

Observit Enterprise Center

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Observit AB

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Release notes and news

Latest news, features, and changes.

1. Overview

Observit Mobile Surveillance is a cloud-based subscription service that revolutionizes video surveillance across bus fleets and serves as a platform for all stakeholders (bus operators, transit authorities and law enforcement agencies). Based on IP cameras and wireless connectivity, it provides remote access to vehicles that does away with onboard work and standstills. The service makes it fast and easy to retrieve evidence, maintain surveillance equipment or gather data for business optimization – all while using less hardware. As technology, vehicles, fleet size and operating arrangements change, it ensures compatibility both backwards and forwards within the fleet.



1.1. Introduction

Observit Services

Observit Mobile Surveillance is a cloud-based subscription service that revolutionizes video surveillance across bus fleets and serves as a platform for all stakeholders (bus operators, transit authorities, police and others). Based on IP cameras and wireless connectivity, it provides remote access to vehicles that does away with onboard work and standstills. The service makes it fast and easy to retrieve evidence, maintain surveillance equipment or gather data for business optimization – all while using less hardware. As technology, vehicles, fleet size and operating arrangements change, it ensures compatibility both backwards and forwards within the fleet.

Fleet device management

By remotely handling any changes in surveillance technology, vehicle location or even fleet generations, Observit Mobile Surveillance keeps onboard surveillance systems up to date. All fleet devices connect automatically with the Observit Enterprise Center in the cloud to receive preconfigured settings, which reduces the need for specialist work on board. By remotely aggregating self-diagnostics from each camera in the fleet, Observit Mobile Surveillance continuously provides stakeholders with health check, warnings and error messages that simplify troubleshooting and maintenance decisions. Through a common cloud interface for all vehicles, cameras, and people sensors, regardless of age, Observit Mobile Surveillance makes it easy to implement and maintain the same surveillance settings and policies throughout your fleet.

Security & safety

By providing live video and audio for incident and driving management, as well as remote access to recorded evidence, Observit Mobile Surveillance reduces the time and effort needed to safeguard passengers and drivers. Observit Mobile Surveillance enables fast reaction to security incidents through live video feeds, triggered by manual alarms or automatic detection – plus easy location of specific recorded sequences for use as evidence. By providing contextualized evidence that combines video with vehicle and driving data, Observit Mobile Surveillance simplifies investigations and reduces your insurance costs. Observit Mobile Surveillance promotes safe driving by continuously authenticating the driver and triggering remote assistance in potentially dangerous driving situations.

Business Operation

By combining video with passenger and driving data, Observit Mobile Surveillance gives you powerful tools for improving efficiency, passenger satisfaction and the basis for payment decisions. Observit Mobile Surveillance helps you understand passenger flows by supplying reliable counts, queue assessments and demographics for use in optimizing routes, services, and payment. (In combination and integrted with with people counting, fleet info, demographics). In combining onboard video with driving data, telematics, Observit Mobile Surveillance helps you optimize passenger comfort by providing a full picture of driving performance for evaluation and education. When integrated with vehicle systems that monitor eco-driving, fuel consumption or other telematics, Observit Mobile Surveillance provides context for analysis that can lead to savings.

2. Enterprise Center

Observit Enterprise Center (OEC for short) is the hub for your vehicles, no matter if your focus is cameras, people sensing or fleet managment.



By studying this guide, you'll find all the information you need to use OEC, no matter if you are a less experienced user, or a real tech wizard.

2.1. Login

Your journey in Obsservit Enterprise Center begins with the creation of a user account, if you haven't recceived an e-mail with an invitation, please contact your manager, nearest sales rep at Observit or our support.



In the above field, fill in your username and the password you've been assigned. If you have an account, but no password, please select "Request new password". PS: Your user name if often the same as your e-mail adress.



Likewise, enter your username and email to request a new password. You'll receive an email with instructions on how to set a new password, after following the instructions you may then proceed to log in.

When first accessing OEC, you'll be prompted to choose a language and a time zone, should you wish to change these settings later, please select <u>Language</u> or <u>Time</u>.

2.2. Language

When first accessing OEC, you'll be greeted by a choice of time zone and language, should you wish to change these settings, please go to Language and Time below.

To change the interface language to your preferred language, please click the flag in the top right corner. A popup with several language options will appear, once you have made your selection, click on Select. OEC will now reload and be presented in your preferred language.



Please note that some apps within OEC might only be available in English at the moment. To make your user experience easier in these apps, go to our How to page and find the app that you need to use.

2.3. Time

For OEC to show your local time, click on the country and location next to the clock in the top right corner.

A popup will now open.



Using the dropdown list with time zones, select your desired time zone and click on Select. OEC will reload and be presented in your local time.





Please note: In OEC, date and time are presented according to ISO 8601.

2.4. Main view

First time user?

When first logging into Observit Enterprise Center, you'll see our logo and a menu on the left. Either select a traffic area or search for a vehicle using its vehicle id.

If you searched for a valid vehicle or milps id number, you'll see several tabs with different titles and information. Don't worry if it's a bit intimidating at first, you'll get the hang of it soon enough.

By using our guides, you'll find instructions on every function in OEC, you can even search for it by using the search field in the top right corner here at Manula.

And as always, if you have any questions, feel free to contact our support.



2.4.1. Traffic area

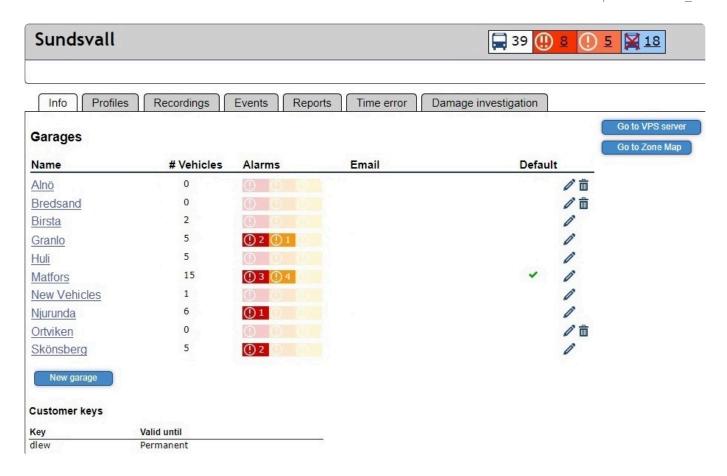
When first venturing into OEC, you'll see several names in the left side menu. These are your traffic areas, traffic areas are often associated with a whole city, i.e. London, Paris, Stockholm.



To simplify for users with responsibilities that stretch over multiple garages, sorting garages into different traffic areas makes it easier to manage multiple areas.

Different levels of user rights can also be applied to multiple users, to facilitate easy management of one or more areas.

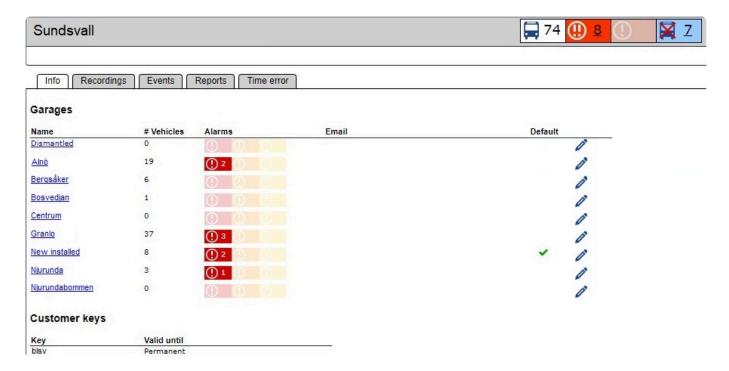
To see all garages assigned to a traffic area, click on any traffic area to open an overview of your garages and the vehicles assigned to each one.



To learn more about how to access and manage garages, please go to <u>Editing garages</u> in our "<u>How to</u>" section.

2.4.1.1. Info

In the Info tab you'll find information about your Garages, garages are typically named after the part the of city in which they are located, i.e. for New York, garage names could be Manhattan, Long Island, Brooklyn etc.



Here you can see the garages in your Traffic area, and from each garage you'll see:

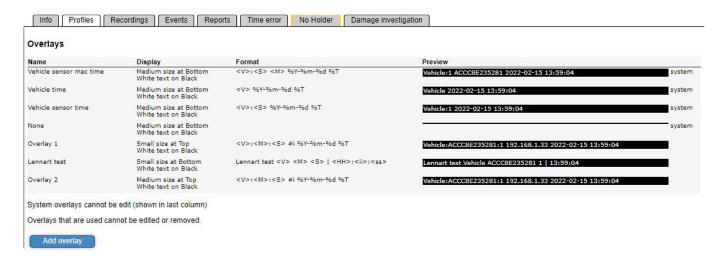
- Name of garage
- · Number of vehicles in each garage
- · Any alarms from vehicles
- · E-mail addresses assigned

The garage with a checkmark next to it, is the default garage – all new vehicles show up here when first registered into OEC, and from there an operator can move vehicles to their assigned garages.

Also, all available customer keys are visible. The customer key must always be entered into the Toolbox utility during the installing of a new vehicle. The customer key ensures that a new vehicle is placed on the correct server and assigned to the right customer.

2.4.1.2. Profiles

The profiles tab contains information about camera overlays and recording profiles."



The overlays can be applied to cameras in vehicles and the information in the overlay will be shown in videos recorded by the camera.

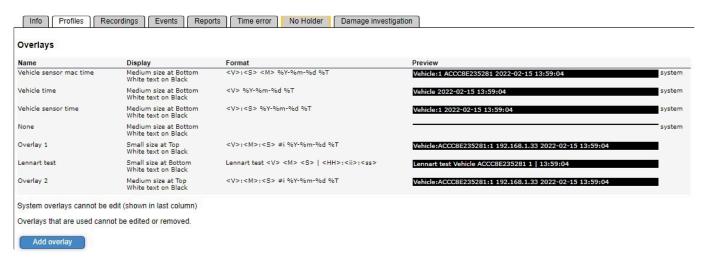
	Resolution	Quality	FPS	Audio	Overlay	
720p	1280x720 (16:9) 720p	Medium	5	No	Vehicle sensor time	
1080p	1920x1080 (16:9) 1080p	High	10	No	Overlay 1	
720p_15fps_no_audio	1280x720 (16:9) 720p	High	15	No	Vehicle sensor mac time	
1080p_5	1920x1080 (16:9) 1080p	Medium	5	No	Overlay 1	
1080p_15	1920x1080 (16:9) 1080p	Medium	15	No	Overlay 1	
540p_10	640x480 (4:3) VGA	Medium	10	No	Vehicle sensor mac time	
1080p_10	1920x1080 (16:9) 1080p	Medium	10	Yes	Vehicle sensor mac time	
160p_10	160x90 (16:9)	Low	10	No	Vehicle sensor mac time	
SL_Standard_12	800x600 (4:3) SVGA	Medium	12	No	Vehicle sensor mac time	
1080p_12	1920×1080 (16:9) 1080p	Medium	12	No	Overlay 2	
1080p20fps	1920x1080 (16:9) 1080p	High	20	No	Vehicle sensor mac time	
Recording profiles that are used o	cannot be edited or removed.					

Recording profiles contains settings for resolution, FPS, picture format etc. that the cameras use to record video.

To edit either, please select Overlays or Recording profiles.

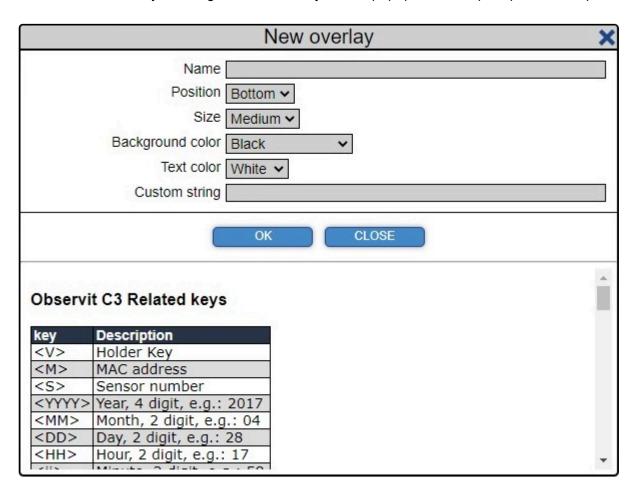
2.4.1.2.1. Overlays

Overlays are banners with text that are imprinted onto a video and will always be shown when viewing the video files.



- · Name The name of your overlay
- Display What style your overlay will be shown
- Format Is the code that makes up your overlay.
- Preview Shows an example of the overlay you've created.

To add a new overlay, clicking on "Add overlay" and a popup with multiple options will open.



Start by giving your overlay a name, fill in the details of what you want the overlay to display.

By scrolling down in the popup, a format guide will be visible to help you create your overlay. Once you are finished, click on "OK" and your new overlay will be available for use.

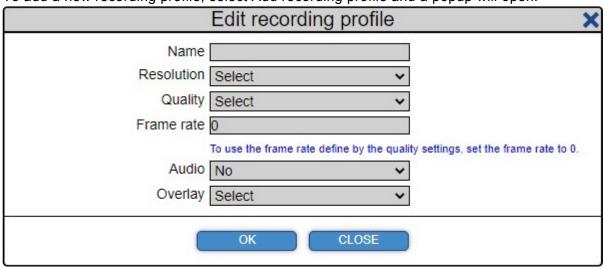
2.4.1.2.2. Recording profile

The recording profiles control how video is captured by cameras, using these settings it's possible to adjust video recordings to any needs.

Recording profile Name Resolution Quality Audio Overlay Vehicle sensor time 720p 1280x720 (16:9) 720p Medium 5 No 1080p 1920x1080 (16:9) 1080p High 10 No Overlay 1 Vehicle sensor mac time 720p_15fps_no_audio 1280x720 (16:9) 720p High 15 No 1080p_5 1920×1080 (16:9) 1080p Medium Overlay 1 5 No 1920x1080 (16:9) 1080p Medium 1080p_15 15 No Overlay 1 640p_10 640x480 (4:3) VGA Medium Vehicle sensor mac time 10 No 1080p_10 Medium Vehicle sensor mac time 1920×1080 (16:9) 1080p 10 Yes 160p_10 160x90 (16:9) Low 10 No Vehicle sensor mac time SL_Standard_12 800x600 (4:3) SVGA Medium 12 No Vehicle sensor mac time 1080p_12 1920×1080 (16:9) 1080p Medium 12 No Overlay 2 1080p20fps 1920×1080 (16:9) 1080p High 20 No Vehicle sensor mac time Recording profiles that are used cannot be edited or removed. Add recording profile

- · Name The name of your profile
- · Resolution Resolution shown in pixels and format
- · Quality The level of detail in your videos
- · FPS Number of frames per second
- · Audio Select if audio should be included or not
- Overlay Option to add an overlay
- Edit & Delete Select the pen or trash can icon to edit/delete a profile

To add a new recording profile, select Add recording profile and a popup will open.



Start by giving your profile a name, fill in the details of how the cameras should capture video and click on "OK". Your new overlay is now available for use.

2.4.1.3. Recordings

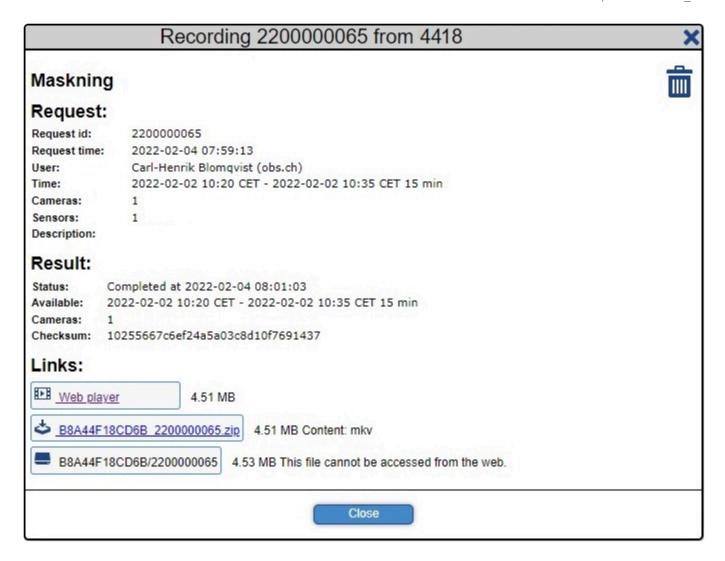
The recordings tab shows the last three months, the number underneath the dates shows how many videos that have been requested for that date.

