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# Administering the WildFly 13/14 and JBoss® EAP 7.2 Application Servers

## Referencia

JJD 115v14

## Duración (horas)

24

## Última actualización

28 octubre 2019

## Modalidades

Presencial, a medida

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## Introducción

This course provides hands-on and in-depth coverage on configuring and managing WildFly 13/14 and JBoss EAP 7.2 servers. It incorporates new server features and all material is current with the new releases. WildFly 13 provides full Java EE 8 support and a new Management console. EAP 7.2 is the supported release of the WildFly 13 server. WildFly 14 adds Java EE 8 certification.

The course is very hands-on, with brief hands-on mini labs throughout the material which illustrate a topic and help with retention. It also includes numerous larger hands-on labs to dig deeply into a topic.

## Objetivos

After completing this course, students will be able to:

- Understand WildFly architecture and JEE server structure
- Install and configure the server
- Understand the structure of both standalone installations and domain-based installations
- Understand the management model and the XML configuration files
- Use the management tools including direct editing of XML, using the CLI (Command Line Interface), scripting, and the Web management console (new design in WF 13)
- Understand deployment types and packaging (JARS, WARS, EARS ...), and deploy applications
- Understand modular classloading in WildFly Server, and how it affects application deployment and dependencies
- Configure and monitor the Web container
- Configure important services, including datasources, JNDI, EJB, JMS messaging, and logging
- Understand and configure WildFly security using the classic (default) security configuration
- Be familiar with the new Elytron security model
- Use monitoring tools, and identify areas for tuning
- Understand and use clustering with WildFly, including including load balancing with the built-in front-end load balancer and Apache httpd and mod\_cluster
- Understand and administer a domain of WildFly servers
- Be Familiar with using the server's Java EE 8 capabilities (different in WF 13/14)

## Perfil de los alumnos

**Barcelona** Carrer Almogàvers 123, 08018 Barcelona / T. +34 933 041 720 / F. +34 933 041 722

**Madrid** Plaza de Carlos Trias Bertrán 7, 1ª Planta (Edificio Sollube), 28020 Madrid / T. +34 914 427 703

IT professionals responsible of administration and deployment of J2EE applications.

## Requisitos previos

Knowledge of J2EE networking, domains, security and architecture.

## Metodología

Active and participatory course through demonstrations, practical exercises and clinical analysis of users of all the theoretical topics taught by the instructor in order to deal with real cases of the related product. The trainer will also use different dynamics that allow group work in the classroom as challenges, evaluation exams and real cases to prepare for the associated Microsoft certification exam, if there is one.

## Certificación

Continual evaluation based on group and individual activities. The faculty will give continuous feedback and at the end of the activities to each participant.

During the course the participants will complete an evaluation test that must be passed with more than 75%. They will have one hour available for its realization.

Conditions of additional certification services are subject to the terms of the license owner or of the authorized certification authority.

## Profesorado

Our team of highly qualified instructors combine training activities with the development of their profession as experts in the field of IT. Professionals certified by the major manufacturers capable of transferring an enjoyable and easy to understand technical concepts more abstract.

## Documentación

A copy of the Netmind documentation in digital format.

## Contenidos

### 1. WildFly Introduction and Installation

- Java EE Overview and Architecture
- WildFly Server Background and Overview
- Installing and Starting WildFly Server
- Server Suspend Mode
- Working with WildFly Server
- Documentation Overview

### 2. Structure and Architecture

- WildFly Server Directory and File Structure
- Server Structure and Configuration

- Server Config File – Extensions, Subsystems, Schemas, Paths
- Interfaces and Socket Bindings

### 3. Configuration and Management – Part 1

- Overview of Management Options
- Understanding the Management Model and the XML Config Files
- Using the CLI (Command Line Interface)
  - Overview
  - Navigating the Management Tree
  - Working with Operations and Commands
  - Creating / Deleting Nodes
- Using the Management Console (new design in WF 13)

### 4. Application Deployment

- Java EE 8 Support
- Java EE Deployment Archives (JARs, WARs, EARs)
- Deployment / Undeployment with the CLI and Management Console
- Deployment Scanner – Auto-Deployment in WildFly Server
- Marker Files and Auto-deployment

### 5. Configuration and Management – Part 2

- JBoss Modules and Modular Classloading
- Defining a Module
- Working with Dependencies
- Server Logging
- Handlers, Log Levels, Formatters and Pattern Strings
- Configuring Application Logging
- Configuring Audit Logging

### 6. Subsystem Configuration

- JNDI and Naming Overview
- Naming Subsystem Overview and Configuration
- Datasource and JCA Overview
- Datasource and Driver Configuration (XML, CLI, and Admin Console)
- Datasource Monitoring, and Tuning
- Thread Pools – History and Current Configuration
- Undertow Web Container
  - Undertow Overview
  - Undertow Configuration – listeners and workers (XML and CLI)
  - Host and Filter Configuration
  - HTTP/2 Support
- The H2 Database and ExampleDS
- EJB Container / Subsystem (SLSB Pooling, MDB, SFSB Cache, Monitoring)
- Other Subsystems in Brief (remoting, ee, infinispn)
- WF13 Only: Using Java EE 8

### 7. Messaging in WildFly Server

- Messaging and JMS (Java Message Service) Overview

- HornetQ Overview
- Messaging Subsystem Configuration (XML, CLI, and Admin Console)
  - General Configuration
  - Connectors and Acceptors
  - Configuring Connection Factories
  - Configuring Queues and Topics (XML, CLI, and Admin Console)
  - Monitoring and Managing
  - Address and Security Settings

## 8. Security

- WildFly / JEE Security Overview
  - General Requirements
  - “Legacy” Security and Elytron Security
  - Security Domains and Realms
  - RBAC
- Securing the Management Interfaces
- Application Security
  - Java EE Security Overview
  - Authentication, Authorization, Identity
  - Linking Applications to a Security Domain
  - Security Info Caching
- RBAC – Role Based Access Control
- Resource Security
  - Configuring TLS / SSL / HTTPS
  - Credential Store – Protecting Sensitive Strings
- [Optional] Overview of Elytron Security Subsystem
  - Overview and Architecture
  - Configuration Overview
  - Usage Overview

## 9. Application Deployment

- Clustering Overview
- WildFly Server Cluster Overview (including HA Singleton)
- Cluster Configuration – JGroups
- Architectures – Load Balancers and Client Interceptors (Proxies)
- HTTP Load Balancing
  - Built-in load balancer
  - Apache httpd load balancer
  - mod\_cluster Overview
  - conf Configuration
  - Installation Choices
  - Modcluster Subsystem Configuration
  - Management

## 10. WildFly Server Domain Mode

- Domain Mode Overview
- Domain Topology – Domain Controllers, Host Controllers, Server Groups
- xml – Domain Configuration, Server Groups
- xml – Domain Controller
- xml – Host Controllers, Processes and Server Instances

- Management – Management Console and CLI
- Deployment / Undeployment – via Management Console and CLI

## 11. Tuning and Monitoring

- Enabling Statistics
- Web Container (Undertow) Tuning – Statistics, Worker Threads
- EJB Tuning – Bean Instances, Thread Pools
- Database Access / Datasources
- Clustering Communication and Replication
- Monitoring Runtime Data
- Java Virtual Machine (JVM) Awareness

## Acreditación

Se emitirá Certificado de Asistencia sólo a los alumnos con una asistencia superior al 75% y Diploma aprovechamiento si superan también la prueba de evaluación.