

How to Install Vagrant with HyperV on Windows

Published on Thursday, 28 June 2018

HYPERV (/TAGS/HYPERV)

VAGRANT (/TAGS/VAGRANT)

How to use Vagrant with HyperV on Windows

First thing you need to know about using HyperV on Windows is you need to have at least Windows 10 Anniversary Update or higher. While its possible to run HyerV on earlier versions of windows like Windows 8, this guide makes use of some network features only available in Windows 10.

Also if you enable HyperV it will prevent other hypervisors like VMware and VirtualBox from working too.

Installing Hyper V

To install Hyper V it is as simple as opening an Elevated PowerShell window and running the following command:

```
Enable-WindowsOptionalFeature -FeatureName Microsoft-Hyper-V-All -Online
```

Setting UP Virtual Networks

To use Vagrant with Hyper V you need to setup VMSwitches for it to use. The other problem you will run into is HyperV doesn't have DHCP out of the box either.

So to work around this we will setup a NAT VMSwitch and we will install a small DHCP service on your host which will do DHCP for it.

Run the following commands from an Elevated PowerShell prompt.

```
New-VMSwitch -SwitchName "NAT" -SwitchType Internal  
New-NetIPAddress -IPAddress 192.168.10.1 -PrefixLength 24 -InterfaceAlias "vEthernet (NAT)"  
New-NetNat -Name NAT -InternalIPInterfaceAddressPrefix 192.168.10.0/24
```

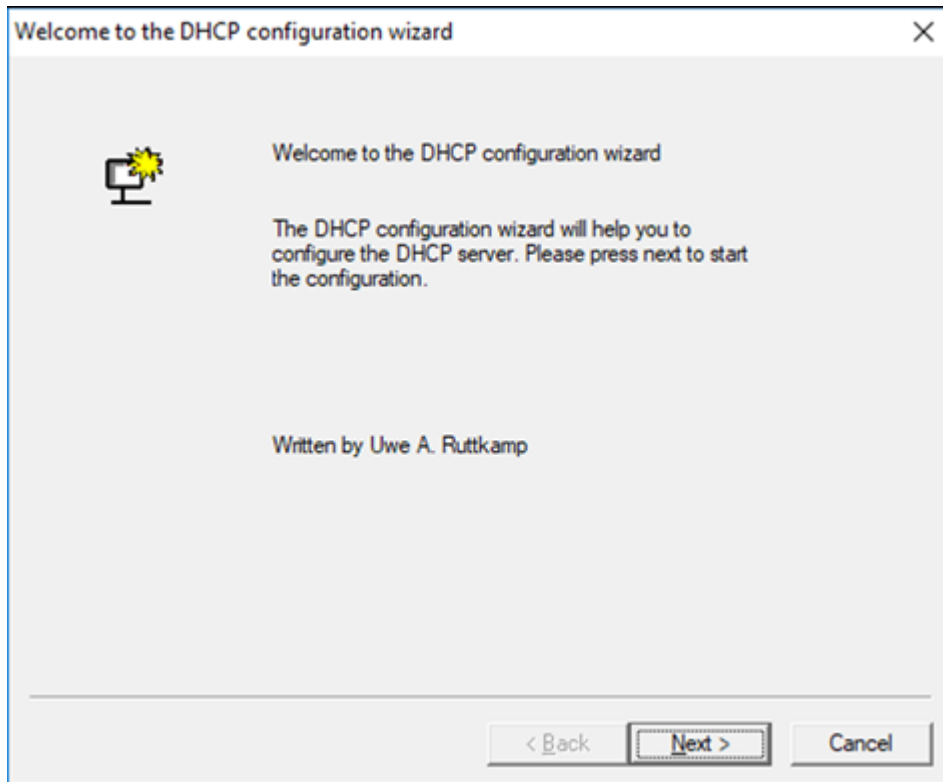
Now you have a Virtual network setup, next step is to get DHCP running on it to assign IP Addresses.

