Installing and Configuring Hyper-V

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Lab Summary 5

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In the lab, IT management is concerned about the low utilization of physical servers. Eventually, the company wants to expand into multiple branch offices and servers in public and private clouds. The management decided to deploy virtual machines so that the admin deployed the Hyper-V server role, including virtual machine storage and networking. Hyper-V is beneficial to deploy in this case of scenario because it makes other virtual machines into a single desktop and can manage them easily.

Before installing and deploying Hyper-V, the admin needs to verify if the Hyper-V is already installed in the system. It can be verified easily in the Hyper-V Manager. Also, there are three different types of networks: external, internal, and private networks. The external network provides virtual machines with access to a network outside; the internal network allows the communication between the virtual machines and Hyper-V host itself; the private network allows the communication between virtual machines on a Hyper-V host. All three types of the network need to be installed because all the types will be used inside and outside in the future.

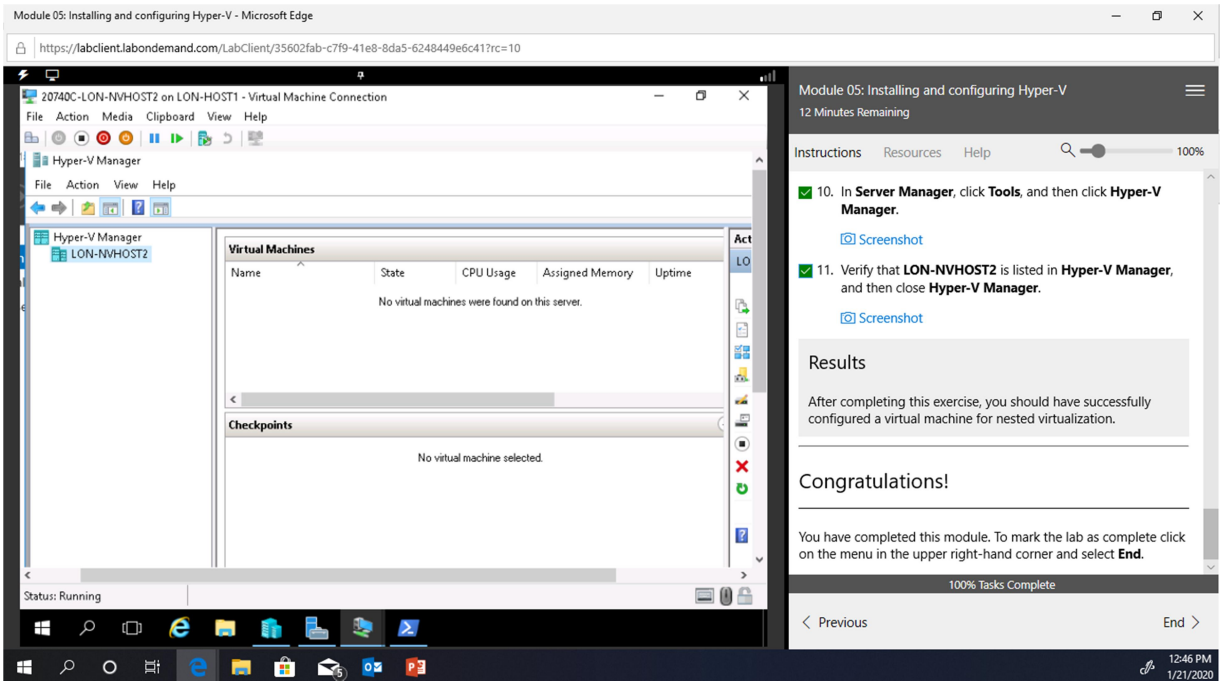
Also, there are different types of virtual machines as well: Generation 1 and 2. Generation 2 virtual machine is more advanced than Generation 1. Since there could be other versions of Windows, one of both is Generation 1, and Generation 2 is from Windows Server 2016. In Generation 1 virtual machine installation, it asks about the manual hard disk addition, unlike Generation 2 virtual machine installation, because the Generation 2 installation has automated creation of the hard disk.

During the installation of the Generation 1 virtual machine, it also asks about the type of virtual disk. The virtual machine disk provides the virtual machines to have their own disk spaces, but they are different from the physical hard disks. There are four types of disks to

choose: fixed-size, dynamically expanding, pass-through and differencing. The fixed-size type means that it allocates all of the space immediately. Dynamically expanding gives some allocation of space, and this is more efficient than the fixed-size type. Another type is pass-through, which provides direct access to a physical disk. Usually, virtual machines are using their own virtual disks, but in this case, they are using the physical disks. Lastly, Differencing is used to reduce data storage requirements so that the admin could create multiple differencing disks.

Finally, the admin should enable nested virtualization, which allows enabling the Hyper-V server role in each virtual machine. Once setting and enabling the nested virtualization, the Hyper-V can be started with Hyper-V Manager or Windows PowerShell. When using Windows PowerShell, the Hyper-V Manager could be used to verify if the virtual machine is running or not. In this lab, the admin could use Hyper-V Manager to control other virtual machines much easier than managing each of them at a time.

Grammarly processed


Module 05: Installing and configuring Hyper-V - Microsoft Edge
https://labclient.labondemand.com/LabClient/35602fab-c7f9-41e8-8da5-6248449e6c41?rc=10
20740C-LON-NVHOST2 on LON-HOST1 - Virtual Machine Connection
File Action Media Clipboard View Help
Hyper-V Manager
File Action View Help
Hyper-V Manager
LON-NVHOST2
Virtual Machines
Name State CPU Usage Assigned Memory Uptime
No virtual machines were found on this server.
Checkpoints
No virtual machine selected.
Status: Running
Module 05: Installing and configuring Hyper-V
12 Minutes Remaining
Instructions Resources Help
100%
10. In Server Manager, click Tools, and then click Hyper-V Manager.
Screenshot
11. Verify that LON-NVHOST2 is listed in Hyper-V Manager, and then close Hyper-V Manager.
Screenshot
Results
After completing this exercise, you should have successfully configured a virtual machine for nested virtualization.
Congratulations!
You have completed this module. To mark the lab as complete click on the menu in the upper right-hand corner and select End.
100% Tasks Complete
Previous
End
12:46 PM
1/21/2020