Lab 4.1.2b vMotion - VMware

Introduction

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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:

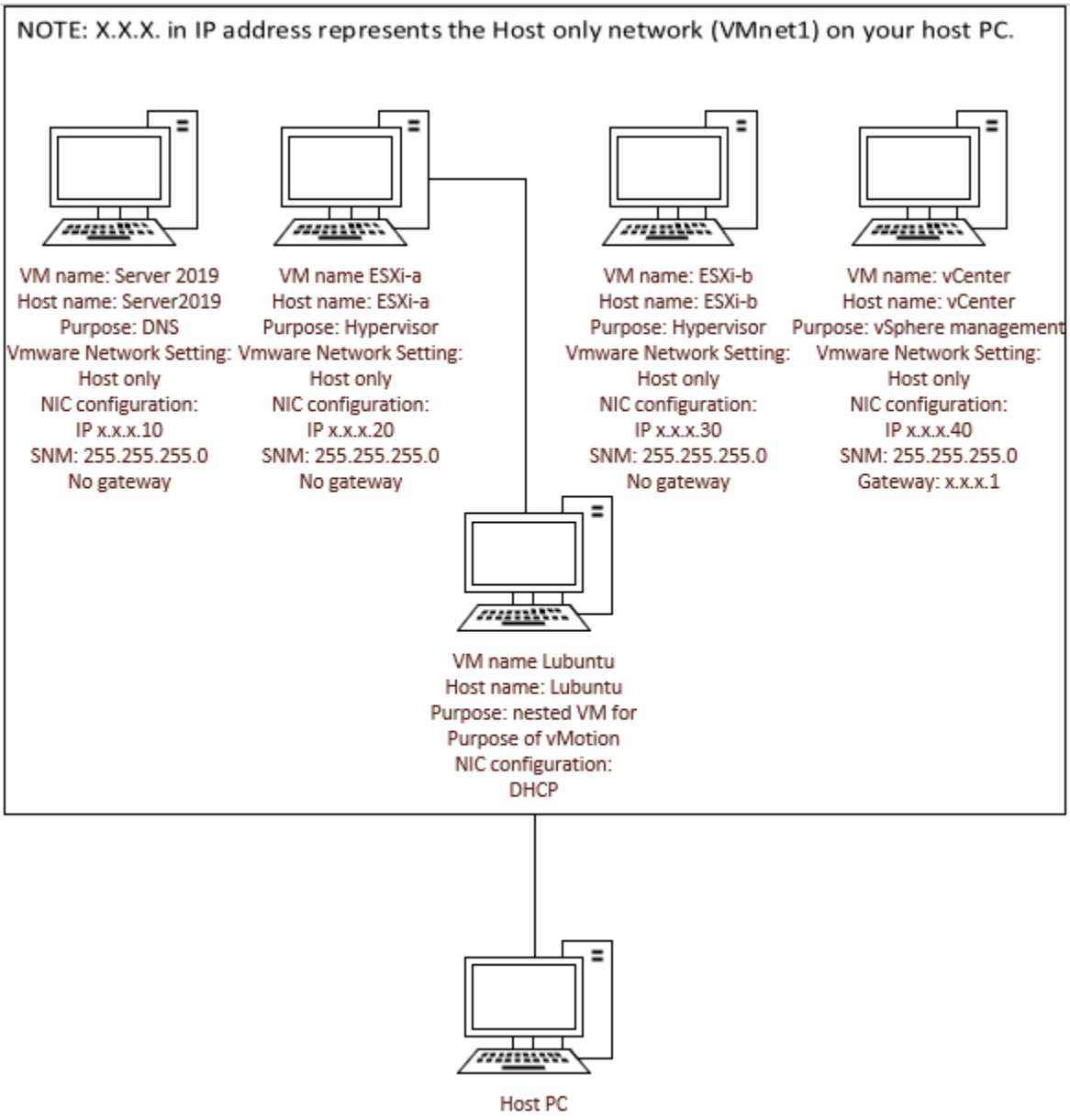
- Install, configure and manage virtual networking and storage [WECM]

