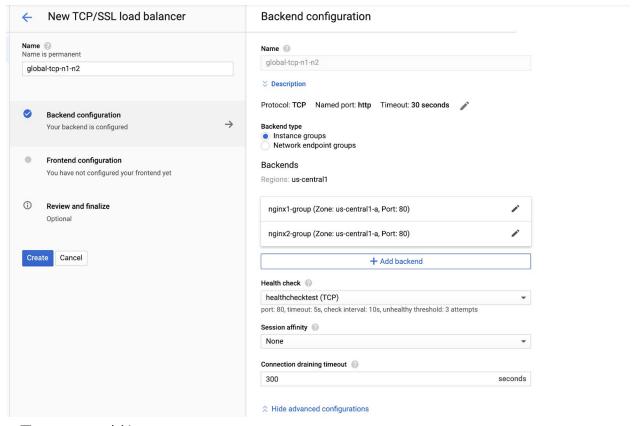# global tcp LB and proxy client ip

https://cloud.google.com/load-balancing/docs/tcp/setting-up-tcp
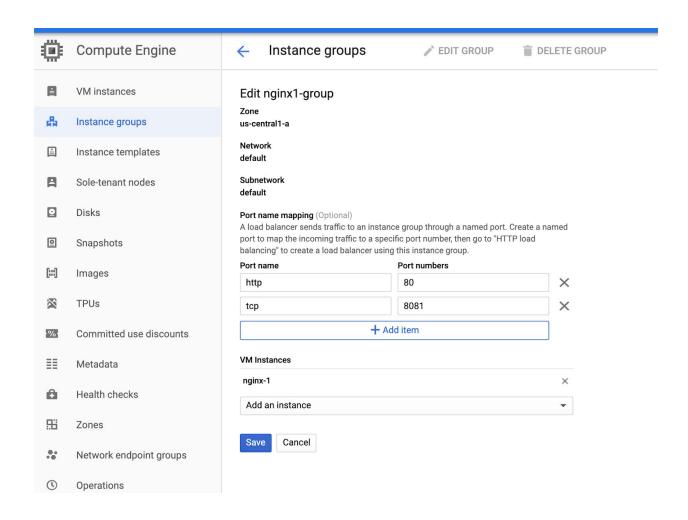
LB Name: global-tcp-n1-n2
IP:Port http://34.96.92.171:25/
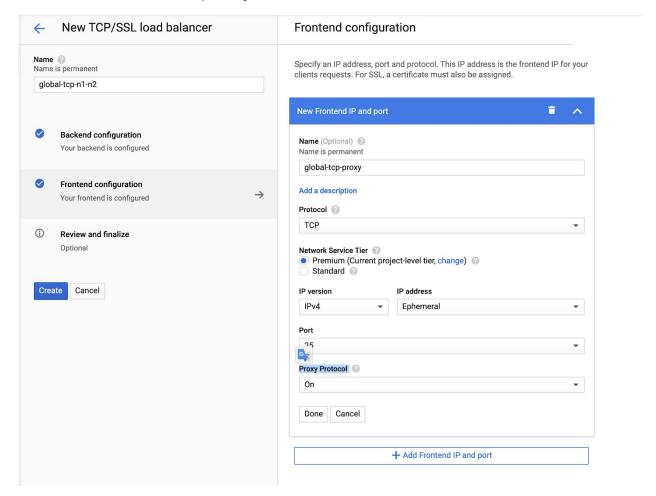
1 setup global tcp LB

1.1 后端设置

配置name port 映射

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

← Instance groups   ✎ EDIT GROUP   🗑 DELETE GROUP

Edit nginx1-group

Zone
us-central1-a

Network
default

Subnetwork
default

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	
http	80	✕
tcp	8081	✕

+ Add item

VM Instances

nginx-1	✕

Add an instance   ▾

Save   Cancel

1.2 设置前端并打开proxy 协议

2 配置proxy 协议

修改nginx http 启动配置来支持TCP PROXY头。否则会出现400错误

https://docs.nginx.com/nginx/admin-guide/load-balancer/using-proxy-protocol/

```
sudo vim /etc/nginx/nginx.conf
sudo service nginx restart
```

```
http {
    #...
    server {
        listen 80   proxy_protocol;
        listen 443  ssl proxy_protocol;
        #...
    }
}
```

```
http {

        ##
        # Basic Settings
        ##
        server {
            listen 80    proxy_protocol;
        ▌ listen 443   ssl proxy_protocol;
        #...
        }
```

