

# ONTAP SAN Advanced Troubleshooting



Delivery: Instructor-led training (ILT)

Duration: 2 days or hours

Audience: Partners and employees

## Course Description

Learn how to troubleshoot NetApp® ONTAP® SAN issues at an advanced level. Analyze the key ONTAP components and processes that are responsible for SAN processing. Identify configuration issues on storage controllers, in the fabric, and on the host. Troubleshoot common issues and identify the root causes.

## Role

Support engineers, implementation engineers, and professional services

## Prerequisites

- Learners should have experience troubleshooting ONTAP based storage systems.
- Learners should have experience with SAN environments.

## Objectives

This course focuses on enabling you to do the following:

- Analyze ONTAP SAN components and Cluster Transaction Manager (CTRAN) groups
- Troubleshoot cluster interconnect issues
- Discover LUN and namespace mapping and pathing
- Investigate storage states and zoning issues
- Examine LIF “up/down” scenarios and LUN space errors
- Troubleshoot quorum issues
- Examine the SCSI unmap process
- Identify the SRAM dump process

## Course Content

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

Module	Lessons	Exercises
<b>Module 1: ONTAP SAN core troubleshooting</b>	<ul style="list-style-type: none"><li>• ONTAP SAN architecture</li><li>• BCOMKA</li><li>• Cluster network</li><li>• CTRAN groups</li><li>• SLUR</li></ul>	Examining cluster services
<b>Module 2: LUN and namespace access</b>	<ul style="list-style-type: none"><li>• LUN and namespace mapping</li><li>• Storage pathing</li><li>• Storage states</li><li>• Zoning</li></ul>	Accessing LUNs and namespaces
<b>Module 3: SAN LIF and storage availability</b>	<ul style="list-style-type: none"><li>• FCP LIF “up/down”</li><li>• LUN space issues</li></ul>	Examining SAN LIF and storage availability
<b>Module 4: Additional SAN troubleshooting</b>	<ul style="list-style-type: none"><li>• SAN quorum</li><li>• SCSI unmap</li><li>• SRAM dump</li></ul>	Performing additional SAN troubleshooting

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