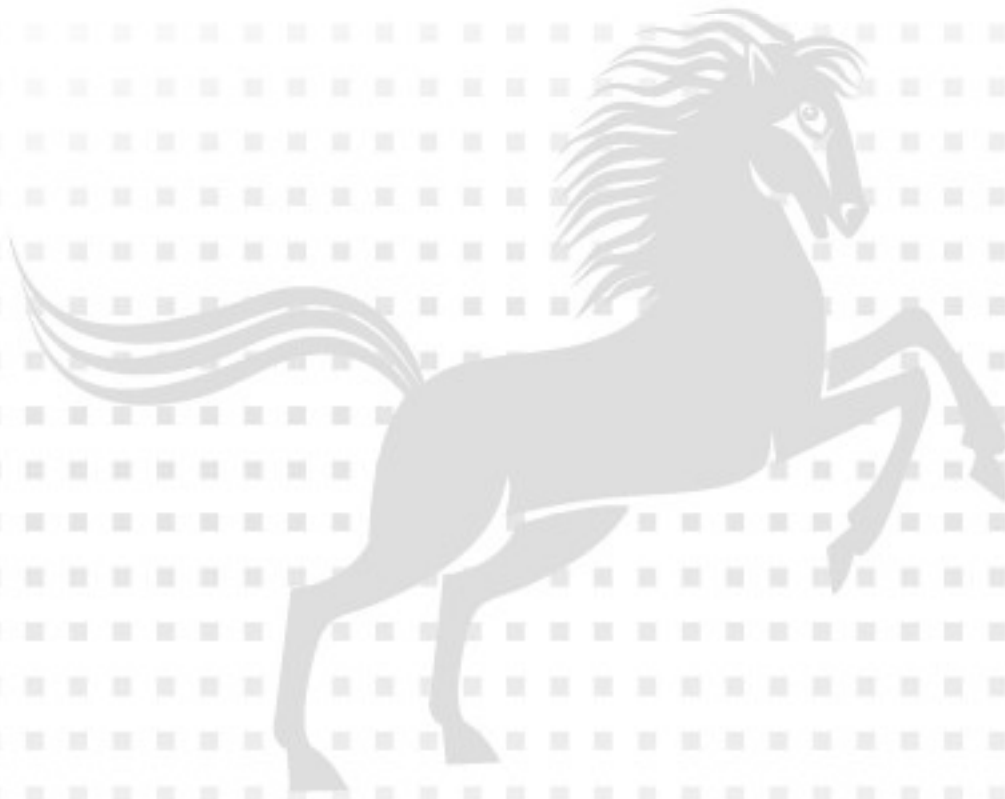


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Exam : **E20-817**

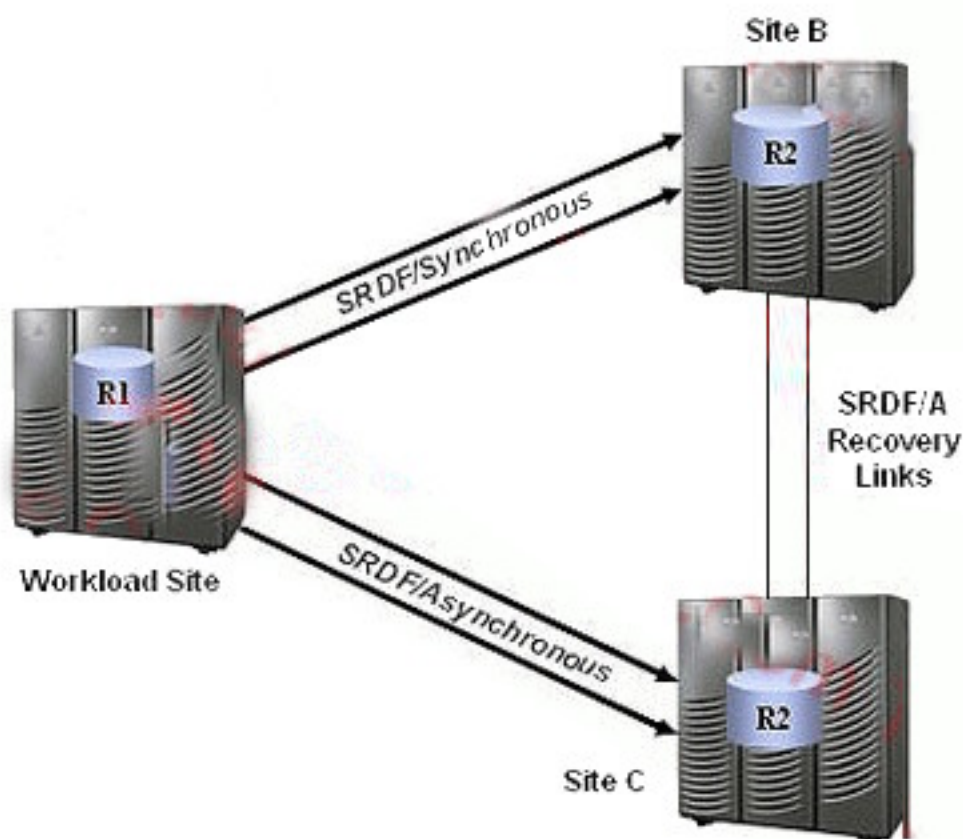
Title : Symmetrix Business
Continuity Expert Exam for
Storage Admins

