



# Datasheet

## Face Recognition

### [Genetec VMS]



## Version 3.6

This Specification Sheet gives the details of system requirements, features and other salient points of AllGoVision Face Recognition application for Genetec VMS.

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## INTRODUCTION

This Specification sheet gives the details of system requirements, features of AllGoVision Face Recognition application for Genetec VMS.

The product analyses rapidly the video data, detects human face, captures the face image, matches it with database of registered faces, and sends real time alarm based on a successful match (face recognized) or mismatch (face not recognized). The face recognition application can also run on any previously recorded video. It can pull the recorded video directly from Genetec on forensic search.

## SYSTEM REQUIREMENT

AllGoVision analytics has the following system hardware and software requirements.

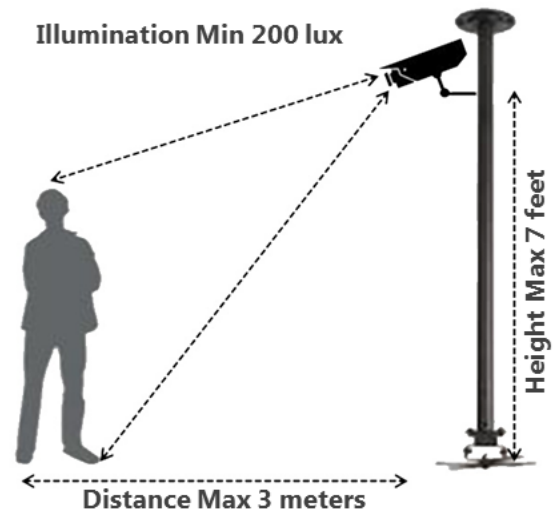
CATEGORY	REQUIREMENT
Operating System	Windows Server 2003, 2008, 2012 Window 7, 8
Hardware configuration	GPU: NVidia GTX 780 + i7 3930 6 core, 32 GB RAM, 1 TB HDD, Windows 7/8 can support up to 8 channels For Client: i7 3930 6-core, 8 GB RAM, 1 TB HDD machine Database: 2 TB HDD (Minimum)
Network	Ethernet, 100 Mbit or higher recommended.
Hard Disk Space	50 GB for 1 week storage for alarm files (images & videos)
Database	My SQL 5.5.2
Resolution & Frame Rate	640x480 and above up to 1080p. Frame rate: 10 fps and above
Stand Alone Version Camera support	Models from Axis, Honeywell, Sony, Bosch, Arecont Vision, Acti, IQInvision, Brickcom, Hikvision, Vision, Pelco, Panasonic
VMS Software	Genetec Security Center 5.1 and above
SDK Connection License	GSC-1SDK-ALLGO-AllGoVision

## INSTALLATION

The software is easy to install and simple to use with intuitive GUI. The AllGoVision Face recognition supports face recognition of people moving towards camera.

### Camera Installation

- i) The camera installation should be Angular at a height of about 1.7 m facing the region where people can walk towards camera.
- ii) The camera installation should be generic IP cameras with good quality at Angular direction.
- iii) The illumination should be above 200 lux. Good constant illumination should be maintained throughout the day.
- iv) The height of installation depends on resolution. The pixel distance between eyes should be above 60 pixels for detection. The pixels between eyes for Face registration is above 100 pixels.

