

# Oracle Database Appliance Release 18c Overview

Infrastructure

DURATION

**2 Days**

MODULES

**14 Lectures**

COURSE CODE

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## Course Overview

This course provides an overview of Oracle Database Appliance Release 18c Overview. Understand the key features, architecture, and capabilities of this Infrastructure solution.

## What You Will Learn

### Introducing Oracle Database Appliance

- Objectives
- Oracle Database Appliance
- Engineered Infrastructure Delivers Optimized Results
- Simple
- Simplicity Through Integration
- Maximize Your Return on IT Resources
- Optimized
- High Availability and Integrated Security
- Affordable
- Manage License Costs Using Capacity On-Demand
- Reduced OPEX Through Simplicity and Automation
- Engineered Appliance Advantages
- Oracle Database Appliance
- Oracle Database Appliance X8 Model Family
- Oracle Database Appliance X8 | Model Family Hardware Summary
- Oracle Database Appliance X8-2S – Small Hardware Configuration
- Oracle Database Appliance X8-2M – Medium Hardware Configuration
- Storage Architecture Oracle Database Appliance X8-2S/X8-2M
- Estimated Usable Space Oracle Database Appliance X8-2S/X8-2M
- Oracle Database Appliance X8-2S/X8-2M Public Network Details
- Oracle Database Appliance X8-2-HA – High Availability Configuration
- Oracle Database Appliance X8-2-HA Storage Architecture

- Estimated Usable Space Oracle Database Appliance X8-2-HA High
- Performance Configuration
- Estimated Usable Space Oracle Database Appliance X8-2-HA High
- Capacity Configuration
- Expanding Storage in Oracle Database Appliance X8-2-HA
- Expanding Storage in Oracle Database Appliance X8-2-HA
- Oracle Database Appliance X8-2-HA Bare Metal Network Details
- Oracle Database Appliance X8-2-HA Virtualized Platform Network Details
- Oracle Database Appliance
- Oracle Database Appliance Software Stack
- Oracle Database Licensing Supported on Oracle Database Appliance
- Standard Edition Versions and Features Supported on Oracle Database Appliance
- Enterprise Edition Versions and Features Supported on Oracle Database Appliance
- Oracle Database Appliance – Appliance Manager
- Virtualization on Oracle Database Appliance
- Virtualization on Oracle Database Appliance Architecture
- Additional Information
- Summary
- Quiz

## Preparing for Deployments

- Objectives
- Registering with Oracle Support and Downloading the Latest Software
- Checking the Shipment
- Site Preparation: Electrical and Environmental
- Site Preparation: Physical Specifications
- Racking Oracle Database Appliance
- Rack Mounting the Storage Shelf (Oracle Database Appliance DE3-24C)
- Rack Mounting the Server Nodes
- Cabling Oracle Database Appliance
- Cabling Oracle Database Appliance X8-2S/X8-2M
- Cabling Oracle Database Appliance X8-2-HA
- Powering On the Oracle Database Appliance X8-2S/X8-2M
- Powering On the Oracle Database Appliance X8-2-HA
- Oracle Integrated Lights Out Management (Oracle ILOM)
- Multiple Options to Configure Oracle ILOM
- Plumbing the Network
- Summary
- Quiz

## Introduction to Deployments

- Objectives
- Key Oracle Database Application Documents

- Oracle Database Deployment Options
- Selecting Database Shapes
- OLTP Workload Database Shapes
- DSS Workload Database Shapes
- In-Memory Workload Database Shapes
- Storage Options
- Configuration Options and Requirements
- Configuration Requirements
- Summary
- Quiz

## Bare Metal Deployments

- Objectives
- About Bare Metal Deployments
- Oracle Database Appliance Base Software
- Oracle Database Appliance Software
- Oracle Database and Oracle Grid Infrastructure Clones
- Bare Metal Operating System ISO Image
- Tasks to Complete Before Deployment
- Copying the Deployment Software to Oracle Database Appliance
- Multi-node Bare Metal Deployment (Launch the Browser User Interface)
- Multi-node Bare Metal Deployment (Configure System)
- Multi-Node Bare Metal Deployment (Configure Client Access Network)
- Multi-Node Bare Metal Deployment (Configure Scan and VIP Network)
- Multi-Node Bare Metal Deployment (Configure ILOM Network)
- Multi-Node Bare Metal Deployment (Configure Users and Groups)
- Multi-Node Bare Metal Deployment (Configure Database)
- Notes only
- Multi-Node Bare Metal Deployment (Configure ASR)
- Multi-Node Bare Metal Deployment (Submit Configuration Details)
- Loading Oracle Database Appliance Configuration From a Configuration File
- Oracle Database Appliance Default Security Settings
- Changing Installation Owner Passwords
- Changing the IPMI Username and Password
- Summary
- Practice 4: Overview
- Quiz

