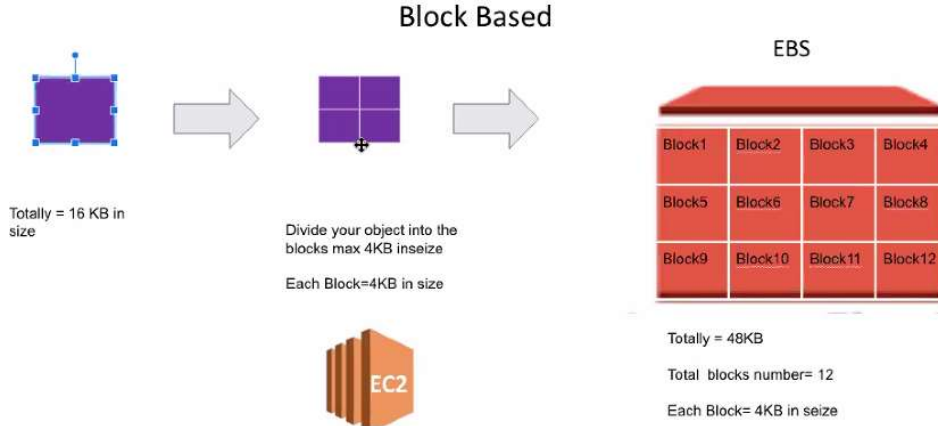


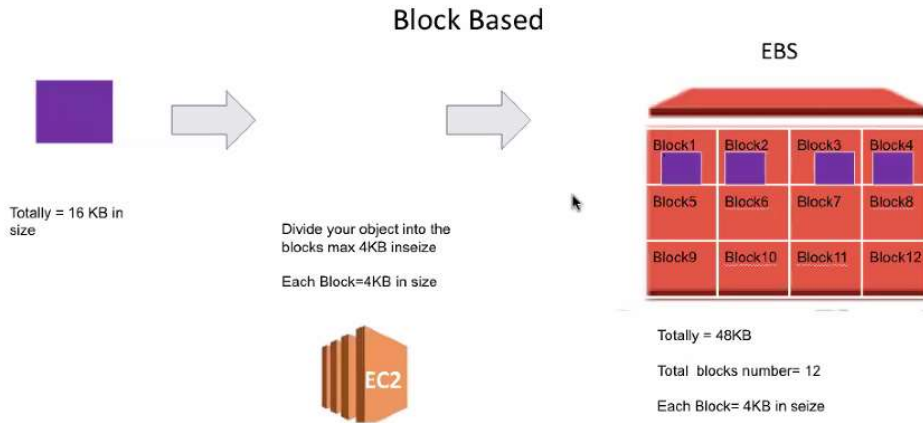
S3 ü hem bireylerin hem AWS in arka planda çöplüğü gibi düşünebiliriz. AWS nin en eski servislerinden birisi.

Biz EBS (Elastic Block Storage) görmüştük. S3 object based storage dır. Block based ne demektir?:



Who can call the data? =Only related EC2

16 KB boyutundaki bir datayı 4 KB lık blocklara bölüyor ve blokları yerleştiriyor.



Who can call the data? =Only related EC2

Dataya ihtiyaç olduğunda bloklar tekrar birleşiyor. EBS hangi EC2 ya bağlıysa o kullanabiliyor. Başkası kullanamaz.

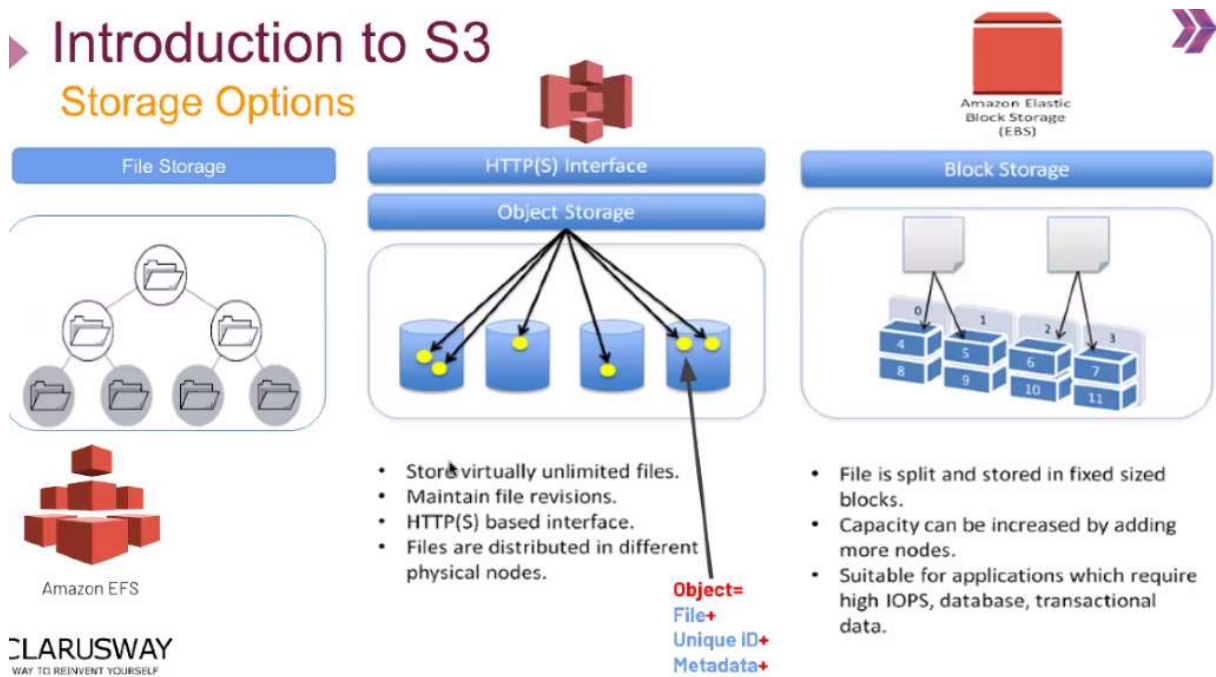
Object data based nasıldır?

Object Based-S3



Bir data ya etiket ekleyerek olduđu gibi kovaya atar. Internet'e erişebilen ve izni olan herkes data'ya ulaşabilir. En güzel örneđi google cloud.
Cloud storage ın object based storage kısmı böyle işliyor.

► Introduction to S3 Storage Options

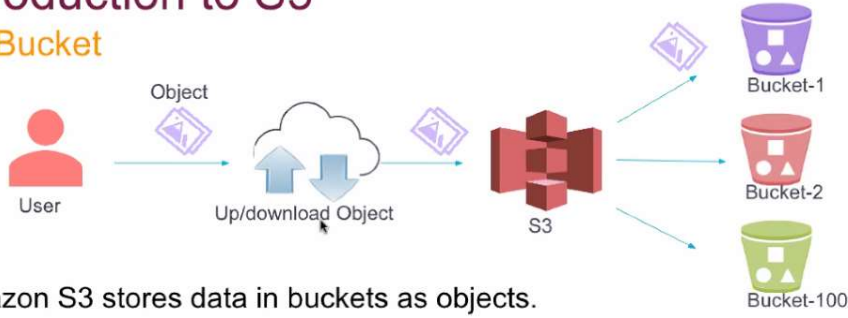


S3 servisinin içine doğrudan bir data atabilmek mümkün deđil. Örn bir süpermarkette alışverişe gittiğimizde önce kendimize bir sepet alırız. Bucket da böyle bir şeydir.

Bu logical yani mantıksal bir klasördür.

Introduction to S3

S3 Bucket



Amazon S3 stores data in buckets as objects.

The number of **objects** that can be stored in a bucket is **not limited**, but each AWS account can only have **100 buckets** at once.

Bir kullanıcı max 100 bucket açabilir. Ancak içine istediğiniz kadar bilgiyi depolayabilirsiniz. S3 availability kapsamında bize 9 11 lik availability sunuyor. Yani %99, virgülden sonra 11 tane 9 luk availability. Aralarında 60 mil mesafe olan 3 tane AZ de depoluyor.

Tel file olarak maks 5 TB boyutunda yükleme yapabilirsiniz.

AWS Consol ile maks 160 GB ık veri yüklenebilir. Bunun üstü Terminal üzerinden olabilir:

Object in S3-Upload



- The max. size of an object you can upload via **AWS Management Console** is **160 GB**.
- For uploading a file **greater than 160 GB**, the AWS CLI, AWS SDK, or API is needed to be used



S3 e yükleme yapmak ücretli değil. Download ederken ücretlendirme oluyor. Storage da ücretlendirme var. Request nedir? Lms e girdiğimizdeki bütün veriler S3 te duruyor. Sayfayı her açtığımızda oradan bir request yapmış oluyoruz.

Ücret örneğin:

Storage pricing

S3 Standard - General purpose storage for any type of data, typically used for frequently accessed data	
First 50 TB / Month	\$0.023 per GB
Next 450 TB / Month	\$0.022 per GB
Over 500 TB / Month	\$0.021 per GB

Request ücreti örneğin:

Region: US East (Ohio)

	PUT, COPY, POST, LIST requests (per 1,000 requests)	GET, SELECT, and all other requests (per 1,000 requests)	Lifecycle Transition requests into (per 1,000 requests)	Data Retrieval requests (per 1,000 requests)	Data retrievals (per GB)
S3 Standard	\$0.005	\$0.0004	n/a	n/a	n/a
S3 Intelligent - Tiering *	\$0.005	\$0.0004	\$0.01	n/a	n/a
Frequent Access	n/a	n/a	n/a	n/a	n/a
Infrequent Access	n/a	n/a	n/a	n/a	n/a
Archive Instant	n/a	n/a	n/a	n/a	n/a
Archive Access, Standard	n/a	n/a	n/a	n/a	n/a
Archive Access, Bulk	n/a	n/a	n/a	n/a	n/a
Archive Access, Expedited	n/a	n/a	n/a	\$10.00	\$0.03
Deep Archive Access, Standard	n/a	n/a	n/a	n/a	n/a

Storage Classes:

Types of Storage Classes



Ne kadar sıklıkla erişmek istediğimiz ve datayı çağırdığımızda ne kadar beklemeye tahammül edebiliriz iki etmenle kombine oluyor class lar:

Standard Class



- Standard is the **default** storage class unless you change
- This is the basic storage solution for **frequently accessed** data
- Reliability at **99,99999999%**
- Availability at **99,99%**
- Cloud applications and web-services, mobile games and website hosting are some example of use case

Standart Class sık erişilen datalar için kullanılır.

