# HOW TO.

## Configure Tailgating using AXIS People Counter in AXIS Camera Station Secure Entry.



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### Introduction

This document explains how to integrate an Axis camera running the AXIS People Counting analytic into an access control system to assist with Tailgating. The purpose of the integration is to enforce badge in/out at an entrance/exit.

Normally AXIS People Counter (APC) will trigger only if two or more people cross the boundary within a set amount of time. With the access control integration, a valid credential read will allow one person to pass the boundary during a set amount of time, if another person badges in, the system will allow two people to pass, and so on.

1st badge, allowed count incr allowed count user 11 12 13 14 15 16 17 18 19 Third badge timed out after 10 seo 20 21 22 23 24 alarm 25 26 27 28 29 30

The below sequence diagram shows how the shunting works

#### Prerequisites

AXIS A1610/A1210 Door Controller 11.8.75.6 or later

AXIS Camera Station Pro 6.2 or later

AXIS People Counter supported Camera

AXIS People Counter ACAP

AXIS People Counter License key

Please note that Axis doesn't take any responsibility for how this configuration may affect your system. If the modification fails or if you get other unexpected results, you may have to restore the settings to default.

#### Step 1 – Adding/updating & setting up devices

Start by adding the unit(s) to Axis Camera Station and ensuring that they are running the latest firmware. For the devices used we require the use of HTTPS for end-to-end security, these devices should also use ACS as an NTP. Only the door controller is required to be added to Axis Camera Station, but the intercom or camera can be added. Ensure either way that all devices are on the latest firmware.

#### To add the devices

Follow these steps if you need to add the devices:

- 1. In Axis Camera Station open the configuration tab via the "+" symbol found at the top of the screen.
- 2. From the left menu select "Devices" and under this drop-down select "Add Devices"
- 3. On this page if the units are in your network, you should see them, if they are missing then you can try do a manual search via the button "Manual Search". If they still cannot be found, please check the units are powered and are on the same network.
- 4. If the units are greyed out, this means they require the password for the unit, this is entered by clicking on the "Enter password" under status for the unit.
- 5. Once you see the units you wish to add, you can hold down the "ctrl" key and select the units, then click add found on the bottom left.
- 6. Follow the pop-up wizard to add these devices

Add devices	?	-		×
Choose how to configure your devices				
Quick configuration				
$\bigcirc$ Site Designer configuration				
✓ Use hostnames instead of IP when possible				
Help < Back	Next >		Cance	el

#### To update the devices

Follow these steps to update your devices:

- 1. In Axis Camera Station open the configuration tab via the "+" symbol found at the top of the screen.
- 2. From the left menu select "Devices" and under this drop-down select "Management"
- 3. From this page hold "ctrl" and select the devices, once selected press the update firmware button.
- 4. In the popup select the latest firmware in the list for each device (for the A1601 ensure to select the latest Secure Entry track) and press "OK"
- 5. The update can be monitored via the "tasks"

			Upgrade Firmware		?	-		×
Select firmwa	are versi	ons for u	ıpgrade					
Check for Updates	Browse							
Model	Quantity	Firmware	Upgrade	Туре				
AXIS A8207-VE	1	10.9.4	10.9.4 (Active, Download)	- Standard	-			
Select / Deselect a	11			Latest check for upd	ates: 16/02	/2022 1	11:09:	55
				Hole	OK		Canac	
				Неір	UK		cance	4

#### To setup the devices

Follow these steps to setup your devices:

- 1. In Axis Camera Station open the configuration tab via the "+" symbol found at the top of the screen.
- 2. From the left menu select "Devices" and under this drop-down select "Management"
- 3. Right click on the device and select "Security HTTPS Enable/Update"

