Arrow ECS Finland Oy - Education Services

# TRAINING OFFERING

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# ONTAP Troubleshooting - Partners

| CODE: | LENGTH: | PRICE: |
|---|---|---|
| NEP_OT-TS-P | 32 Hours (4 days) | €4,080.00 |

## Description

In this Partner-only course, you increase your proficiency as a NetApp® ONTAP® software engineer by learning how to troubleshoot ONTAP environments. Specifically, you learn how to troubleshoot the management component, scale-out networking, NAS protocols (NFS and SMB), and SAN protocols (iSCSI). From lectures, demonstrations, and active exercises, you learn how to isolate issues, verify configurations, view logs, view trace messages, and use event management system messages for troubleshooting.

## Objectives

- Describe the different software components in the ONTAP architecture
- Describe the methodologies for troubleshooting management component applications, networks, and protocols
- Use troubleshooting workflows to identify failure symptoms, determine potential causes, and resolve issues
- Use debugging commands, logs, and tools to identify, isolate, and fix complex technical issues that involve different core components
- Check the health of a cluster and summarize the results
- Identify issues with the management component
- Use administrative commands to verify the configuration of NFS, SMB, and iSCSI
- Use the troubleshooting methodology for NFS, SMB, and iSCSI to define and isolate issues
- Locate logs for the management component, network, NFS, SMB, and iSCSI protocols
- Collect data for support cases

## Audience

- NetApp Technical Support Engineers
- NetApp Support Services Certified Partner Engineers
- NetApp Professional Services Engineers

## Prerequisites

A working knowledge of ONTAP software and NAS and SAN protocol in addition to the course below..

**OT-CLU-A - ONTAP Cluster Administration**

## Programme

**Module 1: Troubleshooting the Management Component**

- Management component
- RDB Concepts: Units, Quorum, Master, Epoch and Epsilon
- Configuration and replication databases
- Job manager
- RDB backup and recovery
- Non-RDB user-space applications
- Event management system, logs, traces and user-space core files

**Module 2: Troubleshooting Scale-out Networking**

- ONTAP networking overview
- Networking-related management component application and databases
- Networking evolution
- Cluster session manager
- Tools to triage networking issues
- Troubleshooting scenarios

**Module 3: Troubleshooting Network Component and Security Services**

- Network component
- SecD
- SecD troubleshooting
- Network component troubleshooting

**Module 4: Troubleshooting NFS**

- NFS Overview
- How NFS works in ONTAP software
- ONTAP NFS authorization using export policies and UNIX permissions
- Export-related caches
- NFS troubleshooting

**Module 5: Troubleshooting SMB**

- SMB
- SMB services
- SMB troubleshooting

**Module 6: Troubleshooting Scalable SAN**

- SAN architecture
- Scalable SAN configuration
- Scalable SAN functional components
- CLAM quorum
- Scalable SAN troubleshooting

## Test and Certification

## Session Dates

| Date | Location | Time Zone | Language | Type | Guaranteed | PRICE |
|---|---|---|---|---|---|---|
| 15 Mar 2027 | Virtual Classroom (CET / UTC +1) | | English | Instructor Led Online | | €4,080.00 |
| 21 Jun 2027 | Virtual Classroom (CET / UTC +1) | | English | Instructor Led Online | | €4,080.00 |
| 20 Sep 2027 | Virtual Classroom (CET / UTC +1) | | English | Instructor Led Online | | €4,080.00 |
| 06 Dec 2027 | Virtual Classroom (CET / UTC +1) | | English | Instructor Led Online | | €4,080.00 |

## Additional Information

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