

# Using AWS CloudFront

## What is CloudFront

Amazon CloudFront is AWS's content delivery network (CDN) service designed to improve website and application performance by distributing content to users with low latency.

### Key Features and Benefits

- **Global Content Delivery:** CloudFront uses a worldwide network of edge locations to cache and deliver content closer to users, reducing latency.
- **Security:** Integrates with AWS Shield for DDoS protection, and AWS WAF (Web Application Firewall) to filter malicious traffic.
- **Integration with AWS Services:** Works seamlessly with other AWS services like S3, EC2, Elastic Load Balancing, and Lambda@Edge.
- **Customizable Caching:** Allows you to control how long content stays cached at edge locations.
- **HTTPS Support:** Provides TLS/SSL encryption and HTTPS support at no additional cost.

## Goals for using CloudFront for our website

Get HTTPS connection between client and AWS

Speed up load times with caching for clients.

## Check load times of our website

### Connect to Asia

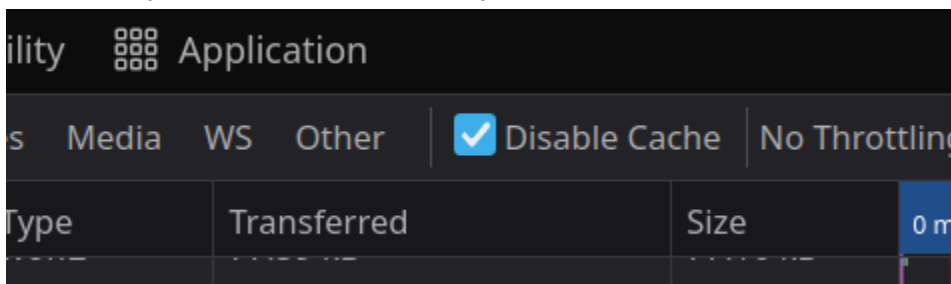
If you have a VPN connection, connect to any servers in Asia. If you don't, either find a partner near you that does or connect to the link provided (this website is hosted in asia)

\_\_\_\_\_ [insert link here](#)

```
* Virtual location servers
thaison@thaison-laptop13:~$ nordvpn c South_Korea
Connecting to South Korea #97 (kr97.nordvpn.com)
You are connected to South Korea #97 (kr97.nordvpn.com)!
thaison@thaison-laptop13:~$
```

Open the developer console on your browser.

Make sure you disable the cache on your browser and press reload.



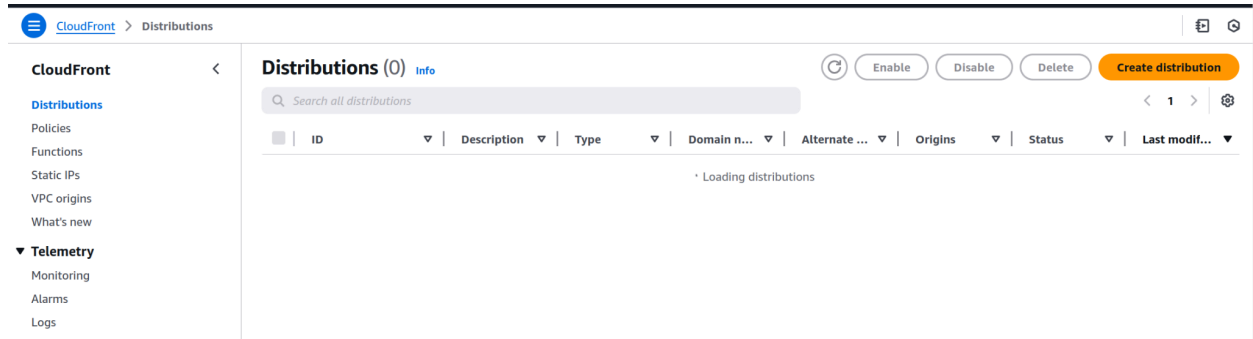
Now sort by loading time.

