Citrix NetScaler Essentials and Traffic Management (CNS-220)

Modality: Virtual Classroom

Duration: 5 Days

About this course:

Our Citrix Training program is designed to polish your technical skills and add to your knowledge of the Citrix NetScaler platform. This brief yet highly intense course includes a range of lessons on NetScaler fundamentals including sessions on functionality, platforms, licensing and architecture.

What's more is that this course provides a complete learning package including learning on traffic management, allowing students to work on a number of tasks efficiently. Students will be engaged throughout the course in lab exercises and live examples to help them gain better understanding and skill development for traffic optimization, content switching, and Global Server Load Balancing.

Our accredited instructors have devised the course in a way that students can get information on Rewrite and Responder features, AppExpert policy engines, Security Insight, Content Switching and much more. You will also become expert in handling Citrix NetScaler functions including security, high availability, performance, load balancing, SSL engines' exploration, and monitoring.

Aspiring IT professionals and engineers alike can benefit greatly from this training program. Amateur IT students can take this course as well. However, this program must be taken before Citrix NetScaler Advanced Topics – Management and Optimization course.

You may enroll in this program now if you also want to prepare for the Citrix Certified Associate – Networking certification program.

Course Objectives:

After completing this course, students will be able to:

- Understand the functionalities and capabilities of Citrix NetScaler

- How to obtain, install, and manage NetScaler licenses

- Comprehend basic NetScaler network architecture

- Understand how SSL is used to secure the NetScaler

- Optimize the NetScaler system for traffic handling and management

- Customize the NetScaler system for traffic flow and content-specific requirements

- Employ recommended tools and techniques to troubleshoot common NetScaler network and connectivity issues

- Configure advanced load balancing and explore the new GSLB wizard on the NetScaler system

- Identify the functionality and characteristics of the NetScaler CPX platform

Audience:

The Citrix NetScaler Essentials and Traffic Management is ideal for those working in roles such as:

- IT Professionals working with NetScaler

- Administrators

- Engineers

- Architects

Prerequisites:

- IT Professionals working with NetScaler, with little to no previous NetScaler experience.

Suggested prerequisites courses:

- Citrix NetScaler for Apps and Desktops (CNS-222)

Course Outline:

Module 1. Getting Started

Introduction to the NetScaler System
TriScale
NetScaler Use Cases NetScaler Functionality NetScaler Overview
Product Features
NetScaler Operating System Overview
nCore Configuration Architecture
NetScaler File System
Deployment Scenarios
Logging in to the NetScaler System
NetScaler Licenses

Module 2. Basic Networking

OSI Networking Model
NetScaler Architecture Overview NetScaler-Owned IP Addresses Network Topology
NetScaler Network Interfaces
Virtual Local Area Networks (VLANs)
IP Routing
Determining the Source IP Address
Packet Forwarding
Use Source IP Mode
Client-IP HTTP Header Insertion
Path MTU Discovery
Link Aggregation
Access Control Lists
Network Address Translation (NAT)

Module 3. NetScaler Platforms

Architecture and General Concepts
Hardware Platforms
Hardware Components
Overview of MPX, VPX, CPX, and SDX
Unique capabilities and functionality of the NetScaler SDX platform
Networking characteristics of the NetScaler SDX platform
Process of provisioning and administration of NetScaler VPX instances on a NetScaler SDX appliance

Module 4. High Availability

High Availability Functionality
High Availability Node Configuration
Propagation and Synchronization
Failover, Route Monitors, and Fail Safe
Propagation and Synchronization
High Availability Management
Performing an Upgrade
Troubleshooting
Upgrading High Availability Pair

Module 5. Load Balancing

Local Load Balancing Concepts
Naming Conventions
Persistence
Service Types
LB Methods
Disabling Entities
Diagnostics/Troubleshooting
L4 vs. L7 for TCP Services
UDP Ping vs. L7

Monitor Attributes
Built in L7 Monitors
Monitors from Scripts
EAV Monitors
ECV Monitors
DataStream

Module 6. SSL Offload

SSL and TLS
SSL Session Process
SSL Administration
SSL Offload Overview
SSL Attacks Overview
SSL Troubleshooting
Cipher Suites
Certificate Management
Feature and Benefits
Offload Performance
Deployment Scenarios
Citrix Recommendations for SSL

Module 7. Securing the NetScaler

NetScaler Communication Ports
Overview of AAA
Authentication on the NetScaler
NetScaler Users
Command Policies
Admin Partitions

Module 8. Monitoring and Troubleshooting

Monitoring Needs
NetScaler Log Management
Simple Network Management Protocol
AppFlow on the NetScaler System
NetScaler Insight Overview
NetScaler Command Center Overview
Network Traffic Capture using NSTRACE
Decoding SSL Traffic with Wireshark
Display NetScaler System Information
NetScaler Command Line Tools

Module 9. AppExpert Classic Policy Engine

Policies Overview
Expression Structures

Content Filtering
Content Filtering Actions
Content Filtering Rules

Module 10. AppExpert Default Policy Engine

Understanding Packet-Processing Flow
Understanding Policies
Policy Process Evaluation Flow
Identifying Default Policy Expressions
Actions
Understanding Bind Points
Understanding Policy Labels
Pattern Sets
Typecasting

Module 11. Rewrite, Responder, and URL Transform

Configuring Rewrite Policies and Actions
Responder Actions
Responder Action for Timeouts
Responder Policies
Responder HTML Page Imports
Binding Policies
URL Transformation
URL Transformation Actions
Binding of URL Transformations

Module 12. Content Switching

Introduction to Content Switching
Content Switching Based on Network Characteristics
Content Switching, Virtual Servers, and Load-Balancing Virtual Servers
Configuring Content-Switching Virtual Servers
Configure a Load-Balancing Setup for Content Switching
Content-Switching Policies
Content-Switching Rule Precedence With Priority Specified

Module 13. Optimization

Introduction to Caching
Compression
Frontend Optimization

Module 14. Global Server Load Balancing

DNS Overview and Records
GSLB Deployment Methods

GSLB Concepts
GSLB Entities
GSLB DNS Methods
Metric Exchange Protocol
Viewing and Configuring GSLB with the Visualizer
GSLB Persistence

Module 15. Clustering (Optional)

How Clustering Works
Cluster Synchronization
Cluster Communication Interfaces
Striped and Spotted IP Addresses
Traffic Distribution
Cluster and Node States
NetScaler Cluster Set up
Dynamic Configuration for a Cluster Link Aggregation Group
NetScaler Cluster Management
NetScaler Cluster Troubleshooting