

# Virtual Developer Day: Java

Watch educational content covering Java SE, Java EE, and Java Embedded, and engage with Oracle Java experts online.

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# EMEA/Africa/Middle East - Tuesday June 25th, 2013

9:00:00 a.m. - 1:00pm BST / 10:00:00 a.m. - 2:00 p.m.CEST /

 $1:\!30:\!00$  p.m. -  $5:\!30:\!00$  p.m. IST /  $12:\!00:\!00$  p.m. -  $4:\!00$  p.m. MSK /

08:00:00 a.m. - 12:00 p.m. Corresponding UTC (GMT)

# **Agenda**

Time			
8:45 a.m.	Event Platform Opening		
9:00 a.m.	Java Strategy Keynote		
	Java EE	Java SE	Java Embedded
9:30 a.m.	JSON 1.0 Presentation	52 New Features	52 New Features in Java SE 8  Do you like coffee with your dessert? Java and the Raspberry Pi
9:50 a.m.	JSON 1.0 Demo	0_ 11011 1 00101100	
10:10 a.m.	WebSocket 1.0 Presentation		
10:30 a.m.	WebSocket 1.0 Demo	Application Unleash the Power of Oracle Java ME Development with Embedded 3.3: The	
10:50 a.m.	Batch 1.0 Presentation	JavaFX	<u>-</u>
11:10 a.m.	Batch 1.0 Demo		Keil Board
11:30 a.m.	Concurrency 1.0 Presentation		ns the Raspberry Pi
11:50 a.m.	Concurrency 1.0 Demo	Lambda Expressions	
12:10 p.m.	JAX-RS 2 Presentation	Tutorial	
12:30 a.m.	JMS 2 Presentation		
		Survey Time	

1:00 p.m. Event Close	1:00 p.m.
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#### **Abstracts**

# Java Strategy Keynote

The future course for modern-day living—in both the enterprise business world and the consumer arena—is being positively influenced by the ongoing innovation and value of Java. From enterprise application development to cloud computing to embedded machine-to-machine systems, Java continues to drive the applications and devices that enrich our interactivity with the world around us. In this opening keynote, we will provide a glimpse of the future showcasing the vast opportunities that Java provides, as well as detail Oracle's continued commitment to, stewardship of, and investment in Java technology.

#### Java EE Track -

#### **JSON 1.0 Presentation**

JSON is a lightweight data exchange format used increasingly in RESTful Web services by highly visible Websites (Facebook, Twitter, Amazon, and the like). This webinar will show how JSR 353: Java API for JSON Processing can be used to process JSON. It goes over streaming API to produce/consume JSON, and also object model API to build a Java object model for JSON.

#### **JSON 1.0 Demo**

JSR 353: Java API for JSON Processing can be used to process JSON. It provides streaming API to produce/consume JSON, and also object model API to build a Java object model for JSON. This webinar demos the use of API in JAX-RS and other applications (for e.g to process Twitter search results).

#### WebSocket 1.0

The Java API for WebSocket is a wholly new technology for the Java EE platform for Java EE 7. This webinar will look at two core example applications - a simple Echo application with both annotated and programmatic WebSocket endpoints, and a Chat application with both a browser and a Java client. These example applications will help you get started with this exciting new technology to Java EE 7.

#### WebSocket 1.0 Demo

The Java API for WebSocket is a wholly new technology for the Java EE platform for Java EE 7. This rapidly adopted network protocol that is a foundational piece of the HTML5 standard gives Java EE developers the ability to add efficient, asynchronous bidirectional messaging into their web applications, enabling them to make their web applications more active and engaging. The webinar will work through the highlights of this new Java API in Java EE 7 so that you will see exactly what features it has and how to integrate it into your Java EE application.

# Batch 1.0 Presentation -

Batch applications: anachronism or enterprise workload? Asynchronous bulk (or long-running) processing, historically called "batch", has been quietly co-existing along-side online applications for years. In recent years, more and more of this batch processing has been written in Java. There has never been an API standard for these applications - until now! JSR 352 Batch Applications for the Java Platform ushers in the world's first Java standard for building batch applications. In this short webinar you will gain a basic understanding of JSR

352, including its motivation, feature highlights, selected API overview, job scheduling language introduction, and key use cases. If you're interested in Java batch applications and standards, this webinar is for you!

#### Batch 1.0 Demo -

This session shows a demo using the Java Batch API.

From a web app, we start a job, which fails. Using batch checkpoints, we restart the job, picking up where we left off, and eventually completing successfully.

We walk through the app Java & XML, highlighting some key Batch API features such as the checkpoint contract and property injection.

Finally, we run a second variant using the same batch artifacts, but with a "partitioned step", processing the same data on three threads ("partitions") concurrently.

## **Concurrency 1.0**

JSR 236 - Concurrency Utilities for Java EE is a new addition to Java EE 7 platform. It provides a mechanism for Java EE application developers to add asynchronous capabilities to their applications. This screencast provides an overview of what is provided in this JSR.

# **Concurrency 1.0 Demo**

JSR 236 - Concurrency Utilities for Java EE is a new addition to Java EE 7 platform. It provides a mechanism for Java EE application developers to add asynchronous capabilities to their applications. This demo shows a few examples on how to use some of its APIs, including ManagedExecutorService, ManagedScheduledExecutorService, and ManagedThreadFactory.

