

Administering the JBoss® 7/EAP 6 Application Server

Duration: 4 Days

Price: \$2095

Discounts: We offer multiple discount options. [Click here](#) for more info.

Delivery Options: Attend face-to-face in the classroom or [remote-live attendance](#).

Students Will Learn

- JBoss AS 7 structure and architecture
- Installing and configuring AS 7
- Structure of both standalone installations and domain-based installations
- Modular classloading characteristics of AS 7 and of deployments in the server and how this differs from JBoss 5
- Management model and how to use it via the CLI (Command Line Interface) and via scripting
- Using the Web management console for managing AS 7
- XML configuration files, their structure and their usage
- Configuring and managing the important subsystems, including the Web, Messaging and Logging
- Configuring and managing the Web container, including the HTTP, HTTPS and AJP connectors
- Configuring Socket Groups
- Configuring and using security in AS 7
- Assembling, deploying, and managing Java EE application components such as EJB, Servlets and JMS
- Configuring resources such as datasources and messaging destinations (topics/queues)
- Configuring runtime security for AS 7 services and server-side application components
- Optimizing/tuning JBoss performance
- Migrating applications from JBoss AS 5 to JBoss AS 7
- Configuring and managing AS 7 Domains
- Configuring and managing AS 7 Clusters, including using Apache `httpd` and `mod_cluster`

Course Description

The JBoss Application Server is one of the most popular open source Java application servers on the market. The latest release, JBoss AS 7, is a major release that includes many improvements and changes from the widely adopted JBoss 5 platform. The new release has a completely new structure and management model that is covered in depth in the course. It is a certified implementation of the Java EE 6 Web profile, and contains a review release of the Java EE 6 Full profile.

This course covers all the important administrative tasks that are required to administer this new version of JBoss AS. It starts with installation, architecture, and basic configuration and monitoring. It covers management using the new and expanded Web console, as well as the structure of the management

model and how to use it via the admin CLI (Command Line Interface) and via scripting. It includes coverage of using the management tools to deploy and configure Web and Enterprise applications, datasources, JMS resources (topics, queues), as well as covering the configuration of the major subsystems, including the Web (HTTP), Web Services, Messaging (including the new HornetQ based provider), Logging, and Security subsystems. You will also learn the structure and contents of the underlying XML configuration files that reflect the actual configuration.

The course also covers the use of JBoss in standalone mode (consistent with previous releases of JBoss), and explains the new domain model for managing multiple JBoss nodes from a single management point. The last part of the course delves into the details of clustering JBoss for high availability and load balancing, as well as going into the details of setting up and managing a JBoss domain with the new domain model.

The course is focused and informative, and created by experts in the JBoss AS. It will demystify the many new capabilities and structure of JBoss 7, and leave you well prepared to manage JBoss AS installations. It also points out many of the issues that you may run into while migrating applications from JBoss 5.

Course Prerequisites

Basic computer knowledge, such as the ability to perform routine tasks such as starting processes and manipulating files.

Course Overview

JBoss AS 7 Introduction and Installation

- Java EE Overview and Architecture
- JBoss AS 7 Background and Overview
- Installing and Starting AS 7
- Working with AS 7
- Documentation Overview

AS 7 Management and Logging

- Using the CLI (Command Line Interface)
- Management Model
- Working with Management Resources
- Common Management Tasks
- The Web Admin Console
- Other Management Capabilities
- Server Logging

Application Deployment

- Java EE Deployment Archives (Jars, Wars, Ears, Sars)
- Deploying with the CLI and Admin Console
- Auto-Deployment in AS 7 (Marker Files, Expanded, Archived)
- Deployment Dependencies

AS 7 Structure and Architecture

- AS 7 Directory and File Structure
- JBoss Modules
- Server Architecture and Configuration

Interfaces and Socket Bindings / Port Configuration

- Interface Configuration
- Socket Bindings and Socket Binding Groups
- Setting the Bind Address

Subsystem Configuration

- Thread Pools
- Web Container
 - Web Container Overview
 - Web Container Configuration in `>standalone.xml`
 - Querying Container Configuration via the CLI
 - Configuring the HTTP, HTTPS, and AJP Connectors (in

>standalone.xml, and via the CLI)

- JNDI and Naming Overview
- JBoss Naming Overview and Configuration
- JNDI Client Configuration
- DataSource and JCA Overview
- DataSource Configuration (XML, CLI, and Admin Console)
- The H2 Database and ExampleDS
- EJB Subsystem

Messaging in AS 7

- JMS (Java Message Service) Overview
- HornetQ Overview
- Configuring Connection Factories (XML, CLI, and Admin Console)
- Configuring Queues and Topics (XML, CLI, and Admin Console)
- Dead Letter and Redelivery
- Messaging Security

Security

- Java EE Security Overview
 - Authentication, Authorization, Identity
 - Security Roles
 - Web App Security Constraints
- AS 7 Security Architecture (PicketBox Security)
- AS 7 Security Domains
- AS 7 Login Modules
- Using PropertiesUsersLoginModule
- Using DatabaseServerLoginModule
- Role Mapping Configuration
- Fine Grained Authorization Policies
- Other Login Modules (LDAP, etc)
- Securing the Management Interfaces
- Enabling SSL
 - SSL Overview
 - Setting Up HTTPS, keytool, configuration
 - Other Uses of SSL

Clustering in AS 7

- Clustering Overview
- Clustering Configuration, JGroups Overview
- Troubleshooting Multicast Issues
- Managing Clusters
- Clustered Services (HA-JNDI/High Availability JNDI, EJB, Messaging)
- Load Balancers and Clustered Http
- Load Balancing with Apache httpd and mod_cluster
- Installing and Configuring mod_cluster
- Load Balancing Between Nodes
- Managing with the CLI

AS 7 Domain Mode

- Domain Mode Overview
- domain.xml and host.xml
- Domain Controllers, Host Controllers, Server Groups, Servers
- Domain Configuration - domain.xml, Controller, and Server Configuration
- Domain Management

Tuning JBoss AS 7

- JBoss AS and the Java Virtual Machine (JVM)
 - Tuning The Heap (Memory Usage)
 - Garbage Collection (GC) Overview and Generational GC
 - Tuning GC

Migration

- Configuration and Management Differences
- Classloading and Modules
- Database / Datasource
- Security
- Messaging

Tuning the Web Tier (Tomcat)

- Connector Tuning
- Other Optimizations
- Database Connection Tuning
- Messaging Tuning
- Other JBoss AS Optimizations
- Creating Minimal Configurations

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