

1. ESXi-1

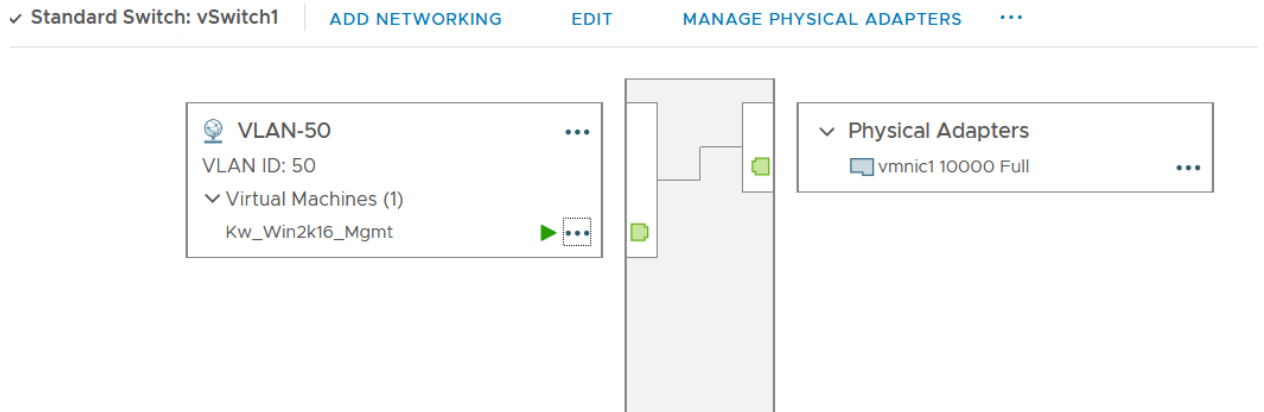


Figure 1 – Host-1 vSwitch-1

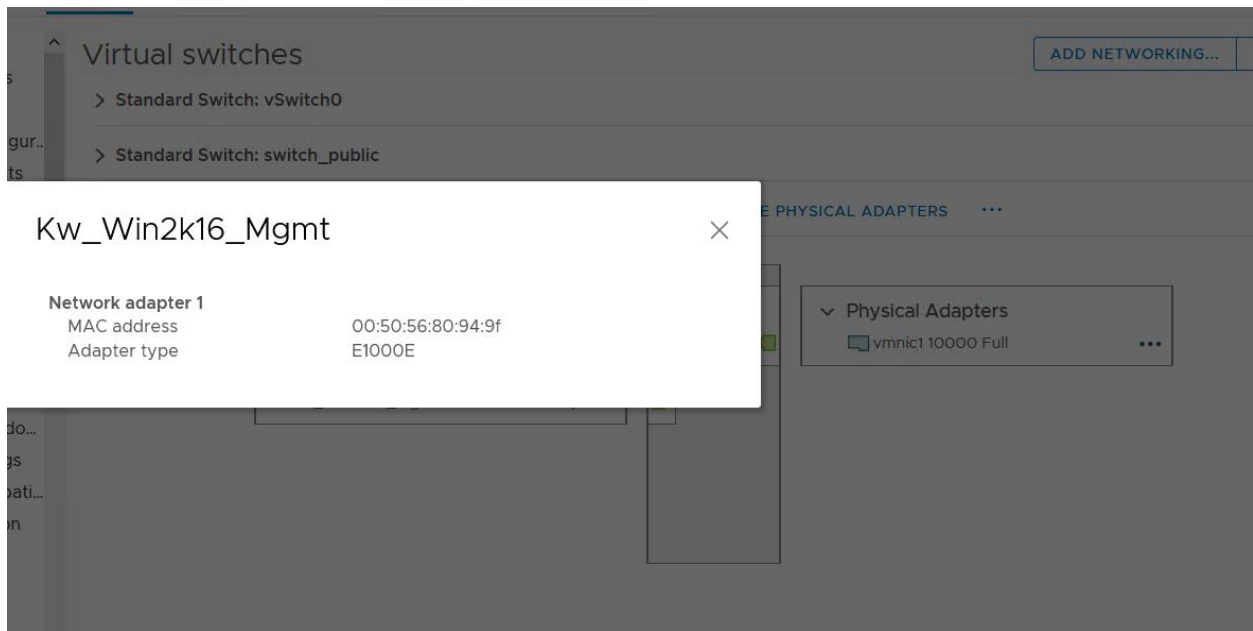


Figure 2 – VM-Server-1 connecting to vSwitch-1 access port-Group vlan 50

vSwitch1 - Edit Settings


Properties		
Security	Number of ports	Elastic
Traffic shaping	MTU (Bytes)	1500 
Teaming and failover		

