

JBoss AS 7 / EAP 6 Performance Tuning (2 days)

Available on site

Available on line

Available classroom

Speed up your applications with JBoss AS 7 / EAP 6 tuning course!

Overview

JBoss AS 7 / EAP 6.1 tuning course is a two-day hands-on training that will teach you how to deliver fast applications on the JBoss Application Server 7 platform by teaching you the correct performance tuning methodology, how to gather Key Performance Indicators and how to detect and correct bottlenecks and common issues. You will learn how to optimize hardware resources, meeting your application requirements with less expenditure.

JBoss AS 7 has been released in the last quarter of 2011 and is now widely used in the IT Industry thanks to its exceptionally lightweight kernel, unparalleled speed and its compliance to Java EE 6 standards. We have been the first team to provide Enterprise training for this product and, with over 50 training classes over the world, we can offer our experience either at your premises or by means of on-line trainings. If you are an individual or have limited numbers of participants, you can consider joining the available classrooms in your favorite Western Europe locations.

Audience & Prerequisites

This course is engineered for Java architects who design and configure Enterprise applications. It is great for Java developers who want to get into the inner details of the application server and of the correct tuning methodology. Prior knowledge of Java programming is required to understand some of the core tuning strategies.

What will you learn from in this course

The performance of Java Enterprise applications is the sum of a set of components including the Java Virtual Machine configuration, the application server configuration (in our case, JBoss AS), the application code itself, and ultimately the operating system. This book will show you how to apply the correct tuning methodology and use the tuning tools that will help you to monitor and address any performance issues.

By looking more closely at the Java Virtual Machine, you will get a deeper understanding of what the available options are for your applications, and how their performance will be affected. Learn about thread pool tuning, EJB tuning, and JMS tuning, which are crucial parts of enterprise applications.

The persistence layer and the JBoss Clustering service are two of the most crucial elements which need to be configured correctly in order to run a fast application. These aspects are covered in detail during the course.

Finally, Web server tuning is the last (but not least) topic covered, which will teach you how to configure and develop web applications that get the most out of the embedded Tomcat web server. Here is the detailed list of topics that will be covered in the course:

- ➔ Overview of the available instruments for tuning. Available free tools and best vendor alternatives
- ➔ Tuning the application server's Virtual Machine.
- ➔ Understanding the workflow of the AS 7 request pipeline.
- ➔ Tuning database Connectivity
- ➔ Tuning specialized modules of your configuration (JMS subsystem, Logging, EJB and Web services)
- ➔ Configuring the application server pools to meet application requests
- ➔ Network and hardware settings that affect your applications
- ➔ Configuring your clusters for extreme performance

On-site Training

Mastertheboss.com organizes training courses as per requirement of the client at the client's premises subject to minimum and maximum of 5 and 25 participants respectively. Training courses can be delivered all around Europe and in many countries of North America, Middle East, Africa, Asia Pacific and Latin America. The fee for such events will be decided on a case to case basis mostly depending on the location of the customer. Contact us for a quote.

Classroom Training

Mastertheboss.com organizes classroom training in the most accessible Western Europe locations such as London, Paris, Rome or Amsterdam. Classroom events will be available since April 2014 on

EventBrite (<https://www.eventbrite.com>) and will be advertised on <http://www.mastertheboss.com>

Online Training

This is a flexible learning solution so that you can study any time, any place. Online courses help you to develop and improve your skills at your own pace. The price of the online training varies according to the number of students.

This is the price for our JBoss AS 7 /EAP 6 remote training:

Course Attendees	Price in Euros (for each student)
2-4	300
5-10	250
11-15	200
16-20	150

Course material

Every course includes a set of materials that will be available to all participants. A course material includes:

- Software required to run the course
- Pre/course assistance to meet your training goals
- Post/course evaluation by means of questionnaires
- Online assistance for general queries about the course topics for the following 6 months

Course Outline

Performance tuning basics

- Understanding the correct tuning methodology
- How to measure performance: common indicators

Installing the best tools for tuning

- How to install and configure the instruments for tuning, including VisualVM, JConsole, JMeter, App Dynamics suite
- Gathering and examining data using the installed tools

Tuning the Java Virtual Machine

- Analysis of the JVM heap and garbage collector parameters, which are used to start up the application server.
- Java 2SE 1.7 garbage collector enhancements

Lifecycle of a JBoss AS request

- Understanding the flow of a RMI-HTTP-JMS request
- Detecting the bottlenecks in requests

Tuning Database Connectivity

- Learning the principles of good database design
- Tuning Connection Pool and Prepared Statement Cache
- Core concepts of Java Persistence API with special focus on JBoss's implementation (Hibernate).
- Second Level Cache (2LC) tuning.

Tuning middleware services

- Tuning the Logging subsystem for best performance
- Tuning the EJB container pool and cache for optimal performance
- Tuning parameters for JMS endpoints
- Tuning JMS data persistence journal

JBoss cluster modules tuning

- Tuning JGroups transport
- Choosing the Infinispan caching configuration which works best for your applications
- Optimizing data replication and distribution in a cluster

Web server tuning

- Tuning the embedded Web server
- Tuning JSF based applications

Tuning clustering

- Learning the core clustering components
- Using the Infinispan Cache manager to cluster your session data
- Managing Load Balancing with mod_cluster and mod_jk
- Clustering the Messaging subsystem

Operating systems tuning tools

- Unix/Linux tuning tools (vmstat, mpstat, iostat, netstat)
- Network tuning
- Configuring buffers to increase performance