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Course Outline :: CNS-222-1I::

Module Title   :   CNS-222-1I-Citrix NetScaler Essentials and Unified Gateway
Duration   :   5 days

Overview

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

What's New:

The course has been completely redeveloped and improves upon CNS-207: Implementing Citrix NetScaler 11 for App and Desktop Solutions via the following:

• Improved course structure and flow to focus on NetScaler essentials for the first three days, and NetScaler Gateway and Unified Gateway features for the remaining two.

• A new lab environment redesigned and built for enhanced performance.

• Incorporated course feedback that has been gathered over the last year.

• New content introduced throughout the course.

Part 1: Citrix NetScaler Essentials - Days 1-3

Learn the skills required to implement NetScaler 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: Citrix NetScaler Unified Gateway - Days 4-5

Learn the skills required 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 remote access requirements for Apps and Desktops.

Recommended pre-requisite courses:

• CNS-102 NetScaler Overview

Note: Students looking to expand their knowledge around NetScaler Traffic Management functionality are recommended to take CNS-220 (Citrix NetScaler Essentials and Traffic Management) 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

- 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

Audience

Students interested in learning how to implement and manage NetScaler Gateway and Unified Gateway 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 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

It is also recommended to gain 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

Certification Preparation

In addition to field experience, this course helps prepares candidates for the 1Y0-253: Implementing Citrix NetScaler 10.5 for App and Desktop Solutions exam. By passing the 1Y0-253: Implementing Citrix NetScaler 10.5 for App and Desktop Solutions exam, candidates will gain the Citrix Certified Associate – Networking (CCA-N). Go here to learn more about Citrix Certifications.

Topic Outline

Part 1: Days 1-3

• Getting Started

    o   Explain NetScaler capabilities and functionality.

    o   Introduce NetScaler architecture.

    o   Discuss NetScaler hardware and components.

    o   Explore deployment and licensing options.

    o   Perform NetScaler setup and configuration.

• Basic Networking

    o   Understand the purpose of NetScaler-Owned IP Addresses.

    o   Recognize the networking topologies used with NetScaler.

    o   Explain the use of interfaces and VLANs during configuration.

    o   Discuss the available NetScaler routing and traffic-handling modes.

    o   Define Access Control Lists and how to configure them.

    o   Describe the Network Address Translation feature of NetScaler.

• NetScaler Platforms

- o Distinguish the hardware and use cases for the NetScaler MPX, VPX, and SDX.

- o Discuss the multi-tenant structure of the NetScaler SDX.

- o Illustrate the function and benefits of various SDX interface allocation scenarios.

- o Identify the NetScaler SDX administrative components and their use.

• High Availability

- o Explain NetScaler capabilities and functionality.

- o Introduce NetScaler architecture.

- o Discuss NetScaler hardware and components.

- o Explore deployment and licensing options.

- o Perform NetScaler setup and configuration.

• Load Balancing

- o Describe the NetScaler load-balancing process and the role of entities.

- o Identify the different load-balancing and monitoring options available on the NetScaler.

- o Define the different traffic types that can be load balanced.

- o Explain how monitoring and service options can be customized.

- o Understand third-party load-balancing services on NetScaler.

- o Distinguish the methods used to protect and troubleshoot a NetScaler load-balancing configuration.

• SSL Offload

- o Define SSL and how SSL Offload works.

- o Explain the process of creating and uploading SSL Certificates.

- o Demonstrate the creation of SSL virtual servers.

- o Identify common SSL deployments.

- o Describe some SSL Exploits and some of the NetScaler configuration settings that can prevent them.

• Securing the NetScaler

- o Define authentication, authorization, and auditing.

- o Describe how to configure authentication and authorization on NetScaler.

- o Identify the components and steps required to secure a NetScaler configuration.

- o Summarize the use and benefits of Admin Partitions.

• Monitoring, Management, and Troubleshooting

- o Identify NetScaler Log issues.

- o Monitor the NetScaler environment with Simple Network Management Protocol data.

- o Leverage AppFlow, Command Center, and Insight features within the NetScaler environment.

- o Utilize NetScaler troubleshooting tools.

Part 2: Days 4-5

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- Unified Gateway
  - Configure Unified Gateway.
  - Understand the challenges of remote access.
  - Understand the Unified Gateway feature and its role for application delivery.
- AppExpert Expressions and Policies
  - Identify policy expression structure and components of AppExpert.
  - Distinguish between classic and default policies.
  - Explain the types of policies available with NetScaler Gateway.
  - Describe policy bind points.
- Authentication and Authorization
  - Understand Authentication to establish identity.
  - Understand Authorization to provide access to resources.
  - Customize multi-factor authentication.
  - Deploy Authentication and Authorization policies.
- Managing Client Connections
  - Configure NetScaler Gateway plug-in with Citrix Receiver to establish VPN.
  - Configure the access level and which applications users are allowed to access in the secure network.
  - Configure pre-authentication policies and profiles to check for client-side security before end users are authenticated.
  - Deploy NetScaler Gateway to allow end-user connections, including logon options.
  - Explain how endpoint analysis is used to verify that the end-user device meets your requirements before allowing it to connect to your network or remain connected after end users log on.
- Integrating NetScaler with XenApp and XenDesktop
  - Understand NetScaler Gateway Integration with XenApp/XenDesktop
  - Integrate with Web Interface and StoreFront
  - Explain WebFront
  - Enable Clientless Access and Receiver for ICA Proxy
  - Utilize SmartControl
  - Configure SmartAccess
- Unified Gateway
  - Describe AppFlow Functionality
  - Discuss Components of NetScaler Insight
  - Configure NetScaler Insight
  - Explain NetScaler Insight Application Performance

- o Generate Performance Reports