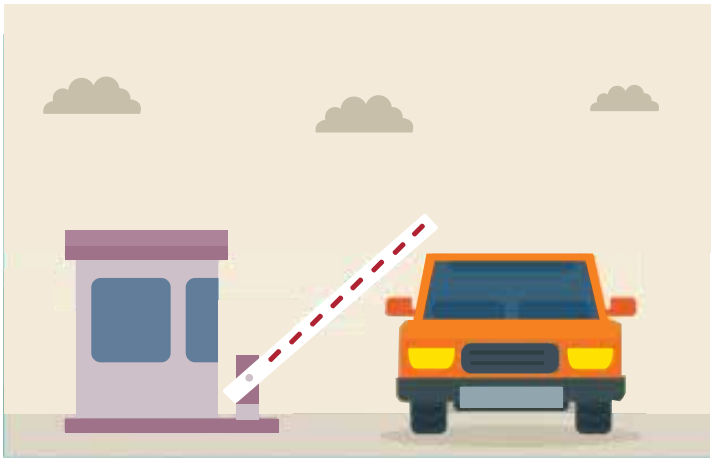
AnexGATE®

Connectivity.Security.Productivity.Manageability



SOLUTION FOR SECURE REMOTE CONNECTIVITY ON HIGHWAYS - - -

4G Sim based solution for Secure CCTV Remote Monitoring and Control

INTRODUCTION:

Ashoka Buildcon is one of India's largest builders of Highways and Bridges. It is also associated with many Power and Infrastructure projects. For one of their Highway project, Ashoka Buildcon had installed 5 PTZ cameras along the highway from Chandigarh to Ludhiana with each camera being installed around 5-8 kms apart from each other. Each camera was mounted on a poll with a NVR to record and monitor entire traffic through these zones

PROBLEM:

The main problem with this setup was the provision of the internet to these cameras to enable remote viewing and control of these cameras. To provide internet to these cameras was a big challenge. The task, to pull the fibre optic cables to all these locations. In addition to this, the cost to pull these wires over 50 kilometres is a huge investment and in case there is any fault in these wires, the entire connection immediately goes down. It is also a gruesome task to find the fault and get it repaired.

To tackle these issues, Ashoka Buildcon was looking for a solution to have internet to provide for these cameras and have remote viewing of these cameras at their Central Command Centre

SOLUTION:

The solution was divided into two phases to create a clean connection and allow efficient use of these cameras. In the first phase, an AnexGATE AWP was deployed at the Toll Plaza admin office at one of their main toll gates near Ludhiana, which acted as the VPN Concentrator. All the connections from all the cameras were remotely accessed from this point.

