

A template for creating a Google Cloud project to protect any web service hosted on any platform.
Utilizes Load Balancing, Cloud CDN, and Cloud Armor for in-depth DDoS defense and performance boosting.

Make sure to replace the following values with your own:
- project_id (replace "shield-blog-example" with your desired project ID)
- project_name (replace "shield-blog-example" with your desired project name)
- billing_account (replace "012345-ABCDEF-678901" with your billing account)
- origin address (replace "8.8.8.8" with your origin address)
- ip_address (replace "1.2.3.4" with your desired IP address, or leave blank to auto-assign one.)

```
resource "google_project" "shield_blog_example" # Replace this with your desired project ID {
  auto_create_network = true
  billing_account = "012345-ABCDEF-678901" # Replace this with your billing account
  name = "shield-blog-example" # Replace this with your desired project name
  project_id = "shield-blog-example" # Replace this with your desired project ID
}
# terraform import google_project.shield_blog_example projects/shield-blog-example
resource "google_compute_backend_service" "my_http_bes" {
  cdn_policy {
    cache_key_policy {
      include_host = true
      include_protocol = true
      include_query_string = true
    }
    cache_mode = "CACHE_ALL_STATIC"
    client_ttl = 3600
    default_ttl = 3600
    max_ttl = 86400
    signed_url_cache_max_age_sec = 0
  }
  connection_draining_timeout_sec = 0
}
```

```
enable_cdn = true
load_balancing_scheme = "EXTERNAL_MANAGED"
locality_lb_policy = "ROUND_ROBIN"
name = "my-http-bes"
port_name = "http"
project = "shield-blog-example"
protocol = "HTTP"
security_policy = "https://www.googleapis.com/compute/beta/projects/shield-blog-example/global/securityPolicies/default-security-policy-for-backend-service-my-http-bes"
session_affinity = "NONE"
timeout_sec = 30
}
# terraform import google_compute_backend_service.my_http_bes projects/shield-blog-example/global/backendServices/my-http-bes
resource "google_compute_backend_service" "my_https_bes" {
  cdn_policy {
    cache_key_policy {
      include_host = true
      include_protocol = true
      include_query_string = true
    }
    cache_mode = "CACHE_ALL_STATIC"
    client_ttl = 3600
    default_ttl = 3600
    max_ttl = 86400
    signed_url_cache_max_age_sec = 0
  }
  connection_draining_timeout_sec = 0
  enable_cdn = true
  load_balancing_scheme = "EXTERNAL_MANAGED"
  locality_lb_policy = "ROUND_ROBIN"
  name = "my-https-bes"
  port_name = "http"
  project = "shield-blog-example"
```

```
protocol = "HTTPS"
security_policy = "https://www.googleapis.com/compute/beta/projects/shield-blog-example/global/securityPolicies/default-security-policy-for-backend-service-my-http-bes"
session_affinity = "NONE"
timeout_sec = 30
}
# terraform import google_compute_backend_service.my_https_bes projects/shield-blog-example/global/backendServices/my-https-bes
resource "google_compute_firewall" "default_allow_internal" {
  allow {
    ports = ["0-65535"]
    protocol = "tcp"
  }
  allow {
    ports = ["0-65535"]
    protocol = "udp"
  }
  allow {
    protocol = "icmp"
  }
  description = "Allow internal traffic on the default network"
  direction = "INGRESS"
  name = "default-allow-internal"
  network = "https://www.googleapis.com/compute/v1/projects/shield-blog-example/global/networks/default"
  priority = 65534
  project = "shield-blog-example"
  source_ranges = ["10.128.0.0/9"]
}
# terraform import google_compute_firewall.default_allow_internal projects/shield-blog-example/global/firewalls/default-allow-internal
resource "google_compute_firewall" "default_allow_ssh" {
  allow {
    ports = ["22"]
    protocol = "tcp"
  }
}
```

```
description = "Allow SSH from anywhere"
direction = "INGRESS"
name = "default-allow-ssh"
network = "https://www.googleapis.com/compute/v1/projects/shield-blog-example/global/networks/default"
priority = 65534
project = "shield-blog-example"
source_ranges = ["0.0.0.0/0"]
}
# terraform import google_compute_firewall.default_allow_ssh projects/shield-blog-example/global/firewalls/default-allow-ssh
resource "google_compute_firewall" "default_allow_icmp" {
  allow {
    protocol = "icmp"
  }
  description = "Allow ICMP from anywhere"
  direction = "INGRESS"
  name = "default-allow-icmp"
  network = "https://www.googleapis.com/compute/v1/projects/shield-blog-example/global/networks/default"
  priority = 65534
  project = "shield-blog-example"
  source_ranges = ["0.0.0.0/0"]
}
# terraform import google_compute_firewall.default_allow_icmp projects/shield-blog-example/global/firewalls/default-allow-icmp
resource "google_compute_global_forwarding_rule" "my_http_lb" {
  ip_address = "1.2.3.4" # Replace this with your desired IP address, or leave blank to auto-assign one.
