Exam Audience

The Supporting the MSA1500 and SATA JBODs exam is for field and customer engineers, call center personnel, field personnel, and channel partners who provide installation and/or operational support assistance for the MSA1500 and SATA JBODs.

Exam Specifications

- Number of items: 55
- Passing Criteria: 63%
- Time allocated: 1 hour and 15 minutes

Exam Preparation

- Prerequisite Training
  - HP StorageWorks MSA1500cs Service and Support ILT
- Prerequisite Knowledge
  - Fibre Channel Switch and Fabric Fundamentals
  - Fibre Channel Switch Technology Training
  - Smart Array Controller Technology
  - Working knowledge or understanding of the MSA1000
- Key Topics
  1.0 Storage technologies and their implications
    - RAID levels and their implications
    - ATA, SATA and SCSI and their uses
    - LUN security, business continuity, and NAS technologies
  2.0 HP Product and Solution Set
    - HP’s Modular Storage Array product family: MSA20, MSA30, MSA1500cs, SATA and SCSI disk drives, supported switches, hubs, and connectors
3.0 Solution Support and Troubleshooting

- Knowledge of MSA1500, MSA20, and MSA30 hardware components
  - Hot-pluggable components
  - Logical drive failure assessments
  - Determining active firmware versions
  - Power-up/down sequence
  - LCD messages
  - Slot diagram labels
  - SCSI I/O module connector usage
- Verification of MSA1500cs solutions according to specified rules
- Troubleshooting the MSA1500cs and subsystems
  - Verify valid backup
  - Controller indicator interpretation
  - Use and functions of OCP buttons and display
  - MSA20 front and rear LEDs
  - MSA20 ID circuit board
  - Verify correct SCSI cable connections
  - Verify correct SATA and SCSI storage enclosures
  - Verify correct Fibre Channel cable connections
  - Determine if appropriate drivers and required firmware versions are installed
  - MSA1500cs configurations for SecurePath
  - Symptoms of hardware failures

4.0 Solution Administration and Management

- Install MSA1500 options, e.g., MSA1500cs controller cache, SCSI I/O module, controller, adding redundant Fibre Channel I/O module
- Adapt SSP and zoning after HBA replacement
- Set up a host connection for the MSA1500cs
- Manage the MSA1500cs using ACU
- Modify existing configurations
- Selective Storage Presentation (SSP)
• Use of Scripting in the ACU
• Update MSA firmware, e.g., MSAFLASH.exe, fan firmware upgrades, implementing MSA1500cs controller’s ROM cloning feature
• Replace MSA1500cs components, e.g., controller, controller cache, controller battery pack, power supply, fan module, SCSI I/O module, Fibre Channel I/O module, SFP transceiver, power switch assembly
• Replace MAS20 components, e.g., memory module on the SCSI I/O board, removing and replacing the back plane boards,
• Perform an external boot from the MSA1500cs
• Migrate direct-attached storage (DAS) to the MSA1500cs
• Manage SecurePath for the MSA1500cs

Available Study Materials

This section lists training courses and documents to help you acquire a majority of the knowledge and skills needed to pass the exam. You are not required to take the courses listed in this section; however, HP strongly recommends you attend the classes, participate in class labs, and thoroughly review all course material and documents before taking the exam, even if you believe you have sufficient on-the-job experience.

Instructor-led training

Use the information in this datasheet and the practical experience you have gained to determine your need for the instructor-led training.

<table>
<thead>
<tr>
<th>Title</th>
<th>Course Number</th>
<th>How to Enroll</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>External: Americas: <a href="http://www.hp.com/go/training">www.hp.com/go/training</a></td>
</tr>
</tbody>
</table>