Microsoft

Exam 70-459

Transition Your MCITP: Database Administrator 2008 or MCITP: Database Developer 2008 to MCSE: Data Platform

Version: 8.4

[Total Questions: 113]

Topic 1, A. Datum
Overview

General Overview
A. Datum Corporation has offices in Miami and Montreal.

The network contains a single Active Directory forest named adatum.com. The offices connect to each other by using a WAN link that has a 5-ms latency.
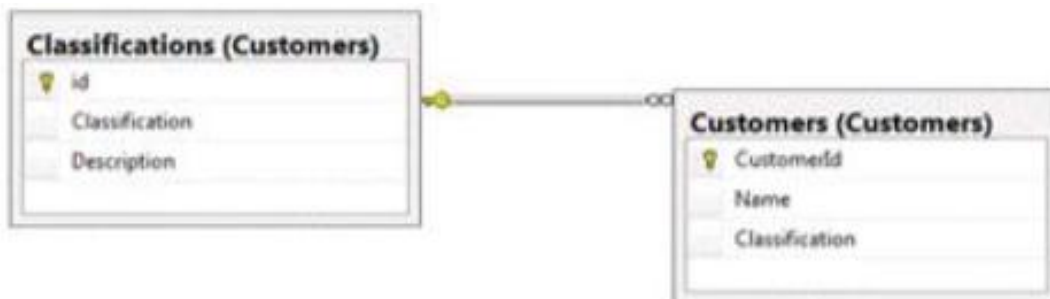
A. Datum standardizes its database platform by using SQL Server 2012 Standard edition.

Databases
Each office contains databases named Sales, Inventory, Customers, Products, Personnel, and Dev.

Servers and databases are managed by a team of database administrators. Currently, all of the database administrators have the same level of permissions on all of the servers and all of the
databases.

The Customers database contains two tables named Customers and Classifications. The following graphic shows the relevant portions of the tables:

The following table shows the current data in the Classifications table:

id	Classification	Description
1	Platinum	Yearly sales over 1,000,000
2	Gold	Yearly sales over 500,000
3	Silver	Yearly sales over 100,000

The Inventory database is used mainly for reports. The database is recreated every day. A full backup of the database currently takes three hours to complete.

Stored Procedures
A stored procedure named sp1 generates millions of rows of data for multiple reports. Sp1 combines data from five different tables from the Sales and Customers databases in a table named Table1.

After Table1 is created, the reporting process reads data from a table in the Products database and searches for information in Table1 based on input from the Products table. After the process is complete, Table1 is deleted.

A stored procedure named sp2 is used to generate a product list. Sp2 takes several minutes to run due to locks on the tables the procedure accesses.

A stored procedure named sp3 is used to update prices. Sp3 is composed of several UPDATE statements called in sequence from within a transaction. Currently, if one of the UPDATE statements fails, the stored procedure continues to execute.

A stored procedure named sp4 calls stored procedures in the Sales, Customers, and Inventory databases. The nested stored procedures read tables from the Sales, Customers, and Inventory databases. Sp4 uses an EXECUTE AS clause.

A stored procedure named sp5 changes data in multiple databases. Security checks are performed each time sp5 accesses a database.

You suspect that the security checks are slowing down the performance of sp5.

All stored procedures accessed by user applications call nested stored procedures. The nested stored procedures are never called directly.

Design Requirements

Data Recovery
You must be able to recover data from the Inventory database if a storage failure occurs. You have a Recovery Point Objective (RPO) of one hour.

You must be able to recover data from the Dev database if data is lost accidentally. You have a Recovery Point Objective (RPO) of one day.

Classification Changes
You plan to change the way customers are classified. The new classifications will have four levels based on the number of orders. Classifications may be removed or added in the future.

Management requests that historical data be maintained for the previous classifications.

Security

A group of junior database administrators must be able to view the server state of the SQL Server instance that hosts the Sales database. The junior database administrators will not have any other administrative rights.

