Course Outline

Juniper Cloud Fundamentals

3 Day Course

DESCRIPTION

This three-day course is designed to provide students with an understanding of cloud enabled networks, cloud service deployment concepts, and virtualized network platforms such as vSRX and vMX.

This course provides a high-level overview and understanding of the following concepts:

- Cloud Network Underlays
- Cloud Network Overlays
- Cloud Design
- Cloud Implementation Methods
- Cloud Services
- Juniper Networks Virtualized Platforms

Junos Cloud Fundamentals is an introductory-level course.

PARTICIPANTS

This course benefits individuals responsible for planning and coordinating cloud enabled networks and services in data center, private cloud, public cloud, hybrid cloud, service provider, and enterprise WAN environments.

PREREQUISITES

The prerequisites for this course are as follows:

- Basic TCP/IP skills;
- General understanding of data center virtualization;
- General understanding of enterprise WAN environments
- Basic understanding of virtualization

Objectives

After successfully completing this course, you should be able to:

- Describe network overlay and underlay concepts.
- Describe private, public, and hybrid cloud architecture and implementation.
- Describe the implementation of services in a cloud networking environment.
- Describe the implementation and functions of the Juniper vSRX platform.
- Describe the implementation and functions of the Juniper vMX platform.
- Describe the implementation and functions of the Juniper NFX platform.
- Describe the role of Juniper Networks virtualized platforms in public cloud offerings.
- Describe the functionality and use of Juniper Networks Cloud Connector.
- Describe the need for Software Defined Networking.
- Describe basic SDN concepts.
- Describe common types of SDN implementation.
- Describe the main Network Function Virtualization components.
- Describe cloud services monitoring.

- Describe the functions of AppFormix in cloud services.
- Describe SDN WAN concepts.
- Describe the role, functions, and features of the NorthStar Controller.
- Describe the role, functions, and features of WANDL/IP MPLS View.
- Describe the role and functions a vCPE and uCPE components.
- Describe the role and functions of Contrail Service Orchestration.
- Describe Software Defined Secure Network concepts.
- Describe methods to secure an SDN environment.
- Describe the functionality of SDSN components.

PROGRAMME

Day 1

Chapter 1: Course Introduction
Chapter 2: Cloud Components
- Cloud Networking Definition
- Cloud Architecture
- XaaS

Chapter 3: Virtualized Platforms
- Juniper Networks Virtualized Platforms
- Juniper Networks Virtualized Platforms in Public Clouds

Chapter 4: SDN Fundamentals
- The Need for SDN
- SDN Explained
- OpenFlow Based SDN
- SDN as an Overlay
- SDN via API
- Applications of SDN
- Lab 1: Exploring OpenStack with the CLI

Day 2

Chapter 5: Network Function Virtualization
- Introduction to NFV
- NFV Architecture
- Examples of VNFs

Chapter 6: Orchestration and Automation
- Managing a Cloud Infrastructure
- OpenStack for Orchestration
- Contrail/OpenContrail SDN Controller
- NSX for SDN

Chapter 7: AppFormix
- Operations Management
- AppFormix Operation and Use Cases

Day 3

Chapter 8: SD WAN Solutions
- SD WAN Concepts
- NorthStar SD WAN Controller
- NorthStar Controller Use Cases
- WNADL IP/MPLSView

Chapter 9: Cloud CPE

- Legacy vs. Cloud CPE Architecture
- Cloud CPE with Contrail Service Orchestration

Chapter 10: Cloud Security

- Legacy Network Security
- Cloud Security Concepts
- SDSN Components