

# AVIGILON™



## Avigilon Unity Video

### Occupancy Counting Setup Guide



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# Occupancy Counting

This feature counts the number of people or vehicles in a facility to reduce the need for manual counting and guesswork, particularly for facilities with multiple entry and exit points. The Reports dashboard in Unity Cloud Services (UCS)/ACS provides a comprehensive overview of a location's occupancy within a chosen time period, valuable for efficiently managing staff resources.

This guide provides instructions on setting up events and rules in the Client, and also includes defining maximum occupancy limits in UCS/ACS.

# Configuring Occupancy Counting Events

To determine occupancy as people or vehicles enter and exit an area, create an Enter occupancy area and Exit occupancy area analytic event for each camera that contains an entrance or exit in its field of view. Entrances and exits can include doors, elevators, stairwells, and hallways.




An occupancy area might be a room, a floor in a building, or a building. If you have multiple areas to monitor, you can label each occupancy area. Ensure that each entry and exit event uses the same Occupancy Area to link all cameras and events to the same area.



## NOTE

Occupancy events will not appear in FoA. Create a rule and an alarm to view occupancy events as a red hexagon in FoA.

## Step 1: Create an Entry Event

1. In the New Task menu , click **Site Setup**.
2. Select a camera, and then click **Analytic Events** .
3. Click **Add**.
4. Enter a name. For example, enter *Person Entering Cafeteria*. This name should be unique throughout the Avigilon Unity Video site.
5. Select the **Enabled** check box. If the check box is clear, the analytics event will not detect or trigger any events.
6. From the Activity: drop-down list, select **Enter occupancy area**.
7. In the Occupancy Area box, enter a name for the area or select an existing Occupancy Area from the list. For example enter *Cafeteria*.  
The area name will appear on the  Reports page in UCS/ACS.
8. From the Object Types: drop-down list, select **Person** or **Vehicle**. We will choose *Person* to align with our example.
9. Adjust sensitivity, as desired. Sensitivity refers to the likeliness of an object to trigger the event. The greater the sensitivity, the more likely an event will be triggered for objects detected with low confidence.
10. Set the Timeout. Timeout is the maximum duration of the event. Events that are still active after this time will trigger a new event.
11. In the area of the camera's field of view, click the green arrow and draw a line to define the Occupancy Area and entry direction.



## TIP

Think of this line like a trip wire. It only detects events if the bottom of a bounding box crosses it. Position the line along the floor, where the bottom of the bounding box is detected. Avoid extending the line to positions where a security guard or personnel may be standing.

12. Click **OK** to save the event.

## Step 2: Create an Exit Event

1. In the Analytic Events dialog, click **Add**.
2. Enter a unique name (for example, Person Exiting Cafeteria) and select the **Enabled** check box.  
If the check box is clear, the system will not detect or trigger any events.
3. From the Activity: drop-down list, select **Exit occupancy area**.
4. In the Occupancy Area box, name the Occupancy Area or select an existing Occupancy Area from the drop-down list. Use the name selected or entered in the Step 1 procedure.
5. From the Object Types: drop-down list, select **Person** or **Vehicle**. We will choose *Person* to align with our example.
6. Set the sensitivity and timeout.
7. In the camera field of view, draw a line to define the Occupancy Area and exit direction. Use the same guidelines as above.
8. Click **OK** to save the event.
9. Follow the Step 1 and Step 2 procedures for each camera that has an entrance or exit in its field of view.





### IMPORTANT

To record activity, ensure that the recording mode is set to *Continuous* or *Motion*. Alternatively, create a rule and alarm.

After events are validated, you can configure the maximum occupancy and view live results using UCS/ACS.


# Configuring an Occupancy Counting Event Rule

While not necessary for occupancy counting setup, you can create a rule to alert security operators about an occupancy counting event; for example, open a live view on a security operator's camera. Consider configuring multiple rules to define multiple entry and exit points to the same area or building.

1. In the New Task menu , click **Site Setup**.
2. Select your site, and then click  **Rules**.
3. Click **Add**.
4. In the Select Rule Event(s) area, under Device Events:
  - a. Select **Video analytics event started** and **Video analytics event ended**.
  - b. Click the **any video analytics event** blue link and then select **Any of the following video analytics events**.
  - c. Select the entry event you created in [Configuring Occupancy Counting Events on page 5](#), and click **OK**. Using our example, we would select *Person Entering Cafeteria*.
  - d. Click the corresponding **any camera** blue link, and select **Any of the following cameras**:
  - e. Select one or more cameras that will trigger the rule action, and then click **OK**.
  - f. Repeat the above steps for the **any video analytics event ended** blue link and choose the exit event created in [Configuring Occupancy Counting Events on page 5](#). Using our example, we would select *Person Exiting Cafeteria*.
  - g. Click the corresponding **any camera** blue link, and choose the cameras selected in Step e, and then click **OK**.
5. Click **Next**.
6. (Optional - This step is not necessary for occupancy counting monitoring, but can be used as an add-on action to an event. For example, when someone enters the school gym equipment room.) In the Select Rule Action(s) area:
  - a. Under Monitoring Actions, select **Start live streaming**.
  - b. Click **the camera linked to the event** blue link, and choose the cameras that will start live streaming when the event occurs.
  - c. Click the **all users** blue link and select the users, and then click **OK**.
7. Click **Next** until the Select Rule Properties dialog appears.
8. Add the rule name, description, and choose a schedule.
9. Select the **Rule is enabled** check box.
10. Click **Finish** and then click **Close**.

# Validating the Analytic Events




To verify and validate events:

1. Enter and exit an area in the field of view of a configured camera.
2. Perform an Event search to verify that both events were detected:
  - a. In the New Task menu , click **Event**.
  - b. Select cameras and enter a date range.
  - c. Select **Classified Object**, and click **Search**.



# Configuring Occupancy Settings in UCS/ACS

Specify the maximum occupancy for a site or area to ensure that the Entry Control Screen displays up-to-date data.

1. On the  **Reports** page, select a site or area.
2. In the top-right corner, click , and then click  **Settings**.
3. Enter the **Maximum Occupancy**.
4. *Sites only*. Enter when the occupancy should reset to 0 in the **Reset occupancy daily at** box.
5. Click **Save**.



## TIP

You can set different maximum occupancies for each area and for the site as a whole.

# More Information & Support

For additional product documentation and software and firmware upgrades, visit [support.avigilon.com](https://support.avigilon.com).

## Technical Support

Contact Avigilon Technical Support at [support.avigilon.com/s/contactsupport](https://support.avigilon.com/s/contactsupport).

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