Reduced Redundancy (RRS)

Non critical Data

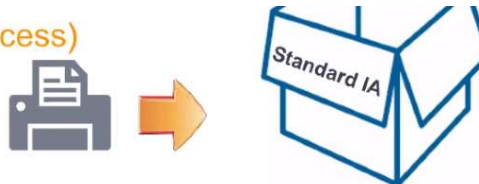


- RRS class offering **less redundancy** is a **modified version of Standard** storage class
- It is designed for **non critical** and reproducible data
- The main difference between RRS and Standard class is **reliability**
- While reliability of **Standard** storage class is **99,99999999%**,
reliability of **RRS** class is **99,99 %**
- It provides **cost saving** compare to Standard class **for the non critical data**.

RRS şu anda AWS tarafından tavsiye edilmiyor. Standarttan tek farkı reliability si düşük.

Standard IA (Infrequent Access)

Infrequently
Accessed Data



- Standard IA (Infrequent Access) is a convenient for **infrequently accessed files**
- But in case of access, it provides you to reach the file **quickly**.
- In fact, it designed for the data which requires less frequent access, but with **longer storage time than the Standard** class
- It is **cheaper than Standard** class **as long as** you access **infrequently**.

Dataya erişmek istediğin bunu çok hızlı bir şekilde çek, hızla ulaş ancak nadiren ihtiyaç duyduğun datalar için kullanılır. Standart Class a göre uzun depolama zamanı sunar.

One Zone IA (Infrequent Access)

Infrequently Accessed
& Non Critical Data



- One Zone IA class is a **modified version of Standard IA**.
- It is **20 percent cheaper** than Standard IA due to less availability.
- Unlike others, One Zone IA **stores data only in one availability zone**, instead of three availability zones
- One-Zone IA can be preferred when you have infrequently accessed and noncritical files

Normade bir data AWS de üç AZ de dpolanır. One Zone IA bu Class ta tek AZ ye depolar. Bu kez availibility de dezavantaj doğar. Çok önemli olmayan datalar için (kaybedilmesi göze alınabilir)

Intelligent Tier

Unpredictable
Access Patterns



Frequent
Access Tier

30 consecutive days after the last access



Infrequent
Access Tier

90 consecutive days after the last access



Archive
Access tier

180 consecutive days after the last access



Deep Archive
Access tier

- It is designed to optimize storage costs by automatically **moving data to the most cost-effective storage access tier**.
- There are **4 access tiers**.
- It is ideal, if your access **patterns are unknown or unpredictable**.

İki etmen var demiştik:

Ne kadar sıklıkla erişmek istediğimiz ve datayı çağırdığımızda ne kadar beklemeye tahammül edebiliriz.

Bu iki etmenin tahmin edilemeyeceği durumlar için bu class sunulmuştur. Bir data önce sık ulaşılan tier a atılır. Ancak 30 gün hiç erişilmezse sık olmayan erişim tier ına atılır. 60 gün içinde burada da erişim olmazsa datayı arşiv kategorisine atar. Burada da 90 gün dataya erişim olmazsa deep arşive erişime atılır. Erişim olursa burada ücretlendirme yüksek olur diye kendisi otomatik olarak frequent accesse atar.

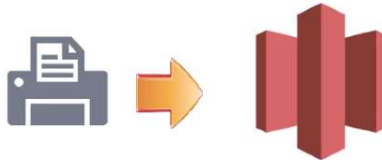
INTELLIGENT TEARING PRECLASS ANALOGY



STORAGE CLASS	ADVANTAGE	CONSIDERATION
STANDARD	FREQUENT ACCESS	NOT COST EFFECTIVE - MOSTLY DATA IS INACTIVE - INFREQUENTLY ACCESSED
INFREQUENT ACCESS	CHEAPER UNTIL IAM PRECLASS BEGIN	NOT COST EFFECTIVE - YOU BREAK COMMITMENT DURING 1-2 WEEK
INTELLIGENT TEARING	COST OPTIMIZED	NOT CHEAPER THAN STANDARD BUT YOU CAN FREQUENTLY ACCESS CHEAPER THAN INFREQUENT ACCESS

Amazon Glacier

Archives & Backup
Copies of Databases

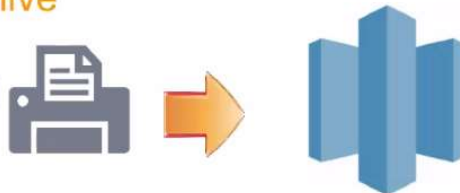


- It is a perfect solution for **long-term storage** and data archiving that doesn't require instant access.
- Minimum storage duration period is **90 days** and can be accessed at least in **1-5 minutes**
- If you have deleted, overwritten, or transitioned to a different **storage class an object before the 90-day minimum**, you are charged for 90 days.

Uzun dönem depolama içindir. 90 gün erişim yapmayacağınız datalar içindir. Çekmeyi düşündüğünüzde 5 dk bekletiyor.

Amazon Glacier Deep Archive

Infrequently Accessed
& Non Critical Data



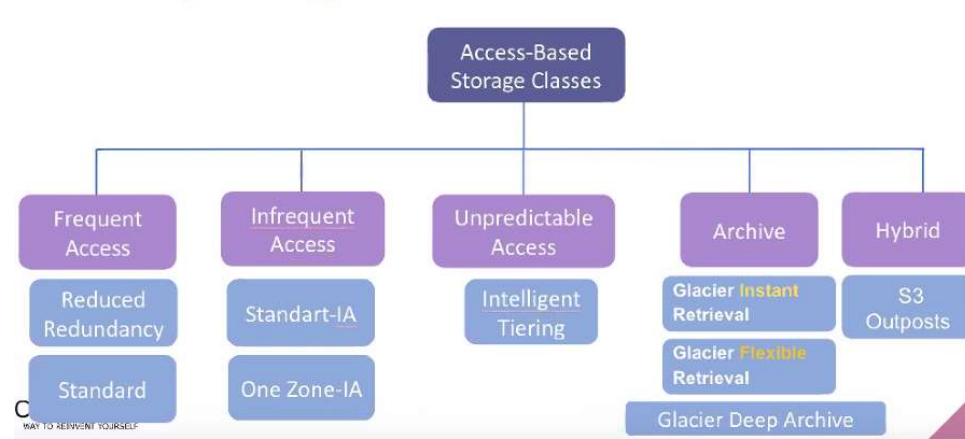
- It is used for archiving data that **rarely need to be accessed**.
- It is the **lowest cost storage option** in AWS.
- The retrieval time is **12-48 hours**
- Minimum storage **duration period is 180 days** and a default **retrieval time of 12 hours**. If you interact with the object in 180 you'll be charged for 180 days.

Çok uzun dönem saklanacak datalar içindir. 180 gün erişim yapmamayı öngörür. Erişim istediğinizde 12-48 saat sürer.

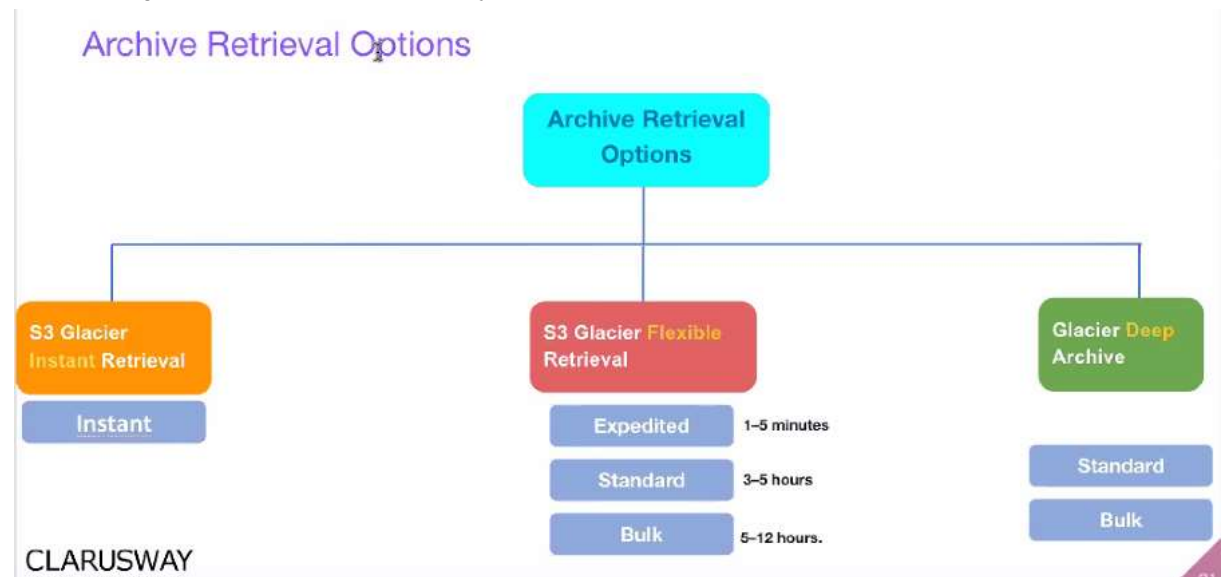
Glacier Instant Class arşivde olup da çok hızlı ulaşmak istediğimiz datalar için sunulan bir class tır.

S3 Outposts askeri dataların arşivlendirmesiyle ilgili kullandığı class diyebiliriz. AWS serverlarını gidiyor örneğin pentagonun bodrumuna kuruyor. Data pentagonda duruyor ancak internetten AWS konsoluyla erişilebilir.

Summary of Storage Classes



Arşiv kategorisinde bulunan bir datayı çekmek için kıstaslar var:

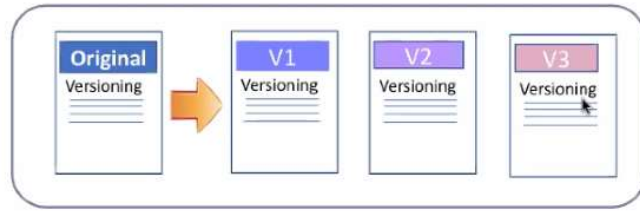


Instant ta hızlı çekilir. Flexible da üç farklı seçenek var Expedited, Standart, Bulk (bunlar rakamlarıyla sınavda çıkar)

Versiyonlama:

AWS de bir dosyanız var, git gibi düşünebiliriz. Dosya üzerinde versiyonlar yazıyoruz, en son verisyonu gösteriyor ancak eski versiyonları saklıyor:

What is Versioning?



- Versioning is a way to **keep multiple versions** (deleted and changed versions) of an object in a bucket.
- By using versioning, all **unwanted user behavior and program errors** can be quickly recovered.

Versiyonlama bucket based dir:

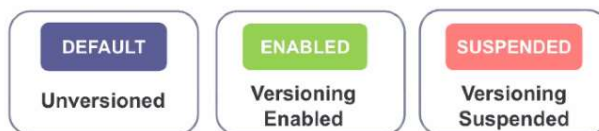
What is Versioning?



- Versioning is **bucket-based** feature

Versiyonu aktif ettiğiniz zaman geri alamazsınız, askıya alabilirsiniz. Bunun etkisi depolamadaki fazlalık olarak ücretlendirmede artış olur.

States of Versioning



It is **not possible** return to an **unversioned** state, however, you can make **suspend versioning** on that bucket.

