

Day8 CSE实战之负载均衡

1 打卡任务

作业：

- 1、启动edge、consumer、provider实例各一个，通过edge调用consumer。然后启动另一个provider，观察consumer日志中刷新provider实例列表的日志。
- 2、连续调用consumer，退出一个provider，观察调用consumer的结果情况。

打卡：

- 1、截图consumer中刷新provider实例列表的特征日志
- 2、截图provider服务的一个实例退出并且连续调用consumer服务时，edge服务的日志

打卡任务基于Day7的demo项目：



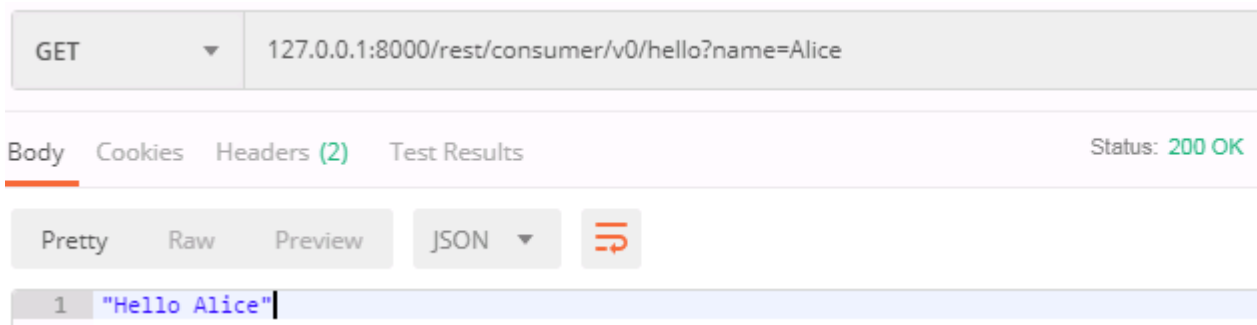
Demo-Day7.zip

2 准备工作

- 1、正常运行Day7的demo

3 观察 consumer 刷新 provider 实例列表的日志

- 1、启动edge、consumer、provider服务的实例各一个，通过edge调用consumer服务成功：



- 2、启动第二个provider实例，此时sc中有1个edge实例、1个consumer实例、2个provider实例：



- 3、当consumer的定时查询微服务实例任务从sc查询到provider的新实例时，会打印如下日志：

```
[INFO] find instances[2] from service center success. service=Training21Days-HelloWorld/p  
[INFO] service id=8a3eefaca25baeb05ebfb98737d678b68bf50c92, instance id=adb613e83c8f11e99  
[INFO] service id=8a3eefaca25baeb05ebfb98737d678b68bf50c92, instance id=bcc3fbba3c8f11e99
```

TIPS: 启动第一个provider实例后，一定要先调用一次consumer，让它去查询provider服务，再启动第二个provider服务的实例。

由于consumer服务查询provider服务信息是懒加载的，如果一直不触发consumer调用provider的话，则consumer一直不会去sc查询和刷新provider服务信息。

4 观察重试和实例隔离

- 1、完成上一步的操作后，现在应该有1个edge实例、1个consumer实例、2个provider实例在线。我们一边连续调用consumer服务，一边停止一个provider服务的实例，观

察edge服务的日志:

```
2019-03-02 10:36:18,318 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:18 CST /rest/consumer
2019-03-02 10:36:18,458 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:18 CST /rest/consumer
2019-03-02 10:36:18,595 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:18 CST /rest/consumer
2019-03-02 10:36:18,734 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:18 CST /rest/consumer
2019-03-02 10:36:18,874 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:18 CST /rest/consumer
2019-03-02 10:36:19,009 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:19 CST /rest/consumer
2019-03-02 10:36:19,151 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:19 CST /rest/consumer
2019-03-02 10:36:20,328 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:19 CST /rest/consumer
2019-03-02 10:36:21,486 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:20 CST /rest/consumer
2019-03-02 10:36:22,635 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:21 CST /rest/consumer
2019-03-02 10:36:23,814 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:22 CST /rest/consumer
2019-03-02 10:36:24,992 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:23 CST /rest/consumer
2019-03-02 10:36:25,145 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:25 CST /rest/consumer
2019-03-02 10:36:25,281 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:25 CST /rest/consumer
2019-03-02 10:36:25,500 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:25 CST /rest/consumer
2019-03-02 10:36:25,638 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:25 CST /rest/consumer
2019-03-02 10:36:25,778 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:25 CST /rest/consumer
2019-03-02 10:36:25,922 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:25 CST /rest/consumer
2019-03-02 10:36:26,061 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:26 CST /rest/consumer
2019-03-02 10:36:26,212 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:26 CST /rest/consumer
2019-03-02 10:36:26,364 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:26 CST /rest/consumer
```