Setting up DHCP

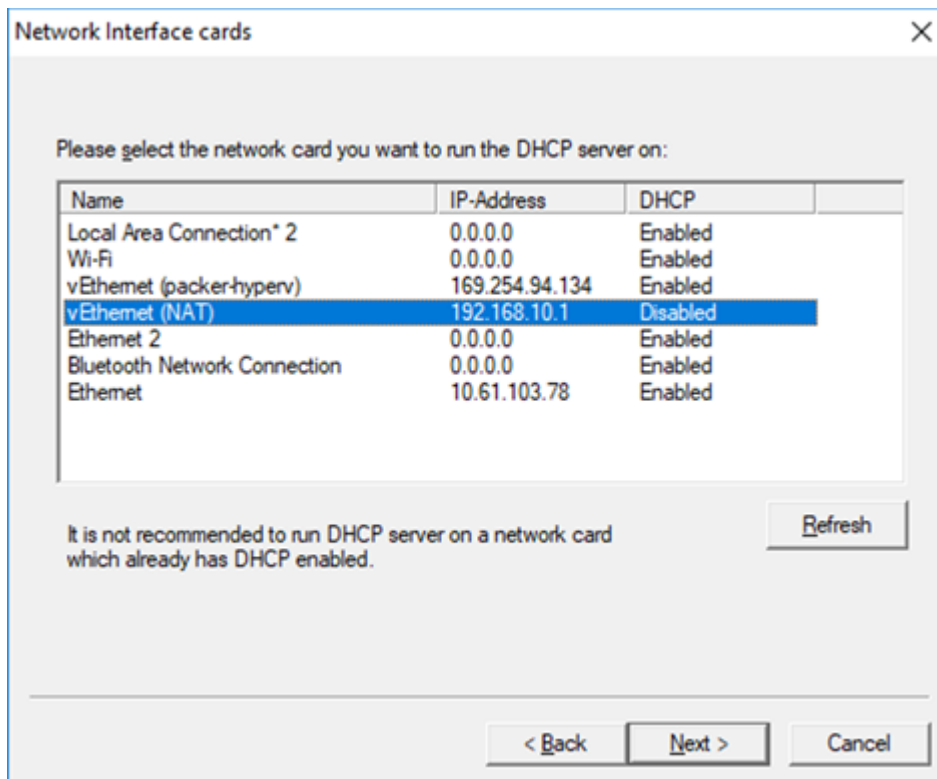
Download the latest version of DHCP Server from <http://www.dhcpserver.de/cms/download/> (<http://www.dhcpserver.de/cms/download/>) and unzip it to where you want to keep it on your hard drive (e.g. c:\tools\dhcpserver).

Open the folder you unzipped and double click on DHCPWiz.exe.

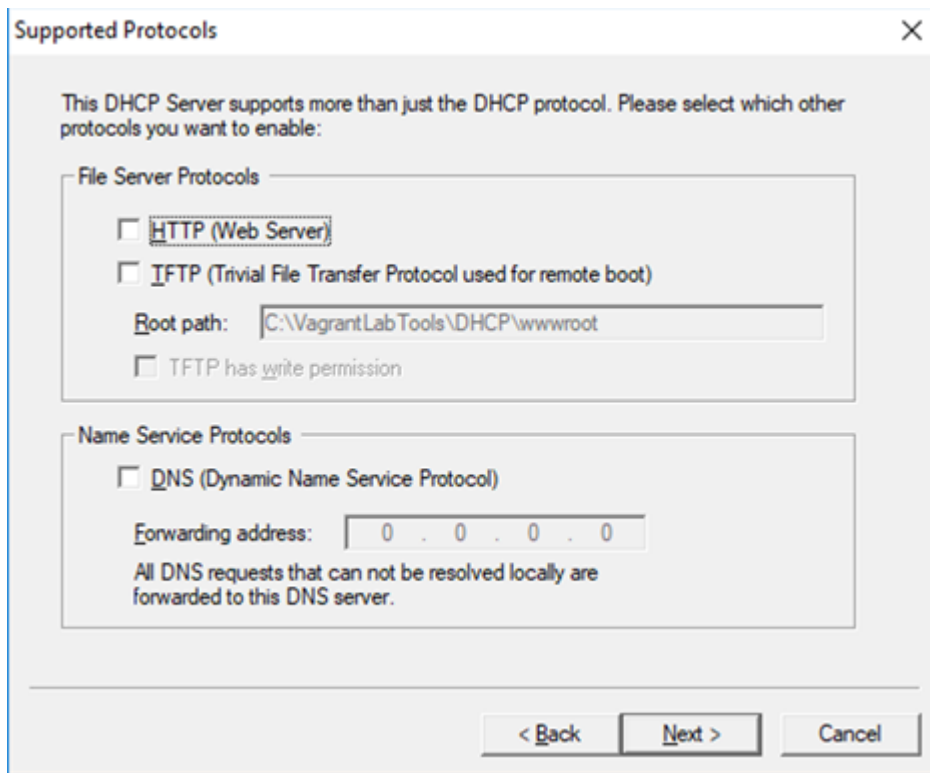
Click Next to progress to next screen.



