Solution: NetCloud Service for Branch ▪ **Industry:** Public Sector ▪ **Use Case:** Pop-Up Network

Sacramento County Leverages Cradlepoint Services to Secure Voting System

LTE-Enabled Branch Solution Delivers Wired & Wireless WAN for Voting Sites & Remote Visibility & Management of Pop-Up Networks

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> **Adam Huyck,** Sacramento County enterprise network & security architect

Success Story Highlights

— **Challenge —** The county needed to upgrade the voting equipment and model on a short timeline.

— **Solution —** After the vote-by-mail law, CA SB 450 (15/16), which allows counties to move from a precinct model to a vote center model, Sacramento County transitioned to the vote center model. With Cradlepoint's NetCloud Service for branch, which for Sacramento included cloud-managed AER Series routers with integrated LTE, the county has reliable connectivity at its headquarters, as well as its 80-plus vote center locations, that is easy to deploy and manage remotely.

— **Benefits —** With Cradlepoint's solutions, Sacramento County has secure networking to keep ballot data and sensitive citizen information safe and the ability to quickly spin up a secure network connection, no matter where the vote center is located.

Challenges

Short Timeline

With the equipment being aged and failure-prone, security risks were a large concern. Their new equipment was going to arrive just two months before Election Day, creating a very short timeline to deploy the new equipment and build a secure and reliable voting center network.

Need for a Secure Network

Network security is mandatory for sensitive voter information. The county needed a solution that would offer secure connectivity for the 80-plus vote centers, which depended on network connectivity for access to the central voter registration database.

Voting Locations with No IT Staff

Vote centers could go up at a variety of locations, and with few to no IT staff onsite, Sacramento County needed a network solution that would be simple to deploy and easy to maintain.

Solution

Sacramento County implemented Cradlepoint's NetCloud Service for branch, which includes cloud management, end-to-end network security and a wireless edge router with dual LTE modems deployed in the 80-plus vote centers throughout Sacramento County.

Sacramento County's IT team had used Cradlepoint products from previous projects, making the choice to go with Cradlepoint an easy one. "We had an understanding of the technology and we knew it worked well," said Adam Huyck, enterprise network and security architect at Sacramento County.

It deployed NetCloud Service, including an endpoint with dual-modem/dual-carrier capabilities, at every location and NetCloud Manager, which allows Sacramento County to manage every router from a centralized location.

Sacramento County took a layered security approach that included a cellular network, a secure overlay network, access control, and monitoring functions to ensure complete isolation from the Internet to eliminate the threat of rogue access at the vote center.

From a cellular perspective, private connections were deployed across both cellular networks using private APNs with carrier-controlled private IP addresses.

The next security layer involves encrypted private IP-VPN overlays connecting each wireless edge router to the data center and routing that blocks the possibility of direct Internet access.

To prevent physical intrusions, such as someone plugging a PC into an open Ethernet port on the edge router, Sacramento County implemented an access control layer within the NetCloud edge firewall to block any unsanctioned traffic flowing from the LAN to the WAN.

The final layer is real-time monitoring of the system with NetCloud Manager.

Benefits

The intent of CA SB 450 (15/16) is to encourage citizens to vote by mail. Consequently, all registered voters in Sacramento County are sent a ballot that can just be mailed back. The purpose of the vote center is to help those who need to physically go to a voting location to vote because of accessibility services, they lost their ballot, or for some reason didn't get the ballot in the mail. With Cradlepoint's services, setting up the vote centers with secure connectivity was a simple process.

Fast Deployment & Uncomplicated Network

Sacramento County began receiving the new vote center equipment in March and needed to have everything ready to go in June.

"From a business perspective, we wanted a really easy conversation when talking about network security in the vote centers," said Kurt Scheuerman, manager of information technology for Sacramento County.

Cradlepoint's easy-to-deploy services allowed Sacramento County to set up secure networking for each voting center in minutes.

"We established site-to-site VPNs between each one of the Cradlepoints. Once that was set up, we were able to use NetCloud Manager to configure the remaining 80-plus devices in about 15 minutes," said Huyck.

Non-Stop Networking

With Cradlepoint's dual-modem/dual-carrier capabilities, Sacramento County can connect two carriers for constant connectivity. Cradlepoint's Software-Defined WAN functionality provides the best connection across different carriers so Sacramento County can ensure the voting process is uninterrupted. The automatic switch from one carrier to the other occurs in mere seconds. Also, both modems can be active at the same time, allowing for more bandwidth.

Security with Full Visibility & Control

With the new vote center model, anyone in the county might show up at a voting center. With the help of Cradlepoint's solutions, Sacramento County was able to connect back to headquarters without leaving the secure network to look up a voter and determine if they had already voted and what kind of ballot they should receive.

"The NetCloud platform was instrumental in our ability to have the best quality of security and efficiency", said Huyck. "With NetCloud services we were able to achieve security that we wouldn't have otherwise been able to do with another product."

Cloud Management & Fast Troubleshooting

Cradlepoint's NetCloud Manager allows organizations to create, deploy, and manage networks from geographically distributed locations, so Sacramento County was confident in the level of visibility the solution provided.

NetCloud Manager helped with the deployment of the 80-plus vote centers by improving automation and making issues easier and faster to fix. "If there is an issue, we can log into the system, look at the statistics, and come up with a solution," said Scheuerman.

Because Sacramento County needs to have the networks up and running for at least 11 days in locations staffed with non-technical people, the ability to use NetCloud Manager to log in and see the status of each network helps to confirm that everything is running accurately.

"We can look at a connection and see if it is weak", said Scheuerman. "We might just send out an extended antenna, or we may switch carriers for a stronger connection. The process is simple."

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