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Apache Tomcat to Apache TomEE in 1 to n Steps

A guide on opening the doorway to Java EE in Apache TomEE
from an Apache Tomcat perspective

Project - https://github.com/tomitribe/tomcat_to_tomee





Is Apache TomEE for Me?

Kathryn Janeway

Jonathan Archer

James T. Kirk

Jean-Luc Picard

Benjamin Sisko

You Yourchoice

The new guy who is going to die (The one in the red top!)





A Look at Apache Tomcat

A legacy application, maybe yours...

JSP

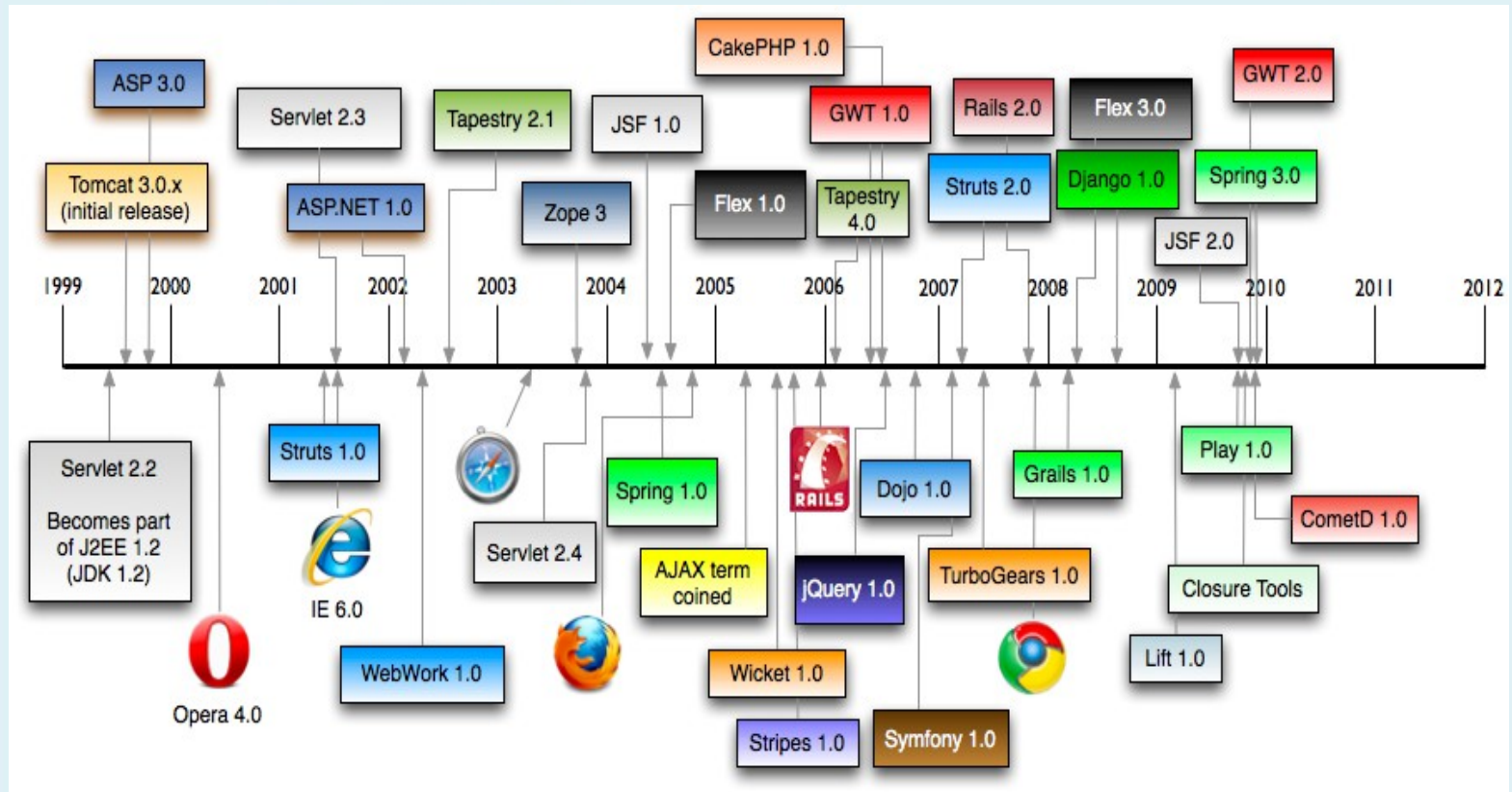
Servlets

? The scary stuff everyone said
? was the next big thing...