Figure 3 – vSwitch-1 Setting

vSwitch1 - Edit Settings










Properties		
Security	Promiscuous mode	Accept 
Traffic shaping	MAC address changes	Accept 
Teaming and failover	Forged transmits	Accept 



Figure 4 – vSwitch-1 Security Setting

vSwitch1 - Edit Settings

Properties		
Security	Load balancing	Route based on originating virtual port 
Traffic shaping	Network failure detection	Link status only 
Teaming and failover	Notify switches	Yes 
	Failback	Yes 

Failover order

Active adapters	
 vmnic1	
Standby adapters	
Unused adapters	

Select a physical network adapter from the list to view its details.

Figure 5 – vSwitch-1 Physical Port

VLAN-50 - Edit Settings

Properties

Security

Traffic shaping

Teaming and failover

Network label VLAN-50

There are virtual machines on this host connected to the network 'VLAN-50'. If you rename this port group, vCenter Server will map it to a standard network with the specified new name. Then you should reconnect all virtual machines to the new standard network.

VLAN ID 50

Figure 6 – vSwitch-1 VLAN-ID config

Physical Link show

Adapter Name	Intel(R) Ethernet Controller 10G X550
Location	vmnic1
Driver	PCI 0000:3b:00.1
Status	ixgben
Status	Connected
Actual speed, Duplex	10000 Mb, Full Duplex
Configured speed, Duplex	10000 Mb, Full Duplex
Networks	0.0.0.1-255.255.255.254 (VLAN706) 0.0.0.1-255.255.255.254 (VLAN712)
SR-IOV	
Status	Disabled
Cisco Discovery Protocol	
Version	2
Timeout	60
Time to live	124
Samples	7478
Device ID	N3K3()
IP address	172.19.255.1
Port ID	Ethernet1/2
Software version	Cisco Nexus Operating System (NX-OS) Software, Version 7.0(3)I7(5)
Hardware platform	N3K-C3172TQ-10GT
IP prefix	0.0.0.0
IP prefix length	0
VLAN	1
Full Duplex	Enabled

```

MTU 1500
System name #N3K3
System OID 1.3.6.1.4.1.9.12.3.1.3.1390
Management address 192.168.255.3
Location
Peer device capability
Router Enabled
Transparent bridge Disabled
Source route bridge Disabled
Network switch Enabled
Host Disabled
IGMP Enabled
Repeater Disabled
Link Layer Discovery Protocol
Link Layer Discovery Protocol is not available on this physical network adapter

```

switch N3k Config

```

show run int eth 1/2

!Command: show running-config interface Ethernet1/2
!Time: Mon Jul 29 15:42:45 2019

version 7.0(3)I7(5) Bios:version 3.5.0

interface Ethernet1/2
 switchport mode trunk
!
show vlan id 50

VLAN Name                Status  Ports
-----
50 Staging-Internal      active  Po1234, Po4096, Eth1/2, Eth
1/49                      Eth1/50, Eth1/51

VLAN Type      Vlan-mode
-----
50 enet      CE

Remote SPAN VLAN
-----
Disabled

Primary Secondary Type      Ports

```

```
-----  
!  
how run int vlan 50  
  
!Command: show running-config interface Vlan50  
!Time: Mon Jul 29 15:44:06 2019  
  
version 7.0(3)I7(5) Bios:version 3.5.0  
  
interface Vlan50  
  no shutdown  
  ip address 172.19.255.1/16
```

