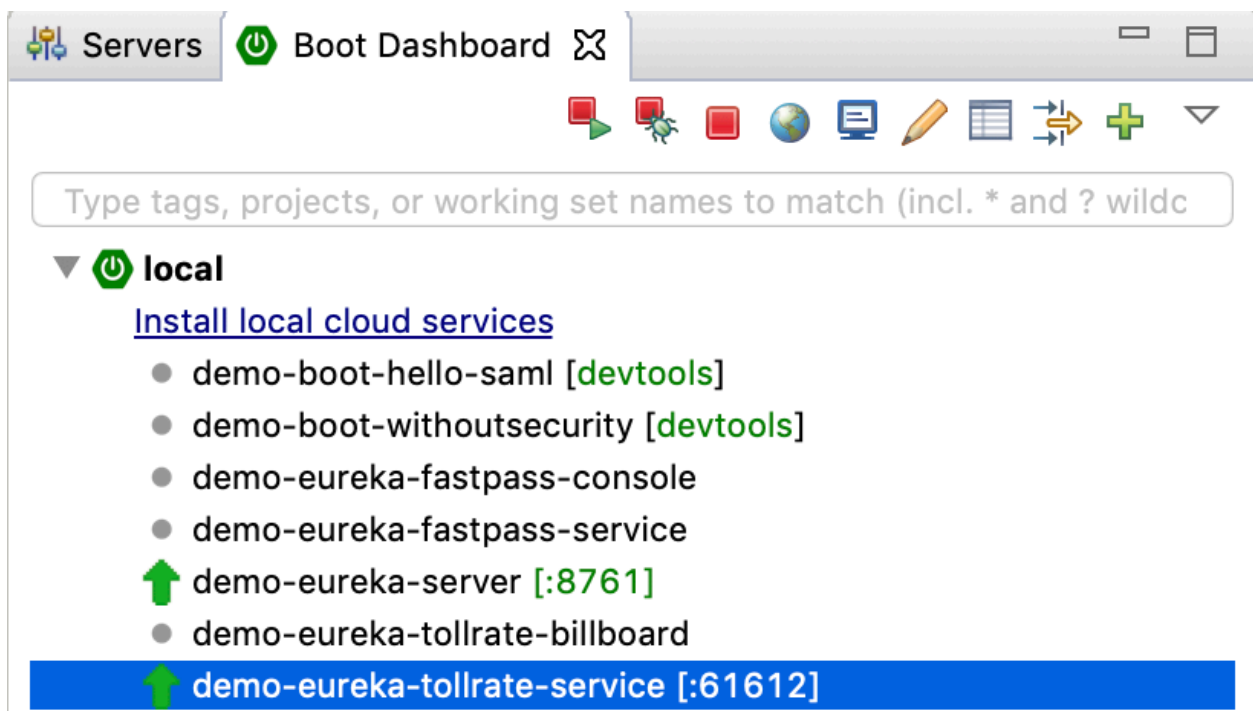


Creating a Zulu Proxy and Experimenting with Routes

1. Import **demo-zuul-apiproxy** as a Maven Project
2. Start **demo-eureka-server**
3. Start **demo-eureka-tollrate-service**



Scenario 1 – Proxy for a single instance

4. Go to **demo-zuul-apiproxy** project and create some proxy configurations

You can create a proxy URL for the toll service running on 61612 (Port# shown in above screen)

