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 and reference and study materials to help you achieve a passing score. Studies conducted by HP 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 designed for IT personnel, technical presales and service professionals who have been supporting OpenVMS systems for 3 to 5 years. The primary network administration tasks that are tested include, but are not limited to:

- Planning and design of OpenVMS-based systems and solutions
- Capacity planning
- O/S installation, upgrade, and configuration
- Integration of the O/S with network components and services, and storage subsystem/SAN
- Tuning and optimization
- System administration and management
- Troubleshooting

Prerequisite

This exam (HP0-450), together with the OpenVMS v7 Network Administration Exam #HP0-436, represents the requirements for the HP Certified System Engineer credential for OpenVMS.

This exam assumes that candidates have passed the OpenVMS System Administration Exam #HP0-651. Although you can register for this exam without first passing the HP0-651 exam, you are more likely to pass the HPO-450 exam if
you have first mastered the knowledge and skill areas covered in the HP0-651 exam.

Additionally, to obtain the HP Certified System Engineer credential for OpenVMS, you must first obtain the HP Certified System Administrator credential for OpenVMS.

**Exam Details**

- Number of questions: 71
- Time allotted to take the exam: 75 minutes
- Passing score: 57%
- No on-line or hard copy sources may be referenced during the exam.

**Exam Content**

The following outline describes the specific areas covered in the exam. The approximate percentage of exam questions dedicated to each major content area is noted in parentheses.

1. **Describe, Apply OpenVMS Architectural Concepts, Features and Benefits (15%)**
   - Describe/apply file system concepts and structure
   - Describe/apply performance features and concepts
   - Describe/apply process-related concepts
   - Describe/apply synchronization techniques and concepts
   - Describe/apply system resource management features and concepts
   - Describe/apply clustering capabilities, features and concepts

2. **Plan and Design an OpenVMS-based System/Solution (8%)**
   - Define system migration requirements and develop migration strategy (VAX to Alpha)
   - Map customer requirements (system and business) to appropriate HP/non-HP solution(s)
   - Plan/design configuration

3. **Configure and Implement an OpenVMS/AlphaServer System/Solution (20%)**
   - Plan and perform upgrades and installations (hardware and software)
   - Plan and perform migration
   - Configure the file system features
   - Configure performance features on a new system
   - Configure clustering capabilities
   - Configure Galaxy
   - Implement and maintain configuration

4. **Integrate OpenVMS with Network and Storage Subsystem/SAN (9%)**
   - Configure storage
   - Configure network

5. **Tune and Optimize an OpenVMS/AlphaServer System (13%)**
- Analyze performance
- Tune OpenVMS for optimal performance
- Capacity planning/manage system resources
- Choose/use appropriate system utilities and monitoring tools to perform tuning tasks
- Solve performance problems

6.0 Manage an OpenVMS System/Cluster Environment (25%)
- Manage storage environment
- Administer and manage network services on OpenVMS
- Maintain security/access controls
- Perform basic system backups
- Manage clusters
- Manage Galaxy

7.0 Troubleshoot Complex System Problem(s) (9%)
- Given a problem whose scope has been defined, diagnose the problem
- Given a problem diagnosis, implement the solution or corrective action

Recommended Training Courses and Documents

This section lists training courses and documents that can help you acquire the knowledge and skills needed to pass the exam. However, you must also possess some practical experience. Specifically, you should have 3-5 years experience installing and administering AlphaServer systems running OpenVMS.

The exam content outline above provides a useful checklist of the major competency areas in which you should have hands-on experience.

You are not required to take the courses listed in this section before taking the exam. However, HP 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

The HP Educational Services courses that support this exam include:

- HP OpenVMS System Management I: Essentials for Established Systems (u3724s)
- HP OpenVMS System Management II: Installation, Configuration, and Customization (u3725s)
- Managing Complex HP OpenVMS Systems (u3726s)
- HP OpenVMS System Performance Management (u3727s)
- TCP/IP services for HP OpenVMS (u3728s)
- HP Open VMS Internals for System Managers (u3729s)
To determine course availability, schedules and to register for courses, follow the links at [http://education.hp.com/openvms/](http://education.hp.com/openvms/) to the information for your geographic area.

