ProTech Professional Technical Services, Inc.

Advanced JBoss EAP / WildFly Server Administration

Course Summary

Description

This course covers advanced topics in administering the JBoss family of application servers. It provides administrators who already have some experience in working with JBoss servers the information they need to successfully manage them in production environments. Available forJBoss EAP 6.2/6.4, EAP 7.1, EAP 7.2 (with advance notice) and WildFly releases from WF8-14.

The course starts with a quick refresher on server structure, architecture, and usage. It then moves on to covering the management tools in depth, with special focus on the CLI - its management structure, how to use it, and how to write scripts for it. It includes coverage of managing the ActiveMQ Artemis messaging subsystem (formerly HornetQ), RBAC (Role Based Access Control), and in-depth coverage of clustering that includes usage and configuration of Infinispan for caching in a cluster. It also includes in-depth coverage of creating and managing domains.

The course is hands-on, with labs for every important topic covered. It provides a wealth of hard-to-find information on managing JBoss servers, and is created by experts in the JBoss family of servers.

Objectives

By the end of the course, students will be able to:

- Review the server structure, architecture, and usage
- Gain in-depth knowledge of working with the CLI, it's management model, and the operations it makes available
- Deploy applications with the CLI and with auto-deployment
- Configure network interfaces and socket bindings
- Understand application dependencies, including implicit and automatic dependencies, and how to configure them
- Work with and configure the ActiveMQ Artemis (formerly HornetQ) messaging subsystem via the XML config and the CLI,
- including address settings configuration, producer flow control, and security settings
- Learn about and use RBAC (Role Based Access Control)
- Mask sensitive strings (e.g. database passwords) with the Vault mechanism
- Set up, work with, and manage server clusters
- Configure, use, and customize the Infinispan subsystem for replication (HTTP and SFSB) and caching, including as a second-level Hibernate cache
- Set up and work with server domains
- Manage domains and application deployments to a domain with the CLI

Topics

- JBoss Server - A Quick Overview
- Architecture Review
- Management Tools
- Interface and Socket Bindings
- Application Deployment

- Messaging
- Security
- Clustering and Replication with Infinispan
- Configuring and Managing Domains

Audience

Suitable for developers or administrators that need to use or manage JBoss/WildFly servers.

Prerequisite

Some experience with Web/Application Servers and Databases is required for this course.

Duration

Four Days

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Course Outline

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I. *JBoss Server - A Quick Overview*
   A. JBoss Server Family - JBoss AS, EAP, WildFly
   B. Server structure and layout
   C. Starting/Stopping

II. *Architecture Review*
   A. Modular Classloading / JBoss Modules, Application Dependencies
   B. Profiles and Subsystems
   C. Exploring the XML Config Schema Files

III. *Management Tools*
   A. CLI Overview/Review, Management Tree Structure, Addressing, Operations
   B. CLI Command Files and Scripting
   C. Using Properties in Command Files
   D. Exploring the Management Model
   E. Management (Web) Console Review

IV. *Interface and Socket Bindings*
   A. Review of Interface/Socket Binding Configuration
   B. Working with Socket Bindings and Socket Binding Groups
   C. Bind Addresses and Port Offsets

V. *Application Deployment*
   A. CLI Deployment
   B. Auto Deployment Review and Management with the CLI
   C. Deployment Classloading
   D. Classloading Precedence - Implicit, Automatic, Explicit
   E. Controlling Classloading - jboss-deployment-structure.xml

VI. *Messaging*
   A. ActiveMQ Artemis Overview and Configuration
   B. Configuring Destinations
   C. Configuration of Address Setting (for Dead Letter, Redelivery, and Security
   D. Paging Configuration and Producer Flow Control

   E. Management via the CLI

VII. *Security*
   A. Security Review - Security Realms and Security Domains
   B. Role Based Access Control (RBAC)
   C. Encryption Overview
   D. Masking Sensitive Strings Using the Vault

VIII. *Clustering and Replication with Infinispan*
   A. Clustering Review / Setting up a Cluster
   B. Infinispan and Replication Overview
   C. Infinispan Subsystem Configuration
   D. Customizing Replication
   E. Infinispan and JPA - Using Infinispan as a second level cache

IX. *Configuring and Managing Domains*
   A. Domain Mode Review - Structure and Configuration
   B. Managing Controllers and Servers (Console and CLI)
   C. Managing Deployments
   D. Advanced Topics
   E. Operating a Domain without a DC
   F. Handling Controller Restarts after Config Changes
   G. Running Controllers in ADMIN_ONLY Mode