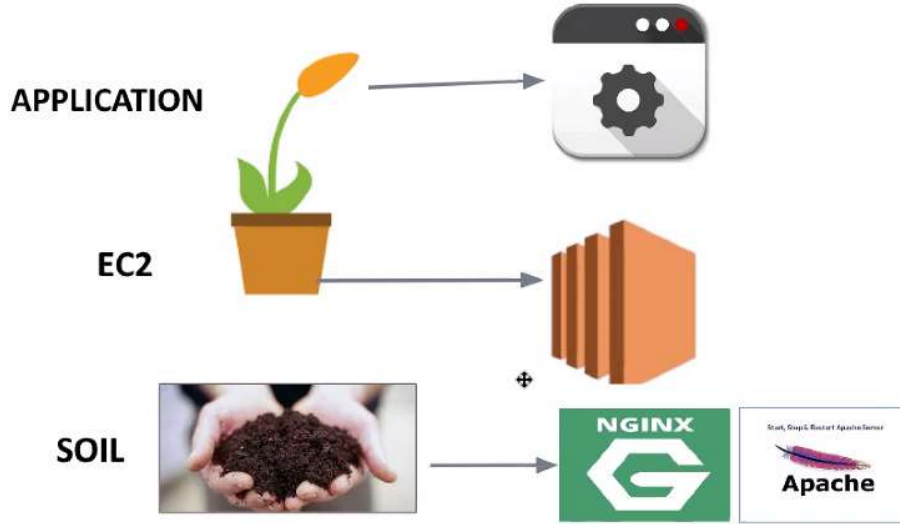
Statik website hosting nedir? S3 depolama için olsa da, client ile etkileşimi olmayan websitelerine statik websitesi denir. Örneğin nöbetçi eczane websitesi. Kullanıcı girer bakar çıkar. Buna static webhosting denir. Server database yoktur.

What is Static Website Hosting?



- Static Website Hosting is a website that contains **simple web components**.
- Uses HTML, CSS, images, etc.
- No **server, database** or any **application code**.

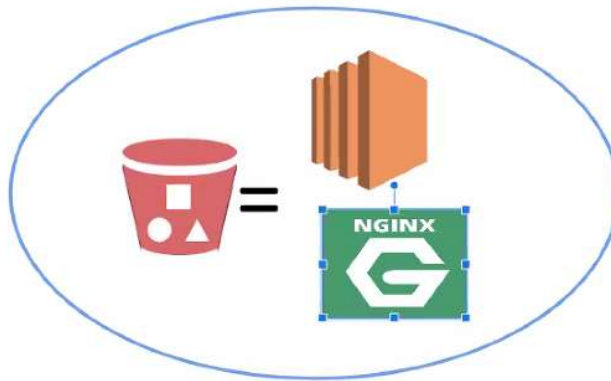
Normalde aplikasyonlar için saksıya nginx e ihtiyaç var:



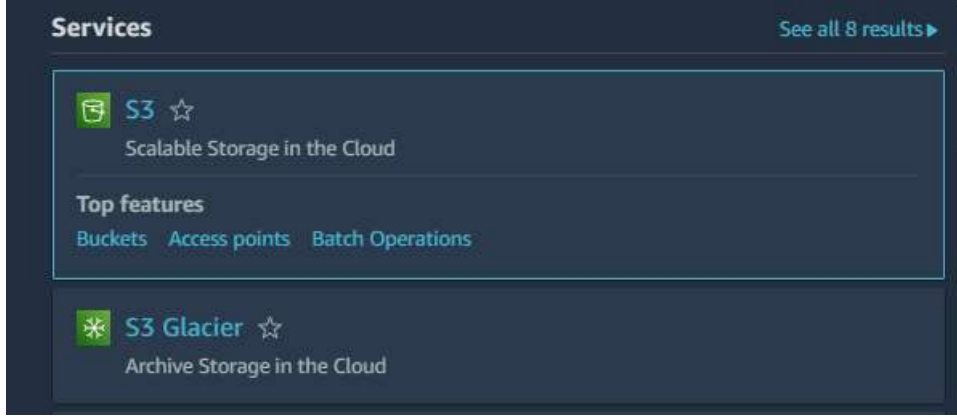
Static website hosting de ise bucket nginx ve server vazifesi görür. Portfolio siteleri böyle yapılır. Server maliyeti olmadan websitesi yayınlamayı sağlar.



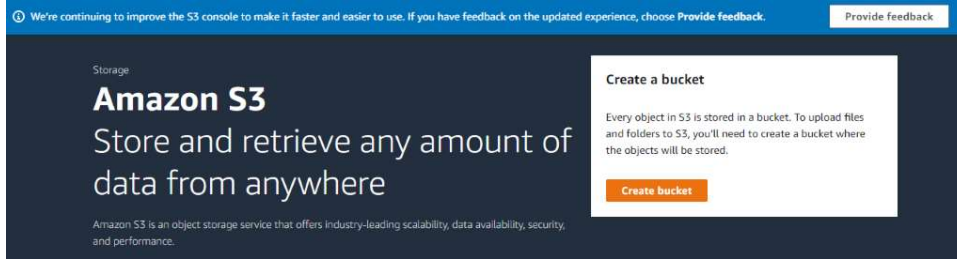
Static Website Hosting



S3 Glasier aslında ayrı bir servis ancak S3 içinden de ulaşılır:



İlk bucket ımızı oluşturmak için creat bucket diyoruz:



General configuration

Bucket name

Bucket name must be globally unique and must not contain spaces or uppercase letters. See rules for bucket naming [\[?\]](#)

AWS Region

US East (N. Virginia) us-east-1 ▼

Copy settings from existing bucket - *optional*

Only the bucket settings in the following configuration are copied.

Choose bucket

Bucket name uniq (benzersiz) olmak zorunda. Bir ismi başkası kullanamaz.

See rules for bucket naming sekmesinden bucket ismi verme kurallarına bakabilirsiniz:

Bucket globaldir ancak 3 tane AZ de depolayacağı için region seçmemizi ister. Burada önemli olan şirketimizin yakın olduğu region seçmeliyiz. Region değişse de bucket ismi başka regionda kullanılamaz.

Banka gibi düşünebiliriz. Banka hesabını antalya da açarsın ama parayı tüm bankamatiklerden çekebilirsin.

Object Ownership [Info](#)

Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership determines who can specify access to objects.

☐ ACLs disabled (recommended)

All objects in this bucket are owned by this account. Access to this bucket and its objects is specified using only policies.

☒ ACLs enabled

Objects in this bucket can be owned by other AWS accounts. Access to this bucket and its objects can be specified using ACLs.

Object Ownership

☒ Bucket owner preferred

If new objects written to this bucket specify the bucket-owner-full-control canned ACL, they are owned by the bucket owner. Otherwise, they are owned by the object writer.

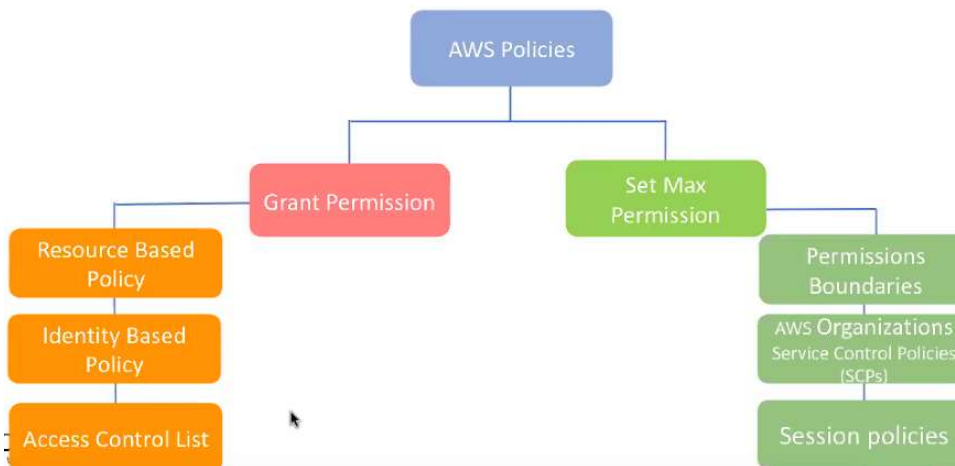
☐ Object writer

The object writer remains the object owner.

i If you want to enforce object ownership for new objects only, your bucket policy must specify that the bucket-owner-full-control canned ACL is required for object uploads. [Learn more](#)

ACLs enabled diyoruz. ACL nedir? Üçüncü kişilere kontrol vermek için kullanılan bir policy dir:

► Policy Types



Block Public Access settings for this bucket

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to this bucket and its objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to this bucket or objects within, you can customize the individual settings below to suit your specific storage use cases. [Learn more](#)

☒ Block all public access

Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another.

☒ Block public access to buckets and objects granted through *new* access control lists (ACLs)

S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.

☒ Block public access to buckets and objects granted through *any* access control lists (ACLs)

S3 will ignore all ACLs that grant public access to buckets and objects.

☒ Block public access to buckets and objects granted through *new* public bucket or access point policies

S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources.

☒ Block public and cross-account access to buckets and objects through *any* public bucket or access point policies

S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.

Buradaki tik i kaldırmadığımız sürece hiç kimse bu bucket a erişemez. İnternet üzerinden erişime kapalı olur.

Versioning ve tag kısmını geçiyoruz.

Default encryption

Automatically encrypt new objects stored in this bucket. [Learn more](#)

Server-side encryption

☒ Disable

☐ Enable

Server-side encryption ne demek. Bucket içinde tutulduğu sürece kriptolu tutulur. Dışarı çıktığında kriptosuz olarak çıkar ki görülebilsin.

▼ Advanced settings

Object Lock

Store objects using a write-once-read-many (WORM) model to help you prevent objects from being deleted or overwritten for a fixed amount of time or indefinitely. [Learn more](#)

☒ Disable

☐ Enable

Permanently allows objects in this bucket to be locked. Additional Object Lock configuration is required in bucket details after bucket creation to protect objects in this bucket from being deleted or overwritten.

 Object Lock works only in versioned buckets. Enabling Object Lock automatically enables Bucket Versioning.

Advanced settings lerde object lock yanlışlıkla değıştirilmesini silinmesini istemediğimiz bir data için bir güvenlik önlemdir.

Create bucket diyoruz.

The screenshot shows the Amazon S3 Buckets page. At the top, there's a navigation bar with 'Amazon S3' and 'Buckets'. Below this, there's a section for 'Account snapshot' with a 'View Storage Lens dashboard' button. The main section is titled 'Buckets (1)' and includes a search bar, a refresh button, and buttons for 'Copy ARN', 'Empty', 'Delete', and 'Create bucket'. A table lists the bucket 'emreaws205' with columns for Name, AWS Region (US East (N. Virginia) us-east-1), Access (Bucket and objects not public), and Creation date (December 22, 2022, 20:12:30 (UTC+01:00)).

