

Lesson 05 Demo 09

Implementing Cache Configuration and Invalidation

Objective: To configure CloudFront distributions and perform cache invalidation to ensure timely updates of content served through Amazon CloudFront

Tools required: AWS workspace

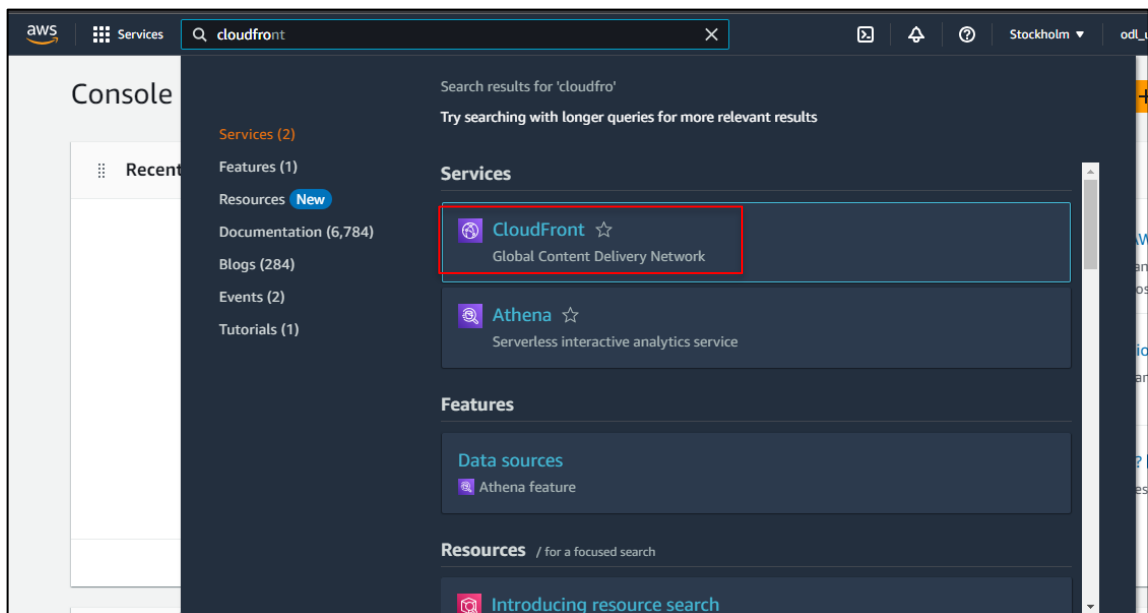
Prerequisites: Create an S3 bucket and have a text file uploaded

Steps to be followed:

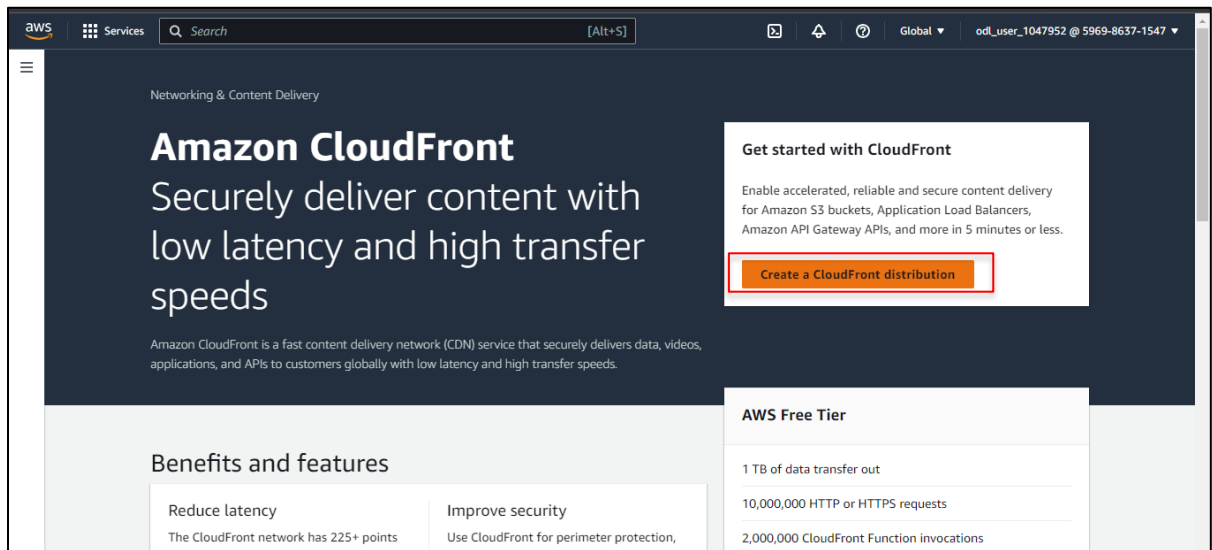
1. Create Distributions
2. Create Invalidation

