HPE Master ASE – Hybrid IT Solutions Architect V1
OFFICIAL CERTIFICATION STUDY GUIDE
(EXAM HPE1-H01)

First Edition

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About the Author

Miriam Allred has spent the last 14 years configuring, testing, and troubleshooting HP and HPE Aruba wired and wireless networks. Miriam combines this wide range of technical expertise with pedagogy and instructional design training, allowing her to create technical training courses for both advanced and entry-level server, storage, and networking professionals. Miriam Allred has a Masters degree from Cleveland State University and a Bachelors degree from Brigham Young University.

Introduction

This study guide is based on the HPE course titled *Designing HPE Advanced Hybrid IT Solutions*. It is intended to help you study for the Designing HPE Advanced Hybrid IT Solutions certification exam (HPE1-H01).

This study guide and the related exam help you qualify for the HPE MASE – Hybrid IT Solutions Architect V1 certification. In addition to passing the HPE1-H01 exam, you must take an exam for an elective. Visit the following URL to learn all the requirements for the certification:

http://certification-learning.hpe.com/tr/index.html

Beyond certification, this guide will serve as a useful on-the-job reference for designing HPE Hybrid IT solutions based on customer needs.

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Audience

This book is designed for presales solution architects involved in supporting the sale of HPE Hybrid IT solutions. It is assumed that you have a broad understanding of HPE server, storage, networking, and management technologies, and how these can be best applied to achieve customer goals. Specifically, you aim to deepen your expertise in designing HPE Hybrid IT solutions based on industry-standard workloads and their characteristics.

Assumed Knowledge

The HPE MASE – Hybrid IT Solutions Architect V1 certification is an expert-level certification. Typical candidates for this certification include consultants, pre-sales engineers, sales engineers, systems engineers, and solutions architects. Candidates should have approximately 7 to 10 years of experience designing and implementing infrastructure solutions for specific workloads to achieve customer business outcomes.

Minimum Qualifications

The prerequisites for this study guide is the HPE ASE – Hybrid IT Solutions Architect V1 certification.

Relevant Certifications

After you pass these exams, your achievement may be applicable toward more than one certification. To determine which certifications can be credited with this achievement, log in to The Learning Center and view the certifications listed on the exam's More Details tab. You might be on your way to achieving additional certifications.

Preparing for Exam HPE0-H01

This self-study guide does not guarantee that you will have all the knowledge you need to pass the exam. This exam is unlike any other HPE exam you have taken and, therefore, requires a different preparation process. You are expected to draw upon skills and knowledge not only from this study guide and the preceding ATP and ASE level certifications, but also from years of experience in the field.

This exam will also be delivered in a completely new way. You will need to answer written questions about your knowledge and job skills in the Discrete Option Multiple Choice (DOMC) item format. You will also access mock-customer environments and answer questions or perform tasks in those environments.

This exam will be delivered online with a remote proctor. It will be in a new environment, through a new delivery provider. You will also register for the exam and access the exam using a new system. Before taking the exam, you should familiarize yourself with the new access method so you will be able to access the exam easily at your scheduled time. For more information, see Chapter 13.

Recommended HPE Training

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

Obtain Hands-on Experience

You are not required to take the recommended, supported courses, and completion of training does not guarantee that you will pass the exams. Hewlett Packard Enterprise strongly recommends a combination of training, thorough review of courseware and additional study references, and sufficient on-the-job experience prior to taking an exam.

Exam Registration

Carefully read all of the documentation found on the Registration link for this exam on the MyLearning portal. Since this exam goes through a different registration process and behaves differently than other HPE exams, the documentation will be critical to your success.

CONTENTS

1 Collecting Customer Information

EXAM OBJECTIVES

- ✓ Identify the customer's key business requirements and desired outcomes.
- ✓ Identify and collect key metrics for performance and application performance.
- ✓ Interpret customer requirements and establish criteria for selecting HPE solutions.
- ✓ Identify the HPE tools that can be used to help architects design and size a solution.

ASSUMED KNOWLEDGE

- Server and storage technologies
- Familiarity with HPE Portfolio

Introduction

You know that the hybrid IT solution you provide to your customers will not be successful if it does not meet their business and technical requirements. The challenge, however, is that your customer will probably not provide you with a complete list of requirements. In some cases, your customers may not completely understand or recognize what those requirements are.

This chapter helps you review the information you must collect so that you can determine your customers' requirements and ensure that you will successfully deliver the HPE hybrid IT solution they need.

Scenario: Designing solutions for a large healthcare provider

Throughout this study guide, you will focus on designing solutions for a fictitious healthcare provider called Healthcare X. As one of the largest healthcare providers in its city, Healthcare X consists of five hospitals with attached clinics and eight InstaCare facilities.

In addition to providing patient care, the hospitals host several medical research groups. Healthcare X also maintains offices for non-medical staff, including Human Resources (HR), financial, marketing, and developers for in-house applications.

Healthcare X recently hired a new CIO, who has been given the responsibility to provide the IT services that the organization needs to improve patient outcomes and become a leading research facility.

The CIO knows that the organization's legacy infrastructure must be updated. IT must provide the services to meet these two broad business goals. For example, the organization wants to:

- Offer patients customized services such as a personalized patient portal. The portal will provide services such as just-in time test results and a way for doctors to communicate directly with patients online.
- Help the organization gather new data (such as patient heart rate and blood pressure) and then store and analyze this data quickly. Doctors will then have additional insights to patients' health, helping them make better diagnosis and treatment plans.
- Reduce the time it takes to analyze data (from days or weeks to minutes or hours). Reducing the time it takes to analyze patient data will help health professionals provide better healthcare.
- Lead research into health issues such as autism. Healthcare X is starting a research group that will focus on mental health issues such as depression. The CIO wants to ensure that IT provides the services this research group needs to store and analyze the data. The CIO can then build on this success to arm other research groups with the tools and services they need to be successful.
- Ensure critical services are available to patients and doctors. As IT enhances the services it provides healthcare professionals and patients, they will begin to rely heavily on those services. The CIO wants to ensure these services are available in the unlikely event of a hardware or software failures and natural disasters.

Finally, the CIO wants to update the infrastructure and add the management tools the IT staff needs to reduce the time it takes to complete routine tasks. The CIO also wants to identify tools that can help IT monitor the infrastructure and detect possible issues before any problems actually occur. And knowing how critical IT services are to providing healthcare, the CIO wants to free up the IT staff so they can focus on innovation, implementing the IT services that will make a difference to the patients and healthcare professionals.

Design process

In this study guide, you will build on what you learned in the *HPE ASE – Hybrid IT Solutions Architect V1 certification*, to design HPE Hybrid IT solutions for more complex environments and workloads. You will follow the general process of designing solutions, which is outlined in Figure 1-1:

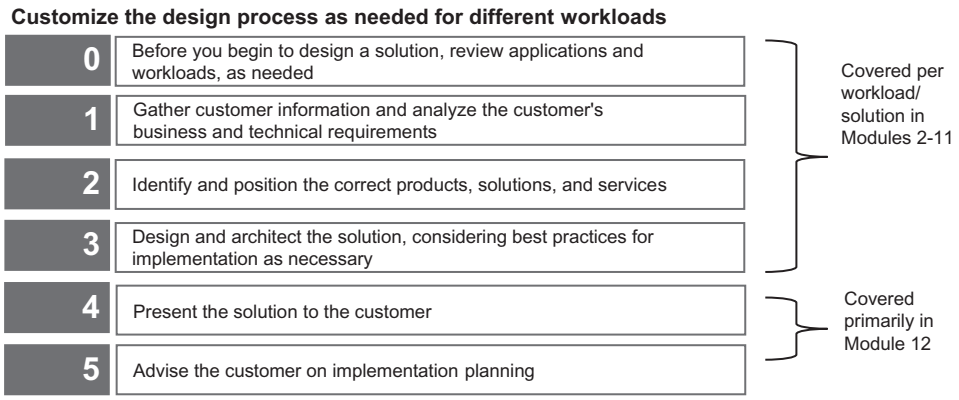

Figure 1-1: Design process

0. Before you begin designing the solution, you might need to learn more about the application and workload in question.

   For example, if big data solutions are new to you, you should acquire a basic background in big data use cases, the Hadoop framework, and other important concepts for big data solutions.

1. Gather customer information.
2. Analyze the customer's business and technical requirements.
3. Identify and position the correct products, solutions, and services.
4. Design and architect the solution.
5. Present the solution to the customer.
6. Advise the customer on implementation planning.

As you design solutions throughout this study guide, you will focus in particular on understanding and analyzing the workload requirements and designing a solution to meet those requirements.

In this chapter, you will begin by reviewing general strategies for discussing requirements with customers, documenting information about the customer's existing solutions and needs, and asking questions to uncover any missing information (if the customer does not provide you with all the information you need). You will follow the remaining steps in this process in the chapters that follow, as you design solutions.