



JAVA EE 7 ARRIVES

Anil Gaur on the evolution of Java EE

BY STEVE MELOAN



As the industry standard for enterprise Java computing, Java Platform, Enterprise Edition, has constantly evolved to keep pace with the emerging usages, patterns, frameworks, and technologies of the enterprise space. Java EE 7 is now here, with essential support for modern-era Web applications—including HTML5, WebSocket, Java API for RESTful Web Services (JAX-RS), JSON Processing (JSON-P), and more.

Java Magazine sat down with Anil Gaur, vice president of software development at Oracle, to explore the new features and technologies of the just-released Java EE 7

Anil Gaur (center), vice president of software development at Oracle, chats with Java EE 7 Platform Specification Leads Bill Shannon and Linda DeMichiel.

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Gaur discusses Java EE 7 capabilities with Arun Gupta (dark shirt), Java evangelist at Oracle, and Shreedhar Ganapathy, engineering manager at Oracle.

platform and examine what it means to enterprise developers and customers.

Java Magazine: What's new and notable in Java EE 7?

Gaur: The Java EE platform is at a critical point right now, in that we have to rapidly move forward to keep pace with emerging Java usages and patterns. These changes are being greatly driven by modern Web applications. Over the past few years, many other frameworks have evolved, and we also wanted to align the platform with those changes.

So the main theme of Java EE 7 is productivity and HTML5 support. The HTML5 enhancement comes from WebSocket, Java Servlet 3.1, the NIO [non-blocking I/O] feature, Server-Sent Events [SSE], JAX-RS, and JSON-P.

In addition, several enhancements have been made throughout the platform to improve productivity, because that's another pain point, and it directly reflects on the cost of development and maintaining applications. With Java EE 7, developers will have

to write less boilerplate code, and the platform will also offer richer functionality through various new specifications, such as batch processing and concurrency.

What's more, the JMS [Java Message Service] spec has gone through major enhancements in JMS 2.0, where we've introduced some of the concepts already available in the Servlet and EJB [Enterprise JavaBeans] specs. And the Expression Language specification has also been enhanced in version 3.0, which will benefit many other technologies within the platform.

The various specs that have gone through changes are JPA 2.1 [Java Persistence API], Java Servlet 3.1, EJB 3.2, Bean Validation 1.1, and CDI [Contexts and Dependency Injection for the Java EE platform], which was added in Java EE 6 and was one of the most popular and widely used specs there.

Java Magazine: How will Java EE 7 provide developer simplification while also offering richer application possibilities?

Gaur: We've particularly focused on simplification in terms of introducing the concept of profiles. We've heard many times that the platform has been growing into a monolithic bundle that was sometimes difficult for very specific, targeted usages. And we took that very seriously. So we invested heavily in the Java EE 6 platform, where we introduced the Web Profile, a runtime stack of standard APIs specifically targeted to Web application development. And that profile has allowed us to put in place a basic framework that we can use toward defining future profiles. Developer simplification also occurs by providing more defaults and by using CDI, which reduces the use of XML coding.

We've seen great demand for the new specs that we've added in Java EE 7. People were already using technologies such as WebSocket and JSON, but prior to Java EE 7, there were no standard APIs. Now, developers no longer need to package their own JSON libraries in the applications. The

And, as I indicated earlier, the JMS 2.0 spec has been revised and simplified in a variety of ways that had been requested by the community. JMS 2.0 will make greater use of annotations,

Gaur: While we've added many new features to Java EE 7, we have also made certain APIs optional. So the

Gaur: The Web Profile was introduced in Java EE 6 and became very popular, because it offered a subset of the full platform, providing standard APIs that are specifically targeted to meet the

helped iron out issues long before the platform was finalized.

Java Magazine: What features are now planned for Java EE 8, and what are the target dates?

Gaur: After the release of Java EE 7, Oracle and other vendors will begin working on Java EE 8. The focus of the release will be a standards-based cloud programming model—deferred from Java EE 7—in which we will add support for multi-tenancy and elasticity.

to have new JSRs, such as JCache and JSON-B [JSON Binding], finalized well before Java EE 8. So there will be incremental progress in the platform, where our customers will be able to see and experiment with those new APIs before Java EE 8 is ultimately released.

In terms of a formal release date for Java EE 8, the community will help define the scope and the features of the release, and that will ultimately determine the dates. The Expert Groups will play a major role in coming up with a final feature set and the release dates.

Java Magazine: At JavaOne 2012, Hasan Rizvi pointed out that the ongoing success of Java is based on a triad of technology innovation, community participation, and Oracle's stewardship. Do you have any thoughts on further enhancing the partnership between

Gaur talks with team members Rajiv Mordani (left) and Nazrul Islam at Oracle's Santa Clara, California, offices.

Java Magazine: How can developers access Java EE 7?

LISTENING TO THE COMMUNITY
We've added more APIs to the platform, but most of the additions have been based on community requests and what was needed to solve the issues we've seen for developing enterprise applications.

Gaur: As with Java EE 5 and Java EE 6, the Reference Implementation of Java EE 7 is derived from Project GlassFish.

GlassFish 4.0 will be available for download in two different flavors. The first distribution contains support for all the APIs in Java EE 7, while the second contains a subset of APIs defined by the Java EE 7 Web Profile specification. So developers will have a choice—they can start with the SDK bundle that contains the open source bits of GlassFish 4.0, or they can download the GlassFish bits separately from Java.net. [</article>](#)

Steve Meloan is a former C/UNIX software developer who has covered the Web and the internet for such publications as *Wired*, *Rolling Stone*, *Playboy*, *SF Weekly*, and the *San Francisco Examiner*. He recently published a science-adventure novel, *The Shroud*, and regularly contributes to *The Huffington Post*.

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