Oracle Exadata Database Machine and Cloud Service 2017 Implementation Essentials Exam Study Guide
Getting Started

The Oracle Exadata Database Machine and Cloud Service 2017 Implementation Essentials Study Guide is designed to help you prepare for the Oracle Exadata Database Machine and Cloud Service 2017 Implementation Essentials exam. Earning this certification helps OPN members differentiate in the marketplace through proven in-depth expertise and helps their partner company qualify for the Oracle Exadata Database Machine Specialization.

Target Audience

Oracle Exadata Database Machine and Cloud Service 2017 Implementation Essentials exam audience defines the type of participants who are likely to pass the exam and targets individuals with a specific level of education and expertise:

* **Job Role:**
  - Technical Implementers
  - Technical workers with a strong foundation and expertise in implementing Oracle Linux based solutions

* **Level of Competency:**
  - Candidates should have 2-4 years of field experience.
  - Participants should possess good knowledge of key technologies like: Oracle Database, Oracle Linux.
  - Deep experience in at least one other Oracle product family is highly recommended.

Exam Topics

The Oracle Exadata Database Machine and Cloud Service 2017 Implementation Essentials covers 8 topics:

- Oracle Database Software
- Oracle Exadata Architecture
- Administration and Configuration
- Backup and Recovery
- Monitoring
- Software Maintenance
- Resource Management
- Exadata in the Cloud
Levels of Knowledge

Each exam topic contains objectives and each objective is categorized as either a learner or practitioner level of knowledge.

**Learner** items test foundational grasp and require product comprehension (not recognition or memorization).

Example:

“When setting up price list modifiers in Advanced Pricing, which three steps must be completed in order to successfully activate surcharge and price break features?”

**Practitioner** items present on-the-job scenarios and require the ability to: integrate and apply knowledge in new contexts, analyze and troubleshoot complex issues, and solve problems.

Example:

1) “You are creating price list modifiers in Advanced Pricing. Your customer has three requirements: X, Y, Z. Identify the two steps that must be completed in order to meet those requirements.

2) “You are running a two-instance database with six redo logs defined. You decide to add a third thread to support a third database instance, on the third node of the cluster. Using command line administration, which two commands will you execute to achieve this?”

Training Options

Throughout the study guide each exam topic recommends one or several training/documentation titles:

**Recommended Training**

Online Training - recorded or live virtual training sessions
OPN Boot Camps - a combination of classroom lectures, hands-on lab exercises, and case studies
Oracle University Training - instructor-led in-class training, live virtual class, on-demand training

**Recommended Documentation**

Oracle Documentation – product manual in on-line format
Product tutorials - on-line information on how to use the product
Datasheets and white papers - documents that summarize the performance and other technical characteristics of a product, machine, component
Books – product information written text that published in printed or electronic form

While the Oracle PartnerNetwork facilitates free access to online training, in class trainings often require a fee.
Exam Details per Topic

This section covers details associated to all exam topics such as: exam topics overview, objectives, levels of knowledge, recommended trainings and sample questions. Specialization exams include all application functionalities not only the most frequently used ones.

**Topic 1: Oracle Database Software**

**Objective**

- Use common database features
- Leverage performance features

**Level**

- Practitioner
- Practitioner

**Recommended Training**

Online Training
- Oracle Exadata Database Machine 2016 Certified Implementation Specialist

**Recommended Documentation**

Oracle Documentation
- Exadata Database Machine Documentation

**Sample Questions**

Which command would you use to stop your customers entire RAC cluster prior to rebooting the server?

