

29. CONTENT DELIVERY NETWORK (CDN)

A content delivery network (CDN) is a system of distributed servers (network) that deliver webpages and other web content to a user based on the geographic locations of the user, the origin of the webpage and a content delivery server.

Amazon CloudFront can be used to deliver your entire website, including dynamic, static, streaming, and interactive content using a global network of Amazon edge locations.

Requests for your website or application are automatically routed to the nearest edge locations instead of your servers, so content is delivered with the best possible performance.

Origin: This is the origin of all files that the CDN will distribute. This can be either an EC2 Instance, S3 Bucket, an ELB or Route53.

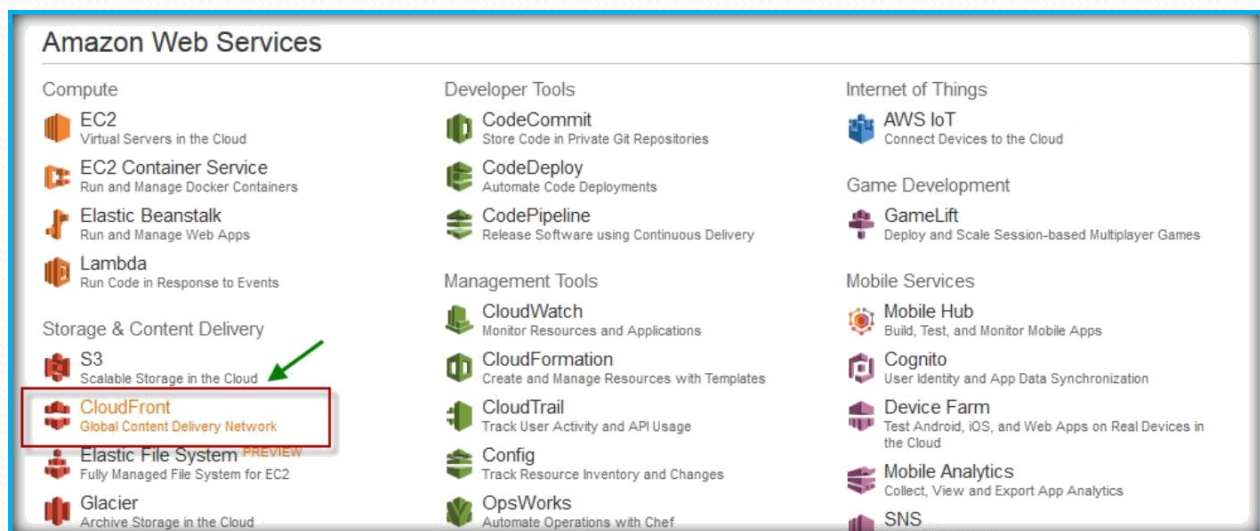
Distribution: This is the name given the CDN which consists of a collection of Edge Locations.

CLOUDFRONT Distribution Types:

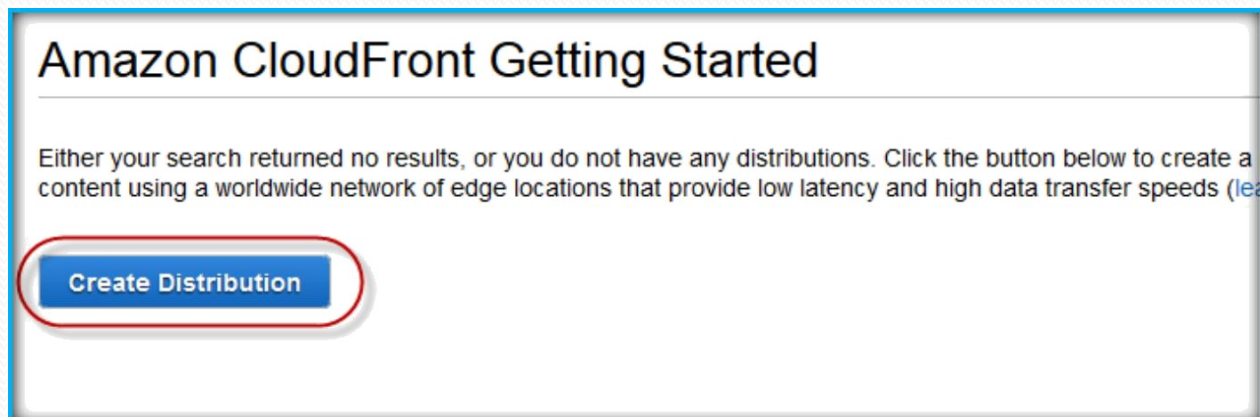
- **Web Distribution:** Typically used for Websites.
- **RTMP:** Used for Media Streaming.