  ip_protocol = "TCP"
  load_balancing_scheme = "EXTERNAL_MANAGED"
  name = "my-http-lb"
  port_range = "80-80"
  project = "shield-blog-example"
  target = "https://www.googleapis.com/compute/beta/projects/shield-blog-example/global/targetHttpProxies/my-http-lb-target-proxy"
}
# terraform import google_compute_global_forwarding_rule.my_http_lb projects/shield-blog-example/global/forwardingRules/my-http-lb
resource "google_compute_global_forwarding_rule" "my_https_lb" {
```

```
ip_address = "1.2.3.4" # Replace this with your desired IP address, or leave blank to auto-assign one.
ip_protocol = "TCP"
load_balancing_scheme = "EXTERNAL_MANAGED"
name = "my-https-lb"
port_range = "443-443"
project = "shield-blog-example"
target = "https://www.googleapis.com/compute/beta/projects/shield-blog-example/global/targetHttpsProxies/my-https-lb-target-proxy"
}
# terraform import google_compute_global_forwarding_rule.my_https_lb projects/shield-blog-example/global/forwardingRules/my-https-lb
resource "google_compute_firewall" "default_allow_rdp" {
  allow {
    ports = ["3389"]
    protocol = "tcp"
  }
  description = "Allow RDP from anywhere"
  direction = "INGRESS"
  name = "default-allow-rdp"
  network = "https://www.googleapis.com/compute/v1/projects/shield-blog-example/global/networks/default"
  priority = 65534
  project = "shield-blog-example"
  source_ranges = ["0.0.0.0/0"]
}
# terraform import google_compute_firewall.default_allow_rdp projects/shield-blog-example/global/firewalls/default-allow-rdp
resource "google_compute_global_address" "my_lb_static_ip" {
  address = "1.2.3.4" # Replace this with your desired IP address, or leave blank to auto-assign one.
  address_type = "EXTERNAL"
  ip_version = "IPV4"
  name = "my-lb-static-ip"
  project = "shield-blog-example"
}
# terraform import google_compute_global_address.my_lb_static_ip projects/shield-blog-example/global/addresses/my-lb-static-ip
resource "google_compute_ssl_certificate" "my_cert" {
  name = "my-cert"
```

```
project = "shield-blog-example"
}
# terraform import google_compute_ssl_certificate.my_cert projects/shield-blog-example/global/sslCertificates/my-cert
resource "google_compute_security_policy" "default_security_policy_for_backend_service_my_http_bes" {
  adaptive_protection_config {
    layer7_ddos_defense_config {
      enable = true
    }
  }
  advanced_options_config {
    json_parsing = "DISABLED"
  }
  description = "Default security policy for: my-http-bes"
  name = "default-security-policy-for-backend-service-my-http-bes"
  project = "shield-blog-example"
  rule {
    action = "allow"
    match {
      config {
        src_ip_ranges = ["*"]
      }
      versioned_expr = "SRC_IPS_V1"
    }
    priority = 2147483647
  }
  rule {
    action = "deny(403)"
    match {
      expr {
        expression = "evaluateAdaptiveProtectionAutoDeploy()"
      }
    }
    priority = 0
  }
}
```

```
}
rule {
  action = "throttle"
  description = "Default rate limiting rule"
  match {
    config {
      src_ip_ranges = ["*"]
    }
    versioned_expr = "SRC_IPS_V1"
  }
  priority = 2147483646
  rate_limit_options {
    conform_action = "allow"
    enforce_on_key = "IP"
    exceed_action = "deny(403)"
    rate_limit_threshold {
      count = 500
      interval_sec = 60
    }
  }
  type = "CLOUD_ARMOR"
}
# terraform import google_compute_security_policy.default_security_policy_for_backend_service_my_http_bes projects/shield-blog-example/global/securityPolicies/default-security-policy-for-backend-service-my-http-bes
resource "google_compute_target_http_proxy" "my_http_lb_target_proxy" {
  name = "my-http-lb-target-proxy"
  project = "shield-blog-example"
  url_map = "https://www.googleapis.com/compute/v1/projects/shield-blog-example/global/urlMaps/my-http-lb"
}
# terraform import google_compute_target_http_proxy.my_http_lb_target_proxy projects/shield-blog-example/global/targetHttpProxies/my-http-lb-target-proxy
resource "google_compute_target_https_proxy" "my_https_lb_target_proxy" {
```

```
name = "my-https-lb-target-proxy"
project = "shield-blog-example"
quic_override = "NONE"
ssl_certificates = ["https://www.googleapis.com/compute/v1/projects/shield-blog-example/global/sslCertificates/my-cert"]
url_map = "https://www.googleapis.com/compute/v1/projects/shield-blog-example/global/urlMaps/my-https-lb"
}
# terraform import google_compute_target_https_proxy.my_https_lb_target_proxy projects/shield-blog-example/global/targetHttpsProxies/my-https-lb-target-proxy
resource "google_compute_url_map" "my_http_lb" {
default_service = "https://www.googleapis.com/compute/v1/projects/shield-blog-example/global/backendServices/my-http-bes"
name = "my-http-lb"
project = "shield-blog-example"
}
# terraform import google_compute_url_map.my_http_lb projects/shield-blog-example/global/urlMaps/my-http-lb
resource "google_compute_url_map" "my_https_lb" {
default_service = "https://www.googleapis.com/compute/v1/projects/shield-blog-example/global/backendServices/my-https-bes"
name = "my-https-lb"
project = "shield-blog-example"
}
# terraform import google_compute_url_map.my_https_lb projects/shield-blog-example/global/urlMaps/my-https-lb
```

BELOW THIS LINE ARE SERVICES THAT ARE REQUIRED TO BE ENABLED IN THE PROJECT.

