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Module Title : CNS-200W: Citrix NetScaler SD-WAN Hands-on Workshop
Duration : 2 days

Overview

In this two day NetScaler SD-WAN workshop, you will learn the various SD-WAN implementations and deployment modes available, and how to choose the one that is right for your organization. Take a tour of the underlying architecture of SDWAN and learn how to differentiate between the various components. Understand how the different elements of SD-WAN come together to provide a better network experience. Topics include: Quality of Service, Classes of Service, Rules, Dynamic Routing, DHCP Services, Zero Touch Deployment and the SD-WAN management tools available. This workshop is meant to be an open, interactive working session. Hands-on labs to be provided.

Prerequisite

- Understanding of different computer networks such as local area network (LAN) and wide area network (WAN)
- Familiarity with data-carrying techniques, including Multiprotocol Label Switching (MPLS), Metro Ethernet, and VPN tunneling
- Understanding of techniques for increasing data transfer efficiencies / WAN optimization
- General understanding of branch network technologies; Routing, Firewall, DHCP, Internet control, Quality of Service

Course Outline

Module 1: SD-WAN Overview

An introduction to NetScaler SD-WAN and the different product platforms offerings. Learn about various SDWAN features, by edition, and the value they provide. Understand how SD-WAN fits into your environment, and how to utilize the management tools available to manage the NetScaler SD-WAN.

Module 2: SD-WAN Architecture

Take a tour of the SD-WAN's underlying architecture. Topics include the packet processing and services architecture as well as the management architecture. Learn how the NetScaler Management and Analytics System (MAS) and SD-WAN Center can facilitate the management of your NetScaler deployment.

Module 3: SD-WAN Quality of Service

Learn how Quality of Service fits into your NetScaler SD-WAN deployment and the various classes of services available. Gain an understanding of SD-WAN transmit modes including load balance paths, duplication paths, and override service.

Module 4: SD-WAN Deployment Modes and Configuration
An introduction to the deployment modes available for NetScaler SD-WAN. Delve into the various configurations available to fit your networking needs. Topics include interface groups, virtual IP addresses, and WAN links. Gain an understanding of the Change Management feature and how it helps distribute information across your system.

Module 5: SD-WAN 9.0 Features
Explore the NetScaler SD-WAN 9.0 features. Topics include Metered Links, IPsec, and MPLS QoS Queues. Discover how these feature sets can provide your organization with the right toolset to optimize your networking experience.

Module 6: SD-WAN 9.1 Features
Take a tour of the NetScaler SD-WAN 9.1 features in this module. Gain an understanding of dynamic routing, virtual routing and forwarding, secure internet breakout, DHCP, IPsec VPN termination, and zero touch deployment.

Module 7: SD-WAN 9.2 Features
In this module, you will gain an understanding of the new features SD-WAN 9.2 has to offer. These include: application classification, top application reporting, stateful firewall, network address translation, and management and platform enhancements.

Exercise 1: SD-WAN Installation Design
Exercise 2: Configuration of the Head-End SD-WAN
Exercise 3: Configure the remote office SD-WAN node
Exercise 4: Configure the SD-WAN path relationships
Exercise 5: Provision the MCN using the saved configuration
Exercise 6: Applying the Configuration to the Remote Appliance
Exercise 7: Troubleshooting the dead path state
Exercise 8: SD-WAN Quality of Service
Exercise 9: SD-WAN Center deployment and configuration
Exercise 10: Use SD-WAN Center to calculate MOS
Exercise 11: Prepare the environment with a working configuration
Exercise 12: Validating bandwidth aggregation

Exercise 13: Customization of the Rules and Classes

Exercise 14: Metered Links

Exercise 15: MPLS Queues

Exercise 16: IPsec data encryption

Exercise 17: Path state sensitivity control

Exercise 18: Dynamic routes

Exercise 19: DHCP review

Exercise 20: Virtual routing and forwarding

Exercise 21: Zero Touch deployment