

Automating ONTAP REST APIs with Ansible



Delivery: Instructor-led training (ILT)

Duration: 2 days

Course Description

Discover how to automate administration of a NetApp® ONTAP® based storage system by using ONTAP REST APIs and Ansible. Explore how to use the Ansible framework to automate and deploy storage administration tasks by calling ONTAP modules from Ansible playbooks. Also, learn how to configure your system for SMB, NFS, Simple Storage Service (S3), and SAN protocols.

Role

- Administrator, engineer, architect, and operator
- Sales, customer success manager, solutions engineer (SE), architect, support engineer, implementation engineer, and professional services

Prerequisites

ONTAP Cluster Administration

Objectives

This course focuses on enabling you to do the following:

- Analyze ONTAP REST APIs and Ansible frameworks.
- Explore how to call ONTAP modules from within Ansible playbooks to automate storage administration tasks.
- Configure SMB, NFS, S3, and SAN protocols programmatically by using Ansible playbooks.
- Identify the performance metrics of the ONTAP based storage system.

Course Content

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

Module	Lessons	Exercises
Module 0: Welcome	Architecture of the lab environment	<ul style="list-style-type: none">• Connecting to your ONTAP cluster• Verifying that the required licenses are installed• Copying the source code files from the GitHub repository• Adding the courseware to the IDE
Module 1: ONTAP REST API	<ul style="list-style-type: none">• What is REST API?• ONTAP REST API documentation	
Module 2: Automation using Ansible	<ul style="list-style-type: none">• Introduction to Ansible• Basics of Ansible• Install Ansible• YAML• Ansible playbooks• Ansible modules• Coding demonstrations of simple playbooks	<ul style="list-style-type: none">• Gaining familiarity with Ansible• Configuring cluster1
Module 3: SMB configuration	<ul style="list-style-type: none">• SMB configuration via Ansible	Creating Ansible playbooks to configure SMB
Module 4: NFS configuration	<ul style="list-style-type: none">• NFS configuration via Ansible	Creating Ansible playbooks to configure NFS

Module	Lessons	Exercises
Module 5: S3 configuration	S3 object storage configuration via Ansible	<ul style="list-style-type: none"> • Creating Ansible playbooks to configure S3 object storage • Verifying access to S3 object store
Module 6: SAN configuration	<ul style="list-style-type: none"> • SAN REST API documentation • iSCSI configuration • FCP and NVME-oF configuration • Playbooks and Ansible modules 	<ul style="list-style-type: none"> • Exploring and identifying the REST API for SAN • Creating an Ansible playbook to provision storage in ONTAP software
Module 7: Performance monitoring	<ul style="list-style-type: none"> • ONTAP performance • Performance metrics • Collecting ONTAP performance metrics • BlueXP and ONTAP System Manager 	<ul style="list-style-type: none"> • Collecting and using performance metrics • Using performance metrics to provision resources

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