THESE SERVICES ARE NOT DIRECTLY RELATED TO THE NETWORKING SETUP

```
resource "google_project_service" "serviceusage_googleapis_com" {
project = "148336249154"
service = "serviceusage.googleapis.com"
}
# terraform import google_project_service.serviceusage_googleapis_com 148336249154/serviceusage.googleapis.com
resource "google_project_service" "dataplex_googleapis_com" {
project = "148336249154"
service = "dataplex.googleapis.com"
}
```



```
# terraform import google_project_service.dataplex_googleapis_com 148336249154/dataplex.googleapis.com
resource "google_project_service" "dataform_googleapis_com" {
project = "148336249154"
service = "dataform.googleapis.com"
}
# terraform import google_project_service.dataform_googleapis_com 148336249154/dataform.googleapis.com
resource "google_project_service" "storage_googleapis_com" {
project = "148336249154"
service = "storage.googleapis.com"
}
# terraform import google_project_service.storage_googleapis_com 148336249154/storage.googleapis.com
resource "google_project_service" "oslogin_googleapis_com" {
project = "148336249154"
service = "oslogin.googleapis.com"
}
# terraform import google_project_service.oslogin_googleapis_com 148336249154/oslogin.googleapis.com
resource "google_project_service" "monitoring_googleapis_com" {
project = "148336249154"
service = "monitoring.googleapis.com"
}
# terraform import google_project_service.monitoring_googleapis_com 148336249154/monitoring.googleapis.com
resource "google_project_service" "cloudapis_googleapis_com" {
project = "148336249154"
service = "cloudapis.googleapis.com"
}
# terraform import google_project_service.cloudapis_googleapis_com 148336249154/cloudapis.googleapis.com
resource "google_project_service" "servicemanagement_googleapis_com" {
project = "148336249154"
service = "servicemanagement.googleapis.com"
}
# terraform import google_project_service.servicemanagement_googleapis_com 148336249154/servicemanagement.googleapis.com
resource "google_service_account" "148336249154_compute" {
account_id = "148336249154-compute"
```

```
display_name = "Compute Engine default service account"
project = "shield-blog-example"
}
# terraform import google_service_account.148336249154_compute projects/shield-blog-example/serviceAccounts/148336249154-
compute@shield-blog-example.iam.gserviceaccount.com
resource "google_logging_log_sink" "a_required" {
destination = "logging.googleapis.com/projects/shield-blog-example/locations/global/buckets/_Required"
filter = "LOG_ID(\"clouddaudit.googleapis.com/activity\") OR LOG_ID(\"externalaudit.googleapis.com/activity\") OR
LOG_ID(\"clouddaudit.googleapis.com/system_event\") OR LOG_ID(\"externalaudit.googleapis.com/system_event\") OR
LOG_ID(\"clouddaudit.googleapis.com/access_transparency\") OR LOG_ID(\"externalaudit.googleapis.com/access_transparency\")"
name = "_Required"
project = "148336249154"
unique_writer_identity = true
}
# terraform import google_logging_log_sink.a_required 148336249154###_Required
resource "google_logging_log_sink" "a_default" {
destination = "logging.googleapis.com/projects/shield-blog-example/locations/global/buckets/_Default"
filter = "NOT LOG_ID(\"clouddaudit.googleapis.com/activity\") AND NOT LOG_ID(\"externalaudit.googleapis.com/activity\") AND NOT
LOG_ID(\"clouddaudit.googleapis.com/system_event\") AND NOT LOG_ID(\"externalaudit.googleapis.com/system_event\") AND NOT
LOG_ID(\"clouddaudit.googleapis.com/access_transparency\") AND NOT LOG_ID(\"externalaudit.googleapis.com/access_transparency\")"
name = "_Default"
project = "148336249154"
unique_writer_identity = true
}
# terraform import google_logging_log_sink.a_default 148336249154###_Default
resource "google_project_service" "storage_api_googleapis_com" {
project = "148336249154"
service = "storage-api.googleapis.com"
}
# terraform import google_project_service.storage_api_googleapis_com 148336249154/storage-api.googleapis.com
resource "google_project_service" "compute_googleapis_com" {
project = "148336249154"
service = "compute.googleapis.com"
```

```
}  
# terraform import google_project_service.compute_googleapis_com 148336249154/compute.googleapis.com  
resource "google_project_service" "logging_googleapis_com" {  
  project = "148336249154"  
  service = "logging.googleapis.com"  
}  
# terraform import google_project_service.logging_googleapis_com 148336249154/logging.googleapis.com
```