

# Day7 CSE实战之框架扩展机制

## 1 打卡任务

作业：

- 1、在edge服务上开发一个HttpServerFilter，该filter从请求中取出名为Username和Password的header存入InvocationContext中，如果没有这两个header则报错，返回401 Unauthorized。
- 2、在edge服务上开发一个Handler，判断InvocationContext中的Username和Password是否相等，如果不相等，则返回401 Unauthorized。并且将该handler配置在edge的consumer端handler链上，只对provider服务生效。

打卡：

- 1、不传Username和Password，调用edge服务，截图报错信息
- 2、通过edge调用provider服务成功并截图。
- 3、通过edge调用consumer的sayHello方法，并且令Username和Password不相等，截图调用成功的结果。

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 开发 HttpServerFilter

- 1、在edge服务中创建一个DemoAuthenticationFilter：

```

public class DemoAuthenticationFilter implements HttpServerFilter {

    public static final String USERNAME = "Username";

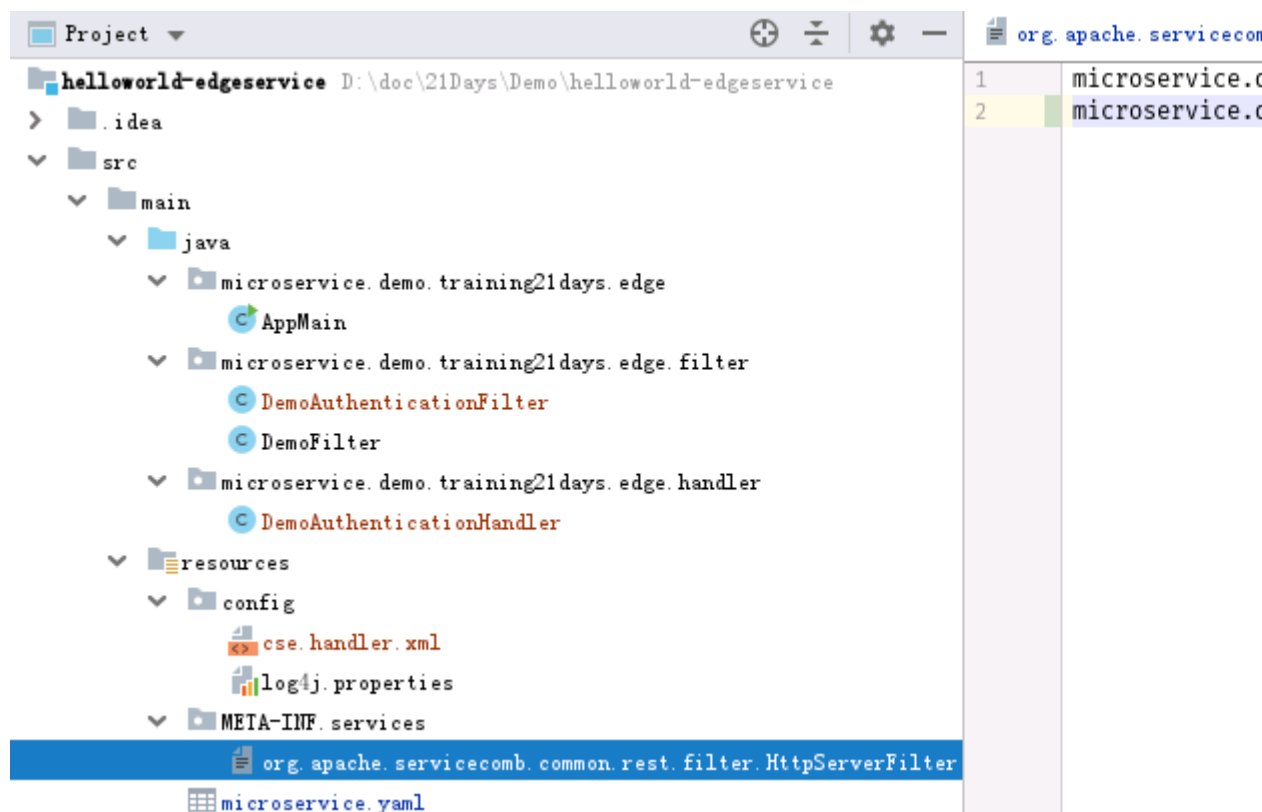
    public static final String PASSWORD = "Password";

