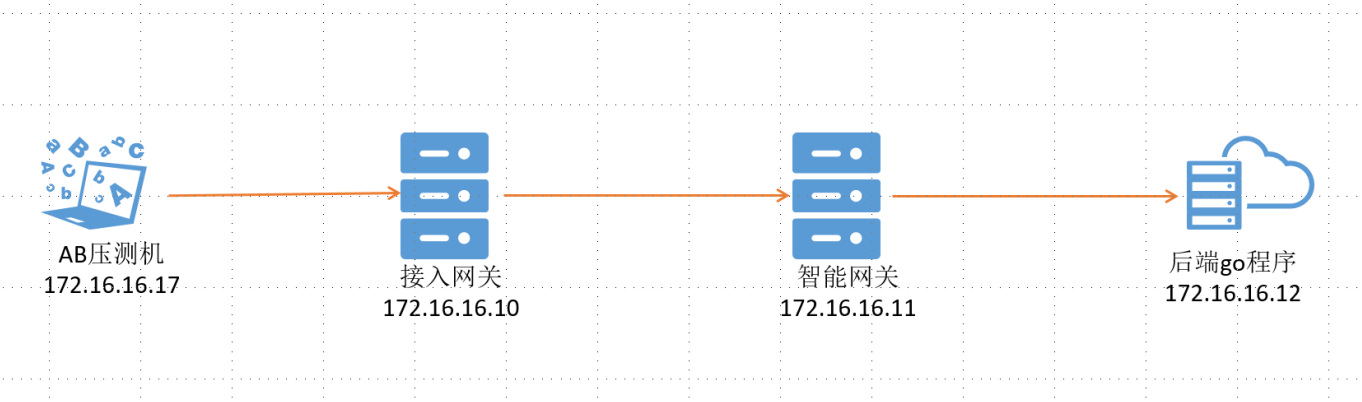
使用apache ab工具对API网关进行简单压测

1. 环境要求



- 部署接入网关和智能网关（接入网关可不部署）；
- 后端服务使用golang程序作为被压测服务，经测试本例的go程序可达到10k+的并发能力;
- 在智能网关上发布站点和api服务;

2. 环境准备

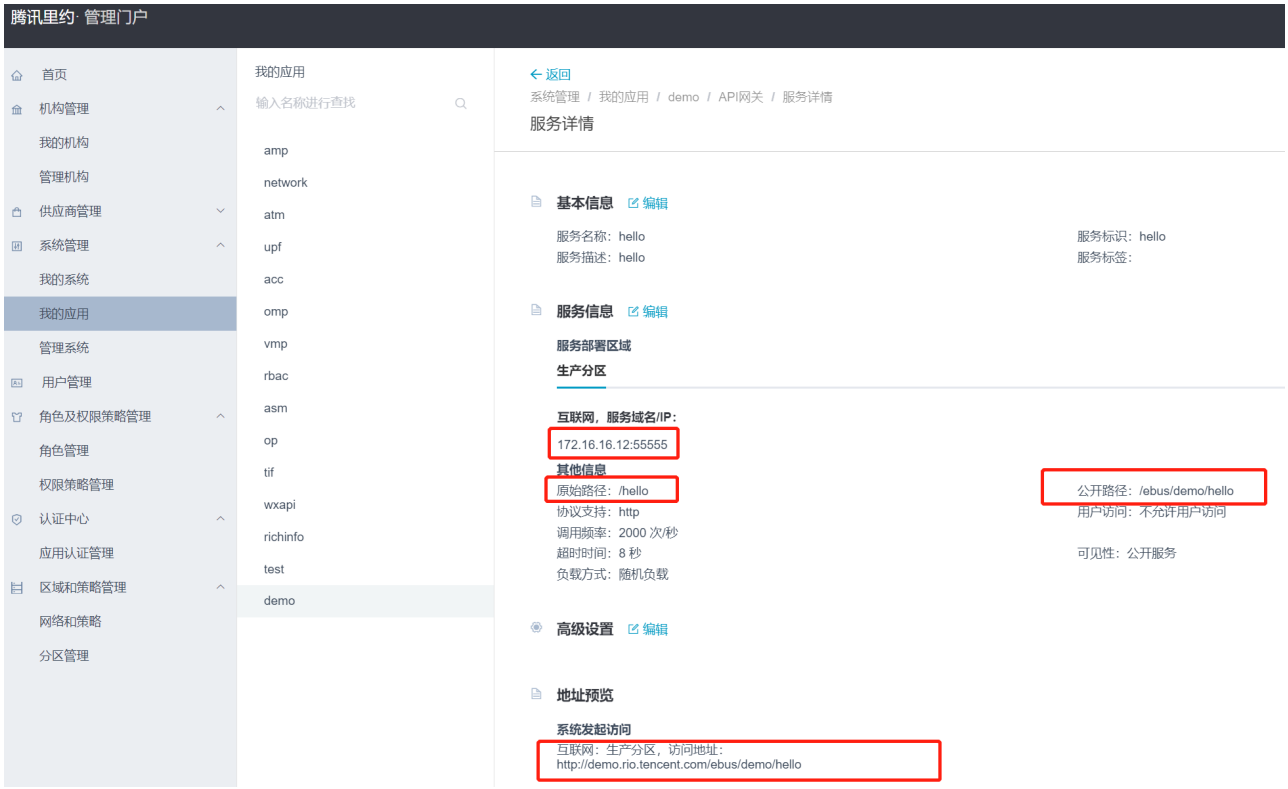
- demo应用服务器准备
- http-server下载

```
mkdir /data/solution/test-server/   #把http-server上传到/data/solution/test-server目录
nohup http-server  55555 &          #启动http-server,端口为 55555
```

