

Day9 CSE实战之服务治理

1 打卡任务

作业：

- 1、在服务治理页面配置provider对consumer服务限流，通过edge分别调用consumer和provider，观察效果

打卡：

- 1、截图consumer调用provider时报429状态码的日志

打卡任务基于Day9的demo项目：



Demo-Day9.zip

2 准备工作

- 1、正常运行Day9的demo

3 体验限流策略

- 1、启动edge、consumer、provider服务，通过edge调用consumer、provider成功



- 2、在治理页面上配置provider服务对consumer服务限流，限制流量为3QPS



- 3、通过edge连续调用consumer，观察consumer的日志

```
2019-03-02 15:39:13,396 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:13 CST /consumer/v0/hello?name=Alice 200 30 7 5c7a332190613095
2019-03-02 15:39:13,533 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:13 CST /consumer/v0/hello?name=Alice 200 30 4 5c7a332107056834
2019-03-02 15:39:13,672 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:13 CST /consumer/v0/hello?name=Alice 200 30 5 5c7a3321f9513fe5
2019-03-02 15:39:13,838 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:13 CST /consumer/v0/hello?name=Alice 429 41 14 5c7a3321bf6c0586
2019-03-02 15:39:13,977 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:13 CST /consumer/v0/hello?name=Alice 429 41 6 5c7a332159743988
2019-03-02 15:39:14,114 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:14 CST /consumer/v0/hello?name=Alice 429 41 6 5c7a3322ef14349c
2019-03-02 15:39:14,257 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:14 CST /consumer/v0/hello?name=Alice 429 41 6 5c7a33226061ce9c
2019-03-02 15:39:14,403 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:14 CST /consumer/v0/hello?name=Alice 200 30 4 5c7a33224186f06b
2019-03-02 15:39:14,533 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:14 CST /consumer/v0/hello?name=Alice 200 30 4 5c7a3322bbced913
2019-03-02 15:39:14,686 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:14 CST /consumer/v0/hello?name=Alice 200 30 3 5c7a3322cf40f0b4
2019-03-02 15:39:14,846 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:14 CST /consumer/v0/hello?name=Alice 429 41 5 5c7a3322ec944db3
2019-03-02 15:39:14,975 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:14 CST /consumer/v0/hello?name=Alice 429 41 4 5c7a33223f0867b8
2019-03-02 15:39:15,103 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:15 CST /consumer/v0/hello?name=Alice 429 41 4 5c7a332314cf59b
2019-03-02 15:39:15,270 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:15 CST /consumer/v0/hello?name=Alice 429 41 6 5c7a332384fecacc
2019-03-02 15:39:15,424 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:15 CST /consumer/v0/hello?name=Alice 200 30 8 5c7a3323e9128287
2019-03-02 15:39:15,572 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:15 CST /consumer/v0/hello?name=Alice 200 30 7 5c7a332337cb3795
2019-03-02 15:39:15,725 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:15 CST /consumer/v0/hello?name=Alice 200 30 9 5c7a332357ca336c
2019-03-02 15:39:15,857 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:15 CST /consumer/v0/hello?name=Alice 429 41 6 5c7a33232a369099
2019-03-02 15:39:15,997 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:15 CST /consumer/v0/hello?name=Alice 429 41 4 5c7a33238ec8050a
2019-03-02 15:39:16,163 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:16 CST /consumer/v0/hello?name=Alice 429 41 4 5c7a3324d06a84df
2019-03-02 15:39:16,309 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:16 CST /consumer/v0/hello?name=Alice 429 41 5 5c7a3324bb317ab6
2019-03-02 15:39:16,443 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:16 CST /consumer/v0/hello?name=Alice 200 30 4 5c7a3324eb2390b8
2019-03-02 15:39:16,613 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:16 CST /consumer/v0/hello?name=Alice 200 30 8 5c7a3324d5bb8e63
2019-03-02 15:39:16,765 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:16 CST /consumer/v0/hello?name=Alice 200 30 9 5c7a3324fef2b6ef
2019-03-02 15:39:16,914 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:16 CST /consumer/v0/hello?name=Alice 429 41 13 5c7a3324fbc88ee1
2019-03-02 15:39:17,070 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:17 CST /consumer/v0/hello?name=Alice 429 41 5 5c7a3325d050a8aa
```

通过日志可以看出每秒钟只能有三次请求成功，其他调用都会返回429 Too Many

Requests错误

← → ↺ ⓘ 127.0.0.1:8000/rest/consumer/v0/hello?name=Alice

["message": "rejected by qps flowcontrol"]

The screenshot shows the Chrome DevTools Network tab. The top toolbar includes buttons for Elements, Console, Sources, Network, Performance, Memory, Application, Security, and Audits. The Network tab is active, showing a list of requests. The first request, 'hello?name=Alice /rest/consumer/v0', is selected. The 'Headers' tab is open, showing the 'General' section. The status code is 429 Too Many Requests. The request URL is 'http://127.0.0.1:8000/rest/consumer/v0/hello?name=Alice'. The request method is GET. The remote address is 127.0.0.1:8000. The referrer policy is no-referrer-when-downgrade.

