

JBoss Administration with Operations Network, RH-336

The JBoss Administration with Operations Network training is targeted at systems administrators and JBoss subscription customers who wish to become proficient in administering JBoss application server instances. This training enables JBoss, Inc. customers to take full advantage of administration, monitoring, alerting, and software update capabilities of JBoss Operations Network. This is a 4-day class with 60% theory and 40% hands-on practical exercises.

This training focuses on installation and deployment issues with the JBoss application server, how to configure the server for production use, the main features of JBoss Operations Network and how to use the graphical user interface and command line tools to administer and monitor JEMS deployments across the enterprise. Students will learn how to deploy applications, how to configure the services for production usage, how to monitor deployed services with JBoss ON, how to set up alerts with JBoss ON, and how to secure the services running on JBoss application server. Finally, you will learn how to successfully build clustered JBoss deployments for high availability and redundancy.

This training does not require previous Java or J2EE knowledge. Familiarity with XML and related tools and technologies is recommended. JBoss Operations Network software and tools are only available to JBoss Subscription customers.

Course Duration: This is a 4-day course.

Course Format: The format is 60% theory and 40% hands-on lab exercises.

Course Prerequisites

Basic working knowledge of the Windows or Linux (Unix-based) operating system. The student must have experience with the following:

- Access to JBoss Subscription components
- Creating directories, files and modifying access rights to the file store
- Installing a JDK
- Configuring environment variables, such as JAVA_HOME, for an operating system
- Launching Java applications and executing an OS-dependent script that launches a Java application.
- Creating and expanding a Java archive file (the jar utility)

No prior knowledge of J2EE, JBoss Application Server or JBoss Operations Network is required. Some familiarity with supporting Java applications with XML configurations, however, is strongly recommended.



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Course Modules

1. **State of the Union.** Introduction to Professional Open Source methodology and to JBoss Inc.'s role in leading the innovation of Open Source middleware development. Short introduction to JBoss Inc. service offerings, current product roadmaps, JBoss Enterprise Middleware System (JEMS) and the road ahead.
2. **JBoss Application Server Architecture.** This module gives you an overview into application servers – why are application servers used as part of the enterprise infrastructure, what a typical server side application might look like, and what are the points of interest for an administrator to tune and configure in a typical application server scenario. We define J2EE, Servlets and EJBs, JCA, and JBoss Microkernel. A good introduction for systems administrators who have no prior experience with application servers.
3. **Installing JBoss Application Server.** We walk you through a basic JBoss installation scenario. How to find the correct JBoss distribution for your needs, what considerations need to be taken into account when choosing a Java virtual machine for your JBoss application server, operating system and hardware considerations, and setting up the environment for the JBoss application server to run. We will familiarize you with the default JBoss application server directory structure in order for you to quickly find the correct locations for different service configuration files, log directories, library directories and so on. This chapter will help you get up and running with a new JBoss installation quickly.
4. **JBoss Basic Deployments.** In this module we start you off with simple application deployments to JBoss application server. We introduce the different J2EE and JBoss package types, different deployment options, basic hot-deployment, redeployment and undeployment. This section familiarizes you with how applications and services are added and removed to and from the application server, and where different package configuration files are located.
5. **Installation of JBoss ON.** This module introduces the student to JBoss Operations Network. Students will learn how JBoss ON enables administration and monitoring of several JEMS deployments across an enterprise and how deployed services across multiple servers and nodes can be managed from a single interface. JBoss ON architecture overview is covered in this section along with installation instructions and troubleshooting.
6. **JBoss ON User Interface.** Introduction to both the graphical, web-based user interface of JBoss ON, and the command-line tools to configure and monitor JEMS product instances and deployed services through via JBoss Operations Network.
7. **Monitoring with JBoss ON.** In this section the students are familiarized with detailed instructions how to monitor specific server products via JBoss Operations Network. We will cover in detail how to monitor and manage JBoss AS instances, stand-alone Tomcat server instances and Apache HTTPD server instances.
8. **JBoss Production Deployments.** This chapter helps you prepare your JBoss installation further for production usage. We will see how to configure production grade databases as the backend for your

JBoss instance and how to deal with several deployment scenarios. You will learn how to order JBoss service deployments, how to deploy applications in a JBoss cluster, and how to configure multiple instances of JBoss application server to run on a single physical machine.

- 9. Introduction to JBoss and J2EE Security Concepts.** This chapter explains the common models how security is implemented in J2EE applications and JBoss application server. We introduce the basic concepts, the relevant configuration files to create security domains, and the tools to create security certificates for secure socket communication. Essential information for anyone to get started on security related topics on JBoss application server.
- 10. Securing JBoss Services.** In this chapter we look deeper into the JBoss service configuration to ensure your JBoss server instance is running securely. We see how to enable HTTPS access to the web tier, how to authenticate access to data sources from within the application server, how to encrypt, authenticate and authorize messaging and EJB communication across public networks. Critical information for any administrator before production deployment of JBoss application server.
- 11. Middleware Clustering.** This chapter introduces you to the concepts and technologies used in the JBoss application server to achieve load-balancing and fail-over functionality. We will see how JBoss provides high-availability features at the different layers of the middleware stack and what the relevant system administration configuration options are. We will also look at the cluster topologies including native web server nodes and mod_jk connectivity to JBoss application server instances.