Step 1: Create Distributions

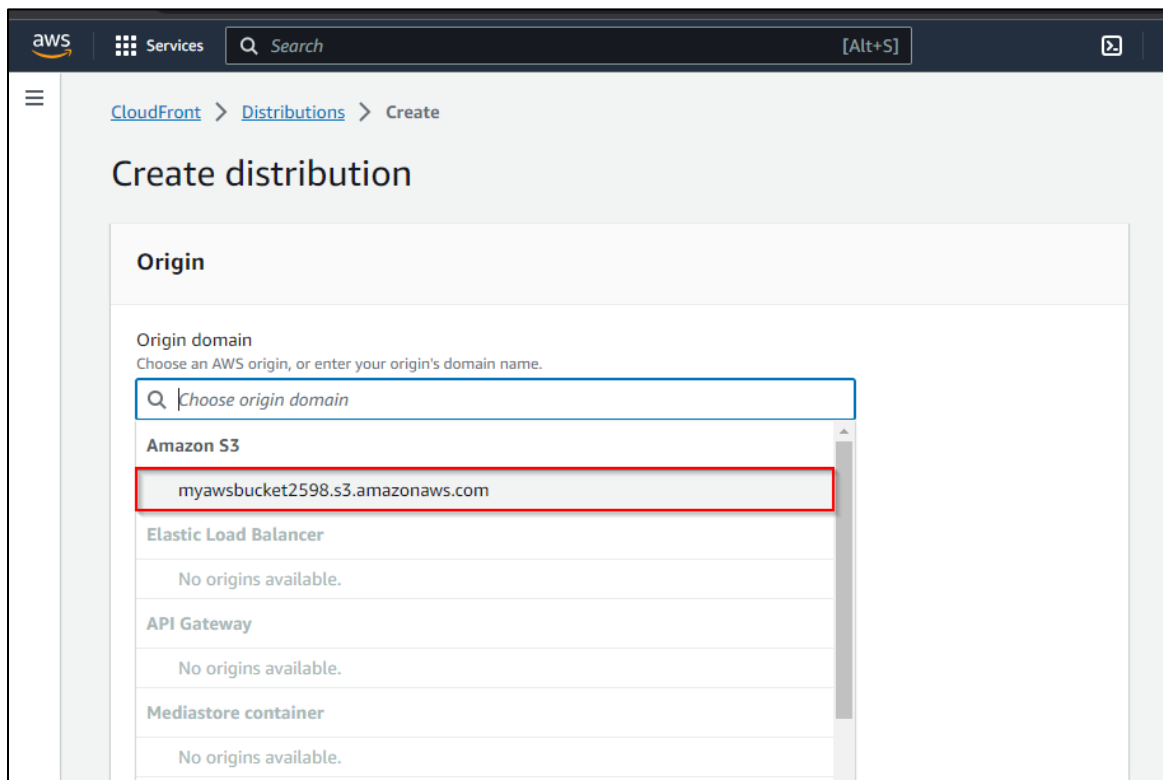
1.1 Navigate to the AWS Management Console and select **CloudFront**