Manage dev	vices 🗟 🕐 🐵 <table-cell-rows> 🐇</table-cell-rows>	G	
Name	MAC address	Status	Address
AXIS A1601 SE	ACCC8EB362F8	ОК	<u>192.168.1.219</u>
	Assign IP Address Configure Devices User Management	•	
	Security	HTTPS	Enable/Update
	Upgrade Firmware	IEEE 802.1X ►	Disable
	Set Date and Time	Certificates 🔸	
	Restart		
	Install Application		
	Collect Device Data		
	Connection	•	
	Reload Tag Devices	_	

4. This will create a task in the task and alarms, once this has completed, HTTPS is enabled on this device.

Alarms Tasks				
Name	Start	Message	Owner	Progress
➡ Enable HTTPS	10/10/2022 09:58:31	Enabling HTTPS	AXISNVR-2ORNKR	
				6

5. Next to setup is the time & date on the device, we do this but right clicking on the device in Devices – Management and selecting "Set Date and Time..."



6. In the pop-up select yes, In the next pop-up under "Time Mode" choose the first option, "Synchronize with server computer time"

Date and Time Settings ? 🗙	:
Device time 10/10/2022 10:07:18	
Time zone	
(UTC+01:00) Amsterdam, Berlin, 🔻	
Automatically adjust for daylight saving time changes.	
Time mode	
Synchronize with server computer time	
10/10/2022 10:07:21	
O Synchronize with NTP server	
192.168.1.194	
O Set manually	
10/10/2022 10:06:15	
Help OK Cancel	]

7. This will then add a task in the task and alarms, once completed the time will now be synched with the computer server time.

Alarms Tasks				
Name	Start	Message	Owner	Progress
➡ Set date and time	10/10/2022 10:08:41	Restarting devices	AXISNVR-2ORNKR	

#### Step 2 – How to create/edit a schedule

#### Creating/editing a schedule to use in Secure Entry

These schedules would be used for setting specified time periods for identification profiles and access times for cardholders or door unlock schedules.

Follow these steps to create a schedule:

- 1. In Axis Camera Station open the configuration tab via the "+" symbol found at the top of the screen.
- 2. From the left menu select "Recording and events" and under this drop-down select "Schedules"
- 3. To edit a schedule, highlight the schedule you wish to edit, if you wish to create a new schedule, press new.
- 4. To edit this schedule hold and drag the cursor along the time for each day that you want the schedule to be running. Blue highlighted will be the active times on each day.
- 5. Once you are happy with your schedule you can provide it with a new name in the name field and click apply.

Schedules		Type to search
Name Used		
Office Hours		
Weekends		
New schedule		
		New Remove
Name: Office Hours		
Week schedule	Override schedule Add	
Tuesday		
Wednesday		
Thursday		
Friday		
Saturday		
Sunday		
	Apply	

#### Step 3 - Creating a door

#### To create a door

If you already have a door in your system that you wish to apply Tailgating too, please move to the next step.

Follow these steps to create a door:

- 1. In Axis Camera Station open the configuration tab via the "+" symbol found at the top of the screen.
- 2. From the left menu select "Access control" and under this drop-down select "Doors and zones"
- 3. On this page press "+ Add door" and in the pop-up give the door a relative name and select the A1601 door controller in the second drop down, then press "Next".
- 4. "Proceed to configure the locks with the correct relay, door monitors and readers, then press "Save

Configuration × 🕽 Access managem	ient 💭 A1210 Assist and Monitor 🕂	::=
Type to filter	E Save Cancel 🚯 Copy configuration 🗸	
📽 Devices	Doors > Edit door	
Add devices Cameras Other devices	Cheruine Door withings 0 Door calvinder Patients Door type and an anti-anti-anti-anti-anti-anti-anti-anti-	Sensors
Stream pronies Image configuration PTZ presets Management	All O ALE OF AND OBSERVED OF A DOOR	Cour position arriver
External data sources Time synchronization	Sentration public PN V	
Storage Recording and events		
료 Recording and events Client Connected services	Side A + Adf → j <sup>2</sup> Edf : B famous	Side 8 + Ad ∨ ∠ Edi ⊜ Parina
Server	RD 050P reader	□ fit REX device
E Licenses		
Security		
Access control		
Doors and zones Identification profiles Card formats and PIN		
Multi server		
C Smart search 2		
✦ System Health Monitoring		

