Avigilon COVID-19 Response Technology User Guide

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Introduction

With Avigilon Control Center (ACC) 7 software and Avigilon Cloud Services, organizations can implement pandemic response solutions to reopen safely and comply with local health and safety guidelines.

Featuring AI-powered video analytics, organizations can more effectively curb the spread of COVID-19. Combined with Avigilon Cloud Services for simple and secure cloud-based reporting, you can identify when and where health and safety guidelines are not being followed and take corrective action.

System Requirements

- ACC Client and Server version 7.12* or later
- ACC Web Endpoint Service version 7.12* or later

Ensure your ACC™ site has Internet access and is **connected to Avigilon Cloud Services**.

Face Mask Detection requires an Enterprise edition license and cameras with Avigilon Appearance Search™ technology.

Social Distancing Violations requires H5A cameras with Self-Learning enabled. The 2.0C-H5A-B1 camera is excluded.

Elevated Temperature Detection requires H4 Thermal ETD cameras.

* Sites with ACC software below this version may not have access to complete Avigilon Cloud Services functionality.

Occupancy Counting

FOR H4A AND H5A CAMERAS
FOR CAMERAS ON APPLIANCES WITH CLASSIFIED OBJECT DETECTION

This feature counts the number of people in a facility to reduce the need for manual counting and guesswork, particularly for facilities with multiple entry and exit points. You can get an overview of the occupancy for up to 30 days using the Avigilon Cloud Services COVID-19 Dashboard.

Configuring Occupancy Counting Events

To determine the occupancy as people 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.

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.

Step 1: Create an Entry Event

1. In the New Task menu , click **Site Setup**.
2. Select an analytics camera, then click **Analytic Events**.
3. Click **Add**.
4. Enter a unique **Name** and select the **Enabled** checkbox.
   If the checkbox is clear, the system will not detect or trigger any events.
5. Select **Enter occupancy area**.
6. In the **Occupancy Area** box, enter a name for the area or select an existing Occupancy area from the list.
7. In the camera field of view, 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.

8. 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 and select the **Enabled** checkbox.
   If the checkbox is clear, the system will not detect or trigger any events.
3. Select **Exit occupancy area**.

4. In the camera field of view, draw a line to define the Occupancy Area and exit direction. Use the same guidelines as above.
5. Name the **Occupancy Area** or select an existing Occupancy Area from the dropdown list.
6. Click **OK** to save the event.

Repeat steps 1 and 2 for each camera with an entrance or exit in its field of view.

Step 3: Validate the Analytic 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 **Events**
    b. Select cameras and enter a Date Range to search.
    c. Select **Classified Object** and click **Search**.

Once events are validated, you can configure the maximum occupancy and view live results in Avigilon Cloud Services. For more information, see *COVID-19 Dashboard* on page 14.

Face Mask Detection

FOR CAMERAS WITH AVIGILON APPEARANCE SEARCH TECHNOLOGY
REQUIRES THE ACC ANALYTICS SERVICE 7.6.4 OR LATER

To help prevent community transmission between employees and customers, this feature determines whether a person is not wearing a face mask. Immediate notifications in the Focus of Attention interface coupled with detailed reporting in Avigilon Cloud Services helps you stay in compliance and take corrective action where necessary.

Enabling Face Mask Detection

1. In the New Task menu , click **Site Setup**.
2. Select a server, then click **Server Analytics** .
3. Select the **Face Mask Detection** tab and then select the cameras to enable the feature on.

   Only cameras that you have access to that have the prerequisite analytics enabled are displayed in each tab.

   The bars at the bottom display the server's capacity based on the number of cameras with analytics features enabled. The percent usage of each analytics feature is displayed using the color of the analytics feature tab.
4. Click **Close**.

Monitoring the Focus of Attention Interface

Operators can monitor a site for people without face masks in the Focus of Attention interface. Configure the interface to display the events and cameras you want to see.

1. In the New Task menu , click **Focus of Attention**.
2. In the top-right corner of the Recent Events list, click .
3. Select the **People Without Masks** checkbox and the cameras you want to display.
4. Click **OK** to save your changes.

Operators will now see yellow alerts in the Focus of Attention interface each time a camera detects a person without a mask.

Configuring Rules and Alarms

You can create rules and alarms to alert operators when a camera detects a person without a face mask.

Rules can be used to trigger an alarm, open a live view, or send an alert to a central monitoring station.

Alarms can be sent as voice alerts to Motorola radios using Avigilon Radio Alert.