1.2 Click on the **Create a CloudFront distribution** button

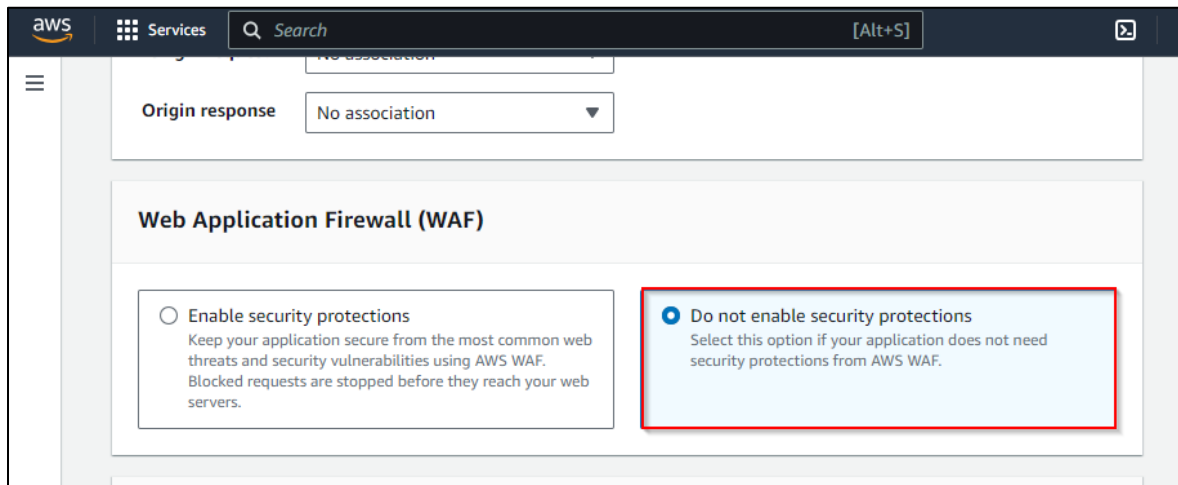


1.3 Choose the S3 bucket you have previously created as the origin domain



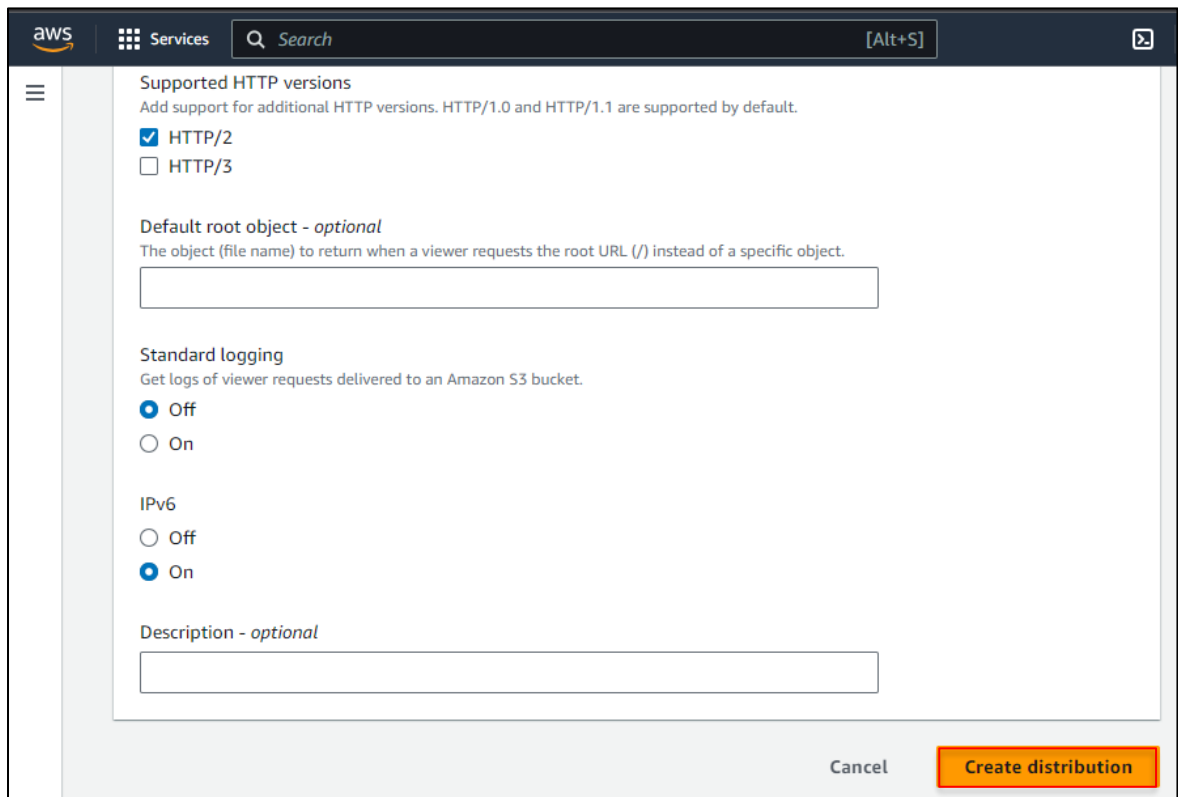
Note: Refer to the previous demos to learn how to create an S3 bucket.

1.4 Select **Do not enable security protections** for simplicity



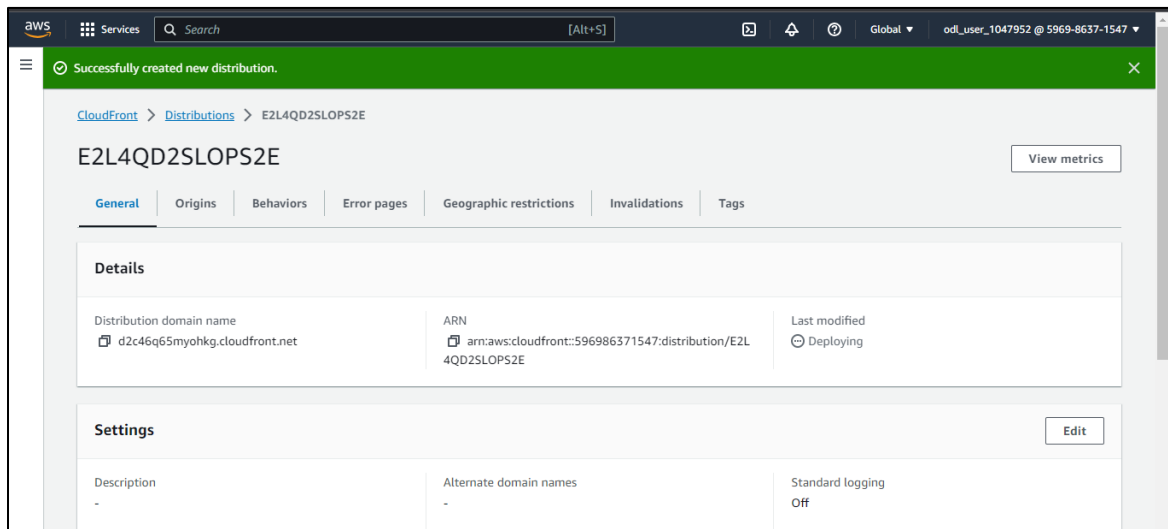
The screenshot shows the AWS IAM console interface. At the top, there's a search bar and a 'Services' menu. Below that, the 'Origin response' dropdown is set to 'No association'. The main section is titled 'Web Application Firewall (WAF)'. It contains two radio button options: 'Enable security protections' (which is unselected) and 'Do not enable security protections' (which is selected and highlighted with a red rectangular box). The 'Do not enable security protections' option includes a subtext: 'Select this option if your application does not need security protections from AWS WAF.'

1.5 Choose the default settings and click on **Create distribution**



The screenshot shows the AWS CloudFront console interface. At the top, there's a search bar and a 'Services' menu. The main section is titled 'Supported HTTP versions'. It includes a subtext: 'Add support for additional HTTP versions. HTTP/1.0 and HTTP/1.1 are supported by default.' Below this, there are two checkboxes: 'HTTP/2' (which is checked) and 'HTTP/3' (which is unchecked). The next section is 'Default root object - optional', with a subtext: 'The object (file name) to return when a viewer requests the root URL (/) instead of a specific object.' Below this is an empty text input field. The next section is 'Standard logging', with a subtext: 'Get logs of viewer requests delivered to an Amazon S3 bucket.' Below this are two radio buttons: 'Off' (which is selected) and 'On' (which is unselected). The next section is 'IPv6', with two radio buttons: 'Off' (which is unselected) and 'On' (which is selected). The final section is 'Description - optional', with an empty text input field. At the bottom right, there are two buttons: 'Cancel' and 'Create distribution' (which is highlighted in orange).

