

# **EMC**

# Exam E20-326

# **Symmetrix Solutions Design Exam**

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[ Total Questions: 235 ]



#### **Topic 1, Volume A**

# Question No : 1 - (Topic 1)

You are designing a new disaster recovery solution with VMAX arrays. During the initial project kick-off meeting, the customer reports their environment can tolerate five minutes or less of data recovery following a disaster but have not yet determined the maximum allowable downtime for their applications.

The customer asks which remote replication methods you recommend for their environment.

What do you recommend?

- **A.** Defer making a recommendation until the application RTO is known.
- **B.** Recommend the disaster recovery solution as described in the Sales Order.
- **C.** Defer making a recommendation until the application RPO in known.
- **D.** Recommend the disaster recovery solution described in the Statement of Work.

**Answer: A** 

#### Question No : 2 - (Topic 1)

You are designing a new disaster recovery solution with VMAX arrays. During the initial project kick-off meeting, the customer reports the maximum allowable downtime for their applications is ninety minutes, but they have not yet determined how much data recovery following a disaster their environment can tolerate.

The customer asks which remote replication method you recommend for their environment.

What do you recommend?

- **A.** Defer making a recommendation until the application RPO in known.
- **B.** Recommend the disaster recovery solution as described in the Sales Order.
- **C.** Defer making a recommendation until the application RTO is known.
- **D.** Recommend the disaster recovery solution described in the Statement of Work.

**Answer: A** 



# Question No: 3 - (Topic 1)

Prior to starting an implementation, which tool should be used to automate the data collection on a Windows host?

- A. EMCGrab
- **B.** EMCReports
- C. E-Lab Advisor
- D. Change Tracker

**Answer: B** 

# Question No: 4 - (Topic 1)

Prior to starting an implementation, which tool should be used to automate the data collection on a UNIX host?

- A. EMCGrab
- **B.** EMCReports
- C. E-Lab Advisor
- D. Change Tracker

**Answer: A** 

## Question No : 5 - (Topic 1)

A customer plans to migrate existing AIX and Windows hosts as well as Mainframe z/OS LPARs to a new VMAX array. Performance data is needed to design the VMAX volumes configuration layout. Which host performance data do you request from the customer?

- A. STP, SAR, WRKDSKSTS
- B. SAR, Perfmon, WRKDSKSTS
- C. IOSTAT, Perfmon, SMF/CMF
- D. IOSTAT, SAR, SMF/CMF

**Answer: C** 

Question No : 6 - (Topic 1)



A customer will migrate existing AIX, HP-UX and Windows hosts from a DMX-3 to a new VMAX array. You need performance data from the existing array to design to the new VMAX volumes configuration layout. Which tools can be used to collect Symmetrix array performance data?

- A. ControlCenter Performance Manager and STP Collector
- B. EMC Workload Generator and STP Navigator
- C. Storage Configuration Advisor and STP Collector
- D. ControlCenter Performance Manager and SymmMerge

**Answer: A** 

#### Question No: 7 - (Topic 1)

A customer plans to migrate existing AIX, HP-UX and IBM iSeries hosts to a new VMAX array. Performance data is needed to design the VMAX volumes configuration layout.

What host performance data do you request from the customer?

- A. IOSTAT, SAR, WRKDSKSTS
- B. STP, Perfmon, SMF/CMF
- C. IOSTAT, STP, WRKDSKSTS
- D. Perfmon, SAR, SMF/CMF

**Answer: A** 

#### Question No:8 - (Topic 1)

A major telecommunications operator is planning to consolidate multiple mid-tier storage arrays to a single Symmetrix VMAX solution. Their existing environment includes IBM AIX servers, HP-UX Servers and Windows 2003 Servers.

When documenting the existing Server environment, which command can be used on the AIX Servers, to list the software modules installed?

- A. pkginfo
- B. Islpp
- C. swlist
- **D.** cfgmgr



**Answer: B** 

#### Question No: 9 - (Topic 1)

A major telecommunications operator is planning to consolidate multiple mid-tier storage arrays to a single Symmetrix VMAX solution. Their existing environment includes IBM AIX servers, HP-UX Servers and Windows 2003 Servers.

When documenting the existing Server environment, which command can be used on the HP-UX Servers, to list the software modules installed?

- A. swlist
- B. Islpp
- C. pkginfo
- D. pkgchk

**Answer: A** 

# Question No: 10 - (Topic 1)

A customer is interested in utilizing TimeFinder/Snap to generate a backup copy of an application every six hours. In order for you to calculate the SAVE Pool requirements you will need to run Change Tracker. To which value should you set the reset interval length for DeltaMark?

- **A.** 21600
- **B.** 10800
- **C.** 86400
- **D.** 32400

**Answer: A** 

#### Question No : 11 - (Topic 1)

A customer is interested in utilizing SRDF/AR to generate a remote copy of an application with an RPO of six hours. In order for you to calculate the bandwidth requirements you will need to run Change Tracker. To which should you set the reset interval length for



#### DeltaMark?

- **A.** 21600
- **B.** 86400
- **C.** 32400
- **D.** 10800

**Answer: D** 

# Question No: 12 - (Topic 1)

A TimeFinder/Snap of production data must be recreated in a four hour cycle throughout the day. Which change tracker report will provide the best data for modeling a solution for the twenty-four hour period?

- A. Delta report reset every four hours
- B. SUM report over four hours
- C. Delta report reset every twenty four hours
- **D.** SUM report over twenty four hours

**Answer: A** 

#### Question No: 13 - (Topic 1)

A TimeFinder/Snap of production data must be recreated in a two hour cycle throughout the day. Which change tracker report will provide the best data for modeling a solution for the twenty-four hour period?

- A. Delta report reset every two hours
- B. SUM report over two hours
- **C.** Delta report reset every twenty four hours
- **D.** SUM report over twenty four hours

**Answer: A** 

Question No: 14 - (Topic 1)



You are designing a new VMAX array. The customer requires high performance for their random write-intensive application. Which RAID protection should you recommend?

- A. RAID-5
- B. RAID-6
- C. RAID-1
- D. RAID-S

**Answer: C** 

# Question No: 15 - (Topic 1)

You are designing a new VMAX array. The customer's primary concern is maximizing capacity available to the host. What RAID protection should you recommend?

- **A.** RAID-5 (7+1)
- **B.** RAID-6 (6+2)
- **C.** RAID-1/0
- **D.** RAID-5 (3+1)

**Answer: A** 

#### Question No: 16 - (Topic 1)

What is a best practice when configuring a Symmetrix VMAX for optimal performance and cost?

- **A.** Different drive types are mixed and spread throughout the array.
- **B.** Dedicated engines have appropriate drive types to meet application needs.
- **C.** A dedicated array with Enterprise Flash Drives (EFD).
- **D.** A dedicated array based upon application requirement.

**Answer: A** 

#### Question No: 17 - (Topic 1)

You are proposing a new VMAX array with FAST VP. The customer reports their



application needs a small amount of EFD capacity and asks whether 200 GB EFDs or 400 GB EFDs would provide better overall performance. Which drive size do you recommend and why?

- A. 400 GB EFDs. They support higher IOPS than 200 GB EFDs.
- B. 200 GB EFDs. They support higher I/O density than 400 GB EFDs.
- C. 400 GB EFDs. They support higher I/O density than 200 GB EFDs.
- D. 200 GB EFDs. They support higher IOPS than 400 GB EFDs.

**Answer: B** 

# Question No: 18 - (Topic 1)

A Symmetrix VMAX has been configured with Dynamic Cache Partitions.

What is a criterion that must be met for a cache slot to be eligible for donation?

- A. The fall through time must be greater than the donation age
- **B.** The fall through time must be less than the donation age
- **C.** The cache slot must belong to a static partition
- D. There must be available cache slots in the default partition

**Answer: A** 

## Question No: 19 - (Topic 1)

A Symmetrix VMAX hosts four applications. Each application is assigned a named dynamic cache partition. Two of the partitions are static and two are flexible. The write pending limit for each partition is set to 60%.

What will happen if an application running in a flexible partition reaches the write pending limit set for that partition?

- A. Host write activity to that partition will be throttled
- **B.** Cache will be borrowed from the other flexible partition
- **C.** Cache will be borrowed from the default partition
- **D.** The write pending limit of the partition will be raised until it reaches 80%

**Answer: A** 



# Question No: 20 - (Topic 1)

A Symmetrix VMAX hosts four applications. Each application is assigned a named dynamic cache partition. Two of the partitions are static and two are flexible. The write pending limit for each partition is set to 60%.

What will happen if an application running in a static partition reaches the write pending limit set for that partition?

- A. Cache will be borrowed from a flexible partition
- **B.** Cache will be borrowed from the default partition
- C. Host write activity to that partition will be throttled
- **D.** The write pending limit of the partition will be raised until it reaches 80%

**Answer: C** 

# Question No : 21 - (Topic 1)

A customer is using virtual provisioning on a Symmetrix VMAX which is being shared for Production and non-production workloads.

What can be used to separate the different workloads?

- A. Dynamic Cache Partitioning
- B. Symmetrix Priority Controls
- C. Write Pending Limit
- D. FAST VP

**Answer: A** 

## Question No : 22 - (Topic 1)

You are designing a new VMAX implementation. All applications will share physical drives and participate in SRDF/S replication.

The customer has two high I/O applications used for OLTP and a several low I/O



applications used for testing. The customer wants to ensure the high I/O applications take precedence over the low I/O applications on the VMAX array. What do you recommend?

- A. Implement Symmetrix Priority Controls.
- B. Configure striped metavolumes.
- C. Implement SRDF Consistency Groups.
- **D.** Configure concatenated metavolumes.

**Answer: A** 

# Question No : 23 - (Topic 1)

Which condition results in effective prioritization by Symmetrix Priority Controls (SPC)?

- **A.** Application classes are isolated on different disks/tiers.
- **B.** Different application classes share the same physical disks.
- **C.** Applications share the same physical disks and have different IO profiles.
- **D.** Applications share the same physical disks and are active at different times,

**Answer: B** 

#### Question No : 24 - (Topic 1)

A storage administrator receives a warning message that one of the thin pools in the Symmetrix is low on storage space. The pool contains a large number of thin devices that have been fully preallocated but have small amounts of used space. What is the least disruptive and most cost effective way to make more thin pool space available?

- **A.** Run zero space reclamation on the thin devices
- **B.** Add more data devices to the thin pool
- **C.** Unbind the underutilized thin devices from the pool
- **D.** Rebalance the pool

**Answer: A** 

Question No: 25 - (Topic 1)