

Citrix NetScaler Essentials and Traffic Management (CNS-220)

Modality: Virtual Classroom

Duration: 5 Days

SATV Value:

CLC:

NATU:

SUBSCRIPTION: No

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