

TCP Proxy GLB配置(多服务端口)

单AnyCast IP地址, 多服务端口

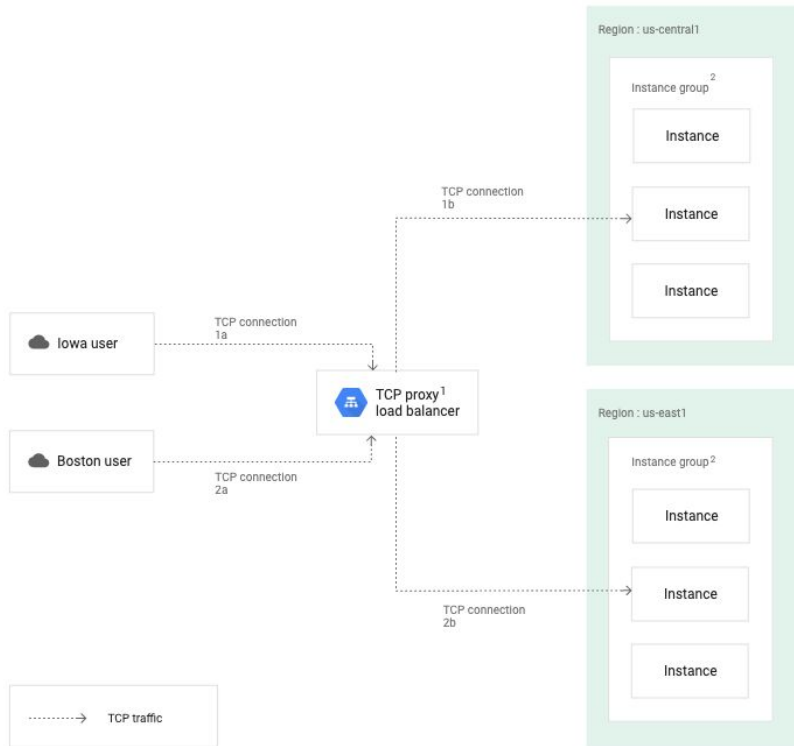


liuchenggang@google.com

Agenda

- 配置Firewall Rules
- 配置Instance Group
- 配置Health Check
- 配置GLB使用的Anycast IP
- 配置HTTPS GLB
- HTTPS 监控指标

TCP Proxy GLB Fundamental



1. This is a TCP proxy load balancer in Premium Tier. With Standard Tier, all of the backend instance groups or backend NEGs must be in the same region.

2. This load balancer has instance group backends, but you can use NEGs instead.

1. 配置Firewall Rules


- GFE: Google Front End, GLB服务部署的边缘站点
- 为VPC打开GFE的指定端口的HTTP访问,源地址为GFE地址
- GFE的后端转发地址段: 130.211.0.0/22 和 35.191.0.0/16
- 一般使用TCP服务端口即可, 因为GFE到Region的底层网络会加密
- GLB后面的VM的IP地址可以不配置公网地址
- 支持的端口是固定的: 25, 43, 110, 143, 195, 443, 465, 587, 700, 993, 995, 1883, 3389, 5222, 5432, 5671, 5672, 5900, 5901, 6379, 8085, 8099, 9092, 9200, and 9300
- 130.211.0.0/22 和 35.191.0.0/16同样也是HealthCheck的源地址(除NLB)


2. 配置Instance Group

- 如果不需要Auto Scaling, 可以配置Unmanaged Instance Group
- 选择网络以及需要加入到 Instance Group的VM
- 如果每个VM, 需要支持多个端口的服务,请配置Port Name Mapping

← Create an instance group

To create an instance group, select one of the options:

 **New managed instance group**
Create a group of identical VM instances from an existing template. Manage VM instances as a single entity.

 **New unmanaged instance group**
Create a group of unique VM instances without using a template. Add and remove VM instances manually.

Organize VM instances in a group to manage them together. [Instance groups](#)

Name ⓘ
Name is permanent

Description (Optional)

Location
Region ⓘ
Region is permanent

Zone ⓘ
Zone is permanent

Specify port name mapping (Optional)

Network ⓘ

Subnetwork ⓘ

VM instances
 ×

You will be billed for VM instances in this group. [Compute Engine pricing](#)

Equivalent REST or [command line](#)

添加提前创建的VM

← Instance groups [EDIT GROUP](#) [DELETE GROUP](#)

Edit umig-nginx

Description
20200109 Nginx 1.10 WebServer Default Config Steam reverse proxy: 995----35.222.199.89:80

Zone
us-central1-a

Network
vpc101

Subnetwork
vpc101-uscentral-1

Port name mapping (Optional)
A load balancer sends traffic to an instance group through a named port. Create a named port to map the incoming traffic to a specific port number, then go to "HTTP load balancing" to create a load balancer using this instance group.

Port name	Port numbers	
tcp80	80	×
tcp995	995	×
+ Add item		

VM Instances
cliu101-nginx ×

3. 创建HTTP Health Check

- 为GLB创建Health Check
- 建议Health Check使用的端口和协议和后端服务提供端口协议保持一致

Compute Engine

VM instances

Instance groups

Instance templates

Sole-tenant nodes

Disks

Snapshots

Images

TPUs

Committed use discounts

Metadata

Health checks

Zones

Network endpoint groups

Operations

Marketplace

Create a health check

Health checking mechanisms determine whether VM instances respond properly to traffic. You cannot create a legacy health check using this page. For more information, refer to the [Health Checks Concepts](#) documentation.

Name
http-hc

Description

Scope

☒ Global

☐ Regional

Protocol
HTTP

Port
80

Proxy protocol
NONE

Request path
/

▼ MORE

Health criteria

Define how health is determined: how often to check, how long to wait for a response.

