



# Oracle

## Exam 1z0-485

### Oracle Exadata Database Machine 2014 Implementation Essentials

Version: 6.0

[ Total Questions: 71 ]

### Question No : 1

Exadata Database Machine offers an Intelligent Platform Management Interface for the various components in the Exadata product. Which option is true?

- A. IPMI can be used to remotely start and stop servers.
- B. IPMI can be used to remotely log in to the operating system.
- C. IPMI commands can be executed by using SNMP traps.
- D. IPMI settings can be secured by backing up the Oracle Linux installation on the storage system.

### Answer: A

**Explanation:** IPMI – short for Intelligent Platform Management Interface - is an interface standard that allows remote management of a server from another using standardized interface. The servers in the Exadata Database Machine follow that. It's not an Exadata command but rather a general Linux one.

To power on a cell or database server, issue this from another server:

```
# ipmitool -H procl01-ilom -U root chassis power on
```

To stop a server, use the shutdown command. To stop immediately and keep it down, i.e. not reboot, execute:# shutdown -h -y now

### Question No : 2

Which is the best location to point your customer to, for finding the latest Exadata patches?

- A. owner's guide
- B. Patch database in MyOracle Support
- C. MyOracle Support note 888828.1
- D. MyOracle Support for database patches, ULN for OS patches, and Sun Support for Server and InfiniBand patches.

### Answer: B

**Explanation:** Before starting, we would like to share and note here two documents from My Oracle Support, aka metalink. These notes must be the first place that you need to go to review before patching the Exadata environment.

\* (B) Database Machine and Exadata Storage Server 11g Release 2 (11.2) Supported

Versions (Doc ID. 888828.1)

- This is for the second and third generation (V2 and X2) for Oracle Exadata, using Sun hardware.

\* Database Machine and Exadata Storage Server 11g Release 1 (11.1) Supported

Versions (Doc ID. 835032.1)

\* - This is for the first generation (V1) for Oracle Exadata, using HP hardware.

### Question No : 3

A customer has three databases named CC, FIN, and DW. The CC database is for their CallCenter. Even a slight decrease in the response time of the database would mean more people "on hold" in their data center. The orders received through the CallCenter are stored in the Finance (FIN) database. Both databases, CC and FIN, serve as sources for the Data Warehouse (DW) database. All databases use the same Automatic Storage Management (ASM) diskgroup and therefore, the same physical disks on Exadata storage. The customer wants to dynamically control the resources that are available for the CallCenter database because this has direct impact on their operations?

Which option should be implemented?

- A. DBRM on the CC database
- B. DBRM on all the databases
- C. IORM, because DBRM cannot be changed for an existing session
- D. IORM and DBRM

**Answer: B**

**Explanation:** Using the Database Resource Manager, you can:

Distribute available processing resources by allocating percentages of CPU time to different users and applications. In a data warehouse, a higher percentage may be given to ROLAP (relational on-line analytical processing) applications than to batch jobs.

### Question No : 4

Consider the following software changes that are performed manually on a Linux server:

1. Changes for Linux kernel firewall configuration
2. Changes for custom performance monitoring tools
3. Changes for security scan tools
4. Changes for Linux system performance optimization

Which of the software changes listed are permitted on Exadata Storage Servers?

- A. 1, 2, 3, and 4
- B. only 3
- C. none
- D. only 2
- E. only 1 and 2
- F. only 2 and 3

**Answer: E**

**Explanation:** 1: The Storage Server Patch is responsible for keeping our cell nodes always up-to-date, fixing possible problems, and this patch includes different component patches, like kernel patches, firmware, operation system, etc... for the Storage Server.

Incorrect:

3,4: security scan tools changes and Linux system performance optimization changes would be on the database server.

### Question No : 5

Which two statements are true about enabling write-back flash cache?

- A. When enabling write-back flash cache in a non rolling manner, it is important to ensure that `asmdeactivationoutcome` is set to YES and `asmModestatus` is set to ONLINE for all grid disks.
- B. Before using write-back flash cache, you need to verify the minimum required versions.
- C. Before write back-flash cache is enabled, you need to drop the Flash Cache first.
- D. The setting `flashCacheMode` should be set to `writeback` by updating `cellinit.ora` and restarting `cellsrv`.
- E. When enabling write-back flash cache in a rolling manner, `dcli` should be used to inactivate the grid disks on all cells first.