Name	AWS Region	Access	Creation date
emreaws205	US East (N. Virginia) us-east-1	Bucket and objects not public	December 22, 2022, 20:12:30 (UTC+01:00)

Bucket oluşturuldu. Yukarıdaki tik i kaldırmadığımız için *bucket and objects not public* diyor. Üstüne tıklayıp bucket içine giriyoruz:

The screenshot shows the Amazon S3 Objects page for the bucket 'emreaws205'. It features a search bar, buttons for 'Copy S3 URI', 'Copy URL', 'Download', 'Open', 'Delete', and 'Actions'. There are also buttons for 'Create folder' and 'Upload'. The table below shows 'No objects' and a message 'You don't have any objects in this bucket.' with an 'Upload' button.

Name	Type	Last modified	Size	Storage class
No objects				

İçeri boş.

Aws dersi reposundaki s3 klasöründeki dosyaları sürükleyerek bucket içine atalım:

<input type="checkbox"/>	Name	Folder	Type	Size
<input type="checkbox"/>	cat.jpg	-	image/jpeg	185.7 KB

Destination

Destination

s3://emreaws205

► **Destination details**

Bucket settings that impact new objects stored in the specified destination.

► **Permissions**

Grant public access and access to other AWS accounts.

► **Properties**

Specify storage class, encryption settings, tags, and more.

Cancel **Upload**

Sağ alttan upload diyorum. Dosya yüklendi:

Objects (1)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Find objects by prefix

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	cat.jpg	jpg	December 22, 2022, 20:16:11 (UTC+01:00)	185.7 KB	Standard

Burada sağ üstteki upload sekmesine basarak tekrar drag and drop ile dosya ekleyebilirim.

Menülerde objects nesneleri gösteriyor:

Objects (2)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Find objects by prefix

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	cat_3.jpg	jpg	December 22, 2022, 20:17:24 (UTC+01:00)	25.9 KB	Standard
<input type="checkbox"/>	cat.jpg	jpg	December 22, 2022, 20:16:11 (UTC+01:00)	185.7 KB	Standard

Properties özellikleri gösterir:

Özelliklerini değiştirebiliriz. Requester pays datayı request eden ücretini ödesin özelliğidir:

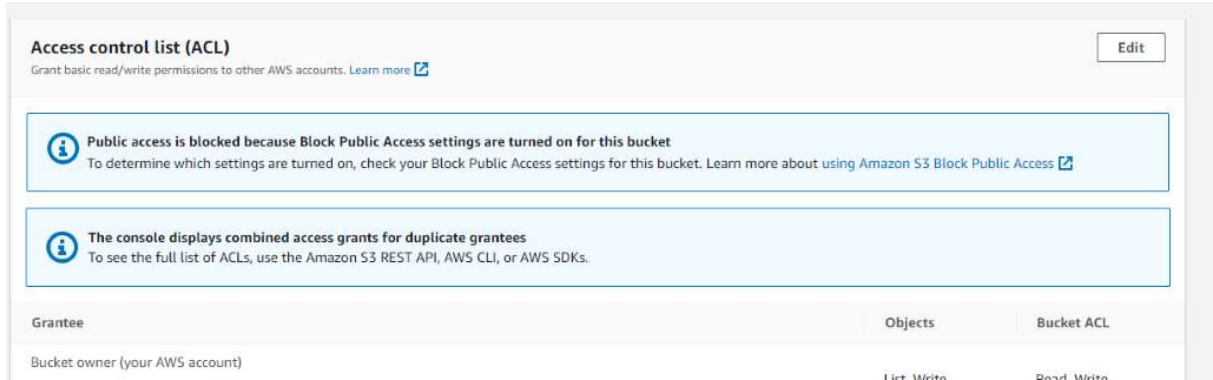
Requester pays

When enabled, the requester pays for requests and data transfer costs, and anonymous access to this bucket is disabled. [Learn more](#)

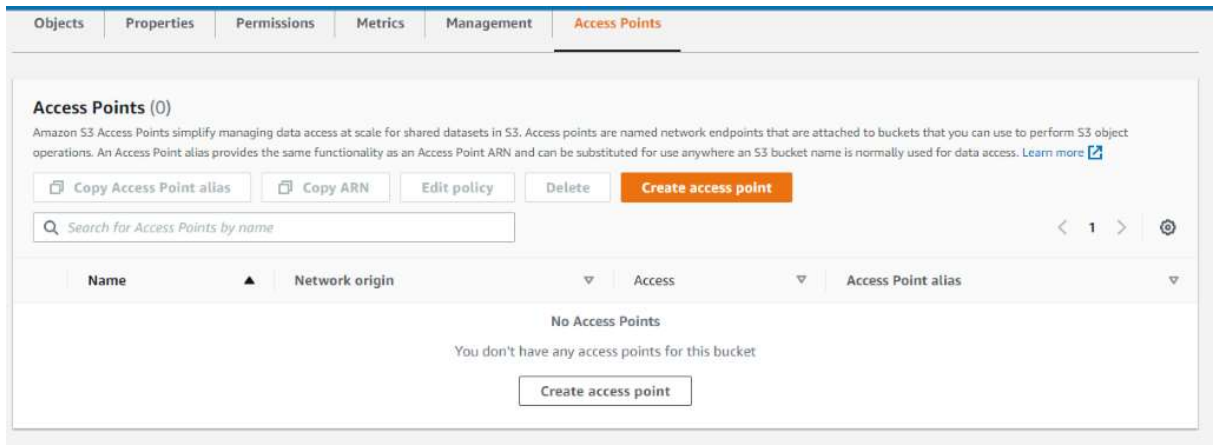
Requester pays

Disabled

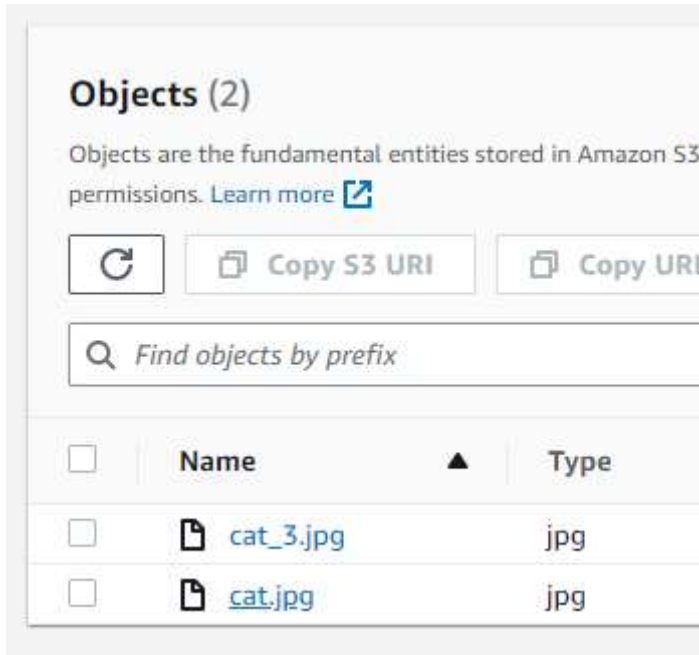
Permissions izinleri gösterir. Bucket lar resource based policy dir.:



Access point de direk erişim sağlayan bir kısa yoldur:



Cat.jpg e tıklayalım:



Object URL websitesini hazırlarken bu görselin çıkması için bu url i çekerek yayınlar:

Properties	Permissions	Versions
Object overview		
Owner y.emre.aydeniz	S3 URI s3://emreaws205/cat.jpg	
AWS Region US East (N. Virginia) us-east-1	Amazon Resource Name (ARN) arn:aws:s3:::emreaws205/cat.jpg	
Last modified December 22, 2022, 20:16:11 (UTC+01:00)	Entity tag (Etag) a9c4c875975145f5ffffbc3dce1a8e78	
Size 185.7 KB	Object URL https://emreaws205.s3.amazonaws.com/cat.jpg	
Type jpg		
Key		

Bu URL yi web browsere yapıştırılam. Public olmadığı için erişim vermeyecektir:

This XML file does not appear to have any style information associated with it. The document tree is shown below:

```
<?xml version="1.0" encoding="UTF-8" ?>
<Error>
  <Code>AccessDenied</Code>
  <Message>Access Denied</Message>
  <RequestId>N6GC5KZ35NVGXRRT</RequestId>
  <HostId>AxI+H0/N+teZ09Ke32hRztpD5EcTvagZq0kCcnshciNySjfdc01iYmvGb8PNsCsbG+OXZpR6Cfc=</HostId>
</Error>
```

Bucket ın içine gidip permissions a basalım ve Block public access menüsünde edit diyelim:

Block u kaldırıyorum save changes diyorum:

☐ **Block all public access**
Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another.

☐ **Block public access to buckets and objects granted through new access control lists (ACLs)**
S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.

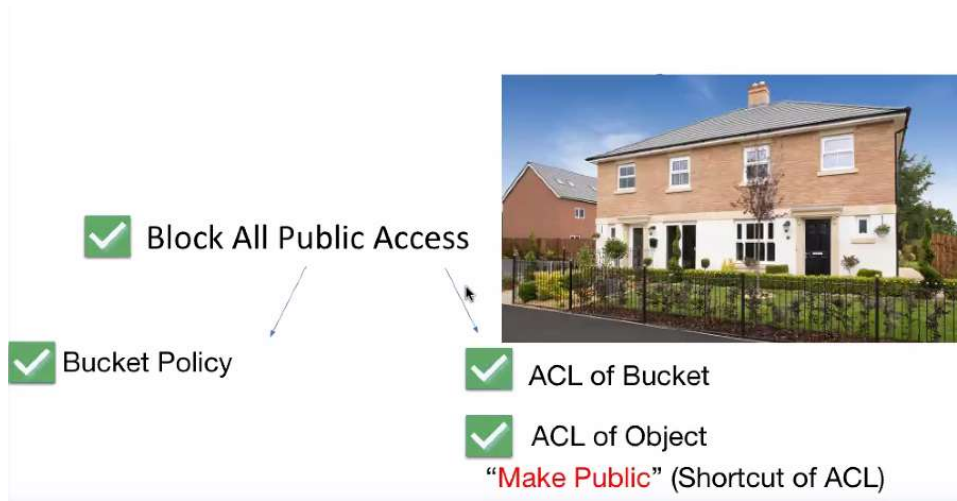
☐ **Block public access to buckets and objects granted through any access control lists (ACLs)**
S3 will ignore all ACLs that grant public access to buckets and objects.

☐ **Block public access to buckets and objects granted through new public bucket or access point policies**
S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources.

☐ **Block public and cross-account access to buckets and objects through any public bucket or access point policies**
S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.

Cancel Save changes

Ancak yine url deki cat.jpg ye erişim vermez. Çünkü S3 üzerinde permission u iki şekilde verebiliriz.



