

Zone setup

IA-N Analyse plugin: alarm rules, lines, excluded zones and license plates, one rule per page

IA-N plugin 1.4.0 ("IA-N Analyse") · For installers and distributors · Real examples: our demonstration cameras

How to read this guide. One page per rule: what it is for, how to draw it in the VMS (Nx Witness, Nx Meta, DW Spectrum...), the recommended settings, a real example on our demonstration cameras (with the time of the real alarm in the VMS), common mistakes and what you see when it works. Plates and faces are blurred. The settings can be shown in English, French, German, Spanish or Italian ("Langue / Language" setting, Installer guide 7.7): the labels quoted here are those of the plugin in English.

8 zones
 per rule and per camera,
 polygons of 3 to 12 points

6 lines
 per camera, with monitored
 direction and tailgating

9 alarms
 IA-N event types usable in the
 VMS rules

Plates
 vehicles at walking pace:
 access, barrier, car park

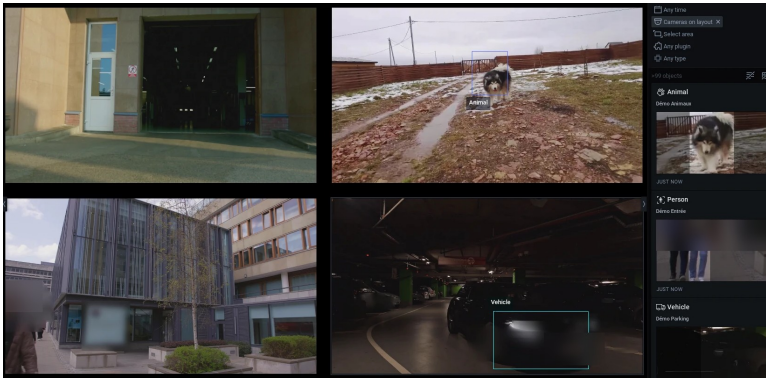
Real alarms from the VMS event log on our demonstration cameras (looping videos: short durations on purpose; on a real site, use the recommended values).

1 What each license provides

Licenses are counted camera by camera: **1 camera = 1 license**. Each camera gets a tier (**Detection** or **Premium**) and an analysis level (**Standard** or **Precision**). License plate reading is an option, also per camera.

License	What you get in the VMS	What for
Detection Standard	People, Vehicles, Animals boxes, live and in the archive; search in the VMS "Objects" tab	See and find people, vehicles and animals
Detection Precision	The same boxes, Precision level	Cameras that see far or small objects
Premium Standard	Detection + alarm rules : intrusion, zone entry / exit, line crossing, tailgating, loitering, dwell time (parking), crowd	VMS alarms on zones and lines
Premium Precision	Premium, Precision level	Rules on cameras that see far
Plates option, per camera	Plate reading inside a polygon, when a vehicle moves in it; "IA-N: License plate read" alarm	Vehicles at walking pace: barrier, gate, car park access (section 12). Not roads or motorways

- **Which license the camera takes:** "Tier for this camera" setting (Automatic, Detection, Premium). "Automatic": Premium if a Premium license is free, otherwise Detection (the VMS says when they are all taken).
- **Plates:** a Plates license is only taken by a camera where "Read license plates on this camera" is ticked. Unticking the checkbox frees the license for another camera.
- **Standard or Precision** ("Analysis level" setting): Precision is better at small and distant objects, but needs about 10 times more computing. Keep it for the cameras that need it; Standard is enough for most. Precision is only offered if the license includes it (it is bought for a number of cameras).
- **Zones drawn without a Premium license:** kept but ignored; the rule pages are grayed out with "Premium option — ask your installer". They apply as soon as a Premium license arrives.



Real capture of the VMS client (client in English): Detection tier, "Animal" and "Vehicle" boxes, object list ("Objects" tab) on the right. Faces and plates blurred.

2 Before drawing: where the settings are

Everything is set in the VMS client, camera by camera: **Camera Settings > Integrations**, then **"IA-N Analyse"** in the list on the left. The IA-N settings form a tree; each page has only the fields its rule needs:

Page (exact label)	What it contains
"IA-N Analyse"	Status banner; "Basic settings": "Analysis level", "Tier for this camera", "Confidence threshold" (0.40), "Analyzed frames per second" (5), checkboxes "People", "Vehicles", "Animals"; "AI processing for this camera"
"Alarm rules"	"Intrusion", "Zone entry / exit", "Line crossing", "Loitering", "Dwell time", "Crowd" (8 zones per page, 6 lines)
"License plate reading"	"Read license plates on this camera", "Plate zone...", vehicle passage settings (section 12)
"Excluded zones"	8 masks: nothing is analyzed behind them (section 11)
"License", "Support"	Read only: status of the license and of the places; versions and log

Drawing a zone (all zone rules)

