



VideoXpert™ v 3.x
Occupancy Counting Service
Installation and Operations Manual



VideoXpert™

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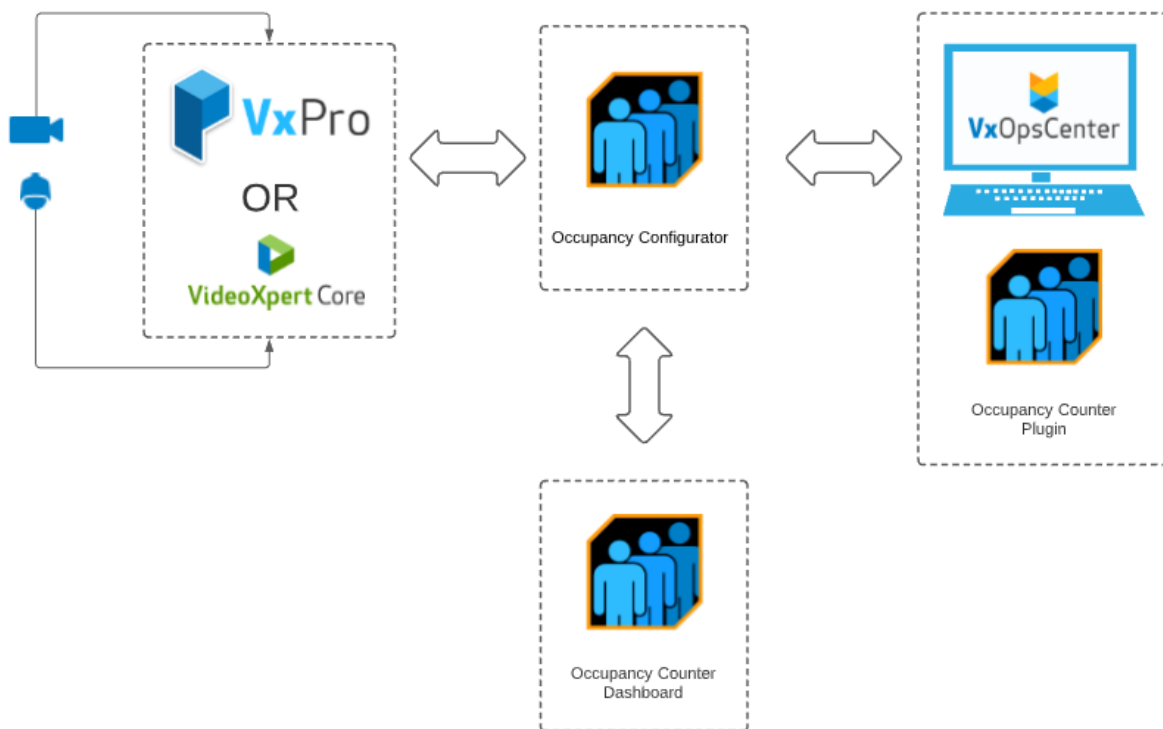
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Introduction

This document is the installation and operation manual for VideoXpert v 3.x Occupancy Counting Service.

System Overview



The Occupancy Counting Service is comprised of three components:

- The Occupancy Counting Configuration application provides the ability to configure regions with IN and OUT lines over Pelco cameras that support advanced analytics, to determine the occupancy of that region. The Occupancy Counting Configuration application can be installed on any system mentioned in [Installing Prerequisites](#), if it can successfully connect to the VideoXpert System.
- The Occupancy Counting Dashboard provides live and historical data of the occupancy count. It is a standalone application for use by administrators as well for display purposes.
- The Occupancy Counting Plugin is a VxOpsCenter plugin that also displays live and historical data of the occupancy count. It is an VxOpsCenter-dependent plugin for use by Operators.



Note: Occupancy Counting components (Configuration, Dashboard, and Plugin) are supported with VideoXpert version 3.11.x and above.