Version : Demo

1. Click the Exhibit button.

During the design process of a Star implementation, a customer expresses the intention to switch production to one of the target sites as part of a disaster drill. After the production has been switched, the customer wishes to run Star protection at this site.

What should you advise?



A. It does not matter which site the customer switches production to, because Star protection cannot be enabled when the workload is running at a target site.

B. Servers and management hosts may be provided at either site, because Star protection can be enabled while the workload is running at either target site.

C. Servers and management hosts should be provided at site B, because Star protection can only be enabled if the workload is switched to the Synchronous target site.

D. Servers and management hosts should be provided at site C, because Star protection can only be enabled if the workload is switched to the Asynchronous target site.

Answer: C

2. A customer running SRDF/Star experienced a workload site failure. Production was switched from the workload site A to the synchronous target site B. Some time later, site A came back online. Before switching production back to site A, a symdev show command is executed to examine the R1 devices at site A.

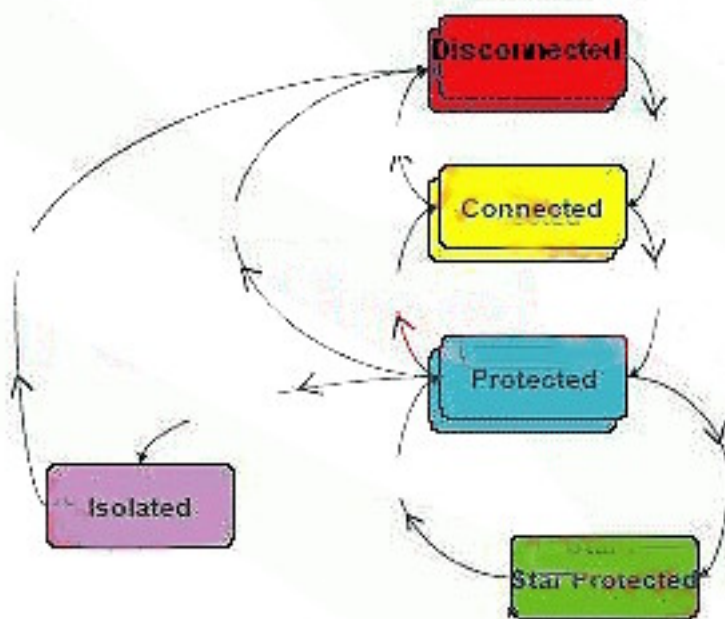
What is the RDF configuration state that describes the relationship of the RDF devices between A and B?

- A. Duplicate
- B. Half
- C. Normal
- D. Partitioned

Answer: A

3. Click on the Exhibit.

In an SRDF/Star implementation, the Connected state indicates which condition has occurred?