Select the network card named "vEthernet (NAT)".



Click Next.



This DHCP Server supports more than just the DHCP protocol. Please select which other protocols you want to enable:

File Server Protocols

- ☐ HTTP (Web Server)
- ☐ TFTP (Trivial File Transfer Protocol used for remote boot)
Root path: C:\VagrantLabTools\DHCP\wwwroot
- ☐ TFTP has write permission

Name Service Protocols

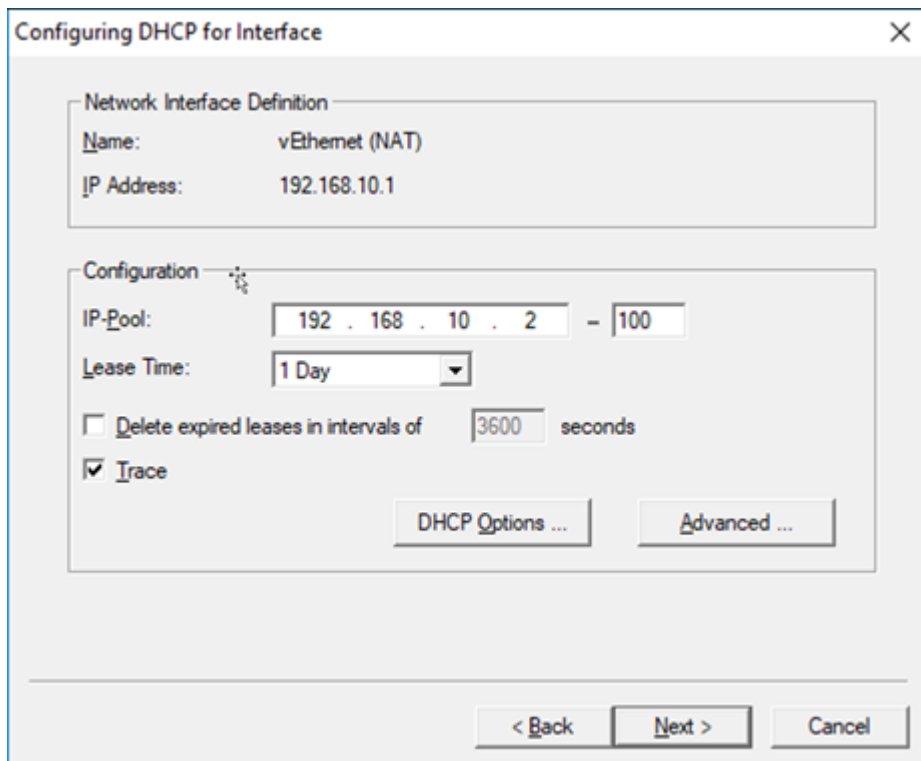
- ☐ DNS (Dynamic Name Service Protocol)
Forwarding address: 0 . 0 . 0 . 0

All DNS requests that can not be resolved locally are forwarded to this DNS server.