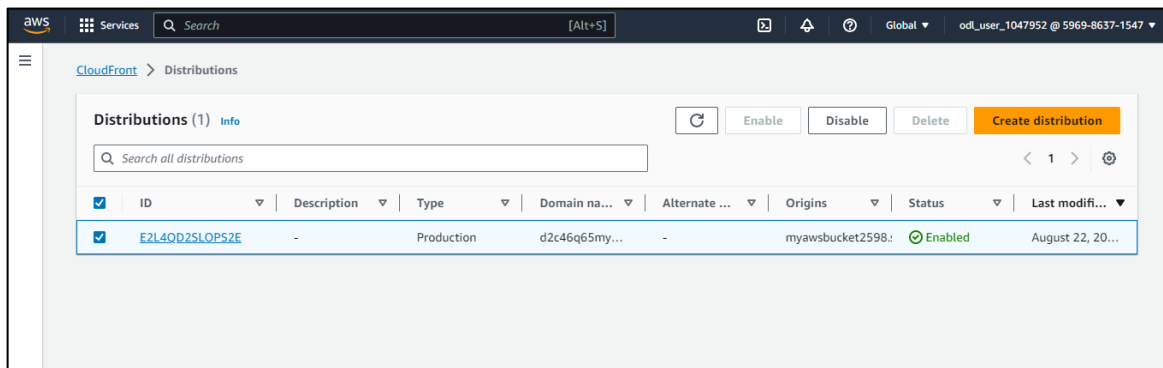
Refer to the previous demos for how to create an S3 bucket.



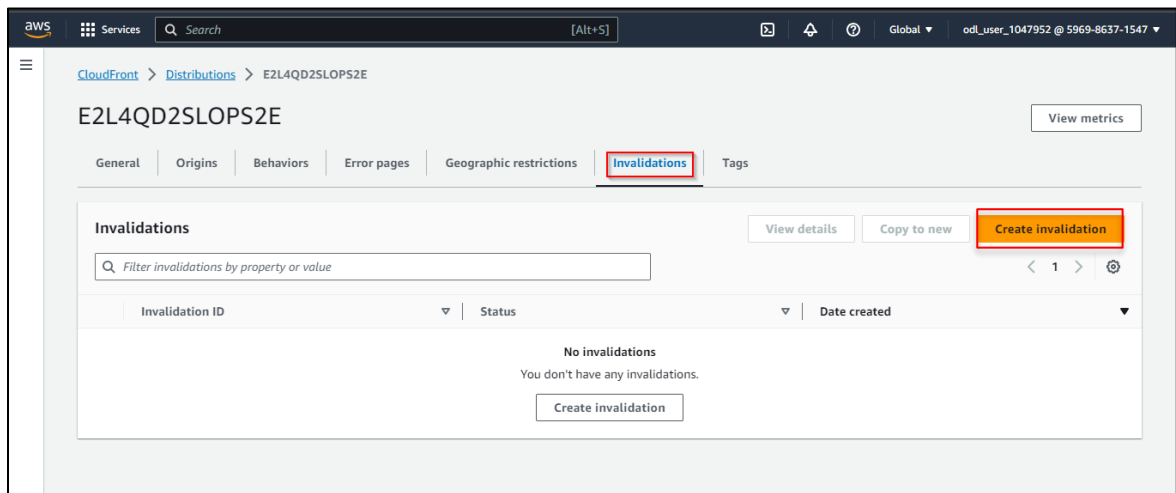
CloudFront distribution has been successfully created.

Step 2: Create Invalidation

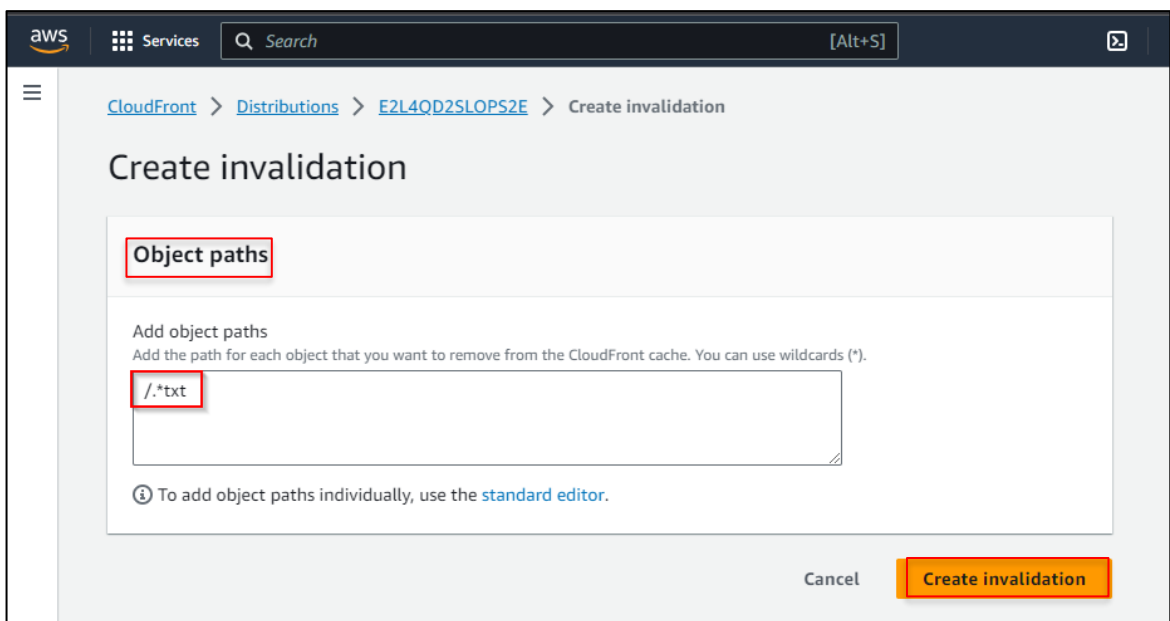
2.1 Click on the CloudFront distribution you created