application.properties

```
server.port = 8086
spring.application.name = toll-api-proxy

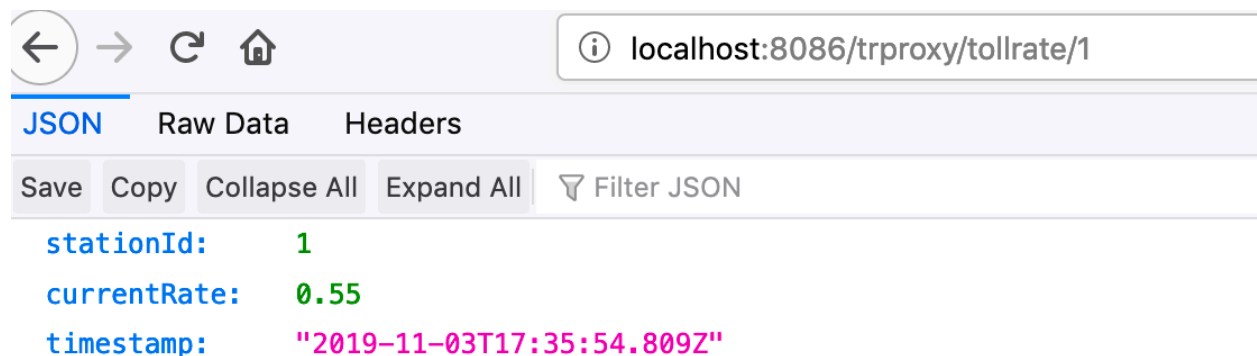
# Scenario 1
zuul.routes.trproxy.url = http://localhost:61612
```

5. RUN the Zuul Proxy

It starts on Port #8086

6. Test invoke a Toll rate API call with Proxy as shown here

Visit: <http://localhost:8086/trproxy/tollrate/1>



The screenshot shows a web browser interface with the address bar displaying `localhost:8086/trproxy/tollrate/1`. Below the address bar, there are tabs for **JSON**, **Raw Data**, and **Headers**, with **JSON** being the active tab. Under the JSON tab, there are buttons for **Save**, **Copy**, **Collapse All**, **Expand All**, and a **Filter JSON** option. The JSON response is displayed as follows:

```
{
  "stationId": 1,
  "currentRate": 0.55,
  "timestamp": "2019-11-03T17:35:54.809Z"
}
```

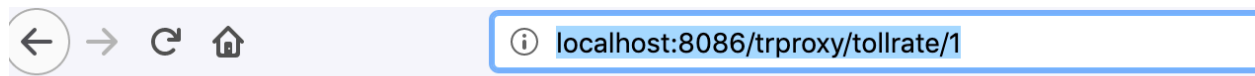
7. Change the name of the Proxy

application.properties

```
# Scenario 1.1 – Change the URL for a Proxy
zuul.routes.trproxy.path = /tollproxy/**
```

8. RUN the Zuul App

9. The earlier URL does not work now as we changed Proxy name



Whitelabel Error Page

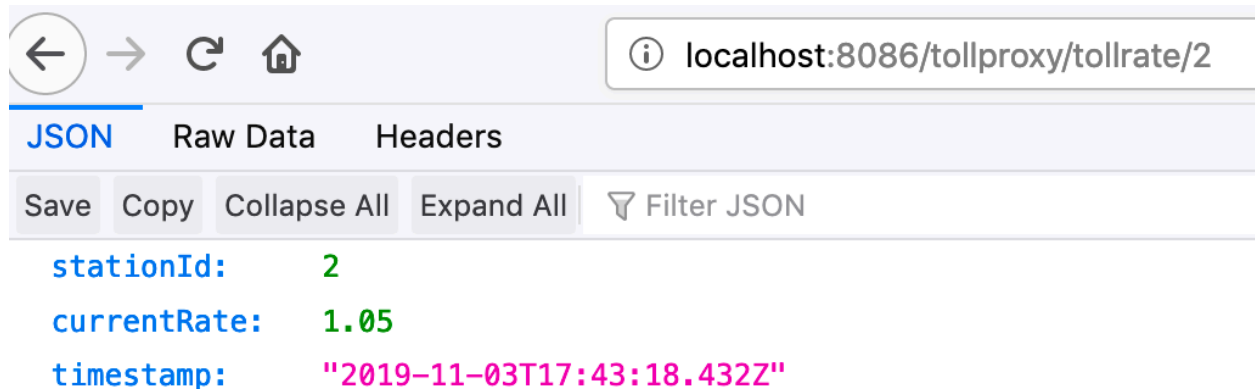
This application has no explicit mapping for /error, so you are seeing this as a fallback.

