Lab 2.1.2 Part B Lab vCenter Installation - VMware

Introduction

-
A network lab environment can be used to test upgrades/patches, evaluate new features, or as a training environment for hands-on experience.

Objectives

In this lab the student will:

- Install, configure and manage virtual networking and storage [WECM]
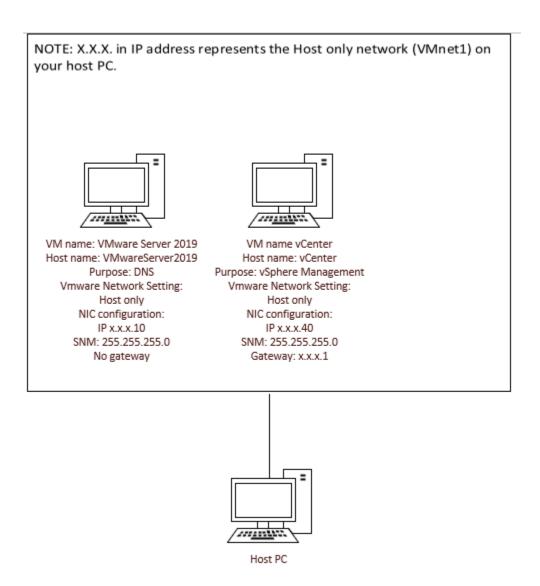
Equipment/Supplies Needed

- Host Computer with VMware Workstation Pro
- VMware vCenter virtual appliance

Assignment

Students will configure a VmWare vCenter Lab environment, as shown in figure below, for use in subsequent labs.
Key activities include creation of the following:
(1) vCenter Virtual Machine (VM) – Administration

NOTE: X.X.X. in IP address represents the Host only network (VMnet1) on your host PC.

VM name: VMware Server 2019
Host name: VMwareServer2019
Purpose: DNS
Vmware Network Setting:
Host only
NIC configuration:
IP x.x.x.10
SNM: 255.255.255.0
No gateway

VM name vCenter
Host name: vCenter
Purpose: vSphere Management
Vmware Network Setting:
Host only
NIC configuration:
IP x.x.x.40
SNM: 255.255.255.0
Gateway: x.x.x.1

Host PC

vCenter is a powerful platform for managing a vSphere environment. Extreme care must be taken when installing and configuring vCenter, because it is a platform that has no margin of error. Your install is either 100% correct, or it is 100% wrong.

If you encounter an error while installing vCenter, the only viable way to fix it is to delete the vCenter VM, delete the entire vcsa folder you installed from (mentioned below), and delete the vCenter Virtual Machine folder (default location is Documents\Virtual Machines). You will then need to restart the lab beginning at step 2 below.

Procedure

      a. Power on the Server 2019 VM and create a DNS 'A' record for vCenter. Be sure to check the box to create a reverse lookup record at the same time. Leave your Server powered on for this lab.

      b. Open the vCenter downloaded ISO to see the contents. NOTE: If you are not able to open the vCenter ISO you may need to unzip it first.

          i. The vcsa folder is where the virtual appliance is that you will install vCenter from.

      c. Copy the vcsa folder and paste it to a separate location. You will be installing vCenter from the virtual appliance in this folder.

      d. In VMware Workstation Pro click on 'Open a Virtual Machine'.

Lab 2.1.2 Part B Lab vCenter Installation - VMware

e.   Browse to the location of the vCenter virtual appliance.

f.   Select the virtual appliance and click on Open.

g.   After accepting the license agreement, name the VM **vCenter** and select the default storage path. If your instructor wants you to use a different storage path, follow your instructor's directions.

h.   Select 'Tiny vCenter Server with Embedded PSC' as the deployment option. This creates the VM with a minimal amount of hard drive space.

i.   The next step has you define multiple properties to configure the vCenter VM. Networking Configuration should be defined as follows. You can mouse over the help icon to the right of each field if needed.

    i.   Host Network IP Family: Ipv4

    ii.   Host Network Mode: Static

    iii. Host Network IP Address: x.x.x.40

    iv.   Host Network Prefix: 24

    v.   Host Network Gateway: x.x.x.1

    vi.   Host Network DNS: IP of Server 2019 VM

    vii. Host Network Identity: enter FQDN of Active Directory (i.e.- vCenter.ITNW2355.local)

    viii. Screenshot DNS to show the vCenter record created in both DNS zones.

j.   SSO Configuration should be as follows: enter Single Sign On password. Use a complex password such as **Password123!** Or any password you choose.

k.   Enter Root password. For simplicity's sake use the same password as you typed in the previous step.

l.   Do not make any changes to Upgrade Configuration.

m. Miscellaneous: select 'False' to not enroll in the customer experience program. HADCS should be 'True'.

n.   Networking Properties: enter AD Domain name. Click on Import to begin the install.

2. After deployment is complete the VM may appear to stop on a black screen with a blinking cursor; let it stay here until loading is complete. You'll see a logon prompt on this black screen. Don't enter anything, just wait until the VM is fully loaded. This may take several minutes.

3. When vCenter VM boots up and has fully loaded, press F2 to edit settings. <u>NOTE: it may take up to 5-10 minutes for the VM to fully load up</u>. Disable Ipv6 and verify Ipv4 and DNS configurations. Power off VM.

4. Open VM settings for vCenter

    a.   Change NIC to Host Only network. Power on VM.

    b.   Ping vCenter VM from Server 2019 VM. Ping by name and IP. You may need to wait a few minutes for vCenter to fully load.

    c.   **Screenshot successful pings to vCenter IP and name from Server 2019**

5. On the host PC right click Notepad and "Run as Administrator". a. In Notepad click File, Open and browse to C:\Windows\System32\drivers\etc and open the Hosts file. If you don't see any files, click "Text Documents (*.txt)" in the lower right corner and change the view to "All Files (*.*)" and open the Hosts file.

6. b. At the bottom of the Hosts file add two lines, as shown below, so your host PC knows where vCenter and the lab ADDC can be found. Replace the x.x.x with your correct network configuration. <u>NOTE: you need to enter fully qualified domain names for vCenter and Server19</u>. See the sample Hosts file below.

7. **Screenshot the Hosts file to show the additional lines added.**

Lab 2.1.2 Part B Lab vCenter Installation - VMware

```
#        102.54.94.97      rhino.acme.com          # source server
#        38.25.63.10       x.acme.com              # x client host

# localhost name resolution is handled within DNS itself.
#        127.0.0.1         localhost
#        ::1               localhost

192.168.15.10             server-19.itsy.edu
192.168.15.40             vCenter.itsy.edu
```

8. Ping vCenter by name and IP from host PC.
    Screenshot successful pings to vCenter IP and name from Server 2019 and from your host PC.

9. **Place all screenshots in a Word or PDF document and upload that document for grading. Submit the following items for grading as evidence of successful lab completion.**

Concerns Working Towards Proficiency	Criteria Standards for This Competency	Accomplished Evidence of Mastering Competency
	Screenshot of proper DNS configuration 20 pt)	1 correct answers; 20 pt each
	Screenshot of Hosts file after adding content (20 pt)	1 correct answers; 20 pt each
	Screenshot of successful ping to vCenter name from Server 2019 (15 pt)	1 correct answers; 15 pt each
	Screenshot of successful ping to vCenter IP from Server 2019 (15 pt)	1 correct answers; 15 pt each
	Screenshot of successful ping to vCenter IP from host PC (15 pt)	1 correct answers; 15 pt each
	Screenshot of successful ping to vCenter name from host PC (15 pt)	1 correct answers; 15 pt each