Purpose of the exam preparation 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 Integrity servers and computer professionals pursuing an HP Accredited Systems Engineer (ASE) certification.

Certification requirements

This exam, Configuration and Management of HP Integrity Mid-range Servers (HP0-381) is one of the core requirements to be certified as an Accredited Systems Engineer (ASE).

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 enterprise class solutions based on HP technologies.

Prerequisites

ASE candidates are expected to have obtained at least one of the following System Engineering certifications before taking this exam:

- CSE - HP-UX
- CSE - HP OpenVMS
- MCSE on Microsoft Windows Server 2003
- SAIR LCE Certification
- Novell Certified Linux Engineer
- RedHat RHCE
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.

- AIS certification: (HP Integrity Server Multi-OS Installation and Deployment, HP0-517)
- Three years experience configuring and installing server products

**Exam details**

- Number of items: 70
- Item types: Multiple choice, drag and drop, exhibits
- Time commitment: 90 minutes
- Passing Score: 73% (51 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 (e.g., 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.

**Configuration and Management of HP Integrity Mid-range Servers (HP0-381)**

**Exam Content**

1.0 Recognize, articulate, and apply knowledge of fundamental industry-standard architectures and technologies related to Itanium server solutions.

   1.1 Describe and apply knowledge of the HP partitioning continuum (hardware and software).

2.0 Recognize, articulate, and competitively position HP Integrity servers, server configurations, and solution components.

   2.1 Describe and apply knowledge of HP integrated technologies and processes.

   2.2 Describe and apply knowledge of HP Integrity solutions.

   2.3 Locate, describe and use tools and resources.

3.0 Install, configure, integrate and upgrade HP Integrity server systems and options.
3.1 Install and configure hardware and upgrades.
3.2 Install software.
3.3 Describe the tools for accessing partition consoles.

4.0 Perform performance-tuning and optimization procedures on common HP Integrity server configurations.

4.1 Describe, at a high level, general performance tuning processes.
4.2 Gather and evaluate Integrity system performance information.

5.0 Troubleshoot and complete repair and replacement procedures.

5.1 Troubleshoot hardware failures.
5.2 Troubleshoot software failures.

6.0 Manage HP Integrity server systems using HP management and serviceability tools and resources.

6.1 Identify and describe the purpose of management and maintenance tools available on the system.
6.2 Perform management and maintenance tasks.
6.3 Integrate operating environment into management framework.
6.4 Describe add-ons that optimize system performance/availability such as Instant Capacity (iCAP) options and Pay-Per-Use (PPU) utility pricing.

7.0 Perform administrative and operational tasks

7.1 Initiate partitioning commands.
7.2 Demonstrate an awareness of shutdown and reboot procedures (all operating systems for Integrity).
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.

- PA-RISC to Integrity Evolution Technical Resource Kit (ELMS 20847)
- HP instructor-led training (ILT) course, “Configuration and Management of HP Integrity Mid-range Servers” (ELMS 25522).

The purpose of this course is to make sure you are familiar with:

- HP Integrity mid-range family of servers.
- Firmware and consoles used to operate and troubleshoot these systems.
- Server management software typically used with these systems.
- Creating and managing hard partitions and virtual partitions.
- Information necessary to troubleshoot these systems.

- CompTIA Server+ certification study guide
Sample test items

For answers please refer to the Answer Key at the end of this document.

Module 1 — Fundamental Industry-Standard Architectures and Technologies

1.1 Which of the following is offered as one of the HP servers partitioning solution?
A. Task and Resource Management
B. Workload Management
C. Compute Load Management
D. Online Add Remove Resource

Module 2 — HP Integrity Servers, Configurations, and Solution Components

2.1 Intel Itanium processor technology is more advanced compared to other processors. Which technology does the Intel Itanium processor use?
A. Super Scalar Reduced Instruction Computing
B. Explicitly Parallel Instruction Computing
C. Reduced Instruction Set Computing
D. Complex Instruction Set Computing

