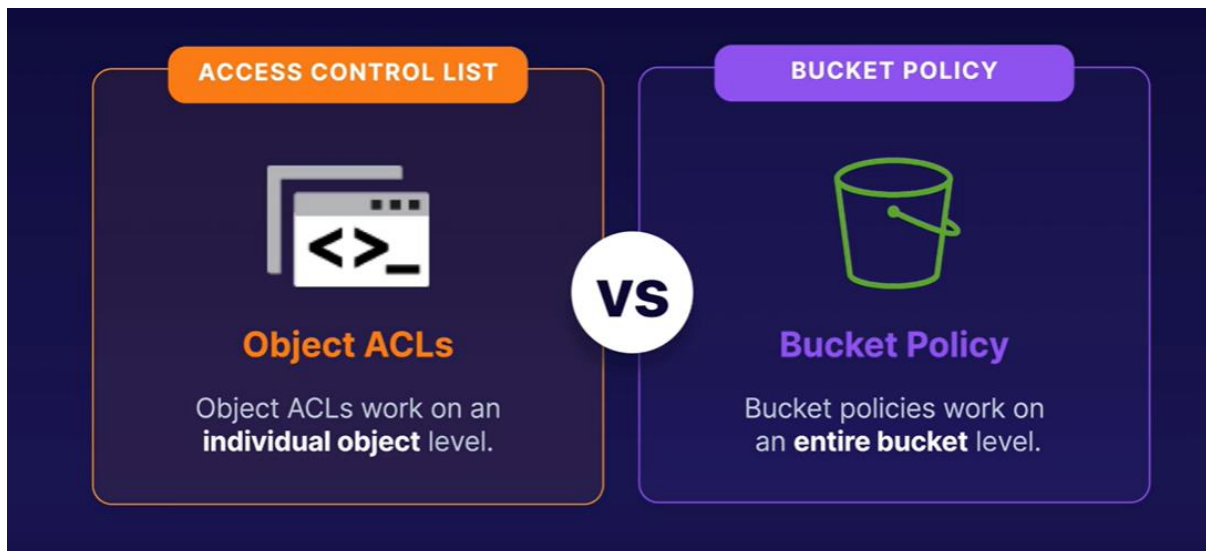


Securing your bucket with S3 block public access:



What to Know for the Exam

- ✓ **Buckets are private by default:** When you create an S3 bucket, it is private by default (including all objects within it). You have to allow public access on both the **bucket** and its **objects** in order to make the bucket public.
- ✓ **Object ACLs:** You can make **individual objects** public using object ACLs.
- ✓ **Bucket policies:** You can make **entire buckets** public using bucket policies.
- ✓ **HTTP status code:** When you upload an object to S3 and it's successful, you will receive an **HTTP 200** code.

Hosting a static website using S3:

STATIC WEBSITES ON S3

You can use **S3** to host **static** websites, such as **.html** sites.

Dynamic websites, such as those that require **database connections**, cannot be hosted on S3.

The screenshot shows the Amazon S3 console interface. The main heading is "Hosting a static website using Amazon S3". Below this, there is a "Notes" section explaining that S3 can host static websites and that the S3 website endpoint is used to access the website. A "Steps" section lists the following tasks: 1. Create a bucket, 2. Configure the bucket for static website hosting, 3. Upload your static content, 4. Test the website. The console also shows a list of buckets on the left sidebar.



What to Know for the Exam

- ✓ **Bucket Policies:** Make entire buckets public using bucket policies.
- ✓ **Static Content:** Use S3 to host static content only (not dynamic).
- ✓ **Automatic Scaling:** S3 scales automatically with demand.

Versioning Objects in S3:

What Is Versioning?

You can enable versioning in S3 so you can have **multiple versions of an object within S3.**



Advantages of Versioning

✓ All Versions

All versions of an object are stored in S3. This includes all writes and even if you delete an object.

✓ Backup

Can be a great backup tool.

✓ Cannot Be Disabled

Once enabled, versioning cannot be disabled — only suspended.

✓ Lifecycle Rules

Can be integrated with lifecycle rules.

✓ Supports MFA

Can support multi-factor authentication.

5 Tips for Versioning Objects



All Versions: All versions of an object are stored in S3. This includes all writes and even if you delete an object.



Backup: Can be a great backup tool.



Cannot Be Disabled: Once enabled, versioning cannot be disabled — only suspended.



Lifecycle Rules: Can be integrated with lifecycle rules.



Supports MFA: Can support multi-factor authentication.

S3 Storage Classes:

S3 Standard

1

High Availability and Durability

Data is stored redundantly across multiple devices in multiple facilities (≥ 3 AZs):

- 99.99% availability
- 99.999999999% durability (11 9's)

2

Designed for Frequent Access

Perfect for frequently accessed data.