Apache Tomcat

Apache TomEE™

Stolen from Roberto Cortez!





A Look at Apache TomEE

A legacy application, maybe yours...

JSP

CDI

JSF

JPA

Servlets

JMA

EJB

JTA

JSTL

JAAS

JAAC

Servlets

Apache Tomcat

Apache TomEE™ Maintaining 'Status quo' - EE6

Latin phrase meaning 'the existing state of affairs'

- JSR-245 JavaServer Pages 2.2
- JSR-344 JavaServer Faces 2.2
- JSR-341 Expression Language 3.0
- JSR-339 The Java API for RESTful Web Services 2.0
- JSR-340 Java Servlet 3.1
- JSR-250 Common Annotations for Java Platform 1.1
- JSR-318 Interceptors 1.1
- JSR 346 Contexts and Dependency Injection for Java EE 1.1
- JSR-345 Enterprise JavaBeans 3.2
- JSR-322 Java EE Connector Architecture 1.7
- JSR-338 Java Persistence 2.1
- JSR-907 Java Transaction API 1.2
- JSR-343 Java Message Service 2.0
- JSR-349 Bean Validation 1.1
- EJB Entity Beans Support
- JAX-RPC 1.1 Support
- JAXR 1.0
- Java EE Application Deployment 1.2

Apache TomEE™ Moving on, 'Tempora mutantur'

Latin phrase meaning 'times change'

- JSR-245 JavaServer Pages 2.2
- JSR-344 JavaServer Faces 2.2
- JSR-341 Expression Language 3.0
- JSR-339 The Java API for RESTful Web Services 2.0
- JSR-340 Java Servlet 3.1
- JSR-250 Common Annotations for Java Platform 1.1
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- JSR-322 Java EE Connector Architecture 1.7
- JSR-338 Java Persistence 2.1
- JSR-907 Java Transaction API 1.2
- JSR-343 Java Message Service 2.0
- JSR-349 Bean Validation 1.1
- ~~EJB-Entity Beans Support~~
- ~~JAX-RPC 1.1 Support~~
- ~~JAXR 1.0~~
- ~~Java EE Application Deployment 1.2~~

Roadmap EE7

- JSR 356 - Java API for WebSockets
- JSR 353 - Java API for JSON Processing (JSON-P)
- JSR 352 - Batch Applications for the Java Platform
- JSR 236 - Concurrency Utilities for Java EE
- JSR-299 - CDI Portable Extensions

Roadmap EE8

- JCache (JSR-107)
- Java API for JSON Binding (JSR-TBD)
- Java Configuration (JSR-TBD)



Apache TomEE™

Still Thinking “Is it for Me”?

- Jakarta Tomcat, aka Apache Tomcat is quite old (1999)
- It is basically just a Web Server and Servlet Container
- Tomcat extension is Ad-hoc at best
- Old is good! Apache Tomcat is a very stable platform
- Tomcat is 'the' platform upon which Apache TomEE sits
- Apache TomEE is not in competition with Apache Tomcat
- Apache TomEE is the opposite of Ad-hoc, it's certified



Apache TomEE™



Rebellabs released an annual study with awards to recognize Geeky Excellence for 2014. Tomcat and TomEE were named as one of the 10 Geek Choice Awards winner. For a complete list of winners, check out the report "[10 Kick-Ass Technologies Modern](#)

[Developers Love](#)".