CLOUDFRONT DISTRIBUTION CREATION

Once you logged in to AWS management console, from the console home choose CloudFront under Storage & Content Delivery.



Choose Create Distribution button to create a new one.



From the select delivery method page, choose Get Started under Web.

Select a delivery method for your content.

Web

Create a web distribution if you want to:

- Speed up distribution of static and dynamic content, for example, .html, .css, .php, and graphics files.
- Distribute media files using HTTP or HTTPS.
- Add, update, or delete objects, and submit data from web forms.
- Use live streaming to stream an event in real time.

You store your files in an origin — either an Amazon S3 bucket or a web server. After you create the distribution, you can add more origins

Get Started

RTMP

Create an RTMP distribution to speed up distribution of your streaming media files using Adobe Flash Media Server's RTMP protocol. An end user to begin playing a media file before the file has finished downloading from a CloudFront edge location. Note the following:

- To create an RTMP distribution, you must store the media files in an Amazon S3 bucket.
- To use CloudFront live streaming, create a web distribution.

Get Started

Under Origin settings, specify Origin Domain name.

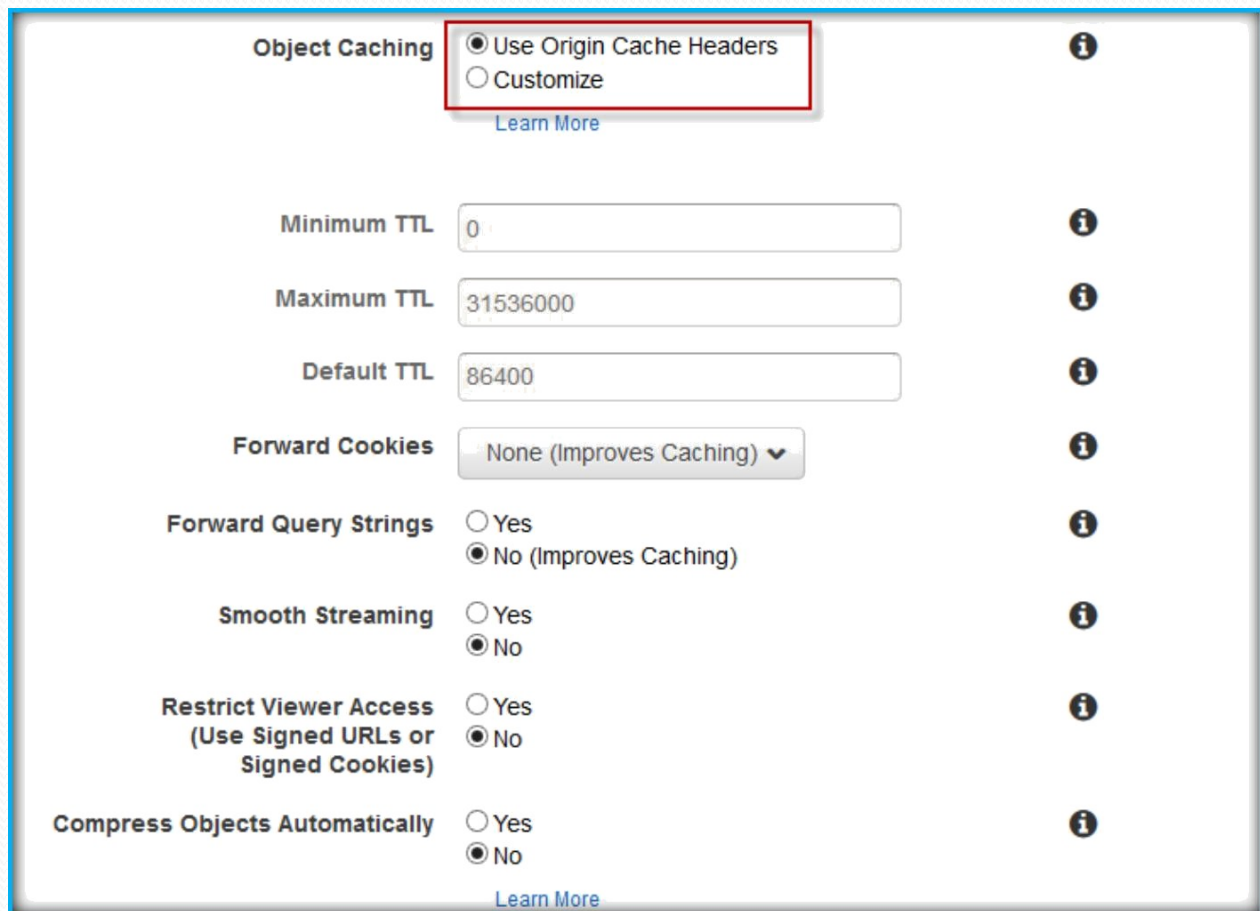
Under Default cache behavior settings left all as defaults till Object Caching.