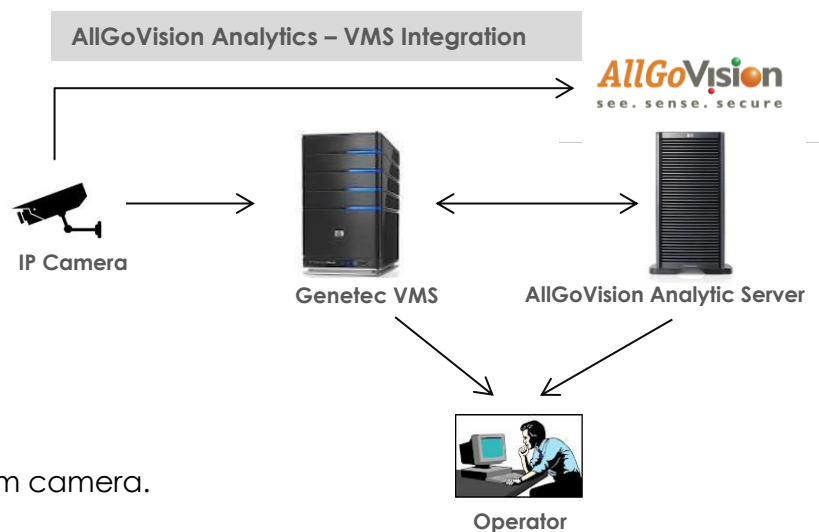


### Integration

AllGoVision Face Recognition application is available in 2 flavours:

#### With VMS:

- AllGoVision application is based on Open Platform Standards.
- It is integrated with Genetec VMS

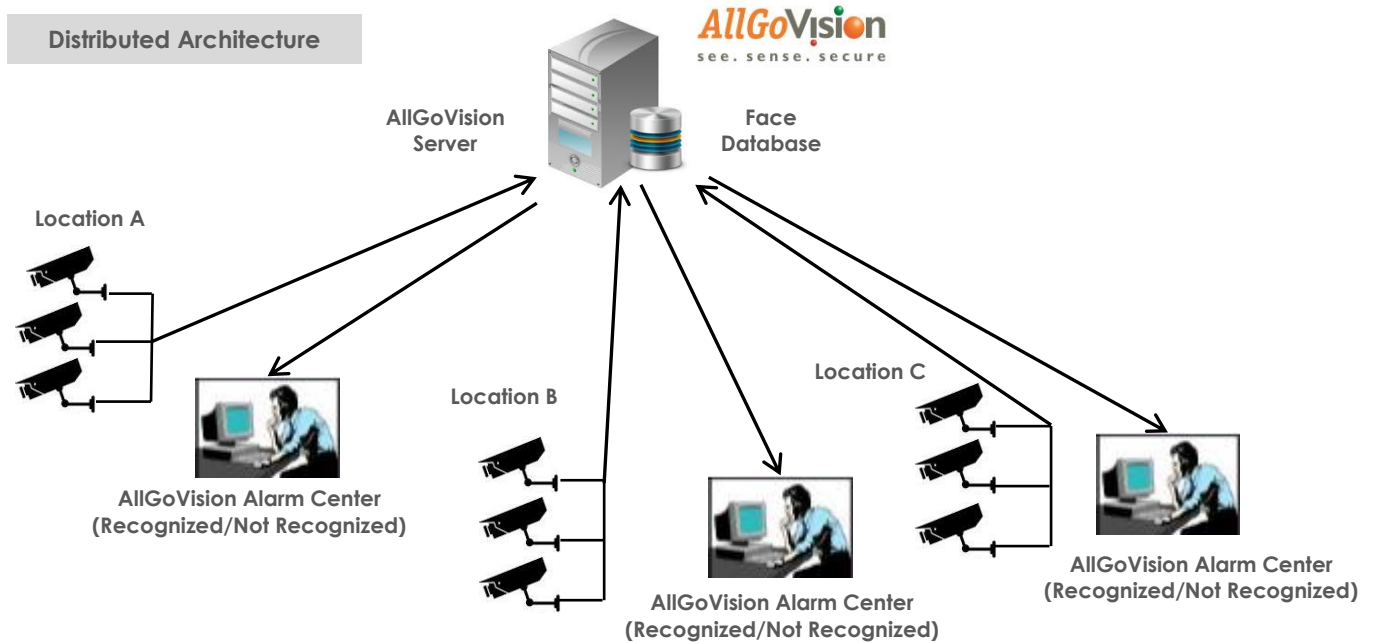


#### Without VMS:

- It is a standalone application.
- It works independent of VMS.
- Directly takes the video feed from camera.