< Back Next > Cancel

Enter the IP pool as 192.168.10.2 - 100

Click Advanced



Configuring DHCP for Interface

Network Interface Definition

Name: vEthernet (NAT)
IP Address: 192.168.10.1

Configuration

IP Pool: 192 . 168 . 10 . 2 - 100

Lease Time: 1 Day

☐ Delete expired leases in intervals of 3600 seconds

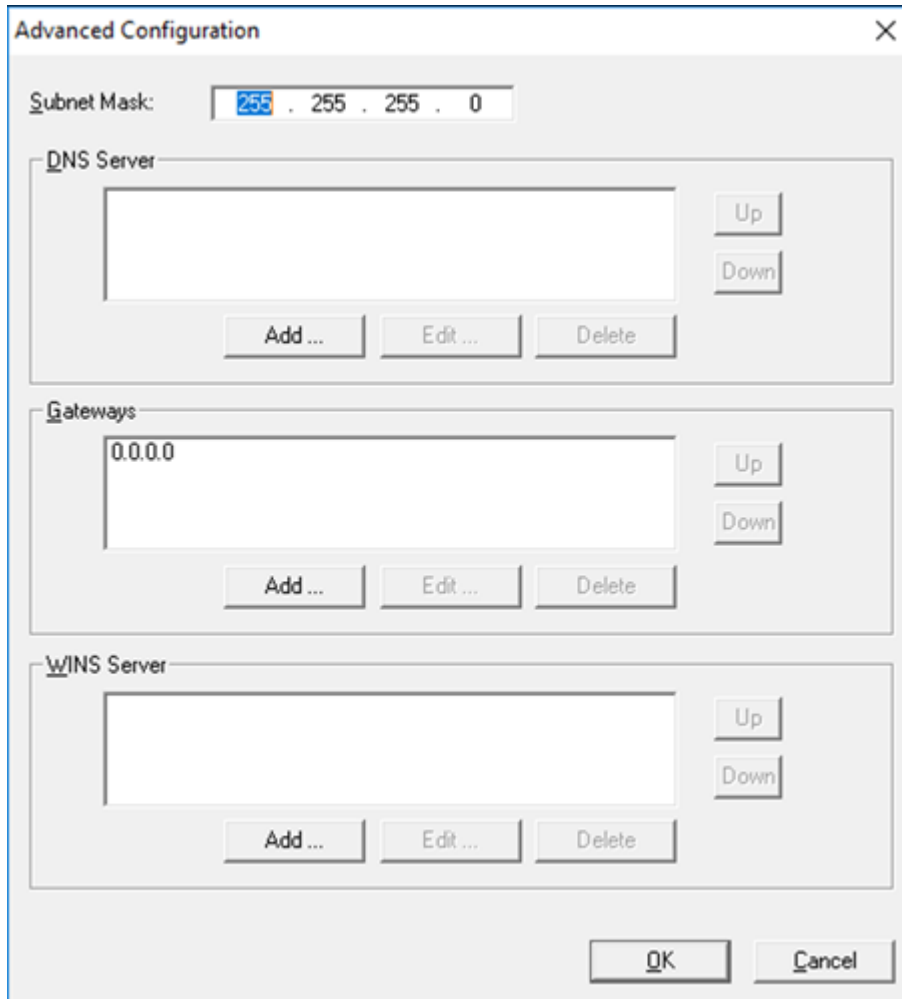
☒ Trace

DHCP Options ... Advanced ...

< Back Next > Cancel

Enter 255.255.255.0 for the subnet mask.

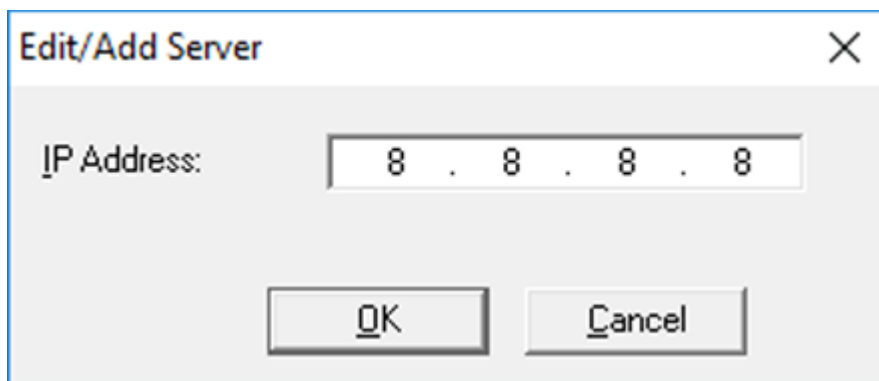
Click Add under DNS Server.



The 'Advanced Configuration' dialog box is shown. It has three main sections: 'DNS Server', 'Gateways', and 'WINS Server'. The 'Subnet Mask' is set to '255 . 255 . 255 . 0'. The 'DNS Server' section has a list box, 'Up' and 'Down' buttons, and 'Add ...', 'Edit ...', and 'Delete' buttons. The 'Gateways' section has a list box containing '0.0.0.0', 'Up' and 'Down' buttons, and 'Add ...', 'Edit ...', and 'Delete' buttons. The 'WINS Server' section has a list box, 'Up' and 'Down' buttons, and 'Add ...', 'Edit ...', and 'Delete' buttons. At the bottom are 'OK' and 'Cancel' buttons.

Enter the IP address of your DNS server. If you are unsure put 8.8.8.8 which is google's DNS.