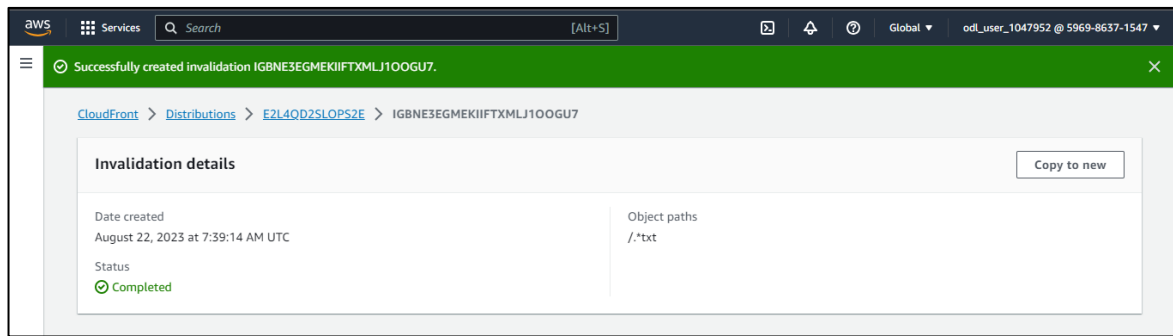


2.2 Navigate to **Invalidations** and then click on **Create invalidation**

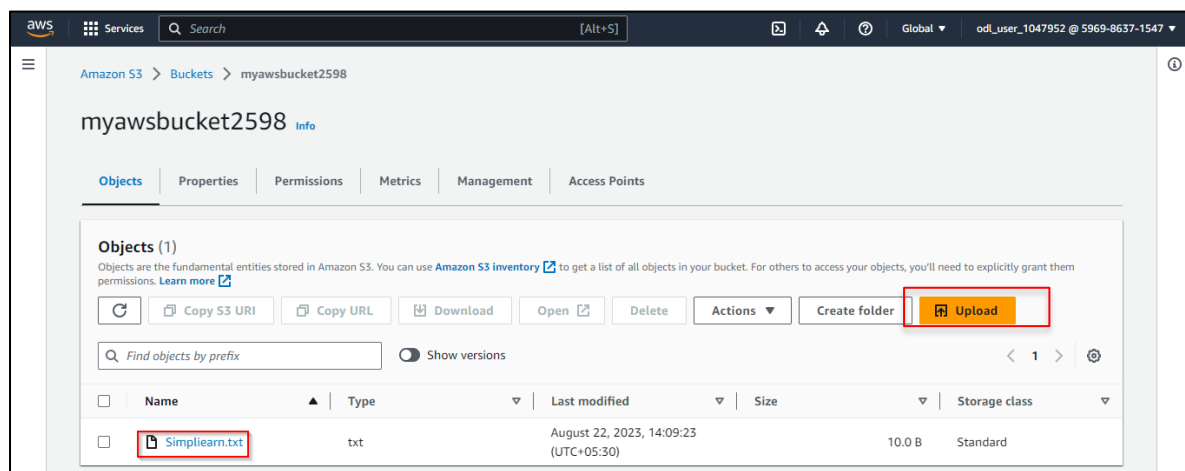


2.3 Enter `/*.*txt` under **Object paths**, and click on **Create invalidation**

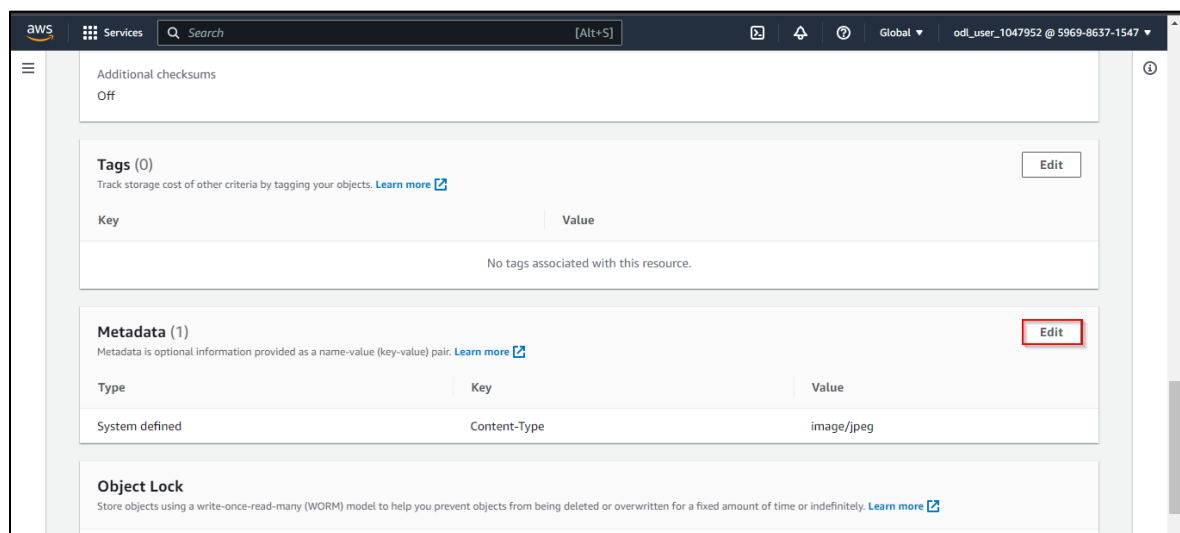




2.4 Upload any .txt file to your S3 bucket by clicking the **Upload** button



2.5 Under the properties, select **Edit** in the **Metadata** section



2.6 Click on **Add metadata**

aws Services Search [Alt+S]

- Objects encrypted with customer-provided encryption keys (SSE-C) will fail to be copied using the S3 console. To edit metadata for objects encrypted with SSE-C, use the AWS CLI, AWS SDK, or the Amazon S3 REST API.
- If this bucket uses the bucket owner enforced setting for S3 Object Ownership, object ACLs will not be copied.

[Learn more](#)

Metadata

Metadata is optional information provided as a name-value (key-value) pair. [Learn more](#)

Type	Key	Value	
System defined	Content-Type	image/jpeg	Remove

Add metadata

2.7 Choose **Type** as **System defined**, in the **Key** section select **Cache-Control**, and enter the **Value** as **max-age=300**

aws Services Search [Alt+S]

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- If this bucket uses the bucket owner enforced setting for S3 Object Ownership, object ACLs will not be copied.

[Learn more](#)

