Oracle VM 3 for x86 Essentials Exam Study Guide

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Objective & Audience

Objective
Help you prepare to take the Oracle VM 3 for x86 Essentials (1Z1-590) exam by providing pointers to resources that you can use in your preparation.

Targeted Audience

• Technical Consultants
• Strong foundation and expertise in implementing Server Virtualization and Oracle VM 3 for x86
• Participated in Oracle VM 3 for x86 implementations
• Candidates must also have knowledge of general Infrastructure topics on networking and storage.
• Up-to-date training and field experience are recommended
Exam Topics & Objectives

Exam Topics

The Oracle VM 3 for x86 Essentials exam consists of following topics:

- Virtualization Essentials
- Xen Essentials
- Oracle VM Essentials
- Oracle VM Architectures
- Oracle VM Manager
- Server Pools
- High Availability
- Best Practices
- Oracle VM Templates
- Oracle VM Networking
- Troubleshooting

Exam Objectives

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

- **Learner-level**: questions require the candidate to recall information to determine the correct answer.
  
  Example: Define the term network.

- **Practitioner-level**: questions require the candidate to derive the correct answer from the application of their knowledge, which can only be attained by extensive experience with the product.
  
  Example: The client requests xyz functionality, would you recommend a, b or c?
Training Options

For each exam topic there have been identified alternative training options that are available at Oracle. The training options are divided into three categories:

• **Boot Camps**
  The Boot Camps are designed as a "jump start" training to enhance your skills by providing role-based training on industry-leading Oracle solutions and services. The boot camps are built as concise, intensive, and real-time training to give partners a competitive advantage as they prepare to build powerful solutions for their own customer base. Partners can choose to attend these boot camps in class or in a live virtual class format to maximize the effectiveness and the time allocated to training.

• **Instructor-Led Training (delivered by Oracle University)**
  Partners can take any publicly-scheduled Oracle University courses at steep discounts. Benefit from hands on experience to gain real working skill and work toward Oracle certifications.

• **Online Training**
  Oracle Partners are entitled free access to the Oracle Knowledge Center (OUKC), a vast library of recorded product courses. New courses are regularly added to the library, providing partners with the latest information and training to master new products or to increase proficiency on the new releases.
Topic 1: Virtualization Essentials

Objectives
• Differentiate Server Virtualization technologies
• Explain the Hardware Virtualization Model
• Explain the Paravirtualization Model

Level
Learner
Learner
Learner

Training Options
• Boot Camp
  – Oracle VM 3.0 Overview and Implementation Boot Camp

• Online Training
  – Oracle VM 3 for x86 Implementation Specialist
  – Oracle VM with Oracle VM Server for x86 Seminar

• Instructor-Led Training
  – Oracle VM with Oracle VM Server for x86 Seminar

Sample Questions
• Which type of virtualization technology does Oracle VM use?
  A. Physical Domain
  B. OS-Level virtualization
  C. Hypervisor based virtualization
  D. Application virtualization
Topic 2: Xen Essentials

Objectives

- Identify xm Commands for common tasks
- Explain the Netfront/Blkfront and Netback/Blkback Driver Model
- Describe the difference between Dom0 and a DomU
- Describe a Guest Config File
- Explain Xen Bridges

Level

Learner

Training Options

- Boot Camp
  - Oracle VM 3.0 Overview and Implementation Boot Camp

- Online Training
  - Oracle VM 3 for x86 Implementation Specialist
  - Oracle VM with Oracle VM Server for x86 Seminar

- Instructor-Led Training
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Sample Questions

- In a Xen-based virtualization platform, which component is responsible for providing emulated I/O services to guest VMs.
  A. Dom0
  B. Hypervisor
Topic 3: Oracle VM Essentials

Objectives

- Describe Oracle VM Installation
- Describe Oracle VM's Guest OS Support
- Patch an Oracle VM Server from Oracle VM Manager

Training Options

- Boot Camp
  - Oracle VM 3.0 Overview and Implementation Boot Camp

- Online Training
  - Oracle VM 3 for x86 Implementation Specialist
  - Oracle VM with Oracle VM Server for x86 Seminar

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Sample Questions

- Choose four supported Guest OS in Oracle VM 3 for x86 from the following?
  - A. Windows Server 2003
  - B. Oracle Linux 6.x
  - C. SuSE Linux Enterprise Server 11
  - D. RedHat Enterprise Linux 5.x
  - E. Solaris 11 x86
Topic 4: Oracle VM Architectures

Objectives

- Describe the major components of Oracle VM 3 for X86
- Explain the function of the Oracle VM Manager Database Repository
- Describe the components of the OVS Agent and their purpose
- Explain the Physical to Virtual (p2v) conversion process

Training Options

- Boot Camp
  - Oracle VM 3.0 Overview and Implementation Boot Camp
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Sample Questions

- In a standard deployment, which port on OVM servers a OVM Manager will communicate for management and monitoring?
  A. 22
  B. 54321
  C. 7001
  D. 8899
Topic 5: Oracle VM Manager

Objectives

- Install Oracle VM Manager from Media
  - Level: Learner
- Create Virtual Machines using Oracle VM Manager
  - Level: Practitioner
- Import Virtual Machine Images using Oracle VM Manager
  - Level: Practitioner
- Import an ISO File using Oracle VM Manager
  - Level: Practitioner
- Create and use Shared Virtual Disks using Oracle VM Manager
  - Level: Practitioner
- Manage Virtual Machines using Oracle VM Manager
  - Level: Practitioner
- Configure Virtual Machines using Oracle VM Manager
  - Level: Practitioner
- Explain the various Cloning types and options
  - Level: Practitioner
- Clone a Virtual Machine using a Clone Definition
  - Level: Learner
- Describe how to manage events
  - Level: Practitioner
- Configure Server IPMI
  - Level: Learner