2、观察consumer服务的日志

当已下线的provider实例还没有被consumer隔离时，consumer会调用到有问题的provider实例上出错，然后在另一个provider实例上重试才成功，有类似于下面的日志内容：

```
2019-03-02 10:36:24,974 [ERROR] Invoke server failed. Operation CONSUMER rest provider.hello. You can add fallback logic by catching this exception.
info: operation=provider.hello.sayHello.;cause:InvocationException,message:InvocationException
2019-03-02 10:36:24,989 [ERROR] Invoke server success. Operation CONSUMER rest provider.hello
```

之后consumer将provider问题实例隔离时会打印如下日志：

```
[INFO] 192.168.0.45 - - Sat, 02 Mar 2019 10:36:23 CST /consumer/v0/hello?name=Alice 200 1
[WARN] Isolate service provider's instance bcc3fbbba3c8f11e9900e0255ac105166. org.apache.s
[INFO] 192.168.0.45 - - Sat, 02 Mar 2019 10:36:25 CST /consumer/v0/hello?name=Alice 200 1
[INFO] 192.168.0.45 - - Sat, 02 Mar 2019 10:36:25 CST /consumer/v0/hello?name=Alice 200 1
[INFO] 192.168.0.45 - - Sat, 02 Mar 2019 10:36:25 CST /consumer/v0/hello?name=Alice 200 1
```

5 打卡截图

1、Consumer刷新provider实例记录的日志：

```
[INFO] find instances[2] from service center success. service=Training21Days-HelloWorld/p
[INFO] service id=8a3eefaca25baeb05ebfb98737d678b68bf50c92, instance id=adb613e83c8f11e9900e0255ac105166
[INFO] service id=8a3eefaca25baeb05ebfb98737d678b68bf50c92, instance id=bcc3fbbba3c8f11e9900e0255ac105166
```

2、通过edge连续调用consumer，并且下线一个provider实例时，edge服务的日志：

```
2019-03-02 10:36:18,318 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:18 CST /rest/consumer
2019-03-02 10:36:18,458 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:18 CST /rest/consumer
2019-03-02 10:36:18,595 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:18 CST /rest/consumer
2019-03-02 10:36:18,734 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:18 CST /rest/consumer
2019-03-02 10:36:18,874 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:18 CST /rest/consumer
2019-03-02 10:36:19,009 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:19 CST /rest/consumer
2019-03-02 10:36:19,151 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:19 CST /rest/consumer
2019-03-02 10:36:20,328 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:19 CST /rest/consumer
2019-03-02 10:36:21,486 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:20 CST /rest/consumer
2019-03-02 10:36:22,635 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:21 CST /rest/consumer
2019-03-02 10:36:23,814 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:22 CST /rest/consumer
2019-03-02 10:36:24,992 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:23 CST /rest/consumer
2019-03-02 10:36:25,145 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:25 CST /rest/consumer
2019-03-02 10:36:25,281 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:25 CST /rest/consumer
2019-03-02 10:36:25,500 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:25 CST /rest/consumer
2019-03-02 10:36:25,638 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:25 CST /rest/consumer
2019-03-02 10:36:25,778 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:25 CST /rest/consumer
2019-03-02 10:36:25,922 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:25 CST /rest/consumer
2019-03-02 10:36:26,061 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:26 CST /rest/consumer
2019-03-02 10:36:26,212 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:26 CST /rest/consumer
2019-03-02 10:36:26,364 [INFO] 127.0.0.1 - - Sat, 02 Mar 2019 10:36:26 CST /rest/consumer
```