Enterprise Computing Solutions - Education Services

TRAINING OFFERING

You can reach us at:

Arrow Enterprise Computing Solutions Ltd, Part 1st Floor, Suite 1D/1, Central House, Otley Road, Harrogate, HG3 1UG

Email: education.ecs.baltic@arrow.com
Phone: 0870 251 1000

Using NetApp Trident with Kubernetes

CODE:	LENGTH:	PRICE:
NEP_UATWK	24 Hours (3 days)	€2,850.00

Description

Learn how to install, configure, and use NetApp® Trident to manage Kubernetes with NetApp ONTAP® based storage systems. Deploy NetApp Trident by using the Trident operator and then use the tridentctl and kubectl methods to manage configurations. Configure NFS-backed, iSCSI-backed, NAS economy-backed, and NVMe-over-TCP (NVMe/TCP) backed storage. Manage Snapshot copies, expand volumes, and import non-NetApp Trident volumes to become managed volumes. Install and configure Trident Protect to protect Kubernetes applications by using snapshots and backups. Restore snapshots and backups in place and to new namespaces. Finally, protect applications across clusters by using cloning and asynchronous SnapMirror.
Written for Kubernetes v1.29, NetApp Trident 24.10, and NetApp Trident Protect 24.10.1, this course includes appendixes on Kubernetes certifications, operator design patterns to extend Kubernetes, and a GitOps introduction.

Objectives

This course focuses on enabling you to do the following:

- Describe Kubernetes storage concepts
- Explain how Trident makes managing persistent storage easier, and install Trident in a Kubernetes cluster
- Configure back ends, storage classes, and persistent volumes to use storage that Trident manages
- Use Trident to manage common scenarios
- Install and use Trident Protect to protect Kubernetes applications
- Protect across clusters by cloning and mirroring applications
- Monitor Trident by using Prometheus and Grafana
- Investigate security options to ensure a secure Kubernetes environment

Audience

- Systems Administrators
- Architects
- Integration Engineers

Prerequisites

Basic Linux Administration Skills

Programme

Module 1: Kubernetes Storage

- Persistent storage in Kubernetes
- Container storage
- Kubernetes storage concepts
- Static provisioning
- Dynamic provisioning

Module 2: Trident installation

- NetApp Trident details
- NetApp Trident installation

Module 3: Configuration

- Configure back ends
- Manage storage classes
- Create persistent volumes by using NetApp Trident
- Custom naming conventions

Module 4:Usage Scenarios

- Manage Snapshot copies
- Expand volumes
- Import volumes
- Manage multiple -zone storage
- Consumption and performance control
- Cross-namespace volume access

Module 5: Protection

- Trident Protect installation
- Application protection
- Application restoration
- Tridentctl-protect

Module 6: Business continuity

- Use cases
- Restoring an app to a new cluster
- Application mirroring
- MetroCluster support

Module 7: Monitoring

- Available options for monitoring NetApp Trident
- Monitor with Prometheus and Grafana

Module 8: Security

- SVM hardening
- NFS hardening
- iSCSI hardening

Module 9: Next steps

Appendix 1: Kubernetes Certifications

• Cloud Native Computing Foundation exams
• NetApp Kubernetes-related exams

Appendix 2:Introduction to operators

• Design patterns for extending Kubernetes
• Operators
• Example operator implementation

Appendix 3: GitsOps introduction

• GitOps definition
• Benefits of GitOps
• Set up Argo CD

Session Dates

On request. Please Contact Us

Additional Information

This training is also available as onsite training. Please contact us to find out more.