While browsing a date with requested recordings, information about the videos can be seen underneath the calendar.



The selected day is marked in blue, and today's date is marked in yellow.

- Start time The requested start time of the video.
- · Length Length of video in hours and minutes.
- Request time Date and time of when the video was requested.
- User The user that requested the video.
- Status Shows either:
 - Complete video is available for watching.
 - Received by vehicle the server is waiting for the upload from the vehicle.
 - Failed something went wrong during upload.
- Recording id The id number of the request, used to identify a specific video.
 - By clicking on the recording id, a popup with additional information will open.
- Vehicle id The vehicle from which the video was requested.
- Description Information entered by the user while making the video request.



The recording details window provides more information regarding the request for video and the result, as well as links to the Web player and the option to download the video to your PC for distribution.

2.4.1.4. Events

The events tab list all things that has happed to a vehicle, this includes but is not limited to:

- Adding/removal of cameras and people sensors.
- · Connection set beteen the IRS-unit and the vehicle
- Customer change and customer adaptation

Information Runs	Recording frame rate Inventory Events Reports Commands
Time	Event
i 2021-09-09 19:39:34	#pc chmodel 000B91A4B6FD
i 2021-09-09 12:51:46	#pc chmodel 000B91A4BBA7
i 2021-08-06 09:59:07	People counter 000B91A4B6FD has been added
i 2021-08-06 09:59:06	People counter 000B91A4BBA7 has been added
i 2021-08-06 09:59:04	New camera ACCC8EE51D6F
i 2021-08-06 09:59:04	New camera ACCC8EE50EE7
i 2021-08-06 09:59:03	New camera ACCC8EE51E29
i 2021-08-06 09:59:03	New camera ACCC8EE51EE0
i 2021-08-06 09:58:30	Connection to vehicle GPG163-9123 created
i 2021-08-05 16:50:19	Upgraded to: ca-observitirs=pevd_34
i 2021-08-05 16:50:13	Customer change for NVR
i 2021-08-05 16:43:08	Set version by lennart: ca-observitirs to pevd
i 2021-01-12 13:59:50	System type set to miips
i 2021-01-12 13:59:50	New NVR miips0009D8038A38 in report type 17

2.4.1.5. Reports

From the Reports tab in OEC it's possible to fetch several different reports with information about different devices in vehicles.



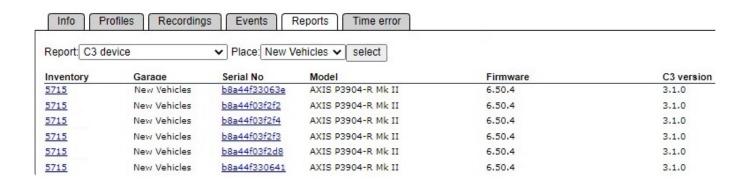
By using the first dropdown menu, a user can select devices such as C3 cameras, people counters, and cameras connected to the Observit IRS.

Using the second dropdown menu, select the garage where you want to fetch information from.



A list of different devices, and all firmware versions will be shown.

To see more details on a device type, click on the arrow icon next to your select device type.



From here, access to a specific vehicle or device is easy, no matter if it's to verify an installation or carry out an upgrade.

CSV reports

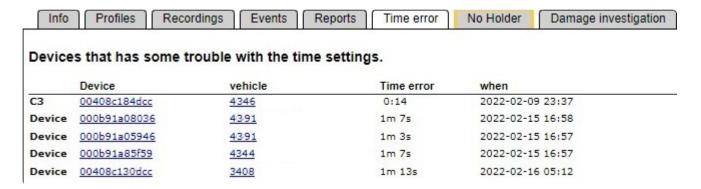
It is also possible to export the above data, simply click on any of the links under the header "Reports in

csv format" to download a CSV-file with all the relevant information.



2.4.1.6. Time error

The Time error tab shows any time deviation between real time and the time in a device.



Listed here are any units with incorrect time, what vehicle it belongs to, how big the error is and at what time the deviation was reported.

Time errors can be caused by slow networks, incorrect network settings or some other fault with a device.

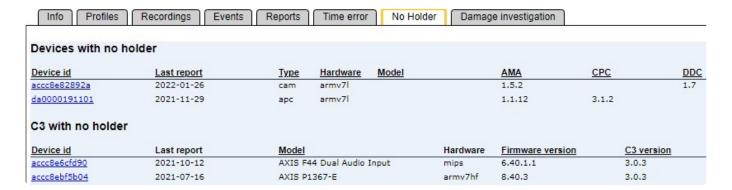
2.4.1.7. No holder

The No holder tab shows applications in devices without a connection to a vehicle.

If a device was not properly configured during installation, it will automatically be moved here, so that it can be identified and moved to its proper location.

Details about the apps shown:

- · Device id (mac address) of the device
- · Time of last report from the app
- · Hardware and model of the device
- Installed application and version
- · Firmware version



The top field shows applications such as AMA, CPC and DDC.

The lower field shows the C3 application.

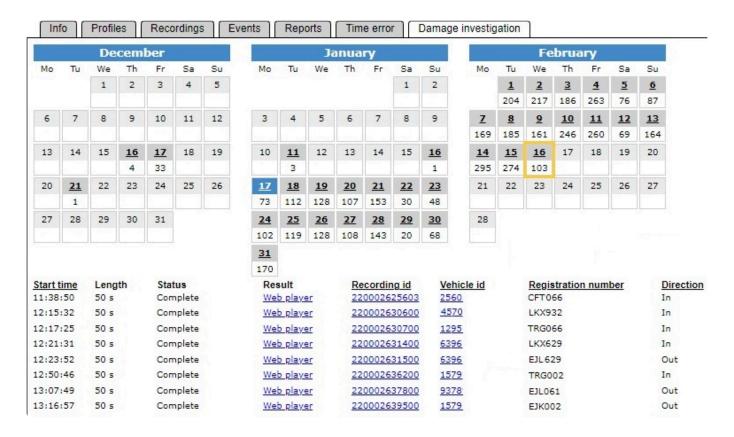
2.4.1.8. Damage Investigation

In our "How to" section, a detailed guide to using Damage investigation is available.

The Damage Investigation tab shows a calendar with the last three months, the number underneath the dates show how many videos that have been captured on that date.

The selected day is marked in blue, and today's date is marked in yellow.

While browsing a date with recordings, information about the videos can be seen underneath the calendar.



- · Start time The time the vehicle was identified by the LPV camera
- · Length Length of videos in hours and minutes.
- Status Indicates if videos have been recorded
- Result A Web player link to the videos captured
- Recording id The id number of the passage, used to identify a specific video.
 - By clicking on the recording id, a popup with additional information will open.
- · Vehicle id The vehicle that triggered the LPV camera
- Registration number The licence plate of the vehicle
- Direction Shows if the passage was in or out of the depot

The recording details window provides more information regarding the request for video and the result, as well as links to the Web player and the option to download the video to your PC for distribution.

2.5. Garage

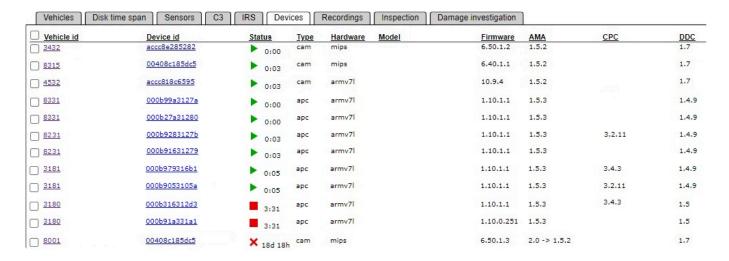
Garages is the lowest tier in the hierarchy when it comes to sorting vehicles in OEC, from here managers can perform operations on multiple or single vehicles as well as the whole garage. This includes, but is not limited to:

- · Install apps or upgrade firmware
- · Fetching inventory reports of devices
- Accessing people counting statistics
- · Fetching and viewing recordings
- · Move and remove vehicles

In larger transit and public transportation organizations, local managers at a depot are often assigned one or more garages in OEC, to reduce the work load for managers with bigger areas of responsibilities.

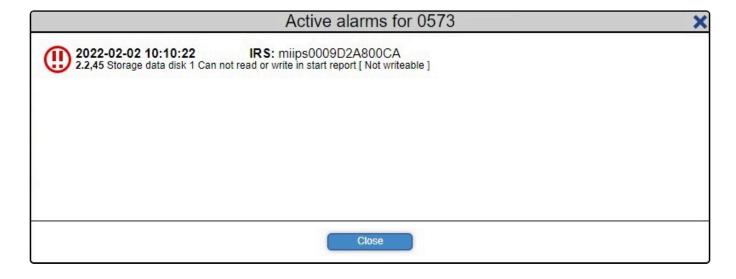
2.5.1. Vehicles

In the Vehicles tab, a list of all vehicles associated with a specific garage are shown.



Information about their status and any alarms, as well as a timeline for the last week showing when recording has been active in at least one recording device in the vehicle.

To view more details on a specific vehicle, click any <u>vehicle id</u> in the list, or click the alarm icon to see any alarms from the vehicle.



When browsing alarms, additional information about which app or device is having issues, last reported date and time of the issue, as well as what the issue is concerning.

In the image above for instance, there is a problem with a storage unit in a device.

At the bottom of the vehicle list, a box with additional options is available.



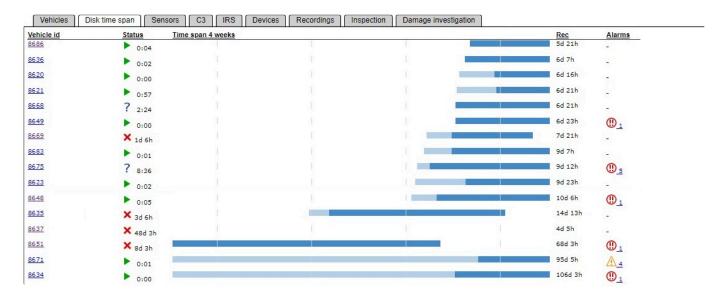
By selecting one or more vehicles using the check boxes next to the vehicle id, it's possible for an operator do three different things:

- Select recordings to be fetched from the vehicle to OEC
- Protect recordings to prevent them from being overwritten with new video
 Please go to <u>Vehicles Overview</u> to read more about protecting recordings.
- Use the <u>Observit Guardian</u> tool. For more information about Observit Guardian, please visit our <u>How to: Guardian</u>.

2.5.2. Disk Time Span

The Disk time Span tab shows several details related to video recording:

- · Vehicle status
- · Days since the oldest video was recorded
- · Alarms from recording units
- · A timeline for each vehicle with at least one recording unit in it.

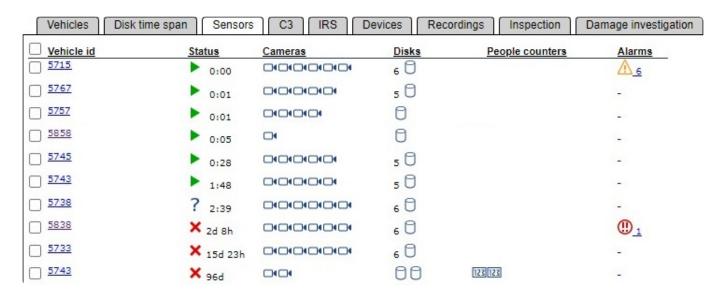


The timeline shows recording status from today and four weeks backwards.

If a vehicle has more than one storage device, the beginning of the timeline may be light blue, which means that not all storage devices have recordings that old.

2.5.3. Sensors

The Sensors tab contains an overview of all vehicles in a garage, equipped with cameras and people sensors.



Information from the vehicle regarding the following topics can be seen:

- · Vehicle status
 - Running, unknown or time since last report
- · Number of cameras
 - If a vehicle contains more than six cameras, a number is shown next to a single camera icon instead.
- · Number of disks
 - If a vehicle contains more than four disks, instead a number is shown next to a single disk icon.
- · Number of people counters
 - If a vehicle contains more than four people counters, instead a number is shown next to a single people counter icon.
- Any alarms from devices
 - Orange triangles represent minor issues, such as time errors. Red exclamation points indicate more severe issues, such as memory failure.

Normally a vehicle will display one disk per camera, except for units such as the AXIS F34 NVR, which may have up to four camera lenses connected.

In the image above, an example of this can be seen in the vehicle 5757.

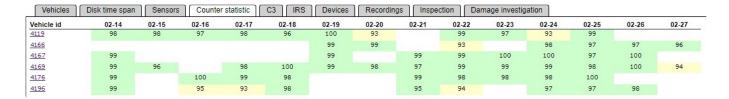


Located at the bottom of the list, a box for multi vehicle operations can be found, which contains options for the following commands:

- Fetching the inventory from a vehicle, a function that reports what devices (cameras, people counters and disks) a vehicle contains and their status.
- Fetching all people counter configuration from a vehicle
- Requesting the privacy image from all people counters in a vehicle

2.5.4. Counter statistic

The Counter statistic tab shows statistics from all vehicles with the CPC application installed in a people sensor.

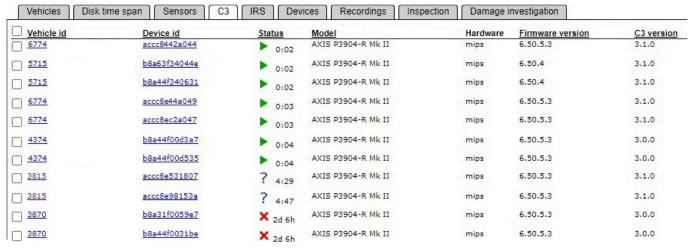


The timeline stretches from today and two weeks backwards. Numbers are marked with either green, yellow, or red depending on the accuracy of the vehicle.

To view earlier days or the number of people counted, click on any vehicle id to view the <u>Counter report</u> tab from the selected vehicle, there you'll find statistics from today and two months back.

2.5.5. C3

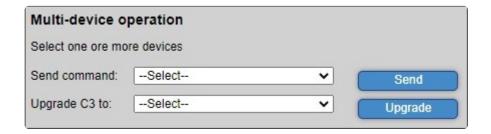
The C3 tab shows information about devices with the C3 application in vehicles, device model and software versions.



From this view, using the multi-device operations settings below, a user can choose to upgrade C3 devices.

Or send one of many different commands to the devices, including, but not limited to:

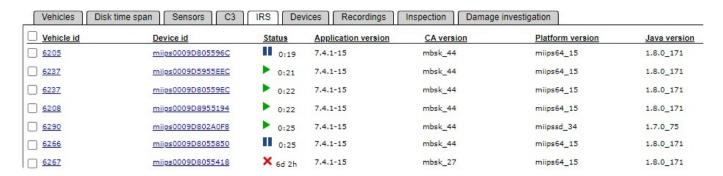
- · Get information from devices
- · Get sensor information and snapshot
- Get reports and debug file
- · Get recording map
- Save and amend storage/sensor databases
- · Enable/disable SSH
- Cancel upgrade of C3



To learn how to install and use the C3 application, please see our guide C3 installation

2.5.6. IRS

The IRS tab shows information about the IRS application and related information from vehicles.



As always, vehicle id, miips mac and status is shown. In addition we can also see:

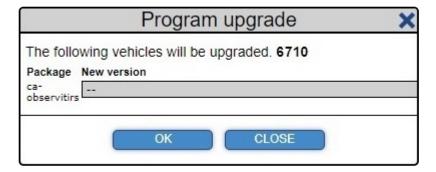
- Version of the IRS application
 Software in the MIIPS used for communication with OEC.
- Customer adaptation (CA) version
 Settings for recordings, retention time of video etc.
- Platform version
 Shows what hardware the IRS app is installed on.
- Java version
 Shows the Java version installed in the MIIPS.

