**Topics from 1910-01-sdc LAB**

**\*\*\*This doesn't include any relevant terminology, for the terms and definitions you can refer to the module itself online.\*\*\***

**Wait for lab status to get ready**

**#1 Creation of virtual machine**

* Login to chrome, using windows authentication.
* Click on home icon, select VMs and Templates
* Expand the vcsa-01a.corp.local tree to expose the "**DataCenter Site A"** object
* Click on "**DataCenter Site A**"
* Click "**Create a new virtual machine**" to start the new virtual machine wizard
* Select cluster, storage(datastore) and make other relevant changes
* Click finish

**#2 Editing the settings of Virtual machine/ setting up image for virtual machine**

* From the **Actions** menu, select **Edit Settings...**
* From the **CD/DVD drive 1** drop-down menu, select **Datastore ISO File**. This will open a file explorer to select that file.
* Expand the directories under **vmimges** and then click on **tools-isoimages.**
* Select **windows.iso** in the Content pane
* Click **OK**.
* Click the **Connected** check box next to **CD/DVD drive 1**.
* Click **OK**.

**#3 Cloning virtual machine**

* Select "**VMs and Templates**" from the Home menu
* Click the drop down arrows to expand the inventory tree
* Right-click the Virtual Machine "**TinyLinux-01**"
* Select "**Clone**"
* Select "**Clone to Template**"
* In the Clone Virtual Machine to Template wizard, provide a name for the Template "**TinyLinux Template**"
* Keep datacenter as site A
* Click next choose cluster and click datastore according to availability.
* Click Finish.
* Now go to datacentre and create a new vm and choose from template

**#4 deploying a clone temple**

* Select the Template, "**TinyLinux Template**"
* Select the "**Getting Started**" tab
* Under Basic Tasks in the action pane, click "**Deploy to a new virtual machine**"
* Enter name, datacentre and click next
* Select cluster, storage and finish

**#5 Using tags and user defined labels**

* Click the **Home** Menu
* Select "**Tags and Custom Attributes**" to create tag categories and tags.
* Click "**New Category**"
* Enter "**web tier**" for the Category Name.
* Keep the default "**One tag per object**"
* Click "**OK**"
* Click '**New Tag**' to create
* To create a new tag enter "**Web Server version 2**"
* Click the tag category "**web tier**" in the drop down box.
* Select "**OK**"
* To assign tags go to vm and template select a vm and right click and select assign tag

**#6 Configuring High availability in cluster**

* First, go to the "**Home**" button
* Select "**Hosts and Clusters**"
* Click "**Cluster Site A**"
* Click "**Actions**" to bring up the drop down menu.
* Click "**Settings**"
* Click "**vSphere Availability**" under "**Services**" to bring up the settings for high
* availability. Note that you may need to scroll to the top of the list.
* Click "**Edit**"
* Check the box "**Turn ON vSphere HA**"
* Click '**Failures and Responses**'.
* From the VM Monitoring drop-down list, select '**VM and Application**
* **Monitoring**'.
* Click '**Admission Control** '.
* In the 'Define host failover capacity by' drop-down menu, select '**Cluster**
* **resource percentage**'.
* Click '**Heartbeat Datastores**'.
* Select '**Automatically select datastores accessible from the host'**.
* Click '**OK**' to enable vSphere HA.

**#7 Enabling DRS**

* Click on the '**Configure**' tab to start the process of enabling Distributed Resource
* Scheduler.
* Click '**vSphere DRS**'.
* Click on the '**Edit**' button to modify the DRS settings.
* Verify that the "**Turn ON vSphere DRS**" box is checked.
* Click the drop down box and select **"Fully Automated**"
* Click "**OK**"
* Click the '**Summary**' tab to display the current status of the cluster

**#8 Creating Alarms**

* Click on the '**Actions**' menu and select '**Alarms > New Alarm Definition**'.
* Enter "**Virtual Machine CPU Ready**"
* Click "**Next**" to move to the Triggers section.
* Click the "**+**" to add a new trigger action.
* Scroll down the list and select the "**VM CPU Ready Time**" and keep the default conditions.
* Click "**Next**"
* Click the "**+**" to add a new action
* Click the "**Migrate VM**" action
* Click the **Resource Pool; Host; Priority** in the Configuration column. Once you click it, it will change to **Click to Configure.** Click this link to configure the Resource Pool settings for when the VM migrates.

**#9 Editing alarms**

* Click the "**Home**" icon, Click the "**Events**" menu item
* Select the vCenter "**vcsa-01a.corp.local**"
* Click the "**Monitor**" tab
* Click the "**Alarm Definitions**" tab.
* Use the filter to find the "Host CPU usage" alarm definition by typing "**cpu**" in the
* search field and press **Enter**.
* Select the "**Host CPU usage**" alarm
* Click the "**Edit**" button
* Click on the "**Triggers**" portion of the alarm.
* Click "**80%**" usage for 5 minutes to trigger the alarm.
* click "**Next**"
* Click the "**+**" to add a new action.
* scroll on the list and click "**Enter maintenance mode**"
* Set the "**Alert State Change**" to "**Once**"
* Set the "**Alert State Change**" to "**Once**"
* Click "**Finish**"

**#10 Create a graph of relevant**

* Select **esx-01a.corp.local (available in the lowest level only)**
* Click the **Monitor** tab
* Click the **Performance** tab
* Select **Realtime** from the Time Range drop-down menu.

