

# QVR PRO overview

*Surveillance solution & application explained*



# Agenda



**Solution Overview**

**System Architecture**

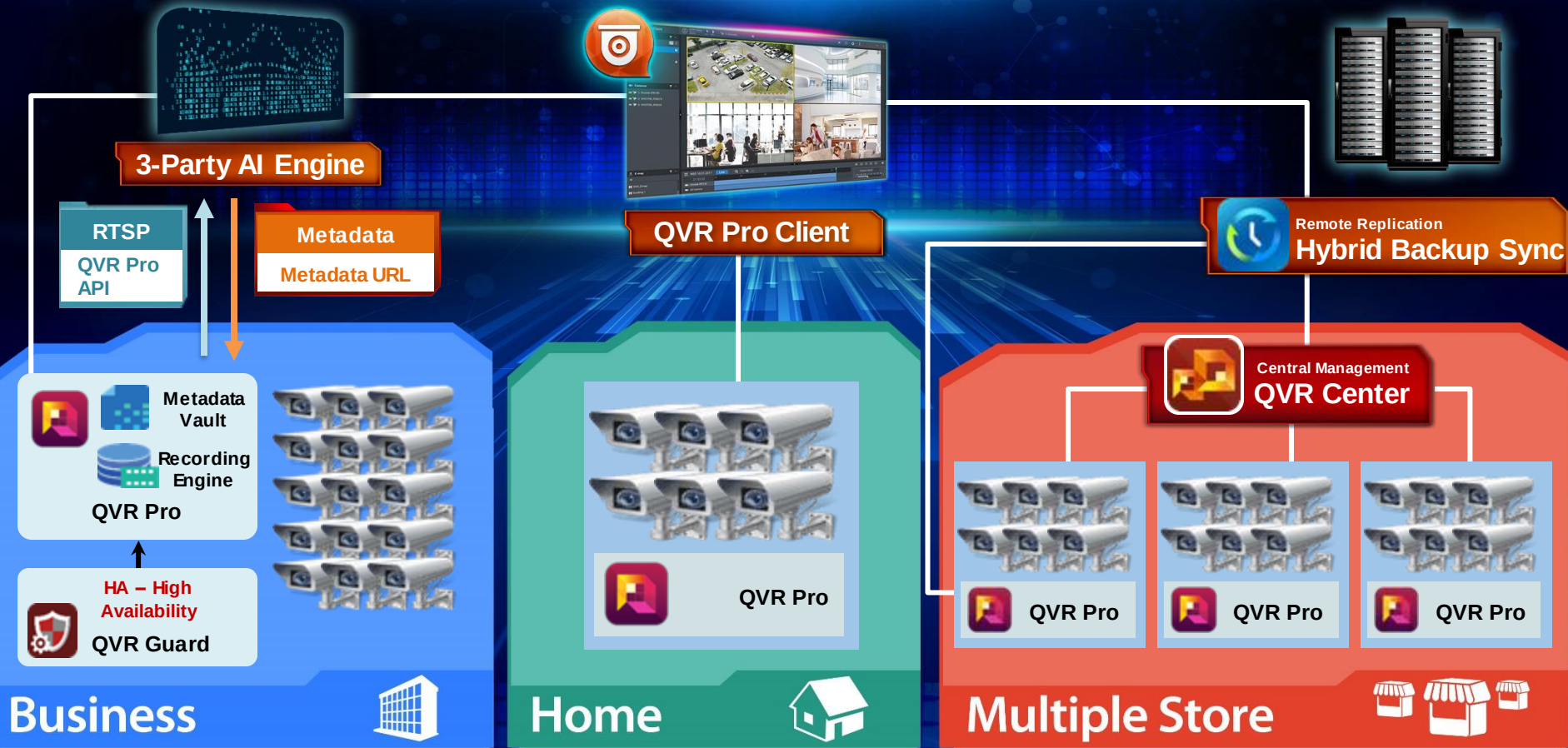
**Use cases/scenarios**



A professional surveillance solution from QNAP

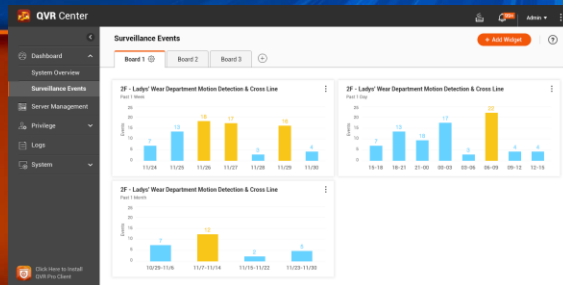
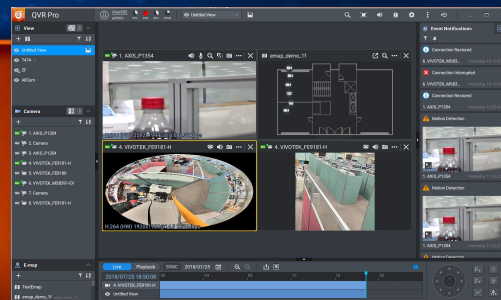
# Solution overview