Birincisi resource based policy (Bucket Policy)

İkincisi ACLs ile. Biz bucket oluştururken ACLs seçtik. Bunu da make publick yapmamız gerekir.

Biz block u kaldırarak çitin içine girdik. Eve girmemiz için iki kapı var ancak biz sağdaki kapının anahtarını seçtik. Şimdi o anahtarı kullanmamız gerekiyor. Bucket a geri dönelim:

ACLs obje obje yapılır. Objects te cat.jpg yi seçip Actions/MAke public ... seçiyoruz:

emreaws205 Info

Objects Properties Permissions Metrics Management Access Points

Objects (2)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. [Learn more](#)

Copy S3 URI Copy URL Download Open Delete

Find objects by prefix

	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	cat_3.jpg	jpg	December 22, 2022, 20:17:24 (UTC+01:00)	25.9 KB	Standard
<input checked="" type="checkbox"/>	cat.jpg	jpg	December 22, 2022, 20:16:11 (UTC+01:00)	185.7 KB	Standard

Query with S3 Select

Edit actions

- Rename object
- Edit storage class
- Edit server-side encryption
- Edit metadata
- Edit tags
- Make public using ACL

Actions Create folder Upload

Make public diyoruz:

Make public [Info](#)

The make public action enables public read access in the object access control list (ACL) settings. [Learn more](#)

⚠ When public read access is enabled and not blocked by Block Public Access settings, anyone in the world can access the specified objects.

Specified objects

Find objects by name

< 1 >

Name ▲	Type ▼	Last modified ▼	Size ▼
 cat.jpg	jpg	December 22, 2022, 20:16:11 (UTC+01:00)	185.7 KB

Cancel

Make public

Browser a gidip refresh ediyorum ve kediye görebiliyorum:



Nesne olarak erişim verdiğimiz için cat3 ü browser da halen göremeyiz.

Bir diğer yönetm, cat3 e tıklayalım ve permissions a gidelim:

cat_3.jpg [Info](#)

Copy S3 URI

Download

Open

Object actions

Properties

Permissions

Versions


Access control list (ACL)

Edit

Grant basic read/write permissions to AWS accounts. [Learn more](#)

Grantee	Object	Object ACL
<div>Object owner (your AWS account)</div> <div>Canonical ID: 9257c8d277de6f27af04566d90be5d477787ad8b5655b204d3247f92a183d2b0</div>	Read	Read, Write
<div>Everyone (public access)</div> <div>Group: http://acs.amazonaws.com/groups/global/AllUsers</div>	-	-
<div>Authenticated users group (anyone with an AWS account)</div>	-	-


Edit diyelim. Public access e read tik ini işaretli hale getirip save changes diyoruz.:

 When you grant access to the Everyone or Authenticated users group grantees, anyone in the world can access this object.

[Learn more](#)

☒ I understand the effects of these changes on this object.

Bu kutucuğun da işaretli olması gerekir.

Access control list (ACL)		
Grant basic read/write permissions to AWS accounts. Learn more		
Grantee	Objects	Object ACL
Object owner (your AWS account) Canonical ID: 9257c8d277de6f27af04566d90be5d477787ad8b5655b204d3247f92a183d2b0	<input checked="" type="checkbox"/> Read	<input checked="" type="checkbox"/> Read <input checked="" type="checkbox"/> Write
Everyone (public access) Group: http://acs.amazonaws.com/groups/global/AllUsers	<input checked="" type="checkbox"/>  Read	<input type="checkbox"/> Read <input type="checkbox"/> Write

Cat3 te browser da görülecektir.

Nesnelerin ismini değiştirebiliriz:

emreaws205 Info

Objects Properties Permissions Metrics Management Access Points

Objects (2)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

[Refresh](#) [Copy S3 URI](#) [Copy URL](#) [Download](#) [Open](#) [Delete](#) [Actions](#)

[Create folder](#) [Upload](#)

Find objects by prefix

	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	cat_3.jpg	jpg	December 22, 2022, 20:17:24 (UTC+01:00)	25.9 KB	Standard
<input checked="" type="checkbox"/>	cat.jpg	jpg	December 22, 2022, 20:16:11 (UTC+01:00)	185.7 KB	Standard

İsim değişince url de değişecektir.

S3 de dosya demek prefix demektir. Create folder deyip yeni folder oluşturabiliriz:

Objects (2)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

[Refresh](#) [Copy S3 URI](#) [Copy URL](#) [Download](#) [Open](#) [Delete](#) [Actions](#)

[Create folder](#) [Upload](#)

Find objects by prefix

	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	cat_3.jpg	jpg	December 22, 2022, 20:17:24 (UTC+01:00)	25.9 KB	Standard
<input type="checkbox"/>	cat.jpg	jpg	December 22, 2022, 20:16:11 (UTC+01:00)	185.7 KB	Standard

Folder1 ismini verdim:

Folder

Folder name

folder1 /

Folder names can't contain "/". See rules for naming

Server-side encryption

The following settings apply only to the new folder object and not to the objects contained within it.

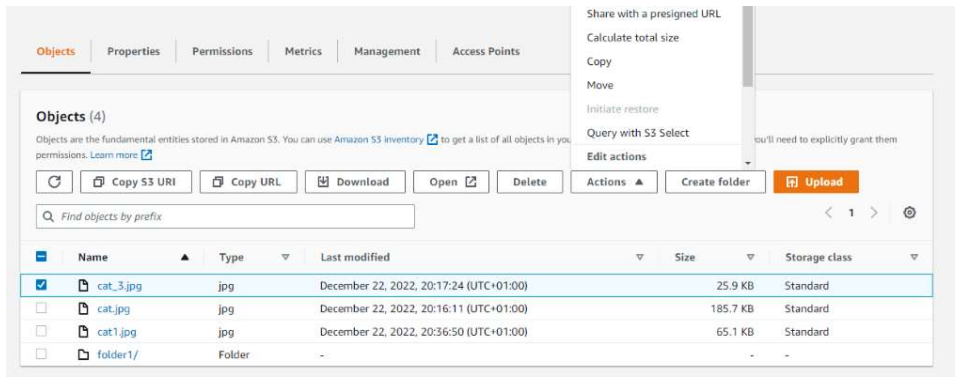
Server-side encryption

☒ Disable

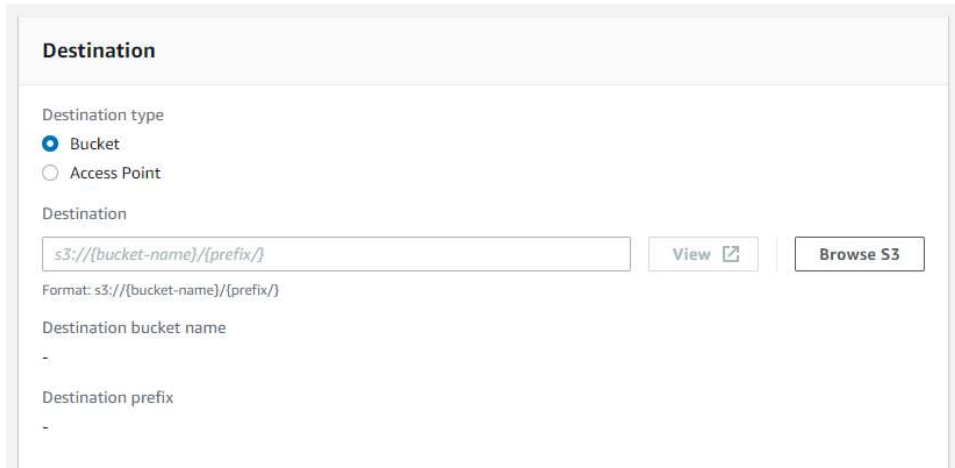
☐ Enable

Cancel [Create folder](#)

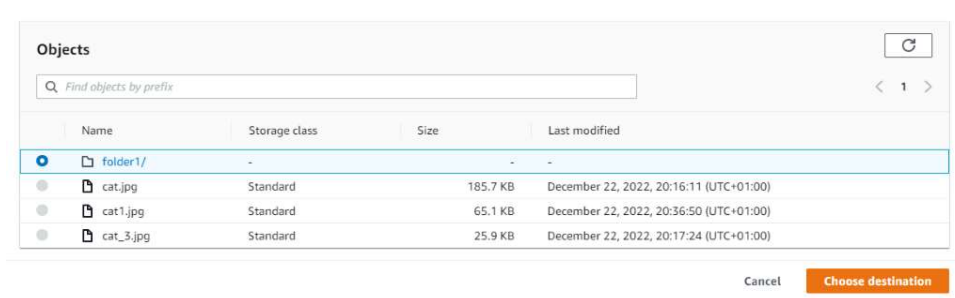
Cat3 ü folder1 e taşımak için seçiyorum actions tan move diyorum:



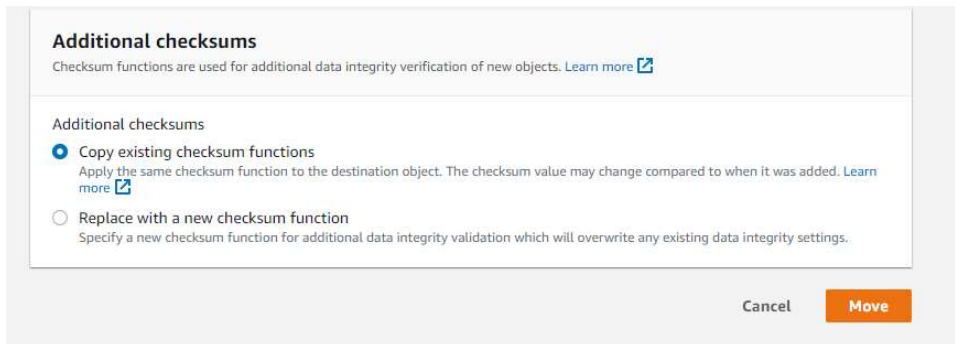
Destinations dan browse s3 diyorum:



Folder1 i seçip choose destination diyorum:



Sonra en alta gelip move diyorum:



Objects e geldiğimde cat3 ü göremiyoruz çünkü folder1 içinde:

Objects (3)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

[Refresh](#) [Copy S3 URI](#) [Copy URL](#) [Download](#) [Open](#) [Delete](#) [Actions](#)

[Create folder](#) [Upload](#)

Find objects by prefix

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	cat.jpg	jpg	December 22, 2022, 20:16:11 (UTC+01:00)	185.7 KB	Standard
<input type="checkbox"/>	cat1.jpg	jpg	December 22, 2022, 20:36:50 (UTC+01:00)	65.1 KB	Standard
<input type="checkbox"/>	folder1/	Folder	-	-	-

folder1/ [Copy S3 URI](#)

Objects (1)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

[Refresh](#) [Copy S3 URI](#) [Copy URL](#) [Download](#) [Open](#) [Delete](#) [Actions](#)

[Create folder](#) [Upload](#)

