Enterprise Computing Solutions - Education Services

# TRAINING OFFERING

**Skontaktuj się z nami**

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# ONTAP Hardware Troubleshooting – Partners Only

| Kod: | Czas trwania: | Cena netto: |
|---|---|---|
| NEP_OT-HW-TS | 24 Hours (3 days) | zł12,885.00 |

## 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%.

## Cel szkolenia

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

## Uczestnicy

- Support Engineer
- limplementation Engineer
- Professional Services Engineer

## Wymagania wstępne

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

## Program szkolenia

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

## Więcej informacji

## Terminy

Na żądanie. Prosimy o kontakt

## Dodatkowe informacje

Jeśli interesują Cię inne szkolenia tego producenta - skontaktuj się z nami.