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Microsoft 70-465:

Designing Database Solutions for
Microsoft SQL Server 2012



Topic 1, Litware, Inc Case A

Overview

You are a database administrator for a company named Litware, Inc. Litware is a book publishing

Litware has a main office and a branch office.

You are designing the database infrastructure to support a new web-based application that has been developed. The web application will be accessed at www.litwareinc.com. Both internal employees and external partners will use the application.

You have an existing desktop application that uses a SQL Server 2005 database named App1_DB. App1_DB will remain in production.

Requirements

Planned Changes

You plan to deploy a SQL Server 2012 instance that will contain two databases named Database1 and Database2. All database files will be stored in a highly available SAN.

Database1 will contain two tables named Orders and OrderDetails. Database1 will also contain a stored procedure named usp_UpdateOrderDetails. The stored procedure is used to update order information. The stored procedure queries the Orders table twice each time the procedure executes. The rows returned by the first query must be returned on the second query unchanged along with any rows added to the Orders table between the two read operations.

Database1 will contain several queries that access data in the Database2 tables.

Database2 will contain a table named Inventory. Inventory will contain over 100 GB of data.

The Inventory table will have two indexes: a clustered index on the primary key and a nonclustered index on the secondary key.

The column that is used as the primary key will use the identity property.

Database2 will contain a stored procedure named usp_UpdateInventory. usp_UpdateInventory will be used to manipulate a table that contains a self-join that has an unlimited number of hierarchies.

All data in Database2 is recreated each day and does not change until the next data creation process.

Data from Database2 will be accessed periodically by an external application named Application1.

The data from Database2 will be sent to a database named Appl_Db1 as soon as changes occur in Database2.

Litware plans to use offsite storage for all SQL Server 2012 backups.

Business Requirements

You have the following requirements:

- Costs for new licenses must be minimized.

- Private information that is accessed by Application must be stored in a secure format.

- Development effort must be minimized whenever possible.

- The storage requirements for databases must be minimized.

- System administrators must be able to run real-time reports on disk usage.

- The databases must be available if the SQL Server service fails.

- Database administrators must receive a detailed report that contains allocation errors and data corruption.

- Application developers must be denied direct access to the database tables. Applications must use stored procedures to access the tables.

- You must encrypt the backup files to meet regulatory compliance requirements. The encryption must minimize changes to the databases and to the applications.

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 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 loads 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 data

Tables

The current database schema contains a table named OrderDetails. The OrderDetails table

information about the items sold for each purchase order. OrderDetails stores the product ID, 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_Latin1_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 all 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. This section shows the relevant portions of the two stored procedures:

Customer Problems

Installation Issues

The current version of the ERP application requires that several SQL Server logins be set up 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, they must defragment the indexes more frequently.

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

key:

Backup Issues

Customers who have large amounts of historical purchase order data report that backup 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

that the item was sold for in previous orders.

Query Performance Issues

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

Import Issues

During the monthly import process, database administrators receive many supports call from report that they cannot access the supplier data. The database administrators want to reduce the 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 be accessed through the ERP application. File access must have the best possible read 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 direct access to the underlying tables.

Concurrency Requirements

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

Topic 2, A. Datum Case B

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 each other by using a WAN link that has a 5-ms latency.

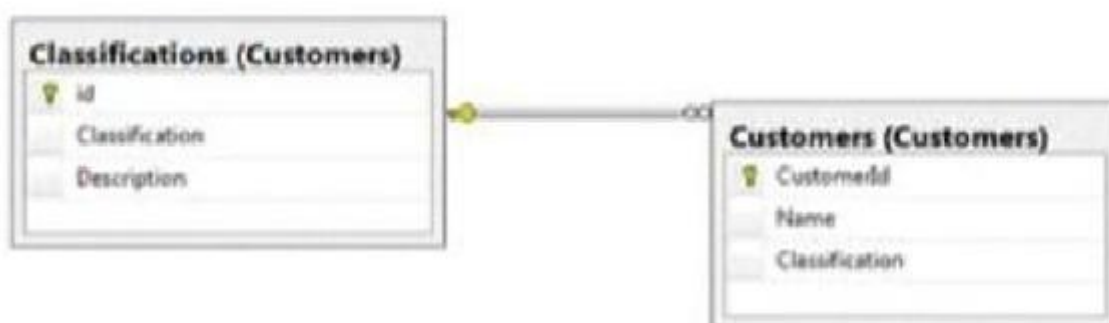
A. Datum standardizes its database platform by using SQL Server 2012 Enterprise edition.