Default Cache Behavior Settings










Path Pattern	Default (*)	
Viewer Protocol Policy	<input checked="" type="radio"/> HTTP and HTTPS <input type="radio"/> Redirect HTTP to HTTPS <input type="radio"/> HTTPS Only	
Allowed HTTP Methods	<input checked="" type="radio"/> GET, HEAD <input type="radio"/> GET, HEAD, OPTIONS <input type="radio"/> GET, HEAD, OPTIONS, PUT, POST, PATCH, DELETE	
Cached HTTP Methods	GET, HEAD (Cached by default)	
Forward Headers	<div>None (Improves Caching) ▼</div>	
Object Caching	<input checked="" type="radio"/> Use Origin Cache Headers <input type="radio"/> Customize	

[Learn More](#)

Under Object Caching, if you want to change choose Custom, then specify Minimum, maximum and Default TTL values.



The screenshot shows a configuration panel for Object Caching. A red rectangular box highlights the 'Customize' radio button under the 'Object Caching' section. Below this, there are input fields for 'Minimum TTL' (0), 'Maximum TTL' (31536000), and 'Default TTL' (86400). Further down are settings for 'Forward Cookies' (set to 'None (Improves Caching)'), 'Forward Query Strings' (set to 'No (Improves Caching)'), 'Smooth Streaming' (set to 'No'), 'Restrict Viewer Access (Use Signed URLs or Signed Cookies)' (set to 'No'), and 'Compress Objects Automatically' (set to 'No'). Each setting has an information icon (i) to its right. A 'Learn More' link is located at the bottom of the panel.

Setting	Value / Option	Info Icon
Object Caching	<input checked="" type="radio"/> Use Origin Cache Headers <input type="radio"/> Customize	
Learn More		
Minimum TTL	0	
Maximum TTL	31536000	
Default TTL	86400	
Forward Cookies	None (Improves Caching) ▼	
Forward Query Strings	<input type="radio"/> Yes <input checked="" type="radio"/> No (Improves Caching)	
Smooth Streaming	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Restrict Viewer Access (Use Signed URLs or Signed Cookies)	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Compress Objects Automatically	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Learn More		

Under Distribution Settings, from Price class drop down list choose one of the option which suits better for your application. Then under SSL Certificate, go with defaults.