Sun Nov 03 12:40:44 EST 2019

There was an unexpected error (type=Not Found, status=404).

No message available

10. Change to this as shown below



Scenario 2

API Proxy without Ribbon

11. API Proxy without Ribbon Load balancer

application.properties

```
# Scenario 2 – API Proxy without Ribbon
ribbon.eureka.enabled = false
zuul.routes.trproxy.path = /tollproxy/**
zuul.routes.trproxy.serviceId = proxy
proxy.ribbon.listOfServers = http://localhost:61612
```

12. RESTART Zuul

13. Pin the Console of Zuul App as shown here

13.1 Click on this dropdown of TV icon **demo-zuul-apiproxy**

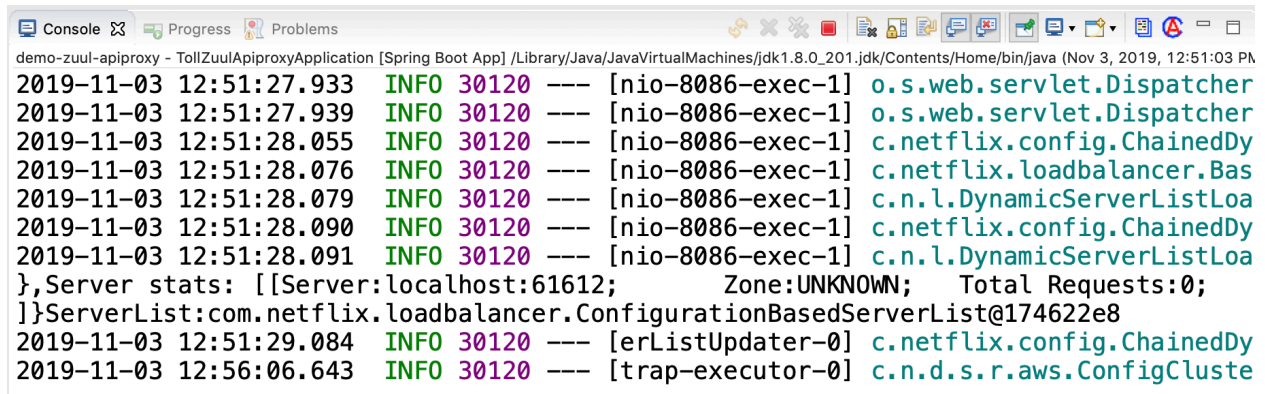
and select



2. Click this PIN icon to lock demo-zuul-proxy console

14. Visit **<http://localhost:8086/tollproxy/tollrate/2>**

15. Observe the Output on the console



```
demo-zuul-apiproxy - TollZuulApiproxyApplication [Spring Boot App] /Library/Java/JavaVirtualMachines/jdk1.8.0_201.jdk/Contents/Home/bin/java (Nov 3, 2019, 12:51:03 PM)
2019-11-03 12:51:27.933 INFO 30120 --- [nio-8086-exec-1] o.s.web.servlet.Dispatcher
2019-11-03 12:51:27.939 INFO 30120 --- [nio-8086-exec-1] o.s.web.servlet.Dispatcher
2019-11-03 12:51:28.055 INFO 30120 --- [nio-8086-exec-1] c.netflix.config.ChainedDy
2019-11-03 12:51:28.076 INFO 30120 --- [nio-8086-exec-1] c.netflix.loadbalancer.Bas
2019-11-03 12:51:28.079 INFO 30120 --- [nio-8086-exec-1] c.n.l.DynamicServerListLoa
2019-11-03 12:51:28.090 INFO 30120 --- [nio-8086-exec-1] c.netflix.config.ChainedDy
2019-11-03 12:51:28.091 INFO 30120 --- [nio-8086-exec-1] c.n.l.DynamicServerListLoa
}Server stats: [[Server:localhost:61612; Zone:UNKNOWN; Total Requests:0;
]}ServerList:com.netflix.loadbalancer.ConfigurationBasedServerList@174622e8
2019-11-03 12:51:29.084 INFO 30120 --- [erListUpdater-0] c.netflix.config.ChainedDy
2019-11-03 12:56:06.643 INFO 30120 --- [trap-executor-0] c.n.d.s.r.aws.ConfigCluste
```

