

vSphere 7 – Distributed Switch Configuration

In this post, I will show you the steps for VDS. I am going to use 2 hosts (ESX1 and ESX3) for this exercise.

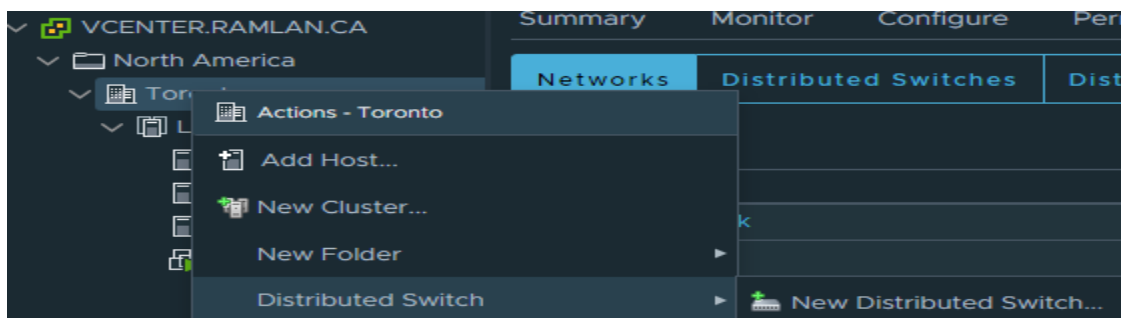
What Is a Distributed Virtual Switch in vSphere?

A virtual switch, much like a physical switch, ensures the layer 2 network connectivity. A distributed virtual switch is a logical switch that is created on vCenter Server and is applied to all ESXi hosts added to the distributed virtual switch. A distributed virtual switch is like a template stored in vCenter. When you create a distributed virtual switch in vCenter, identical hidden standard vSwitches are created on all ESXi hosts added to VDS configuration. If you create a port group for VLAN on a distributed virtual switch, the same port group will be created on all vSwitches of ESXi hosts associated to that VDS. You only need to create a port group once, which is a significant advantage. A distributed virtual switch created in vCenter is a control plane (used for management) and hidden standard vSwitches on ESXi hosts are the IO plane (responsible for network operation).

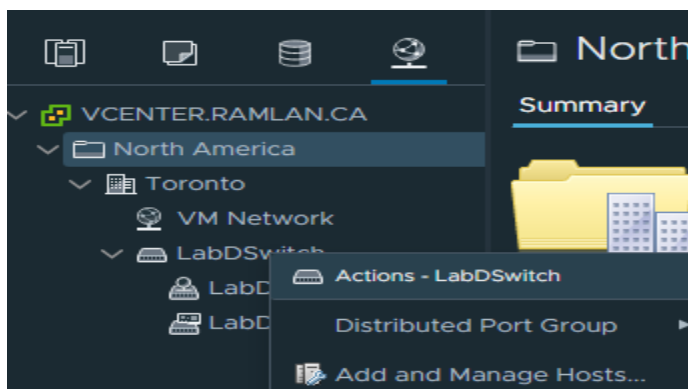
After VM migration from one ESXi host to another is performed, the VM remains connected to the same port of the distributed virtual switch (also referred to as networking vMotion, which preserves the consistency in network connectivity of VMs). vCenter is a management system for vSphere environment, including a distributed virtual switch. If, for some reason, vCenter Server is unavailable, you will not be able to change VMware distributed switch configuration, including reconnecting virtual machines to other port groups. However, even if vCenter is offline, a network will remain in a working state because hidden standard vSwitches (the IO plane) are responsible for network operation. Keep in mind that vCenter cannot be connected to a distributed virtual switch.

The VDS configuration is located on vCenter Server and every five minutes a local copy stored on ESXi servers as cache is updated. The cached configuration is stored in the /usr/lib/vmware/bin/ directory on ESXi hosts.

Go to Datacenter – Right Click – Distributed Switch – New DS – Next – Next – Next – Click OK



Go to Networking – Right Click – Add and Manage Hosts



LabDSwitch - Add and Manage Hosts

1 Select task

2 Select hosts

3 Manage physical adapters

4 Manage VMkernel adapt...

5 Migrate VM networking

6 Ready to complete

Select task

Select a task to perform on this distributed switch.

Add hosts

Add new hosts to this distributed switch.

Manage host networking

Manage networking of hosts attached to this distributed switch.

Remove hosts

Remove hosts from this distributed switch.

CANCEL

BACK

NEXT

LabDSwitch - Add and Manage Hosts

✓ 1 Select task

2 Select hosts

3 Manage physical adapters

4 Manage VMkernel adapt...

5 Migrate VM networking

6 Ready to complete

Select hosts

Select hosts to add to this distributed switch.

