

# **Creating and Customizing Workflows Using OnCommand Workflow Automation (CCWWFA)**

**Modality: Multi-Location Classroom**

**Duration: 2 Days**

**NATU: 24 Units**

## **About the course:**

This training program shows new storage engineers when to use OnCommand WFA (OnCommand Workflow Automation) to remove manual storage management processes that are prone to errors within their companies. This course explains techniques to customize and design workflows to meet the company's storage needs. This course further explains techniques to build design elements, like functions, data sources, finders, and commands. Ultimately, this course offers an understanding of the NetApp PowerShell Toolkit and REST APIs and also how to combine this toolkit with OnCommand Workflow Automation.

The NetApp Infrastructure Engineer can make an average salary of **\$78,406/-** per year.

## **Course Objectives:**

After successful completion of this program, candidates can:

- Establish Workflows
- Explain and describe the design components in OnCommand Workflow Automation
- Customized Workflows
- Examine the NetApp PowerShell Toolkit
- Configuration of OnCommand Workflow Automation
- List REST support resources

and API tasks

- Establish building blocks

## **Audience:**

This course is designed for:

- NetApp customers

- NetApp sales engineers
- Professional services consultants
- Professional services engineers
- Application Engineers
- Channel partner engineers
- Consulting sales engineers

## **Pre-requisites:**

- ONTAP Data Protection Administration and ONTAP Cluster Administration
- Data Protection STRSW-CDOTDP-9.5 and NETAPP-CDOTDP-9.5 ONTAP Cluster Administration 9.5

And:

- NETAPP-AOCMCDOT-REV01-CV and NETAPP-AOCMCDOT-REV01-CV 2
- Practical understanding SQL, MVEL, and Windows PowerShell

## **Course Outline:**

### **Module 1: Introduction to OnCommand WFA**

- OnCommand portfolio
- WFA installation and configuration
- Challenges WFA can resolve
- WFA interfaces
- WFA roles

### **Module 2: OnCommand WFA Design**

- WFA architecture
- Workflow design
- Commands
- Functions
- Templates
- Data source design
- Content manager
- Running workflows

### **Module 3: Designing Workflows**

- Workflow design recommendations
- Design a workflow
- OnCommand WFA architecture
- Modular workflows

## **Module 4: Refining Workflows**

- Types of user inputs
- Modifying user inputs
- Using constants
- Adding return parameters

## **Module 5: Advanced Design Features**

- Add approval points
- Repeat rows in a workflow
- Incremental naming
- Verify resource reservation and element existence
- Conditional execution
- Workflow categorization

## **Module 6: Creating Design Elements**

- Creating filters and finders
- Creating a command
- Command categories
- Creating a template
- Creating a function
- Creating a data source

## **Module 7: Customizing workflows**

- Creating customized workflows
- WFA packs for the FlexPod solution

## **Module 8: REST APIs and Support Resources**

- WFA tasks for REST APIs
- Key support resources for REST APIs

## **Module 9: NetApp PowerShell Toolkit**

- WFA PowerShell Cmdlets
- Support links
- Specific OnCommand WFA commands to automate storage

## **Appendix A: Entity Versioning**

- Features
- Child and parent entities
- Imported entities
- Versioning of an imported entity

## **Labs:**

- Reviewing OnCommand WFA configuration
- Running an OnCommand WFA workflow
- Designing and running a workflow
- Modifying user inputs
- Applying constants and return parameters
- Adding an approval point
- Adding row repetitions
- Applying incremental naming
- Marking the workflow ready for production
- Creating a filter and customizing a finder
- Creating commands and a template
- Creating a function
- Creating a data source
- Customizing a workflow
- Using Windows PowerShell to connect to a cluster