- 1. Open "Alarm rules", then the page of the rule (e.g. "Intrusion").
- 2. In the "new" box (e.g. "Intrusion zone 1 (new)"), field "Zone": type the name (e.g. "Jardin"; it appears in the alarm) and place the points of the polygon on the image preview (3 to 12). Leave "Display on video" ticked to see the zone on the image.
- 3. "Objects": People, Vehicles and / or Animals; then the fields of the page (0 = recommended value).
- 4. **Apply**: one more "new" box appears for the next zone. To remove a zone: erase its drawing, then Apply.
- 5. Do a **test pass** and check the alarm in the VMS.
- Point tested**: for a zone, the **center of the object's box**; for a line, the **bottom of the box** (feet, wheels).
- The object must also be detected**: the checkboxes "People", "Vehicles", "Animals" on the main page must be ticked for the objects of the zone.
- Set up at commissioning**: each "Apply" restarts the analysis of the camera (gap of about 1 to 3 s in its recording).
- "Ignore stationary objects"** (new in 1.3.0, **ticked by default**): box of each zone of the "Intrusion", "Zone entry / exit", "Loitering" and "Dwell time" pages. "Crowd" and "Line crossing": unchanged.
- Vehicle or animal**: alarm only if it has **really moved** since it appeared (not a mere jitter of the box, nor a box that grows with reflections or headlights); a parked car never gives an alarm, even if its tracking is lost and then resumes. **Person**: arriving counts as a movement; the person is reported once, then no more as long as they do not move; a "person" who keeps reappearing at the same place (plant, post) is no longer reported from the 3rd appearance at that place (remembered for 20 minutes). The same object alarms again only after moving again.
- An object already there when the rule starts (rule created, VMS restarted), people included, gives no alarm as long as it does not move. Untick = as in 1.2.0 (alarm on stationary objects too). Help shown by the VMS: "No alarm for a vehicle or an animal that has not moved since it appeared (parked car), nor for an object already there when the rule starts; a person who appears is reported once. The same object alarms again only after moving again. Untick to also alarm on stationary objects."; "Dwell time" page: "No alarm for an object that was already there when the rule started and has not moved since (car already parked); a vehicle that arrives and then stops is reported once. The same object alarms

again only after moving again.”

- **Always active**, no setting: a box that covers almost the whole image (false detection) is discarded: no box in the VMS, no alarm.
- **Troubleshooting**: No alarm for a parked vehicle, or for a person waiting without moving: normal, “Ignore stationary objects” box ticked (a person is reported once, on arrival; untick the box to alarm on stationary objects too). Dwell time: a vehicle already parked when the rule starts is never reported; a vehicle that arrives and then stops is reported once.

On screen: the VMS figure editor, opened by clicking the image preview of a “Zone” or “Line” field: the camera image in large; click to place the points of the polygon (or the 2 points of a line), a field lets you type the name; for a line, a button changes the monitored direction (one arrow or two); confirming closes the editor.



Real capture: zones and lines shown on the image with their names (“SORTIE GARAGE”, “PLAQUES ENTRÉE”, line “SEUIL”, “JARDIN”, “PORTE”, “ACCÈS”, “PARVIS”, “ACCÈS RÉSERVÉ”). The “PLAQUES ALLÉE” polygon (bottom right) was left by mistake, then removed (section 12). Faces and plates blurred.

3 Alarms in the VMS and the Event Rule

Each plugin alarm is a VMS **Analytics Event**. On its own, it does nothing visible: a VMS **Event Rule** must say what to do (notification, bookmark, recording...). In the VMS, the alarm has a caption "IA-N: type - zone name" (e.g. "IA-N: Loitering - Parvis"), the text below as its description, and the object's box.

Event in the VMS	Comes from	Alarm text format (with our zone names)
IA-N: Intrusion	intrusion zone	Intrusion in zone "Jardin" (animal)
IA-N: Zone entry	entry / exit zone	Entry into zone "Accès" (person)
IA-N: Zone exit	entry / exit zone	Exit from zone "Accès" (person)
IA-N: Line crossing	line	Crossing of line "Seuil" (vehicle, direction A to B)
IA-N: Loitering	loitering zone	Loitering in zone "Parvis": present for 6 s (person)
IA-N: Dwell time exceeded (parking)	dwell time zone	Parking / prolonged stop in zone "Sortie garage": vehicle for 3 s
IA-N: Tailgating	line, tailgating checkbox	Tailgating on line "Seuil": 2 crossings in the same direction in less than 30 s
IA-N: Crowd	crowd zone	Crowd in zone "Toute la scène": 5 person(s) for 65 s (threshold 5)
IA-N: License plate read	plates	Caption "IA-N: plate AB***CD"; "Plate read on ... good frame(s)"

Creating the Event Rule (once per alarm type)

- Open the VMS Event Rules and **add a rule**.
- **When:** Analytics Event; choose the camera(s), then the event "IA-N: Intrusion" (or another IA-N type from the table).
- **Do:** notification, bookmark, recording, e-mail, output... as the customer needs. A schedule in the rule limits the alarm to the desired hours (e.g. at night).
- Do a test pass: the alarm must appear with the right zone name.