See how long it takes to load the longest resources (How many seconds is 2000 ms?)

|    |     |                           |                   |            |      |           |           |         |
|----|-----|---------------------------|-------------------|------------|------|-----------|-----------|---------|
| 00 | GET | myportfoliobucket-thai... | c7.png            | img        | png  | 3.75 kB   | 3.39 kB   | 2679 ms |
| 00 | GET | myportfoliobucket-thai... | c6.png            | img        | png  | 3.17 kB   | 2.82 kB   | 2651 ms |
| 00 | GET | myportfoliobucket-thai... | c5.png            | img        | png  | 2.87 kB   | 2.51 kB   | 2588 ms |
| 00 | GET | myportfoliobucket-thai... | c4.png            | img        | png  | 2.98 kB   | 2.62 kB   | 2573 ms |
| 00 | GET | myportfoliobucket-thai... | c3.png            | img        | png  | 3.40 kB   | 3.04 kB   | 2392 ms |
| 00 | GET | myportfoliobucket-thai... | c2.png            | img        | png  | 4.09 kB   | 3.73 kB   | 2291 ms |
| 00 | GET | myportfoliobucket-thai... | c1.png            | img        | png  | 2.10 kB   | 1.75 kB   | 2251 ms |
| 00 | GET | myportfoliobucket-thai... | p5.jpg            | img        | jpeg | 5.54 kB   | 5.18 kB   | 2237 ms |
| 00 | GET | myportfoliobucket-thai... | p4.jpg            | img        | jpeg | 8.22 kB   | 7.87 kB   | 2164 ms |
| 00 | GET | myportfoliobucket-thai... | p3.jpg            | img        | jpeg | 19.64 kB  | 19.28 kB  | 2175 ms |
| 00 | GET | myportfoliobucket-thai... | p2.jpg            | img        | jpeg | 7.79 kB   | 7.44 kB   | 1876 ms |
| 00 | GET | myportfoliobucket-thai... | p1.jpg            | img        | jpeg | 6.11 kB   | 5.75 kB   | 1839 ms |
| 00 | GET | myportfoliobucket-thai... | profile_image.jpg | img        | jpeg | 148.53 kB | 148.17 kB | 1978 ms |
| 00 | GET | myportfoliobucket-thai... | responsive.css    | stylesheet | css  | 3.20 kB   | 2.85 kB   | 930 ms  |
| 00 | GET | myportfoliobucket-thai... | style.css         | stylesheet | css  | 20.48 kB  | 20.12 kB  | 913 ms  |

# Set up Cloud Front distribution

Go to cloud front dashboard and create a distribution



## Use your bucket as origin

Find your bucket domain and set your website bucket as the origin.

Use the website endpoint when this message pops up

Origin domain

Choose an AWS origin, or enter your origin's domain name. [Learn more](#)

Enter a valid DNS domain name, such as an S3 bucket, HTTP server, or VPC origin ID.

This S3 bucket has static web hosting enabled. If you plan to use this distribution as a website, we recommend using the S3 website endpoint rather than the bucket endpoint.

Use website endpoint

## Disable WAF

Web Application Firewall (WAF) [Info](#)

☐ Enable security protections

Keep your application secure from the most common web threats and security vulnerabilities using AWS WAF. Blocked requests are stopped before they reach your web servers.

☒ Do not enable security protections

Select this option if your application does not need security protections from AWS WAF.

## Observe the other settings

Check out the other settings, but keep everything at default. Then create it.

## Use the new distribution

Wait for it to finish deployment, then use the distribution domain name and paste it into your browser.