Below the list of vehicles, a grey box with multi-device operations is available. From here it's possible to perform upgrades and send requests to several vehicles at once. By selecting one of the commands in the grey box, a popup with more options will be revealed.



Upgrade NVR

This allows upgrading and/or replacement of the customer unique MIIPS software. If you are unsure what version is correct, please contact Observit support.



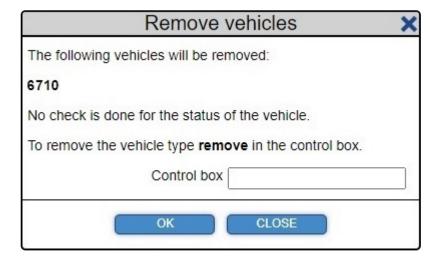
Get reports

Allows the user to request several different reports from devices in a vehicle.



Remove vehicles

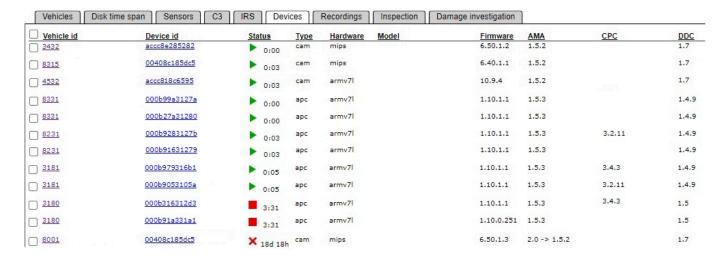
Option to completely remove a vehicle from OEC. This command should only be used by senior staff and with absolute certainty.



2.5.7. Devices

The Devices tab shows the current run status of the vehicle, the software of devices in the vehicle – cameras and people counters, as well as current alarms.

If a device in a vehicle has either AMA, CPC or DDC installed, it will be shown in this list.



Below the list of vehicles, a grey box with multi-device operations is available.



By selecting the Command dropdown, a user can choose to either fetch the latest status and device info from a vehicle or cancel a previous install request.

The bottom options enable the installation of new software versions of each app individually.

2.5.8. Recordings

The Recordings tab shows all recordings from vehicles in a garage.



If there are ten or less recordings, only a list will be shown. In the list, several details regarding both the recording and the request are shown.

One of the most important fields for regular users is Status, this shows either:

- Complete
 - Fetching of videos from the vehicle is complete
- · Upload in progress
 - The request has been received, video upload in progress
- · Waiting for vehicle
 - The upload request has not been received by the vehicle yet

It is not only the **Status** field that will update during the process of requesting video, the field labeled **Result** will also show an indication of the progress made thus far.

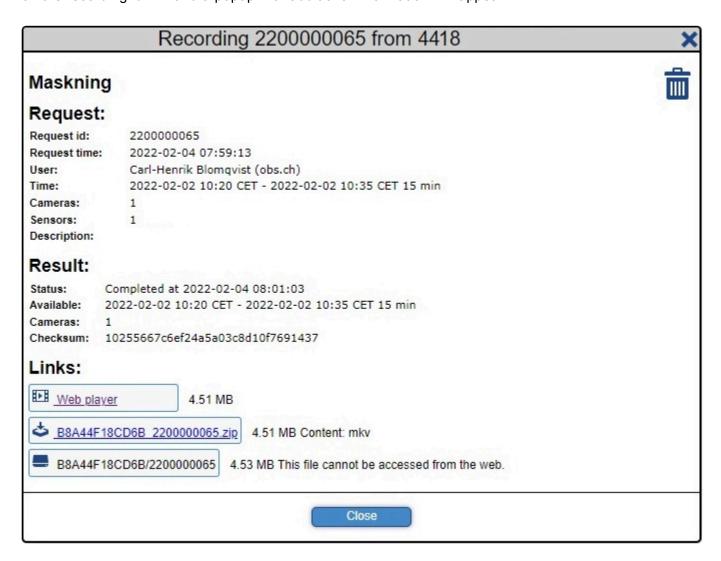
The Result field can show either:

- · No info
 - No information from the vehicle has been received by the server
- · X minutes
 - A confirmation of the length of video requested and about to be uploaded
- · Web player
 - As soon as the video is uploaded, a link to the Web player will be shown.
 - This allows the user to view the video instantly in their own browser.

If there are more than ten recordings, a calendar view will be shown instead. To find the recording you are looking for, simply click the date in the calendar and select you recording in the list below.



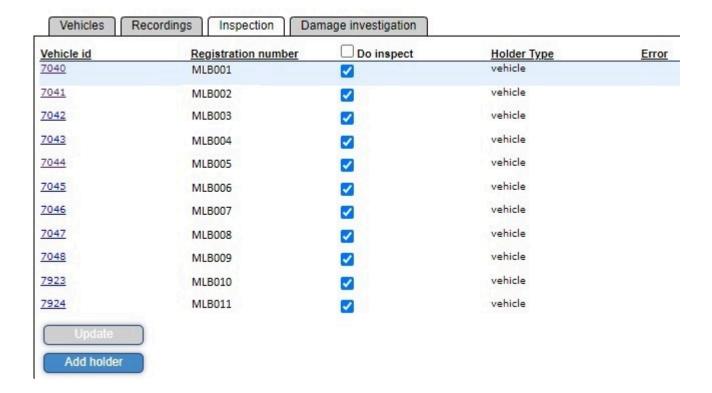
To see more information about the request and videos, as well as to download the video sequence, click on the recording id link and a popup with additional information will appear.



Here more details about the request and attached video is presented, with information about the number of cameras/sensors, what time the upload was finished, a checksum to verify that it is the correct video. There are also links to the Web player, and an option to download the video to your local PC, for distribution and analysis.

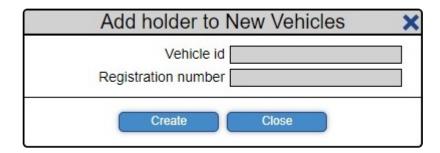
2.5.9. Inspection

In the Inspection tab you'll find a list of all vehicles associated with a specific garage, and from there toggle on/off any vehicle from being registered by the cameras in the Damage Investigation tool.



To enable/disable the vehicle being recorded, simply click the check button next to the vehicle id and select "Update" at the end of the list.

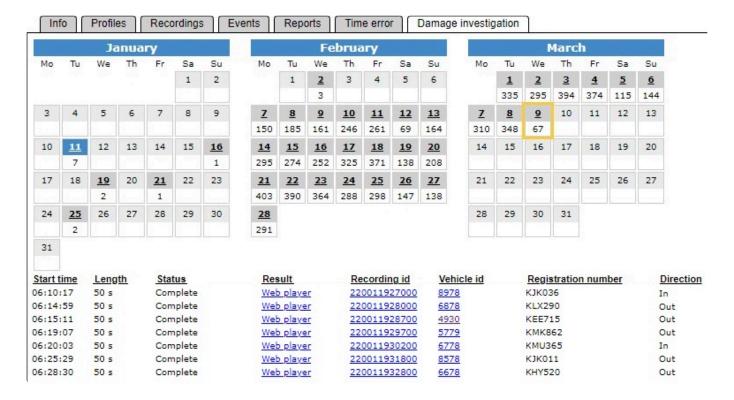
The "Add holder" button allows users to manually input a new vehicle into OEC, to input a new vehicle, simply click the button and a popup to enter details will open.



Vehicle id is always required, but Registration number may be added later.

2.5.10. Damage Investigation

The Damage Investigation tab displays a calendar with journeys made in and out of depots outfitted with the Damage Investigation tool. Every vehicle on the allowed list is captured on video from all sides and from different angles, to make sure that any damages to the vehicle is documented.



The selected date is marked in blue, and today's date is marked with a yellow square. Days marked in grey have recordings, recordings are by default saved for 30 days, but this is fully customizable. The journeys are time stamped and marked with the direction they passed through the entry of the depot.

To view they journey of a vehicle, simply click on the Web player link of your desired vehicle.

To see our complete guide on how to use all functions in Damage Investigation, please click on the link How to: Damage Investigation

2.6. Vehicles

When accessing a vehicle page in OEC, all information regarding that vehicle will be available for viewing.

Please note that some of the tabs and functions might not be visible or enabled, depending on your user level.

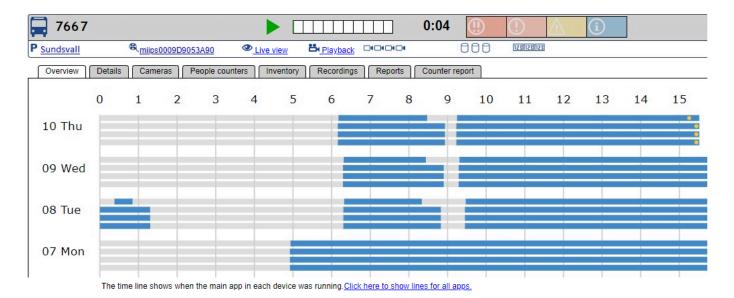
If functions that you should have access to aren't visible, contact your local manager.

Please select **Overview** to get familiar with the main vehicle page.

2.6.1. Overview

The overview contains all information about a vehicle, including but not limited to:

- · Vehicle id and Garage
- · Miips-id
- Status and latest report time
- · Links to Live view and Playback
- · Number of cameras, storage units, people sensors
- · Any errors reported from the vehicle



Below this information, for the last week several timelines are shown. This represents when recording has been active, i.e. when cameras have been powered on.

Blue means cameras are on, and grey means cameras are off. There is one line for each recording unit, i.e. each device with Observit C3 and each NVR with Observit IRS.

The top line is reserved for the IRS application in the MIIPS, after that apps in cameras are shown, and then apps in people sensors.

For the top line, showing today, the future is white.

The vehicle in the picture above has at least one app running in each device. In the overview of a vehicle, only the main app in each unit is displayed on the timeline.

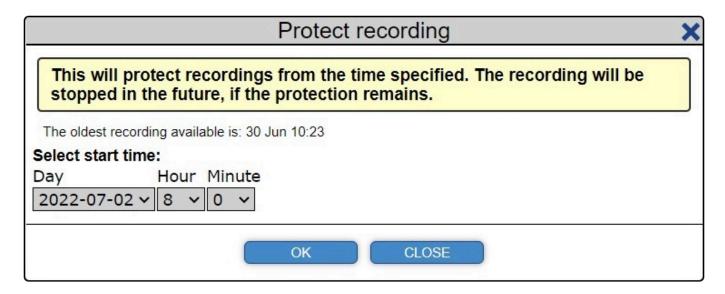
To see which main app is running in a device, simply mouse hover over any line to show the app and id of the device.

- To see all apps, please select "Click here to show lines for each app."
- The yellow mark indicates the time of the device's most recent report
- By holding the mouse pointer over the yellow mark, the latest report time is displayed

Protected recordings

Any vehicle containing a Miips units equipped with the IRS application have the added option to protect recordings made before a specific date and time.

To protect a recording, go to the vehicle, select the "Recordings" tab and a popup with options will appear.



Here you'll see the date and time of the oldest recording.

Select a date and time located after the time period you are interested in protecting, then simply click on "OK". A confirmation popup will appear



If you feel confident with your requested time period, click on "OK" to confirm. Within a few moments, and if the vehicle is online, your requested recordings will be protected.

Alarms

Below the recording information, any alarms from the vehicle will be presented.



To learn more about alarms from vehicles, go to Alarms.

2.6.1.1. Alarms

Whenever an app or device in a vehicle encounters an error, an error message will be shown underneath the vehicle timeline.



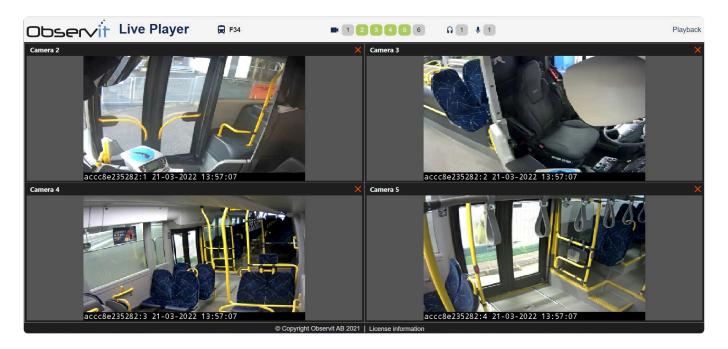
The message will display date and time of when the error has reported, what app or device where the issue has occurred, as well as a message that gives details regarding the error.



If an error is "fixed", the notification will be moved from the active alarms section to the old alarms area. This serves two purposes, it declutters the interface to make sure that an operator notices a current problem, as well as highlighting old alarms that are important, but not be of critical importance at this time.

2.6.1.2. Live view

The Live view in OEC allows an operator to see live video in real time from a vehicle. This is particularly useful for bus operators or security center personnel that need to keep track of what's happening in vehicles.



To learn how to use the live view feature, go to our **How to: Live view** guide.

2.6.1.3. Playback

By using the Playback feature, a user can easily and quickly find event or incident in or near a vehicle. When the exact time of an incident has been noted, fetching a appropriate length of video will be much quicker, compared to requesting hours of materials, waiting for the upload and then sifting through the video material.

To learn how to use the Observit Playback tool, go to our How to: Playback video guide.

2.6.1.4. Web player

The Observit Web Player is a multifunctional video player that is used directly in your browser, no installations or plugins needed.

To learn how to use Observit Web Player, <u>click here</u> to download your own PDF version of our guide.

2.6.2. Details

In the details tab, you can see the registration number, registration date of the vehicle (when first registered into OEC), what garage it belongs to.

There is also an option to move a vehicle to another garage.



To enable a vehicle for inspection using the Damage Investigation tool in OEC, please tick the checkbox next to "Inspect vehicle".

This will allow video to be captured of the vehicle while it's driving in/out of a depot fitted with the Observit Damage Investigation utility.

2.6.3. Cameras

The Cameras tab contains information about cameras and video sensors in a vehicle.

If the Connect Camera Cluster (C3) app is installed in cameras in a vehicle, the available information about those cameras will look different, than in a vehicle that only utilizes the IRS application in the MIIPS.

To see the different views and learn more, please select either <u>Cameras with C3</u> or <u>Cameras with IRS</u>.



2.6.3.1. Cameras with IRS

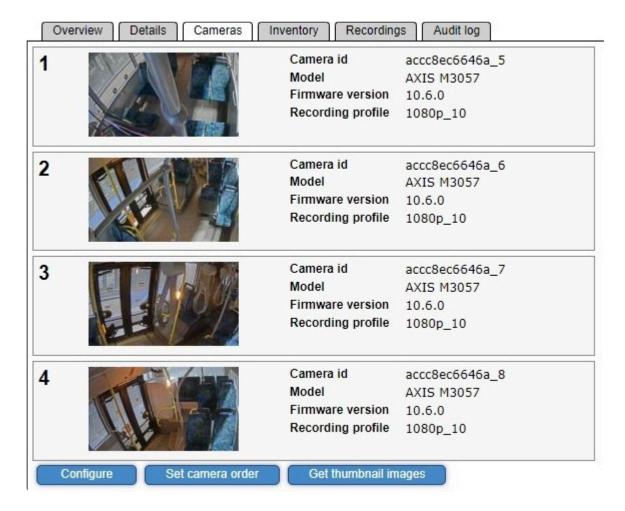
The Cameras tab contains information about IRS cameras, which are NVR attached cameras and video sensors in the vehicle.



- Pos Camera position in the vehicle
- Camera id Unique camera MAC address
- Model Camera model
- · Camera firmware Current firmware in camera

2.6.3.2. Cameras with C3

Any cameras with the Connect Camera Cluster (C3) app, will show additional information about the camera and enables the settings options for each C3 outfitted camera.



Extra camera information regarding

- · Position number Camera order
- Thumbnail Pictures from cameras
- Camera id Unique camera id/MAC address
- Model Camera make and model
- Firmware Camera software
- · Profile Recording settings

As well as camera management

- Configure Update profile function
- Set camera order Set/change camera order
- Get thumbnail images Opens a popup to get new/replace current thumbnail images



2.6.4. People counters

The People counters shows all people sensor units installed in a bus, provided that the Toolbox utility has been used, and all the sensors have been assigned a door number.

