Terraform Module: Application Load Balancer (ALB)

This module deploys a highly configurable Application Load Balancer (ALB) on AWS. It is designed to be a shared, central entry point for web traffic, capable of serving multiple applications via listener rules.

Key features include: * Creation of an internet-facing or internal ALB. * Configurable HTTP and HTTPS listeners with default fixed-response actions. * A dedicated, customizable security group for the ALB. * Production-grade access logging to a dedicated S3 bucket, with support for versioning, encryption, and lifecycle policies.

Usage

```
module "shared_alb" {
  source = "./modules/application_load_balancer"

  alb_name            = "shared-webapp"
  target_environment  = "dev"
  vpc_id              = "vpc-0123456789abcdef0"
  subnet_ids          = ["subnet-0123...", "subnet-4567..."]
  internal_alb        = false

  http_enabled        = true
  http_ingress_cidrs  = ["0.0.0.0/0"]

  https_enabled       = true
  https_tls_cert_arn  = "arn:aws:acm:us-east-2:123456789012:certificate/..."
  https_ingress_cidrs = ["0.0.0.0/0"]

  enable_access_logs                    = true
  access_logs_s3_bucket_name            = "my-project-alb-logs-dev"
  access_logs_s3_bucket_lifecycle_enabled = true
  access_logs_s3_bucket_expiration_days   = 90

  tags = {
    CostCenter = "web-infra"
  }
}
```

Requirements

Name	Version
terraform	>= 1.0
aws	~> 6.0

Providers

Name	Version
aws	~> 6.0

Inputs

Name	Description	Type	Default	Required
`alb_name`	A unique name for the Application Load Balancer.	`string`	n/a	yes
`target_environment`	The target environment (e.g., dev, uat, prd) to append to resource names.	`string`	n/a	yes
`internal_alb`	Set to true to create an internal-facing ALB, false for internet-facing.	`bool`	`true`	no

Name	Description	Type	Default	Required
`vpc_id`	The ID of the VPC where the ALB will be deployed.	`string`	n/a	yes
`subnet_ids`	A list of subnet IDs where the ALB will be deployed. At least two are recommended.	`list(string)`	n/a	yes
`http_enabled`	Set to true to enable an HTTP listener.	`bool`	`true`	no
`http_port`	The port for the HTTP listener.	`number`	`80`	no
`http_ingress_cidrs`	A list of CIDR blocks to allow HTTP ingress from.	`list(string)`	`[]`	no
`https_enabled`	Set to true to enable an HTTPS listener.	`bool`	`true`	no
`https_port`	The port for the HTTPS listener.	`number`	`443`	no
`https_ingress_cidrs`	A list of CIDR blocks to allow HTTPS ingress from.	`list(string)`	`[]`	no
`https_tls_cert_arn`	The ARN of the ACM certificate for the HTTPS listener. Required if `https_enabled` is true.	`string`	`null`	no
`enable_access_logs`	Set to true to enable ALB access logging to an S3 bucket.	`bool`	`false`	no
`access_logs_s3_bucket_name`	The name of the S3 bucket for logs. Required if `enable_access_logs` is true.	`string`	`null`	no
`access_logs_s3_prefix`	The S3 bucket prefix for ALB access logs.	`string`	`"alb-logs"`	no
`access_logs_s3_bucket_versioning_enabled`	Set to true to enable versioning on the S3 bucket for logs.	`bool`	`false`	no
`access_logs_s3_bucket_lifecycle_enabled`	Set to true to enable lifecycle rules on the S3 bucket for logs.	`bool`	`false`	no
`access_logs_s3_bucket_transition_days`	Number of days to transition logs to STANDARD_IA storage.	`number`	`null`	no
`access_logs_s3_bucket_expiration_days`	Number of days after which to expire (delete) logs.	`number`	`null`	no
`tags`	A map of tags to assign to all resources created by this module.	`map(string)`	`{}`	no

Outputs

Name	Description
`alb_arn`	The ARN of the created Application Load Balancer.
`alb_dns_name`	The DNS name of the created Application Load Balancer.
`alb_zone_id`	The Route 53 Hosted Zone ID of the created ALB.
`alb_listener_http_arn`	The ARN of the HTTP listener, if enabled.
`alb_listener_https_arn`	The ARN of the HTTPS listener, if enabled.
`alb_security_group_id`	The ID of the security group attached to the ALB.
`alb_access_logs_s3_bucket_arn`	The ARN of the S3 bucket for ALB access logs, if enabled.