General

Security

Origins

Behaviors

Error pages


Invalidations

Tags


Logging

Details

Distribution domain name

 d30xhy5zr4vx2e.cloudfront.net

ARN

 arn:aws:cloudfront::831926625893:distribution/E2XYVVMXNM0R51

Last modified

March 10, 2025 at 8:01:35 PM UTC

Settings

Description

-

Alternate domain names

-

Standard logging

Off

Price class

Use all edge locations (best performance)

Cookie logging

Off

Supported HTTP versions

HTTP/2, HTTP/1.1, HTTP/1.0

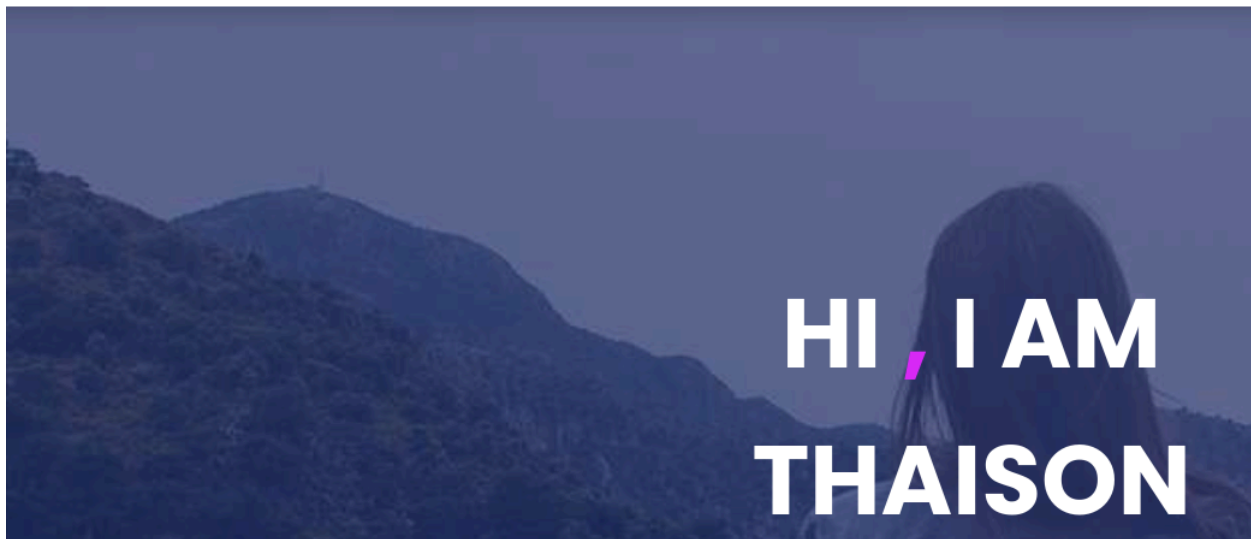
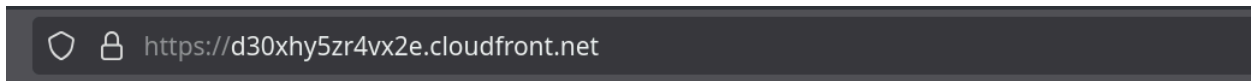
Default root object

-

Continuous deployment [info](#)

Create staging distribution

Notice that we have https now



Check load times of CDN

Time your response again. The first load should take about the same time as last time, maybe less.

