ONTAP Hardware Troubleshooting – Partners Only

Cursusduur: 3 Dagen Cursuscode: NEP_OT-HW-TS

Beschrijving:

English - Please note this course is only available in English.
Nederlands - Let op: deze training is alleen in het Engels beschikbaar.
Français - Veuillez noter que ce cours est uniquement disponible en anglais.
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%.

Doelgroep:

Support Engineerlimplementation EngineerProfessional Services Engineer

Doelstelling:

- • 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

Vereiste kennis en vaardigheden:

• Technical Support Engineer New Hire OnRamp Program

• Three months of experience taking support calls

• FAS, AFF, and ASA web-based training

Cursusinhoud:

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

• 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

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

Exercises

Documenting system cabling

Module 3: Disks

Lessons

• Disk types

• Disk interfaces

• Encryption

• Disk ownership

• Common disk issues and error recovery

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

• Dexter

• Active IQ

• Hardware Universe and IMT

• Net2

Exercises

Using support tools

Using Net2

Nadere informatie:

Neem voor nadere informatie of boekingen contact op met onze Customer Service Desk 030 - 60 89 444

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