



Optimizing Enterprise Java
for a Microservices Architecture

Enterprise Java Standards History



Java
Community
Process



RED HAT JBOSS®
ENTERPRISE
APPLICATION PLATFORM 7

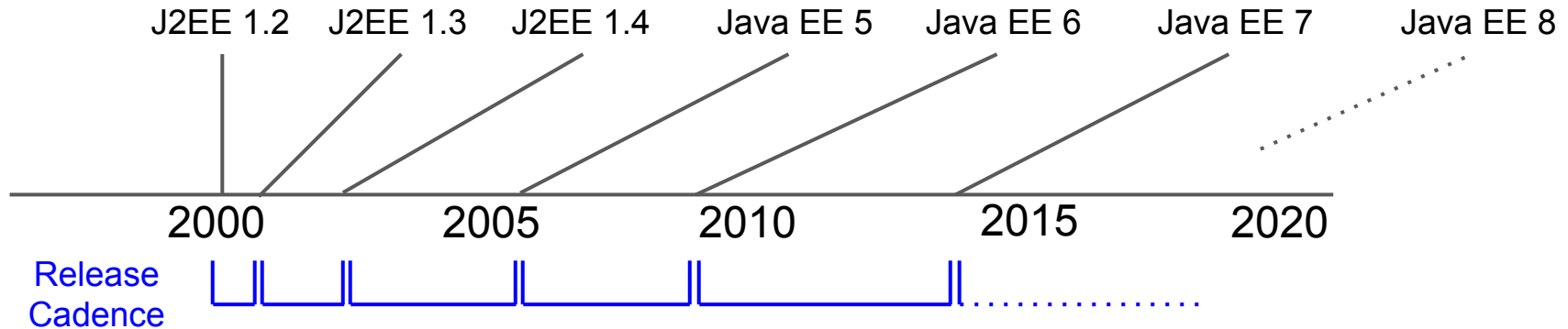
ORACLE®
FUSION MIDDLEWARE
WEBLOGIC SERVER



Cosminexus

FUJITSU

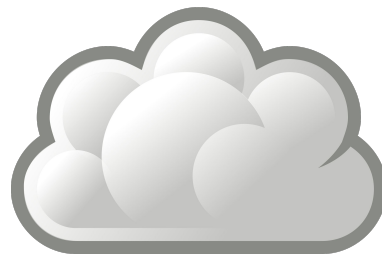
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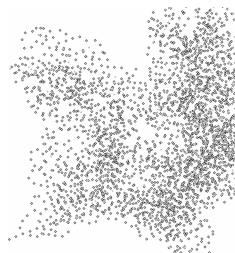
Fundamental Shifts in Computing

Cloud

- Reduce time to market
- Address unpredictable loads
- Pay as you go
- Containerization



Microservices



- Deliver new features more quickly
- Smaller, more agile teams
- Deliver business features as discrete services
- Scale services independently

MicroProfile Background

- Began as a collection of independent discussions
 - Many innovative “microservices” efforts in existing Java EE projects
 - [WildFly Swarm](#)
 - [WebSphere Liberty](#)
 - [Payara](#)
 - [TomEE](#)
 - Projects already leveraging both Java EE and non-Java EE technologies
 - Creating new features/capabilities to address microservices architectures
- Quickly realized there is common ground
- Java EE technologies are already being used for microservices, but we can do better

MicroProfile Release Philosophy

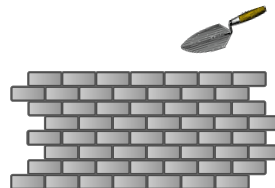
Release 1.0



Rapidly iterate
and innovate



Build
consensus

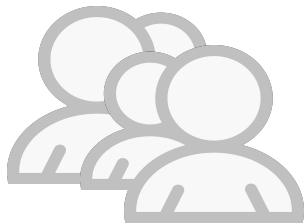


Standardize



Sept 2016

Bridging Community and Standards

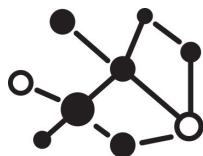


Broad Collaboration

Encouraged
experimentation

Fail Fast

Rapid innovation

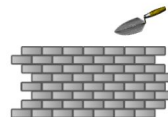


MicroProfile

Rapidly iterate
and innovate



Build
consensus



Vendor Choice

Implementation Choice

Application Portability

Backwards Compatibility

Reduced Risk

An Eclipse Foundation Project



- Meritocracy; vendor neutrality
- MicroProfile leadership can change over time
- Legal and technical infrastructure
- Trademark Ownership
- Accepts Apache License