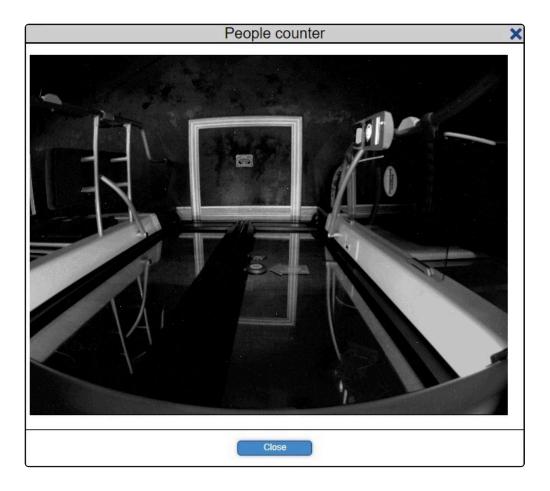


- · Serial number MAC address
- Model Hardware model
- · Firmware Software

The Info and Image links next to each sensor opens a popup with additional information about the configuration files in the counter



An image generated by the sensor during installation, it is often used by vehicle engineers to verify that the installation has been successful.



2.6.5. Inventory

The Inventory tab shows software versions, storage and much more for devices in a vehicle.

If the C3 app is installed in cameras, the view will look different than if only IRS is installed on the vehicle MIIPS.

Please select <u>Inventory with C3</u> and <u>Inventory with IRS</u> in the menu to read more.

2.6.5.1. Inventory with IRS

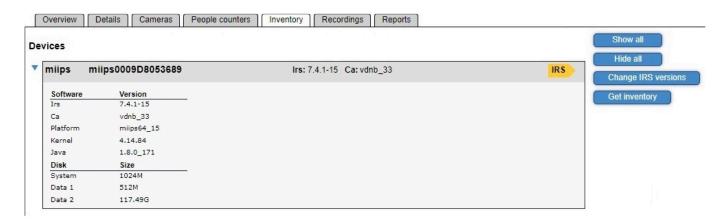
In a vehicle without C3 or AMA in devices, only information about MIIPS devices with IRS will be visible.



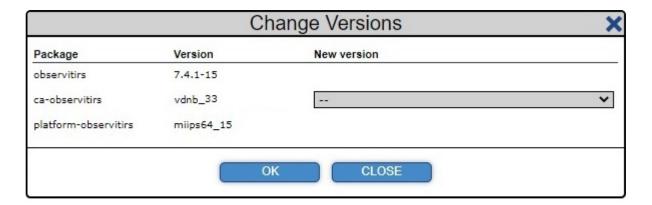
By clicking on the MIIPS banner, it will extend downward to reveal more information about both hardware and software in the device.

To close the extended view, simply click on the banner again.

It's also possible to use the "Show all" or "Hide all buttons" to the right, to see or hide all information about devices.



By clicking on the "Change IRS versions" button, a popup with options to change the IRS version will open. Simply use the dropdown in the popup to select your own Customer Adaptation (CA).

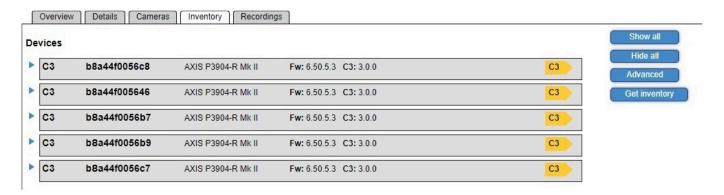


Using the Get inventory button, a popup will open with the option to fetch information about both hardware and software in each device.



2.6.5.2. Inventory with C3 or AMA

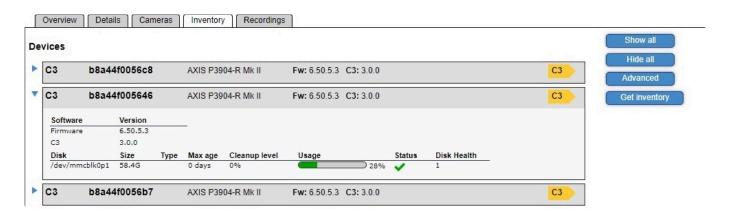
In a vehicle with C3 or AMA in devices, both information about cameras and people sensors with either app installed will be visible.



By clicking on a device banner, it will extend downward to reveal more information about both hardware and software in the device.

To close the extended view, simply click on the banner again.

To see or hide all information from all banners, click on the "Show all" or "Hide all buttons" to the right.



Selecting "Advanced" will expand all tabs from devices with either C3 or AMA installed. From here, upgrading apps installed in a device is possible.



Just click on the dropdown next to the app name and select your desired version.



Any fields with active changes will now be marked in yellow, and an additional button named "Do" will be available underneath the "Get inventory" button in the left side menu.

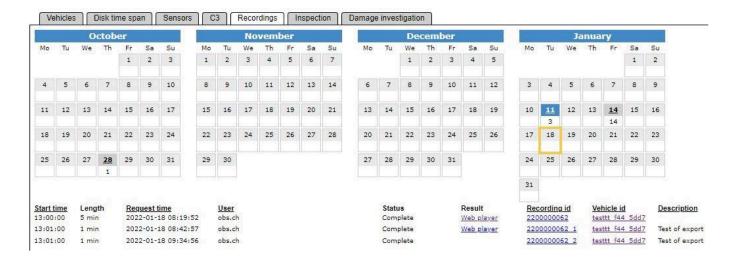
To abort an upgrade, select "Cancel" in the dropdown menu under the header "New version".



Using the Get inventory button, a popup will open with the option to fetch information about both hardware and software in each device.

2.6.6. Recordings

The recordings tab is where you fetch recordings from the vehicle to the server. There is also an overview of current and recent recordings fetched from the current vehicle.



One of the most important fields for regular users is Status, this shows either:

- Complete
 - Fetching of videos from the vehicle is complete
- · Upload in progress
 - The request has been received, video upload in progress
- · Waiting for vehicle
 - The upload request has not been received by the vehicle yet

The field labeled **Result** will also show an indication of the progress made thus far, it will show either status:

- · No info
 - No information has yet been received by the server from the vehicle has been
- X minutes
 - A confirmation of the length of video requested and about to be uploaded
- Web player
 - As soon as the video is uploaded, a link to the Web player will be shown.
 - This allows the user to view the video instantly in their own browser.

Watching recordings

Viewing videos, simply click on the "Web player" link next to any recording and a new window will open where you can view your recordings.

To learn how to use the Observit Web player, go to our "How to" section to see our user guides.

Exports from Web player

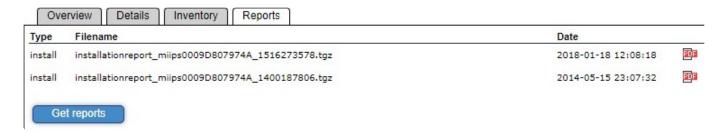
If any exports have been made from the original recording, they will shown underneath the original video. The new video file is given the same name as the original file with the addition of a serial number

for easy tracking. In the image above, we can see that two exports have been made from the original file, both with a new serial number at the end of the original recording id.

The export with a 1 at the end of it, was requested as a mp4 file, a format used to easy distribution. And the export with a 2 at the end, was requested in the Web player format, only used for viewing through the Observit Web Player.

2.6.7. Reports

The Reports tab in OEC shows any available reports created in the Toolbox utility in the vehicle.



In the Installation report below several details can be seen, including, but not limited to:

- · Date of registration
- · Licence plate number
- · Vehicle id (Inventory number)
- · Miips software
- Customer adaptation version
- · Serial numbers of cameras
- · Test result from cameras and the recording disk

Installation report vehicle 7957

Installation

Installer	
FS	
Inventory number	
7957	
Observit IRS version	
4.1.0-34	
Customer adaptation version	
nsda 2	
	FS Inventory number 7957 Observit IRS version 4.1.0-34 Customer adaptation version

Serial number

Camera 1	Camera 2
ACCC8E08E898 M3113 5.40.9.4	ACCC8E08E89A M3113 5.40.9.4
Camera 3	Camera 4
ACCC8E08E70E M3113 5.40.9.4	ACCC8E08E899 M3113 5.40.9.4
Camera 5	Camera 6
ACCC8E08E7F8 M3113 5.40.9.4	ACCC8E08E732 M3113 5.40.9.4

System test

Communication	Recording disk	
OK	OK	
Camera 1	Camera 2	
OK	OK	
Camera 3	Camera 4	
OK	OK	
Camera 5	Camera 6	
OK	OK	
Recording		
OK		

The installation report is generated by the miips during installation, it is often used by vehicle engineers to verify that the installation has been successful.

2.6.8. Counter report

The counter report tab in a vehicle displays a calendar view of the last two months, with a number representing the accuracy of the counting of passengers.



Since buses transport passengers at all hours of the day, instead of having the day start at 00:00 / 12:00 pm, the counting restarts a few hours after midnight, depending on your local time. This is to ensure that the result of the counting of passengers is registered on the correct "traffic date". The time is adaptable to suit the customer's needs. The time when counting restarts is shown above the calendar.

Days marked in dark grey have a CSV-file attached, with further details on the counting available. The numbers marked with either green, yellow, or red represent the accuracy of the counting for the day. During a day that the bus has not been in use, or the number of people counted is below the selected threshold, a blank day will be shown in the calendar. When selecting a day without a result, if no stops have been served, a message "No stops for this day." will be shown, or if the bus has had to few passengers, details on the counting results will be shown.

	7MVF 2022-03-01.csv					Accumulated			
Time	Туре	Stop	occupancy	Boarding	Alighting	Boarding	Alighting	Accuracy	
06:52:18	auto	-1	-5	0	0	0	0		
7:22:26	auto	-1	-6	0	0	0	0		
7:32:27	leaving	-1	-6	1	3	1	3		
8:10:29	arriving	-1	-5	0	0	1	3		
8:10:49	auto	-1	-6	0	0	1	3		
8:12:04	auto	-1	-5	0	0	1	3		
B:12:14	leaving	-1	-5	3	4	4	7		
8:25:10	arriving	-1	-5	0	0	4	7		
8:25:30	leaving	-1	-4	1	0	5	7		
8:37:05	arriving	-1	-4	0	0	5	7		
8:37:45	leaving	-1	-2	2	0	7	7		
8:43:15	arriving	-1	-2	0	0	7	7		
8:44:25	leaving	-1	-6	0	4	7	11		
8:45:45	arriving	-1	-6	0	0	7	11		
8:47:04	auto	-1	-5	0	0	7	11		
8:48:19	auto	-1	-4	0	0	7	11		
8:48:30	leaving	-1	-4	3	1	10	12		
3:50:35	arriving	-1	-4	0	0	10	12		
8:50:49	auto	-1	-3	0	0	10	12		

This is an extract from a run of a bus, where details of the counting are displayed. At the top, a CSV-file is available for download.

Several details regarding the counting is displayed here, including:

- Time
 - What time the counting took place.
- Type
 - Report of counting result can set to trigger on:

Automatically at a fixed interval

Doors opening / closing

Combination of both, such as seen above

- Stop
 - A position or name of stop will be shown.
- Occupancy
 - Number of people currently on the bus
- Boarding
 - Number of people getting on the bus at the stop
- Alighting
 - Number of people getting off the bus at the stop

To the far right, underneath the topic Accumulated, the total number of people counted for that day is shown.

- Boarding
 - Total number of people who have gotten on the bus since counting restarted.
- Alighting
 - Total number of people who have gotten off the bus since counting restarted.
- Accuracy
 - As soon as 100 or more people have been counted, a number representing the accuracy of the counting is shown.

2.7. Administration

The hierarchy in OEC is made up of the default root, then partners and finally customers.



The root level stems from Observit, partners are often IT-solution providers using OEC to supply a platform for their customers.

Partners are shown in blue and can hold both partners and customers, one or more of each category.

Customers are shown in yellow and is made up of both private and public companies, government agencies, transportation authorities and all of their employees.

2.7.1. User access

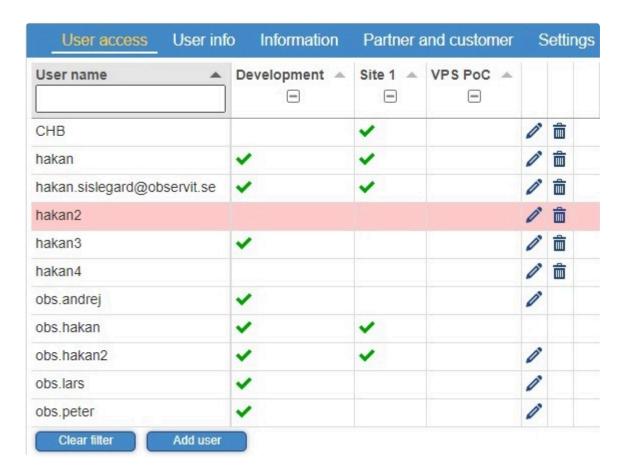
The User access tab gives admins a number of options when it comes to user control including adding new users, changing user access to customers, modifying user privileges and more.

Administrators with root privileges also have the option of the limiting user access for partners as well as customers.

Views and filters - For partners

All user levels and customers are sorted into charts to achieve a clear overview access.

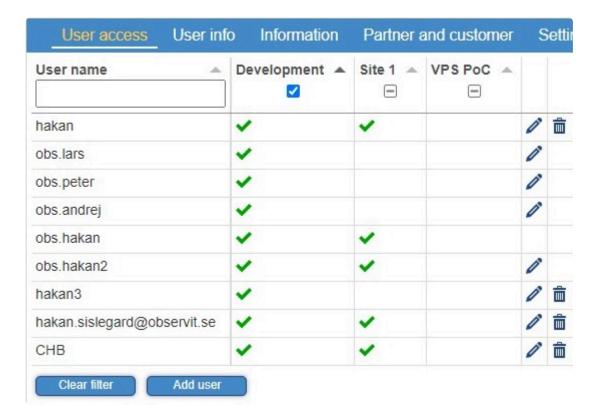
From this view, only customer access is shown. To see what functions your users have access to, go to "User access – Customer level" below.



The user list is by default sorted by name, to sort by access to a specific customer, simply click on the customer and all users with those rights to that customer will be shown.

To filter out all users that lack access to a specific customer, find your customers name and click on the box with a dash inside of it, now only users with the specific access will be shown.

User accounts that have expired are marked in red.



And to see all users without access to that customer, click once again in the same box.



By clicking on "Clear filter", any filtering options are reset, and the default view will be shown.



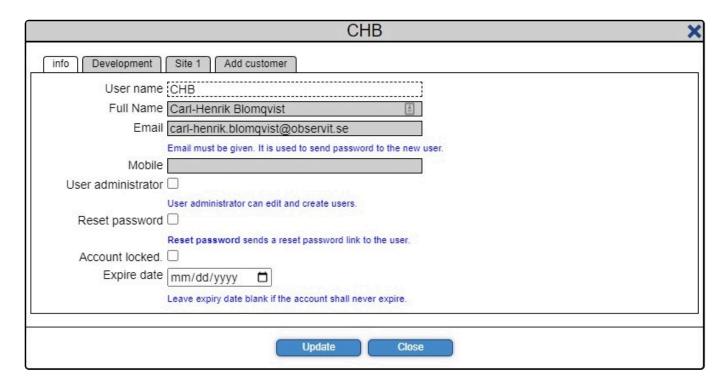
Views and filters - For customers

Just like when accessing the User access tab as a partner, the same views and filters can be applied. Customers have a wide range of options to choose from, with the ability to turn features on and off, or to

customize different values.

