# Oracle Coherence 12c: Administer and Troubleshoot Clusters

**Duration:** 5 Days

## What you will learn

This Oracle Coherence 12c: Administer and Troubleshoot Clusters training covers all the essential knowledge required to administer Coherence in both stand-alone and WebLogic Clusters. Deep dive into different scenarios and how this solution can help you navigate your way through it.
Updated for 12.2.1: This course has new content about the new features in Coherence 12.2.1.

Learn To:

Describe Coherence and its core features.
Identify the role of a Coherence administrator.
Install, script and configure Coherence.
Understand caching and what a Coherence administrator needs to know about caching
Configure and deploy the GoldenGate Hot Cache adapter.
Identify and deploy Coherence applications.
Understand the differences between standalone Coherence and WebLogic-hosted Coherence instances.
Monitor Coherence and Coherence applications in standalone and WebLogic environments.
Identify common Coherence problems and how they are triaged.

Benefits to You

Enrolling in this course will help you develop the knowledge to successfully create and manage Coherence clusters either in stand-alone or WebLogic environments. In addition, you will learn all the major subsystems of Coherence and how to configure, deploy and manage these areas.

Explore Coherence

Expert Oracle University instructors will use carefully crafted lab exercises to guide you through installation, configuration and common uses of Coherence and its major subsystems. Participating in hands-on exercises will solidify your new knowledge and help you apply it to your daily tasks.

Examine Coherence & WebLogic Server

This course will demonstrate how Coherence applications get deployed to WebLogic Server and how Coherence clusters are created and managed in a WebLogic environment. You'll also learn which WebLogic console features are involved in Coherence Server management within a WLS domain.

## Audience

Application Server Administrators
J2EE Developer
Java EE Developers
System Administrator
Web Administrator

## Related Training

*Required Prerequisites*

A good understanding of networking concepts including TCP, UPD, Ports and the like

Familiarity with Java concepts such as classpath and classloaders, and tools such as jar and versions

Familiarity with XML concepts

Familiarity with basic JEE packaging concepts including Web and Enterprise application structure and packaging

## Course Objectives

Describe, configure and deploy local, replicated, distributed and near cache topology architectures

Install and manage Coherence within WebLogic Server

Configure, manage and secure Coherence REST

Identify and describe the basic tasks for performance tuning Coherence cache

Monitor and manage Coherence using JMX and Coherence reporting tools

Troubleshoot a Coherence cluster

Configure the GoldenGate/Coherence HotCache adapter

Install, configure and start Coherence clusters in both stand-alone and WebLogic environments

Test, configure and troubleshoot network and other components of a Coherence cluster to maximize performance

## Course Topics

**Introduction to Coherence**
Exploring and Enumerating Basic Coherence Concepts, Including Cache, Node, Cluster, Service and Others
Exploring the Role and Tasks of a Coherence Administrator
Enumerating Coherence Editions and Their Features

**Coherence Basics**
Illustrating Coherence and How It Relates to WLS
Installing Coherence
Managing Coherence Cache Servers
Exploring the Cache Console

**Cluster Management**
Enumerating Cluster Startup Principles and Concepts
Configuring Cluster Membership
Configuring Member Ports and Identification

**Cluster Provisioning**
Performing Member Provisioning
Managing and Monitoring Coherence Nodes by Using Scripts
Configuring Basic Logging and Log Rotation (Including Log4j)
Configuring Coherence and System Properties

**Configuring Coherence Caches**
Enumerating the Core Elements of Cache Configuration
Exploring Basic Scheme Structure and Cache Mapping
Configuring Quorum and Service Guardian
Exploring Basic Topologies

**Introduction to Coherence Monitoring**
Identifying and Describing the Primary Management Capabilities of Coherence
Configuring JMX Basics and Common Tools Such as Java Console and JVisualVM
Generating Reports by Using Coherence Reporter
Creating and Customizing Coherence Reports
Implementing the Coherence Rolling Upgrade Process

**Coherence Cluster Monitoring**
The Four Pillars of Coherence Performance: Stability, Performance, Balance, and Capacity
Identifying and Describing the Themes Behind Coherence Cluster Monitoring
Investigating Coherence Cluster Monitoring Themes

**Coherence Troubleshooting and Performance Tuning**
Identifying Common Problems and Solutions
Describing Common Areas for Performance Tuning
Exploring Java Mission Control to Capture and Analyze Information from a Running VM
Capturing and Examining Heap Dumps

**Coherence*Extend**
Describing, Configuring, and Deploying a Coherence*Extend Gateway
Tuning and Simplifying a Coherence*Extend

**Coherence and REST**
Exploring Coherence REST
Configuring Coherence for REST
Accessing Coherence REST
REST and JEE Application Deployment
Securing Coherence REST

**Coherence and GoldenGate HotCache**
Exploring GoldenGate Concepts
Examining HotCache and How It Works
Configuring Coherence to Support GoldenGate HotCache
Configuring and Running the GoldenGate HotCache Adapter

**WebLogic Server and Coherence**
Exploring the Coherence Container and Its Benefits To/From WLS
Examining the Coherence/WLS Combined Installation Process
Comparing Coherence and WLS Clusters
Creating Coherence Clusters Within a WLS Domain

Creating and Configuring Coherence Servers (MCS) and Clusters Within a WLS Domain
Examining and Deploying Coherence GARs with a WLS Domain
Describing and Implementing the Rolling Deploy Process

**Oracle Enterprise Manager and Coherence**
Examining the Coherence Management Pack for Enterprise Manager
Configuring Coherence Nodes for Management
Discovering Coherence Nodes