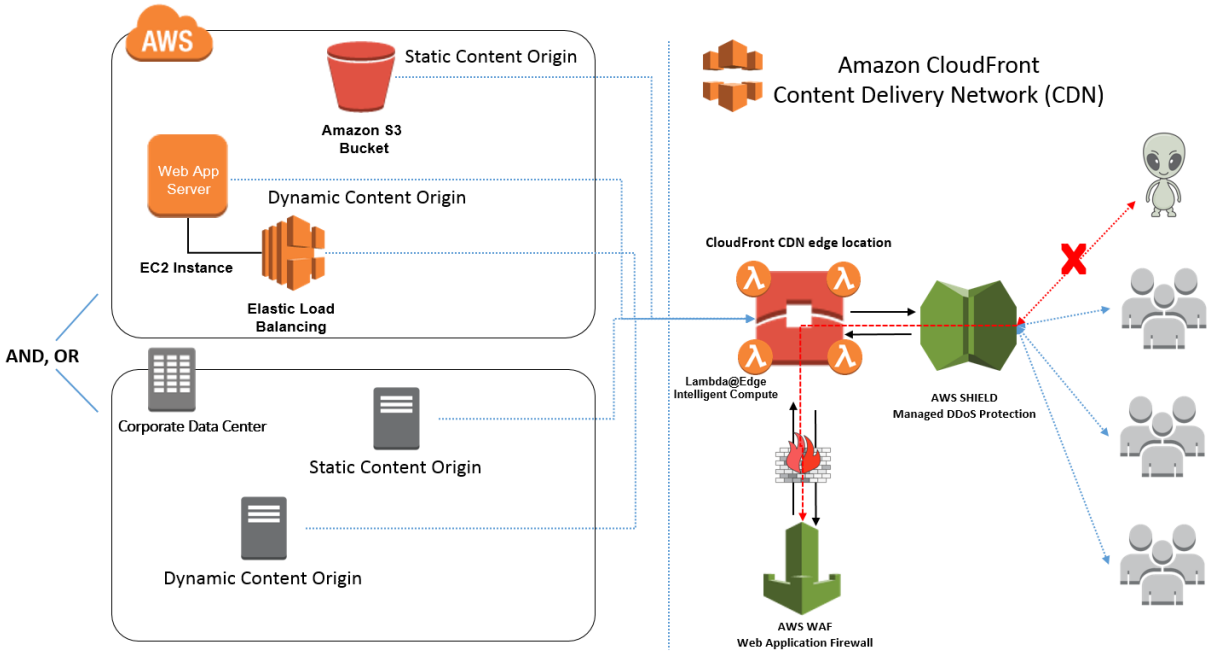
AWS CloudFront demo by photos and docs

Intro - https://aws.amazon.com/caching/cdn/

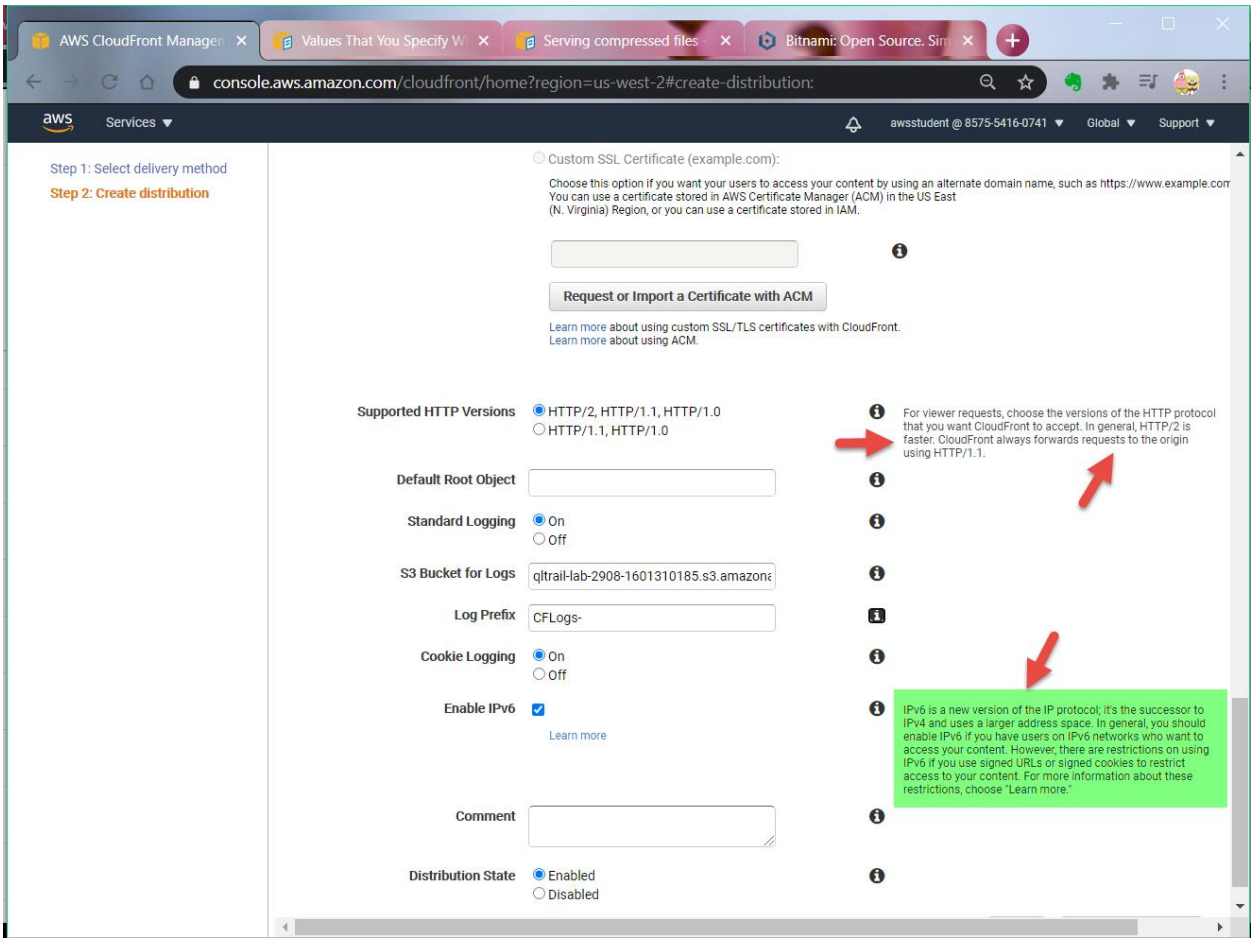


1) Docs/urls:
   a) CF – https://console.aws.amazon.com/cloudfront/home?region=us-east-1#fle:
   b) Dev guide – https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/Introduction.html
   c) Cache Expiration - https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/Expiration.html
   d) Compress - https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/ServingCompressedFiles.html
   e) Geo Restriction – https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/distribution-web-values-specify.html#DownloadDistValuesEnableIPv6
   f) Protocols and Ciphers - https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/secure-connections-supported-viewer-protocols-ciphers.html#secure-connections-supported-ciphers
   g) Origin Access Identity - https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/private-content-restricting-access-to-s3.html
   h) Field Level Encryption - https://docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/field-level-encryption.html#field-level-encryption-setting-up
   i) Age header - https://developer.mozilla.org/en-US/docs/Web/HTTP/Headers/Age
   j) Lab - https://www.qwiklabs.com/focuses/13391?parent=catalog

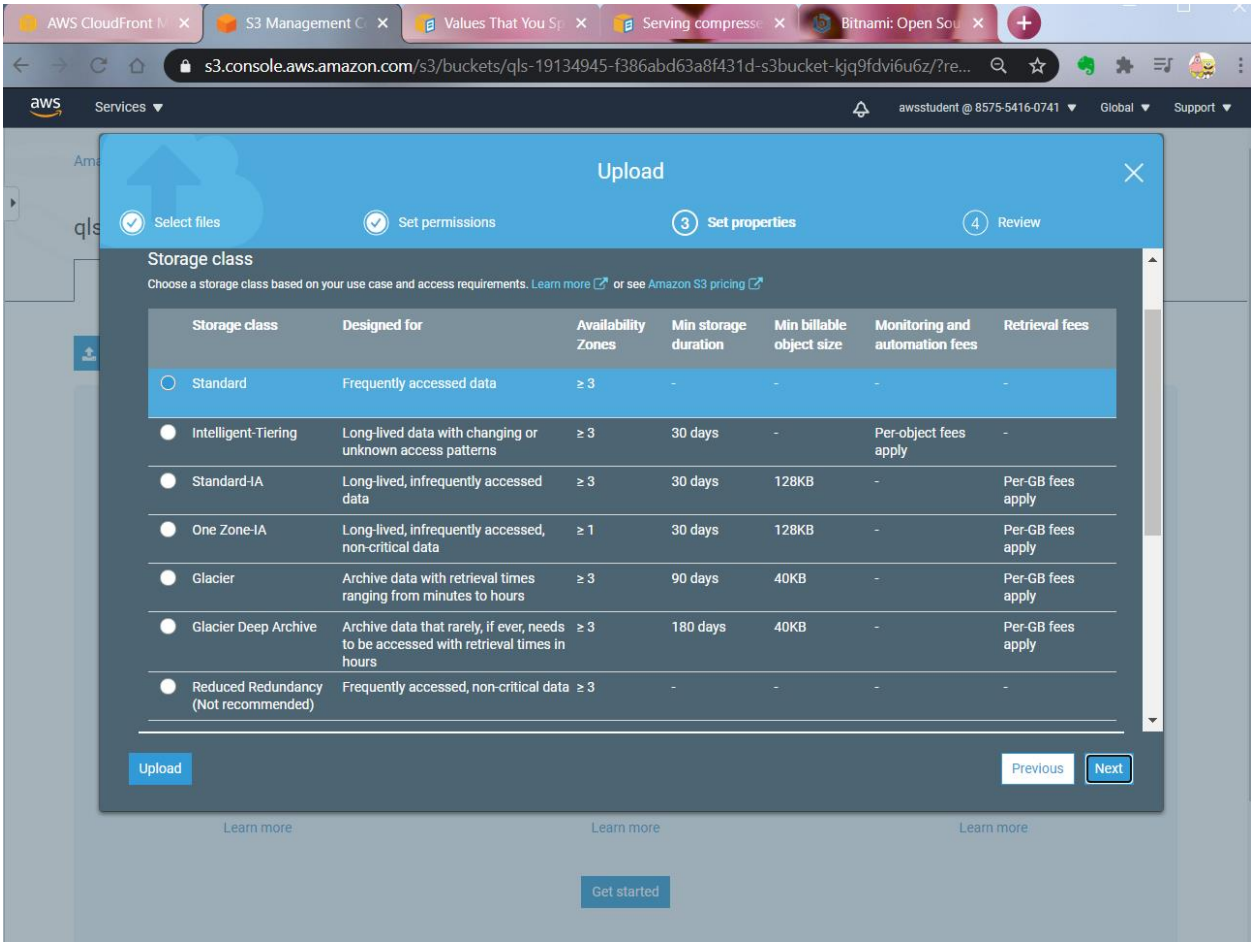
   k) CF Whats-new –
- https://aws.amazon.com/about-aws/whats-new/2020/07/cloudfront-cache-key-policy/ (Cache key and Origin Request Policies)
- https://aws.amazon.com/about-aws/whats-new/2020/08/cloudfront-realtimelogs/ (real-time logs)

Demo by Photos:

