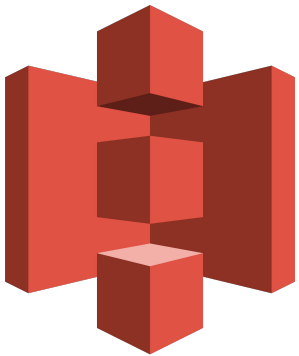
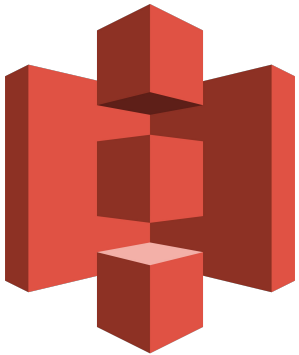
Simple Storage Service



S3

S3 Website Lab



Simple Storage Service

S3 is a service for storing Objects

Bucket: A container for objects stored in Amazon S3
- They organize S3 at a higher level
- They help identify the owner

Object: The fundamental entities stored in Amazon S3.
- Objects consist of data and metadata
- The data portion is opaque for S3

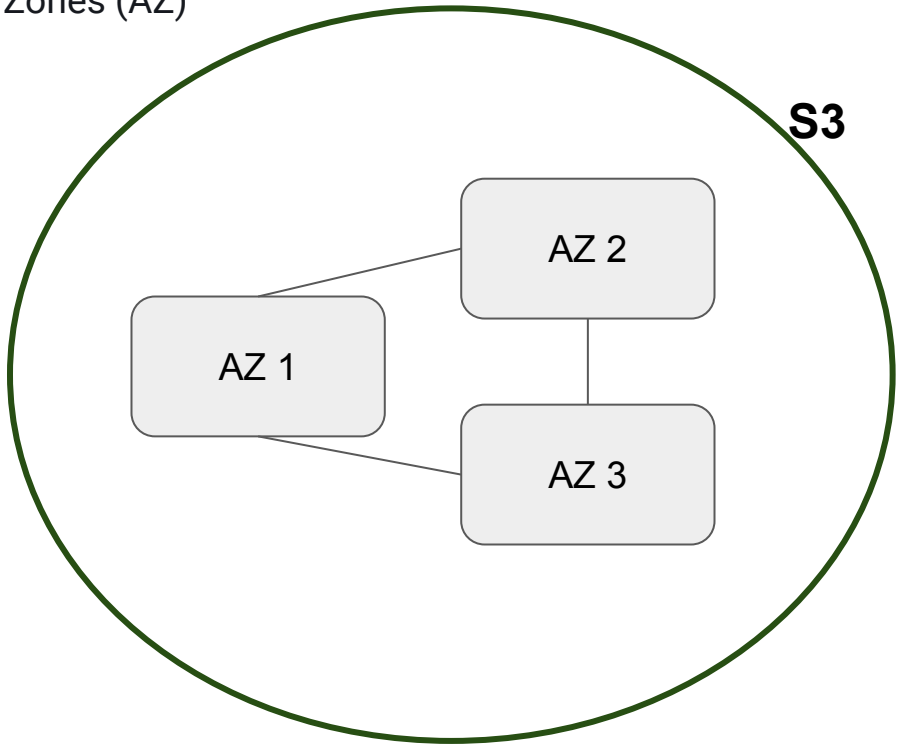
Keys: The unique identifier for an object within a bucket.
- Every object in a bucket has exactly one key.
- The combination of a bucket, key, and version ID uniquely identify each object.