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 updated frequently. The database is often used for reporting. 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 Table1 sequentially several times. After the process is complete, Table1 is deleted.

A stored procedure named sp2 is used to generate a product list. The product list contains the names of products grouped by category. Sp2 takes several minutes to run due to locks on the tables the procedure accesses. The locks are caused by sp1 and sp3.

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 fails.

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. All nested stored procedures handle errors by using structured exception handling.

A stored procedure named sp5 calls several stored procedures in the same database. Security checks are performed each time sp5 calls a stored procedure.

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 Time Objective (RTO) of 5 minutes.

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 manage security for the Sales database.

The junior database administrators will not have any other administrative rights.

A. Datum wants to track which users run each stored procedure.

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 all stored procedures and nested stored procedures. Nested stored procedures are never called directly.

Topic 3, Litware, Inc Case B

Overview

You are a database administrator for a company named Litware, Inc. Litware is a book publishing house.

Litware has a main office and a branch office.

You are designing the database infrastructure to support a new web-based application that is being developed. The web application will be accessed at www.litwareinc.com. Both internal employees and external partners will use the application.

You have an existing desktop application that uses a SQL Server 2005 database named App1_DB. App1_Db will remain in production.

Requirements

Planned Changes

You plan to deploy a SQL Server 2012 instance that will contain two databases named Database1 and Database2.

Database1 will contain two tables named Orders and OrderDetails. Database1 will also contain a stored procedure named usp_UpdateOrderDetails. The stored procedure is used to update order information. The stored procedure queries the Orders table twice each time the procedure executes. Each query against the Orders table must return the same data. All statements in the stored procedure run in a single transaction.

Database1 will contain several queries that access data in the Database2 tables.

Database2 will contain a table named Inventory. Inventory will contain over 100 GB of data.

The Inventory table will have two indexes: a clustered index on the primary key and a nonclustered index. The column that is used as the primary key will use the identity property.

Database2 will contain a stored procedure named usp_UpdateInventory. Usp_UpdateInventory will manipulate several small data sets of up to 100 rows each. Each data set will be used multiple times.

Data from Database2 will be accessed periodically by an external application named Application1. The data from Database2 will be sent to a database named App1_Db1 as soon as changes occur to the data in Database2.

Litware plans to use offsite storage for all SQL Server 2012 backups.

Business Requirements

You have the following requirements:

- Costs for new equipment must be minimized.
- External access to the databases must be encrypted.
- Development effort must be minimized whenever possible.
- System administrators must be notified when disk space falls below a certain threshold.
- The databases must be available if the SQL Server service or the storage solution fails.
- Database administrators must receive a detailed report that contains allocation errors and disk corruption.
- Application developers must be denied direct access to the database tables. Applications must be denied direct access to the tables.
- You must encrypt the backup files to meet regulatory compliance requirements. The encryption strategy must minimize changes to the databases and to the applications.

Topic 4, A. Datum Case A

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.

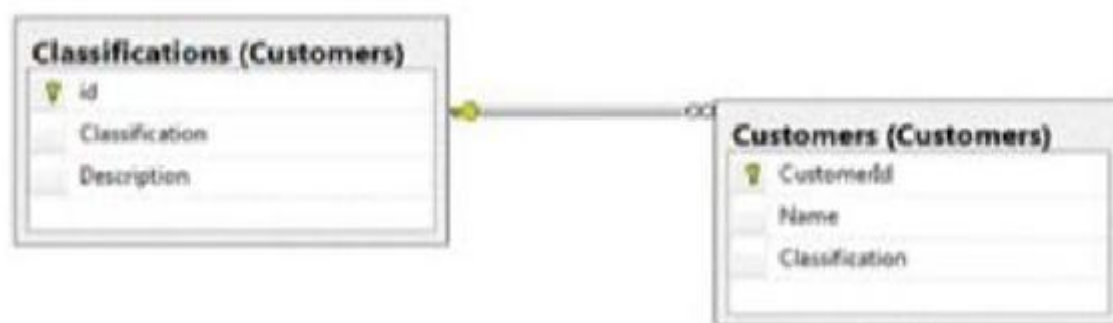
A. Datum standardizes its database platform by using SQL Server 2012 Standard edition.

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:



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 complete 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.

