Microsoft

Exam Questions 70-764

Administering a SQL Database Infrastructure (beta)

NEW QUESTION 1
- (Exam Topic 1)
You administer a Microsoft SQL Server 2016 database named Orders.
Users report that during peak usage periods, certain operations are taking more time than expected. Your initial analysis suggests that blocking is the cause.
You need to gather more data to be able to determine which processes are being blocked and to identify the root cause.
What should you do?

A. Start a trace using SQL Server Profiler to catch the Lock: Deadlock event.
B. Use sp_configure to set the blocked process threshol
C. Start a trace using SQL Server Profiler to catch the Blocked Process Report event.
D. Schedule a SQL Agent job to run every 60 seconds and insert the results of executing the sys.dm_os_wait_stats DMV into a table.
E. Use System Monitor to catch the Lock Waits/sec event.

Answer: B

NEW QUESTION 2
- (Exam Topic 1)
You administer a Microsoft SQL Server 2016 database.
Users report that a billing application becomes unresponsive during busy times of the day. While investigating, you notice large number of processes taking or waiting for table locks. You suspect that SQL Server is assigning stronger locks to queries.
You start a SQL Profiler trace. Which event should you select?

A. Deadlock graph
B. Lock: Escalation
C. Lock: Timeout
D. Lock: Deadlock

Answer: B

NEW QUESTION 3
- (Exam Topic 1)
You are planning to deploy log shipping for Microsoft SQL Server and store all backups on a dedicated fileshare.
You need to configure the servers to perform each log shipping step.
Which server instance should you configure to perform each action? To answer, select the appropriate server instances in the dialog box in the answer area.

Answer Area

Action	Server instance
Complete the backup job.	Primary server instance Secondary server instance Monitor server instance Backup share file server
Copy the backup job.	Primary server instance Secondary server instance Monitor server instance Backup share file server
Restore the backup.	Primary server instance Secondary server instance Monitor server instance Backup share file server

A. Mastered
B. Not Mastered

Answer: A

Explanation:

Note: Before you configure log shipping, you must create a share to make the transaction log backups available to the secondary server.
SQL Server Log shipping allows you to automatically send transaction log backups from a primary database on a primary server instance to one or more secondary databases on separate secondary server instances. The transaction log backups are applied to each of the secondary databases individually. An optional third server instance, known as the monitor server, records the history and status of backup and restore operations and, optionally, raises alerts if these operations fail to occur as scheduled.
Box 1: Primary server instance.
The primary server instance runs the backup job to back up the transaction log on the primary database. backup job: A SQL Server Agent job that performs the backup operation, logs history to the local server and
the monitor server, and deletes old backup files and history information. When log shipping is enabled, the job
category "Log Shipping Backup" is created on the primary server instance.
Box 2: Secondary server instance
Each of the three secondary server instances runs its own copy job to copy the primary log-backup file to its own local destination folder.
copy job: A SQL Server Agent job that copies the backup files from the primary server to a configurable destination on the secondary server and logs history on the secondary server and the monitor server. When log shipping is enabled on a database, the job category "Log Shipping Copy" is created on each secondary server in a log shipping configuration.
Box 3: Secondary server instance.
Each secondary server instance runs its own restore job to restore the log backup from the local destination folder onto the local secondary database.
restore job: A SQL Server Agent job that restores the copied backup files to the secondary databases. It logs history on the local server and the monitor server, and deletes old files and old history information. When log shipping is enabled on a database, the job category "Log Shipping Restore" is created on the secondary server instance.
References: https://docs.microsoft.com/en-us/sql/database-engine/log-shipping/about-log-shipping-sql-server

NEW QUESTION 4
- (Exam Topic 2)
You are a database administrator for a Microsoft SQL Server 2016 instance.
You need to ensure that data can be replicated from a production server to two reporting servers in real time. You also need to ensure that data on the reporting server is always accessible.
Which solution should you use?

