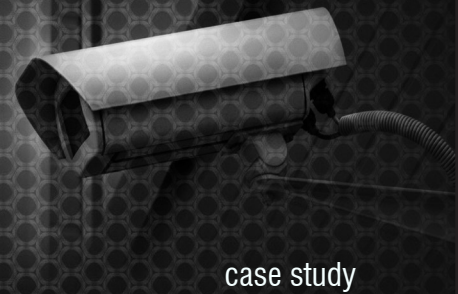


# CMS Implements CCTVs For Large Petrochemical Provider



case study

## Introduction

India is amongst the fastest growing petrochemical markets in the world. Petrochemical companies, need to ensure security and effective monitoring given the large number of site break-in's and instances of theft that occur fairly regularly.

CMS deployed a consolidated CCTV framework for one of India's largest petrochemical product providers. The customer was facing multiple issues from a previous implementation and required a new range of CCTVs to be integrated with the previously placed hardware.

Given CMS's extensive experience in procuring, integrating and deploying networked CCTVs especially for large enterprises helped in winning the project.



## Challenges

While CMS has extensive experience of deploying and integrating different technologies together, each implementation has its unique set of challenges.

In this case, CMS was dealing with a large plant that was organized into multiple blocks, approximately 20 blocks or 5 clusters. Given this set up it automatically posed a challenge in terms of being able to manage the network in a common control room

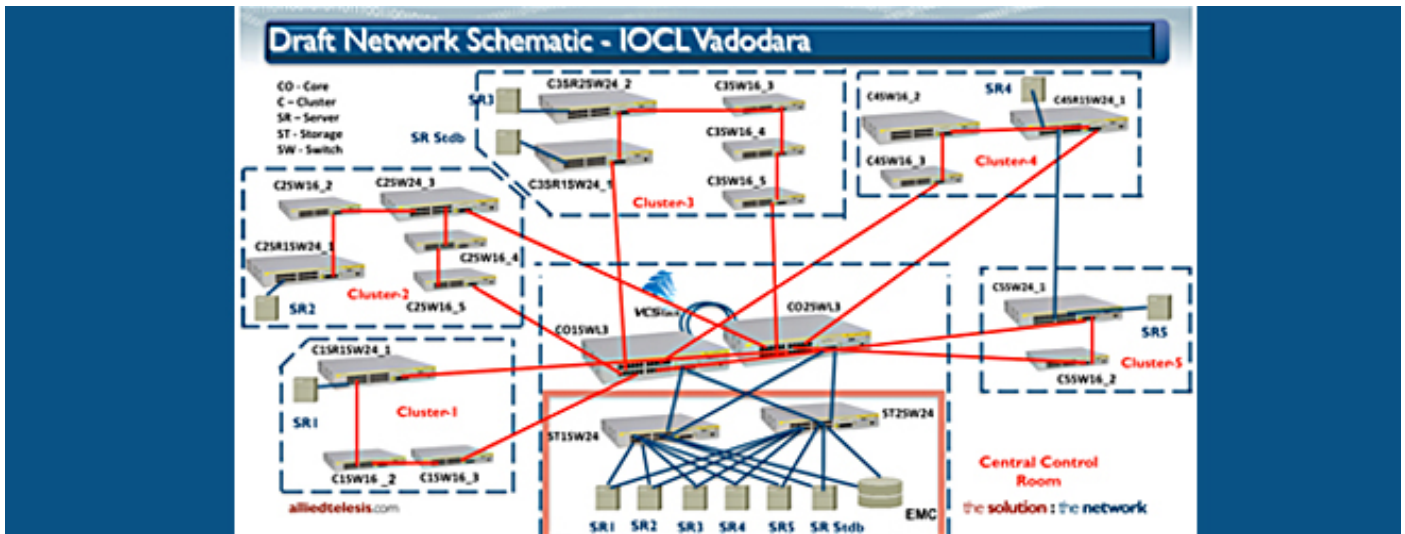
The company also wanted explosion proof camera's to be integrated with their pre-existing CCTV network of 140 + CCTV cameras that were close to 5 years old with no support from the supplier. CMS had to get into this project and integrate these technologies together, which was challenging at times. However, given CMS's proficiency as an integrator, getting different technologies to talk together is part of the company's DNA. While it was challenging to execute, the new hardware was still implemented in an organized manner.

Another challenge that was faced was in terms of the immense scale of data back-ups & redundancy planning considering the scale of each site of the plant. Especially ensuring that the backups happen in an organized manner and follow a schedule required a fair amount of customization.

One of the biggest issues with networking projects in large area sites is the Cable laying process. CMS had to lay cables in over 50 Kms area of the site, which was a challenging task in itself.

# Proposed Solution (Network Architecture)

The heart of the system was the network architecture. The project required that CMS help in consolidating all captured data at central control room in the form of a dashboard of detailed video information from 20 blocks of the site.



## Network Architecture

- Central Control Room (CCR) has Two Core Layer 3 AT-x610-24SP/X switches which are in VC-Stack mode with resiliency link
  - There are total five clusters and each cluster is connected to the two Core Layer 3 Switches in CCR over Dual SMF
    - Each Cluster has a mix of AT-GS950/24 and AT-GS950/16 switches
    - Separate VLANs for Video stream and Storage
  - All Cameras should be placed in Video Stream VLAN

## Storage Area Network (SAN) Design

- Separate Storage Area Network is created for Servers and EMC Storage
  - There are two AT-GS950/24 switches in the CCR connecting the servers and EMC Storage.
    - These switches are connected to the Core switches
    - Separate VLANs for EMC Storage
    - All servers will be placed in single VLAN for data communication
    - Storage and Servers are communicating on iSCSI protocol
      - Redundancy on Storage and Servers are maintained on NIC and Switch level
      - Redundancy on Server level is maintained by keeping Hot Spare Server at the Core and the Field Level

## Solution (Video Assets Utilized)

Some of the hardware utilized in the implementation is listed below

- Honeywell explosion proof cameras
- Infinova encoders & software (converting old camera signals to IP)
- Allied Telesys network solution

## Benefits

- Consolidated dashboard gathering information from 20 blocks gives officials a bird's eye view of the plant
  - Higher ROI on previously installed hardware given the consolidated set up
  - Fire proof cameras provide great clarity in understanding more about disaster situations before they occur or after they occur given the video record captured in surveillance