

CNS-220-1I: Citrix NetScaler Essentials and Traffic Management



Overview

Designed for students with little or no previous NetScaler experience, this course is best suited for individuals who will be deploying or managing NetScaler environments.

What's New?

This course has been completely redeveloped and improves upon its predecessor CNS-205: Citrix NetScaler Essentials and Networking in the following ways:

- Improved course structure and flow to focus on Citrix NetScaler Essentials for the first three days, and Citrix Traffic Management for the remaining two days.
- New lab environment redesigned and built for enhanced performance.
- Incorporated enhancements based on feedback gathered over the last year.
- New content introduced throughout the course.

Part 1: Citrix NetScaler Essentials - Days 1-3 (SubCode CNS-218)

Learn the skills required to implement Citrix NetScaler Essential components including secure Load Balancing, High Availability, and NetScaler Management. At the end of the course, students will be able to configure their NetScaler environments to address traffic delivery and management requirements including Load Balancing, Availability, and NetScaler Operation Management.

Part 2: NetScaler Citrix Traffic Management - Days 4-5 (SubCode CNS-219)

Learn the skills required to configure and manage NetScaler Citrix Traffic Management features, including Content Switching, Traffic Optimization, and Global Server Load Balancing. At the end of the course, students will be able to configure their NetScaler environments to address efficient traffic switching and resilience requirements including Content Switching, Traffic Optimization, and Disaster Recovery.

Recommended pre-requisite courses

- [CNS-102 NetScaler Overview](#)

Note: Students looking to expand their knowledge around NetScaler Gateway functionality should take CNS-222 (Citrix NetScaler Essentials and Unified Gateway) instead of this class.

This course is based on the Citrix NetScaler 11 product, but the skills and fundamental concepts learned are common to earlier product versions.

Key Skills

- Understand the functionalities and capabilities of Citrix NetScaler

- Comprehend basic NetScaler network architecture
- Obtain, install, and manage NetScaler licenses
- 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
- Implement NetScaler TriScale technology, including clustering
- Configure advanced load balancing and GSLB on the NetScaler system
- Identify the functionality and characteristics of the NetScaler SDX platform

Audience

Students interested in learning how to implement and manage NetScaler features using leading practices. Specifically:

- Administrators
- Implementers / Engineers
- Architects

Instructional Method

This course is offered in instructor-led training (ILT)/virtual instructor-led training (vILT) formats with application of concepts through hands-on exercises in a live lab environment.

Course Length

5 days

Course Materials

As part of this course, students will receive the following materials:

- Access to a lab environment for the duration of the course
- Lab exercise guide
- Access to final course deliverables once the course is available in general availability including copies of all official materials presented by the instructor with additional notes and references as well as videos with experts throughout Citrix around course topics and lab exercises.

Preparatory Recommendations

Citrix recommends students prepare for this course by taking the following course:

- [CNS-102 NetScaler Overview](#)

In preparation, students should also gain a basic understanding of the following concepts and technologies:

- Basic Networking

- Windows and Linux Server administration
- TCP/IP, HTTP protocols and the OSI model
- Server load balancing and content switching concepts
- Web server software
- DNS, SSL and compression concepts
- Network security threats and site protection concepts

Certification Preparation

In addition to field experience, this course helps prepares candidates for the [1Y0-351: Citrix NetScaler 10.5 Essentials for Networking exam](#). By passing this exam, candidates will gain the Citrix Certified Professional – Networking (CCP-N) certification. Learn more about Citrix Certifications [here](#).

Topic Outline

Part 1: Days 1-3 (SubCode CNS-218)

- Getting Started
 - Explain NetScaler capabilities and functionality.
 - Introduce NetScaler architecture.
 - Discuss NetScaler hardware and components.
 - Explore deployment and licensing options.
 - Perform NetScaler setup and configuration.
- Basic Networking
 - Understand the purpose of NetScaler-Owned IP Addresses.
 - Recognize the networking topologies used with NetScaler.
 - Explain the use of interfaces and VLANs during configuration.
 - Discuss the available NetScaler routing and traffic-handling modes.
 - Define Access Control Lists and how to configure them.
 - Describe the Network Address Translation feature of NetScaler.
- NetScaler Platforms
 - Distinguish the hardware and use cases for the NetScaler MPX, VPX, and SDX.
 - Discuss the multi-tenant structure of the NetScaler SDX.
 - Illustrate the function and benefits of various SDX interface allocation scenarios.
 - Identify the NetScaler SDX administrative components and their use.
- High Availability
 - Explain NetScaler capabilities and functionality.
 - Introduce NetScaler architecture.
 - Discuss NetScaler hardware and components.
 - Explore deployment and licensing options.

- Perform NetScaler setup and configuration.
- Load Balancing
 - Describe the NetScaler load-balancing process and the role of entities.
 - Identify the different load-balancing and monitoring options available on the NetScaler.
 - Define the different traffic types that can be load balanced.
 - Explain how monitoring and service options can be customized.
 - Understand third-party load-balancing services on NetScaler.
 - Distinguish the methods used to protect and troubleshoot a NetScaler load-balancing configuration.
- SSL Offload
 - Define SSL and how SSL Offload works.
 - Explain the process of creating and uploading SSL Certificates.
 - Demonstrate the creation of SSL virtual servers.
 - Identify common SSL deployments.
 - Describe some SSL Exploits and some of the NetScaler configuration settings that can prevent them.
- Securing the NetScaler
 - Define authentication, authorization, and auditing.
 - Describe how to configure authentication and authorization on NetScaler.
 - Identify the components and steps required to secure a NetScaler configuration.
 - Summarize the use and benefits of Admin Partitions.
- Monitoring and Troubleshooting
 - Identify NetScaler Log issues.
 - Monitor the NetScaler environment with Simple Network Management Protocol data.
 - Leverage AppFlow, Command Center, and Insight features within the NetScaler environment.
 - Utilize NetScaler troubleshooting tools.

Part 2: Days 4-5 (SubCode CNS-219)

- AppExpert Classic Policy Engine
 - Understand the basics of the NetScaler classic policy engine.
 - Describe the NetScaler content-filtering feature and how to configure it.
- AppExpert Default Policy Engine
 - Describe Default Policy including basic components.
 - Discuss the syntax of Default Policy expression.
 - Utilize Actions in policy expression evaluation.
 - Distinguish key attributes of policy binding and bind types.
 - Construct and manage Default Policies with AppExpert.

- Rewrite, Responder, and URL Transform
 - Describe what the Rewrite feature of NetScaler does and explain how it works.
 - Discuss the functionality of Responder policies and how to configure them.
 - Apply the benefits of using URL Transformation.
- Content Switching
 - Explain Content Switching and how it works.
 - Discuss the importance of a Content-Switching VServer.
 - Distinguish what Content-Switching policies are and how to use them.
 - Understand what rule precedence is and the way it affects policies.
- Optimization
 - Implement traffic compression in a NetScaler environment.
 - Understand the benefits of caching in a NetScaler environment.
 - Utilize Front End Optimization to render the web browser more efficient.
- Global Server Load Balancing
 - Describe the Global Server Load Balancing feature.
 - Deploy Domain Name System to support GSLB.
 - Implement GSLB in a NetScaler environment.
 - Utilize Content Switching to implement GSLB.
 - Understand GSLB Metric Exchange Protocol and Monitoring.
 - Customize the GSLB Configuration.
- Clustering (Optional)
 - Understand the NetScaler Clustering feature.
 - Identify methods for managing and configuring a NetScaler Cluster.
 - Discuss options for troubleshooting the NetScaler Cluster.