A. Availability Groups
B. Extended Events
C. Snapshot Replication
D. Policy Based Management

Answer: A

NEW QUESTION 5
- (Exam Topic 2)
You are designing a monitoring application for a new SQL Server 2014 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 SQL Server error log
B. The sys.dm_os_wait_stats dynamic management view
C. The DBCC SQLPERF(WAITSTATS) command
D. SQL Server Profiler

Answer: B

Explanation:
sys.dm_os_wait_stats
Returns information about all the waits encountered by threads that executed. You can use this aggregated view to diagnose performance issues with SQL Server and also with specific queries and batches.
Columns include: waiting_tasks_count
Number of waits on this wait type.
This counter is incremented at the start of each wait.

NEW QUESTION 6
- (Exam Topic 2)
You are designing a database named DB1.
Changes will be deployed to DB1 every Wednesday night.
You need to recommend a strategy to deploy the changes to DB1. The strategy must meet the following requirements:
 The strategy must not disrupt backup operations.
 DB1 must be unavailable to users while the changes are deployed.
 You must be able to undo quickly the entire operation.
What should you recommend? More than one answer choice may achieve the goal. Select the BEST answer.

A. Perform a copy-only database backup before the changes are deployed.If the deployment fails, restore the database to another server and recover the original.Objects from the restored database.
B. Create a database snapshot.If the deployment fails, recover the objects from the database snapshot.
C. Create a database snapshot.If the deployment fails, revert the database to the database snapshot.
D. Perform a full database backup before the changes are deployed.If the deployment fails, restore the database to another server and recover the original objects from the restored database.

Answer: C

NEW QUESTION 7
- (Exam Topic 2)
You administer a Microsoft SQL Server 2016 database that has Trustworthy set to On.

You create a stored procedure that returns database-level information from Dynamic Management Views. You grant User1 access to execute the stored procedure.
You need to ensure that the stored procedure returns the required information when User1 executes the stored procedure.
You need to achieve this goal by granting the minimum permissions required.
What should you do? (Each correct answer presents a complete solution. Choose all that apply.)

A. Create a SQL Server login that has VIEW SERVER STATE permission
B. Create an application role and a secured password for the role.
C. Modify the stored procedure to include the EXECUTE AS OWNER statemen
D. Grant VIEW SERVER STATE permissions to the owner of the stored procedure.
E. Create a SQL Server login that has VIEW SERVER STATE permission
F. Modify the stored procedure to include the EXECUTE AS {newlogin} statement.
G. Grant the db_owner role on the database to User1.
H. Grant the sysadmin role on the database to User1.

Answer: BC

Explanation:
References:
http://msdn.microsoft.com/en-us/library/ms187861.aspx http://msdn.microsoft.com/en-us/library/ms191291.aspx

NEW QUESTION 8
- (Exam Topic 2)
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 2008 database named App1_DB. App1_DB will remain in production.
Requirements Planned Changes
You plan to deploy a SQL Server 2014 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 from the first query must be returned on the second query unchanged along with any rows added to the 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. The column that is used as the primary key will use the identity property.
Database2 wilt contains a stored procedure named usp_UpdateInventory. usp_UpdateInventory will manipulate a table that contains a self-join that has an unlimited number of hierarchies. All data in Database2 is recreated each day ad 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_Dbl as soon as changes occur to the data in Database2. Litware plans to use offsite storage for all SQL Server 2014 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 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.
You need to recommend a solution for Application1 that meets the security requirements. What should you include in the recommendation?

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

Answer: D

Explanation:
- Scenario:
- Data from Database2 will be accessed periodically by an external application named Application1
- Application developers must be denied direct access to the database tables. Applications must be denied direct access to the tables.
Tutorial: Signing Stored Procedures with a Certificate

NEW QUESTION 9
- (Exam Topic 2)
You want to simulate read, write, checkpoint, backup, sort, and read-ahead activities for your organization's SQL Server 2016 deployment.
Which of the following tools would you use to accomplish this goal?

A. SQLIO
B. SQLIOSim
C. SQLIOStress
D. chkdsk

Answer: B

Explanation:
The SQLIOSim utility has been upgraded from the SQLIOStress utility. The SQLIOSim utility more accurately simulates the I/O patterns of Microsoft SQL Server.
References:
https://support.microsoft.com/en-us/help/231619/how-to-use-the-sqliosim-utility-to-simulate-sql-server-activity-

NEW QUESTION 10
- (Exam Topic 2)
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 2014.
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	uniquedentifier
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.Prod and Sales.Proc2 execute. You need to recommend changes to the ERP application to resolve the search issue.
The solution must minimize the impact on other queries generated from the ERP application. What should you recommend changing?

A. The collation of the Products table
B. The index on the ProductName column
C. The collation of the ProductName column
D. The data type of the ProductName column

Answer: C

Explanation:
References:
http://technet.microsoft.com/en-us/library/aa214408(v=sql.80).aspx

NEW QUESTION 11
- (Exam Topic 3)
Background Corporate Information
Fabrikam, Inc. is a retailer that sells electronics products on the Internet. The company has a headquarters site and one satellite sales office. You have been hired as the database administrator, and the company wants you to change the architecture of the Fabrikam ecommerce site to optimize performance and reduce downtime while keeping capital expenditures to a minimum. To help with the solution, Fabrikam has decided to use cloud resources as well as on-premise servers.
Physical Locations
All of the corporate executives, product managers, and support staff are stationed at the headquarters office. Half of the sales force works at this location. There is also a satellite sales office. The other half of the sales force works at the satellite office in order to have sales people closer to clients in that area. Only sales people work at the satellite location.
Problem Statement
To be successful, Fabrikam needs a website that is fast and has a high degree of system uptime. The current system operates on a single server and the company is not happy with the single point of failure this presents. The current nightly backups have been failing due to insufficient space on the available drives and manual drive cleanup often needing to happen to get past the errors. Additional space will not be made available for backups on the HQ or satellite servers. During your investigation, you discover that the sales force reports are causing significant contention.
Configuration Windows Logins
The network administrators have set up Windows groups to make it easier to manage security. Users may belong to more than one group depending on their role. The groups have been set up as shown in the following table:

Group	Members
OurDomain\Management	All corporate executives
OurDomain\SalesStaff	All sales people
OurDomain\ProductionStaff	All product managers and support staff
OurDomain\AllUsers	Everyone
OurDomain\CustomerSupport	Customer support representatives

Server Configuration The IT department has configured two physical servers with Microsoft Windows Server
2012 R2 and SQL Server 2014 Enterprise Edition and one Windows Azure Server. There are two tiers of storage available for use by database files only a fast tier and a slower tier. Currently the data and log files are stored on the fast tier of storage only. If a possible use case exists, management would like to utilize the slower tier storage for data files. The servers are configured as shown in the following table:

Location	Server
Company headquarters	HQ_Server
Satellite sales office	Satellite_Server
Microsoft Windows Azure (cloud)	Cloud_File Server

Database
Currently all information is stored in a single database called ProdDB, created with the following script:

```
CREATE DATABASE ProdDB
GO
ALTER DATABASE ProdDB SET RECOVERY SIMPLE
GO
```

The Product table is in the Production schema owned by the ProductionStaff Windows group. It is the main table in the system so access to information in the Product table should be as fast as possible. The columns in the Product table are defined as shown in the following table:

Column	Data type
ProductID	INT
ProductName	VARCHAR(100)
ProductDescription	VARCHAR(MAX)
ProductPrice	SMALLMONEY
QuantityOnHand	INT
ProductCost	SMALLMONEY
ProductSupplierID	INT

The SalesOrderDetail table holds the details about each sale. It is in the Sales schema owned by the SalesStaff Windows group. This table is constantly being updated, inserted into, and read. The columns in the SalesOrderDetail table are defined as shown in the following table:

Column	Data type
SalesOrderDetailID	INT
ProductID	INT
SalePrice	SMALLMONEY
SaleQuantity	INT

Database Issues

The current database does not perform well. Additionally, a recent disk problem caused the system to go down, resulting in lost sales revenue. In reviewing the current system, you found that there are no automated maintenance procedures. The database is severely fragmented, and everyone has read and write access.

Requirements Database

The database should be configured to maximize uptime and to ensure that very little data is lost in the event of a server failure. To help with performance, the database needs to be modified so that it can support in-memory data, specifically for the Product table, which the CIO has indicated should be a memoryoptimized table. The auto-update statistics option is set off on this database. Only product managers are allowed to add products or to make changes to the name, description, price, cost, and supplier. The changes are made in an internal database and pushed to the Product table in ProdDB during system maintenance time. Product managers and others working at the headquarters location also should be able to generate reports that include supplier and cost information.

