

## ***ST233c-EN ONTAP Troubleshooting***

### **Kurzbeschreibung:**

Analyse and identify Hardware- and Configuration issues

### **Zielgruppe:**

**Experience NetApp Partner employees**

### **Voraussetzungen:**

NCDA certification and several years of ONTAP experience is absolutely necessary.

### **Sonstiges:**

**Dauer:** 5 Tage

**Preis:** 4700 Euro plus Mwst.

### **Ziele:**

In this workshop the students learn methods to analyse hard- and software problems and how to use tools to check the system configuration.

## Inhalte/Agenda:

- ♦ ONTAP Troubleshooting
  - ♦ ♦ Clustershell Tipps and Tricks
  - ♦ ♦ Systemshell and FreeBSD
  - ♦ ♦ Kernel modules and Cluster Services
  - ♦ ♦ Essential Processes and Watchdog Daemon
  - ♦ ♦ Replicated Databases, Epsilon and Quorum
  - ♦ ♦ Configuration Databases
  - ♦ ♦ Job Manager and Scheduling
  - ♦ ♦ SK (simple kernel)
  - ♦ ♦ Logs and Traces
- ♦ Network Troubleshooting
  - ♦ ♦ Ports (physical, IFGRP, VLAN)
  - ♦ ♦ LIFs (Backend and Frontend)
  - ♦ ♦ IPspaces, Broadcast Domains and Failover Groups
  - ♦ ♦ Firewall policies
  - ♦ ♦ Multitenancy with DNS, AD, NIS and LDAP
  - ♦ ♦ Cluster Interconnect and Cluster Session Manager (CSM)
- ♦ Troubleshooting of NAS protocols:
  - ♦ ♦ SecD, Authentication and Usermapping (multiprotocol)
  - ♦ ♦ important Caches
  - ♦ ♦ NFS Services and configuration
  - ♦ ♦ NFS Filehandles
  - ♦ ♦ CIFS Services and configuration
  - ♦ ♦ User permissions
  - ♦ ♦ sectrace
- ♦ Troubleshooting of SAN protocols:
  - ♦ ♦ MPIO and ALUA
  - ♦ ♦ Selective LUN mapping
  - ♦ ♦ bcomd and other Internals
  - ♦ ♦ Logs and Traces