Topic 1, 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_Latin1_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 all 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 support calls 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.Prod and Sales.Proc2 execute

Exam A

QUESTION 1

You need to recommend a backup process for an Online Transaction Processing (OLTP) database. The process must meet the following requirements:

- Ensure that if a hardware failure occurs, you can bring the database online with a minimum amount of data loss.
- Minimize the amount of administrative effort required to restore any lost data.

What should you include in the recommendation?

To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Create a database snapshot.	
Perform a differential backup of the database every night.	
Ship the logs to a secondary server.	
Perform a backup of the transaction log every hour.	
Set the database to the simple recovery model.	
Set the database to the full recovery model.	
Perform a weekly full backup of the database.	

Correct Answer:

	Create a database snapshot.
	Perform a differential backup of the database every night.
	Ship the logs to a secondary server.
Perform a backup of the transaction log every hour.	
	Set the database to the simple recovery model.
Set the database to the full recovery model.	
Perform a weekly full backup of the database.	

Section: (none)

Explanation

Explanation/Reference:

QUESTION 2

You plan to install two SQL Server 2012 environments named Environment1 and Environment2. Your company identifies the following availability requirements for each environment:

- Environment1 must have mirroring with manual failover implemented.
- Environment2 must have AlwaysOn with automatic failover implemented.

You need to identify the minimum number of SQL Server 2012 servers that must be deployed to each environment to ensure that all data remains available if a physical server fails.

How many servers should you identify?

To answer, drag the appropriate number to the correct environment in the answer area.

Select and Place:

Number of Servers	Answer Area
2 3 4	Environment1 #
	Environment2 #

Correct Answer:

Number of Servers	Answer Area
2 3 4	Environment1 2
	Environment2 2

Section: (none)
Explanation

Explanation/Reference:

QUESTION 3

You need to design a stored procedure to update rows. The stored procedure must meet the following requirements:

- If more than one row is updated, an error must be raised to the application and the update must be discarded.
- The stored procedure must be designed to maximize concurrency.

What should you include in the design?

To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Raise an error and roll back the transaction if the row count is greater than 1.	
Issue a SELECT statement to count the number of rows.	
Perform the update.	
Set the isolation level to serializable.	
Read the @@ROWCOUNT system variable.	
Begin an explicit transaction.	
Commit the transaction.	

Correct Answer:

Raise an error and roll back the transaction if the row count is greater than 1.	Perform the update.
Issue a SELECT statement to count the number of rows.	Set the isolation level to serializable.
	Begin an explicit transaction.
	Commit the transaction.
	Read the @@ROWCOUNT system variable.

Section: (none)

Explanation

Explanation/Reference:

QUESTION 4

You are designing a monitoring application for a new SQL Server 2012 instance. You need to recommend a solution to generate a report that displays the 10 most frequent wait types that occur for the instance. What should you include in the recommendation? More than one answer choice may achieve the goal. Select the BEST answer.

- A. The sys.dm_os_wait_stats dynamic management view
- B. The DBCC SQLPERF(WAITSTATS) command
- C. The SQL Server error log
- D. SQL Server Profiler

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 5

You have two servers named SQL1 and SQL2 that have SQL Server 2008 installed. SQL1 contains a database that is mirrored asynchronously to SQL2. The database contents are updated once a month. You need to upgrade the database to SQL Server 2012. The solution must minimize downtime. Which upgrade steps should you recommend? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Fail over.	
Fail back.	
Upgrade SQL1.	
Upgrade SQL2.	
Establish a mirror.	
Break the mirror.	

Correct Answer:

Fail over.	Upgrade SQL1.
	Establish a mirror.
	Fail back.
Upgrade SQL2.	Break the mirror.

Section: (none)

Explanation

Explanation/Reference:

QUESTION 6

Your company identifies the following monitoring requirements for the database:

- An e-mail message must be sent when a user logs in.
- An e-mail message must be sent if CPU utilization exceeds 90 percent.

You need to identify which feature meets each monitoring requirement. Which features should you identify?

To answer, drag the appropriate feature to the correct monitoring requirement in the answer area.

Select and Place:

Policy-Based Management	An e-mail message must be sent when a user logs in.	Feature
a SQL Server Agent alert		
SQL Server Integration Services (SSIS)	An e-mail message must be sent if CPU utilization exceeds 90 percent.	Feature
trace flags		
triggers		

Correct Answer:

Policy-Based Management	An e-mail message must be sent when a user logs in.	triggers
SQL Server Integration Services (SSIS)	An e-mail message must be sent if CPU utilization exceeds 90 percent.	a SQL Server Agent alert
trace flags		

Section: (none)

Explanation

Explanation/Reference:

QUESTION 7

You deploy a database by using SQL Server 2012. The database contains a table named Table1. You need to recommend a solution that meets the following requirements:

- Stores the most recent data from Table1 by using the fastest storage solution possible.
- Stores the historical data from Table1 by using a slower storage solution.

