



BESTARION

CONTROLLED DOCUMENT

CONVENTION

QM

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|---------------------------------|----------------------|
| Security classification: | INTERNAL |
| Document code: | Bestarion.QM.CON.001 |
| Last updated by: | Khoa Nguyen-Dinh |
| Effective date: | Aug 09, 2023 |
| Version: | 2.1 |
| Template ID: | ODT_Base_Template |

DOCUMENT CONTROL

| Version | Change Description | Changed By | Date | Approved By | Date |
|---------|---|------------|------------|-------------|------------|
| 1.0 | Khởi tạo tài liệu và phê duyệt lần đầu. | KhoaND | 2025-01-01 | CEO/TienDD | 2025-01-05 |
| 1.1 | Cập nhật phần quy trình 3.2. | MinhNT | 2025-02-10 | N/A | N/A |

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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 | Definition |
|------|---------------------------|
| 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