On our demonstration cameras, for each IA-N type: one rule that writes the alarm to the VMS event log, and one rule that sets a 10 s **bookmark** (5 s before, 5 s after, tag "IA-N").

On screen: the VMS Event Rules screen: a rule whose event is the Analytics Event "IA-N: Intrusion" on the chosen camera, and the desired action (notification, bookmark...), with the schedule if any.

The images "reviewed in the archive" on the following pages are the image recorded by the VMS at the time of the alarm, with the object's box and a banner (time, camera, alarm) added by our checking tool. They are not screenshots of the VMS screen.

4 Intrusion

Alarm when a person, a vehicle or an animal is in a zone where it must not be: yard closed at night, loading dock, roof, garden. The object can enter the zone or appear in it (come out from behind an obstacle): both trigger.

Shape	Zone: polygon of 3 to 12 points; point tested = center of the box
Page	"Alarm rules > Intrusion"; boxes "Intrusion zone 1", "Intrusion zone 2"... (8 at most)
VMS event	"IA-N: Intrusion"
License	Premium (Standard or Precision)

Drawing in the VMS

- Page "Alarm rules > Intrusion": in the box "Intrusion zone ... (new)", field "Zone", type the name of the zone and place the points of the polygon.
- "Objects" = those that must not be there.
- Draw the polygon over the forbidden area only, not over the sidewalk or the street.
- Apply: a new empty box appears for the next zone.

Useful settings and recommended values

Field (exact label)	Recommended value	Effect
"Objects"	People (closed site); Animals (garden); Vehicles (pedestrian path)	Only these objects trigger
"Minimum presence before the alarm (s)"	0 = immediate; 2 to 5 s if passers-by brush past the zone	Time spent in the zone before the alarm
"Minimum delay between two alarms (s)"	0 = 30 s for the zone	No new alarm from the zone during this delay; an object that stays inside does not trigger again
"Ignore stationary objects"	Ticked (default)	Stationary vehicle or animal (parked car), object already there at the start: no alarm; person arriving: one alarm. Unticked: as in 1.2.0

Example on our demonstration cameras



"Démonstration Animaux": zone "Jardin" (bottom of the image), Animals, duration 0, delay 30 s. Alarm "IA-N: Intrusion - Jardin", then one every 30 s at most while dogs pass. On the left, the same camera with another dog video. Captured with the plugin in French.

Common mistakes

- Zone that spills over onto the street or the sidewalk: every passer-by gives an alarm.
- Object not ticked on the main page: nothing happens.
- Delay too short (1 s): one alarm per second in the VMS. Keep 30 s.
- The center of the box is what counts: a person with only their feet in the zone is not in it yet.

VMS Event Rule (section 3): when "IA-N: Intrusion" on the camera, notification to the guard post and bookmark.

When it works: caption "IA-N: Intrusion - Jardin", text *Intrusion in zone "Jardin" (animal)*, box on the animal.

5 Zone entry / exit

Know when an object enters or leaves a zone: door of a room, car park access, sensitive area. Two separate alarms, one for the entry, one for the exit.

Shape	Zone: polygon of 3 to 12 points; point tested = center of the box
Page	"Alarm rules > Zone entry / exit"; boxes "Entry / exit zone 1", "Entry / exit zone 2"... (8 at most)
VMS events	"IA-N: Zone entry" and "IA-N: Zone exit"
License	Premium (Standard or Precision)

Drawing in the VMS

- Page "Alarm rules > Zone entry / exit": in the box "Entry / exit zone ... (new)", field "Zone", type the name of the zone and place the points of the polygon.
- "Objects" = your choice.
- Draw the polygon over the area whose entry and exit you monitor.
- Apply: a new empty box appears for the next zone.

Useful settings and recommended values

Field (exact label)	Recommended value	Effect
"Objects"	People (door); Vehicles (car park access)	Only these objects count
Zone size	Large enough for the object to stay in it for at least half a second	The change of side is confirmed after 0.3 s
Delay (fixed, not adjustable)	2 s per object	An object hesitating at the edge does not give a burst of alarms
"Ignore stationary objects"	Ticked (default)	Stationary vehicle or animal at the edge of the zone: no alarm. Unticked: as in 1.2.0

Example on our demonstration cameras

1 · In the VMS client: zones "Porte" and "Accès" (real capture)



"Démonstration": zones "Porte" and "Accès", People. Exit from "Accès", then entry 6 s later: "IA-N: Zone entry - Accès". Captured with the plugin in French.