2.2 Which HP Integrity server has a maximum of four cells?
A. rx7620
B. rx8620
C. rp7420
D. rp8420

2.3 Which HP Integrity server has a maximum of eight processor module sockets?
A. rx8620
B. rp7420
C. rx7620
D. rp8420
2.4 In order to have four hard partitions on an rx8620 server, what must first be added?
A. Additional Core I/O boards for each cell
B. IOX (I/O Expansion Unit)
C. SEU (System Expansion Unit)
D. additional power supply for expanded power consumption

2.5 Click the Exhibit button. Select the diagram that represents Pay-Per-Use (PPU).
A. A
B. B
C. C

Exhibit
2.6 A failing CPU has been resilienced by the operating system. What must a system administrator do to activate an iCAP CPU as a hot spare?
A. Initiate the power-on sequence for the CPU.
B. Activate the license, in software, for the CPU.
C. Reboot the partition that lost the failed CPU.
D. Nothing, the process is fully automatic.

2.7 Click the Exhibit button. Where is the Cell Controller located?
A. A
B. B
C. C
D. D

Exhibit
2.8 What type of partition is used to prevent a critical hardware failure from affecting other partitions?
A. virtual
B. hard
C. resource
D. logical

2.9 Which of the following specifications can be used for system analysis using PQRT? Select TWO.
A. TPC-C
B. MIPs
C. SPECfp2000
D. Memory latency
E. Baan Tier 1

Module 4 — HP Integrity Server Systems and Options

4.1 Which MP command is used to configure the Management LAN?
A. LC
B. LS
C. XD
D. LL

4.2 What is the recommended cell board configuration order for an rx8620 server?
A. 3, 2, 1, 0
B. 1, 3, 2, 0
C. 0, 3, 2, 1
D. 0, 1, 2, 3

4.3 What is the number of core I/O cards needed on a 4-nPar Integrity rx8620 server?
A. 1
B. 2
C. 3
D. 4
4.4 Which task cannot be run from a Windows or an HP-UX partition running the native Partition Manager?
   A. creating a new partition/modifying an existing partition
   B. removing active cells from a remote partition
   C. removing cells from a partition that is in BIB mode
   D. deleting a partition that is in BIB mode

Module 5 — Tuning and Optimization of HP Integrity Server Configurations

5.1 For which OS is HP Systems Insight Manager v4.2 (SIM) not available?
   A. HP-UX
   B. Linux
   C. Windows
   D. OpenVMS

5.2 Which configuration would provide the best memory performance on an rx8620 server with a single-cell partition?
   A. Use more but lower capacity DIMMs and populate only one memory bus.
   B. Use more but lower capacity DIMMs and populate all memory slots in dual quads configuration.
   C. Use less but higher capacity DIMMs and minimize use of memory slots, odd quads configuration.
   D. Use less but higher capacity DIMMs and populate only one memory bus.

Module 6 — HP Integrity Server Troubleshooting, Repair and Replacement

6.1 Where would you check for the Windows version and revision installed on an rx7620 server?
   A. Open the command line and type in the `ver /revision` command.
   B. Open the command line and type in the `ver /r` command.
   C. Open the control panel, click System, and click the General tab.
   D. Open the control panel and click Version Control Repository.
6.2 Which command do you use to verify the OS version on an rx7620 server with HP-UX installed?

A. `uxver`
B. `ustatus -rev`
C. `uname -a`
D. `uver -r`

Module 7 — HP Integrity Server Management and Serviceability Tools

7.1 Click the Exhibit button. What is the operational state of this partition?

A. failed
B. active
C. inactive
D. degraded

Exhibit

```
# parstatus -V -p1
[Partition]
Partition Number : 1
Partition Name   : hostname05
Status           : inactive
IP address       :
Primary Boot Path: 4/0/1/0/0.9
Alternate Boot Path: 0/0/0/0/0/0/0/0/0/0.0
HA Alternate Boot Path: 0/0/0/0/0/0/0/0.0.0
PAC Revision     : 104.1
IODCH Version    : 23664
CPU Speed        : 552 MHz
Core Cell        :
Core Cell Alternate:
  0. cab0,cell4
  1. cab0,cell5
```
7.3 You are using WBEM to manage remote nPartition in a target complex. When you need to secure the WBEM management connection, you will use an SSL authentication process. Which of the following are needed? Select TWO.

A. SSL certificate
B. unique administrator password
C. Trust Certificate Store
D. trusted CMS station by IP subnet mask
E. Open SSL certificate

7.4 Which configuration will result in the best memory performance on an HP Integrity rx8620 server?

A. a multiple of 8 DIMMs (two quads), equally populated on all memory buses
B. a multiple of 8 DIMMs (two quads), populate only one of the memory bus first
C. a multiple of 4 DIMMs (single quad), equally populated on all memory buses
D. a multiple of 4 DIMMs (single quad), populate only one of the memory bus first

Module 8—HP Integrity Server Administrative and Operational Tasks

8.1 You have an rx7620 with two hard partitions. You are logged on to partition 0 with HP-UX, and you want to change the primary boot path of the remote hard partition 1. How do you accomplish this?

A. setboot -P 1 -p <path>
B. parboot -p 1 -b <path>
C. parmodify -p 1 -b <path>
D. It is not possible to set the boot path of a remote partition.

8.2 You removed a cell from an active Linux partition. Which command established your changes on the system?

A. reboot -rem cell
B. shutdown -r
C. init 5 /r cell
D. halt -rem cell
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 — Fundamental Industry-Standard Architectures and Technologies

1.1 Which of the following is offered as one of the HP servers partitioning solution?
A. Task and Resource Management
* B. Workload Management
C. Compute Load Management
D. Online Add Remove Resource

Module 2 — HP Integrity Servers, Configurations, and Solution Components

2.1 Intel Itanium processor technology is more advanced compared to other processors. Which technology does the Intel Itanium processor use?
A. Super Scalar Reduced Instruction Computing
* B. Explicitly Parallel Instruction Computing
C. Reduced Instruction Set Computing
D. Complex Instruction Set Computing

2.2 Which HP Integrity server has a maximum of four cells?
A. rx7620
* B. rx8620
C. rp7420
D. rp8420

2.3 Which HP Integrity server has a maximum of eight processor module sockets?
A. rx8620
B. rp7420
* C. rx7620
D. rp8420
2.4 In order to have four hard partitions on an rx8620 server, what must first be added?
   A. Additional Core I/O boards for each cell
   B. IOX (I/O Expansion Unit)
   * C. SEU (System Expansion Unit)
   D. additional power supply for expanded power consumption

2.5 Click the Exhibit button. Select the diagram that represents Pay-Per-Use (PPU).
   A. A
   B. B
   * C. C

Exhibit

![Exhibit Diagram]

- A
- B
- C
2.6 A failing CPU has been resilienced by the operating system. What must a system administrator do to activate an iCAP CPU as a hot spare?

A. Initiate the power-on sequence for the CPU.
B. Activate the license, in software, for the CPU.
C. Reboot the partition that lost the failed CPU.
D. Nothing, the process is fully automatic.

2.7 Click the Exhibit button. Where is the Cell Controller located?

A. A
B. B
C. C
D. D

Exhibit
2.8  What type of partition is used to prevent a critical hardware failure from affecting other partitions?
A. virtual
* B. hard
C. resource
D. logical

2.9  Which of the following specifications can be used for system analysis using PQRT?
Select TWO.
* A. TPC-C
B. MIPs
* C. SPECfp2000
D. Memory latency
E. Baan Tier 1

Module 4 — HP Integrity Server Systems and Options

4.1  Which MP command is used to configure the Management LAN?
* A. LC
B. LS
C. XD
D. LL

4.2  What is the recommended cell board configuration order for an rx8620 server?
A. 3, 2, 1, 0
B. 1, 3, 2, 0
C. 0, 3, 2, 1
* D. 0, 1, 2, 3

4.3  What is the number of core I/O cards needed on a 4-nPar Integrity rx8620 server?
A. 1
B. 2
C. 3
* D. 4
4.4 Which task cannot be run from a Windows or an HP-UX partition running the native Partition Manager?

