



Lab 2.1.3 Lab Environment vCenter User Roles and Permissions

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
- Reference: [VMware ESXi Installation and Setup Guide \[17 APR 2018\]](#)

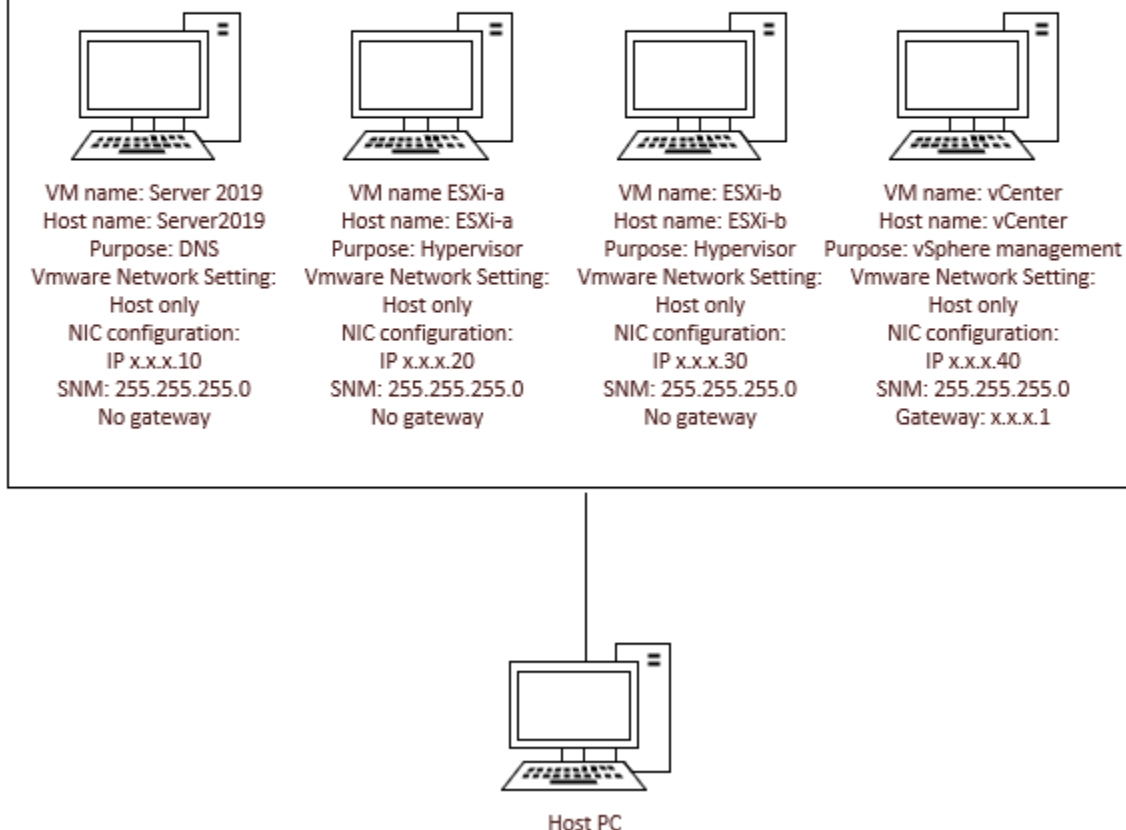
Assignment

Students will configure user permissions and roles in their VMware Lab environment.

Key activities include configuring the following:

(1) vCenter virtual appliance

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



Procedure

1. Now that vCenter is installed and configured, it's time to configure user permissions and roles for managing the vSphere environment. Before beginning the lab ensure that Windows Server and your two ESXi servers are powered on and working. You should also have successfully edited the Hosts file on your host PC
 - 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).
 - c. Sign in as user administrator@vsphere.local with the password you previously set. It may take several minutes for the vCenter page to appear because of the low amount of RAM assigned to vCenter. In the real world this will take very little time.
2. Our first task will be to integrate vCenter with Active Directory. On the vCenter page click on vSphere Client in the upper left corner.
 - a. Click on Administration in the menu.
 - b. Click on Configuration under the Single Sign On section.
 - c. Select Active Directory Domain in the list of Identity Sources.
 - d. Click on the JOIN AD link to the right Identity Sources.
 - e. Type in the AD Domain name and a username/password. The user must have Windows Domain Administrator or higher permissions to allow vCenter to join the Domain.

