VCE

■ **CLIENT**
The City of Denton, the eleventh largest city of the Dallas-Fort Worth Metroplex

■ **CHALLENGE**
Meet increased demand for government services in a fast-growing community

■ **SOLUTION**
VCE Vblock System

■ **RESULTS**
Deployed disaster recovery infrastructure in six weeks; delivered 300-plus percent performance improvement for critical applications

CITY OF DENTON BOOSTS APPLICATION PERFORMANCE WITH VBLOCK SYSTEM

FAST-GROWING TEXAS CITY ACCELERATES DISASTER RECOVERY DEPLOYMENT; SCALES INFRASTRUCTURE TO SUPPORT RAPID EXPANSION

The City of Denton employs 1,500 staff and provides services to more than 121,000 residents across nearly 95 square miles. As one of the fastest-growing communities in Texas, Denton determined that its IT infrastructure was no longer delivering adequate system performance.

Disaster recovery also was a concern since the region was at high risk for tornados and flooding. If a major outage occurred, it would take days or weeks to recover Denton's data center from its tape backup system. This would disrupt vital government services and cost $200,000 in lost revenue daily from city-owned utilities and other fees.

Choosing the Vblock™ System, Denton rolled out a disaster recovery infrastructure in weeks versus months while significantly increasing the performance of its Esri ArcGIS solution and other critical applications.

The Challenge

To address Denton's evolving requirements, the IT staff considered numerous solutions, including other storage systems and blade servers, but ultimately implemented EMC storage, Cisco UCS servers, Cisco networking, and VMware virtualization technologies at its primary data center.

> "The **Vblock System** can handle three times the performance required by our ArcGIS application. That headroom is important as Denton's population and consumption of services grows and puts more demand on our IT infrastructure"
> — *Kevin Gunn, Director of Technology Services, City of Denton*

Denton wanted the same best-of-breed infrastructure at a new disaster recovery site but with an accelerated deployment. There was a short-term opportunity to expand a new severe weather-proof electric utilities dispatch center under construction with room for a redundant data center. With only 400 square feet of data center space available and a tight construction schedule, IT chose a fully integrated, pretested Vblock System based on EMC, Cisco, and VMware technologies.

The Solution

Across its primary and remote sites, Denton has standardized on VCE Vblock Systems and EMC, Cisco, and VMware technologies, replacing its prior infrastructure of NetApp, IBM, and Dell Compellent systems. Presidio, a VCE partner, provided the configuration and implementation services for the Vblock System.

The City also runs EMC VPLEX Metro systems at both sites to enable active-active processing for data mobility and continuous availability of applications. Both data centers run Denton's critical applications, including "smart" electric meter reading, computer-aided emergency dispatch, Oracle JD Edwards ERP, Harris Northstar billing environment, Microsoft Exchange, and Microsoft SQL Server databases. In addition, Denton depends on Avamar deduplication storage systems for data backup and recovery.

One of Denton's most critical applications is ArcGIS from Esri, the world leader in geographic information systems (GIS). Esri, a VCE reseller and partner, has certified the Vblock System for pre-installation of the Esri ArcGIS solution.

Denton uses the Vblock System-ArcGIS solution to support public safety dispatch, land planning and development, and maintenance of Denton's streets, utilities, and sewer resources. The ArcGIS database retains hundreds of thousands of GIS features along with a series of

12 aerial and land photograph mosaics dating back to 1942.

The Results

The City credits the Vblock System with delivering several significant advantages and savings, including:

- Implementation at the disaster recovery site was completed in only six weeks—compared to the six months needed to assemble, integrate, and implement the EMC, Cisco, and VMware infrastructure at the primary site.

- Improved performance across all applications, such as 100,000 IOPS for ArcGIS and other tier-one applications during testing—a three-time increase over typical IOPS levels of 30,000.

- Streamlined infrastructure scalability even as the ArcGIS database grew from 1.5 to 3.1 million data points in the last few years.

- Better availability of ArcGIS and other business-critical applications with disaster recovery tests reporting a recovery time objective of one minute and a recovery point objective of zero data loss ,

- Significant time savings for Denton's small IT staff, which reported that weekly administration time has decreased from 20 hours spread across several staff members to two hours.

With improved efficiency and reliability enabled by the Vblock System, IT now has more time for projects that directly benefit Denton citizens. For example, Denton has begun to make its ArcGIS maps and other data available on its website as part of a national Open Data initiative.

Denton is confident that the Vblock System will provide the performance, scalability, and reliability needed for this growing repository of data while supporting increased demand for government services.