## Managing Databases for Bare Metal Oracle Database Appliance

- Objectives
- Database Performance and Workload Sizing Considerations
- Default Administrative Groups and Users
- Directory Paths for Oracle Database Appliance
- Viewing Existing Databases
- Creating a New Database

- Notes only
- Deleting a Database
- Viewing Existing Database Homes
- Creating a New Database Home
- Deleting a Database Home
- Summary
- Practice 5: Overview
- Quiz

## Oracle Database Appliance Backup and Recovery

- Objectives
- Overview of Oracle Database Appliance Backup and Recovery
- Oracle Database Appliance Backup Levels
- Oracle Database Appliance Recovery Options
- Backing Up to Disk or Internal FRA Workflow
- Backing Up to Oracle Object Storage Workflow
- Backing Up to External FRA or NFS Workflow
- Creating a Backup Policy
- Updating a Backup Policy
- Deleting a Backup Policy
- Adding a Backup Policy to a Database
- Creating a Database Backup
- Recovering a Database from Backup
- Summary
- Practice 6: Overview
- Quiz

## Patching Bare Metal Oracle Database Appliance

- Objectives
- Overview of Oracle Database Appliance Patching
- Patching Options
- Upgrading Oracle Database Appliance
- Upgrade Path for Oracle Database Appliance
- The Patching Process
- Downloading the Server Patch Bundle
- Updating the Patch Repository Using the Browser User Interface
- Updating the Agent, Storage, DCS, and Server Components Using the Browser User Interface
- Patching a Database Home (Updating a Database) Using the Browser User Interface
- Upgrading a Database
- Updating the Patch Repository Using Command-Line
- Updating the DCS Agent Using Command-Line
- Updating the Server and Storage Using Command-Line
- Patching a Database Home (Updating a Database) Using Command-Line

- Upgrading a Database Using Command-Line
- Summary
- Practice 7: Overview
- Quiz

## Administering Bare Metal Oracle Database Appliance

- Objectives
- Using the Browser User Interface for Oracle Database Appliance Administration
- Using CLI for ODA Administration
- Understanding Bare Metal Oracle Database Appliance Configuration
- Oracle Database Appliance X8-2 Network Options
- Updating a Network
- Virtual Local Area Network Administration
- Creating a New VLAN Using Browser User Interface
- Storage Administration
- Using Browser User Interface for Monitoring: Bill of Materials
- Using Browser User Interface for Monitoring: Hardware
- Diagnostics
- What Is Auto Service Request?
- How Does Oracle ASR Work?
- Summary
- Practice 8: Overview
- Quiz

## Introduction to Virtualized Platform

- Objectives
- What Is Virtualization?
- What Are the Advantages of Virtualization?
- Why Virtualize Applications on Oracle Database Appliance?
- Virtualization on Oracle Database Appliance
- Differences Between OVM and KVM
- Overview: Provision and Deploy Virtualized Platform
- Summary
- Quiz

## Provisioning an Oracle Database Appliance Virtualized Platform

- Objectives
- Configuring Oracle Database Appliance Virtualized Platform OS ISO Images
- Virtualized Server Platform
- VM ISO Image (Dom0) (Virtualized Platform ISO Image)
- Oracle Database Appliance Virtualized OS Re-image: Step 1
- Oracle Database Appliance Virtualized OS Re-image: Step 2
- Oracle Database Appliance Virtualized OS Re-image: Step 3
- Oracle Database Appliance Virtualized OS Restore: Step 4