    @Override
    public int getOrder() {
        return 0;
    }

    @Override
    public Response afterReceiveRequest(Invocation invocation, HttpServletRequestEx httpServletRequestEx) {
        String username = httpServletRequestEx.getHeader(USERNAME);
        String password = httpServletRequestEx.getHeader(PASSWORD);
        if (StringUtils.isEmpty(username) || StringUtils.isEmpty(password)) {
            return Response.consumerFailResp(
                new InvocationException(Status.UNAUTHORIZED, new CommonExceptionData("Lack of authentication information"))
            );
        }
        invocation.addContext(USERNAME, username);
        invocation.addContext(PASSWORD, password);
        return null;
    }
}

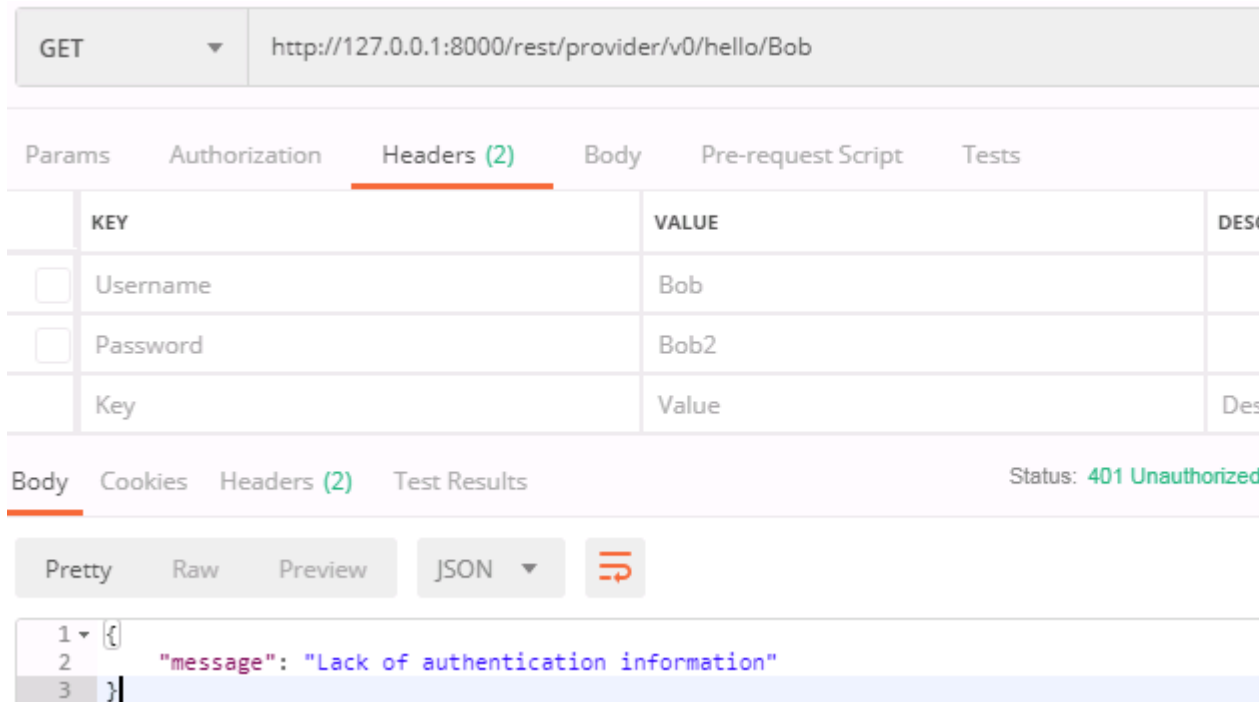
```