4、通过edge连续调用provider，观察edge的日志

```
2019-03-02 15:46:17,909 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:17 CST /rest/provider/v0/hello/Bob 200 28 4 5c7a34c90f96a099
2019-03-02 15:46:18,071 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:18 CST /rest/provider/v0/hello/Bob 200 28 3 5c7a34ca652e58b2
2019-03-02 15:46:18,247 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:18 CST /rest/provider/v0/hello/Bob 200 28 8 5c7a34ca61330330
2019-03-02 15:46:18,417 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:18 CST /rest/provider/v0/hello/Bob 200 28 2 5c7a34ca0474b07f
2019-03-02 15:46:18,608 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:18 CST /rest/provider/v0/hello/Bob 200 28 5 5c7a34ca0af01fa1
2019-03-02 15:46:18,805 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:18 CST /rest/provider/v0/hello/Bob 200 28 4 5c7a34cab8e7bba1
2019-03-02 15:46:18,962 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:18 CST /rest/provider/v0/hello/Bob 200 28 8 5c7a34ca71ea23be
2019-03-02 15:46:19,122 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:19 CST /rest/provider/v0/hello/Bob 200 28 3 5c7a34cb34261d77
2019-03-02 15:46:19,307 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:19 CST /rest/provider/v0/hello/Bob 200 28 4 5c7a34cbaff34189
2019-03-02 15:46:19,464 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:19 CST /rest/provider/v0/hello/Bob 200 28 4 5c7a34cb3029c1ff
2019-03-02 15:46:19,656 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:19 CST /rest/provider/v0/hello/Bob 200 28 5 5c7a34cbd49dacc4
2019-03-02 15:46:19,853 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:19 CST /rest/provider/v0/hello/Bob 200 28 12 5c7a34cb8038972c
2019-03-02 15:46:20,014 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:20 CST /rest/provider/v0/hello/Bob 200 28 4 5c7a34ccaf946af7
2019-03-02 15:46:20,217 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:20 CST /rest/provider/v0/hello/Bob 200 28 4 5c7a34cc8d2b6fde
2019-03-02 15:46:20,414 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:20 CST /rest/provider/v0/hello/Bob 200 28 7 5c7a34cc801704a2
2019-03-02 15:46:20,588 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:20 CST /rest/provider/v0/hello/Bob 200 28 3 5c7a34cc1604465b
2019-03-02 15:46:20,752 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:20 CST /rest/provider/v0/hello/Bob 200 28 10 5c7a34ccdd1a9251
2019-03-02 15:46:20,920 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:20 CST /rest/provider/v0/hello/Bob 200 28 4 5c7a34cc1b219a81
2019-03-02 15:46:21,108 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:21 CST /rest/provider/v0/hello/Bob 200 28 18 5c7a34cd765bb77c
2019-03-02 15:46:21,274 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:21 CST /rest/provider/v0/hello/Bob 200 28 4 5c7a34cd536a0f9d
2019-03-02 15:46:21,457 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:21 CST /rest/provider/v0/hello/Bob 200 28 5 5c7a34cdd82773ea
2019-03-02 15:46:21,639 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:21 CST /rest/provider/v0/hello/Bob 200 28 3 5c7a34cdf2a25777
2019-03-02 15:46:21,809 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:21 CST /rest/provider/v0/hello/Bob 200 28 6 5c7a34cdc697aeb
2019-03-02 15:46:21,970 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 15:46:21 CST /rest/provider/v0/hello/Bob 200 28 3 5c7a34cde641aa22
```

从以上日志可以看出通过edge直接调用provider时，即使流量大于3QPS也不会触发限流，说明我们在治理页面配置的provider服务限流策略只对consumer生效，不对edge起作用。

4 打卡截图

1、Consumer服务的日志展示的限流策略效果如下图：

```
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2019-03-02 15:39:14,257 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:14 CST /consumer/v0/hello?name=Alice 429 41 6 5c7a33226061ce9c
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2019-03-02 15:39:14,533 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:14 CST /consumer/v0/hello?name=Alice 200 30 4 5c7a3322bbced913
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2019-03-02 15:39:15,857 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:15 CST /consumer/v0/hello?name=Alice 429 41 6 5c7a33232a369099
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2019-03-02 15:39:16,613 [INFO] 192.168.0.45 - - Sat, 02 Mar 2019 15:39:16 CST /consumer/v0/hello?name=Alice 200 30 8 5c7a3324d5bb8e63
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```