Microsoft

70-450 PRACTICE EXAM

PRO: Designing

Question: 1

You administer a SQL Server 2008 instance.
You plan to deploy a new database that has the following capacity requirements:
275 GB for the database data file
50 GB for the transaction log file
The storage array has six 100-GB disk drives available for the database. The disks are attached to a redundant array of independent disks (RAID) controller that supports RAID levels 0, 1, 5, and 10. The write performance of the transaction log needs to be maximized. The database and transaction log files must be protected in the event of a drive failure. You need to design the storage system. Which storage configuration should you use?

A. A single RAID 5 volume
B. A single RAID 10 volume
C. A RAID 0 volume and a RAID 5 volume
D. A RAID 1 volume and a RAID 5 volume

Answer: D

Question: 2

You administer a SQL Server 2008 instance. The instance is located on a four-processor, quad-core server. The server frequently experiences CPU pressure. The instance contains a very large mission-critical database that is used continuously. You need to ensure that online index rebuilds do not consume all available CPU cycles. Which configuration option should you use?

A. affinity mask
B. affinity I/O mask
C. max degree of parallelism
D. optimize for ad hoc workloads

Answer: C

Question: 3

You administer a SQL Server 2008 infrastructure. An instance runs on a computer that has eight quad-core processors and 128-GB RAM. Four different applications use the instance. The instance experiences a low number of CXPACKET waits. The instance also experiences a large number of lazy writer waits. You need to optimize the performance of the instance. What should you do?

A. Configure the Resource Governor.
B. Configure the Windows System Resource Manager.
C. Configure software non-uniform memory access (soft-NUMA).
D. Configure an increase in the maximum degree of parallelism option.

Answer: C

Explanation:

Failover clustering in SQL Server provides high—availability support for an entire SQL Server instance. For example, you can configure a SQL Server instance on one node of a failover cluster to fail over to any other node in the cluster during a hardware failure, operating system failure, or a planned upgrade.

A failover cluster is a combination of one or more nodes (servers) with two or more shared disks, known as a resource group. The combination of a resource group, along with its network name, and an internet protocol (IP) address that makes up the clustered application or server, is referred to as a failover cluster or a failover cluster Irrstar·ce. A SQL Server failover cluster appears on the network as if it were a single computer, but has functionality that provides failover from one node to another if the current node becomes unavailable. A failover cluster appears on the network as a normal application or single computer, but it has additional functionality that increases its availability.

Failover clustering has a new architecture and new work flow for all Setup scenarios in SQL Server 2008. The two options for installation are Integrated installation and AdvancedlEnterprise installation. Integrated installation creates and configures a single-node SQL Server failover cluster instance. Additional nodes are added using add node functionality in Setup. For example, for Integrated installation, you run Setup to create a single-node failover cluster. Then, you run Setup again for each node you want to add to the cluster. AdvancedlEnterprise installation consists of two steps. The Prepare step prepares all nodes of the failover cluster to be operational. Nodes are defined and prepared during this initial step. After you prepare the nodes, the Complete step is run on the active nods—the node that owns the shared disk—to complete the failover cluster instance and make it operational.

When to Use Failover Clustering

Use failover clustering to:

- Administer a failover cluster from any node in the clustered SQL Server configuration. For more information, see Installing a SQL Server 2008 Failover Cluster.

· Allow one failover cluster node to fail over to any other node in the failover cluster configuration.

For more information, see Installing a SQL Server 2008 Failover Cluster.

· Configure Analysis Services for failover clustering. For more information, see How to: install

Analysis Services on a failover cluster.

· Execute full-text queries by using the Microsoft Search segilce with failover clustering. For more information, see Using SQL Server Tools with Failover stering.

Question: 4

You administer a SQL Server 2008 instance.
The instance runs on a computer that has the following features:
A 64-GB RAM
Four quad-core processors
Several independent physical raid volumes
You plan to implement a transactional database on the instance. The database is expected to have a high volume of INSERT, UPDATE, and DELETE activities. The activities include creation of new tables. You need to optimize the performance of the database by maximizing disk bandwidth and reducing the contention in the storage allocation structures. What should you do?

A. Create multiple data files for the database.
B. Place database and log files on the same volume.
C. Configure the affinity mask option appropriately.
D. Configure the affinity I/O mask option appropriately.

Answer: A

Question: 5

You administer a SQL Server 2008 instance. You plan to deploy a new database to the instance. The database will be

subject to frequent inserts and updates. The database will have multiple schemas. One of the schemas will contain a large amount of read-only reference data. You need to design the physical database structure for optimal backup performance. What should you do?

A. Create the database by using a single data file and a single log file.
B. Create the database by using a single data file and multiple log files.
C. Create the database by using a single log file and multiple filegroups.
D. Create the database by using a single log file and a filegroup that has multiple data files.

Answer: C

Explanation:
Reasons to take database snapshots include:
- Maintaining historical data for report generation.
Because a database snapshot provides a static view of a database, a snapshot can extend access to data from a particular point in time. For example, you can create a database snapshot at the end of a given time period (such as a financial quarter} for later reporting. You can then run end-of-period reports on the snapshot. If disk space permits, you can also maintain end-of-period snapshots indefinitely, allowing queries against the results from these periods; for example, to investigate organizational performance.
- Using a mirror database that you are maintaining for availability purposes to offload reporting.
Using database snapshots with database mirroring permits you to make the data on the mirror sewer accessible for reporting, Additionally, running queries on the mirror database can free up resources on the principal. For more information, see Database Mirroring and Database
Snapshots.
- Safeguarding data against administrative error.
- Before doing major updates, such as a bulk update or a schema change, create a database snapshot on the database protects data. If you make a mistake, you can use the snapshot to recover by reverting the database to the snapshot. Reverting is potentially much faster for this purpose than restoring from a backup; however, you cannot roll forward afterward.

Question: 6

You administer a SQL Server 2008 instance. You deploy a new database named Engineering. The Engineering database manages large documents that will be revised occasionally. You need to design a table structure that allows fast read access. You also need to minimize storage space requirements. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

A. Use NTFS file system compression on the volume.
B. Use row-level compression on the document table.
C. Use varbinary(MAX) data type with FILESTREAM storage.
D. Enable row-level compression on all columns that use the vardecimal() data type.

Answer: A, C

Question: 7

You administer a SQL Server 2008 Reporting Services (SSRS) instance. You plan to design an authentication method for SSRS reports that use SQL Server data connections. You need to ensure that all SSRS reports communicate to the SQL Server instance by using the Kerberos authentication protocol. What should you do?

A. Configure the default Web site on the instance to use the Integrated Security type.
B. Configure the application pool used by the default Web site to use a domain account.
C. Configure the default Web site on the instance to use the Secure Sockets Layer (SSL) protocol.
D. Register a service principal name (SPN) in the Active Directory directory service for the SSRS instance.

Answer: D

Question: 8

You administer a SQL Server 2008 instance. You plan to design the security requirements for a new database application that will be deployed to the instance. The new database contains a table that is created by using the following code segment:

```
CREATE TABLE EmpBonusPlan
(
  EmployeeID INT NOT NULL IDENTITY(1,1),
  NumOptions INT NOT NULL,
  BaseSalary MONEY NOT NULL,
  BonusPlan VARBINARY(MAX) FILESTREAM
)
```

You need to ensure that the BonusPlan column is protected from unauthorized access by using the most secure method. What should you do?

A. Use Transparent data encryption.
B. Use the Trustworthy option for the database.
C. Use the Advanced Encryption Standard encryption on all columns in the database.
D. Use the NTFS file system security and limit the access of the database files to the SQL Server 2008 Service account.

Answer: D

Question: 9

You administer a SQL Server 2008 instance. The instance hosts a database that is used by a Web-based application. The application processes 15,000 transactions every minute. A table in the database contains a column that is used only by the application. This column stores sensitive data. You need to store the sensitive data in the most secure manner possible. You also need to ensure that you minimize the usage of memory space and processor time. Which encryption type should you use?

A. Symmetric key encryption
B. Asymmetric key encryption
C. Certificate-based encryption
D. Transparent data encryption

Answer: A

Explanation:
---Jeff---
Symmetric key encryption is the most commonly recommended option for SQL Server 2008 encryption.
It provides security without overly taxing the server like asymmetric encryption might.
Certificates have a similar architecture (public-private key).
TDE is not appropriate, as it would encrypt the entire database.

Question: 10

You administer a SQL Server 2008 instance. You plan to deploy a third-party database application to the instance. The application uses stored procedures that are developed by using SQL CLR integration. The application must be configured to enable the EXTERNAL_ACCESS code access security setting. You need to ensure that the application is deployed to the instance without loss of functionality. What should you do first?

A. Replace read write non-static fields in the code with static fields.
B. Replace read-only static fields in the code with read write static fields.
C. Use the peverify.exe PEVerify tool to verify whether the code meets the type-safety requirements.
D. Use the regasm.exe assembly registration tool to register the assembly on the server before deployment.

Answer: C

Question: 11

You administer a SQL Server 2008 instance. You plan to design the security requirements for a new database application. The application uses a code segment that contains the following components: A method that accesses the registry on the SQL Server. A method that accesses the file system on a network file server. A class definition that uses public static fields The code segment uses SQL CLR integration and is implemented as a single assembly. You need to ensure that the application is successfully deployed to the instance. What should you do?

A. Use the SAFE code access security for the assembly.
B. Replace all public static fields with public fields.
C. Replace all public static fields with public static read-only fields. Use the EXTERNAL_ACCESS code access security for the assembly.
D. Replace all public static fields with public static read-only fields. Register the assembly by using the regasm.exe utility before deployment.

Answer: C

Question: 12

You administer a SQL Server 2008 instance that will host a new database application. You plan to design the security requirements for the application. Each application user has a unique login to the SQL Server 2008 server. The application database contains stored procedures to execute stored procedures in the MSDB database. The stored procedures in the MSDB database schedule SQLAgent jobs. You need to ensure that the stored procedures in the MSDB database are executed by using the security context of the application user. What should you do?

A. Add each user to the public role in the MSDB database.
B. Add each user to the db_dtsltduser database role in the MSDB database.
C. Configure the new database to use the TRUSTWORTHY option, and then add each user to the MSDB database.
D. Configure the MSDB database to use the TRUSTWORTHY option, and then add each user to the MSDB database.

Answer: C

Explanation:

---Jeff---

If this ever actually comes up, you may want to re-think your application design. Presumably, the application users are logging in to the app database. Since this database is trusted, and the users exist in MSDB, the users will be able to schedule jobs via the mechanism in the question... which probably is not a good idea.

Question: 13

You administer a SQL Server 2008 instance. The instance hosts a new database application. You plan to design the data security strategy for the application. You will use Snapshot replication to replicate the data to another instance of SQL Server 2008. You need to ensure that all stored data is encrypted by using the least amount of administrative effort. What should you do?

A. Enable encrypted connections between the instances.
B. Enable Transparent data encryption for the MSDB database on the two instances.
C. Enable Transparent data encryption for the Publisher, Distribution, and Subscriber databases.
D. Enable certificate-based encryption for the Publisher, Distribution, and Subscriber databases.

Answer: C

Question: 14

You administer SQL Server 2008 servers on a single site. The site contains the following two SQL Server 2008 instances:
•   An Enterprise Edition server on a server that has a redundant array of independent disks (RAID) 10 disk system
•   A Standard Edition server on a server that has a RAID 5 disk system
Each instance hosts a single application. You need to recommend a high-availability solution for the site to meet the following business requirements:
•   The solution can be implemented on the existing systems.
•   The database is available with minimal downtime.
•   Data loss is minimal.
•   There is minimal effect on the existing system.
What are two possible ways to achieve this goal? (Each correct answer presents a complete solution. Choose two.)

A. Replication
B. Log shipping
C. Failover clustering
D. Database snapshot

Answer: A, B

Explanation:

---Jeff---

Snapshots are not a high availability solution no matter how many times they are included in questions about high availability.

Failover Clustering would require the addition of a shared storage array.

That leaves log shipping and replication. Log shipping is the weakest of high availability options in SQL Server 2008.

Peer-to-peer replication is viable.

Question: 15

You administer SQL Server 2008 instances at three sites. All sites share a mission-critical database. The business requirements specify that users at each site must be able to perform the following tasks:
•   Access and modify data on all sites with minimal latency.
•   Minimize data loss in the event of a server failure.
You need to provide a high-availability solution that meets the business requirements. Which solution should you implement?

A. Failover clustering
B. Peer-to-Peer replication
C. Asynchronous database mirroring without a witness server
D. Log shipping to servers at two of the sites to provide read-only copies of data

Answer: B

Explanation:
---Jeff---
To minimize latency, users need a local copy of the database.
Failover clustering doesn't provide multiple copies.
Database mirroring only supports one destination.
Database mirroring and log shipping leave the secondary or secondaries in a restoring state, so data is not easily accessible.
Peer-to-peer replication is the only viable solution.

Question: 16

You administer a SQL Server 2008 infrastructure. An instance hosts a business-critical database that must be continuously available to the users without data loss. The database includes Filestream data. You need to implement a high-availability solution for the site. Which solution should you use?

A. Failover clustering
B. Database snapshot
C. Asynchronous database mirroring
D. Synchronous database mirroring with a witness server

Answer: A

Explanation:
Failover clustering in SQL Server provides high—availability support for an entire SQL Server instance. For example, you can configure a SQL Server instance on one node of a failover cluster to fail over to any other node in the cluster during a hardware failure, operating system failure, or a planned upgrade.
A failover cluster is a combination of one or more nodes (servers) with two or more shared disks, known as a resource group. The combination of a resource group, along with its network name, and an internet protocol (IP) address that makes up the clustered application or server, is referred to as a failover cluster or a failover cluster instance. A SQL Server failover cluster appears on the network as if it were a single computer, but has functionality that provides failover from one node to another if the current node becomes unavailable. A failover cluster appears on the network as a normal application or single computer, but it has additional functionality that increases its availability.
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Use failover clustering to:

- Administer a failover cluster from any node in the clustered SQL Server configuration. For more information, see Installing a SQL Server 2008 Failover Cluster.

· Allow one failover cluster node to fail over to any other node in the failover cluster configuration.

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· Configure Analysis Services for failover clustering. For more information, see How to: install

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· Execute full-text queries by using the Microsoft Search segilce with failover clustering. For more information, see Using SQL Server Tools with Failover stering.

Question: 17

You administer four SQL Server 2008 instances. Each instance hosts a single database application. You plan to migrate all four instances to a new SQL Server failover cluster. The four instances are configured as shown in the following table.

Instance Name	Configuration
Instance 1	8 processors that have 16-GB RAM
Instance 2	4 processors that have 8-GB RAM
Instance 3	2 processors that have 16-GB RAM
Instance 4	4 Processors that have 8-GB RAM

The four instances are fully optimized and have no spare CPU cycles or extra memory. The new cluster will host all four databases on a single virtual cluster IP address. You need to ensure that the new cluster is configured to handle the workload of all the database applications by using the minimum amount of hardware resources. Which cluster configuration should you use?

A. Four-node active/active/active/active cluster that has each node containing a minimum of 9 processors and a 25-GB memory

B. Two-node active/active cluster that has each node containing a minimum of 9 processors and a 25-GB memory

C. Two-node active/passive cluster that has each node containing a minimum of 18 processors and a 50-GB memory

D. Four-node active/active/active/passive cluster that has each node containing a minimum of 18 processors and a 50-GB memory

Answer: C

Explanation:

---Jeff---

Clustering provides protection against server hardware failure by using multiple systems (nodes) that share a disk array.

It does NOT protect against that disk array failing.

Active/Passive means that one node is hosting the SQL Server instance, while the other is sitting around waiting for the first one to fail. It's the preferred solution, but means that both nodes have to be powerful enough to host the entire SQL server instance.

Two-node implementations are the most common and least expensive. More nodes can be added to distribute the load.

Since a requirement mentioned is to minimize hardware usage, a two-node option is preferable. Active/Passive is generally recommended by Microsoft as well. Also, the question states that each instance is currently EXACTLY powerful enough to perform its duties without any overhead. This would make splitting the hardware into two active nodes impossible, as the values for processor and RAM don't add up neatly enough to split the instances 50/50 based on existing requirements.

Required reading: Start at SQL-Server-Performance, move on to MSSQLTips, finish with the white paper (PDF).
http://www.sql-server-performance.com/2002/clustering-intro/
http://www.mssqltips.com/sqlservertip/1554/sql-server-clustering-active-vs-passive/
http://www.google.com/url?sa=t&source=web&cd=1&ved=0CBIQFjAA&url=http%3A%2F%2Fdownload.
microsoft.com%2Fdownload%2F6%2F9%2FD%2F69D1FEA7-5B42-437A-B3BA-A4AD13E34EF6%
2FSQLServer2008FailoverCluster.docx&rct=j&q=sql%20server%202008%20cluster%20microsoft%20white%
20paper&ei=7T2rTOG8EcWBlAfN8fnEDA&usg=AFQjCNGI1hQIgs4JkiNAfD6zVvVl1-8UuA&cad=rja

Question: 18

You administer a SQL Server 2008 instance. The instance hosts a database configured by using high-safety mirroring operation mode along with a witness server. The witness server is experiencing memory failure and will be offline for four hours. You need to reconfigure the mirroring strategy to minimize the risk of database unavailability. What should you do?