- 2、在HttpServerFilter的SPI配置文件中增加DemoAuthenticationFilter的配置：

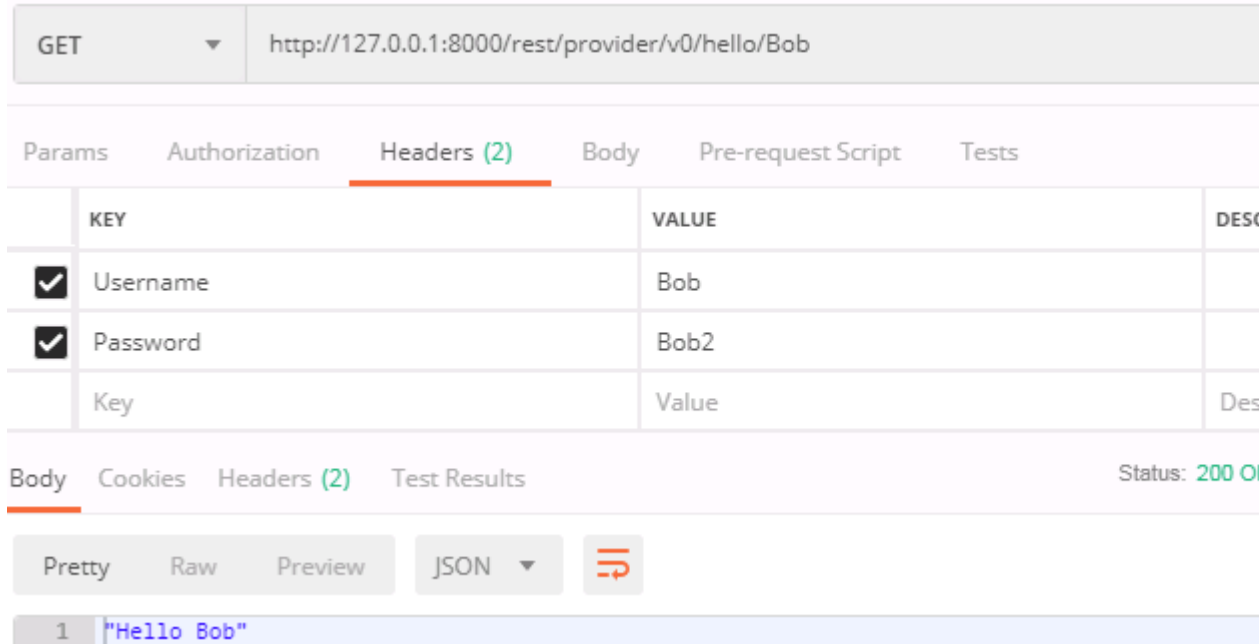


- 3、运行edge服务，此时如果不在header中传Username和Password，是无法调通后端服

务的:



但是如果加入了Username和Password，即使不相等也可以调用通过



4、该限制对于所有服务和接口都生效，即使通过edge调用的是provider

## 4 开发 Handler

1、在edge服务中定义一个DemoAuthenticationHandler:

```
package microservice.demo.training21days.edge.handler;

import javax.ws.rs.core.Response.Status;

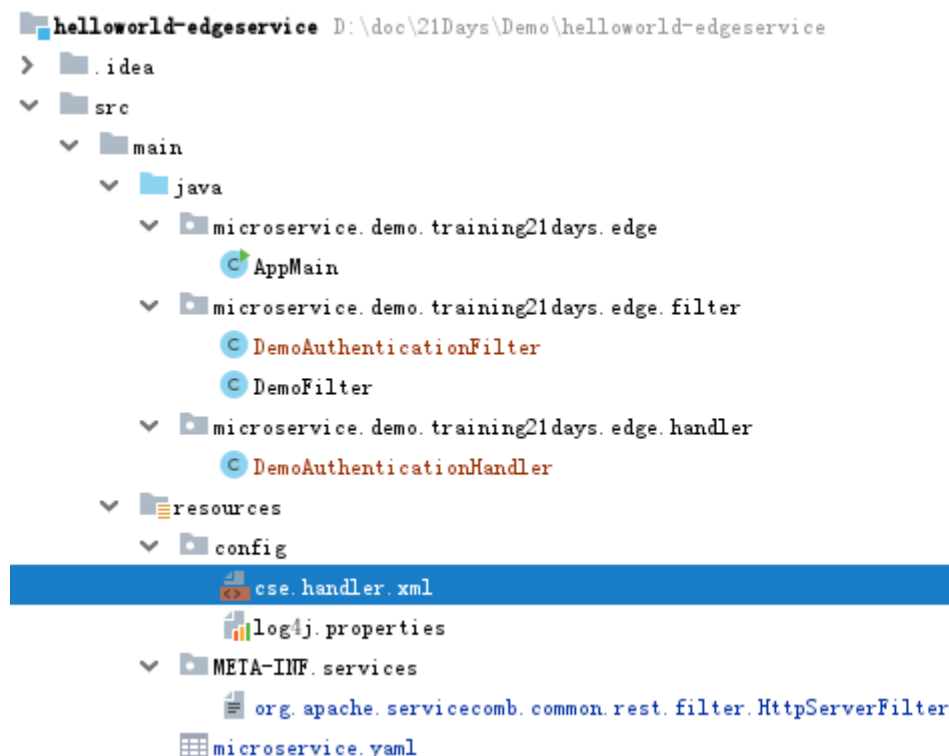
import org.apache.servicecomb.core.Handler;
import org.apache.servicecomb.core.Invocation;
import org.apache.servicecomb.swagger.invocation.AsyncResponse;
import org.apache.servicecomb.swagger.invocation.exception.InvocationException;

import microservice.demo.training21days.edge.filter.DemoAuthenticationFilter;

public class DemoAuthenticationHandler implements Handler {
    @Override
    public void handle(Invocation invocation, AsyncResponse asyncResp) throws Exception {
        String username = invocation.getContext(DemoAuthenticationFilter.USERNAME);
        String password = invocation.getContext(DemoAuthenticationFilter.PASSWORD);
        if (null == username || !username.equals(password)) {
            asyncResp.consumerFail(new InvocationException(Status.UNAUTHORIZED, "Wrong authentication"));
            return;
        }
        invocation.next(asyncResp);
    }
}
```

- 2、在resources/config目录下创建一份cse.handler.xml配置文件，声明

DemoAuthenticationHandler:



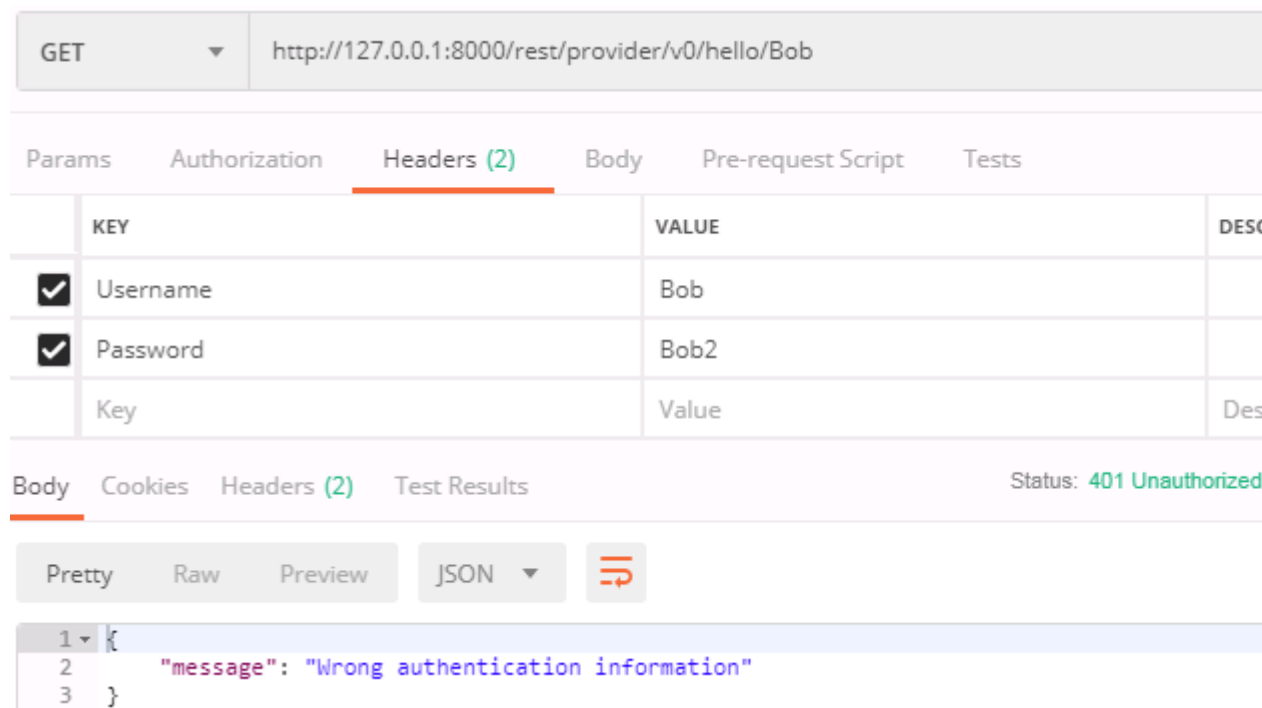
- 3、在microservice.yaml配置文件中定义edge调用provider时的handler链:

```
cse:
  handler:
  chain:
    Consumer:
      service:
        #.该handler链配置只在edge调用provider服务时生效，edge调用其他服务时走的还是默认的handler链
        provider: demo-authentication-handler,qps-flowcontrol-consumer,loadbalance,fault-tolerance
```