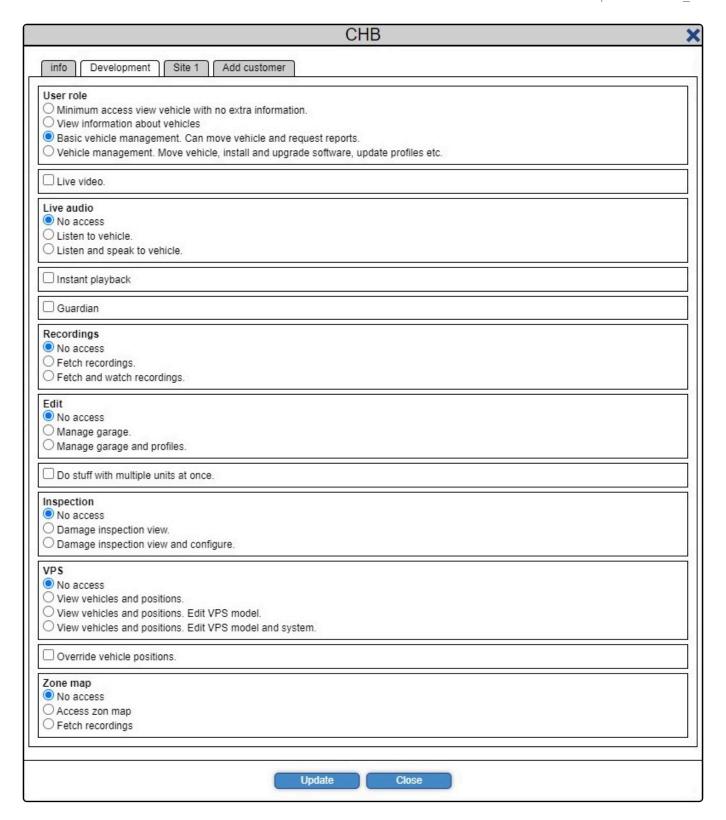
Editing and removing

Managing a user's access to customers in OEC is easy, simply click on the pen icon on the right side of the chart, and a popup will open.



From here it is possible to change the name, e-mail, and phone number of a user. As well as adding/removing admin rights, resetting passwords, locking and assign an expiry date to the account. When you have selected the required settings, click on "Update".

To edit what rights a user has on a specific customer, click on that customers name in the top menu.



Here you will find a great deal of options related to the viewing, editing, and deleting of vehicles and garages.

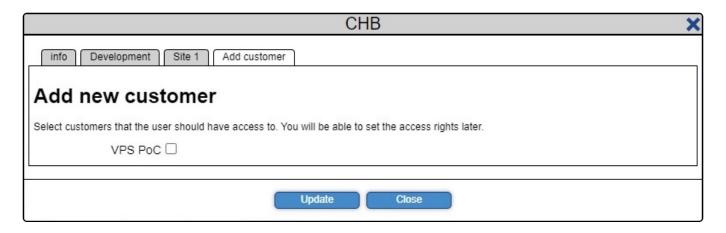
It is also possible to enable specific functions and features in OEC that a user should or should not have access to.

When the correct settings have been selected, click on "Update".

Missing options for a specific customer?

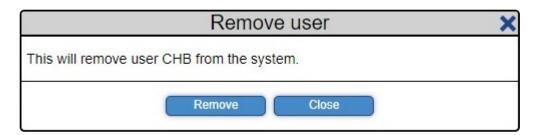
Select "Add customer" and tick the checkbox next to the desired customer.

A new tab will now appear where all the same settings can be edited.



Deleting users

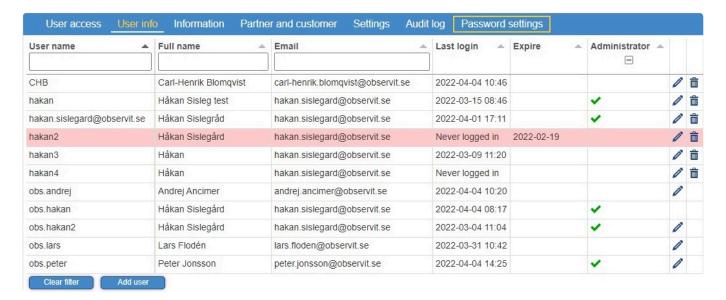
If you wish to delete a user, click on the trashcan icon on the right side of the chart, a popup will open.



Verify that the username corresponds with the name of the user you wish to delete, then click the "Remove" button.

2.7.2. User info

The User info tab shows details such as name, e-mail, last login and more about each user account associated with that partner or customer.



The user list is by default sorted by name, to sort according to another criteria, click on a header "Last login" to sort the list date and time of the latest login made by the user.

User accounts that have expired are marked in red.

Go to <u>User access</u> to find a detailed guide on how to edit the user account details.

2.7.3. Information

In the Information tab you'll find information about your selected customer.



From here, it's both possible to rename an existing customer, and to assign an e-mail address to that specific customer.

If a request for video upload is made by a user without an e-mail address, a notification when the upload is complete will be sent to the e-mail address entered here.

Notifications regarding automatic uploads are also sent to the e-mail address entered here.

The customer number is used by Observit or Observit partners when sending invoices to customers.

Customer key is a parameter that needs to be entered into certain apps in cameras and other equipment, to ensure that they report to the correct customer.

2.7.4. Partner and customer

The customer tab shows a summary of useful information on your partners and customers.

User acc	ess User info Informatio	n raiui	er and customer	Settings
Customers	3			
Name	Email	# users	# vehicles	# free nvrs
Development	hakan.sislegard@observit.com	9	43	1
Site 1		5	0	0
VPS PoC	lennart.rasmusson@observit.se	0	6	0
New custom				

In the customers section you'll see the names of all customers, any connected email addresses, and the number of:

- Users
- Vehicles
- · Free NVR's

A customer can have holders, holders are vehicles such as buses, trains, and trucks etc. A customer may also have cameras, people sensors or similar devices.

Partners

Name	Email	# users	# children
Observit		5	3
partner 1		20	2
partner 2		0	5
partner 3		1	4

A partner can only be removed if it has no customers, partners or users.

For partners, you'll see the names of your partners, their connected email address, and the number of:

- Users
- Children (customers assigned to that partner)

A partner of Observit can manage and create Customers. A partner doesn't have any holders, cameras etc. A partner may have one or more customers.

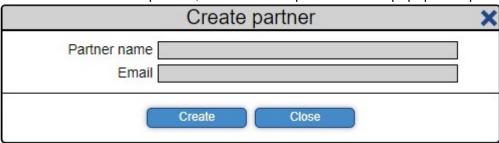
Adding partners and customers

To add a new customer, click on "New customer" and a popup will open.



Input the new customers name, any email address you wish to assign to the customer. As well as the name of the default garage where your new vehicles will be placed.

Likewise to add a new partner, click on "New partner" and a popup will open.

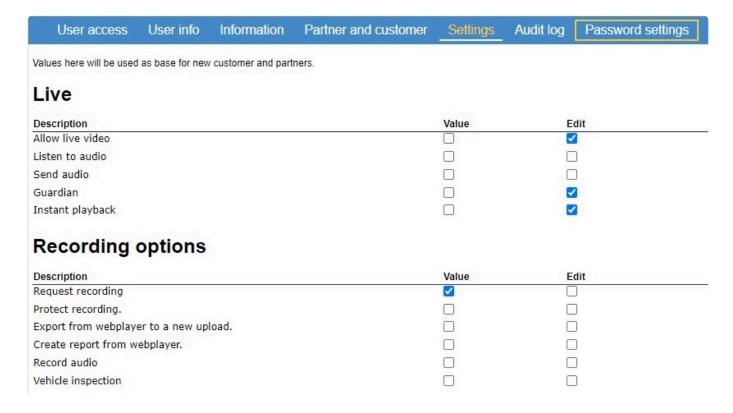


Input the new partner's name and the email address you wish to assign to the partner.

2.7.5. Settings

The settings options are only available for partners and provides a large number of different options for administrators.

The value of settings here will be inherited by any new partners or customers created.



Settings related viewing live video and the recording of audio and video may be altered in this section. The first column of checkboxes (Value) control whether users can use the function The second column (Edit) controls if the customer can change the value, or if the value should be locked in.

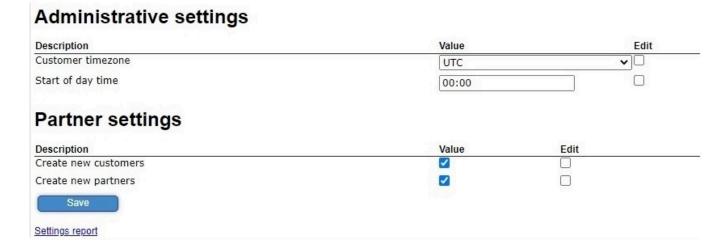
Recording storage policy Edit Description Value Number of days to keep fetched recordings after request day 30 Range: 1 - 60 Minimum number of days to keep fetched recordings after finish 10 Range: 1 - 10 Number of days to wait before warning about fetch recording requests that are 5 not finished Range: 0 - 10 If set to 0, no warning messages will be sent. Number of days to keep fetch recordings requests that have not been sent 30 If set to 0; do not remove unsent requests. Range: 0 - 40 Settings for IRS Edit Description Value Allow NVR to be moved to different customer Use multi IRS function V

The recording storage policy controls for how long video should be saved on the server before being deleted.

As well as for how long failed requests should be saved.

The option to move NVR's is important to partners that manage large fleets of vehicles for multiple customers.

IRS is a Observit application running on MIIPS units in busses, trains, and trucks. Click <u>here</u> to find out more about the IRS-application.



The last section gives control of time settings, for instance a partner might have customers in different regions around the world, and it is favorable to set the time individually for each area.

It also gives the option of letting your partner allow the creation of new partners and customers, as well as editing existing ones.

2.7.6. Audit log

The audit log shows any action each user has taken from login and until they log out.

	Jser access User in	nfo Informa	ation Partner and	customer Settings A	udit log Configuration
Select	month 2022-04 ✔ Select	Who	What	On what	info
9858	2022-04-04 08:08:05	obs.ch	Logged in	Oli Wilat	illo
9857	2022-04-04 08:08:05	lennart	Logged in		
					6
9856	2022-04-01 17:15:34	obs.hakan	Observit Guardian	customer: Development	Cameras: 1, 2
9854	2022-04-01 16:34:18	obs.hakan	Webplayer	holder: F34	Recording 220000016800
9853	2022-04-01 16:31:26	obs.peter	Logged out		
9852	2022-04-01 16:28:33	obs.hakan	Request recording	holder: F34	Recording 220000016800
9842	2022-04-01 16:27:37	obs.hakan	Remove recording	holder: F34	Recording 220000016600
9841	2022-04-01 16:24:40	obs.hakan	Webplayer	holder: F34	Recording 220000016700
9834	2022-04-01 13:45:25	obs.andrej	Logged in		
9833	2022-04-01 13:43:54	obs.andrej	Logged out		
9832	2022-04-01 13:12:50	obs.hakan	Request recording	holder: F34	Recording 220000016500
9831	2022-04-01 13:04:15	obs.hakan	Request recording	holder: F34	Recording 220000016400
9830	2022-04-01 13:03:40	obs.hakan	Remove recording	holder: F34	Recording 2200000099_1
9829	2022-04-01 13:03:33	obs.hakan	Remove recording	holder: F34	Recording 2200000099
9828	2022-04-01 13:03:29	obs.hakan	Remove recording	holder: F34	Recording 2200000096_1
9827	2022-04-01 13:03:03	obs.hakan	Webplayer	holder: F34	Recording 220000016300
9826	2022-04-01 12:43:19	obs.hakan	Request recording	holder: F34	Recording 220000016300
9825	2022-04-01 11:52:18	obs.hakan	Remove recording	holder: 101_1	Recording 220000015800
0024	2022 04 01 11:52:10	ohe hakan	Domovo recording	holders 101 1	Pocordina 220000016100

Select the month you are interested in then click on "Select", within a few second the complete audit log for that partner/customer is shown.

Here you'll see when someone has logged in, what commands or actions they performed during that time, as well as when they logged out.

2.7.7. Password settings

Due to security the password settings options are only available to users with the highest administrator rights.

User access U	ser info	Information	Partner a	nd customer	Settings	Audit log	Password settings
Password rule	es						
Settings for password handling Only make changes if you was							
	Al	lowed range.		Parent value	Value		
Password minimum length	. 8			8	614E	Ā	П
Minimum number of catego	ories. 0	- 4		0			Ī
Max password changes in	24h. 0	- no check is done		0			Ī
Number of passwords that not be reused		- no check is done	0 - 10	0			j
Days until password expire	es. 0	- no check is done		0			
Max number of login tries I account is locked.	pefore 0	- no check is done		0			
Values may be adjusted to fo	llow parent	rules.					
save							
Clear password configur	ration.						

From here, it's possible to tighten security by enforcing stricter rules for user passwords.

- Password minimum length
 Passwords must be at least eight characters, with no upper limit.
- Number of categories
 Makes passwords harder to guess when any of the following must be included: uppercase or lowercase letters, numbers, symbols.
- Max password changes in 24h
 Controls how many times a user can reset their password during a day.
- Number of passwords that cannot be reused
 If set to zero, the same password may be used twice in a row. If set to one, a new password must be used when a user resets their password.
- Days until password expires
 If you have temporal users, this allows you to have their account expire when their time is up.
- Max number of login tries before account is locked Reduces the risk of a successful brute force attacks.

2.7.8. Reports

In the reports tab, there are two options.

The first is to generate a report of all video requests made by users. It is also possible to generate a report of any successful uploads and if they are protected.



Each report is generated into a CSV-file, with details on:

- · Upload id
- · When a request was made
- Associated holder
- · What user has made the request
- · Recording start and end time

3. Applications and services



Observit offers a wide range of services aimed at bus operators, transit authorities and law enforcement agencies.

To find out more about each service, click on any link below.

C3 Video Surveillance

BOT Video Surveillance

Connected People Counter

Damage Investigation

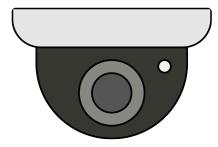
Body Worn Camera

Observit Guardian

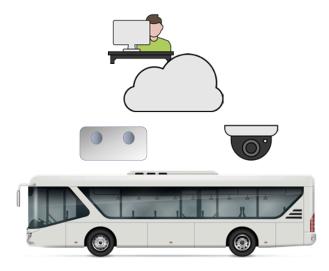
Vehicle Position Service

3.1. Application Management App

The Application Management App (AMA) is an app running in a camera, people sensor or similar IoT-device. AMA perform the most critical features in a remote managed environment.



- · AMA starts whenever the device/host starts
- Talks to trusted servers to check what software is licensed to run
- · Handles installation, upgrade and configuration changes
- The requirements on this app changes infrequently, which means it is extremely well tested and reliable



Managing other apps

- · keep a database of other apps on the same device.
- install more apps, when instructed by the server.
- upgrade another apps, when instructed by the server.
- remove an app, when instructed by the server.

After AMA is started

- · start all other installed apps
- · monitor the state of the other apps and restart them if they crash
- · detects a problem with an app, it reports that to the server.

AMA restart

- AMA is be able to restart an app, including itself, when instructed by the server.
- Security and user management
- AMA reserves the device for Observit use by changing the root password. One or more Observit users may be added, to be used by Observit services.
- It uses encrypted communication with servers and other devices.

3.2. Body Worn Camera

Onboard video surveillance can be a complicated business, from keeping hardware functioning up todate, across multiple fleet generations, to making sure that authorized stakeholders have access to the evidence they need. Adding Body Worn Cameras to the equation seems to make it even more complicated.

Yet there's an easier way to manage it – not just on a single bus or a single Body Worn Camera, but on every bus in your fleet. The solution is in the cloud.

Body Worn Cameras

Based on needs addressed by customers within the law enforcement and private security field, the body worn camera provides a new way for making the world a safer, smarter and more secure place. To put a camera on the torso of a police officer, a security guard or a train attendant creates a more secure workplace, better possibilities for collecting evidence and can provide input for developing better work methods or trainings. The possibilities and use cases are endless.

AXIS's Body-worn Camera is a new product on the market. The camera itself is a recording device. To offload the video data from the device, it is connected to a local Axis Docking Station. The Observit Body Worn Camera Surveillance, BWS, connects to the Axis Docking Station to make recorded video from the body worn camera available in the Observit VMS Cloud service.