Distribution Settings

Price Class Use All Edge Locations (Best Performance) ⓘ

AWS WAF Web ACL Use Only US and Europe ⓘ

Alternate Domain Names (CNAMEs) Use Only US, Europe and Asia ⓘ

SSL Certificate ☒ Default CloudFront Certificate (*.cloudfront.net) ⓘ

Choose this option if you want your users to use HTTPS or HTTP to access your content with the CloudFront domain name (such as `https://d1111111abcdef8.cloudfront.net/logo.jpg`). Important: If you choose this option, CloudFront requires that browsers or devices support TLSv1 or later to access your content.

☐ Custom SSL Certificate (example.com): ⓘ

Choose this option if you want your users to access your content by using an alternate domain name, such as `https://www.example.com/logo.jpg`. You can use either certificates that you created in AWS Certificate Manager (ACM) or certificates stored in the IAM certificate store.

No certificates available ▼ ↻

Then specify Default root object or leave blank, specify logging should be on or off.

Then choose Create Distribution button to create.

Default Root Object ⓘ

Logging ☐ On ⓘ

☒ Off ⓘ

Bucket for Logs ⓘ

Log Prefix ⓘ

Cookie Logging ☐ On ⓘ

☒ Off ⓘ

Comment ⓘ

Distribution State ☒ Enabled ⓘ

☐ Disabled ⓘ

Cancel Back **Create Distribution**

Distribution will start creating, you can see the status as in progress.

CloudFront Distributions								
<div>Create Distribution Distribution Settings Delete Enable Disable </div>								
Viewing : Any Delivery Method Any State <input type="text"/> Viewing 1								
	Delivery Method	ID	Domain Name	Comment	Origin	CNAMEs	Status	State
<input type="checkbox"/>	Web	E2XBFMJOLTLAOC	d10feb84i6i6.cloudfront.net	-	cloudlinuxa	-	In Progress	Enabled

Once completion, click on ID.

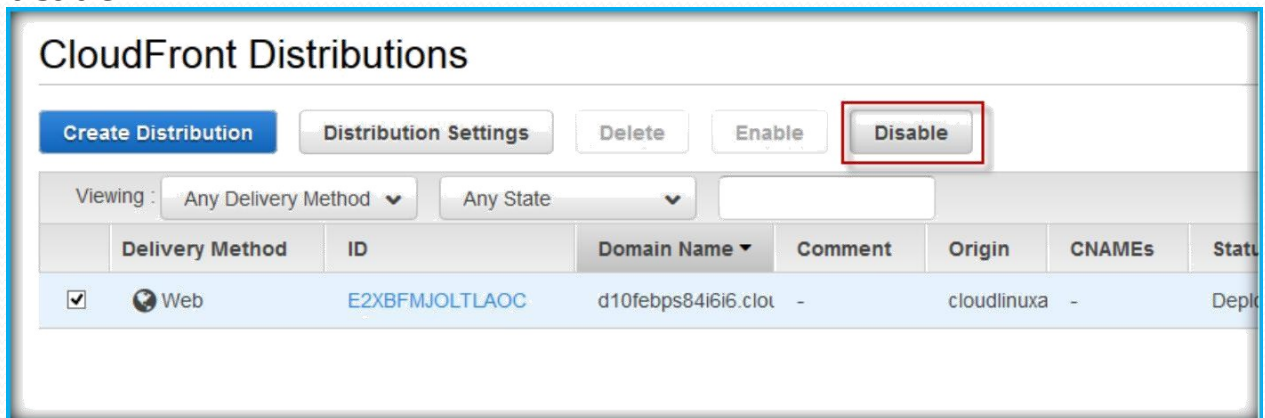
Viewing : Any Delivery Method Any State <input type="text"/>								
	Delivery Method	ID	Domain Name	Comment	Origin	CNAMEs	Status	
<input type="checkbox"/>	Web	E2XBFMJOLTLAOC	d10feb84i6i6.cloudfront.net	-	cloudlinuxa	-	Deployed	

You can see the domain of your cloudfront distribution under general.