#### JAX-RS 2

JAX-RS is the Java API for building RESTful web services. This webinar focuses on the new and exciting features introduced in JAX-RS 2.0 including the client API, filters and entity interceptors, asynchronous processing and hypermedia. These new features are centered around providing ease of use and reduced development time for your apps. Additionally, application portability is greatly increased by minimizing the need to use proprietary extensions in existing JAX-RS implementations. This webinar briefly introduces the new features and shows code snippets of the API for each one.

#### JMS<sub>2</sub>

This presentation introduces the new features of JMS 2.0 and explains how they improve ease of use and make developers more productive. JMS 2.0 introduces a completely new "simplified" API which means fewer objects to manage, simpler methods to call and less code to write. In Java EE, the use of annotations and dependency injection reduces the amount of code needed still further. Improvements have also been made to the existing "classic" API to make it simpler and easier to use. The presentation also includes a summary of some of the new messaging features which have been added to tackle real-world issues such as scalability and error handling.

## Java SE Track -

#### 52 New Features in Java SE 8

Java SE 8 is the next release of the core Java platform and contains lots of exciting new features. In addition to the big features like Lambda expressions, extension methods for interfaces and a new Date and Time API there are plenty of smaller features as well. This session will rapidly cover fifty-two new features that are scheduled for inclusion in Java SE 8.

## **Application Development with JavaFX**

After a brief introduction to JavaFX and associated developer resources, this session will demonstrate how to create JavaFX applications using two different approaches. The first approach uses Java with the JavaFX 2 API to create the user interface. The second approach uses Scene Builder to design the user interface, which is represented as FXML documents. In both approaches the application's behavior is implemented using Java and the JavaFX 2 API. A tutorial guide including starter and solution code will be supplied to reinforce concepts learned in the session.

In addition, this session will introduce several JavaFX features new in JDK 8. These include rich text, a public API for CSS structure, TreeTableView, DatePicker, 3D, a new modern theme named Modena, WebView enhancements, and embedded support. This session will also show how lambda expressions, new with JDK 8, may be used to simplify JavaFX event handling.

# **Lambda Expressions Tutorial**

The biggest new feature being included in Java SE 8 is support for Lambda expressions in the Java language syntax. This enables developers to take a more functional approach to certain aspects of code development as well as simplifying the way that code can be executed in parallel through concise use of library classes.

This tutorial will show how Lambda expressions can be used to replace common single abstract method coding patterns in Java making code considerably more concise and easier to read and maintain.

Hacking with Java and the Raspberry Pi

With new low cost devices entering the market, access to the world of embedded computing is becoming more cost affordable. And, with continued advances in Java, developers can easily begin creating innovative applications that leverage these low cost devices. One extremely popular device developers can access is the Raspberry Pi. With an acquisition cost around \$35, this credit-card sized computer offers developers a springboard to quickly dive into the embedded world of programming. The Raspberry Pi includes an ARM chip that is powerful enough to run a full version of Java SE including JavaFX.

In this tutorial, you will get a chance to see Java and JavaFX technologies running on a very accessible embedded platform, as well as learn tips and tricks on how to easily get up and running on the Raspberry Pi.

# Java Embedded Track -

# Do you like coffee with your dessert? Java and the Raspberry Pi

The Raspberry Pi has caused a huge wave of interest amongst developers, providing an ARM powered single board computer running a full Linux distro off an SD card and all for only \$35!

After an introduction to the Raspberry Pi and the ARM architecture this session will look at how Java can be used on a device like this. Oracle have released an early access preview of JDK8 including JavaFX and a version of Java ME Embedded (3.3) tuned specifically for the Raspberry Pi. This includes a very useful Device Access API enabling the use of sensors and actuators easily from Java code using the Raspberry Pi's external interface. Using these releases we will show a variety of demonstrations of what the Raspberry Pi is capable of. Prepare to be amazed at what this tiny board can do.

# Unleash the Power of Oracle Java ME Embedded 3.3: The Raspberry Pi and the Keil Board

The Java language and runtime platform are pervasive in the embedded space, and now with the release of Oracle Java ME Embedded 3.3 we are providing a robust platform for the rapid explosion of programmable, connected devices to create what we call today: Internet of things.

Oracle Java ME Embedded is based on Connected Limited Device Configuration (CLDC), and is a Java runtime stack optimized for small embedded systems. It provides a robust and flexible application platform with dedicated embedded functionality for always-on, headless (no graphics/UI), and connected devices. Oracle Java ME Embedded enables system designers and developers to create sophisticated small embedded solutions leveraging the benefits of the Java language, runtime, and ecosystem while meeting tight system resource targets.

This session will walk you through the Device Access APIs, allowing you to have a chance to understand and play with the classes and interfaces for communicating with peripherals that are connected to an embedded development board. Demonstrations will focus on the Raspberry Pi and the KEIL board.

This session will help you learn everything you need to know to get ready to program the next generation of the "Internet of Things".

#### Hacking with Java and the Raspberry Pi

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