Purpose of the exam prep guide

The intent of this guide is to set expectations about the content and the context of the exam and to help candidates prepare for the exam. In this guide, you will find recommended HP training courses, reference and study material, and sample test items to help you achieve a passing score.

Studies conducted by HP and Prometric show that a combination of course attendance and self-study maximizes the likelihood of passing the exam on the first attempt.

Audience

This exam is for system engineers or technicians who require an in-depth understanding of the technologies deployed in HP ProLiant servers and computer professionals pursuing an HP Accredited Integration Specialist (AIS) certification.

Certification requirements

This exam, Implementing HP ProLiant servers, HPO-683 is one of the core requirements to be certified as an HP Accredited Integration Specialist (AIS).

This level of certification measures the competencies required for hands-on planning and the integration and support of technical solutions in business-class, networked environments. Given a set of customer business requirements, this individual is expected to be able to design, support, and integrate platform, operating system, storage, network, and option components to solve business needs. The ideal candidate is anyone who deploys business-class solutions based on HP technologies.
Prerequisites

HP strongly recommends that students taking this course have the following credentials. The instructor will deliver this course under the assumption that students have attained this level of experience.

- One of the following OS certifications:
  - Microsoft Certified Systems Administrator (MCSA) certification
  - Red Hat Certified Technician (RHCT) certification
  - SAIR Linux Certified Administrator (LCA) certification
  - Certified Novell Administrator (CNA) certification


- Recommended only – HPCP APS certification
- Recommended only – CompTia Server+ certification
- Recommended only – One year of experience configuring and installing server products in a SMB computing environment

Exam details

At the beginning of the exam, you will be asked to answer several survey questions. The survey has been designed to help the exam development team define the final exam forms and set the passing score. Your honest responses will assist the exam team in properly tailoring this exam to the appropriate audience.

Details about the exam include:

- Number of items: 73
- Item types: Multiple choice, Drag and Drop, and Click the Exhibit Button
- Time commitment: 120 minutes
- Passing Score: 71% (52 items to pass)
- Reference material: No online or hardcopy reference material will be allowed at the testing site.
Comments on the exam

During the exam, participants can make specific comments about the items (i.e., accuracy, appropriateness to audience, etc). HP welcomes these comments as part of our continuous improvement process.

Exam content

The following testing objectives represent the specific areas of content covered in the exam. Use this outline to guide your study and to check your readiness for the exam. The exam measures your understanding of these areas.

Implementing HP ProLiant servers (HPO 683) Exam Content

1.0 Explain and recognize fundamental server technologies
   1.1 Describe processor technologies
   1.2 Describe memory technologies
   1.3 Describe I/O bus technologies
   1.4 Describe storage technologies
   1.5 Explain Network technologies
   1.6 Explain and recognize system architectures
   1.7 Describe High Availability & Clustering Technologies
   1.8 Describe OS architectures
   1.11 Describe Mission Critical concepts and environmental requirements
   1.12 Describe Systems Management Tools and Technologies
   1.13 Describe rack and power technologies

2.0 HP industry standard server products and solutions
   2.1 Describe Server Products
   2.2 Explain the features and benefits of primary storage subsystems and components, implementation methodologies, restrictions or limitations

3.0 Planning and design necessary for a deployable solution
   3.1 Gather Business requirements and existing infrastructure data
   3.2 Analyze the business requirements based on site survey
   3.3 Design and size the solution
   3.4 Identify the appropriate platform and components based on the solution
   3.5 Write a scope of work
4.0 Install, configure, setup and upgrade ProLiant and options
  4.1 Install and configure storage (local, MSA 20/30/500)
  4.2 Install and configure server hardware and related options
  4.3 Install OS
  4.4 Install and configure management Software
  4.5 Install and configure Rack and Power/Infrastructure Options

6.0 Perform troubleshooting and repair/replacement procedures
  6.1 Describe and apply 6-step methodology
  6.2 Apply the HP troubleshooting methodology- 6 step process
  6.3 Evaluate data to determine problem
  6.4 Develop an (appropriate) action plan
  6.5 Execute the plan
  6.6 Implement preventative measures by taking necessary steps to insure the problem is not reoccurring
  6.7 Use Fault Management Tools and resources
  6.9 Identify and describe HP service capabilities
  6.10 Install service delivery tools
  6.11 Use HP service delivery tools (Support CDs, OARS CD)

7.0 Use HP management and serviceability tools and resources
  7.1 Identify performance management process
  7.2 Use performance management tools
  7.3 Record baseline measurements
  7.4 Resolve performance bottlenecks
  7.5 Document changes, results, and recommendations
  7.6 Perform volume management
  7.7 Identify common performance issues
  7.8 Set performance threshold

8.0 Perform administrative and operational tasks
  8.1 Apply change/configuration management tools
  8.2 Use change/configuration management tools (VCRM and VCA)
  8.3 Perform system upgrades
  8.4 Perform Basic security administration
  8.5 Identify and implement back-up solutions

9.0 Industry standard server market place & competitive positioning
9.1 Identify and describe HP service capabilities
9.2 Install service delivery tools
9.3 Use service delivery tools (Support CDs)

Recommended Training and Study References

This section lists training courses and documents that can help you acquire a majority of the knowledge and skills needed to pass the exam. You must also gain the practical experience outlined in this guide.

You are not required to take the courses listed in this section. However, HP strongly recommends that 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.

- HP web based training course ‘HP ProLiant Family’
- HP instructor led training course ‘Implementing HP ProLiant Servers’
- CompTia Server+ certification study guides
Sample test items

Module 1 — Explain and recognize fundamental server technologies

1.1 To extend the battery life of an HP UPS, what are the stages of intelligent battery charging? Select THREE.
   A. float charge to 100%
   B. trickle charge to 50%
   C. positive charge
   D. rapid charge to 90%
   E. self-test mode
   F. rest mode

1.2 A RAID controller is connected directly to the system controller in a point-to-point topology. What type of bus is being used?
   A. PCI bus
   B. PCI-X bus
   C. PCI Express bus
   D. iSCSI bus

1.3 Which memory technology is used in L2 cache?
   A. SDRAM
   B. DRAM
   C. DDR SDRAM
   D. ROM
   E. SRAM

1.4 You need to order ProLiant Server with 2 processors and minimum space and power consumption requirements for the customer. Which server you will choose?
   A. ML 350
   B. DL 560
   C. ML 570
   D. DL 320
Module 2 — HP industry standard server products and solutions

2.1 What type of drive enclosure is the MSA20?
   A. serial SCSI
   B. parallel ATA
   C. parallel SCSI
   D. serial ATA

2.2 Which features are supported by the MSA1500? Select THREE.
   A. Serial ATA drives
   B. fibre channel disks
   C. fibre based host connections
   D. SCSI based host connections
   E. parallel SCSI drives

2.3 Which SmartStart installation method must you use to install Linux on an HP ProLiant server?
   A. assisted
   B. manual
   C. replicated
   D. imaged

2.4 Which installation path is supported if you are using SmartStart to install Microsoft Windows 2003 server on an HP ProLiant G4 server?
   A. full installation
   B. replication installation
   C. assisted installation
   D. complete installation

Module 3 — Planning and design necessary for a deployable solution

3.1 Which factor should be considered when determining proper site services?
   A. ease of access
   B. environmental conservation
   C. projected growth
   D. proximity to emergency facilities
3.2 Which HP Tool does not support drive expansion, RAID-level migration, or setting the stripe size?
A. ROM-Based Setup Utility (F9)
B. Option ROM Configuration for Arrays Utility (F8)
C. Array Configuration Utility (F8)
D. System Maintenance Menu (F10)

3.3 What is the minimum number of disks required to set up RAID 5?
A. 2
B. 3
C. 4
D. 8

3.4 You have encountered a controller failure on a SMART Array 6404. Rather than move the drives from one server to another, you decide to replace the controller. What should you do to ensure that any data on the cache is written to the drives?
A. Transport the Battery-Backed Write Cache (BBWC) from the old controller to the new one.
B. This cannot be done, since the dirty data resides with the faulty 6404 controller.
C. Manually copy the dirty data from one BBWC cache to the new one.
D. Move the memory and drives from one server to another.

Module 4 — Install, configure, setup and upgrade ProLiant and options

4.1 Peter wants to reinstall a ProLiant DL380 G3 server. To create an unconfigured system, he uses the System Erase Utility. In doing so, what will be erased? Select THREE.
A. iLO settings (if present)
B. Smart Array controller configuration
C. NVRAM of the SCSI controllers
D. CMOS
E. partitions on all hard drives
F. system ROM
4.2 Which HP utility is typically used to compare historical configurations on the same system?
   A. HP Insight Diagnostics Offline Edition
   B. ROM-Based Setup Utility (RBSU)
   C. HP System Management Homepage
   D. HP Insight Diagnostics Online Edition

4.3 Which memory technologies protect against dual-bit errors? Select FOUR.
   A. advanced ECC
   B. online spare memory
   C. hot-plug mirrored memory
   D. hot-plug RAID memory
   E. parity memory
   F. ECC
   G. single board mirrored memory

4.4 What is the default SNMP community string?
   A. default
   B. public
   C. PUBLIC
   D. DEFAULT
   E. private

Module 6 — Perform troubleshooting and repair/replacement procedures

6.1 Which tests are available through the HP Insight Diagnostic offline (SmartStart) edition? Select TWO.
   A. automatic
   B. full
   C. complete
   D. partial
   E. quick
6.2 What you should do if you need to send hardware and operating system configuration information to a higher level of ProLiant support?

A. Access HP Insight Diagnostic Survey Utility and save the configuration information in xml file.
B. Access HP Insight Diagnostic Survey Utility and save the configuration information in txt file.
C. Access HP Insight Diagnostic Integrated Management log and save the configuration information into htm file.
D. Access HP Insight Diagnostic Integrated Management log and save the configuration information into xml file.

6.3 As an administrator for a growing company, you need a way to analyze your Windows infrastructure to identify gaps in supportability at a minimal cost. Which HP services option would best achieve this result?

A. Subscribers Choice
B. HP Proactive Plus
C. HP Care Pack
D. HP Active Answers

6.4 An administrator spends 25% of her time searching the HP website for updated drivers and support software, and 60% managing change requests. She needs to allocate more time for change requests. How can she free-up additional time at minimal cost?

A. Use ActiveAnswers to manage change requests.
B. Use HP Services to manage the entire environment.
C. Sign up for Subscriber's Choice for Business.
D. Use Product Change Notification to repair hardware failures.

Module 7 — Use HP management and serviceability tools and resources

7.1 You need to set up performance monitoring on a Linux server. The best way to capture an overview of system performance is to use a job scheduler to periodically run ______.

A. free
B. vmstat
C. top
D. iosta
7.2 Karen is managing an environment of 25 servers. For the past 2 months, 6 servers in the environment are showing signs of performance degradation. Before Karen can begin to solve the problem, what must she do first to each of the servers?

A. compare server performance against its baseline
B. install additional processors
C. rearrange the boot load order of the files.
D. install more memory

7.3 Which statement about Lights-Out technology is true?

A. The higher the resolution on the remote server, the better the overall performance.
B. The remote server operating system resolution should be higher than the resolution on the management client.
C. For the best results, set the color option to less than 256 colors.
D. For the best results, set the mouse motion acceleration to low or none.

Module 8—Perform administrative and operational tasks

8.1 A server has a logical drive on a RAID5 set which is using all of the capacity in the array. You are attaching an extra hard drive to the array controller. What will happen in the Array Configuration Utility?

A. The array starts rebuilding to include the new hard drive.
B. The drive is automatically added to the existing array.
C. A new logical drive is automatically created with the new hard drive.
D. A new unassigned hard drive with free space.

8.2 You want to view the Systems Management homepage of "ServerA" in your web browser using a secure link. Which URL would you use?

A. http://ServerA:2301
B. http://ServerA:2381
C. https://ServerA:2381
D. [https://ServerA:2301](https://ServerA:2301)
E. [https://ServerA:2357](https://ServerA:2357)
8.3 Which statement is true about a differential backup?
   A. It backs up only changed data since the last full backup and marks the files as backed up.
   B. It backs up all the data from selected disks.
   C. It backs up all the changes since the last differential backup.
   D. It backs up all files with the archive bit set and leaves the archive bit unchanged.

8.4 When observing a server in the computer room, Bob noticed that the activity LEDs on the hard drives were active, even though there were no users accessing the server at that time. What could be a possible cause?
   A. The server is compromised by outside users.
   B. The hard drives are approaching an imminent failure.
   C. The array controller is performing the dynamic sector repair.
   D. This is a known issue. The array controller needs a firmware upgrade.

Module 9 — Industry standard server market place & competitive positioning

9.1 Steve owns a server on which the warranty has expired. He needs an onsite visit to replace a failed power supply. Which HP solution should you suggest to cover this and future incidents?
   A. renew the standard warranty
   B. Extend the warranty with a Care Pack
   C. contact local service provider to arrange an onsite visit
   D. no solution is available to cover his need

9.2 Which collection of Onsite Agents Reference Set (OARS) CDs should you use to find information on a ProLiant 1500?
   A. OARS archive set
   B. OARS legacy set
   C. OARS active set
   D. OARS end of life set

Conclusion

HP wishes you success in the HP Certified Professional Program and in passing the exam for which you are preparing.
Answer Key

Module 1 — Explain and recognize fundamental server technologies

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   C. PUBLIC
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