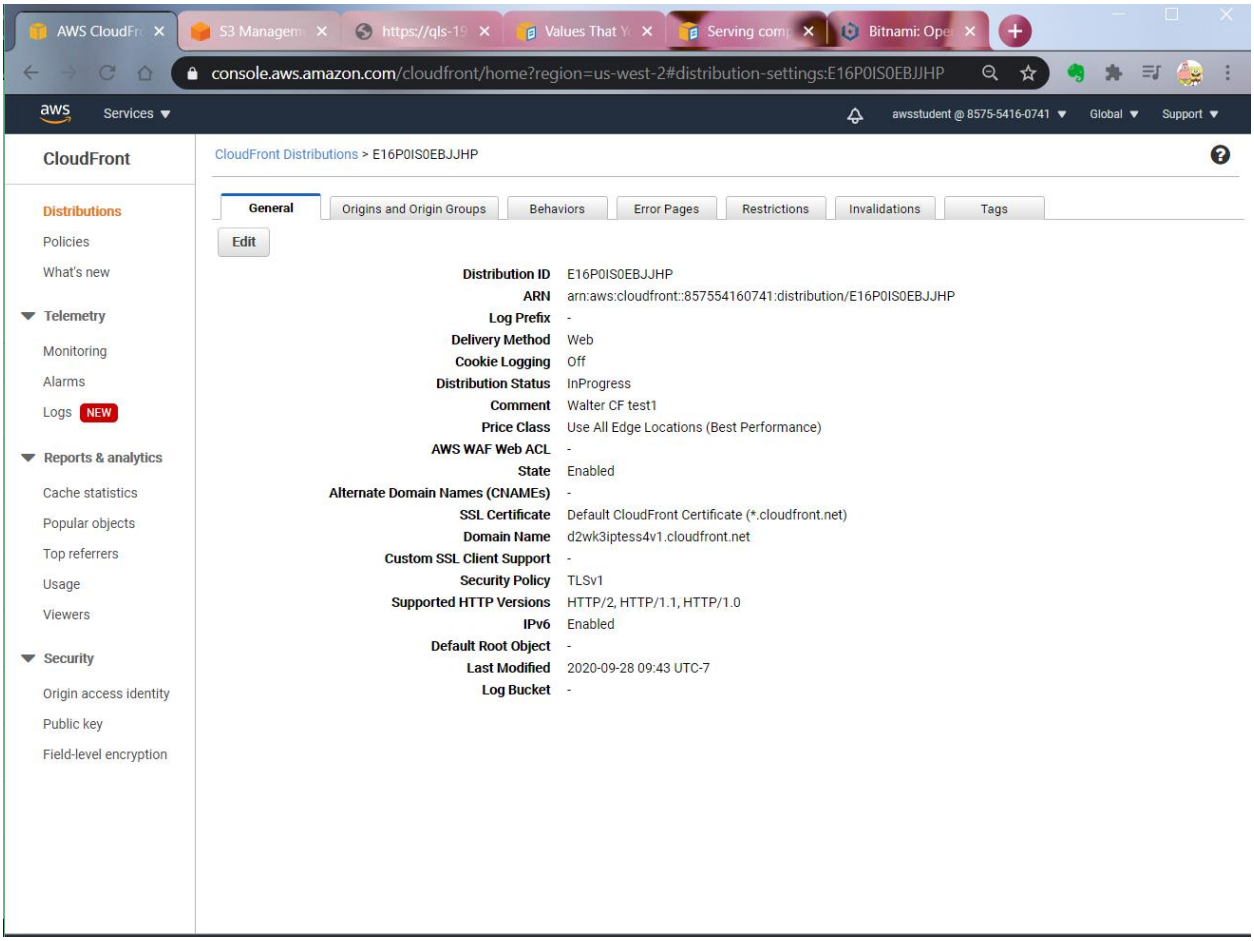
1) Easy set up



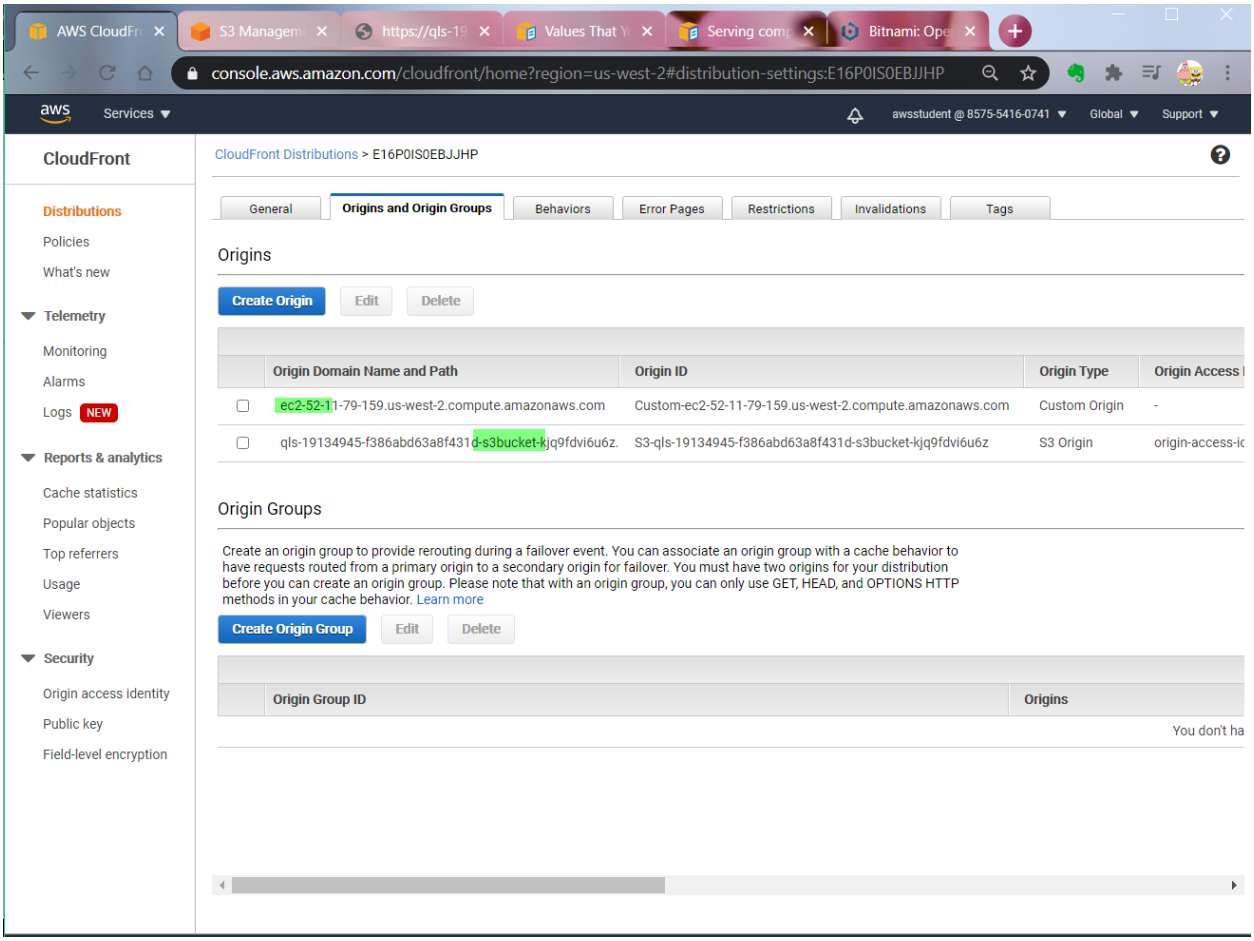
2) Many S3 bucket choices for static contents:



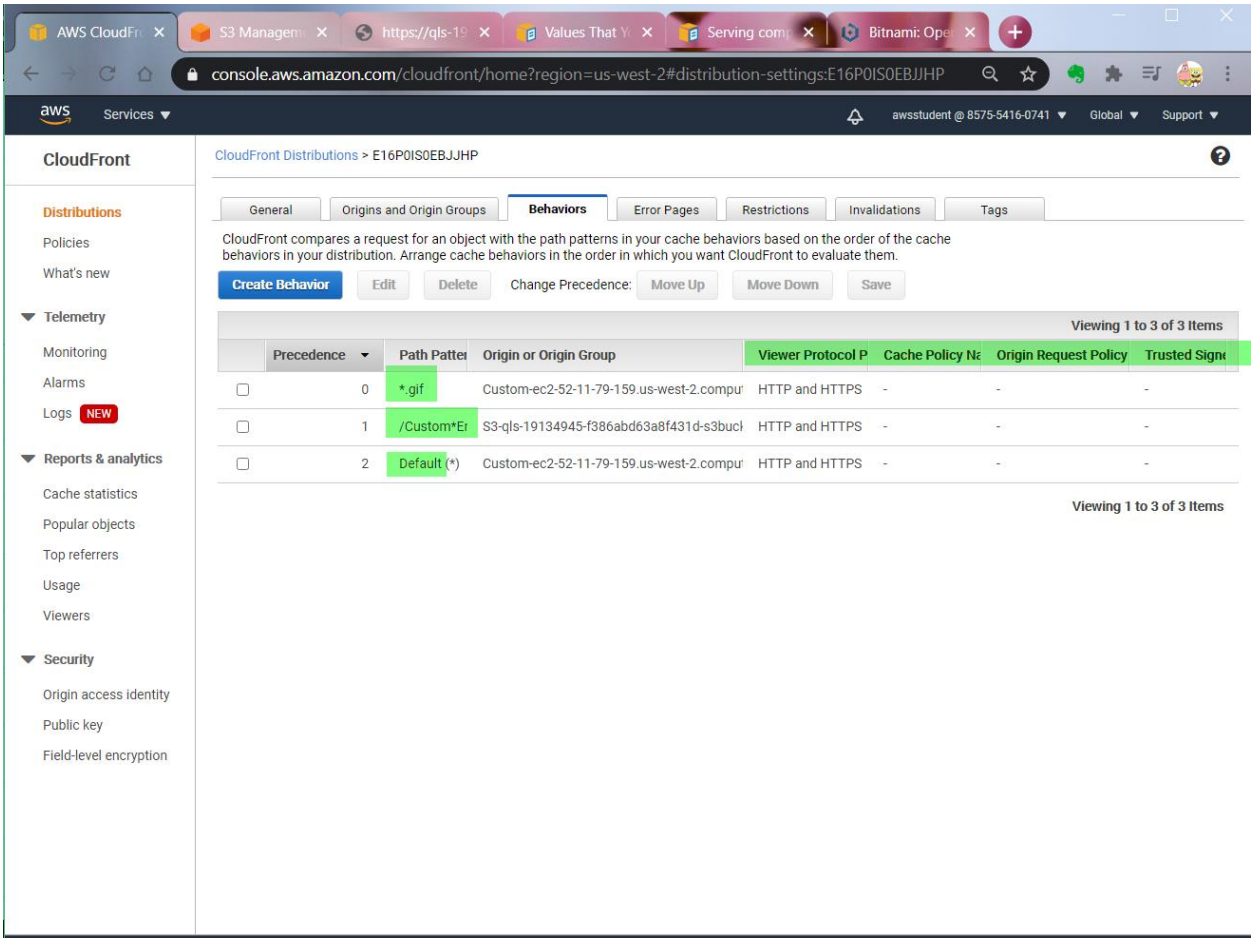
3) Fast activation of new CF distribution:



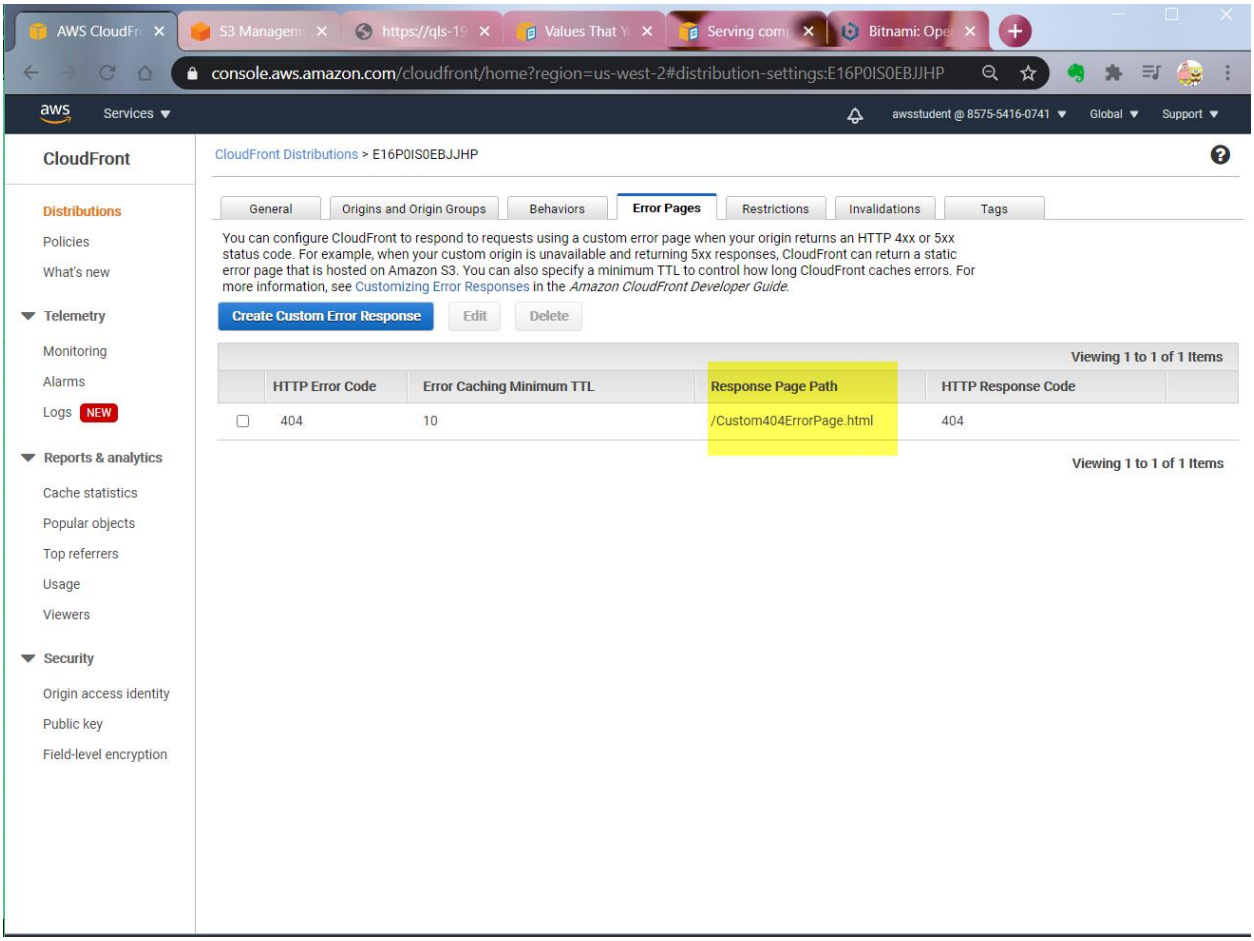
4) Origins below = Dynamic EC2 web server + S3 buckets for static



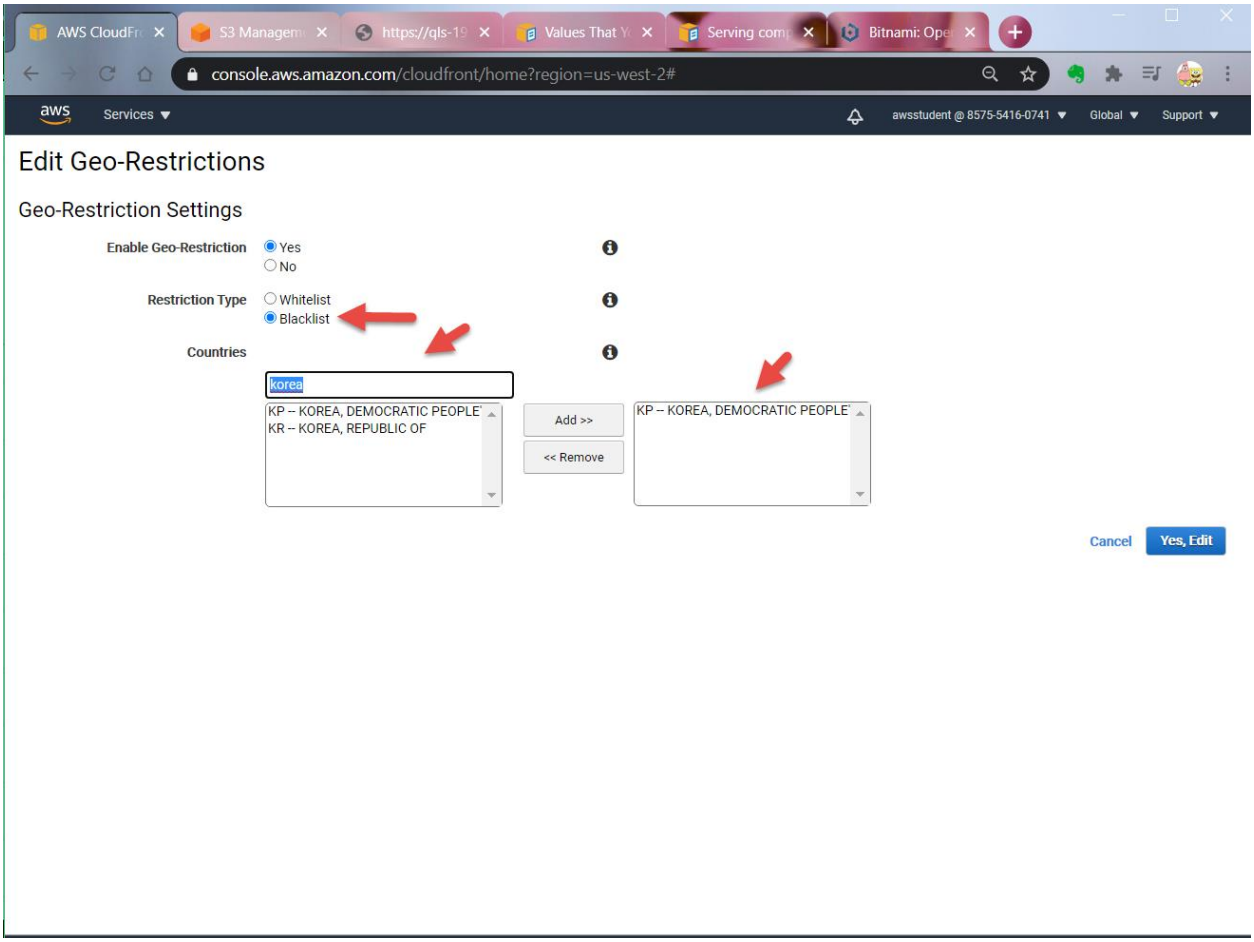
5) Diff cache and other behaviors:



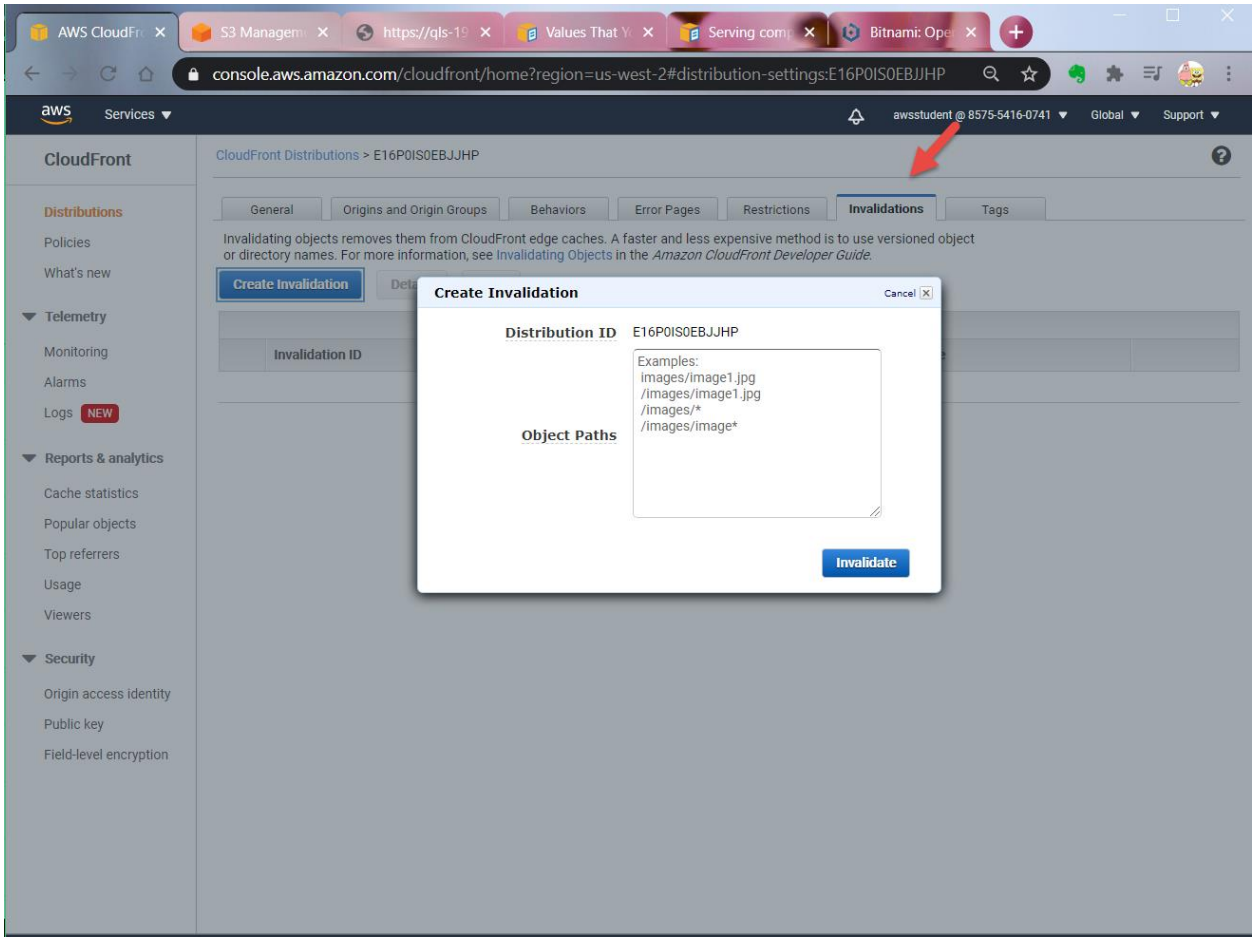
6) Error page customization:



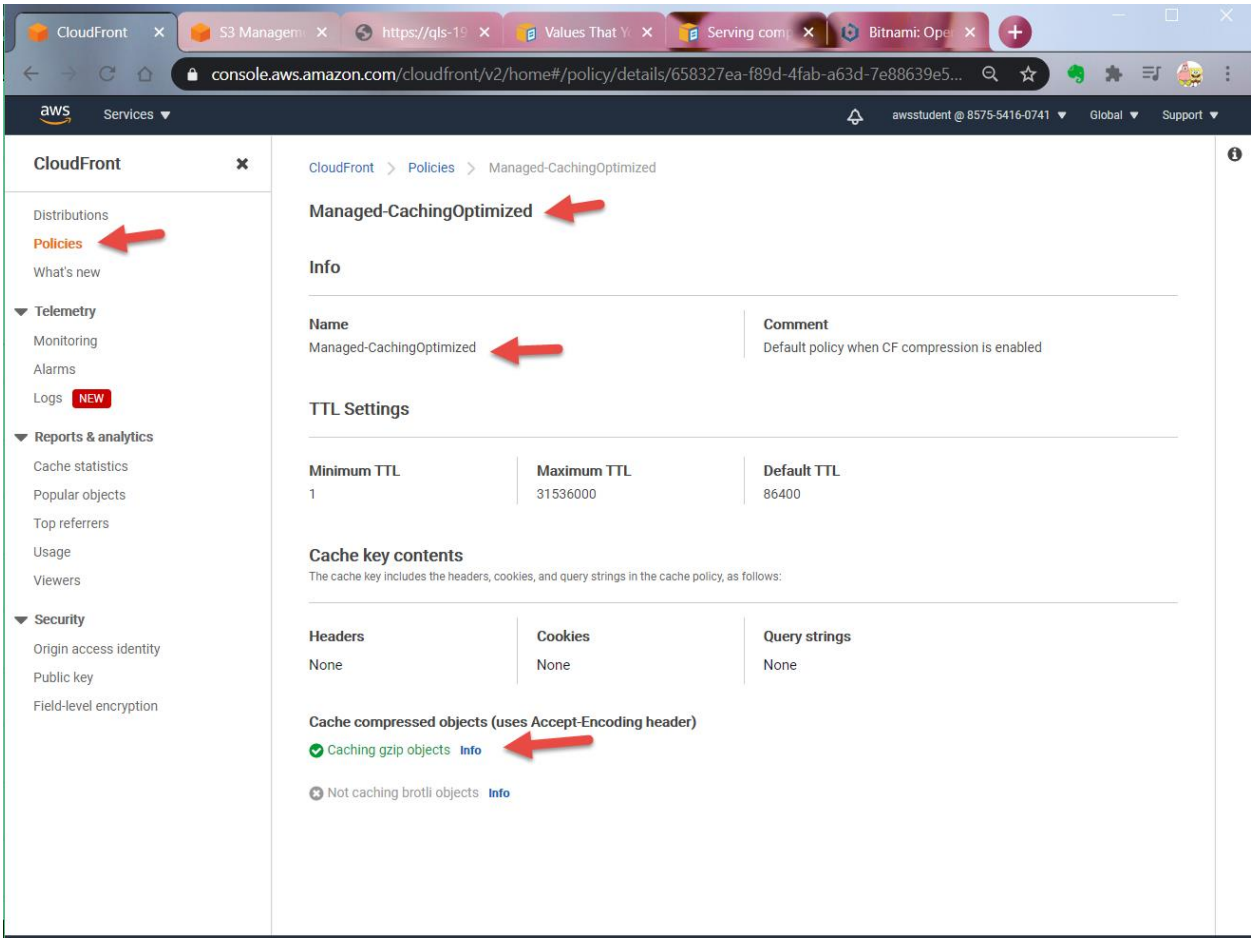
7) Easy Geo Restriction:

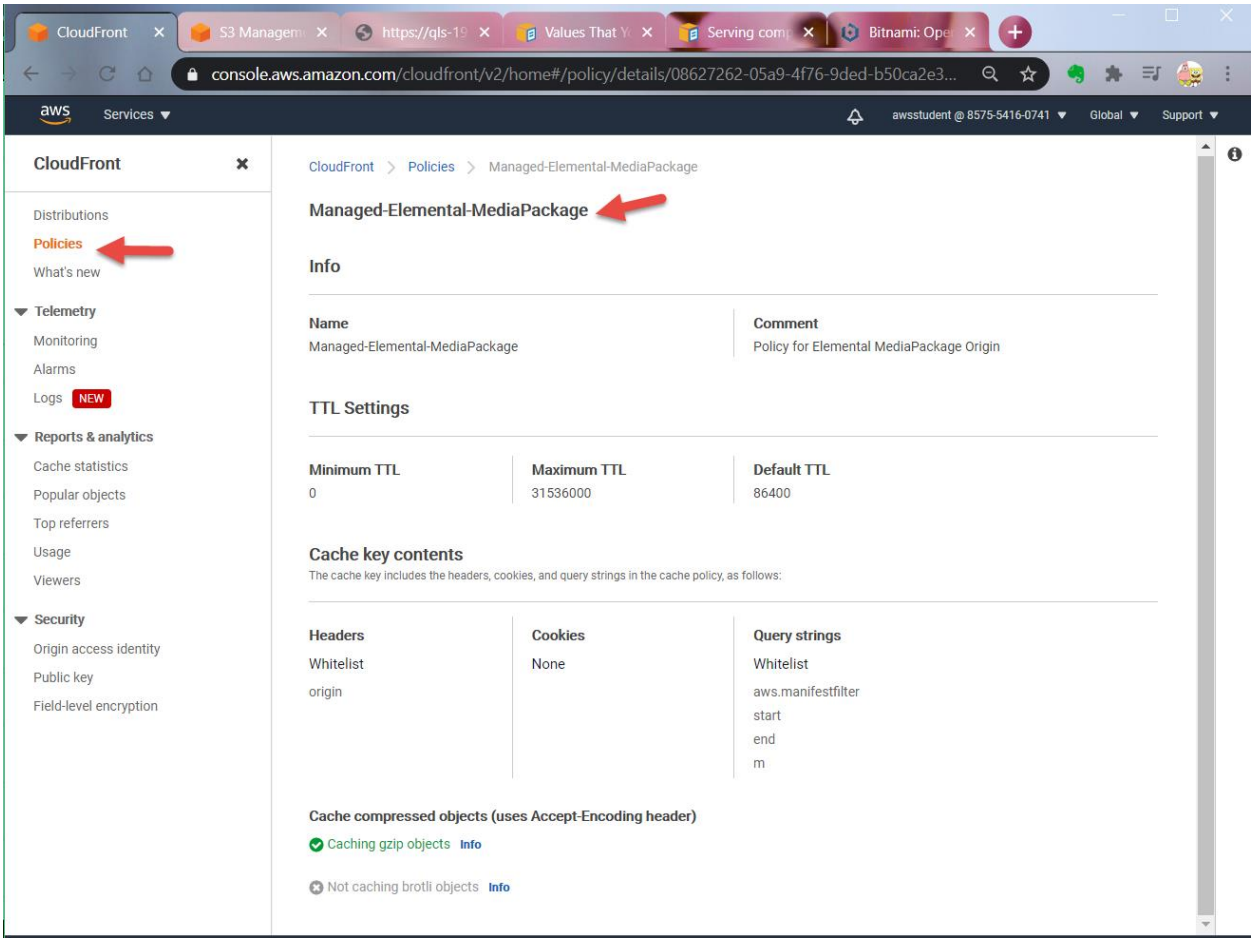


8) Easy purge/invalidation:

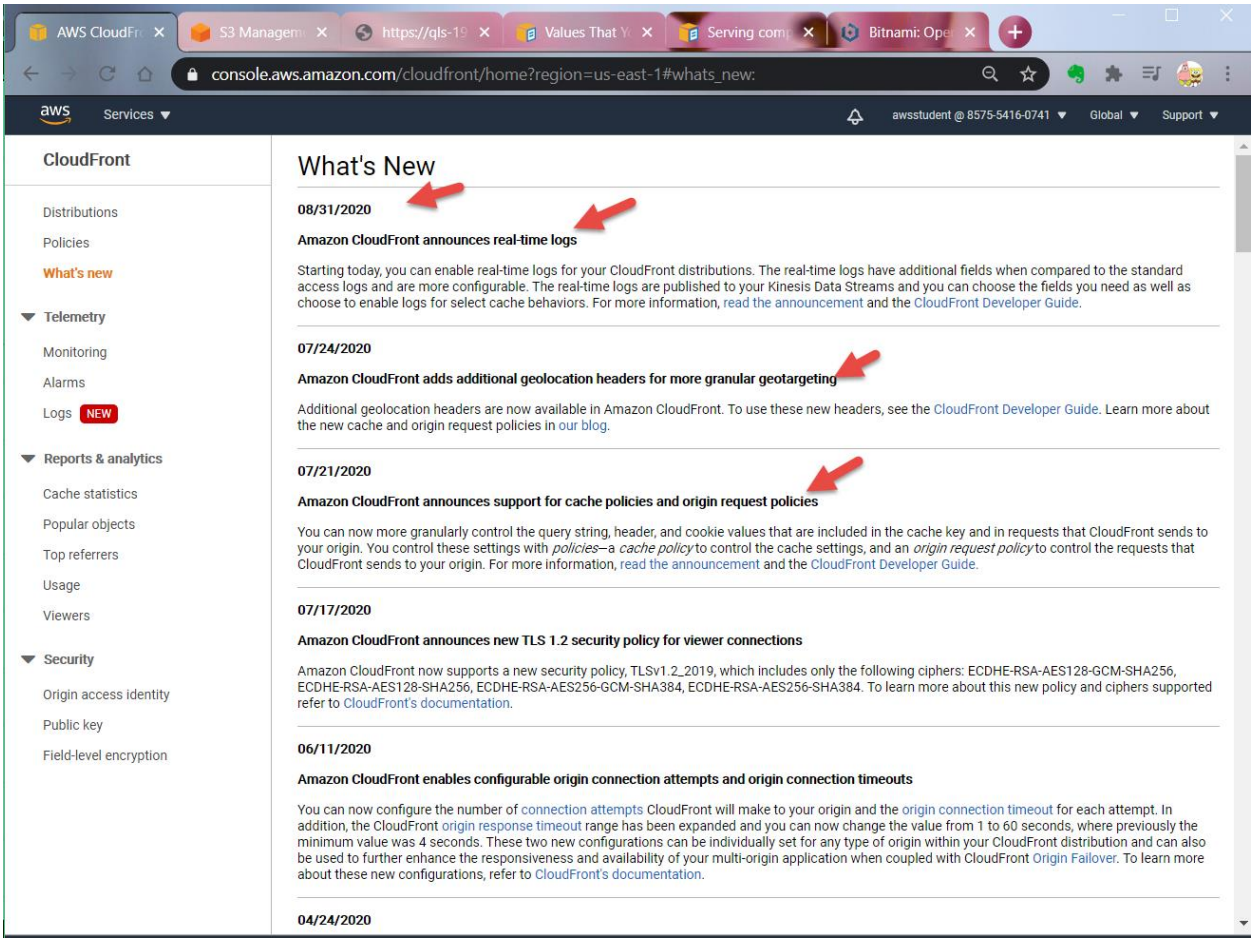


9) CF Policies :