Installing the Software

Installing Prerequisites

Prior to installation of this software, install the following:

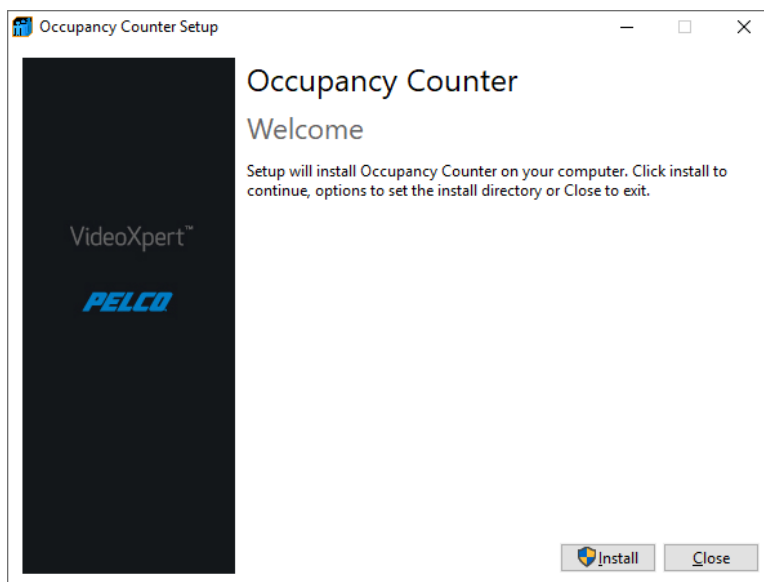
- Windows 7, Windows 8.1, Windows 10
- VideoXpertPro-3.11.x
- VideoXpertCore-3.11.x
- VidepXpertOpsCenter-3.11.x

The Occupancy Counting Service software will install any needed prerequisites, including:

- .NET Framework 4.7.2 or later
- Microsoft Visual C++ 2015 Redistributables (x64)

Installing the Occupancy Counter

1. Right-click the OccupancyCounting-1.x.x.xx file, and then start the installation as an administrator.
2. Click **Install**.

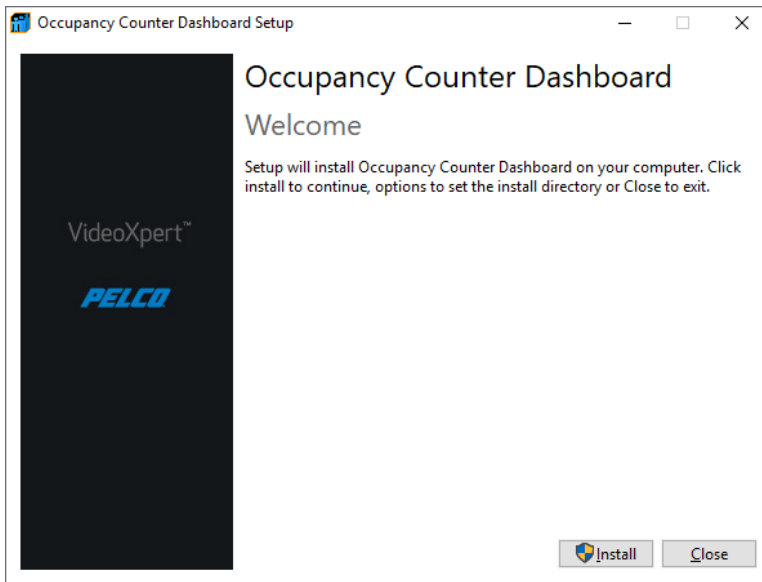


3. Click **Install**.
4. If necessary, click **Cancel** to abort the installation.
5. Click **Close**.

Installing the Occupancy Counter Dashboard

1. Right-click the OccupancyDashboard-1.x.x.xx file, and then start the installation as an administrator.

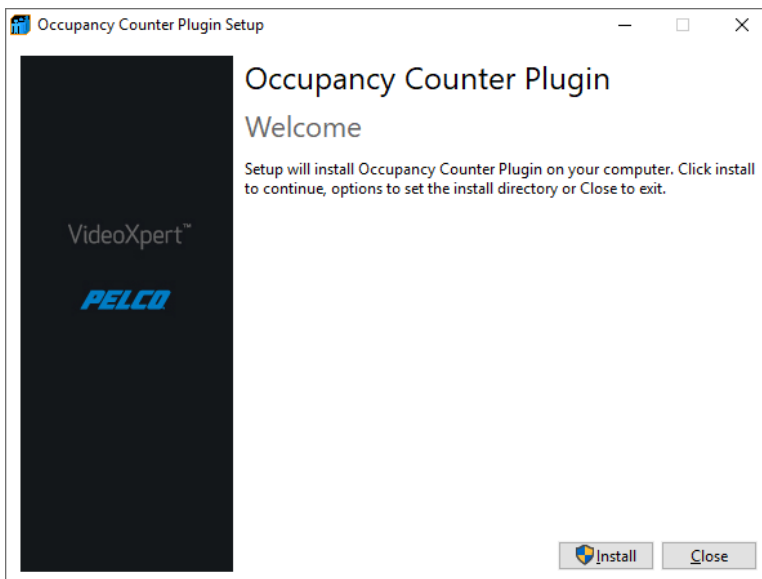
2. Click **Next**.