**Answer: B,C**

**Explanation:** B: Exadata storage version 11.2.3.2.1 is the minimum version required to use this write back flash cache option.

C: Steps for Enabling Write back flash cache:

First of all, you don't need the stop CRS or database (This is ROLLING method) ,you can do it cell by cell.

\* drop flashcache

\* Be sure asmdeactivationoutcome is YES is before disabling grid disk

### Question No : 6

Consider the following setup:

User A1 belongs to resource group High on Database A.

User B2 belongs to resource group Low on Database B.

User C3 is a user on Database C without any DBRM setup.

DBRM setup:

Database A: Resource group High gets 80% and Low gets 20%.

Database B: Resource group High gets 60% and Low gets 40%.

IORM setup:

Database A: Share=20, limit=5

Database B: Share=30, limit=10

Database C: 5 shares

Total number of shares in the IORM setup = 100

What percent of I/O will each database user theoretically be using when the Exadata storage unit I/O throughout is used 100% and no other databases but A, B, and C are running?

- A. A1 = 36%, B2=18%, and C3=9%
- B. A1 = 33%, B2=33%, and C3=33%
- C. A1 = 10%, B2=5%, and C3=20%
- D. A1 = 8%, B2=12%, and C3=5%
- E. A1 = 5%, B2=10%, and C3=85%

**Answer: E**

**Explanation:** IORM setup limits Database A to 5%, and Database B is limited to 10%, while Database C has not IORM limit.  
Not that the resource groups are for CPU allocation.

### Question No : 7

Consider this CellCLI command:

```
CellCLI> CREATE GRIDDISK ALL HARDDISK PREFIX=data, size=423G;
```

Which two statements describe what happens when you execute this command?

- A. It creates one 423 GB grid disk on the first available cell hard disk.
- B. It creates one 423 GB grid disk on each available cell hard disk.
- C. It creates grid disks on the outermost 423 GB that is available on each hard disk.
- D. It creates grid disks on the innermost 423 GB that is available on each hard disk.
- E. It creates an Exadata Smart Flash Cache on all flash drives.

**Answer: B,C**

**Explanation:** \* Example:

```
CellCLI> create griddisk all harddisk prefix=temp_dg, size=570G
```

This command will create 12 Griddisks, each of 570G in size from the outer (fastest) sectors of the underlying Harddisks. It fills up the first 2 Celldisks entirely, because they have just 570G space free – the rest is already consumed by the OS partition.

### Question No : 8

You get a Host Unreachable error when you attempt to connect to a server through a

network terminal command line. What are two other ways in which you can connect?

- A. Use the ILOM Web GUI.
- B. Use the dcli command at the root prompt on a database node.
- C. Attach a terminal device to the back panel of the server with a serial cable.
- D. Connect by using SQL \*Plus.
- E. Log in as root on the database node using the Net1 IP address.

**Answer: A,C**

**Explanation:** In addition to gaining shell access via SSH to manage your Exadata servers, you can also access them from the Integrated Lights Out Management (ILOM) console or KVM console.

and should typically not require modifications unless you have changed network information inside your database machine.

Note: A KVM switch (with KVM being an abbreviation for "keyboard, video and mouse") is a hardware device that allows a user to control multiple computers from one or more[1] keyboard, video monitor and mouse. Although multiple computers are connected to the KVM, typically a smaller number of computers can be controlled at any given time

### Question No : 9

Identify three best practices for applying asmdeactivationoutcome es on Exadata Database Servers and Exadata Storage Servers?

- A. Backing up database servers and storage cells is not recommended before performing planned maintenance.
- B. Database server updates can be rolled back using the the "yum downgrade" procedure.
- C. Bundle patches do not require testing before being installed on a production system.
- D. It is recommended that Exadata systems with Data Guard configured use the "Standby First" patching approach.
- E. Patching should never be interrupted due to a connection drop. It is therefore recommended that you use VNC or the screen utility.
- F. Before patching cells in a rolling manner, you must check asmdeactivationoutcome amModestatus and make sure that cells on all disks are online and that disks can be

deactivated.