## ARCHITECTURE

A simple architecture without VMS is shown below. The video from CCTV camera is sent to central server. The face detected from video is matched against face database and recognition/non recognition alarm is sent to be viewed in either VMS or Alarm Center.



## FEATURES

- People face should be visible in front of the camera. The people who are walking towards camera are recognized.
- In the face recognition process, the application provides alarm based on whether the face in the camera view is accepted (recognized) or rejected (not recognized).
- The recognized person details are displayed in real time.
- The environment is indoor as well as outdoor.
- The detection accuracy is greater than 80%.
- The camera is able to track the detected face when it is moving and does not generate multiple alarms.
- The detection time is 1-3 sec.
- The face registration is done with 1-10 face images per person.
- The face detection allows  $\pm 20$  degree tilt in both x and y direction.
- The face recognition works at various resolutions above 640x480 and frame rate above 10 fps.
- Works simultaneously with video analytics for other cameras.

## Registration

Software allows faces to be registered with multiple faces per person. It is better to have faces with front, left, right, up and down poses.

The faces can be automatically captured in live view which can be used for registration

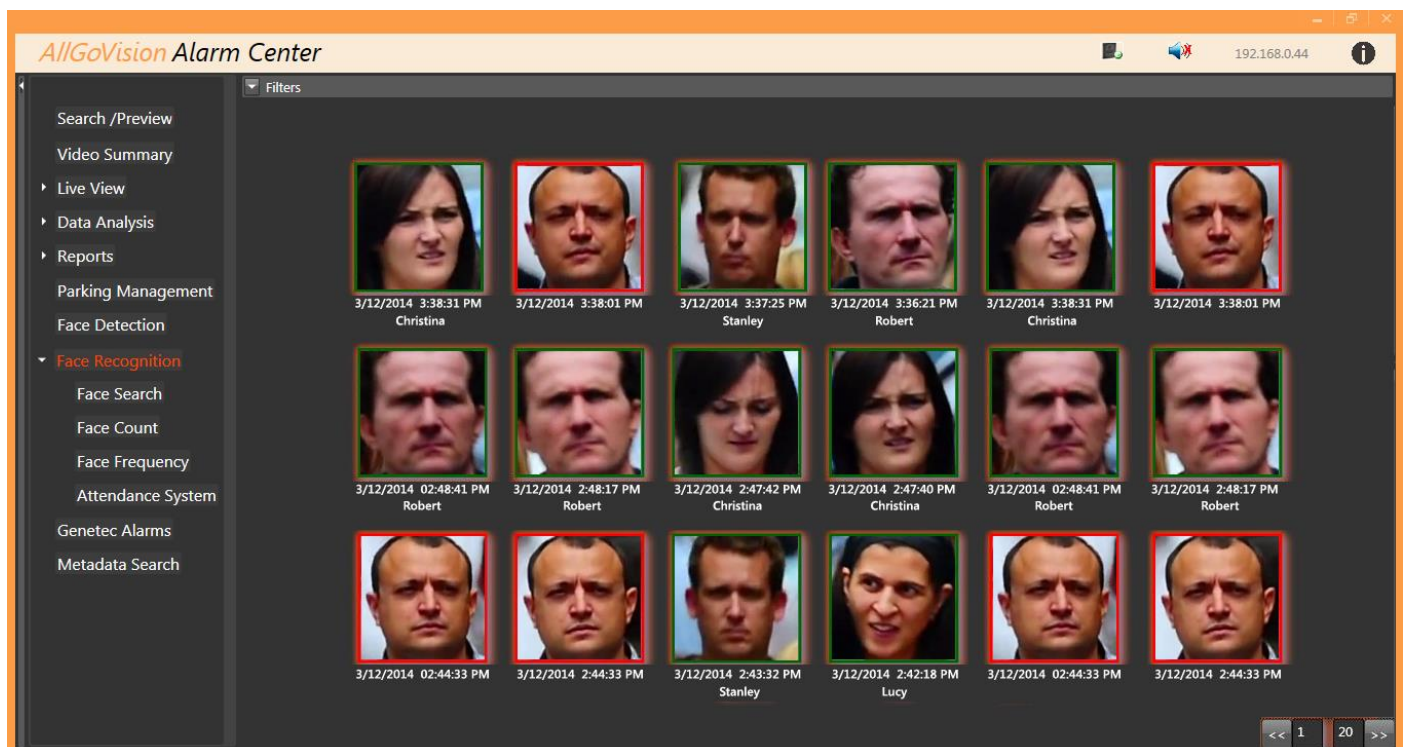
## Applications

- Black Listed People Recognition
- VIP Identification or White list people identification