What should you recommend?

- A. partitioned views
- B. a database snapshot
- C. change data capture
- D. table partitioning

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 8

You are creating a database that will store usernames and passwords for an application. You need to recommend a solution to store the passwords in the database. What should you recommend? More than one answer choice may achieve the goal. Select the BEST answer.

- A. One-way encryption
- B. Transparent Data Encryption (TDE)
- C. Encrypting File System (EFS)
- D. Reversible encryption

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 9

You need to recommend an isolation level for usp_UpdateOrderDetails. Which isolation level should recommend?

- A. Repeatable read
- B. Read uncommitted
- C. Serializable
- D. Read committed

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 10

You need to recommend solution for the deployment of SQL Server 2012. The solution must meet the business requirements. What should you include in the recommendation?

- A. Deploy two servers that have SQL Server 2012 installed and implement database mirroring.
- B. Create new instance of SQL Server 2012 on the server that hosts the SQL Server 2005 instance.
- C. Upgrade the existing SQL Server 2005 instance to SQL Server 2012.
- D. Deploy two servers that have SQL Server 2012 installed and implement Failover Clustering.

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 11

You need to recommend a solution to improve the performance of usp_UpdateInventory. The solution must minimize the amount of development effort.

What should you include in the recommendation?

- A. subquery
- B. cursor
- C. common table expression
- D. table variable

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 12

You need to recommend disk monitoring solution that meets the business requirements.

What should you include in the recommendation?

- A. SQL ServerAgent alert
- B. dynamic management view
- C. maintenance plan
- D. an audit

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 13

You need to recommend solution forApplication1 that meets the security requirements.

What should you include in the recommendation?

- A. Encrypted columns
- B. CertificateAuthentication
- C. Secure Socket Layer (SSL)
- D. Signed stored procedures

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 14

You need to recommend feature to support your backup solution.
What should you include in the recommendation?

- A. Column-level encryption
- B. Secure Sockets Layer (SSL)
- C. An NTFS file permission
- D. Transparent Data Encryption (TDE)

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 15

You need to recommend a solution to allow application users to perform UPDATE operations on the database.
The solution must meet the business requirements. What should you recommend?

- A. Create stored procedures that use EXECUTEAS clauses.
- B. Create user-defined database role and add users to the role.
- C. Create functions that use EXECUTEAS clauses.
- D. Create Policy-Based Management Policy.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 16

You plan to create a database. The database will be used by a Microsoft .NET application for a special event.
During the event, data must be highly available. After the event, the database will be deleted. You need to implement the database while minimizing costs. The solution must not affect any existing applications. Which solution should you recommend?
More than one answer choice may achieve the goal. Select the BEST answer.

- A. Max Degree of Parallelism
- B. Resource Governor
- C. Windows System Resource Manager (WSRM)
- D. Processor affinity

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 17

You need to recommend a solution to meet the security requirements of the junior database administrator. What should you recommend?

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

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:

QUESTION 18

You need to recommend a solution that addresses the index fragmentation and index width issues. What should you include in the recommendation?

(Each correct answer presents part of the solution. Choose all that apply.)

- A. Change the data type of the modifiedBy column to tinyint.
- B. Change the data type of the lastModified column to smalldatetime.
- C. Remove the id column from the clustered index.
- D. Remove the modifiedBy column from the clustered index.
- E. Change the data type of the id column to bigint.
- F. Remove the lastModified column from the clustered index.

Correct Answer: ABF
Section: (none)
Explanation

Explanation/Reference:

QUESTION 19

You need to recommend the actions that are required to partition a table.

In which order should the four actions be performed?

To answer, move the actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions	Answer Area
Create a partition scheme.	
Create a partition function.	
Create filegroups.	
Create the table.	

Correct Answer:

Actions	Answer Area
	Create a partition scheme.
	Create a partition function.
	Create filegroups.
	Create the table.

Section: (none)

Explanation

Explanation/Reference:

QUESTION 20

You need to recommend a disaster recovery solution for the Dev database.

What should you include in the recommendation?

