HANA Certificated Development Practice Test (Sample)

Study Guide

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Questions

SAMPLE

1. **Which of the following are characteristics of an external view?**

   A. It allows access to an SAP HANA information view with Open SQL.

   B. It can be used as a data type in ABAP programs.

   C. It is an ABAP Dictionary object type.

   D. It can be used in Open SQL statements for database updates.

2. **What is crucial in the Performance Rules for ABAP on SAP HANA?**

   A. To keep loads within the database

   B. It is beneficial to move data-intensive calculations into the database

   C. Reducing main memory consumption and improving insert performance

   D. Only allow basic calculations in the database

3. **How do you launch the debugger when debugging an ABAP program using ABAP development tools (ADT)?**

   A. Set a breakpoint in the ABAP program and execute the program

   B. Choose the Debug option from the menu

   C. Create a debug configuration for the ABAP application

   D. Run the program without any preparation

4. **Regarding the use of transport containers, which is a critical function?**

   A. Snapshot creation of delivery units

   B. Export updates management

   C. Automatic imports

   D. Interdependent transport structuring

5. **What should you search for and potentially replace after migrating to an SAP HANA database?**

   A. Left outer joins in open SQL statements

   B. Native SQL statements

   C. Code that relies on implicit database sorting

   D. ORDER BY Clauses in Open SQL statements

6. **What does the CLOSE method do in the CL_SQL_RESULT_SET class?**

    A. Update resources

    B. Release resources

    C. Release packages

    D. Update packages

7. **What is the primary purpose of Static Code Analysis in SAP HANA development?**

    A. Integrates with SAP Solution Manager

    B. To detect code that could lead to functional or performance issues

    C. ABAP source code with performance optimization potential

    D. Integrated into ABAP Development Tools and ABAP Workbench

8. **What are the key components of SAP HANA's High Availability Per Datacenter feature?**

    A. Shared file systems for only one server

    B. High availability configuration

    C. Active clusters for all servers

    D. Services-Name and index server on all nodes

9. **Which features are associated with ABAP CDS?**

    A. Distribution

    B. Update

    C. Export

    D. All of the above

10. **How is SAP HANA primarily used as an Accelerator?**

    A. To reduce the time it takes to develop and deploy an application on SAP HANA

    B. To provide a way to vary the speed of SAP HANA in order to reduce resources

    C. To improve the speed of data loading to SAP HANA

    D. To work alongside a disk based database in order to speed up the read access for existing SAP applications

Answers

1. A
2. C
3. A
4. A
5. B
6. B
7. B
8. B
9. B
10. D

Explanations

1. Which of the following are characteristics of an external view?

A. It allows access to an SAP HANA information view with Open SQL.

B. It can be used as a data type in ABAP programs.

C. It is an ABAP Dictionary object type.

D. It can be used in Open SQL statements for database updates.

An external view in the context of SAP HANA is primarily designed to provide access to information views through Open SQL. This capability allows users to leverage the power of SQL queries to interact with the underlying data structures without needing to worry about the complexities of data model specifics. By enabling access to SAP HANA information views using Open SQL, external views create a bridge between ABAP applications and the data stored in HANA, thus enabling efficient data retrieval and manipulation. The other options represent characteristics that do not accurately describe external views. For instance, while external views integrate with ABAP, they do not serve as a data type in ABAP programs. Furthermore, external views are not classified as ABAP Dictionary object types; rather, they are linked to HANA's data modeling capabilities. Finally, while external views allow for data retrieval through SQL statements, they do not support database updates directly through Open SQL, which is a distinct function associated with different types of ABAP Dictionary objects. This differentiation highlights the specialized role that external views play in providing read access rather than full transactional capabilities.

2. What is crucial in the Performance Rules for ABAP on SAP HANA?

A. To keep loads within the database

B. It is beneficial to move data-intensive calculations into the database

C. Reducing main memory consumption and improving insert performance

D. Only allow basic calculations in the database

In the context of Performance Rules for ABAP on SAP HANA, the critical aspect is to reduce main memory consumption and improve insert performance. This principle is essential because SAP HANA is designed to leverage in-memory computing capabilities, and efficient use of memory can lead to enhanced performance. By optimizing memory consumption, applications can run more effectively without unnecessary bottlenecks, especially when handling large datasets. Improving insert performance is equally important; when data is inserted more efficiently, it enhances overall system throughput and reduces the time needed for batch processes and transactions. This means that the entire data processing architecture benefits from these optimizations, ensuring responsiveness and efficiency. While other answers address important practices, they do not encapsulate the overarching need to maintain low memory usage alongside high-performance data manipulation, which is the essence of tuning and optimizing applications on the SAP HANA platform.

