Network Automation in the Service Provider Cloud

Duration: 3 Days   Course Code: NASPC

Overview:

This three-day course is designed to provide students with the knowledge required to work with the Juniper Networks Cloud CPE software-defined networking (SDN) solutions. Students will gain in-depth knowledge of how to use Contrail Service Orchestrator (CSO), Contrail Cloud, and NFX Series devices to instantiate centralized, distributed, and SDWAN deployments of Juniper Networks Cloud CPE solution. Through demonstrations and hands-on labs, students will gain experience with features of each of these devices. This course is based on CSO Release 3.2.0.

Target Audience:

This course benefits individuals responsible for working with software-defined networking solutions in service provider environments.

Objectives:

- Describe the benefits of the NFX Series product.

- Describe the hardware and software architecture of the NFX Series product.

- Describe the default management networks of the NFX Network Services Platform.

- Manually configure VNF service chaining on the NFX using both virtio and SR-IOV interfaces.

- Describe the basic features of the CSO portals.

- Navigate the Administrator Portal.

- Navigate the Customer Portal.

- Describe how to add a new tenant to CSO.

- Describe how to verify the status of CSO.

- Navigate the Designer Tools user interface.

- Create a network service design using Network Service Designer.

- Describe the various distributed Cloud CPE deployment models.

- Describe the internal NFX topology created by stage 1 and 2 configuration.

- Describe the workflow for the distributed deployment model.

- Describe how to bypass the redirect server.

- Describe the additional workflow steps for options 1 and 4.

- Describe the Contrail SDWAN deployment model.

- Describe the internal NFX topology created by the SDWAN stage 1 and 2 configuration.

- Describe the workflow for the SDWAN deployment model.

- Describe how to implement intent based policies.

- Instantiate an SD-WAN topology using CSO, NFX, and vSRX Series devices.

- Describe how to monitor all aspects of the Cloud CPE operations using CSO.

- Describe the overall topology of the centralized Cloud CPE (vCPE) model.

- Describe the workflow for the centralized Cloud CPE deployment model.

- Implement a centralized deployment using a combination of CSO and Contrail Cloud

Prerequisites:

- Basic TCP/IP skills;
- General understanding of data center virtualization;
- Basic understanding of the Junos operating system;
- Attendance of the Network Automation using Contrail Cloud

(NACC) course prior to attending this class; and
- Basic knowledge of object-oriented programming and Python scripting is recommended.

Content:

1 COURSE INTRODUCTION

2 Evolution of the Telco Cloud

- SDN/NFV Overview
- Today's Telco Data Center
- Juniper's Cloud CPE Solution Overview

3 NFX Network Services Platform

- NFX Overview
- Hardware and Software Architecture
- VNF Data Plane
- Internal Management Networks
- Initial Configuration and Management
- Service Chaining Examples
- Useful Commands

LAB 1: NFX Network Services Platform

4 Network Service Designer

- Getting Started with Designer Tools
- Network Service Designer

LAB 2: Network Service Designer

5 CSO User Interfaces

- Basic Navigation
- Administrator Portal Walkthrough
- Customer Portal Walkthrough
- Adding a Tenant
- Other User Interfaces
- Verifying the State of CSO

LAB 3: CSO User Interfaces

6 Distributed Cloud CPE

- Distributed Cloud CPE Deployment Models
- Internal NFX Topology
- Distributed Deployment Workflow
- Bypassing Redirect Server
- Deployment Options 1 and 4

LAB 4: Distributed Cloud CPE Deployment

7 Contrail SD-WAN

- Contrail SD-WAN Deployment Model
- Internal NFX Topology
- SD-WAN Deployment Workflow
- Intent-Based Policies

LAB 5: Contrail SD-WAN

8 Centralized Cloud CPE

- Centralized Cloud CPE Overview
- Centralized Cloud CPE Deployment Example

LAB 6: Centralized Cloud CPE

Further Information:

For More information, or to book your course, please call us on 00 20 (0) 2 2269 1982 or 16142

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