Equipment/Supplies Needed

- Host Computer with VMware Workstation Pro
- VMware vCenter virtual appliance
- Reference: VMware ESXi Installation and Setup Guide

Assignment

Student will configure ESXi and vCenter servers in their VMware Lab environment for vMotion.
Key activities include configuring the following:
(1) vCenter virtual appliance
(2) ESXi VM's



Procedure

1. Before powering on your VM's go into Virtual Machine Settings for each ESXi VM and remove the CD\DVD to avoid a known conflict in virtual labs with vMotion. Power on your Windows Server VM, your two ESXi VM's, and your vCenter VM and ensure they are working.
    a. On your host PC open a Web browser and type the URL: https://*ip.address.of.vCenter*.
    b. Click on LAUNCH VSPHERE CLIENT (HTML5) and sign in as the Active Directory user you gave VMware Administrator privileges to.
2. Your first task will be to verify both ESXi servers are configured for vMotion. On the vCenter page, select Hosts and Clusters from the Menu drop down at the top.
    a. Click on an ESXi host in the left pane, then click on the Configure tab in the right pane.
    b. Click on Virtual switches under the Networking heading in the scroll menu of the right pane.
    c. In the right pane under **Standard Switch: vSwitch0**, click on Management Network in the top left rectangle to the left of Physical Adapter vmnic0. The rectangle will turn light blue indicating you have selected it.

d. In the blue rectangle under the heading of VMkernel Ports (1), click on the 3 dots to the right of vmk0: x.x.x.10, then click on Edit Settings.
e. Under Available services ensure that vMotion, Provisioning, Management, and vSphere Replication boxes are checked.
f. Now with the focus on Standard Switch: vSwitch1 in the right pane, click on Storage in the rectangle to the left of Physical Adapter vmnic1.
g. Click on the 3 dots to the right of vmk1: x.x.x.x, then click on Edit Settings and ensure the same boxes are checked as in step 2e.

3. In the right pane in the scroll menu under the heading of Networking, click on VMkernel Adapters.
   a. Click on vmk0 in the right pane, then click on Edit. Ensure the same boxes are checked as in steps 2e and 2g.
   b. Perform the same steps on vmk1.
   c. You have verified that the required services are enabled for the components that are used in vMotion.
   d. Perform steps 2 and 3 above on your other ESXi VM.
4. It's now time to perform a live migration on your Lubuntu nested VM. In the vCenter webpage ensure your Lubuntu nested VM is powered on.
   a. Right click the nested VM and select Migrate.
   b. Select Change both compute resource and storage
   c. On the 'Select a Compute resource' window click on Datacente1, then click on the ESXi VM you are migrating **TO**. The compatibility checks should succeed. If not correct before continuing.
   d. Select Datastore150 as the storage for migration. Again, compatibility checks should succeed.
   e. Select the VM Network as the network for migration. It is the only network you should show in the 'Select networks' window. Verify compatibility checks succeed.
   f. Schedule vMotion with high priority.
   g. Before clicking on FINISH open a command prompt on your host PC and ping the IP of the Lubuntu nested VM with the switch to ping until terminated; ping x.x.x.x -t.
   h. In Vmware Workstation Pro on your host PC, click once in each ESXi VM, then press enter to ensure it is awake and ready for vMotion. In the real world this would not be necessary because your ESXi servers will be very busy.
   i. In vCenter click FINISH to start vMotion. Monitor the vCenter console and command prompts with ping running to watch vMotion in action.
   j. **SCREENSHOT THE ENTIRE VCENTER WEB PAGE INCLUDING THE RECENT TASKS SECTION AT THE BOTTOM AFTER VMOTION COMPLETES SUCCESSFULLY. The Recent Tasks section at the bottom of the page should show that vMotion successfully moved the VM from one server to the other.**

5. **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 vCenter showing vMotion moved the VM	1 correct answer