2 · Alarm reviewed in the archive · 11:31:04



Common mistakes

- Object first seen when already inside the zone: no "entry". The zone must start where the object is already visible.
- Zone too thin: the object crosses it between two analyzed frames and nothing is reported. For a simple passage, prefer a line (section 6).
- For a precise direction of passage: a line with an arrow rather than a zone.

VMS Event Rule (section 3): two rules if the entry and the exit are not handled the same way (e.g. entry = notification, exit = bookmark).

When it works: "IA-N: Zone entry - Accès" / "IA-N: Zone exit - Accès", texts *Entry into zone "Accès" (person)* / *Exit from zone "Accès" (person)*.

6 Line crossing

Alarm when an object crosses a line: gate threshold, property boundary, car park entrance. One direction or both are monitored.

Shape	Line: 2 points; point tested = bottom of the box (feet, wheels)
Page	"Alarm rules > Line crossing"; "Line 1" to "Line 6"
VMS event	"IA-N: Line crossing"
License	Premium (Standard or Precision)

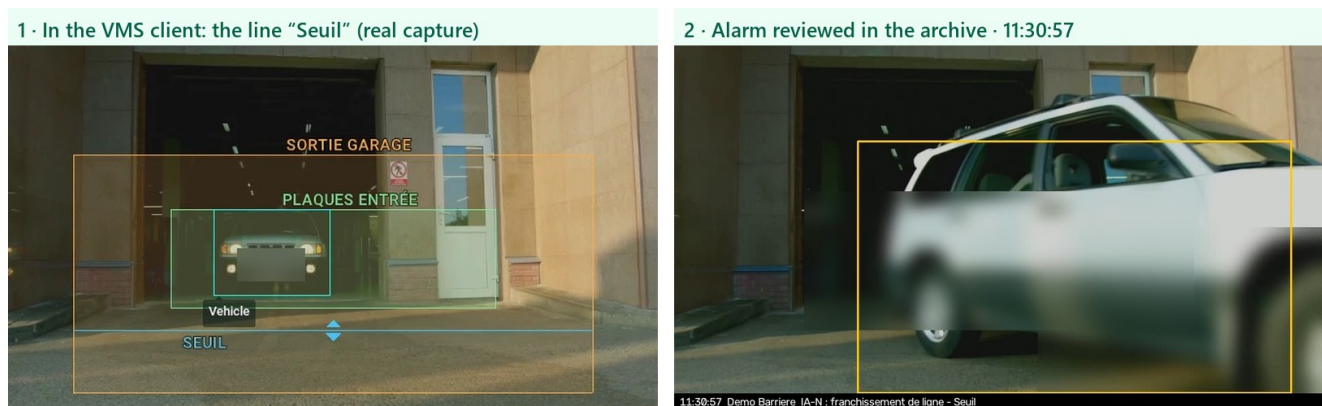
Drawing in the VMS

- Name the line (e.g. "Seuil") and draw it in the field "Line (2 points; arrow = monitored direction)", **on the ground**, where the feet or wheels pass, from one side of the passage to the other; then Apply.
- Arrow** = only one direction monitored; no arrow = both directions (the VMS then shows a double arrow).
- "Objects": People by default; tick Vehicles for a vehicle access.
- Do one pass in each direction: the alarm text says "direction A to B" or "direction B to A".

Useful settings and recommended values

Field (exact label)	Recommended value	Effect
"Objects"	People; Vehicles for a car park access	Only these objects count
Direction (arrow)	One direction for an entrance; both for a boundary	Crossings in the other direction are ignored
Delay (fixed, not adjustable)	2 s per object, plus a tolerance band around the line	An object hesitating on the line gives only one alarm

Example on our demonstration cameras



"Démonstration Barrière": line "Seuil" on the ground in front of the garage, Vehicles, both directions (double arrow in the middle of the line). Alarm "IA-N: Line crossing - Seuil". Captured with the plugin in French.

Common mistakes

- Line drawn at head or hood height: the point tested is the bottom of the box, so the line is never crossed.
- Line shorter than the passage: an object passing at its end does not cut it.
- Line right at the edge of the image: the object is not yet fully visible when it crosses.
- Reversed direction: check with a test pass and flip the arrow.

VMS Event Rule (section 3): when "IA-N: Line crossing", notification and / or bookmark. A line with tailgating also gives this alarm at each crossing (section 9).

When it works: caption "IA-N: Line crossing - Seuil", text *Crossing of line "Seuil" (vehicle, direction A to B)*, direction also given in the "Sens" attribute (direction).

7 Loitering

Alarm when someone stays too long in the same place: in front of a door, around vehicles, near a storeroom. Simply walking through does not trigger.