Body Worn meets the cloud

Observit VMS is developed for transport and mobile fleets. With a unique, cloud-connected subscription service organisations can achieve cost-effective control over the onboard surveillance. No matter how many buses you own or how wide an area you serve, you can experience high reliability and a low cost of ownership.

With the Observit BWS the integration between the Body Worn Camera and the service available in the Cloud is seamless.

Simpler fleet management

With the cloud as a hub, it's equally easy to manage surveillance equipment across your fleet. Our easily installed onboard cameras are configured and updated remotely, so that you always have the same settings and functions fleet-wide – even if your business operations change. Better still, each system checks its health and reports it via the cloud. So you always know that your systems are working, without having to check them in person. The recorded video by the Body Worn Cameras will be as easy to retrieve as any other camera in the Observit VMS.

Observit VMS is web based. No installation is required, available from anywhere and any time with a browser and an authorized stakeholder.

3.3. C3 Video Surveillance

C3 is an enterprise video solution developed for the connected enterprise bus fleet.

- Just plug in the camera and connect
- Easy and quick to implement
- · Remote management continuous monitoring to ensure system functionality and quality of service
- · Highest possible quality camera VMS to the price of low cost IP solutions



Observit C3 VMS

Observit C3 VMS take advantage of the evolution in the IP technology with Axis video cameras in the transportation segment. The Axis cameras and the Observit C3 solution is a perfect match running the application in the camera to provide a professional CCTV solution in vehicles or other mobile devices. No NVR or recorder is needed in the vehicle.

Video Surveillance as a Service

Observit C3 is a professional video surveillance solution. It's an IP based CCTV system, VSaaS, where the customer can setup the system quick and easy. All delivered as a service make the complete fleet having the same functionality, increase and grow with new functions made available instantly, without onboard actions. New or old vehicles in the fleet are all managed in same way during the lifecycle of the vehicles.

The Observit API is available for integration with other stakeholders or to increase collaboration with partners, police, security management, transit authorities, smart cities and big data solutions.

All made easy. No need for onboard NVR or recorders. No need for expensive in-vehicle repair/

maintenance. No need for consultants, experts, specialists or dedicated staff.

Observit Enterprise Center

The well recognized Observit Enterprise Center management and monitoring solution serves as a solid backend to make sure this is a reliable and stable platform. All devices and units are monitored and managed through the Observit Enterprise Center webbased system. Total control of system, devices, inventory, logfiles etc, as well as management and organisation and the logical structure of depots, vehicles and functionality.

Reliable - available - serviceable

The system is reliable, available and serviceable with a documented High Availability. Video and audio are always available, in high quality, accessible from anywhere, at any time.

Monitored - maintained

The system is easy to handle and the services are continuously monitored during operation to ensure that problems are detected when they occur. Any problem or reduced functionality are reported to the operation and maintenance center. Expensive on-board service is avoided because maintenance and configuration, as well as adding new features, is done remotely.

Accessible

Video, live and recorded, can be accessed at any time without waiting for the vehicle to arrive to the depot or station. Recordings are uploaded from the vehicle during operation to a central video storage, for analysis. In critical situation, remote live video and live audio streams can be established.

Efficient video analysis

Efficient and easy to use Observit webplayer, with synchronized playback from all cameras. It is very easy to export video and to analyze incidents in multiple cameras in parallel.

Future proof

Observit C3 VMS is a future-proof system, built on open standards. Built for transport and fleets, sustainable and cost effective.

Observit cloud services in short

C3 App

- · Local, in camera software
- Recordings, reports, status, loggings
- · Video, audio, metadata etc.

Operation and Maintenance

- Cloud based Central operation, maintenance and inventory
- Immediate report of malfunction

- · Remote corrective action and software upgrade
- · Direct Access to device

Security

- Secured communication
- User authorization
- Logged actions
- Checksum

Installation and service

- · Quality assured easy installation
- · Software remotely managed
- · Cloud based central management, no installation
- · Multi-management of devices and vehicles
- No NVR/Recorder needed on vehicle

Video Access

- Live access
- · Smart upload of recordings, video & audio
- · Direct access to video recording on camera
- · Observit Webplayer, easy to use GUI
- · Instant Playback from the vehicle

Real time

- · Live video access
- Two-way Audio access

Recording

- Full HDTV quality video in H.264 and audio
- · Recordings bookmarked and protected on Edge Storage

Image Analysis with Player

- Synchronous playback from multiple cameras
- · Two-way audio supported
- · Easy to select and download footage
- · User-friendly graphical interface

Integration

- · Support for external I/O as alarmbuttons
- · Support for meta and FMS data
- GPS Support
- · API support to access Observit VMS from a bespoke system

3.4. Connected People Counter

The Observit CPC is an efficient system that makes it easy to install, monitor and manage People counters in the enterprise fleet.

Counting Objects and People

The Observit CPC detects the number of passengers entering and exiting a public transit vehicle, as well as the number of persons currently present within a defined area, the occupancy. The solution is primarily designed for buses and trams and trains but may be used in a wide range of applications. The CPC is using high technology to analyze and perform people counting in a pre-defined area. To get highest possible accuracy in the counting, the counting is made by sensors coupled in stereo creating a 3D view which makes it possible to measure objects in a very efficient way. The accuracy of each vehicle is shown in Observit Enterprise Center.

Data access in real time

The data and result that are analyzed, the number of passengers, are stored in the unit and can be pushed to a predefined customer server or via MQTT/ITxPT at every stop of the bus making real time figures available for stakeholders.

This includes real time counting information, detailed, and accumulated data.

Observit CPC collect data from all counters in a bus and delivers real time accumulated passenger counting information. Boardings and departures are divided into different categories as well as the actual occupancy at each stop. The information can be used, among other things, for monitoring real time travelling and also for congestion information to Travelers.

Accuracy

The devices in the vehicles are constantly monitored to verify the counting operation of the devices. Each stop will generate a status sent to OEC with the actual boarding and leaving information. The measured accuracy of each vehicle is shown in OEC, almost in real time, which gives a very good indication regarding the functionality and condition of the people counters and the quality of the service. The Observit CPC defines a new level of precision in electronic people counting, with a counting accuracy close to 100% – even under difficult conditions.

How To use CPC.

3.5. Damage Investigation

Damages reduced and the economy improved by using video technology and Observit Damage Investigation.

Damages to buses is seen as an increasing problem to bus Operators and Public Transit Authorities. Both the repair itself and buses at standstills because of damages, are very costly and unpredictable.

Observit Damage Investigation

Observit Damage Investigation is a solution that support the business with damage management by continuously registering the external condition of the bus and thus being able to direct support measures to the right journey, driver and the date and time. The Observit Damage Investigation service is used to document the condition of vehicles, primarily as they enter the depot and as they leave the depot. Video from all positions and angles is captured of each vehicle to ensure that any damage can be noticed and addressed.

Analyze

Authorized personnel may view recorded footage of each vehicle to detect damage and quickly determine if the damage was pre-existing, occurred while at the depot, or after leaving the depot. The Observit Damage Investigation service provides the tools you need to decrease damage claims and reduce costs. The Observit Web Player is used to view the recorded video.

Report

An investigation report is created with the basic vehicle info, comments, and selected snapshots. The report could be enhanced to support API to API with direct transfer to your own ticket system and/or customer service. A complete video scene of the bus may also be exported.

In the cloud and always available

The solution is simple and scalable. Instead of relying on local servers and hard disks you equip your depot with the Observit VMS in combination with Axis network cameras and connectivity. The cloud service makes it possible to investigate and manage vehicles from any location and the access is available to all authorized personnel.

With this unique, cloud-connected subscription service you can achieve a cost-effective control over the fleet. Regardless the size of a fleet or the how big of a service area, you can expect high reliability and a low cost of ownership.

How to use Damage Investigation

3.6. Device App Installer

Introduction

Observit has multiple apps that can be installed in devices such as people counters, cameras, and communication routers. Normally, these apps are managed remotely from the cloud using Observit Enterprise Center.

However, when a brand-new device is put in operation, the first app must be installed from the same network as the device. This has three purposes:

- Cloud-enable the device so it connects to Observit Enterprise Center.
- Prove ownership of the device to maintain cyber-security. This prevents unauthorized users from registering devices to Observit Enterprise Center.
- Setting of parameters to establish the organizational home of the device.

Installation Overview

Observit installer is PC software that you run on your computer. You do not have to install the application; it is enough to click on the executable file to start it.

Observit installer finds devices on the local network and pushes Observit apps to the devices.

Observit installer user guide

This user guide describes how the Observit installer PC application is used to install an Observit app in a device.

Terminology

Customer key

A short, alphanumeric key used to uniquely associate a device with a customer. A customer may have several keys, either with limited or permanent validity.

Device

A small, network-connected, special-purpose computer running Linux, e.g., a camera, people counter or router.

Holder

The location or vehicle that contains the device. This could be mobile devices such as buses or trucks, as well as in a fixed location as a depot or freight terminal.

Holder ID

A unique, customer-defined identity of a holder, e.g., number plate or inventory number.

Installation Overview

Installation is done in the place where the devices are located, for example in a vehicle. Observit installer is a PC software that can be runs on any computer. You do not have to install the application; it is enough to click on the executable file to start it. Observit installer finds devices on the local network and pushes Observit apps to the devices.

The installation process is consists of multiple steps:

- 1. Set parameters for installation. These are normally different for each holder, but the same for each device in a holder.
- 2. Select target devices for installation from a list of devices found on the network.
- 3. Select the wanted installation package for each device.
- 4. Confirm selection and start installation.
- 5. Verify that the installation was successful.

If you make a typo and install an app with the wrong parameters, there is a function to correct the configuration afterwards.

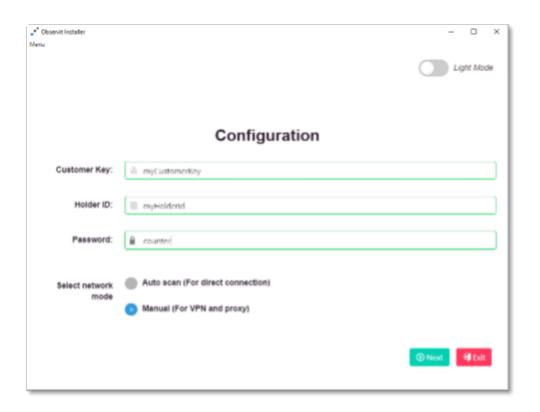
Start Details

Start Observit installer by clicking on the program name.

A screen is displayed while the program starts, showing the version of the installer.



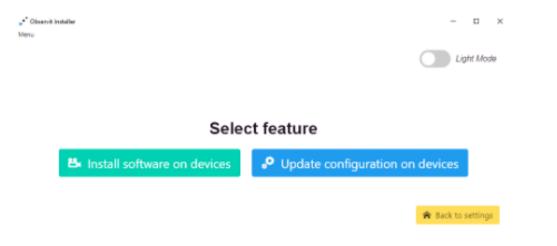
Main, Set parameters for installation Fill in this form and click OK.



Fields with valid content shows a green border and fields with incomplete or invalid content have a red border.

The Light mode / Dark mode switch changes the color settings for the application and can be toggled at any time.

- Customer Key is mandatory.
 - Sent to Observit Enterprise Center, to let OEC know which customer owns the device.
- · Holder ID is mandatory.
 - Sent to Observit Enterprise Center, so that the server knows where the device is installed.
- Password is mandatory.
 - It tells Observit installer the password of the device. Normally, if the device is new and unused, the password is the default.
- · Select network mode is mandatory.
 - It tells Observit installer the networking mode, which can be automatic or manual.



Click on the feature button to continue with installation or configuration update.

- · Install software on devices
 - Starts the installation process. For further details please check the "Installation" section.
- Update configuration on devices
 - Allows correction of the configuration file on one or multiple devices if a mistake has been made during install. For further details please check the "Updating configuration" section.

Installation

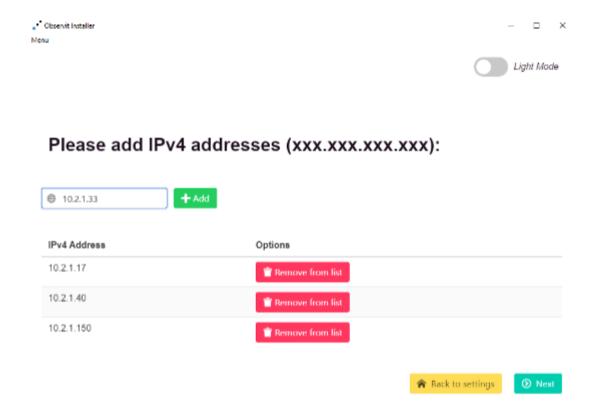
Automatic network scan

If the selected mode was automatic, the application will look for devices on the network and display the progress. Wait until it finishes the lookup process.



Manual network handling

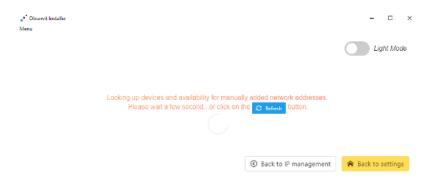
If the manual network handling was selected, Observit installer will display an address manager. Add the addresses you need by entering each IPv4 address and clicking "Add". When all addresses are entered, click "Next".



You must add at least one address. To remove an element from the list, click on the red "Remove from list" button.

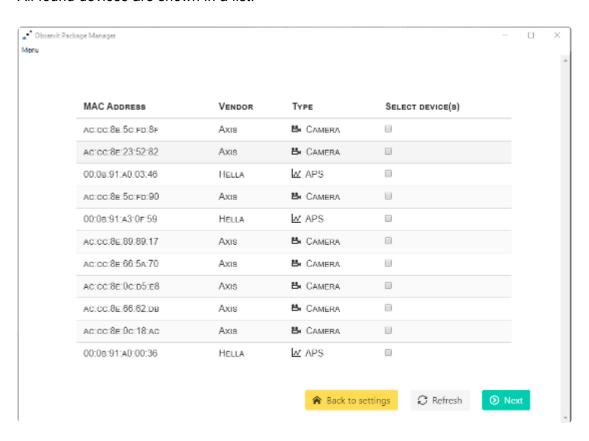
Waiting for network

After the IP address management, Observit Installer will look for devices at the manually selected addresses and display the progress. Wait until the addresses are checked.



Select target devices

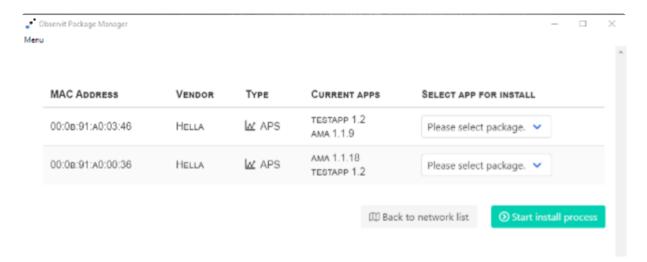
All found devices are shown in a list.



Select the devices you are interested in and click "Next".

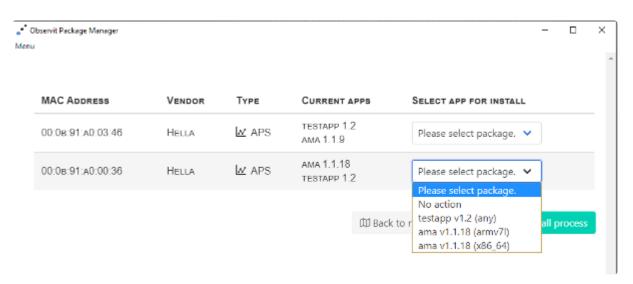
Select installation package

The selected devices are shown, with the installed applications and a drop-down menu with packages you can install.



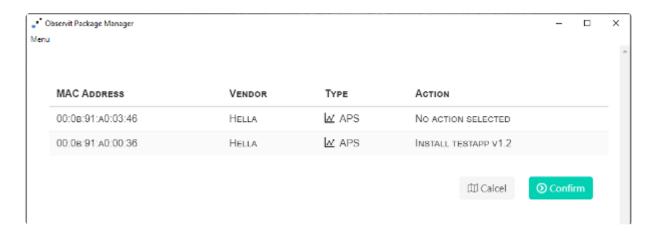
If the installer fails to log in to a device using the supplied password, an error message is shown instead of the menu.

