
SIT706 Cloud Computing Technologies

Practical 6: Migrating, Managing and Monitoring VMs

Aims and Objectives

In this week's practical we continue examining how to construct cloud infrastructure, working with the VMware virtualization systems and completing practical tasks aligned with the VMware vSphere Install, Configure, and Manage certification curriculum. This week we examine how to migrate a virtual machine. Migrating a virtual machine is an important mechanism in cloud computing – the ability to move an active VM from one host server to another host server allows the resource usage of the cloud resources to be managed effectively, particularly during peak usage times. Importantly, the ability to move an active VM also allows the number of host servers to be consolidated during non-peak times, in turn allowing unused resources to be shutdown to save electricity costs.

We then examine the concept of virtual machine snapshots, which allows the contents of a virtual machine at a particular time to be captured. The state of the virtual machine can then be set to one of these snapshots at any time in the future, and the state of a virtual machine at a particular snapshot can also use for other operations, e.g., duplicated to another new virtual machine.

Finally we examine the facilities in vSphere for monitoring the usage of physical resources by a VM.

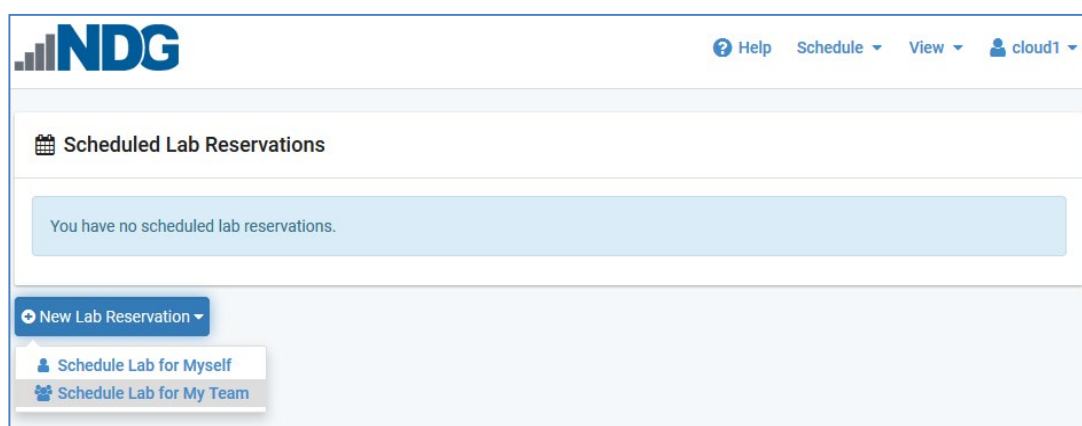
Using NetLab+ VE

In this week's practical, you are required to complete the following two labs:

- Lab 13: Migrating Virtual Machines;
- Lab 14: Managing Virtual Machines; and
- Lab 17: Monitoring Virtual Machine Performance.

As in the previous practicals, you will use the School's NetLab infrastructure which can be accessed via <https://vmlab.it.deakin.edu.au/>

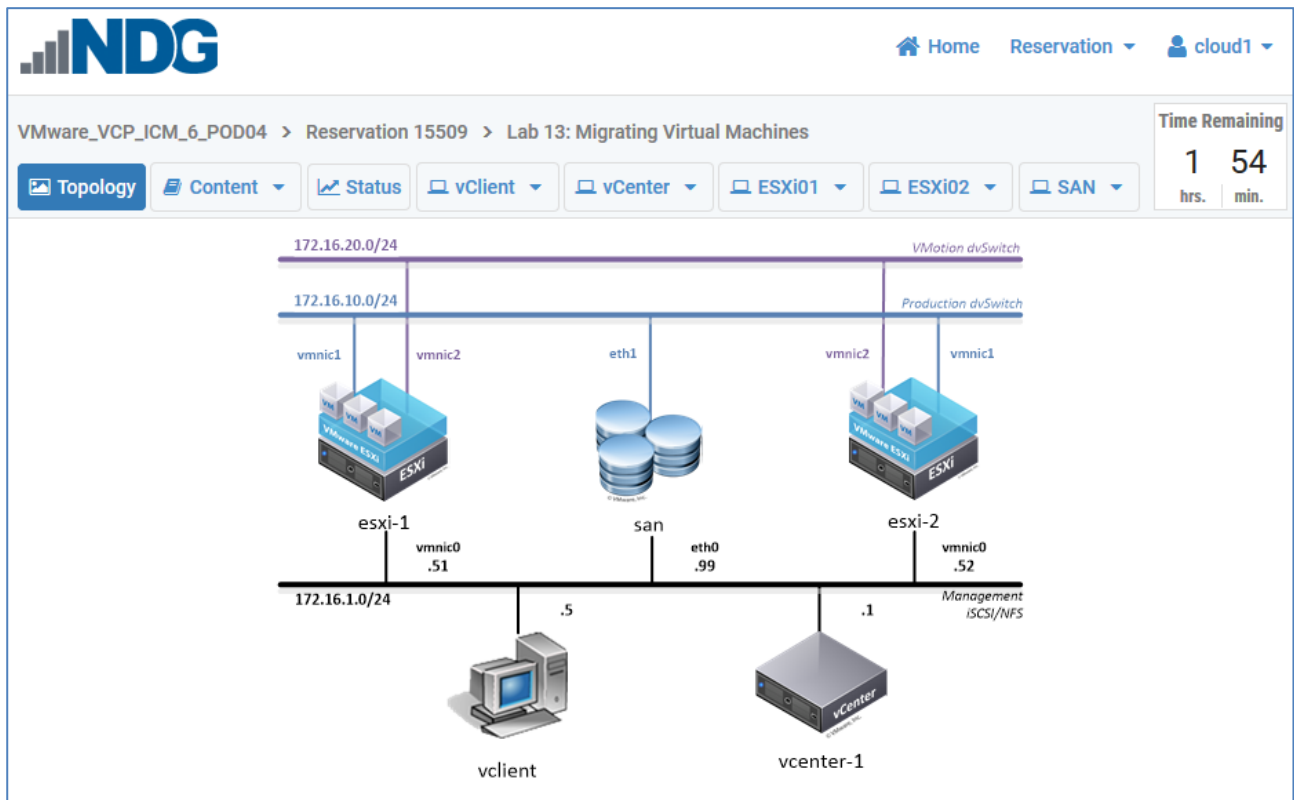
Once you have logged in, book an appropriate Pod and Lab by clicking on the **New Lab Reservation** menu and then the **Schedule Lab for Myself** menu item:



Ensure you have selected the **VMware vSphere ICM 6** topics to view the list of available labs. Using the **Action** menu, click on the **Schedule** menu-item to start a Pod booking for the lab named:

- Lab 13: Migrating Virtual Machines.

After successfully booking this lab, click on the **Enter Lab** button to begin your work. You will now be shown the topology (the virtual machines and networks) associated with this lab:



The instructions for this lab can be found by clicking on the **Content** menu.

Once you have completed work all on this Lab, ensure you click on the **Reservation > End Reservation Now** menu-item to free the Pod's resources for others to use.

As above for Lab 13, you should now complete the following two labs:

- Lab 14: Managing Virtual Machines; and
- Lab 17: Monitoring Virtual Machine Performance.