# Automate actions with the versatile rule engine

- enabling tailoring and adaptation of the video surveillance system

The *rule engine* is a central element in Milestone XProtect VMS and NVR products. Its versatile event and time-driven logic enables tailoring and adaptation of the VMS system to match customer specific situations and needs. It makes it possible to automate a wide range of security functions, increasing operational efficiency by eliminating the need for manual intervention.

The logic that brings versatility to the VMS system

The rule engine builds on the principal logic where an input can trigger one or more actions, conditioned by the time and day. A wide range of events and time schedules can trigger rules in the rule engine, as shown below. Lost connection, motion detection, analytics and tampering are examples of events originating from cameras and devices. Other categories of events originates from external systems integrated via the Milestone Integration Platform (MIP) API. Systems events is yet another category of events, providing useful insights into the operational status of the VMS system and related hardware.
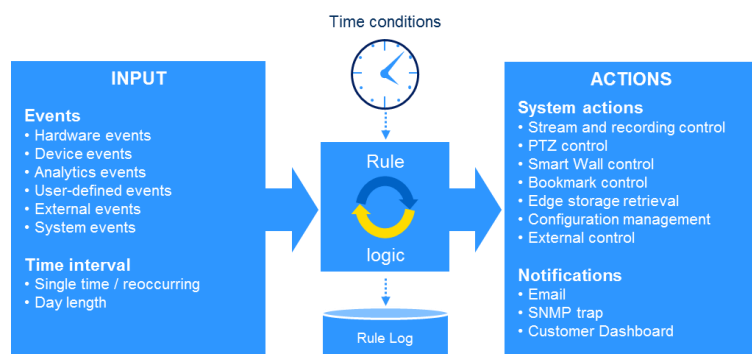
The rule engine takes a wide range of input and can drive a multitude of different actions, where a single input may trigger multiple actions

The rule engine can initiate an array of different types of system actions, including control of connected cameras, security peripherals, VMS-internal functions, external applications, and systems. The rule engine can also trigger different types of notifications like emails, SNMP traps and custom notifications to Milestone Customer Dashboard.

Key benefits

- Increases operational efficiency as standard security tasks can be automated

- Adaptive control of system behaviour based on actual operational conditions

- Enables operational integration of external applications, enabling events, actions and alarms to be triggered across the integration

Key features

- Versatile rule logic defined by simple "Outlook-like" clear text logic

- Takes a wide range of events and time schedules as input

- Controls a multitude of different internal and external actions

- Integrates with external applications and systems

Feature availability

The capabilities described in this brief are available in XProtect Corporate, XProtect Expert, XProtect Professional+ and XProtect Express+. For details please refer to the specification sheets of the individual products.

Increases operational efficiency

Operational efficiency is paramount not only to keep staffing costs down, but also to keep security at the right level. The rule engine is designed to tailor the operational procedures in a video surveillance installation. By defining rules for commonly occurring and critical events the need for manual activities can be minimized, as operators are assisted in handling incidents.

An example of an applied usage is how the system can make operators aware about an "object left behind". The rule engine makes it possible to automatically display relevant cameras on the XProtect Smart Wall based on the results of an integrated video analytics application.

Adaptive configuration optimizes performance

Using the rule engine, it is possible to apply changes to the system configuration dynamically. This makes it possible to adapt the system behavior to the actual operational conditions. An example of a commonly applied logic is to increase video quality or frame rate on relevant cameras in conjunction with a security incident. By doing so, this enables the availability of high quality video for a possible forensic investigation.

Configuration changes can also be scheduled. Such a scheduling example could be the application of optimized cameras settings for day versus night operation, which increases the overall image quality.

## Video enables external applications and systems

External applications and systems can easily be integrated with Milestone VMS solutions using the MIP API, or via simple network protocol integrations. Such third party systems include video analytic applications, building management, access control systems, and similar. The rule engine enables operational integration of external applications, by facilitating exchange of events, actions and alarms between the integrated application and the VMS core.

Time profiles

There are two different types of time profiles: static and day length profiles. The static profiles are defined using an easy-to-use calendar-based interface.
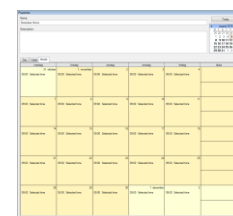
Using the day length profiles, it is possible to define a dynamic time schedule that follows the sun light at a given location, by simply providing the GPS location.
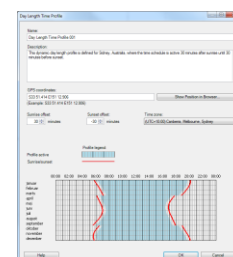
System wide and generic rules

Rules are system wide and may be applied to a single device, a group of devices or all devices.

Want to know how

Read more about the rule engine in the Administrator Manual:

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