3. Click **Install**.
4. If necessary, click **Cancel** to abort the installation.
5. Click **Close**.

Installing the Occupancy Counter Plugin

1. Double click the OccupancyPlugin-1.x.x.xx file to start the installation.
2. Click **Install**.



3. Click **Close**.

Licensing the Occupancy Counting Service

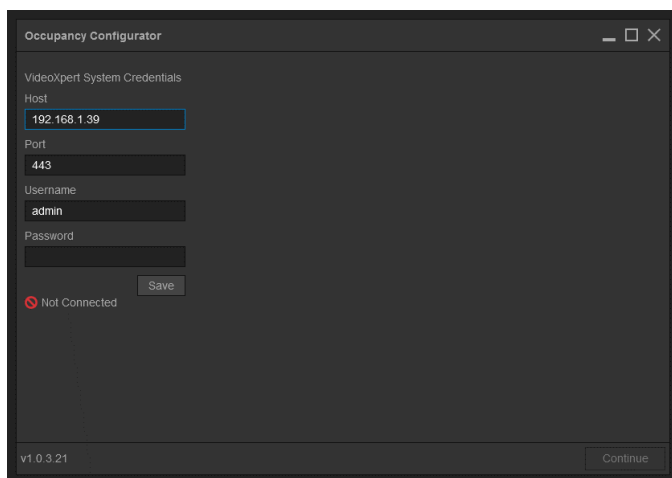
The Occupancy Counting Service requires a license to be present on each VideoXpert system that will be added to it. If a license is not present on the system when it is added, a 90-day trial period will begin on that system. The Occupancy Counting Service will be able to use the system normally during this period. If the system remains unlicensed when the trial period expires the Occupancy Counting Service will no longer be able to communicate with the system until a valid license has been applied.


For assistance, contact Pelco Product Support at 1-800-289-9100 (USA and Canada) or +1-559-292-1981 (international).


Configuring and Using the Software

Configuring the Occupancy Configurator

1. After installing the Occupancy Counter, start the application. This will open the Occupancy Configurator.
2. Type in the VideoXpert Server information.




- a. Enter a value in the *Host* field. This is the IP address of the VideoXpert Core or VideoXpert Professional.
 - b. Update the *Port*, if necessary. The default port is 443.
 - c. Enter the *Username* and *Password*, which are the credentials for any VideoXpert user with an administrator role.
 - d.  **Note:** Only a VideoXpert user with an administrator role can configure occupancy settings; however, any VideoXpert user can view occupancy data in the plugin, on the dashboard, or on a web page.
 - e. Click **Save**.
3. After the connection is successfully made and the status shows as *Connected* with a green checkmark icon, click **Continue**.

 **Caution:** Before configuring the regions for Occupancy Counting, configure person counters (advanced analytics) via VideoXpert Toolbox on the cameras. See the current version of the *VideoXpert Toolbox Operations Manual* for adding person counters.

4. Add regions.

Regions identify one or more person counters across multiple cameras supporting advanced analytics. In the *Regions* (left) panel:

