

Apache Tomcat as a transport in CXF



R&D Project midpoint Presentation

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30. April 2019, University of Neuchatel

Project description

Integration between CXF and embedded Tomcat - is the initial goal of our project.

CXF is a java open source framework that makes writing messaging for applications easier.

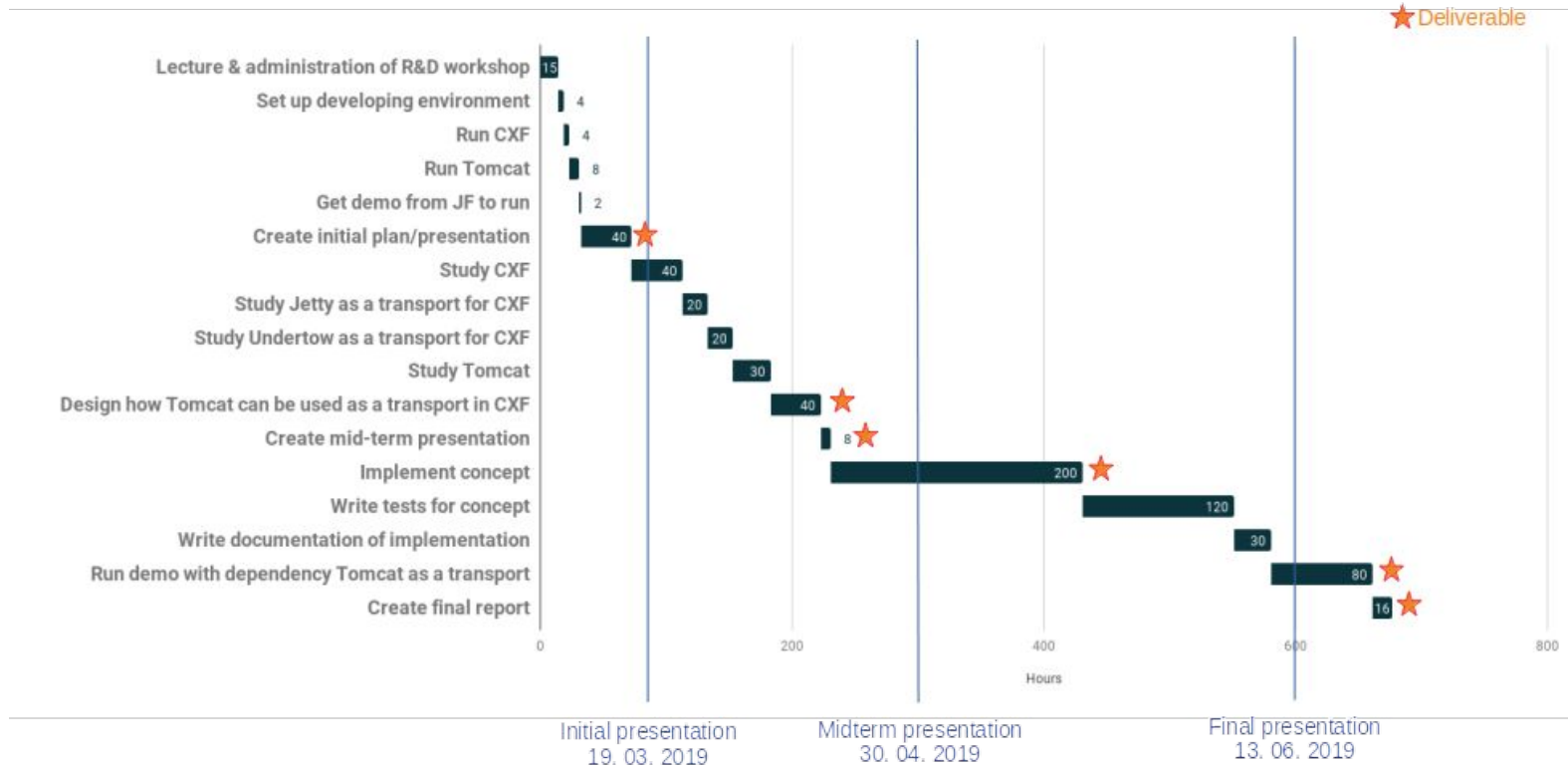
Tomcat is an open source java HTTP web server.

