

# Texas Wesleyan University Satisfies Hierarchy of IT Needs with Solution from Mainline

Texas Wesleyan University (TXW) is a private coeducational urban liberal arts university, founded by the United Methodist Church in 1890 as Polytechnic College in Fort Worth, Texas. As the college expanded and mission evolved, it became Texas Woman's College in 1914, then Texas Wesleyan College in 1934, and in January 1989, Texas Wesleyan University.

As Fort Worth/Dallas grew and prospered into a major metropolitan area of 6 million, TXW also expanded to include Fort Worth's only law school, the nation's largest Graduate Program in Nurse Anesthesia (GPNA), and a satellite site in Burleson, Texas, to serve residents south of Fort Worth. Through the School of Business, School of Education, School of Arts and Letters, School of Natural & Social Sciences, the School of Law, and GPNA, Wesleyan offers 43 undergraduate majors, 13 graduate programs and 3 doctoral programs to 1,517 undergraduates and 1,531 post-graduates.

## The Challenge

Net Geners, a generation that has grown up with information technology, number 81.1 million in the U.S. alone. Of these, 37.3 million are potential students, making it the largest potential market for education in history. Marcus Kerr, TXW's Chief Information Officer, developed his IT strategy to accommodate the needs and expectations of this technologically competent group.

He called on Mainline Information Systems, an IBM Premier Business Partner, to help him realize his vision of modernizing and improving every aspect of TXW's IT services, which he planned to accomplish in stages, analogous to Maslow's Hierarchy of Needs.

Kerr explained that the basic IT infrastructure--servers, data management, storage and backup--made up Stage One, and was similar to Maslow's Basic Survival Needs--food, water, air, shelter. A person, or in this case, an organization, moves to a higher level when each preceding level is satisfied. Stage Two focuses on Safety and Security Needs--protection from physical threat. In the IT environment, this includes firewalls and password security as well as business continuity and disaster recovery. Stage Three, Maslow's Social Needs--friendship, belonging, and group acceptance--are addressed by providing the IT infrastructure for connecting and interacting, without time or place constraints, throughout the community. The Mainline team of experts used these guidelines to provide the road map for the entire project.

## The Solution

For the basic needs of Stage One, Mainline configured an infrastructure that consisted of server and storage consolidation, and virtualization, and included a tape library, replication and deduplication software and centralized automated data protection software (TSM). To address the safety and security needs of Stage Two, Mainline is implementing a Disaster Recovery and Business Continuity plan, driven by business practices, that duplicates the main system and includes IBM Bladecenters, nSeries Storage and new racks with integrated power distribution and cooling. In addition, VMware's Site Recovery Manager will manage failover in emergencies. Secondary access to the Internet will allow for business continuity. As part of Stage three, TXW is planning to implement a virtual desktop program (VDI) that will provide network access to learning and business resources across the university's campuses, using voice, video and data capabilities.



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## The Challenge...

- Address Net Gen IT needs
- Modernize, upgrade and improve IT Systems and Services
- Use upgraded IT to attract new students and keep current ones
- Address safety and security needs

## The Solution...

### Stage One

- IBM BladeCenter® H Chassis with 8 IBM HS 22 Blade Servers
- VMware Virtualization Software
- IBM N series 6040 Storage
- IBM System Storage TS3593 Tape Library
- NetApp® SnapMirror®
- NetApp® Data ONTAP® Data Deduplication
- IBM Tivoli Storage Manager (TSM)

### Stage Two

- Disaster Recovery/Business Continuity Plan
- IBM BladeCenter® H Chassis with IBM HX5 Blade Servers
- IBM N series 6040 Storage
- VMware vCenter Site Recovery Manager™
- Mainline Professional Services

## The Results...

- Better system performance
- Optimized resources
- High flexibility and scalability for growth
- Reduced complexity and easier management
- Reduced power consumption
- Unified storage platform and highly efficient utilization
- High availability and reliability
- Increased data security and retention
- Disaster Recovery and Business Continuity

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## Stage One

**IBM BladeCenter® H Chassis with 8 IBM HS 22 Blade Servers** consolidated TWU's 70 servers into the Blades. Each IBM BladeCenter H houses 14 thin modular server blades, each an independent server containing processors, memory and network controllers. The BladeCenter allows more power in less rack space, while providing high performance, flexibility, simplicity and central management from a single console.

**VMware Virtualization Software** was recommended because this software suite centralizes management and optimizes resources by partitioning servers into multiple self-contained virtual machines that aggregate virtualized servers, storage and the network.

**IBM System Storage N series 6040** consolidates diverse data sets onto a unified storage platform, unlocking the full potential of virtualized servers. It reduces data management complexity in a heterogeneous storage environment and reduces power, cooling, and space demands.

**IBM System Storage TS3593 Tape Library**, an open-standard magnetic tape data storage system, supports scalable, automated data retention, utilizing high-capacity IBM System Storage™ Tape Drives.

**NetApp® SnapMirror®** thin replication software uses network bandwidth more efficiently. SnapMirror replicates only changed blocks in a file, significantly reducing bandwidth requirements so that there is a 50% reduction in management overhead versus competing solutions.

**NetApp® Data ONTAP® Data Deduplication** utilizes minimal system resources, with primary data, backup data and archival data all deduplicated with nominal impact on data center operations.

**IBM Tivoli Storage Manager (TSM)** software provides centralized automated data protection and is designed to manage costs, reduce complexity, and address compliance and regulatory data retention and availability requirements.

## Stage Two

**IBM BladeCenter® H Chassis with IBM HX5 Blade Servers** serves as a back-up replica of TWU's production servers.

## IBM System Storage N series 6040

**VMware vCenter Site Recovery Manager™** automates and accelerates the recovery process in emergencies. Mainline Professional Services provided configuration for the three stages and installation and implementation services for the basic IT stage and the security stages .

## Results

"Later this school year, when TXW implements Stage Three, we will have achieved our goal of connecting students to TXW, no matter where they are, using voice, video and data capabilities," Kerr explained. "With these planned changes, we will be able to serve students as never before."

"By driving revenue, decreasing costs and providing greater administrative control, TXW's management recognizes IT's role as a partner in the business of running the university and in facilitating organizational excellence," he elaborated.

"The Mainline team responded with best practices to everything we were trying to do, Kerr concluded. "We could not have done this without Mainline's help."



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