- A. The simple recovery model and full backups
- B. The full recovery model, full backups, and transaction log backups
- C. The full recovery model, full backups, and differential backups

D. The bulk-logged recovery model and full backups

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 21

You plan to deploy a database by using SQL Server 2012.

Your company identifies the following requirements for the database:

- The name of all stored procedures must start with "usp_"always.
- All distribution statistics must be updated daily.

You need to identify which feature must be used to meet each database requirement.

Which features should you identify?

To answer, drag the appropriate feature to the correct database requirement in the answer area.

Select and Place:

Features	Answer Area
change data capture	The name of all stored procedures must start with "usp_"always. Feature
the CHECK constraint	All distribution statistics must be updated daily. Feature
Extended Event	
a maintenance plan	
Policy-Based Management	

Correct Answer:

Features	Answer Area
change data capture	The name of all stored procedures must start with "usp_"always.
the CHECK constraint	All distribution statistics must be updated daily.
Extended Event	

Section: (none)

Explanation

Explanation/Reference:

QUESTION 22

You need to recommend a disaster recovery strategy for the Inventory database. What should include in the recommendation?

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

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 23

You need to recommend a solution to minimize the amount of time it takes to execute sp5. What should you include in the recommendation?

- A. Use the EXECUTE AS clause in sp5.
- B. Enable cross-database chaining.
- C. Use a server role to group all logins.
- D. Copy sp5 to each database.

Correct Answer: B

Section: (none)

Explanation

Explanation/Reference:

QUESTION 24

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

Which change should you recommend?

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

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 25

You manage a SQL Server 2012 instance that contains a database named DB1.

Users report that some queries to DB1 take longer than expected. Although most queries run less than one second, some queries take up to 20 seconds to run.

You need to view all of the performance statistics for each database file. Which method should you use?

- A. Examine the Data File I/O pane in Activity Monitor.
- B. Query the sys.dm_io_virtual_file_stats dynamic management function.
- C. Query the sys.dm_os_performance_counters dynamic management view.
- D. Query the sys.dm_os_tasks dynamic management view.

Correct Answer:

Section: (none)

Explanation

Explanation/Reference:

QUESTION 26

Your company has offices in Seattle and Montreal.

The network contains two servers named Server1 and Server2 that have SQL Server 2012 installed. Server1 is located in the Seattle office. Server2 is located in the Montreal office. The latency of the WAN link between the Montreal office and the Seattle office is more than 200 ms.

You plan to implement an AlwaysOn availability group on both servers.

You need to recommend a failover type for the availability group.

What should you recommend?

- A. Synchronous manual failover
- B. Synchronous automatic failover
- C. Asynchronous automatic failover
- D. Asynchronous manual failover

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 27

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?

- A. Filegroups
- B. Table partitioning
- C. Indexed views
- D. Indexes

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 28

You have a server that has SQL Server 2012 installed. The server contains 100 user databases.

You need to recommend a backup solution for the user databases. The solution must meet the following requirements:

- Perform a transaction log backup every hour.
- Perform a full backup of each database every week.
- Perform a differential backup of each database every day.
- Ensure that new user databases are added automatically to the backup solution.

What should you recommend?

More than one answer choice may achieve the goal. Select the BEST answer.

- A. A maintenance plan
- B. SQL Server Agent jobs
- C. Policy-Based Management
- D. A Data Definition Language (DDL) trigger

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 29

You need to recommend a solution for the deployment of SQL Server 2012. The solution must meet the business requirements.

What should you include in the recommendation?

- A. Install a new instance of SQL Server 2012 on the server that hosts the SQL Server 2005 instance. Deploy a new server that has SQL Server 2012 installed. Implement AlwaysOn.
- B. Upgrade the existing SQL Server 2005 instance to SQL Server 2012. Deploy a new server that has SQL Server 2012 installed. Implement AlwaysOn.
- C. Deploy two servers that have SQL Server 2012 installed and implement Failover Clustering.
- D. Deploy two servers that have SQL Server 2012 installed. Implement AlwaysOn Availability Groups on both servers.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 30

You have a SQL Azure database named Database1. You need to design the schema for a table named table1. Table1 will have less than one million rows. Table1 will contain the following information for each row:

Column	Description
ID	An incremental numeric value used to identify the row
Name	A string in English
Code	An alphanumeric code that has five characters
ModifiedDate	The date of the last modification

The solution must minimize the amount of space used to store each row. Which data types should you recommend for each column?

To answer, drag the appropriate data type to the correct column in the answer area.