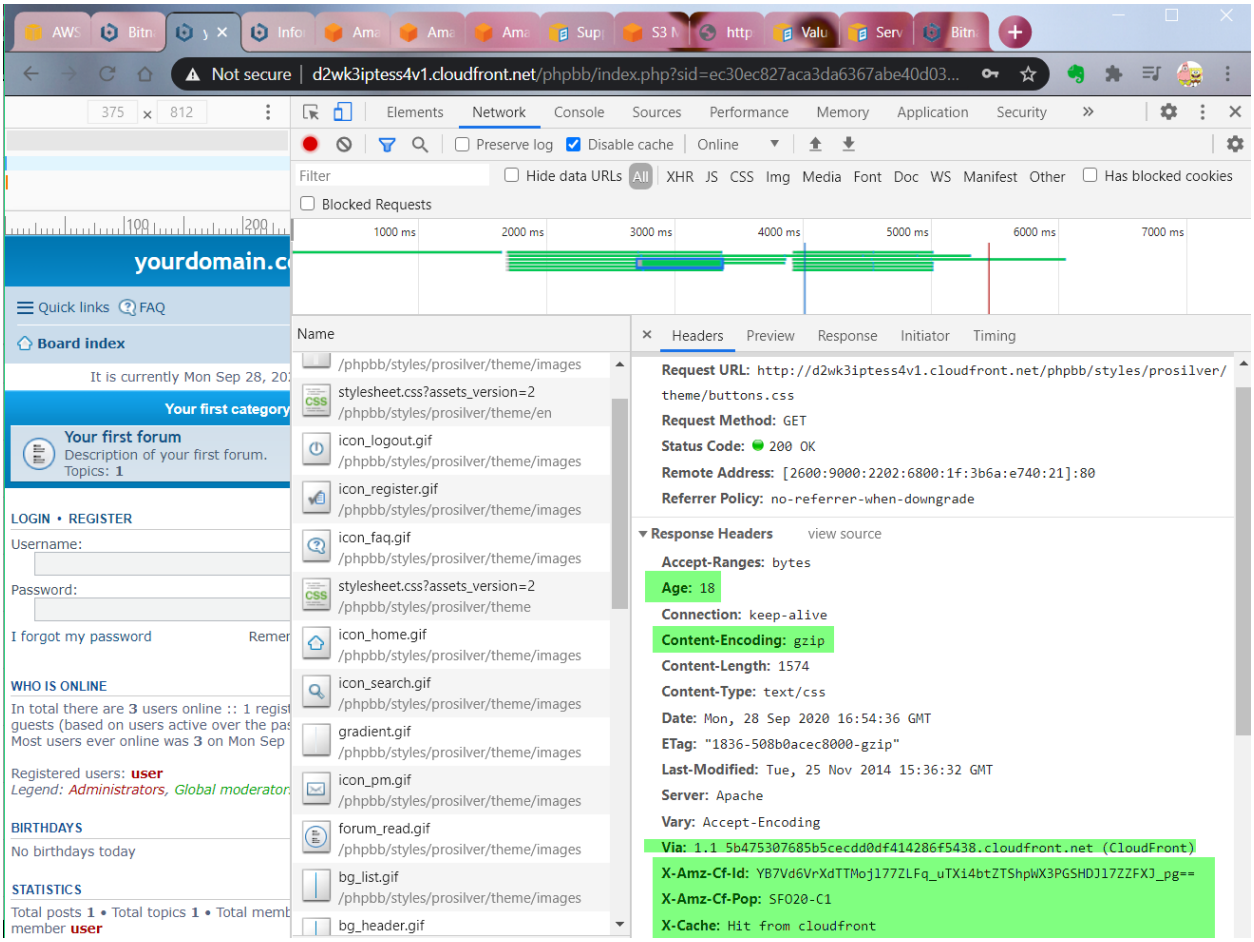



CloudFront
S3 Managem
https://qls-19
Values That Y
Serving comp
Bitnami: Ope
console.aws.amazon.com/cloudfront/v2/home#/policy/details/08627262-05a9-4f76-9ded-b50ca2e3...
aws
Services
awsstudent @ 8575-5416-0741
Global
Support
CloudFront
Distributions
Policies
What's new
Telemetry
Monitoring
Alarms
Logs
NEW
Reports & analytics
Cache statistics
Popular objects
Top referrers
Usage
Viewers
Security
Origin access identity
Public key
Field-level encryption
CloudFront > Policies > Managed-Elemental-MediaPackage
Managed-Elemental-MediaPackage
Info
Name
Managed-Elemental-MediaPackage
Comment
Policy for Elemental MediaPackage Origin
TTL Settings
Minimum TTL
0
Maximum TTL
31536000
Default TTL
86400
Cache key contents
The cache key includes the headers, cookies, and query strings in the cache policy, as follows:
Headers
Whitelist
origin
Cookies
None
Query strings
Whitelist
aws.manifestfilter
start
end
m
Cache compressed objects (uses Accept-Encoding header)
Caching gzip objects Info
Not caching brotli objects Info

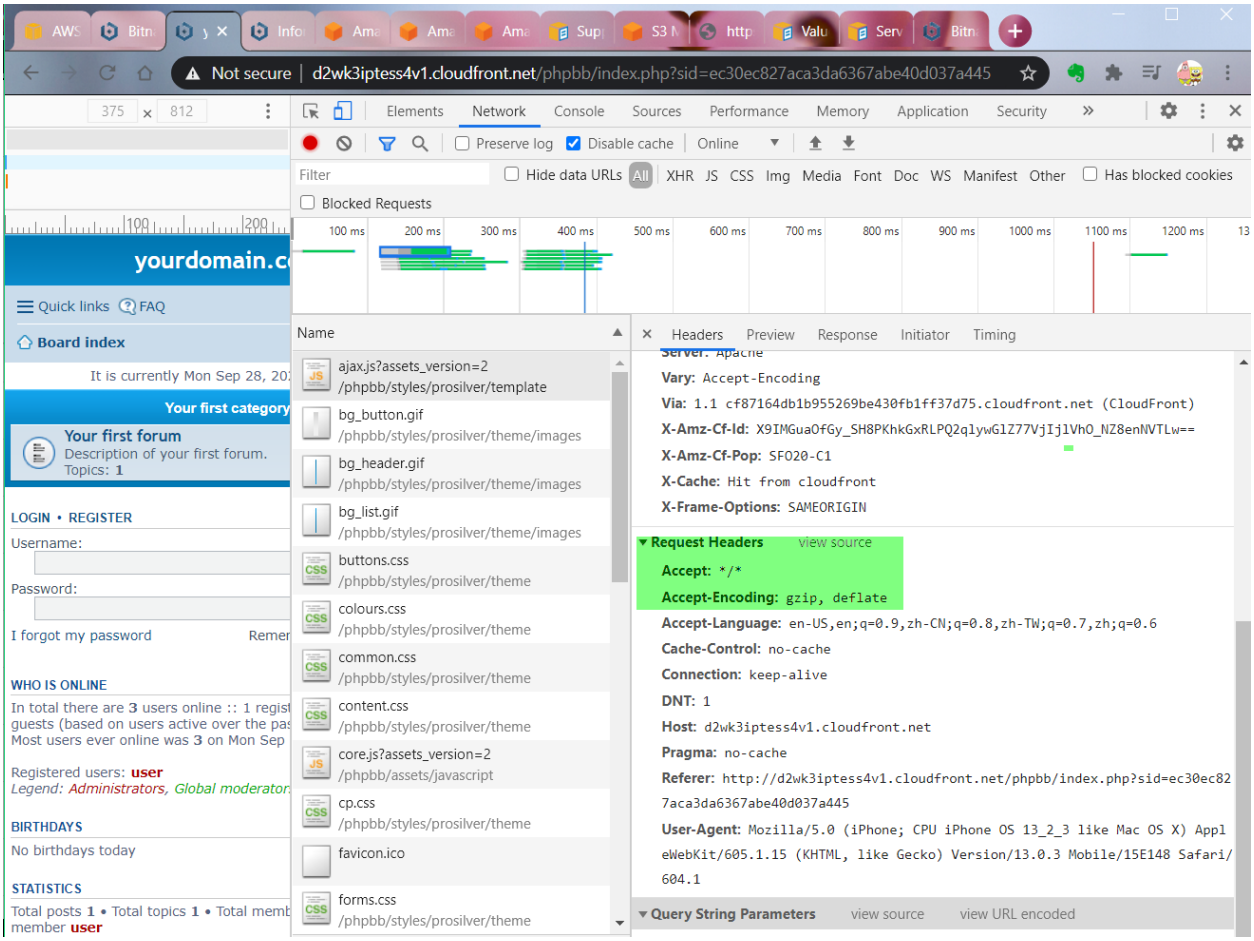
10) What's New in CF:



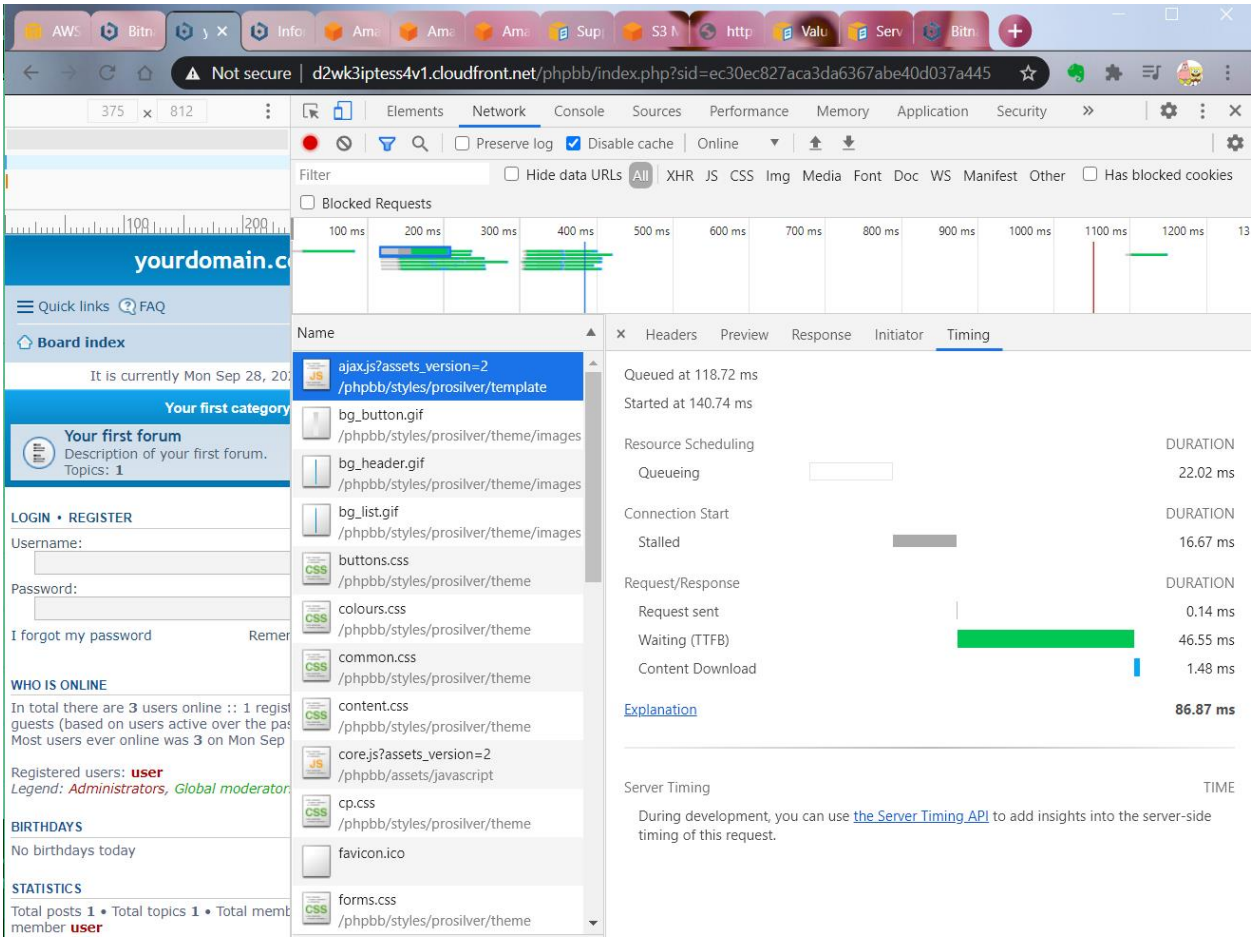
11) Sample CF headers:



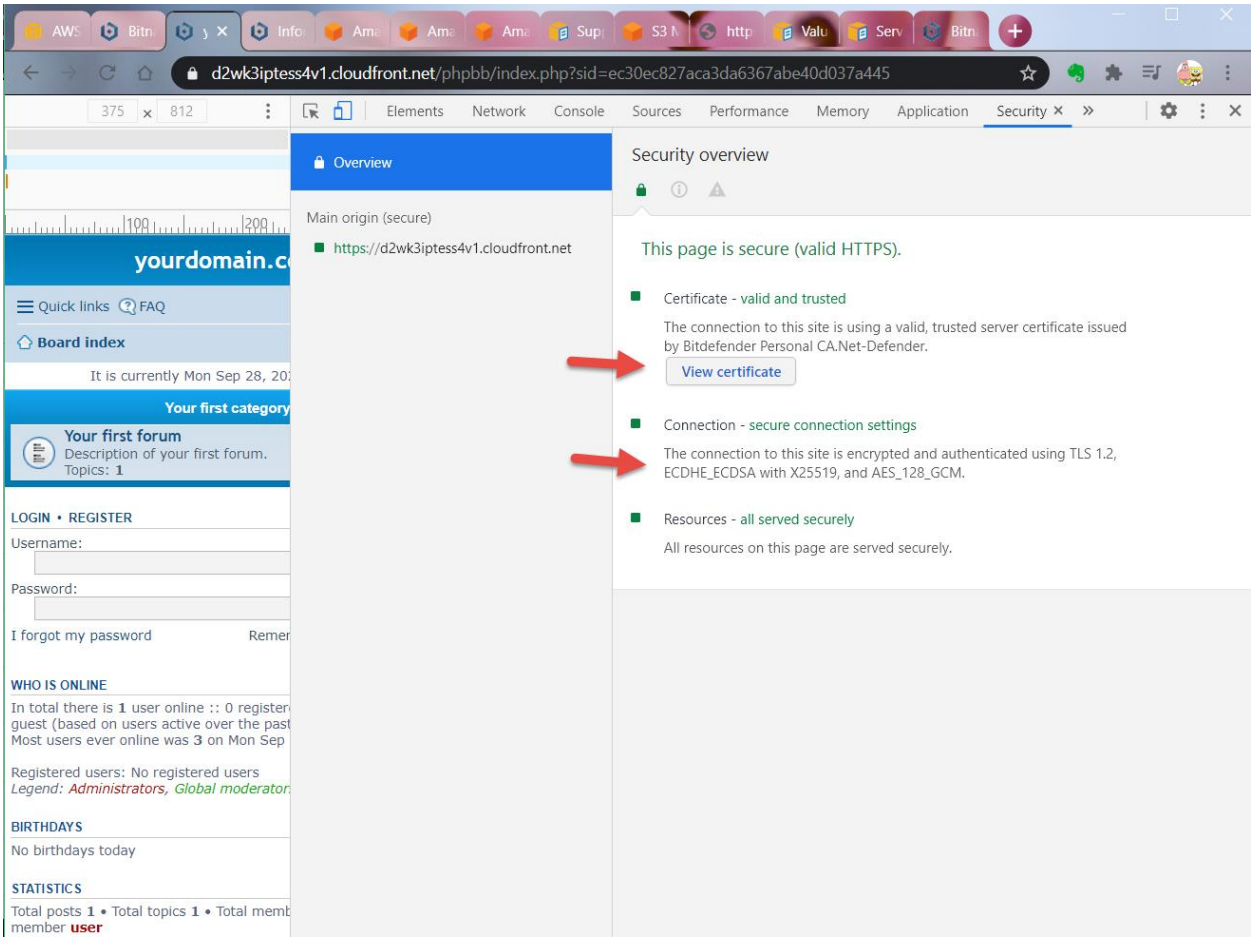
Still http1.1 in request, not http2 ?