#### **Step 4– Install AXIS People Counter**

#### **To install AXIS People Counter**

Follow these steps to install AXIS People Counter ACAP

- 1. On AXIS.com search for AXIS People Counter and select the link
- 2. On the webpage select "Download"



3. Then click the download link, (this requires an AXIS.com account) and select your camera model



The application can be installed on compatible Axis cameras with firmware 5.7 or higher. If your camera does not have the latest firmware, see **how to upgrade** the firmware and then find the latest firmware for your camera **here**.

4. From AXIS Camera Station go to Configuration -> Devices -> Management, select the camera to be used and press the ACAP Puzzle button.

						-				
Configuration × 🅀 AXIS M4216-LV	AXIS M42	216-LV Q Data search	Access mana	gement 🚺 Internal	Access Control - R					
Type to filter	Manage	devices								
% Devices	🗗 A .	🛓 🖾 ወ 🐢 🖪								
Add devices		······································								
Cameras	7 devices, 1 select	ted								
Other devices	Name	MAC address	Status	Address	Manufacturer	Model	Firmware	DHCP	HTTPS	Server
Stream profiles	AXIS A12	0 D6A44F625F7	a ok	192.168.1.211	Axis	AXIS A1210	11.8.75.5	Yes	01	PCCZC3077HS2
Image configuration	AXIS A161	10 B8A44F49545	5 ОК	192.168.1.208	Axis	AXIS A1610	11.8.75.6	Yes	On	PCCZC3077HS2
PTZ presets	📋 AXIS A916	51 B8A44F5CC7C	- 4 OK	192.168.1.199	Axis	AXIS A9161	1.84.3	Yes		PCCZC3077HS2
Management	📋 AXIS A918	38/-VE ACCC8EFC828	D OK	192.168.1.201	Axis	AXIS A9188/-VE	1.84.2	Yes		PCCZC3077HS2
External data sources	📋 AXIS A921	IO B8A44F9DE24	1 ОК	192.168.1.230	Axis	AXIS A9210	11.8.75.6	Yes	On	PCCZC3077HS2
Time curchropization	AXIS M42	16-LV B8A44F48626	5 ОК	<u>192.168.1.213</u>	Axis	AXIS M4216-LV	11.9.60	Yes	On	PCCZC3077HS2
							Install App	lication		? _ <b>- ×</b>
a stoluge					Select applicati	ion				
Secording and events					<u> </u>					
딸 Client					O AXIS Video Mo	tion Detection 4				
<ul> <li>Connected services</li> </ul>					O AXIS Video Cor	itent Stream				
Server					Browse to App	lication				
					Application file:					Browse
ICENSES	<b>N</b>									
🔁 Security										
Q Smart search 2										
Access control									N	ext > Cancel

- 5. In the popup, select "Browse to Application" and select the AXIS People Counter ACAP we downloaded in the previous step, then follow the installation wizard.
- 6. During the installation you will be requested to provide your license for the ACAP. This can also be added directly on the web interface of the camera.



#### NOTE

Other settings such as install height will need to be configured for more accurate detections, please see the People counter installation guide on AXIS.com

#### Step 5 - Enabling Access Control integration in the camera

#### To Enable Access Control in the camera

Follow these steps to enable Access Control in the camera:

 In AXIS Camera Station go to Configuration -> Devices -> Management and click on the address link to enter the webpage of the camera with AXIS People Counter ACAP installed.