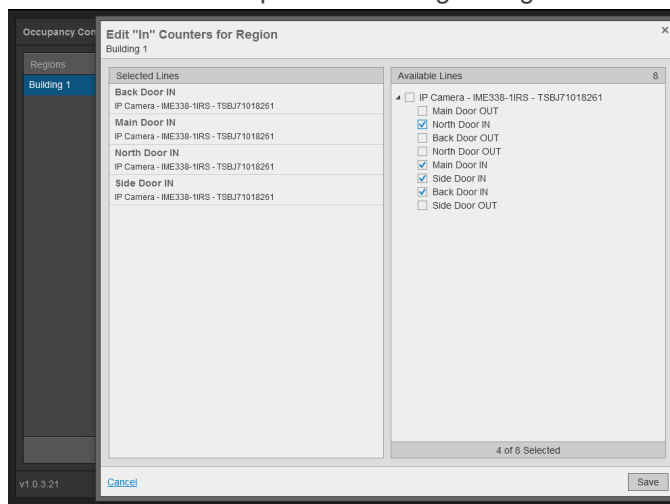
- a. Click the *Add* (+) icon.
- b. Enter a user friendly name for the region.
- c. After a region is added, add IN and OUT lines.
 - These lines will automatically pop up if the person counters are correctly configured on the camera (from VideoXpert Toolbox).
 - Currently, Occupancy Counter supports only Uni-Directional lines. During configuration, the user must create IN and OUT counters separately.
 - A single region can contain multiple lines with multiple cameras.

 **Note:** Save each individual region separately, by clicking **Save**. After all of the regions and lines are configured, you will click **Done** to push the configuration changes.

5. (Optional) To delete an added region, click the *Delete* (🗑️) icon.

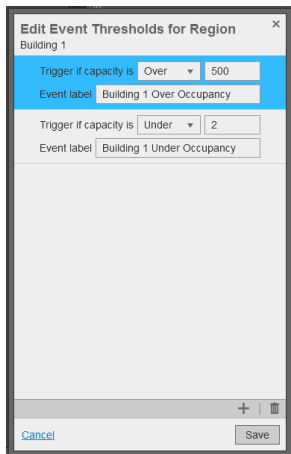
6. Configure the IN and OUT *Counters* for each region.

- a. Click to select the region name.
- b. In the right panel, in the *Counters* area, click the *Edit* (✎) icon in the *In* heading to open the *Edit "In" Counters for Region* window.
- c. Click to select and deselect the checkboxes for the IN counters, and then click **Save**. Each IN counter counts the persons entering the region.



- d. In the right panel, in the *Counters* area, click the *Edit* (✎) icon in the *Out* heading to open the *Edit "Out" Counters for Region* window.
- e. Click to select and deselect the checkboxes for the OUT counters, and then click **Save**. Each OUT counter counts the persons exiting the region.

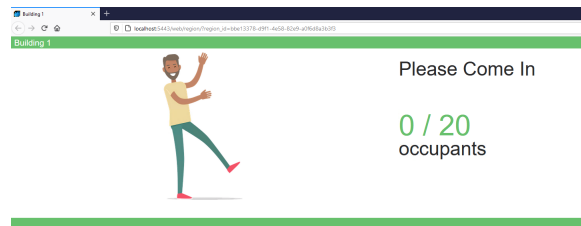
7. (Optional) Configure **Event Thresholds** for each region.
You can configure events to be received by the VxOpsCenter Event Viewer if occupancy thresholds are exceeded. Events are configured in VxToolbox. Events can be triggered when the capacity goes over or under the specified value. The user can specify a friendly label which will be shown in the Events plugin in VxOpsCenter when the event is received.
 - a. If you have not already done so, click to select the Region.
 - b. In the right panel, in the *Event Thresholds* area at the far right of the heading, click the *Edit* (✎) icon to open the *Edit Event Thresholds for Region* window.
 - c. Click the *Add* (+) icon, and then select and type in values for the *Trigger if capacity is* and *Event Label* fields.



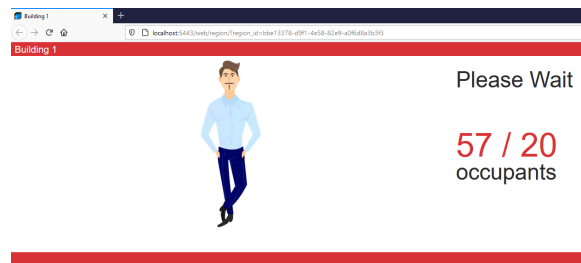
- d. If appropriate, add more event thresholds.
 - e. After you have added all of the event thresholds, click **Save**.
8. (Optional) Reset the *Total In* and *Total Out* counts.
To obtain daily occupancy counts, reset the totals each day.
 - a. If you have not already done so, click to select the Region.
 - b. Under *Total In* and *Total Out*, click **Reset Totals**.
9. (Optional) Reset *Occupancy*.
 - a. If you have not already done so, click to select the Region.
 - b. Under *Occupancy*, click **Reset Occupancy**.
10. Set the appropriate value in the *Occupancy* field.
In most cases, you will set this value to zero (0); but when appropriate, you can set this to a different value. For example: you can set the occupancy to the number of employees in the region before any visitors enter or exit.
 - a. If you have not already done so, click to select the Region.
 - b. Under *Occupancy*, type a value in the *Occupancy* field.