3

Suitable for Most Workloads

- The default storage class.
- Use cases include websites, content distribution, mobile and gaming applications, and big data analytics.



S3 Standard-Infrequent Access (S3 Standard-IA)

DESIGNED FOR INFREQUENTLY ACCESSED DATA



Rapid Access

Used for data that is accessed less frequently but requires rapid access when needed.



You Pay to Access the Data

There is a low per-GB storage price and a per-GB retrieval fee.

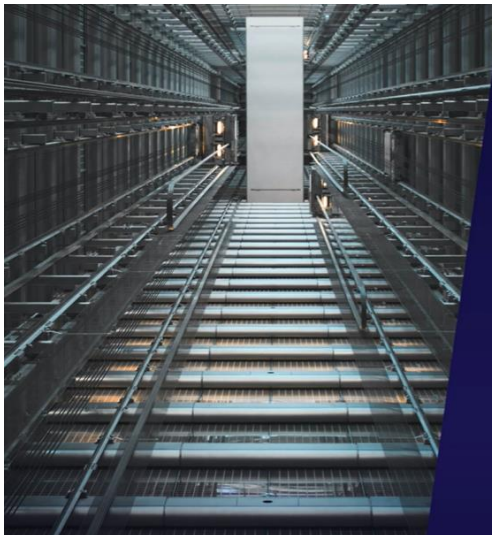


Use Cases

Great for long-term storage, backups, and as a data store for disaster recovery files.

99.9% Availability

99.999999999% (11 9's) Durability



S3 ONE ZONE-INFREQUENT ACCESS

Like S3 Standard-IA, but data is stored redundantly within a single AZ.

- Costs **20% less** than regular S3 Standard-IA
- Great for long-lived, infrequently accessed, non-critical data

99.5% Availability

99.999999999% (11 9's) Durability

2 Glacier Options

- Glacier is cheap storage.
- Optimized for data that is very infrequently accessed.
- You pay each time you access your data.
- Use only for archiving data.

OPTION 1

Glacier

Provides **long-term data archiving** with retrieval times that range from 1 minute to 12 hours (e.g., historical data only accessed a few times per year).

OPTION 2

Glacier Deep Archive

Archiving **rarely accessed data** with a default retrieval time of 12 hours (e.g., financial records that may be accessed once or twice per year).

2 TIERS

Frequent and Infrequent Access

Automatically moves your data to the most cost-effective tier based on how frequently you access each object.

Optimizes Cost

Monthly fee of \$0.0025
per 1,000 objects

99.99% Availability
99.99999999% (11 9's) Durability

Performance across the S3 Storage Classes

	S3 Standard	S3 Intelligent-Tiering*	S3 Standard-IA	S3 One Zone-IA+	S3 Glacier	S3 Glacier Deep Archive
Designed for Durability	99.999999999% (11 9's)	99.999999999% (11 9's)	99.999999999% (11 9's)	99.999999999% (11 9's)	99.999999999% (11 9's)	99.999999999% (11 9's)
Designed for Availability	99.99%	99.9%	99.9%	99.5%	99.99%	99.99%
Availability SLA	99.9%	99%	99%	99%	99.9%	99.9%
Availability Zone(s)	≥3	≥3	≥3	1	≥3	≥3
Min Capacity Charge per Object	N/A	N/A	128KB	128KB	40KB	40KB
Minimum Storage Duration Charge	N/A	30 days	30 days	30 days	90 days	180 days
Retrieval Fee	N/A	N/A	Per GB retrieved	Per GB retrieved	Per GB retrieved	Per GB retrieved
Storage Type	Object	Object	Object	Object	Object	Object
Lifecycle Transitions	Yes	Yes	Yes	Yes	Yes	Yes

Storage Class	Availability and Durability	AZ(s)	Use Case
S3 Standard	99.99% Availability 11 9's Durability	≥3	Suitable for most workloads (e.g., websites, content distribution, mobile and gaming applications, and big data analytics)
S3 Standard-Infrequent Access	99.9% Availability 11 9's Durability	≥3	Long-term, infrequently accessed critical data (e.g., backups, data store for disaster recovery files, etc.)
S3 One Zone-Infrequent Access	99.5% Availability 11 9's Durability	1	Long-term, infrequently accessed, non-critical data
S3 Glacier	99.99% Availability 11 9's Durability	≥3	Long-term data archiving that occasionally needs to be accessed within a few hours or minutes
S3 Glacier Deep Archive	99.99% Availability 11 9's Durability	≥3	Rarely accessed data archiving with a default retrieval time of 12 hours (e.g., financial records for regulatory purposes)
S3 Intelligent-Tiering	99.9% Availability 11 9's Durability	≥3	Unknown or unpredictable access patterns

