Azure storage accounts

## Overview

An Azure storage account provides a unique namespace to store and access your Azure Storage data objects. All objects in a storage account are billed together as a group. By default, the data in your account is available only to you, the account owner.

There are two types of storage accounts:

### General-purpose Storage Accounts

A general-purpose storage account gives you access to Azure Storage services such as Tables, Queues, Files, Blobs and Azure virtual machine disks under a single account. This type of storage account has two performance tiers:

* A standard storage performance tier which allows you to store Tables, Queues, Files, Blobs and Azure virtual machine disks.
* A premium storage performance tier which currently only supports Azure virtual machine disks. See [Premium Storage: High-Performance Storage for Azure Virtual Machine Workloads](https://docs.microsoft.com/en-us/azure/virtual-machines/windows/premium-storage) for an in-depth overview of Premium storage.

### Blob Storage Accounts

A Blob storage account is a specialized storage account for storing your unstructured data as blobs (objects) in Azure Storage. Blob storage accounts are similar to your existing general-purpose storage accounts and share all the great durability, availability, scalability, and performance features that you use today including 100% API consistency for block blobs and append blobs. For applications requiring only block or append blob storage, we recommend using Blob storage accounts.

lob storage accounts expose the **Access Tier** attribute which can be specified during account creation and modified later as needed. There are two types of access tiers that can be specified based on your data access pattern:

* A **Hot** access tier which indicates that the objects in the storage account will be more frequently accessed. This allows you to store data at a lower access cost.
* A **Cool** access tier which indicates that the objects in the storage account will be less frequently accessed. This allows you to store data at a lower data storage cost.

## Storage account billing

You are billed for Azure Storage usage based on your storage account. Storage costs are based on the following factors: region/location, account type, storage capacity, replication scheme, storage transactions, and data egress.

* Region refers to the geographical region in which your account is based.
* Account type refers to whether you are using a general-purpose storage account or a Blob storage account. With a Blob storage account, the access tier also determines the billing model for the account.
* Storage capacity refers to how much of your storage account allotment you are using to store data.
* Replication determines how many copies of your data are maintained at one time, and in what locations.
* Transactions refer to all read and write operations to Azure Storage.
* Data egress refers to data transferred out of an Azure region. When the data in your storage account is accessed by an application that is not running in the same region, you are charged for data egress. (For Azure services, you can take steps to group your data and services in the same data centers to reduce or eliminate data egress charges.)

## Storage account endpoints

Every object that you store in Azure Storage has a unique URL address. The storage account name forms the subdomain of that address. The combination of subdomain and domain name, which is specific to each service, forms an endpoint for your storage account.

For example, if your storage account is named mystorageaccount, then the default endpoints for your storage account are:

* Blob service: http://mystorageaccount.blob.core.windows.net
* Table service: http://mystorageaccount.table.core.windows.net
* Queue service: http://mystorageaccount.queue.core.windows.net
* File service: http://mystorageaccount.file.core.windows.net

## Create a storage account

1. Sign in to the [Azure portal](https://portal.azure.com/).
2. In the Azure portal, expand the menu on the left side to open the menu of services, and choose **More Services**. Then, scroll down to **Storage**, and choose **Storage accounts**. On the **Storage Accounts** window that appears, choose **Add**.
3. Enter a name for your storage account. See [Storage account endpoints](https://docs.microsoft.com/en-us/azure/storage/common/storage-create-storage-account#storage-account-endpoints) for details about how the storage account name will be used to address your objects in Azure Storage.

Note

Storage account names must be between 3 and 24 characters in length and may contain numbers and lowercase letters only.

Your storage account name must be unique within Azure. The Azure portal will indicate if the storage account name you select is already in use.

1. Specify the deployment model to be used: **Resource Manager** or **Classic**. **Resource Manager** is the recommended deployment model.
2. Select the type of storage account: **General purpose** or **Blob storage**. **General purpose** is the default.
3. Select the replication option for the storage account: **LRS**, **GRS**, **RA-GRS**, or **ZRS**. The default is **RA-GRS**.

## Choosing a replication option

When you create a storage account, you can select one of the following replication options:

* Locally redundant storage (LRS)
* Zone-redundant storage (ZRS)
* Geo-redundant storage (GRS)
* Read-access geo-redundant storage (RA-GRS)

The following table provides a quick overview of the scope of durability and availability that each replication strategy will provide you for a given type of event (or event of similar impact).

| Scenario | LRS | ZRS | GRS | RA-GRS |
| --- | --- | --- | --- | --- |
| Node unavailability within a data center | Yes | Yes | Yes | Yes |
| An entire data center (zonal or non-zonal) becomes unavailable | No | Yes | Yes | Yes |
| A region-wide outage | No | No | Yes | Yes |
| Read access to your data (in a remote, geo-replicated region) in the event of region-wide unavailability | No | No | No | Yes |
| Designed to provide \_durability of objects over a given year | at least 99.999999999% (11 9's) | at least 99.9999999999% (12 9's) | at least 99.99999999999999% (16 9's) | at least 99.99999999999999% (16 9's) |
| Available in \_ storage account types | GPv1, GPv2, Blob | GPv2 | GPv1, GPv2, Blob | GPv1, GPv2, B |

1. Select the subscription in which you want to create the new storage account.
2. Specify a new resource group or select an existing resource group.
3. Select the geographic location for your storage account. See [Azure Regions](https://azure.microsoft.com/regions/#services) for more information about what services are available in which region.
4. Click **Create** to create the storage account.