SETC Training Corporate Logo

Java Training: Performance Tuning & Advanced Diagnostics (JPTO, 4 jours)

Description

If you still believe that Java is slow, you need to take this course. The course Performance Tuning & Advanced Diagnostics (Java Training) cracks open the hood of the JVM to understand its internals. This will allow you to write blazingly fast Java code. Starting with Java profiling and performance tuning, the course explores the internals of Java together with techniques for the efficient use of the Java Class Library. The training includes Java best practices for text manipulation, input/output, collections, memory management, multi-threading. The course completes with an exploration of the performance implications of Java JEE applications.

Tarifs

- Tarification: $3,750/person
- Rabais de 10% lorsque vous inscrivez 3 personnes.

Plan de cours

The Java Environment

- The Java Runtime: Internal Architecture
- Packages and JAR Files
- Java and JEE
- JEE Architecture
- JEE Containers: The WebSphere JEE Server
- Troubleshooting and Diagnostic Tools
- SDLC: From Analysis to Deployment
- Eclipse Debugging

Performance Tuning in tha Java World

- What is Fast? What is Slow?
- Performance Tuning: The Root of all Evil?
- What is Performance Tuning?
- What should be Tuned?
- The Tuning Process

Java Diagnostic Tools

- Introduction to Diagnostics
- Tools Overview
- jinfo
- jmap
- jstack
- jconsole
- jps
- jstat

Advanced Tools

- HPROF
- The Heap Analysis Tool
- About Fatal Error Handling
- dbx
- jdb and Hung Processes
- Command Line Options

System Properties
Profiling Tools
Measurements and Timings
Garbage Colletion
Method Calls
Object Creation Profiling
Monitoring Memory Usage
Client-Server Communications
Tuning the JDK
Garbage Collection
Replacing JDK Classes
Faster Virtual Machines
Better Optimizing Compilers
Optimizing the Sun Compiler
Native Machine Code
Native Method Calls
Object Creation
Object Creation Statistics
Object Reuse
Avoiding Garbage Collection
Initialization
Early and Late Initialization
Working with Strings
Strings and Performance
String Resolution: Compile Time versus Runtime
String Conversions
String versus Character Arrays
String Comparison, Sorting and Searches
Working with Java Language Elements
Reference Types versus Primitives
About Casting and Conversion
Working with Functions and Parameters
About Exceptions and Exception Handling
About Looping
About switch
Input, Output and Logging
About Console Output
Optimizing IO Operations
Optimizing Logging
Optimizing Serialization
About Object Clustering and IO Counts
Threading
About Java Threads
Race Conditions
Deadlocks and Synchronization
Threads and Timing
Thread Pools
Load Balancing
Data Structures and Algorithms
About Java Collections

Hashtables and Hashmaps
Cached Access
Working with Strings
Search Trees
Generics
Distributed Computing
Tools of the Trade
Reducing Traffic
About Caching
About Batching
About Application Partitioning
Communication Optimization
Garbage Collection
Tuning Database Access
JEE Performance Tuning Overview
The JEE Architecture
WebSphere Specifics
Tools for Diagnosing Performance Problems in a JEE Application
Overview of JSP and Struts Tuning
Overview of EJB Tuning
Tuning Entity Beans
Tuning Session Beans
Tuning Message Driven Beans
About Hibernate and Performance
Performance Tuning Review
Checklists
JSE Checklist
JEE Checklist
Other Considerations