A. CELLCLI  
B. SRVCTL  
C. CRSCTL  
D. DCLI  
E. CellCLI Shutdown services ms
## Topic 2: Oracle Exadata Architecture

### Objective

<table>
<thead>
<tr>
<th>Objective</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Describe offloading processing</td>
<td>Learner</td>
</tr>
<tr>
<td>• Describe Oracle Exadata software architecture</td>
<td>Learner</td>
</tr>
<tr>
<td>• Use Smart Flash Cache</td>
<td>Practitioner</td>
</tr>
<tr>
<td>• Enable Flash Cache Write Back</td>
<td>Practitioner</td>
</tr>
<tr>
<td>• Enable Advanced Compression and HCC on Exadata tables</td>
<td>Practitioner</td>
</tr>
<tr>
<td>• Describe storage indexes</td>
<td>Learner</td>
</tr>
<tr>
<td>• Describe Oracle recommended configurations for HA configurations</td>
<td>Learner</td>
</tr>
<tr>
<td>• Enable parallelism for Data Warehouse workloads</td>
<td>Practitioner</td>
</tr>
<tr>
<td>• Describe the Power Distribution Unit</td>
<td>Learner</td>
</tr>
<tr>
<td>• Describe database and ASM-Scoped Security concepts</td>
<td>Learner</td>
</tr>
<tr>
<td>• Describe the importance and use of In-Memory Fault Tolerance</td>
<td>Learner</td>
</tr>
<tr>
<td>• Explain the differences between the types of storage servers</td>
<td>Learner</td>
</tr>
</tbody>
</table>

### Recommended Training

**Online Training**

- [Oracle Exadata Database Machine 2016 Certified Implementation Specialist](#)

### Recommended Documentation

**Oracle Documentation**

- [Exadata Database Machine Documentation](#)

### Sample Questions

Which three operations can be performed on the Exadata Storage Servers?

A. **Predicate Filtering**  
B. Aggregation  
C. **Storage Index Processing**  
D. Table Scans  
E. Data Conversion
Topic 3: Administration & Configuration

Objective

- Compress data using Advanced Compression and HCC
  Level: Practitioner
- Use network configuration options
  Level: Practitioner
- Create and configure ASM disk groups using Exadata
  Level: Practitioner
- Explain the impact of various diskgroup failure group choices
  Level: Learner
- Install software onto the Exadata Database Machine
  Level: Practitioner
- Administer physical disks on Exadata
  Level: Practitioner
- Describe various tasks that can be done with the ILOM console
  Level: Learner
- Identify failure scenarios and implement recovery procedures
  Level: Practitioner
- Install high availability software onto the Exadata Database Machine
  Level: Practitioner
- Set up an Automatic Service Request (ASR) on the Database Machine
  Level: Practitioner
- Describe network components in Exadata
  Level: Learner
- Create a database snapshot on Exadata for testing purposes
  Level: Practitioner

Recommended Training

Online Training

- Oracle Exadata Database Machine 2016 Certified Implementation Specialist

Recommended Documentation

Oracle Documentation

- Exadata Database Machine Documentation
Sample Questions

Your customer has a very large table that is accessed very infrequently, they would like to load this table onto their Exadata Database Machine, but are critically low on space and would like to compress the table as much as possible. They are looking for recommendations on the strategy to use. Select the best method.

A. Load this table using Advanced Compression
B. Load this table using a combination of Hybrid Columnar Compression, Advanced Compression and Basic Compression
C. Load this table with Hybrid Columnar Compression set to ARCHIVE HIGH
D. Load this table with Hybrid Columnar Compression set to QUERY LOW

Topic 4: Backup and Recovery

Objective

- Create a backup plan for Exadata
- Implement recovery procedures on different failure scenarios
- Describe troubleshooting tasks for Backup and Recovery processes
- Recover Storage Cells from Disk Failure
- Describe how the Exadata Storage Servers are backed up internally

Level

Practitioner
Practitioner
Learner
Practitioner
Learner

Recommended Training

Online Training
- Oracle Exadata Database Machine 2016 Certified Implementation Specialist

Recommended Documentation

Oracle Documentation
- Exadata Database Machine Documentation
Sample Questions

- Your customer is keen to ensure that they select the best tape based backup strategy on their Exadata Database Machine.
  
  A. Daily full RMAN backups that take advantage of Exadata’s speed and performance
  B. Weekly full RMAN tape backups and daily incremental RMAN tape backups
  C. Weekly full RMAN disk based backups and daily incremental RMAN backups
  D. Tape based backups are not recommended on the Exadata Database Machine

Topic 5: Monitoring

Objective

- Install an Enterprise Manager Exadata Monitoring plug-in
- Set up an agent, plugin, and Exadata target for EM Cloud Control
- Monitor the storage cell using the CellCLI and the DCLI
- Describe the purpose and uses for SNMP, IPMI, and ILOM
- Use osWatcher and iostat to monitor the operating system
- Use exacli and dbcli to monitor storage cells

Recommended Training

Online Training

- Oracle Exadata Database Machine 2016 Certified Implementation Specialist

Recommended Documentation

Oracle Documentation

- Exadata Database Machine Documentation
Sample Questions

- Which CellCLI command will shut down the ms, rs, and cellsrv services on Exadata?

