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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

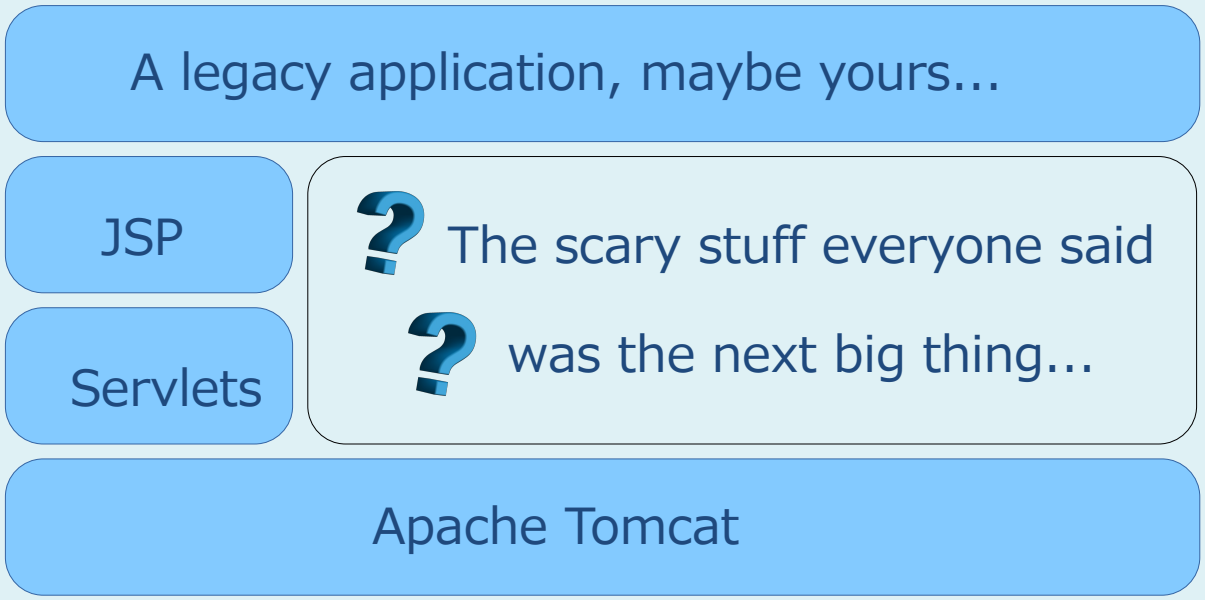
Benjamin Sisko

You Yourchoice

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

Apache TomEE™

A Look at Apache Tomcat



A Look at Apache TomEE

A legacy application, maybe yours...

JSP	CDI	JSF	JPA
Servlets	JMA	EJB	JTA
JSTL	JAAS	JAAC	Servlets

Apache Tomcat

A Look at Apache TomEE

A Legacy Application, Maybe Yours...

JSP | CDI | WS | REST

Servlets | JPA | EJB | JMS | JTA

Apache Tomcat | More...

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

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
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- 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~~

Focus on the Future – EE7, EE8

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)

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

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 - TomEE

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

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

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)

Discovery and Failover

Overview
Multicast Discovery (UDP)
Multipulse Discovery (UDP)
Multipoint Discovery (TCP)
Multipoint Considerations
Multipoint Recommendations
Logging Events

OpenEJB Standalone Server

Understanding the Directory Layout
Startup
Deploy Tool
Properties Tool

Spring

Spring and OpenEJB 3.0
Spring and OpenEJB 3.1 and later
Spring, EJB and JPA example

Arquillian

Arquillian Primer - What you need to know
Using the TomEE Arquillian adapters

TomEE Maven Plugin

Getting started
tomee-maven-plugin reference documentation
TomEE simple webapp archetype documentation