11. (Optional) Customize browser images to be opened on the system's default browser for display purposes. You can use your own logo, the over or under occupancy status, and the total number of occupants.
 - a. If you have not already done so, click to select the Region.
 - b. In the *Browser Images* area, click **Browse** to the right of the *Under Capacity* field, navigate to the appropriate image file, and then double-click it.
 - c. In the *Browser Images* area, click **Browse** to the right of the *Over Capacity* field, navigate to the appropriate image file, and then double-click it.
 - d. Click Open Browser to log in to the VideoXpert System and preview the display.

An example *Under Capacity* image is as follows.



An example *Over Capacity* image is as follows.



12. Click **Save Changes**.
13. Click **Done**.

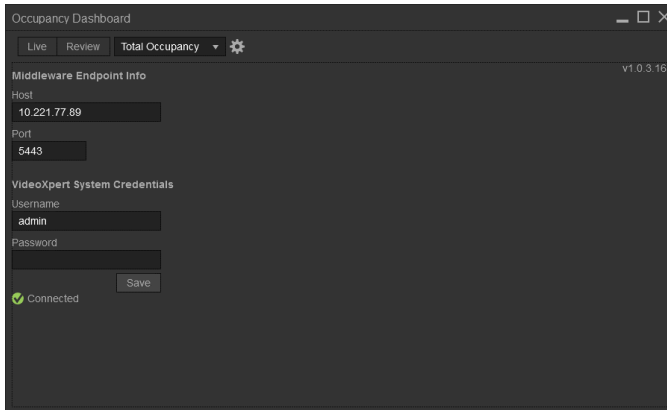
Configuring the Occupancy Counter Dashboard

Occupancy Dashboard is a standalone application used to connect to the Occupancy Counter Configuration application for displaying occupancy from various regions live as well as to view historic data by choosing the timeline. After installation, start the Occupancy Dashboard application and connect it to the Occupancy Counter Configuration application.



Caution: Complete the procedure in [Configuring the Occupancy Configurator](#) before using the dashboard. The Occupancy Counter Dashboard can be installed on a standalone system, if it is able to connect to the Occupancy Counter Configuration application.

1. Start the Occupancy Dashboard.
2. Type in the Occupancy Counter Configuration application information.



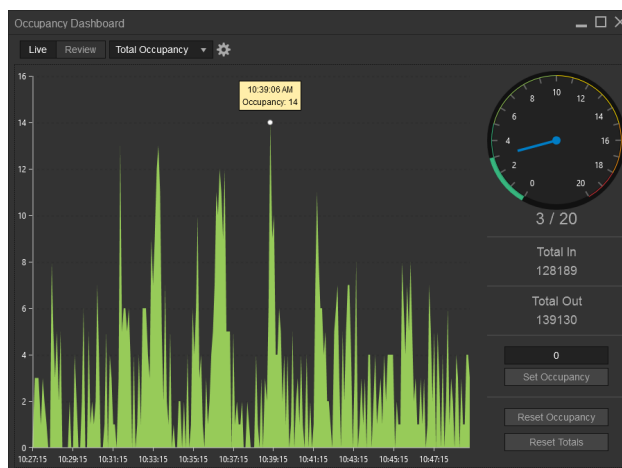
- a. Enter a value in the *Host* field. This is the IP address of the system on which the Occupancy Counter Configuration application is installed and running.
- b. Update the *Port*, if necessary. The default port is 5443.
- c. Enter the *Username* and *Password*, which are the credentials for any VideoXpert user with an administrator role.