Storage

A. Datum has limited storage. Whenever possible, all storage space should be minimized for all databases and all backups.

Error Handling

There is currently no error handling code in any stored procedure. You plan to log errors in called stored procedures and nested stored procedures. Nested stored procedures are never called directly.

Question No : 1 - (Topic 1)

You need to recommend a solution for the planned changes to the customer classifications.

What should you recommend? (Each correct answer presents part of the solution. Choose all that apply.)

A. Add a row to the Customers table each time a classification changes.
B. Add columns for each classification to the Customers table.
C. Add a table to track any changes made to the classification of each customer.
D. Add a column to the Classifications table to track the status of each classification.
E. Implement change data capture.

Answer: C,D

Question No : 2 - (Topic 1)

You need to recommend a change to sp3 to ensure that the procedure completes only if all of the UPDATE statements complete.

Which change should you recommend?

A. Set the IMPLICIT_TRANSACTIONS option to off.
B. Set the XACT_ABORT option to off
C. Set the IMPLICIT_TRANSACTIONS option to on.
D. Set the XACT_ABORT option to on.

Answer: D

Explanation: References:

http://msdn.microsoft.com/en-us/library/ms188792.aspx

http://msdn.microsoft.com/en-us/library/ms188317.aspx

http://msdn.microsoft.com/en-us/library/ms187807.aspx

Question No : 3 - (Topic 1)

You need to recommend a solution to meet the security requirements of the junior database administrators.

What should you include in the recommendation?

A. a shared login
B. a database role
C. a credential
D. a server role

Answer: D

Question No : 4 - (Topic 1)

You need to recommend a solution to minimize the amount of time it takes to execute USP_1.

With what should you recommend replacing Table1?

A. a temporary table
B. a function
C. a view
D. a table variable

Answer: C

Explanation: References:

http://msdn.microsoft.com/en-us/library/ms175503.aspx

http://msdn.microsoft.com/en-us/library/ms190174.aspx

Question No : 5 - (Topic 1)

You need to recommend a disaster recovery strategy for the Inventory database.

What should you include in the recommendation?

A. Log shipping
B. Always on availability groups
C. SQL Server Failover Clustering
D. Peer-to-peer replication

Answer: A

Explanation: References:

http://msdn.microsoft.com/en-us/library/cc645993.aspx

http://msdn.microsoft.com/en-us/library/ms187103.aspx

http://msdn.microsoft.com/en-us/library/ms190640.aspx

Question No : 6 - (Topic 1)

You need to recommend a solution to ensure that USP_4 adheres to the security requirements.

What should you include in the recommendation?

A. Configure data manipulation language (DML) triggers.
B. Enable SQL Server Audit.
C. Enable trace flags.
D. Enable C2 audit tracing.

Answer: B

Explanation: References:

http://msdn.microsoft.com/en-us/library/ms178110.aspx

http://msdn.microsoft.com/en-us/library/cc280386.aspx

http://msdn.microsoft.com/en-us/library/ms188396.aspx

http://msdn.microsoft.com/en-us/library/ms187634.aspx

QUESTIO NO: 7

You need to recommend a change to sp3 to ensure that the procedure continues to execute even if one of the UPDATE statements fails.

Which change should you recommend?

A. Set the IMPLICIT_TRANSACTIONS option to on.

B. Set the XACT_ABORT option to off.

C. Set the IMPLICIT_TRANSACTIONS option to off.

D. Set the XACT_ABORT option to on.

Answer: B

References:

http://msdn.microsoft.com/en-us/library/ms188792.aspx

http://msdn.microsoft.com/en-us/library/ms188317.aspx

http://msdn.microsoft.com/en-us/library/ms187807.aspx

Topic 2, Contoso Ltd
Overview

Application Overview

Contoso, Ltd., is the developer of an enterprise resource planning (ERP) application.

Contoso is designing a new version of the ERP application. The previous version of the ERP application used SQL Server 2008 R2. The new version will use SQL Server 2012.

