VMware NSX: Introduction to Routing and Switching Course

Course Duration: 16 Hours **Course Code: NSX-RS101**

1. Course Overview

The VMware NSX: Introduction to Routing and Switching course is designed to provide IT professionals with a solid understanding of routing and switching concepts within a VMware NSX environment. This course covers fundamental networking principles, logical routing, distributed switching, and how these functions integrate into a software-defined data center (SDDC). Participants will gain both theoretical knowledge and hands-on experience to design, configure, and manage virtual networks effectively.

2. 2. What You'll Learn?

By the end of this course, you will be able to:

- Understand the architecture of VMware NSX and its core networking components.
- Configure and manage logical switches and distributed routers.
- Implement routing protocols such as OSPF, BGP, and static routes within NSX.
- Differentiate between traditional networking and software-defined networking (SDN).
- Troubleshoot common issues related to routing and switching in NSX.
- Integrate NSX routing and switching with physical infrastructure.

3. Target Audience

This course is ideal for:

- Network Administrators and Engineers
- Virtualization Engineers
- System Administrators
- Data Center Professionals
- IT professionals looking to gain skills in VMware NSX and software-defined networking.

4. Pre-Requisites

Participants should have:

- Basic knowledge of TCP/IP networking.
- Familiarity with virtualization concepts and VMware vSphere.
- Understanding of routing and switching fundamentals.
- Experience with command-line tools (preferred but not mandatory).

5. Course Content

Module 1: Introduction to VMware NSX and Networking Fundamentals

- Overview of VMware NSX architecture
- Traditional vs. Software-Defined Networking
- Core NSX components and their functions

Module 2: Logical Switching in NSX

- Configuring logical switches
- VXLAN concepts and encapsulation
- Traffic flow and packet forwarding

Module 3: Distributed Routing

- NSX distributed logical router (DLR)

- Configuring static routes
- Routing between virtual networks

Module 4: Dynamic Routing Protocols

- Introduction to OSPF and BGP
- Configuring OSPF in NSX
- Configuring BGP in NSX
- Route redistribution concepts

Module 5: Edge Routing and Integration

- NSX Edge Services Gateway (ESG)
- North-South routing design
- Integration with physical network infrastructure

Module 6: Monitoring and Troubleshooting

- Tools for monitoring NSX routing and switching
- Troubleshooting distributed routing
- Troubleshooting logical switching issues