🗘 Configuration 🗙 🏵 AXIS M4216-LV	AXIS M4216-LV	Q Data search	Access management	t 📗 Internal Acce	ess Control - R					
Type to filter	Manage devi	ces								
🕦 Devices	🛨 🕄 🚣 🖏	Ø 🖲 😫	56							
Add devices	7 devices, 1 selected									
Cameras	Name	MAC address	Status	Address	Manufacturer	Model	Firmware	DHCP	HTTPS	Server
Other devices	AXIS A1210	B8A44F625F7A		<u>192.168.1.211</u>	Axis	AXIS A1210		Yes		PCCZC3077HS2
Stream profiles	AXIS A1601	ACCC8EB362F8		<u>192.168.1.219</u>	Axis	AXIS A1601	11.8.75.5	Yes		PCCZC3077HS2
Image configuration	AXIS A1610	B8A44F495455		<u>192.168.1.208</u>	Axis	AXIS A1610		Yes		PCCZC3077HS2
PTZ presets	AXIS A9161	B8A44F5CC7C4		<u>192.168.1.199</u>	Axis	AXIS A9161	1.84.3	Yes		PCCZC3077HS2
Management	AXIS A9188/-VE	ACCC8EFC82BD		<u>192.168.1.201</u>	Axis	AXIS A9188/-VE	1.84.2	Yes		PCCZC3077HS2
External data assures	AXIS A9210	B8A44F9DE241	ок	192.168.1.230	Axis	AXIS A9210		Yes		PCCZC3077HS2
	AXIS M4216-LV	B8A44F486265	ок	<u>192.168.1.213</u>	Axis	AXIS M4216-LV	11.9.60	Yes	On	PCCZC3077HS2
Time synchronization										

2. From the WebGUI go to System -> Plain Config

System	^
Time and location	_
lain config	
aintenance	

3. On this page, search for "badge" in the Search for parameters by ID field

Plain config	
A Plain config is for expert users only.	Only change the settings if you know what you're doing.
Select group	Search for parameters by ID
None 🔹	badge

4. Next in the next menu under Development0 tailgating badge event, change the current value from 0 to 1.

Tvpc         Development0 tailgating badge event         1         Feature0 tailgating badgetime in         10         Feature0 tailgating badgetime out         10	) To see the effect of your changes, you might have	e to refresh the webpage or restart the device.
Development0 tailgating badge event 1 Feature0 tailgating badgetime in 10 Feature0 tailgating badgetime out 10	Түрс	
Feature0 tailgating badgetime in 10 Feature0 tailgating badgetime out 10	Development0 tailgating badge event	
10       Feature0 tailgating badgetime out       10	Feature0 tailgating badgetime in	
Feature0 tailgating badgetime out           10	10	
10	Feature0 tailgating badgetime out	
	10	

5. In this same window we can set the Badge in and badge out times This is the time that each person that scans their badge will have to pass the boundary. If the time expires and the person passes the boundary, the alarm will trigger. After these settings have been changed, scroll down to the bottom of the page and hit "Save".



6. Now, navigate back to the App page and restart the ACAP by toggling the Action Button.

Status							
D Video							
al. Audio		+	Add app Find more apps	Allow unsigned apps () Allow root-privileged	apps	۵	
Recordings							
S Apps			AXIS Barcode Reader     Wersion: 1.1-2     Avis Communications	License: valid until 2024-02-15	Open		
A Maintenance			Alarm Tone Med Detector				
			Version: 3.8-5 Sound Intelligence	License: valid	Open		
			AXIS License Plate Verifier      Wirston: 2.8-4     Auis Communications	License: valid	Open		
			AXIS Loitering Guard     AXIS Loitering Guard     Version: 2.3-2     Auis Communications	l	Open		
			AXIS Object Analytics      AXIS Constraints     Version: 10-19     Avis Communications	١	Open		
			AXIS People Counter	License: valid until 2024-03-15	Open	:	
			AXIS Video Motion Detection     Original AXIS Control Action Version: 4.5-6 Axis Communications		Open	:	

#### **Step 6- Dynamic Overlay (Optional)**

#### To enable dynamic overlay

These steps are completed from the WebGUI of the camera.