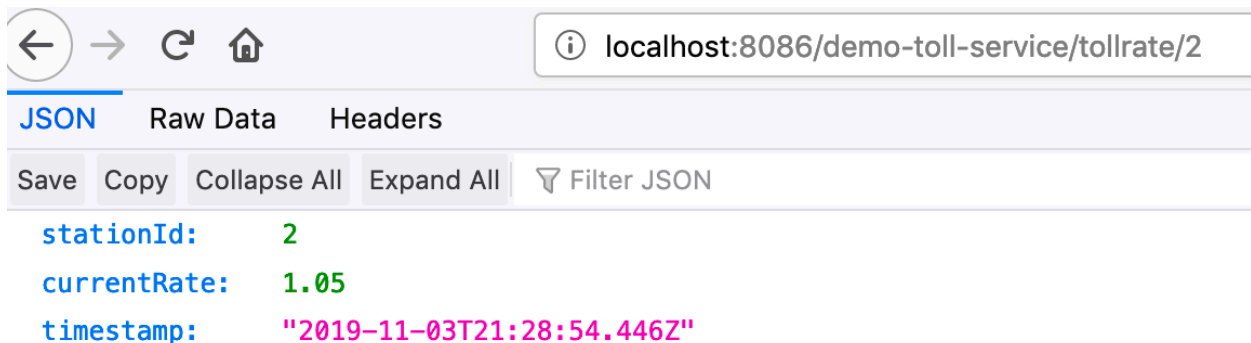
Scenario 3

Adding Eureka starter for Zuul App filters all the Eureka registered Microservices

16. Add Eureka Dependency for Zuul App and observe that Eureka registered Microservices are accessible via Zuul Proxy

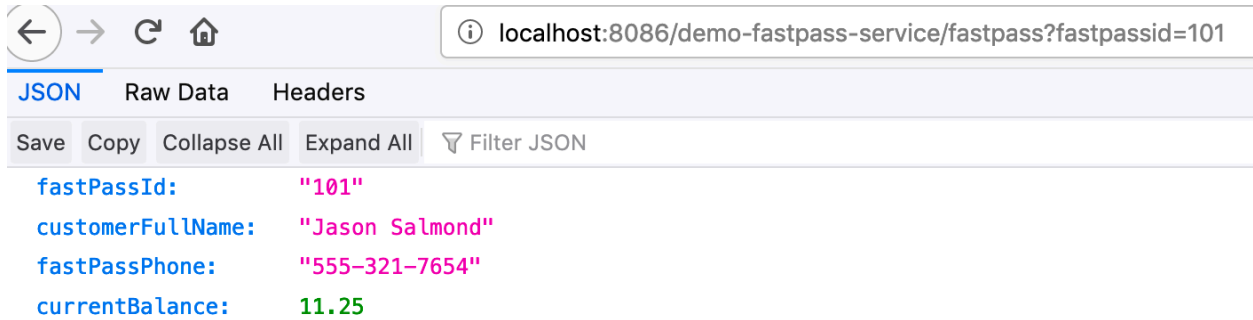
No config required in application.properties

Visit: **<http://localhost:8086/demo-toll-service/tollrate/2>**



```
{
  "stationId": 2,
  "currentRate": 1.05,
  "timestamp": "2019-11-03T21:28:54.446Z"
}
```

