

---

## Implementing & Configuring Cisco Nexus 1000

**Duration: 3 Days**    **Course Code: ICNX1V**

---

### Overview:

The Cisco Nexus 1000V is a virtual switch that resides within the VMware ESX Server instance and provides operations and management consistency with existing Cisco Nexus and Catalyst switches. The 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 server virtualization strategy.

This 3-day course provides you with an indepth look at the design and configuration process for the Cisco Nexus 1000V, including hands-on labs in which you will configure a VMware infrastructure, configure the Nexus 1000V and demonstrate policy mobility during virtual machine migration.

---

### Target Audience:

This course provides an introduction to VNLink and the Cisco Nexus 1000V for network engineers who need to gain experience in configuring a VMware virtual networking environment.

---

### Objectives:

- |  |   |
|--|---|
| ■ <b>After you complete this course, you will be able to:</b>                          | ■ Configure VMware clustering services                              |
| ■ Describe the VMware virtual networking environment                                   | ■ Test VMotion in a VMware network environment                      |
| ■ Describe the Nexus 1000V switch and its role in a virtual server network environment | ■ Install and configure the Nexus 1000V                             |
| ■ Describe the Nexus 5000, 2000, and 1000V access layer architecture                   | ■ Configure VN-Link on the Nexus 5000                               |
| ■ Model and configure virtual access layer topologies                                  | ■ Configure Nexus 1000V network security profiles                   |
| ■ Perform basic configuration of ESX virtual machines                                  | ■ Describe the network monitoring methods used with the Nexus 1000V |
| ■ Import VMs from a SAN  | ■ Configure Nexus 1000V security policies                           |
| ■ Describe the configuration of advanced VMware services                               | ■ Monitor and troubleshoot Nexus 1000V environments                 |
- 

### Prerequisites:

**Delegates should meet the following prerequisites:**

- CCNA level knowledge of Routing and Switching

### Testing and Certification

**Recommended preparation for exam(s):**

- None applicable at this time
- 

### Follow-on-Courses:

**The following courses are recommended for further study:**

---

## Content:

### Module 1: Networks in a Virtual Server Environment

#### Introduction to the Nexus 1000V

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

#### Server Virtualization Primer

- Server Virtualization
- VMware Virtualization
- Virtual Networking with VMware
- Virtual Storage Networking with VMware
- VMware Environment Management

#### VMware Ethernet Networking

- Virtual Access Layer
- The VMware vSwitch
- VMware Network Configuration
- Distributed Virtual Switching

#### Nexus 1000V Architecture

- Architectural Overview
- Installation and Operation

#### Nexus Design Considerations

- VN-Link
- Access Layer Designs

### Module 2: Virtual Network Configuration

#### Configuring VMware Switching

- Configuring vSwitches
- Configuring VMware DVS

#### Install and Configure Nexus 1000V

- Configure VSM vSwitch Networks
- VSM Virtual Machine Creation
- Initial VSM Configuration
- Connect the VSM to vCenter
- Nexus 1000V HA Configuration

#### Configuring Port Profiles

- Port Profiles
- VLAN Configuration
- Creating Uplink Profiles
- Creating VM data Port Profiles
- Configuring Nexus 1000V Port Channels
- Adding Hosts to the VSM
- Adding VMs to a VSM

#### Configuring Security

- Access Control Lists
- Configuring Access Control Lists
- Understanding Private VLANs
- Configuring Private VLANs

#### Installing and configuring the Nexus 1000V and VN-Link

- IGMP Snooping
- QoS

#### Network Monitoring and Troubleshooting

- Netflow
- SPAN
- Troubleshooting VSM Connectivity
- Troubleshooting VM Connectivity

#### Labs

- Lab 1: Populating the vCenter Database
- Lab 2: Configuring VMware Networking
- Lab 3: Installing the Nexus 1000V
- Lab 4: Configuring Port Profiles
- Lab 5: Nexus 1000V Switch Management
- Lab 6: Configuring Security
- Lab 7: Traffic Flow
- Lab 8: Troubleshooting

## Further Information:

For More information, or to book your course, please call us on 0800/84.009

[info@globalknowledge.be](mailto:info@globalknowledge.be)

[www.globalknowledge.be](http://www.globalknowledge.be)