Then click ok

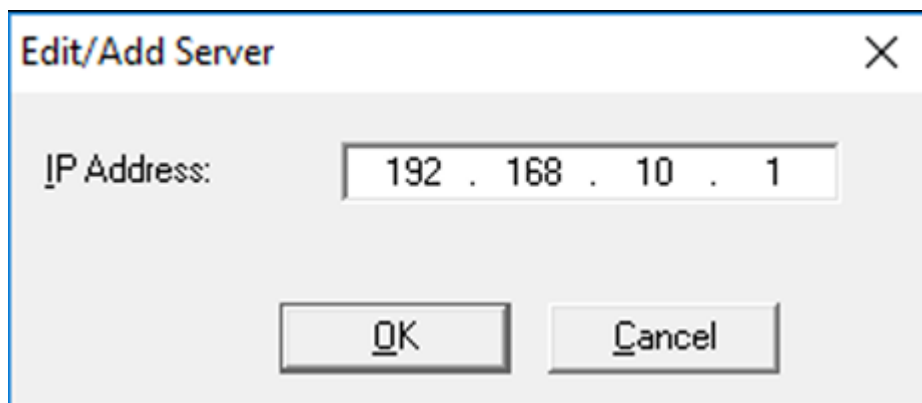


The 'Edit/Add Server' dialog box is shown. It has a single text field for 'IP Address' containing '8 . 8 . 8 . 8'. At the bottom are 'OK' and 'Cancel' buttons.

Now under Gateways select 0.0.0.0 and click Edit.



Enter 192.168.10.1 and press Ok.



Click Ok

Advanced Configuration [X]

Subnet Mask: 255 . 255 . 255 . 0

DNS Server

8.8.8.8 [Up] [Down]

[Add ...] [Edit ...] [Delete]

Gateways

192.168.10.1 [Up] [Down]

[Add ...] [Edit ...] [Delete]

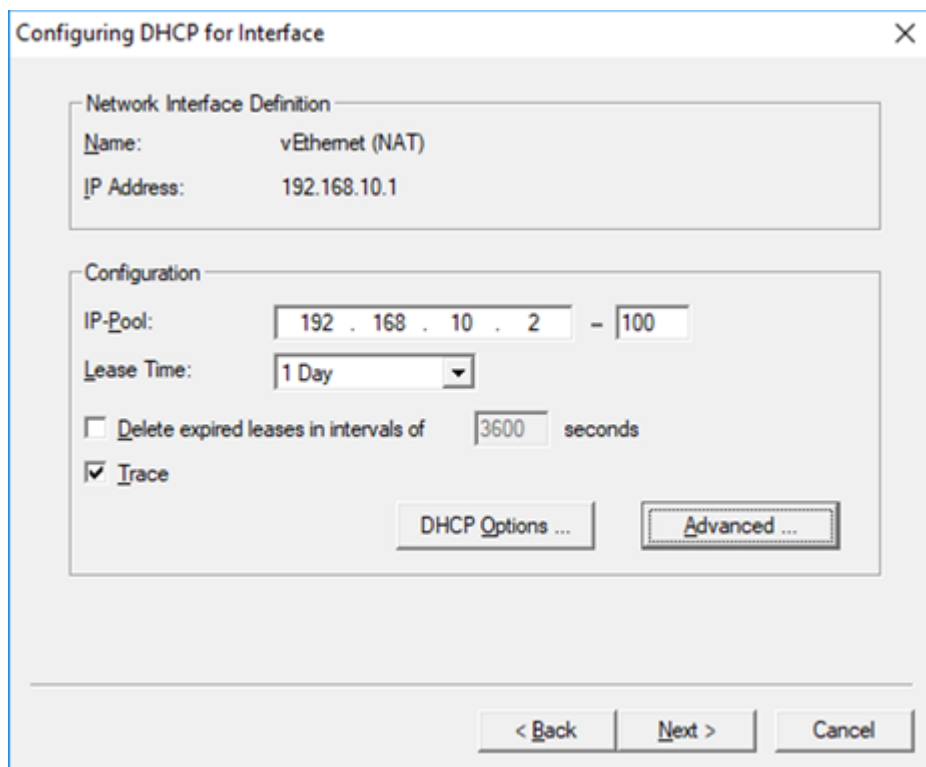
WINS Server

[Up] [Down]

[Add ...] [Edit ...] [Delete]

