Deploying Juniper Security in AWS and Azure

COURSE OVERVIEW

This four-day, intermediate-level course provides students with the knowledge required to implement Juniper Networks® vSRX Virtual Firewall in Amazon Web Services (AWS) and Azure environments. Through 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 is based on Junos Space Release 23.1R1.4, Security Director Release 23.1R1.4, Policy Enforcer Release 23.1R1.4, and vSRX Release 24.4R1.9.

COURSE LEVEL

Intermediate

AUDIENCE

- Individuals who want a basic understanding of cloud infrastructure, operations, and terms.
- Individuals who want 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 vSRX Virtual Firewall device and its range of security features.
- Working knowledge of cloud networks.
- Completion of the *Juniper Cloud Fundamentals* course.

RELATED JUNIPER PRODUCTS

SRX Series Firewalls, vSRX Virtual Firewall, Junos Space, Junos Space Security Director, Policy Enforcer

RECOMMENDED NEXT COURSE

Juniper Security

OBJECTIVES

- Describe major cloud concepts.
- Describe the AWS cloud architecture.
- Deploy an Amazon Elastic Compute Cloud (Amazon EC2) instance.
- Deploy a vSRX instance in AWS.
- Deploy vSRX instances using AWS CloudFormation.
- Describe and configure cloud connectivity using the IPsec tunnel.
- Implement AWS transit gateway.
- Deploy Juniper Connected Security.
- Describe the Microsoft Azure Cloud architecture and services.
- Deploy a vSRX instance in Microsoft Azure.
- Automate vSRX deployments using Microsoft Azure Resource Manager.
- Deploy multicloud vSRX instances using Terraform.
- Describe AWS and Azure Cloud security services.

Course Outline

COURSE CONTENTS

DAY 1

Module 01: Cloud Overview

- Describe cloud fundamentals
- Explain cloud virtualization
- Describe cloud security.

Module 02: Introduction to AWS

- Describe the AWS architecture
- Access the AWS Management Console
- Launch AWS EC2 instances
- Navigate the AWS Marketplace and explore the available products.

Lab 01: Introduction to AWS

Module 03: Implementing vSRX in AWS

- Explain the operation of an AWS vSRX instance
- Launch an AWS vSRX instance
- Configure an AWS vSRX instance

Lab 02: Implementing vSRX in AWS

DAY 2

Module 04: AWS CloudFormation

- Describe AWS CloudFormation
- Describe CloudFormation templates
- Describe JSON and YAML fundamentals
- Deploy a vSRX instance using the CloudFormation template.

Lab 03: CloudFormation

Module 05: Cloud Connectivity Using an IPsec Tunnel

- Describe the cloud connectivity options
- Describe how IPsec tunnels are established
- Configure an IPsec tunnel between an enterprise SRX and an AWS Virtual Private Gateway
- Configure an IPsec tunnel between an enterprise SRX and an AWS vSRX instance
- Describe how to configure an IPsec tunnel between vSRXs from different AWS VPCs

Lab 04: Cloud Connectivity

Module 06: AWS Transit Gateway

- Explain the purpose and function of the AWS transit gateway
- Describe inter-VPC firewall use cases
- Deploy an AWS Transit Gateway and attach a vSRX instance in services VPC

Lab 05: AWS Transit Gateway

DAY 3

Module 07: Advanced Cloud Security

- Describe Juniper Connected Security
- Configure AWS components for Juniper Connected Security
- Implement Juniper Connected Security with Advanced Threat Prevention.

Lab 06: Advanced Cloud Security

Module 08: Introduction to Microsoft Azure

- Describe the Microsoft Azure services
- Describe the Microsoft Azure architecture
- Navigate the Microsoft Azure portal
- Locate Juniper Networks products in the Microsoft Azure Marketplace
- Launch a Microsoft Azure virtual machine

Lab 07: Introduction to Microsoft Azure

Module 09: Implementing vSRX in Microsoft Azure

- Describe prelaunch considerations for Microsoft Azure vSRX instances
- Launch a Microsoft Azure vSRX instance
- Explain the required vSRX Microsoft Azure configuration.

Lab 08: Implementing a vSRX Instance in Microsoft Azure

DAY 4

Module 10: Microsoft Azure Resource Manager

- Describe Microsoft Azure Resource Manager capabilities
- Describe Microsoft Azure Resource Manager templates
- Create Microsoft Azure Resource Manager templates
- Deploy a vSRX instance using a Microsoft Azure Resource Manager template

Lab 09: Microsoft Azure Resource Manager

Module 11: Terraform

- Explain multicloud complexity
- Explain Terraform concepts
- Manage multicloud infrastructure using Terraform

Lab 10: Terraform

Module 12: Public Cloud Services

- Describe load balancing and auto scaling
- Describe how to configure AWS load balancer and auto scale vSRX instances
- Describe Key Management Service in AWS and Microsoft Azure Cloud
- Describe the AWS alert and monitoring service

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