- A. Both links are transmitting data, but one or both target sites are not fully synchronized with the workload site
- B. The RDF relationship is not properly defined or there is no data flow between the sites.
- C. The RDF relationship is properly defined, but the target site in question is not synchronized with the workload site and there is no consistency protection for the remote data.
- D. The RDF relationship is properly defined, dependent write consistency of the data at the synchronous

target site is assured through RDF-ECA and dependent write consistency at the asynchronous target is assured through MSC.

Answer: A

4. A customer has a 5 (five) node Microsoft cluster (MSCS) that spans across 2 (two) sites over a SRDF/A link.

Site A, the primary site, contains 3 (three) nodes. Site B, the remote site, contains 2 (two) nodes. If the customer is using SRDF/CE with Majority Node Set (MNS), what happens to the nodes at Site A if communication is lost between the 2 (two) sites?

A.Nodes at Site A and Site B will go offline until communication resumes to Site B. The nodes at both sites need to be started manually, and the /ForceQuorum switch must be used.

B.Nodes at Site A will go offline until communication resumes to Site B. The nodes at Site A need to be started manually and the /ForceQuorum switch must be used.

C.Nodes at Site A will go offline until the nodes at Site A are manually started and the /ForceQuorum switch is used.

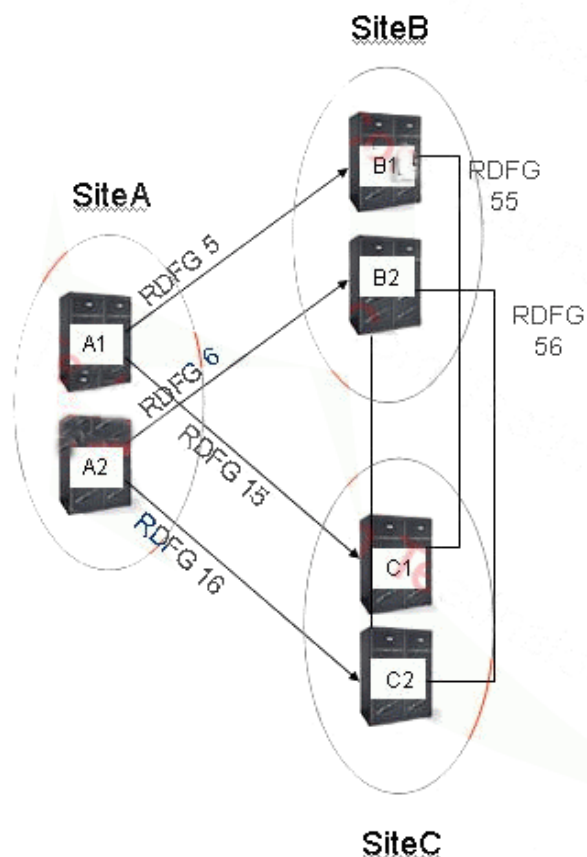
D.Nodes will remain online.

Answer: D

5. Click the Exhibit button.

Star Options File

```
SYMCLI_STAR_WORKLOAD_SITE_NAME=SiteA
SYMCLI_STAR_SYNC_TARGET_SITE_NAME=SiteB
SYMCLI_STAR_ASYNC_TARGET_SITE_NAME=SiteC
SYMCLI_STAR_ADAPTIVE_COPY_TRACKS=30000
SYMCLI_STAR_ACTION_TIMEOUT=1800
SYMCLI_STAR_TERM_SDDF=No
```



The diagram shows a planned Star configuration with two Symmetrix arrays at each site. The options file to be used for setting up Star is shown on the left.

RDF Groups 5 and 6 on arrays A1 and A2 connect to arrays B1 and B2.

RDF Groups 15 and 16 on arrays A1 and A2 connect to arrays C1 and C2.

RDF Groups 55 and 56 on arrays B1 and B2 connect to arrays C1 and C2.

Which RDF groups in the configuration should be assigned the name SiteB?

- A.5 and 15
- B.5 and 6
- C.55 and 56
- D.6 and 16

Answer: B

6. A company has a five-node MSCS cluster running SRDF/CE with three nodes at the primary site and two nodes at the secondary site. The sites are 10 km apart. Due to capacity requirement changes, additional storage is needed.