Find objects by prefix

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	cat_3.jpg	jpg	December 22, 2022, 20:46:49 (UTC+01:00)	25.9 KB	Standard

Cat3 ün url si de değışti:

Object URL

https://emreaws205.s3.amazonaws.com/folder1/cat_3.jpg

Şimdi tekrar block all public access i aktif hale getirelim ve yeni bir dosya ekleyelim (cat1):

Şu an cat1 I browserda göremem çünkü çiti az önce kapattım. Objects e geldim cat1 I seçtim actions tan share with a presigned URL diyoruz:

Objects (4)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

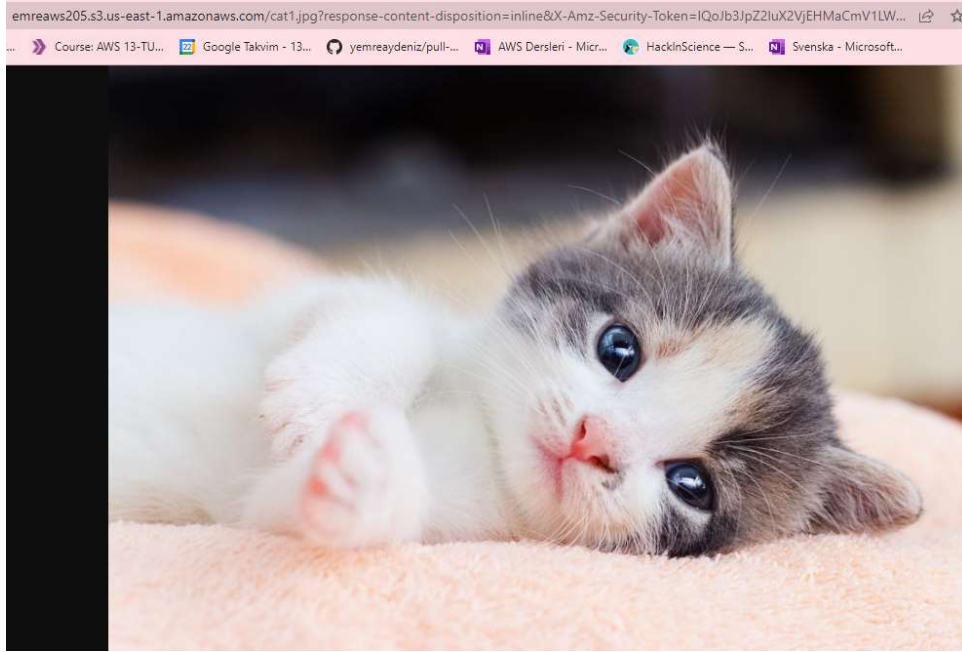
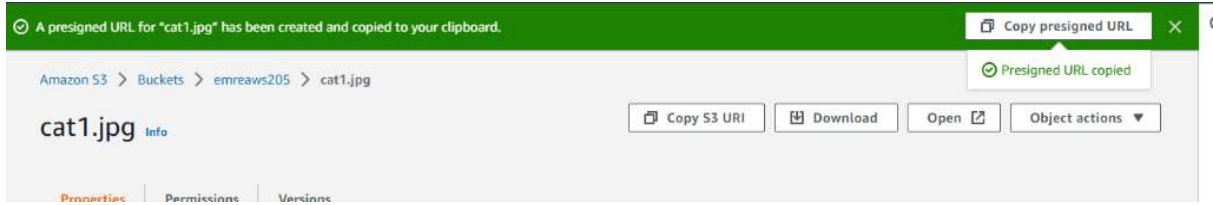
[Refresh](#) [Copy S3 URI](#) [Copy URL](#) [Download](#) [Open](#) [Delete](#) [Actions](#) [Create folder](#) [Upload](#)

Find objects by prefix

<input type="checkbox"/>	Name	Type	Last modified	Size	Storage class
<input type="checkbox"/>	cat_3.jpg	jpg	December 22, 2022, 20:17:24 (UTC+01:00)	25.9 KB	Standard
<input type="checkbox"/>	cat.jpg	jpg	December 22, 2022, 20:16:11 (UTC+01:00)	185.7 KB	Standard
<input checked="" type="checkbox"/>	cat1.jpg	jpg	December 22, 2022, 20:36:50 (UTC+01:00)	65.1 KB	Standard
<input type="checkbox"/>	folder1/	Folder	-	-	-

Share with a presigned URL
Calculate total size
Copy
Move
Initiate restore
Query with S3 Select
Edit actions

Burad bir süre giriyoruz. Copy presigned URL diyerek linki alıyoruz.Bu süre içinde bu linke sahip herkes bu datayı görebilir. :

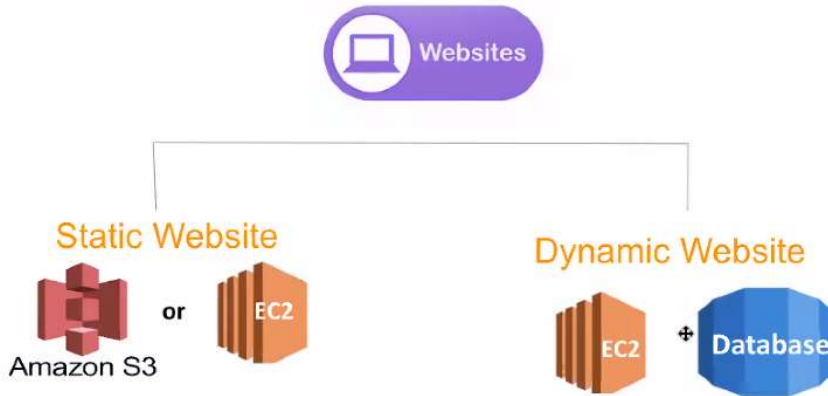


Bu da bacadan girme yöntemidir:



Static web hosting:

What is Static and Dynamic Website Hosting?



Çoğu websitesi static website tır.

Yeni bir bucket ayağa kaldıracaz. Bu kez bucket policy ile yöneteceğiz: ACLs yi disabled yapacaz:

Object Ownership [Info](#)
Control ownership of objects written to this bucket from other AWS accounts and the use of access control lists (ACLs). Object ownership determines who can specify access to objects.

☒ **ACLs disabled (recommended)**
All objects in this bucket are owned by this account. Access to this bucket and its objects is specified using only policies.

☐ **ACLs enabled**
Objects in this bucket can be owned by other AWS accounts. Access to this bucket and its objects can be specified using ACLs.

Object Ownership
Bucket owner enforced

Block u kaldırıp acknowledge ediyorum ve create bucket diyorum:

☐ **Block all public access**
Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another.

☐ **Block public access to buckets and objects granted through new access control lists (ACLs)**
S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.

☐ **Block public access to buckets and objects granted through any access control lists (ACLs)**
S3 will ignore all ACLs that grant public access to buckets and objects.

☐ **Block public access to buckets and objects granted through new public bucket or access point policies**
S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources.

☐ **Block public and cross-account access to buckets and objects through any public bucket or access point policies**
S3 will ignore public and cross-account access for buckets or access points with policies that grant public access to buckets and objects.

Turning off block all public access might result in this bucket and the objects within becoming public
AWS recommends that you turn on block all public access, unless public access is required for specific and verified use cases such as static website hosting.

☒ I acknowledge that the current settings might result in this bucket and the objects within becoming public.

Bucket ın içine giriyorum. Web sitesi yayınlanacağı için html, css vb olması lazım içinde. Index.html:

```
<> index.html M X
C: > Users > a > Desktop > clarusway-aws-devops-13 > aws > hands-on > 12_22_2022_S3_1 > <>
1  <html>
2    <head>
3      <title> Cute Cat </title>
4    </head>
5    <body>
6      <center><h1> My Cute Cat V2</h1><center>
7      <center></center>
8      <!-- <p><center> <a href="/kitten/cutest.html"> Click here
9    </body>
10 </html>
```

Cat.jpg ile index.html l bucket a yüklüyerek upload diyoruz:

<input type="checkbox"/>	Name	Folder	Type	Size
<input type="checkbox"/>	cat.jpg	-	image/jpeg	185.7 KB
<input type="checkbox"/>	index.html	-	text/html	281.0 B

Destination
Destination
s3://emrestaticweb
► Destination details
Bucket settings that impact new objects stored in the specified destination.

► Permissions
Grant public access and access to other AWS accounts.

► Properties
Specify storage class, encryption settings, tags, and more.

Cancel Upload

Bucket içinde properties e gidip en aşağı iniyoruz. Static web hosting l edit deyip enable yapıyoruz:

Index dosyamızın adını yazıyoruz. Error page için de aynısını yazabiliriz:

☒ Enable

Hosting type

☒ Host a static website
Use the bucket endpoint as the web address. [Learn more](#)

☐ Redirect requests for an object
Redirect requests to another bucket or domain. [Learn more](#)

i For your customers to access content at the website endpoint, you must make all your content publicly readable. To do so, you can edit the S3 Block Public Access settings for the bucket. For more information, see [Using Amazon S3 Block Public Access](#)

Index document
Specify the home or default page of the website.

index.html

Error document - optional
This is returned when an error occurs.

index.html

Redirection rules - optional
Redirection rules, written in JSON, automatically redirect webpage requests for specific content. [Learn more](#)

Save changes diyoruz.

En alta geldik ve bize bir endpoint verdi. Websitesi adı bunu domain de yapamaz ileride.:

Static website hosting
Use this bucket to host a website or redirect requests. [Learn more](#)

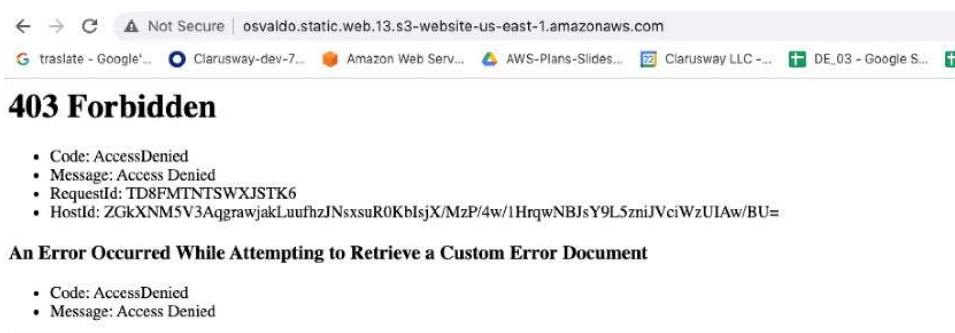
Static website hosting
Enabled

Hosting type
Bucket hosting

Bucket website endpoint
When you configure your bucket as a static website, the website is available at the AWS Region-specific website endpoint of the bucket. [Learn more](#)

