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VMware NSX 4 Training: Installation, Configuration and Administration

5 days (35 hours)

Presentation

Our VMware NSX 4 training course will teach you the key methods for installing, configuring and administering an NSX environment.

You'll learn how to protect your infrastructure through a presentation of VMware NSX functionalities and use cases. These include logical switching, logical routing, firewalls, networking and security services.

This detailed program covers the fundamental aspects of VMware NSX. We'll guide you through the VMware architecture and components. This will prepare you to configure and manage the NSX infrastructure, focusing on key elements such as transport nodes, transport zones and profiles.

By the end of this course, you'll have mastered VMware NSX administration for intelligent cloud protection. We'll teach you the latest version of the system, VMware NSX 4.1.

Objectives

- Describe NSX architecture and main components
- Explain the features and benefits of NSX
- Deploying the NSX management cluster and VMware NSX® Edge™ nodes
- Preparing VMware ESXi™ hosts to participate in NSX networking
- Create and configure segments for Layer 2 transfer.
- Create and configure Tier-0 and Tier-1 gateways for logical routing
- Use distributed firewall and gateway policies to filter east-west and north-south traffic in NSX
- Configuring advanced threat prevention functions
- Configuring network services on NSX Edge nodes
- Use VMware Identity Manager™ and LDAP to manage users and accesses

- Explain the use cases, importance and architecture of federation

Target audience

Experienced system or network administrators.

Prerequisites

- Good understanding of TCP/IP services and protocols
- Knowledge and practical experience of computer networks, including switch and routing technologies (L2 to L3) and firewalls (L2 to L7)
- Knowledge and professional experience of VMware vSphere® environments
- Knowledge and practical experience of Kubernetes or VMware vSphere® environments with VMware Tanzu®.
- Solid understanding of the following concepts:
  - Basic technical skills for VMware virtual cloud networking
  - VMware datacenter virtualization: Basic technical skills
  - Kubernetes fundamentals

Note: This course aims to provide the knowledge and skills required for the official course on implementing and managing a VMware network infrastructure ("VMware NSX: Install, Configure, Manage [V4.0]" or the equivalent in the event of changes decided by the publisher).

This course is part of the certification program offered by the publisher, but taking the exam is not included in this consultation. Ambient IT is not the owner of the technology, VMware NSX® is a registered trademark of VMware Inc.

VMware NSX 4 training program

Introduction

- Introductions and course outline
- The objectives
- VMware Virtual Cloud Network and VMware NSX

Presenting the VMware virtual cloud network vision

- Describe the NSX product portfolio
- NSX features, use cases and benefits
- Explanation of NSX architecture and components
- Explanation of management, control, data and consumption plans and their functions.
- Preparing the NSX infrastructure

Deploy VMware NSX® ManagerTM nodes on ESXi hypervisors

- Navigating the NSX user interface
- Explanation of data plan components
  - N-VDS/VDS,
  - Transport nodes,
  - Transport zones
  - Profiles
- Prepare transport node and configure data plan infrastructure
- Check status and connectivity of transport nodes
- DPU-based acceleration in NSX
- Installing NSX using DPUs
- NSX Logical Switching

Logical routing and use cases

- Present the architecture, topologies and components of two-level routing
- Explanation of gateway functions Tier-0 and Tier-1
- Describe the logical router components
- Service Router and Distributed Router
- Architecture and function of NSX Edge nodes
- NSX Edge node deployment options
- Configuring NSX Edge nodes and creating NSX Edge clusters
- Configuring Tier-0 and Tier-1 gateways
- Examine packet flows at one or more levels
- Configure static and dynamic routing, including BGP and OSPFActivate ECMP on a Tier-0 gateway
- Describe HA, fault detection and recovery modes
- Configuring VRF LitePont NSX

Description of the logical binding function

- Use cases
- Compare routing and binding solutions
- Explain the components of logical binding
- Create cluster bridges and bridge profiles
- NSX Firewalls

Describing NSX segmentation

- Identify the steps for applying zero confidence with NSX segmentation
- Describe the architecture, components and function of a distributed firewall
- Configuring distributed firewall sections and rules
- Configuring distributed firewalls on VDS
- Describe the architecture, components and function of a firewall gateway
- Configure firewall gateway sections and rules
- NSX Advanced Threat Prevention

Explain NSX IDS/IPS and its use cases

- Configuring NSX IDS/IPS
- Deploying the NSX application platform
- Identify NSX Malware Prevention components and architecture
- Configuring NSX Malware Prevention for east-west and north-south traffic
- Describe the use cases and architecture of VMware NSX® Intelligence™.
- Identify the components and architecture of VMware NSX® Network Detection and Response™.
- Use NSX Network Detection and Response to analyze network traffic events
- NSX Services

Explain and configure network address translation (NAT)

- Explaining and configuring DNS and DHCP services
- Describe the architecture, components, topologies and use cases of VMware NSX®.
- Advanced Load Balancer™
- Configuring NSX Advanced Load Balancer
- Function and use cases :
  - IPSec VPN
  - VPN L2Configure
  - IPSec VPN
  - VPN L2
- NSX user and role management

The function and benefits of VMware Identity Manager™ on NSX

- Integrate VMware Identity Manager with NSX
- Integrate LDAP with NSX
- Identify different user types, authentication policies and authorizations
- Use role-based access control to restrict user access
- Explanation of object-based access control

NSX Federation

- Overview of key concepts, terminology and use cases for NSX Federation
- Explain the NSX Federation integration process
- Describe switching and routing functions
- Describe NSX Federation security concepts

Companies concerned

This training course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as enrolment is finalized, the learner receives a self-assessment questionnaire enabling us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and objectives.

This questionnaire also enables us to anticipate any connection or internal security problems (intra-company or virtual classroom) that could be problematic for the follow-up and smooth running of the training session. This questionnaire also enables us to anticipate any connection or internal security difficulties within the company (intra-company or virtual classroom) that could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.