- Oracle Database Appliance Virtualized OS Restore: Step 5
- Oracle Database Appliance Virtualized OS Restore: Step 6
- Oracle Database Appliance Virtualized OS Restore: Step 7
- Oracle Database Appliance Virtualized OS Restore: Step 8
- Oracle Database Appliance Virtualized OS Restore: Step 9
- Oracle Database Appliance Virtualized OS Restore: Step 10
- Oracle Database Appliance Virtualized OS Restore: Step 11
- Oracle Database Appliance Virtualized OS Restore: Step 12
- Creating Initial Network Using the configure-firstnet Script
- Optional: Creating a Virtual Local Area Network (VLAN)
- Summary
- Quiz

## Installing Virtualized Platform Software and Deploying the Appliance (ODA\_BASE)

- Objectives
- Oracle Database Appliance ODA\_BASE Template (Virtualized Platform Deployments Only)
- Transferring the ODA\_BASE Template to ODA
- Installing the ODA\_BASE Template
- Configuring the ODA\_BASE Template
- Validating the ODA\_BASE Deployment
- Configuring Public Network for ODA\_BASE
- Updating Server and Storage Components
- Information You Need for Deployment: Network
- Information You Need for Deployment: Database
- Understanding Database Shapes (Templates)
- Database Template Storage Performance
- Collecting Information You Need: Security and Storage
- Real-Time Configuration and Deployment
- Verifying Virtual Machine Image and Cabling
- Virtualized Platform Deployment
- Oracle Database Appliance Manager Stand-alone Configurator
- Start Configurator
- Welcome Window
- Configuration Type Window
- System Information Window
- Network Information Window
- Database Information Window
- Network Validation Window
- Summary Window
- Configuring CPU Core Count
- Securing Oracle ILOM Service Processors
- Changing Installation Owner Passwords
- Changing the IPMI Username and Password
- Summary

- Practice 11: Overview
- Quiz

## Deploying and Managing Guest VMs

- Objectives
- Virtualized Server Release or Revision Updates Are Image Updates
- Understanding Oracle VM Guests
- Deploying Virtual Guest Machines to Create Solutions-in-a-Box
- Virtualized Platform Deployments Shared Repositories: Overview
- Supporting Application Workloads Through Virtualization
- Solution-in-a-Box Series
- Deploying Virtual Guest Machines
- Staging the Downloaded Template and Cloning the VM
- Example of a Created VM
- Configuring the Template
- Starting the Virtual Machine
- Working with Shared Repositories: Step 1
- Importing the Required Template or Assembly: Step 2
- Configuring the Template or Assembly: Step 3
- Cloning the Template or Assembly: Step 4
- Updating the Virtual Machine as Required: Step 5
- Starting the Virtual Machine: Step 6
- Accessing the Virtual Machine Console: Step 7
- Creating Virtual Local Area Networks (VLAN)
- CPU Pools on Virtualized Platform Deployments
- CPU Pool Management Commands
- Summary
- Quiz

## Managing Databases for Oracle Database Appliance Virtualized Platform

- Objectives
- Virtual Machine Performance Considerations Selecting the Right Size and Shape for Your Use Case
- Selecting the Right Shape for Your Workload
- Workloads and Database Shapes and Sizes
- Default Administrative Groups and Users
- Creating a New Virtualized Platform Oracle Database on Oracle Database Appliance
- Directory Paths for Oracle Database Appliance
- Modifying an Existing Database
- Managing Databases
- Creating Additional Databases
- Integrated Database Snapshots
- Database Snapshots: Storage Space Benefits
- Database and VM Snapshots

- Creating Snapshot Databases
- The Patching Process
- Step 1: Downloading the Patch Bundle
- Obtaining and Deploying the Patch
- Step 2: Unpacking and Validating the Patch Files
- Step 3: Updating the Server Components, Storage Components, and the Database
- Summary
- Quiz

## Administering Oracle Database Appliance Virtualized Platforms

- Objectives
- Understanding Virtualized Configuration and OS Layout
- Managing Shared Repositories
- Checking Repository Status
- Importing Template or Assembly
- Configuring Template or Assembly
- Cloning Template or Assembly
- Updating Virtual Machine as Required
- Creating Virtual Local Area Networks (VLAN)
- CPU Pools on Virtualized Platform Deployments
- CPU Pool Management Commands
- Creating Virtual Disks and Storage Pools
- Summary
- Quiz