- Forensic search and analysis
- Facial Recognition based Access Control
- Facial Recognition based automatic Attendance System
- Face Detection and Recognition based Business Intelligence
  - Viewership Measurement for retail shelf, digital signage – based on face count
  - Customer tracking and statistics – Face Capture, Face Tracking
  - Statistics on Face Analytics – Presence, Frequency, Demographics (Age, Gender)

## Software Features

- Application can run as service.
- Settings are available for Direct Camera connection.
- Settings are available to send alarms to Genetec VMS and Alarm Center.
- Pulls recorded video from Genetec on metadata search.

## Face Recognition Snapshot



## ALLGOVISION GUI

AllGoVision product offers a graphical user interface with windows-oriented, tab based, point and pick interface. Extensive use of graphical icons, pull-down menus, buttons, check boxes, and radio-buttons are incorporated to reduce typing work to the minimum possible extent.

AllGoVision product GUI consists of tabs:

### Server Setup Tab

The server setup tab consists of setup for VMS connection or camera connection.

### Analytics Setup Tab

The Analytics setup tab gives options to set the analytics fields for different features. The faces recognition settings are completed here.

### Advanced Setup Tab

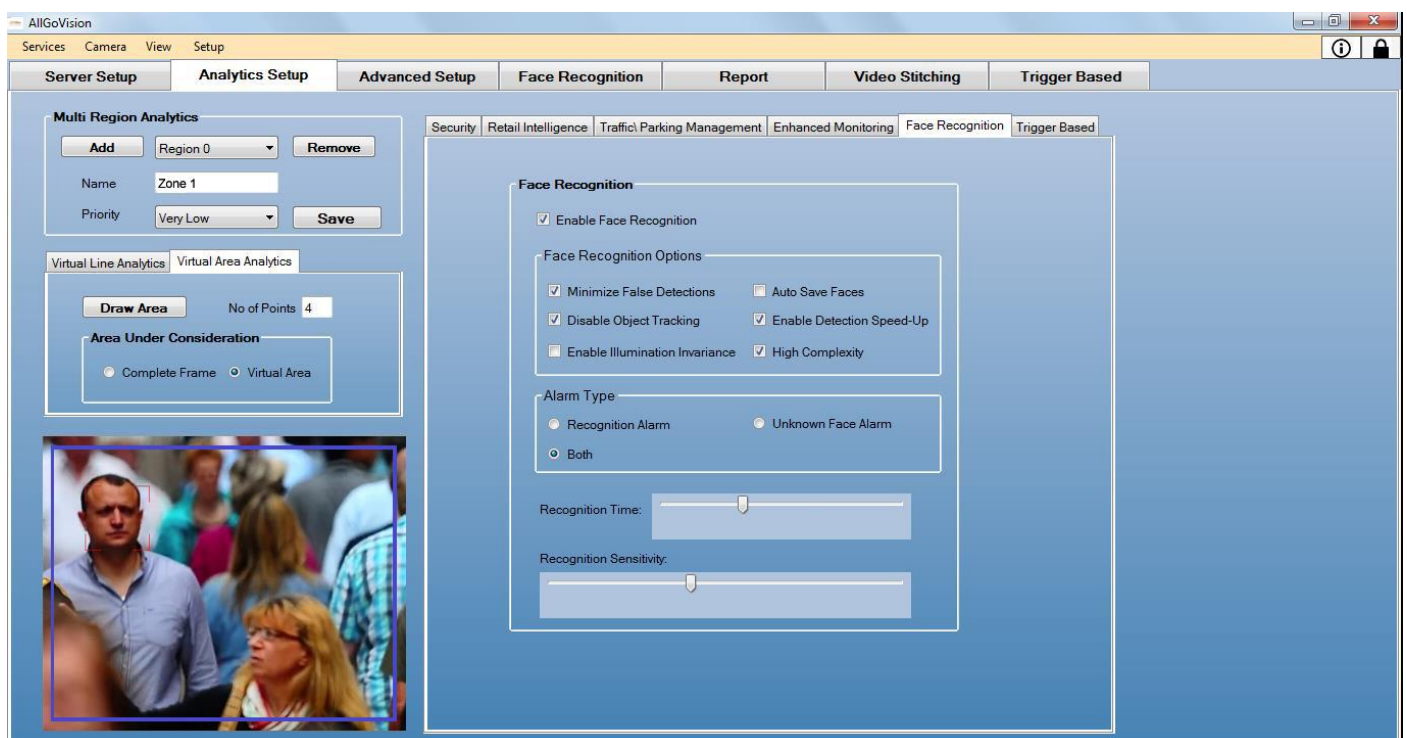
This tab gives options to select advanced settings like camera environment, analytics processing complexity, shadow removal sensitivity, camera view, predefined object size and minimum object size.