# The next-gen surveillance system - QVR Pro

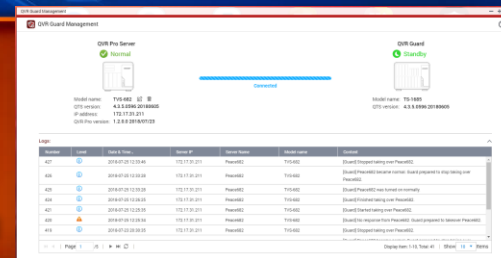




# QVR Pro Client



## QVR Guard





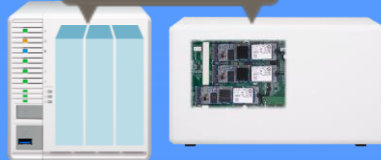
# Various NAS model can fulfill different need

QVR Pro  
Best Entry NAS

TS-332X-4G



RAID5 X RAID5



Built-in HDMI  
Local Display

TVS-951X-8G



3 HDMI for small scale Video  
Wall solution

TVS-1282-i7-64G



Expansion Unit support for  
PB Level Storage

TDS-16489U-SA1



# QVR Pro – advanced Gold license

QVR Pro provides  
8 cameras

QVR Pro Client  
provides 14 days  
playback only



QVR Pro

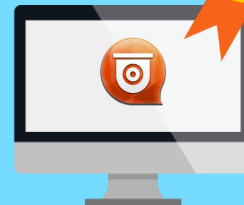


Easily manage local  
& Windows  
AD/LDAP users

QVR Pro Gold



With QVR Pro Gold, 8 more cameras = 16 cameras  
Can be managed by QVR Center  
QVR Pro Client unlimited days of playback  
Manage local & Windows AD/LDAP users



QVR Pro Channel  
Expansion License

Expandable up to 128  
cameras

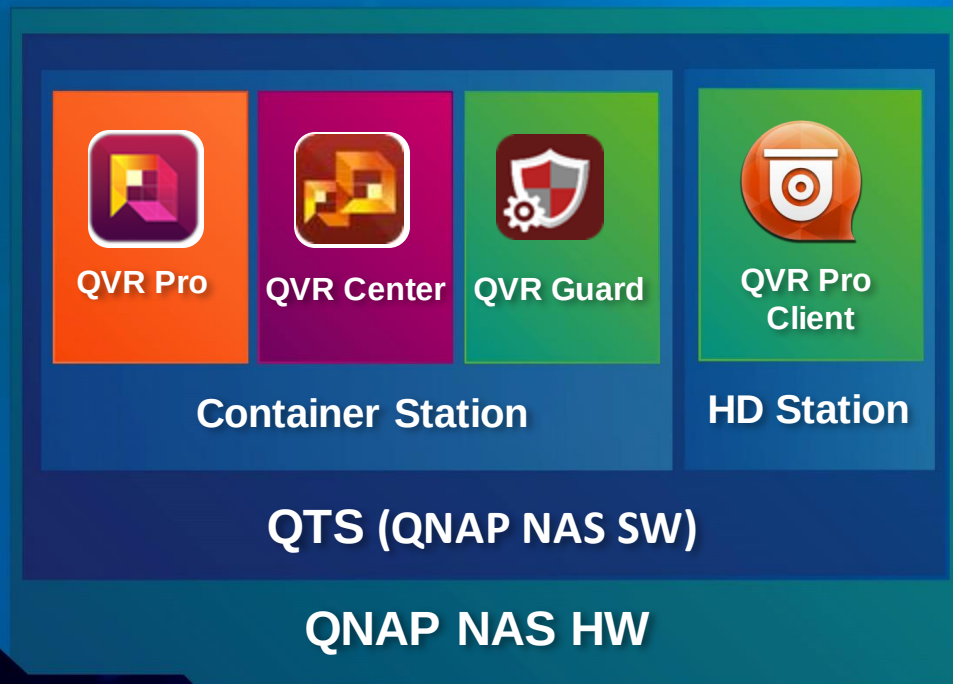


A professional surveillance solution from QNAP

# Solution Structure



# QVR Pro ecosystem interactions



# How QVR Pro works



QVR Pro



QVR Center



QVR Guard



QVR Pro Client

Container Station

HD Station

Application Framework

Storage  
Management

Network  
Management

Resource  
Management

App  
Center

OpenGL

QTS (SW)

NAS HW



QVR Pro

# QVR Pro Internal Design



Live View &amp; Playback



Camera Management



Recording Storage Management

QVR Pro Core

Privilege Management

Event Engine

Event  
Recording

Video storage engine

Metadata Interface

Log

Store Video

Channel-Time-  
Metadata Pairing

Metadata





QVR Center

# QVR Center Internal Design



Live View &amp; Playback



## QVR Center Group

### QVR Center Core

QVR Center Privilege  
managementQVR Center  
DashboardManage multiple QVR  
Pro server

QVR Pro core

QVR Pro core

QVR Pro core



QVR Pro Client

# Stay on top of everything



## QVR Pro Client



- Live view, Playback
- Unified UI across platforms
- Dynamic View
- Support De-warp technology
- Multiple event
- notification method





## QVR Pro Client

Dynamic View

Item List

Main Toolbar

Event notification

Timeline

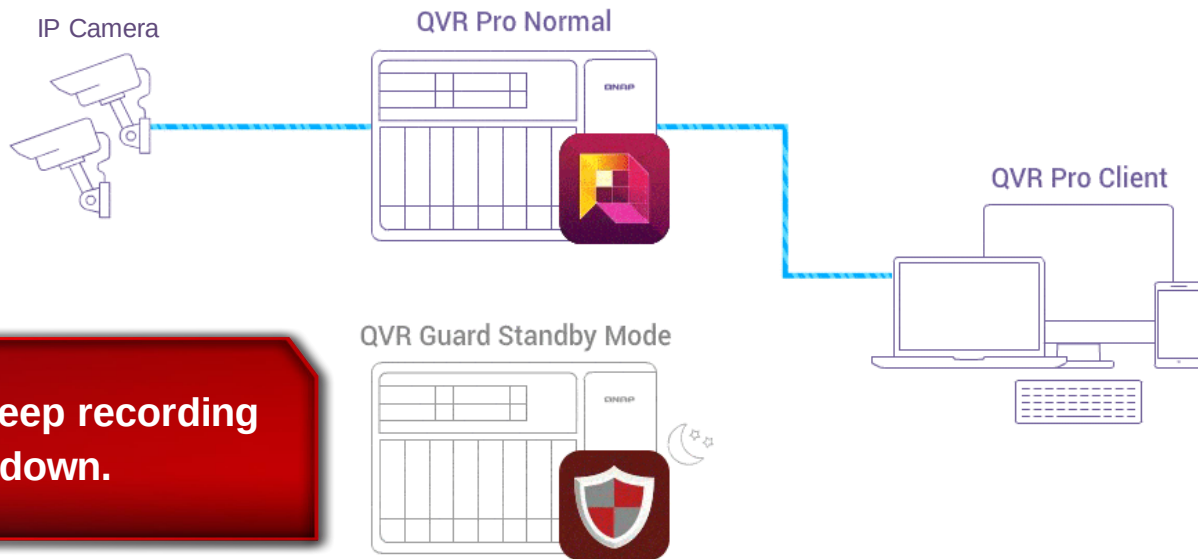
The screenshot displays the QVR Pro Client interface. At the top, a status bar shows the user 'Alan682 admin' and system resources (CPU, RAM, GPU, VRAM). Below this is a 'view' toolbar with icons for zoom, pan, and other controls. The main area is divided into four quadrants: top-left shows a live video feed from '1. AXIS\_P1354'; top-right shows a floor plan map labeled 'emap\_demo.tf'; bottom-left shows a 360-degree fisheye view from '4. VIVOTEK\_FE9181-H'; bottom-right shows another live video feed from '4. VIVOTEK\_FE9181-H'. On the left, an 'Item List' panel lists cameras and maps. On the right, an 'Event notification' panel shows a log of events like 'Connection Restored' and 'Motion Detection'. At the bottom, a 'Timeline' panel shows a playback bar for the selected camera feed.





QVR Gard

# Failover for uninterrupted recording



**QVR Guard can keep recording while QVR Pro is down.**

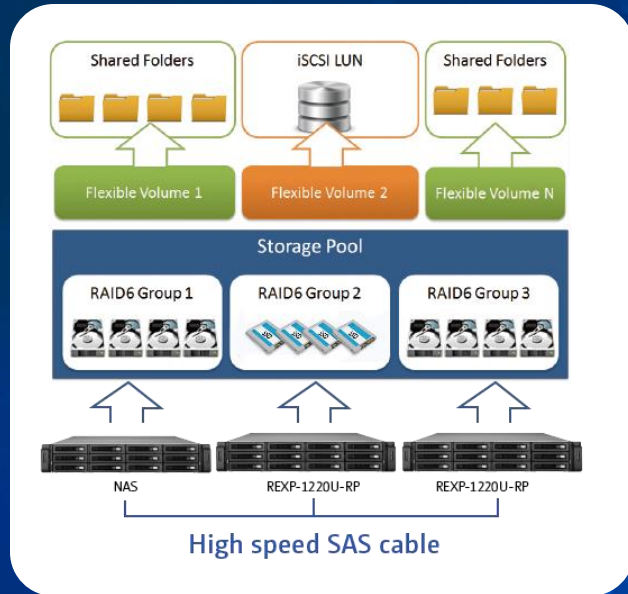
# Based on QNAP NAS high reliability

Thunderbolt™ 3



- **SSD + HDD Hybrid Architecture**  
QVR Pro uses the database index system for increased performance. SSD can facilitate high database I/O request. But recording data is still kept at HDD. Balancing performance and price.
- **RAID**  
QNAP NAS supports RAID1, RAID5, RAID6, RAID50, RAID60, RAID 10 in order to secure the video footage

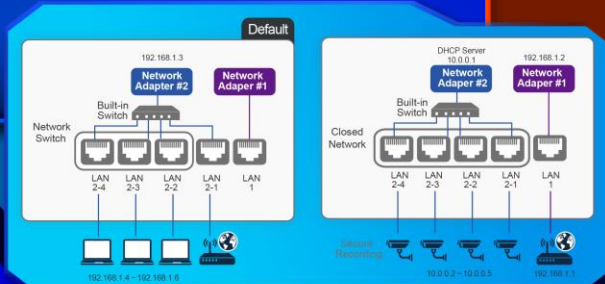
# A flexible big data storage system



- **Single & multiple volume**
  1. Implementing an architecture that separates the system and the data.
  2. First volume by SSD, for QTS and QVR Pro installation.
  3. Other Volumes by HDD, for Recording Storage of QVR Pro.
  4. Balance performance and price.
- **Can Reach PB storage via JBOD**

When the NAS storage space is insufficient, you can use the JBOD to reach PB-level storage space.





- **Various of internet interfaces**  
You could separate different camera group, but do not need set different networks
- **10GbE internet**  
Good for surpassing Gb camera throughput.
- **Virtual Switch**  
QVR Pro supports setting up Virtual switch and IP address assignment

# Combining various QNAP apps



- **QUSBCam2**

This APP allows you to create a surveillance environment easily, you could simply connect a USB camera via QVR Pro Onvif without PoE switch.

- **Hybrid Backup Sync**

Regularly backup videos to other NAS or FTP by using Hybrid Backup Sync

- **QVPN Service**

QVPN provides you a private Internet access environment to secure your users and servers

A professional surveillance solution from QNAP

# Use cases/scenarios







**Home**



**Factory**



**QVR Pro surveillance family**



**Multiple  
sites**



**Enterprise**





Home

## Problem & Bottleneck

No matter working or travel, when you stay out of home. You want to know your home is still safe and secure.





Enterprise

## Problem & Bottleneck

Enterprises and companys may experience accidental events, or want to track attendance record.

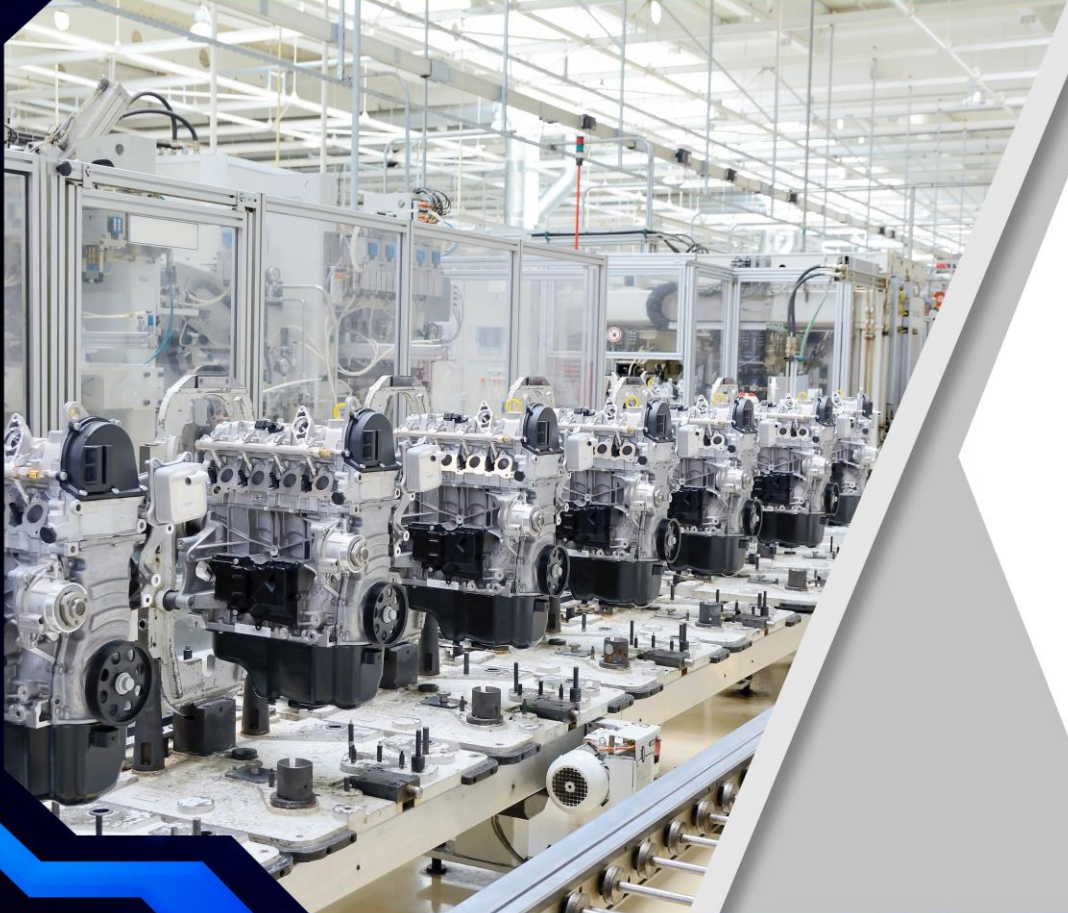


Multiple sites

## Problem & Bottleneck

When a company owns many locations, the owner need a single entrance surveillance system to monitor multiple retail store.





Factory

## Problem & Bottleneck

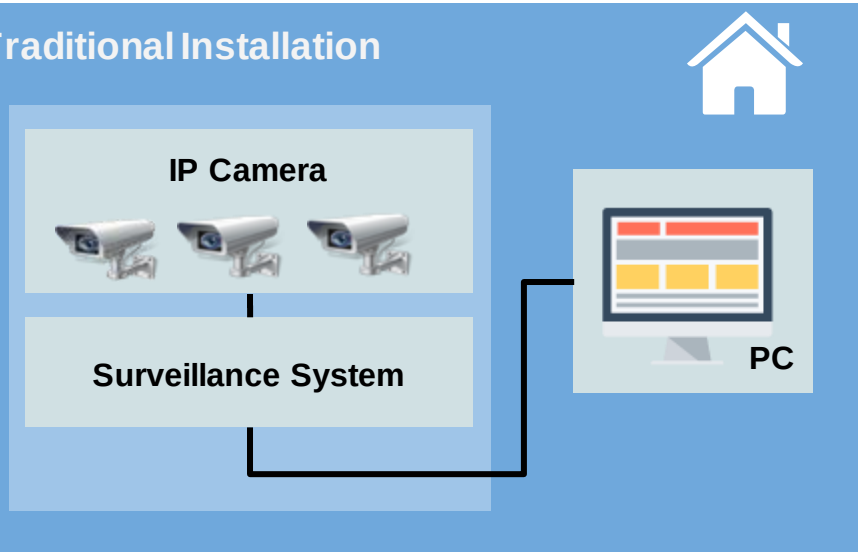
Manufacturing plants turn to automation. The users at the factory hope to track the video record of production line to improve the efficiency of production.



# Function & Application

## 1. Easy Installation

### Traditional Installation



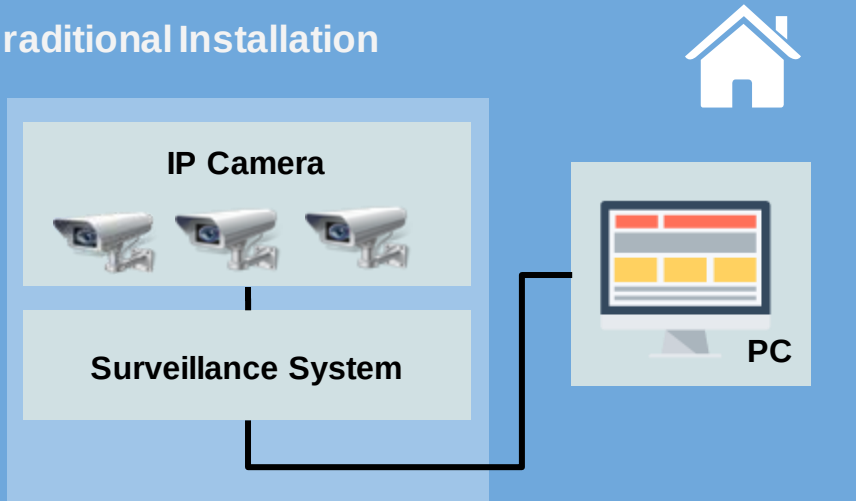
### 《Simple But Professional》

Most home users are not familiar with surveillance systems and they often feel surveillance systems are complex.

# Function & Application

## 2. Easy Management

### Traditional Installation

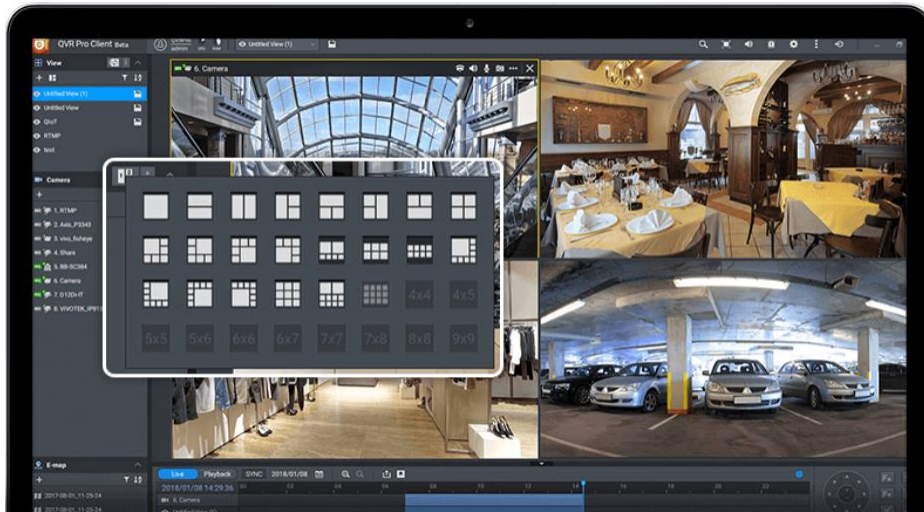


《Time is money》

Installation, maintenance and upgrade tasks could take tons of time. When you have more cameras, the load is even more heavier.

# Function & Application

## 3. Playback

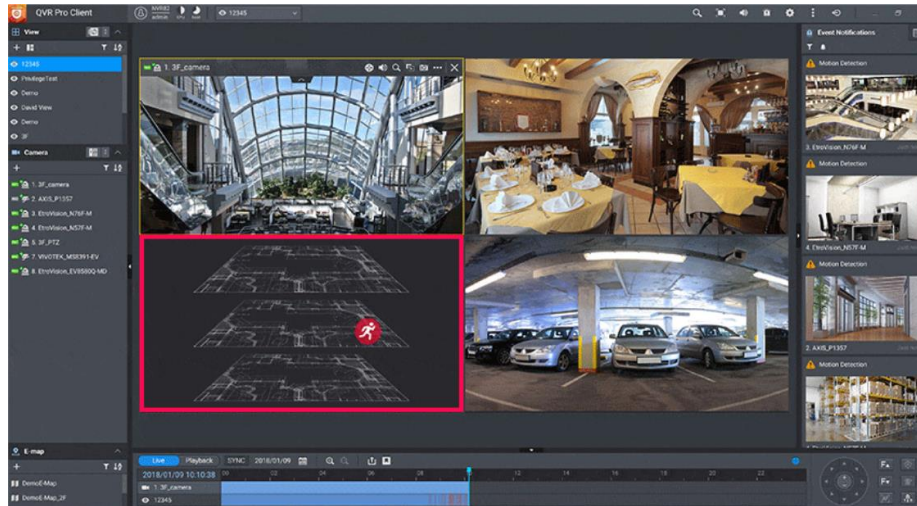


《There is only one truth》  
Without surveillance system,  
you may not be able to track  
down the root cause of the  
event. With surveillance,  
you could know who did what  
at when in where.



# Function & Application

4 : Can I know the event taking place now?1



《Quick response is necessary》  
Real-time alerts need to be handled ASAP, otherwise, it will be getting worse.

# Function & Application

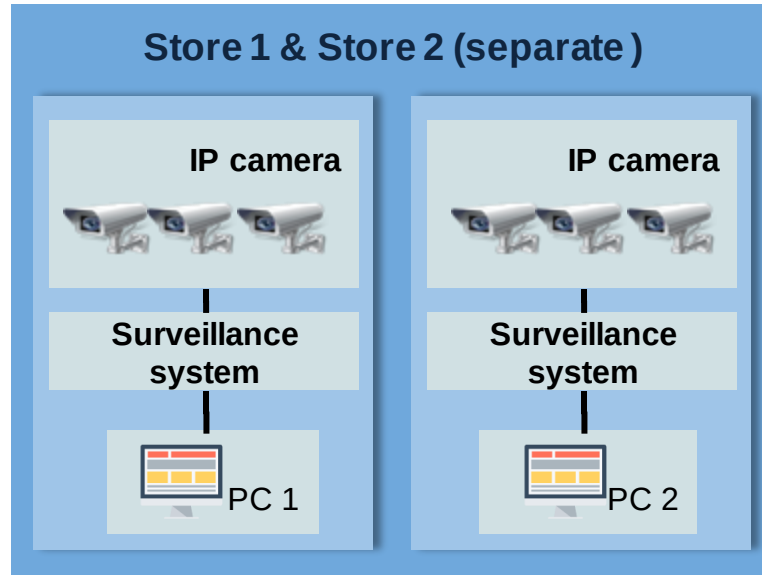
5. out of office , but need to check office situation  
( remote monitoring is necessary )



With mobile monitoring support, we allow you to stay close with the thing that matters to you.

# Advanced Feature & Application

## 1.Support multiple server management



《Need extra hands? 》  
Users do not want to login  
multiple server for many times.



# Advanced Feature & Application

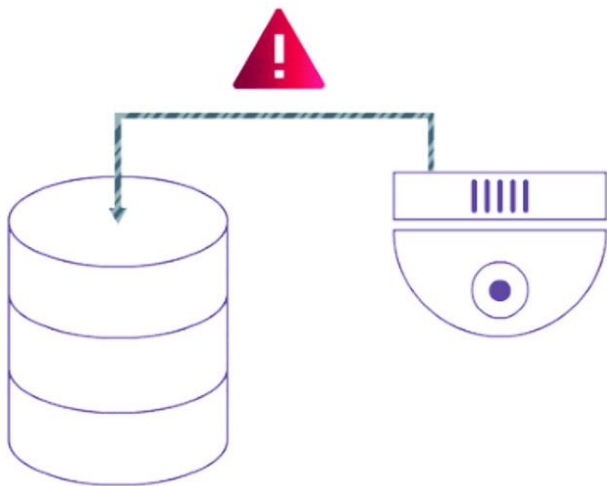
## 2. Flexible privilege design

|                                                                                   | CH 1                                                                              | CH 2                                                                              | CH 3                                                                              | E-MAP                                                                              |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
|  |  |  |  |   |
|  |  |  |  |  |

《Everyone plays his role》  
Even in home locations  
everyone plays a different role:  
you may not want other  
members of the family to  
change camera settings.

