Product Administration

Labkit

Product Administration - Developer Fundamentals

Content

1. Installing and Running WSO2 Products

1.1. Training Objective

Verify that the products required for running this tutorial are installed and configured. and deploy and test the data. The participants are expected to be connected to the internet throughout in order to successfully complete the lab exercises.

1.2. High Level Steps

- Install WSO2 EI 6.5.0
- Install API M 2.6.0
- Instal IS 5.8.0
- Other installations

1.3. Detailed Instructions

1.3.1. Install WSO2 Enterprise Integrator

Before installing the product, ensure that the installation prerequisites have been met. Refer to the documentation at: https://docs.wso2.com/display/EI650/Installation+Guide

1.3.2. Install WSO2 API M 2.6.0

https://docs.wso2.com/display/AM260/Installation+Guide

1.3.3. Install WSO2 IS 5.8.0

https://docs.wso2.com/display/IS580/Installation+Guide

1.3.4. Other Installations

For Windows: Installing cURL[1] and JDBC Drivers for MySQL[2]
[1] Install cURL from https://curl.haxx.se/dlwiz/?type=bin&os=Win32&flav=-
[2] Install Drivers from https://www.microsoft.com/en-us/download/details.aspx?id=11774

For MAC OS X: Installing brew[1], JDBC driver for MySQL[2], and cURL[3]

[1] Install brew from https://brew.sh/

[2] In terminal run "*brew tap gbeine/homebrew-java*" and "*brew install mysql-connector-java*"

[3] In terminal run: "*brew install curl*"

1.4.   Expected Outcome

The user should be able to deploy and run the WSO2 Enterprise Integrator.

2.   Management Console Basics

2.1.   Training Objective

The user will be able to control and configure individual products via the Management Console. The management console differs from one WSO2 product to another.

2.2.   High Level Steps

- Getting started with the Management Console
- Customizing the Management Console

2.3.   Detailed Instructions

2.3.1.   Working with the Management Console

In Enterprise Integrator
In API Manager
In Identity Server

2.3.2.   Customizing the Management Console

Customizing the Management Console

3.   Working with Data Stores

3.1.   Training Objective

All WSO2 products are shipped with embedded H2 databases for storing data. The user will learn to set up, change, configure and browse Databases.

3.2.   High Level Steps

- Browsing and Changing the default H2 Database
- Setting up a Physical Database
- Managing Datasources
- Configuring the User Stores

3.3.   Detailed Instructions

Browsing the H2 Database

Changing the Default Database

Setting up a Physical Database

Managing Datasources

Configuring the User Stores

4. Working with Transports

4.1. Training Objective

WSO2 Carbon is the base platform on which all WSO2 Java products are developed. Built on OSGi, WSO2 Carbon encapsulates all major SOA functionality. It supports a variety of transports, which make Carbon-based products capable of receiving and sending messages over a multitude of transport and application-level protocols. We will be looking in to the various types of Transports used in WSO2 Products.

4.2. High Level Steps

- Transports used by WSO2 products
- Configuring transport parameters

4.3. Detailed Instructions

The following transport implementations are supported by default in the WSO2 Carbon platform. Each transport implementation generally contains a transport receiver/listener and a transport sender.
Follow these examples to get a brief knowledge on how to use transport.
https://docs.wso2.com/display/ADMIN44x/Introduction+to+Transports

5. User Management

5.1. Training Objective

In this section, you will learn how to set up custom roles and users.

5.2. High Level Steps

- Managing and Configuring Users, Roles and Permissions via the management console
- GDPR applied in WSO2 products

5.3. Detailed Instructions

5.3.1. Configuring Users, Roles and Permissions

User management functionality is provided by default in all WSO2 Carbon-based products and is configured in the user-mgt.xml file.

Managing Users, Roles and Permissions

Configuring Users

Configuring Roles

Configuring Permissions

5.3.2. General Data Privacy Regulations(GDPR) applied to WSO2 Products

A key requirement outlined in the General Data Protection Regulation (GDPR) is the right of the data subject to be forgotten, which gives users the right to request an organization to remove their personal data when requested.

Removing References to Deleted User Identities in WSO2 Products

6.   Monitoring WSO2 Products

6.1.   Training Objective

Java Management Extensions (JMX) is a technology that lets you implement management interfaces for Java applications.

https://docs.wso2.com/display/ADMIN44x/Monitoring

6.2.   High Level Steps

Configuring JMX in a WSO2 product
Monitoring a WSO2 product with JConsole and Jolokia

6.3.   Detailed Instructions

6.3.1.   Configuring JMX in a WSO2 product

JMX is enabled in WSO2 products by default, which ensures that the JMX server starts automatically when you start a particular product.

JMX Based Monitoring

6.3.2.   Monitoring a WSO2 product with JConsole

Jconsole is a JMX-compliant monitoring tool, which comes with the Java Development Kit (JDK) 1.5 and newer versions.

Monitoring with JConsole

Jolokia is a JMX-HTTP bridge, which is an alternative to JSR-160 connectors. It is an agent-based approach that supports many platforms.

Monitoring with Jolokia

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7.   Distributed Deployment

7.1.   Training Objective

You can install multiple instances of WSO2 products in a cluster. A cluster consists of multiple instances of a product that act as if they are a single instance and divide up the work. The user will learn to setup, configure certain aspects of clustering and to also troubleshoot them.

7.2.   High Level Steps

- Production Deployment Guidelines
- Understanding deployment scenarios of WSO2 products
- Overview of clustering

7.3.   Detailed Instructions

7.3.1.   Deployment Guidelines

https://docs.wso2.com/display/ADMIN44x/Production+Deployment+Guidelines

7.3.2.   Deployment scenarios of WSO2 products

Clustered Deployment in Enterprise Integrator:
https://docs.wso2.com/display/EI6xx/Clustered+Deployment

Distributed Deployment in API Manager 2.6.0:
https://docs.wso2.com/display/AM260/Distributed+Deployment+of+API+Manager

Distributed Deployment in Identity Server:
https://docs.wso2.com/display/IS580/Deployment+Patterns

7.3.3.   Overview of Clustering

https://docs.wso2.com/display/ADMIN44x/Clustering+Overview

8.   Securing WSO2 Products

8.1.   Training Objective

Use the **Secure Vault** implementation that is built in to the ESB profile to encrypt plain text passwords in configuration files and synapse configurations.

https://docs.wso2.com/display/ADMIN44x/Security

8.2.   High Level Steps

- Securing Carbon Applications
- Encrypting passwords in configuration files
- Encrypting passwords for synapse configurations
- Applying WS-Security for synapse configurations

8.3.   Detailed Instructions

Securing Carbon Applications

Securing passwords in configuration files

Working with Passwords in the ESB Profile

Applying Security to a Proxy Service