Select and Place:

Data Types		Answer Area
int		ID <input type="text" value="Data type"/>
bigint		Name <input type="text" value="Data type"/>
varchar		Code <input type="text" value="Data type"/>
nvarchar		ModifiedDate <input type="text" value="Data type"/>
char		
smalldatetime		
date		

Correct Answer:

Data Types		Answer Area
<input type="text"/>	ID	<input type="text" value="int"/>
<input type="text" value="bigint"/>	Name	<input type="text" value="varchar"/>
<input type="text"/>	Code	<input type="text" value="char"/>
<input type="text" value="nvarchar"/>	ModifiedDate	<input type="text" value="date"/>
<input type="text"/>		
<input type="text" value="smalldatetime"/>		
<input type="text"/>		

Section: (none)

Explanation

Explanation/Reference:

QUESTION 31

You have a SQL Server 2012 environment that contains 20 servers. The corporate security policy states that all SQL Server 2012 instances must meet specific security standards. You need to recommend a management strategy for the SQL Server 2012 servers. What should you include in the recommendation?

More than one answer choice may achieve the goal. Select the BEST answer.

- A. Multi server jobs
- B. Maintenance plans
- C. Policy-Based Management
- D. Common criteria compliance

Correct Answer: C

Section: (none)

Explanation

Explanation/Reference:

QUESTION 32

You are designing a database for a university. The database will contain two tables named Classes and Enrollment that have the following specifications:

- Classes will store brochures in the XPS format. The brochures must be structured in folders and must be accessible by using UNC paths.
- Enrollment will store information about students and their classes. Performance must be enhanced for queries of the current enrollments.

You need to identify which SQL Server technology meets the specifications of each table. Which technologies should you identify?

To answer, drag the appropriate technology to the correct table in the answer area.

Select and Place:

Technologies	Answer Area
FileStream	Technology Classes
FileTable	Technology Enrollment
Partitioned tables	
Partitioned views	

Correct Answer:

Technologies	Answer Area
FileStream	FileTable Classes
	Partitioned tables Enrollment
Partitioned views	

Section: (none)

Explanation

Explanation/Reference:

QUESTION 33

You deploy a database by using SQL Server 2012. The database contains a table named Table 1. You need to recommend a solution to track all of the deletions executed on Table1. The solution must minimize the amount of custom code required. What should you recommend?

A. Change data capture

- B. A trigger
- C. Statistics
- D. Master Data Services

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 34

You have four databases that are accessed by using an Online Transaction Processing (OLTP) application. The databases are stored on a server named SQL1 that has SQL Server 2012 installed. You plan to deploy an additional server that has SQL Server 2012 installed. You need to design a high-availability solution for the databases that meets the following requirements:

- If SQL1 fails, the databases must be available.
- Users must be able to run reports against a secondary copy of the databases.

What should you include in the design?

More than one answer choice may achieve the goal. Select the BEST answer.

- A. Database mirroring
- B. Log shipping
- C. Failover Clustering
- D. AlwaysOn availability groups

Correct Answer: D

Section: (none)

Explanation

Explanation/Reference:

QUESTION 35

You work as a Database Administrator (DBA) for a company named ABC.com. The company uses a Microsoft SQL Server 2012 infrastructure.

You have a database named CorpDB. You plan to create a stored procedure to access data in CorpDB.

You need to ensure that the stored procedure supports dirty reads.

What should you do?

- A. You should configure the stored procedure to use the READ UNCOMMITTED isolation level.
- B. You should configure the stored procedure to use the READ COMMITTED isolation level.
- C. You should configure the stored procedure to use the SERIALIZABLE isolation level.
- D. You should configure the stored procedure to use the REPEATABLE READ isolation level.
- E. You should configure the stored procedure to use the SNAPSHOT isolation level.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference:

QUESTION 36

You work as a Database Administrator (DBA) for a company named ABC.com. The company uses a Microsoft SQL Server 2012 infrastructure.

You are configuring a highly-available database solution using an AlwaysOn availability group on two servers running SQL Server 2012. The two servers are in separate datacenters. The two datacenters are connected by a WAN link with a network latency of more than 200ms.

Which of the following failover types should you configure for the availability group?

- A. You should configure the asynchronous manual failover failover type.
- B. You should configure the synchronous manual failover failover type.
- C. You should configure the synchronous automatic failover failover type.
- D. You should configure the Asynchronous automatic failover failover type.

Correct Answer: A

Section: (none)

Explanation

Explanation/Reference: