



# HP Certified Professional

## OpenVMS System Administration

Exam #HP0-651  
Exam Preparation Guide

### 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 help you achieve a successful 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

The OpenVMS System Administration exam is intended for IT professionals who understand networking fundamentals and who typically support non-clustered AlphaServer systems running OpenVMS. These professionals are expected to have an intermediate knowledge level of OpenVMS, and one year of hands-on experience with OpenVMS.

Candidates should take the exam after acquiring the necessary competencies and when able to meet the exam objectives outlined in this document.

## **Exam Details**

These details refer to the exam described in this document:

- Number of questions: 74
- Time allotted to take the beta exam: 90 minutes
- Passing score: 58%
- No on-line or hard copy sources may be referenced during the exam.

## **Scope of the Exam**

The OpenVMS System Administration exam measures intermediate level knowledge and skills related to the major competencies and technologies listed below. You need hands-on experience to pass this exam. Candidates typically require 12 months to obtain this experience, and to develop the desired competencies sufficiently.

### **Major Competencies**

Exam candidates should be able to:

- Install OpenVMS V7.3
- Configure/customize OpenVMS to customer's specifications
- Upgrade OpenVMS to its latest version
- Manage Devices, Queues, Users, and Files
- Backup files
- Set and manage security and performance features

### **Major Strategies, Technologies, and Concepts**

Exam candidates should have intermediate level knowledge of the following strategies, technologies, and concepts:

- OpenVMS operating system V7.3
- File systems
- OpenVMS Volume Shadowing
- RAID
- Batch and print queuing
- Networking
- System Security
- User Interface
- Basic cluster concepts

## Exam Objectives

Use the exam objectives listed in this section to guide your study and to check your readiness for the exam. The exam measures your understanding of these objectives. The approximate percentage of exam questions dedicated to each major category of objectives is included in parenthesis.

### Section Name

#### 1 Installation, Configuration and Upgrade (10%)

- Explain the prerequisites for operating system installation/upgrade.
- List the steps needed to perform operating system installation/upgrade.
- List the steps needed for managing OpenVMS licensing.
- Explain the prerequisites and steps for configuring Galaxy instances.
- Explain the purpose, how to display and how to use the following utilities/procedures during a basic network installation: LANCP, NETCONFIG.COM, NET\$CONFIG.COM, UCX\$CONFIG.COM, TCPIP\$CONFIG.COM, and LAT\$STARTUP.COM.
- Explain the purpose and conventions for TCP/IP domain names, node names, IP addresses, and DHCP.

#### 2 System Startup and Shutdown (15%)

- Describe the order of events of system startup.
- Define the purpose of OPCOM, ERRFMT, AND JOB\_CONTROL processes.
- Explain the console variables used to control the normal boot process.
- Explain how to collect and preserve BUGCHECK information, examine the error logs and force a crash dump.

#### 3 Device Management (10%)

- Differentiate between spooled and non-spooled devices with system parameters that modify their default characteristics.
- Explain how to display and set device, display, and printer characteristics.
- Explain the system parameters used to set default terminal characteristics.
- Explain how to allocate and deallocate devices and how to initialize volumes and volume sets.
- Explain how to add members to and remove members from volume sets.
- Explain how to display storage device information.

## Section Name

### 4 File System Management and Backup (15%)

- Define file fragmentation and explain its consequences.
- Differentiate among ODS-2 and ODS-5.
- Explain how to set, modify, and display volume high-water marking, the volume label, and other volume attributes.
- Explain how to use ANALYZE/DISK to obtain error reports, recover lost files and blocks and resolve multiply allocated blocks.
- Explain the SET command for rebuilding the file system.
- Explain how to locate and access files among storage volumes, including Tape save sets.
- Differentiate among image, incremental, and physical backups.
- Explain risks of using volume shadowing in place of backup.
- Explain how to back up and restore files, directories, volumes, and volume sets using tapes and disks.
- Explain how to use BACKUP to list the contents of a save set or compare files.
- Explain the BACKUP qualifiers used to ensure data integrity and the issues associated with setting files to NOBACKUP.

### 5 User Management (10%)

- Define the categories of user privileges, limits, and process quotas.
- Explain the relationships among PQL and UAF system wide parameters.
- Explain how to create, modify, maintain, delete, disable, enable, and delete user accounts and use identifiers.

### 6 Queue Management (5%)

- Define the concepts of queuing and spooling and generic and execution queues.
- Explain the purpose of queue managers, forms, and library modules and how to set or modify queue parameters or characteristics.
- Explain how to create, start, pause, resume, and stop generic and execution queues.
- Identify the default location and the files that make-up the queue database.
- Explain how to identify why a job cannot be deleted from a queue.

## Section Name

### 7 System Security, Performance and Customization (20%)

- Define the purpose of security auditing, the AUDIT\_SERVER process and the security audit journal.
- Explain how to enable and disable security auditing and examine audit events.
- Explain how to display and delete intrusion records.
- Define the following concepts:
  - ⇒ System logical name tables
  - ⇒ Primary and secondary page and swap files
  - ⇒ AUTOCONFIGURE
  - ⇒ Balance set and working set.
- Explain how to define system-wide logical names in SYLOGICALS.COM.
- Explain how SYSTARTUP\_VMS.COM and SYSMAN are used to perform common startup tasks.
- Identify potential sources of CPU bottlenecks.
- Identify potential sources of memory bottlenecks.
- Identify potential sources of I/O bottlenecks.
- Define modified page list and free page list.
- List and explain the phases of AUTOGEN.
- Explain the purpose and contents of MODPARAMS.DAT.

### 8. User Interface (10%)

- Define the following concepts: logical names, local and global symbols, foreign commands, and lexical functions and explain the purpose of the syntactical components (i.e. verb, parameter, and qualifier) of a generic DCL command.
- Explain the following generic components of message syntax: facility, severity, ident, and text.
- Explain how to pass parameters to a command file, and how commands in a command file acquire the values of those parameters.
- Explain how to obtain log files for command files run interactively and as batch jobs and monitor the execution of each command in a command file.
- Explain how to define, display, and delete logical names and symbols.
- Explain how to set DECwindows remote display.

## Section Name

### 9. Basic OpenVMS Concepts and Terminology (5%)

- Define working set.
- Differentiate between paging and swapping and explain the purpose of the page file and the swap file.
- Explain paged and nonpaged pool and differentiate between buffered and direct I/O.
- Define Adaptive Partition Multi Processing.
- Explain the purpose of clustering and a cluster interconnect.

## Recommended Training Courses and Documents

This section lists training courses and documents that can help you acquire a majority of knowledge and skills needed to pass the exam, but you must also gain the practical experience outlined in this guide. Specifically, you should have 12 months practical experience installing and administering a networked AlphaServer system running OpenVMS, which should include each major competency cited in the previous section.

You are not required to take the courses listed in this section before taking the exam. However, Compaq **strongly recommends** that you attend the appropriate classes, participate in class labs, and thoroughly review course materials and reference documents before taking the exam.

### Instructor-Led Training

Use the information in this guide and the practical experience you have gained to determine which of the following courses, if any, you should take to prepare for this exam. Self-paced training and technical documentation may provide appropriate learning alternatives to instructor-led training for more experienced candidates.

The Compaq courses that support this exam include:

Compaq OpenVMS Fundamentals V7.3  
Compaq OpenVMS System and Network Node Management I  
Compaq OpenVMS System and Network Node Management II

Compaq OpenVMS 7.3 Update Seminar (This training option may be appropriate for experienced candidates who are familiar with OpenVMS 7.2.)

Compaq has selected independent training providers to deliver these courses. To identify the independent training provider(s) in your area, refer to your country's Compaq Training Catalog.

## Self-Paced Training

This section lists the relevant self-paced courseware available from Compaq.

<u>Title</u>	<u>Source or Part Number</u>
OpenVMS Primer for System Managers	<a href="http://www.openvms.compaq.com/wbt/pc/welcome.htm">http://www.openvms.compaq.com/wbt/pc/welcome.htm</a>

To order self-paced courseware, refer to your country's Compaq Training Catalog

## Documentation

This section lists reference documents that describe the major competencies, technologies, and concepts covered in the exam. Compaq **strongly recommends** that you review the specific sections listed for each document. Since some sections may describe topics in more depth than is required for the exam, you should use the exam objectives listed in this publication to guide your study.

References are listed in random order, so the sequence does not imply importance.

You can access most references at

<http://www.openvms.compaq.com:8000/index.html> - ovmsdocset.

<u>Title/Part Number</u>	<u>Chapter/Section Titles<sup>1</sup></u>
<b>DIGITAL TCP/IP Services for OpenVMS Installation and Configuration</b> AA-LU49M-TE <a href="http://www.openvms.compaq.com:8000/73FINAL/6524/6524pro.HTML">http://www.openvms.compaq.com:8000/73FINAL/6524/6524pro.HTML</a>	<ul style="list-style-type: none"><li>• Installation Procedure (Section 2.1)</li><li>• Configuring TCP/IP Services (Chapter 3, especially, "Using TCPIP\$CONFIG Option Commands to Bypass TCPIP\$CONFIG Menus" in Section 3.4)</li></ul>
<b>OpenVMS Alpha Galaxy Guide</b> <b>New title: OpenVMS Alpha Partitioning and Galaxy Guide</b> AA-REZQC-TE <a href="http://www.openvms.compaq.com:8000/73final/6512/6512PRO.HTML">http://www.openvms.compaq.com:8000/73final/6512/6512PRO.HTML</a>	<ul style="list-style-type: none"><li>• Setup Environment Variables (Section 6.6)</li><li>• The Galaxy Software Architecture on OpenVMS (Section 2.2)</li></ul>
<b>OpenVMS Alpha V7.2 Upgrade and Installation Manual</b> AA-QSE8C-TE <a href="http://www.openvms.compaq.com:8000/72final/6522/6522pro.html">http://www.openvms.compaq.com:8000/72final/6522/6522pro.html</a>	<ul style="list-style-type: none"><li>• Performing a Conversational Boot (Sections A.1.3)</li><li>• Booting from a Different Directory (Section A.1.6)</li></ul>
<b>OpenVMS Alpha V 7.3 Upgrade and Installation Manual</b> AA-QSE8D-TE <a href="http://www.openvms.compaq.com:8000/73final/6629/6629PRO.HTML">http://www.openvms.compaq.com:8000/73final/6629/6629PRO.HTML</a>	<ul style="list-style-type: none"><li>• Setting and Showing Boot Devices (Section A2.2)</li><li>• Installing the Compaq OpenVMS Alpha Operating System (Chapter 3)</li></ul>
<b>OpenVMS System Manager's Manual</b>	<ul style="list-style-type: none"><li>• Glossary</li></ul>

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<sup>1</sup> Section numbers may change during documentation updates.

Title/Part Number	Chapter/Section Titles <sup>1</sup>
<a href="http://www.openvms.compaq.com:8000/73final/6017/6017pro.html">http://www.openvms.compaq.com:8000/73final/6017/6017pro.html</a>	Recommended Method for Changing Parameter Values (Section 15.2)
<b>OpenVMS Cluster Systems</b> AA--PV5WE--TK <a href="http://www.openvms.compaq.com:8000/73final/4477/4477PRO.HTML">http://www.openvms.compaq.com:8000/73final/4477/4477PRO.HTML</a>	<ul style="list-style-type: none"> <li>• Overview (Section 1.1)</li> <li>• Hardware Components (Section 1.2)</li> </ul>
<b>OpenVMS DCL Dictionary</b> <a href="http://www.openvms.compaq.com:8000/73final/9996/9996PRO.HTML">http://www.openvms.compaq.com:8000/73final/9996/9996PRO.HTML</a> AA-PV5LF-TK AA-PV5KF-TK	Comands: DEFINE DEASSIGN INIT LICENSE LOAD MOUNT QUEUE SET DISPLAY SET /SHOW TERMINAL SET TIME SET /SHOW PRINTER SET VERIFY SHOW DEVICE SHOW LICENSE SHOW SYMBOL SHOW TERMINAL SUBMIT  Table DCL I-3
<b>OpenVMS Guide to extended File Specifications</b> AA--REZRB--TE <a href="http://www.openvms.compaq.com:8000/73final/6536/6536PRO.HTML">http://www.openvms.compaq.com:8000/73final/6536/6536PRO.HTML</a>	Features of Extended File Specifications (section 1.2)
<b>OpenVMS Guide to System Security</b> AA--Q2HLE--TE <a href="http://www.openvms.compaq.com:8000/73final/6346/6346pro.html">http://www.openvms.compaq.com:8000/73final/6346/6346pro.html</a>	<ul style="list-style-type: none"> <li>• Reading Informational Messages (Section 3.4.3)</li> <li>• Controlling Access with ACLs (Section 4.4)</li> <li>• Setting Default Protection and Ownership (Section 8.8)</li> <li>• Overview of the Auditing Process (Section 9.1)</li> <li>• Providing Report Specifications (Section 9.5.3)</li> <li>• Tasks Performed by the Audit Server (Section 9.6.1)</li> <li>• Disabling and Reenabling Startup of the Audit Server (Section 9.6.2)</li> <li>• Assigning Privileges (Appendix A)</li> </ul>
<b>OpenVMS License Management Utility Manual</b> AA-PVXUD-TK <a href="http://www.openvms.compaq.com:8000/73final/4584/4584pro_contents.html">http://www.openvms.compaq.com:8000/73final/4584/4584pro_contents.html</a>	Loading a License (Section 2.5)
<b>OpenVMS Performance Management Course Guide</b> EY-Q793E-DP	See the Exam Objectives section of this preparation guide for appropriate study topics.
<b>OpenVMS Performance Management</b> AA--R237C--TE <a href="http://www.openvms.compaq.com:8000/73final/6491/6491pro.html">http://www.openvms.compaq.com:8000/73final/6491/6491pro.html</a>	<ul style="list-style-type: none"> <li>• Performance Management (Section 1)</li> <li>• Memory (Section 3.1)</li> <li>• Process Swapping (Section 3.3)</li> <li>• Working Set Regions (Section 3.5.2)</li> <li>• Swapper Trimming (3.6)</li> <li>• Active Memory Reclamation from Idle Processes (Section 3.7)</li> </ul>

Title/Part Number	Chapter/Section Titles <sup>1</sup>
	<ul style="list-style-type: none"><li>• Working Set Regions (Section 3.5.2)</li><li>• Types of Scheduling Wait States (Section 9.1.5)</li><li>• Excessive Interrupt State Activity (Section 9.2.3)</li><li>• Improving Memory Responsiveness (Section 11.1)</li><li>• Reduction of System CPU Consumption (Section 13.1.2)</li><li>• Glossary</li></ul>
<b>OpenVMS System Management Utilities Reference Manual A-L</b> AA-PV5PE-TK (Vol 1) <a href="http://www.openvms.compaq.com:8000/73final/6048/6048PRO.HTML">http://www.openvms.compaq.com:8000/73final/6048/6048PRO.HTML</a>	<ul style="list-style-type: none"><li>• ANALYZE/DISK_STRUCTURE (Section 3.1)</li><li>• AUTHORIZE (Section 5.0)</li><li>• AUTOGEN (Section 6.1)</li><li>• BACKUP (Section 7.1)</li><li>• BACKUP Qualifiers (Section 7.5, especially: BACK/LIST BACKUP/PHYSICAL BACKUP/IGNORE= BACKUP/IMAGE BACKUP/INCREMENTAL BACKUP/VOLUME BACKUP/REWIND</li><li>• LATCP Commands, CREATE LINK (Section 13.3)</li><li>• LANCP Description (Section 12.1, especially SHOW DEVICE)</li></ul>
<b>OpenVMS System Management Utilities Reference Manual M-Z</b> AA-PV5QE-TK (Vol 2) <a href="http://www.openvms.compaq.com:8000/73final/6048/6048PRO.HTML">http://www.openvms.compaq.com:8000/73final/6048/6048PRO.HTML</a>	PRODUCT commands, (Section 3.3, especially the EXTRACT RELEASE_ NOTES Command)
<b>OpenVMS System Manager's Manual Vol 1: 1: Essentials</b> AA-PV5ME-TK (Vol 1) <b>OpenVMS System Manager's Manual: Tuning, Monitoring and Complex Systems</b> AA-PV5NE-TK (Vol 2)  Web document (vol. 1 and vol. 2): <a href="http://www.openvms.compaq.com:8000/73final/6017/6017pro.html">http://www.openvms.compaq.com:8000/73final/6017/6017pro.html</a>  PDF documents (both volumes) can be accessed from: <a href="http://www.openvms.compaq.com:8000/index.html - ovmsdocset">http://www.openvms.compaq.com:8000/index.html - ovmsdocset</a>	<b>Volume 1</b> <ul style="list-style-type: none"><li>• Booting Without Startup and Login Procedures (Section 4.4.2)</li><li>• Booting and Startup Processes (Section 4.1.1)</li><li>• Conversational Boot: For Special Booting Functions (Section 4.1.3.2)</li><li>• System Startup and STARTUP.COM (Section 4.1.4)</li><li>• Booting While Displaying Startup Procedure Commands (Section 4.5.4)</li><li>• Performing an Emergency Shutdown Using Console Commands (Section 4.8.6)</li><li>• Understanding Site-Specific Startup Command Procedures (Section 5.2.1)</li><li>• Modifying SYSTARTUP_VMS.COM to Perform General Operations (Section 5.2.7)</li><li>• Modifying Login Command Procedures to Customize User Environments (Section 5.3)</li><li>• Understanding the Layered Product Startup Database (Section 5.4.2)</li></ul>

