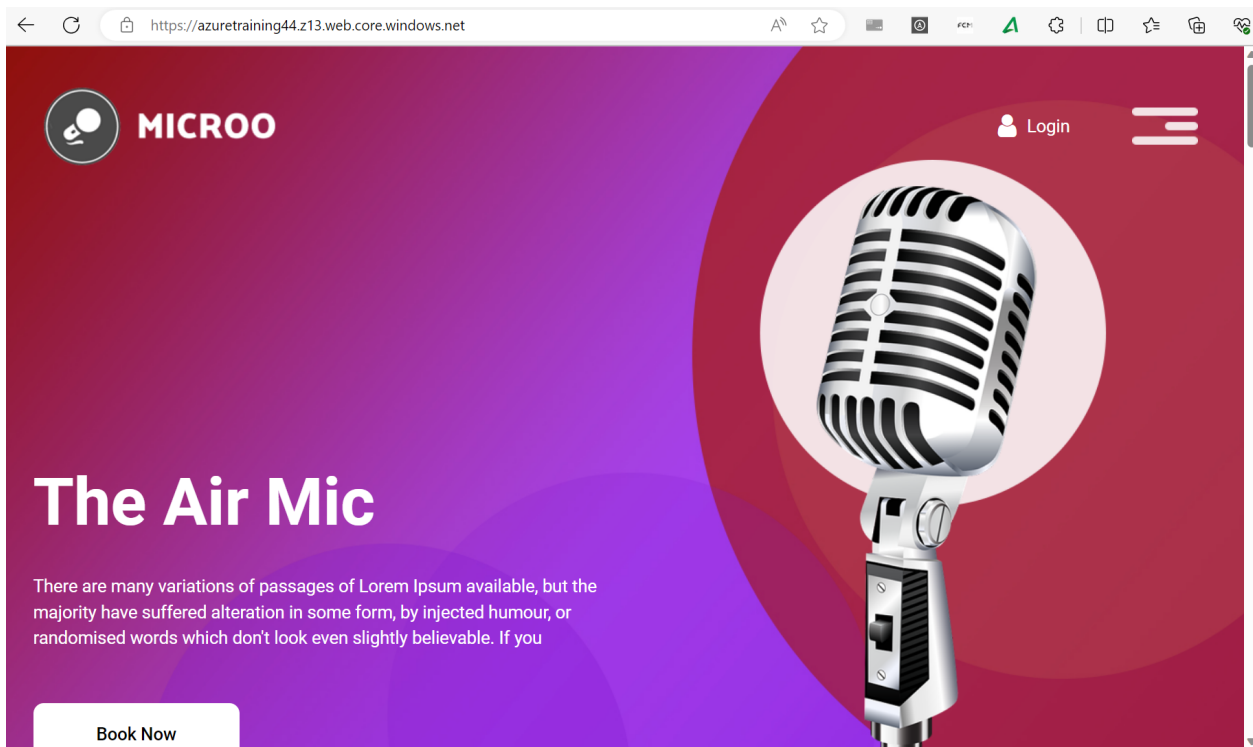
<https://azuretraining44-secondary.z13.web.core.windows.net/>

Index document name ⓘ

index.html

Error document path ⓘ

error.html



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Instance details

Storage account name ⓘ *

newstorageaccount22

Region ⓘ *

(US) East US

Deploy to an edge zone

Performance ⓘ *

☒ Standard: Recommended for most scenarios (general-purpose v2 account)

☐ Premium: Recommended for scenarios that require low latency.

Redundancy ⓘ *

Locally-redundant storage (LRS)

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Hierarchical Namespace

Hierarchical namespace, complemented by Data Lake Storage Gen2 endpoint, enables file and directory semantics, accelerates big data analytics workloads, and enables access control lists (ACLs) [Learn more](#)

Enable hierarchical namespace☒

Access protocols

Blob and Data Lake Gen2 endpoints are provisioned by default [Learn more](#)

Enable SFTP ☐

Enable network file system v3 ☐

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1 Deploying...

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Container retention period in days7

File share soft deleteEnabled

File share retainment period in days7

VersioningDisabled

Blob change feedDisabled

Version-level immutability supportDisabled

Encryption

Encryption typeMicrosoft-managed keys (MMK)

Enable support for customer-managed keysBlobs and files only

Enable infrastructure encryptionDisabled

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*** Submitting deployment...

Submitting the deployment template for resource group 'Azurerg'.

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Deployment

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✓ Your deployment is complete

Deployment name: newstorageaccount22... Start time: 9/4/2023, 3:00:37 PM
Subscription: npunext-1680261963256 Correlation ID: 9789948a-cdd3-4e68-b479-23c8
Resource group: Azurerg

Deployment details

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Cost Management

Get notified to stay within your budget and prevent unexpected charges on your bill.
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Work with an expert

Azure experts are service provider partners who can help manage your assets on Azure and be your first line of support.

Azure data lake storage gen2 or ADLS gen2 and azure blob storage are both storage services offered by microsoft azure, but they are designed