HPE Digital Learner SimpliVity Content Pack

This content pack provides knowledge and skills related to using and managing HPE SimpliVity for VMware vSphere®. It covers the HPE SimpliVity hardware and HPE SimpliVity OmniStack software. The course includes demonstrations, interactions and learning checks, as well as practice through simulation and hands-on labs using live equipment.

**Audience**

This content pack is recommended for infrastructure administrators and system engineers who need to learn how to administer HPE SimpliVity.

**Content Pack objectives**

By the end of the course, you should be able to:
- Describe hyperconvergence and the functionality of HPE SimpliVity
- Describe the HPE SimpliVity products’ physical characteristics and software architecture
- Describe the functionalities and layers of HPE SimpliVity Data Virtualization Platform
- Explain architectural designs on the node, cluster and federation levels
- Describe architectural concepts of the HPE SimpliVity topologies and datapaths
- Use the HPE SimpliVity vSphere user interface for management tasks
- Identify how VM data is stored across HPE SimpliVity clusters
- Create datastores and perform different tasks associated with HPE SimpliVity datastores
- Explain the various HPE SimpliVity operations like clone or move VM
- Create manual and policy-based backups and use them for restore
- Configure external stores for secondary backup
- Perform basic support tasks on the HPE SimpliVity Federation
- Use RapidDR to automate remote site recovery
- Run various commands to perform actions using the HPE SimpliVity CLI
- Use REST API components and functions
- Get backups and restore virtual machines using the REST API
- Access the interactive REST API reference

**Recommended learning**

HPE recommends that students have basic server, networking and hypervisor (vSphere) experience.

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*Realize Technology Value with Training IDC Infographic 2037, Sponsored by Hewlett Packard Enterprise, 2019*
## Detailed course outline

### HPE SimpliVity Overview

This eLearning course provides an introduction to hyperconvergence and the functionality of HPE SimpliVity. It also gives an overview of the hardware models and the software used in the solution. Finally, it shows where HPE SimpliVity fits into the bigger picture.

- **Product description**
  - Hyperconvergence, deduplication, resiliency
- **Hardware overview**
  - HPE SimpliVity models, components, accelerator card, configurations
- **Software overview**
  - The Data Virtualization Platform (DVP), HPE OmniStack REST API, OmniWatch and RapidDR

### HPE SimpliVity Theory of Operation

This eLearning course provides information about the HPE SimpliVity 380 and 2600 architecture and under-the-hood operation. It describes federation topologies, OVC failover, Intelligent Workload Optimizer, and the Arbiter.

- **HPE SimpliVity Federation**
  - HPE SimpliVity Federations and clusters
  - Deduplication
  - VM operations
  - Intelligent Workload Optimizer and Resource Balancer
- **HPE SimpliVity resiliency features**
  - Raid levels, cluster level data protection
  - RapidDR
  - Stretched cluster support
  - HPE SimpliVity and HPE StoreOnce integration
  - Replication, restoration and optimized backups

### HPE SimpliVity System Administration for vSphere

This eLearning course presents an overview of HPE SimpliVity administration tasks. Topics include an overview of the hyperconverged infrastructure, datacenters, clusters, HPE SimpliVity hosts, virtual machines and virtual machine templates, backups, restores, external stores, and various support details. It also includes simulated system access procedures, ‘try-its’ for practice, and learning checks as well as hands-on exercises on live HPE SimpliVity equipment.

- **HPE SimpliVity infrastructure**
  - Components, HPE SimpliVity plug-in for vSphere Client
  - HPE OmniStack host—network interfaces
  - HPE SimpliVity Arbiter and Virtual Controller
  - Management Virtual Appliance
  - External stores
  - Best practices
- **Federation**
  - Federation, scale and manageability, security
  - MVA deployment
  - Mixed software versions in a Federation
  - Federation security
- **Clusters, hosts and datastores**
  - Clusters
    - Intelligent Workload Optimizer
    - DRS rule creation
    - vSphere HA configuration
    - Stretched clusters
  - Backup reports
  - Hosts
    - View, shut down and remove
    - Standard ESXi hosts
  - Datastores
    - Create, resize, configure, manage and delete
- **VMs and VM templates**
  - Clone, move and save credentials for VSS
  - VM templates
- **Backups and restores**
  - Backups and backup policies
  - Restore a VM or template
  - File level restore
  - Restore VSS backups
- **External stores and standard ESXi Hosts**
  - Register, backup and restore
  - Datastores and standard ESXi hosts
- **Support details**
  - VMware pre-configured and HPE SimpliVity-specific alarms
  - Create a support capture
- **Hands-on labs**
  - Access software components, edit backup policies, add datastores, clone and move a VM, create support capture file, create a RapidDR recovery configuration

### HPE SimpliVity CLI and REST API Operations

The course covers a range of HPE SimpliVity administration actions executed using the CLI and REST API commands and scripts. It also includes interactive demo recordings, learning checks and hands-on exercises on live HPE SimpliVity equipment.

- **Introduction to HPE SimpliVity management**
  - Common SimpliVity administration tasks
- **HPE SimpliVity CLI**
  - Accessing the Virtual Controller CLI, user requirements, commands
- **HPE SimpliVity REST API**
  - Interacting with the REST API
  - Object relationship
  - SimpliVity PowerShell module
  - REST API examples
- **Hands-on labs**
  - Accessing the CLI through vCenter Web Client console and through a terminal emulator, exploring backup policy, datastore, VM, backup, restore and shutdown commands, the interactive REST API reference and calls through PowerShell