Enterprise Computing Solutions - Education Services

TRAINING OFFERING

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Juniper Cloud Fundamentals (JCF)

CODE:	LENGTH:	PRICE:
JUN_JCF	24 Hours (3 days)	£2,195.00

Description

This three-day course provides students with the foundational knowledge required to work with basic cloud components in a Juniper environment. The course summarizes cloud concepts, virtual networks, containerization, and cloud management.
Key topics include:
• Fundamental cloud concepts
• Linux virtualization concepts
• Linux namespace concepts
• Linux containerization
• Virtual network basics
• Software-defined networking (SDN) and Network Functions Virtualization (NFV)
• OpenStack basics and OpenStack networking
• Kubernetes operations and various Kubernetes networking utilities
• Red Hat OpenShift key concepts
Through demonstrations and hands-on labs, students will gain experience in configuring and monitoring cloud automation tools and using various cloud configuration formats. Students will also become familiar with several cloud-native applications. Students will learn and better identify the Juniper solutions for cloud infrastructure, including virtualization (vSRX, vMX), and containerization (cSRX, cRPD).

Objectives

• Identify the key fundamental cloud concepts.
• Identify the concepts of Linux virtualization.
• Identify the concepts of Linux namespaces.
• Identify the concepts of Linux containerization.
• Identify the basics of network virtualization.
• Describe the main concepts of SDN and NFV.
• Describe the fundamentals of OpenStack.
• Identify the key concepts of the OpenStack configuration.
• Identify the basics of OpenStack networking.
• Identify the basics of Kubernetes.
• Identify the key concepts of Kubernetes networking.
• Identify the key concepts of Red Hat OpenShift.

Audience

Individuals who want a basic understanding of cloud solutions using Juniper products, virtualization, OpenStack, Red Hat OpenShift, and containerization, including Docker and Kubernetes

Prerequisites

• A basic networking knowledge and a general understanding of data center environments
• A general understanding of enterprise WAN environments, and basic understanding of virtualization
• A general understanding of Linux and basic Linux CLI commands
• A basic understanding of containerization and some experience using Docker or equivalent knowledge
• Completion of the Getting Started with Cloud e-learning course

Programme

DAY 1

1 Course Introduction

2Fundamental Cloud Concepts

• Describe key cloud concepts
• Describe components of a cloud architecture
• Identify Juniper solutions for cloud infrastructure

3 Linux Virtualization

• Describe virtualization techniques
• Describe the Linux architecture
• Examine key virtualization concepts

Lab 1: Linux Virtualization

4 Linux Namespaces

• Describe Linux namespaces and other kernel containment features
• Describe network namespaces
• Identify the concept of routing instance segregation

Lab 2: Linux Namespaces

5 Containerization

• Describe a container
• Define the Docker architecture
• Examine the process of creating a container using Docker • Describe Docker networking

Lab 3: Containerization

Lab 4: cSRX

6 Network Virtualization

• Explain the concepts of a virtual network
• Describe how to extend virtual networks

Lab 5: Network Virtualization

DAY 2

7 Software-Defined Networking and Network Functions Virtualization

• Describe SDN architecture and its benefits
• Describe NFV architecture and its benefits
• Summarize the relationship between SDN and NFV

8 Introduction to OpenStack

• Describe the basics of OpenStack
• Discuss OpenStack services
• Review basic OpenStack concepts
• Create and manage OpenStack instances

Lab 6: OpenStack web UI Configuration

9 OpenStack Configuration

• Describe the OpenStack CLI
• Examine the OpenStack API
• Describe orchestration through Heat templates

Lab 7: OpenStack CLI Configuration

10 OpenStack Networking

• Explain how OpenStack networking is implemented
• Determine how to create a network
• Describe security groups for VMs
• Explain how to set up OpenStack routing
• Describe the concept of floating IP addresses
• Review the load-balancing techniques

Lab 8: OpenStack Networking

DAY 3

11 Introduction to Kubernetes

• Explain the fundamentals of Kubernetes
• Describe the Kubernetes objects
• List the Kubernetes tools
• Illustrate the basics of KubeVirt
• Define Kubernetes namespaces

Lab 9: Basic Kubernetes

12 Kubernetes Networking

• Describe Kubernetes networking
• Examine connecting applications with services
• Review a multitier application deployment on a Kubernetes cluster

Lab 10: Kubernetes Networking

13 Red Hat OpenShift

• Describe the relationship between Kubernetes and OpenShift
• Explain the installation process for OpenShift
• Navigate the Web UI for OpenShift
• Create an application using the OpenShift Web UI

• Navigate the OpenShift CLI
• Create an application using the OpenShift CLI

Follow on courses

RECOMMENDED NEXT COURSE
Implementing Cloud-Native Contrail Networking

Test and Certification

RELATED CERTIFICATION
JNCIA-CLOUD

Session Dates

On request. Please Contact Us

Additional Information

This training is also available as onsite training. Please contact us to find out more.