

HPE Primera I: Management and Connectivity eLearning, Rev 23.23 HM9Q5AAE

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Delivery mode	eLearning
Course length	1 day
HPE course number	HM9Q5AAE

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The HPE Primera I: Management and Connectivity eLearning course provides an overview of the HPE Primera portfolio. Using hands-on labs, the course reviews how to perform common day-to-day management tasks, including creating the right data efficient volumes on an all-flash HPE Primera array, and leveraging the power of HPE InfoSight.

The course prepares learners for deeper follow-on training from HPE, including the HM9Q6AAE: HPE Primera II: Monitoring and Replication eLearning course.

NOTE: HPE Primera I: Management and Connectivity eLearning, has two components:

- 1. Web-based training available online
- 2. Hands-on practice, available through HPE Virtual Labs (HPE vLabs)

With this self-paced eLearning course, you have options normally unavailable with an instructor-led course. You have a year of access to the web-based portion of the training so that you may repeat sections for reinforcement. Take this training at your own pace and on your own schedule. You have one day of access to the HPE Virtual Labs to run the labs associated with this course.

Audience

Customers, administrators and channel partner sales or technical sales

Prerequisites

- An understanding of general storage concepts including fibre channel technology and RAID
- Operator level functionality in a Windows environment

Course objectives

After completing this course, the student should be able to:

- Identify the hardware and software that comprise the HPE Primera family
- Identify HPE Primera hardware building blocks
- Identify data protection and security features
- Identify HPE Primera software and management options for upgrade
- Select key components of the controller node architecture and identify the port numbering
- Identify the Data Services Cloud Console steps to onboard HPE Primera
- Identify administration tools for on-premises management, including features and third-party integration portfolios
- Perform the steps for HPE Primera initial setup, HPE Primera UI, and customer self update/repair options
- Select the definition of key provisioning
- Select the correct definitions of the concept of chunklets and logical disks

- Differentiate between HPE Primera concepts of a common provisioning group (CPG)
- Define thin provisioned virtual volumes (TPVV)
- Select the definition of key HPE Primera Data Reduction technologies
- Use SSMC and the CLI to work with hosts and storage
- Export virtual volumes (VV) to a host as VI UNs
- Prepare a host to access an HPE Primera Storage array
- Create hosts in an HPE Primera Storage array
- Identify the steps to add fibre channel (FC) ports to a host
- Identify the components of an iSCSI configuration
- Discuss the guidelines and rules regarding host sets and volume sets
- Select the advantages to the HPE Smart SAN for Primera
- Describe the use of HPE InfoSight to monitor HPE Primera and its surroundings
- Export virtual volumes (VV) to a host as VLUNs
- Unexport virtual volumes (VV) from a host
- Identify the advantages of host sets and volume sets
- Select the guidelines and rules regarding host sets and volume sets
- Identify the definition of application volume sets
- Create and maintain host sets and volume sets using Data Services Cloud Console, SSMC, and CLI
- Identify the advantages of HPE InfoSight
- Navigate the HPE InfoSight console
- Locate reports, array, and physical disk details from HPE InfoSight

Detailed course outline

Module 0: Course Overview		
Module 1: Solution Overview:	Lesson 1—Hardware Overview	Lesson 2—Software and features
	- HPE Primera hardware	- All-inclusive licenses
	- HPE Primera family	 Management options
	- HPE Primera hardware building blocks	- Persistency features
	- HPE Primera front and back view	
	- Controller and HBA	
	 Node port identification 	
	- Node architecture	
	- ASIC and interconnection	
	- Drive types and enclosures	
	- I/O path optimization	
	- Data-in-place upgrade	
Module 2: HPE Primera Management	Lesson 1: Manageability	Lesson 2: Initial setup
	- Options for management	- HPE Discovery Tool
	- HPE StoreServ Management Console (SSMC)	- Phases of initial setup
	- Data Services Cloud Console	- DSCC enablement
	– HPE Primera UI	Lab 1: Working with SSMC and CLI
	- Command line interface (CLI) overview	
	- Third-party integrations	
	- Self update	
	- Self repair	
Module 3: Storage Concepts and Terminology	Lesson 1: Provisioning terminology	Lesson 3: Thin Provisioning concepts
	- HPE Primera OS virtualization	- Thin provisioning overview
	- Virtualization concepts	- Thin provisioning advantages
	- Chunklet concepts	- Thin provisioning and VMware vSphere®
	- Virtualization advantages	- File system layout considerations
	 Controller node ownership 	- HPE Primera virtual lock feature
	- RAID concepts	- Data reduction overview
	Lesson 2: Common provisioning groups (CPGs)	- Capacity allocation
	- CPG creation	Lab 2: Storage configuration
	- High availability	
	 Virtual volume overview 	

Module 4: Host, Volume, and App Volume Sets	Lesson 1: Host connectivity and storage allocation	Lesson 4: HPE Host Explorer for HPE Primera
	- Host to HPE Primera front-end configuration: FC example	- HPE Host Explorer for HPE Primera features
	- HPE Primera persistent ports	- HPE Host Explorer for HPE Primera examples
	- HPE Primera OS 4.x host OS support	Lesson 5: HPE LUNInfo
	- iSCSI and DCB features	- Locating HPE LUNInfo
	- HPE Primera implementation guide	Lab 3: Host configuration and storage allocation
	Lesson 2: Host HBAs and WWNsHost	
	- HBAs and WWNs	
	- Commands and utilities	
	Lesson 3: HPE Smart SAN	
	- HPE Smart SAN overview	
	- HPE Smart SAN for HPE Primera features	
	- Using HPE Smart SAN for HPE Primera	
	- Making VLUNs visible to hosts	
Module 5: Host, Volume, and App volume sets	Lesson 1: Host and volume sets	Lesson 2: App volume sets
	- Host sets and virtual volume sets advantage	- Overview of creating app volume sets
	- Comparison of host and volume sets	- Steps to create app volume sets
	- Examples	Lab 4: Host, volume, and app volume sets
	- Data Services Cloud Console	
Module 6: HPE InfoSight	Lesson 1: HPE InfoSight sees and predicts behind the scene	Lab 5: Using HPE InfoSight
	- HPE InfoSight overview	
	- HPE InfoSight artificial intelligence (AI) operations	
	- HPE InfoSight user interface	
	- Reports and analysis	
	- Cross-stack analytics for VMware environments	
	- Software recommendations and updates	
Appendix 1: Selected Features Overview	HPE Virtual Domain software	Data protection solutions overview

Detailed lab outline

Lab 0: HPE vLabs Access	Exercise 1: Accessing HPE vLabs	
Lab 1: Working with SSMC and CLI	Exercise 1: Reviewing the SSMC GUI and online help	Exercise 5: Working with the SSMC activity screen
	Exercise 2: Reviewing the cashboard and changing output views	Exercise 6: SSMC hardware introduction
	Exercise 3: Accessing the SSMC settings screen	Exercise 7: Launching the CLI
	Exercise 4: Adding a user	
	Exercise in identify a deci-	
Lab 2: Storage Configuration	Exercise 1: Log in to SSMC	Exercise 3: Working with virtual volumes (VV) in SSMC
	Exercise 2: Working with CPGs in SSMC	 Exercise 3-1: Creating thin provisioned virtual volume.
		 Exercise 3-2: Creating thin provisioned volumes (TPVV) with data reduction enabled
		 Exercise 3-3: Creating multiple virtual volumes using a count
		 Exercise 3-4: Displaying, editing, and removing virtual volumes
		Exercise 4: Working with VVs using the CLI
Lab 3: Host Configuration and Storage Allocation	Exercise 1: Identify the HBA type (Windows)	Exercise 5: Windows host configuration formatting and
	Exercise 2: Determining host port WWNs	mounting VLUNs
	Exercise 3: Adding a host using HBA WWNs in SSMC	Exercise 6: Online virtual volume increase
	- Exercise 3-A: Adding a host using Host Explorer in SSMC	Exercise 7: Working with default reports
	 Exercise 3-B: Adding a host manually using HBA WWNs in SSMC 	 Exercise 8: Working with HPE 3PARInfo for HPE Primera and HPE 3PAR Exercise 9: Working with hosts and storage using the CLI
	Exercise 4: Export/unexport VLUNs in SSMC	
Lab 4: Host, Volume and App Volume Sets	Exercise 1: Working with host sets and virtual volume sets	Exercise 2: Working with app volume sets using SSMC
	- Exercise 1-1: Working with host sets in SSMC	Exercise 3: Working with host sets and volume sets using
	- Exercise 1-2: Working with virtual volume sets in SSMC	CLI
	 Exercise 1-3: Export virtual volume sets to hosts sets in SSMC 	
	 Exercise 1-4: Unexport virtual volume sets from hosts sets in SSMC 	
	 Exercise 1-5: Delete virtual volume sets and hosts sets in SSMC 	
Lab 5: Using HPE InfoSight	Exercise 1: Logging in and dashboard	Exercise 5: Reports
	Exercise 2: Access HPE InfoSight support	Exercise 6: HPE InfoSight scenarios (optional)
	Exercise 3: Array overview	- Exercise 6-1: Planning for growth
	Exercise 4: Physical disk details	Exercise 6-2: Using HPE InfoSight to troubleshoot

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