Title/Part Number	Chapter/Section Titles <sup>1</sup>
	<ul style="list-style-type: none"><li>• Setting Correct Time Zone Information on Your System (Section 6.1)</li><li>• Setting Time Zone Information on OpenVMS VAX Systems (Section 6.3)</li><li>• Setting Time in an OpenVMS Cluster Environment (Section 6.4)</li><li>• Preparing to Add User Accounts (Section 7.5)</li><li>• Restricting the Use of Accounts (Section 7.8)</li><li>• Understanding Device Names (Section 8.1)</li><li>• Getting Information About Devices on the System (Section 8.2)</li><li>• Setting Security Protection Characteristics on Devices Section 8.3)</li><li>• Connecting Devices and Loading Device Drivers (Section 8.4)</li><li>• Automatically Configuring Devices for OpenVMS Alpha Systems (Section 8.5)</li><li>• Understanding Extended File Specifications Features (Section 10.1)</li><li>• Displaying Information About Queue Managers (Section 13.4)</li><li>• Customizing Queue Manager Failover (Section 13.6)</li><li>• Stopping and Restarting the Queue Manager (Section 13.7)</li><li>• Using Multiple Queue Managers (Section 13.8)</li><li>• Managing Passwords (Section 12.2)</li><li>• Using Intrusion Detection Mechanisms (Section 12.3)</li><li>• Planning Your Queue Setup (Section 14.3)</li><li>• Creating and Starting Queues (Section 14.4)</li></ul> <p><b>Volume 2</b></p> <ul style="list-style-type: none"><li>• Recommended Method for Changing Parameter Values (Section 15.2)</li><li>• Tracking Resource Use (Section 21)</li></ul>
<b>OpenVMS Upgrade and Installation Manual</b> AA-QSI8D-TE <a href="http://www.openvms.compaq.com:8000/73final/6629/6629">http://www.openvms.compaq.com:8000/73final/6629/6629</a> <a href="#">PRO.HTML</a>	Backing Up and Restoring the System Disk (Appendix B)
<b>OpenVMS User's Manual</b> AA--PV5JD-TK <a href="http://www.openvms.compaq.com:8000/73final/6489/6489">http://www.openvms.compaq.com:8000/73final/6489/6489</a> <a href="#">pro.html</a>	<ul style="list-style-type: none"><li>• Logical Names (Section 1.7)</li><li>• Symbols (Section 1.8)</li><li>• Lexical Functions (1.10)</li><li>• Constructing DCL Commands (Sections 3.2)</li><li>• Defining Foreign Commands (Section 14.2.3)</li><li>• Understanding Symbol Substitution (Section 14.12)</li></ul>
<b>OpenVMS VAX System Dump Analyzer Utility Manual</b> AA--PV6TD-TE <a href="http://www.openvms.compaq.com:8000/73final/4556/4556">http://www.openvms.compaq.com:8000/73final/4556/4556</a> <a href="#">PRO.html</a>	Saving System Dumps (Section 1.2)

Title/Part Number	Chapter/Section Titles <sup>1</sup>
<b>OpenVMS Version 7.x New Features Manual</b> AA-QSBFC-TE	See the Exam Objectives section of this preparation guide for appropriate study topics.
<b>POLYCENTER Software Installation Utility Developer's Guide</b> AA--Q28MD--TK <a href="http://www.openvms.compaq.com:8000/73final/5952/5952PRO.html">http://www.openvms.compaq.com:8000/73final/5952/5952PRO.html</a>	Product Description Language (PDL) Evolves Over Time (Section 7.1)
<b>VMS Developer's Guide to VMSINSTAL</b> AA-LA99A-TE (archived) Can be accessed from: <a href="http://www.openvms.compaq.com:8000/index.html#ovmsd ocset">http://www.openvms.compaq.com:8000/index.html#ovmsd ocset</a>	Choosing VMSINSTAL Options, Installer's Options (Section 1.4.1)
<b>Volume Shadowing for OpenVMS</b> AA--PVXMG--TE <a href="http://www.openvms.compaq.com:8000/73final/5423/5423pro.html">http://www.openvms.compaq.com:8000/73final/5423/5423pro.html</a>	<ul style="list-style-type: none"><li>• Adding Shadow Set Members (Section 4.5)</li><li>• Mounting a Shadow Set on Other Nodes in the Cluster (Section 4.6)</li><li>• Why Use Minicopy? (Section 7.3)</li></ul>
<b>OpenVMS System Messages: Companion Guide for Help Message Users</b> AA--PV5TD--TK <a href="http://www.openvms.compaq.com:8000/73final/6023/6023pro.html">http://www.openvms.compaq.com:8000/73final/6023/6023pro.html</a>	Format of System Messages (Section 1.1)
<b>OpenVMS Release Notes</b> AA--QSBTD--TE <a href="http://www.openvms.compaq.com:8000/73final/6637/6637PRO.html">http://www.openvms.compaq.com:8000/73final/6637/6637PRO.html</a>	Upgrade Paths (Section 1.2)

