



Course Outline  
for  
WSO2 Product Administration

Email: [training@wso2.com](mailto:training@wso2.com)

# Prerequisites

## WSO2 Platform

Review the WSO2 platform overview webinar found at [1] which contains:

- Who is WSO2?
- Fundamentals: Middleware, Services
- Service Oriented Architecture (SOA) Evolution
- WSO2 Enterprise Middleware and Cloud platform

[1]<http://wso2.com/library/webinars/2017/04/open-technology-platform-for-digital-transformation/>

## Course Outline

### Module 1

#### Introduction

- Introduction to WSO2 Product Stack
  - Introduction to Carbon
  - Carbon Architecture
  - Carbon Directory Structure
- Lab: Installing and Running WSO2 Products
- Lab: Management Console Basics

#### Configuration files

#### Datasources and databases

Lab: Working with Datastores

#### Transports

Lab: Working with Transports

### Module 2

#### WUM

### Module 3

#### User Management

- User Accounts and User Roles
  - LDAP
- Lab: User Management

### Module 4

#### Deployable Artifacts

- Carbon Apps
- Server Roles

### Module 5

#### Monitoring Carbon Products

- Analytics - API-M
  - Log Files
  - JMX
  - Carbon Metrics
  - Carbon Dump
- Lab: Monitoring WSO2 Products

## Module 6

### Deployment Patterns and Clustering

- Load Balancing and High Availability
- Independent Nodes
- Shared DBs
- Sticky Sessions
- Full Replication

### Lab: Distributed Deployments

### Caching

- Local caching

## Module 7

### Security

- Transport Level Security
- Asymmetric Encryption
- Symmetric Encryption
- Java Security Manager
- Securing Passwords in Configuration Files (Secure Vault)
- Mitigating Cross Site Request Forgery (CSRF) Attacks
- Mitigating Cross Site Scripting (XSS) Attacks
- Hardening
- Best Practices and Recommendations

### Lab: Securing WSO2 Products

## Module 8

### Troubleshooting

- Understanding Log Files
- Discovery of Changes
- Root Cause Analysis

## Module 9

### Backups and Disaster Recovery

## Module 10

### Deployment Automation

- Configuration Management
- Artifact Management

- Automation and Orchestration Tools
- Deployment Orchestration with Puppet
- Patch Management

## Module 11

### Delivery

- Discoverability
- Quality
- Continuous Integration and Delivery

## Software Requirement

### Java

Oracle Java 1.8.x

### WSO2 Products Used

WSO2 Carbon [1], WSO2 API Manager [2] WSO2 Data Analytics Server [3], WSO2 Enterprise Service Bus [4], WSO2 Message Broker [5]. [6] Application Server [6].

[1] <http://wso2.com/products/carbon/>

[2] <http://wso2.com/products/api-manager/>

[3] <http://wso2.com/products/enterprise-service-bus/>

[4] <http://wso2.com/products/data-analytics-server/>

[5] <http://wso2.com/products/message-broker/>

[6] <http://wso2.com/products/application-server/>

### Other Tools Used

Apache Ant [1], Apache Maven [2], SoapUI [3], CUrl[4], Docker [5], Docker Compose tool [6] NGINX [7].

[1] <http://ant.apache.org/manual/install.html>

[2] <https://maven.apache.org/install.html>

[3] <http://www.soapui.org/>

[4] <http://curl.haxx.se/download.html>

[5] <https://docs.docker.com/engine/installation/linux/ubuntu/linux/>

[6] <https://docs.docker.com/compose/install/> or

sudo apt-get -y install python-pip

sudo pip install docker-compose

[7] <http://nginx.org/en/download.html>