Select the wanted package for each device and click "Start install process".



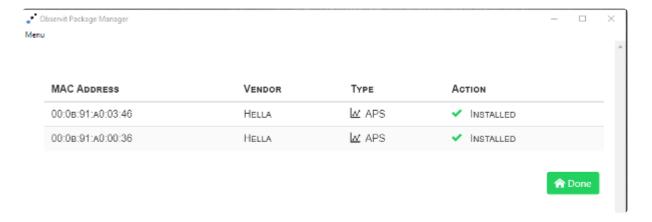
Confirm selection and start installation

A summary of the selected actions is displayed. Review the changes and click "Confirm" to start installation.



Verify

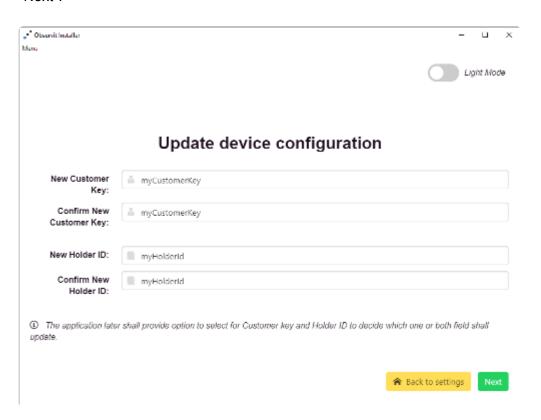
Check the feedback and verify that installation was successful.



Update Configuration

Configuration update information

Enter credentials for Customer Key and Holder ID and type them again to ensure the data. Then click on "Next".



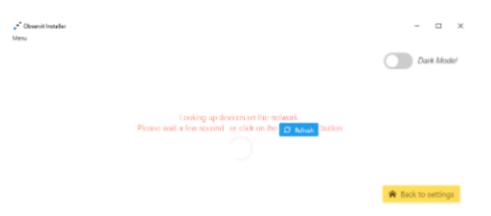
You must enter at least one of customer key and holder id.

New Customer Key and Confirm new customer key field content must be equal.

New Holder ID and Confirm New Holder ID field content must be equal.

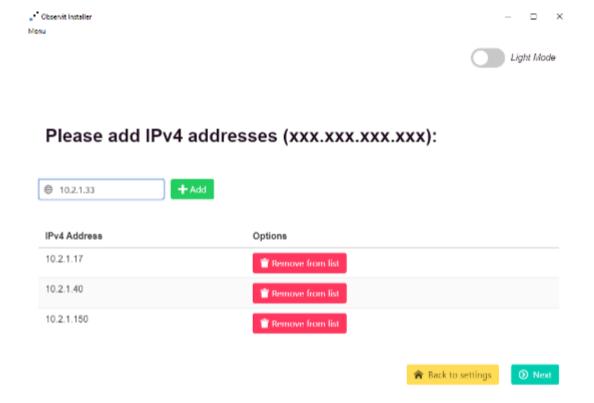
Automatic network scan

If the selected mode was automatic, the application will look for devices on the network and display the progress. Wait until it finishes the lookup process.



Manual network handling

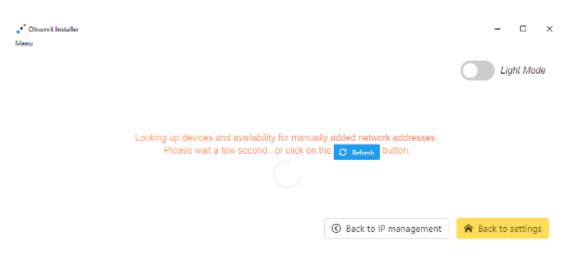
If the manual network handling was selected, Observit installer will display an address manager. Add the addresses you need by entering each IPv4 address and clicking "Add". When all addresses are entered, click "Next".



You must add at least one address. To remove an element from the list, click on the red "Remove from list" button.

Waiting for network

After the IP address management, Observit Installer will look for devices at the manually selected addresses and display the progress. Please wait until Observit Installer has checked the addresses.

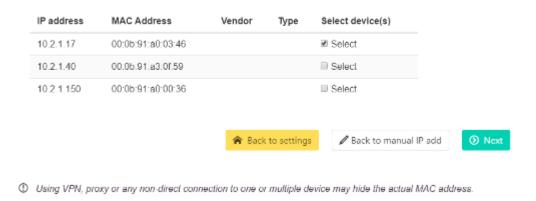


Select target devices

All found devices will be shown in a list.



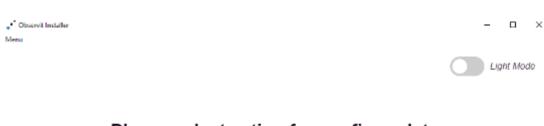
Please select device(s) for further action(s).



Select the devices you are interested in and click "Next".

Select field to update

Select which parameter you want to update in each device. Then click "Start config update process".



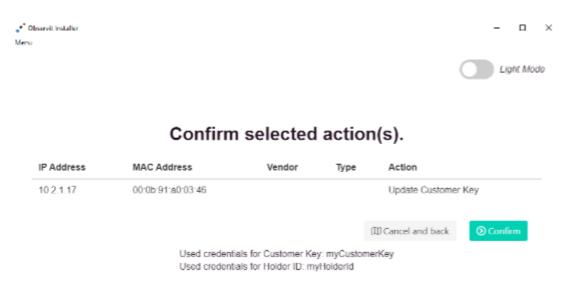
Please select action for config update.

IP Address	MAC Address	Vendor	Туре	Firmware	Current apps	Select field for update
10.2.1.17	00:0b:91:a0:03:46			1.8.2.4	ddc 1.5.1 ama 1.4.2	 ✓ Update Customer Key ☐ Update Holder ID
				[I]] Back to	network list	② Start config update process

The vendor and device type are only shown if it can be determined over the network (Proxy, VPN...).

Confirm action

A summary of the selected actions is displayed. Review the changes and click "Confirm" to start the update process.



Verify

Check the feedback and verify that installation was successful.



Confirm selected action(s).

IP Address	MAC Address	Vendor	Type	Action		
10.2.1.17	00:0b:91:a0:03:46			✓ Successfully Updated		
				☆ Done		
Used credentials for Customer Key: myCustomerKey						

Used credentials for Holder ID: myHolderId

Click "Done" to start over.

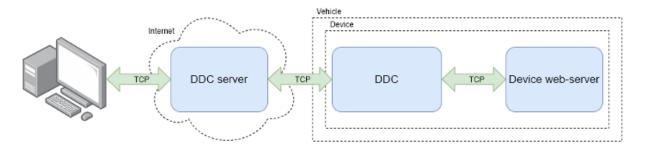
3.7. Direct Device Connect

Background

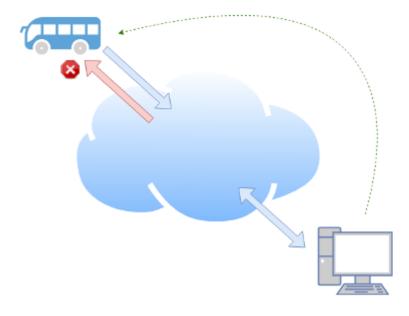
Nowadays remote network access is becoming an increasingly common need among the business companies and engineers. A VPN (virtual private network) connection is used in order to access nodes on a remote network, but if no VPN connection to a remote network is available, a different approach should be considered. The objective of the DDC solution is to allow for users to connect to the GUI (graphical user interface) of Embedded Devices on a remote private network, where a VPN connection is not available, and where Internet connection is not stable, usually a LAN (local area network) on vehicles.

The DDC is a solution that implements two separate applications – the DDC server and the DDC client. The DDC server exists in a cloud while the DDC client application is installed on a device. The DDC client connects to the DDC server with a unique DDC API and keeps the connection open indefinitely (as long as possible since the connection may not be stable, and a client may shut down). The DDC server keeps track of the DDC client connections and implements an API for the user to connect to the DDC client (Device GUI).

How does it work



DDC provides remote web interface access, without any VPN installation or configuration, to a user when the as soon as the web interface is available on a local network and the device is connected to the internet.



Setup DDC

To learn how to setup DDC on a device, please go to <u>Setup & Installation</u> section, and select <u>Direct Device Connect</u>.

3.8. Observit BOT

BOT is a proven video management system where Observit has set the new industry-standard of quality and efficiency.

Observit surveillance solutions are installed in public transportation environments since 2006. With our extensive experience and proven track record, you can rest assured that we will enable you to achieve your surveillance ambitions in your mobile fleet.

BOT for Telia Miips platform

- Observit IRS software for Telia Miips
- · Observit IRS connects to Observit Enterprise Center
- · Operation and maintenance of the system
- · Cloud services
- · Realtime video/audio
- · video/audio download
- API (customer integration system)



Innovative technology - new possibilities

Whether you run a service with a few or tens of thousands of vehicles in the fleet, network video makes a noticeable improvement in your Balance Sheet. The introduction of network video has revolutionized the way public transportation professionals work with passenger experience, passenger behavior, safety, security and vandalism. Network video provides a whole new set of tools to reach operational excellence.

A multitude of advantages

Implementation of network video in public transportation environments has proven successful in many ways.

Revenue increase. Network video helps to improve vehicle and staff planning. Easy and fast handling of crime reports. It is also a highly efficient vandalism prevention tool.

Fast ROI: Reduced vandalism, less time spent on investigating suspect incidents, decrease in liability

claims, enhanced marketing and optimized staffing all result in a compelling ROI.

h4 Seamless integration

Observit video solutions are compatible with your existing infrastructure. They easily integrate with other on-board systems and ERP systems, providing efficient ways to investigate suspect incidents and analyze business performance.

Reliable - available - serviceable

The system is reliable, available and serviceable with a documented High Availability. Recorded video and pictures are always available, in high quality, accessible from anywhere, at any time.

Monitored – maintained

The system is easy to maintain, and the services are continuously monitored during operation, to ensure that problems are detected when they occur. Any problem or reduced functionality are reported to the operation and maintenance center for automatic or manual action. Expensive on-board service is avoided because maintenance and configuration, as well as adding new features, is done remotely.

Accessible

Recorded material can be accessed at any time without waiting for the vehicle to arrive to the depot or station. Recordings are uploaded from the vehicle during operation to a central video storage, for later analysis. In critical situation, remote live video and live audio streams can be established.

Installable

Installation is time and cost effective with a minimum of simple steps to follow. The completed installation is documented and Quality-assured.

Efficient video analysis

Efficient with easy-to-use video player, supporting synchronized playback from multiple cameras. Comprehensive GUI to export video clips and to analyze incidents.

Future proof

BOT is a future-proof system, built on open standards and certified for multiple hardware and software platforms. Easy to integrate with on-board applications, e.g. Breath alcohol interlock, Panic button, Eco driving and Passenger counting to achieve valuable synergy effects.

Operation and Maintenance

- □ Central operation, maintenance and inventory.
- Immediate report of malfunction.
- [□] Remote corrective action and software upgrade.
- Qualification of critical alarms.

Security

- [□] Encrypted video.
- [□] Secured communication.
- [□] User authorization.
- [□] Logged actions.

Installation and service

- □ Quality assured easy installation.
- Automatic system test and installation report.
- □ Software remotely mass deployed.

Remote Video Access

- Upload of recordings to central server
- [□] Live video and audio access

Recording

- □ Full HDTV quality with maximum frame-rate.
- [□] Recordings bookmarked and protected.

Image Analysis

- Synchronous playback from multiple cameras.
- Fast forward and rewind, zoom in, zoom out.
- [□] Easy to select and download footage.
- [□] Timestamp and GPS coordinates.
- User-friendly, comprehensive GUI.

Embedded Application Management

Add intelligent video analytics software, directly to the cameras, during operation.

Integration

- ^L API to integrate with on-board applications, e.g. Alcohol interlock, Panic button, Eco driving and Signage to achieve valuable synergy effects.
- [□] Alarm panel and ERP systems.
- □ Driver and In Vehicle display.

Alarm and Communication

- Rule based alarm and event handling.
- □ Camera tamper alarm management.
- □ Rule based communication over 3G/LTE and Wi-Fi.

Platform

- [⊔] Application platform: Fältcom MIIPS Committo, Icomera Moovbox M340, X-series.
- □ Camera: Axis onboard cameras, Hikvision Mobile IP Cameras.

3.9. Observit Guardian

Observit Guardian gives an operator the opportunity to keep track of several vehicles simultaneously in real time.

The operator selects how many vehicles and cameras to be monitored and how often the images should be swapped.

If the operator detects an event that requires attention to be directed to a specific vehicle, it is possible by clicking on the image from a vehicle to open a new tab, where the operator can watch live video from cameras in the current vehicle.



Way of work

Selection of vehicles

- · Select vehicle to be displayed
- · Select "Observit Guardian"

Selection of cameras

• For example, camera 1 och camera 2 from the bus

The Guardian window opens

- · Frequency and amount of vehicles
- · Select the frequency of image exchange and the amount of vehicles
- Frequency of image exchange
- Number of vehicles to be displayed

For a more in-depth guide on how to use Observit Guardian, go to our How to section and select Observit Guardian.

3.10. Toolbox

Using Observit Toolbox

Please click on <u>Toolbox installation guide</u> to download a pdf-guide, with simple instructions on how to use our Toolbox feature.

3.11. Vehicle Position Service

Vehicle Position Service (VPS) is a unique service that identifies a vehicle's position using license plate recognition (LPR) and GPS identification. By combining various sources, a vehicle's position can be determined even if it is in radio shadow or if they are parked in a column.

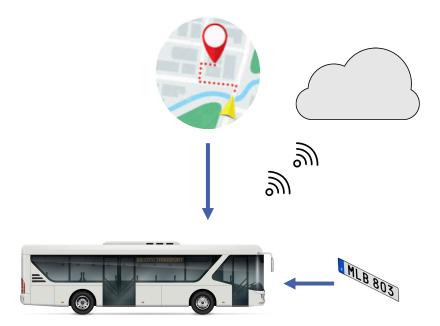


VPS works in all types of depots and other positions of interest, parked on a ramp or complex parking areas having a column layout.

- Parked on a ramp or those who have a column layout
- · Bus stops
- General positions

The solution provide a surface / zone positioning that says which zone the bus is in (e.g, the basement or service hall space no. 2 etc.)

- Provide an exact parking space when the bus is connected
- Able to find buses and analyze data regarding when and time spent on various positions. The positions could be parking, maintenance, cleaning, repair etc.
- A website with a position map and a search function
- The information is available both in real time and as historical positions



GPS constantly provides the vehicles position if a reliable signal is available. GPS may also activate the camera sensor to start or stop, depending of the position. Typically, when the bus arrives at the depot or similar.

The front camera / sensor detects and reports identified, defined and known license plates / signs. The license plate may be on a vehicle or at a fixed location.

Status and information of actual position is transferred to the cloud service.

The positioning system combines both GPS-signals and signs to make an optimal, efficient, and redundant way to define the exact position of a bus, even if the bus is not connected to services such as electric charge, fuel services in the depot. A column parking area has both a start and an end sign to verify arrival and departure, combined with GPS if available. The front camera will identify the bus in front of it to calculate in what order the buses are positioned.

Use case	Main Technology used
Detailed Position	Sign
Tracking of route	GPS
In/Out of garage	Sign
Gates	Sign
Parking spot in garage	Sign
Column parking	Sign + GPS
Parking on ramp	Sign + GPS
Bus stop	Sign + GPS
Washing / repair	Sign

Data is available for analysis from the Observit API and can be applied to use cases such as:

- Find a Vehicle Track a Vehicle
- Vehicle position overview Map all positions for a Vehicle and date
- Position overview and Vehicle allocation Overview of depot and it's Vehicles
- Vehicle position reservation Reserve a position for a Vehicle
- Position overview and statistics Analysis of a Vehicle / position, usage, time spent

Vehicle Position Service (VPS)

To learn how to use our VPS, please go to Vehicle Position Service.

