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"

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.

Easy way to install

- Use the script found here (only from on-campus)
- begin by obtaining VMware-VCSA-all-6.0.0-3634788.iso
  - You can scp this from vm.cs.dixie.edu:/qemu/iso/ directory.
- mkdir tempdir
- sudo mount -o loop VMware-VCSA-all-6.0.0-3634788.iso tempdir

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)**
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)

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.