  A. CellCLI > alter cell shutdown ms, rs, cellsrv
  B. CellCLI > alter cell stop ms, rs, cellsrv
  C. CellCLI > alter cell shutdown services all
  D. CellCLI > alter cell all shutdown
  E. CellCLI > alter cell shutdown ms; alter cell shutdown rs, alter cell shutdown cellsrv

Topic 6: Software Maintenance

Objective

- Describe software components
- Apply Oracle recommendations to the patching process for Exadata
- Describe the Oracle Configuration Manager
- Explain and troubleshoot planned maintenance of the Exadata machine
- Describe how to use the OEDA to create virtual machines on Exadata

Level

- Learner
- Practitioner

Recommended Training

Online Training

- Oracle Exadata Database Machine 2016 Certified Implementation Specialist

Recommended Documentation

Oracle Documentation

- Exadata Database Machine Documentation
Sample Questions

- Your customer would like to apply patches to the Exadata Database Machine to match their current patching schedule. Currently, servers are patched twice per year, databases are patched quarterly, operating systems are patched monthly. Will your customer be able to patch the various components of the Exadata Database Machine on the same schedule? Select the best answer and reason.

  A. Yes, patches are delivered from Metalink on a monthly schedule
  B. No, patches are delivered quarterly and the OS, firmware, storage server and database server patches are delivered together
  C. Yes, patches are delivered via Platinum Support. OS and firmware patches are available monthly, CPU patches are available for download once per quarter.
  D. No, patches for the os, firmware, storage server and database server are available once per year.

Topic 7: Resource Management

Objective

- Set up Database Resource Management
- Configure I/O Resource Management
- Set up instance caging
- Manage I/O on Exadata

Recommended Training

Online Training

- Oracle Exadata Database Machine 2016 Certified Implementation Specialist

Recommended Documentation

Oracle Documentation

- Exadata Database Machine Documentation
- Exadata Metalink Note 888828.1
Sample Questions

- You have recommended that your customer use IORM in order to distribute disk bandwidth among multiple databases on an Exadata system. Which strategy could this action potentially help out with?

  A. OLTP  
  B. Consolidation  
  C. Big Data Analytics performance  
  D. SQL statement tuning  
  E. Grid infrastructure optimization

Topic 8: Exadata in the Cloud

Objective

- Describe the Oracle Exadata Cloud Service provisioning process
- Configure backup and recovery on the Exadata Cloud Service
- Set up service roles and user accounts in the Oracle cloud
- Administer the Oracle Database on the Exadata Cloud Service
- Administer the Oracle Database on the Exadata Cloud Machine

Level

- Learner
- Practitioner

Recommended Training

Online Training

- Oracle Exadata Database Machine 2016 Certified Implementation Specialist

Recommended Documentation

Oracle Documentation

- Exadata Database Machine Documentation
Sample Questions

- Which Oracle Cloud service can be deployed as a quarter, half, or full rack?
  
  A. Big Data Analytics Cloud Service  
  B. Oracle Infrastructure as a Service Cloud  
  C. Oracle Database Express  
  D. **Oracle Exadata Cloud Service**

Exam Registration Details

Full exam preparation details are available on the exam page [Oracle Exadata Database Machine and Cloud Service 2017 Implementation Essentials (1Z1-338)](https://education.oracle.com), including learning objectives, number of questions, time allowance, pricing and languages available.

The OPN Certified Specialist Exams appointments are available worldwide at [Pearson VUE Testing Centers](https://www.pearsonvue.com). Reservations can be made via phone or online.

Candidates must have an Oracle Web Account to access [CertView](https://certview.oracle.com) and check their exam results. In order to have their certifications reflected on [OPN Competency Center](https://www.oracle.com/education/opn.html), both CertView and Pearson Vue accounts must be updated with the current OPN Company ID. Your Company ID can be obtained by contacting your local [Oracle Partner Business Center](https://www.oracle.com/germany/partner-business-center.html) or by signing in to your [OPN account](https://education.oracle.com).

Additional Resources

- [Oracle Exadata Database Machine Knowledge Zone](https://education.oracle.com)
- [Oracle Exadata Database Machine Specialization](https://education.oracle.com)
- [OPN Guided Learning Paths & Assessments](https://education.oracle.com)
- [OPN Certified Specialist Exam Study Guides](https://education.oracle.com)