Oracle 1z0-515

Data Warehousing 11g Essentials

Version: 6.0

QUESTION NO: 1

Indentify the true statement about REF partitions.

A. REF partitions have no impact on partition-wise joins.
B. Changes to partitioning in the parent table are automatically reflected in the child table.
C. Changes in the data in a parent table are reflected in a child table.
D. REF partitions can save storage space in the parent table.

Answer: B

Explanation: Reference partitioning is apartitioningmethod introduced inOracle 11g. Using reference partitioning, a child table can inherit the partitioning characteristics from a parent table.

QUESTION NO: 2

Identify the control structure that would NOT be defined as part of a data flow with Oracle Data Integrator.

A. Loops
B. Conditions
C. Error handling
D. GOTOs

Answer: D

Explanation: GOTOs cannot be used within the Oracle Data Integrator.
Reference: DIJQR.pdf, Page 7 (Oracle Data Integrator)

QUESTION NO: 3

For which type of query is the SQL result cache automatically disabled?

A. Queries that access data which changes frequently
B. Queries that return large amounts of data
C. Queries that use SQL functions such as SYSDATE
D. Queries that are used infrequently

Answer: C

Explanation: SYSDATE produces a new value every time it is used. Caching such a value would

make no sense.

QUESTION NO: 4

Which is NOT among Oracle SQL Analytic functions included in Oracle Database 11g?

A. Ranking functions
B. Substring functions
C. Window aggregate functions
D. LAG/LEAD functions

Answer: B

Explanation:

Substring functions are not analytic.

QUESTION NO: 5

How many Exadata Storage Server cells can be used in a grid?

A. 7
B. 14
C. 128
D. No practical limit

Answer: D

Explanation: There is no practical limit to number of cells that can be in the grid.
Reference: Sun Oracle Exadata and Database Machine Overview

QUESTION NO: 6

Identify the action that you CANNOT perform using Database Resource Manager.

A. Define Consumer Groups.
B. Create rules to map sessions to Consumer Groups.
C. Define a Resource Plan.
D. Allocate individual CPUs to Consumer Groups.

Answer: D

Explanation: Oracle Database Resource Management (DRM) provides tools that allow any Oracle DBA to manage a database server's CPU resources effectively for application user groups and during different resource demand periods.

DRM consists of four basic components:
*Resource Consumer Groups(not A). A resource consumer group is a collection of users with similar requirements for resource consumption. Users can be assigned to more than one resourceconsumer group, but each user's active*session*can only be assigned to one resource consumer group at a time.
*Resource Plans (not C). In its simplest form, a resource plan describes the resources allocated to one or more resource consumer group(s).
*Resource Plan Directives (not B). Resource plan directives allocate resources among the resource consumer groups in the resource plan. Essentially, directives connect resource consumer groups or subplans to their resource plans.
* SYSTEM_PLAN. Oracle supplies an initial, default resource plan named SYSTEM_PLAN. This plan implements a CPU utilization resource allocation method to divide and prioritize CPU resources to three resource consumer groups

QUESTION NO: 7

You will be implementing a data warehouse for one of your customers. In your design process, which index type is most likely to be used to improve the performance of some queries where the data is of low cardinality?

A. Bitmap indexes
B. B*-tree indexes
C. Reverse indexes
D. Invisible indexes

Answer: A

Explanation: Bitmap indexes are a highly compressed index type that tends to be used primarily for data warehouses.
Characteristic of Bitmap Indexes
* For columns with very few unique values (low cardinality)
* Columns that have low cardinality are good candidates (if the cardinality of a column is <= 0.1 % that the column is ideal candidate, consider also 0.2% – 1%)
* Tables that have no or little insert/update are good candidates (static data in warehouse)
* Stream of bits: each bit relates to a column value in a single row of table

Reference: The Secrets of Oracle Bitmap Indexes,

http://www.akadia.com/services/ora_bitmapped_index.html

QUESTION NO: 8

You think that result set caching might provide some benefits for your current data warehouse scenario. You perform some analysis on the composition of the queries used in the scenario. Identify the result of the analysis that would indicate the most potential for improvement with result set caching.

A. The scenario consists mainly of queries that are used infrequently.
B. The scenario consists mainly of queries that work on data which changes frequently.
C. The scenario consists mainly of queries with long run times and small result sets.
D. All data warehouse scenarios will benefit from result set caching.

Answer: C
Explanation: As its name suggests, the query result cache is used to store the results of SQL queries for re-use in subsequent executions. By caching the results of queries, Oracle can avoid having to repeat the potentially time-consuming and intensive operations that generated the resultset in the first place (for example, sorting/aggregation, physical I/O, joins etc). The cache results themselves are available across the instance (i.e. for use by sessions other than the one that first executed the query) and are maintained by Oracle in a dedicated area of memory. Unlike our homegrown solutions using associative arrays or global temporary tables, the query result cache is completely transparent to our applications. It is also maintained for consistency automatically, unlike our own caching programs.
Reference: query result cache in oracle 11g, http://www.oracle-developer.net/display.php?id=503

QUESTION NO: 9

For data warehousing, identify the benefits that would NOT be provided by the use of RAC.

A. Distribute workload across all the nodes.
B. Distribute workload to some of the nodes.
C. Provide parallel query servers.
D. Provide high availability for all the operations.

Answer: B
Explanation:
WithOracle RACthe workload can be distributed access all cluster nodes, parallel query servers

can be provided through the Parallel Query tool, and high availability can be obtained through, for example, Oracle Clusterware.