Shape	Zone: polygon of 3 to 12 points; point tested = center of the box
Page	"Alarm rules > Loitering"; boxes "Loitering zone 1", "Loitering zone 2"... (8 at most)
VMS event	"IA-N: Loitering"
License	Premium (Standard or Precision)

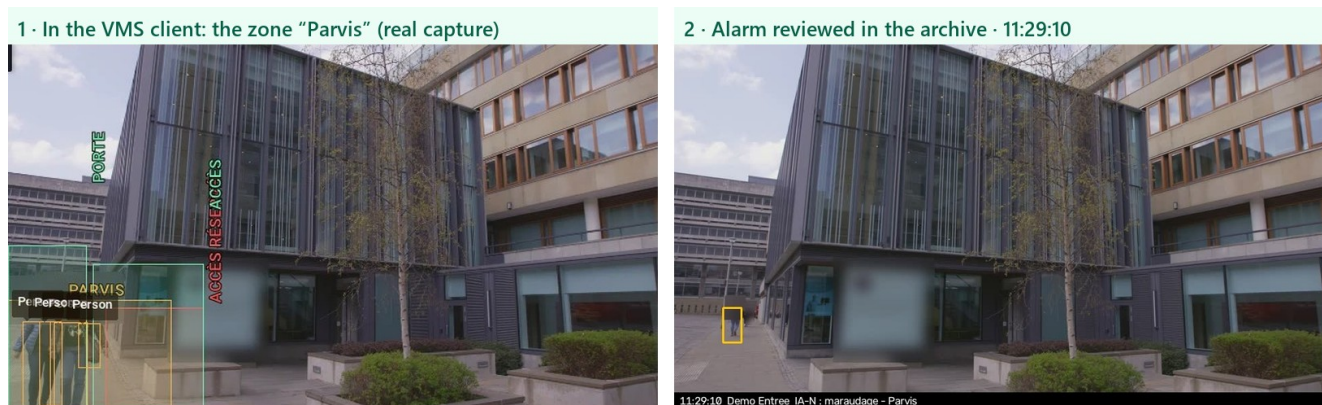
Drawing in the VMS

- Page "Alarm rules > Loitering": in the box "Loitering zone ... (new)", field "Zone", type the name of the zone and place the points of the polygon.
- "Objects" = People.
- Draw the polygon over the place where no one should linger.
- "Presence before the alarm (s)" = presence time before the alarm.
- Apply: a new empty box appears for the next zone.

Useful settings and recommended values

Field (exact label)	Recommended value	Effect
"Presence before the alarm (s)"	0 = 60 s; 30 s in front of an access door; 120 s or more where people normally wait	Continuous presence before the alarm; an absence of 2 s at most (object hidden for a moment) does not reset the counter
"Minimum delay between two alarms (s)"	0 = 60 s per object	Only one alarm per stay in the zone
"Objects"	People	Only these objects count
"Ignore stationary objects"	Ticked (default)	Person already there at the start and not moving: no alarm; a person who arrives counts. Unticked: as in 1.2.0

Example on our demonstration cameras



"Démonstration": zone "Parvis", People, duration 6 s (deliberately short: looping video). Alarm "IA-N: Loitering - Parvis". Another test, service station, duration 15 s: alarm for a person who stayed about one minute. Captured with the plugin in French.

Common mistakes

- Duration too short: every slow passer-by becomes a "loiterer". On a real site, not less than 30 s.
- Zone covering a bus stop, a terrace, a queue: continuous alarms. Leave these places out.
- Person who leaves the zone and comes back: the counter starts again from zero.

VMS Event Rule (section 3): when "IA-N: Loitering", notification and bookmark; the person has been there for the set duration, so make the bookmark start early enough.

When it works: caption "IA-N: Loitering - Parvis", text *Loitering in zone "Parvis": present for 6 s (person).*

8 Dwell time (parking)

Alarm when an object stays longer than allowed: vehicle parked in front of an emergency exit, on a delivery bay, in front of a garage.

Shape	Zone: polygon of 3 to 12 points; point tested = center of the box
Page	"Alarm rules > Dwell time"; boxes "Dwell time zone 1", "Dwell time zone 2"... (8 at most)
VMS event	"IA-N: Dwell time exceeded (parking)"
License	Premium (Standard or Precision)

Drawing in the VMS

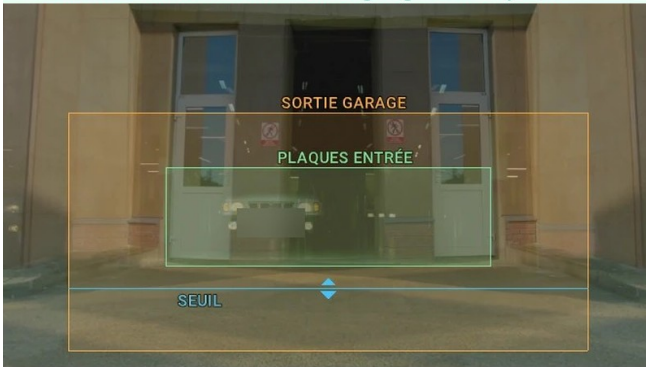
- Page "Alarm rules > Dwell time": in the box "Dwell time zone ... (new)", field "Zone", type the name of the zone and place the points of the polygon.
- "Objects" = Vehicles most of the time (default choice of this page).
- Draw the polygon over the forbidden spot only.
- Leave "Only if the object is stationary (no parking)" ticked for parking.
- With "Ignore stationary objects" (ticked too): only a vehicle that arrived and then stopped counts, not a vehicle already parked.
- Apply: a new empty box appears for the next zone.

