\Orchestrating a brighter world

NEC

UNIVERGE 3C™

Chatham County

Chatham County

Chatham County, founded in 1777, is located in the Piedmont area of North Carolina, and is part of the Raleigh-Durham-Chapel Hill Combined Statistical Area (CSA) commonly referred to as "The Triangle". Chatham County is known as "The Heart of Carolina", with its County Seat in Pittsboro, NC, and has industrial and commercial businesses as well as a range of agricultural-based enterprises, including specialty farms' products which support businesses throughout the Triangle area. All these contribute to an increasingly diverse economy in the region.

The scenic environment has attracted many artists to Chatham County making it a vibrant community, enriched with arts including metalwork, yard art, and mixed media, and arts-related tourism has also become a growing economic influence. Home to Central Carolina Community College, Chatham County has grown steadily due to its offering of easy access to major Triangle universities, medical centers, and the Research Triangle Park.

For well over 25 years, Chatham County has provided an array of services and programs to its growing community, ranging from non-profits to environmental programs, to health services and public safety, to name a few. Chatham County's population and economic base has grown substantially during its history, with a recent dramatic rise in population and residential growth near Chapel Hill, Durham, and Cary; this growth is creating the need to accommodate and service an increasing number of county residents.

Customer

- Chatham County

Industry

- Government

Challenges

- Rapid population growth rate with no system scalability
- System downtime due to area power outages
- Different legacy systems with no integration capability
- Un-networked communication between county departments
- Costly, labor intensive systems to manage
- Finding a cost effective solution

Solution

- NEC's UNIVERGE 3C™ (Unified Communications and Collaboration Platform)

Results

- Full Integration of NEC systems
- System redundancy for failover
- Efficient system management
- Cost savings on non-proprietary equipment
- Increased productivity with easy dialing
- Enhanced call features

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Challenges

Spread across Pittsboro in 17 separate buildings, Chatham County departments' communications system was operating with six (6) different systems, installed by various vendors at different times in the past. These disparate systems were all hardware-based solutions--some very old, some no longer even supported, and the more recent systems could not be integrated, resulting in there being no internal communications network. The primary complaint from Users was that some systems needed only 4-digit dialing, while others required 10-digit dialing, since some systems had been added in the past to deliver to specific needs. Working without Caller ID, or Missed Call information, internal Directory, or a way to connect with or to message a group or department since conferencing and collaboration tools were not available, the system had evolved over time to the point where internal communications were becoming increasingly difficult.

Another challenge for the county was the Pittsboro power grid with its very old infrastructure, causing frequent area "brown-outs"--and when a system failed, system restoration was labor intensive and time consuming. Darlene Yudell, Director of IT, stated, "When there were problems, since the systems were not located in our MIS (Management Information System), we'd have to go to other sites to try to diagnose what was going on, then perform processes to bring it back online, or if it was a part failure, we'd start making calls to try to find a refurbished part."

With Chatham County's population estimated to double within 20 years, rapid community growth was posing other challenges to an obsolete communication system unable to scale to meet those growth needs.

According to Ms. Yudell, "The challenge with this county was to get the whole network ready to grow—and there was no growth capability with the old systems.

"When it comes to population growth, departments that must work together very closely (Planning, Permits, Deeds, the Tax Department) are definitely affected when you have changes in population and development. Departments will need to expand their workforce and they must to be able to easily communicate with each other."

With over 20 different County departments and programs scattered throughout Chatham County, it had become imperative to find a way to provide a seamless network integration of all locations, with a cost effective system that also provided enhanced call features. Chatham County needed a way to unify obsolete, disparate phone systems—some buildings still dependent upon very old cabling--and convert all to a system that would be easy to manage on a daily basis and intuitive for the User.

"Because the UNIVERGE 3C system allows redundant installs of the system with a built in failover to the other site, this has repeatedly saved us."

Solution

After much research, Chatham County chose NEC's UNIVERGE 3C™, a powerful, software-based IP telephony, Unified Communications (UC), and Collaboration platform, together in a single solution that operates across premises, cloud or hybrid environments.

UNIVERGE 3C allows employees to connect from any location, on virtually any device, and collaborate with colleagues, customers and partners. Organizations can tailor communications to their specific needs and leverage unmatched flexibility, reliability and scalability to stay ahead of increasing demand.

With this solution, Chatham County had the option to either use an Enterprise class NEC server or to source their own. The cost savings was attractive to Chatham County, as was the lack of infrastructure on premises, beyond their virtualized environment. Added to this was the ease of managing the virtualized system. The IT Director confirmed, "A very appealing aspect of UNIVERGE 3C is that it's a software-based solution-- not hardware-based, and it is very easy to work with, and very flexible.

"We knew the UNIVERGE 3C solution represented the 'new way to do VoIP business' but felt confident that our support for this NEC product would be as good as we had experienced with NEC for years."

It was decided to put the first software instance on a virtual server, then add additional servers at locations where redundancy was needed. With this set up, Chatham County could then load many instances of software at no additional cost, with no redundancy penalty.

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Phase 1 installation began with the UNIVERGE 3C software virtualized and installed at the County MIS, and then Parks and Recreation departments, which networked to the existing voice infrastructure. Chatham County decided to deploy NEC telephones that can utilize an enhanced SIP feature set, but to remain on PRI trunks from the local

carrier until the SIP trunk technology could mature in their service area.

During Phase 2 deployment, a second instance of UNIVERGE 3C was installed at the Detention Center, Animal Control, and Environmental Quality, to add network resiliency and failover to the Chatham County voice work. Shortly after phase 1 & 2, the Emergency Operations Center, Sheriff's Department, Department of Social Services, and Board of Elections were brought online, and the staging plan continued integration of county departments.

Results

"To date," said Ms. Yudell, "All locations but six have been completed, and we can say we are quite happy with the results. Key locations have redundancy keeping them operational if network failures occur, and we've had seamless transition between those systems, with uninterrupted service.

"Because the UNIVERGE 3C system allows redundant installs of the system with a built in failover to the other site, this has repeatedly saved us. There's been absolutely no downtime. When we can say a network issue was 'unnoticed by the user', we have done something right. Choosing the UNIVERGE 3C system and support through TSM South, Inc., a trusted local NEC partner, was the right choice.

"MIS daily administration has been significantly reduced, however, it's our reaction, diagnostic and recovery that have really benefited. The MIS team's engineer for the phone system rarely needs to travel to the redundant site and only when the onsite server needs physical attention.
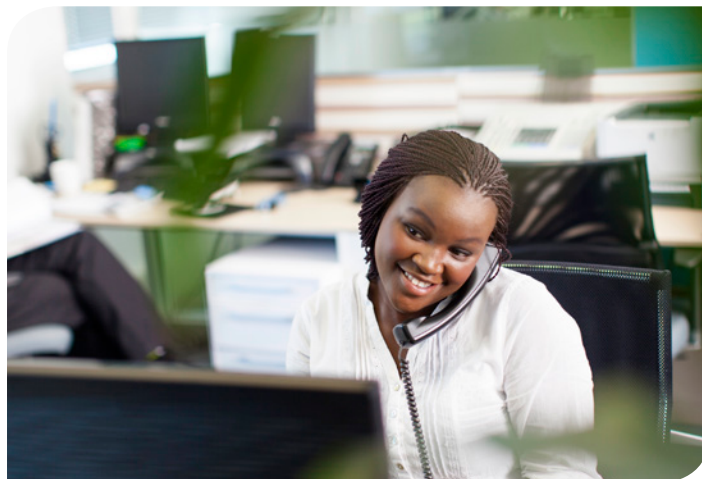
Failovers have worked so well that this has not been an issue and remote access makes the travel almost completely unnecessary."

Reportedly, some UNIVERGE 3C features most popular with the staff are: Conferencing, the Call Attendant programming, the way a Directory phone number is offered but will also reach out to other assigned phone numbers, the easy Call Routing, Missed Calls information, using the soft keys, and fast 4-digit dialing that is currently consistent throughout the system. This NEC solution enables Unified Communication functionality and true Mobility for the departments of Chatham County.

Ms. Yudell affirmed, "There has been only positive feedback; everyone is really excited, and the staff has improved productivity and is able to move calls efficiently from any device or department."

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