CITY OF CHARLOTTE

Advanced Digital Solutions successfully migrates the City's existing security video management system to the new Genetec based system.

By Christina White, Advanced Digital Solutions | November 29, 2021

Situation

The City of Charlotte provides services to a population of nearly 800,000 people that live and work in the community. Charlotte is comprised of groups of stakeholders that includes; Charlotte Water, Charlotte Mecklenburg Police Department, Charlotte Fire Department, Charlotte Area Transit, Charlotte Solid Waste Services and Charlotte- Mecklenburg Government Center. Of these groups, services that provide community safety, and transportation are areas of focus. The Charlotte Fire Department operates out of 43 fire stations and provides fire protection for people living in a 311 square-mile area. The Charlotte Department of Transportation maintains, operates, and develops a multi-modal transportation system that consists of 2,450 centerline miles of streets. The Charlotte Mecklenburg Police Department, (CMPD) has 13 Patrol Divisions spread throughout the city, as well as Headquarters in Uptown Charlotte. CMPD Headquarters operates a Real Time Crime Center (RTCC), and Command Center where officers and other City stakeholders can monitor over 1500 cameras in real time. Camera feeds are managed and displayed through a sophisticated Video Management System (VM).

The City of Charlotte conducted a comprehensive review of its existing Video Management Systems and future needs. Several different VMS platforms that were being utilized across the City, were in need of upgrading and replacement due to their age (end of life) and the inability to receive manufacture support services to remedy system issues. These systems were considered susceptible to a high failure rate. There was also a limitation on camera resolution through the old system and a goal for standardization on a single VMS platform City-wide for the future. Limited integration options for access control and limited support for mobile devices were additional business drivers.

Uniquely Qualified Integrators

In conjunction with Genetec and the City's Innovation & Technology Department, the program stakeholders had made the initial decisions regarding the architecture and design for the replacement and upgrade of the existing Video Management Systems. The City requested proposals for Video Management Professional Services for implementation of the Genetec Video Management Software, related applications and supporting infrastructure, in which Advanced Digital Solutions (ADS) was uniquely qualified.

The City of Charlotte conducted an open competition to evaluate and confirm relevant experience and capabilities from numerous Security Installation companies. After careful consideration and evaluation across multiple City entities; ADS, was selected to implement the VMS system from other quality integration companies.

ADS demonstrated to the City of Charlotte stakeholder groups that its security implementation capabilities was based on its successful track record of installing the Genetec VMS software platform into a wide range of applications. ADS assembled a highly talented and capable team that included, project management, solutions engineering, enterprise networking experience and Genetec certified installation technicians.

Solution

The City of Charlotte's network is an evolving entity that must accommodate changes to meet the demands of a growing population and the requirements of various City entities responsible for meeting public demands. During numerous research and planning meetings, it became clear there would be numerous challenges of deploying a new video management solution that would integrate with the City's existing complex network environment. A combination of wired, wireless, unicast and multicast networks presented challenges that had to be negotiated to deploy the new Genetec based solution. The Genetec security platform is extraordinarily accommodating as it allows for adaptation to a client's network capabilities, however this capability requires a high level of both IP networking and Genetec subject matter expertise.

ADS executed this project by dividing it into phases and tackling them sequentially. We implemented the 'PPDECO' methodology, which follows a project lifecycle approach that incorporated the following stages: Plan Phase, Design Phase, Execute Phase, Compliance Phase and Operational Phase. A collaborative effort between the City's IT and administration teams and ADS' engineering team were able to successfully migrate the City's existing security video management system to the new Genetec based system.

A Safer City

One critical milestone was to implement a successful transition of the City's operators to the new Genetec VMS platform in time for the Republican National Convention held in Charlotte in August of 2020. ADS accomplished this task, the City's operators were trained, and the VMS system was operational in time for this major security event. The City now has a new versatile, scalable, and more importantly, stable VMS system that can be leveraged by multiple city-wide departments for a variety of security and public safety business purposes. The system is increasing efficiency for business and maintaining proper integrity of video archives while being able to introduce public and private assets and users to the system at will. With the Real Time Crime Center the detectives have helped respond to 1745 calls for service, find over 400 stolen cars and directed officers to the arrest of 75 fugitives and 20 missing persons. "Being able to obtain camera footage and license plate reader data really allows me to corroborate any evidence I may have already received from witnesses or victims, which is really useful in court." – Detective Kelly Murphy, Charlotte- Mecklenburg Police Department. The City uses Genetec Clearance to manage their digital evidence, which has the ability to handle cases and files from a single application and grant instant access to evidence at the click of a button. The full system was completed and handed over to the stake holders in February 2021, having achieved the project goal to successfully implement and support the next generation of video management, in line with the expected City guidelines and milestones. We are proud to be part of the City's vision to provide the most effective 'Safe Cities' security solution.

The newly installed Genetec VMS system allows for two- way interconnections between other public and private VMS Genetec systems

that include, Charlotte Water and Charlotte Mecklenburg Schools as well as private entities. "We take cameras from local businesses and establishments which are shared to the cloud and allows CMPD to have access to those cameras."– Richard Saintvilus, Charlotte-Mecklenburg Police Department. The system uses real-time supervision and intercommunication between client users and has the capability to draw down permissions of users/groups' access to digital evidence information assets. With support for users with mobile devices, there's an additional level of operational efficiency for departments and users. "This partnership with volunteering local business will give the crime center team additional resources to better respond to criminal activity and traffic incidents in real time." – Chief Johnny Jennings, Charlotte Mecklenburg Police Department.

There are 179 schools in Mecklenburg County, which the CMS Police are the number one line of response, and the City now has a scalable system that can be leveraged to keep the bright emerging minds of the City safe. Beyond our students, the new VMS system provides benefits to City traffic management and public safety as a whole. The system allows us to make the City much safer, which is what we are all here to do.- Sgt. Brian Scharf, Charlotte- Mecklenburg Police Department

Long Term Outlook

The City is better positioned to accommodate the growing population of Charlotte and keep crime rates down by enabling the City to investigate crimes more effectively. "The cameras have become a force multiplier for us." – Crystal Cody, CGCIO, Public Safety Technology Director. City growth is forecasted to increase by nearly 25,000 citizens by 2022 and the City is fully prepared and capable of monitoring areas across the City to accommodate that growth. The Charlotte Metro area is 6th Nationally, in attracting young adults. Enrollment in the graduate program at UNCC has increased 54% as of June 2021. "Perhaps it's highlighted the need to prepare our future" said Teresa Petty of UNCC's Cato College of Education. While the educators prepare our citizens for the future, the City can keep them safe. The future looks more secure and much safer with the Genetec VMS system. ADS has a multiyear support and maintenance contract to ensure operability and availability across the city, 24/7.

About Advanced Digital Solutions

Our team of experienced engineers and installation professionals understand the unique operation requirements of our partners and how this affects your security needs and regulatory compliance. Through consultation, assessment, design, project management, training and maintenance, ADS provides an 'end to end' experience that focuses on physical security applications. Using open-source leading edge devices, we design and implement non-proprietary and scalable security management systems.