Citrix (NetScaler) ADC 12.x Essentials and Citrix Gateway (CNS-222)

ID CNS-222   **Price** 2,691.— € (excl. tax)   **Duration** 5 days

Who should attend

- Administrators
- Implementers / Engineers
- Architects

This course is part of the following Certifications

Citrix Certified Associate - Networking (CCA-N)
Citrix Certified Associate - App Delivery and Security (CCA - APPDS)

Prerequisites

It is recommended that you have a basic understanding of the following concepts and technologies:

- Basic Networking
- Windows and Linux Server administration
- Experience with Citrix virtualization technologies, such as XenDesktop and XenApp
- Experience with Microsoft SQL Server or enterprise database servers
- Experience with Active Directory and Group Policy
- Basic understanding of Microsoft Remote Desktop Services
- Basic understanding of VPN concepts, including SSL encryption and certificates

Course Objectives

Upon successful completion of this course, you will be able to:

- Identify the functionality and capabilities of the NetScaler
- Explain basic NetScaler network architecture
- Explain how SSL is used to secure the NetScaler
- Configure Authentication and Authorization
- Define End User Access and Experience
- Integrate NetScaler Gateway with XenApp and XenDesktop
- Integrate Unified Gateway with additional resources
- Employ recommended tools and techniques to troubleshoot common NetScaler Gateway network and connectivity issues

Course Content

Citrix NetScaler for Apps and Desktops is a 5 day instructor led course that teaches you the skills required to implement NetScaler components including secure Load Balancing, High Availability, and NetScaler Management. You will also learn how to configure and manage NetScaler Gateway and Unified Gateway features, including how to implement Gateway components including NetScaler Gateway and Unified Gateway. 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.

Detailed Course Outline

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

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)

NetScaler Platforms

- Architecture and General Concepts
- Hardware Platforms
- Hardware Components
- MPX Overview
- VPX Overview
- CPX Overview
- SDX Overview
- Identify the unique capabilities and functionality of the NetScaler SDX platform
- Identify the networking characteristics of the NetScaler SDX platform
- Explain the process of provisioning and administration of NetScaler VPX instances on a NetScaler SDX appliance

High Availability

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

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

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

Securing the NetScaler

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

Monitoring, Management, 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
- Troubleshooting with Filter Expressions
- Decoding SSL Traffic with Wireshark
- Display NetScaler System Information

Authentication and Authorization

- System and AAA Users Groups
- External Authentication
- Authentication Actions and Policies
- Authentication Configuration
- Supported Authentication Types

Access Policies

- Endpoint Analysis
- Policy, Profiles, and Expressions

- Pre-Authentication Policies and Profiles
- Post-Authentication Policies
- Endpoint Analysis Troubleshooting

End-User Access and Experience

- Connection Methods
- Endpoint Session Policies Settings
- Timeout Settings
- RDP Proxy
- Clientless Access
- VLAN Options

Gateway Services Load Balancing

- SSL Offload Overview
- Traffic Types
- Ldap, HDX, StoreFront Load Balancing
- Extended Content Verification (ECV) Monitoring

Integrating NetScaler with XenApp and XenDesktop

- Required Firewall Rules
- Web Interface or StoreFront Integration with NetScaler Gateway
- WebFront Overview
- Session Policies

Unified Gateway

- NetScaler Unified Gateway Overview
- NetScaler Unified Gateway Reference Architecture Review
- Unified Gateway Key Features
- Unified Gateway Topologies

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