Existing servers as transports in CXF: Jetty and Undertow

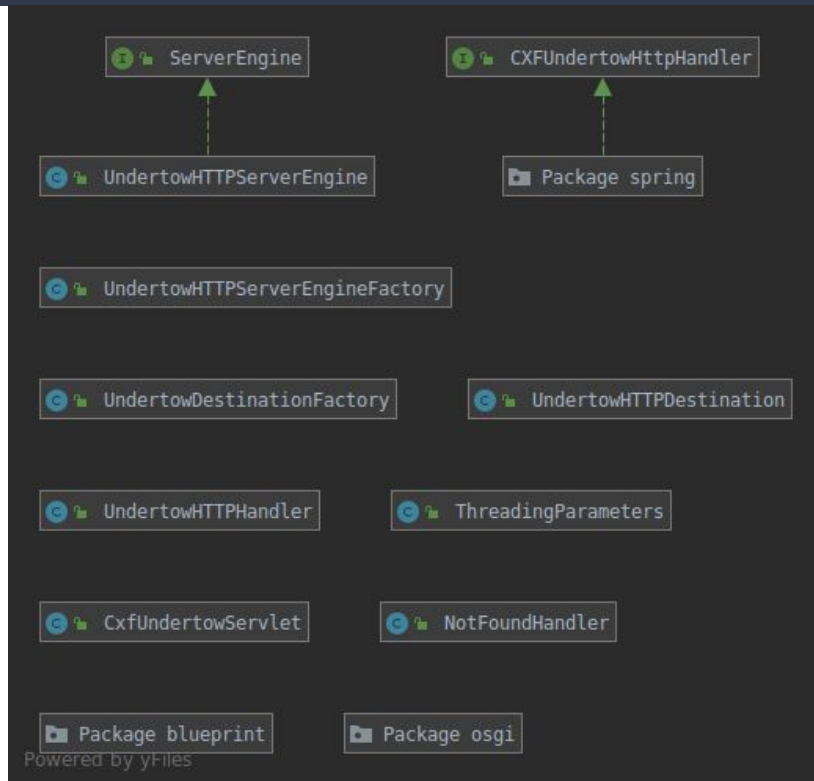
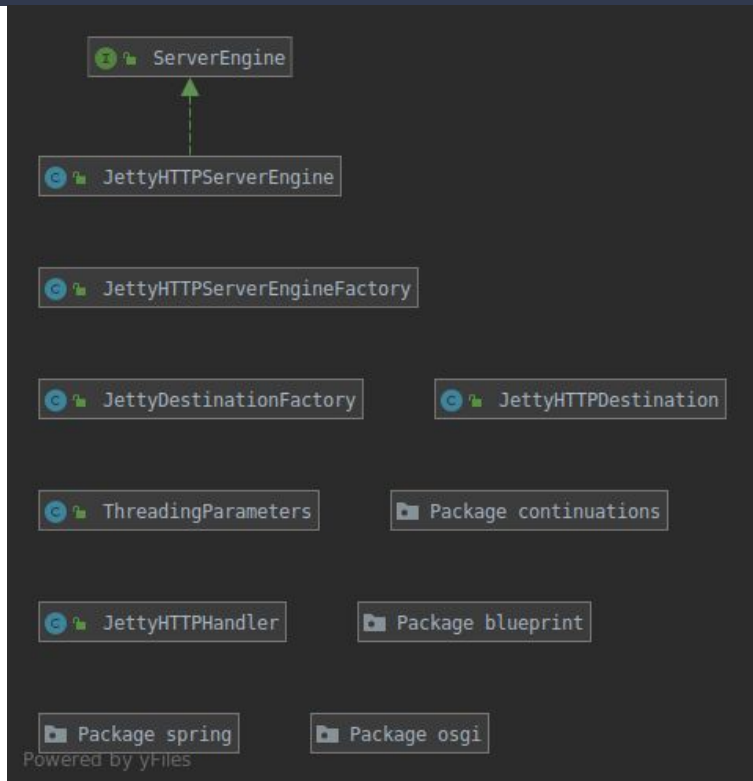
Goals

1. Understand underlying principles of embedded Jetty and Undertow in CXF scope
2. Investigate the challenge of embedding apache tomcat into CXF
3. Design a solution and propose TDD approach
4. Develop the solution
5. Demonstrate it using a basic HTTP REST service for Tomcat