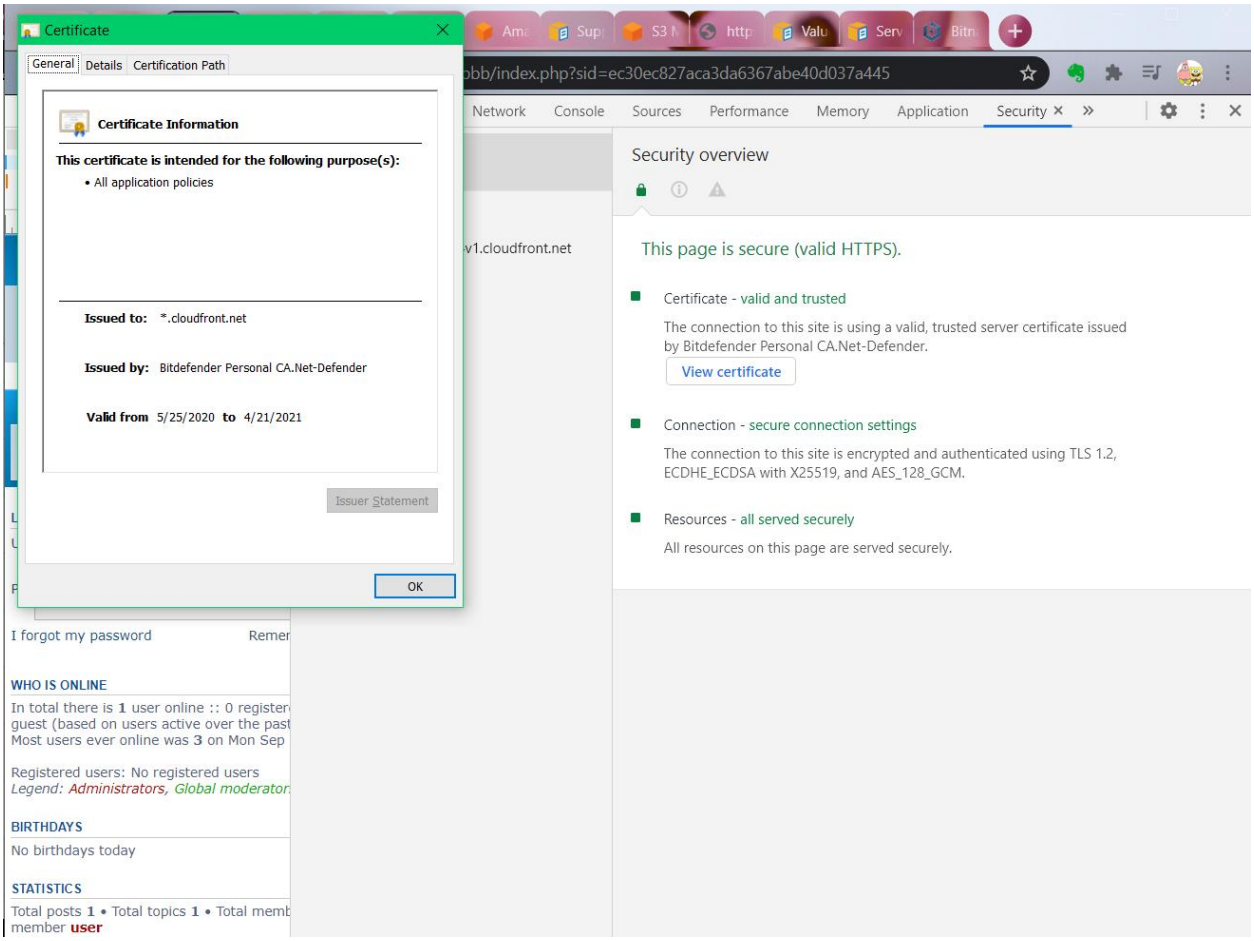
Fast timing:


Not secure | d2wk3iptess4v1.cloudfront.net/phpbb/index.php?sid=ec30ec827aca3da6367abe40d037a445
Elements
Network
Console
Sources
Performance
Memory
Application
Security
Preserve log
Disable cache
Online
Filter
Hide data URLs
All
XHR
JS
CSS
Img
Media
Font
Doc
WS
Manifest
Other
Has blocked cookies
Blocked Requests
100 ms
200 ms
300 ms
400 ms
500 ms
600 ms
700 ms
800 ms
900 ms
1000 ms
1100 ms
1200 ms
yourdomain.c
Quick links
FAQ
Board index
Your first category
Your first forum
Description of your first forum.
Topics: 1
LOGIN • REGISTER
Username:
Password:
I forgot my password
WHO IS ONLINE
Registered users: user
BIRTHDAYS
No birthdays today
STATISTICS
Name
ajax.js?assets_version=2
/phpbb/styles/prosilver/template
bg_button.gif
/phpbb/styles/prosilver/theme/images
bg_header.gif
/phpbb/styles/prosilver/theme/images
bg_list.gif
/phpbb/styles/prosilver/theme/images
buttons.css
/phpbb/styles/prosilver/theme
colours.css
/phpbb/styles/prosilver/theme
common.css
/phpbb/styles/prosilver/theme
content.css
/phpbb/styles/prosilver/theme
core.js?assets_version=2
/phpbb/assets/javascript
cp.css
/phpbb/styles/prosilver/theme
favicon.ico
forms.css
/phpbb/styles/prosilver/theme
Headers
Preview
Response
Initiator
Timing
Queued at 118.72 ms
Started at 140.74 ms
Resource Scheduling
DURATION
Queueing
22.02 ms
Connection Start
DURATION
Stalled
16.67 ms
Request/Response
DURATION
Request sent
0.14 ms
Waiting (TTFB)
46.55 ms
Content Download
1.48 ms
Explanation
86.87 ms
Server Timing
TIME
During development, you can use the Server Timing API to add insights into the server-side timing of this request.

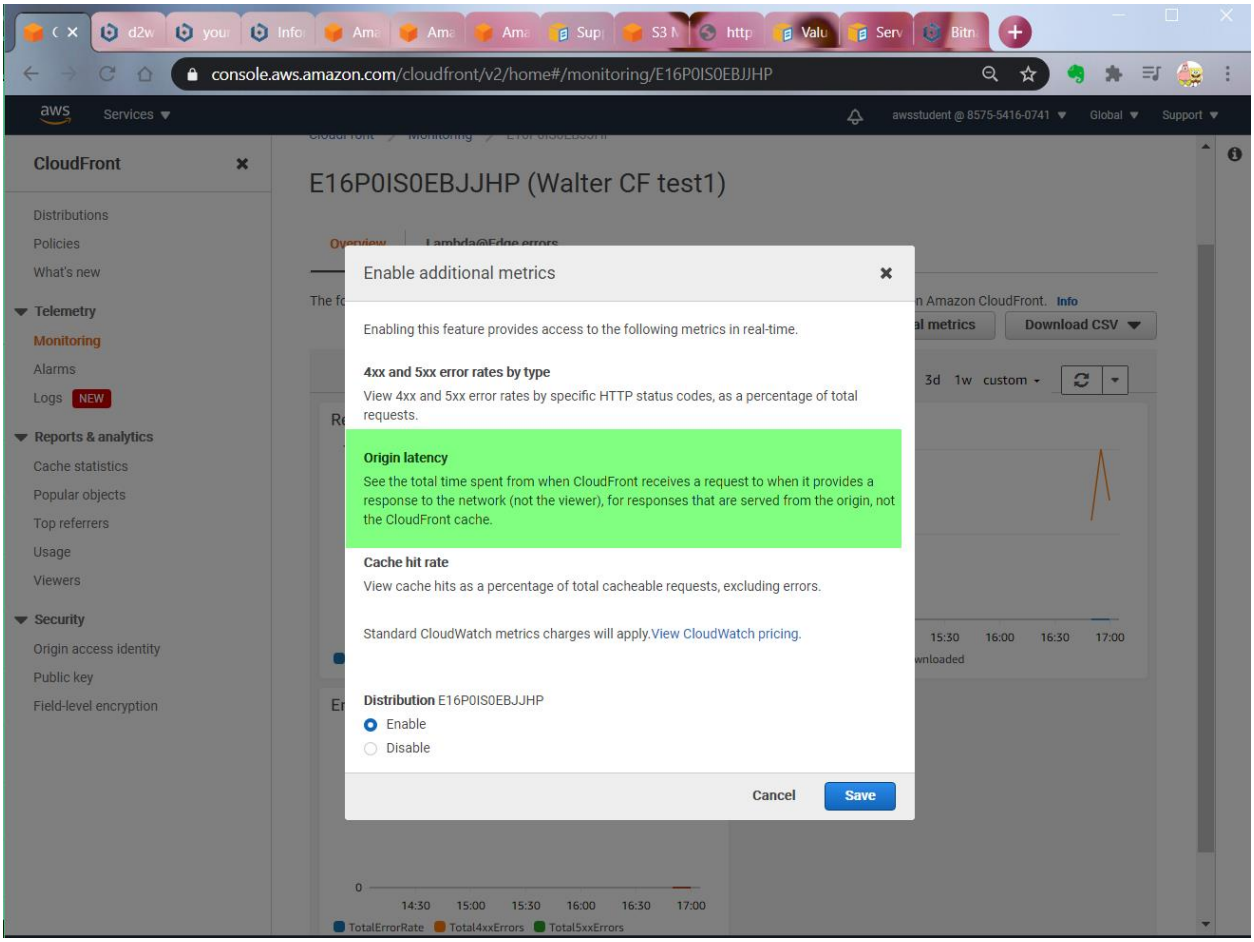
TLS 1.2


d2wk3iptess4v1.cloudfront.net/phpbb/index.php?sid=ec30ec827aca3da6367abe40d037a445
Elements
Network
Console
Sources
Performance
Memory
Application
Security
Overview
Main origin (secure)
https://d2wk3iptess4v1.cloudfront.net
Security overview
This page is secure (valid HTTPS).
Certificate - valid and trusted
The connection to this site is using a valid, trusted server certificate issued by Bitdefender Personal CA.Net-Defender.
View certificate
Connection - secure connection settings
The connection to this site is encrypted and authenticated using TLS 1.2, ECDHE_ECDSA with X25519, and AES_128_GCM.
Resources - all served securely
All resources on this page are served securely.
yourdomain.c
Quick links
FAQ
Board index
Your first forum
Description of your first forum.
Topics: 1
LOGIN • REGISTER
Username:
Password:
I forgot my password
WHO IS ONLINE
BIRTHDAYS
No birthdays today
STATISTICS

