**Lab 07: vSwitches – Networking in the VDC**

In this lab, we created and configured a standard vSwitch, and a distributed vSwitch.

**Standard vSwitch**

A virtual switch is software that allows a VM to communicate with other networking components, similar to how a physical Ethernet switch works. It also provides settings for VLANs, port-groups, and security.

Logging onto the vCenter Appliance and using the vSphere Web Client, we navigated to the Production Services Cluster. Selecting the Manage tab, then the Networking subtab, we added a host network. Choosing Virtual Machine Port Group for a Standard Switch, a new standard switch was created. Once the vSwitch was finished being created, we could observe its properties under the Content section.

To configure a virtual switch, we selected vSwitch2, clicked Edit and then Properties. Here, it is possible to change the number of ports and maximum transmission unit (MTU) of the vSwitch. There are also security options available, as well as traffic shaping and failover options.

**Distributed vSwitch**

Distributed vSwitches provide centralised management, unlike standard vSwitches which require management on each host.

Still within the vSphere Web Client, we navigated to Distributed Switches under the Inventory Lists. From here, we created a new distributed switch, selecting the newest version available. We then added hosts to this switch, checking both available hosts listed. We ensured the settings were validated by the presence of the green Passed status.

Next, we added VMs to the distributed vSwitch, specifying Production as the source network, and DPortGroup as the destination network. We observed the various setting options available under the Edit menu, such as the private VLAN settings. These are useful for maintaining layer 2 network separation across many hosts, as each VLAN is separated from the others.

We then added a port mirroring session, selecting Distributed Port Mirroring and the desired server. Having configured the setup, we then enabled port mirroring. With Distributed Switch Port Mirroring enabled ,the traffic from CentOS Server 01 will be mirrored to CentOS\_6.4\_i386\_Min server interface. The mirror will remain in place if either virtual machine is migrated to another host.