VMware NSX

**Product Features**

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<th>Advanced</th>
<th>Enterprise</th>
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<td>SW vswitch operation</td>
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<td>Dynamic routing with ECMP (active-active)</td>
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<td>APIs driven automation</td>
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<td>Integration with vRealize</td>
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<td>Integration with Action Directory</td>
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<td>Server activity monitoring</td>
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<td>Service insertion (third-party integration)</td>
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<td>Integration with AirWatch</td>
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<td>Cross-Center N2N</td>
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<td>Multi-site NSX optimization</td>
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<td>VPN (IPSec and SSL)</td>
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<td>Remote Gateway</td>
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<td>Integration with back-end VSPPs</td>
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**Load Balancing Services**

- **One-Arm Mode (Proxy):**
  - Load Balancing is in the VM defined in the VIP definition
  - Only one VIP port is created
  - VIP is not disabled in the NSX Edge
  - VIP is not the VIP's default gateway

- **Inbound Mode (Transparent):**
  - Load Balancing in the VM defined in the VIP definition
  - Only the VIP's default gateway is used
  - VIP is disabled in the NSX Edge

**Load Balancer Commands**

- **Firewall:**
  - Show configuration
  - Show configuration status

- **Logical Route:**
  - Show vtep (VIP)
  - Show configuration
  - Show configuration status

- **Logical Switch:**
  - Show vtep
  - Show configuration

- **Logical Router:**
  - Show vtep
  - Show configuration

**NSX Edge commands**

- **Controllers:**
  - Show controller
  - Show controller status

- **Logical Switch:**
  - Show logical-switch

- **Logical Router:**
  - Show logical-router

- **Logical Switches:**
  - Show logical-switch

- **Logical Routers:**
  - Show logical-router

- **Logical Interface:**
  - Show logical-interface

**NSX Manager Commands**

- **Controllers:**
  - Show controller status

- **Logical Switches:**
  - Show logical-switch

- **Logical Routers:**
  - Show logical-router

- **Logical Interfaces:**
  - Show logical-interface

**NSX Dynamic Routing**

- **Controllers:**
  - Show controller status

- **Logical Switches:**
  - Show logical-switch

- **Logical Routers:**
  - Show logical-router

- **Logical Interfaces:**
  - Show logical-interface

**NSX Reference Architecture**

- **Policy:**
  - Route based on existing path

- **Routing:**
  - Route based on protocol

- **Failover:**
  - Failover based on NIC

**ESXi Commands**

- **Check NSX Manager:**
  - Check whether NSX Manager is installed

- **Check NSX VXLAN:**
  - Check VXLAN presence

- **Check NSX Overlay:**
  - Check if VXLAN is configured

- **Check NSX Version:**
  - Check NSX version number

- **Check NSX Controller:**
  - Check NSX Controller status

- **Check NSX Logical Switch:**
  - Check NSX Logical Switch status

- **Check NSX Logical Router:**
  - Check NSX Logical Router status

- **Check NSX Logical Interface:**
  - Check NSX Logical Interface status

**NSX Implementation Steps**

1. **Register with vCenter**
2. **Deploy NSX Manager**
3. **Prepare Clusters**
4. **Configure and deploy Edge Services Gateway(s) and additional networking & security services**
5. **Dedicated network services**
6. **Integrate with vRealize Automation**
7. **Integrate with Action Directory**
8. **Integrate with AirWatch**
9. **Integrate with back-end VSPPs**
10. **Configuring and deploying VXLAN services**
11. **Configuring and deploying NSX Edge Services Gateway(s)**
12. **API-driven automation**
13. **Integration with Active Directory**
14. **Network Layer 2 bridging to physical environment**
15. **SW L2 bridging to physical environment**
16. **Dynamic routing with ECMP (active-active)**
17. **Switching via controller**
18. **Deployment of security policies with vRealize Automation**
19. **Integration with AirWatch**
20. **Integration with Action Directory**
21. **Integrate with back-end VSPPs**

**API-driven automation**

- **Load Balancing Services**

  - Show load balancer configuration
  - Show configuration load balancer
  - Show VIPs
  - Show configuration load balancer virtual IP
  - Show configuration load balancer pool "poolName"
  - Show load balancer pool configuration

**Dynamic Routing**

- **Distributed firewalling**

**Logical Routers**

- **Logical Interface**

**Logical Switches**

- **Logical Switch**

- **Logical Router**

**Logical Switch**

- **Logical Switch**

**Logical Router**

- **Logical Router**

**Logical Interface**

- **Logical Interface**

**Controller**

- **Controller**

**Manager**

- **Manager**

**Edge Cluster**

- **Edge Cluster**

**Management Cluster**

- **Management Cluster**

**Payload Rack Cluster**

- **Payload Rack Cluster**

**Documentation Center**

- **Documentation Center**

- **Official Blog**

- **VMware Hands-on labs**

- **NSX Resource links**

**Troubleshooting**

- **Trending support issues**

**NSX Licensing**

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<th>vCPU</th>
<th>Memory</th>
<th>General Guidance</th>
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<tr>
<td>Compact</td>
<td>1</td>
<td>128MB</td>
<td></td>
</tr>
<tr>
<td>Large</td>
<td>2</td>
<td>1GB</td>
<td>Medium performance firewall</td>
</tr>
<tr>
<td>X-Large</td>
<td>6</td>
<td>8GB</td>
<td>High performance firewall</td>
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**VXLAN Frame Format**

- **VXLAN Grouped Frames**

  - VXLAN Grouped Frame
  - VXLAN Encapsulated Frame
  - VXLAN Original Frame

- **VXLAN Grouped Frame Format**

  - VXLAN Grouped Frame
  - VXLAN Encapsulated Frame

- **VXLAN Original Frame Format**

  - VXLAN Original Frame
  - VXLAN Encapsulated Frame