### Report Tab

This tab gives option to plot the statistics of counting features including face counting. Both line and bar charts are possible. This also has auto e-mailer and export of plots and report.

### Face Recognition Tab

This tab is used for Face registration.



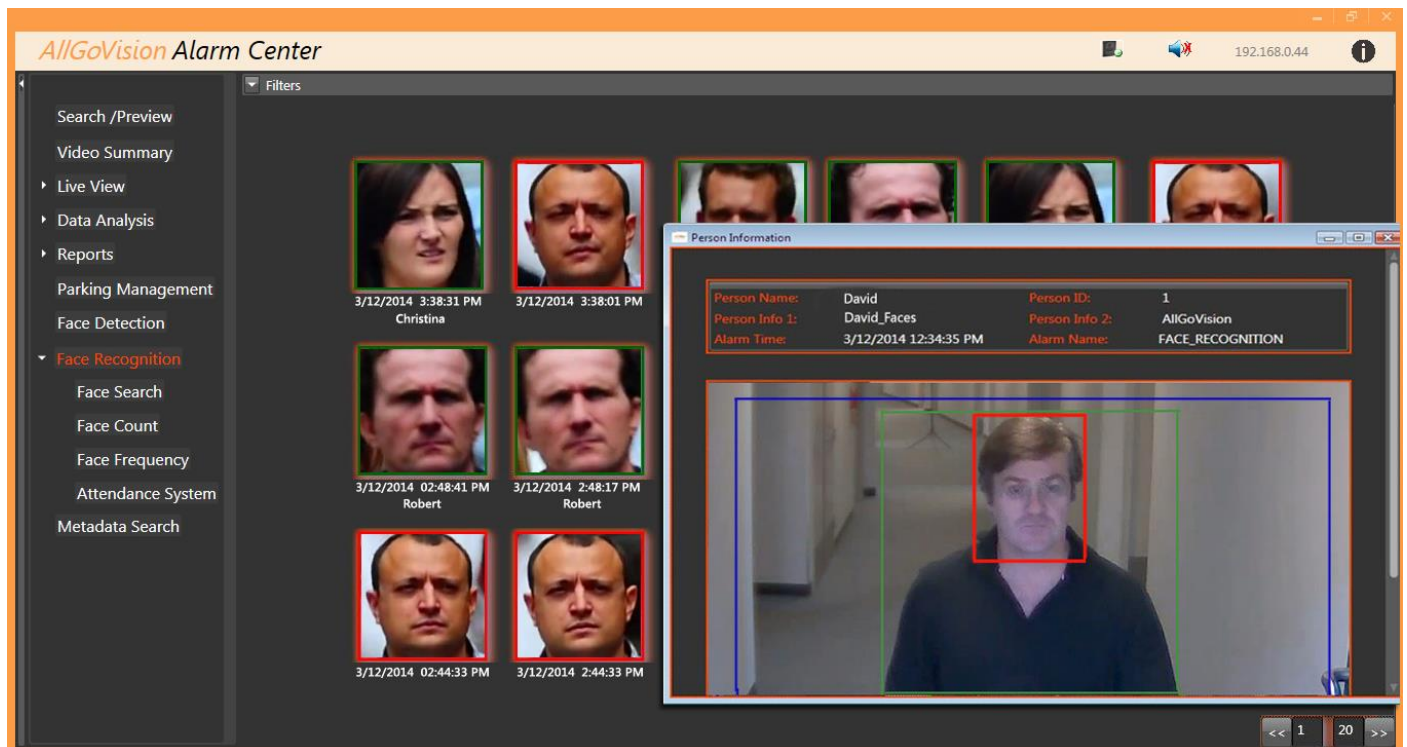
AllGoVision Analytics Setup Tab

## ALLGOVISION ALARM CENTER

AllGoVision Alarm Center is a Client to view all the alarms generated by AllGoVision analytics running on different systems across a LAN. Database is MySQL.

### Features

- Alarm Popup for latest alarm
- Alarm Preview and Alarm Video Playback options for any of the past alarms
- Displays alarms with date and time stamp
- Search: Filters to search alarms easily based on its types & properties
- Forensic Analysis based on various object properties – size / color / type / time etc.
- Forensic Face Search: searching appearance of a person in recorded video
- Forensic search also works with Genetec recorded video
- Alarm Management and Reporting of Face Counting
- Duration of any face shown in the camera view (Face Presence)
- Frequency distribution map for recognized people (Face Frequency)
- Attendance Recording and Reporting System based on Face Recognition