**Documentation**

This section lists reference documents that describe the major competencies, technologies, and concepts covered in the exam. **HP 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.

You can access most references at the following locations:

- OpenVMS Operating System Documentation  
- OpenVMS DECnet Documentation  
- OpenVMS DECnet-Plus Documentation  

<table>
<thead>
<tr>
<th>Title/Part Number</th>
<th>Chapter/Section Titles</th>
</tr>
</thead>
</table>
| **HP TCP/IP Services for OpenVMS Installation and Configuration**  
AA-LU49P-TE  
Chap 2: Installing TCP/IP Services  
Chap 3: Configuring TCP/IP Services  
Appendix A: Sample New TCP/IP Services Installation and Configuration |
| **HP DECnet-Plus for OpenVMS Installation and Basic Configuration**  
AA-OQPSUB-TE  
Part 2: DECnet-Plus for OpenVMS Basic Configuration |
| **HP Guidelines for OpenVMS Cluster Configurations**  
AA-Q28LG-TK  
Chap 2: Determining Business and Application Requirements  
Chap 3: Choosing OpenVMS Cluster Systems  
Chap 4: Choosing OpenVMS Cluster Interconnects  
Chap 5: Choosing OpenVMS Cluster Storage Subsystems  
Chap 6: Configuring Multiple Paths to SCSI and Fibre Channel: Storage  
Chap 7: Configuring Fibre Channel as an OpenVMS Cluster Storage Interconnect  
Chap 8: Configuring OpenVMS Clusters for Availability  
Chap 9: Configuring CI OpenVMS Clusters for Availability and Performance |