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Type	Key	Value	
System defined	Content-Type	image/jpeg	Remove
System defined	Cache-Control	max-age=300	Remove

Add metadata

2.8 Click on **Save changes**

Metadata

Metadata is optional information provided as a name-value (key-value) pair. [Learn more](#)

Type

System defined

Key

Content-Type

Value

image/jpeg

Remove

Type

System defined

Key

Cache-Control

Value

max-age=300

Remove

Add metadata

Specified objects

Find objects by name

< 1 >

Name	Type	Last modified	Size
1.jpg	jpg	August 22, 2023, 13:48:19 (UTC+05:30)	7.1 KB

Cancel

Save changes

2.9 Navigate back to **CloudFront** distribution and copy the **Distribution domain name**

CloudFront

Distributions

Policies

Functions

What's new NEW

Telemetry

Monitoring

Alarms

Logs

Reports & analytics

Cache statistics

Popular objects

Top referers

Usage

Viewers

Security

CloudFront > Distributions > E2L4QD2SLOPS2E

E2L4QD2SLOPS2E

View metrics

General

Origins

Behaviors

Error pages

Geographic restrictions

Invalidations

Tags

Details

Distribution domain name

d2c46q65myohkg.cloudfront.net

ARN

arn:aws:cloudfront::596986371547:distribution/E2L4QD2SLOPS2E

Last modified

August 22, 2023 at 7:23:27 AM UTC

Settings

Description

-

Alternate domain names

-

Standard logging

Off

Price class

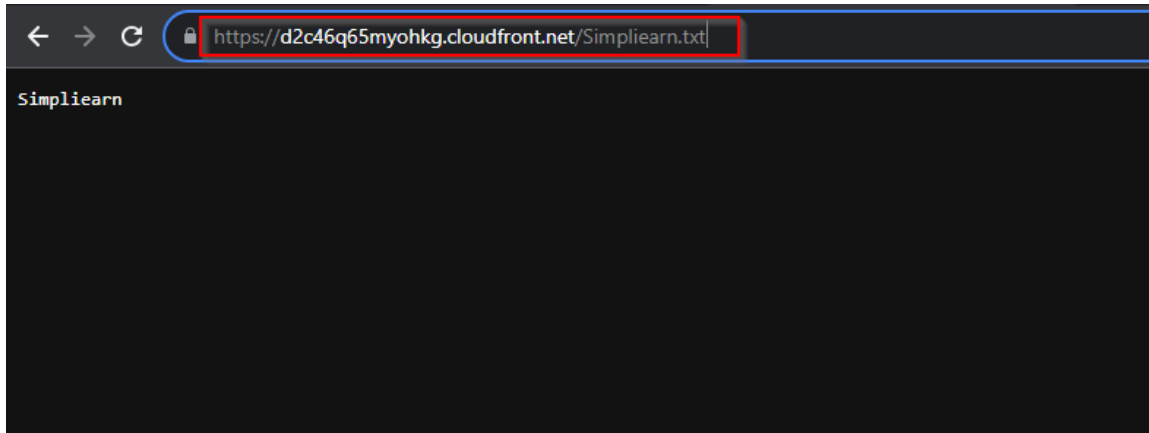
Use all edge locations (best performance)