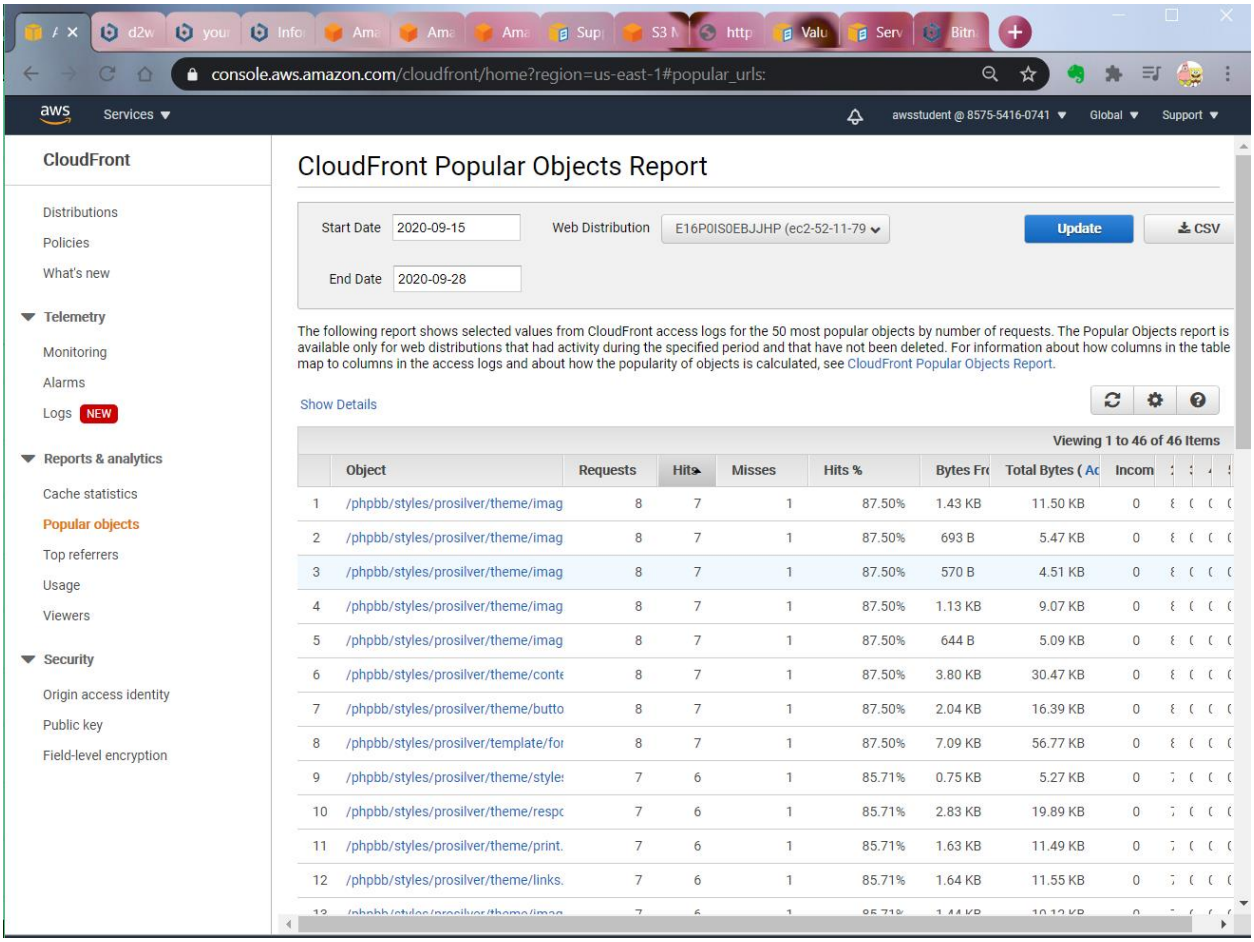
CF default SSL cert:



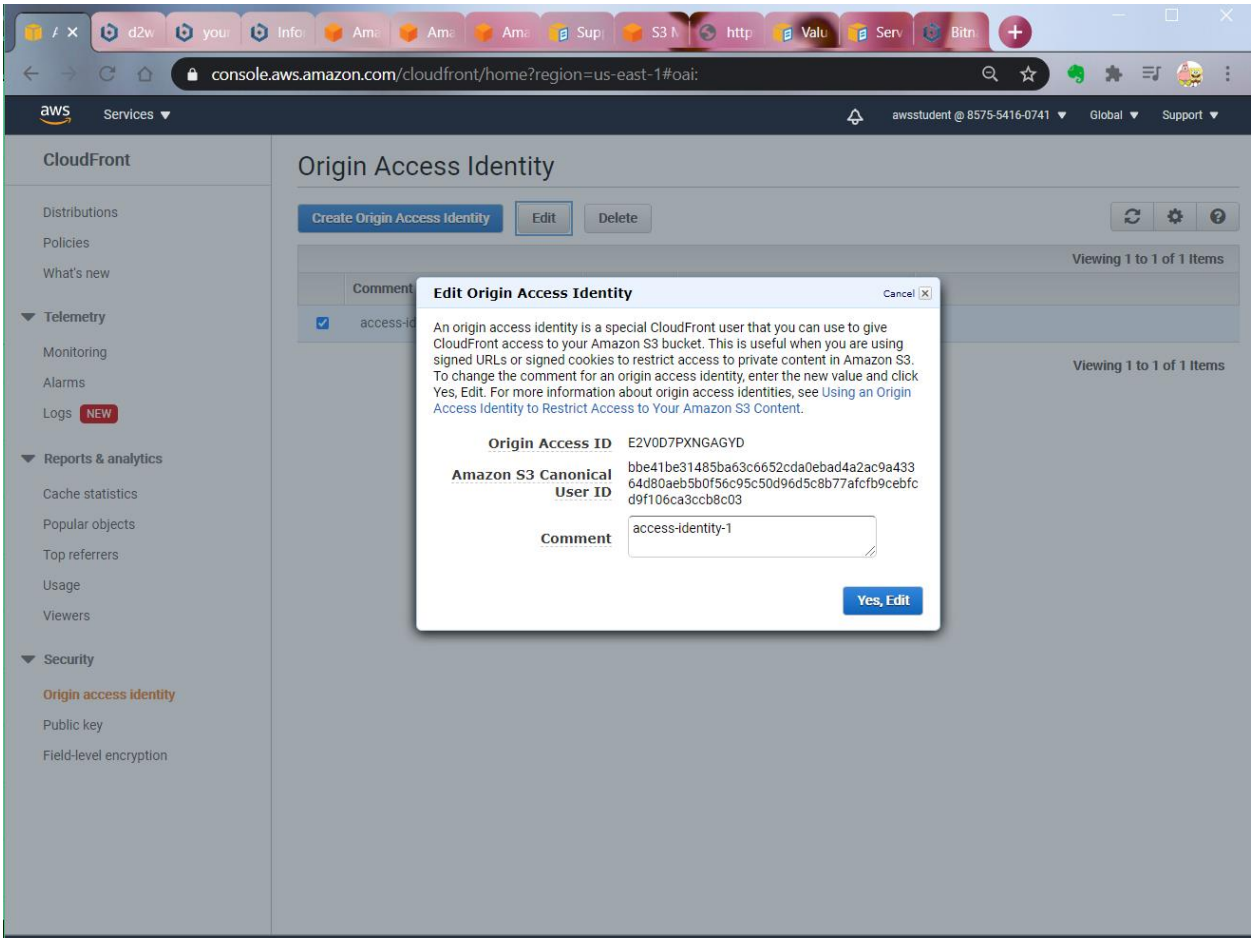
12) Add more metrics



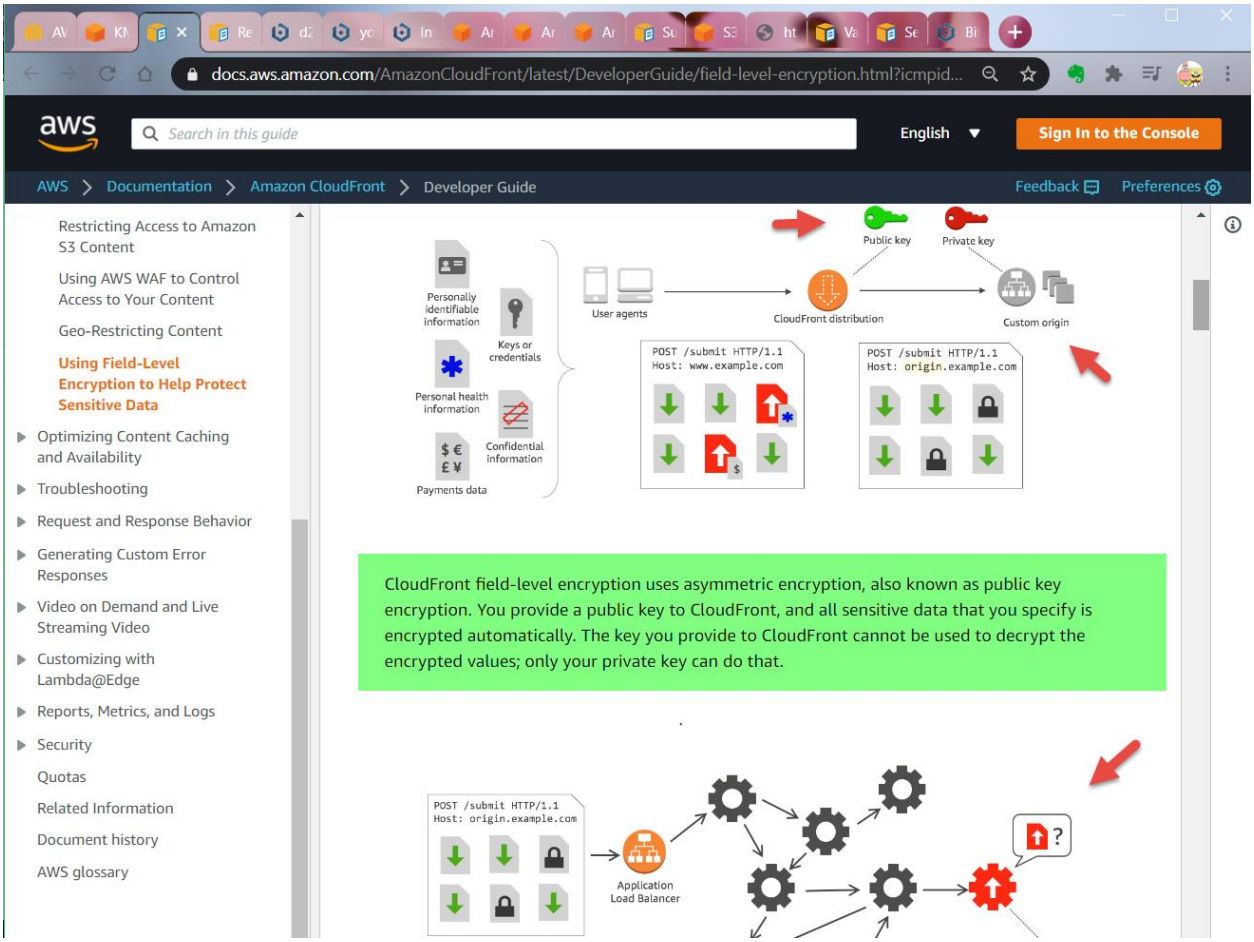
Popular objects:


console.aws.amazon.com/cloudfront/home?region=us-east-1#popular_urls:
aws
Services
awsstudent @ 8575-5416-0741
Global
Support
CloudFront
Distributions
Policies
What's new
Telemetry
Monitoring
Alarms
Logs
NEW
Reports & analytics
Cache statistics
Popular objects
Top referrers
Usage
Viewers
Security
Origin access identity
Public key
Field-level encryption
CloudFront Popular Objects Report
Start Date
2020-09-15
End Date
2020-09-28
Web Distribution
E16P0IS0EBJJHP (ec2-52-11-79
Update
CSV
The following report shows selected values from CloudFront access logs for the 50 most popular objects by number of requests. The Popular Objects report is available only for web distributions that had activity during the specified period and that have not been deleted. For information about how columns in the table map to columns in the access logs and about how the popularity of objects is calculated, see CloudFront Popular Objects Report.
Show Details
Viewing 1 to 46 of 46 Items
Object
Requests
Hits
Misses
Hits %
Bytes Fr
Total Bytes (Ac
Incom
1 /phpbb/styles/prosilver/theme/imag 8 7 1 87.50% 1.43 KB 11.50 KB 0
2 /phpbb/styles/prosilver/theme/imag 8 7 1 87.50% 693 B 5.47 KB 0
3 /phpbb/styles/prosilver/theme/imag 8 7 1 87.50% 570 B 4.51 KB 0
4 /phpbb/styles/prosilver/theme/imag 8 7 1 87.50% 1.13 KB 9.07 KB 0
5 /phpbb/styles/prosilver/theme/imag 8 7 1 87.50% 644 B 5.09 KB 0
6 /phpbb/styles/prosilver/theme/conte 8 7 1 87.50% 3.80 KB 30.47 KB 0
7 /phpbb/styles/prosilver/theme/butto 8 7 1 87.50% 2.04 KB 16.39 KB 0
8 /phpbb/styles/prosilver/template/for 8 7 1 87.50% 7.09 KB 56.77 KB 0
9 /phpbb/styles/prosilver/theme/style 7 6 1 85.71% 0.75 KB 5.27 KB 0
10 /phpbb/styles/prosilver/theme/respo 7 6 1 85.71% 2.83 KB 19.89 KB 0
11 /phpbb/styles/prosilver/theme/print. 7 6 1 85.71% 1.63 KB 11.49 KB 0
12 /phpbb/styles/prosilver/theme/links. 7 6 1 85.71% 1.64 KB 11.55 KB 0