Training Options

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  - Oracle VM 3.0 Overview and Implementation Boot Camp

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Sample Questions

- Under which two of the following situations will jobs be generated in Oracle VM Manager?
  A. Discover Oracle VM Servers in Oracle VM Manager
  B. View Oracle VM Servers’ status in Oracle VM Manager
  C. Change name of an unassigned Oracle VM Server
  D. Power off a Oracle VM Server machine by running shutdown command in Dom0
Topic 6: 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
- Configure an OCFS2 Cluster
- Configure a Repository Using NFS or iSCSI
- Register a File Server
- Set up an HA Server Pool

Level

- Learner
- Practitioner

Training Options

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  - Oracle VM 3.0 Overview and Implementation Boot Camp

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Sample Questions

- Which one of the following statement is NOT true about master server in a server pool?
  A. Oracle VM Manager will contact the master server using cluster’s Virtual IP.
  B. When the master server in a server pool fails or in maintenance mode, one of the remaining servers in the server pool will be selected to be the new master server.
  C. Master server is used as gateway to manage other servers in the server pool.
  D. Non-clustered server pool does not need a master server.
Topic 7: High Availability

Objectives

- Explain the Automatic Failover Process
- Explain the Live Migration Process
- Use Network Bonding in an HA Environment
- Use Storage Multipathing in an HA Environment

Level

- Learner
- Practitioner

Training Options

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Sample Questions

- Is the Oracle VM Manager required in the Automatic Failover Process?
  - A. True
  - B. False
## Topic 8: Best Practices

### Objectives

| • Apply best practices in Dom0 | • Apply best practices with Storage Repositories | • Configure DRS/DPM | • Apply best practices with network types | • Determine when to use Policies/QoS features |
| • Practitioner | • Practitioner | • Practitioner | • Practitioner | • Practitioner |

### Training Options

- **Boot Camp**
  - [Oracle VM 3.0 Overview and Implementation Boot Camp](#)

- **Online Training**
  - [Oracle VM 3 for x86 Implementation Specialist](#)
  - [Oracle VM with Oracle VM Server for x86 Seminar](#)

- **Instructor-Led Training**
  - [Oracle VM with Oracle VM Server for x86 Seminar](#)

### Sample Questions

- Which of the following software can be installed in Dom0 in a production environment?
  - A. HTTP Server
  - **B. Device Drivers provided by Oracle or OPN Partners**
  - C. Development Tools
  - D. Network monitoring tools
Topic 9: Oracle VM Templates

Objectives

- Explain the benefits of Oracle VM Templates
- Install a template from Oracle
- Describe the JeOS Tools
- Explain the use of Boot and Cleanup Scripts
- Describe the Oracle VM Template Builder

Level

- Learner
- Practitioner
- Learner
- Learner

Training Options

- Boot Camp
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Sample Questions

Which of the following statements about OVM Template is NOT correct?

A. Templates downloaded from Oracle eDelivery site are pre-built, pre-configured and production ready.

B. A template archive must contains a vm configuration file and one or more disk image files.

C. A template can be used to deploy a complex application with multiple Oracle Software components running on independent OSes.

D. A template can be cloned as a Virtual Machine or another template
Topic 10: Oracle VM Networking

Objectives

- Describe the different network types and their uses
- Explain the use of Oracle VM VNIC Manager
- Configure Networking

Level

- Learner
- Practitioner

Training Options

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Sample Questions

- Which three network types are configured automatically for the first network bonding of a Oracle VM Server?
  A. Management
  B. Virtual Machine
  C. Cluster Heartbeat
  D. Live Migration
  E. Storage
Topic 11: Troubleshooting

Objectives

- Explain which Log Files are used with Oracle VM Server/VM Manager  
  Level: Learner
- Troubleshoot problems with the Oracle VM Server Components  
  Level: Practitioner
- Examine the Xen Internal Systems to solve common problems  
  Level: Practitioner
- Explain Xen Commands for troubleshooting network issues  
  Level: Learner
- Troubleshoot problems with the OVS Agent  
  Level: Practitioner
- Troubleshoot issues with Attached Storage Arrays  
  Level: Practitioner
- Explain troubleshooting methods for common problems  
  Level: Learner

Training Options

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Sample Questions

- Which command will be used to show running Guest VMs on an Oracle VM Server?
  A. xm info
  B. xm list
  C. prstat
  D. ps -ef
Exam Registration

• **How to register for the exam?**
  You can register for all Oracle certification exams with Pearson VUE. Before a registration can be submitted, a Pearson VUE profile must be created using your Company ID. Your Company ID can be obtained by contacting your local Oracle Partner Business Center or by signing in to your OPN account. Your Company ID is located in the section on the right under "Company information".

  Please follow these instructions in order to properly set-up your Pearson VUE account for the first time.

• **Have you completed an Oracle Certification Exam in the past?**
  Due to systems enhancements, each partner who has completed an Oracle Certification Exam will need to update their Pearson VUE profile in order to receive credit and for those records to appear in the OPN Competency Center.

• **How to get full recognition as Certified Implementation Specialist?**
  To get full recognition as a Certified Implementation Specialist you need to:
  A. Update your Pearson VUE profile with your Company ID
  B. Activate your Certview Account

  Please follow these instructions and your records will be properly recorded.
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