| Time | Method | URL                           | File Name                         | Type   | Size  | Size     | Time     |         |
|------|--------|-------------------------------|-----------------------------------|--------|-------|----------|----------|---------|
| 200  | GET    | fonts.gstatic.com             | pxiByp8kv8JHgFvRLGT9Z1xiFQ.woff2  | font   | woff2 | 8.56 kB  | 7.75 kB  | 1105 ms |
| 200  | GET    | fonts.gstatic.com             | pxiByp8kv8JHgFvRLjE6Z1xiFQ.woff2  | font   | woff2 | 8.81 kB  | 8 kB     | 1019 ms |
| 200  | GET    | fonts.gstatic.com             | pxiByp8kv8JHgFvRLDz8Z1xiFQ.woff2  | font   | woff2 | 8.65 kB  | 7.84 kB  | 1067 ms |
| 200  | GET    | fonts.gstatic.com             | pxiByp8kv8JHgFvRLCz7Z1xiFQ.woff2  | font   | woff2 | 8.63 kB  | 7.82 kB  | 1140 ms |
| 200  | GET    | fonts.gstatic.com             | pxiEyp8kv8JHgFvRJfegc.woff2       | font   | woff2 | 8.72 kB  | 7.88 kB  | 1820 ms |
| 200  | GET    | d30xhy5zr4vx2e.cloudfront.net | welcome-banner.jpg                | img    | jpeg  | 85.33 kB | 84.91 kB | 982 ms  |
| 200  | GET    | d30xhy5zr4vx2e.cloudfront.net | fontawesome-webfont.woff2?v=4.7.0 | font   | woff2 | 77.58 kB | 77.16 kB | 927 ms  |
| 200  | GET    | d30xhy5zr4vx2e.cloudfront.net | FlatIcon.woff                     | font   | woff  | 3.03 kB  | 2.61 kB  | 768 ms  |
| 200  | GET    | d30xhy5zr4vx2e.cloudfront.net | custom.js                         | script | js    | 1.41 kB  | 2.81 kB  | 863 ms  |
| 200  | GET    | cdnjs.cloudflare.com          | jquery.easing.min.js              | script | js    | 1.79 kB  | 2.53 kB  | 642 ms  |
| 200  | GET    | d30xhy5zr4vx2e.cloudfront.net | owl.carousel.min.js               | script | js    | 11.25 kB | 42.85 kB | 739 ms  |
| 200  | GET    | d30xhy5zr4vx2e.cloudfront.net | jquery.appear.js                  | script | js    | 1.09 kB  | 1.48 kB  | 842 ms  |

The second load should take much less time now that it has cached it at the CDN level

|     |     |                          |                      |        |     |          |          |        |
|-----|-----|--------------------------|----------------------|--------|-----|----------|----------|--------|
| 200 | GET | d30xhy5zr4vx2e.cloudf... | welcome-banner.jpg   | img    | jpg | 85.34 kB | 84.91 kB | 285 ms |
| 200 | GET | d30xhy5zr4vx2e.cloudf... | custom.js            | script | js  | 1.41 kB  | 2.81 kB  | 458 ms |
| 200 | GET | cdnjs.cloudflare.com     | jquery.easing.min.js | script | js  | 1.76 kB  | 2.53 kB  | 258 ms |
| 200 | GET | d30xhy5zr4vx2e.cloudf... | owl.carousel.min.js  | script | js  | 11.26 kB | 42.85 kB | 459 ms |
| 200 | GET | d30xhy5zr4vx2e.cloudf... | jquery.appear.js     | script | js  | 1.10 kB  | 1.48 kB  | 445 ms |
| 200 | GET | d30xhy5zr4vx2e.cloudf... | progressbar.js       | script | js  | 7.32 kB  | 21.65 kB | 445 ms |
| 200 | GET | d30xhy5zr4vx2e.cloudf... | jquery.sticky.js     | script | js  | 2.88 kB  | 10.09 kB | 445 ms |
| 200 | GET | d30xhy5zr4vx2e.cloudf... | bootstrap.js         | script | js  | 4.26 kB  | 27.84 kB | 439 ms |
| 200 | GET | d30xhy5zr4vx2e.cloudf... | bootstrap.min.js     | script | js  | 10.03 kB | 37.05 kB | 439 ms |
| 200 | GET | cdnjs.cloudflare.com     | modernizr.min.js     | script | js  | 4.99 kB  | 11.08 kB | 276 ms |
| 200 | GET | d30xhy5zr4vx2e.cloudf... | jquery.js            | script | js  | 29.97 kB | 85.58 kB | 437 ms |
| 200 | GET | d30xhy5zr4vx2e.cloudf... | c7.png               | img    | png | 3.82 kB  | 3.39 kB  | 440 ms |
| 200 | GET | d30xhy5zr4vx2e.cloudf... | c6.png               | img    | png | 3.25 kB  | 2.82 kB  | 437 ms |
| 200 | GET | d30xhy5zr4vx2e.cloudf... | c5.png               | img    | png | 2.94 kB  | 2.51 kB  | 454 ms |
| 200 | GET | d30xhy5zr4vx2e.cloudf... | c4.png               | img    | png | 3.05 kB  | 2.62 kB  | 428 ms |

Congratulations.