注意这里的配置不同于培训PPT中的配置。Day7培训PPT中的配置是provider端默认handler链，而这里的consumer端handler链配置只作用于edge调用provider服务时，如果是edge调用consumer服务则走的是默认的handler链配置。

#### 4、启动edge服务，测试效果

调用provider服务：



GET http://127.0.0.1:8000/rest/provider/v0/hello/Bob

KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/> Username	Bob	
<input checked="" type="checkbox"/> Password	Bob2	
Key	Value	Description

Body Cookies Headers (2) Test Results Status: 401 Unauthorized

Pretty Raw Preview JSON

```
1 {
2   "message": "Wrong authentication information"
3 }
```

调用consumer服务：

GET 127.0.0.1:8000/rest/consumer/v0/hello?name=Alice

Params Authorization Headers (2) Body Pre-request Script Tests

	KEY	VALUE	DESC
<input checked="" type="checkbox"/>	Username	Bob	
<input checked="" type="checkbox"/>	Password	Bob2	
	Key	Value	Des

Body Cookies Headers (2) Test Results Status: 200 OK

Pretty Raw Preview JSON

```
1 "Hello Alice"
```

## 5 打卡截图

1、不传Username和Password，调用edge服务

GET http://127.0.0.1:8000/rest/provider/v0/hello/Bob

Params Authorization Headers (2) Body Pre-request Script Tests

	KEY	VALUE	DESC
<input type="checkbox"/>	Username	Bob	
<input type="checkbox"/>	Password	Bob2	
	Key	Value	Des

Body Cookies Headers (2) Test Results Status: 401 Unauthorized

Pretty Raw Preview JSON

```
1 {
2   "message": "Lack of authentication information"
3 }
```

2、通过edge调用provider服务成功

GET ▼ http://127.0.0.1:8000/rest/provider/v0/hello/Bob

Params Authorization **Headers (2)** Body Pre-request Script Tests

	KEY	VALUE	DESC
<input checked="" type="checkbox"/>	Username	Bob	
<input checked="" type="checkbox"/>	Password	Bob	
	Key	Value	Des

Body Cookies Headers (2) Test Results Status: 200 OK

Pretty Raw Preview JSON ≡

1 "Hello Bob"

- 3、通过edge调用consumer的sayHello方法，并且令Username和Password不相等，截图调用成功的结果。

GET ▼ 127.0.0.1:8000/rest/consumer/v0/hello?name=Alice

Params ● Authorization **Headers (2)** Body Pre-request Script Tests

	KEY	VALUE	DESC
<input checked="" type="checkbox"/>	Username	Bob	
<input checked="" type="checkbox"/>	Password	Bob2	
	Key	Value	Des

Body Cookies Headers (2) Test Results Status: 200 OK

Pretty Raw Preview JSON ≡

1 "Hello Alice"

参考答案：

