



BESTARION

CONTROLLED DOCUMENT

CONVENTION

QM

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1. Introduction

1.1. Purpose

This document explains Terraform module frontend in MAX project, documenting the CloudFront distribution deployment for the PERFORMANCE environment. It provides developers with architecture overview, deployment instructions, and operational guidance to understand, setup, and maintain the infrastructure.

1.2. Scope

This Terraform module deploys an AWS CloudFront Distribution specifically for the PERFORMANCE environment. It focuses on CloudFront configuration with optimized cache behaviors, custom HTTPS via ACM certificate, and access logging.

Related dependencies relevant to the configuration are managed externally and out of scope for this document:

- How S3 bucket is provided and managed about static asset deployment
- Networking layer (VPC, ALB, subnets).
- Certificate creation and domain validation.
- Backend application services behind Load Balancing.

1.3. Definition And Abbreviation

Term	Defination
CDN	Content Delivery Network
SPA	Single Page Application
ALB	Application Load Balancer
ACM	AWS Certificate Manager
TTL	Time To Live

Table 1: *Terms*

2. Architecture

2.1. Flow

Request Flow: Users accessing perf.maxapp.com would hit CloudFront edge locations world-wide.

- Static assets like js and css files are cached up to 24 hours (with `CachingOptimized`) for lightning-fast delivery.
- When user typing `/about` directly or refreshing the page, Cloudfront returns `index.html` so React router can handle the route.
- API calls with prefix `/api/*` and `/auth/*` will bypass cache completely, forwarding all headers + CORS to ALB backend services.

2.2. Functional

- SPA frontend from S3 (cached static + routing)
- API backend via ALB (no-cache, CORS).
- Global CDN, custom HTTPS (TLS 1.2+), access logging to S3

3. Requirements

3.1. Module & Codes

Depends on : Networking layer remote state

3.2. Version & Provider