Useful settings and recommended values

Field (exact label)	Recommended value	Effect
"Maximum duration (s)"	0 = 60 s; 300 s (5 min) for a no-parking area; 60 to 120 s in front of an emergency exit	Time stationary before the alarm
"Only if the object is stationary (no parking)"	Ticked (default)	A vehicle that is driving or maneuvering is never "parked". Unticked: simple presence, one alarm per stay
"Minimum delay between two alarms (s)"	0 = 120 s per spot	A vehicle still parked triggers again every 2 min at most, if "Ignore..." is unticked. No effect if "stationary" is unticked
"Ignore stationary objects"	Ticked (default)	Already parked at the start: never reported; arrives then stops: one alarm. Unticked: as in 1.2.0

Example on our demonstration cameras

1 · In the VMS client: the zone "Sortie garage" (real capture)



2 · Alarm reviewed in the archive · 11:30:52



"Démonstration": zone "Sortie garage", Vehicles, duration 3 s (deliberately short: looping video), "stationary" ticked. Alarm "IA-N: Dwell time exceeded (parking) - Sortie garage". Captured with the plugin in French.

Common mistakes

- "Stationary" unticked for parking: maneuvering vehicles count too.
- Zone that includes authorized spaces: every properly parked car gives an alarm.
- Duration too short: a stop of a few seconds (drop-off, delivery) triggers.
- People or Animals ticked: a person standing still in the zone counts too.

VMS Event Rule (section 3): when "IA-N: Dwell time exceeded (parking)", notification to the caretaker and bookmark to find the arrival.

When it works: caption "IA-N: Dwell time exceeded (parking) - Sortie garage", text *Parking / prolonged stop in zone "Sortie garage": vehicle for 3 s (Dwell time exceeded in zone... if "stationary" is unticked).*

9 Tailgating

Alarm when several objects cross a line in the same direction within a short time: two people behind a single badge, two cars under a single barrier opening.

Shape	Checkbox on a line (2 points); point tested = bottom of the box
Page	"Alarm rules > Line crossing" (checkbox of each line)
VMS event	"IA-N: Tailgating"
License	Premium (Standard or Precision)

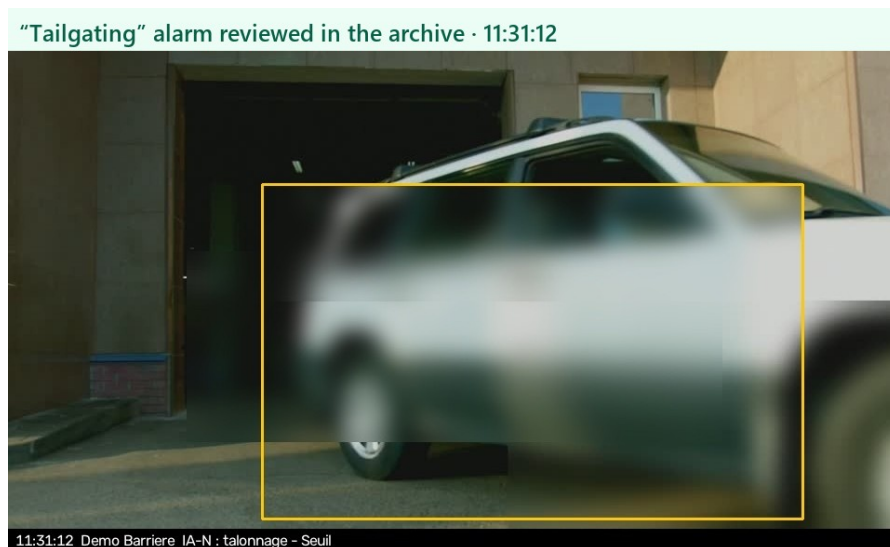
Drawing in the VMS

- Draw the line at the controlled passage (badge door, barrier), on the ground, as for a line crossing (section 6).
- Tick "Tailgating: alarm if several crossings in the same direction within a short time".
- Fill in "Tailgating: number of crossings" and "Tailgating: within (s)".
- Arrow in the entry direction to monitor entries only. Each direction is counted separately.