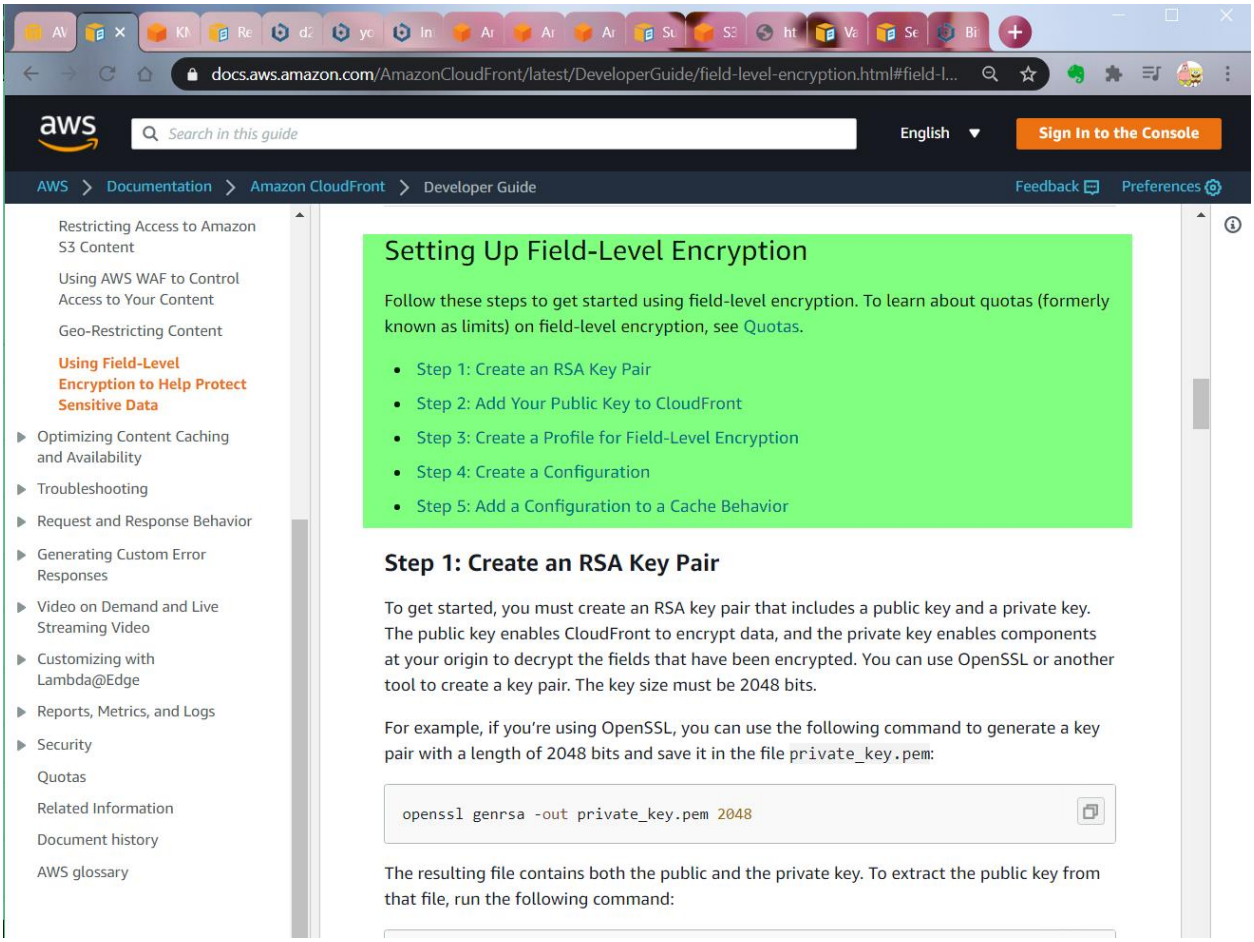
13) Origin access identity

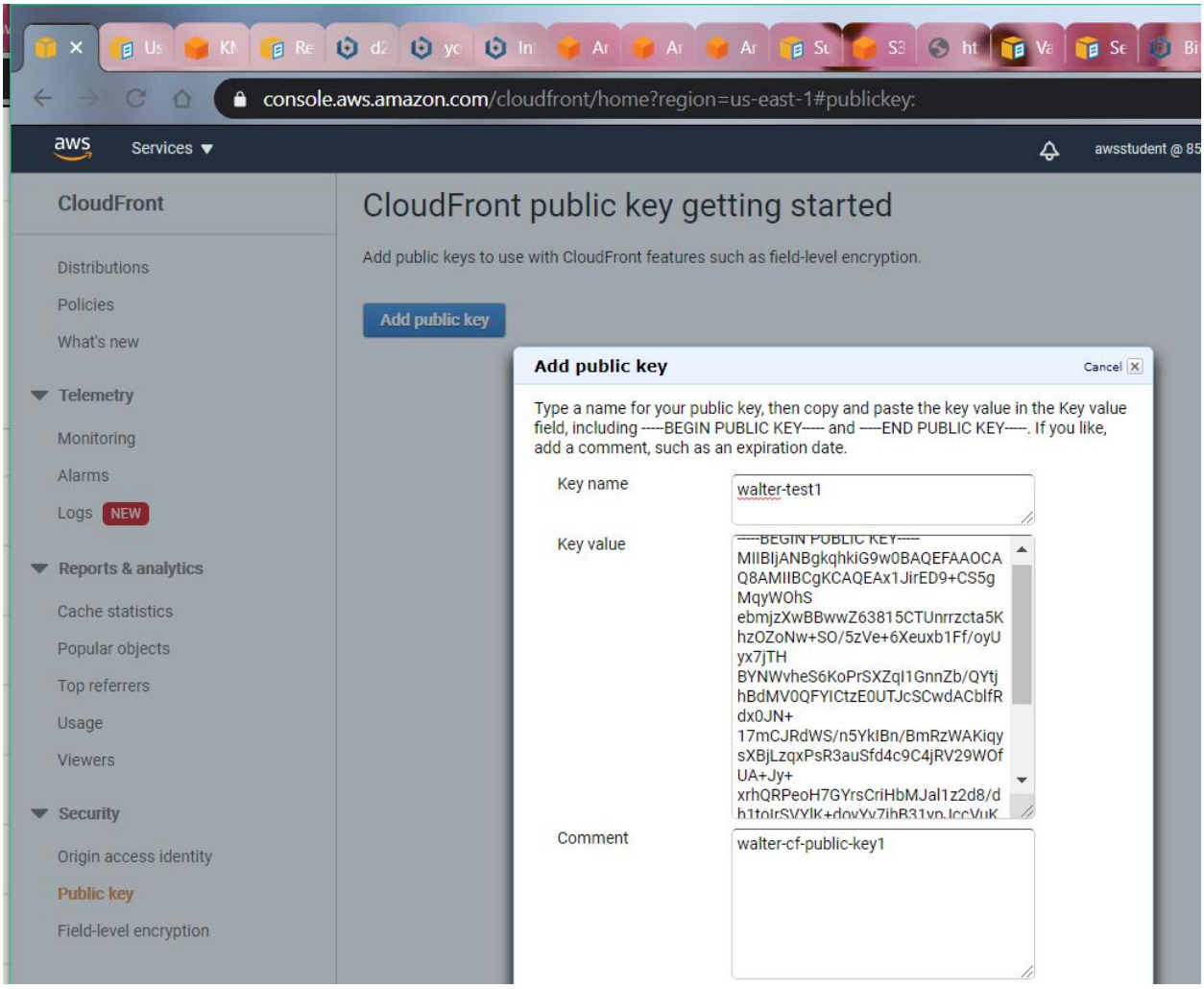


14) Field level encryption setup:



Easy setup:


docs.aws.amazon.com/AmazonCloudFront/latest/DeveloperGuide/field-level-encryption.html#field-l...
aws
Search in this guide
English
Sign In to the Console
AWS > Documentation > Amazon CloudFront > Developer Guide
Feedback
Preferences
Restricting Access to Amazon S3 Content
Using AWS WAF to Control Access to Your Content
Geo-Restricting Content
Using Field-Level Encryption to Help Protect Sensitive Data
Optimizing Content Caching and Availability
Troubleshooting
Request and Response Behavior
Generating Custom Error Responses
Video on Demand and Live Streaming Video
Customizing with Lambda@Edge
Reports, Metrics, and Logs
Security
Quotas
Related Information
Document history
AWS glossary
Setting Up Field-Level Encryption
Follow these steps to get started using field-level encryption. To learn about quotas (formerly known as limits) on field-level encryption, see Quotas.
Step 1: Create an RSA Key Pair
Step 2: Add Your Public Key to CloudFront
Step 3: Create a Profile for Field-Level Encryption
Step 4: Create a Configuration
Step 5: Add a Configuration to a Cache Behavior
Step 1: Create an RSA Key Pair
To get started, you must create an RSA key pair that includes a public key and a private key. The public key enables CloudFront to encrypt data, and the private key enables components at your origin to decrypt the fields that have been encrypted. You can use OpenSSL or another tool to create a key pair. The key size must be 2048 bits.
For example, if you're using OpenSSL, you can use the following command to generate a key pair with a length of 2048 bits and save it in the file private_key.pem:
openssl genrsa -out private_key.pem 2048
The resulting file contains both the public and the private key. To extract the public key from that file, run the following command:


console.aws.amazon.com/cloudfront/home?region=us-east-1#publickey:
aws
Services
awsstudent @ 85
CloudFront
Distributions
Policies
What's new
Telemetry
Monitoring
Alarms
Logs
NEW
Reports & analytics
Cache statistics
Popular objects
Top referrers
Usage
Viewers
Security
Origin access identity
Public key
Field-level encryption
CloudFront public key getting started
Add public keys to use with CloudFront features such as field-level encryption.
Add public key
Add public key
Cancel
Type a name for your public key, then copy and paste the key value in the Key value field, including -----BEGIN PUBLIC KEY----- and -----END PUBLIC KEY-----. If you like, add a comment, such as an expiration date.
Key name
walter-test1
Key value
-----BEGIN PUBLIC KEY-----
MIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAx1JirED9+CS5g
MqyWOhS
ebmjzXwBBwwZ63815CTUnrrzcta5K
hzOZoNw+SO/5zVe+6Xeuxb1Ff/oyU
yx7jTH
BYNWvheS6KoPrSXZqI1GnnZb/QYtj
hBdMV0QFYICtzE0UTJcSCwdACblfR
dx0JN+
17mCJRdWS/n5YkIBn/BmRzWAKiqy
sXBjLzqxPsR3auSfd4c9C4jRV29WOf
UA+Jy+
xrhQRPeoH7GYrsCriHbMJal1z2d8/d
Comment
walter-cf-public-key1