Follow these steps to create a dynamic overlay:

1. For the overlay display, dynamic overlay text needs to be enabled. Go to Video -> Overlays Stream settings, enable the overlay and add the #D modifier.

Status	Overlays
⊐ Video ^	
辞 Installation	Text •
🖬 Image	
ঞ) Stream	T <sup>#D</sup> White L48
ᅜ Overlays	White [ 40
View areas	#D
Privacy masks	<b>*D</b>
📶, Audio 🗸 🗸	
Recordings	
🗱 Apps	Modifiers 🛱 🕓
錄 System 🗸 🗸	
A Maintenance	

2. Next go to System -> Events press Add Rule

Status						
		Rules	Recipients	Schedules	Manual triggers	
🔐 Audio		+	Add a rule	ן		
Recordings			_	J		
🗩 Apps						
System	^					
Time and location						
Network						
Security						
Accounts						
Events						
📓 ΜΩΤΤ						
🗟 Storage						
🕞 Stream profiles						
ONVIF						
Analytics metadat						
Ø Detectors						
ປ້ Accessories						

3. In the popup, give this a recognizable name such as "Tailgating Overlay," for the condition select "TailgatingDetector-NoBadgeIn", For the action choose "Use Overlay Text" and select the correct view area. Finally type the overlay text you wish to have and the duration it should be displayed when the event it triggered.

Edit rule	
✓ Use this rule	
Name Tailgating Overlay	
Wait between actions (hh:mm:ss) 00:00:00	
Condition	
Use this condition as a trigger	
TailgatingDetector-NoBadgeIn	-
+ Add a condition	
Action	
Use overlay text	•
Video channels	
View Area 1 × ×	•
Text	
Tailgating	0
Duration 00:00:05 HH:MM:55	
Cancel Sa	ve

#### Step 7 – Adding People Counter badgeIn event.

#### To Configure the People Counter badgeln event.

Follow these steps to create a people counter event:

1. In AXIS Camera Station navigate to Configuration -> Recordings and events -> Action Rules, on this page press New bottom right.



2. In the pop for the tigger select "Add" followed by Device Event

			Add Trigger ? X
	Edit Rule 7 🗙	Trigger	
<u>Steps</u> Triggers Actions Schedule Details	Triggers         Triggers describe when a rule should become active.         All triggers must be active simultaneously to trigger the actions         Add	Motion detection Active Tampering Alarm AXIS Cross Line Detection System Event and Error Input/Output	in sype disges of events from the second other devices cameras and other devices. This trigger is for advanced users and can be used if no other trigger is applicable.
	Edit       Remove       Help     Cancel       Kext	Device Event Action Button External HTTPS	Help OK Cancel

3. Next in the pop-up configure the event trigger, selecting the correct controller, the event type as "Access request granted" then choosing the door side and door name. Then press OK. Then Next.



4. Now we can create the action, select "add" and choose "Send HTTP Notification."

				Add Action ? X
	Edit Rule	? ×	Action Record Raise Alarm Set Output	Description Send a notification to a camera, a door controller or an external web server.
<u>Steps</u> Triggers Actions Schedule Details	Actions Define the actions that should be carried out when this rule is active. All the actions you specify here will be carried out every time.	Add Edit Remove	Send E-mail Live view Send HTTP Notification Siren and light Send mobile app notification Turn rules on or off	
	Help Cancel < Back Next >	Finish		Help OK Cancel

5. In the new pop-up enter in the URL - <u>http://>IP>/local/people-counter/.api?badge in</u> replacing the IP with the cameras IP, followed by ticking the "authentication required" and providing the credentials for the camera. Click Ok then Next.