CREATE CANCEL

Equivalent [REST](#) or [command line](#)

4. 预留GLB使用的AnyCast IP

注意: 多个GLB-TCP Proxy无法共用IP, GLB-HTTP Proxy可以

Google Cloud Platform cliu101

VPC network

Reserve a static address

Name [?]
Name is permanent
clu-anycast

Description (Optional)

Network Service Tier [?]
☒ Premium (Current project-level tier, [change](#)) [?]
☐ Standard [?]

IP version
☒ IPv4
☐ IPv6

Type
☐ Regional
☒ Global (to be used with Global forwarding rules [Learn more](#))

GLB使用的IP地址

⚠ Static IP addresses not attached to an instance or load balancer are billed at an hourly rate [Pricing details](#)

Reserve Cancel

Equivalent [REST](#) or [command line](#)

5. 创建TCP Proxy LB 1

← Create a load balancer

HTTP(S) Load Balancing

Layer 7 load balancing for HTTP and HTTPS applications
[Learn more](#)

Configure
HTTP LB
HTTPS LB (includes HTTP/2 LB)

Options
Internet-facing or internal
Single or multi-region

[Start configuration](#)

TCP Load Balancing

Layer 4 load balancing or proxy for applications that rely on TCP/SSL protocol [Learn more](#)

Configure
TCP LB
SSL Proxy
TCP Proxy

Options
Internet-facing or internal
Single or multi-region

[Start configuration](#)

UDP Load Balancing

Layer 4 load balancing for applications that rely on UDP protocol
[Learn more](#)

Configure
UDP LB

Options
Internet-facing or internal
Single-region

[Start configuration](#)

← Create a load balancer

Please answer a few questions to help us select the right load balancing type for your application

Internet facing or internal only

Do you want to load balance traffic from the Internet to your VMs or only between VMs in your network?

- ☒ From Internet to my VMs
☐ Only between my VMs

Multiple regions or single region

Do you want to place the backends for your load balancer in a single region or across multiple regions?

- ☒ Multiple regions (or not sure yet)
☐ Single region only

Continue

分别为这个TCP/SSL Load Balancer选择Frontend和Backend

Frontend configuration

Specify an IP address, port and protocol. This IP address is the frontend IP for your clients requests. For SSL, a certificate must also be assigned.

New Frontend IP and port

Name (Optional) ?
Name is permanent
lowercase, no spaces

Add a description

Protocol ?
TCP

Network Service Tier ?
☒ Premium (Current project-level tier, [change](#)) ?
☐ Standard ?

IP version
IPv4

IP address
Ephemeral

Port
993

Proxy Protocol ?
Off

Done

Cancel

Backend configuration

Name ?

Description

Backend type

- ☒ Instance groups
☐ Network endpoint groups

Protocol, named port & timeout

Protocol ?
TCP

Named port ?
tcp80

Timeout ?
30 seconds

Backends

Regions: us-central1

umig-nginx (Zone: us-central1-a, Port: 80)

+ Add backend

Health check ?

hc-http (HTTP)

port: 80, timeout: 5s, check interval: 10s, unhealthy threshold: 3 attempts

Advanced configurations (Session affinity, connection draining timeout)

5. 创建TCP Proxy LB 2,选择Frontend和Backend

Frontend configuration

Specify an IP address, port and protocol. This IP address is the frontend IP for your clients requests. For SSL, a certificate must also be assigned.

Frontend IP and port

Name

frontend-995

Protocol ?

TCP

Network Tier

Premium

IP

34.107.180.105

Port

995

Proxy Protocol ?

Off

Done

Cancel

+ Add Frontend IP and port

Backend configuration

Name ?

tlb995

Description

Backend type

- ☒ Instance groups
☐ Network endpoint groups

Protocol, named port & timeout

Protocol ?

TCP

Named port ?

tcp995

Timeout ?

30

seconds

Backends

Regions: us-central1

umig-nginx (Zone: us-central1-a, Port: 995)

Not saved



+ Add backend

Health check ?

hc-http (HTTP)

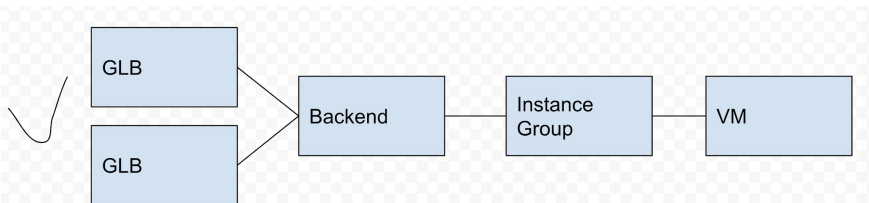
port: 80, timeout: 5s, check interval: 10s, unhealthy threshold: 3 attempts

Advanced configurations (Session affinity, connection draining timeout)

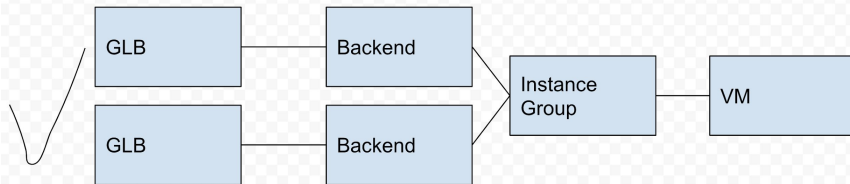
常见问题

- GLB-Backend-Instance Group-VM的映射关系: 一个VM只能属于一个 Instance Group

同一个服务, 多个AnyCast IP或者
多个Port



一个AnyCast IP通过多个端
口映射访问同一个服务的不同端口



多个anycast ip+多个端口通
过端口映射访问同一个服务
器的不同端口