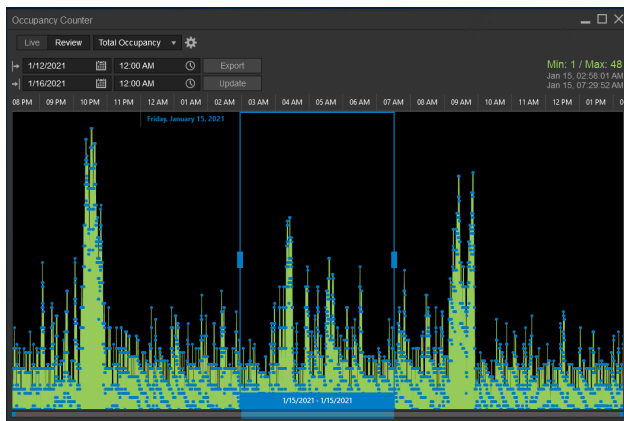
Note: Only a VideoXpert user with an administrator role can configure occupancy settings; however, any VideoXpert user can view occupancy data in the plugin, on the dashboard, or on a web page.

- d. Click **Save**.
3. After the connection is successfully made and the status shows as *Connected* with a green checkmark icon, click **Continue**.
 4. (Optional) View live (current) occupancy information.
 - a. Click the **Live** tab.

The *Live* page shows the current status of occupancy along with Total In and Total Out data for that region. Occupancy is displayed using a graph plotted against time and also using an occupancy count dial.



- b. From the drop-down menu to the left of the settings  icon, click to select **Total Occupancy** or another region for which to view live occupancy data.
 - c. (Optional) Type a value in the *Set Occupancy* field and then click **Set Occupancy** to manually enter an occupancy value.
 - d. (Optional) Click **Reset Occupancy** to set the occupancy value to zero (0).
 - e. (Optional) Click **Reset Totals** to set the occupancy totals values to zero (0).
5. (Optional) Review and export historical occupancy data.
- a. Click the **Review** tab.




- b. Select a date and time range for the historical data, by one of the following methods:
 - Enter or select values in the start date, start time, end date, and end time fields to specify the occupancy data included on the page.
 - Click and drag the blue bars on the blue vertical lines to the appropriate start and end dates and times.
- c. Click **Update**.
- d. (Optional) Click **Export**, and then follow the prompts to export the file in .csv format.

Configuring the Occupancy Counter Plugin

The Occupancy Counter Plugin is a plugin for VxOpsCenter which displays the occupancy count for defined regions. See the current version of the *VideoXpert OpsCenter Operations Manual*.

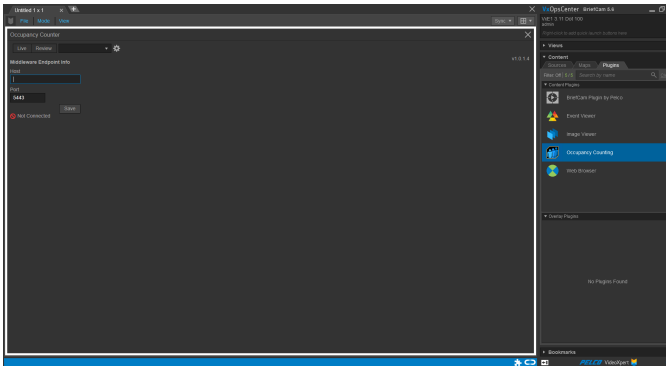


Caution: Occupancy Counter Configuration must be completed before the Occupancy Counter Plugin can be used. The Occupancy Counter Plugin must be installed on the system on which VxOpsCenter is installed.

1. Launch VxOpsCenter.
2. Access the available plugins by one of the following methods:
 - In Mission Control (right panel), click to expand **Content**, and then click the **Plugins** tab.
 - In Mission Control (right panel), click the Plugins icon .
3. If necessary, click to expand **Content Plugins**.

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4. Double-click the **Occupancy Counting** plugin to add it to the selected cell (if you selected a cell), or drag the plugin to any cell.
5. Type in the Occupancy Counter information.

