

The Detailed course Modules for (DCNX7K) Configuring Cisco Nexus 7000 Switches Training Online:

Module 1: Cisco Nexus 7000 Series Switches

- Cisco unified fabric trends
- Nexus 7000 series switch
- Deployment models

Module 2: Cisco Nexus 7000 Series Switch Hardware

- Nexus 7000 series switch chassis family
- Chassis components
- I/O module families
- Nexus 7000 and 7700 I/O module scalability
- Network analysis module
- High-availability features
- Packet flow and arbitration
- Layer 2 and Layer 3 forwarding

Module 3: Cisco Nexus 2000 Series Fabric Extender

- Cisco FEX technology
- Fabric extender models
- 7000 series switch and 2000 series switch fabric extender topologies and features

Module 4: Cisco NX-OS Software

- NX-OS software architecture and key features
- NX-OS high-availability infrastructure components
- IOS to NX-OS conversion tool
- Licensing for Nexus 7000 series

Module 5: Cisco Nexus 7000 Series Switch Administration, Management and Troubleshooting

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- CLI and GUI management interfaces
- NX-OS setup utility
- NX-OS user management
- AAA configuration with RADIUS, TACACS+, and LDAP
- System management features
- Cisco Fabric services
- ISSU
- NX-OS image recovery
- EPLD image upgrade
- Troubleshooting process
- Configure online diagnostics
- OBFL feature
- Configure RMON and Cisco EEM
- Evaluate memory
- Troubleshoot packet flow issues
- Cisco network analysis module

Module 6: Virtual Device Contexts (VDC) on Cisco Nexus 7000 Series Switches

- VDC communication
- VDC types, resources and management
- Configuring and verifying VDCs
- Managing VDC configurations

Module 7: Layer 2 Switching Features on Cisco nexus 7000 Series Switches

- Basic interface parameters configuration
- FEX layer 2 and 3 interfaces configuration
- VLAN configuration
- STP configuration
- Q-in-Q VLAN tunnels configuration

Module 8: Port Channels and Virtual Port Channels on Cisco Nexus 7000 Series Switches

- Port channel operation
- Port channel load balancing

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- vPC
- Concepts
- Benefits
- Architecture
- Control and data plane operation
- Peer link failure
- Peer switch
- Layer 3 interactions
- Multicast
- Configure and verify
- Optimize
- Troubleshooting checklist

Module 9: Cisco FabricPath on Cisco Nexus 7000 Series Switches

- FabricPath
- Architecture
- MAC address learning
- Data plane operation
- Spanning Tree interaction
- IP multicast routing
- FabricPath con Nexus 7000 series switches configuration
- Troubleshooting
- FabricPath pong
- DFA architecture and features
- Fabric management
- DFA deployment requirements
- Prime DCNM 7.0 and DFA

Module 10: Layer 3 Switching Features on Cisco Nexus 7000 Series Switches

- Cisco NX-OS routing and forwarding
- Routing protocol configuration
- Static route
- OSPF

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- EIGRP
- IS-IS
- BGP
- Route policy manager
- FHRP protocol configurations
- HSRP
- VRRP
- GLBP
- BFD configuration on Nexus 7000 switches
- Multicast configuration

Module 11: MPLS on Cisco Nexus 7000 Series Switches

- Layer 2 and 3 VPN
- Traffic engineering
- MPLS feature set configuration
- Layer 3 VPNs configuration
- Layer 2 VPNs configuration
- MPLS TE configuration

Module 12: Cisco OTV on Cisco Nexus 7000 Series Switches

- Cisco OTV
- Terminology
- Control plane
- Data plane
- Unicast-only transport infrastructure
- Data plane encapsulation
- Spanning tree
- Unknown unicast
- QOS
- Fast convergence
- OTV verification and configuration
- Advanced OTV features

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Module 13: VXLAN on Cisco Nexus 7000 Series Switches

- Data center overlay technologies
- VXLAN
- Data plane learning and packet flow
- MP-BGP EVPN control plane
- MP-BGP EVPN gateway functions
- VXLAN configuration verification

Module 14: LISP on Cisco Nexus 7000 Series Switches

- LISP
- Features
- Configuration steps
- Infrastructure
- Site devices
- Internetworking devices
- VM mobility

Module 15: FCoE on Cisco Nexus 7000 Series Switches

- Fiber Channel over Ethernet (FCoE)
- Requirements
- Address scheme
- Initialization protocol
- Port types
- Design
- Supported FCoE ports
- Configuration steps
- Licensing
- Enable FCoE
- Multihop FCoE configuration

Module 16: Security Features on Cisco Nexus 7000 Series Switches

- Security features
- Configurations

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- ACLs
- Port security
- DHCP snooping
- DAI
- IP source guard
- uRPF
- Traffic storm control
- CoPP
- Cisco TrustSec configuration

Module 17: QoS on Cisco Nexus 7000 Series Switches

- Diversity of data center application flows
- Data center QoS requirements
- Priority flow control
- Priority-based bandwidth management
- DCBX protocol
- QoS on Nexus 7000 configuration

Module 18: Cisco ITD and RISE on Cisco Nexus 7000 Series Switches

- ITD deployment models
- ITD configuration and verification
- RISE overview
- With Citrix NetScaler appliances
- With Cisco Prime NAM

Module 19: Cisco NX-API and Python on Cisco Nexus 7000 Series Switches

- Network programmability
- NX-API overview
- Python extensions and scripting