访问的几种方式

```
curl http://127.0.0.1:55555                         #访问服务
curl http://127.0.0.1:55555/hello                   #访问demo的hello
curl http://127.0.0.1:55555/hello/1                 #使用GET的方法来请求
curl http://127.0.0.1:55555/hello/1 -X POST         #使用POST方法来请求
```

- 发布API服务 在demo应用上发布API服务



3. apache ab压测工具

下载ab-test.zip,并解压到/tmp/ab-test

```
 #在线安装httpd-tools,里面包含ab工具里面
yum install httpd-tools -y

cd /tmp/ab-test
unzip ab-test.zip
chmod +x *.sh sign  test-client
```

- 修改ab_params,包括以下内容

```
paasid=test              #paasid
paastoken=K2pRkyqRVaMNTy8O4bblaXpaoTeGnVTm    #paastoken
serverUrl=http://demo.rio.tencent.com/ebus/test/hello/1
postdata=a             #postbody
client=100             # ab工具并发数
reqtimes=10000         # ab工具请求数
```

- 执行压测前的验证 ./test_rio.sh

```
 bash -x test_rio.sh
+ source ab_params
++ paasid=test
```

```
++ paastoken=K2pRkyqRVaMNTy8O4bblaXpaoTeGnVTm
++ serverUrl=http://demo.rio.tencent.com/ebus/test/hello/1
++ postdata=a
++ client=100
++ reqtimes=10000
+ ./test-client test K2pRkyqRVaMNTy8O4bblaXpaoTeGnVTm
http://demo.rio.tencent.com/ebus/test/hello/1 "a"

--------------------------------http requests-------------------------------
--------
&{200 OK 200 HTTP/1.1 1 1 map[Connection:[keep-alive] Content-Length:[84]
Content-Type:[application/json; charset=UTF-8] Date:[Mon, 01 Jul 2019
08:37:05 GMT] X-Forwarded-For:
[172.16.16.12,127.0.0.1,172.16.16.12,172.16.16.17] X-Proxy-By:[Tif-
APIGate]] 0xc00005a600 84 [] false false map[] 0xc0000cc100 <nil>}

--------------------------------request header-----------------------------
---------
X-Tif-Paasid: test
X-Tif-Nonce: i6zunpfipyz5zzo1
X-Tif-Timestamp: 1561970225
X-Tif-Signature:
647DC0B4EA3BF3AC892C638F83FD725F73305F5A6F8B3A304164608A124A9E70
Content-Type: application/json

--------------------------------respone body-------------------------------
---------
{"id":1,"name":"Write presentation","completed":false,"due":"0001-01-
01T00:00:00Z"}
```

- 执行压测

```
bash -x ab-test.sh
+ source ab_params
++ paasid=test
++ paastoken=K2pRkyqRVaMNTy8O4bblaXpaoTeGnVTm
++ serverUrl=http://demo.rio.tencent.com/ebus/test/hello/1
++ postdata=a
++ client=100
++ reqtimes=10000
+ echo a
+ ./sign test K2pRkyqRVaMNTy8O4bblaXpaoTeGnVTm
+ awk '{print $1$2}'
+ source /dev/shm/sign.tmp
++ Paasid=test
++ Nonce=u2xwhaeute46fky1
++ Timestamp=1561970154
++
Signature=B362951F0CF484071AFD5DF50891E0A35682E9CE09F9A6C647AEF64EBA5FF09D
+ ab -c 100 -n 10000 -p postdata -T application/xml -H 'x-tif-nonce:
u2xwhaeute46fky1' -H 'x-tif-paasid: test' -H 'x-tif-signature:
```

```
B362951F0CF484071AFD5DF50891E0A35682E9CE09F9A6C647AEF64EBA5FF09D' -H 'x-
tif-timestamp: 1561970154' http://demo.rio.tencent.com/ebus/test/hello/1
This is ApacheBench, Version 2.3 <$Revision: 1430300 $>
Copyright 1996 Adam Twiss, Zeus Technology Ltd, http://www.zeustech.net/
Licensed to The Apache Software Foundation, http://www.apache.org/

Benchmarking demo.rio.tencent.com (be patient)
Completed 1000 requests
Completed 2000 requests
Completed 3000 requests
Completed 4000 requests
Completed 5000 requests
Completed 6000 requests
Completed 7000 requests
Completed 8000 requests
Completed 9000 requests
Completed 10000 requests
Finished 10000 requests


Server Software:
Server Hostname:        demo.rio.tencent.com
Server Port:            80

Document Path:          /ebus/test/hello/1
Document Length:        84 bytes

Concurrency Level:      100
Time taken for tests:   8.833 seconds
Complete requests:      10000
Failed requests:        0
Write errors:           0
Total transferred:      3180000 bytes
Total body sent:        3210000
HTML transferred:       840000 bytes
Requests per second:    1132.12 [#/sec] (mean)
Time per request:       88.330 [ms] (mean)
Time per request:       0.883 [ms] (mean, across all concurrent requests)
Transfer rate:          351.58 [Kbytes/sec] received
                        354.89 kb/s sent
                        706.47 kb/s total

Connection Times (ms)
              min  mean[+/-sd] median   max
Connect:        0    1   1.6      0      14
Processing:     7   87  43.8     83     460
Waiting:        7   86  43.6     82     458
Total:          8   88  43.8     83     460

Percentage of the requests served within a certain time (ms)
  50%     83
  66%     96
  75%    105
  80%    111
```

```
  90%    137
  95%    164
  98%    201
  99%    218
 100%    460 (longest request)
```