**Lab 08: Benefits of vMotion and Storage vMotion**

In this lab, we migrated a VM from host-to-host while the machine was still running. We also migrated a VM datastore while the machine was still running.

**vMotion**

vMotion enables the live migration of running VMs from one physical server to another with zero downtime, continuous service availability, and complete transaction integrity. This technology is vital in providing high uptime services to end users. When used with other technologies like High Availability (HA) or Fault Tolerant (FT), it can assist an organisation’s effort in obtaining 99.999% uptime.

Logging onto the vCenter Appliance and using the vSphere Web Client, we navigated to the Production Services Cluster. Powering on CentOS Server 01, we viewed its Related Objects section. In the Navigator area of CentOS Server 01, we selected Migrate, then chose Change host. Again, looking at the Related Objects section, we can verify that the host changed from 192.168.1.21 to the new host of 192.168.1.22, showing that the VM migration was successful.

**Storage vMotion**

Storage vMotion allows the live migration of a running VM’s file system from one storage system to another, with no downtime for the VM, and no service disruption for end users. It is the companion feature to vMotion. Working in tandem, these two vMotion processes ensure that VMs are mobile without endangering their operational or data consistency. Storage vMotion is imperative for operations that require 24/7 service. To get the most from this feature, two or more storage systems must be available and capable of handling a sufficient amount of the load, so that one system may be taken offline.

In the Navigator area of CentOS Server 01, we selected Migrate, then chose Change datastore, selecting NAS02 from the list. In the Related Objects section, we can verify that NAS02 has replaced NAS01 under Storage, showing that the datastore migration was successful.