Useful settings and recommended values

Field (exact label)	Recommended value	Effect
"Tailgating: number of crossings"	2 (default)	2 crossings = 1 too many behind a badge
"Tailgating: within (s)"	8 s (default) for a badge door; according to the opening time for a barrier	Time window of the crossings
Delay (fixed, not adjustable)	30 s per line	After an alarm, the count starts again from zero

Example on our demonstration cameras



"Démonstration": ligne "Seuil", Véhicules, 2 crossings within 30 s (window widened for the video). Alarm "IA-N: Tailgating - Seuil". Captured with the plugin in French.

Common mistakes

- Window too long on a busy passage: two normal crossings 20 s apart trigger.
- Two people close together may be seen as only one: camera mounted high, facing the passage.
- Each crossing also gives "IA-N: Line crossing": to alert on tailgating only, put the notification on "IA-N: Tailgating" only.

VMS Event Rule (section 3): when "IA-N: Tailgating", immediate notification and bookmark.

When it works: caption "IA-N: Tailgating - Seuil", text *Tailgating on line "Seuil": 2 crossings in the same direction in less than 30 s.*

10 Crowd

Alarm when at least N people (or selected objects) are in a zone at the same time, for a certain time: gathering in front of an entrance, group on a car park at night.

Shape	Zone: polygon of 3 to 12 points; point tested = center of the box
Page	"Alarm rules > Crowd"; boxes "Crowd zone 1", "Crowd zone 2" ... (8 at most)
VMS event	"IA-N: Crowd"
License	Premium (Standard or Precision)

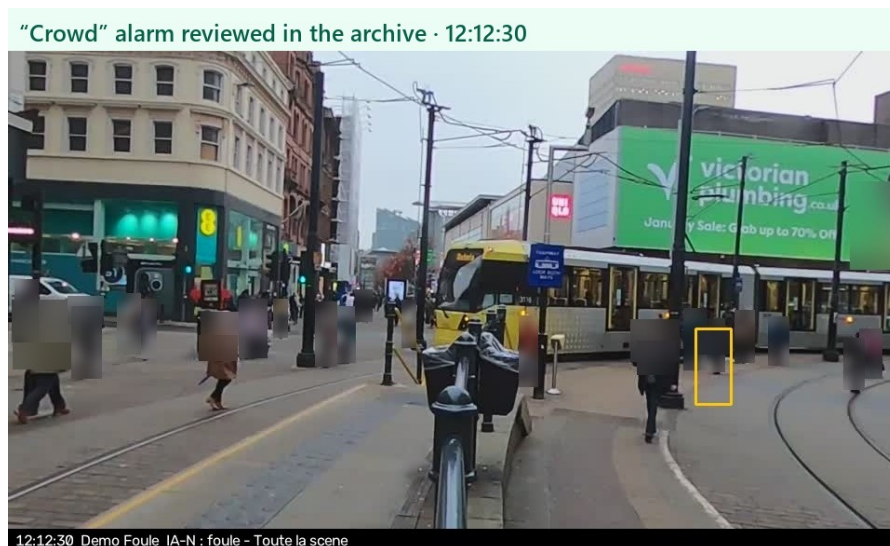
Drawing in the VMS

- Page "Alarm rules > Crowd": in the box "Crowd zone ... (new)", field "Zone", type the name of the zone and place the points of the polygon.
- "Objects" = People.
- Draw the polygon over the area to monitor.
- Fill in "Minimum number of objects" and "For at least (s)".
- Apply: a new empty box appears for the next zone.

Useful settings and recommended values

Field (exact label)	Recommended value	Effect
"Minimum number of objects"	5 (default, from 2 to 100); 3 at night on a closed car park; 10 or more in front of a shop	Number of objects present at the same time
"For at least (s)"	0 = 5 s	The group must stay this long; an absence of 2 s at most is tolerated
"Minimum delay between two alarms (s)"	0 = 60 s for the zone	At most one alarm per minute while the group stays

Example on our demonstration cameras



"Démo Foule", real street scene with a tram: zone "Toute la scène", People, N = 5, duration 5 s. Alarm "IA-N: Crowd - Toute la scène", text ... 5 person(s) for 65 s (threshold 5). Faces blurred. Captured with the plugin in French.

Common mistakes

- Distant or small people: in Standard, some of them are not seen, so not counted. Draw the zone on the near part of the image, or switch the camera to Precision.
- Tight group: people hidden by others are not counted. Set N a little below the target number.
- N too low in a busy place: an alarm at every rush hour.

VMS Event Rule (section 3): when "IA-N: Crowd", notification and bookmark; night schedule if the place is busy during the day.

When it works: caption "IA-N: Crowd - Toute la scène", text *Crowd in zone "Toute la scène": 5 person(s) for 65 s (threshold 5)*.

11 Excluded zones (privacy masks)

The "Excluded zones" page of the camera, available in **all tiers**: up to 8 polygons ("Excluded zone 1"...). **Nothing is analyzed behind them**: no box in the VMS, no alarm, no plate. For neighbors' windows, the public road, areas that do not concern the customer (data minimization, GDPR).