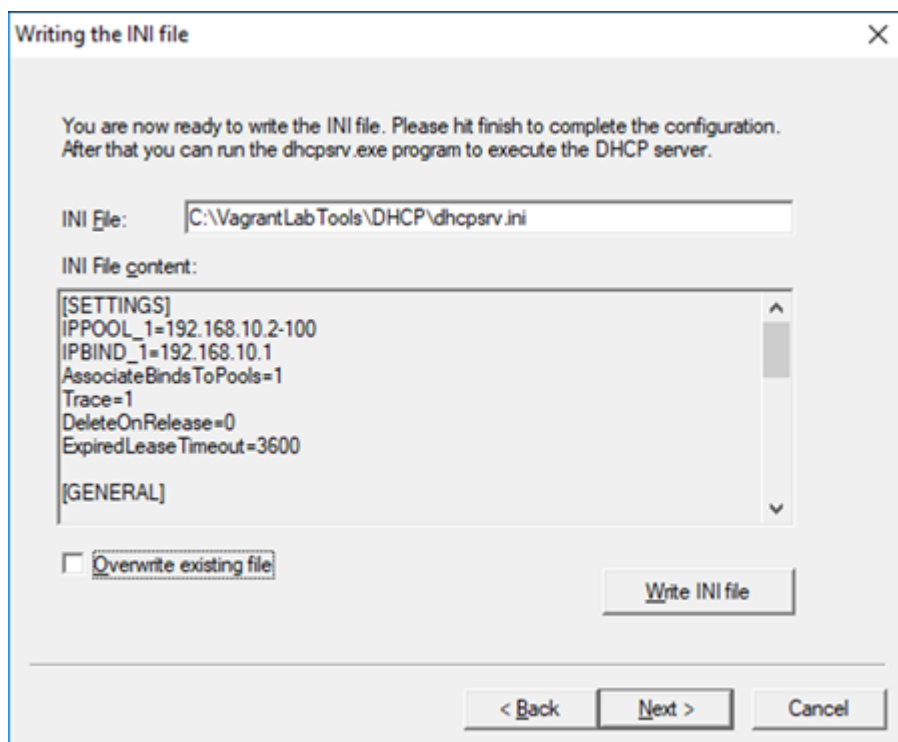
[OK] [Cancel]

Click Next



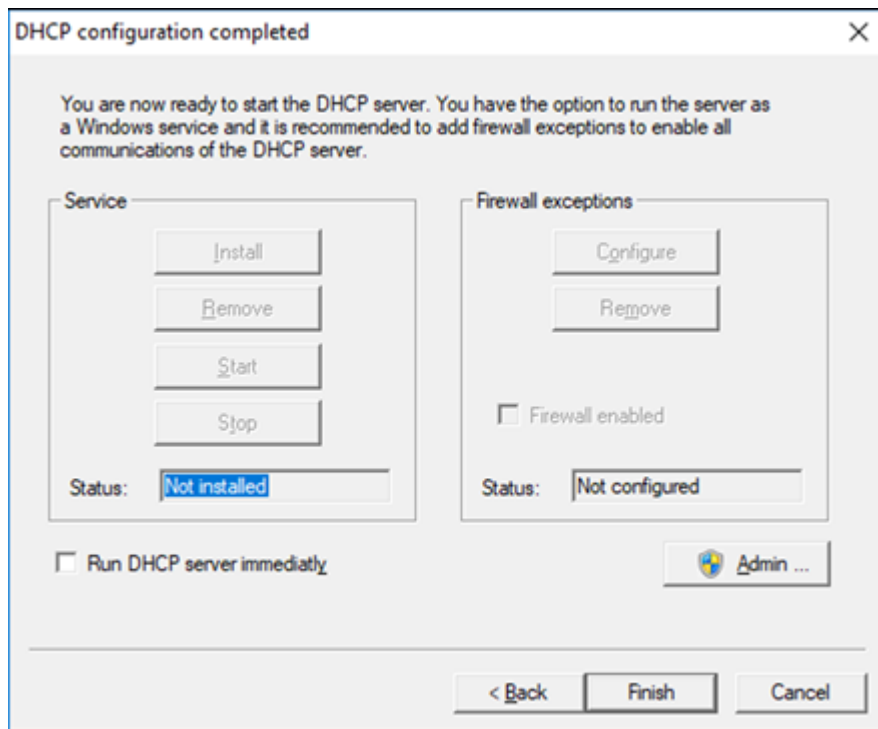
The 'Configuring DHCP for Interface' dialog box is shown. It has a title bar with a close button. The dialog is divided into two main sections: 'Network Interface Definition' and 'Configuration'. In the 'Network Interface Definition' section, the 'Name' is 'vEthernet (NAT)' and the 'IP Address' is '192.168.10.1'. The 'Configuration' section contains an 'IP Pool' field with the value '192 . 168 . 10 . 2 - 100', a 'Lease Time' dropdown set to '1 Day', a checkbox for 'Delete expired leases in intervals of 3600 seconds' which is unchecked, and a checked checkbox for 'Trace'. There are two buttons, 'DHCP Options ...' and 'Advanced ...', below the configuration fields. At the bottom of the dialog are three buttons: '< Back', 'Next >', and 'Cancel'.