[Read the Report](#)

Apache TomEE, pronounced "Tommy", is an all-Apache Java EE 6 Web Profile certified stack where Apache Tomcat is top dog. Apache TomEE is assembled from a vanilla Apache Tomcat zip file. We start with Apache Tomcat, add our jars and zip up the rest. The result is Tomcat with added EE features -

[Download Apache TomEE Now »](#) and [get started today!](#)

TomEE+

Apache TomEE Plus has all the features of TomEE with the addition of [JAX-RS \(RESTfull Services\)](#), [JAX-WS \(Web Services\)](#), [JMS \(Java Message Service\)](#) and [JCA \(the Java Connector Architecture\)](#). The additional functionality is delivered via Apache CXF, Apache ActiveMQ and the Geronimo Connector library

[View details »](#)

OpenEJB

Apache OpenEJB is a standalone EJB 3.1 container. It can also be used for adding EJB 3.1 capabilities to Tomcat.

[View details »](#)

Examples

See the extensive list of examples being developed for Java EE 6. All are functional and tested before publishing. Some are documented. These also stream from the continuous integration system.

[View details »](#)

Documentation



See also the [examples page](#) for downloadable, executable and code-focused view of Java EE and TomEE.
You can also find us on IRC [freenode.org #openejb](#) and [#tomee](#)

General Guides

- [Get started with IntelliJ, Debugging in IntelliJ](#)
- [Get started with Eclipse](#)
- [Get started with Netbeans](#)
- [Get started with Maven](#)
- [Eclipse WTP and TomEE logging](#)
- [Comparison: OpenEJB, TomEE, TomEE+](#)
- [TomEE Directory structure](#)
- [TomEE Configuration](#)
- [TomEE Security](#)
- [Deploying in TomEE](#)
- [The 'tomee' webapp](#)
- [Install TomEE using the drop-in WAR](#)
- [TomEE Reference Card](#)

Discovery and Failover

- [Overview](#)
- [Multicast Discovery \(UDP\)](#)
- [Multipulse Discovery \(UDP\)](#)
- [Multipoint Discovery \(TCP\)](#)
- [Multipoint Considerations](#)
- [Multipoint Recommendations](#)
- [Logging Events](#)

Arquillian

- [Arquillian Primer - What you need to know](#)
- [Using the TomEE Arquillian adapters](#)

Configuration

- [System Properties](#)
- [Deployments](#)
- [Containers and Resources](#)
- [JMS Resources and MDB Container](#)
- [Configuring DataSources](#)
- [Configuring JavaMail](#)
- [Security](#)
- [EJB Clients](#)
- [EJB over SSL](#)
- [JNDI Names](#)
- [Changing JMS implementations](#)
- [Changing JPA to Hibernate](#)

OpenEJB Standalone Server

- [Understanding the Directory Layout](#)
- [Startup](#)
- [Deploy Tool](#)
- [Properties Tool](#)

TomEE Maven Plugin

- [Getting started](#)
- [tomee-maven-plugin reference documentation](#)
- [TomEE simple webapp archetype documentation](#)

Testing Techniques

- [Application discovery via the classpath](#)
- [Embedded Configuration](#)
- [Configuring DataSources in Tests](#)
- [Configuring PersistenceUnits in Tests](#)
- [Configuring Containers in Tests](#)
- [Configuring Logging in Tests](#)
- [Alternate Descriptors](#)
- [Unit Testing Transactions](#)
- [TestCase with TestBean inner-class](#)
- [TestCase Injection \(@LocalClient\)](#)