**Answer: D,E,F**

**Question No : 10**

The mpstat output from OS Watcher shows a database node as being 90% idle on an average. What would you do to get a full picture of CPU utilization on the entire Exadata RAC cluster?

- A. Average the mpstat id1 output from all the nodes.
- B. Ask application users if they have noticed a slowdown in screen response.
- C. Look for an increase in batch job servicing times.
- D. A & B above

**Answer: A**

**Question No : 11**

Which two attributes describe key benefits of the InfiniBand network?

- A. All Exadata database servers have a direct path link to each Exadata Storage Server.
- B. Cell-to-cell communication uses Reliable Datagram Sockets (RDS) over InfiniBand to achieve low latency.
- C. Expanding from two Full racks to four only requires adding an external InfiniBand switch to be at the top of the fat-tree topology.
- D. Each InfiniBand link provides 10 Gigabits of bandwidth.
- E. Oracle's interconnect protocol uses direct memory access (DMA) to eliminate buffer copies and reduce CPU use.

**Answer: C,E**

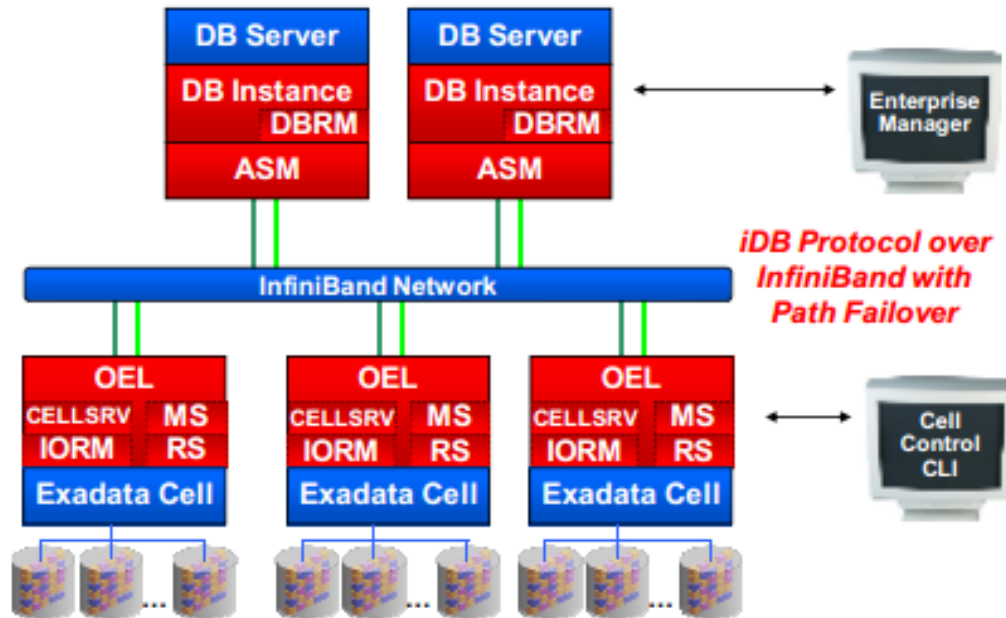
**Explanation:** C: Oracle Exadata is architected to scale-out to any level of performance. To achieve higher performance and greater storage capacity, additional database servers and Exadata cells are added to the configuration – e.g., Half Rack to Full Rack upgrade. As more Exadata cells are added to the configuration, storage capacity and I/O performance increases near linearly.



E: Oracle's interconnect protocol uses direct data placement (DMA – direct memory access) to ensure very low CPU overhead by directly moving data from the wire to database buffers with no extra data copies being made. The InfiniBand network has the flexibility of a LAN network, with the efficiency of a SAN.

Incorrect:

Not A: The architecture of the Exadata solution includes components on the database server and in the Exadata cell. The software architecture for a Quarter Rack configuration is shown below.



Not B: No cell-to-cell communication is ever done or required in an Exadata configuration.

Not D: Each InfiniBand link provides 40 Gigabits of bandwidth –

### Question No : 12

Identify three Exadata Storage Server software processes and their purpose?

- A. CELLSRV: The Cell Server is responsible for servicing disk I/O and predicate processing offload.
- B. CELLSRV: The Cell Server is responsible for balancing workload to other storage servers.
- C. MS: The Management Server is responsible for storage cell management and configuration.
- D. MS: The Management Server is responsible for starting a local Enterprise Manager

agent.