3. How do you launch the debugger when debugging an ABAP program using ABAP development tools (ADT)?

A. Set a breakpoint in the ABAP program and execute the program

B. Choose the Debug option from the menu

C. Create a debug configuration for the ABAP application

D. Run the program without any preparation

To launch the debugger when debugging an ABAP program using ABAP Development Tools (ADT), setting a breakpoint in the ABAP program and then executing the program is indeed the correct approach.   When you set a breakpoint, it acts as a marker in your code that tells the debugger to pause execution at that specific point. This allows you to examine the program's state, inspect variables, and step through the code to diagnose issues or understand the flow of the application. When you execute the program after placing a breakpoint, the system will automatically trigger the debugger when that breakpoint is reached, providing you with a powerful tool for analyzing and correcting your code.   The other options do not accurately describe the proper way to initiate the debugger in ADT. While choosing a Debug option may seem intuitive, this option is not the standard method within ADT for debugger activation with an ABAP program. Similarly, creating a debug configuration, while useful for setting up execution contexts, does not directly launch the debugger. Finally, running the program without any preparation would not trigger the debugger, as there would be no breakpoints set to halt execution. Thus, the method of setting a breakpoint before executing the program is the most effective way to engage the debugging process in ABAP development.

4. Regarding the use of transport containers, which is a critical function?

A. Snapshot creation of delivery units

B. Export updates management

C. Automatic imports

D. Interdependent transport structuring

The critical function of transport containers is snapshot creation of delivery units. This function allows developers to capture the state of a delivery unit, including all the changes made to objects within that unit. By taking a snapshot, the transport container provides a way to consistently manage and transport changes across different systems, such as from a development environment to a production environment. The snapshot ensures that all necessary components are included and that the right versions of objects are moved together to maintain system integrity.   Snapshot creation is essential because it facilitates version control and aids in rollback scenarios if needed. Properly managing these snapshots helps in tracking changes, ensuring that deployments are consistent and minimizing errors during transport. This function is particularly critical in environments where multiple developers might be making changes simultaneously, as it helps avoid conflicts and ensures that all components are packaged accurately for transport.

5. What should you search for and potentially replace after migrating to an SAP HANA database?

A. Left outer joins in open SQL statements

B. Native SQL statements

C. Code that relies on implicit database sorting

D. ORDER BY Clauses in Open SQL statements

After migrating to an SAP HANA database, it is essential to search for and potentially replace native SQL statements. This is because SAP HANA supports a variety of SQL dialects and has specific optimizations and features that can improve both performance and functionality. Replacing native SQL statements ensures that developers leverage the full capabilities of HANA's in-memory architecture. In contrast, while other options address valid concerns, they may not be as critical to review in the same context as native SQL statements. For example, left outer joins may still be necessary depending on the application logic, and code relying on implicit sorting should be checked as it might behave differently in HANA. However, the focus on native SQL is particularly important because it directly impacts how the database interacts with the application logic, potentially leading to performance issues or functionality that isn't optimal in HANA's environment. Furthermore, while ORDER BY clauses can certainly influence performance and should be optimized as well, they are part of the broader SQL optimization processes rather than being a unique category requiring replacement post-migration. Therefore, focusing on native SQL statements aligns with best practices for ensuring effective adaptation to the HANA platform.

6. What does the CLOSE method do in the CL_SQL_RESULT_SET class?

A. Update resources

B. Release resources

C. Release packages

D. Update packages

The CLOSE method in the CL_SQL_RESULT_SET class is specifically designed to release resources associated with the result set obtained from executing SQL statements. When a developer retrieves data from a database using this class, a result set is created that occupies system resources such as memory and database connections. Calling the CLOSE method ensures that these resources are properly released and made available for other processes, preventing potential memory leaks or resource exhaustion. This is crucial for maintaining optimal performance and stability within an application. Efficient resource management is a key aspect of working with databases in any programming environment, including SAP HANA, where data handling and performance are of utmost importance. The other options do not accurately describe the functionality of the CLOSE method, as it does not update or release packages, nor does it address resource updating.