Tips and Tricks

Global Concurrency Management
WebLogic Lookup
Jersey Client

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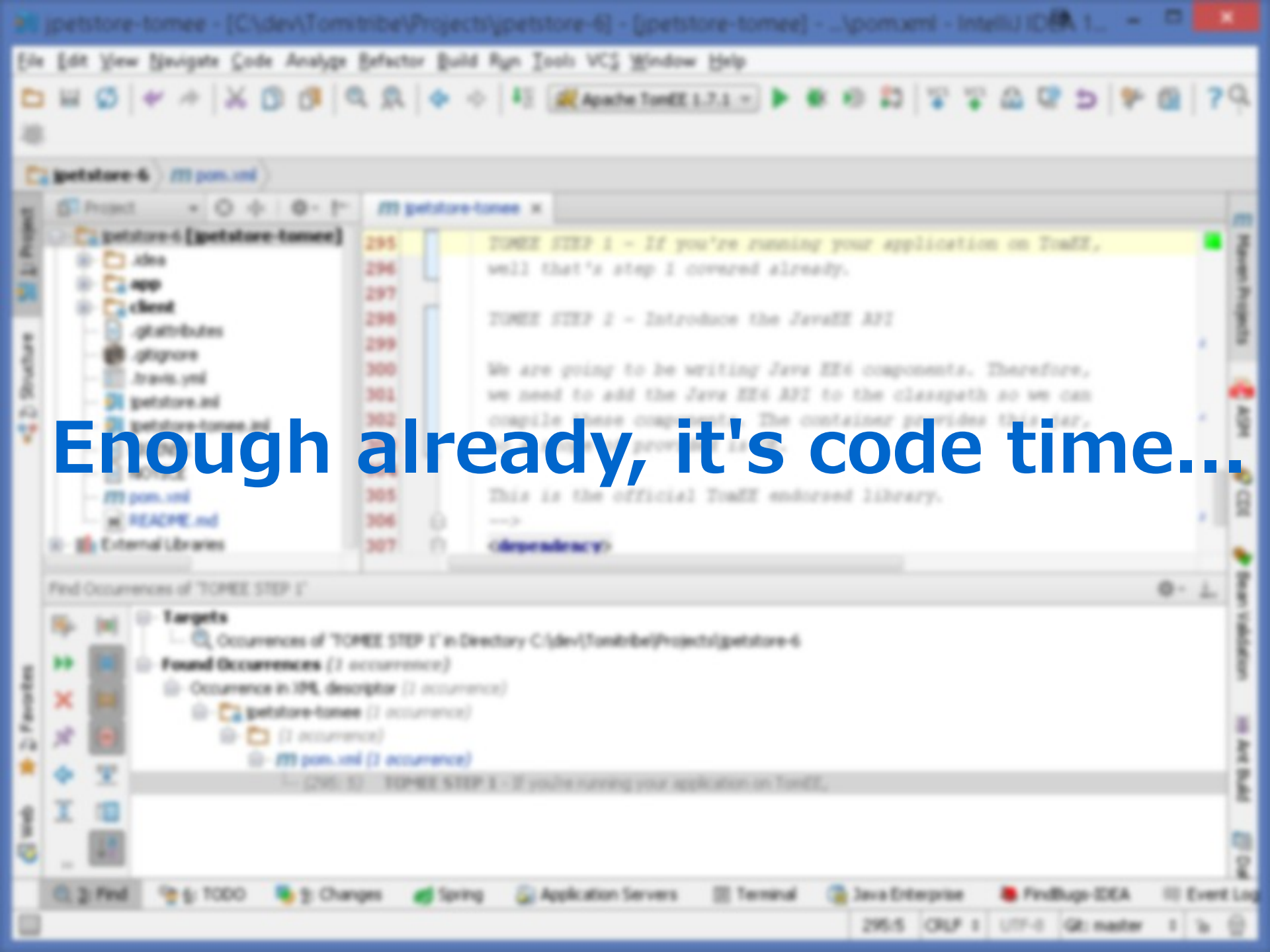
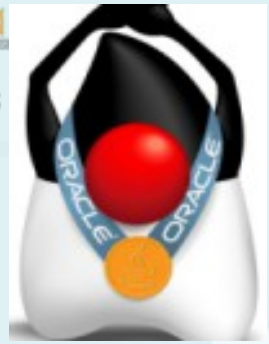

Enough already, it's code time...

Apache TomEE™

A Winning Choice



Tomitribe
join the tribe

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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