2. ESXi-2

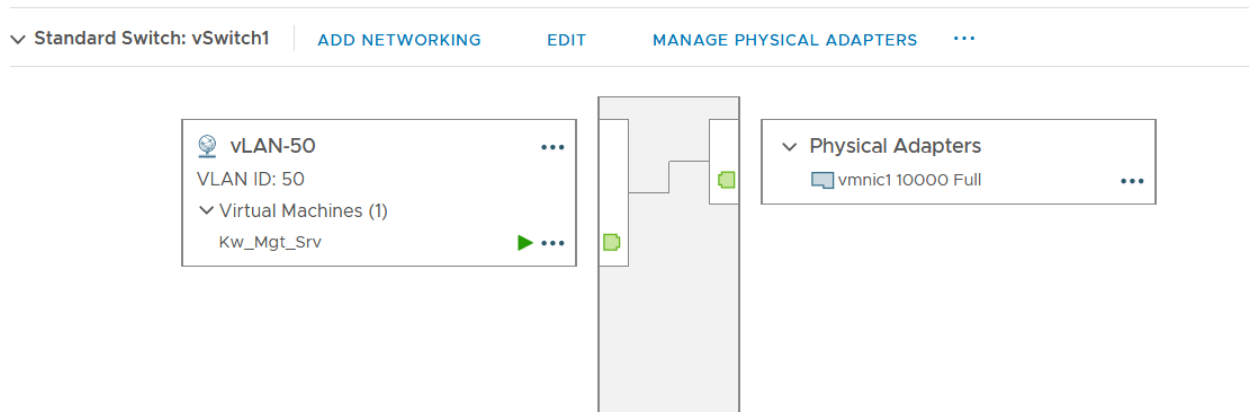


Figure 7 - Host-2 vSwitch-1

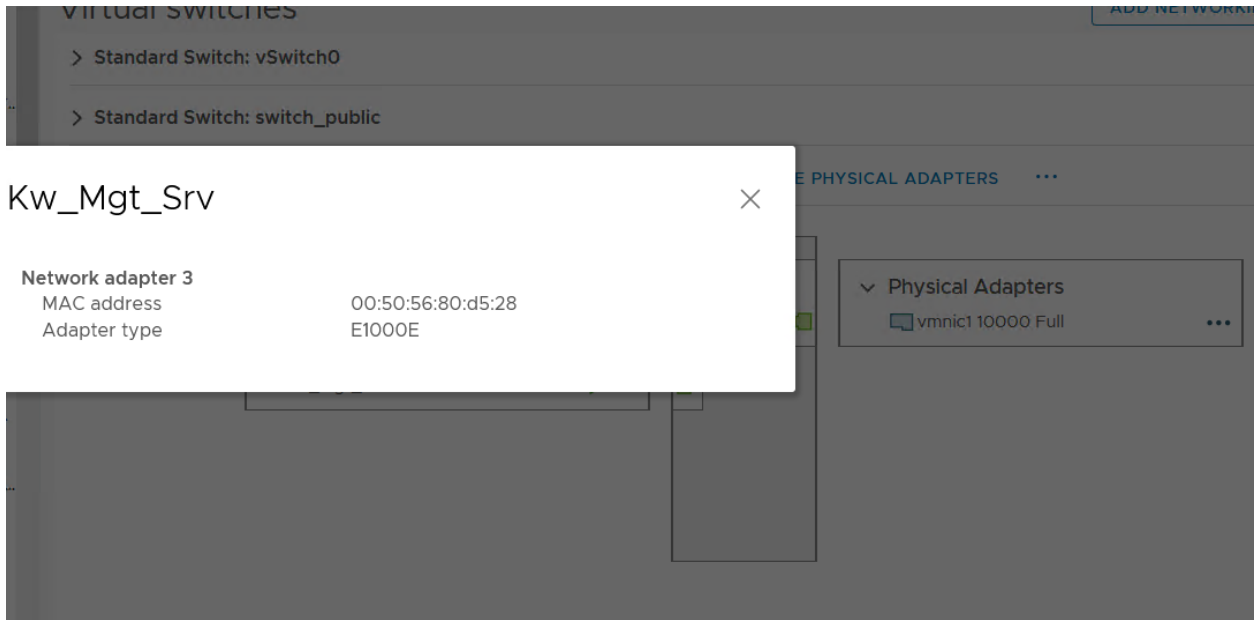


Figure 8 - VM-Server-2 connecting to vSwich-1 access port-Group vlan 50

vSwitch1 - Edit Settings

Properties	Number of ports	Elastic
Security		
Traffic shaping	MTU (Bytes)	1500
Teaming and failover		