1. Section numbers may change during documentation updates.
<table>
<thead>
<tr>
<th>Title/Part Number</th>
<th>Chapter/Section Titles</th>
</tr>
</thead>
<tbody>
<tr>
<td>HP OpenVMS Advanced Administration, Performance, and Support exam # HP0-450 Exam Preparation Guide</td>
<td>Chap 10: Configuring OpenVMS Clusters for Scalability Chap 11: OpenVMS Cluster System Management Strategies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Title/Part Number</th>
<th>Chapter/Section Titles</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Title/Part Number</th>
<th>Chapter/Section Titles</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Title/Part Number</th>
<th>Chapter/Section Titles</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Title/Part Number</th>
<th>Chapter/Section Titles</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Title/Part Number</th>
<th>Chapter/Section Titles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Title/Part Number</td>
<td>Chapter/Section Titles</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>HP OpenVMS Advanced Administration, Performance, and Support exam # HP0-450 Exam</td>
<td></td>
</tr>
<tr>
<td>hp.com/doc/os73_index.html</td>
<td></td>
</tr>
<tr>
<td>Title/Part Number</td>
<td>Chapter/Section Titles</td>
</tr>
<tr>
<td>(URL references are for indexes on the HP documentation web site where both pdf and html format manuals may be found)</td>
<td></td>
</tr>
<tr>
<td><strong>Title/Part Number</strong></td>
<td><strong>Chapter/Section Titles</strong></td>
</tr>
</tbody>
</table>
Chap 13: Compensating for CPU-Limited Behavior  
Appendix A: Decision Trees                                                                 |
| AA-PV5PH-TK (Vol. 1)                                                              |                                                                                                                                                           |
| http://h71000.www7.hp.com/doc/os73_index.html                                      |                                                                                                                                                           |
| HP OpenVMS System Management Utilities Reference Manual M-Z                        | Chap 1: Authorize Utility  
Chap 2: AUTOGEN Utility  
Chap 3: Backup Utility  
Chap 11: Install Utility  
Appendix G: Valid Combinations of BACKUP Qualifiers  
Appendix J: System Parameters                                                                 |
| AA-PV5QH-TK (Vol. 2)                                                              |                                                                                                                                                           |
| http://h71000.www7.hp.com/doc/os73_index.html                                      |                                                                                                                                                           |
| HP OpenVMS System Manager’s Manual Vol. 1: Essentials                             | Volume 1  
Chap 1: Overview of This Manual  
Chap 2: Using OpenVMS System Management Utilities and Tools  
Chap 3: Installing, Upgrading, and Updating Software  
Chap 4: Starting Up and Shutting Down the System  
Chap 5: Customizing the Operating System  
Chap 6: Setting the System Time  
Chap 7: Managing User Accounts  
Chap 8: Managing Peripheral Devices  
Chap 9: Managing Storage Media  
Chap 10: Using Files and Directories  
Chap 11: Using BACKUP  
Chap 12: Security Considerations  
Chap 13: Managing the Queue Manager and Queue Database  
Chap 14: Setting Up and Maintaining Queues  
**Volume 2**  
Chap 1: Managing System Parameters  
Chap 2: Managing Page, Swap and Dump Files  
Chap 3: Performance Considerations  
Chap 4: Managing File System Data Caches  
Chap 6: Getting Information About the System                                                                 |
| AA-PV5MH-TK (Vol. 1)                                                              |                                                                                                                                                           |
| **HP OpenVMS System Manager's Manual: Tuning, Monitoring and Complex Systems**     |                                                                                                                                                           |
| AA-PV5NH-TK (Vol. 2)                                                              |                                                                                                                                                           |
| http://h71000.www7.hp.com/doc/os73_index.html                                      |                                                                                                                                                           |
| HP OpenVMS Alpha Version 7.3-2 New Features and Documentation Manual              | Part 1  
Chap 1: Summary of OpenVMS Version 7.3 New Features  
Chap 2: General User Features  
Chap 3: System Management Features                                                                 |
| AA-RV8XA-TE                                                                      |                                                                                                                                                           |
| http://h71000.www7.hp.com/doc/os73_index.html                                      |                                                                                                                                                           |
| HP Volume Shadowing for OpenVMS                                                   | Chap 1: Introduction to Volume Shadowing for OpenVMS  
Chap 3: Preparing to Use Volume Shadowing  
Chap 4: Creating and Managing Shadow Sets Using DCL Commands  
Chap 6: Ensuring Shadow Set Consistency  
Chap 8: Performing System Management Tasks on Shadowed Systems                                                                 |
| AA-PVXJM-JE                                                                       |                                                                                                                                                           |
| http://h71000.www7.hp.com/doc/os73_index.html                                      |                                                                                                                                                           |

6
Related documentation

One or more exam items reference the following documents. You should have a general familiarity with these documents.

- **HP OpenVMS DCL Dictionary**
  Order Number: AA-PV5KJ-TK (Vol. 1)
  AA-PV5LJ-TK (Vol. 2)

- Availability Manager User’s Guide

- OpenVMS I/O User’s Reference Manual
  Order Number: AA-PV6SF-TK

- OpenVMS License Management Utility Manual
  Order Number: AA-PVXUF-TK

- OpenVMS Linker Utility Manual
  Order Number: AA-PV6CD-TK

- OpenVMS Programming Concepts Manual
  Order Number: AA–RNSHB–TE (Vol. 1)
  AA–PV67F–TK (Vol. 2)

- OpenVMS System Services Reference Manual
  Order Number: AA-QSBMF-TE (Vol. 1)
  AA-QSBNF-TE (Vol. 2)

Conclusion

HP wishes you success in the HP Accredited Professional Program and in passing this exam. Acquiring the certification this exam supports provides you with a globally recognized credential that reflects your level of skill on the HP OpenVMS operating system.