Customer data access

Customers access the company's website to order products, so they must be able to read product information such asname, description, and price from the Product table. When customers place orders, stored procedures calledby the website update product quantityon-hand values. This means the product table is constantly updated at randomtimes.

Customer support data access

Customer support representatives need to be able to view and not update or change product information. Management does not want the customer support representatives to be able to see the product cost or any supplier information.

Sales force data access

Sales people at both the headquarters office and the satellite office must generate reports that read from the Product and SalesOrderDetail tables. No updates or inserts are ever made by sales people. These reports are run at random times and there can be no reporting downtime to refresh the data set except during the monthly maintenance window. The reports that run from the satellite office are process intensive queries with large data sets. Regardless of which office runs a sales force report, the SalesOrderDetail table should only return valid, committed order data; any orders not yet committed should be ignored.

Historical Data

The system should keep historical information about customers who access the site so that sales people can see how frequently customers log in and how long they stay on the site.

The information should be stored in a table called Customer Access. Supporting this requirement should have minimal impact on production website performance.

Backups

The recovery strategy for Fabrikam needs to include the ability to do point in time restores and minimize the risk of data loss by performing transaction log backups every 15 minutes.

Database Maintenance

The company has defined a maintenance window every month when the server can be unavailable. Any maintenance functions that require exclusive access should be accomplished during that window.

Project milestones completed

 Revoked all existing read and write access to the database, leaving the schema ownership in place.

 Configured an Azure storage container secured with the storage account name MyStorageAccount with the primary access key StorageAccountKey on the cloud file server.

 SQL Server 2014 has been configured on the satellite server and is ready for use.

 On each database server, the fast storage has been assigned to drive letter F:, and the slow storage has been assigned to drive letter D:.

You need to implement changes to the system to reduce contention and improve performance of the SalesOrderDetail table.

Which three actions should you perform? Each correct answer presents part of the solution. (Choose three.)

A. Use (SNAPSHOT] hints in the report queries
B. ALTER DATABASE [ProdDB] SET READ_COMMITTED_SNAPSHOT ON
C. ALTER DATABASE [ProdDB] SET READ_COMMITTED_SNAPSHOT OFF
D. SET TRANSACTION ISOLATION LEVEL SNAPSHOT
E. Use (TABLOCK) hints in the report queries
F. SET TRANSACTION ISOLATION LEVEL SERIALIZABLE
G. ALTER DATABASE [ProdDB] SET ALLOW.SNAPSHOT ISOLATION ON
H. Use (SNAPSHOT]hints in the update statements

Answer: ABF

Explanation:
- Scenario: The SalesOrderDetail table holds the details about each sale. It is in the Sales schema owned by the SalesStaff Windows group. This table is

constantly being updated, inserted into, and read.
- Regardless of which office runs a sales force report, the SalesOrderDetail table should only return valid, committed order data; any orders not yet committed should be ignored.
- READ_COMMITTED_SNAPSHOT { ON | OFF } ON Enables Read-Committed Snapshot option at the database level. When it is enabled, DML statements start generating row versions even when no transaction uses Snapshot Isolation. Once this option is enabled, the transactions specifying the read committed isolation level use row versioning instead of locking.
When a transaction runs at the read committed isolation level, all statements see a snapshot of data as it exists at the start of the statement. OFF Turns off Read-Committed Snapshot option at the database level. Transactions specifying the READ COMMITTED isolation level use locking. ALTER DATABASE SET Options (Transact-SQL) SET Statements (Transact-SQL)

NEW QUESTION 12
- (Exam Topic 3)
You have a query that is used by a reporting dashboard. Users report that the query sometimes takes a long time to run. You need to recommend a solution to identify what is causing the issue.
What should you recommend? More than one answer choice may achieve the goal. Select the BEST answer.

A. Set the blocked process threshold, and then run SQL Server Profiler.
B. Set the blocked process threshold, and then create an alert.
C. Enable trace flag 1204, and then create an alert.
D. Create a job that queries the sys.dm_os_waiting_tasks dynamic management view.

