



## Exam Preparation Guide

# HPO-P19: HP-UX High Availability Using Serviceguard v18

The intent of this guide is to set expectations about the context of the exam and to help candidates prepare for it. Recommended training to prepare for this exam can be found at The Learning Center. It is important to note that although training is recommended for exam preparation, successful completion of the training alone does not guarantee that you will pass the exam. In addition to training, exam items are based on knowledge gained from on-the-job experience and application as well as other supplemental reference material that may be specified in this guide.

### HP certification

The HP Certified Professional community is a network of qualified HP channel partners, customers, and employees who have taken the courses and studied the associated reference material necessary to pass the certification exams that earn HP Certified Professional credentials. The exams offered through the HP Certified Professional Program validate the skills and assure the competency of HP Certified Professionals. The knowledge and experience required to pass HP certification exams ensure that HP Certified Professionals are respected and valued throughout the industry.

### Audience

This exam is for advanced HP-UX professionals with at least 2-3 years of hands-on experience with HP-UX. Examples of job roles:

- System and network administrators, system integrators, support engineers, and technical consultants

### Relevant certifications

After passing this exam, your achievement may be applied toward more than one certification. To determine which certifications will be credited with this achievement, log into The Learning Center and view the certifications listed on the exam's More Details tab. You may be on your way to achieving additional HP certifications.

### Exam details

The following are details about the exam:

- Number of items: 60
- Item types: multiple choice, drag and drop, complex graphical
- Time commitment: 120 minutes
- Passing Score: 72%    Reference Material: No on-line or hard copy reference material will be allowed at the testing site.
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## 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.

<b>Objective</b>	
1.0	HA Concepts and Architecture – 12%
•	Describe the purpose, benefit, and implementation choices provided by high availability solutions.
•	Describe the various clustering types; including their benefits, strengths and weaknesses, and primary applications.
•	Identify OL* (OnLine Replacement, Addition, and Deletion) components and describe their benefit in a highly available architecture.
•	Describe the features and benefits of Virtual Server Environment with respect to high availability.
•	Identify the single points of failure (SPOF) in an HP-UX environment.
2.0	Serviceguard Concepts and Architecture – 16%
•	Describe how Serviceguard provides high availability during various failure scenarios.
•	Describe how operating system and network security affect your Serviceguard configuration.
•	Describe how operating system and application performance affect your Serviceguard configuration.
•	Identify the SAN architecture and volume management choices in a Serviceguard environment.
•	Identify additional Serviceguard cluster technologies to assist in HA designs for disaster tolerant solutions.
•	Identify the single points of failure (SPOF) that can be addressed by Serviceguard.
•	Describe the components, concepts and key functions of Serviceguard.



	<ul style="list-style-type: none"><li>• Define Serviceguard terminology.</li></ul>
	<ul style="list-style-type: none"><li>• Identify the components of HP Serviceguard Storage Management Suite (SMS) and Cluster File System (CFS) bundles.</li></ul>
3.0	Install, Configure and Test a Serviceguard Cluster – 29%
	<ul style="list-style-type: none"><li>• Validate a Serviceguard cluster implementation plan.</li></ul>
	<ul style="list-style-type: none"><li>• Setup and configure a basic Serviceguard cluster.</li></ul>
	<ul style="list-style-type: none"><li>• Configure LAN interfaces for Serviceguard usage.</li></ul>
	<ul style="list-style-type: none"><li>• Configure cluster arbitration.</li></ul>
	<ul style="list-style-type: none"><li>• Configure a basic package to run in a Serviceguard environment.</li></ul>
	<ul style="list-style-type: none"><li>• Verify a Serviceguard cluster operation and failover.</li></ul>
	<ul style="list-style-type: none"><li>• Identify special tasks necessary when installing a Serviceguard CFS cluster.</li></ul>
4.0	Manage and Customize Serviceguard – 27%
	<ul style="list-style-type: none"><li>• Create application monitoring scripts.</li></ul>
	<ul style="list-style-type: none"><li>• Add a package utilizing application monitoring scripts to an existing cluster configuration.</li></ul>
	<ul style="list-style-type: none"><li>• Utilize EMS resources within a package.</li></ul>
	<ul style="list-style-type: none"><li>• Perform package and cluster customization and optimization.</li></ul>
	<ul style="list-style-type: none"><li>• Use the Enterprise Cluster Master Toolkit (ECMT), HA-NFS Toolkit, and Developer’s Toolbox for integrating an application.</li></ul>
	<ul style="list-style-type: none"><li>• Describe and implement change management in a Serviceguard environment.</li></ul>
	<ul style="list-style-type: none"><li>• Use utilities that help manage Serviceguard clusters.</li></ul>
	<ul style="list-style-type: none"><li>• Identify special tasks necessary for Serviceguard CFS cluster management.</li></ul>
5.0	Troubleshooting Serviceguard Clusters – 13%
	<ul style="list-style-type: none"><li>• Identify and resolve common Serviceguard cluster configuration problems.</li></ul>
	<ul style="list-style-type: none"><li>• Identify and resolve package, failover, and errors on a Serviceguard cluster.</li></ul>
6.0	Serviceguard Extension for RAC (SGeRAC) – 3%
	<ul style="list-style-type: none"><li>• Identify concepts, architecture and operation of Serviceguard Extension for RAC (SGeRAC).</li></ul>



•	Determine the appropriate choices for volume and storage management in an SGeRAC environment.
•	Describe networking considerations in an SGeRAC configuration.

### Training

Recommended training to prepare for this exam is accessible from this exam's page in The Learning Center. See the exam attachment, Supporting courses, to view and register for the courses.

You are not required to take the associated courses; however, HP strongly recommends that you complete the training and thoroughly review all course materials and documents before taking the exam. Sufficient on-the-job experience may also be required.

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

### Additional study references

This section lists courses and documents that can help you prepare for the exam and acquire the knowledge necessary to achieve the associated credential. You must also gain the practical experience outline in this guide.

Title	Source/Order Number
HP-UX 11i v3 Manual Pages	<a href="#">11i v3 Manual Pages</a>
HP-UX 11i v3 system administration manuals	<a href="#">11i v3 System Administration</a>
HP-UX 11i v3 installation and update documentation	<a href="#">11i v3 Installing and Updating</a>

### Exam registration

To register for this exam, please go to the exam's description in The Learning Center: <http://www.hp.com/go/partnerlearning>

### Conclusion

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



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