Extreme™
Customer-Driven Networking

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Executive Summary

Industry

• State and Local Government

Environment

• 450 employees
• 30 facilities
• Access ports
• 3 data centers
• Physical servers
• Virtual machines

Technology Needs

• Replace flat, outdated network with a robust, scalable, enterprise-level solution
• Connect all three data centers
• Upgrade perimeter security

Extreme Solution

• Extreme Management Center™
• ExtremeSwitching™
• Extreme professional services and training classes

Results

• 100% uptime
• Awarded for upgraded its computer-aided dispatch system
• High availability and redundancy throughout the city
• Upgrades allowed for a new document-management system and continued enhancements, including a trail camera system

City of Seguin Upgrades Network Enterprise to Meet the Demands of Rapid Growth

From a tangled web of outdated virtual routing to a seamless, elegant solution

The City of Seguin, sometimes referred to as a "gateway to South Texas," evinces an old-world charm, from its classic downtown Main Street to its own icon of roadside Americana: a 1,000-pound plaster cast of the world's largest pecan. Thanks to an abundance of limestone construction, Seguin once had the largest concentration of concrete buildings in the United States. Today, the emerging city of 30,000 residents (including approximately 450 city employees) still cherishes its hometown origins while boasting the largest manufacturing sector per capita in Texas.

Seguin won a state award for upgrading its computer-aided dispatch system in 2019, and was the first agency in Texas to connect to a regional hub that allows officers to send and receive data in real-time while in the field—an efficient, proactive use of technology on behalf of public safety. Seguin IT staff have also earned individual recognition both internally and externally and the department even received a letter congratulating them on their accomplishments from a senator. But its IT systems haven't always been quite as progressive.

"Over the past decade we went from no IT department to an eight-person staff and part-time intern," says McDaniel. "My position was created three years ago, when we still had a flat network architecture incapable of scalability."

Deconstruct, Detangle, Deliver

With 25 plus new subdivisions and more than 8,000 new homes being built, Seguin had to replace its flat network and dated technology infrastructure to support the pending surge in growth that had already been taxing city operations. Finding a solution partner was the easy part, says McDaniel. "We already had Extreme Networks' products in one of our facilities, and Gartner recognizes Extreme as a leader in its Magic Quadrant." McDaniel knew he needed an enterprise class provider, and Extreme was selected due to capabilities, pricing, and the engagement demonstrated by the company's representatives.

The project itself, however, was a major undertaking. Countless steps were taken in order to detangle the old network to the point where they could even begin the physical integration and add layer 3 routing. "It was a big, tangled, shoestring mess that we had to slowly untie from various points around the city to correct and add Layer 3, high availability through redundant ISP's and upgrade perimeter security. The whole thing took nine months."

On the go-live date, Seguin staff unplugged from the old, dated network and transitioned into the new Extreme architecture. With such a layered undertaking, bugs and missteps were to be expected. However, says McDaniel, the migration went off with hardly an issue.

While Seguin IT was upgrading the city's infrastructure, staff simultaneously implemented another capital project interconnecting the city's three data centers. They were able to run fiber leveraging utility poles owned by the city, aligning Extreme backend hardware with competing ISP's to integrate high availability and redundancy throughout city facilities, allowing for peace of mind in the event of an outage.

"It's the best of both worlds. A few years back, a marketing firm developed our tagline: 'It's Real.' As a newer citizen of Seguin, I've learned it means we're holding true to our Texas roots while being an evolving city and experiencing incredible growth."

**Shane McDaniel, Director of IT,
The City of Seguin**

The Sky Is the Limit

Modernizing the city's network infrastructure has allowed Seguin to continue to make enhancements that take advantage of evolving technology. Utilizing the powerful new network, the IT Department has integrated an enterprise video management system, stood up a document management platform, extended the city's fiber ring, and upgraded the wireless backend and telecom OS.

The city also established a trail camera system leveraging cellular connectivity tied into the new Extreme network. McDaniel says they were quoted $10,000 per camera per site but decided to implement in house at a 70-percent cost savings. "It integrates directly with our network. Our public safety and parks teams now have real-time visibility at our skateboard park, wave pool, and other public areas around the city," he says. Already, this technology has aided public safety staff with an incident that may not have been resolvable without camera footage.

"The trail cams were not something I wanted to build in-house, I wanted a plug and play solution, but financially I just could not buy into what was quoted. I could not be more proud of staff for working through the nuances and hurdles to stand up this solution for Seguin; it's a winner."

**Shane McDaniel, Director of IT,
The City of Seguin**

Other infrastructure projects continue to take shape in Seguin, including several enhancements to the ERP platform, body cameras for public safety, GPS integration for the local golf course, and a $1.8M project to upgrade the city's radio infrastructure to P25 Phase II.

The Proof Is in the Products

As a municipal government, the City of Seguin must accomplish a lot of tasks with limited budgets and staff. IT is the primary point of contact for every aspect of technology within the city. The IT department appreciates the Extreme Management Center for its ability to efficiently oversee the network at multiple levels. "We are currently involved with 30 plus capital projects and receive an average of 450 help desk tickets a month," says McDaniel. "Extreme Management Center allows us to manage our technology ecosystem holistically, which in turn assists in moderating efficiency."

McDaniel says their relationship with Extreme Networks has been phenomenal and credits Extreme's staff for their continued support, as well as for being responsive to any and all of his department's needs in a friendly, professional manner. Working with local representatives who really understand networking is appreciated, plus "they partner with a preferred reseller, Solid Border, whose guidance helped us achieve scalability, speed, and reliability." With 100 percent availability in network performance since the June 2019 launch, Seguin is already seeing a solid ROI.

As the City of Seguin continues its technology transformation, McDaniel is gratified to have the foundation in place to establish future operational technology needs with Extreme architecture. "I don't worry about the availability of the network as much these days, and you can't put a price on that," he says. "When I applied for this opportunity two years ago, I told the City Manager we'd put Seguin IT on the map. A lot of productivity is coming out of this incredibly talented and enthusiastic group, and Extreme Networks is the technology foundation for everything that's being accomplished. I don't know if there's anything on our radar that our staff and network can't handle. When you marry strong tech with a can-do Country IT approach it really is something special."

The success has meant that the municipal government truly understands and respects the need for IT to have "a seat at the table." And the word has spread. We were told that an entity elsewhere in the state was interested in moving towards what Seguin has done. "Someone else noticed what we accomplished, and they want to set it up in their own environment. That tells me that we've done this right. I consider it an honor other folks out there would like to mimic Seguin's network."

As the department finishes year two of the three-year effort to upgrade the network infrastructure, Seguin IT is working on other capital efforts for this fiscal year budget that include upgrading the library's public use VDI platform and a hyperconvergence migration for the systems architecture. It's the kind of thing we could not have taken on without the upgraded Extreme network footprint, he says.

How would McDaniel best describe the network the city now has in place? "Beautiful, elegant," he says. As Seguin moves into even more advanced projects in 2020, riding on Extreme network infrastructure throughout, McDaniel looks forward too many more "slam dunks" for this small city with a robust network at its heart.