Oracle Coherence 12c: Administer and Troubleshoot Clusters

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.

Prerequisites

Suggested Prerequisite

- JSON knowledge helpful but not required
- Java programming knowledge required
- XML knowledge helpful but not required

Audience

- Administrator
- Developer
- Systems Administrator

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

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