

Oracle NoSQL Database for Administrators Ed 1

Duration: 2 Days

What you will learn

This Oracle NoSQL Database for Administrators Ed 1 training teaches you how to deploy a KVStore and troubleshoot installation and hardware failures. Expert Oracle University instructors will also teach you how to monitor and manage a KVStore.

Learn To:

Plan installation of Oracle NoSQL Database.

Install and configure Oracle NoSQL Database.

Deploy Oracle NoSQL Database KVStore.

Secure the configuration.

Extend a KVStore by increasing the replication factor or capacity of the KVStore.

Troubleshoot installation and hardware failures.

Monitor and optimize Oracle NoSQL Database performance. Perform backup, recovery, and upgrades.

Benefits to You

When you walk away from this course, you'll be able to identify the features and benefits of the Oracle NoSQL Database. You'll have a deeper understanding of how to optimize the KVStore's performance.

Audience

Application Developers

Database Administrators

Hadoop/BigData Cluster Administrator

Java Developers

Course Objectives

Plan installation of Oracle NoSQL Database

Install and configure Oracle NoSQL Database

Deploy Oracle NoSQL Database KVStore

Secure the configuration

Extend a KVStore by increasing the replication factor or capacity of the KVStore

Troubleshoot installation and hardware failures

Monitor and optimize Oracle NoSQL Database performance

Perform backup, recovery, and upgrades

Course Topics

Course Introduction

Course Objectives

Course Schedule

Course Environment

Accessing the Labs Directory

Introducing Personas

Course Supplement

Additional Resources

Oracle NoSQL Database: Overview

Oracle NoSQL Database

Key Features

Benefits of Using Oracle NoSQL Database

Supported Data Types

How Does the Oracle NoSQL Database Work?

Oracle NoSQL Database Components

Partitions and Key Value Pairs

Performance and Throughput

Planning An Installation

KVStore Analysis: Tasks

Understanding Storage Capacity and Throughput Capacity

Using InitialCapacityPlanning Spreadsheet

Application Requirements

Hardware Requirements

Performance Requirements: Estimating Workload

Performance Requirements: Estimating Throughput

Performance Requirements: Estimating Cache Size

Installing and Configuring Nodes

Prerequisites Checklist

Installation Steps

Creating Directories

Extracting Software

Verifying the Installation

Configuring the Replication Node

Using the makebootconfig Utility

Starting Storage Node Agents

Configuring and Deploying A KVStore

Configuration Steps

Introducing Plans

States of a Plan

Starting the Admin CLI

- Configuring KVStore
- Creating a Data Center/Zone
- Deploying an Admin Node
- Creating a Storage Pool

Modifying a KVStore

- Reasons to modify a cluster
- Increasing a clusters capacity
- Increasing a clusters replication factor
- Steps to modify a cluster

Securing the Configuration

- Security Overview
- Performing a secure installation using makebootconfig
- Secure an existing installation using securityconfig
- Security.xml Parameters
- Encrypting Data
- Configuring Authentication
- Default Security Policies
- Security Guidelines

Troubleshooting Oracle NoSQL Database Installation Issues

- Verifying a KVStore
- Verify Command
- Verification Using Admin Console
- Locating the Installed Files
- Understanding the Installed Files
- Understanding the Log File
- Service States
- HA Port Ranges

Fixing Hardware Failures

- Hardware Failures: Overview
- Network Failure
- Recovering from Network Failure
- Detecting Storage Device Failures
- Replacing a Failed Storage Device
- Detecting Server Failures
- Replacing a Failed Storage Node
- Migrating to the New Storage Node

Setting Store Parameters

- Introducing KVStore Parameters
- List of Parameters
- Parameter Usage
- Viewing Parameters Using CLI
- Viewing Parameters Using the Admin Console
- Changing Parameters Using CLI
- Changing Parameters Using Admin Console
- Setting Replication Node Policy

Optimizing KVStore Performance

- Best Practice: Set Optimal JE Cache Size
- Estimating JE Cache Size Requirement
- Setting JE Cache Size
- Best Practice: JVM
- Best Practice: Set Optimal Java Heap Size
- Estimating Java Heap Size
- Setting Java Heap Size
- Best Practice: Log Garbage Collection Activity

General Monitoring

- Monitoring the KVStore (include SNMP and JMX)
- Events
- Viewing the Events: Using Admin Console
- Viewing the Events: Using CLI
- Using SNMP and JMX

Backup and Recovery

- Backup Process
- Introducing Snapshots
- Using Snapshots
- Recover Process
- Recovery: Using a Load Program
- Using the Load Program Guidelines
- Recovery: Directly Using Snapshots
- Updating an Existing Deployment

Managing AVRO Schema

- Introducing AVRO schema
- JSON format
- Adding a schema
- Changing a schema
- Viewing a schema
- Disabling a schema
- Enabling a schema

Upgrading the Software

- Upgrade Process: Overview
- Pre-requisites
- Upgrading from R1 to R2
- Upgrading from R2 to R3
- Using a script