Note: Oracle RAC (Real Application Clusters) is a cluster database with a shared cache architecture that overcomes the limitations of traditional shared-nothing and shared-disk approaches to provide highly scalable and available database solutions for all your business applications. Oracle RAC is a key component of Oracle's private cloud architecture. Oracle RAC support is included in the Oracle Database Standard Edition for higher levels of system uptime.

Reference: Data Warehousing on Oracle RAC Best Practices

QUESTION NO: 10

You want partitions to be automatically created when data that does not fit into current date range loaded. Which type of partitioning would you implement?

A. Hash
B. List
C. Invisible
D. Interval

Answer: D
Explanation: Interval Partitioning was introduced in 11g, interval partitions are extensions to range partitioning. These provide automation for equi-sized range partitions. Partitions are created as metadata and only the start partition is made persistent. The additional segments are allocated as the data arrives. The additional partitions and local indexes are automatically created.

Note: Partitioning is one of the most sought after options for data warehousing. Almost all Oracle data warehouses use partitioning to improve the performance of queries and also to ease the day-to-day maintenance complexities. Starting with 11G, more partitioning options have been provided and these should reduce the burden of the DBA to a great extent.

Reference: Partitioning in Oracle 11g, Oracle FAQs

QUESTION NO: 11

Identify the benefit of using interval partitioning.

A. Automatic creation of new partitions based on hash values
B. Automatic creation of new partitions based on the value of data being entered
C. Improved performance compared to range partitions
D. Automatic transfer of older partitions lower cost storage

Answer: B
Explanation: Interval Partitioning was introduced in 11g, interval partitions are extensions to range partitioning. These provide automation for equi-sized range partitions. Partitions are created as metadata and only the start partition is made persistent. The additional segments are allocated as the data arrives. The additional partitions and local indexes are automatically created.

Reference: Partitioning in Oracle 11g, Oracle FAQs

QUESTION NO: 12

Your customer wants to implement an ILM strategy. The customer must have which option when deploying Oracle's ILM Assistant to implement this strategy?

A. RAC
B. Partitioning
C. OLAP
D. Oracle Clusterware

Answer: B
Explanation: Information Lifecycle Management (ILM) is a set of policies and procedures for managing data during its lifetime.
The ILM Assistant manages information by recommending the correct placement of data on logical storage tiers as specified by a lifecycle definition, where a lifecycle definition describes the stages and storage tiers that data resides on during its lifetime.
Each stage specifies a retention period during which the data resides on a logical storage tier. A logical storage tier is a collection of Oracle tablespaces in which partitions may reside.

Note: Information today comes in a wide variety of types, for example an E-mail message, a photograph, or an order in an Online Transaction Processing System. Therefore, once you know the type of data and how it will be used, you already have an understanding of what its evolution and final destiny is likely to be.

One of the challenges facing each organization is to understand how its data evolves and grows, monitor how its usage changes over time, and decide how long it should survive, while adhering to

all the rules and regulations that now apply to that data. Information Lifecycle Management (ILM) is designed to address these issues, with a combination of processes, policies, software, and hardware so that the appropriate technology can be used for each stage in the lifecycle of the data.

Reference: Implementing Information Lifecycle Management Using the ILM Assistant

QUESTION NO: 13

Why does partitioning help parallelism with RAC?

A. The ability to do partition-wise joins reduces interconnect traffic.
B. Partitioning allows you to split data storage across nodes.
C. Partitioning reduces storage requirements.
D. RAC will spawn additional parallel servers to meet the needs of requesting applications.

Answer: A
Explanation: Partition-wise joins reduce query response time by minimizing the amount of data exchanged among parallel execution servers when joins execute in parallel. This significantly reduces response time and improves the use of both CPU and memory resources. In Oracle Real Application Clusters (RAC) environments, partition-wise joins also avoid or at least limit the data traffic over the interconnect, which is the key to achieving good scalability for massive join operations.

Partition-wise joins can be full or partial. Oracle decides which type of join to use.

Reference: Oracle® Database VLDB and Partitioning Guide, 11g Release 1 (11.1), 4Partitioning for Availability, Manageability, and Performance

QUESTION NO: 14

You are looking for some general design principles that could be used in designing every large scale data warehouse you create. Identify the principle that would have the widest applicability.

A. Partition your tables appropriately to produce partition-wise joins.
B. Always use a star schema or snowflake schema design.
C. Do as much analytics as possible in your BI tools.

D. Always use Oracle OLAP.

Answer: A

Explanation: Partition-wise joins can be full or partial. Oracle decides which type of join to use.
A full partition-wise join divides a large join into smaller joins between a pair of partitions from the two joined tables. To use this feature, you must equipartition both tables on their join keys, or use reference partitioning.
Oracle Database can perform partial partition-wise joins only in parallel. Unlike full partition-wise joins, partial partition-wise joins require you to partition only one table on the join key, not both tables.

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Reference: Oracle® Database VLDB and Partitioning Guide, 11g Release 1 (11.1), 4 Partitioning for Availability, Manageability, and Performance

QUESTION NO: 15

What is the difference between an ETL (Extraction Transformation Load) approach and an ELT (Extraction Load Transformation) approach to data integration? Select one.

A. ETL can operate between heterogeneous data sources.
B. ELT requires a separate transformation server.
C. ELT transforms data on the target server.
D. ELT cannot be used for incremental data loading.

Answer: C

Explanation:
There are two approaches to consider for data integration: ELT and ETL.
The difference between ETL and ELT lies in the environment in which the data transformations are applied. In traditional ETL, the transformation takes place when the data is en route from the source to the target system. In ELT, the data is loaded into the target system, and then transformed within the target system environment.

Reference: