Arrow ECS Finland Oy - Education Services

TRAINING OFFERING

You can reach us at:

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ONTAP Hardware Troubleshooting – Partners Only

CODE:	LENGTH:	PRICE:
NEP_OT-HW-TS	24 Hours (3 days)	€3,060.00

Description

Discover the tools and techniques of NetApp® ONTAP® hardware analysis and troubleshooting. Learn to triage and gather the right data for all hardware cases, to work 60% to completion with no help, and to properly frame and get assistance to resolve the remaining 40%.

Objectives

This course focuses on enabling you to do the following:

• Troubleshoot system controllers, power supplies, fans, and add-in cards
• Troubleshoot storage shelf issues
• Troubleshoot disk failures
• Identify high availability issues
• Analyze RAID issues
• Identify troubleshooting tools

Audience

- Support Engineer
- limplementation Engineer
- Professional Services Engineer

Prerequisites

• Technical Support Engineer New Hire OnRamp Program
• Three months of experience taking support calls
• FAS, AFF, and ASA web-based training

Programme

This course includes the following modules, lessons, and exercises:

Module 1: Storage controller
Lessons
• System categories
• Storage controller components
• System memory
• Fans, PSUs, and LEDs
• SP and BMC
• Model-specific I/O expansion
• Add-on cards
• HA interconnect

Exercises
Discovering storage controller attributes

Module 2: Storage

Lessons
• Storage shelves
• Shelf components
• Shelf cables
• Disk drives and IOMs
• Shelf cabling
• Shelf protocols
• Logs

Exercises
Documenting system cabling

Module 3: Disks
Lessons
• Disk types
• Disk interfaces
• Encryption
• Disk ownership
• Common disk issues and error recovery
• Maintenance Center

Exercises
Managing a disk

Module 4: RAID
Lessons
• ONTAP RAID types
• RAID reconstruction
• Drive spares
• ADP
• RAID labels
• RAID and media scrubbing
• ASA r2

Exercises
Recovering RAID

Module 5: High availability
Lessons
• NVRAM mirroring
• Mailbox disks
• Failover and giveback
• Disk ownership
• Nonmaskable Interrupts and hardware panics

Exercises
Performing takeover and giveback

Module 6: Cluster high availability
Lessons
• Quorum and replicated databases
• Cluster high availability
• Epsilon
• Cluster switches and network connectivity
• Switch vendor support
Exercises
Investigating cluster connectivity issues

Module 7: Firmware
Lessons
• Automatic System Manager firmware updates
• Disk firmware upgrades
• IOM firmware upgrades
• SP and BMC firmware
• BIOS upgrades and issues
• Add-on PCIe card firmware upgrades

Exercises

Performing firmware validation

Module 8: AutoSupport
Lessons
• AutoSupport
• Automatically created cases

Exercises
Uploading AutoSupport messages manually

Module 9: Tools
Lessons
• Fix It
• Dexter
• Active IQ
• Hardware Universe and IMT
• Net2

Exercises
Using support tools
Using Net2

Further Information

Session Dates

Date	Location	Time Zone	Language	Type	Guaranteed	PRICE
22 Feb 2027	Virtual Classroom (CET / UTC +1)		English	Instructor Led Online		€3,060.00
17 May 2027	Virtual Classroom (CET / UTC +1)		English	Instructor Led Online		€3,060.00
02 Aug 2027	Virtual Classroom (CET / UTC +1)		English	Instructor Led Online		€3,060.00
22 Nov 2027	Virtual Classroom (CET / UTC +1)		English	Instructor Led Online		€3,060.00

Additional Information

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