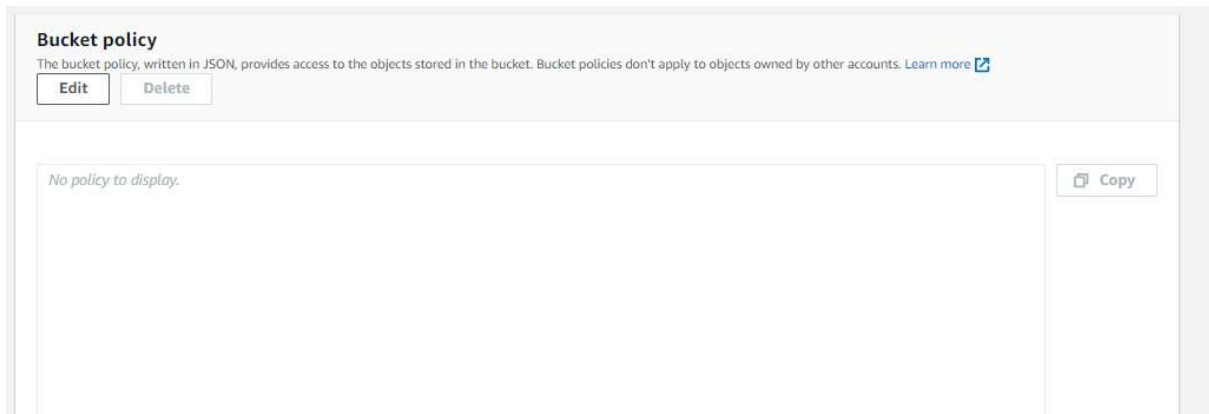
<http://emrestaticweb.s3-website-us-east-1.amazonaws.com>

Bunu browserda açmaya çalıştığımızda 403 hatası aldık:



Çünkü bucket policy yapmadık. Bucket ıma gidip permissions menüsüne gidiyoruz:

Bucket policy e edit diyoruz:



Bunu içine yapııştırıyoruz:

```
{} aws-s3-static-website-policy.json X
C: > Users > a > Desktop > clarusway-aws-devops-13 > aws > hands-on > 12_22_2022_S3_1 > {} aws-s
1  {}
2  "Version": "2012-10-17",
3  "Statement": [
4    {
5      "Sid": "PublicReadGetObject",
6      "Effect": "Allow",
7      "Principal": "*",
8      "Action": "s3:GetObject",
9      "Resource": "arn:aws:s3:::don't forget to change me/*"
10   }
11 ]
12 }
```

Bu bir resource based policy.



Burada principal request eden action s3 teki object

Principle yerine account id ya da IAM user yazılarak daraltılabilir.

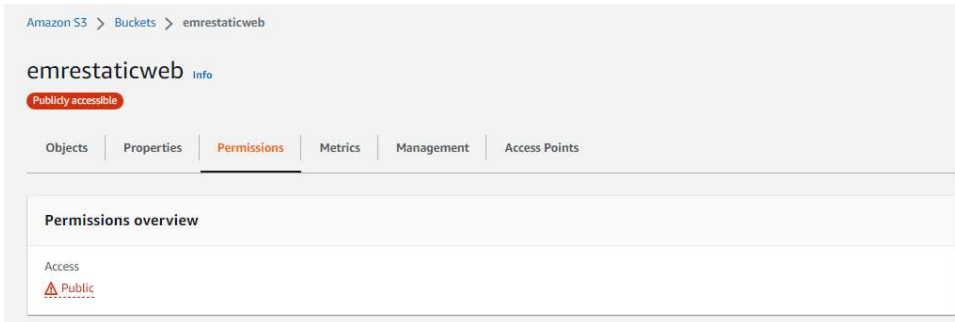
Burada resource u (sonundaki /* kalacak - /* bunun altındaki bütün objeler demek yani bunun altındaki bütün objeleri görünür kıl)Bucket ARN ile değiştireceğiz:

```
Bucket ARN
arn:aws:s3:::emrestaticweb

Policy

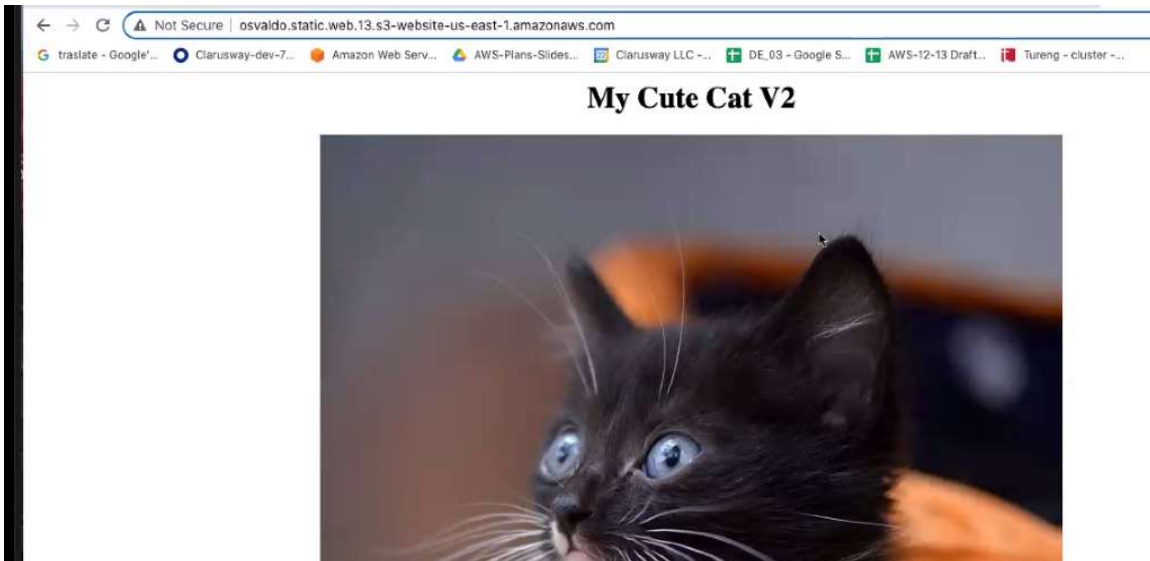
1 {
2   "Version": "2012-10-17",
3   "Statement": [
4     {
5       "Sid": "PublicReadGetObject",
6       "Effect": "Allow",
7       "Principal": "*",
8       "Action": "s3:GetObject",
9       "Resource": "arn:aws:s3:::emrestaticweb/*"
10    }
11  ]
12 }
```

Save changes diyoruz.



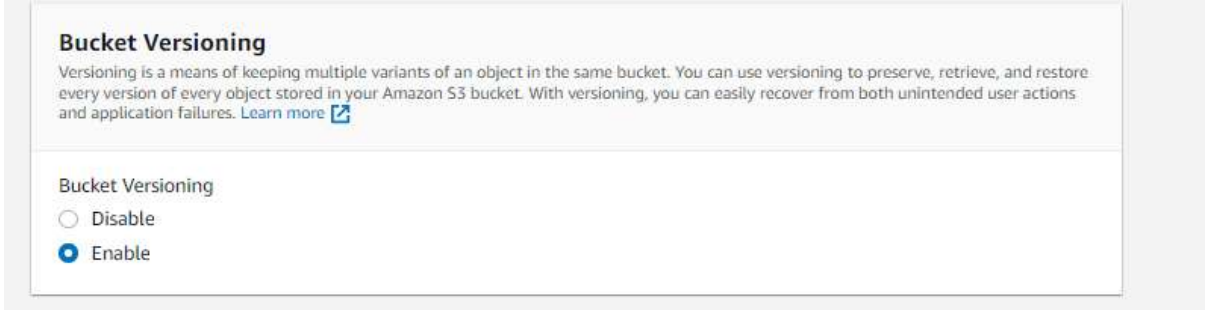
Publicly accesable olarak uyarılıyoruz (herkes tarafından erişilebilir)

Şimdi websitesi formatında browserda static web site çalıştı:



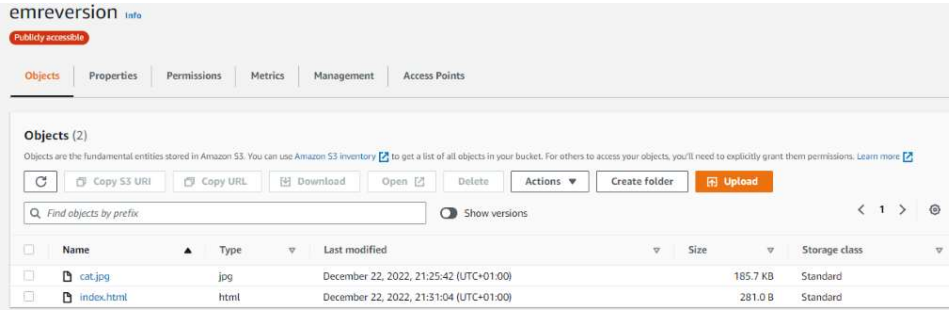
Cat in url sini browserda girerek fotoyu yine görürüz ancak bu bir url dir. Static web site den aldığımız url ise bir endpoint. Domain name ile kullanılabilir.

Şimdi versiyonlama yapcaz. Yeniden bir bucket ve statıc web site yapcaz.Az öncekinden farklı olarak versionlamayı enable yapıp create bucket diyoruz:

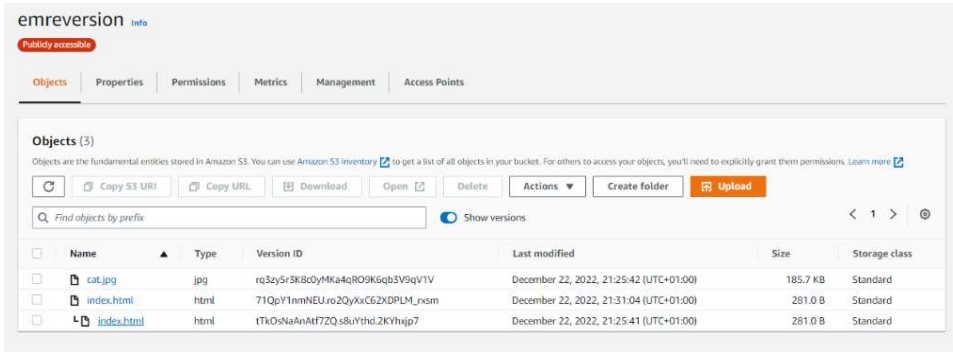


Bu bucket a da indexhtml ve cat.jpg l atıyoruz.