- Draw the polygon in the "Excluded zone ... (new)" box, then Apply: one more box appears.
- An object is discarded if its feet (middle of the bottom of the box) are in the excluded zone, or if at least half of its box is covered.
- An excluded zone is **never** a detection zone: it triggers nothing.
- The VMS always records the whole image: to hide the image itself, also use the camera's privacy mask.

12 License plates

License plate reading: vehicles at walking pace (access, barrier, car park), not roads or motorways. Dedicated camera, framed on the passage; French plates (current format and old format). **The graphics card speeds up detection, not plate reading:** plates are read on the CPU. Continuous traffic or one vehicle every 10 s: not recommended.

Shape	Page "License plate reading", polygon "Plate zone (plates are only read inside it)"
VMS event	"IA-N: License plate read"
License	Plates option: 1 camera = 1 license, taken only if "Read license plates on this camera" is ticked

Setting up in the VMS

- Tick "Read license plates on this camera".
- Draw "Plate zone (plates are only read inside it)" **tight**, where the plate passes **large and sharp**, head-on (in front of the barrier): not over the car park, not over the whole lane.
- Have the **primary stream** analyzed, at least 1280 pixels wide (choice of the analyzed stream in the camera settings of the VMS). Otherwise the VMS shows "License plate reading: the analyzed stream is ... (secondary stream)... have this camera's PRIMARY stream analyzed."
- Fixed rules: reading only inside the polygon and only when a vehicle **moves** in it; parked cars are **never** read; several frames vote before giving a plate.

Golden rule: TIGHT polygon, where the plate is large and sharp. A large polygon costs more computing at each read, without reading better. If it is too large (wider than about 1,600 pixels, or more than 0.8 million pixels, in full resolution), the VMS shows it: "License plate reading: the plate polygon is large (... px in full resolution): each read costs more computing. Tighten it where the plate passes large and sharp (zone setup guide)." To read well: **camera dedicated to plates**, framed on the passage, **short exposure time** set in the camera (motion blur is not corrected by the software).

Vehicle passage settings

When a moving vehicle arrives in the plate zone, the camera is analyzed **faster** for the duration of the passage (never faster than the camera sends its frames), then returns to its normal rate. More frames during the passage = more chances of getting the plate large and sharp.

Field (exact label)	Recommended value	Effect
"Frames/s while a vehicle passes"	15 (default, from 10 to 25); raise toward 25 if plates are missed at a car park entrance	Analysis rate during the passage, then back to the normal rate
"Hold after the vehicle leaves (s)"	1 s (default, from 0 to 5)	Time kept at the passage rate after the vehicle leaves
"CPU ceiling for plate acceleration (%)" (integration settings, "Processing" group)	80 (default, from 50 to 95), all cameras	If the server CPU is already loaded beyond it, the passage is analyzed at the normal rate

GDPR: a license plate is personal data. Read plates **only** where it is necessary (minimization): few cameras, polygon limited to the vehicle passage; short retention in the VMS (30 days at most unless there is a justified reason); information of the people concerned (sign). In documents and captures, plates always masked: **AB***CD** (the plugin log only keeps masked plates).

Example on our demonstration cameras



1-2 · "Démo Barrière": "Plaques entrée", primary stream; plate read "IA-N: plate AA***AA" (masked here), also added to the vehicle ("Plaque" attribute, i.e. plate). 3 · Real capture: forgotten polygon (see mistakes). Faces and plates blurred. Captured with the plugin in French.

Common mistakes

- **Forgotten polygon** (image 3): "Plaques allée" was left on another camera, checkbox unticked (nothing read, no license taken). No plate polygon where there is nothing to read.
- Secondary stream analyzed: nothing is read (message above in the VMS).
- All Plates licenses taken: "License plate reading: the license covers ... plate camera(s), all already in use. Order the Plates option for this camera."
- Checkbox ticked without a polygon: the VMS asks you to draw the plate polygon; nothing is read.
- **Polygon too large** (whole lane, whole car park): more computing at each read and a warning in the VMS. Tighten it on the passage.
- **Blurred plates**: exposure time of the camera too long. Set it short in the camera; raising "Frames/s while a vehicle passes" does not correct the blur.
- **Road, expressway, motorway**: outside the scope of the plugin's plate reading.

On screen: Camera Settings in the VMS, "Integrations" tab, setting of the stream analyzed by the integration: choose the primary stream (high resolution) for a plate camera; the secondary stream for the other cameras.

VMS Event Rule: when "IA-N: License plate read", bookmark to find the passage, notification if needed.

When it works: caption "IA-N: plate AB***CD" (full plate in the VMS, masked here), text *Plate read on ... good frame(s) (... reads)*; the plate is added to the vehicle in the object list ("Objects" tab).