

Objective: Install a virtual environment on rack server and then create a virtual machine running Windows Server.

Setup Information:

This is a several step process. The first step is to select and install a virtual environment that will support a virtual machine (VM) running Microsoft Windows Server. Once the virtual environment is installed then it needs to be accessed through it's management interface and a virtual switch/bridge needs to be configured to provide an external interface to the physical network. A VM can then be created and Windows Server installed.

In our lab we used the following technologies:

- Dell rack servers
- DVD Installation of Hyper-V Server 2016
- VM running Windows 10 to run Hyper-V Manager
- ISO file of Window Server 2016 to install VM
- Remote Desktop to access the Hyper-V Server, Win10 client, and WinServer 2016

The instructor provided additional information, such as:

- Names to use for computers and accounts
- IP address information
- Product Keys
- Passwords

Virtual Environment:

Your lab report should describe the full process of installing Hyper-V Server through the final process of installing Windows Server 2016 and accessing it through Remote Desktop. It is common to run into problems when setting up a new environment for the first time. Our experience was no exception. Make sure your report describes the problems, troubleshooting steps, and final solutions. For example, you might consider the following points:

- What did you have to do to the rack servers to prepare them for installation of Hyper-V?
- What did you do to make the Hyper-V Server accessible through Remote Desktop?
- What did you have to do to make it possible to use Win10 as a remote console for Hyper-V?
- Why did we eventually decide to use a Win10 VM as our Hyper-V management console rather than the Win10 computers in the lab?
- What did we need to do to make it possible for the Hyper-V manager to connect a console to our newly created VM?
- What do you need to do before you Remote Desktop into your WinServer VM directly from one of the Win10 computers in the lab?

Windows Server IP Information:

You can let the system automatically acquire the IP information through DHCP. You may need to set specific IP addresses in future labs, but you can change the configuration at that time.

After you finish with the installation, run `ipconfig /all` to check the addresses your WinServer acquired.

1. List your IP address, Subnet mask, Gateway address, and DNS addresses.
2. What is the Ethernet address (physical address) for your network interface?
3. Based on the IP information what is the network id of the lab's network?
4. Based on the IP information what is the host id of your computer?
5. What is the range of the host IP addresses on this subnet?
6. What is the purpose of the Default Gateway?
7. What symptoms would you expect if you didn't have a valid Default Gateway address entered on your computer's IP configuration?