Click Write Ini File and then Next.

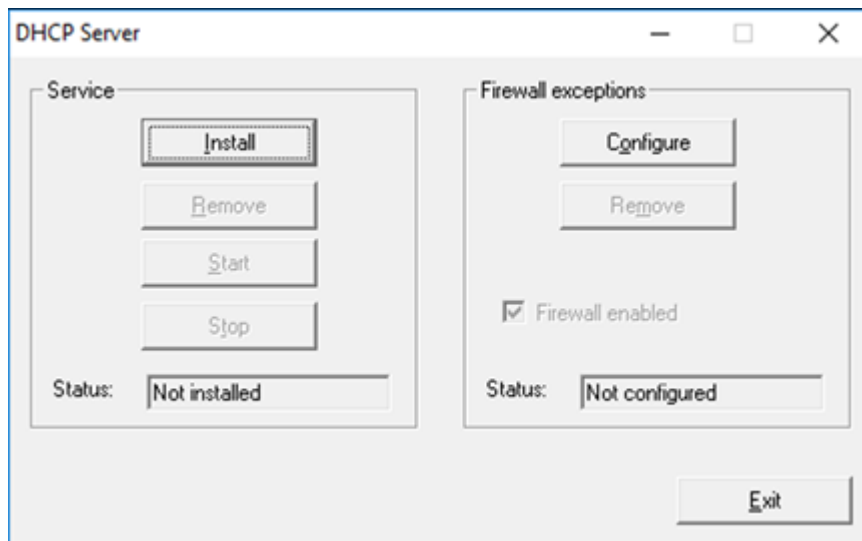


The 'Writing the INI file' dialog box is shown. It has a title bar with a close button. The dialog contains a message: 'You are now ready to write the INI file. Please hit finish to complete the configuration. After that you can run the dhcpssrv.exe program to execute the DHCP server.' Below this is an 'INI File:' text box containing the path 'C:\VagrantLabTools\DHCP\dhcpssrv.ini'. Underneath is a section titled 'INI File content:' followed by a text area containing the following text: '[SETTINGS]' followed by 'IPPOOL_1=192.168.10.2-100', 'IPBIND_1=192.168.10.1', 'AssociateBindsToPools=1', 'Trace=1', 'DeleteOnRelease=0', and 'ExpiredLeaseTimeout=3600'. Below this is another section titled '[GENERAL]'. At the bottom left is a checkbox labeled 'Overwrite existing file' which is unchecked. To the right of this checkbox is a 'Write INI file' button. At the very bottom of the dialog are three buttons: '< Back', 'Next >', and 'Cancel'.

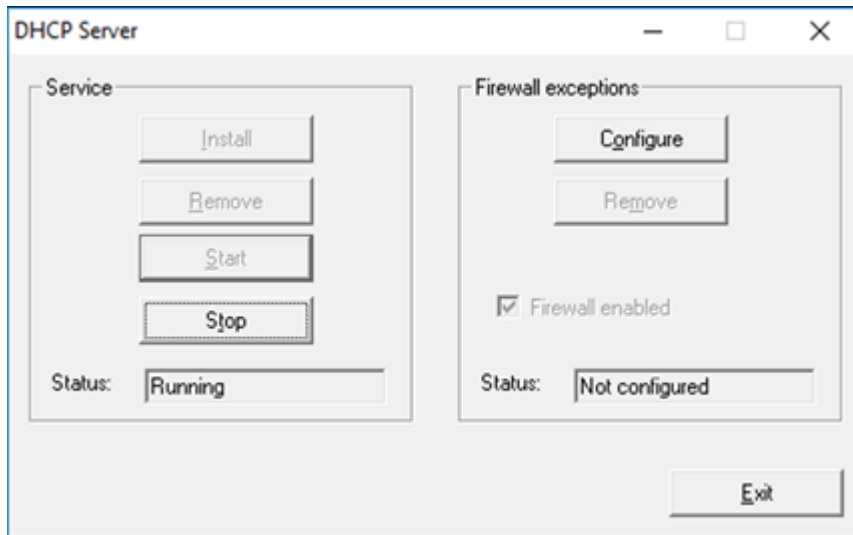
Click Admin and Accept the UAC prompt.