What must be done to the cluster after the storage configuration changes?

A.No action is required with MSCS after storage provisioning. All storage configuration updates are propagated automatically via the COM server to the cluster nodes.

B.SRDF/CE cluster requires use of the COM server that must be restarted after all configuration changes. Once a change is made to a node configuration, it will send out a message to all other cluster node members after the service restarts.

C.The clusters must be rebooted, and a complete rescan of the system bus is required. Any current patches should be applied at this time.

D.Update the SRDF/CE database by issuing a Symmetrix SRDF/CE Discover through the console or manually setting symcli_db_file to srdcfesymapi.db followed by the symcfg discover command.

Answer: D

7. Your client has 10 large Microsoft Exchange servers. Currently, the backups to tape are not completing in the backup window. The database cannot be stopped, and the client has no capacity to increase the number of tape drives available.

How will you help solve the clients problem and provide the shortest possible backup window?

A.Add local BCVs to the Exchange Server disk and use TF/EIM to perform parallel backups.

B.Replicate the data to a disaster recovery site and use TF/SIM to perform tape backups.

C.Use TF/EIM to perform parallel backups directly to tape.

D.Use the EMC EDM product to call the Microsoft Exchange Online Backup API to back up the data to tape.

Answer: A

8. Your customer requests an immediate point-in-time copy of their production Oracle database but cannot have the application brought down.

Which Enginuity feature allows the creation of restartable copies without quiescing the database?

A.Double Checksum

B.Enginuity Consistency Assist

C.Multi-Session Consistency

D.Symmetrix Differential Data Facility

Answer: B

9. An application has a BC requirement of two independent full concurrent copies of production each night. One copy is mounted up for backup and recovery (BURA); the other is mounted up on a target server for data warehouse operations.

The current STD device configuration is a four-member mirrored meta. The current BCV device configuration is a four-member unprotected meta. The Symmetrix has global hot sparing enabled.

Which local EMC replication product(s) will enable the same number of replications as well as an additional SRDF device?

- A.Symmetrix Optimizer
- B.TimeFinder/Clone
- C.TimeFinder/Snap
- D.TimeFinder/SRDF

Answer: B

10. You are designing an SRDF service level plan for a customer. Their needs assessment shows the following:

Performance: Remote replication with potential impact, depending on distance and network latency for synchronous leg

Availability: Zero data exposure in the event of a source failure; no data loss on a single point of failure

Functionality: Continuous real-time mirroring on synchronous leg, Unlimited distances with no additional host impact for asynchronous leg, and the ability to synchronize between two remote sites

Economics: Requires sufficient bandwidth to support peak workload requirements

Which SRDF mode of operation should be chosen?

- A.SRDF/A
- B.SRDF/DM
- C.SRDF/S
- D.SRDF/Star

Answer: D

11. A company migrates their Windows 2003 Exchange servers. After this has been completed the systems administrator notes that performance has degraded on one of the Exchange servers. Analysis indicated that the system is performing two reads or writes for transactions 15% of the time.

What is the probable cause?

- A. Block size is too small.
- B. Read cache is turned off.
- C. Sectors are misaligned.
- D. Stripe size is too small.

Answer: C

12. A company had their SRDF links go down while the R1BCV was in the process of synchronizing with the STDR2. A few minutes later the TimeFinder Integration Module for Exchange found inconsistencies in the information store of the local STDR1 device. The SRDF link comes back up.

What must the storage administrator do next?