Answer: B

Explanation:
Step 1: Turn on the blocked process report. This will look for any blocking taking 20 seconds or longer.
- Make sure you don't have any pending changes

```
SELECT *
FROM sys.configurations
WHERE value <> value_in_use;
GO
exec sp_configure 'show advanced options', 1;
GO
RECONFIGURE
GO
exec sp_configure 'blocked process threshold (s)', 20;
GO
RECONFIGURE
GO
```

Step 2: Set up a trace to capture the blocked process report. Run it as a server side trace.

NEW QUESTION 13
- (Exam Topic 4)
You plan to implement a fault tolerance solution for a Microsoft SQL Server database. The solution must provide failover storage on the local network.
You need to ensure that the solution can route traffic to failover storage by using SMB 3.0. Which storage option should you use?

A. Cluster Shared Volumes
B. Microsoft Azure Blob storage
C. Always On availability group
D. Stretch Database

Answer: A

Explanation:
Clustered Shared Volumes (CSV) is a new clustered file system in Windows Server that is a layer of abstraction above the NTFS file system in a WSFC environment. It allows all Nodes in the failover cluster to read and write to the CSV volume. CSV leverages the investments Microsoft have made in SMB 3.0, such as SMB Direct and SMB Multichannel.
SQL Server 2014 was the first version of SQL Server to support CSVs.
References: https://www.microsoftpressstore.com/articles/article.aspx?p=2832586&seqNum=5

NEW QUESTION 14
- (Exam Topic 4)
You manage a database named DB1 that uses the following filegroups:

Filegroup name	Size	Description	Backup logical device
PRIMARY	100 MB	Primary filegroup. Contains no business-related data. All files are stored on the D drive.	Backup1
FG1	10 GB	Filegroup has read/write access. Contains mission-critical data. All files are stored on the E drive.	Backup2
FG2	5 TB	Filegroup has read-only access. Contains historical data but no critical reporting data. All files are stored on the F drive. You create a backup after you configure the filegroup for read-only access.	Backup3
FG3	100 GB	Filegroup has read-only access. Contains mission-critical data. All files are stored on the E drive.	Backup2

The database is configured to use full recovery model. Transaction logs are backed up to a backup set named TLogBackup.
The PRIMARY and FG2 for DB1 are damaged. FG1 and FG3 are intact.
You need to design a piecemeal restore plan that meets all the above requirements. You need to bring critical filegroups online as soon as possible while

minimizing restoration time. All damaged filegroups must be online after the restore operation completes.
Which five actions should you perform in sequence? To ansjver, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Actions

| Perform a differential database backup of database **DB1** using the NORECOVERY option. |
| Restore tail-logs from the backup using the NORECOVERY options. Then, restore transaction logs from TLogBackup using the RECOVERY option. |
| Restore filegroup PRIMARY from Backup1 using the PARTIAL and NORECOVERY options. |
| Restore filegroup FG2 from Backup3 using the RECOVERY option. |
| Restore transaction logs from TLogBackup using the NORECOVERY option. Then, restore tail-logs from the backup using the RECOVERY option. |
| Perform a tail-log backup of database **DB1** using the NORECOVERY option. |
| Restore filegroups FG1 and FG3 from Backup2 using the RECOVERY option. |
| Recover filegroups FG1 and FG3 using the RECOVERY option without restoring. |

Answer area

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Step 1: Perform a differential database backup… Step 2: Perform a tail-log backup…
A tail-log backup captures any log records that have not yet been backed up (the tail of the log) to prevent work loss and to keep the log chain intact. Before you can recover a SQL Server database to its latest point in time, you must back up the tail of its transaction log. The tail-log backup will be the last backup of interest in the recovery plan for the database.
Step 3:
The PRIMARY and FG2 for DB1 are damaged. FG1 and FG3 are intact.
Step 4:
Transaction logs are backed up to a backup set named TLogBackup. Step 5:
The PRIMARY and FG2 for DB1 are damaged.
References:
https://docs.microsoft.com/en-us/sql/relational-databases/backup-restore/restore-files-and-filegroups-sql-server?
https://docs.microsoft.com/en-us/sql/relational-databases/backup-restore/tail-log-backups-sql-server?view=sql-s

NEW QUESTION 15
- (Exam Topic 4)
You are implementing log shipping. You configure a secondary server in standby mode. You configure log shipping to occur hourly and keep up to seven days of log backups.
Users create reports by querying the secondary server. Transaction logs are not applied to the secondary server.
You need to ensure that the secondary server has current data at the beginning of each business day. What are two possible ways to achieve the goal? Each answer represents a complete solution.

A. Create a snapshot database from a daily backup to use as the secondary databas
B. Revert the snapshot database back to the previous business day.
C. Disconnect users while transaction logs are applied.
D. Configure the secondary server as a database mirroring target server.
E. Allow restore operations to accumulat
F. Run a Microsoft SQL Agent job that disconnects all users that are connected to the secondary server.

Answer: CD

NEW QUESTION 16
- (Exam Topic 4)
Note: This question is part of a series of questions that use the same scenario. For your convenience, the scenario is repeated in each question. Each question presents a different goal and answer choices, but the text of the scenario is exactly the same in each question in this series.
You maintain a Microsoft SQL Server instance that contains the following databases SalesDb1, SalesDb2, and SalesDb3. Each database has tabled named Products and Sales. The following table shows the configuration of each database.

Option of configuration	SalesDb1	SalesDb2	SalesDb3
Recovery model	Full	Full	Simple
Query Store operation model	Read Write	Off	Off
Auto Update Statistics	True	False	False
Auto Update Statistics asynchronously	False	False	False
Sales data age	< 1 month	1 to 6 months	> 6 months

The backup strategies for each database are described in the following table.

Database	Strategy	Backup file names
SalesDb1	Full database backups occur daily at 00:00. Log backups occur every hour.	SalesDb1Full_*.bak SalesDb1Log.bak
SalesDb2	Full database backups occur every three months. Differential backups occur every month. Logs are not backed up.	SalesDb2Delta_*.bak SalesDb2Full_*.bak
SalesDb3	Full database backups occur every five years. Differential backups occur every six months.	SalesDb3Delta_*.bak SalesDb3Full_*.bak

Each full or differential backup operation writes into a new file and uses a different sequence number. You observe the following database corruption issues.

Database	Error	Description
SalesDb2	824	Some data pages that store table row data are torn. All backups for **SalesDb2** are lost.
SalesDb3	823	You observe bad checksum issues for data pages that store table row data. All backups are available. No new data has been added to the table since the latest differential backup.

SalesDb3 reports a number of database corruption issues related to error 823 and 824 when reading data pages. You must display the following information about the corrupted pages:

- database name
- impacted file id
- impacted file physical name
- impacted page id
- event type that identifies the error type
- error count

Users report performance issues when they run queries against SalesDb2. You plan to monitor query statistics
and execution plans for SalesDb2 by using Query Store. The monitoring strategy must meet the following requirements:

- Perform automatic data cleanup when query store disk usage reaches 500 megabyte (MB).
- Capture queries based on resource consumption.
- Use a stale query threshold value of 60 days.

The query optimizer generates suboptimal execution plans for a number of queries on the Sales table in SalesDb2. You will create a maintenance plan that updates statistics for the table. The plan should only update statistics that were automatically created and have not been updated for 30 days. The update should be based on all data in the table.

You need to view the information about the corrupted pages on SalesDb3.

How should you complete the Transact-SQL statement? To answer, drag the appropriate Transact-SQL segments to the correct locations. Each Transact-SQL segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

Transact-SQL segments

```
misdb.dbo.suspect_pages

msdb.sys.sysfiles

SalesDb3.sys.sysfiles

master.sys.sysfiles

msdlb.sys.database_files

msdb.sys.dm_hadr_auto_page_repair

msdb.sys.dm_db_mirroring_auto_page_repair
```

Answer Area

```
SELECT DB_NAME(sp.database_id)AS database_name, sp.file_id,
f.filename AS File_name, sp.page_id, sp.event_type, sp.error_count
FROM _____ sp

INNER JOIN _____ ON f.fileid = sp.file_id

WHERE sp.event_type NOT INT(4, 5, 7) AND sp.database_id = ON_ID ('SalesDb 3')
```

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Box 1: msdb.dbo.suspect_pages
suspect_pages contains one row per page that failed with a minor 823 error or an 824 error. Pages are listed in this table because they are suspected of being bad, but they might actually be fine. When a suspect page is repaired, its status is updated in the event_type column.
The suspect_pages table resides in the msdb database. SalesDb3 has pages with checksum errors.
Box 2: msdb.sys.database_files
We want to identify these pages and which database they are in, this is easy enough to do when we join out to sys.databases and sys.master_files, as seen here:
SELECT d.name AS databaseName, mf.name AS logicalFileName, mf.physical_name AS physicalFileName, sp.page_id,
case sp.event_type
when 1 then N'823 or 824 error' when 2 then N'Bad Checksum' when 3 then N'Torn Page' when 4 then N'Restored'
when 5 then N'Repaired' when 7 then N'Deallocated' end AS eventType, sp.error_count, sp.last_update_date
from msdb.dbo.suspect_pages as sp
join sys.databases as d ON sp.database_id = d.database_id join sys.master_files as mf on sp.[file_id] = mf.[file_id] and d.database_id = mf.database_id;
The result of this query will give you a high level view of where you have potential corruption in your databases, from here it is important to use tools such as DBCC CHECKDB and your backups to recover from in line with your RPO and RTO.
References:
https://docs.microsoft.com/en-us/sql/relational-databases/backup-restore/manage-the-suspect-pages-table-sql-ser
https://blogs.sentryone.com/johnmartin/monitoring-for-suspect-pages/

NEW QUESTION 17
- (Exam Topic 4)
You have a database named DB1.
You must ensure that DB1 is highly available. You implement a Windows cluster. You need to create a Cluster Shared Volume (CSV) for the database and log files.
Which three Windows Power Shell commands should you execute in sequence? To answer, move the appropriate Windows PowerShell commands from the list of Windows PowerShell commands to the answer area and arrange them in the correct order.

Solutions

Add-ClusterSharedVolume "Disk1"
$cluster.EnabledSharedVolumes = "Disabled"
$cluster = Get-ClusterGroup
$cluster.EnabledSharedVolumes = "Enabled"
$cluster = Get-Cluster

Answer Area

A. Mastered
B. Not Mastered

Answer: A

Explanation:
Box 1: $cluster = Get-Cluster
The Get-Cluster cmdlet gets information about one or more failover clusters in a given domain.
This cmdlet can obtain a variety of configuration and state information about a failover cluster, including the following items, such as the EnabledSharedVolumes property.
Box 2: $cluster.EnabledSharedVolumes ="Enabled" Box 3: Add-ClusterSharedVolume "Disk1"
The Add-ClusterSharedVolume cmdlet makes a volume available in the Cluster Shared Volumes in a failover cluster. The Cluster Shared Volume must be chosen from the disks in Available Storage (that is, disks that
have been added to the cluster but not assigned to a specific use in the cluster). References:
https://docs.microsoft.com/en-us/powershell/module/failoverclusters/get-cluster
https://docs.microsoft.com/en-us/powershell/module/failoverclusters/add-clustersharedvolume?view=winserver2

NEW QUESTION 18
- (Exam Topic 4)
Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.
After you answer a question in this section, you will NOT be able to return to it As a result, these questions wilt not appear in the review screen.
You have a database named DB1 that contains a table named Table1. You need to audit all updates to Table1. Solution: You convert Table1 to a system-versioned temporal table. Does this meet the goal?

A. Yes
B. No

Answer: A

NEW QUESTION 19
- (Exam Topic 4)
Contoso. Ltd. has Microsoft SQL Server databases that support a custom application. The current SQL Server environment consists of two servers: ContosoSQL1 and ComosoSQL2. These two servers participate in an Always On Availability Group named ContosoAG1 that is configured to use synchronous-commit with automatic failover. The secondary replica is not configured for read-only access.
The application performs both transactional processing and historical data retrieval in a database named ContosoDB. The application includes an inventory management module. The inventory management module and database have experienced performance issues.
Users report mat a Query named inventoryQuery1 takes a long time to complete. The query is shown as follows:
SELECT ProductNumber, Name, ProductLine FROM Production.Product
WHERE ProductNumber = N' <specific product>'
The query plan used by SQL Server for this query is shown in the exhibit.
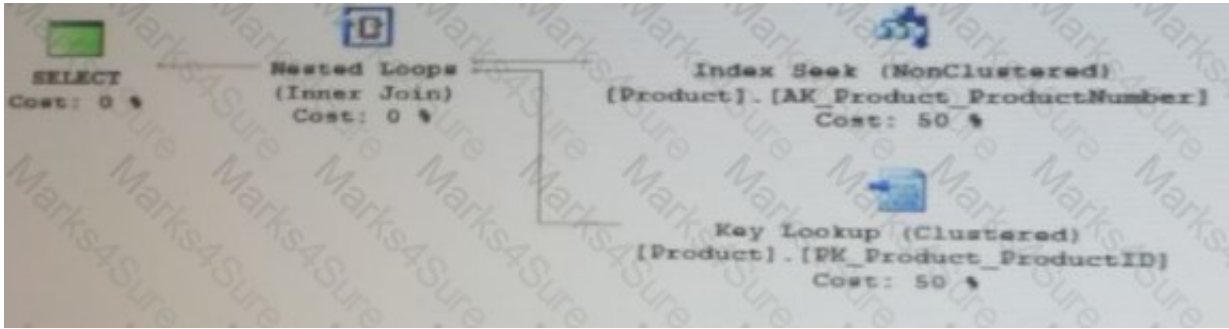
Various Performance issues, including frequent long-term blocking episodes, prevent business users from completing their daily tasks. You suspect the tempdb database resources could be responsible. You must create blocking reports for the contosoDB database to identify issues.

You plan to use Extended Events to review all Transact SQL statements that are run against the ContosoSQL1 instance. The output from the Extended Events session must contain both start and stop events and must be written to a file. You must configure the Extended Events session to minimize possible data loss and reduce the effect on server performance.

You plan to deploy an additional secondary replica named contosoSQL3 to ContosoAG1. Ready-only traffic must be load-balanced between the two secondary replicas, regardless of which instance is the primary replica. Contoso plans to add an additional dedicated reporting system that will reply on real-time data from the transactional database.

The company plans to improve their high availability/disaster recovery (HA/DR) solution. As part of the planned improvements, you will back up all databases from ContosoSQL1 directory to an off-site location.

You need to create the blocking reports.
Which three actions should you perform in sequence?

A. Mastered
B. Not Mastered

Answer: A

Explanation:

NEW QUESTION 20
- (Exam Topic 4)
You are a database administrator for an organization. You manage a mission-critical database named DB1 that is hosted on a server named LON-SQL1.
An audit record for transactions that occur in DB1 are written to a file every five seconds. If an audit record cannot be recorded, the transaction must be terminated.
You create a shared folder named Audits on a server named LON-SVR1.
You need to implement the process for recording audit records.
How should you complete the Transact-SQL statement? To answer, select the appropriate Transact-SQL segments in the answer area.
NOTE Each correct selection is worth one point.

Answer Area

```
CREATE │ Database Audit Specification        │ DB_Activity
       │ Trigger                             │
       │ Server Audit                        │

   TO  │ SECURITY_LOG                                        │
       │ FILE (FILEPATH='\\LON-SVR1\Audits\')                │
       │ APPLICATION_LOG                                     │
       │ FILE (FILEPATH='\\LON-SQL1\Events\')                │

 WITH  ( │ QUEUE_DELAY = 5    │ , │ ON_FAILURE = CONTINUE        ▷ │ )
         │ QUEUE_DELAY = 5000 │   │ ON_FAILURE = SHUTDOWN         │
         │ QUEUE_DELAY = 0    │   │ ON_FAILURE = FAIL_OPERATION   │
```

A. Mastered
B. Not Mastered

Answer: A

Explanation:

Answer Area

```
CREATE │ Database Audit Specification        │ DB_Activity
       │ Trigger                             │
       │ Server Audit ┆                      │

   TO  │ SECURITY_LOG                                        │
       │┆ FILE (FILEPATH='\\LON-SVR1\Audits\') ┆             │
       │ APPLICATION_LOG                                     │
       │ FILE (FILEPATH='\\LON-SQL1\Events\')                │

 WITH  ( │ QUEUE_DELAY = 5     ┆ │ , │ ON_FAILURE = CONTINUE        ▷ │ )
         │┆QUEUE_DELAY = 5000 ┆  │   │ ON_FAILURE = SHUTDOWN         │
         │ QUEUE_DELAY = 0      │   │┆ON_FAILURE = FAIL_OPERATION ┆  │
```

NEW QUESTION 21
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