## Section 2: Sample Exam Questions

### Sample Exam Questions

This set of sample exam questions will help you become familiar with the types of questions on the exam. This set of questions is NOT intended to test your readiness for the exam, since the questions do not cover every test objective. None of these questions is contained on the actual exam. The actual exam questions may be more or less difficult than this set of questions.

After answering these questions, check your responses using the answer key provided at the end of this section.

1. The AUTHORIZE utility can be used to maintain:
  - A. The password file
  - B. The User Authorization File only
  - C. The User Authorization File, the Rights list Database, and the network Proxy database
  - D. User directories
  
2. Which command is used to display the status of ALL output execution queues?
  - A. SHOW QUEUE/DEVICE
  - B. SHOW QUEUE/EXECUTION
  - C. SHOW QUEUE/OUTPUT
  - D. SHOW QUEUE/STATUS
  
3. Window turns and split transfers indicate:
  - A. File optimizations are being performed
  - B. Non-paged pool is fragmented
  - C. Disks contain fragmented files
  - D. Data files need to be installed with the /SHARE qualifier
  
4. Artificial swapping occurs when:
  - A. You are swapping intelligently
  - B. You have run out of balance set slots
  - C. You have run out of virtual memory
  - D. You have run out of page file space

5. Which is true about the QUANTUM SYSGEN parameter:
  - A. It is charged per process, based on CPU time
  - B. It is charged system-wide, based on CPU time
  - C. It is charged per process, based on wall clock time
  - D. It is charged system-wide, based on wall clock time
  
6. Which parameter determines the initial size of a process working set?
  - A. WSDEFAULT
  - B. WSEXTENT
  - C. WSINIT
  - D. WSQUOTA
  
7. When do you usually need to register a Product Authorization Key (PAK)?
  - A. After you install the product software
  - B. Before you install the product software
  - C. Before you read the product documentation
  - D. After users begin to use the product
  
8. Which command displays the amount of free space and total space on a disk volume?
  - A. SHOW VOLUME
  - B. SHOW QUOTA
  - C. SHOW DEVICE/FULL
  - D. SHOW ALL
  
9. Which command is used to assign privileges to users?
  - A. AUTHORIZE
  - B. AUTOGEN
  - C. MODPARAMS
  - D. SETPRIV
  
10. Which logical name designates a system wide login command procedure?
  - A. SYS\$LOGIN
  - B. SYS\$LOGIN\_PROCEDURE
  - C. SYS\$SYLOGIN
  - D. SYS\$SYSTEM

11. What are the TWO types of queues on an OpenVMS system?
- A. BATCH and OUTPUT
  - B. BATCH and GENERIC
  - C. GENERIC and EXECUTION
  - D. GENERIC and OUTPUT
12. Which utility is used to manage processes on remote nodes?
- A. AUTHORIZE
  - B. LATCP
  - C. NCP
  - D. SYSMAN
13. You are incurring a high page hard fault rate (approximately 50 per second). The free page list is large (approximately 20000 pages).
- You should:
- A. Add more memory
  - B. Increase working set sizes
  - C. Decrease working set sizes
  - D. Install images /SHARE
14. High MP Synchronization time indicates:
- A. You have contention for spinlocks and should attempt to reduce Interrupt state time
  - B. Too much user mode time
  - C. You need another CPU
  - D. The SPINWAIT SYSGEN parameter needs to be increased

## **Answer Key**

<b>#</b>	<b>Answer</b>
1.	C
2.	A
3.	C
4.	B
5.	A
6.	A
7.	B
8.	C
9.	A
10.	C
11.	C
12.	D
13.	B
14.	A

## **Conclusion**

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