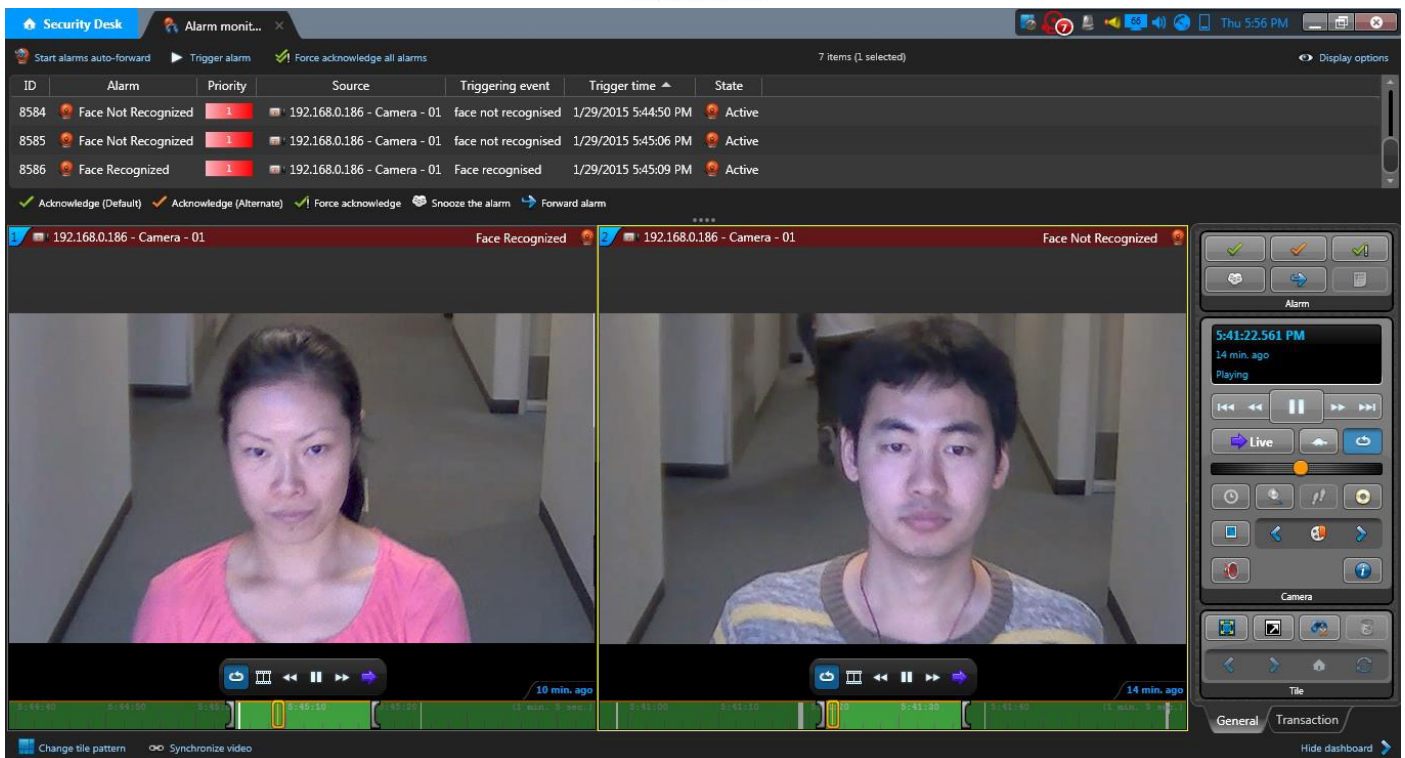
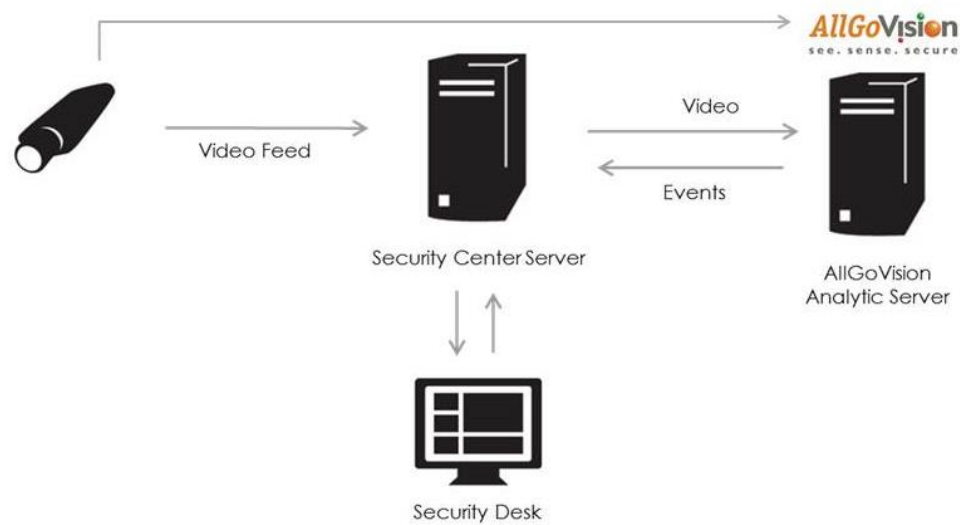


Alarm Center: Face Recognition Alarm Preview & Playback



## INTEGRATION WITH GENETEC

- AllGoVision (AGV) is integrated with Security Center 5.1 (SC) or higher
  - Can be installed on Windows OS workstations and servers
  - Can be installed on same server as that of SC or in a different server
- Takes Security Center (SC) login credentials to connect to SC and get video feed from SC
- Supports all IP cameras supported by SC
- Can be configured for any number of cameras connected to SC
- Provides simple and intuitive GUI to set rules and features
- Enables multiple regions and multiple rules per region at a time
- Sends custom event and generic event to send alarms to view / enable actions in SC
- Also provides its own plug-in for Security Desk to view alarms with video playback and pop up



Face Recognition Alarms viewed in Genetec