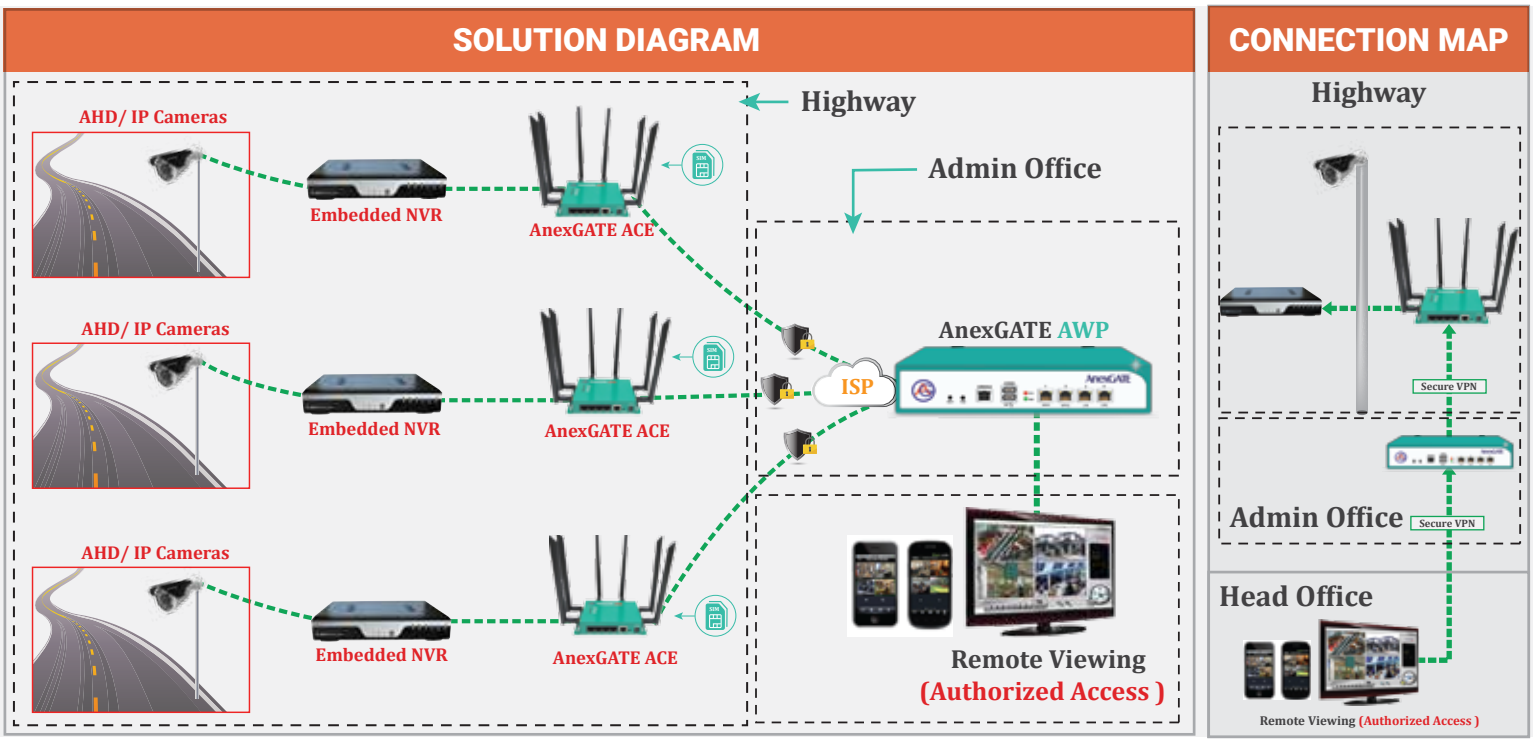
Secondly multiple AnexGATE Advanced Pro appliances with Dual Sim and USB Tethering was deployed along with the cameras and DVR at all the locations. ACE Advanced Pro provided Bandwidth Aggregation to all these connections giving it a stronger output for good quality video transmission. Along with this, there was also auto failover between these connections to provide almost 100% uptime for the entire network.

A secure VPN tunnel was created from each individual Advanced Pro appliance which terminated at the AWP located in the admin office.

The highlight of this solution was that these PTZ cameras could be remotely accessed from their command centre located at Ludhiana and an authorized access was provided to their Main Office at Nagpur, which allowed granular access to the Management Team to monitor the activity over these cameras sitting in their office. To ease operation, they could also control the pan, tilt and zoom of these cameras sitting in their office by remotely accessing these cameras.

In such situations, SECURITY is a major concern as if the camera can be accessed by any unauthorized person, he can purposely manage the camera for wrong use. As you are aware, in most of the Chinese camera implementation that use Chinese cloud servers for remote viewing is highly insecure.

By creating a VPN concentrator, we allowed all transmission to happen domestically and all the data was securely transmitted to the local server



SOLUTION HIGHLIGHTS:

- The cameras can be controlled for pan, tilt and zoom from any remote location by authorized login.
- The feed from the cameras can be securely transmitted over a secure VPN tunnel and monitored at any remote location with authorized access.
- The dual sim and USB Tethering provided a stable internet connection to the cameras and DVR to transmit the video feed continuously to the command control centre
- Features like Bandwidth Aggregation over dual sim and Multilink failover created a stronger and more stable connection to provide almost 100% Uptime to all the camera locations.
- In locations where internet lines are expensive to pull and the connection may be erractric, a secure connection over Dual Sim and USB is the most cost effective solution.