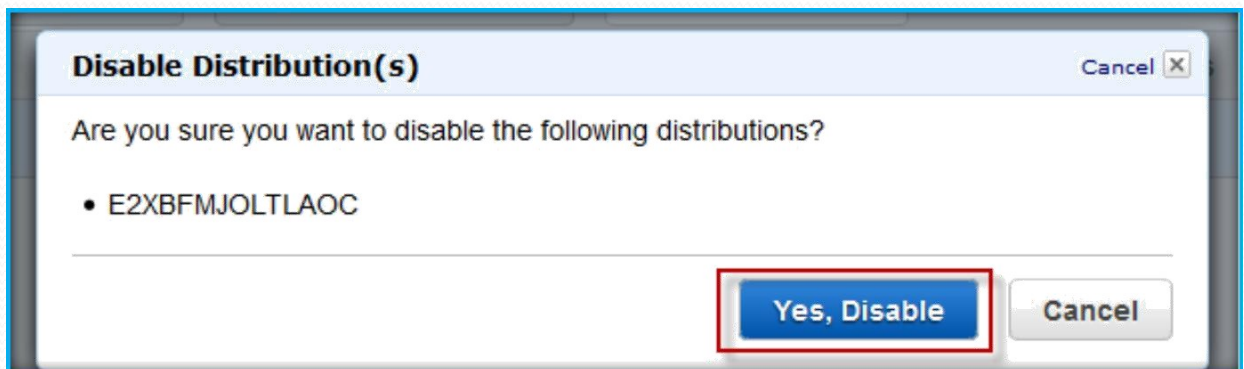
General		Origins	Behaviors	Error Pages	Restrictions	Invalidations
<div>Edit</div>						
Distribution ID		E2XBFMJOLTLAOC				
Log Prefix		-				
Delivery Method		Web				
Cookie Logging		Off				
Distribution Status		Deployed				
Comment		-				
Price Class		Use Only US, Europe and Asia				
AWS WAF Web ACL		-				
State		Enabled				
Alternate Domain Names (CNAMEs)		-				
SSL Certificate		Default CloudFront Certificate (*.cloudfront.net)				
Domain Name		d10feb84i6i6.cloudfront.net				
Custom SSL Client Support		-				
Default Root Object		-				
Last Modified		2016-05-06 22:39 UTC+5:30				
Log Bucket		-				

REMOVE CLOUDFRONT DISTRIBUTION

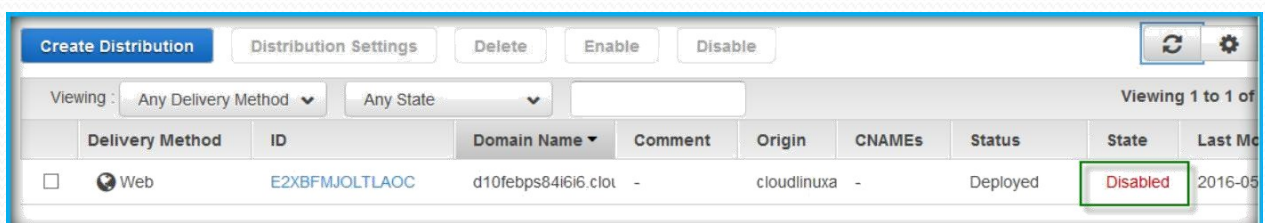
To remove the distribution, select the distribution then choose disable.