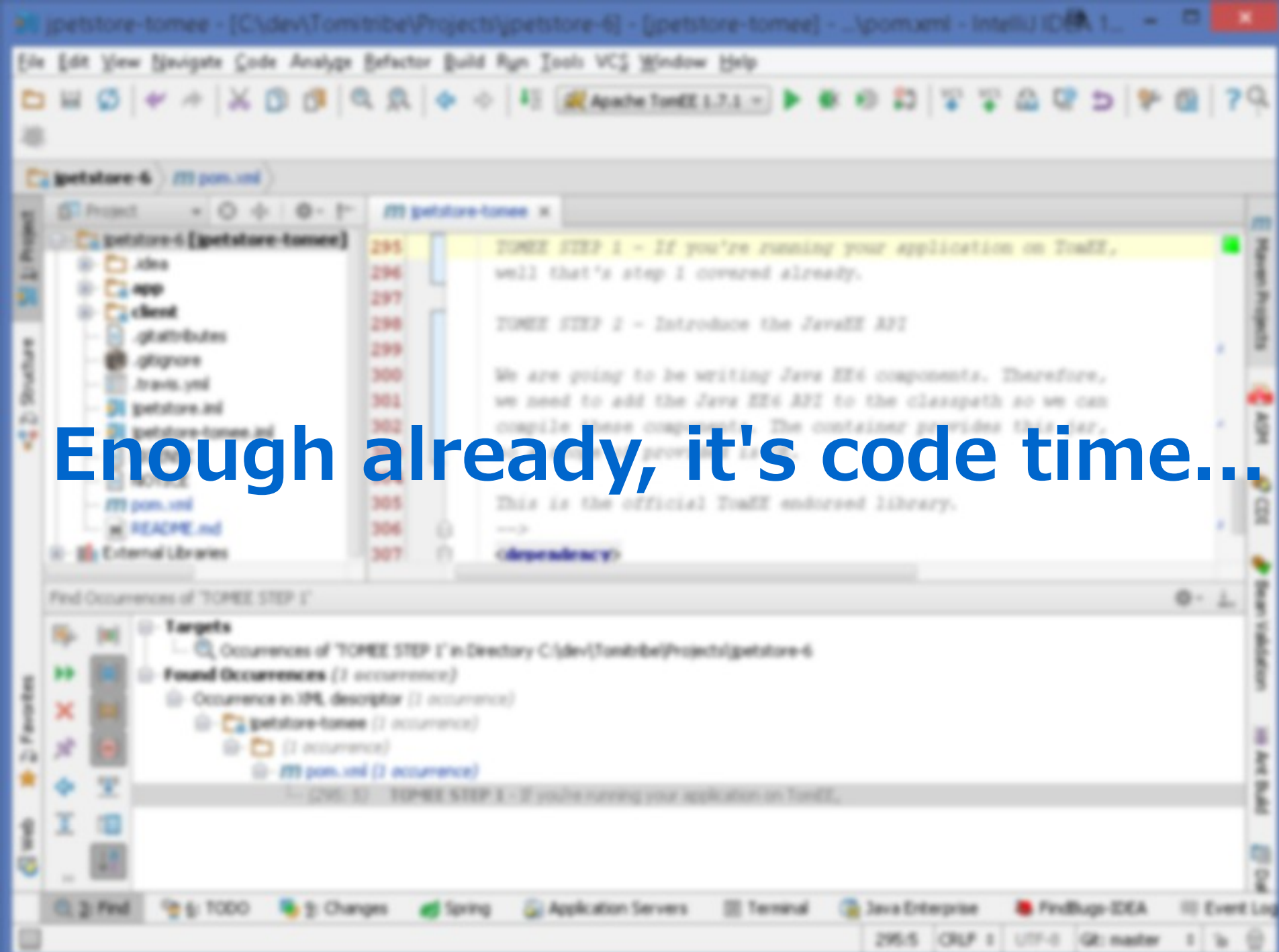
Spring

- [Spring and OpenEJB 3.0](#)
- [Spring and OpenEJB 3.1 and later](#)
- [Spring, EJB and JPA example](#)

Tips and Tricks

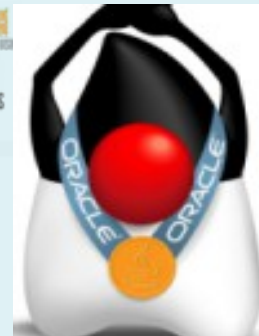
- [Global Concurrency Management](#)
- [WebLogic Lookup](#)
- [Jersey Client](#)

Enough already, it's code time...



Apache TomEE™

A Winning Choice





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Tomitribe Corporation

Leading Open Source Enterprise Service

Support Provider for Apache TomEE

www.tomitribe.com ~ #TomEE ~ @tomitribe





Who are the tribe?

- Tomitribe Corporation founded in Spring 2013
- CEO David Blevins – Project lead on Apache- TomEE, OpenEJB and Geronimo projects. Member of the EJB 3.0 / 1 / 2 and Java EE 6 / 7 and 8 expert groups
- Employees are Apache TomEE / OpenEJB developers
- OpenWebBeans, DeltaSpike, Camel, CXF, Sirona, BatchEE and CREST committers
- Community leaders