A. creating a new partition/modifying an existing partition
B. removing active cells from a remote partition
C. removing cells from a partition that is in BIB mode
D. deleting a partition that is in BIB mode

Module 5 — Tuning and Optimization of HP Integrity Server Configurations

5.1 For which OS is HP Systems Insight Manager v4.2 (SIM) not available?

A. HP-UX
B. Linux
C. Windows
D. OpenVMS

5.2 Which configuration would provide the best memory performance on an rx8620 server with a single-cell partition?

A. Use more but lower capacity DIMMs and populate only one memory bus.
B. Use more but lower capacity DIMMs and populate all memory slots in dual quads configuration.
C. Use less but higher capacity DIMMs and minimize use of memory slots, odd quads configuration.
D. Use less but higher capacity DIMMs and populate only one memory bus.

Module 6 — HP Integrity Server Troubleshooting, Repair and Replacement

6.1 Where would you check for the Windows version and revision installed on an rx7620 server?

A. Open the command line and type in the \texttt{ver /revision} command.
B. Open the command line and type in the \texttt{ver /r} command.
C. Open the control panel, click System, and click the General tab.
D. Open the control panel and click Version Control Repository.
6.2 Which command do you use to verify the OS version on an rx7620 server with HP-UX installed?

A. uxver
B. usstatus -rev
C. uname -a
D. uver -r

Module 7 — HP Integrity Server Management and Serviceability Tools

7.1 Click the Exhibit button. What is the operational state of this partition?

A. failed
B. active
C. inactive
D. degraded

Exhibit

```
# parstatus -V -p1
[Partition]
Partition Number : 1
Partition Name   : hostname05
Status          : inactive
IP address      :
Primary Boot Path : 4/0/1/0/0.9
Alternate Boot Path : 0/0/0/0/0/0/0/0.0.0
HA Alternate Boot Path : 0/0/0/0/0/0/0/0.0.0
PIX Revision     : 104.1
ICDCH Version    : 23564
CPU Speed        : 552 MHz
Core Cell        :
Core Cell Alternate :
0. cab0,cell14
1. cab0,cell15
```

7.2 The "nPartition Configuration Privilege" allows you to control the access of a user managing an nPartition on a complex. Which command would you use at the MP?

A. PARPERM
B. vPARMGMT
C. PARSECURE
D. vPARSET
7.3 You are using WBEM to manage remote nPartition in a target complex. When you need to secure the WBEM management connection, you will use an SSL authentication process. Which of the following are needed? Select TWO.

- A. SSL certificate
- B. unique administrator password
- C. Trust Certificate Store
- D. trusted CMS station by IP subnet mask
- E. Open SSL certificate

7.4 Which configuration will result in the best memory performance on an HP Integrity rx8620 server?

- A. a multiple of 8 DIMMs (two quads), equally populated on all memory buses
- B. a multiple of 8 DIMMs (two quads), populate only one of the memory bus first
- C. a multiple of 4 DIMMs (single quad), equally populated on all memory buses
- D. a multiple of 4 DIMMs (single quad), populate only one of the memory bus first

Module 8— HP Integrity Server Administrative and Operational Tasks

8.1 You have an rx7620 with two hard partitions. You are logged on to partition 0 with HP-UX, and you want to change the primary boot path of the remote hard partition 1. How do you accomplish this?

- A. setboot -P 1 -p <path>
- B. parboot -p 1 -b <path>
- C. parmodify -p 1 -b <path>
- D. It is not possible to set the boot path of a remote partition.

8.2 You removed a cell from an active Linux partition. Which command established your changes on the system?

- A. reboot -rem cell
- B. shutdown -r
- C. init 5 /r cell
- D. halt -rem cell