

RED HAT
SUMMIT

Java and MicroProfile on Azure: Building microservices in style

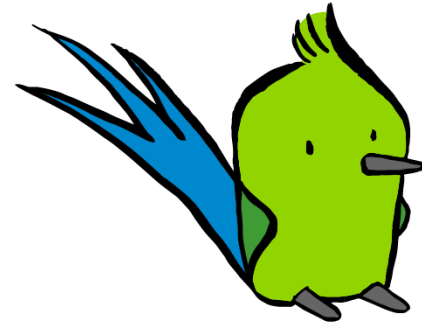
James Falkner

Senior App Dev Technical Evangelist, Red Hat
@schtool

Brian Benz

Senior Cloud Developer Advocate, Microsoft
@bbenz

- What is MicroProfile
- The MicroProfile Community
- MicroProfile Development
- Thorntail (née WildFly Swarm)
- Demo Time!
- More resources
- Q&A



THORNTAIL

- Eclipse MicroProfile is an open-source community specification for Enterprise Java microservices
- A community of individuals, organizations, and vendors collaborating within an open source (Eclipse) project to bring microservices to the Enterprise Java community

Community - individuals, organizations, vendors



Current MicroProfile [implementations](#)



Eclipse MicroProfile 2.2 (Feb 2019)

Open Tracing 1.3	Open API 1.1	Rest Client 1.2	Config 1.3
Fault Tolerance 2.0	Metrics 1.1	JWT Propagation 1.1	Health Check 1.0
CDI 2.0	JSON-P 1.1	JAX-RS 2.1	JSON-B 1.0

MicroProfile 2.2

- = New
- = Updated
- = No change from last release (MicroProfile 2.1)

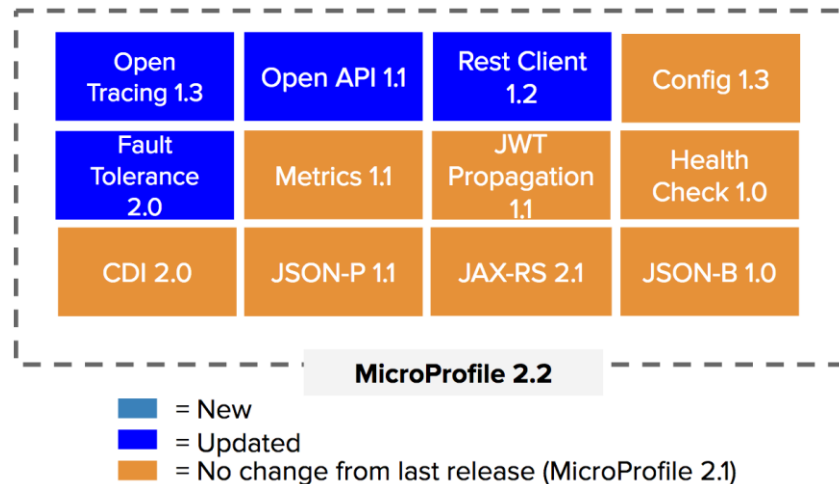
Eclipse MicroProfile 2.2 Released!

On February 12, 2019, MicroProfile 2.2 was released.
Offered in the release:

- Java EE 8 continued alignment
- A richer feature set for Fault Tolerance, Open Tracing, Open API, and Rest Client
- CDI-based and programmatic interfaces
- Test Compatibility Kit (TCK), Javadoc, PDF doc for download

Other news:

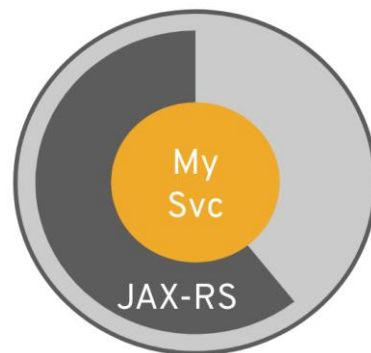
- [MicroProfile Starter \(Beta\)](#) now available
- [Reactive Streams Operators](#) project plans to release standalone
- [MicroProfile GraphQL](#) project has been approved to move to the MicroProfile sandbox





THORNTAIL

- Leverage Java EE expertise
- Open Standard
- Microservices focus
- Optimized for Containers
- Super Lightweight
- uber-jar and war support
- Implements MicroProfile 1.2*

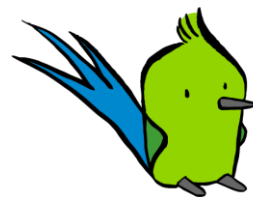


```
$ java -jar my_microservice.jar
```

or

```
$ java -jar custom-runtime.jar myapp.war
```

* 2.0 planning in progress, Q1 CY19



THORNTAIL

```
<dependencyManagement>
  <dependencies>
    <dependency>
      <groupId>io.thorntail</groupId>
      <artifactId>bom</artifactId>
      <version>${version.thorntail}</version>
      <scope>import</scope>
      <type>pom</type>
    </dependency>
  </dependencies>
</dependencyManagement>
```

Externalized Configuration

```
@Inject  
@ConfigProperty(name = "myapp.default-name")  
private String defaultName;
```

Health Probes

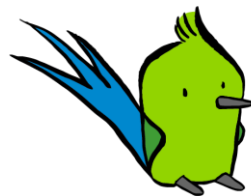
```
@Health  
@ApplicationScoped  
public class GoodHealthCheck implements HealthCheck {  
    public HealthCheckResponse call() {  
        return HealthCheckResponse  
            .named("MyHealthCheck")  
            .withData("someKey", "aValue")  
            .up()  
            .build();  
    }  
}
```



