

Customer story

INDUSTRY:

SMART CITY



HIGHLIGHTS

From Pixels to Pavements: Making Traffic Cameras and the City Smart using Edge Computing

CLIENT

In the realm of smart city initiatives, the client embarks on a project involving the integration of surveillance cameras and traffic signals for enhanced network connectivity.

REQUIREMENT

The client sought an evaluation of alternative options for establishing a private network to interconnect all traffic signals and cameras, should MPLS VPN implementation not be viable.

- They sought a cost-effective network solution with built-in security features like VPN redundancy, and an on-premises solution for video analytics that seamlessly operates within the existing MPLS VPN network to address latency concerns effectively.

CHALLENGE

Navigating the complexities of deploying a smart city infrastructure posed significant challenges:

- Connecting traffic signals and surveillance cameras across a private network, preferably MPLS VPN, posed feasibility issues due to certain sites being inaccessible for fiber extension.
- The need for a secondary network as a backup to MPLS VPN raised concerns over cost-effectiveness, especially when considering secondary MPLS options from alternative providers.
- Manual monitoring of surveillance cameras across 500 sites from a centralised control center proved cumbersome and inefficient.
- Planning for AI-based video analytics required addressing bandwidth consumption concerns for each camera and ensuring robust network security, discouraging the adoption of cloud-based video analytics.

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MORE INFO

SOLUTION

[Edge Computing]

To address this complex network requirement and challenge, Viva provided an ideal solution for the client.

The proposed solution included the following components:

- **Integrated Edge Microservices for Comprehensive Management:** Positioned SMOAD Network solution with edge microservices that consolidate network connectivity, security, and video analytics into a unified platform.
- **Localised Video Analytics with SMOAD Spider:** SMOAD Spider integrates advanced video analytics capabilities, processing analytics locally to optimise performance and minimise bandwidth consumption.
- **Cost-Effective Last-Mile Broadband Connectivity:** SMOAD accommodates all broadband networks as a last mile solution, offering cost-effective connectivity options and ensuring security with Wireguard encryption and authentication between hub and spoke sites.
- **Cellular-Based Private Network Redundancy:** SMOAD Spider supports cellular-based private networks with up to 3 SIMs for backup, ensuring high uptime and reliability for critical operations.
- **Enhanced Data Privacy with Edge-Based Analytics:** Edge-based analytics on SMOAD Spider keep sensitive data on-premises, enhancing data privacy and protection against potential data breaches.