**#11 Create a standard switch**

* Under vcsa-01a.corp.local, expand **Datacenter Site A** and then **Cluster Site A**.
* Next, right-click on **esx-02a.corp.local** in the Navigator and select '**Add Networking**'.
* select **Standard Switch** and click Next
* choose **New Standard Switch** and click Next.
* Select '**Unused Adapters**' and click the green '**+**' button.
* Click '**Next** to continue.
* Do not change change the VLAN ID; leave this set to **None (0)**.
* To check goto config > network> virtual switch

**#12 Creating a distributed switch**

* In the Navigator, right-click on Datacenter Site A and select Distributed Switch --> New Distributed Switch.
* Keep the default name for the new distributed switch then click **Next**.
* Make sure Distributed Switch: 6.5.0 is selected and click **Next**.
* To add host to Dswitch
* Go to networking tab (of the navigator)
* Select Dswitch and right click and add and manage Host
* Select task=> add host. Select host click + . select all the local clustrers
* Manage physical network adapters select the nic and assign uplink to them for both cluster
* Click next next
* To verify go back to lowest level host and cluster and go to goto config > network> virtual switch

**#13 Create an nfs datastore**

* Select "**Datacenter Site A**"
* Select "**Actions**"
* Select "**Storage**"
* Select "**New Datastore**"
* Click the "**Next**" button to advance the wizard to the "**Type**" step.
* Verify type - NFS - is selected, and click "**Next**"
* Verify NFS Version - **NFS 3** - is selected, and click "**Next**"
* Give the new Datastore a name, "**ds-site-a-nfs02**"
* Enter the Folder "**/mnt/NFS02**" in the NFS Share Details area.
* Enter the Server "**10.10.20.60**" in the NFS Share Details area and click "Next"
* Select the "**check box**" to include all hosts and select "**Next**".
* To check go to datacentre site A’s Datastore tab

**#14 Create a vmfs datastore**

* Select "**Datacenter Site A**"
* Select "**Actions**"
* Select "**Storage**"
* Select "**New Datastore**"
* Verify type - VMFS - is selected, and click "Next"
* Give the new Datastore a name, "**ds-iscsi02**"
* Select a Host to view the accessible disks/LUNs and select **esx-01a.corp.local** in the drop-down box.
* Click "**Next**"
* To check go to datacentre site A’s Datastore tab

**#15 Roles**

* Home>administration>roles
* + for creating (name + privileges selection)
* Pencil for edit (for name and permission)
* Contact for clone (need to rename)
* X for deleting

**Topics from 1901-03-cmp LAB**

Live Instance: Connected to the small running vSphere environment in the lab.

There isn't a large inventory of objects in this instance but it allows us to interact with vCenter.

• Historical Instance: Running a 30-minute time loop of data that was captured in the past. This instance has a much larger inventory of objects but since it is not currently connected to a vCenter, we can't perform any actions here.

• Blue Medora Management Packs: Also running in historical mode, this instance has a large number of management packs from Blue Medora that allow us to see information from adjacent infrastructure (storage and physical servers) as well as operating system and application information.

**#15 Loging to vRealize Operations – Live Instance**

* Open google chrome
* Live Instance
* VMware Identiy Manager in the type of login
* User hol pwd VMware1!
* Sign in

**#15 Reclaim resources**

* Open google chrome
* Click the **vRealize Operations - Historical Instance**
* **choose local users,** Enter user credentials. Username is **admin** and password is **VMware1! and login**
* Select Reclaim on the Quick Start Page
* Click Reclaim for the datacentre
* Select from the given action, power off, delete or snapshot, accordingly.
* Power off = remove which are off for long time(forgotten project)
* Idle vms= best option is to power them off to reclaim cpu and memory
* Snapshots= remove if very old, as they will no longer be used in future

**#15 Reclaim resources for oversized**

* Open google chrome
* Click the **vRealize Operations - Historical Instance**
* **choose local users,** Enter user credentials. Username is **admin** and password is **VMware1! and login**
* Select Reclaim on the Quick Start Page
* Click Reclaim for the datacentre
* Go to oversized
* Select vm and resize, if necessary go to Overview in Quick start to analyse

**#16 Workload scenario for capacity planning**

* Open google chrome
* Click the **vRealize Operations - Live Instance**
* Select **VMware Identity Manager,** USER: **hol** PASSWORD: **VMware1!**
* Click the Plan link to go into workload, Scenario Name = New Rainpole Project
* 2. Select the Datacenter RegionA01 (vcsa-01a.corp.local)
* 3. Allow this workload to be on Any cluster
* build out the configuration
* Select ADVANCED CONFIGURATION
* Click the radio button for '**Thin'**.
* Click Save so we can come back to this scenario.

**Topics from 1911-06-cmp LAB**

**#17 Accessing the API explorer**

* Appliance handles calls to the underlying VMware appliance
* CIS Common Infrastructure Services, handles calls involving tagging
* Content handles calls involves the Content Library
* vAPI vSphere API, handles calls regarding the API endpoint
* • vCenter handles calls to involving the vCenterLaunch Google Chrome by clicking the **"Chrome"**
* change the url to, https://vcsa-01a.corp.local/apiexplorer
* Select vCenter from API Drop Down.
* Click on **Cluster**
* Click on **/vcenter/cluster**
* Scroll all the way down until you see the "Try it out button"
* Try out the API from the ex