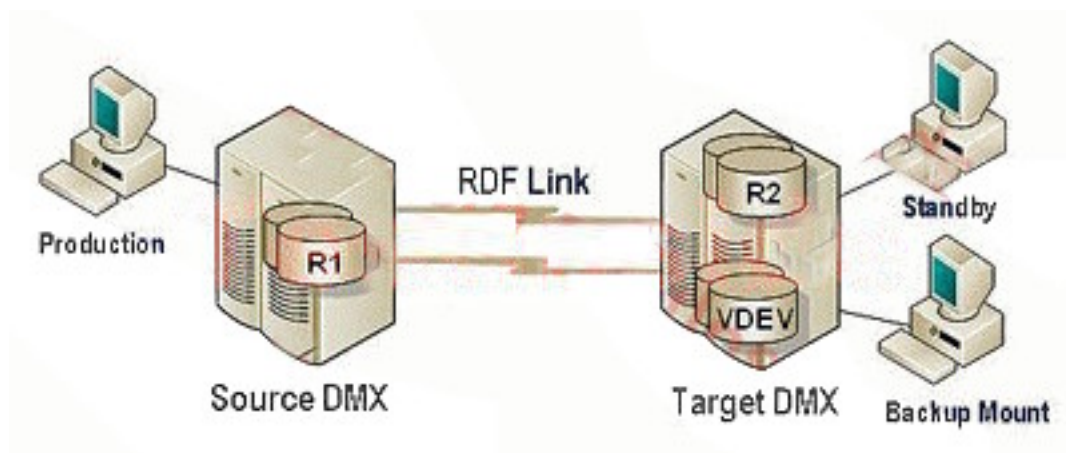
- A. Restore the STD from the STDR2.
- B. Establish the R1BCV with the STDR2.
- C. Keep the data from becoming unusable at the remote location.
- D. Split the BRBCV from the STDR2.

Answer: A

13. Click the Exhibit button.

A customer has been using TF/SIM tsimsnap2 from the production server to back up the SQL Server database in the remote snap environment. There was a request to add more devices in the environment for a new database. The storage administrator added R1, R2, and the new VDEVs. A new DBA ran the tsimsnap2 command from the production server. The tsimsnap2 backup failed.

What needs to be done to complete the backup?



- A.Synchronize the R1 and R2 devices, create the snap sessions, and rerun tsimsnap2.
- B.Synchronize the R1 and R2 devices, and rerun tsimsnap2.
- C.Activate the snap sessions, and rerun tsimsnap2.
- D.Shut down the newly added database on the production server, and rerun tsimsnap2.

Answer: A

14. A customer is deploying TF/SIM to create remote replicas of Symmetrix devices that hold their production SQL Server 2005 database. The synchronous SRDF R1-R2 pairs that contain the database files are synchronized.

The customer created RBCVs on the remote Symmetrix to be used as the replicas. These replicas are in turn mounted on a host connected to the remote Symmetrix for development purposes.

Which state do the RBCVs need to be in for tsimsnap backup with the -mountonly option to run successfully on the remote host?

- A.Established and not mounted on the backup host
- B.It doesn't matter, tsimsnap will do what is needed to get the BCVs to the desired state
- C.Split and mounted on the backup host
- D.Split and not mounted on the backup host

Answer: C

15. A customer wants to create a disaster recovery solution for SQL 2005 on a DMX-3 2500 Symmetrix with the best possible recovery point objective (RPO).

What needs to be implemented to provide both restartable and recoverable replicas without taking the

SQL Server offline?

- A. Local BCV/R1s, split BCVs with Replication Manager using VDI and use SRDF Adaptive Copy
- B. SRDF/A and use BCVS with consistent split
- C. SRDF/S and split BCVs using consistent split
- D. SRDF/S, split BCVs with Replication Manager using VDI

Answer: D

16. A customer is running Oracle 10g. The DBA is planning on adding a device to the ASM data disk group. After the device has been added to the ASM disk group, what is needed to create a viable point-in-time TimeFinder copy?

- A. Add a device to the TimeFinder device group to match the ASM disk group.
- B. Add an additional device to the RDF target.
- C. Split the ASM disk group, then start the ASM instance.
- D. The ASM disk group will split automatically enabling synchronization of the disk group with the TimeFinder device group.

Answer: A

17. BCVs are configured to create the restartable copy of the Oracle database. The last BCV split was done at 10 A.M. Database transactions were performed on the production database. At 11:15 A.M. the DBA realized that transactions were committed incorrectly.

What is the quickest method to restore the database back to the last restartable copy?

- A. Perform an incremental restore of the BCVs to the STD devices and start the primary database.
- B. Shut down the primary database, perform a full restore of BCVs to the standard devices, and start the primary database.
- C. Shut down the primary database, perform an incremental restore of BCVs to the standard devices, and start the primary database.
- D. Shut down the primary database, perform an incremental restore of BCVs to the standard devices, restore the backup control and archive log files, and recover and start the primary database.