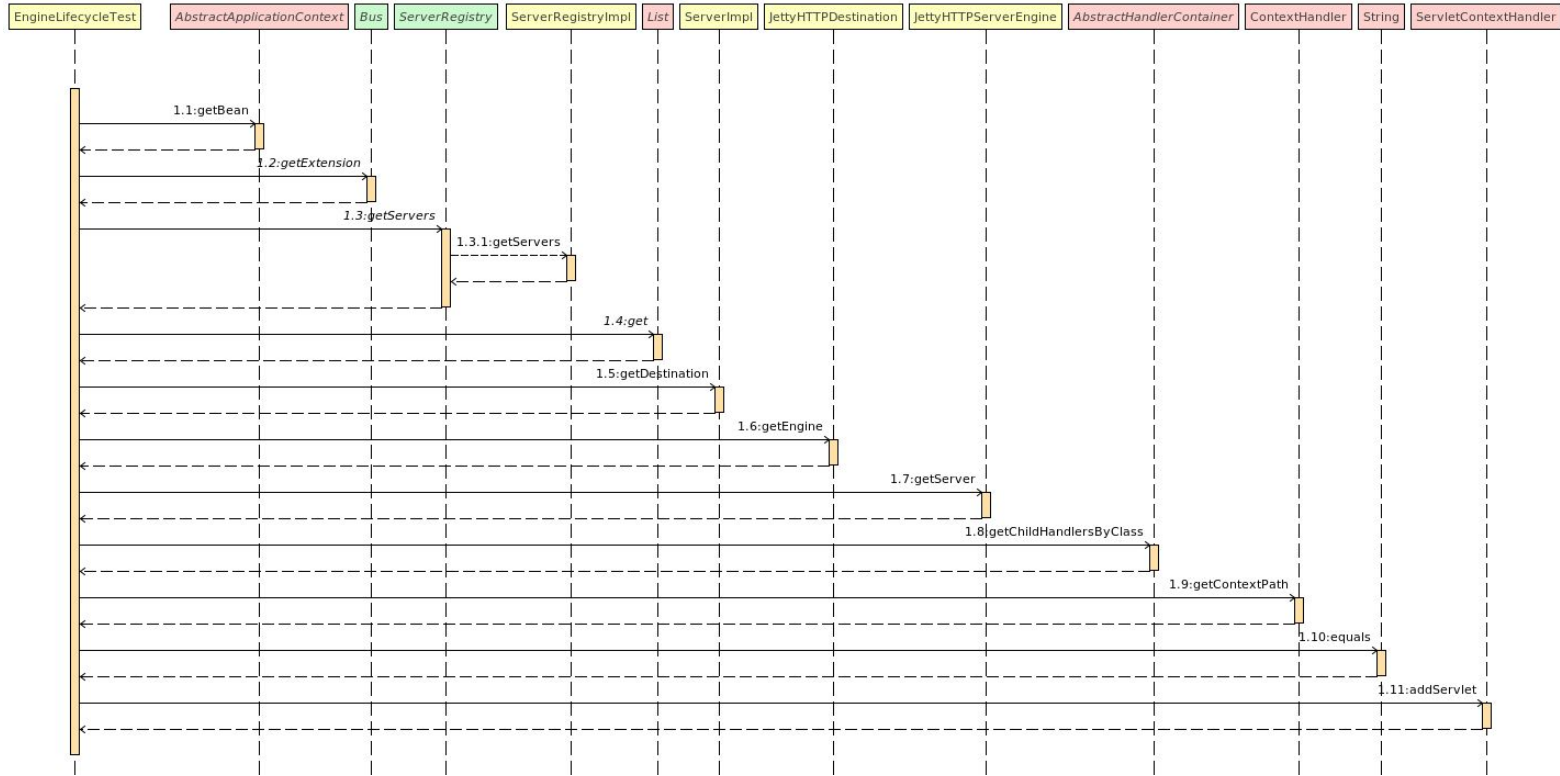
Timeline (updated)



Comparing Jetty and Undertow



EngineLifecycleTest: testUpDownWithServlets



Design of Tomcat as a transport in CXF

Class TomcatHTTPServerEngine extends ServerEngine

Class TomcatHTTPServerEngineFactory

Class TomcatDestinationFactory

Class TomcatHTTPDestination (around 50% completed)

Class TomcatHTTPHandler

Classes for spring integration

Current Tomcat structure

- CxfTomcatServlet
- HelloServlet
- Messages.properties
- ServerEngine
- ThreadingParameters
- TomcatDestinationFactory
- TomcatHTTPDestination
- TomcatHTTPHandler
- TomcatHTTPServerEngine
- TomcatHTTPServerEngineFactory
- TomcatHTTPTestHandler

- blueprint
 - HTTPTomcatTransportNamespaceHandler
 - TomcatHTTPServerEngineFactoryHolder
 - TomcatServerEngineFactoryParser
 - TomcatServerEngineParser

- osgi
 - HTTPTomcatTransportActivator

- spring
 - NamespaceHandler
 - TomcatHTTPServerEngineBeanDefinitionParser
 - TomcatHTTPServerEngineFactoryBeanDefinitionParser
 - TomcatSpringTypesFactory

Done so far

Fulfilled goals 1 & 2

Designed concept for Tomcat as a transport (goal 3)

Implemented the first part of integration test with spring framework

Next steps

Finish core classes

Implement transport tests

Get proof of concept running

Questions?

