**IT 3300 : Virtualization**

vCenter Server

**Terms Revisited**

- vSphere = software suite
  - ESXi (type 1 hypervisor)
  - vCenter - centralized management app
  - vSphere client - client to esxi management
  - etc...

**What is vCenter?**

It is a utility that we can use to manage our ESXi instances. - migration - templates - clones - etc ...

**Details**

After installing ESXi, we can manage our host using the “Embedded Host Client”

- see here
- and here
- and here

Designed to replace the windows-centric management app. (vSphere legacy client)

**Details**

You can install vCenter Server on a physical system or on a virtual machine running on an ESXi host.

- Could install on Windows Physical or Virtual machine
- As an alternative to installing vCenter Server on a Windows virtual machine or physical server, you can deploy the vCenter Server Appliance.

**Details**

All administrative functions are available through the vSphere Web Client. The vSphere Web Client is a cross platform application that can connect only to vCenter Server. It has a full range of administrative functionality and an extensible plug-in-based architecture. Typical users are virtual infrastructure administrators, help desk, network operations center operators, and virtual machine owners. Users can use the vSphere Web Client to access vCenter Server through a Web browser. The vSphere Web Client uses the VMware API to mediate the communication between the browser and the vCenter Server.

**Conclusion?**

So the vSphere web client is different than the embedded host client.

**Installation?**

- Here is one site that explains it.
- Here are my screenshots. (See slides below before pursuing)

**Easy way to install**

- Use the script found here (only from on-campus)
- begin by obtaining VMware-VMvisor-Installer-6.0.0.update02-3620759.x86_64.iso
  - You can scp this from \vm.cs.dixie.edu:/qemu/iso/\ directory.
- put in Downloads
- mkdir tempdir
- sudo mount -o loop VMware-VMvisor-Installer-6.0.0.update02-3620759.x86_64.iso tempdir

**Harder way to install**

I did not capture the screens where I did the following:

- Mount the file "VMware_VCSA-all-6.0.0-xxxx.iso" to a Windows VM.
- Access the Console of the Windows 7 VM and browse to the mounted ISO image.
- Open the "vcsa" directory and execute the "VMware-ClientIntegrationPlugin-6.0.0.exe" file.
- In the VMware Client Integration Plug-in Installer window, select “Next”.
- Accept the licence agreement and select “Next”.
- Leave the "Destination Folder" as default and press "Next".
- In the "Ready to Install Plug-in" window, press "Install".
- In the "Installation complete" window, press "Finish".

Installation?

After the above install completed, I was able to visit the html page which started the installer.

Installation Finish

![Installation Complete](image)

Your vCenter Server is successfully installed.

Post-install steps:
1. vCenter Server is installed in evaluation mode. Activate vCenter Server by using the vSphere Web Client within 90 days. When the evaluation period of this vCenter Server expires, all hosts will be disconnected from this vCenter Server.
2. Use the vSphere Web Client to manage vCenter Server. Login with the Single Sign-On administrator account administrator@Joe.local

You can now login to vSphere Web Client [https://144.13.154.13/vsphere-client](https://144.13.154.13/vsphere-client) as administrator@Joe.local

Login
First Screen
VCenter related items

- **Database:**
  - Most crucial component of the architecture; storing:
  - security roles,
  - inventory items,
  - resource pools,
  - perf data,
  - Supported databases are:
    - Oracle
    - MSSQL
    - vPostgres (included with the VCSA)

VCenter related items

- SSO for authentication
- vSphere inventory service
  - manages web client inventory objects (tags)
  - tags can be useful in large environments to find vms, data stores, clusters, etc...
- Managed Hosts
  - these are enabled by vCenter Server to manage ESXi hosts as well as the VM's installed on them.
- Web Client (of course)

VCenter architecture review (from text)
VCenter Communication

- VMware Virtual Server or vpxd is the main service on VCenter Server.
- When hosts are added to VCS, an agent called vpxa is installed and runs on the ESXi hosts.
- vpxd relays commands to vpxa, vpxa relays commands to a hostd process. hostd does most of the work (ie. creating vms)

VCenter Communication Continued

- When a command is issued, on VCS, it also updates the db.
- VMs are still running even if VCS crashes, but some other advanced features might not be available.
- If we connect directly to the ESXi host the db isn’t updated... so we should always try to use VCS.