MicroProfile 1.1 Underway



Configuration 1.0




Security: JWT Token Exchange 1.0



Health Check 1.0



Fault Tolerance 1.0 (Stretch goal)



**Second Quarter
2017!**

Feature Backlog* - Help us prioritize [1 of 2]

- Container API
- Microservice-y annotations
(Ex: `@CircuitBreaker`)
- Testing
- Distributed Logging
- Distributed Tracing
- OAuth2/OpenID Connect
- Microservice Security
- Service Discovery
- Health Check
- Configuration
- Metrics/Monitoring
- WebSockets
- JSON-B
- Bean Validation
- JPA
- JTA
- Concurrency Utilities for Java EE

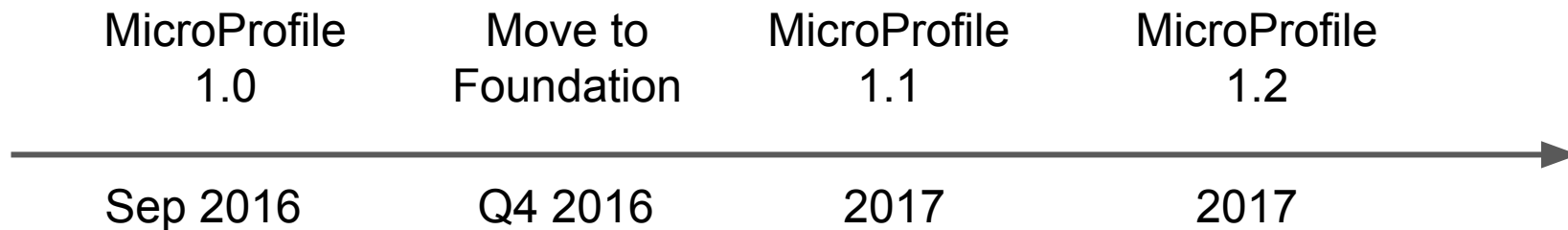
* Some Items may be removed due to lack of interest

Feature Backlog* - Help us prioritize [2 of 2]

- Messaging / Eventing
- Asynchronous/Reactive Support / Patterns
- Integration with Reactive / Eventing systems
- Big Data/NoSQL strong & weak consistency support
- Netflix OSS Integration
- JCache
- JDK 8
Lambda+Streams
- EJB Lite
- Servlets
- HTTP/2
- Startup Time
- Disk Space
- Memory
- Uber-jar
- Java 9 Modularity

* Some Items may be removed due to lack of interest

Release Schedule



















Join the Community!



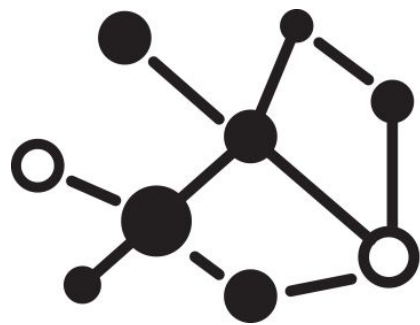
Join the Discussion!

<https://groups.google.com/forum/#!forum/microprofile>

★  Far Jar code from Spring Boot	15 posts	238 views	Phillip Webb +9
★  Micro profile criteria	2	22	Will Hartung +1
★  What about JCache? (5)	9	45	Sebastian Łaskawiec +3
★  What's the underlying foundation/baseline?	31	151	Maurice de Chateau +12
★  Welcome to the MicroProfile Discussion Forum!	9	161	me +4
★  Current poll results	2	27	Thiago Veronezi +1
★  Getting involved / Road Map	21	198	David Blevins +9
★  Security discussion	15	209	Arjan Tijms +7
★  Re: BeanValidation Discussion	15	222	Jean-Louis Monteiro +9
★  Modularity	2	31	Philippe Marschall +1
★  Are RMI and remote EJBs in the profile?	14	130	David Sharpe +12
★  Should the microprofile be like a toolbox?	17	115	Gunnar Morling +9
★  What about jbatch ?	11	111	Antoine Sabot-Durand +7
★  JMS (No Broker) (2)	7	110	Jonathan Fisher +4
★  Goals of MicroProfile	3	132	Matthew McLarty +1
★  Announcing Micro Profile	7	242	Antonio Goncalves +5

Resources

- [MicroProfile.io](https://microprofile.io)
- MicroProfile Discussion Forum
bit.ly/MicroProfileForum
- MicroProfile Examples
<https://github.com/microprofile/microprofile-samples>



MicroProfile