A. Pause database mirroring.
B. Use asynchronous operating mode.
C. Remove database mirroring.
D. Remove the witness server from the mirroring session.

Answer: D

Question: 19

You administer a SQL Server 2008 instance. The instance is one of three servers in a peer-to-peer transactional replication topology. The publication contains a table named Orders. The Orders table contains 200 GB of data across multiple partitions. A batch process bulk loads 10 GB of data to the Orders table periodically. You need to design a replication strategy to minimize latency. What should you do?

A. Configure the Distributor agent to replicate transactions continually.
B. Configure the Distributor agent to change the commit batch threshold.
C. Use the BULK INSERT command in multiple staging tables. Switch partitions into the Orders table.
D. Disable the Distributor agent. Use the BULK INSERT command in the Orders table. Reinitialize the publication.

Answer: C

Explanation:
According to the exam resources, the answer is A). But according to MSDN, partition switching is not supported when the source or destination table is involved in replication.
The vagueness of the question doesn't help. If we assume latency refers to the time between data replication, then B) may be the optimal solution. Using the -continuous option on the distributor will ensure that transactions are replicated as quickly as possible. The commit batch threshold refers to replication commands and isn't relevant here.
Note: Answer confirmed on exam as A), regardless of whether this is actually correct or not.

Question: 20

You administer a SQL Server 2008 infrastructure. You implement log shipping for several databases on three SQL Server instances. The logs are shipped to a fourth SQL Server instance. You plan a manual failover. You need to ensure that the database applications use the secondary server after failover. You also need to ensure that users can access the most recent data. Which three tasks should you perform? (Each correct answer presents part of the solution. Choose three.)

A. Redirect client computers to the secondary instance.
B. Back up all databases on the secondary instance.
C. Copy all log shipping network shares to the secondary instance.
D. Back up the tail of the transaction log of primary databases by using the WITH NORECOVERY option.
E. Apply any unapplied transaction log backups in sequence to each secondary database by using the WITH RECOVERY option on the last log.

Answer: ADE

Explanation:
---Jeff---
Official source: http://msdn.microsoft.com/en-us/library/ms191233.aspx
Explanation: While the maturation of clustering and mirroring in SQL Server 2008, log shipping doesn't see the widespread usage it once did. Jose Baretto's blog has a nice concise explanation of the steps in a log shipping failover. They're out of order in the above question, which can make thinking through the process a bit more difficult.
1. Backup of the tail of the log on the primary using NORECOVERY (assuming this is possible).
2. Restore that log backup as the final link to the secondary, and specify RECOVERY.
3. Point any applications to the now-restored secondary server.

Question: 21

You administer a SQL Server 2008 instance that hosts a large database. The database experiences high volumes of queries and transactions that are processor-intensive. You plan to implement an incremental backup strategy for the database. You also plan to use backup compression. You need to ensure that the backup jobs have a minimal effect on the performance of the server. What should you do?

A. Use database snapshots.
B. Use the Resource Governor.
C. Reconfigure the Affinity I/O Mask configuration option.
D. Spread the database backup across multiple backup devices.

Answer: B

Explanation:
Resource governor can be used to limit the resource usage of a given session.
http://www.sql-server-performance.com/2008/resource-governor-in-sql-server-2008/
Database snapshots are not a backup methodology, as they rely on the existing database.
The affinity mask I/O option is for binding disk operations to certain CPUs and was covered earlier.
Spreading backups across multiple devices is supported in SQL Server 2008. If the resource in demand was disk I/O, this would be a viable solution.

Question: 22

You administer a SQL Server 2008 instance. The instance hosts a database that contains sensitive data. You plan to implement a database backup strategy for the database. You need to ensure that all backups of the database are encrypted. You also need to prevent unauthorized access of the backups. What should you do?

A. Use Windows BitLocker Drive Encryption technology.
B. Use Transparent database encryption.
C. Use the BACKUP statement along with the PASSWORD option.
D. Use the BACKUP statement along with the MEDIAPASSWORD option.

Answer: B

Explanation:
Official source: http://msdn.microsoft.com/en-us/library/bb934049.aspx

Question: 23

You administer a SQL Server 2008 instance that hosts a large financial database.
The database has the following backup strategies:
•   A full database backup is performed once a week.
•   A differential backup is performed every day.
•   A transaction log backup is performed every hour.
You plan to execute an end-of-year batch process that takes two hours to run. The batch process will modify about five percent of data within the database. You need to ensure that if the Finance department does not approve the batch process, the batch operation can be rolled back in minimum possible time. What should you do prior to starting the batch process?

A. Perform a differential backup.
B. Create a database snapshot.
C. Create a marked transaction. Perform a transaction log backup.
D. Record the time before the batch operation. Perform a transaction log backup.

Answer: B

Explanation:
Reasons to take database snapshots include:
- Maintaining historical data for report generation.
Because a database snapshot provides a static view of a database, a snapshot can extend access to data from a particular point in time. For example, you can create a database snapshot at the end of a given time period (such as a financial quarter} for later reporting. You can then run end-of-period reports on the snapshot. If disk space permits, you can also maintain end-of-period snapshots indefinitely, allowing queries against the results from these periods; for example, to investigate organizational performance.
- Using a mirror database that you are maintaining for availability purposes to offload reporting.
Using database snapshots with database mirroring permits you to make the data on the mirror sewer accessible for reporting, Additionally, running queries on the mirror database can free up resources on the principal. For more information, see Database Mirroring and Database
Snapshots,
- Safeguarding data against administrative error.
- Before doing major updates, such as a bulk update or a schema change, create a database snapshot on the database

protects data. If you make a mistake, you can use the snapshot to recover by reverting the database to the snapshot. Fleverting is potentially much faster for this purpose than restoring from a backup; however, you cannot roll forward afterward.

Question: 24

You administer a SQL Server 2008 database solution. All data modifications are performed through stored procedures that use only the INSERT, UPDATE, or DELETE statements. You are designing a backup strategy.
You need to ensure that the following business requirements are met:
•   The backup strategy supports point-in-time recovery for failure at any time of day.
•   The transaction log uses the least amount of disk space.
What should you do?

A. Use hourly database snapshots.
B. Use the full-recovery model along with differential backups.
C. Use the simple-recovery model along with differential backups.
D. Use the full-recovery model along with transaction log backups.

Answer: D

Explanation:
Full-recovery Model
Description
· Requires log backups.
- No work is lost due to a lost or damaged data file.
· Can recover to an arbitrary point in time (for example, prior to application or user error).
Work loss exposure
· Normally none.
- Il the tail of the log is damaged, changes since the most recent log backup must be redone.
Recover to point in time? S3.
- Can recover to a specific point in time, assuming that your backups are complete up to that point in time.

Question: 25

You administer a SQL Server 2008 instance that hosts a database. The backup strategy used by the database is as shown in the following table.

Backup Type	Frequency	Time of the Backup	Time Taken for the Backup
Full Database	Tuesday, Thursday, Saturday	21:00 hr	60-90 minutes
Differential	Monday, Wednesday, Friday	21:00 hr	30-45 minutes
Transaction Log	Hourly	Hourly	< 5 minutes

You run a batch process on Saturday that lasts from 21:00 hr to 23:00 hr. You discover that the batch process is invalidated because a user has modified some data at 21:05 hr on the same day. You need to restore the database to its state at the start of the batch process in the least possible time. What should you do?

A. Restore the full database backup that was performed on Saturday.
B. Restore the full database backup that was performed on Thursday.

Restore all transaction logs from the time of the full backup on Thursday and stop at 21:00 hr on Saturday.

C. Restore the full database backup that was performed on Saturday.

Restore all transaction logs from the time of the full backup on Saturday and stop at 21:00 hr on Saturday.

D. Restore the full database backup that was performed on Thursday.

Restore the differential backup that was performed on Friday.

Restore all transaction logs from the time of the differential backup on Friday and stop at 21:00 hr on Saturday.

Answer: D

Explanation:

---Jeff---

The backup just before the batch takes 90 minutes to complete.

The full backup will grab any recently completed transactions as it nears completion, so most - if not all - of the batch modifications will be included. It's necessary to go back further than that. Lesson: don't run major changes during your backups.

Question: 26

You administer a SQL Server 2008 instance that hosts a large database. The following backup strategy is used for the database:

- • A full database backup is performed at 02:00 hr every Monday.
- • A differential backup is performed at 23:00 hr every day.
- • A transaction log backup is performed on an hourly basis.

A power failure on Thursday causes the SQL Server 2008 server to restart at 09:15 hr. Fifteen minutes after the server restarts, the users report that they are unable to execute certain queries that access customer data. You discover that the customer data is unmodified after the power failure. When you execute the DBCC CHECKDB command on the database, you receive the following error message:

Object ID 2814307832, index ID 2, partition ID 83127819437122157, alloc unit ID 82134587923221126 (type In-row data): Page (3421:169) could not be processed. See other errors for details.

Table error: Object ID 2814307832, index ID 2, partition ID 83127819437122157, alloc unit ID 82134587923221126 (type In-row data), page (3421:169). Test (IS_OFF (BUF_IOERR, pBUF->bstat)) failed. Values are 16928422 and -8.

CHECKDB found 0 allocation errors and 2 consistency errors in table 'tbl_Customer' (object ID 2814307832).

When you execute the sp_help 'tbl_customer' stored procedure you receive the following result set:

index_name index_description

------------- ----------------------------------

PK clustered located on PRIMARY

NCIX nonclustered located on PRIMARY

You need to ensure that the data is available as quickly as possible with minimal effect on users. What should you do?

A. Drop and recreate the PK index.

B. Drop and recreate the NCIX index.

C. Restore the latest full database backup. Restore all transaction log backups from the latest full database backup.

D. Restore the latest full database backup. Restore the latest differential backup. Restore all transaction log backups from the latest differential backup.

Answer: B

Explanation:

---Jeff---

The error refers to index 2. Since the clustered index on a table is always index 1, this means there's a problem with

the nonclustered index. Dropping and recreating this may fix the seek issue quickly as indicated in the requirements.
In situations such as this, it's always a better idea to restore from backups. There's no way of telling how bad the damage is.
However, to get the database running as quickly as possible, D) is the immediate solution. Any steps taken after that aren't relevant.

Question: 27

You administer a SQL Server 2008 database solution that is log-shipped for high-availability purposes. The data files of the database are located on drive D. The transaction log files of the database are located on drive E. You are designing a recovery test plan to meet the following requirements for the log-shipping solution:
The secondary database is brought online as quickly as possible.
The data loss is minimal.
The data is in a consistent state.
You need to identify the first step for the recovery test plan when drive D fails.
Which step should you choose?

A. Bring the secondary database online.
B. Perform the tail-log backup of the primary database.
C. Execute the DBCC CHECKDB command along with the REPAIR_REBUILD option against the primary database.
D. Execute the DBCC CHECKDB command along with the REPAIR_ALLOW_DATA_LOSS option against the primary database.

Answer: B

Question: 28

You administer a SQL Server 2008 instance that hosts a large database.
The database has the following backup strategy:
Full database backups are performed weekly.
Differential backups are performed daily.
Transaction log backups are performed hourly.
The recovery plan requires you to perform an unscheduled full backup.
You need to perform a full database backup without interrupting the scheduled backup strategy. Which backup option should you use?

A. SKIP
B. NOINIT
C. MIRROR TO
D. COPY_ONLY

Answer: D

Question: 29

You administer a SQL Server 2008 infrastructure. You design a corporate backup and recovery strategy that has to be validated. You need to ensure the successful recovery of any single database from a catastrophic failure without requiring a backup data center in a different location. Which three tasks should you include? (Each correct answer presents part of the solution. Choose three.)

A. Store all backup media offsite.
B. Script SQL login accounts and credentials.
C. Install all SQL Server instances on a failover cluster.
D. Maintain one list of all Windows logins and passwords.
E. Document the administrative processes and application access requirements.

Answer: A, B, E

Explanation:
---Jeff---
There isn't enough information here to make any specific recommendations. It's just a best practices question.
Some dumps suggests other answers, but I don't think a cluster would help in this scenario.
It's hard to tell because the type of failure isn't explained. Since a restore operation is needed, it seems like a disk failure.

Question: 30

You administer a SQL Server 2008 infrastructure. Your company requires capacity planning information. You need to design a long-term infrastructure monitoring strategy. Which two tasks should you include in your design? (Each correct answer presents part of the solution. Choose two.)

A. Backup all databases every day.
B. Clear the system log and the application log every hour.
C. Review system monitor counters on a regular basis.
D. Baseline the system before you deploy production databases.
E. Create a maintenance plan that rebuilds indexes every week.

Answer: C, D

Explanation:
---Jeff---
Establishing a performance baseline and keeping an eye on fluctuations is an ideal way to determine current and future resource requirements. Backing up databases and rebuilding indexes are good ideas, but not related to this task.

Question: 31

You administer a SQL Server 2008 instance. Customers report server performance degradation because of a newly implemented process. You use Dynamic Management Views to verify that there are no long running queries. You need to correlate the operating system performance data with the actual query execution trace by using minimum administrative effort. What should you do?

A. Use Data Collector.
B. Use the SQLdiag.exe utility.
C. Use SQL Server Profiler and System Monitor.
D. Use SQL Server Profiler and the tracerpt.exe utility.

Answer: C

Explanation:

http://support.microsoft.com/kb/298475
http://msdn.microsoft.com/en-us/library/ms181091.aspx

Question: 32

You administer a SQL Server 2008 instance. The instance is using a 32-bit version on a Windows Server 2008 64-bit server. The awe enabled option is enabled. The instance will experience a predictable increase in query activity. You plan to ascertain the appropriate time when the migration of the databases to a 64-bit SQL Server 2008 server on the same hardware is beneficial. You need to identify a data collector type that provides the appropriate information. Which collector should you use?

A. SQL Trace collector
B. T-SQL Query collector
C. Query Activity collector
D. Performance Counters collector

Answer: D

Explanation:
This question is referencing SQL 2008's management data warehouse feature, which allows the collection of performance-related SQL statistics.
The T-SQL Query collector allows you to write a custom query. The query is executed at intervals and the results are logged.
The SQL Trace collector leverages SQL Profiler to capture trace data.
The performance counters collector tracks OS and SQL-related counters in the same way PERFMON does.
The query activity collector tracks DMV results. It is generally not used.
As far as the question goes, it seems logical to pick the time when the server is experiencing the least activity.
The performance counters collection makes the most sense, as it's possible to determine activity based on disk I/O, processor, memory, etc.
http://www.sql-server-performance.com/2008/Management-Data-Warehouse/
http://www.sql-server-performance.com/articles/per/System_Data_Collection_Reports_Install_p1.aspx

Question: 33

You administer a SQL Server 2008 infrastructure. You discover that an instance experiences performance degradation for the following reasons:
• 	Excessive CPU usage
• 	Server processes paging
• 	Deadlocks
You need to design a monitoring solution that can provide data, including detailed deadlock information, to monitor and troubleshoot performance issues. You want to achieve this goal by using the minimum amount of administrative effort. What tool should you use?

A. Extended Events
B. Resource Governor
C. Database Engine Tuning Advisor
D. Performance Monitor (SYSMON)

Answer: A

Explanation:

---Jeff---

Is a broad error-handling system that can correlate data between SQL server, the OS, and other applications.

Events from SQL Server can be collected, then passed elsewhere (a "target") for reporting or event response.

Resource governor is for limiting resource consumption.

The DTA (Database Tuning Advisor) makes index recommendations.

PERFMON monitors operating system and sql server counters.

Official source: http://msdn.microsoft.com/en-us/library/bb630354.aspx

Extra reading: http://www.sqlteam.com/article/introduction-to-sql-server-2008-extended-events

Question: 34

You administer a SQL Server 2008 instance. You plan to design a monitoring solution for the instance to monitor object usage statistics. The solution must identify a list of first 10 objects for each of the following components:
• 	Most frequently executed stored procedures and functions
• 	Long running Transact-SQL statements
You need to implement the monitoring solution to minimize performance effect by using the least amount of administrative effort. What should you do?

A. Use dynamic management views.
B. Use a System Monitor counter log.
C. Use a client-side SQL Server Profiler trace.
D. Use a server-side SQL Server Profiler trace.

Answer: A

Explanation:
Background info:
http://www.simple-talk.com/sql/performance/which-of-your-stored-procedures-are-using-the-most-resources/
http://www.sql-server-performance.com/2008/monitor-stored-procedure-performance/

Question: 35

You administer a SQL Server 2008 infrastructure. The instance contains a database required for the day-to-day business of your company. Users experience slow response time when they execute reports. You plan to design a performance monitoring strategy that captures and stores the following data:
• 	Executed Transact-SQL statements and query activity.
• 	Blocking and deadlock information.
• 	Counters for disk, CPU, and memory.
You need to implement the monitoring process by using the minimum amount of administrative effort. What should you do?

A. Use the data collector.
B. Use the client-side profiler trace.
C. Use the dynamic management views.
D. Use the System Monitor counter log trace.

Answer: A

Explanation:

The data collector is a component installed on a SOL Server server, running all the time or on a user-defined schedule, and collecting different sets of data. The data collector then stores the collected data in a relational database known as the management data warehouse.

The data collector is a core component of the data collection platform for SQL Server 2008 and the tools that are provided by SQL Server. The data collector provides one central point for data collection across your database servers and applications.

This collection point can obtain data from a variety of sources and is not limited solely to performance data, unlike SOL Trace. w

The data collector enables you to adjust the scope of data collection to suit your test and production environments. The data collector also uses a data warehouse, a relational database that enables you to manage the data you collect by setting different retention periods for your data. The data collector supports dynamic tuning for data collection and is extensible through its API.

Question: 36

You administer a SQL Server 2008 infrastructure. You plan to design a maintenance strategy for a mission-critical database that includes a large table named Orders. The design plan includes index maintenance operations. You must design the strategy after considering the following facts:
- The Orders table in the database is constantly accessed.
- New rows are frequently added to the Orders table.
- The average fragmentation for the clustered index of the Orders table is less than 2 percent.
- The Orders table includes a column of the xml data type.

You need to implement the strategy so that the performance of the queries on the table is optimized. What should you do?

A. Drop the clustered index of the Orders table.
B. Rebuild the clustered index of the Orders table offline once a month.
C. Reorganize the clustered index of the Orders table by decreasing the fill factor.
D. Exclude the clustered index of the Orders table from scheduled reorganizing or rebuilding operations.

Answer: D

Explanation:
Since the clustered index never has any significant fragmentation, there's no reason to rebuild or reorganize it.

Question: 37

You administer a SQL Server 2008 infrastructure. An instance contains a database that includes a large table named OrderDetails. The application queries only execute DML statements on the last three months data. Administrative audits are conducted monthly on data older than three months. You discover the following performance problems in the database. The performance of the application queries against the OrderDetail table is poor. The maintenance tasks against the database, including index defragmentation, take a long time. You need to resolve the performance problems without affecting the server performance. What should you do?

A. Create a database snapshot for the OrderDetails table every three months.
Modify the queries to use the current snapshot.
B. Create an additional table named OrderDetailsHistory for data older than three months.
Partition the OrderDetails and OrderDetailsHistory tables in two parts by using the OrderDate column.
Create a SQL Server Agent job that runs every month and uses the ALTER TABLE...SWITCH Transact-SQL statement to move data that is older than three months to the OrderDetailsHistory table.

C. Create an additional table named OrderDetailsHistory for data older than three months.
Create a SQL Server Agent job that runs the following Transact-SQL statement every month. INSERT INTO OrderDetailsHistory
SELECT * FROM OrderDetails
WHERE DATEDIFF(m,OrderDate,GETDATE())>3
D. Create an additional table named OrderDetailsHistory for data older than three months.
use the following Transact-SQL statement.
CREATE TRIGGER trgMoveData
ON OrderDetails
AFTER INSERT
AS
INSERT INTO OrderDetailsHistory
SELECT * FROM OrderDetails
WHERE DATEDIFF(m,OrderDate,GETDATE())>3

Answer: B

Question: 38

You administer a SQL Server 2008 infrastructure. Humongous Insurance has 20 branch offices that store customer data in SQL Server 2008 databases. Customer data that is stored across multiple database instances has to be security compliant. You plan to design a strategy for custom policies by using the Policy-Based Management feature. Custom policies are in XML format. The strategy must meet the following requirements:
•   Custom policies are distributed to all instances.
•   The policies are enforced on all instances.
You need to implement the strategy by using the least amount of administrative effort. What should you do?

A. Use a configuration server.
B. Use the Distributed File System Replication service.
C. Distribute the policies by using Group Policy Objects.
D. Distribute the policies by using the Active Directory directory service.

Answer: A

Explanation:
---Jeff---
Configuration servers are the original name for central management servers, which allow the administration and enforcement of SQL Server 2008 policies for multiple servers to be centralized.

Question: 39

You administer a SQL Server 2008 infrastructure. An instance contains a database that includes a table named EmployeeData. The EmployeeData table has a column named Profile. The column is used to store Microsoft Office Word 2003 documents. You need to minimize the space occupied by the Profile column. You also need to maintain a reasonable performance to retrieve the content of the column. What should you do?

A. Use ROW compression for the EmployeeData table.
B. Use PAGE LEVEL compression for the EmployeeData table.
C. Implement the Profile column as a CLR user-defined type.
D. Store the Profile column by using filestream storage, and use the NTFS file system compression.

	Answer: D

Question: 40

You administer a SQL Server 2008 infrastructure. You partition the largest table in a database into four equal-sized parts. The first two partitions are rarely queried. The third partition is frequently queried by several reports. The last partition is heavily queried and frequently modified. You need to minimize the disk space of the table and ensure that this has minimum effect on the query performance. Which two actions should you perform? (Each correct answer presents part of the solution. Choose two.)

A. Enable ROW compression for the last partition.
B. Enable ROW compression for the third partition.
C. Enable ROW compression for the first two partitions.
D. Enable PAGE compression for the last partition.
E. Enable PAGE compression for the third partition.
F. Enable PAGE compression for the first two partitions.

	Answer: B, F

Question: 41

You administer a SQL Server 2008 infrastructure. You plan to design a solution to obtain hardware configurations, such as the number of processors on a computer and the processor type of all SQL Server 2008 computers. The solution must meet the following requirements:
• 	It is hosted on the central computer.
• 	It can verify hardware configurations for multiple servers.
You need to select a technology that meets the requirements by using the minimum amount of development effort. What should you do?

A. Use the Invoke-Sqlcmd cmdlet in SQL Server PowerShell cmdlet.
B. Define policies based on conditions by using the ExecuteSql function.
C. Define policies based on conditions by using the ExecuteWQL function.
D. Use the Windows Management Instrumentation (WMI) provider for the server events.

	Answer: C

Explanation:
---Jeff---
ExecuteWQL is a relatively straightforward way to query operating system data from SQL server.
It can then be stored in a database for analysis.
The Invoke-Sqlcmd cmdlet is a powershell cmdlet for executing sql commands. It doesn't apply well to the question.
WMI is a driver extension with scripting language and could theoretically be used to accomplish the goal, but with a much more complex development process.
EXECUTESQL is a SQL command for running a pre-built SQL statement

Question: 42

You administer a SQL Server 2008 infrastructure. Your company wants to enforce naming standards for the database

objects. You need to design a solution to enforce naming standards by using the minimum amount of administrative and programming efforts. What should you do?

A. Use event notifications to handle the DDL events.
B. Create Policy-Based Management policies, and then distribute the policies by using a configuration server.
C. Create DDL triggers for one of the instances, and then use SQL Server Management Objects (SMO) to script the definition of the DDL triggers. Run the script by using Microsoft Windows PowerShell on all instances.
D. Create DDL triggers for one of the instances, and then use Microsoft SQL Server Management Studio (SSMS) to script the definition of the DDL triggers. Run the script on all instances by using the registered servers node from SSMS.

Answer: B

Question: 43

You administer a SQL Server 2008 instance. You plan to deploy new SQL Server 2008 Integration Services (SSIS) packages that are created by the SQL Server Import and Export Wizard. The packages will connect to external data sources by using stored user names and passwords. You need to ensure that the user names and passwords are protected from access by unauthorized users. What should you do?

A. Use the SQL Server 2008 server to store the packages, and manage the security in the SQL Server 2008 server.
B. Ensure that no data is saved along with the packages, and save the files to the most secure directory.
C. Ensure that no sensitive data is saved along with the packages, and save the packages in the SQL Server 2008 server.
D. Set a common password to make all information in the package as secure as possible when each package is saved.

Answer: A

Question: 44

You administer a SQL Server 2008 instance for your company. Your company has a team of database administrators. A team of application developers create SQL Server 2008 Integration Services (SSIS) packages on the test server in a shared project. One of the packages requires a fixed cache file. On completion of development, the packages will be deployed to the production server. Only the database administrators can access the production server. You need to ensure that the application developers can deploy the project successfully to the production server. What should you do?

A. Use the Import and Export Wizard to save packages.
B. Create a deployment utility for the SSIS project.
C. Create a direct package configuration for each package.
D. Create an indirect package configuration for all packages.

Answer: B

Explanation:
---Jeff---
This is a strange question. The underlying lesson is that deployment utilities make SSIS package deployment easier, especially in situations where limited access may be available. Direct and indirect package configurations are explained on MSDN.
Official source: http://msdn.microsoft.com/en-us/library/ms141682.aspx

Question: 45

You administer a SQL Server 2008 infrastructure. You administer two SQL Server 2008 instances named Instance1 and Instance2. Instance1 contains the Sales database, and Instance2 contains the Accounts database. A procedure in the Sales database starts a transaction. The procedure then updates the Sales.dbo.Order table and the Accounts.dbo.OrderHistory table through a linked server. You need to ensure that the transaction uses a two-phase commit. What should you do?

A. Configure the linked server to use distributed transactions.
B. Configure a Service Broker to enable the appropriate transaction control.
C. Ensure that the linked server is appropriately configured for delegation.
D. Ensure that the linked server is appropriately configured for impersonation.

Answer: A

Explanation:
A distributed transaction can be executed via a linked server using BEGIN DISTRIBUTED TRANSACTION.
This will guarantee that the entire batch will complete or fail. Two-phase commit is a transaction protocol employed by the MSDTC to ensure this is possible.
The service broker is for distributing heavy workloads across multiple database instances.
Delegation and impersonation are for passing credentials from one server/instance to another. Delegation passes windows credentials;
Impersonation passes a SQL Server login.

Question: 46

You administer a SQL Server 2008 instance named Instance1 at the New York central site.
Your company has a sales team to fulfill purchase orders for customer requests. The sales team uses portable computers to update data frequently in a local database. When the portable computers connect to the central site, the local database must be synchronized with a database named Sales. You plan to create a replication model to replicate the local database to the Sales database. The replication model must meet the following requirements:
•   Data conflicts are handled when multiple users update the same data independently.
•   The sales team cannot update sensitive data such as product price.
•   The sales team can synchronize data at scheduled times and on demand also.
You need to identify the best model to replicate data by using minimum development efforts. What should you do?

A. Use merge replication along with each portable computer that is set up as a subscriber.
B. Use snapshot replication along with each portable computer that is set up as a subscriber.
C. Use transactional replication along with each portable computer that is set up as a publisher.
D. Use SQL Server Integration Services (SSIS) to push data changes and pull updates to the Sales database along with the SSIS packages, on demand.

Answer: A

Explanation:
http://www.codeproject.com/KB/database/sql2005-replication.aspx

Question: 47

You are a professional level SQL Sever 2008 Database Administrator. It is reported by the customers that the server performance degraded due to a newly implemented process. Dynamic Management Views is utilized to confirm that no long running queries exist. The operating system performance data should be correlated with the actual query execution trace, and the least administrative effort should be utilized. Which action will you perform to finish the task?

A. To finish the task, Data Collector should be utilized.
B. To finish the task, the SQLdiag.exe utility should be utilized.
C. To finish the task, SQL Server Profiler and the tracerpt.exe utility should be utilized.
D. To finish the task, SQL Server Profiler and System Monitor should be utilized.

Answer: D

Explanation:
SOL Server profiler displays data about a large number of SOL Server events. Whereas Windows System Monitor graphically displays information about the server internals. You can merge the two sets of information and walk through a scenario viewing both perspectives using SQL Server Profiler.
To set up the dual-perspective experience, you need to simultaneously capture server performance using both Performance Monitor's Counter Logs and SOL Server Profiler. The steps to do this are listed below:
1. Configure System Monitor with the exact counters you want to view later. Be sure to get the scale and everything just right. Set up the Counter Log to the exact same configuration.
2. Configure Profiler with the right set of trace events. They must include the start and end time data columns so that Profiler can integrate the two logs later. Save the profiler and close profiler.
3. Manually start the Counter Log. Open SOL Profiler trace code to start the server—side trace.
4. When the test is complete, stop both the counter Log and the server side trace. You need to stop the SQL Profiler which is a negative point in this.
5. Open profiler and open the saved trace file.
6. Use the Files> Import Performance Data menu command to import the Counter Log. You have the option of selecting only the important counters from the performance monitor. There will be performance issues if you select too many counters.
Source:
http://www.sqI-server-performance.com/faq/How_to_Integrate_Performance_Monitor_and_SOL_Profiler_p1.aspx

Question: 48

You are a professional level SQL Sever 2008 Database Administrator. There is a database in the instance, and the day-to-day business of your company requires the database. When reports are executed, slow response time is experienced by Users. A performance monitoring strategy will be implemented by you so as to have three aspects of data captured and stored:

A performance monitoring strategy will be implemented by you so as to have three aspects of data captured and stored:
•	Blocking and deadlock information
•	Executed Transact-SQL statements
•	Query activity and Counters for disk, CPU, and memory.
You are required to utilize the least amount of administrative effort to implement the monitoring process. Which action will you perform to finish the task?

A. To finish the task, the client-side profiler trace should be utilized.
B. To finish the task, the dynamic management views should be utilized.
C. To finish the task, the data collector should be utilized.
D. To finish the task, the System Monitor counter log trace should be utilized.

Answer: C

Explanation:

SQL Sewer 2008 provides a data collector that you can use to obtain and save data that is gathered from several sources. The data collector enables you to use data collection containers, which enable you to determine the scope and frequency of data collection on a SOL Server server system.

The data collector provides predefined collector types that you can use for data collection. The collector types provide the actual mechanism for collecting data and uploading it to the management data warehouse. For this release of the data collector, the following collector type is provided.

In This Section

Topic	Description
T-SQL Query Collector Type	Describes the structure and behavior of the T-SQL Query collector type.
SQL Trace Collector Type	Describes the structure and behavior of the SQL Trace collector type.
Performance Counters Collector Type	Describes the structure and behavior of the Performance Counters collector type.
Query Activity Collector Type	Describes the structure and behavior of the Query Activity collector type.

Question: 49

You are a professional level SQL Sever 2008 Database Administrator. The computer on which the instance run has the following three features:

64-GB RAM, four quad-core processors, and several independent physical raid volumes A transactional database will be implemented on the instance.

In addition, the database should have a high volume of INSERT, UPDATE, and DELETE activities, creation of new tables is contained by the activities. You need to maximize disk bandwidth and decrease the contention in the storage allocation structures so as to have the performance of the database optimized.

Which action will you perform to finish the task?

A. To finish the task, database and log files should be placed on the same volume.
B. To finish the task, the affinity mask option should be configured properly.
C. To finish the task, multiple data files should be create for the database.
D. To finish the task, the affinity I/O mask option should be configured properly.

Answer: C

Explanation:

If your database is very large and very busy, multiple tiles can be used to increase performance. Here is one example of how you might use multiple files. Let's say you have a single table with 10 million rows that is heavily queried. It the table is in a single file, such as a single database file, then SQL Server would only use one thread to perform a read of the rows in the table. But if the table were divided into three physical files, then SOL Server would use three threads (one per physical file} to read the table, which potentially could be faster. In addition, if each tile were on its own separate physical disk or disk array, the performance gain would even be greater.

Essentially, the more files that a large table is divided into, the greater the potential performance.

Of course there is a point where the additional threads aren't of much use when you max out the server's UO. But up until you do max out the IXO, additional threads (and files) should increase performance.

SOURCE: http://WWW.sqI-server-perlormance.comr'tipsffilegroups_p1.aspx

Question: 50

You are a professional level SQL Sever 2008 Database Administrator.
After a regular test, you find that performance degradation is experienced by an instance for the three reasons:
Excessive CPU usage, Server processes paging and Deadlocks
A monitoring solution should be implemented to provide data, monitor and troubleshoot performance issues and detailed deadlock information should be contained in the provided data. You should utilize the least amount of administrative effort to finish the task.
Which tool will you utilize to finish the task?

A. To finish the task, you should utilize Resource Governor.
B. To finish the task, you should utilize Database Engine Tuning Advisor.
C. To finish the task, you should utilize Extended Events.
D. To finish the task, you should utilize Performance Monitor (SYSMON).

Answer: C

Explanation:
Introducing SQL Server Extended Events
SOL Server Extended Events (Extended Events} is a general event-handling system for server systems. The Extended Events infrastructure supports the correlation of data from SOL Server, and under certain conditions, the correlation of data from the operating system and database applications. In the latter case, Extended Events output must be directed to Event Tracing for Windows (ETW) in order to correlate the event data with operating system or application event data. All applications have execution points that are useful both inside and outside an application.
Inside the application, asynchronous processing may be enqueued using information that is gathered during the initial execution of a task. Outside the application, execution points provide monitoring utilities with information about the behavioral and performance characteristics of the monitored application.
Extended Events supports using event data outside a process, This Etta is typically used by:
- Tracing tools, such as SOL Trace and System Monitor.
· Logging tools, such as the Windows event log or the SOL Server error log.
- Users administering a product or developing applications on a product.

Question: 51

You are a professional level SQL Sever 2008 Database Administrator. There are 30 branch offices in DoubleSecurity Insurance, and in the branch offices, customer data are stored in SQL Server 2008 databases. Customer data should be security compliant if it is stored through multiple Database instances. You intend to utilize the Policy-Based Management feature to design a strategy for custom policies. And the format of custom policies is XML format. The requirements listed below should be satisfied. The company distributes custom policies to all instances. In addition, the company enforces the policies on all instances. A strategy should be thought out and the minimum amount of administrative effort should be utilized. Which action should you perform to finish the task?

A. To finish the task, the Distributed File System Replication service should be utilized.
B. To finish the task, a configuration server should be utilized.
C. To finish the task, the policies should be distributed by utilizing Group Policy Objects.
D. To finish the task, the policies should be distributed by utilizing the Active Directory directory service.

Answer: B

Explanation:
Configuration Server or Central Management Server

In SOL Server 2008, you can designate an instance ot SQL Server as a Central Management Server. Central Management Servers store a list of instances of SOL Server that is organized into one or more Central Management Server groups. Actions that are taken by using a Central Management Server group will act on all servers in the server group. This includes connecting to servers by using Object Explorer and executing Transact-SOL statements and Policy-Based Management policies on multiple servers at the same time. All Central Management Servers and subordinate servers must be registered by using Windows Authentication. Versions ot SOL Server that are earlier than SOL Server 2008 cannot be designated as a Central Management Server.

Question: 52

You are a professional level SQL Sever 2008 Database Administrator. All data changes are implemented through stored procedures, and only the INSERT, UPDATE, or DELETE statements are utilized by the procedures. A backup strategy should be implemented. The business requirements listed below should be satisfied:
•   Point-in-time recovery for failure is supported by the backup strategy at any time of day.
•   The least amount of disk space should be utilized by the transaction log.
Which action should you perform to finish the task?

A. To finish the task, hourly database snapshots should be utilized.
B. To finish the task, the full-recovery model along with transaction log backups should be utilized.
C. To finish the task, the full-recovery model along with differential backups should be utilized.
D. To finish the task, the simple-recovery model along with differential backups should be utilized.

Answer: B

Explanation:
Description
- Requires log backups.
- No work is lost due to a lost or damaged data file.
· Can recover to an arbitrary point in time (tor example, prior to application or user error).
Work loss exposure
- Normally none.
· It the tail of the log is damaged, changes since the most recent log backup must be redone.
Recover to point in time?
· Can recover to a specific point in time, assuming that your backups are complete up to that point in time.

Question: 53

You are a professional level SQL Sever 2008 Database Administrator. You are experienced in managing databases in an enterprise-level organization, optimizing and sustaining the database life cycle. In the company, your job is to implement solutions on security, troubleshooting, deployment and optimization. A SQL Server 2008 infrastructure is managed by you. A database is utilized by the instance, and the database is utilized by a Web-based application. 15,000 transactions are processed by the application every minute. A column is contained by a table in the database, and the column is utilized only by the application. Sensitive data is stored in this column. The sensitive data should be stored with the highest security level. In addition, the least amount of memory space and processor time should be utilized. From the following four encryption types, which one should you utilize?

A. Asymmetric key encryption should be utilized.
B. Certificate-based encryption should be utilized.
C. Symmetric key encryption should be utilized.
D. Transparent data encryption should be utilized.

Answer: C

Explanation:
At the root of encryption tree is the Windows Data Protection API (DPAPI), which secures the key hierarchy at the machine level and is used to protect the service master key (SMK) for the database server instance. The DIVIK protects the database master key (DMK), which is stored at the user database level and which in turn protects certificates and asymmetric keys. These in turn protect symmetric keys, which protect the data. TDE uses a similar hierarchy down to the certificate. The primary difference is that when you use TDE, the DIVIK and certificate must be stored in the master database rather than in the user database. A new key, used only for TDE and referred to as the database encryption key {DEK), is created and stored in the user database.

This hierarchy enables the server to automatically open keys and decrypt data in both cell-level and database-level encryption. The important distinction is that when cell-level encryption is used, all keys from the DIVIK down can be protected by a password instead of by another key. This breaks the decryption chain and forces the user to input a password to access data. In TDE, the entire chain from DPAPI down to the DEK must be maintained so that the server can automatically provide access to files protected by TDE. In both cell-level encryption and TDE, encryption and decryption through these keys is provided by the Windows Cryptographic API (CAPI). Symmetric keys use the same password to encrypt and decrypt data, so it is the less space consuming, because one asymmetric key will use one private and one public key.

Question: 54

You are a professional level SQL Sever 2008 Database. A new database application is hosted by the instance. The security requirements should be designed for the application. A unique login to the SQL Server 2008 server is assigned to each application user. Stored procedures are included by the application database to execute stored procedures in the MSDB database. SQLAgent jobs are scheduled by the stored procedures in the MSDB database. Since you are the technical support, you are required to confirm that the stored procedures in the MSDB database should be executed by utilizing the security context of the application user. Which action should you perform?

A. Each user should be added to the public role in the MSDB database.
B. Each user should be added to the db_dtsltduser database role in the MSDB database.
C. The MSDB database should be set to utilize the TRUSTWORTHY option, and then each user should be added to the MSDB database.
D. The new database should be set to utilize the TRUSTWORTHY option, and then each user should be added o the MSDB database.

Answer: D

Explanation:
The TRUSTWORTHY database property is used to indicate whether the instance of SOL Server trusts the database and the contents within it. By default, this setting is OFF, but can be set to ON by using the ALTER DATABASE statement. For example, ALTER DATABASE
AdventureWorks2008R2 SET TRUSTWORTHY ON;
By default msdb has the option TRUSTWORTHY set to True.

Question: 55

You are a professional level SQL Sever 2008 Database Administrator. The security requirements should be designed for a new database application. A code segment is utilized by the application, and the code segment includes the

following components:
•   A method that the registry is accessed on the SQL Server
•   A method that the file system is accessed on a network file server
•   A class definition that public static fields are utilized
•   SQL CLR integration is utilized by the code segment
•   The code segment is implemented as a single assembly.
Since you are the technical support, you are required to make sure that the application should be successfully deployed to the instance. Which action will you perform?

A. The SAFE code access security should be utilized for the assembly.
B. All public static fields should be replaced with public fields.
C. All public static fields should be utilized with public static read-only fields. And then the assembly should be registered by utilizing the regasm.exe utility before deployment.
D. All public static fields should be replaced with public static read-only fields. And then the EXTERNAL_ACCESS code access security should be utilized for the assembly.

	Answer: D

Explanation:
Creates a managed application module that contains class metadata and managed code as an object in an instance of SOL Server. By referencing this module, common language runtime (CLR) functions, stored procedures, triggers, user-defined aggregates, and user-defined types can be created in the database.
PERMISSION_SET { SAFE | EXTERNAL_ACCESS I UNSAFE}
Specifies a set of code access permissions that are granted to the assembly when it is accessed by SOL Server. If not specified, SAFE is applied as the default.
We recommend using SAFE. SAFE is the most restrictive permission set. Code executed by an assembly with SAFE permissions cannot access external system resources such as files, the network, environment variables, or the registry.
EXTERNAL_ACCESS enables assemblies to access certain external system resources such as files, networks, environmental variables, and the registry.

Question: 56

You are a professional level SQL Sever 2008 Database Administrator.
The security requirements should be designed for a new database application, and the application will be deployed to the instance. A table is consisted by the new database, and the table is created by utilizing the following code segment:
TABLE EmpBonusPlan
Since you are the technical support, you should utilize the maximum secure method to protect the BonusPlan column from the access of unauthorized users.
Which action will you perform to finish the task?

A. To finish the task, Transparent data encryption should be utilized.
B. To finish the task, the NTFS file system security should be utilized and the access of the database files should be limited to the SQL Server 2008 Service account.
C. To finish the task, the Trustworthy option for the database should be utilized.
D. To finish the task, the Advanced Encryption Standard encryption should be utilized on all columns in the database.

	Answer: B

Explanation:
The column BonusFIn is of type FILESTFIEAM this means that the data of this column is saved outside of the database on the filesystem. So, you have to protect those files by the NTFS security.

Question: 57

You are a professional level SQL Sever 2008 Database Administrator. A mission-critical database is shared by the five sites. According to the business requirements, the users at each site should be enabled to access and change data on all sites with minimal latency. In addition, data loss should be minimized if a server fails. A high-availability solution should be designed, and the business requirements should be satisfied. Which action should be included in your solution?

A. Failover clustering should be included.
B. Asynchronous database mirroring without a witness server should be included.
C. Peer-to-Peer replication should be included.
D. Log shipping to servers at two of the sites to offer read-only replications of data should be included.

Answer: C

Explanation:
As required from the business, the only way to deal with this request is the Peer-to-Peer replication as by default the databases are synchronized continuously on each site.

Question: 58

You are a professional level SQL Sever 2008 Database Administrator in an international corporation named Wiikigo. You are experienced in managing databases in an enterprise-level organization, optimizing and sustaining the database life cycle. In the company, your job is to implement solutions on security, troubleshooting, deployment and optimization.
A SQL Server 2008 infrastructure is managed by you. A corporate backup and recovery strategy that has to be validated is designed.
You are required to make sure that any single database can be restored successfully from a severe failure, and during the restoration, a backup data center should not be required in a different location.
Which three actions should be contained by your solution? (Choose more than one)

A. All SQL Server instances should be installed on a failover cluster.
B. One list of all Windows logins and passwords should be sustained.
C. All backup media offsite should be stored.
D. SQL login accounts and credentials should be scripted.
E. The administrative processes and application access requirements should be documented.

Answer: C, D, E

Explanation:
---Jeff---
Explanation: There isn't enough information here to make any specific recommendations. It's just a best practices question. One of the dumps suggests the answer is ADE, but I don't think a cluster would help in this scenario. It's hard to tell because the type of failure isn't explained. Since a restore operation is needed, it seems like a disk failure.

Question: 59

You are a professional level SQL Sever 2008 Database Administrator. A new database should be deployed, and the capacity requirements listed below should be satisfied. There should be 275 GB for the database data file, while there should be 50 GB for the transaction log file. There are six 100-GB disk drives which are accessible for the database in the storage array. The six disks are attached to a redundant array of independent disks (RAID) controller, and the controller supports RAID levels 0, 1, 5, and 10. Since you are the technical support, you are required to maximize the write performance of the transaction log. In addition, you should protect the database and transaction log files, when a drive fails. The storage system should be designed. From the following four storage configuration, which one should you utilize?

A. A single RAID 5 volume should be utilized.
B. A RAID 1 volume and a RAID 5 volume should be utilized.
C. A single RAID 10 volume should be utilized.
D. A RAID 0 volume and a RAID 5 volume should be utilized.

Answer: B

Explanation:
You have to
- "maximize the write performance of the transaction log."
- "you should protect the database and transaction log files, when a drive fails"
To maximize the per1 of the transaction log and have it protected, for this, you should use the raid 1, because it is a disk mirror and the size is 50GB, the half of the 100GB, but you need two disks for this. Then it will only remains four disks, but you can't have RAID 1 for the data files as the data file is 275GB. So, RAID 5 is the only solution.

Question: 60

You are a professional level SQL Sever 2008 Database Administrator. Two SQL Server 2008 instances are contained by the site. One is an Enterprise Edition server, and it is on a server that has a redundant array of independent disks (RAID) 10 disk system The other is a Standard Edition server, and it is on a server that has a RAID 5 disk system. A single application is hosted by each instance. A high availability solution should be recommended for the site to satisfy the business requirements listed below:
First, the solution can be implemented on the current systems.
Secondly, the database is available with least downtime.
Thirdly, Data loss should be cut to the least.
Fourthly, the existing system should be with least impact.
Which solutions should be utilized to finish the task? (Choose more than one)

A. To finish the task, Log shipping should be utilized.
B. To finish the task, Failover clustering should be utilized.
C. To finish the task, Replication should be utilized.
D. To finish the task, Database snapshot should be utilized.

Answer: A, C

Explanation:
Failover clustering is not possible, because the two system are not on the same array of disk and furthermore, you have to implement it on the current system.
Database snapshot is not one HA solution, because it is stored on the same server.
Replication and Log shipping are both answering to the four requirements.

Question: 61

You are a professional level SQL Sever 2008 Database Administrator in an international corporation named Wiikigo. There is a team of database administrators in your company. SQL Server 2008 Integration Services (SSIS) packages are created on the test server in a shared project by a team of application developers. A fixed cache file is required by one of the packages. The company will deploy the packages to the production server on completion of development. The production server is available only to the database administrators. Since you are the technical support, you need to confirm that the project can be deployed successfully to the production server by the application developers. Which action will you perform to achieve the goal?

A. To achieve the goal, the Import and Export Wizard should be utilized to save packages.
B. To achieve the goal, a direct package configuration should be created for each package.
C. To achieve the goal, a deployment utility should be created for the SSIS project.
D. To achieve the goal, an indirect package configuration should be created for all packages.

Answer: C

Explanation:
The first step in deploying packages is to create a deployment utility for an Integration Services project. The deployment utility is a folder that contains the files you need to deploy the packages in an Integration Services project on a different server. The deployment utility is created on the computer on which the Integration Services project is stored.
You create a package deployment utility for an Integration Services project by first configuring the build process to create a deployment utility, and then building the project. When you build the project, all packages and package configurations in the project are automatically included. To deploy additional files such as a Fteadme file with the project, place the files in the Miscellaneous folder of the Integration Services project. When the project is built, these files are also automatically included.
You can configure each project deployment differently. Before you build the project and create the package deployment utility, you can set the properties on the deployment utility to customize the way the packages in the project will be deployed. For example, you can specify whether package configurations can be updated when the project is deployed. To access the properties of an Integration Services project, right-click the project and click Properties.
The following table lists the deployment utility properties.

Property	Description
AllowConfigurationChange	A value that specifies whether configurations can be updated during deployment.
CreateDeploymentUtility	A value that specifies whether a package deployment utility is created when the project is built. This property must be **True** to create a deployment utility.
DeploymentOutputPath	The location, relative to the Integration Services project, of the deployment utility.

When you build an Integration Services project, a manifest file, qproject name>.SS|SDep|oymentlv1anifest.xmI, is created and added, together with copies of the project packages and package dependencies, to the bintlileployment folder in the project, or to the location specified in the DepIoymentOutputPath property. The manifest file lists the packages, the package configurations, and any miscellaneous files in the project.
The content of the deployment folder is refreshed every time that you build the project. This means that any file saved to this folder that is not copied to the folder again by the build process will be deleted. For example, package configuration files saved to the deployment folders will be deleted.

Question: 62

You are a professional level SQL Sever 2008 Database Administrator. A database is hosted by the instance and the database is configured by utilizing high-safety mirroring operation mode along with a witness server. A memory failure is experienced by the witness server; therefore the server will be offline for five hours. The mirroring strategy should be reset to cut the risk of database unavailability to the least level. Which action should you perform to finish the task?

A. To finish the task, database mirroring should be paused.
B. To finish the task, the witness server should be moved from the mirroring session.
C. To finish the task, asynchronous operating mode should be utilized.
D. To finish the task, database mirroring should be removed.

Answer: B

Explanation:
Removing the witness will keep the mirroring session, but without automatic failover
You can remove the witness from a session if you are connected to the current principal server. To remove the witness:
1. Connect to the principal server instance and, in the Object Explorer pane, click the server name to expand the server tree.
2. Expand Databases, and select the database whose witness you want to remove.
3. Flight-click the database, select Tasks, and then click Mirror. This opens the Mirroring page of the Database Properties dialog box.
4. To remove the witness, delete its server network address from the Witness field.
Note lf you switch from high-safety mode with automatic failover to high-performance mode, the Witness field is automatically cleared.

Question: 63

You are a professional level SQL Sever 2008 Database Administrator. A large financial database is hosted by the instance. The backup strategies listed below are contained by the database:
First, the performance of a full database backup is implemented once a week.
Secondly, the performance of a differential backup is implemented every day.
Thirdly, the performance of a transaction log backup is implemented every hour.
An end-of-year batch process should be implemented, and the process takes two hours to run.
About five percent of data within the database will be changed by the batch process.
Since you are the technical support, you are required to make sure that the batch operation can be rolled back in the shortest time, if the batch process is not approved by the Finance department.
What should you do first before start the batch process?

A. You should perform a differential backup.
B. You should create a marked transaction. And then you should perform a transaction log backup.
C. You should create a database snapshot.
D. You should record the time before the batch operation. And then you should perform a transaction log

Answer: C

Explanation:
Reasons to take database snapshots include:
· Maintaining historical data for report generation.

Because a database snapshot provides a static view of a database, a snapshot can extend access to data from a particular point in time. For example, you can create a database snapshot at the end of a given time period (such as a financial quarter} tor later reporting. You can then run end-of-period reports on the snapshot. If disk space permits, you can also maintain end-of-period snapshots indefinitely, allowing queries against the results from these periods; for example, to investigate organizational performance.

- Using a mirror database that you are maintaining for availability purposes to offload reporting.

Using database snapshots with database mirroring permits you to make the data on the mirror server accessible for reporting. Additionally, running queries on the mirror database can free up resources on the principal. For more information, see Database Mirroring and Database Snapshots.

- Safeguarding data against administrative error.

- Before doing major updates, such as a bulk update or a schema change, create a database snapshot on the database protects data. If you make a mistake, you can use the snapshot to recover by reverting the database to the snapshot. Fleverting is potentially much faster for this purpose than restoring from a backup; however; you cannot roll forward afterward.

Question: 64

You are a professional level SQL Sever 2008 Database Administrator. A database is hosted by the instance, and sensitive data is included in the database. A database backup strategy will be implemented for the database. You need to have all backups of the database encrypted. The backups should not be accessed by unauthorized users. Which action will you perform?

A. Transparent database encryption should be utilized.
B. Windows BitLocker Drive Encryption technology should be utilized.
C. The BACKUP statement should be utilized along with the PASSWORD option.
D. The BACKUP statement should be utilized along with the MEDIAPASSWORD option.

Answer: A

Explanation:
You can take several precautions to help secure the database such as designing a secure system, encrypting confidential assets, and building a tirewall around the database servers.

However, in a scenario where the physical media (such as drives or backup tapes) are stolen, a malicious party can just restore or attach the database and browse the data. One solution is to encrypt the sensitive data in the database and protect the keys that are used to encrypt the data with a certificate. This prevents anyone without the keys from using the data, but this kind of protection must be planned in advance.

Transparent data encryption (TDE) per to rms real-time It encryption and decryption of the data and log files, The encryption uses a database encryption key (DEK), which is stored in the database boot record for availability during recovery. The DEK is a symmetric key secured by using a certificate stored in the master database of the server or an asymmetric key protected by an EKM module. TDE protects data "at rest", meaning the data and log tiles. It provides the ability to comply with many laws, regulations, and guidelines established in various industries. This enables software developers to encrypt data by using AES and 3DES encryption algorithms without changing existing applications.

Question: 65

You are a professional level SQL Sever 2008 Database Administrator.
A large database is hosted by the instance. The company utilizes the following backup strategy for the database.
First, the performance of a full database backup is implemented at 02:00 hr every Monday.
Secondly, the performance of a differential backup is implemented at 23:00 hr every day.

Thirdly, the performance of a transaction log backup is implemented on an hourly basis.

A reboot is caused on the SQL Server 2008 server by a power failure at 09:15 hr, Thursday.

Fifteen minutes after the reboot of the server, it is reported that certain queries that access customer data cannot be executed. You find that the customer data remains unvaried after the power failure.

When the DBCC CHECKDB command is executed on the database, the following error message is received.

Object ID 2814307832,

index ID 2, partition ID 83127819437122157,

alloc unit ID 82134587923221126 (type In-row data): Page (3421:169) could not be processed. See other errors for details.

Table error: Object ID 2814307832, index ID 2, partition ID 83127819437122157,

alloc unit ID 82134587923221126 (type In-row data), page (3421:169).

Test (IS_OFF (BUF_IOERR, pBUF->bstat)) failed.

Values are 16928422 and -8.CHECKDB found 0 allocation errors and 2 consistency errors in table 'tbl_Customer' (object ID 2814307832).

When the sp_help 'tbl_customer' stored procedure is executed, the following result set is received:

index_name   index_description

PK   clustered located on PRIMARY

NCIX   nonclustered located on PRIMARY

Since you are the technical support, you are required to make sure that the data should be accessible in the shortest time. And the impact on users should be cut to the least.

Which action will you perform to finish the task?

A. To finish the task, the PK index should be dropped and recreated.

B. To finish the task, the latest full database backup should be recovered. And all transaction log backups should be recovered from the latest full database backup.

C. To finish the task, the latest full database backup should be recovered. And then, the latest differential backup should be recovered. At last, all transaction log backups should be recovered from the latest differential backup.

D. To finish the task, the NCIX index should be dropped and recreated.

Answer: D

Explanation:

As-you can see in the DBCC CHEYZKDB, the failed object is the index with the ID=2.

Or, the index with the |D=2 is the index NCIX, one nonclustered index. So, this index is build upon the Cluster index and all the leaf pages contains the leaf page address of the clustered index. To rebuild this index in the fatsest way, the solution is to drop it and to re-create it after.

Question: 66

You are a professional level SQL Sever 2008 Database Administrator. A new database will be deployed to the instance. Regular inserts and updates should be subjected by the database. There will be multiple schemas on the database. A great number of read-only reference data should be contained by one of the schemas. The physical database structure should be designed for optimal backup performance. Which action should you perform?

A. You should utilize a single log file and multiple filegroups to create the database.

B. You should utilize a single data file and a single log file to create the database.

C. You should utilize a single data file and multiple log files to create the database.

D. You should utilize a single log file and a filegroup that has multiple data files to create the database.

	Answer: A

Explanation:
In order to be able to backup filegroups with different schedules, the easiest way is to create multiple lilegroups and only one log file.
---Jeff---
Putting the read-only data in a separate read-only filegroup will increase the performance of the database. Read-only filegroups do not suffer from contention or locking issues.

Question: 67

You are a professional level SQL Sever 2008 Database Administrator. A large database is hosted by the instance. High volumes of queries and transactions that are processor intensive are experienced by the database. An incremental backup strategy should be designed for the database. In addition, backup compression will be utilized. Since you are the technical support of the company, you are required to reduce the impact from the backup jobs on the performance of the server to the least. Which action will you perform to achieve the goal?

A. To achieve the goal, database snapshots should be utilized.
B. To achieve the goal, the Affinity I/O Mask configuration option should be reconfigured.
C. To achieve the goal, the database backup should be spread across multiple backup devices.
D. To achieve the goal, the Resource Governor should be utilized.

	Answer: D

Explanation:
As-we have the following statement "An incremental backup strategy should be designed for the database. In addition, backup compression will be utilized." and "you are required to reduce the impact from the backup jobs on the performance of the server to the least"
We can remove answer C from the choices because we will use the backup compression and this use a lot of resource Ressource governor will help us to achieve this by creating assignment function and resource pool. We can manage the backups and the queries in parallel.

Question: 68

You are a professional level SQL Sever 2008 Database Administrator. A new database application is hosted by the instance. The data security strategy should be designed for the application. The data should be duplicated to another instance of SQL Server 2008 by utilizing the Snapshot duplication. Since you are the technical support of the company, you should make sure that all stored data should be encrypted, and the minimum amount of administrative effort should be utilized. Which action will you perform?

A. Encrypted connections should be enabled between the instances.
B. Transparent data encryption should be enabled for the Publisher, Distribution, and Subscriber databases
C. Transparent data encryption for the MSDB database should be enabled on the two instances.
D. Certificate-based encryption should be enabled for the Publisher, Distribution, and Subscriber databases.

	Answer: B

Explanation:
You can take several precautions to help secure the database such as designing a secure system, encrypting confidential assets, and building a firewall around the database servers.

However, in a scenario where the physical media (such as drives or backup tapes) are stolen, a malicious party can just restore or attach the database and browse the data. One solution is to encrypt the sensitive data in the database and protect the keys that are used to encrypt the data with a certificate. This prevents anyone without the keys from using the data, but this kind of protection must be planned in advance.

Transparent data encryption (TD E} performs real -time UO encryption and decryption of the data and log files. The encryption uses a database encryption key (DEK), which is stored in the database boot record for availability during recovery. The DEK is a symmetric key secured by using a certificate stored in the master database of the server or an asymn·@tric key protected by an EKM module. TDE protects data "at rest", meaning the data and log files. It provides the ability to comply with many laws, regulations, and guidelines established in various industries. This enables software developers to encrypt data by using AES and 3DES encryption algorithms without changing existing applications.

Question: 69

You are a professional level SQL Sever 2008 Database Administrator. Your company wants to enforce naming standards for the database objects. A solution should be designed by you to enforce naming standards, and the least amount of administrative and programming efforts should be utilized. Which action should you perform?

A. Policy-Based Management policies should be created, and then the policies should be distributed by utilizing a configuration server.
B. Event notifications should be utilized to handle the DDL events.
C. DDL triggers should be created for one of the instances, and then SQL Server Management Objects (SMO) should be utilized to script the definition of the DDL triggers. At last, the script should be run by utilizing Microsoft Windows PowerShell on all instances.
D. DDL triggers should be created for one of the instances, and then Microsoft SQL Server Management Studio (SSMS) should be utilized to script the definition of the DDL triggers. At last, the script should be run on all instances by utilizing the registered server??s node from SSMS.

Answer: A

Explanation:
Policy-Based Management is a system for managing one or more instances of SOL Server 2008.
When SQL Server policy administrators use Policy-Based Management, they use SOL Server
Management Studio to create policies to manage entities on the server, such as the instance of
SOL Server, databases, or other SOL Server objects.
Policy-Based Management has three components:
Policy management
Policy administrators create policies.
Explicit administration
Administrators select one or more managed targets and explicitly check that the targets comply with a specific policy, or explicitly make the targets comply with a policy.
Evaluation modes
There are four evaluation modes, three of which can be automated:
On demand. This mode evaluates the policy when directly specified by the user.
On change: prevent. This automated mode uses DDL triggers to prevent policy violations.
Important:
It the nested triggers server configuration option is disabled, OI1 change: prevent will not work correctly. Policy-Based Management relies on DDL triggers to detect and roll back DDL operations that do not comply with policies that use this evaluation mode. Fiemoving the Policy-Based Management DDL triggers or disabling nest triggers, will cause this evaluation mode to fail or perform unexpectedly.
On change: log only. This automated mode uses event notification to evaluate a policy when a relevant change is

made.

On schedule. This automated mode uses a SOL Server Agent job to periodically evaluate a policy.

When automated policies are not enabled, Policy-Based Management will not affect system performance.

Question: 70

You are a professional level SQL Sever 2008 Database Administrator. A database is hosted by the instance. You can see the backup strategy utilized by the database from table listed below:

Backup Type	Full Database	Differential	Transaction Log
Frequency	Tuesday, Thursday, Saturday	Monday, Wednesday, Friday	Hourly
Time of the Backup	21:00	21:00	Hourly
Time taken for the backup	60-90 minutes	30-45 minutes	Less than 5 minutes

A batch process is run on Saturday, and the process lasts from 21:00 hr to 23:00 hr; you find that the batch process takes no effect because certain data is modified some data by a user at 21:05 hr on the same day. The database should be recovered to its state at the start of the batch process in the shortest time. Which action will you perform?

A. The full database backup that was performed on Saturday should be recovered.
B. The full database backup that was performed on Thursday should be recovered. And then, all transaction logs should be recovered from the time of the full backup on Thursday and should be stopped at 21:00 hr on Saturday.
C. The full database backup that was performed on Thursday should be recovered. And then the differential backup that was performed on Friday should be recovered. At last, all transaction logs should be recovered from the time of the differential backup on Friday and should be stopped at 21:00 hr on Saturday.
D. The full database backup that was performed on Saturday should be recovered. And then all transaction logs should be recovered from the time of the full backup on Saturday and should be stopped at 21:00 hr on Saturday.

Answer: C

Explanation:

Because we want the database restored to Saturday 21:00, because the job start exactly at the same time than the full backup, we can't use it. So, we have to restore the last full backup then the differential backup and finaly the transactions logs.

Question: 71

You are a professional level SQL Sever 2008 Database Administrator. The largest table in a database is partitioned into four equal-sized parts. The first two partitions are seldom queried, while the third partition is regularly queried by several reports. Meanwhile, the fourth partition is heavily queried and regularly modified. The disk space of the table should be cut to the least and the query performance should be with the least impact. What will you do? (Choose more

A. PAGE compression should be enabled for the first two partitions.
B. ROW compression should be enabled for the last partition.
C. ROW compression should be enabled for the third partition.
D. ROW compression should be enabled for the first two partitions.
E. PAGE compression should be enabled for the last partition.
F. PAGE compression should be enabled for the third partition.

Answer: A, C

Explanation:
The two first partition are seldom queried, this means that we can compress to the maximum the data in the partition. Page compression will be use as it removes duplicate pattern and compress to the max the data
The Third partition is regularly queried, this means that the partition should be @ht. Thus, the
ROW compression is more adequate tor this partition.

Question: 72

You are a professional level SQL Sever 2008 Database Administrator. The capacity planning information is required by your company. A long-term infrastructure monitoring strategy should be implemented. Which two actions should be contained in the strategy? (Choose more than one)

A. System monitor counters should be reviewed regularly.
B. After deployment of the production databases, the system should be basedlined.
C. All databases should be backed up every day.
D. The system log and the application log should be cleared every hour.
E. A maintenance plan that rebuilds indexes every week should be created.

Answer: A, B

Explanation:
After the production deployment, we will set a baseline of system counter in order to have metrics about the health of the server. This is useful in order to query on a regular basis the status of those counter. When big deviation from the counters are seen, further investigation could be done to solve potential problem.

Question: 73

You are a professional level SQL Sever 2008 Database Administrator. A large database is hosted by the instance. The company utilizes the following backup strategy for the database:
• 	 First, the performance of full database backups is implemented weekly.
• 	 Secondly, the performance of differential backups is implemented daily.
• 	 Thirdly, the performance of transaction log backups is implemented hourly.
According to the restoring plan, an unscheduled full backup should be performed. A full database backup should be performed, and the scheduled backup strategy should not be interrupted. Form the following four options, which one should be utilized to finish the task?

A. To finish the task, SKIP should be utilized.
B. To finish the task, NOINIT should be utilized.
C. To finish the task, MIRROR TO should be utilized.
D. To finish the task, COPY_ONLY should be utilized.

Answer: D

Explanation:
---Jeff---
COPY_ONLY is a backup option which will not affect the normal backup sequence.
NONIT specifies that the backup should be appended to an existing set.
SKIP works in conjunction with INIT/NONIT and skips the check for media name and expiration.

MIRROR to will make a secondary copy of the backup.

A copy-only backup is a SOL Server backup that is independent of the sequence of conventional SQL Server ba@ups. Usually, taking a backup changes the database and affects how later backups are restored, However, occasionally, it is useful to take a backup for a special purpose without affecting the overall backup and restore procedures for the database. For this purpose, copy-only backups were introduced SQL Server 2005. The types of copy-only backups are as follows:

Copy-only full backups {all recovery models)

A copy-only full backup cannot serve as a differential base or differential backup and does not affect the differential base.

Copy-only log backups {full recovery model and bulk-logged recovery model only)

A copy-only log backup preserves the existing log archive point and, therefore, does not affect the sequencing of regular log backups. Copy-only log backups are typically unnecessary. Instead, you can create another routine, current log backup (using WITH NORECOVERY), and then use that backup together with all other previous log backups that are required for the restore sequence. However, a copy-only log backup can be created for performing an online restore.

The transaction log is never truncated after a copy-only backup. Copy-only backups are recorded in the is_copy_only column of the backupset table.

Question: 74

You are a professional level SQL Sever 2008 Database Administrator. A business-critical database is hosted by the instance, and the database must be constantly available to the users with no data loss. Filestream data is contained by the database. A high-availability solution should be designed for the site. Which solution should be utilized?

A. Database snapshot should be utilized.
B. Failover clustering should be utilized.
C. Asynchronous database mirroring should be utilized.
D. Synchronous database mirroring with a witness server should be utilized.

Answer: B

Explanation:

Failover clustering in SQL Server provides high—availability support for an entire SQL Server instance. For example, you can configure a SQL Server instance on one node of a failover cluster to fail over to any other node in the cluster during a hardware failure, operating system failure, or a planned upgrade.

A failover cluster is a combination of one or more nodes (servers) with two or more shared disks, known as a resource group. The combination of a resource group, along with its network name, and an internet protocol (IP) address that makes up the clustered application or server, is referred to as a failover cluster or a lallover cluster Instance. A SOL Server failover cluster appears on the network as if it were a single computer, but has functionality that provides failover from one node to another if the current node becomes unavailable. A failover cluster appears on the network as a normal application or single computer, but it has additional functionality that increases its availability.

Failover clustering has a new architecture and new work flow for all Setup scenarios in SQL Server 2008. The two options for installation are Integrated installation and AdvancedlIinterprise installation. Integrated installation creates and configures a single-node SQL Server failover cluster instance. Additional nodes are added using add node functionality in Setup. For example, for Integrated installation, you run Setup to create a single-node failover cluster. Then, you run

Setup again for each node you want to add to the cluster. AdvancedlEnterprise installation consists of two steps. The Prepare step prepares all nodes of the failover cluster to be operational. Nodes are defined and prepared during this initial step. After you prepare the nodes, the Complete step is run on the active node—the node that owns the shared disk—to complete the failover cluster instance and make it operational.

When to Use Failover Clustering

Use failover clustering to:
- Administer a failover cluster from any node in the clustered SQL Sewer configuration. For more information, see Installing a SOL Server 2008 Failover Cluster.
- Allow one failover cluster node to fail over to any other node in the failover cluster configuration.
For more information, see Installing a SQL Server 2008 Failover Cluster,
- Configure Analysis Services for failover clustering. For more information, see How to: install
Analysis Services on a failover cluster.
- Execute full-text queries by using the Microsoft Search service with failover clustering. For more information, see Using SQL Server Tools with Failover Clustering.

Question: 75

You are a professional level SQL Sever 2008 Database Administrator. New SQL Server 2008 Integration Services (SSIS) packages will be deployed, and the packages are created by the SQL Server Import and Export Wizard. The packages will utilize stored user names and passwords to connect to external data sources. Since you are the technical support of your company, you are required to confirm that unauthorized users can not get access to the user names and passwords. Which action will you perform?

A. No other data should be saved together with the packages, and then files should be saved to the most secure directory.
B. No sensitive data should be saved together with the packages, and then the packages should be saved in the SQL Server 2008 server.
C. The SQL Server 2008 server should be utilized to store the packages, and administrate the security in the SQL Server 2008 server.
D. A common password should be set to make a highest level of security for all information in the package when each package is saved.

Answer: C

Explanation:
---Jeff---
http://msdn.microsoft.com/en-us/library/ms141747.aspx?ppud=4
There are several options for package protection. C) is the equivalent of "Rely on server storage", which allows SQL server to handle the security. A) and B) will cause the package to fail, and D) is just a terrible idea.

Question: 76

You are a professional level SQL Sever 2008 Database Administrator. A new database named Engineering is deployed. Large documents are managed by the Engineering database, and the documents will be revised occasionally. A table structure should be designed to permit fast read access. The storage space requirements should be cut to the least. What will you do to achieve the goal? (Choose more than one.)

A. To achieve the goal, row-level compression should be utilized on the document table.
B. To achieve the goal, NTFS file system compression should be utilized on the volume.
C. To achieve the goal, varbinary(MAX) data type should be utilized with FILESTREAM storage.
D. To achieve the goal, row-level compression should be enabled on all columns that the vardecimal() data type is utilized.

Answer: B, C

Explanation:
1. FILESTREAM
Much of the data that is created every day is unstructured data, such as text documents, images, and videos, This unstructured data is often stored outside the database, separate from its structured data. This separation can cause data management complexities. Or, if the data is associated with structured storage, the file streaming capabilities and performance can be limited.
FILESTREAM integrates the SOL Server Database Engine with an NTFS file system by storing varbinary(max) binary large object (BLOB) data as files on the file system.
Transact-SOL statements can insert, update, query, search, and back up FILESTREAIVI data.
Win32 tile system interfaces provide streaming access to the data.
FILESTFiEAlv1 uses the NT system cache for caching file data. This helps reduce any effect that FILESTREAM data might have on Database Engine performance. The SQL Server butter pool is not used; therefore, this memory is available for query processing.
Note:
FILESTREAM data is not encrypted even when transparent data encryption is enabled.
2. NTFS compression
NTFS compression should be used to compress the files on the NTFS file system

Question: 77

You are a professional level SQL Sever 2008 Database Administrator. A monitoring solution should be designed for the instance to have object utilization statistics monitored. A list of first 10 objects should be identified by the solution for each of the following two components:
• 	most frequently executed stored procedures and functions
• 	long running Transact-SQL statements
The monitoring solution should be implemented with minimum performance effect, and the least amount of administrative effort should be utilized. Which action will you perform to accomplish the task?

A. To accomplish the task, a System Monitor counter log should be utilized.
B. To accomplish the task, a client-side SQL Server Profiler trace should be utilized.
C. To accomplish the task, a server-side SQL Server Profiler trace should be utilized.
D. To accomplish the task, dynamic management views should be utilized.

Answer: D

Explanation:
Dynamic management views and functions return server state information that can be used to monitor the health of a server instance, diagnose problems, and tune performance.
Important: Dynamic management views and functions return internal, implementation-specific state data. Their schemas and the data they return may change in future releases of SOL Server.
Therefore, dynamic management views and functions in future releases may not be compatible with the dynamic management views and functions in SQL Server 2008.
There are two types of dynamic management views and functions:
- Server-scoped dynamic management views and functions. These require VIEW SERVER
STATE permission on the server.
- Database-scoped dynamic management views and functions. These require VIEW DATABASE STATE permission on the database.

Question: 78

You are a professional level SQL Sever 2008 Database Administrator. A thirdparty database application will be deployed to the instance. Stored procedures are utilized by the application, and the procedures are developed by utilizing SQL CLR integration. You should set the application to have the EXTERNAL_ACCESS code access security setting enabled. Since you are the technical support of the company, you should deploy the application to the instance with no loss of functionality. Which action will you perform first?

A. Readwrite non-static fields in the code should be replaced with static fields.
B. The peverify.exe PEVerify tool should be utilized to confirm whether the type-safety requirements are satisfied by the code.
C. Read-only static fields in the code should be replaced with readwrite static fields.
D. The regasm.exe assembly registration tool should be utilized to have the assembly registered on the server before deployment.

Answer: B

Explanation:
---Jeff---
This is a vague question, but we can eliminate three answers just based on context.
PEVERIFY is used to determine if type-safety requirements are met.
From the first part of the guide, we know that read-only static fields are the only ones permitted, so that excludes A) and C) from being acceptable answers. REGASM creates registry entries for
.COM functionality and isn't related here.

All EXTEFINAL_ACCESS assemblies must meet the following criteria:
- Static fields are not used to store information. Read-only static fields are allowed.
- PEVerify test is passed. The PE\.·'erify tool {peverityexe), which checks that the MSIL code and associated metadata meet type safety requirements, is provided with the .NET Framework
- Synchronization, for example with the SynchronizationAttribute class, is not used.
- Finalizer methods are not used.
The following custom attributes are disallowed in EXTERNAL_ACCESS assemblies:
- System.ContextStaticAttribute
- System.I\lITAThreadAttribute
- System.Fiuntime.CompiIerServices.I\.·1ethodImplAttribute
- System.Runtime.CompiIerServicesCompilationHe|axationsAttribute
- System.Ftuntime.Flemoting.Contexts.ContextAttribute
- System.Runtime.Remotingflontexts.Synchronizationiiittribute
- System.Runtime.|nteropServices.DI||mportAttribute
- System.Security.Permissions.CodeAccessSecurityAttribute
- System.Security.SuppressUnmanagedCodeSecurityAttribute
- System.Security.Unverifiab|eCodeAttribute
- System.STAThreadAttribute
- System,ThreadStaticAttribute

Question: 79

You administer a SQL Server 2008 infrastructure. Developers in your company have rights to author policies. A test server is used to develop and test the policies. The Policy-Based Management feature generates SQL Server Agent alerts when a policy is violated. The developers are able to create and modify policies, but are unable to test policy violation alerts. You need to grant the necessary permission to the developers to test the policies. You also need to comply with the least privilege principle when you grant the permission. What should you do?

A. Add the developers to the sysadmin server role.
B. Grant the ALTER TRACE permission to the developers.
C. Add the developers to the PolicyAdministratorRole role in the MSDB database.
D. Grant the EXECUTE permission on the sys.sp_syspolicy_execute_policy stored procedure to the developers.

Answer: B

Explanation:
http://technet.microsoft.com/en-us/library/bb510667.aspx
Additional Considerations About Alerts
Be aware of the following additional considerations about alerts:
* Alerts are raised only for policies that are enabled. Because On demand policies cannot be enabled, alerts are not raised for policies that are executed on demand.
* If the action you want to take includes sending an e-mail message, you must configure a mail account. We recommend that you use Database Mail. For more information about how to set up Database Mail, see How to:
Create Database Mail Accounts (Transact-SQL).
* Alert security:
When policies are evaluated on demand, they execute in the security context of the user. To write to the error log, the user must have ALTER TRACE permissions or be a member of the sysadmin fixed server role. Policies that are evaluated by a user that has less privileges will not write to the event log, and will not fire an alert.
The automated execution modes execute as a member of the sysadmin role. This allows the policy to write to the error log and raise an alert.

Question: 80

You administer a SQL Server 2008 infrastructure. The infrastructure contains SQL Server 2008 servers across four sites. All sites are connected via a WAN link. All sites use the same database application. Your company has the following business requirements: All sites maintain data related to their site. Each site has access to data related to other sites. In the event of any site failure, database activity is redirected to another site. You need to implement a replication topology that meets the business requirements. Which solution should you implement?

A. Snapshot replication
B. Peer-to-Peer replication
C. Transactional replication that uses updating subscriptions
D. HTTP Merge replication

Answer: B

Explanation:
Peer-to-peer replication provides a scale-out and high-availability solution by maintaining copies of data across multiple server instances, also referred to as nodes. Built on the foundation of transactional replication, peer-to-peer replication propagates transactionally consistent changes in near real-time. This enables applications that require scale-out of read operations to distribute the reads from clients across multiple nodes. Because data is maintained across the nodes in near real-time, peer-to-peer replication provides data redundancy, which increases the availability of data.

Question: 81

You administer a SQL Server 2008 instance. You plan to design a high-availability solution by using database mirroring. The current application includes programming logic that will retry transactions if a failover occurs. You need to

configure a strategy that will provide the minimum amount of latency for committed transactions. What should you do?

A. Pause database mirroring.
B. Configure manual failover role switching.
C. Configure forced service role switching.
D. Configure automatic failover role switching.

Answer: C

Explanation:
Source:
http://msdn.microsoft.com/en-us/library/ms189852.aspx (see posts from Carlos and Helper22 at http://www.examcollection.com/microsoft/Microsoft.Certkey.70-450.v2011-04-13.by.Jorge.311q.vce.file.html)

Question: 82

You administer a SQL Server 2008 infrastructure. Several production databases use Transparent database encryption. You perform full database backups of the production databases as part of your backup strategy. You need to ensure that the database backups can be restored on another SQL Server 2008 instance if the original host server fails. What should you do?

A. Back up the server master key.
B. Back up the database master key.
C. Ensure that the instances use the same service account.
D. Back up the resource database.

Answer: B

The database master key is a symmetric key used to protect the private keys of certificates and asymmetric keys that are present in the database. When it is created, the master key is encrypted by using the Triple DES algorithm and a user-supplied password.
When enabling TDE, you should immediately back up the certificate and the private key associated with the certificate. If the certificate ever becomes unavailable or if you must restore or attach the database on another server, you must have backups of both the certificate and the private key or you will not be able to open the database. The encrypting certificate or asymmetric should be retained even if TDE is no longer enabled on the database. Even though the database is not encrypted, the database encryption key may be retained in the database and may need to be accessed for some operations.

Question: 83

You administer a SQL Server 2008 Enterprise Edition instance that hosts a large database.
The database uses the simple-recovery model. The database contains the following three additional filegroups:
•   FileGroupA that is read/write
•   FileGroupB that is read-only
•   FileGroupC that is read-only
FilegroupB contains less critical data than FilegroupC. You discover that the PRIMARY filegroup and FileGroupB have failed. You need to recover the database in the minimum possible time. You also need to ensure that data is available as soon as possible. What should you do?

A. Perform a partial restore of the PRIMARY filegroup and FileGroupB from a partial backup.
B. Perform a partial restore of the PRIMARY filegroup and FileGroupA from a partial backup. Perform an online recovery of FileGroupC, and then perform an online restore of FileGroupB.
C. Perform a partial restore of the PRIMARY filegroup and FileGroupA from a partial backup. Perform an online recovery of FileGroupB, and then perform an online restore of FileGroupC.
D. Perform a full database restore.

Answer: D

Reference:
http://msdn.microsoft.com/en-us/library/ms190984.aspx

Question: 84

You administer a SQL Server 2008 instance that hosts a database solution in a production environment. The database solution uses several SQL Server Agent jobs to periodically transfer data from heterogeneous data sources to the production environment. You also have a separate development environment that is used by several development teams. You design a test recovery plan for the database. You plan to test the recovery plan by performing the following tasks:
Restoring the database on a separate SQL Server 2008 instance in a development environment Running a number of unit tests.
You need to ensure that all database dependencies are included in the recovery plan.
Which two objects should you transfer from the production environment to the development environment? (Each correct answer presents part of the solution. Choose two.)

A. msdb database
B. Login accounts
C. master database
D. SQL Server Agent jobs
E. Custom error messages

Answer: AC

Explanation:
Correct: A (http://msdn.microsoft.com/en-us/library/ms187112.aspx)
Correct: C (http://msdn.microsoft.com/en-us/library/ms187837.aspx)
Incorrect: B (master database also includes the login accounts of SQL Server instance. See http://msdn. microsoft.com/en-us/library/ms187837.aspx).
Incorrect: D (msdb database also includes the SQL Agent schedules. See http://msdn.microsoft.com/en-us/library/ms187112.aspx)

Question: 85

You administer a SQL Server 2008 infrastructure. You plan to design an infrastructure for a new application. The application has the following requirements:
•   Users can connect to an instance named SQLSERVER1.
•   SQLSERVER1 is linked to a server named SQLSERVER2.
•   SQLSERVER1 and SQLSERVER2 run on different computers.
•   The SQL Server instances use only Windows authentication.
You need to configure the infrastructure to ensure that the distributed queries are executed in the Windows security

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

A. Configure all servers to use the Shared Memory network protocol.
B. Register a server principal name (SPN) for SQLSERVER1 and SQLSERVER2.
C. Use the local computer account as a service account for SQLSERVER1 and SQLSERVER2.
D. Create a map for each SQL login from SQLSERVER1 to SQLSERVER2 and use the impersonate option.
E. Ensure that the two instances use the same Windows account for the Microsoft SQL Service. Create the link so that each account uses the current security context.

Answer: B, D

Explanation:
http://msdn.microsoft.com/en-us/library/ms189580%28v=SQL.100%29.aspx

Question: 86

You are designing a database solution by using SQL Server 2008. The database has a large number of tables that have columns that contain sensitive data. The sensitive data must be protected. You need to choose an encryption strategy that has the minimum effect on the performance of the server. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

A. Use Encrypting File System.
B. Use Bitlocker Encryption.
C. Use Transparent Data Encryption (TDE).
D. Use Cell-Level Encryption.

Answer: C

Reference:
http://msdn.microsoft.com/en-us/library/bb934049.aspx

Question: 87

You are configuring a new SQL Server installation. The SQL Server instance will be used for both online analytical processing (OLAP) and relational data. The data in the server is accessed frequently. You can configure the services, startup type, and accounts used by the services that run on the server according to the following table.

Service	Startup type	Account
SQL Server	Automatic	Local System
SQL Server Agent	Automatic	Local System
Analysis Services	Automatic	Local System

You want to raise the level of security on the server. You need to minimize the surface area for potential attacks on the server. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

A. Change the Startup type property for all the services to Manual.
B. Change the Startup type property for all the services to Disabled.
C. Create a single non-administrative local user account and assign it to each of the services.
D. Create three different non-administrative local user accounts and assign them to each of the services.

Answer: D

Explanation:
Answer is D. From Microsofts best practises point of view every service should have it's own service account.
C. Is a correct answer you can select this option due the installation of an SQL 2008 instance but is not recommended as best practise.
Official site: http://msdn.microsoft.com/en-us/library/cc281953.aspx
You can assign the same login account to all SQL Server services, or you can configure each service account individually.
You can also specify whether services start automatically, are started manually, or are disabled.
Microsoft recommends that you configure service accounts individually to provide least privileges for each service, where SQL Server services are granted the minimum permissions they need to complete their tasks. For more information

Question: 88

Your organization has many servers that run SQL Server 2008. You define a rule to ensure that all database servers have Database Mail disabled. You need to be able to identify and resolve any violation of the rule by using the minimum amount of administrative effort. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

A. Define a scheduled task on each server.
B. Define a SQL job on each database server.
C. Define a maintenance plan on each database server.
D. Define a SQL Server policy and import it on each database server.

Answer: D

Explanation:
Source:
http://msdn.microsoft.com/en-us/library/bb510667.aspx
"Policy-Based Management would be helpful in resolving the issues presented in the following scenarios:
A company policy prohibits enabling Database Mail or SQL Mail. A policy is created to check the server state of those two features. An administrator compares the server state to the policy. If the server state is out of compliance, the administrator chooses the Configure mode and the policy brings the server state into compliance.

Question: 89

You administer a SQL Server 2008 instance. You plan to deploy multiple databases to the instance. You design the security policy for the instance. A stored procedure verifies the partition compression settings on each database deployed to the instance. You plan to use a policy to execute the stored procedure. You need to ensure that the policy is enforced by using Policy-Based Management Framework. What should you do?

A. Enable the nested triggers server configuration option.
B. Grant EXECUTE permissions on the stored procedure to the SQLAgent service account.
C. Grant EXECUTE permissions on the stored procedure to the ##MS_PolicyTsqlExecutionLogin## login.
D. Grant EXECUTE permissions on the stored procedure to the ##MS_PolicyEventProcessingLogin## login.

Answer: C

Explanation:

The correct answer should be A or C because the two options are necessary to the policy be enforced.

But as the question specifies the security policy context, the right answer would be C.

http://technet.microsoft.com/en-us/library/bb510667.aspx

"If the nested triggers server configuration option is disabled, On change: prevent will not work correctly. Policy-Based Management relies on DDL triggers to detect and roll back DDL operations that do not comply with policies that use this evaluation mode. Removing the Policy-Based Management DDL triggers or disabling nest triggers, will cause this evaluation mode to fail or perform unexpectedly."

http://blogs.msdn.com/b/sqlpbm/archive/2008/07/03/executesql.aspx

"The proxy account is called ##MS_PolicyTsqlExecutionLogin##. You'll find this login under the "Logins" folder in Management Studio and master.sys.syslogins. By default the login has very limited permissions. You will likely need to extend the privileges of this user to accommodate the SQL you need to run under policy.

Note: Every permission you grant to ##MS_PolicyTsqlExecutionLogin## you are effectively granting that permission to all users in the Policy Administrator role."

Other sources:

http://social.msdn.microsoft.com/Forums/en-US/sqlsecurity/thread/da35c7fc-af9d-4f87-b5e7-8438a6c6ca24

Question: 90

Your SQL Server 2008 database contains two tables named Customer and Order inside the Sales schema. The Sales schema is defined as follows:

- • It has a stored procedure named SetCustomerStatus that reads from Order and modifies Customer.
- • It is owned by a user named SalesUser.

Another user named marketingUser wants to be able to call SetCustomerStatus and change the status of Customer. You need to assign the least permission necessary to MarketingUser. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

A. Set only Execute on SetCustomerStatus.
B. Set only Take Ownership on ustomer and Order.
C. Perform the following tasks:
Set Select on Customer.
Set Update on Order.
D. Perform the following tasks:
Set Execute on SetCustomerStatus.
Set Select on Customer.
Set Update on Order.

Answer: A

Explanation:
A and B could be correct but Execute gives the least amount of rights to MarketingUser

Question: 91

Your SQL Server 2008 server has only the SQL Server service running. All other SQL Services are disabled. You have a user named DBReportsUser. You need to restrict DBReportsUser to login only between 17:00 hours and 22:00 hours. You want to achieve this goal by using the minimum amount of administrative effort and the least impact on the Server security. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

A. Use SQL Profiler.

B. Use a logon trigger.
C. Enable login auditing.
D. Create a SQL Server Agent job.

Answer: B

Source:
http://blogs.technet.com/b/vipulshah/archive/2007/12/04/ddl-triggers-and-logon-triggers.aspx

Question: 92

You are the database administrator for a SQL Server that hosts an application defined as follows:
The database consists of 4 data files and one log file.
The physical server has 16 CPUs and 64 GB of memory.
Hardware non-uniform memory access (NUMA) is not available on this server platform.
Users of the application report that it is responding slowly. You use SQL Server Profiler to find out that the I/O performance issue is related to the lazywriter process.
You need to improve the performance of the application by reducing the I/O performance issue. What should you do?
(More than one answer choice may achieve the goal. Select the BEST answer.)

A. Add additional RAM to the server.
B. Add additional data files to the database.
C. Configure four software non-uniform memory access (soft NUMA) nodes on the server.
D. Configure a CPU affinity mask on the server to limit the instance of SQL Server to four CPUs

Answer: C

Explanation:
---Jeff---
There are a number of terms in the question that don't come up often.
The lazy writer is partially responsible for writing data from memory buffers to the disk.
It's called 'lazy' because it only functions when the amount of free buffers becomes low.
Otherwise, it doesn't do much.
NUMA organizes the way that CPUs access memory: The benefits of soft-NUMA include reducing I/O and lazy writer bottlenecks on computers with many CPUs and no hardware NUMA.
There is a single I/O thread and a single lazy writer thread for each NUMA node. Depending on the usage of the database, these single threads may be a significant performance bottleneck. Configuring four soft-NUMA nodes provides four I/O threads and four lazy writer threads, which could increase performance.
CXPACKET waits occur due to problems with the timing of multiple processors. It's low here, so we know that's not the issue.

Question: 93

You are designing a new SQL Server instance that will support a Web application. The Web application is hosted on a Web farm that contains 32 nodes. The server has 128 GB of memory and 16 processor cores. The application contains two databases and supports both online analytical processing (OLAP) and online transaction processing (OLTP) workloads. When testing the application, you discover that some queries run extremely slow and some queries run very fast. You need to ensure that the server processes database queries as fast as possible. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

A. Execute the following command on the server: exec_sp_configure 'maximum degree of parallelism', 1
B. Execute the following command on the server: exec_sp_configure 'maximum degree of parallelism', 8
C. Use SQL Profiler to identify queries that experience CXPACKET waits. Add (OPTION MAXDOP 1) to each query
D. Use SQL Profiler to identify queries that experience CXPACKET waits. Add (OPTION MAXDOP 8) to each query

Answer: C

Explanation:
The data collector is a component installed on a SOL Server server, running all the time or on a user-defined schedule, and collecting different sets of data. The data collector then stores the collected data in a relational database known as the management data warehouse.
The data collector is a core component of the data collection platform for SQL Server 2008 and the tools that are provided by SQL Server. The data collector provides one central point for data collection across your database servers and applications.
This collection point can obtain data from a variety of sources and is not limited solely to performance data, unlike SOL Trace.
The data collector enables you to adjust the scope ol data collection to suit your test and production environments. The data collector also uses a data warehouse, a relational database that enables you to manage the data you collect by setting different retention periods for your data. The data collector supports dynamic tuning for data collection and is extensible through its API.

Question: 94

You are designing the storage scheme for a new SQL Server 2008 database application. The application will primarily be used to query data. The database will be initially populated with 4 terabytes of data stored in 20 tables. The data is distributed evenly throughout all 20 tables. Every night, between 100 GB and 300 GB of new data will be loaded into 4 database tables. The remaining 16 tables will remain static. The average CPU utilization of the server where the application will reside is between 30 and 50 percent. You need to ensure that the amount of disk space used is reduced. You need to achieve this goal by ensuring minimum impact of performance on the server. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

A. Use page-level data compression on the 4 tables that are loaded every night.
B. Use row-level data compression on the 4 tables that are loaded every night.
C. Use page-level data compression on the 16 tables that remain static.
D. Use row-level data compression on the 16 tables that remain static.

Answer: B

Explanation:
---Small Peter---(best answer logics)
I will go with answer b.
As the 4 tables get loaded every night will soon become the major factor of the storage capacity problem and page level compression will use a lot of CPU time. Thus row level compression every night for the 4 non-static tables would be a good compromise.
---D---- Answer
We should use row-level compression only on the 16 tables that remain static.
Row-level because it is the compression type that consumes less CPU (page-level compression consumes more CPU).
---A answer---
Full-recovery Model
Description

- Requires log backups.
- No work is lost due to a lost or damaged data file.
- Can recover to an arbitrary point in time (for example, prior to application or user error).
Work loss exposure
- Normally none.
- If the tail of the log is damaged, changes since the most recent log backup must be redone.
Recover to point in time?
- Can recover to a specific point in time, assuming that your backups are complete up to that point in time.

Question: 95

You administer a SQL Server 2008 infrastructure. You plan to upgrade a Microsoft SQL Server 2005 instance to SQL Server 2008 by using an in-place upgrade. All user databases use the simple recovery model and have the PAGE_VERIFY option turned off. You need to ensure that the database engine can identify I/O path errors and memory corruptions for the data in tables. Which two actions should you perform before the upgrade? (Each correct answer presents part of the solution. Choose two.)

A. Rebuild the nonclustered indexes.
B. Rebuild the clustered indexes and heaps.
C. Set the database recovery model to FULL.
D. Set the PAGE_VERIFY database option to CHECKSUM.
E. Set the PAGE_VERIFY database option to TORN_PAGE_DETECTION.
F. Execute the DBCC CHECKDB command by using the DATA_PURITY option.

Answer: C, D

Explanation:
http://msdn.microsoft.com/en-us/library/bb522682.aspx

Question: 96

You deploy a new database application to a SQL Server 2008 instance on a server that has 4 processor cores and 64 GB of RAM. The application uses partitioned tables. During testing, deadlocks occasionally occur on queries that are attempting to read data. You find out that the deadlocks are related to the table partitions. You need to ensure that the application executes without deadlocks for the read queries. You also need to ensure that dirty reads do not occur. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

A. Disable partition-level lock escalation.
B. Add additional database files to each partitioned table.
C. Move the clustered indexes for the partitioned tables to a separate filegroup.
D. Move each partitioned table to its own filegroup.

Answer: A

Explanation:
Full-recovery Model
Description
· Requires log backups.
- No work is lost due to a lost or damaged data file.
· Can recover to an arbitrary point in time (for example, prior to application or user error).

Work loss exposure

· Normally none.

- Il the tail of the log is damaged, changes since the most recent log backup must be redone.

Recover to point in time? S3.

- Can recover to a specific point in time, assuming that your backups are complete up to that point in time.

http://msdn.microsoft.com/en-us/library/ms184286.aspx

Question: 97

You administer a SQL Server 2008 infrastructure. A financial application uses several instances across multiple servers. The majority of queries require distributed transactions across all servers. The application administrator reports that the application experiences excessive deadlocks. You need to design a data collector type that provides the appropriate information for remote servers. What collector should you use?

A. Query Activity collector
B. T-SQL Query collector
C. Performance Counters collector
D. A custom Query collector that uses WMI

Answer: C

Explanation:
Background info:
http://msdn.microsoft.com/en-us/library/bb933940.aspx
http://msdn.microsoft.com/en-us/library/ms190216.aspx

Question: 98

You are a professional level SQL Sever 2008 Database Administrator. A database is included by the instance, and a table named EmployeeData is contained by the database. There is a column named Profile in the EmployeeData table. Microsoft Office Word 2003 documents are stored in the column. The space utilized by the Profile column should be cut to the least. In addition, a reasonable performance should be maintained to retrieve the content of the column. Which action will you perform?

A. ROW compression should be utilized for the EmployeeData table.
B. The Profile column should be stored by utilizing filestream storage, and the NTFS file system compression should be utilized.
C. PAGE LEVEL compression should be utilized for the EmployeeData table.
D. The Profile column should be implemented as a CLR user-defined type.

Answer: B

Explanation:
Much of the data that is created every day is unstructured data, such as text documents, images, and videos. This unstructured data is often stored outside the database, separate from its structured data. This separation can cause data management complexities. Or, if the data is associated with structured storage, the file streaming capabilities and performance can be limited.

FILESTREAM integrates the SQL Server Database Engine with an NTFS file system by storing varbinary(max) binary large object (BLOB) data as files on the file system.

Transact-SQL statements can insert, update, query, search, and back up FILESTREAM data. Win32 file system

interfaces provide streaming access to the data.

FILESTREAM uses the NT system cache for caching file data. This helps reduce any effect that FILESTREAM data might have on Database Engine performance. The SQL Server buffer pool is not used; therefore, this memory is available for query processing.

Note:

FILESTREAM data is not encrypted even when transparent data encryption is enabled.

Question: 99

You are a professional level SQL Sever 2008 Database Administrator. Log shipping should be implemented for several databases on three SQL Server instances. The logs are migrated to a fourth SQL Server instance. A manual failover will be implemented. You need to ensure that the database applications utilize the secondary server after failover. Since you are the technical support, you are required to confirm that the latest data should be available to users. Which actions should you perform to achieve the goal? (Choose more than one)

A. To achieve the goal, you should utilize the WITH RECOVERY option on the last log to apply any unapplied transaction log backups in sequence to each secondary database.
B. To achieve the goal, you should redirect client computers to the secondary instance.
C. To achieve the goal, you should replicate all log shipping network shares to the secondary instance.
D. To achieve the goal, you should utilize the WITH NORECOVERY option to back up the tail of the transaction log of primary databases.
E. To achieve the goal, you should back up all databases on the secondary instance.

Answer: A, B, D

Explanation:

Log shipping consists of three operations:

1. Back up the transaction log at the primary server instance.
2. Copy the transaction log file to the secondary server instance.
3. Restore the log backup on the secondary server instance.

The log can be shipped to multiple secondary server instances. In such cases, operations 2 and 3 are duplicated for each secondary server instance.

A log shipping configuration does not automatically fail over from the primary server to the secondary sewer. It the primary database becomes unavailable, any of the secondary databases can be brought online manually.

To make the target as the new source database you have to

1. Backup the transaction log tail in order to have the latest transactions and to put the database in recovery state BACKUP LOG lzldventuxewoxks]

TO DISK = N ' C : \PTOgTam l¤`ileS\Mic:T»;>s0fl; SQL

Server\MSSQL10 .MSSQLSERVER\MSSQL\Backup\Adv.trn'

WITH NO_TRUNCATE ,

NOFORMAT,

NOINIT,

NAME = N' Adva·ntu:l:s,·W0Tks—Tra11Saction Log Backup ' ,

SKIP,

NOREMJTND,

NOUNLOAD,

NOREc0vERY,

STATS = 10

2. After having copied all the transaction log backup, restore them in order and, tor the latest, use the WITH RECOVERY option

3. Redirect all the clients to the new source database.

Question: 100

You are a professional level SQL Sever 2008 Database Administrator. A maintenance strategy should be designed for a mission-critical database, and a large table named Orders is contained by the database. Index maintenance operations are contained in the design plan. When you design the strategy, the facts listed below should be taken into consideration. First, the users continuously access to the Orders table in the database. Secondly, a column of the xml data type is contained by Orders table. Thirdly, the new rows are regularly added to the Orders table. Fourthly, the average fragmentation for the clustered index of the Orders table is no more than 2 percent. A strategy should be designed to have the performance of the queries on the table optimized. Which action will you perform?

A. The clustered index of the Orders table should be dropped.
B. The clustered index of the Orders table offline should be rebuilt once a month.
C. The clustered index of the Orders table should be excluded from scheduled reorganizing or rebuilding operations.
D. The clustered index of the Orders table should be reorganized by reducing the fill factor.

Answer: C

Explanation:
As the users will continuously access the database and there is one cluster index, the cluster index could not be unavailable because the leaf pages of the clustered index contains the table data.
Furthermore, the cluster index has never one fragmentation of more than 2%, this means it doesn't need to be reordered.
With this, you can be sure that answer A,B and D are wrong.

Question: 101

You are a professional level SQL Sever 2008 Database Administrator. A database is included by an instance. And a large table named OrderDetails is included by the database. Only DML statements on the last three months data are executed by the application queries. Administrative audits are managed monthly on data which is longer than four months. The performance problems listed below are found by you in the database. The performance of the application queries against the OrderDetail table is poor. It takes a long time to perform the maintenance tasks against the database, index defragmentation is contained. The performance problems should be solved with on impact on the server performance. Which action will you perform?

A. A database snapshot should be created for the OrderDetails table every four months. And then, the queries should be changed to utilize the present snapshot.
B. An additional table named OrderDetailsHistory should be created for data older than four months. And then, the OrderDetails and OrderDetailsHistory tables should be partitioned in two parts by utilizing the OrderDate column. At last, a SQL Server Agent job that runs every month should be created and the ALTER TABLE...SWITCH Transact-SQL statement should be utilized to remove data that is longer than four months to the OrderDetailsHistory table.
C. An additional table named OrderDetailsHistory should be created for data longer than four months. And then, a SQL Server Agent job that runs the following Transact-SQL statement every month should be created. INSERT INTO OrderDetailsHistory SELECT * FROM OrderDetailsWHERE DATEDIFF(m,OrderDate,GETDATE())>4
D. An additional table named OrderDetailsHistory should be created for data older than four months. And then, the following Transact-SQL statement should be utilized. CREATE TRIGGER trgMoveDataON
OrderDetailsAFTER INSERT ASINSERT INTO OrderDetailsHistory SELECT * FROM
OrderDetailsWHERE DATEDIFF(m,OrderDate,GETDATE())>4

Answer: B

Explanation:
The easiest way to deal with history tables is to use partitioned tables and the switch command should be use to attach the old data to the history table.

Question: 102

You are a professional level SQL Sever 2008 Database Administrator in an international corporation named Wiikigo. A 32-bit version is utilized by the instance on a Windows Server 2008 64-bit server. You activate the awe enabled option. A predictable increase in query activity will be experienced by the instance. You are required to figure out the most proper and beneficial time to have the databases migrated to a 64-bit SQL Server 2008 server on the same hardware. A data collector type that proper information is provided should be identified. What kind of collector should you utilize?

A. You should utilize SQL Trace collector
B. You should utilize Performance Counters collector
C. You should utilize T-SQL Query collector
D. You should utilize Query Activity collector

Answer: B

Explanation:
Performance Counters collector is used as it contains information about the CPU, Memory and Disk usage of the SQL Server instance. As we need to know if it will o benefit to migrate to 64 bit version of SQL Server.

Question: 103

You are a professional level SQL Sever 2008 Database Administrator.
They are respectively named Ins01, Ins02, Ins03 and Ins04. A single database application is hosted by each instance. All four instances should be removed to a new SQL Server failover cluster. You can see the configuration of the four instances from the table listed below:

Instance Name	Ins01	Ins02	Ins03	Ins04
Configuration	8 processors with 16GB RAM	4 processors with 8GB RAM	2 processors with 16GB RAM	4 processors with 8GB RAM

All the four instances are sufficiently optimized, and there are no spare CPU cycles or extra memory in the instances. All four databases will be hosted by the new cluster on a single virtual cluster IP address. Since you are the technical support, you are required to set the new cluster to handle the workload of all the database applications with the least amount of hardware resources. From the four cluster configuration, which one should be utilized?

A. Four-node active/active/active/active cluster should be utilized and a minimum of 9 processors and a 25-GB memory are contained by each node.
B. Two-node active/passive cluster should be utilized and a minimum of 18 processors and a 50-GB memory are contained by each node.
C. Two-node active/active cluster should be utilized and a minimum of 9 processors and a 25-GB memory are contained by each node.
D. Four-node active/active/active/passive cluster should be utilized and a minimum of 18 processors and a 50-GB memory are contained by each node.

Answer: B

Explanation:
To-use the least amount of hardware resources, we will create a single two nodes Active-Passive cluster.
As all the instances should be able to run without impact, we will sum the number of CPU; here it is 18 CPU for each node
Memory needed: 18 GB + 8 GB + 16 GB + 8 GB = 48 GB + 2 GB for the OS = 50 GB.

Question: 104

You are a professional level SQL Sever 2008 Database Administrator. An instance runs on a computer, and the computer has eight quad-core processors and 128-GB RAM. The instance is utilized by four different applications. Not only a low number of CXPACKET waits but also a large number of lazy writer waits are experienced by the instance. The performance of the instance should be optimized. Which action will you perform to accomplish the goal?

A. To accomplish the goal, software non-uniform memory access (soft-NUMA) should be configured.
B. To accomplish the goal, the Resource Governor should be configured.
C. To accomplish the goal, the Windows System Resource Manager should be configured.
D. To accomplish the goal, an increase should be configured in the maximum degree of parallelism option.

Answer: A

Explanation:
The instance is utilized by four different applications. Not only a low number of CXPACKET waits but also a large number of lazy writer waits are experienced by the instance with software non-uniform memory access, we could set multiple threads to ifo see example below:
Consider the following example.
A computer with eight CPUs does not have hardware NUMA. Three soft-NUMA nodes are configured. Database Engine instance A is configured to use CPUs 1 through 4. A second instance of the Database Engine is installed and configured to use CPUs 5 through 8. The example can be visually represented as:
Claus 1 2 3 4 5 6 7 8
Soft:—NUMA <—N0——><—N1—>< ———— N2 ———— >
SQL Server <insurance A ><instance B>
Instance A, which experiences significant IIO, now has two UO threads and two lazy writer threads, while instance B, which performs processor-intensive operations, has only one IIO thread and one lazy writer thread. Differing amounts of memory can be assigned to the instances, but unlike hardware NUMA, they both receive memory from the same operating system memory block and there is no memory-to-processor affinity.

Question: 105

You are a professional level SQL Sever 2008 Database Administrator. An authentication method should be designed for SSRS reports that SQL Server data connections are utilized. Since you are the technical support of the company, you are required to make sure that all SSRS reports utilize the Kerberos authentication protocol to communicate to the SQL Server instance. Which action should you perform?

A. The default Web site should be set on the instance to utilize the Integrated Security type.
B. The application pool utilized by the default Web site should be set to utilize a domain account.
C. A service principal name (SPN) should be registered in the Active Directory directory service for the SSRS instance.
D. The default Web site on the instance should be set to utilize the Secure Sockets Layer (SSL) protocol.

Answer: C

Explanation:
Explanation: Configuring SSRS authentication can be surprisingly challenging. There's an article dedicated to it on MSDN.
http://msdn.microsoft.com/en-us/library/cc281253.aspx

A service principal name (SPN} is the name by which a client uniquely identifies an instance of a service. The Kerberos authentication service can use an SPN to authenticate a service. When a client wants to connect to a service, it locates an instance of the service, composes an SPN for that instance, connects to the service, and presents the SPN for the service to authenticate.
Permissions
To register the SPN, the Database Engine must be running under a built-in account, such as Local System or NETWORK SERVICE, or an account that has permission to register an SPN, such as a domain administrator account. It SOL Server is not running under one of these accounts, the SPN is not registered at startup and the domain administrator must register the SPN manually. More in BOL

Question: 106

You are a professional level SQL Sever 2008 Database Administrator. Two SQL Server 2008 instances are managed by you, and they are respectively called Ins01 and Ins02. The Sales database is included in Ins01, while the Accounts database is contained by Ins02. A transaction is started by A procedure in the Sales database. And then, the Sales.dbo.Order table and the Accounts.dbo.
OrderHistory table are updated by the procedure through a linked server. Since you are the technical support of the company, you are required to make sure that a two-phase commit is utilized by the transaction. Which action will you perform to finish the task?

A. To finish the task, a Service Broker should be configured to have the proper transaction control enabled.
B. To finish the task, the linked server to utilize distributed transactions
C. To finish the task, the linked server should be properly configured for delegation.
D. To finish the task, the linked server should be properly configured for impersonation.

Answer: B

Explanation:
When you have created your linked server
EXEC master.dbo.sp_addlinkedserver @server = N'.\MAPS', @srvproduct=N'SQL
Server'
You can configure it to use distributed transaction
EXEC master.dbo.sp_serveroption @server=N'.\MAPS'; @optname=N'remote proc transaction promotion', @optvaiue=N'true'

Question: 107

You are a professional level SQL Sever 2008 Database Administrator. The solution is log-shipped for high-availability purposes. The data files of the database reside on drive D, while the transaction log files of the database reside on drive E. A restoring test plan should be implemented to satisfy the requirements listed below for the log-shipping solution. First, the secondary database is brought online in the shortest time. Secondly, the data is in a consistent state. Thirdly, the data loss is reduced to the least. The first step for the recovery test plan should be identified in the event of drive D failure. Which step should be performed?

A. You should bring the secondary database online.
B. You should execute the DBCC CHECKDB command along with the REPAIR_REBUILD option against the primary database.
C. You should perform the tail-log backup of the primary database.
D. You should execute the DBCC CHECKDB command along with the REPAIR_ALLOW_DATA_LOSS option against the primary database.

Answer: C

Explanation:
This topic is relevant only for databases that are using the full or bulk-logged recovery models.
In most cases, under the full or bulk-logged recovery models, SOL Server 2005 and later versions require that you back up the tail of the log to capture the log records that have not yet been backed up. A log backup taken of the tail of the log just before a restore operation is called a tail-log backup.
SQL Server 2005 and later versions usually require that you take a tail-log backup before you start to restore a database. The tail-log backup prevents work loss and keeps the log chain intact.
When you are recovering a database to the point of a failure, the tail-log backup is the last backup of interest in the recovery plan. If you cannot back up the tail of the log, you can recover a database only to the end of the last backup that was created before the failure.
Not all restore scenarios require a tail-log backup. You do not have to have a tail-log backup if the recovery point is contained in an earlier log backup, or it you are moving or replacing {overwriting) the database. Also, it the log tiles are damaged and a tail-log backup cannot be created, you must restore the database without using a tail-log backup. Any transactions committed after the latest log backup are lost.

Question: 108

You are a professional level SQL Sever 2008 Database Administrator. A SQL Server 2008 instance at the New York central site is managed by you, and it is called Ins01. There is a sales team in your company, and their task is to finish purchase orders for customer requests. The sales team updates data regularly in a local database by utilizing their portable computers. When the central site is connected by portable computers, a database named Sales will be synchronized with the local database. A duplication model will be created to duplicate the local database to the Sales database. The requirements listed below should be satisfied by the duplication model:
•   First, when the same data is updated by multiple users independently, there should be no data conflicts.
•   Secondly, sensitive data such as product price cannot be updated by the sales team.
•   Thirdly, the data should be synchronized by the sales team not only at scheduled times but also on demand.
The best model should be identified to have data duplicated, and you should be reduced the development efforts to the least. Which action will you perform?

A. You should utilize snapshot duplication along with each portable computer that is set up as a subscriber.
B. You should utilize transactional duplication along with each portable computer that is set up as a publisher.
C. You should utilize merge duplication along with each portable computer that is set up as a subscriber.
D. You should utilize SQL Server Integration Services (SSIS) to promote the date modification and pull updates to the Sales database along with the SSIS packages, on demand.

Answer: C

Explanation:
Merge replication, like transactional replication, typically starts with a snapshot of the publication database objects and data. Subsequent data changes and schema modifications made at the Publisher and Subscribers are tracked with

triggers. The Subscriber synggronizes with the
Publisher when connected to the network and exchanges all rows that h e changed between the Publisher and Subscriber since the last time synchronization occurred.
Merge replication is typically used in server-to-client environments.

Question: 109

You are a professional level SQL Sever 2008 Database Administrator. A solution will be implemented to have hardware configurations obtained. The hardware configuration obtained should include the number of processors on a computer and the processor type of all SQL Server 2008 computers. The requirements listed below should be satisfied by the solution. The solution should be hosted on the central computer. And the hardware configurations for multiple servers should be verified by the solution. A technology should be selected to satisfy the requirements, and the least amount of development effort should be utilized. Which action should you perform to finish the task?

A. To finish the task, you should utilize the Invoke-Sqlcmd cmdlet in SQL Server PowerShell cmdlet.
B. To finish the task, you should utilize the ExecuteWQL function to define policies based on conditions.
C. To finish the task, you should utilize the Windows Management Instrumentation (WMI) provider for the server events.
D. To finish the task, you should utilize the ExecuteSql function to define policies based on conditions.

Answer: B

Explanation:
Policy-Based Management is a system for managing one or more instances of SOL Server 2008. When SOL Server policy administrators use Policy-Based Management, they use SOL Server
Management Studio to create policies to manage entities on the server, such as the instance of
SOL Server, databases, or other SOL Server objects.
Policy-Based Management has three components:
Policy management
Policy administrators create policies,
Explicit administration
Administrators select one or more managed targets and explicitly check that the targets comply with a specific policy, or explicitly make the targets comply with a policy.
Evaluation modes
There are four evaluation modes, three of which can be automated:
On demand. This mode evaluates the policy when directly specified by the user.
On change: prevent. This automated mode uses DDL triggers to prevent policy violations.
Important:
It the nested triggers server configuration option is disabled, OI'! change: pI'BV6I'Il will not work correctly. Policy-Based Management relies on DDL triggers to detect and roll back DDL operations that do not comply with policies that use this evaluation mode. Removing the Policy-Based Management DDL triggers or disabling nest triggers, will cause this evaluation mode to fail or perform unexpectedly.
On change: log only. This automated mode uses event notification to evaluate a policy when a relevant change is made.
On schedule. This automated mode uses a SOL Server Agent job to periodically evaluate a
policy.
When automated policies are not enabled, Policy-Based Management will not altect system performance.
---By Jeff---
ExecuteWQL is a relatively straightforward way to query operating system data from SQL server. It can then be stored in a database for analysis.
The Invoke-Sqlcmd cmdlet is a powershell cmdlet for executing sql commands. It doesn't apply well to the question.

WMI is a driver extension with scripting language and could theoretically be used to accomplish the goal, but with a much more complex development process.

EXECUTESQL is a SQL command for running a pre-built SQL statement

Question: 110

You are a professional level SQL Sever 2008 Database Administrator. It is on a four-processor, quad-core server. CPU pressure is regularly experienced by the server. An extremely large mission-critical database is consisted by the instance, and it is utilized constantly. The online index rebuilds should not occupy all available CPU cycles. From the following four configurations, which one should you utilize?

A. You should utilize affinity mask.
B. You should utilize max degree of parallelism.
C. You should utilize affinity I/O mask.
D. You should utilize optimize for ad hoc workloads.

Answer: B

Explanation:
When SQL Server runs on a computer with more than one microprocessor or CPU, it detects the best degree of parallelism, that is, the number of processors employed to run a single statement, for each parallel plan execution. You can use the max degree of parallelism option to limit the number of processors to use in parallel plan execution. The default value of 0 uses all available processors. Set max degree of parallelism to 1 to suppress parallel plan generation. Set the value to a number greater than 1 (up to a maximum of 64) to restrict the maximum number of processors used by a single query execution. If a value greater than the number of available processors is specified, the actual number of available processors is used. If the computer has only one processor, the max degree of parallelism value is ignored, Overriding max degree of parallelism SQL Server will consider parallel execution plans tor queries, index data definition language (DDL) operations, and static and keyset-driven cursor population. For more information about parallel execution, see Degree of Parallelism.

You can override the max degree of parallelism value in queries by specifying the MAXDOP query hint in the query statement. For more information, see Query Hints (Transact-SQL).

Index operations that create or rebuild an index, or that drop a clustered index, can be resource intensive. You can override the max degree of parallelism value for index operations by specifying the MAXDOP index option in the index statement. The MAXDOP value is applied to the statement at execution time and is not stored in the index metadata. For more information, see Configuring Parallel Index Operations.

In addition to queries and index operations, this option also controls the parallelism of DBCC CHECKTABLE, DBCC CHECKDB, and DBCC CHECKFILEG ROU P. You can disable parallel execution plans for these statements by using trace flag 2528. For more information, see Trace Flags (Transact-SQL).

Note:
ll the affinity mask option is not set to the default, It may restrict the number of processors available to SQL Server on symmetric multiprocessing (SMP) system@

Question: 111

You are planning to upgrade a database application that uses merge replication. The table currently has a column type of UNIQUEIDENTIFIER and has a DEFAULT constrain that uses the NEWID() function. A new version of the application requires that the FILESTREAM datatype be added to a table in the database. The data type will be used to store binary files. Some of the files will be larger than 2 GB in size. While testing the upgrade, you discover that replication fails on the articles that contain the FILESTREAM data. You find out that the failure occurs when a file object is larger than 2 GB. You need to ensure that merge replication will continue to function after the upgrade. You also need to ensure

that replication occurs without errors and has the best performance. What should you do? (More than one answer choice may achieve the goal. Select the BEST answer.)

A. Drop and recreate the table that will use the FILESTREAM data type.
B. Change the DEFAULT constraint to use the NEWSEQUENTIALID() function.
C. Place the table that will contain the FILESTREAM data type on a separate filegroup.
D. Use the sp_changemergearticle stored procedure and set the @stream_blob_columns option to true for the table that will use the FILESTREAM data type.

Answer: D

Explanation:
http://msdn.microsoft.com/en-us/library/bb895334.aspx
Considerations for Merge Replication
If you use FILESTREAM columns in tables that are published for merge replication, note the following considerations:
-Both merge replication and FILESTREAM require a column of data type uniqueidentifier to identify each row in a table. Merge replication automatically adds a column if the table does not have one. Merge replication requires that the column have the ROWGUIDCOL property set and a default of NEWID() or NEWSEQUENTIALID(). In addition to these requirements, FILESTREAM requires that a UNIQUE constraint be defined for the column. These requirements have the following consequences:
- If you add a FILESTREAM column to a table that is already published for merge replication, make sure that the uniqueidentifier column has a UNIQUE constraint. If it does not have a UNIQUE constraint, add a named constraint to the table in the publication database. By default, merge replication will publish this schema change, and it will be applied to each subscription database. For more information about schema changes, see Making Schema Changes on Publication Databases.
If you add a UNIQUE constraint manually as described and you want to remove merge replication, you must first remove the UNIQUE constraint; otherwise, replication removal will fail.
- By default, merge replication uses NEWSEQUENTIALID() because it can provide better performance than NEWID(). If you add a uniqueidentifier column to a table that will be published for merge replication, specify NEWSEQUENTIALID() as the default.
Merge replication includes an optimization for replicating large object types. This optimization is controlled by the @stream_blob_columns parameter of sp_addmergearticle. If you set the schema option to replicate the FILESTREAM attribute, the @stream_blob_columns parameter value is set to true. This optimization can be overridden by using sp_changemergearticle. This stored procedure enables you to set @stream_blob_columns to false. If you add a FILESTREAM column to a table that is already published for merge replication, we recommend that you set the option to true by using sp_changemergearticle.
Enabling the schema option for FILESTREAM after an article is created can cause replication to fail if the data in a FILESTREAM column exceeds 2 GB and there is a conflict during replication. If you expect this situation to arise, it is recommended that you drop and re-create the table article with the appropriate
FILESTREAM schema option enabled at creation time.
Merge replication can synchronize FILESTREAM data over an HTTPS connection by using Web Synchronization. This data cannot exceed the 50 MB limit for Web Synchronization; otherwise, a run-time error is generated.

Question: 112

You administer a SQL Server 2008 infrastructure. You plan to deploy a new SQL Server 2008 multi-node failover cluster. The failover cluster uses a storage area network (SAN) that will use redundant array of independent disks (RAID) level 5. You need to format the logical unit numbers (LUNs) for optimal performance of the database data files. Which of the following is the best allocation unit size you should use?

A. 8-KB

B. 32-KB

C. 64-KB

D. 156-KB

Answer: C

Explanation:

Windows NT File System (NTFS) Allocation Unit

SCSI Drives: When you format the new drives in Disk Administrator, you should consider an allocation unit, or block size, that will provide optimal performance. Significant performance gains may be obtained by sizing this to a larger value in order to reduce disk I/Os; however, the default value is based on the size of the physical disk. The best practice for SQL Server is to choose 64 KB, because this reduces the likelihood of I/Os that span distinct NTFS allocations, which then might result in split I/Os. Keep in mind that although this information can be useful, the type of storage you are using (and in some cases also your backup software) will drive the format of your disks. If you are changing the block size on an existing system, be sure to run a baseline in your test environment and another after you have tested the changes.

Source: http://technet.microsoft.com/nl-nl/library/cc966510(en-us).aspx

Question: 113

You administer a SQL Server 2005 instance. The instance is configured to use the named pipes network communication protocol. You plan to upgrade the instance to SQL Server 2008. You need to ensure that the upgraded instance can continue to use the named pipes network communication protocol. You also need to ensure that the server uses the most secure authentication method available. Which authentication method should you use?

A. NTLM authentication

B. Kerberos authentication

C. SQL Server authentication

D. Mixed-mode authentication

Answer: B

Explanation:

Kerberos is also supported with Named pipes protocol:

http://msdn.microsoft.com/en-us/library/cc280744.aspx

Very good discussion about this:

http://social.msdn.microsoft.com/Forums/en-US/databasedesign/thread/1787d4ac-3f56-4702-922f90ecd8ea4384/

Question: 114

You administer a SQL Server 2008 instance. Your company security policy is designed to prevent changes to the server to the server configuration. You plan to use Policy-Based Management Framework to implement the security policy. You need to ensure that the policy is configured to meet the security requirement. What should you do?

A. Use a domain account for the SQLAgent service.

B. Use the Local Service account for the SQLAgent service.

C. Enable the nested triggers server configuration option.

D. Disable the nested triggers server configuration.

Answer: C

Explanation:
http://technet.microsoft.com/en-us/library/bb510667.aspx
"If the nested triggers server configuration option is disabled, On change: prevent will not work correctly. Policy-Based Management relies on DDL triggers to detect and roll back DDL operations that do not comply with policies that use this evaluation mode. Removing the Policy-Based Management DDL triggers or disabling nest triggers, will cause this evaluation mode to fail or perform unexpectedly."