Step 1: Create an Alarm

1. In the New Task menu , click **Site Setup**.
2. Select a site, then click **Alarms**.
3. Click **Add** and select **External Software Event** as the alarm trigger source.
4. Complete the alarm configuration, and then click **Finish**.

Step 2: Create a Rule

1. In the Site Setup tab, click **Rules**.
2. Click **Add**.
3. Under Device Events, select **Person without a mask detected**. Click **Next**.
4. Under Alarm Actions, select **Trigger an alarm**.
5. Click the blue text and select the alarm created in Step 1. Click **Next**.
6. Complete the rule configuration, and then click **Finish**.

Searching for People without Masks

You can search your site for all events where people without face masks were detected.

1. In the New Task menu , click **Events**
2. Select cameras and enter a Date Range to search.
3. Select **Person Without Mask** and click **Search**.

Social Distancing Violations

FOR H5A CAMERAS, EXCLUDING 2.0C-H5A-B1

> **Note:** Self-Learning must be enabled and reach 100% on the camera before social distancing events appear.

To ensure that social distancing protocols are followed in public places and high-density areas, this feature detects when the distance between two individuals falls below a specified threshold. Using the Avigilon Cloud Services COVID-19 Dashboard, you can review the number of violations to identify hotspots and peak periods when violations occur.

Configuring Social Distancing Violation Events

To detect social distancing violations, create an analytic event.

1. In the New Task menu , click **Site Setup**.
2. Select an analytics camera, then click **Analytic Events**.
3. Click **Add**.
4. Enter a unique name and select the **Enabled** checkbox.
   If the checkbox is clear, the system will not detect or trigger any events.
5. Select **Objects too close**.
6. In the camera field of view, define the region of interest. Only violations that occur in the region of interest will trigger an event.

   > **Tip:** Think of the region of interest like a rug. It only detects events if the bottom of the bounding boxes are on it. The distance is measured between the bottom centers of two bounding boxes.

7. Specify the minimum **Distance** between detected objects and the **Threshold Time**. Violations will only trigger an event if they last longer than the specified time.
8. Click **OK** to save the event.

Validating the Analytic Events

1. In the field of view of a configured camera, have two people stand closer than the specified distance.
2. Perform an Event search to verify that the event was detected:
    a. In the New Task menu , click **Events**
    b. Select cameras and enter a Date Range to search.
    c. Select **Classified Object** and click **Search**.

Once events are validated, you can view live results in Avigilon Cloud Services. For more information, see *COVID-19 Dashboard* on page 14.

Elevated Temperature Detection

FOR H4 THERMAL ETD CAMERAS

This feature detects people with elevated temperatures. You can configure the skin temperature threshold for subjects with elevated and low temperatures. Subjects that fall in between the elevated and low temperature thresholds will be considered as being within the acceptable range. You can also set up analytic temperature events to record events for a specified temperature threshold.

You can get an overview of the detected temperature events for up to 30 days using the Avigilon Cloud Services COVID-19 Dashboard.

For detailed information on the camera installation and configuration, see the **H4 Thermal Elevated Temperature Detection Camera User Guide**.

Configuring Skin Temperature Thresholds

Configure the thresholds for detecting skin temperatures on faces in live video.

> **Note:** The following button is supported only for the Avigilon H4 Thermal Elevated Temperature Detection camera.

1. In the New Task menu , click **Site Setup**.
2. Select a thermal camera and click **Temperature Settings** .
3. In the **Temperature Settings** dialog box, edit as needed:
   - **Elevated Temperature Threshold (°C)** or **(°F)**: The threshold above which a person may need further screening. Default is the calibrated value from the thermal camera.

     If an elevated temperature at or above the threshold is detected, and a red bounding box are displayed over the face in the live video.
   - **Lower Temperature Threshold (°C)** or **(°F)**: The threshold below which a person may need further screening. Default is the calibrated value from the thermal camera.

     If a lower temperature at or below the threshold is detected, and a white bounding box are displayed over the face in the live video.

   Any temperature detection that falls between the specified thresholds is considered within the acceptable range. If a temperature is detected, and a green bounding box are displayed over the face in the live video.
4. Click **Restore Defaults** to restore the calibrated value from the camera, if needed.
5. Click **OK** to apply the settings and exit, or click **Apply** to apply the settings without exiting.

Next, you can configure analytics events.

Adding a Temperature Analytic Event

The temperature events can be used to set up notifications or rules.

1. In the New Task menu , click **Site Setup**.
2. Select a camera, then click **Analytic Events** .
3. Click **Add**.
4. Enter a name. This should be unique throughout the ACC site.
5. Select the **Enabled** checkbox. If the checkbox is clear, the video analytics event will not detect or trigger any events.
6. Select the type of temperature event you want to add in **Activity:** and configure the event settings:
    - If **Object with elevated temperature** is selected, configure the **Elevated Temperature Threshold (°C)** or **(°F)**: The threshold above which a person may need further screening. Default is the calibrated value from the thermal camera. Any temperature detection above this threshold will trigger the event.
    - If **Object with lower temperature** is selected, configure the **Lower Temperature Threshold (°C)** or **(°F)**: The threshold below which a person may need further screening. Default is the calibrated value from the thermal camera. Any temperature detection below this threshold will trigger the event.
    - If **Object with expected temperature** is selected, configure both the lower and elevated temperature thresholds. Any temperature detection that falls between the specified thresholds is considered within the acceptable range and will trigger the event.

    When a detected temperature matches the threshold defined, the event triggers the camera to record for the specified duration.
7. People is automatically selected as the **Object Types:** and cannot be changed.

    Ignore the Sensitivity:, Number of Objects:, and Threshold Time: settings.
8. In Timeout:, select the recording duration for the event from 2 to 15 seconds. The default setting is 8 seconds.
9. Click **OK** to save your settings.

Toggling Degrees Celsius and Fahrenheit

Toggle the temperature unit that displays next to the bounding box on faces in live video and in related temperature detection activity events.

1. In the Windows Control Panel, select **Region** and **Additional settings**.
2. Select the unit in **Measurement system**.
3. Click **OK**. The temperature unit takes effect immediately.

COVID-19 Dashboard

REQUIRES CLOUD CONNECTION

The Avigilon Cloud Services Reports page displays data from configured ACC events across an organization, site or area over a specified time range.

Avigilon Cloud Services Administrators or Managers can access the Reports page to gain business insights and access the **Entry Control Screen**.

Viewing the COVID-19 Dashboard

1. Click **Reports**.
2. Select a site to view information on a per-site level.
3. Select an area to view information on a per-area level.
4. Select a camera to view information on a per-camera level. You can drill down for more event information.

> **Tip:** Select a card to view more details.

Changing the Time Range

The default time range is the last 60 minutes.

- In the top-left, select a new **Time Range**.

Downloading a Report

You can print a chart you are viewing to a PDF formatted report The chart allows you to view data across a site, area, or camera over the specified time range.

You can also export the summarized data points from the chart you are viewing into a CSV file. The data is summarized into 5 minute, one hour or daily totals depending on the time range used for the chart.

PDF Reports

1. Select the site, area or camera. Update the Time Range if needed.
2. Select a card and in the top-right of the table that appears, click **Print**.
3. In the Print dialog, select **Save as PDF** and click **Save**.
4. Select where to save the file.

   A PDF report is downloaded.

Tip: You can also use the browser print settings to save a PDF report. Press Ctrl+P on Windows or Command-P on Mac.

CSV Reports

1. Select the site, area or camera. Update the Time Range if needed.
2. Select a card and in the top-right of the table that appears, click **CSV**.

   A CSV report is downloaded.

Card Details

Name	Description
Current Occupancy	The number of people in an occupancy area in an organization, site or area at this time.
Peak Occupancy Trend	The greatest number of people in the area at a time over the selected time range. It is not the total number of people in an area at a time. For example, the total number of people in the area over an hour was 20. But if for 20 minutes there were 12 people then for 20 minutes there were 8 people and then for 20 minutes there were no people, the peak occupancy would be 12.
Entries and Exits	The total number of people who entered or left an occupancy area over the selected time range. The Event Trend chart shows the number of events that occurred over time.
People Without Mask	The number of detected people without masks in an organization or site over the selected time range. The Event Trend chart shows the number of events that occurred over time.
Social Distancing Violations	The number of detected social distance violations between two people over the selected time range. The Event Trend chart shows the number of events that occurred over time.
Elevated Temperature percentage or Elevated Temperature Events	The percentage of temperature events that are elevated. To get the Elevated Temperature percentage details, you must have configured all 3 temperature events: Elevated, Low, and Expected. If only the elevated temperature event is configured, only the Event Trend chart will display on this card. The Event Trend chart shows the number of events that occurred over time.

Name	Description
Events	The number of events detected by the specified camera over the selected time range. Only displayed when viewing camera details.

Configuring the Occupancy Settings

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 , 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.

Displaying the Entry Control Screen

The Entry Control Screen can be displayed on a monitor or tablet at an entrance to let people know if it's safe to enter or if the maximum occupancy has been reached and they should queue.

The Entry Control Screen can be displayed on a device that is connected to Avigilon Cloud Services or a URL can be generated and used on devices that are not connected to Avigilon Cloud Services.

1. On the Reports page, select an area.
2. In the top-right corner, click , then click **Settings**.
3. Click **Regenerate Auth Key** to ensure the correct URL and authentication key is generated.
4. To display the Entry Control Screen on this device:
    a. Click **Save**. The COVID-19 Dashboard displays.
    b. In the top-right corner, click **Entry Control Screen**.

    The Entry Control Screen will load in a new tab.
5. To display the Entry Control Screen on a device that is not connected to Avigilon Cloud Services:

a. Copy the **Access URL** to your clipboard so you can send it to the site that needs to display the Entry Control Screen.
b. At the site, enter the copied URL into your web address bar to open the Entry Control Screen.
c. Click **Save**.

Tip: Secure the monitor or tablet to prevent people from interacting with the display.

Changing the Entry Control Screen Messages

You can customize the messages that are displayed when the occupancy is full or when there is still room for people to enter.

1. On the Reports page, select a site.
2. In the top-right corner, click , then click **Settings**.
3. Enter the following:
   - **Valid entry heading** — The text displayed if only one person is allowed to enter. The number 1 will be displayed in front of this text. Maximum 22 characters.
   - **Valid entry heading (plural)** — The text displayed if multiple people are allowed to enter. The number of people allowed to enter will be displayed in front of this text. Maximum 22 characters.
   - **Invalid entry heading** — The text displayed if the maximum occupancy is reached. Maximum 22 characters.
   - **Invalid entry subheading** — Additional text to display if the maximum occupancy is reached. You can use this to advise social distance guidelines. Maximum 23 characters.
   - **Maximum occupancy status** — The text displayed when the maximum occupancy is reached. Maximum 7 characters.
4. Click **Save**.

Manually Updating the Occupancy

You can manually update the current occupancy if a person enters or exits and from an entrance that is not monitored.

1. On the Reports page, select a site or area.
2. In the top-right corner, select ⚙ and update the current occupancy:
   - — *Areas only*. Enter a number to decrease or increase the current occupancy.
   - — Set the current occupancy to 0.
   - — Set the current occupancy to the maximum occupancy.

   The current occupancy is automatically updated.

> **Tip:** To reset the current occupancy daily, see *Configuring the Occupancy Settings* on page 16.

Hiding an Area

If you have an area that is no longer used, you can hide the area to exclude any analytic events from the site total.

1. On the Reports page, select a site and then an area.
2. In the top-right corner, click ⚙.
3. Click **Hide Area**.

Showing an Area

You can view previously hidden areas and reactivate them.

1. On the Reports page, select a site.
2. In the top-right corner, click ⚙.
3. Click **Show hidden areas**.

To reactivate a hidden area:

- Click **Set Active**.

Viewing Events

You can get a list of events detected by each camera and view the recorded video linked to the event.

1. On the Reports page, select a site, then a camera.

   For Enter or Exit Area events, select the **Occupancy Area** and then select a camera.

   For Face Mask Detection & Social Distancing Events & Temperature Events, scroll down to the list of cameras in the section for **Face Mask Detection & Social Distancing Events & Temperature Events** and then select a camera.

2. Select a **Time Range** and **Event Types** to display.

3. To review video of an event, click the date and time of the event in the **Start Time** column to open the event clip in the video player.

   You must have the **View recorded images** group privilege for the camera in the ACC system, otherwise video will not stream.

   Use the timeline and player controls to review the video.

Event Details

Name	Description
Start Time	When the event was triggered. Click to view the event video.
Event	The type of event.
Direction	The direction of an Enter or Exit occupancy area event.
Temperature	The temperature reading of the person that triggered the event. This Event detail is only available for Temperature events.
Number of People	The number of people detected in the event.
Source	Whether the event was detected by a camera or manually entered.

Troubleshooting and Support

If you do not see the Reports page in Avigilon Cloud Services, contact Avigilon technical support using this **online form**.

Additional resources:

- **Avigilon Cloud Services User Guide**
- **Avigilon Control Center User Guide**