



VMware VCenter Upgrade

As part of our upgrades for the virtual environment, the NMO team was tasked to upgrade from VCenter 6.0 to 6.5. This engagement was led by **Paul Maney** and **David Fraser** of Layer 3 and **Lance Melancon**. The started **Friday morning** and completed early **Saturday morning**.

Several steps were taken in preparation of this upgrade including compatibility matrix checks, interoperability verification, backups, and snapshots. There are many products and applications that integrate with VCenter, making due diligence very necessary.

These integrated products include VROPS, LogInsight, TrendMicro, and NSX. The next phase of upgrades will include those integrated products.



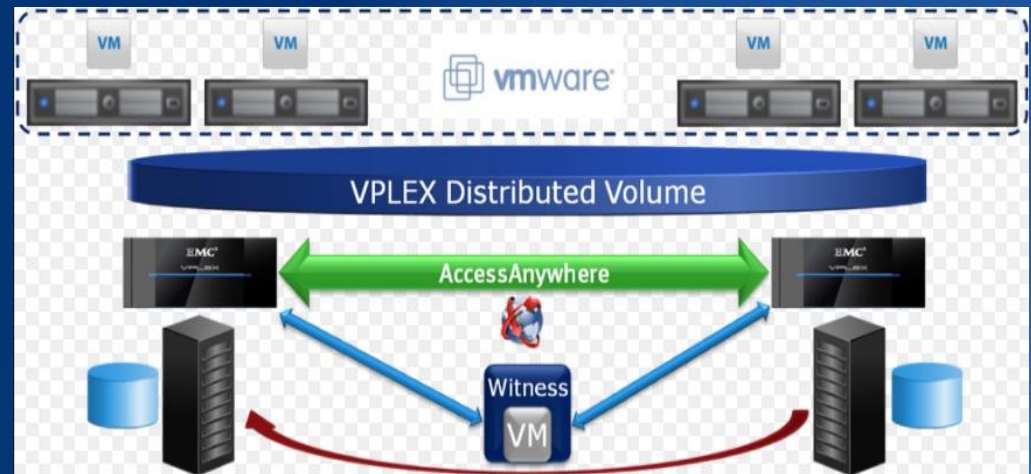
Expanding Management Cluster Storage



Mike Diaz and **Ken Gibson** expanded and configured the EMC VPLEX distributed LUN for our VMware Management Cluster at Data Center 4. This cluster contains edge gateways and controlling components of VMware.



In that the Management Cluster is out-of-band, the process was more challenging than other LUN expansions because this storage is outside the control of VIPER which normally manages data stores.





Securing the Environment



Wednesday, during the hard freeze conditions, NMO held a remote meeting with Layer 3 to discuss infrastructure upgrades and project planning for patching for the Meltdown vulnerability.

Josh Zhang deployed a WSUS (Windows Server Update Services) server to manage and distribute Microsoft updates through a management console.

As of **Friday, January 19th**, most of the Windows Server environment has been fully patched for the Meltdown vulnerability.

This week, **Josh Zhang, Kimberly Osborn, Greg Rhodes, and Paula Ross** met with **Jennifer Miller** and **Eric Pina** from the **CCC** to integrate KnowBe4 into the Active Directory to allow for single sign on and identity management.

KnowBe4 is a service the district purchased to help identify weaknesses in cybersecurity practices and provide end user training to help secure the district's network.

