Qualys Scanner – Configure VLAN on Hyper-V

This guide will help you configure VLANs on Hyper-V. Note that Hyper-V vSwitch is in trunk mode by default so no special configuration is required for enabling VLAN. Want to know more about VLAN scanning? Check out our VLAN Scanning Guide.

Enable VLAN in Single Network Configuration

Applicable to scanner virtual machines with 1 network adapter.

VLAN configuration from powershell

Powershell allows multiple VLAN configurations.

1) Shut down the virtual machine from the GUI or powershell.

2) Set the virtual machine network adapter to Trunk mode in order to allow packets from multiple VLANs, as shown in the following example:

```powershell
PS C:\Users\Administrator> Set-VMNetworkAdapterVlan -VMName MyScannerVM -Trunk -AllowedVlanIdList "3,4,5,15" -NativeVlanId 0
```

- `AllowedVlanIdList` is a comma separated or range of VLAN IDs.
- `NativeVlanId` is required to allow untagged traffic. In the example above, VLAN ID 0 is used at the switch for Untagged traffic.

3) Start the virtual machine.

All set. You should be able to configure any VLAN from the list provided via `AllowedVlanIdList` using the scanner console or from the Qualys UI (go to Scans > Appliances).

Enable VLAN in Split Network Configuration

Applicable to scanner virtual machines with 2 network adapters.

There are multiple ways to enable VLANs in a split network configuration, based on the state of the scanner virtual machine. By default, scanner virtual machines start with one network adapter. A second network adapter can be added as needed after creating the virtual machine.

Method 1 (Recommended)

1) Shut down the scanner virtual machine if it’s running. The assumption is that the virtual machine has only 1 network adapter at this point.

2) Enable VLANs on the network adapter as shown in the section “VLAN configuration from powershell” above.

3) Add the second network adapter.
4) List the network adapter VLAN settings as shown in following example:

```
PS C:\Users\Administrator> Get-VMNetworkAdapterVlan -vmname MyScanner-split
```

<table>
<thead>
<tr>
<th>VMName</th>
<th>VMNetworkAdapterName</th>
<th>Mode</th>
<th>VlanList</th>
</tr>
</thead>
<tbody>
<tr>
<td>MyScanner-split</td>
<td>Network Adapter</td>
<td>Trunk</td>
<td>0,3-5,15</td>
</tr>
<tr>
<td>MyScanner-split</td>
<td>Network Adapter</td>
<td>Untagged</td>
<td></td>
</tr>
</tbody>
</table>

5) Start the virtual machine.

All set. You should be able to configure any VLAN from the list provided via -AllowedVlanIdList using the scanner console or from the Qualys UI (go to Scans > Appliances).

**Method 2**

In this section we’ll explain how to configure VLANs on an existing split network scanner virtual machine. The command used in the single network scanner method above can be used with an additional parameter called `-VMNetworkAdapterName`.

Some things to consider:

**Problem 1:** Hyper-V creates all network adapters with the exact same name – the name is literally ‘Network Adapter’. So every network adapter on each virtual machine running on a Hyper-V server has the same name ‘Network Adapter’.

**Solution:** Change the name for one of the network adapters and then configure VLANs on the LAN interface.

**Problem 2:** Renaming the network adapter is not possible from the Hyper-V GUI. It can only be done from powershell. The option to change a network adapter name is not directly available. All network adapters have the same name and the differentiating factors for each network adapter, such as MAC address, is not accepted by Rename-* command as a parameter.

**Solution:** Run a set of commands to accomplish this by following the examples below.

Follow these steps:

**List all network adapters for a VM**

```
PS C:\Users\Administrator> Get-VMNetworkAdapter -vmname MyScanner-split
```

<table>
<thead>
<tr>
<th>Name</th>
<th>IsManagementOs</th>
<th>VMName</th>
<th>SwitchName</th>
<th>MacAddress</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network Adapter</td>
<td>False</td>
<td>MyScanner-split</td>
<td>Intel(R) 82574L Gigabit Network Connection - 172.16</td>
<td>00155D002325</td>
<td></td>
</tr>
<tr>
<td>Network Adapter</td>
<td>False</td>
<td>MyScanner-split</td>
<td>Intel(R) 82574L Gigabit Network Connection #2 - 10.15</td>
<td>00155D002326</td>
<td></td>
</tr>
</tbody>
</table>
View VLAN settings on these network adapters

PS C:\Users\Administrator> Get-VMNetworkAdapterVlan -VMName MyScanner-split

VMName          VMNetworkAdapterName       Mode          VlanList
-------          --------------------------   ----          -------
MyScanner-split  Network Adapter           Untagged      
MyScanner-split  Network Adapter           Untagged      

Save them to a variable. This variable is going to be used for changing the adapter name.

PS C:\Users\Administrator> $VMNetAdap = Get-VMNetworkAdapter -vmname
MyScanner-split

PS C:\Users\Administrator> $VMNetAdap[0]

Name  IsManagementOs  VMName        SwitchName         MacAddress         Status
----  -------------   ------        -------------         -----------         -----  
Network Adapter  False  MyScanner-split  Intel(R) 82574L Gigabit Network Connection - 172.16

Rename the LAN network adapter. [Scanner supports VLANs only on LAN]

PS C:\Users\Administrator> rename-VMNetworkAdapter -VMNetworkAdapter
$VMNetAdap[0] -newname "LAN_Adapter"

PS C:\Users\Administrator> Get-VMNetworkAdapter -vmname MyScanner-split

Name  IsManagementOs  VMName        SwitchName         MacAddress         Status
----  -------------   ------        -------------         -----------         -----  
LAN_Adapter  False  MyScanner-split  Intel(R) 82574L Gigabit Network Connection - 172.16
Network Adapter  False  MyScanner-split  Intel(R) 82574L Gigabit Network Connection #2 - 10.15
Configure Trunk mode on LAN adapter with desired VLAN ID list

PS C:\Users\Administrator> Set-VMNetworkAdapterVlan -VMName MyScanner-split -VMNetworkAdapterName LAN_Adapter -Trunk -AllowedVlanIdList "3,4,5,15" -NativeVlanId 0

PS C:\Users\Administrator> Get-VMNetworkAdapterVlan -vmname MyScanner-split

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<td></td>
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</tbody>
</table>

That’s it! Users should now be able to configure VLANs from the scanner console.

Additional Resources

Configure virtual local area networks for Hyper-V

Rename virtual machine network adapter with identical name

How to Work with Hyper-V Virtual Network Adapters

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