+ New hosts... - Remove

Host	Host Status
No items to display	

CANCEL

BACK

NEXT

Select New Hosts | LabDSwitch

SHOW INCOMPATIBLE HOSTS

Filter

<input type="checkbox"/>	Host	Host State	Cluster	Compatibility
<input checked="" type="checkbox"/>	esx1.ramlan.ca	Connected	Lab	✓ Compatible
<input type="checkbox"/>	esx2.ramlan.ca	Connected	Lab	✓ Compatible
<input checked="" type="checkbox"/>	esx3.ramlan.ca	Connected	Lab	✓ Compatible

3 items

CANCEL

OK

LabDSwitch - Add and Manage Hosts

- 1 Select task
- 2 Select hosts**
- 3 Manage physical adapters
- 4 Manage VMkernel adapt...
- 5 Migrate VM networking
- 6 Ready to complete

Select hosts

Select hosts to add to this distributed switch.

+ New hosts... - Remove

Host	Host Status
(New) esx1.ramlan.ca	Connected
(New) esx3.ramlan.ca	Connected

2 items

CANCEL

BACK

NEXT

LabDSwitch - Add and Manage Hosts

- 1 Select task
- 2 Select hosts
- 3 Manage physical adapters**
- 4 Manage VMkernel adapt...
- 5 Migrate VM networking
- 6 Ready to complete

Manage physical adapters

Add or remove physical network adapters to this distributed switch.

+ Assign uplink - Unassign adapter - View settings

Host/Physical Network Adapters	In Use by Switch	Uplink	Uplink Port Group
esx1.ramlan.ca			
On this switch			
vmnic1 (Assigned)	--	Uplink 1	LabDSwitch-DVU...
On other switches/unclaimed			
vmnic0	vSwitch0	--	--
vmnic2	--	--	--
esx3.ramlan.ca			
On this switch			
vmnic1 (Assigned)	--	Uplink 2	LabDSwitch-DVU...
On other switches/unclaimed			
vmnic0	vSwitch0	--	--

CANCEL

BACK

NEXT

LabDSwitch - Add and Manage Hosts

- 1 Select task
- 2 Select hosts
- 3 Manage physical adapters
- 4 Manage VMkernel adapt...**
- 5 Migrate VM networking
- 6 Ready to complete

Manage VMkernel adapters

Manage and assign VMkernel network adapters to the distributed switch.

+ Assign port group - Reset changes - View settings

Host/VMkernel Network Adapters	In Use by Switch	Source Port Group	Destination Port Gr...
esx1.ramlan.ca			
On this switch			
On other switches/unclaimed			
vmk0	vSwitch0	Management Net...	Do not migrate
vmk1	vSwitch0	vMotion ESX1	Do not migrate
esx3.ramlan.ca			
On this switch			
On other switches/unclaimed			
vmk0	vSwitch0	Management Net...	Do not migrate

CANCEL

BACK

NEXT

LabDSwitch - Add and Manage Hosts

- ✓ 1 Select task
- ✓ 2 Select hosts
- ✓ 3 Manage physical adapters
- ✓ 4 Manage VMkernel adapt...
- 5 Migrate VM networking**
- 6 Ready to complete

Migrate VM networking
Select virtual machines or network adapters to migrate to the distributed switch.

Migrate virtual machine networking

Assign port group Reset changes View settings

Host/Virtual Machine/Network Adapter	NIC Count	Source Port Group	Destination Port Group
No records to display			

CANCEL BACK NEXT

LabDSwitch - Add and Manage Hosts

- ✓ 1 Select task
- ✓ 2 Select hosts
- ✓ 3 Manage physical adapters
- ✓ 4 Manage VMkernel adapt...
- ✓ 5 Migrate VM networking
- 6 Ready to complete**

Ready to complete
Review your settings selections before finishing the wizard.

Number of managed hosts
Hosts to add: 2

Number of network adapters for update
Physical adapters: 2

CANCEL BACK FINISH

Task Name	Target	Status
Update network configuration	esx1.ramlan.ca	✓ Completed
Update network configuration	esx3.ramlan.ca	✓ Completed
Reconfigure vSphere Distributed Switch	LabDSwitch	✓ Completed

LabDSwitch | ACTIONS

Summary Monitor **Configure** Permissions Ports Hosts VMs Networks

- Settings
 - Properties
 - Topology**
 - LACP
 - Private VLAN
 - NetFlow
 - Port Mirroring
 - Health Check
- Resource Allocation
 - System traffic
 - Network resource pools
 - Alarm Definitions

LabDPortGroup

- VLAN ID: --
- VMkernel Ports (1)
 - vmk1 - 192.168.0.116
 - Virtual Machines (0)

LabDSwitch-DVUplinks-1007

- Uplink 1 (1 NIC Adapters)
 - vmnic1 esx1.ramlan.ca
- Uplink 2 (1 NIC Adapters)
 - vmnic1 esx3.ramlan.ca
- Uplink 3 (0 NIC Adapters)
- Uplink 4 (0 NIC Adapters)

Now we have deployed Distributed Switch and the settings are same for every hosts.

Thanks

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