Answer: C

18. Your 7x24 customer runs SRDF/A and has several Oracle databases. They want to perform backups at the remote site creating backups that provide a recoverable database.

Arrange the events in order using best practices to accomplish the backup.

- [1] Establish BCVs to the R2 devices.
- [2] Place the Oracle tablespace(s) in hot backup mode.
- [3] Use the symrdf checkpoint command.
- [4] Split the BCVs from the R2 devices.
- [5] Take the tablespace(s) out of hot backup mode.
- [6] Force the database to archive the current online redo log.

A.2, 5, 3, 1, 6, 4

B.2, 1, 3, 5, 6, 4

C.3, 2, 1, 4, 5, 6

D.3, 1, 2, 4, 5, 6

Answer: A

19. A customer wants to deploy a Replication Manager (RM) environment to control SRDF data replication of Oracle 10g databases on four (4) SAN-attached Solaris 10 servers.

What is the viable option for deploying RM components?

A.RM Client on one of the Solaris database servers and RM Servers and Consoles on all four Solaris database servers

B.RM Server on a LAN-attached Windows server, RM Clients on all four Solaris database servers, and RM Consoles on RM users Windows XP desktops

C.RM Server on at least two SAN-attached Windows servers, replication databases and RM Clients on the four Solaris database servers, and RM Consoles on RM users Windows XP desktops

D.RM Server, Console, and Client on a Windows server and DBMS/FS Agents on the four Solaris database servers

Answer: B

20. Within an Oracle environment, what does the acronym OFA represent?

A.Open Fixed Area

- B.Open Flexible Area
- C.Oracle Flexible Architecture
- D.Oracle Functional Architecture

Answer: A

21. When replicating an Oracle database environment, which three (3) Oracle file types are required to ensure the database will restart successfully on the target side?

- A.Control, Data, and Log files.
- B.Control, Data, and Table files
- C.Data, Archive, Tablespace file
- D.Data, Tablespace, and Views files.

Answer: B

22. Which statement best describes a RAID 1 data protection environment?

- A.Data block are replicated to a mirror device
- B.Data is mirrored to three or more additional devices
- C.Data is striped across multiple storage devices
- D.Uses a parity block to reconstruct a striped data set.

Answer: D

23. What is a primary benefit to implementing TimeFinder/Clone vs. TimeFinder/Mirror against an Oracle database?

- A.Clones are always fully synchronized.
- B.Clone copy is ideal for heavy write intensive database environments.
- C.Clone copy replication takes slightly less time than a full BCV copy.
- D.Generates a point in time database copy that is available immediately.

Answer: C

24. Which EMC Solution for SQL Server requires that an ODBC data source be created before running?

- A.Enginuity Consistency Assist

- B.PowerPath Consistent Split
- C.Solutions Enabler Database SRM
- D.TimeFinder Integration Module for SQL Server

Answer: B

25. Which EMC Solution for SQL Server 2005 provides a GUI interface to create replicas?

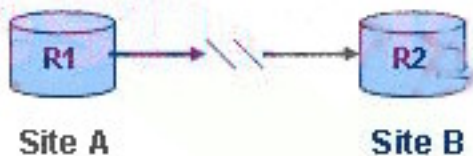
- A.Database SRM
- B.ECA/PowerPath
- C.Replication Manager
- D.TSIM

Answer: A

26. Click the Exhibit button

Which state will the devices be in at the point of a half swap for the device at site B?

BEFORE HALF SWAP
Normal Configuration – Suspended State



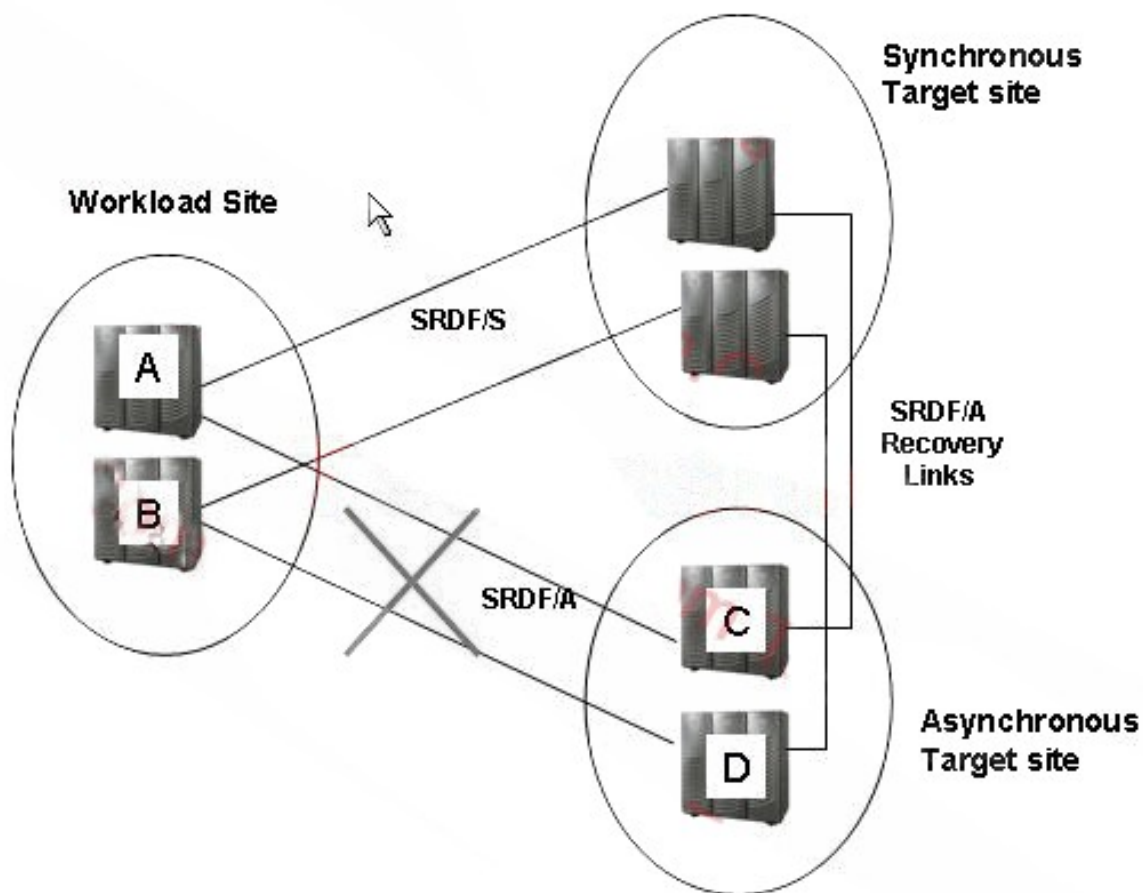
- A.R1 at site A, R1 at site B
- B.R1 at site A, standard device at site B
- C.R2 at site A, R2 at site B
- D.Standard device at site A, R2 at site B

Answer: A

27. Click the Exhibit button

The Star configuration experienced a link failure between the workload and asynchronous target sites. A query of the RDF groups revealed that the RDF group in the DMX labeled C needed MSC cleanup but the RDF group in the DMX labeled D did not.

What is the cause?



- A. The capture delta set in the source DMX A was incomplete at the time of the link failure.
- B. The capture delta set in the source DMX B was incomplete at the time of the link failure.
- C. The Receive delta set on DMX C was complete but the receive delta set on DMX D was incomplete at the time of the link failure.
- D. The Receive delta set on DMX D was complete but the receive delta set on DMX C was incomplete at the time of the link failure.

Answer: C

28. Click the Exhibit button

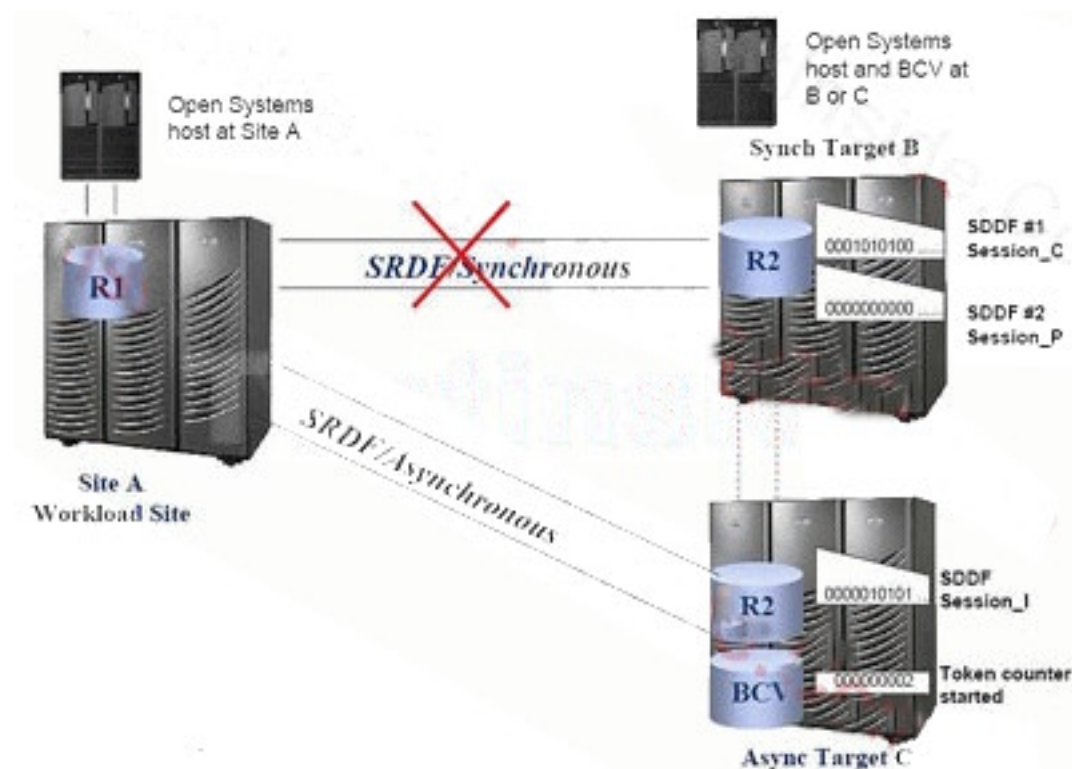
The SRDF/Synchronous link fails in the Star configuration.

Order the steps to handle this failure.

1. SDDF Session at C activated
2. Token counter started at site C

3. MSC freezes SRDF/A cycle switch

4. MSC releases SRDF/A cycle switch



A.4 3 2 1

B.3 1 4 2

C.1 2 3 4

D.2 3 1 4

Answer: B

29. A customer implemented multiple production applications that are running on multiple SRDF/A groups.

An RDF daemon is maintaining Multi-Session Consistency (MSC) in this SRDF/A environment. The RDF daemon detects the trip event after the link failure and suspends the other R1-R2 SRDF/A link. The top Receive delta set is incomplete; the bottom delta set is complete.

What will the top target Symmetrix do with the Incomplete Receive delta set?

A.Apply

B.Clean

C.Discard

D.Resend

Answer: C

30. A customer has a fully operational SRDF/Star environment that had been running in a Star Protected state. A query of the SRDF/Star configuration shows the following. Assuming 2nd_Target_Site is the synchronous site, which steps should be performed to restore Star protection?

System State:

```
{  
1st_Target_Site : Protected  
2nd_Target_Site : PathFail  
STAR : Tripped  
}
```

A.From 2nd_Target_Site, reset the synchronous site, connect the synchronous site, protect the synchronous site and enable Star protection.

B.From the workload site, disconnect the asynchronous site, connect the synchronous site, protect the synchronous site, connect the asynchronous site, protect the asynchronous site, and enable Star protection.

C.From the workload site, reset the synchronous site, connect the synchronous site, protect the synchronous site and enable Star protection.

D.From the workload site, reset the synchronous site, reset the asynchronous site, connect the synchronous site, protect the synchronous site and enable Star protection.

Answer: C