



Szkolenie: HPE
HPE Storage: Containers and Automation



Cel szkolenia:

This course provides hands-on learning for developers and administrators who create automation and integration applications. The course focuses on:

- Automating container applications using HPE storage arrays
- HPE modules for Ansible-enabled automated storage provisioning
- SDK to communicate with the HPE storage array over the WSAPI REST interface
- HPE Volume Plugin for Docker and the Container Storage Interface that provide persistent storage for your containerized applications and popular container platforms like Docker, Kubernetes, and OpenShift
- Tools and techniques to automate deployment of an application in Kubernetes with persistent storage

Course Objectives:

Upon completion of this course, students will be able to:

- Demonstrate the use of the WSAPI REST interface
- Configure and use a Docker environment using the Docker storage plug-in
- Configure a Kubernetes environment that uses HPE Primera/3PAR or HPE Nimble Storage

Audience:

Developers and administrators who create automation and integration applications

Plan szkolenia:

- Course Overview
 - Course overview and objectives
 - Course benefits
- Overview of Automating HPE Storage for a Container Environment
 - Benefits of HPE storage for containers
 - Containers and storage plugins overview



- Challenges in providing storage in a container environment
- Use cases
- DevOps CI/CD pipeline, IT operations, lift and shift, CaaS
- Storage operations for containers
- The need for a storage plug-in
- Using the Storage API
 - Storage API objects overview
 - Using the API for storage management
 - Using Curl to make API calls to storage API
 - Creating scripts to manage storage using the API
- Using PowerShell
 - Overview of PowerShell
 - Using PowerShell Invoke-RestMethod to access the storage API
 - Create and run PowerShell scripts to access the storage API
 - Install and use an HPE storage PowerShell toolkit to create scripts
- Using Ansible Automation for Storage Management
 - Installing and configuring Ansible modules for storage
 - Creating and managing storage volumes using Ansible playbooks
 - Orchestrating storage with Ansible playbooks
- Docker and Storage
 - Docker and storage overview
 - HPE Volume Plugin for Docker overview
 - Replication using RCG (replication groups)
 - Multi-array support
 - Multi-CPG support per array
 - Encrypted password support
 - Snapshot scheduling
 - Import volume capability
 - Deploying the plugin
 - Overview of the plug-in installation process
 - Installation in Docker
 - Installing and configuring the Docker plugin
 - Configuring and running an Ansible playbook for automatically deploying the HPE Volume Plugin for Docker
 - Installing and configuring the managed Docker storage plugin
 - Storage operations in Docker



- Creating and managing volumes
- Deploying a Docker application with volume creation
- File sharing operations
- Cloning and snapshots
- Cloning a volume using Docker tools
- Troubleshooting storage in Docker
- Kubernetes and Storage
 - Kubernetes overview
 - Storage in Kubernetes
 - Storage plugins for Kubernetes
 - Automated storage provisioning
 - Creating persistent volume claims
 - Setting the default storage class
 - Deploying an application with automated volume creation and attachment
 - Volume replication, backup and recovery operations

Using storage in a CI/CD environment

Wymagania:

Prior to this course, students should have experience with:

- Basic storage concepts
- Virtualization concepts, including Docker and Kubernetes
- Scripting or coding

Poziom trudności



Certyfikaty:

The participants will obtain certificates signed by HPE (course completion).

Prowadzący:

Authorized HPE Trainer.