- f. After clicking on JOIN, **TAKE A SCREENSHOT OF THE PAGE**, then reboot vCenter as the message should say.
3. It's now time to work with user permissions. After signing back into VC, click on vSphere Client in the upper left corner, Administration, then Users and Groups under the Single Sign On heading.
 - a. In the right pane you'll notice that you can focus on Users or Groups by clicking on the appropriate link. You'll also notice the drop-down arrow to the right of Domain. This is where you choose to work with users in the default vsphere.local domain, localos, or the AD Domain you just added. We will be working with AD so select the AD Domain name.
 - b. If you see the AD Domain name in the drop-down list in 3a, then you can skip to step 4. If you do not, then perform these additional steps.
 - c. If you are not seeing the AD Domain name in the drop-down list then you need to perform one additional step. You need to add the AD Domain to the vCenter Identity Sources.
 - i. Click on Administration in the Menu drop-down list. In the left pane under Single Sign On click on Configuration.
 - ii. In the right pane click on Identity Source. If you do not see your AD Domain in the list then click on ADD IDENTITY SOURCE.
 - iii. Active Directory should pre-populate the popup window. Ensure the radio button for Use machine account is selected. Click on ADD.
 - iv. Go back to Users and Groups under Single Sign On and the drop-down list should now show your AD Domain.
4. We now need to add some users in AD as VMware Admins so we can assign roles and permissions for them in vCenter. Sign into your Windows Server VM and open AD Users and Computers.
 - a. Create three new users. Assign one to the Domain Admins group and assign the other two to a new group called VMware Admins. Be sure to add a description of their purpose in your AD domain. The user added to the Domain Admins group will be a VMware Administrator. One of the other two users will be a Virtual Machine Administrator and the other will be a VMware Auditor. This user will end up getting Read-Only VMware Administrator privileges.

SCREENSHOT SUCCESSFULLY ADDING EACH USER AS SPECIFIED IN THIS STEP.
5. You will now assign Roles and Permissions to these users in vCenter. In vCenter, refresh the Users and Groups view in the right pane by pressing the F5 key. Your three new users should now appear.

SCREENSHOT THE NEW AD USERS SHOWING UP IN THIS vCenter PANE.

 - a. In vCenter, click on Roles under the Access Control section.
 - b. Click on the + sign in the right pane to add a new role.
 - c. Scroll down the list of roles and select Virtual Machine in the left pane. In the right pane click on All Virtual Machine Privileges.
 - d. Name the new role VM-Admins and enter the description of Allow VM permissions only.
 - e. Scroll down the list of Roles in the right pane and you'll see the new role you just added. Click on it to see your description. **SCREENSHOT THIS STEP.**
 - f. Click on Global Permissions in the left pane, then click on the + sign in the right pane.
 - g. With your AD Domain selected, type the first few letters of the AD user who is the VMware auditor with read only permissions, then select the user.
 - h. Select the Role of Read-only for this user. Select the Propagate to children check box.

SCREENSHOT SUCCESSFUL ROLE ASSIGNMENT FOR EACH USER IN STEPS h, i, AND j.

 - i. Click the + sign again to add the role of Administrator for the AD user with this description.
 - j. Click the + sign again to add the role of VM-Admins for the AD user with this description.
 - k. Click on Menu in the dark bar across the top of the vCenter page, then click on Hosts and Clusters.
 - l. Right click Datacenter1 and Add Permission.

- m. Select the AD Domain, type in the first few letters of the VM-Admin user name and change the role to VM-Admins. Your VM Admin will only have access to Datacenter1 and only be able to administer existing VM's. **SCREENSHOT THIS STEP.**
6. Test your user Roles and Permissions by logging out of vCenter and logging back in as each new user one at a time starting with the user who is a VMware Administrator. This time the logon username will be different because Active Directory is now enabled on vCenter. Previously you were logging into vCenter as administrator@vsphere.local. Now you will log in using the AD domain name. For example, if my AD Domain name was ITNW2355.EDU and my VMware Administrator's AD username was George I would log in with username george@itnw2355.edu. As you log in as each new user, notice what permissions that user has on vCenter. **Screenshot the vCenter view after logging in as each of the 3 new users. Your screenshots should show what the user can, or can't do with their assigned roles and permissions.**
4. **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.**

<u>Concerns</u> Working Towards Proficiency	<u>Criteria</u> Standards for This Competency	<u>Accomplished</u> Evidence of Mastering Competency
	Screenshot of vCenter joining AD (15 pt)	1 correct answers; 15 pt each
	3 Screenshots for adding 3 new users in AD – step 4 (15 pt)	3 correct answers; 5 pt each
	Screenshot of all 3 new AD users in vCenter – step 5 (10 pt)	1 correct answers; 10 pt each
	Screenshot of new VM Admin role – step 5e (15 pt)	1 correct answers; 15 pt each
	9 Screenshots for adding 3 new users – steps 5 h,i,j (15 pt)	9 correct answers; 1.66 pt each
	Screenshot of assigning VM Admin permissions to Datacenter1 – step 5m (15 pt)	1 correct answers; 15 pt each
	3 Screenshots, one of each new user after logging into vCenter – step 6 (15 pt)	3 correct answers; 5 pt each