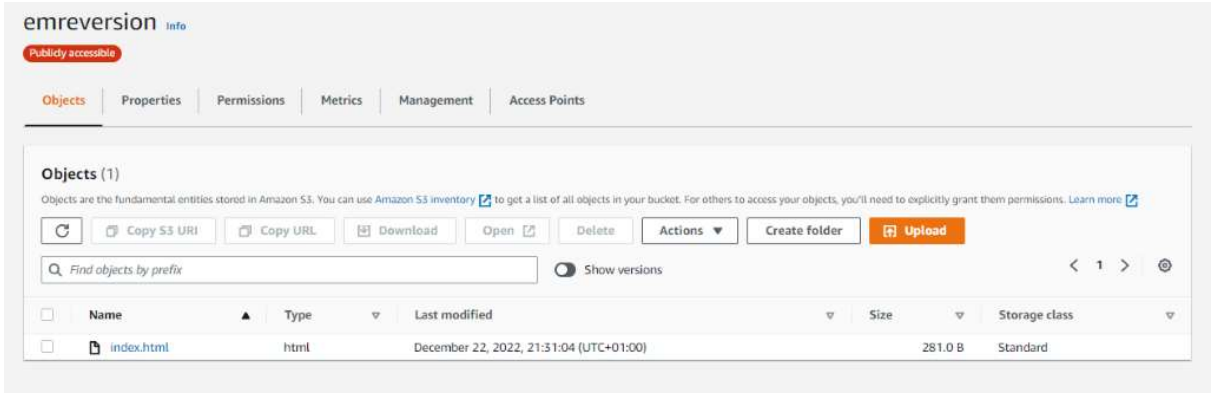
Static website ayarlarını yaptık. Şimdi index.html l tekrar atıyoruz bucket a. Bucket içinde bir değişiklik yok:



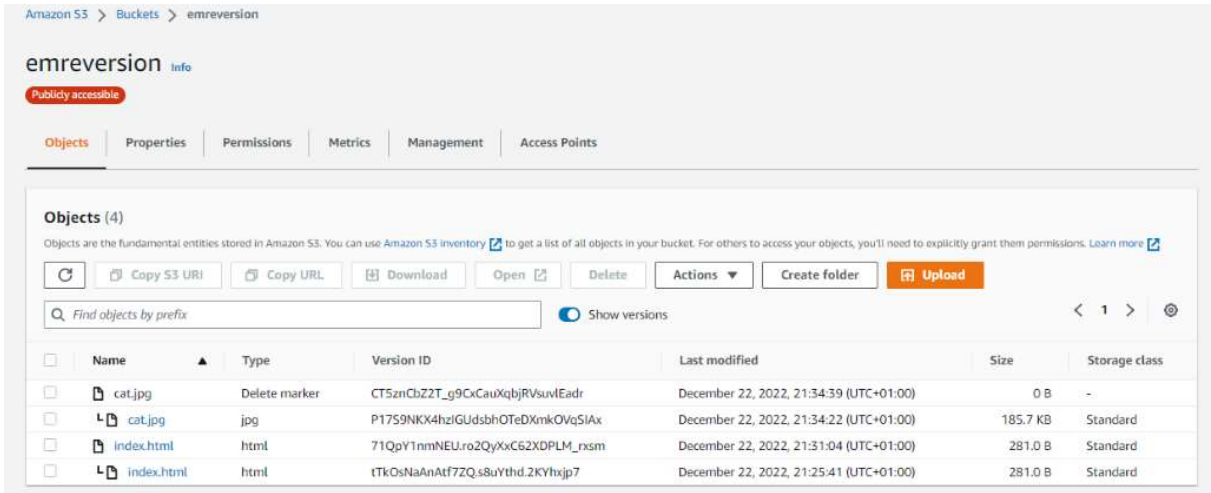
Show versions butonun aktif hale getirince index.html in versiyonunu gördük:



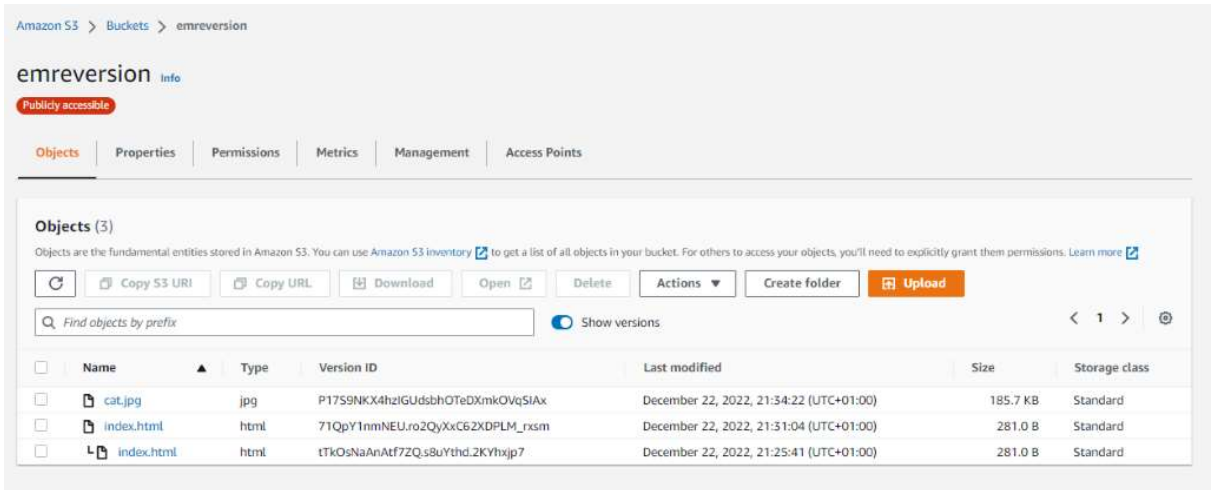
Versiyonlara id vererek takip ediyor. Show versions butonunu pasif hale getirip Cat.jpg yi silelim:



Show versions butonunu aktif hale getirince versiyon olarak görüyorum:



Burada en üstteki delete marker tipindeki cat.jpg yi siliyorum. Bu aslında silindi bilgisi. Biz şimdi silindi bilgisini siliyoruz.:



Cat.jpg geri geliyor.



Verisyonlama açıkken bir versiyonu silersen kalıcı olarak siler:

Specified objects

Find objects by name

Name	Version ID	Type	Last modified	Size
index.html	71QpY1nmNEU.ro2QyXxC62XDPLM_rxsm	html	December 22, 2022, 21:31:04 (UTC+01:00)	281.0 B

Permanently delete objects?

To confirm deletion, type *permanently delete* in the text input field.

permanently delete

Cancel Delete objects

Son versiyon index.html i kalıcı olarak silmiş olduk:

emreversion Info

Publicly accessible

Objects Properties Permissions Metrics Management Access Points

Objects (2)

Objects are the fundamental entities stored in Amazon S3. You can use [Amazon S3 inventory](#) to get a list of all objects in your bucket. For others to access your objects, you'll need to explicitly grant them permissions. [Learn more](#)

Copy S3 URI Copy URL Download Open Delete Actions Create folder Upload

Find objects by prefix Show versions

	Name	Type	Version ID	Last modified	Size	Storage class
<input type="checkbox"/>	cat.jpg	jpg	P1759NKX4hzlGUdsbhOTeDXmkOVqSIAx	December 22, 2022, 21:34:22 (UTC+01:00)	185.7 KB	Standard
<input type="checkbox"/>	index.html	html	tTkOsNaAnAtf7ZQ.s8uYthd.2KYhxp7	December 22, 2022, 21:25:41 (UTC+01:00)	281.0 B	Standard

Şimdi index.html içinde V2 yi V5 olarak değiştirelim ve yeni index.html l bucket a yükleyelim:

```
> index.html M X
> hands-on > 12_22_2022_S3_1 > index.html > html > body > center
1  <html>
2    <head>
3      <title> Cute Cat </title>
4    </head>
5    <body>
6      <center><h1> My Cute Cat V4</h1><center>
7      <center></center>
8      <!-- <p><center> <a href="/kitten/cutest.html"
9    </body>
10 </html>
```

Browser a gidip refresh ettiğimde V2 yazısı V4 olarak güncellendi:



Hiçbir bucket ıımızın ublic kalmaması lazım. Güvenlik açığı doğuyor:

Buckets (3) Info				
Buckets are containers for data stored in S3. Learn more				
<input type="text" value="Find buckets by name"/>				
Name	AWS Region	Access	Creation date	
<input type="radio"/> emreaws205	US East (N. Virginia) us-east-1	Bucket and objects not public	December 22, 2022, 20:12:30 (UTC+01:00)	
<input type="radio"/> emrestaticweb	US East (N. Virginia) us-east-1	Public	December 22, 2022, 21:00:31 (UTC+01:00)	
<input type="radio"/> emreversion	US East (N. Virginia) us-east-1	Public	December 22, 2022, 21:24:47 (UTC+01:00)	

Bucket ı silmeyeceksek dahi permissiondan block all public access I on yapcaz:

Edit Block public access (bucket settings) [Info](#)

Block public access (bucket settings)

Public access is granted to buckets and objects through access control lists (ACLs), bucket policies, access point policies, or all. In order to ensure that public access to all your S3 buckets and objects is blocked, turn on Block all public access. These settings apply only to this bucket and its access points. AWS recommends that you turn on Block all public access, but before applying any of these settings, ensure that your applications will work correctly without public access. If you require some level of public access to your buckets or objects within, you can customize the individual settings below to suit your specific storage use cases. [Learn more](#)

☒ Block all public access

Turning this setting on is the same as turning on all four settings below. Each of the following settings are independent of one another.

☒ Block public access to buckets and objects granted through *new* access control lists (ACLs)

S3 will block public access permissions applied to newly added buckets or objects, and prevent the creation of new public access ACLs for existing buckets and objects. This setting doesn't change any existing permissions that allow public access to S3 resources using ACLs.

☒ Block public access to buckets and objects granted through *any* access control lists (ACLs)

S3 will ignore all ACLs that grant public access to buckets and objects.

☒ Block public access to buckets and objects granted through *new* public bucket or access point policies

S3 will block new bucket and access point policies that grant public access to buckets and objects. This setting doesn't change any existing policies that allow public access to S3 resources.

Bucket ı silebilmemiz için içinin boş olması gerekir. İçini boşaltmak için versiyonlama yapıldıysa özellikle içine girip içini silmeyeceiz. Bucket listesinden seçip empty diyeceiz:

Buckets (3) [Info](#)
Buckets are containers for data stored in S3. [Learn more](#)

[Refresh](#) [Copy ARN](#) [Empty](#) [Delete](#) [Create bucket](#)

< 1 >

	Name	AWS Region	Access	Creation date
<input type="radio"/>	emreaws205	US East (N. Virginia) us-east-1	Bucket and objects not public	December 22, 2022, 20:12:30 (UTC+01:00)
<input type="radio"/>	emrestaticweb	US East (N. Virginia) us-east-1	Only authorized users of this account	December 22, 2022, 21:00:31 (UTC+01:00)
<input checked="" type="radio"/>	emreversion	US East (N. Virginia) us-east-1	Public	December 22, 2022, 21:24:47 (UTC+01:00)

Bucket ı boşalttıktıkta sonra bucket ı seçip delete diyoruz ve siliyoruz.

Bazen bucket silinse bile listede görülebilir bu önemli değil. Bazen de policy den ötürü silinemeyebilir. O durumda da önce policy silin sonra bucket ı silin.