Cookie logging

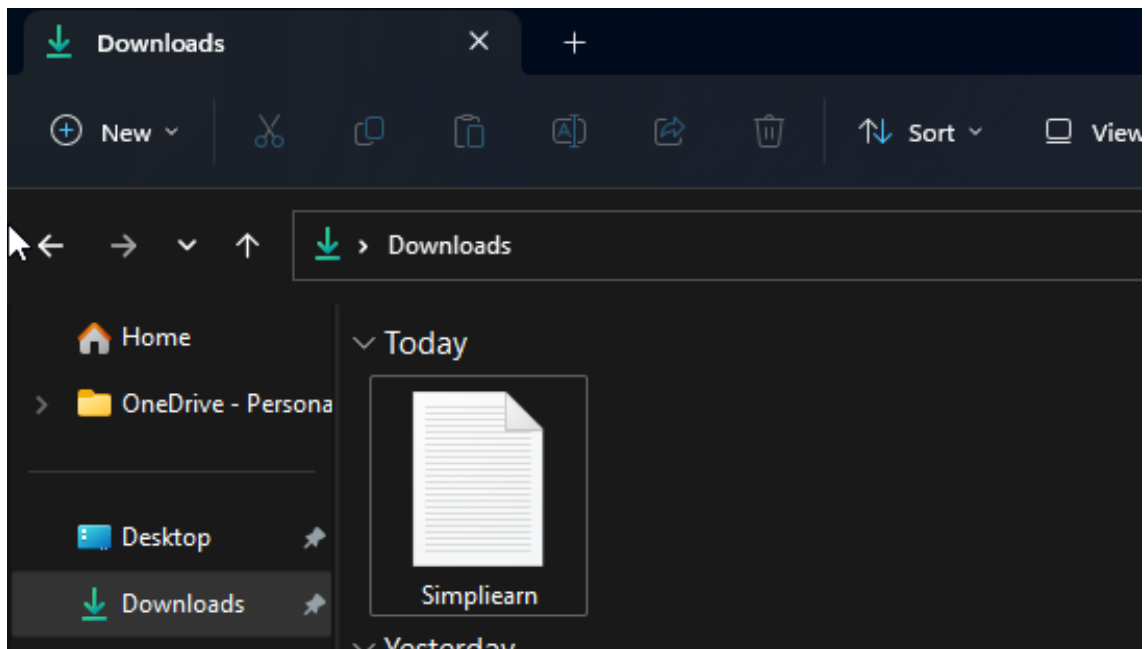
Off

Edit

2.10 Open a browser, paste the distribution domain name, add **/your-text-file-name**, and then press enter

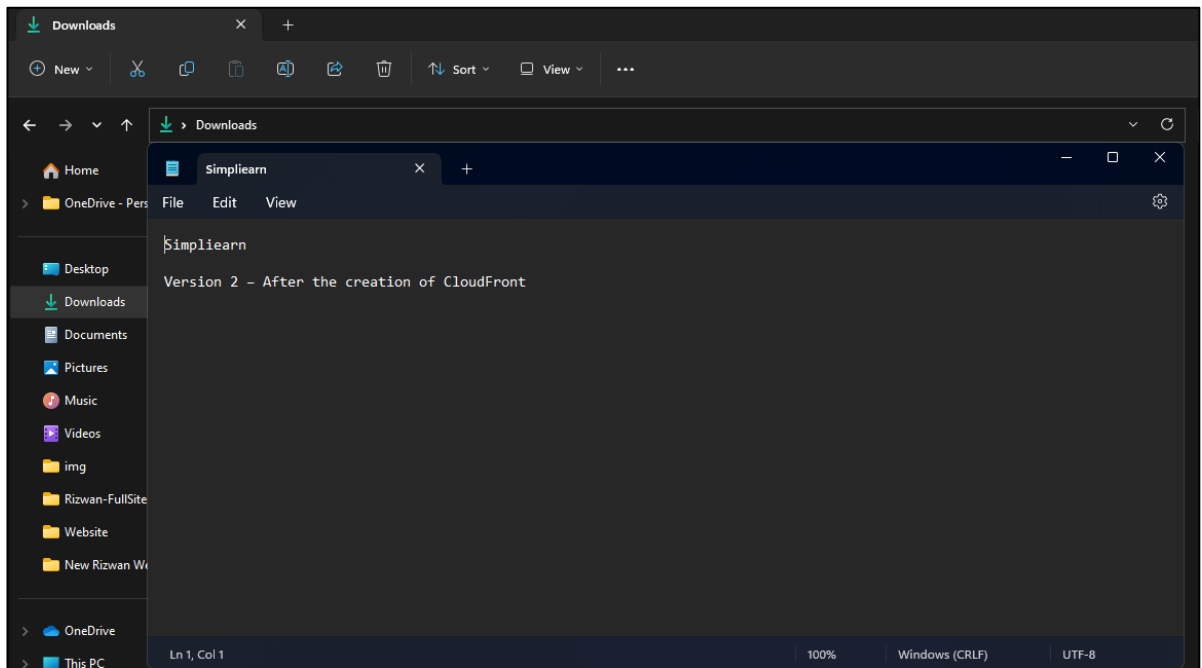


2.11 Open the text file that was created on the local PC

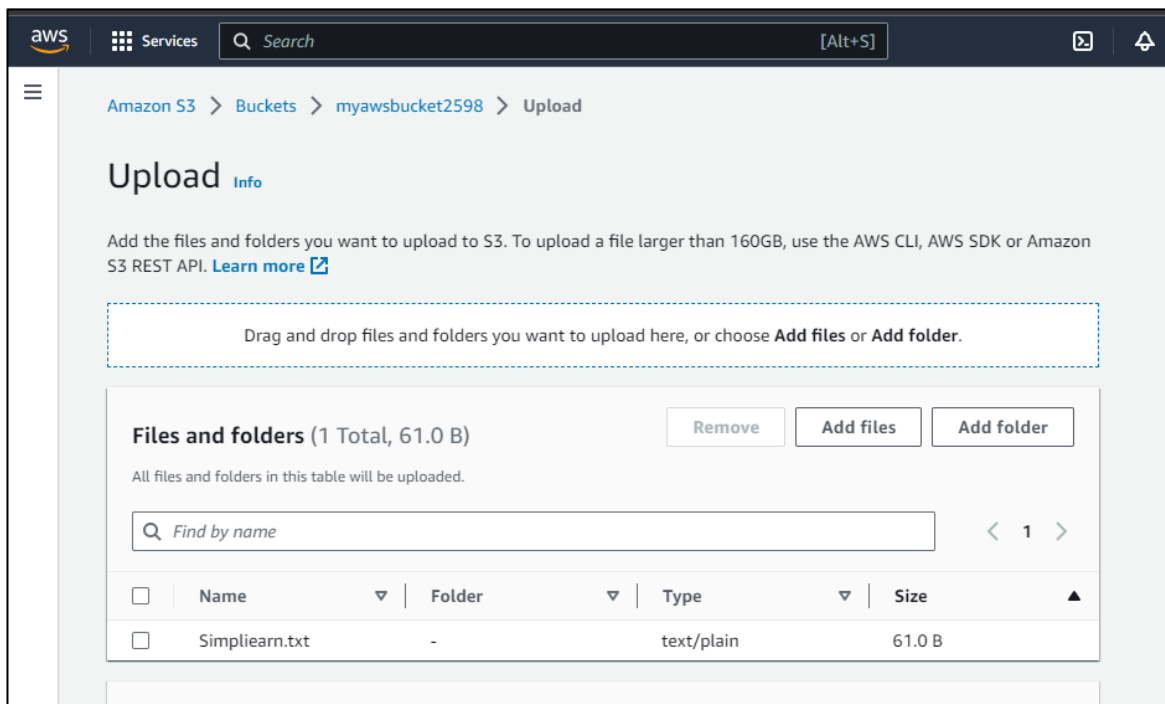


Note: Open the uploaded file in the S3 bucket and edit the file

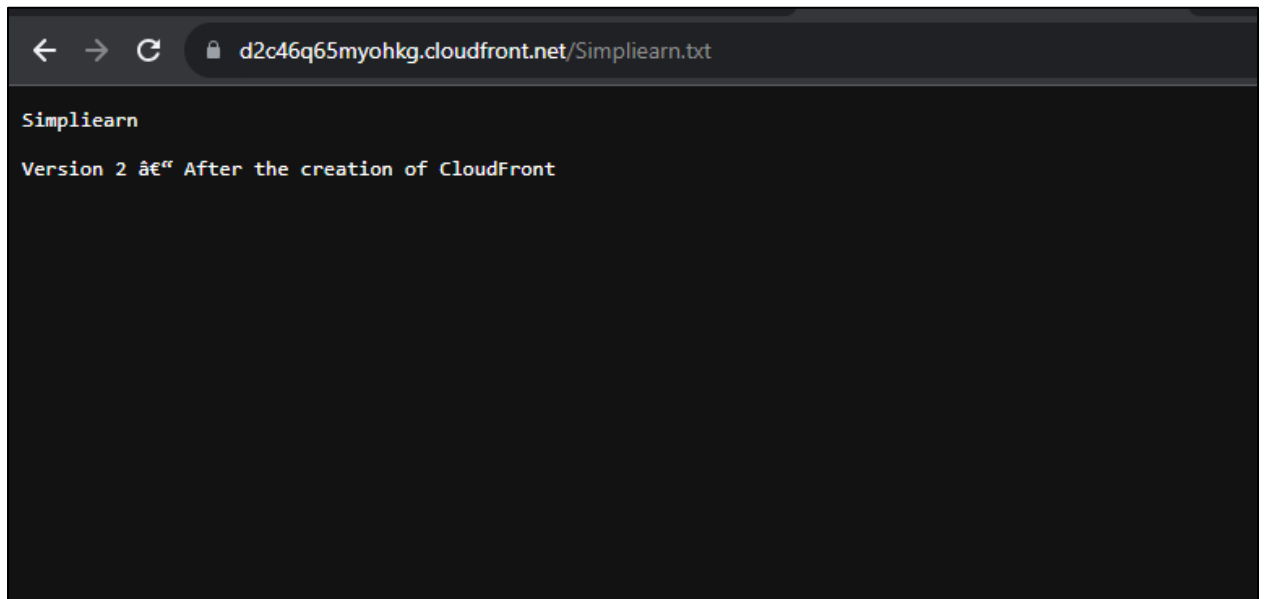
2.12 Enter **Version 2** – After the creation of CloudFront in the text file and save it



2.13 Upload the text file again to the S3 bucket and delete the old text file



Refresh the page once. You will get the updated output of the text file.



By following these steps, you have successfully configured CloudFront distributions. By establishing distributions and connecting them to existing S3 buckets, you have guaranteed accessibility to your content.