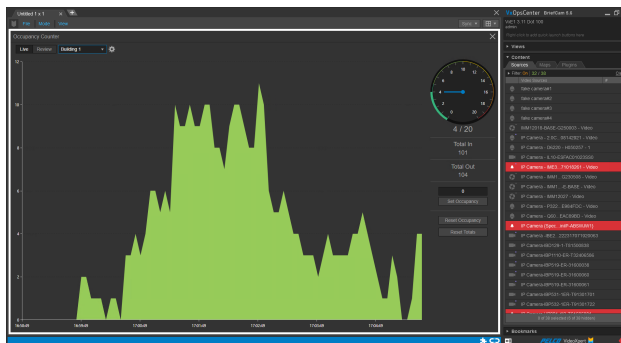


- a. Enter a value in the *Host* field. This is the IP address of the system on which the Occupancy Counter Configuration application is installed and running.
- b. Update the *Port*, if necessary. The default port is 5443. This must be the same port that is used for the Occupancy Counter Configuration application.
- c. Click **Save**.

After the connection is successfully made, the status shows as *Connected* with a green checkmark icon.

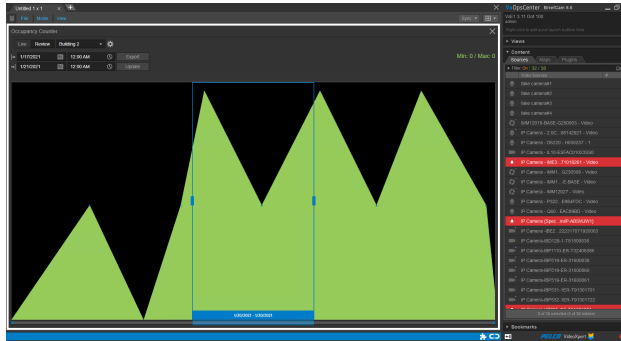
6. (Optional) View live (current) occupancy information.
 - a. Click the **Live** tab.

The *Live* page shows the current status of occupancy along with Total In and Total Out data for that region. Occupancy is displayed using a graph plotted against time and also using an occupancy count dial.



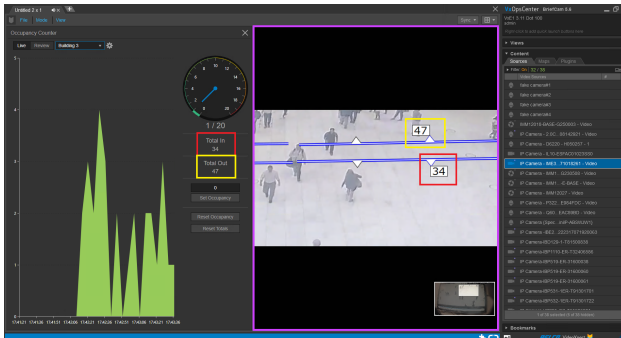
- b. From the drop-down menu to the left of the settings (⚙️) icon, click to select **Total Occupancy** or another region for which to view live occupancy data.
- c. (Optional) Type a value in the *Set Occupancy* field and then click **Set Occupancy** to manually enter an occupancy value.
- d. (Optional) Click **Reset Occupancy** to set the occupancy value to zero (0).
- e. (Optional) Click **Reset Totals** to set the occupancy totals values to zero (0).

7. (Optional) Review and export historical occupancy data.
 - a. Click the **Review** tab.



- b. Select a date and time range for the historical data, by one of the following methods.
 - Enter or select values in the start date, start time, end date, and end time fields to specify the occupancy data included on the page.
 - Click and drag the blue bars on the blue vertical lines to the appropriate start and end dates and times.
 - c. Click **Update**.
 - d. (Optional) Click **Export**, and then follow the prompts to export the file in .csv format.

The advantage of using the Occupancy Counting plugin is that the user can view the camera which is using the person counters in one cell of VxOpsCenter, and view the live or historic data in another cell.



Troubleshooting

Log files for the middleware are located at C:\ProgramData\Pelco\Logs\OccupancyCounting.

Pelco Troubleshooting Contact Information

For further assistance, contact Pelco Product Support at 1-800-289-9100 (USA and Canada) or +1-559-292-1981 (international).

Version Information

Integration Component Version

Component Name	Version	Description
OccupancyCounting-1.0.3.x	1.0.3.x	Occupancy Configurator
OccupancyPlugin-1.0.3.x	1.0.3.x	Occupancy Counter Plugin
OccupancyDashboard-1.0.3.x	1.0.3.x	Occupancy Counter Dashboard



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