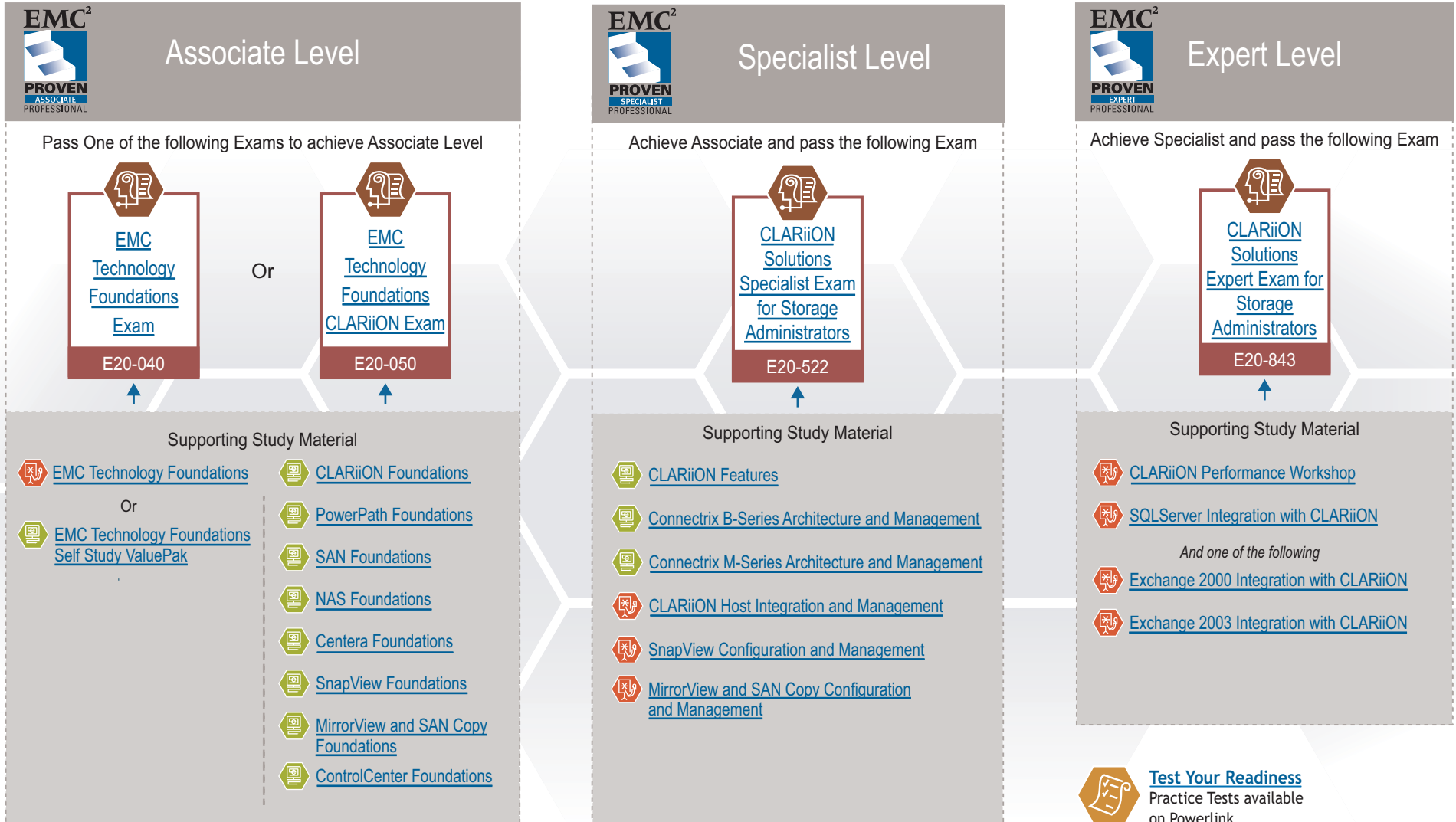


EMC Proven Professional - Storage Administrator

CLARiiON Solutions Specialty



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EMC Proven Professional

EMC Technology Foundations Exam



Exam Number: E20-040

Duration: 90 minutes (60-70 questions)

Available Languages: English

Exam Description

EMC Technology Foundations Exam is a qualifying exam for all EMC Proven Professional Tracks.

This exam requires that candidates be able to describe the architecture, theory of operations, features and technical value of EMC's offering; including Symmetrix and CLARiiON storage platform hardware and software; SAN, NAS and CAS hardware and software; and open storage management and business continuity software.

Exam Topics

Specific topics likely to be found on the exam include:

Symmetrix Architecture

- Describe the basic architecture of a Symmetrix Integrated Cached Disk Array (ICDA)
- Explain how Symmetrix functionally handles I/o requests from the host environment
- Illustrate the relationship between Symmetrix physical disk drives and Symmetrix logical volumes
- Describe the Media Protection options available on the Symmetrix
- Using a Diagram, explain high availability features of Symmetrix and their impact
- Describe the Front-End, Back-End, Cache, and Physical Drive configurations of various Symmetrix models

Symmetrix Host Connectivity

- Describe the difference between file level and block level access
- Describe how Symmetrix logical volumes are presented to a host
- Describe how a host views a Symmetrix logical volume

CLARiiON Architecture

- Describe the basic architecture of a CLARiiON disk array
- Using a diagram, illustrate the relationship between CLARiiON physical disk drives and LUNs
- Illustrate how CLARiiON functionally handles I/O requests from the host environment
- Illustrate how CLARiiON high availability features effect data availability

PowerPath and ControlCenter

- Explain how PowerPath achieves transparent recovery
- Explain what load balancing is
- Explain the architecture of EMC ControlCenter
- Discuss the tasks that EMC ControlCenter can do
- Describe the benefits of using EMC ControlCenter

SAN [Storage Area Network]

- Define a storage area network
- Describe the features and benefits of a SAN
- Identify SAN configuration and switch management issues
- Discuss the benefits of the Connectrix family of switches and directors
- Compare and contrast various fabric management software
- Describe Zoning, LUN Masking concepts & issues

NAS [Network Attached Storage]

- Describe Network Attached Storage and its benefits
- Identify NAS configuration considerations
- Describe Celerra NAS products
- Identify Celerra management software

Centera/CAS [Content-Addressed Storage]

- Describe the concepts of Content Addressed Storage (CAS)
- Identify the components and the function of each that make up a Centera Solution
- Create/explain a block diagram that describes the information flow of a Centera Solution

Symmetrix Local Replication (TimeFinder) and Remote Replication (SRDF)

- Describe the functional concepts of local replication
- Describe the benefits of local replication
- Identify the differences of the various EMC Symmetrix local replication solutions
- Describe the functional concepts of remote replication
- Identify the differences of the various EMC Symmetrix remote replication solutions

CLARiiON Local Replication (SnapView) and Remote Replication (MirrorView and SAN Copy)

- Describe the functional concepts of local replication on the CLARiiON Storage Platform
- Describe the benefits of local replication on the CLARiiON Storage Platform
- Identify the differences of the various EMC CLARiiON Local Replication Solutions
- Describe the functional concepts of remote replication on the CLARiiON Storage Platform
- Describe the benefits of remote replication on the CLARiiON Storage Platform
- Identify the differences of the various EMC CLARiiON remote replication solutions

Recommended Training

The **EMC Technology Foundations** curriculum is the recommended training for this exam.

EMC Proven Professional

EMC Technology Foundations - CLARiiON Exam



Exam Number: E20-050

Duration: 90 minutes (60-70 questions)

Available Languages: English

Exam Description

EMC Technology Foundations - CLARiiON is a qualifying exam for the Technology Architect (EMCPTA), Implementation Engineer (EMCPIE) and Storage Administrator (EMCPSA) – CLARiiON Solutions.

The EMC Technology Foundations - CLARiiON Exam (E20-050) will ensure that candidates can describe the architecture, theory of operations, features and technical value of EMC's offering; including the CLARiiON storage platform hardware and software; SAN, NAS and CAS hardware and software; and open storage management and business continuity software.

Exam Topics

The following information provides guidelines for topics likely to be present on this exam:

CLARiiON Storage Platform:

- Draw & describe the basic architecture of a CLARiiON disk array
- Using a diagram, illustrate the relationship between CLARiiON physical disk drives and LUNs
- Illustrate how CLARiiON functionally handles I/O requests from the host environment
- Illustrate CLARiiON high availability features and how these may impact data availability

Networked Storage:

- Explain how PowerPath performs transparent channel fail over
- Describe the load balancing capabilities of PowerPath
- Describe the concepts of Content Addressed Storage (CAS)
- List the components and the functions that make up a Centera solution
- Create a block diagram that describes the information flow of a Centera solution
- Define a Storage Area Network (SAN)
- List the features and benefits of a SAN
- List SAN configuration and switch management issues
- Discuss the benefits of the Connectrix family of switches and directors
- Compare and contrast the various fabric management software
- Identify Connectrix opportunities within a data center environment
- Describe zoning and LUN masking concepts & issues
- Describe Network Attached Storage (NAS) and its benefit
- List NAS configuration considerations
- Describe Celerra NAS products
- List Celerra management software

Business Continuity and Storage Management:

- Describe the functional concepts of local replication
- Describe the benefits of local replication
- Describe the functional concepts of remote replication
- Describe the functional concepts of local replication on the CLARiiON storage platform
- Describe the benefits of local replication on the CLARiiON storage platform
- Identify the differences of the various EMC CLARiiON local replication solutions
- Describe the functional concepts of remote replication on the CLARiiON storage platform
- Describe the benefits of remote replication on the CLARiiON storage platform
- Identify the differences of the various EMC CLARiiON remote replication solutions
- Explain the architecture of EMC ControlCenter
- Discuss the storage management tasks that can be accomplished with EMC ControlCenter
- List benefits of using EMC ControlCenter

Recommended Training

The **EMC Technology Foundations – CLARiiON** curriculum is the recommended training for this exam.

EMC Proven Professional

CLARiiON Solutions Specialist Exam for Storage Administrators



Exam Number: E20-522

Duration: 90 minutes (60-70 questions)

Available Languages: English

(Available – April 30, 2004)

Exam Description

The CLARiiON Solutions Specialist Exam is a qualifying exam for the Storage Administrator (EMCPSA) – CLARiiON Solutions.

The CLARiiON Solutions Specialist Exam (E20-522) will ensure that candidates can configure, manage and administer heterogeneous open systems CLARiiON SAN environments.

Exam Topics

The following information provides guidelines for topics likely to be present on this exam:

CLARiiON Essentials

- Data Integrity
- Data Availability
- Introduction to CLARiiON Performance
- CLARiiON Storage Objects
- Access Logix
- PowerPath
- Windows Connectivity
- Unix Connectivity
- Fibre Channel switch architecture and management

CLARiiON Management

- Create and manage storage objects, systems and fault isolation
- Fundamentals of Navisphere Manager
- Fundamentals of Navisphere CLI
- Java CLI fundamentals
- RAID Groups
- Cache Management
- GUI indicators
- Navisphere 6.x Security
- CLARiiON Events
- SnapView Snapshots
- SnapView Clones
- MirrorView
- SAN Copy

Recommended Training

The **EMCPTA or EMCPSA CLARiiON Solutions – Specialist** curriculum is the recommended training for this exam.

EMC Proven Professional

CLARiiON Solutions Expert Exam for Storage Administrators



Exam Number: E20-843

Duration: 90 minutes (60-70 questions)

Available Languages: English

(Available – Dec 15, 2004)

Exam Description

The CLARiiON Solutions Expert Exam for Storage Administrators is a qualifying exam for Storage Administrator (EMCPSA) – CLARiiON Solutions.

The CLARiiON Solutions Expert Exam for Storage Administrators (E20-843) will ensure that candidates can analyze and tune CLARiiON performance and integrate Microsoft Exchange and SQL Server applications for point-in-time data recovery; in heterogeneous, Open Systems SAN environments.

Exam Topics

The following information provides guidelines for topics likely to be present on this exam:

CLARiiON Performance

- Navisphere Analyzer
- Layered Applications

Database Integration

- SnapView Integration Modules
- Exchange 2000
- Exchange 2003
- SQL Server

Recommended Training

The **EMCPSA CLARiiON Solutions – Expert** curriculum is the recommended training for this exam.