Simple Storage Service

Buckets reside on a region of your choice

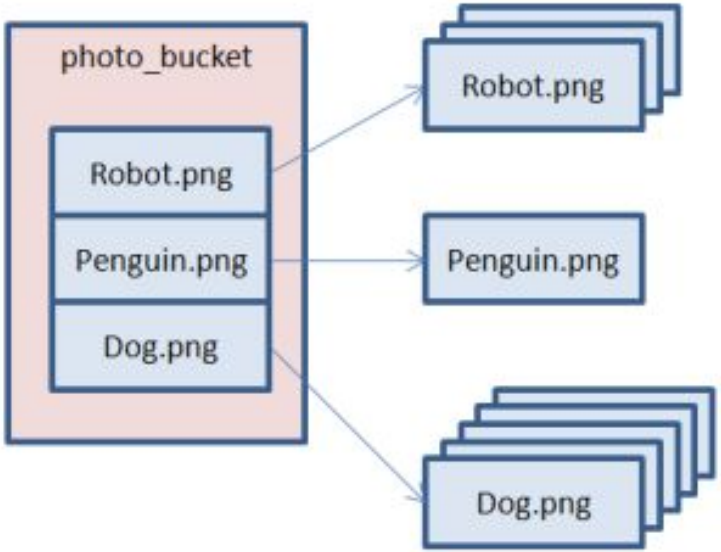
Simple Storage Service

And inside the region, every object gets replicated to two additional Availability Zones (AZ)



S3 versioning

You can enable versioning in your S3 bucket



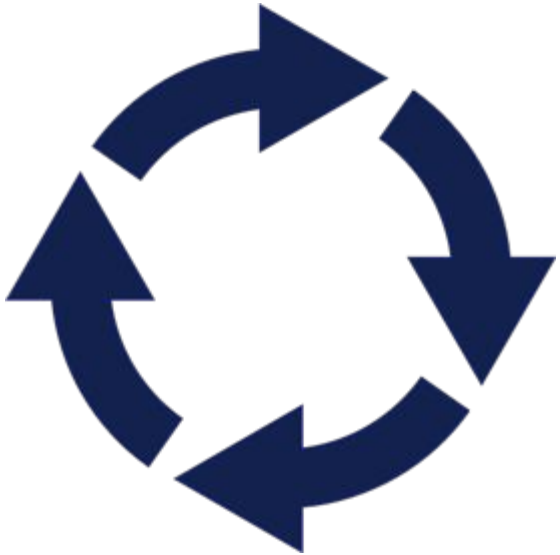
- Every version is a different object, they have the same key but different version ids.
- Once enabled, versioning cannot be reverted
- Deleting a versioned object only places a delete tag on the object

Storage Classes

STANDARD	Frequently accessed data
STANDARD_IA	Long-lived, infrequently accessed data
ONEZONE_IA	Long-lived, infrequently accessed, non-critical data
INTELLIGENT_TIERING	Long-lived data with changing or unknown access patterns
S3 Glacier	Long-term data archiving with retrieval times ranging from minutes to hours
S3 Glacier Deep Archive	Archiving rarely accessed data with a default retrieval time of 12 hours

IA = Infrecuent Access

Object Lifecycle Management



S3 Limits

You can have up to 100 buckets in a single AWS account

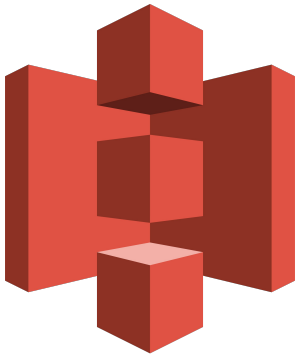
You can increase the limit up to 1000 buckets with a service limit increase

S3 Pricing

https://aws.amazon.com/s3/pricing/

Is S3 Serverless?

1. No server management
2. Flexible scaling
3. High availability
4. No idle capacity



S3 Security

By default only the owner gets access to the bucket

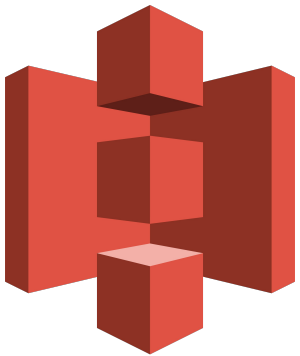
Access Control Lists and Bucket Policies

ACLs are mostly used for granting access to other AWS accounts to your buckets or objects.
Object level
ACL’s can only grant permissions, not deny them

Bucket policies can grant or deny permissions to all or a subset of objects. They can describe:

- AWS bucket operations (GET, DELETE, etc)
- Requester
- Conditions (like objects with a prefix)
- Bucket level

CloudFront



Content Distribution Network

What is a Content Delivery Network?

CloudFront terminology

- **Edge Location:** Where the content is cached
- **Origin:** Where the content is stored, like an S3 bucket
- **Distribution:** Name given to the CDN

Why would you use a CloudFront Distribution?

A. Your client needs to reach a lot of differently located users around the globe.
B. The contents you want to share do not change frequently, you want to save money in excessive request over the same objects