Note. - <u>http://>IP>/local/people-counter/.api?badge\_out</u> can also be used for the opposite direction

Edit Send HTTP Notification Action ? X		Edit Rule	? X
URL: http://192.168.0.79/local/people-counter/.api?badge_in  Authentication required Username: root Password: •••••	<u>Steps</u> Triggers Actions Schedule Details	Actions Define the actions that should be carried out when this rule is active. All the actions you specify here will be carried out every time. Send HTP notification to 'http://192.168.0.79/local/people- counter/.api?badge_in'	Add Edit Remove
Advanced >> Test Help OK Cancel		Help Cancel < Back Next >	Finish

6. Now you can choose the schedule you wish this to follow and the name of the rule we have created.

	Edit Rule	? <b>&gt;</b>	٢		Edit Rule	?	×
<u>Steps</u> Triggers Actions Schedule Details	Schedule If necessary, specify a schedule that defines when this rule should be active. Always Custom schedule: Office Hours Edit New			<u>Steps</u> Triggers Actions Schedule Details	Details Entering a name and click 'Finish' to create the rule. Name: Badgeln Triggers: Device event trigger on AXIS A1610 (Access request granted) Schedule: Always on Actions: Send HTTP notification to 'http://192.168.0.52/local/people- counter/.api?badge_in'		
	Help Cancel < Back Next > F	inish			Help Cancel < Back Next >	nish	

#### Step 8 – Tailgating Alarm in AXIS Camera Station Secure Entry

#### To configure the Tailgating Alarm

Follow these steps to make a cardholder exempt:

1. In AXIS Camera Station navigate to Configuration -> Recordings and events -> Action Rules, on this page press New bottom right.

Configuration × 🕀 AXIS M4216-LV	💭 AXIS MAIZHEAV 🔍 Qi ala sawath 📗 Access managammat 📳 Internal Access Control - RMAXIW ACCESS Control - RMAXIW	
Type to filter	Action rules	
Se Devices	A control and and an analyse watching program, actions, and schedular.	Type to filter
Storage		
Recording and events		
Schedules		
Recording method		
Action rules		
🛱 Client		
Connected services		
E Server		
Licenses		
Security User permissions		
Certificates		
C Smart search 2	Click new to create an advanced wide for recording sending enable or mixing	
🔸 System Health Monitoring	alarma, etc.	
Access control		
		IL Copy Remove

### How to configure Tailgating using AXIS People Counter in AXIS Camera Station Secure Entry.

2. In the pop for the tigger select "Add" followed by Device Event

				Add Trigger ? X
<u>Steps</u> Triggers Actions Schedule Details	Edit Rule Triggers Triggers describe when a rule should become active. All triggers must be active simultaneously to trigger the actions	? X dd dit	Trigger Motion detection Active Tampering Alarm AXIS Cross Line Detection System Event and Error Input/Output Device Event Action Button External HTTPS	Description This type triggers on events from cameras and other devices. This trigger is for advanced users and can be used if no other trigger is applicable.
	Help Cancel < Back Next >	Finish		Help OK Cancel

3. Next in the pop-up configure the event trigger, selecting the correct camera, the event type as "TailgatingDetector-NobadgeIn". Then press OK. Then Next.



4. Now we can create the action, select "add" and choose the action you want, for this example I will be choosing "Raise Alarm" giving the alarm a title, description, and duration. Then pressing OK.

Edit Alarm Action ? X		
Alarm message Title: Tailgating Detected Description: Tailgating has been detected on the Main door	Edit Rule	? <b>X</b>
Duration (s): 10	Steps         Actions           Triggers         Define the actions that should be carried out when this rule is active.           Actions         All the actions you specify here will be carried out every time.           Schedule         Raise alarm 'Tailgating Detected'	Add
On alarm show alarm procedure:  File name:  Preview Upload	Details	Edit Remove
Help OK Cancel	Help Cancel < Back Next :	Finish

5. Now you can choose the schedule you wish this to follow and the name of the rule we have created.



## **Considerations and limitations**

- 1. The use of the A1610/A1210 requires HTTPS to be enabled.
- 2. To ensure accurate detections from the People counter ACAP check the installation guide.
- 3. Disconnection between the devices and the server can lead to missed detections.