Visit: <http://localhost:8086/demo-fastpass-service/fastpass?fastpassid=101>



Scenario 4

Allow ONLY specific services via Proxy

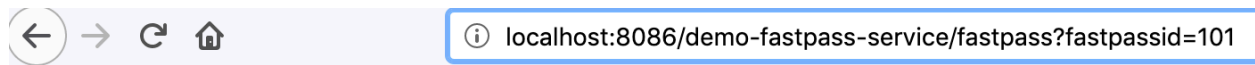
17.

```
# Scenario 4
zuul.ignoredServices=*
zuul.routes.trproxy.path = /tollproxy/**
zuul.routes.trproxy.serviceId = demo-toll-service
```

18. RESTART Zuul App

19. Now try to access the fastpass service via Proxy and should not work.

Visit: <http://localhost:8086/demo-fastpass-service/fastpass?fastpassid=101>



Whitelabel Error Page

This application has no explicit mapping for /error, so you are seeing this as a fallback.

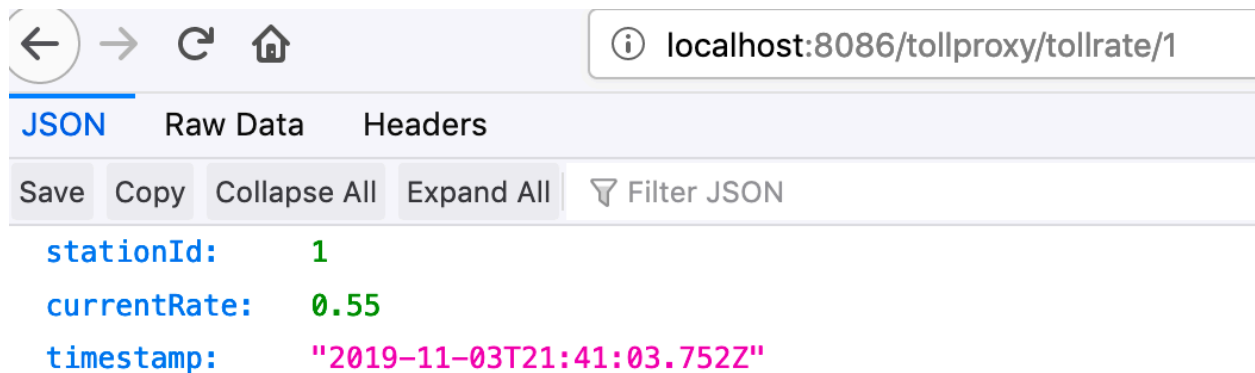
Sun Nov 03 16:35:02 EST 2019

There was an unexpected error (type=Not Found, status=404).