Apache Tomcat as a transport in CXF



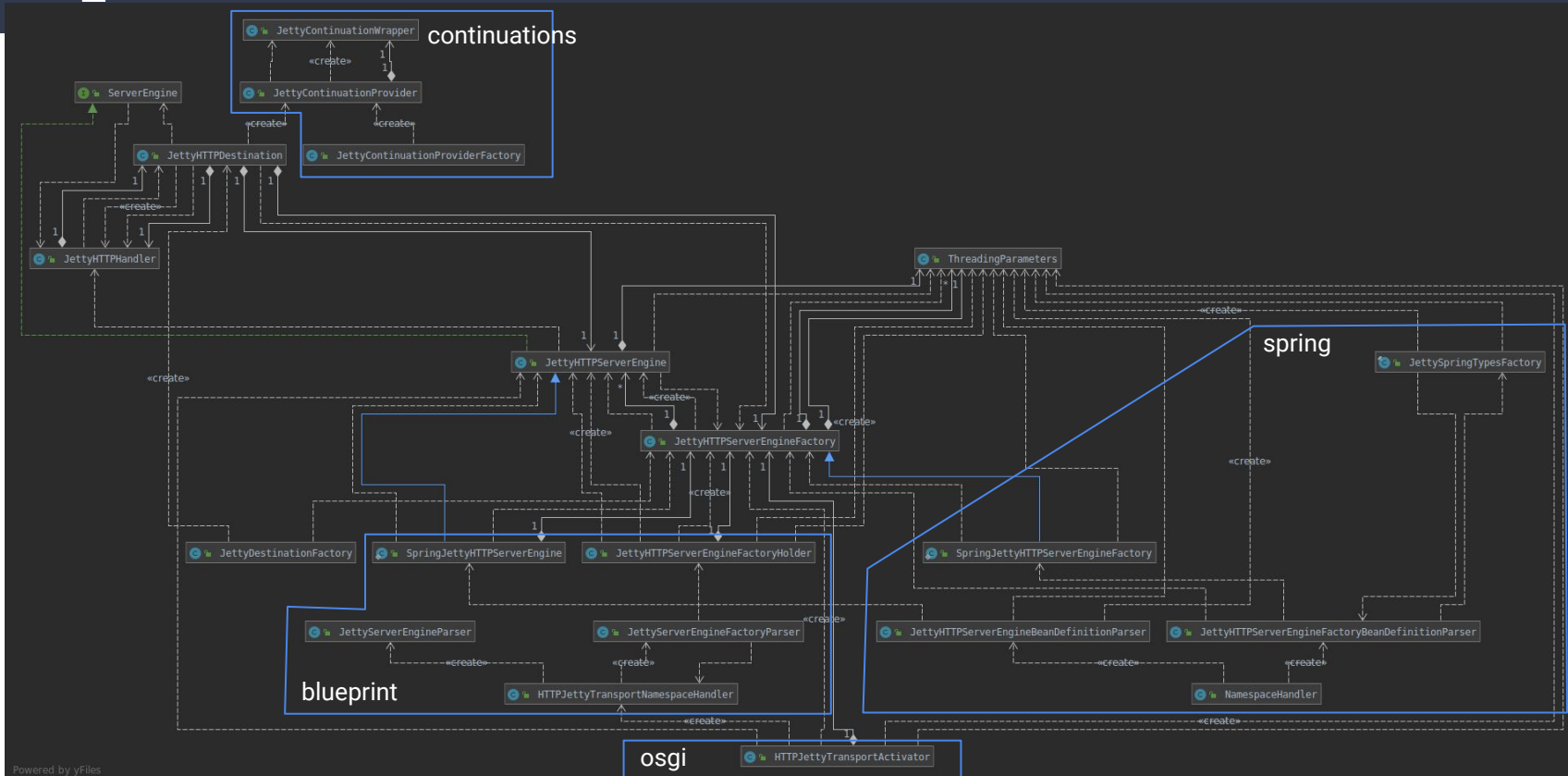
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Jetty related classes (with dependencies)



Undertow related classes (with dependencies)

Tomcat related classes (with dependencies)

