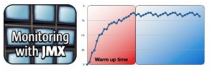
Java for Application Managers

Duration: 2 days Price: € 1499

Open Schedule



Java for Application Managers

Audience Course Java for Application Managers

The course Java for Application Managers is intended for persons responsible for the monitoring, management and troubleshooting of Java Applications and for other interested persons.

Prerequisites Course Java for Application Managers

General basic knowledge of computer systems and software development. Programming experience is an advantage in following this course.

Realization Training Java for Application Managers

In this hands-on course the theory is treated by means of presentation slides and is interchanged with exercises. Demos are used to clarify the theory. The course material is in English. The course times are from 9.30 up and to 16.30.

Certification Java for Application Managers

Participants receive an official certificate Java for Application Managers after successful completion of the course.

Content Course Java for Application Managers

In the course Java for Application Managers the foundations of the Java SE and EE platform, the Java language and the options to manage and monitor Java software are discussed.

Java Fundamentals

The participants become familiar with Java applications and their data types, the object oriented nature of Java, the packaging of Java applications, the principles of garbage collection and the Java thread model.

Logging

A key module in the course treats the various logging mechanisms in Java software and the configuration of logging.

Exception Handling

Also attention is paid to principles of exception handling in Java and how stack traces can be interpreted.

Java EE

The Java EE standard is discussed and attention is paid to Java EE Web Components like servlets and JSP's. In this respect the reference implementation for Web Components Tomcat is treated.

Java Management Extensions

The participants also become familiar with Java Management Extensions (JMX) as a standard and API for the (remote) management and monitoring of Java Applications. The principles of memory management in Java and the various options to configure garbage collection are discussed as well.

Performance Tuning

The final subject of the course is the performance monitoring and performance tuning of Java applications. Optional appendixes about Java Database Connectivity (JDBC) and the Java Messaging Service (JMS) are provided and will be discussed if this is the desire of the class.

Modules Course Java for Application Managers

Module 1 : Java Intro	Module 2 : log4j Logging	Module 3 : Stack Tracing
Java Platform	Logging in Java	Error Conditions
Java Editions	log4j characteristics	Exceptions in Java
Java Libraries	log4j Basic Concepts	Exception Handling
Types of Java Applications	java.util Logging	Generated Stack Traces
Compiling and Running Programs	Logging API	Finally Clause
Standalone Application structure	Simple Logging	Exception information
Java Variables	Logging Configuration	Predefined Exceptions
Primitive Data Types	log4j properties	Multiple catch clauses
Classes and Objects	Configuration Options	ArrayIndexOutOfBoundsException
Inheritance	Loggers	NullPointerExceptions
Casting Objects	Logger Output Hierarchy	ClassCastExceptions
Packages	Inheriting Logging Levels	NumberFormat Exceptions
Packaging in JAR files	Logger Names	Creating Exception Classes
Garbage Collection	Log Levels	Throwing Exceptions
Java Thread Model	Appenders	Chained Exceptions
Thread Characteristics	Layouts	Assertions
Module 4 : Java EE	**Module 5 : Java Management Extensions**	**Module 6 : Memory Management**
Java EE Standard	What is JMX?	JVM's Internal Architecture
Java EE Servers	JMX Goal	Heap and Stack
Servlets and JSP's	Where is JMX used	Java Memory Management
Translation and Request Time	Managed Beans	Object Lifecycle
EJB Components	MBean flavors	Strong Object References
Java EE API's	JMX Architecture	Invisible and Unreachable
Apache Tomcat	Java SE Mbeans	Circular References
Tomcat Directories	Naming MBeans	Tuning Garbage Collection
Configuration Files	MBean Server	Generational GC
Web Application Structure	Registering Mbeans	Heap Space Organization
Deployment Descriptor	Manipulating MBeans	Tuning Garbage Collection
Sessions	Notifications	GC Algorithms
Tomcat Logging	Notification Listener	Finalization
Module 7 : Java Performance Tuning	**Optional Appendix : JDBC**	**Optional Appendix : JMS**
Influences on Performance	Java Database Connectivity (JDBC)	What is JMS?
JIT Compilation	JDBC Overall Architecture	JMS Terminology
Hotspot JVM	JDBC Operation	JMS Programming Model
Monitoring, Profiling, Tuning	JDBC Drivers	Message Consumption
String Handling	Database URL's	Messaging Domains
Buffered and New I/O	ClassNotFoundException	Queues
Synchronization	Using Tomcat and JDBC	Topics
Collections	Configuring JNDI JDBC Resources	Message Types
Serialization	Context.xml in META-INF	Message Headers
Lazy Loading	JDBC in Web Applications	Durable Subscriptions

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