Figure 9 – Host-2 vSwitch-1 configuration

vSwitch1 - Edit Settings

Properties		
Security	Promiscuous mode	Accept
Traffic shaping	MAC address changes	Accept
Teaming and failover	Forged transmits	Accept

Figure 10 - Host-2 vSwitch-1 security configuration

vSwitch1 - Edit Settings

Properties	Load balancing	Route based on originating virtual port
Security	Network failure detection	Link status only
Traffic shaping	Notify switches	Yes
Teaming and failover	Failback	Yes

Failover order

↑ ↓

Active adapters
vmnic1
Standby adapters
Unused adapters

Select a physical network adapter from the list to view its details.

Figure 11 – Host-2 vSwitch-1 physical port

Server physical NIC show

Adapter	Intel(R) Ethernet Controller 10G X550
Name	vmnic1
Location	PCI 0000:3b:00.1
Driver	ixgben
Status	
Status	Connected
Actual speed, Duplex	10000 Mb, Full Duplex
Configured speed, Duplex	10000 Mb, Full Duplex
Networks	No networks
SR-IOV	
Status	Disabled
Cisco Discovery Protocol	
Version	2
Timeout	60
Time to live	154
Samples	28893
Device ID	N3K4()
IP address	172.19.255.2

Port ID	Ethernet1/2
Software version	Cisco Nexus Operating System (NX-OS) Software, Version 7.0(3)I7(5)
Hardware platform	N3K-C3172TQ-10GT
IP prefix	0.0.0.0
IP prefix length	0
VLAN	1
Full Duplex	Enabled
MTU	1500
System name	N3K4
System OID	1.3.6.1.4.1.9.12.3.1.3.1390
Management address	192.168.255.4
Location	
Peer device capability	
Router	Enabled
Transparent bridge	Disabled
Source route bridge	Disabled
Network switch	Enabled
Host	Disabled
IGMP	Enabled
Repeater	Disabled
Link Layer Discovery Protocol	
Link Layer Discovery Protocol is not available on this physical network adapter	

Switch Nexus show

```

show run int eth 1/2

!Command: show running-config interface Ethernet1/2
!Time: Mon Jul 29 15:53:20 2019

version 7.0(3)I7(5) Bios:version 3.5.0

interface Ethernet1/2
  switchport mode trunk
!
show vlan id 50

VLAN Name                Status  Ports
-----
50 Staging-Internal      active  Po1234, Po4096, Eth1/2, Eth
1/49

```


Eth1/50, Eth1/51

```
VLAN Type      Vlan-mode
-----
50  enet      CE
```

Remote SPAN VLAN

Disabled

```
Primary Secondary Type      Ports
-----
```

!

SBDT-HCM-N3K4# show run int vlan 50

!Command: show running-config interface Vlan50
!Time: Mon Jul 29 15:53:54 2019

version 7.0(3)I7(5) Bios:version 3.5.0

```
interface Vlan50
no shutdown
ip address 172.19.255.2/16
```

3. Testing

VM-Server IP 172.19.5.61 in Host-2

```
Ethernet adapter vLan-Test:

Connection-specific DNS Suffix . : 
Description . . . . . : Intel(R) 82574L Gigabit Network Connection #3
Physical Address. . . . . : 00-50-56-80-D5-28
DHCP Enabled. . . . . : No
Autoconfiguration Enabled . . . . : Yes
Link-local IPv6 Address . . . . . : fe80::59f1:adf9:3dc2:1814%5(Preferred)
IPv4 Address. . . . . : 172.19.5.61(Preferred)
Subnet Mask . . . . . : 255.255.0.0
Default Gateway . . . . . : 
DHCPv6 IAID . . . . . : 419450966
DHCPv6 Client DUID. . . . . : 00-01-00-01-24-B7-AD-AD-00-0C-29-E1-F3-92
DNS Servers . . . . . : fec0:0:0:ffff::1%1
                       : fec0:0:0:ffff::2%1
                       : fec0:0:0:ffff::3%1
NetBIOS over Tcpi. . . . . : Enabled
```