# Advanced Feature & Application

## 3. The log track system

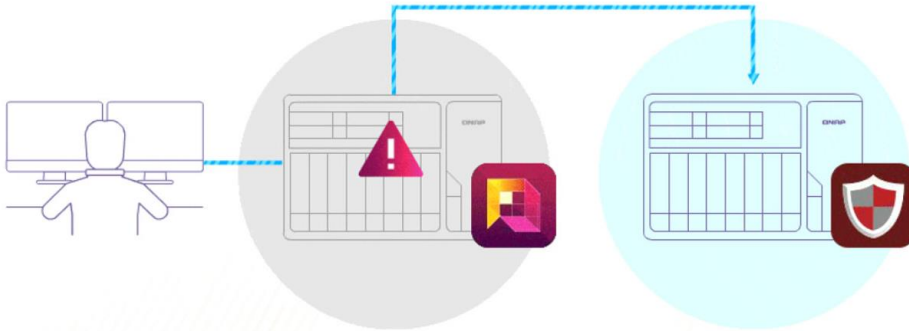


### 《Prevention over cure》

For surveillance systems, it's all about cameras. Users hope surveillance could run 24/7 without error. So a complete log track system is very important.

# Advanced Feature & Application

4 : what if HW failure happens ( Need to take over the task )

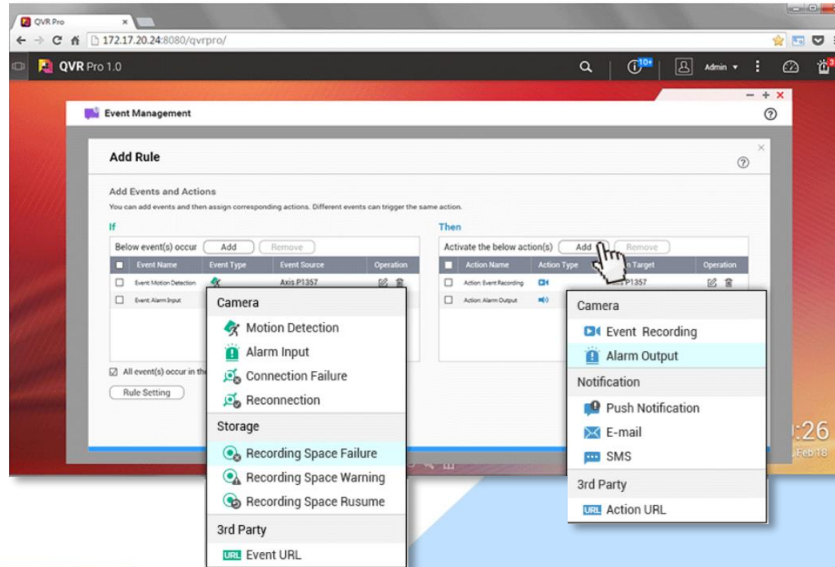


《Something you can rely on》  
Don't let HW failure ruin your  
surveillance system.



# Advanced Feature & Application

## 5. Support third-party integration



《1 + 1 > 2》

QVR Pro could integrate with many 3<sup>rd</sup> party systems, like POS & access control. Users could still use QVR Pro Client to access 3<sup>rd</sup> party data.

# Break it down into details

|            | Easy to use             | Easy to maintain | Can review the video | Real time notification | Support remote monitoring |
|------------|-------------------------|------------------|----------------------|------------------------|---------------------------|
| Home       | QVR Pro, QVR Pro Client |                  |                      |                        |                           |
| Enterprise | QVR Pro, QVR Pro Client |                  |                      |                        |                           |
| Multi-Site | QVR Pro, QVR Pro Client |                  |                      |                        |                           |
| Factory    | QVR Pro, QVR Pro Client |                  |                      |                        |                           |

# Break it down into details

|            | Can manage multiple servers | Independent privilege management | Can record the down time | Can take over recoding task while HW failure |
|------------|-----------------------------|----------------------------------|--------------------------|----------------------------------------------|
| Home       | No such need                | QVR Pro<br>QVR Center            | QVR Pro<br>QVR Center    | No such need                                 |
| Enterprise | QVR Center                  | QVR Pro<br>QVR Center            | QVR Pro<br>QVR Center    | QVR Guard                                    |
| Multi-Site | QVR Center                  | QVR Pro<br>QVR Center            | QVR Pro<br>QVR Center    | QVR Guard                                    |
| Factory    | QVR Center                  | QVR Pro<br>QVR Center            | QVR Pro<br>QVR Center    | QVR Guard                                    |



# QNAP solution for business/multi-site management



# QNAP solution for business/multi-site management



# Centralized downward management – downward capability

QVR Center can manage QVR Pro, Surveillance  
Station and QVR 5.1.3

- ✓ Centralized manage multiple servers in different location
- ✓ No need to upgrade the existing investment and can be centrally managed by QVR Center
- ✓ Share the same client with QVR Pro Client
- ✓ Easy for learning.





# QVR PRO

*QVR Pro is the best surveillance solution choice*