7. What is the primary purpose of Static Code Analysis in SAP HANA development?

A. Integrates with SAP Solution Manager

B. To detect code that could lead to functional or performance issues

C. ABAP source code with performance optimization potential

D. Integrated into ABAP Development Tools and ABAP Workbench

The primary purpose of Static Code Analysis in SAP HANA development is to detect code that could lead to functional or performance issues. This process involves analyzing source code without executing it to identify potential problems such as coding standards violations, performance bottlenecks, and logical errors. By flagging these issues early in the development lifecycle, developers can address them proactively, ensuring higher code quality and better performance of the application. Static Code Analysis helps maintain clean code practices, optimize performance, and reduce the risk of bugs, ultimately leading to more reliable and efficient applications when deployed in SAP HANA environments. Other options, while relevant to the broader context of SAP development, do not capture the essence of Static Code Analysis specifically focusing on identifying problematic code in terms of functionality and performance.

8. What are the key components of SAP HANA's High Availability Per Datacenter feature?

A. Shared file systems for only one server

B. High availability configuration

C. Active clusters for all servers

D. Services-Name and index server on all nodes

The key components of SAP HANA's High Availability Per Datacenter feature include a high availability configuration, which is fundamental to ensuring that the system can withstand failures of individual components without disrupting service. This configuration allows for the setup of backup systems that can take over in case the primary system fails, thereby maintaining continuous operation and minimizing downtime. In a high availability scenario, instances are set up across different nodes, and they work together to provide reliable access to data and services. The focus on high availability configurations ensures that data redundancy and real-time data replication are implemented, supporting business continuity seamlessly. While other options may touch on relevant aspects of high availability within an SAP HANA environment, they do not capture the complete essence of the high availability configuration itself. For instance, shared file systems and active clusters pertain to certain configurations and setups but do not encapsulate the broader concept of a high availability architecture that aims at system resilience. The fourth option, mentioning services running on all nodes, while crucial, does not emphasize the configurational aspect that is central to ensuring high availability.

9. Which features are associated with ABAP CDS?

A. Distribution

B. Update

C. Export

D. All of the above

ABAP CDS, or Core Data Services, is a framework that allows developers to define a semantic data model in ABAP. The key features associated with ABAP CDS include the ability to provide a structured way of consuming and distributing data efficiently. When it comes to the update capability directly inherent to CDS views, they are primarily designed for data retrieval rather than modification. While you can use CDS views to expose data objects in a read-only manner, they do have the capability to define associations and create derived entities, but they don't inherently support update operations like traditional database tables do. The notion of distribution in CDS relates more to the scenarios where data is accessed from various sources or distributed across different systems rather than being a direct feature of the CDS construct itself. Similarly, while export might refer to the ability to expose data, it doesn't capture the core functionalities that ABAP CDS is meant to feature. Understanding this context clarifies why the answer that indicates only "Update" does not fully encapsulate the more comprehensive nature and features of ABAP CDS. Generally, it's essential to recognize that defining and utilizing ABAP CDS revolves around data modeling and efficient retrieval, rather than direct update capabilities which are more nuanced in practice.

10. How is SAP HANA primarily used as an Accelerator?

A. To reduce the time it takes to develop and deploy an application on SAP HANA

B. To provide a way to vary the speed of SAP HANA in order to reduce resources

C. To improve the speed of data loading to SAP HANA

D. To work alongside a disk based database in order to speed up the read access for existing SAP applications

SAP HANA is primarily utilized as an Accelerator in the context of working alongside a disk-based database to enhance the performance of existing SAP applications. This approach leverages the in-memory computing capabilities of HANA to significantly speed up read access times, allowing for faster query responses and improved overall application performance. The integration of SAP HANA with traditional disk-based databases enables organizations to optimize data retrieval processes. By placing frequently accessed or critical data in HANA's in-memory store, applications can achieve rapid data access and processing speeds that are not achievable with disk-based systems alone. This is particularly beneficial for performance-sensitive applications where response times are crucial. The other options highlight important features of SAP HANA but do not capture the primary role of HANA as an Accelerator in the context of existing disk-based systems. For instance, while reducing development time, varying processing speeds, or improving data loading speeds are valid considerations, they do not emphasize the specific functionality of enhancing read access in conjunction with traditional databases. This is a key aspect of HANA's architecture and its role in modernizing and accelerating application performance in existing ecosystems.