VM-Server IP 172.19.5.62 in Host-1

```
Ethernet adapter Ethernet0:

    Connection-specific DNS Suffix . . . . . : 
    Description . . . . . : Intel(R) 82574L Gigabit Network Connection #3
    Physical Address. . . . . : 00-50-56-80-94-9F
    DHCP Enabled. . . . . : No
    Autoconfiguration Enabled . . . . . : Yes
    Link-local IPv6 Address . . . . . : fe80::2813:b3d3:cb45:ffd5%22(Preferred)
    IPv4 Address. . . . . : 172.19.5.62(Preferred)
    Subnet Mask . . . . . : 255.255.0.0
    Default Gateway . . . . . : 
    DHCPv6 IAID . . . . . : 369119318
    DHCPv6 Client DUID. . . . . : 00-01-00-01-24-B7-AD-AD-00-0C-29-E1-F3-92
    DNS Servers . . . . . : fec0:0:0:ffff::1%1
                           fec0:0:0:ffff::2%1
                           fec0:0:0:ffff::3%1

    NetBIOS over Tcpi. . . . . : Enabled
```

VM-Server in host-1 cannot ping VM-Server in host-2 and vice versa

```
C:\Users\Administrator>ping 172.19.5.62

Pinging 172.19.5.62 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.19.5.62:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

VM-Server in host-2 cannot ping int-vlan-50 in N3K-3 (which connecting to host-1) but can ping int-vlan-50 in N3K-4 (which directly connecting to host-2)

```
C:\Users\Administrator>ping 172.19.255.2

Pinging 172.19.255.2 with 32 bytes of data:
Reply from 172.19.255.2: bytes=32 time<1ms TTL=255
Reply from 172.19.255.2: bytes=32 time<1ms TTL=255
Reply from 172.19.255.2: bytes=32 time<1ms TTL=255
Reply from 172.19.255.2: bytes=32 time<1ms TTL=255

Ping statistics for 172.19.255.2:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\Administrator>ping 172.19.255.1

Pinging 172.19.255.1 with 32 bytes of data:
Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 172.19.255.1:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

VM-Server in host-1 can ping both of int-vlan-50 in N3K-3 (which connecting to host-1) and N3K-4 (which connecting to host -2) but can not ping VM- Server in host-1

```
C:\Users\Administrator>ping 172.19.255.1
```

```
Pinging 172.19.255.1 with 32 bytes of data:
```

```
Reply from 172.19.255.1: bytes=32 time<1ms TTL=255
```

```
Reply from 172.19.255.1: bytes=32 time<1ms TTL=255
```

```
Reply from 172.19.255.1: bytes=32 time<1ms TTL=255
```

```
Reply from 172.19.255.1: bytes=32 time<1ms TTL=255
```

```
Ping statistics for 172.19.255.1:
```

```
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
```

```
Approximate round trip times in milli-seconds:
```

```
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:\Users\Administrator>ping 172.19.255.2
```

```
Pinging 172.19.255.2 with 32 bytes of data:
```

```
Reply from 172.19.255.2: bytes=32 time<1ms TTL=255
```

```
Reply from 172.19.255.2: bytes=32 time<1ms TTL=255
```

```
Reply from 172.19.255.2: bytes=32 time<1ms TTL=255
```

```
Reply from 172.19.255.2: bytes=32 time<1ms TTL=255
```

```
Ping statistics for 172.19.255.2:
```

```
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
```

```
Approximate round trip times in milli-seconds:
```

```
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

```
C:\Users\Administrator>ping 172.19.5.61
```

```
Pinging 172.19.5.61 with 32 bytes of data:
```

```
Request timed out.
```

```
Request timed out.
```

```
Request timed out.
```

```
Request timed out.
```

```
Ping statistics for 172.19.5.61:
```

```
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
```

```
C:\Users\Administrator>_
```