No message available

20. Call the toll service with toll proxy and should work!

Visit: <http://localhost:8086/tollproxy/tollrate/1>



21. Ignore specific pattern in the above scenario

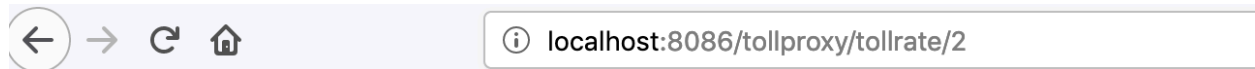
Enter this line in Scenario #4

application.properties

```
zuul.ignored-patterns=/tollproxy/tollrate/2
```

22. RESTART Zuul App

23. Observe that /2 will not work



Whitelabel Error Page

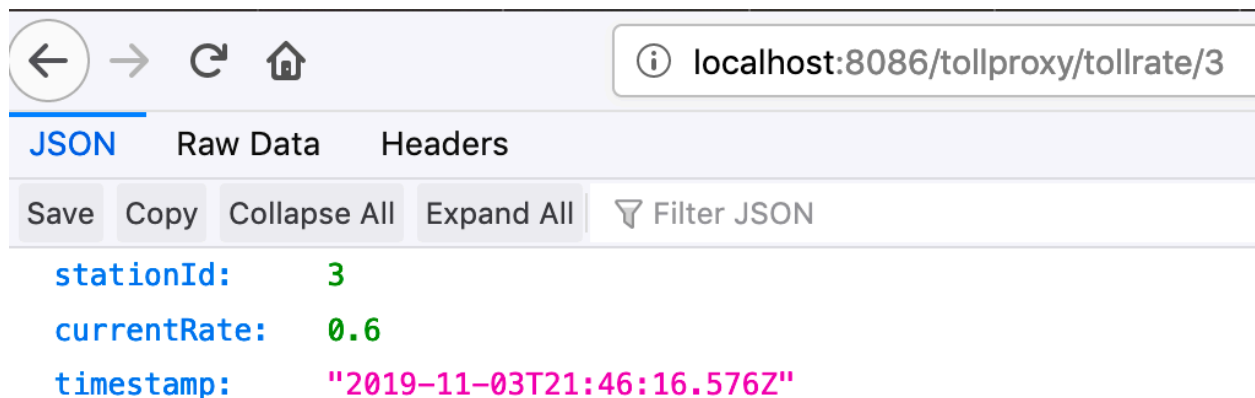
This application has no explicit mapping for /error, so you are seeing this as a fallback.

Sun Nov 03 16:43:52 EST 2019

There was an unexpected error (type=Not Found, status=404).

No message available

24. Change it to any other value, should work!



Scenario 5

Prefix for a Proxy URL

25. Add the following entry in

application.properties

```
# Scenario 5
zuul.prefix = /api
```

26. RESTART Zuul App

Any valid URL requires /api as a prefix

So, the URL of #24 will not work



Whitelabel Error Page

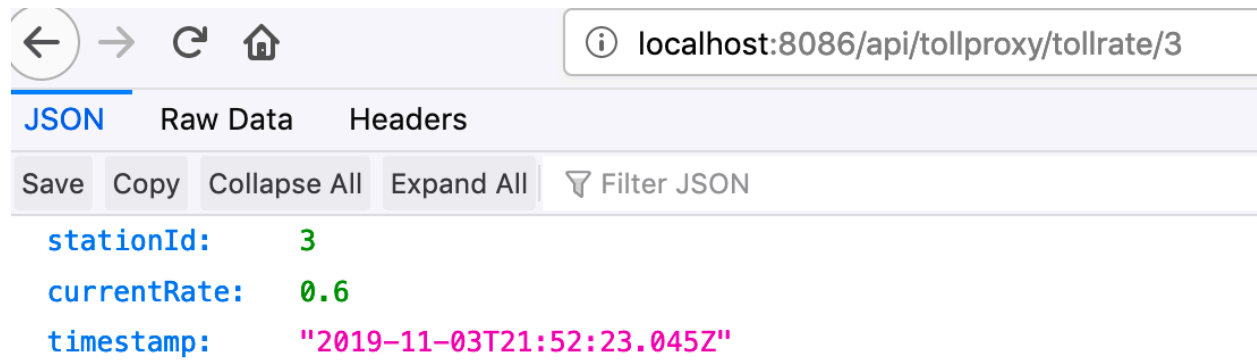
This application has no explicit mapping for /error, so you are seeing this as a fallback.

Sun Nov 03 16:51:25 EST 2019

There was an unexpected error (type=Not Found, status=404).

No message available

27. Prefix a /api for the above URL and must work!



The screenshot shows a web browser window with a REST client interface. The address bar displays the URL `localhost:8086/api/tollproxy/tollrate/3`. Below the address bar, there are tabs for `JSON`, `Raw Data`, and `Headers`. The `JSON` tab is selected. Below the tabs, there are buttons for `Save`, `Copy`, `Collapse All`, `Expand All`, and a `Filter JSON` button. The JSON response is displayed in a preformatted style:

```
stationId: 3
currentRate: 0.6
timestamp: "2019-11-03T21:52:23.045Z"
```