

CASE STUDY

FRIANT WATER



CHALLENGE

According to the World Health Organization , 10% of the world's population lack access to safe, clean water. In fact, much of the developed world's outdated water delivery infrastructures are in dire need of upgrade . In the U.S. alone, 50,000 small-to-medium sized water companies operate without a secure network infrastructure , leaving them vulnerable to hacking. The quality of our drinking water is only as good as the water supplier. Enter Friant Water Authority . It's a public agency that owns and controls several of California's hydroelectric dams, storage dams, canals, and aqueducts. Friant delivers water to 9 million citizens, businesses , and farmers in the Central Valley. With a service area covering more than one million acres, it's the second largest water source in the state. Friant had a problem. It had a slow, unreliable network.

The agency 's infrastructure used auto -dialers for field communications , which was inefficient, unpredictable and prone to weather -related outages . This resulted in largely manual operations. Workers used clipboards and stopwatches to measure water flow and had to manually inspect floodgates for proper positioning . Without accurate data, Friant was not able to accurately deliver and bill for specific amounts of water. And in the extreme water demand of the California drought, it needed reliability and efficiency.

More than 15,000 farmers depend on Friant's quality water supply. Their entire livelihood depends on having access to water with precise measurements of chemicals like copper sulfide to prevent crop damage. Friant's new communications infrastructure and sensors give immediate, accurate information about water chemical levels, so farmers can trust what is being delivered . The ability to accurately deliver and bill for water and to deliver timely information on

SOLUTION

The Friant team turned to a trusted Cisco partner , IntelliSite , to help develop and deploy the new infrastructure it so desperately needed . IntelliSite selected Verizon 4G XLTE with Mobile Private Network (MPN) as the network solution. It deployed the Cisco Universal IoT Gateway with the ISR829 and ISR819 router and Advantech server, powered by Verizon 4G throughout the service area. Friant is also deploying the Cisco Industrial Security Appliance 3000 (ISA3000) ASA firewall to secure its network infrastructure from external attack.

Intellisite installed 140 Universal IoT Gateways and deployed a complete solution providing IntelliSite "Eyes On" Remote Guarding Service, IoT sensors monitoring, Video Alarm monitoring, Remote Voice-Down via LoudSpeaker integrated with Schneider Electric ClearSCADA

"Cisco and Verizon have been extremely valuable partners," said Christopher Hunter, Director of Technology, Friant Water Authority. "Our new 4G network is secure and reliable. It empowers us to protect our resources and it provides meaningful real-time analytics that our employees and customers count on."



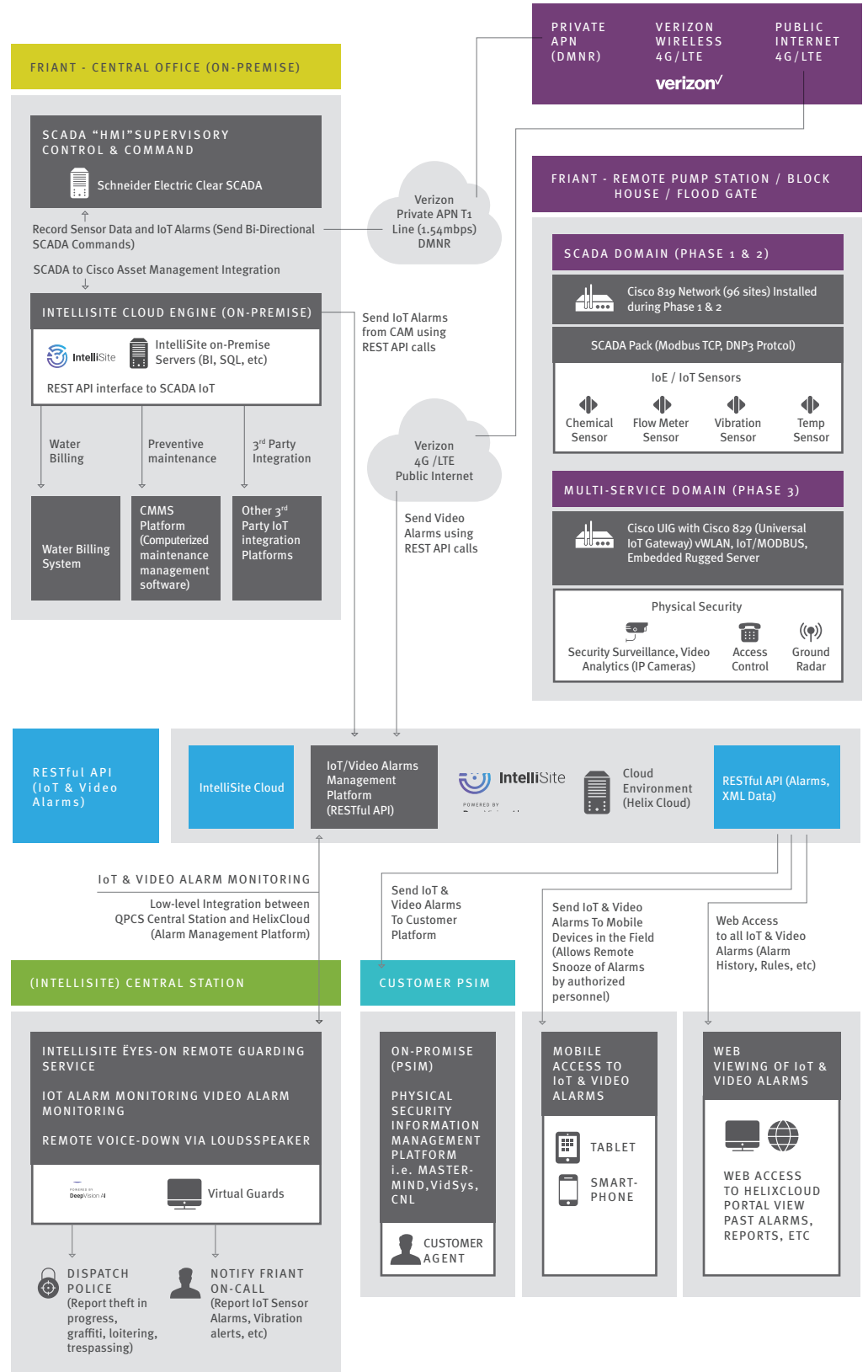
ARCHITECTURE

FRIANT WATER AUTHORITY - PROJECT PHASE 3 (IOT/ SCADA INITIATIVE) - CONCEPTUAL MODEL V1



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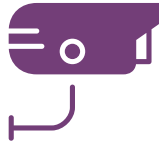


SENSORS



VIBRATION

RANGE: 0 ... 10'000 PPM



VIDEO CAMERA

VIDEO ANALYTICS



TEMPERATURE

RANGE: -40 ... + 125 °C



WATER QUALITY

TEMP, DO, COND, PH, TURBIDITY MEASURING

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please contact our sales department at 888.410.4220.

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IntelliSite

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