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Developing, managing and opening the hood of JVM REST services

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What is swookiee?

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Pfannen-what?

- ★ Fun-an-schmidt
- ★ Data Products @ Intuit Data Engineering & Analytics
- ★ Founder of @mobilecgn User Group
- ★ @leastangle

What is swookiee?

- ★ OSGi Runtime for REST Services
- ★ JAX-RS 2
- ★ Jersey, Jetty, Jackson
- ★ Services in Java, Groovy, Scala
- ★ Swagger integration
- ★ Metrics / Graphite Support
- ★ JSON Logging Support
- ★ Remote Controllable (RFC-182)
- ★ EPL

$10^{(-6+1)}$ - Services

Agenda

- ★ Building REST Services
- ★ Swagger documentation
- ★ Metrics
- ★ JSON Logging
- ★ Remote Control

Fizz Buzz

<https://flic.kr/p/6ae8KK> by Luis Linero - Some rights reserved CC BY 2.0



Any number divisible by three is replaced by the word *fizz* and any divisible by five by the word *buzz*.
Numbers divisible by three and five become *fizz buzz*.

FizzBuzz v1



FizzBuzz v2

Documentation

<https://flic.kr/p/dELbZF> Books HD by Abhi Sharma - Some rights reserved CC BY 2.0



FizzBuzz v3

Alternatives

- ★ Good old WADL? [[here](#)]
- ★ Apiary (<http://apiary.io/>)
- ★ RAML (<http://raml.org/>)
- ★ ...

Metrics

Opening the hood

<https://flic.kr/p/byHbPG> Broken down by orangebron... reserved CC BY-NC-SA 2.0



FizzBuzz v4

Logging

<https://flic.kr/p/fE5Wgb> Pitt River Logs by James Wheeler - Some rights reserved CC BY-NC-SA 4.0



Enabling JSON Logging

```
productionLogging = true
```

```
loggingDirectory = logs
```

Generated logs can be found in logs/osgi-
log.json

Sample Log Entry

```
{  
  "timestamp": "1402051840211",  
  "level": "INFO",  
  "thread": "Component Resolve Thread (Bundle 48)",  
  "logger": "com.swoosie.runtime.metrics.MetricsToGraphiteReporter",  
  "message": "Graphite Reporter started using configuration: GraphiteReporterConfigu",  
  "context": "default"  
}
```

Messages in JSON?

```
Map<String, Object> map = new HashMap<>();
map.put("limit", limit);
map.put("result", result);
logger.info("{} ", map);
```

```
{
  "timestamp": "1401544478570",
  "level": "INFO",
  "thread": "qtp1201555453-33",
  "logger": "com.swookiee.demo.logging.impl.FizzBuzzService",
  "message": {
    "result": [
      "1",
      "2",
      "Fizz",
      "4",
      "Buzz"
    ],
    "limit": 5
  },
  "context": "default"
}
```

Remote

<https://flic.kr/p/hm8mFS>

Chernobyl NPP - Control Room No. 2 by Michael Kötter - Some rights reserved CC BY-NC-SA 2.0



Some REST calls

Deploy

```
private SwookieeClient getSwookieeClient() throws SwookieeClientException {
    SwookieeClientBuilder swookieeClientBuilder = SwookieeClientBuilder
        .newTarget("localhost")
        .withPort(8080)
        .withUsernamePassword("admin", "admin123");
    return swookieeClientBuilder.create();
}
```

```
try ( SwookieeClient swookieeClient = getSwookieeClient() ) {
    String installedBundle = swookieeClient.installBundle(file, true);
    swookieeClient.startBundle(installedBundle);
} catch (SwookieeClientException ex) {
    logger.error("Could not install/start bundle: '{}'", ex.getMessage(), ex);
}
```

Future

- ★ Release version
- ★ JVM languages?
- ★ OAuth2 provider
- ★ Integration testing

Thank You!

swookiee.com

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