Oracle VM 2 for x86 Essentials – Exam Study Guide

The Oracle VM 2 for x86 Essentials Exam Study Guide highlight the training options mapped to each exam topic to guide students in their preparation to pass the Oracle VM 2 for x86 Essentials (1Z0-540). The exam targets the intermediate-level implementation team member. Up-to-date training and field experience are recommended.

The exam objectives are defined by learner or practitioner level of knowledge.

Learner-level: questions require the candidate to recall information to derive the correct answer

Practitioner-level: questions require the candidate to derive the correct answer from an application of their knowledge

For each exam topic there have been identified alternative training options that are available at Oracle. Please note that some of the training recommended can cover multiple exam topics.

The exam covers 11 topics.

Topic 1: Virtualization Essentials

Objectives

<table>
<thead>
<tr>
<th>Differentiate Server Virtualization Technologies</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Differentiate Between Hypervisor and Virtualization Server</td>
<td>Practitioner</td>
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<tr>
<td>Explain On-Chip Virtualization</td>
<td>Learner</td>
</tr>
<tr>
<td>Explain Soft and Hard Partitioning</td>
<td>Learner</td>
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</tbody>
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Training Options

- Boot Camp
  - Oracle VM 2 Overview & Implementation Boot Camp
- Online Training
  - Oracle VM Essential Overview: Module 1: Introduction

Topic 2: Xen Essentials
Objectives
- Explain the Paravirtualization Model
- Explain the Hardware Virtualization Model
- Explain Timer Management with Various Virtualization Techniques
- Explain Security Considerations for a Virtualized Environment
- Identify `xm` Commands for Common Tasks
- Explain the Netfront and Netback Driver Model
- Explain the Blkfront and Blkback Driver Model
- Explain the Qemu-DM Driver Model
- Configure Virtual Machine Configuration Files
- Explain Xen Bridges

Level
- Practitioner
- Learner

Training Options
- Boot Camp
  - Oracle VM 2 Overview & Implementation Boot Camp
- ILearning
  - Oracle VM Essential Overview: Module 2: HVM vs PV

Topic 3: Oracle VM Essentials

Objectives
- Describe Oracle VM Installation Prerequisites
- Explain How Oracle Certifies Product on Oracle VM
- Explain the Components of a Validated Configuration
- Describe Oracle VM's Guest OS Support
- Explain and Apply the Oracle VM Pricing Model

Level
- Learner
- Practitioner

Training Options
- Boot Camp
  - Oracle VM 2 Overview & Implementation Boot Camp

Topic 4: Oracle VM Architectures

Objectives
- Describe the Components of the Oracle VM Architecture
- Explain the Function of the Oracle VM Manager Database Repository
- Describe the Role of the Utility Server
- Describe the Role of the Server Pool Master

Level
- Learner

Training Options
Topic 5: Oracle VM Server

Objectives

| Install Oracle VM Server                     | Practitioner |
| Describe the Oracle VM Server Components   | Learner      |
| Explain the Role of the Oracle VM Agent    | Learner      |

Training Options

- Boot Camp
  - Oracle VM 2 Overview & Implementation Boot Camp

Topic 6: Oracle VM Manager

Objectives

| Install Oracle VM Manager from Media        | Practitioner |
| Install Oracle VM Manager from Template    | Practitioner |
| Explain the Physical to Virtual (p2v) Conversion Process | Practitioner |
| Explain the Virtual to Virtual (v2v) Conversion Process | Practitioner |
| Create Virtual Machines Using Oracle VM Manager | Practitioner |
| Import Virtual Machine Images Using Oracle VM Manager | Practitioner |
| Import an ISO File Using Oracle VM Manager  | Practitioner |
| Create and Use Shared Virtual Disks Using Oracle VM Manager | Practitioner |
| Manage Virtual Machines Using Oracle VM Manager | Practitioner |
| Configure Virtual Machines Using Oracle VM Manager | Practitioner |
| Configure Groups and Users Using Oracle VM Manager | Practitioner |

Training Options

- Boot Camp
  - Oracle VM 2 Overview & Implementation Boot Camp

Topic 7: Server Pools
Objectives

- Explain the Directory Structure for a Repository
- Explain Oracle VM's Shared Storage Pool
- Create a Shared Repository
- Manage a Shared Repository
- Explain the Effects of a Server Pool Reset
- Configure an OCFS2 Cluster
- Configure a Repository Using NFS
- Configure a Repository Using iSCSI
- Set Up an HA Server Pool

Level

Practitioner
Practitioner
Practitioner
Practitioner
Learner
Practitioner
Practitioner
Practitioner
Practitioner

Training Options

- Boot Camp
  - Oracle VM 2 Overview & Implementation Boot Camp
- Online Training
  - Oracle VM Essential Overview: Module 4: Server Pools

Topic 8: High Availability

Objectives

- Explain the Automatic Failover Process
- Explain the Live Migration Process
- Use Live Migration to Load Balance
- Use Network Bonding in an HA Environment
- Use Storage Multipathing in an HA Environment
- Use Capacity Planning to Determine Server Roles in an HA Environment

Level

Practitioner
Practitioner
Practitioner
Practitioner
Practitioner
Practitioner

Training Options

- Boot Camp
  - Oracle VM 2 Overview & Implementation Boot Camp

Topic 9: Best Practices

Objectives

- Apply Best Practices in Dom0
- Apply Best Practices with Storage Repositories
- Determine When to Use Network QoS Features

Level

Practitioner
Practitioner
Learner

Training Options
Topic 10: Oracle VM Templates

Objectives

- Explain the Benefits of Oracle VM Templates
- Install a Template from Oracle
- Describe the JeOS Tools
- Use JeOS Tools to Create a Template
- Explain the Use of Boot and Cleanup Scripts
- Describe the Oracle VM Template Builder
- Set up Access to a YUM Repository

Level

- Learner
- Practitioner

Training Options

- Boot Camp
  - Oracle VM 2 Overview & Implementation Boot Camp
- Online Training
  - Oracle VM Essential Overview: Module 3: Lifecycle Management - Templates

Topic 11: Troubleshooting

Objectives

- Explain Which Log Files Are Used with Oracle VM
- Troubleshoot Problems with the Oracle VM Server Components
- Use XM Commands to Solve Common Problems
- Examine the Xen Internal Systems to Solve Common Problems
- Identify Problems with Virtual Machine Configuration Files
- Explain Troubleshooting Methods for Common Problems

Level

- Learner
- Practitioner

Training Options

- Boot Camp
  - Oracle VM 2 Overview & Implementation Boot Camp
- Online Training
  - Oracle VM Essential Overview: Module 7: Troubleshooting & Diagnostics