**E.** RS: The Restart Server is responsible for Automatic Storage Management (ASM) instance restart.

**F.** RS: The Restart Server is responsible for CELLSRV and MS monitoring and restart.

**Answer: A,C,F**

**Explanation:** A: CELLSRV (Cell Services) is the primary component of the Exadata software running in the cell

and provides the majority of Exadata storage services. CELLSRV is multi-threaded software that

communicates with the database instance on the database server, and serves blocks to databases

based on the iDB protocol. It provides the advanced SQL offload capabilities, serves Oracle

blocks when SQL offload processing is not possible, and implements the DBRM I/O resource

management functionality to meter out I/O bandwidth to the various databases and consumer

groups issuing I/O.

**C:** The MS is the primary interface to administer, manage and query the status of the Exadata cell. It works in cooperation with the Exadata cell command line interface

(CLI) and EM Exadata plug-in, and provides standalone Exadata cell management and configuration. For example, from the cell, CLI commands are issued to configure storage, query

I/O statistics and restart the cell. Also supplied is a distributed CLI so commands can be sent to

multiple cells to ease management across cells.

**F:** Restart Server (RS) ensures the ongoing

functioning of the Exadata software and services. It is used to update the Exadata software. It

also ensures storage services are started and running, and services are restarted when required.

### Question No : 13

Which two statements are true about troubleshooting failed patching activities?

- A. Dependency issues found during yum updates require rolling back to a previous release before retrying.
- B. Bundle patches applied using opatch auto cannot roll back only the database or the grid infrastructure home.
- C. Failed OS patches on database servers can be rolled back.
- D. Failed storage cell patches are rolled back to the previous release automatically.
- E. Database server OS updates can be rolled back using opatch auto -rollback.
- F. Dependency issues found during yum updates should be ignored using the force option.

**Answer: A,E**

**Explanation:** \* Oracle has shifted the strategy to patching the exadata in 11.2.3.2.0 onwards to using Yum as the method of patching.

\* Database servers are patched using yum; there is a yum channel for each Exadata image version. Recently, this functionality replaced the “minimal pack.”

\* In the README for each storage server patch, Oracle provides detailed rollback instructions that are to be followed in the event of a patch failure.

#### Question No : 14

Which two DML operations will add rows compressed by Hybrid Columnar Compression (HCC) to a table that is created to use HCC?

- A. INSERT
- B. insert with an append hint
- C. UPDATE
- D. CREATE TABLE AS SELECT

**Answer: B,D**

**Explanation:** To maximize storage savings with Hybrid Columnar Compression, data must be loaded using data warehouse bulk loading techniques. Examples of bulk load operations commonly used in data warehouse environments are:

- \* Insert statements with the APPEND hint
- \* Parallel DML
- \* Direct Path SQL\*LDR
- \* Create Table as Select (CTAS)

Incorrect:

Not A, Not C: DML operations (INSERT/UPDATE) against a Hybrid Columnar Compressed

table/partition can reduce the overall compression savings over time since data INSERTED/UPDATED via DML operations will not be compressed to the same ratio as data that is bulk loaded.

**Question No : 15**

Your customer wants to increase the size of the DATA diskgroup on the Exadata systems. The customer is currently using 600 GB disks. Which two are the best options that you would recommend?

- A. adding a High Capacity Storage expansion rack
- B. expanding the Exadata rack from a Half Rack to a Full Rack
- C. moving underutilized grid disks from the RECO diskgroup to DATA
- D. adding a ZFS storage appliance
- E. adding a High Performance Storage expansion rack

**Answer: A,B**

**Explanation:** A: Oracle Exadata Storage Expansion Rack X4-2 enables you to grow the Oracle Exadata storage capacity and bandwidth of Oracle Exadata Database Machine X4-2 and X3-8 and Oracle SuperCluster. It is designed for database deployments that require very large amounts of data, including historical or archive data; backups and archives of Oracle Exadata Database Machine data; documents; images; file and XML data; LOB's; and other large unstructured data.

**Question No : 16**

What are two choices that a customer must make that impact diskgroup creation?

