



# Virtual Server Networking for VMware Engineers

**Length**  
1 day

**Format**  
Lecture/lab

**Track**  
Design

**Version**  
1.1

## Description

One of the major barriers to widespread adoption of server virtualization in the Enterprise Data Center today is the challenge of coordinating provisioning of virtual machines with network resources. The emerging VN-Link specification for virtual switching was designed to ensure consistent, policy-based administration of physical and virtual servers.

The Cisco Nexus 1000V leverages the VN-Link specification, together with VMware's vNetwork Distributed Switch framework, to offer tightly integrated network services as part of a comprehensive Data Center virtualization strategy. The Nexus 1000V provides operations and management consistency with existing Cisco Nexus and Catalyst switches.

This 1-day course provides an overview of the features and capabilities of VN-Link and the Cisco Nexus 1000V, including a hands-on lab in which you will configure the Nexus 1000V and demonstrate policy mobility during virtual machine migration.

## Who Should Attend

This course provides an introduction to VN-Link and the Cisco Nexus 1000V for experienced VMware administrators.

## Recommended Prerequisites

You will gain the most from this seminar if you have hands-on experience with VMware Virtual Infrastructure, and some familiarity routing and switching technologies.

# VSN-VE

## Objectives

In this course, you will learn how to:

- Describe the key characteristics of access-layer LAN design
- Explain the challenges with advanced virtual machine mobility features of VMware, including ESX clusters and Vmotion
- Describe the implementation and components of VN-Link technology and the Nexus 1000V
- Explain how the Nexus 1000V provides real-time coordinated configuration of network and security services
- Discuss Nexus 1000V network design and explain how the Nexus 1000V fits into the current network
- Configure the Nexus 1000V and demonstrate policy mobility during virtual machine migration



Learning  
Solutions



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## Course Outline

### **Lesson 1: Introduction to the Nexus 1000V**

- Data Center Access Layer Networks
- Virtual Environment Overview
- Cisco Virtual Switching Overview
- Feature Overview

### **Lesson 2: Access Layer Networking**

- Layered Networking
- VLANs and Trunks
- Network Routing
- Spanning Tree Protocol
- PortChannels
- Network Security

### **Lesson 3: Nexus 1000V Architecture**

- Key Features
- Architectural Overview

### **Lesson 4: Nexus Access Layer Networking Design**

- VN-Link
- Access Layer Designs

### **Lesson 5: Nexus 1000V Configuration**

- Installation and Operation
- Port Profiles

### **Labs:**

- Lab 1: Populating the vCenter Database
- Lab 2: Installing the Nexus 1000V
- Lab 3: Configuring Port Profiles
- Lab 4: Nexus 1000V Switch Management



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