THORNTAIL

Metrics

```
@Counted(name = "hCount",  
    absolute = true,  
    description = "# calls to /myendpoint",  
    monotonic = true)  
@GET  
@Path("/myendpoint")  
public Response myEndpoint {}
```

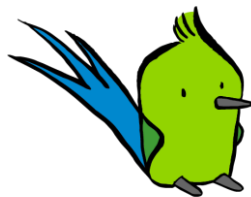


Fault Tolerance

THORNTAIL

```
@Retry(maxRetries = 2)  
@Fallback(fallbackMethod = "greetingFallback")  
public Response greeting() {}  
  
public Response greetingFallback() {  
    return Response.ok()  
        .entity(new Greeting("Greetings from a fallback")).build();  
}
```

```
<dependency>  
  <groupId>io.thorntail</groupId>  
  <artifactId>jaeger</artifactId>  
</dependency>
```



THORNTAIL



JAEGER



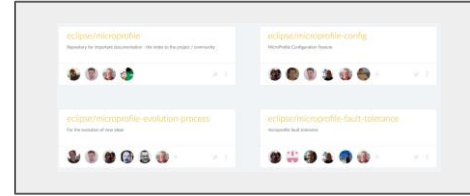
Demo Time!



Get Involved!



[Google Groups](#)



[MicroProfile Projects](#)



[Bi-Weekly & Quarterly
General community
Meetings](#)



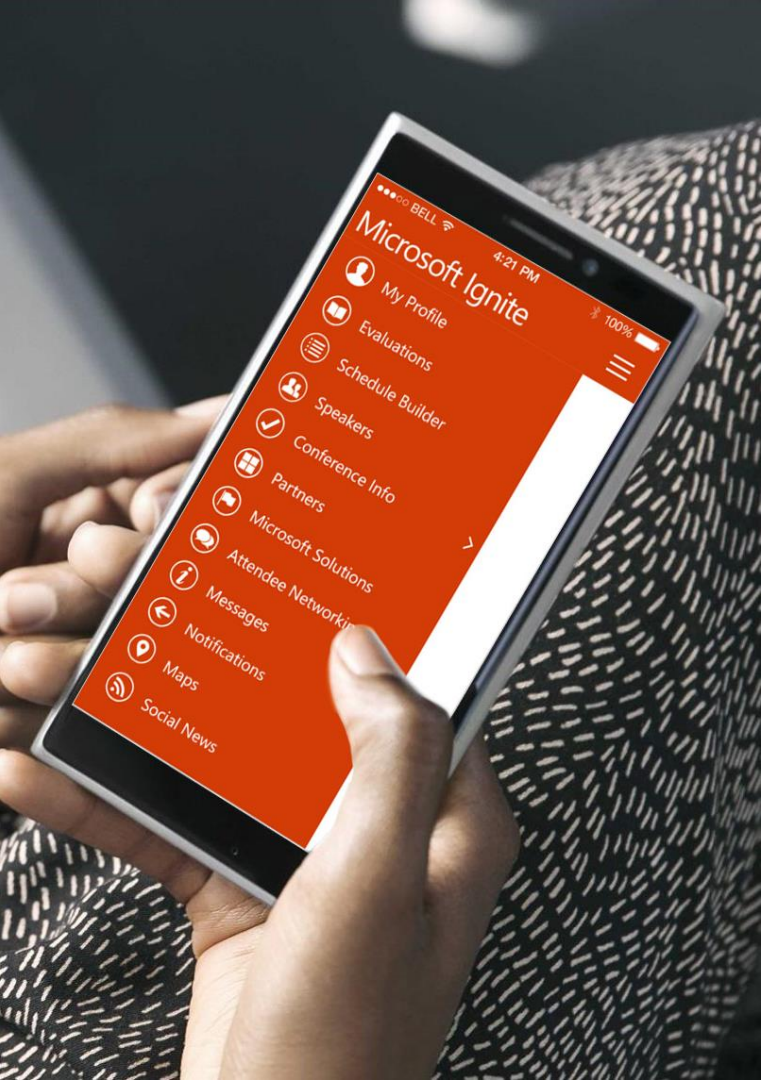
[YouTube Channel](#)



[Video Hangouts](#)

- MicroProfile - <https://microprofile.io/>
- Projects: <https://microprofile.io/projects/>
- Join the Discussion - <https://groups.google.com/forum/#!forum/microprofile>
- Events calendar - <http://bit.ly/MicroProfile-calendar>

- Thorntail (née WildFly Swarm)
 - - <http://wildfly-swarm.io/documentation/>
- Reference Architecture for OpenShift on Azure:
 - <http://bit.ly/refarch-ocp-azure>
- Java on Azure – <http://azure.com/java>
- Docs <https://docs.com/>



Questions?
(Don't forget the evals!)
(Follow us on Twitter!)

James Falkner

jfalkner@redhat.com

[@school](https://twitter.com/school)

Brian Benz

bbenz@microsoft.com

[@bbenz](https://twitter.com/bbenz)

RED HAT
SUMMIT

THANK YOU



[linkedin.com/company/Red-Hat](https://www.linkedin.com/company/Red-Hat)



[youtube.com/user/RedHatVideos](https://www.youtube.com/user/RedHatVideos)



[facebook.com/RedHatinc](https://www.facebook.com/RedHatinc)



twitter.com/RedHat