3 测试

3.2 Nginx Web

curl -v 35.244.241.122:1883

查看nginx 日志 发现proxy tcp4
cat /var/log/nginx/access.log
35.191.9.25 - - [18/Dec/2019:12:18:58 +0000] "PROXY TCP4 203.208.61.208 35.244.241.122 49246 1883" 400 173 "-" "-"

```
169.254.169.254 - - [18/Dec/2019:12:18:47 +0000] "GET / HTTP/1.1" 200 616 "-" "-"
169.254.169.254 - - [18/Dec/2019:12:18:50 +0000] "GET / HTTP/1.1" 200 616 "-" "GoogleHC/1.0"
169.254.169.254 - - [18/Dec/2019:12:18:55 +0000] "GET / HTTP/1.1" 200 616 "-" "GoogleHC/1.0"
169.254.169.254 - - [18/Dec/2019:12:18:56 +0000] "GET / HTTP/1.1" 200 616 "-" "GoogleHC/1.0"
169.254.169.254 - - [18/Dec/2019:12:18:57 +0000] "GET / HTTP/1.1" 200 616 "-" "-"
35.191.9.25 - - [18/Dec/2019:12:18:58 +0000] "PROXY TCP4 203.208.61.208 35.244.241.122 49246 1883" 400 1
73 "-" "-"
169.254.169.254 - - [18/Dec/2019:12:19:00 +0000] "GET / HTTP/1.1" 200 616 "-" "GoogleHC/1.0"
169.254.169.254 - - [18/Dec/2019:12:19:05 +0000] "GET / HTTP/1.1" 200 616 "-" "GoogleHC/1.0"
169.254.169.254 - - [18/Dec/2019:12:19:06 +0000] "GET / HTTP/1.1" 200 616 "-" "GoogleHC/1.0"
169.254.169.254 - - [18/Dec/2019:12:19:07 +0000] "GET / HTTP/1.1" 200 616 "-" "-"
169.254.169.254 - - [18/Dec/2019:12:19:10 +0000] "GET / HTTP/1.1" 200 616 "-" "GoogleHC/1.0"
169.254.169.254 - - [18/Dec/2019:12:19:15 +0000] "GET / HTTP/1.1" 200 616 "-" "GoogleHC/1.0"
169.254.169.254 - - [18/Dec/2019:12:19:16 +0000] "GET / HTTP/1.1" 200 616 "-" "GoogleHC/1.0"
```

Debug:
Issue 1 返回400

```
junsong-macbookpro:~ junsong$ curl -v  35.244.241.122:1883
* Rebuilt URL to: 35.244.241.122:1883/
*   Trying 35.244.241.122...
* TCP_NODELAY set
* Connected to 35.244.241.122 (35.244.241.122) port 1883 (#0)
> GET / HTTP/1.1
> Host: 35.244.241.122:1883
> User-Agent: curl/7.54.0
> Accept: */*
>
< HTTP/1.1 400 Bad Request
< Server: nginx/1.10.3
< Date: Wed, 18 Dec 2019 12:32:43 GMT
< Content-Type: text/html
< Content-Length: 173
< Connection: close
<
<html>
<head><title>400 Bad Request</title></head>
<body bgcolor="white">
<center><h1>400 Bad Request</h1></center>
<hr><center>nginx/1.10.3</center>
</body>
</html>
* Closing connection 0
junsong-macbookpro:~ junsong$
```

分析：
传递了空的头，LB 打开proxy就会出现400

```
130.211.3.13 - - [11/Mar/2020:11:51:31 +0000] "PROXY TCP4 114.255.33.128
34.107.164.208 41784 1883" 400 173 "-" "-" "-" "-"
```

log_format main '$remote_addr - $remote_user [$time_local] "$request" '
          '$status $body_bytes_sent "$http_referer" '
          '"$http_user_agent" "$http_x_forwarded_for" "$http_x_region"';