- A. What is the level of redundancy required?
- B. What OS will be run?
- C. Where will disk backups be written?
- D. How many databases will run on the cluster?

**Answer: A,B**

**Explanation:** B: There are a number of ASM disk group attributes that you can set when creating your disk groups, but the following are the most important:

- \* (B) compatible.rdbms: Set this to the software version of your RDBMS home.
- \* au\_size: Set this to 4 MB.
- \* compatible.asm: Set this to the software version of your Grid Infrastructure home.
- \* cell.smart\_scan\_capable: Set this to TRUE. If this attribute is set to FALSE, Smart Scan will be disabled to segments that reside in the disk group.
- \* disk\_repair\_time: Leave this defaulted to 3.6 hours unless you're performing maintenance on a call and know that your outage window will be greater than 3.6 hours.

A:

Once you identify candidate grid disks, use the CREATE DISKGROUP command to create your ASM disk groups.

Here are some of the more important considerations to think about when creating ASM disk groups on Exadata:

- \* (A) When capacity planning, take your redundancy specification into consideration.

Normal

redundancy will have the effect of reducing your usable storage to half the raw capacity, and

high redundancy will shrink it to a third of your raw disk capacity.

- \* Simplicity is best on Exadata. Using wild-carded CREATE DISKGROUP syntax not only offers the most terse command syntax, but also ensures your ASM disk groups are spread evenly across your Exadata Storage Server disks.

- \* Take the time to plan grid disk prefix names and overall grid disk configuration in the context

of your desired ASM disk group design.

- \* Make sure to set the appropriate compatible.asm and compatible.rdbms attributes when creating ASM disk groups.

- \* Whenever possible, use a 4 MB extent size when creating disk groups on ASM storage.

### Question No : 17

When would be the best time to run an Exadata health check (exachk)?

- A. before patching, before upgrades, before backups, and on a regular basis
- B. after patching, after upgrades, and after backups

- C. only when advised by Oracle Support
- D. before and after patching, when advised by Oracle Support, and *on* a regular basis
- E. only after a hardware failure
- F. monthly and after a hardware failure

**Answer: D**

**Explanation:** #1: Check for updates frequently.

#2: Execute before & after system changes.

#3: Make part of regular planned maintenance

### Question No : 18

Which two statements describe correct network configuration for Exadata Database Machine?

- A. The InfiniBand network subnet manager runs on all database servers to achieve High Availability.
- B. Oracle Clusterware communication is configured to use the management network.
- C. The InfiniBand network interfaces on Linux servers are configured using active-passive bonding.
- D. Database connections to the SCAN listener route through the Ethernet switch in the Exadata rack.
- E. Database servers are deployed with three logical network interfaces configured: management, client access, and private.

**Answer: C,D**

**Explanation:**

Incorrect:

Not A: The InfiniBand switches use an OpenSM InfiniBand subnet manager to manage the switch configuration.

### Question No : 19

How would you execute CellCLI commands and scripts?

- A. using SQL\*Plus on database nodes
- B. by CellCLI commands executed on the database nodes
- C. using third party tools after installing the CellCLI RPM plug-in
- D. directly executing the commands and scripts on the Exadata storage cell
- E. remotely by connecting to Port 1521 using SSL

**Answer: D**

**Explanation:** The storage cells in Exadata Database Machine are managed via two tools called CellCLI and DCLI.

**Question No : 20 CORRECT TEXT**

Which two statements are true about migrating your database to Exadata?

- A) Because Exadata uses InfiniBand, in order to migrate your database to Exadata, you must have InfiniBand on the system that you are migrating from.
- B) Using Data Guard Physical Standby to migrate from an 11.1 database to Exadata is beneficial because it allows you to adopt HCC during migration.
- C) ASM and database best practice configuration supplied during Exadata deployment should be retained during and after migration,
- D) Logical migration methods allow more flexibility than physical methods to change the database structure for best performance.
- E) All indexes should be dropped when migrating to Exadata.

**Answer: CD**

**Answer:** Databases on Exadata use ASM.

Incorrect:

Not A: 3 network choices:

10 Gb/s Ethernet

40 Gb/s InfiniBand

1 Gb/s Ethernet

(No fibre channel)

**Question No : 21**