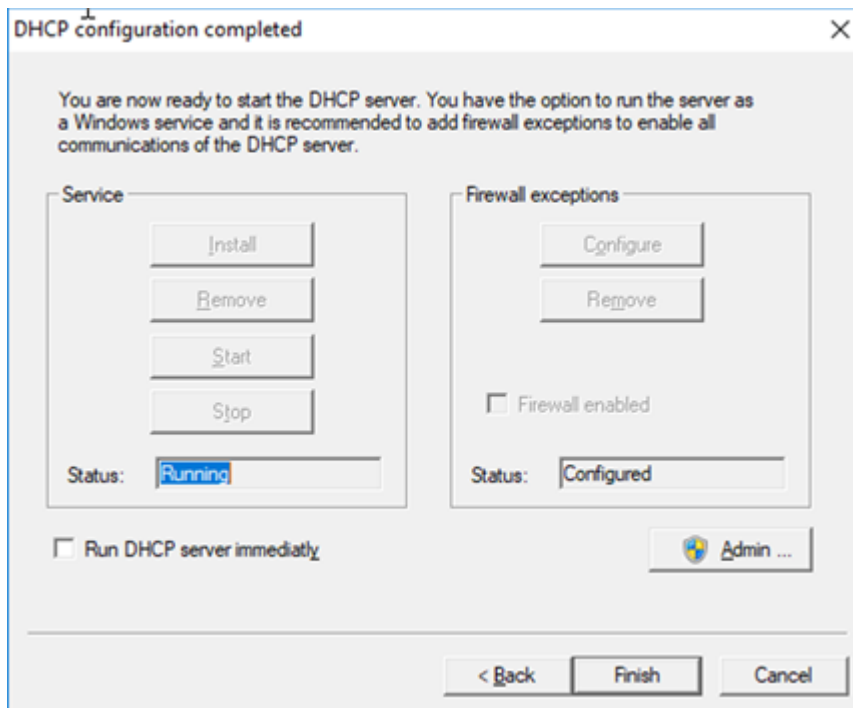
Click Install and then Start when it becomes available.



Click Configure and then Exit.



Click Finish



Now you have DHCP configured and running.

Enable PowerShell Remoting

PowerShell remoting is an important part of interacting with Windows virtual machine in vagrant. For this functionality to work properly run the following commands:

```
Enable-PSRemoting -Force -SkipNetworkProfileCheck
Enable-WSManCredSSP -Role Server -Force
Enable-WSManCredSSP -Role Client -DelegateComputer * -Force
Start-service winrm
Set-Item "wsman:\localhost\client\trustedhosts" -Value "*" -Force
```

Installing Vagrant

Now to install vagrant itself. You can do this by downloading the installer from [here \(https://www.vagrantup.com/downloads.html\)](https://www.vagrantup.com/downloads.html) or running the following chocolatey command:

```
choco install vagrant -yes
```

Close and reopen any powershell windows you have open at this point.

Note: By default vagrant will download large files and store configuration in a folder called .vagrant.d in your user profile. If you want to move this to another location you can do so with the VAGRANT_HOME environment variable.

Set default Provider

Last step is to set the VAGRANT_DEFAULT_PROVIDER to hyperv . Doing this will cause vagrant to use VMware as its default provider. If you don't you might have vagrant try and download virtual box which is not what you want.

Testing Vagrant works

In a blank directory that you want to create your VM in run the following commands:

```
vagrant init hashicorp/precise  
vagrant up  
vagrant ssh
```

You should now have an SSH session into a virtual machine. To clean up use the following command:

```
vagrant destroy
```

Copyright © 2018

 [RSS Feed \(/feed.rss\)](/feed.rss) |  [Atom Feed \(/feed.atom\)](/feed.atom)

Generated by Wyam (<https://wyam.io>)