**Basics : JavaSE - JDK1.6.x**

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### Web Services

All developers get first-class support for writing XML web service client applications. No messing with the plumbing: You can expose your APIs as .NET interoperable web services with a simple annotation. Not your style? Want to handle the XML directly? Knock yourself out: Java SE 6 adds new parsing and XML to Java object-mapping APIs, previously only available in Java EE platform implementations or the Java Web Services Pack.

### Scripting

You can now mix in JavaScript technology source code, useful for prototyping. Also useful when you have teams with a variety of skill sets. More advanced developers can plug in their own scripting engines and mix their favorite scripting language in with Java code as they see fit.

### Database

For a great out-of-the-box development experience with database applications, the Java SE 6 development kit – though not the Java Runtime Environment (JRE) – co-bundles the all-Java JDBC database, Java DB based on Apache Derby. No more need to find and configure your own JDBC database when developing a database application! Developers will also get the updated JDBC 4.0, a well-used API with many important improvements, such as special support for XML as an SQL datatype and better integration of Binary Large OBjects (BLOBs) and Character Large OBjects (CLOBs) into the APIs.

### More Desktop APIs

Much has been said about this spoonful of sugar (to go with the Desktop team's cake), so we will only skim a little. GUI developers get a large number of new tricks to play like the ever popular yet newly incorporated SwingWorker utility to help you with threading in GUI apps, JTable sorting and filtering, and a new facility for quick splash screens to quiet impatient users.

### Monitoring and Management

The really big deal here is that you don't need do anything special to the startup to be able to attach on demand with any of the monitoring and management tools in the Java SE platform. Java SE 6 adds yet more diagnostic information, and we co-bundled the infamous memory-heap analysis tool Jhat for forensic explorations of those core dumps.

### Compiler Access

Really aimed at people who create tools for Java development and for frameworks like JavaServer Pages (JSP) or Personal Home Page construction kit (PHP) engines that need to generate a bunch of classes on demand, the compiler API opens up programmatic access to javac for in-process compilation of dynamically generated Java code. The compiler API is not directly intended for the everyday developer, but for those of you deafened by your screaming inner geek, roll up your sleeves and give it a try. And the rest of us will happily benefit from the tools and the improved Java frameworks that use this.

### Pluggable Annotations

It is becoming a running joke in Java technology circles, at least some that contain us, that for every wished-for feature missing in Java technology, there's a budding annotation that will solve the problem. Joke no more, because Java tool and framework vendors can put a different smile on your face, defining their own annotations and have core support for plugging in and executing the processors that do the heavy lifting that can make custom annotations so cool.

### Desktop Deployment

Those of you deploying applications to the desktop will soon discover that it's a tale of a large number of smaller changes that add up to a big difference to existing applications: better platform look-and-feel in Swing technology, LCD text rendering, and snappier GUI performance overall. Java applications can integrate better with the native platform with things like new access to the platform's System Tray and Start menu. At long last, Java SE 6 unifies the Java Plug-in technology and Java WebStart engines, which just makes sense. Installation of the Java WebStart application got a much needed makeover.

### Security

You can have all the security features you like in the platform — and this release adds a few more, like the XML-Digital Signature (XML-DSIG) APIs for creating and manipulating digital signatures — but if you don't have well supported security administrators, your security may be at risk. So Java SE 6 has simplified the job of its security administrators by providing various new ways to access platform-native security services, such as native Public Key Infrastructure (PKI) and cryptographic services on Microsoft Windows for secure authentication and communication, Java Generic Security Services (Java GSS) and Kerberos services for authentication, and access to LDAP servers for authenticating users.

### The -lities: Quality, Compatibility, Stability

You probably knew that Sun has done regular feature releases of the Java SE platform over the last 10 years. So we certainly feel like we've built up some expertise in this area, such as the ever growing 80,000 test cases and several million lines of code testing conformance (being just one aspect of our testing activity). You probably noticed that, unlike the last release, people have been downloading binary snapshots for the last 20 (not just 6) months. And what's more, they've been filing bugs. So, before we even got to beta, we'd fixed a number of quality and regression issues. Doesn't that add up to a better product? Oh, and by the way, performance is looking better than J2SE 5.0.