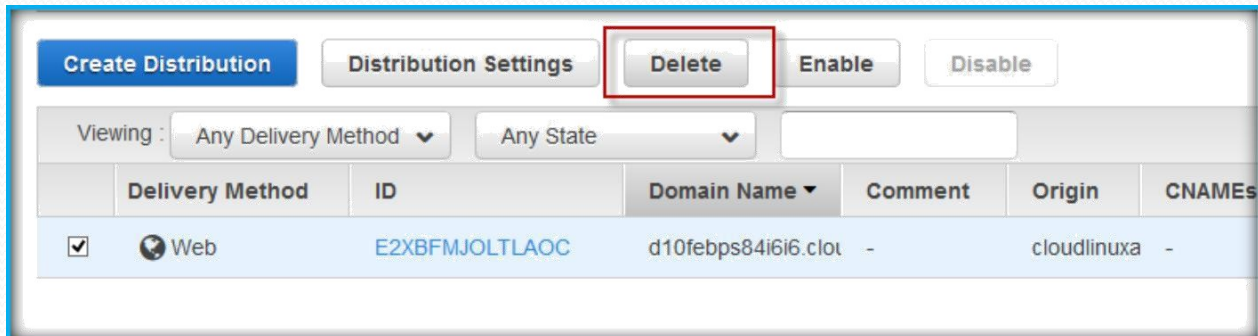
Confirm the disabling distribution.



It will start disabling, once done status will change to Disabled.



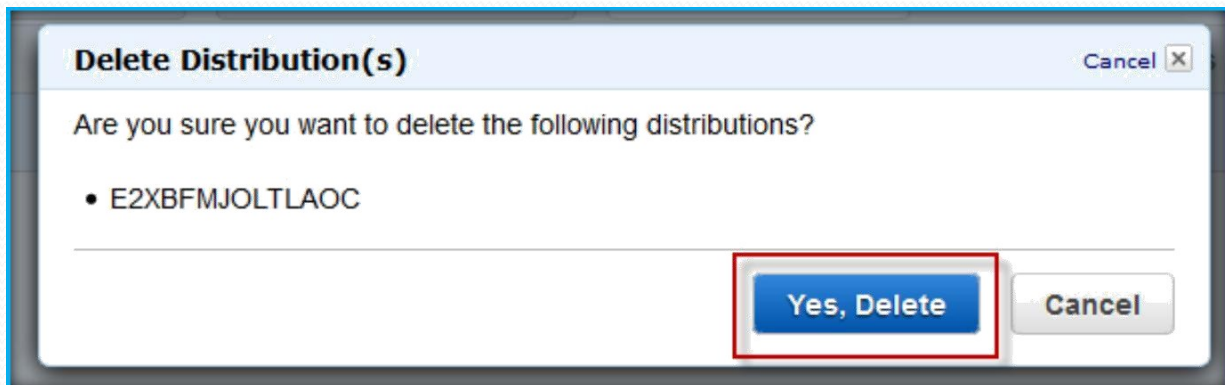
Choose distribution, select Delete to delete the distribution.



The screenshot shows a web interface for managing distributions. At the top, there are four buttons: 'Create Distribution' (blue), 'Distribution Settings' (grey), 'Delete' (grey, highlighted with a red box), and 'Enable' (grey). Below these buttons are two dropdown menus: 'Viewing : Any Delivery Method' and 'Any State'. Below the dropdowns is a table with the following columns: 'Delivery Method', 'ID', 'Domain Name', 'Comment', 'Origin', and 'CNAMEs'. The table contains one row with the following data: 'Web' (with a globe icon), 'E2XBFMJOLTLAOC', 'd10feb84i6i6.cloudfront.net', '-', 'cloudlinux', and '-'. A checkbox is checked in the first column of the row.

	Delivery Method	ID	Domain Name	Comment	Origin	CNAMEs
<input checked="" type="checkbox"/>	Web	E2XBFMJOLTLAOC	d10feb84i6i6.cloudfront.net	-	cloudlinux	-

Confirm deletion, by clicking on Yes, Delete button.



The screenshot shows a confirmation dialog box titled 'Delete Distribution(s)'. The dialog contains the text 'Are you sure you want to delete the following distributions?' followed by a bulleted list containing 'E2XBFMJOLTLAOC'. At the bottom right of the dialog, there are two buttons: 'Yes, Delete' (blue, highlighted with a red box) and 'Cancel' (grey). A 'Cancel' button with a close icon is also visible in the top right corner of the dialog.

Delete Distribution(s) Cancel X

Are you sure you want to delete the following distributions?

- E2XBFMJOLTLAOC

Yes, Delete Cancel