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Disaster Recovery Process Overview

The University of Texas at Brownsville is an educational institute located 25 miles inland from the Gulf of Mexico and a member of the University of Texas System. In the aftermath of hurricane Katrina in August 2005, administration began a series of initiatives in business continuance to meet the growing needs of students, faculty, and staff. One of these initiatives was the need for a more robust disaster recovery solution that included a hot site to provide high availability, particularly in email services.

The Information Technology Services department began researching a DR/HA solution that would not require major modifications to already existing local redundancies, specifically, the faculty and staff Microsoft Exchange Enterprise 2003 Cluster. Furthermore, ITS was also interested in leveraging virtualization technology in order to minimize the hardware requirements for the hot site.

In keeping with this, the combination of VMware Infrastructure and CA XOSoft's WANSyncHA provided a complete solution that was able to meet the needs and expectations of the University.

Implementation Process Overview

The University of Texas at Brownsville uses Exchange 2003 Enterprise and houses approximately 24,000 mailboxes on a costly SAN architecture. In order to reduce the costs associated with installing a SAN at the hot site, several terabytes of local storage were installed on the VMware ESX servers instead. In addition, a VLAN was extended allowing both sites to exist on the same network subnet, simplifying routing and firewall policies that could otherwise introduce communication issues.

WANSyncHA at present is replicating a two-node Exchange back-end cluster server to one VM and similarly four Exchange back-end servers to four VM's. The failover process takes approximately 15-20 minutes per server to complete with users experiencing minimal downtime.

The hot site is hosted and maintained at the University's ISP in Austin, Texas. One advantage of using the University's ISP, is having both network and server support in one location resulting in a more centralized disaster recovery process.

In conclusion, to provide a complete DR/HA working environment, one of each of the following servers also exist at the hot site. Active Directory VM, OWA front-end VM, an AntiSpam/AntiVirus email appliance and a DNS VM.