The ERP application relies on an import process to load supplier data. The import process updates thousands of rows simultaneously, requires exclusive access to the database, and runs daily.

You receive several support calls reporting unexpected behavior in the ERP application. After analyzing the calls, you conclude that users made changes directly to the tables in the database.

Tables

The current database schema contains a table named OrderDetails. The OrderDetails table contains information about the items sold for each purchase order. OrderDetails stores the product ID, quantities, and discounts applied to each product in a purchase order. The product price is stored in a table named Products.

The Products table was defined by using the SQL_Latinl_General_CP1_CI_AS collation. A column named ProductName was created by using the varchar data type.

The database contains a table named Orders. Orders contains alt of the purchase orders from the last 12 months. Purchase orders that are older than 12 months are stored in a table named OrdersOld.

The previous version of the ERP application relied on table-level security.

Stored Procedures

The current version of the database contains stored procedures that change two tables. The following shows the relevant portions of the two stored procedures:

```
CREATE PROC Sales.Proc1
AS
BEGIN TRAN
UPDATE Sales.Table1 ...
UPDATE Sales.Table2 ...
COMMIT TRAN
GO
```

```
CREATE PROC Sales.Proc2
AS
BEGIN TRAN
UPDATE Sales.Table2 ...
UPDATE Sales.Table1 ...
COMMIT TRAN
GO
```

Customer Problems

Installation Issues

The current version of the ERP application requires that several SQL Server logins be set up to function correctly. Most customers set up the ERP application in multiple locations and must create logins multiple times.

Index Fragmentation Issues

Customers discover that clustered indexes often are fragmented. To resolve this issue, the customers defragment the indexes more frequently.

All of the tables affected by fragmentation have the following columns that are used as the clustered index key:

Column	Data type
id	uniqueidentifier
lastModified	datetime
modifiedBy	varchar(200)

Backup Issues

Customers who have large amounts of historical purchase order data report that backup time is unacceptable.

Search Issues

Users report that when they search product names, the search results exclude product names that contain accents, unless the search string includes the accent.

Missing Data Issues

Customers report that when they make a price change in the Products table, they cannot retrieve the price that the item was sold for in previous orders.

Query Performance Issues

Customers report that query performance degrades very quickly. Additionally, the customers report that users cannot run queries when SQL Server runs maintenance tasks.

Import Issues

During the monthly import process, database administrators receive many supports call from users who report that they cannot access the supplier data. The database administrators want to reduce the amount of time required to import the data.

Design Requirements

File Storage Requirements

The ERP database stores scanned documents that are larger than 2 MB. These files must only be accessed through the ERP application. File access must have the best possible read and write performance.

Data Recovery Requirements

If the import process fails, the database must be returned to its prior state immediately.

Security Requirements

You must provide users with the ability to execute functions within the ERP application, without having direct access to the underlying tables.

Concurrency Requirements

You must reduce the likelihood of deadlocks occurring when Sales.Proc1 and Sales.Proc2 execute.

Question No : 7 - (Topic 2)

You need to recommend a solution that addresses the concurrency requirement.

What should you recommend?

A. Make calls to Sales.Proc1 and Sales.Proc2 synchronously.
B. Modify the stored procedures to update tables in the same order for all of the stored procedures.
C. Call the stored procedures in a Distributed Transaction Coordinator (DTC) transaction.
D. Break each stored procedure into two separate procedures, one that changes Sales.Table1 and one that changes Sales.Table2.

Answer: B

Explanation: References:

http://msdn.microsoft.com/en-us/library/ms191242%28v=SQL.105%29.aspx

http://msdn.microsoft.com/en-us/library/bb677357.aspx

http://msdn.microsoft.com/en-us/library/ms378149.aspx

Question No : 8 - (Topic 2)

You need to recommend a solution that addresses the backup issue. The solution must minimize the amount of development effort.

What should you include in the recommendation?