Juniper Cloud Networking with AWS and Azure (JCNAA)

Engineering Simplicity

COURSE OVERVIEW

This four-day course is designed to provide students with the knowledge required to implement Juniper Networks vSRX in AWS and Azure environments. Though demonstrations and hands-on labs, students will gain in-depth knowledge about the manual and automated methods used to deploy the vSRX in multicloud environments. This course uses various releases of the vSRX as well as Junos Space, Security Director, Policy Enforcer, and Sky ATP.

COURSE LEVEL

Intermediate-level

AUDIENCE

Individuals who want
- A basic understanding of cloud infrastructure, operations, and terms
- To learn how to securely expand their IT operations into the cloud

PREREQUISITES

- Basic TCP/IP skills
- Basic understanding of the Junos operating system
- Basic understanding of the SRX Series device and its range of security features

RELEVANT JUNIPER PRODUCT

- Junos OS
- Junos Space
- Policy Enforcer
- Security Director
- Sky ATP
- SRX Series

CONTACT INFORMATION

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OBJECTIVES

- Describe cloud concepts.
- Describe how virtualization is used in the cloud.
- Describe various security designs used in the cloud.
- Describe the AWS architecture and explain how each tier is used.
- Access the AWS management console.
- Launch AWS EC2 instances.
- Navigate the AWS Marketplace and locate Juniper products.
- Describe the operation of the vSRX in AWS.
- Launch a vSRX instance in AWS.
- Configure a vSRX instance to forward traffic.
- Describe CloudFormation features.
- Describe the CloudFormation template format.
- Describe the basics of JSON and YAML.
- Deploy AWS vSRX instances using a CloudFormation template.
- Describe Microsoft Azure cloud services.
- Describe Azure cloud architecture.
- Navigate the Azure portal.
- Launch Azure virtual machine instances.
- Navigate the Azure Marketplace and locate Juniper products.
- List the vSRX offerings in Azure.
- Describe pre-launch considerations for the vSRX in Azure.
- List the steps required to launch the vSRX in Azure.
- Describe the configuration needed for the vSRX to function in Azure.
- Describe the Azure Resource Manager Features.
- Describe the Azure Resource Manager template format.
- Deploy a vSRX instance using Azure Resource Manager.
- List different methods used to connect cloud resources.
- Describe secure connection options.
- Establish an IPsec tunnel between an enterprise/DC SRX and an AWS Virtual Private Gateway.
- Establish an IPsec tunnel between an enterprise SRX and a vSRX instance in AWS.
- List advanced vSRX security features that are used to protect cloud resources.
- Describe the benefits of Terraform in multicloud environments.
- Deploy and destroy vSRX instances in AWS and Azure using Terraform
- Describe the components used to implement Juniper Connected Security.
- Configure the components used to support Juniper Connected Security in the cloud.
- Configure Security Director, Policy Enforcer, and Sky ATP to implement Juniper Connected Security and secure AWS resources.
- Describe the benefits provided by Contrail Enterprise Multicloud (CEM).
- Describe CEM use cases.

COURSE CONTENT

DAY 1

1 **Course Introduction**

2 **Cloud Overview**
- Cloud Concepts
- Cloud Virtualization
- Cloud Security

3 **Introduction to AWS**
- Amazon Web Services Overview
- Amazon Management Console
- Launch and Access and EC2 Server
- Amazon Marketplace

Lab 1: Introduction to AWS

4 **Implementing the vSRX in AWS**
- Operating the vSRX in AWS
- Launch a vSRX Instance in AWS
- Configure the vSRX to forward traffic

Lab 2: Implementing the vSRX in AWS

DAY 2

5 **AWS Automation using CloudFormation**
- CloudFormation Overview
- Understanding CloudFormation Templates
- JSON and YAML Overview
- Create a CloudFormation Stack

Lab 3: AWS Automation using CloudFormation

6 **Introduction to Azure**
- Azure Overview
- Azure Architecture
- Azure Portal
- Control Access to Azure
- Launch and Access a Windows Server
- Azure Marketplace

Lab 4: Introduction to Azure

7 **Implementing the vSRX in Azure**
- The vSRX in Azure
- Pre-Launch Planning
- Launching the vSRX in Azure
- Configuring the vSRX for Azure

Lab 5: Implementing the vSRX in Azure

DAY 3

8 **Azure Automation using ARM**
- Azure Resource Manager (ARM) Overview
- Understanding ARM Templates
- Creating ARM Templates
- Deploy an ARM Template

Lab 6: Azure Automation using ARM

9 **Cloud Connectivity**
- Connectivity Options
- Secure Connections
- DC SRX to AWS Virtual Private Gateway
- DC SRX to vSRX in AWS
- VPC Peering using the vSRX

Lab 7: Cloud Connectivity

10 **Terraform**
- Terraform Overview
- HashiCorp Configuration Language
- Terraform Infrastructure Management
- vSRX Deployment using Terraform

Lab 8: Terraform

DAY 4

11 **AWS Automation using CloudFormation**
- CloudFormation Overview
- Understanding CloudFormation Templates
- JSON and YAML Overview
- Create a CloudFormation Stack

Lab 3: AWS Automation using CloudFormation

12 **Contrail Enterprise Management**
- Today's Networking Environment
- CEM Overview
- CEM Use Cases

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2