

Please help in S.C & VMotion VLAN Setup



[Hussain Al Sayed](#) 2 posts since

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I want to configure my ESX Servers to works with VLAN under Nortel Switches 4542 GT in Stack-mode.

Server Configuration:

2- DL380 G5, each with Single Port HBA, 6 pNICs, 2 pCPU Dual-Proc.

2- BL460 G1, Each with Dual-port HBA, 6 pNICs, 1 pCPU Dual-Proc.

Setup:

vSwitch0 = ESX Networks: Service Console "172.16.20.0/24" && VMotion "10.1.0.0/24" using VLANs.

vSwitch1= Production Network: 128.104.0.0/16

vSwitch2 = DMZ Network: 192.168.1.0/24

Private Network for ESX:

vSwitch0 with 2 pNICs connected vmnic0 & vmnic1 Teamed on the vSwitch Level.

2 Portsgroup.

1 Service Console

1 VMotion

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In the portgroup Setting for S.C --> Nic Teaming is vmnic0 Active and vmnic1 Standby

In the portgroup setting for VMotion --> Nic Teaming is the vmnic1 Active and vmnic0 Standby.

vmnic0 connected to pSwitch on port configured with VLAN 2

vmnic1 connected to pSwitch on port configured with VLAN 3

Production Network:

vSwitch1 with 2 pNICs connected vmnic2 & vmnic3 Teamed on the vSwitch Level.

1 Portgroup.

Production VMs

vSwitch2 with 2 pNICs connected vmnic4 & vmnic5 Teamed on the vSwitch Level.

1 Portgroup

DMZ VMs

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If

I assign an IP Address to the S.C with the same IP which is configured

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on the VLAN, "Without Assigning the ((VLAN ID)) in the portgroup, through pServer, i can reach to other ESX Host Service Console, because both of them are on the same VLAN.

As soon as I assign the ((VLAN ID)) on the portgroup of S.C, i lost the connectivity to the server, and I started troubleshooting the vswif0 to create another Service Console Network in order to access it the ESX Host. "And the same applies on the VMotion Network".

The same goes to the VMotion network as well. From the pSwitch, both the VLANs are reachable to 172.16.20.0/24 Service Console, and 10.1.0.0/24 for VMotion Network.

I want the Service Console Network, can talk to the VMotion Network and vice versa to get the VMotion works.

Service Console:

IP:172.16.20.2/24

D.G: 172.16.20.1

DNS: 172.16.20.57 "This host is connected to the same VLAN where the ESX hosts connected". It's a VC and DNS Server.

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VMkernel:

IP:10.1.0.2/24

D.G: 10.1.0.1

From,

within the ESX Host, I'm unable to reach to the Default Gateway of the VMotion Network using vmkping. Nor the Service Console able to reach to the VMotion Network.

Moreover, I wanted to reach to the Service Console Network 172.16.20.0 via 128.104.0.0 Network to do my Administrative Task. In this case, do I have to add a Static Route in the Service Console, in order for the VI Clients reach from Production Network?

Further Testing:

have UnTagged the ports for both VLANs. I setup both PortGroups S.C & VMKernel without VLAN ID.

I

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got one host can ping VMkernel PortGroup on another host via COS ping.

Also from the same host tried vmkping S.C IP and D.Gateway. It's successful.

However, from the another host I can reach the first host S.C IP but not VMkernel. Nor the VMKernel able to reach it's D.Gateway.

Since the both VLANs are reachable within the pSwitch. Do I have to use a port Trunking, and assign different VLAN ID "**The Trunked vLAN**" in each Portgroup **S.C & VMotion**?

In additional to what i have mentioned to earlier regarding the **NIC Teaming**.

Both, vmnic0 & vmnic1 assigned to vSwitch0, in the NIC Teaming

Setting of vSwitch0, both vmnic0 & vmnic1 as Active/Active. And

within each PortGroup, S.C = vmnic0 Active & vmnic1 Standby. And

VMkernel = vmnic1 Active & vmnic0 Standby. Is this Setting may

confusing the VLAN to work properly?

Furter troubleshooting I'm going to make;

1. Remove the Nic Teaming from the PortGroups.
2. Configure the vSwitch0 with only vmnic0 on both hosts, assuming a **pNIC failure**.
3. Test both hosts can ping each other S.C and D.Gateway 172.16.20.1

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4. Configure VMkernel with the prospective VLAN IP schema & test vmkping whether it can reach S.C IP & its D.Gateway.

5. If it's success, then will configure the same on the other host and test the connectivity between the hosts.

If not, do I have to configure a Trunking on the pSwitches and make both **VLANs 3 & 4 members of the Trunked VLAN?**

Further Testing:

In the pSwitch on port 5 where the vmnic0 connected, i have set the port ot TagAll.

Result:

1. I lost the connectivity to the vswif0 "Service Console IP". But within this vSwitch0, I have VM Network Portgroup, and one of the Virtual Machines IP's is set to the same VLAN of the Service Console, it's reachable :eek:

This without VLAN ID specified on any PortGroup.

2. While the the pSwitch Port 5 is set to TagAll, I have specify a VLAN ID to both the **Service Console & VM Network Portgroups**, I got the connectivity back up on the **Service Console** as well as on the **VM Network**.

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Now I have the vmnic0 connected to port 5 "VLAN 3 - ip: 172.16.20.0" on the pSwitch and vmnic0 linked to vSwitch0. Also, vmnic1 is connected to port 6 "VLAN 4 - ip: 10.1.0.0" on the pSwitch and vmnic1 is Linked to vSwitch0 as well.

Question: How to get the VMotion works since Service Console is setting on the different Network and VMotion on Different Network?

Do I have to specify a Static Route in the ESX Server in order for the VMKernel Network sees the Service Console Network?

Thanks,