3.12. Zone Mapper

About Zone Mapper

The Observit Zone Mapper is a feature available in OEC, which allows users to find vehicles that have resided in an area during a specific time. Using the list of vehicles, it's easy to find vehicles of interest and request video from them. If the requested vehicles are online, the upload of video will start as soon as the request has been received by the vehicles.

All requested videos will be available in OEC under its respective vehicle dashboard. Any GPS equipped vehicle connected to Trafikportalen can be found in Zone mapper. To ensure privacy, regular users can only view and access info on their own vehicles. Users with special privileges, such as law enforcement agencies, may see all vehicles and request video from each affiliated operator.

How to Zone Mapper

To learn how to utilize Zone Mapper in your daily work, go to our "How to" section and select Zone Mapper.

4. Setup & Installation



Observit offers a wide range of applications that can be installed on cameras, people sensors, servers etc. Here this you will find the necessary info needed to setup all Observit services. Most applications are already installed when your equipment arrives, but depending on your service agreement, it might be necessary to install and or upgrade some applications on your own.

Should you need further assistance, please go to Support.

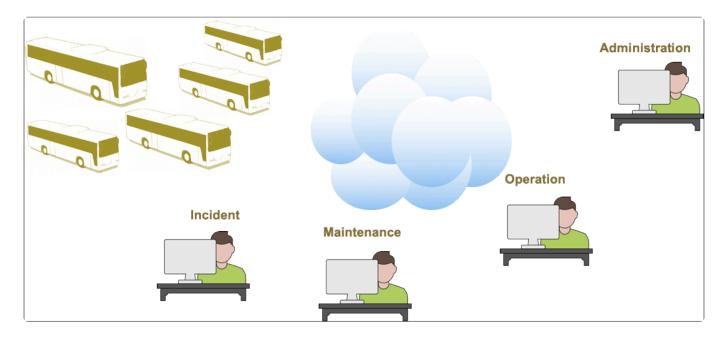
4.1. Observit Enterprise Center Setup

Observit Enterprise Center, OEC, is a cloud-centered solution to manage surveillance cameras, people counters and other devices in connected vehicles. OEC is a powerful tool for transit authorities, vehicle operators, police, and other stakeholders for improving efficiency of device management, security & safety issues, and business operations across fleets of vehicles.

The OEC service does not require any installation, what is required is an account with the correct authorization obtained by Observit or a partner certified by Observit.

Contact Observit <u>support</u> or an Observit partner to receive more information and the credentials to start up an account.

To manage the account, go to "Administration".



4.2. Connected Camera Cluster

The Observit Connected Camera Cluster (C3) is an application installed on Axis network cameras with Edge storage.

C3 connects the camera directly to a cloud based video management system (VMS), which eliminates the need for network video recorders in vehicles.

This creates a reliable, cost-effective, connected, and easy-to-use VMS-service for buses, trams and other transport vehicles.



4.2.1. Setup C3

Requirements to setup C3 *

Each item in the following list is needed to run the C3 application in a Axis camera.

- · A Observit Enterprise Center account
- SD-card installed in the camera, formatted to ext4
- NTP and DNS in the camera to get the correct time
- · C3 app installed, configured, and started in the camera
- To connect and access the camera in the vehicle, a number of ports must be open for outbound traffic.
- The client firewall must also allow outbound traffic on a few specific ports
 These ports are specific to each customer and service, please contact <u>Observit support</u> to make sure that your network meets our requirements

Setup procedure for C3

Account to Observit Enterprise Center

Contact Observit support to receive an account for Observit Enterprise Center (OEC) cloud service.

Axis Onboard Camera with Edge Storage

Axis onboard cameras equipped with Axis high endurance SD-card and power-supply. The SD-card needs to be formatted in ext4. An SD-card is mandatory to run the C3-app. Set the NTP and DNS in the camera to get the correct time.

Internet Connection

To connect and access the camera in the vehicle.

Not sure what ports need to be opened for outbound traffic? Please contact Observit support

Preparation

Request for an account to Observit

Enter the information needed in the e-mail received from Observit called "C3 setup request" and send this to Observit support at: support@observit.se

OEC, Cloud system setup

Open a web-browser and log in to the cloud service with the login credentials you received from Observit, and/or with the custom agreement. If you need more information about recommended browsers, please contact Observit support.

After successfully logging in – go to "Settings": Enter system policies and profiles including desired resolution and recording framerate

The client firewall must allow outbound traffic on some specific ports, please contact Observit support

before opening unnecessary ports.

Local PC preparation

AXIS IP Utility and AXIS Device Manager are recommended methods for finding Axis products on the network and assigning them IP addresses in Windows®. Both applications are free and can be downloaded from at the Axis website.

The camera will be accessed from a browser. If you need more information about recommended browsers, go to www.axis.com/browser-support

Axis camera preparation

Mount the Axis SD-card in camera, see the camera user manual for mounting an SD-card in the camera. An SD-card is mandatory to run the C3-app.

Download C3 application

Fetch the recommended version of the C3 application from Observit, an Observit partner or contact our support via our <u>helpdesk</u>.

4.2.2. Install C3

Initial setup

Connect the camera to your local LAN using PoE

Connect your PC to the same network.

Access the camera from a web browser by entering the IP address in the browser's address field. Login to the camera.

Check firmware version

C3 is tested for Axis onboard cameras, see the release notes for the correct firmware (if unsure contact Observit support).

Set time and time zone

Set the NTP and DNS in the camera to get the correct time, set the correct time zone and adjust for daylight saving.

Format SD-card

Install and format SD card as ext4 in the camera, an SD-card is mandatory to run the C3 application.

Install and Activate C3 Application

In the setup menu in the camera, go to "Applications": Upload the C3 application file (.eap) into the camera.

In the application menu: Go to the Observit C3 app > settings.

Enter valid values into the fields:

- Vehicle key / Holder id
 Chosen by the end-user e.g. vehicle id or license plate number or similar.

 Only the letters a-z, A-Z and numbers 0-9 can be used, "space" is not a valid character-. Max 16 char used.
- Customer key / User id
 The unique identifier for the user distributed by Observit support.
- Device password
 Enter the same password you have set in the camera. The application needs it to be able to control the camera.

Click on save, then launch the application by pressing the "Start" button.

Verifying installation

Under "C3 status", check that there are no errors reported.

If you have access to these devices in OEC, go to your vehicle and verify that no errors are shown.

Congratulations, you have now completed your first install of the C3 application.

4.2.3. Onboard installation

Hardware installation

Mount camera and other hardware in the vehicle. Connect camera to the vehicle network and power up the camera.

Connect PC to vehicle network and access the camera from a web browser by entering the cameras IP-address in the browser's address field.

Login to the camera and adjust camera view by physically adjusting the lens.

If required, rotate image in camera settings.

Verify onboard installation

Connect Vehicle to Mobile Network

Verify access from camera in vehicle to Internet using OEC.

Please note that a few specific ports must be open for outbound traffic.

OEC Cloud service

Open a browser and log in to the cloud service

Assign the vehicle to a site (garage). The vehicle will be placed in the default garage "New Vehicles" if no other info is available.

The vehicle can now be monitored and managed from the OEC cloud service.

4.3. Connected People Counter

The Connected People Counter (CPC) is installed in a compatible people sensor device, and when run collects data from all people counters in the bus.

To read more, please select <u>Connected People Counter</u> to download your own copy of the CPC presentation.

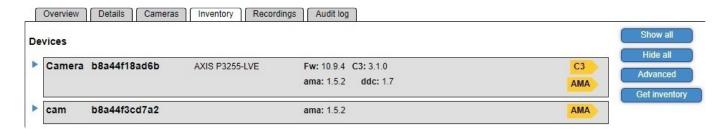
To see how the result and accuracy of the counting is presented, go to <a>Counter statistic to read more.

4.4. Direct Device Connect

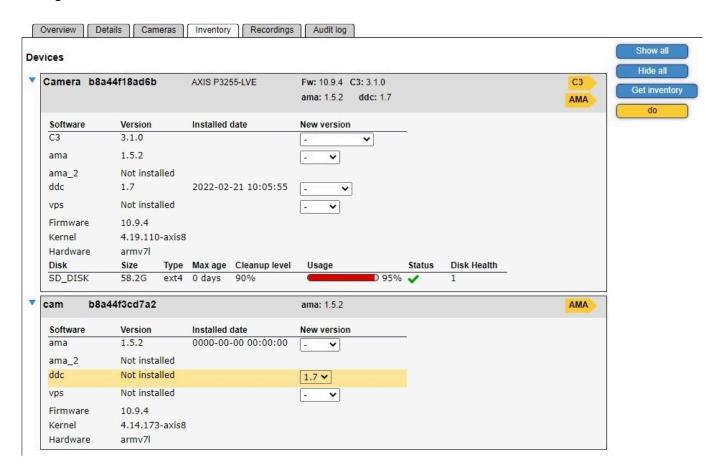
Installing DDC

If a DDC server is installed and configured, the process for end users to utilize the DDC app via OEC is very simple.

To use DDC, both AMA and DDC need to be installed on the device.



Go to a vehicle with a compatible device, select the "Inventory" tab and click the "Advanced" button on the right side.



Using the dropdown menu to the right side of "ddc" (marked in yellow above), select the latest version of the app, then click the yellow "Do" button on the right hand side menu.

If the vehicle is turned on and the conection with the device is good, the app will be installed within a few moments.



When refreshing the page, app version as well as time and date of the install will be visible. The DDC app is now ready to use.

To find out how to use DDC, please go to Access a device.

4.5. Damage Investigation

Damage investigation is service to find, view and analyze vehicles passing in and out of sites such as depots, garages, or similar locations.

Technology based on:

- Numberplate identification
- · Allowed list of vehicles
- Image recording stored from four angles
- Web player view in OEC
- Remote access
- · Bus operational info
- Reporting

Read the Product Specification for detailed info.

Product Specification Damage Investigation

4.6. Observit BOT

Observit BOT

The industry leading mobile video management system for the Enterprise Fleet.

To learn how to install, please click on <u>Observit BOT User Guide</u> to download your own PDF copy of our user guide.

4.7. Observit Guardian

Observit Guardian is a fully integrated service and does not require any installation. Guardian setup is available in OEC, only the correct user rights and authorization is needed.

Observit Guardian configuration

5. How to

In our How to section you'll find guides that guide you through any tasks in OEC, ranging from the easiest to the most complex.

If you have any requests for additional guides or comments about the existing manuals in our How to section, please let us know at: support@observit.com

5.1. Access a device

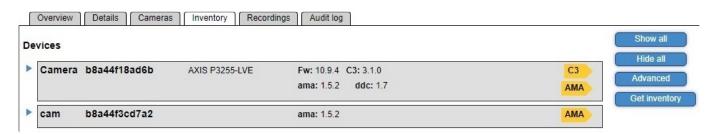
Some devices in OEC can be accessed directly, using a special Observit application called Device direct connect (DDC).

To read more about how DDC works, please go to DDC.

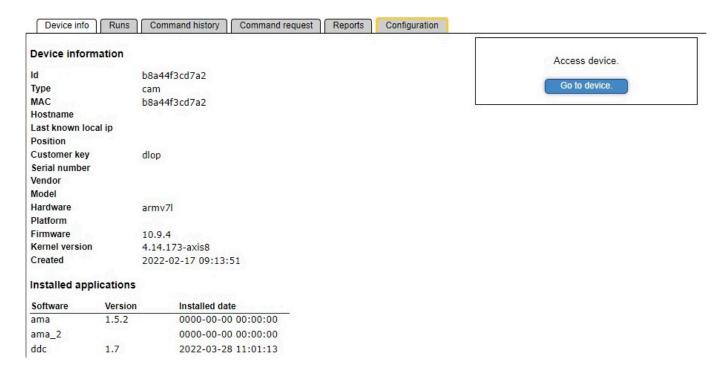
How to use

If DDC server is installed and configured, it's a simple process for end users to utilize the DDC application in OEC.

To use DDC, both AMA and DDC need to be installed on the device.



Go to a vehicle with AMA and DDC installed on a device. Then click on the yellow "AMA" button, and a new page will open.



Here you'll find additional information about both the device and installed apps.

To access the device, click on the "Go to device" button, and the connection will open in a new window.

Good to know

Caching in the web browser often causes problems when changing devices, so refreshing the web page, clearing the cache, or using incognito mode / private browsing might be necessary.

Access device.

Device not connected.

Devices in vehicles might not always be available due to problems with network, power supply or external circumstance, so if no connection is available, try again in a while.

5.2. Damage investigation

Observit Control Place

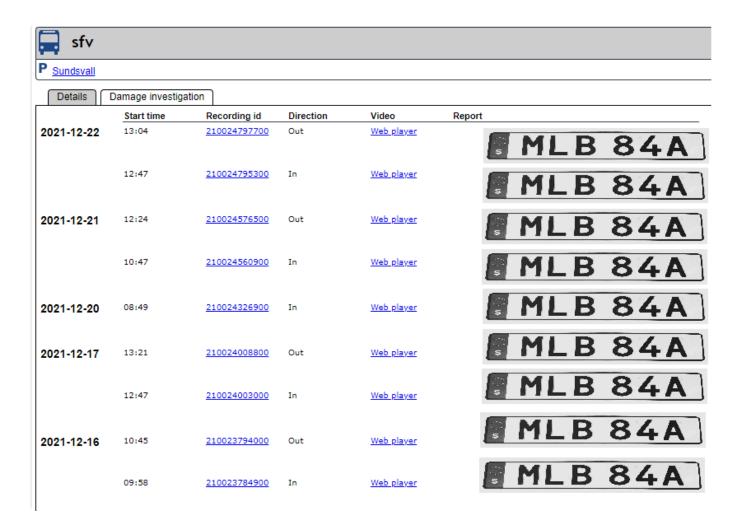
Identifying and limiting vehicle incidents

Functions and area of use

- When a vehicle passes through an entrance or exit of a depot fitted with the equipment for Damage Investigation (abbreviated to SFV or DI in OEC), the vehicle is identified by a camera that registers the license plate.
- If the license plate belongs to a registered vehicle, it will enter the journey of the vehicle into a database.
- The cameras will record a series of videos to capture all sides and angles of the vehicle. An operator can generate a report of the damages to the vehicle.
- The cameras will record video even if the internet connection is lost, and as soon as the connection has been reestablished, previously recorded video will be available for viewing remotely.
- Images shown in this document may differ from the actual view for different partners, customers, or individual users.

There are two different ways to access the Damage Investigation tool, either by using the vehicle id to search for a specific vehicle or go to a traffic area outfitted with Damage investigation to view journeys in and out by all vehicles associated with that site. Please select "Inspecting vehicles" below to get started.

5.2.1. Inspecting vehicles



Begin by searching for a vehicle using its vehicle id in OEC, then in the vehicle overview, select the "Damage investigation" tab. A list of journeys in and out by the vehicle will now be visible, several details regarding the journeys are shown as well:

Overview - Inspecting vehicles

- · Date and time
- · Recording id of the video
- Direction of passage
- · Link to the video
- · Link to reports generated for a passage
- · Snapshot of the vehicle licence plate

This view shows a list of journeys made by the vehicle with the licence plate MLB84A.



If you want to watch videos of all vehicles entering/leaving a depot, select a Garage in OEC and the Damage investigation tab.

Click the Web player-link to view a journey in or out of the depot, and a new window will open.

To learn how to handle the Web Player, please select "Using the Web Player" at the bottom of the page.

Known issues

If no recordings of your vehicle are available, solving the problem can often be quite simple.

There are two issues that are common, but other errors could occur:

- The licence plate on the vehicle is damaged or dirty.
 Check the status of the plate with the vehicle engineer at the depot.
- Vehicle has incorrect vehicle id or licence plate registered in OEC.
 Search for the vehicle in OEC, click on the Details tab and make sure that the registration number entered matches the actual plate on the vehicle.

Also make sure that there is a checkmark next to "Inspect vehicle".



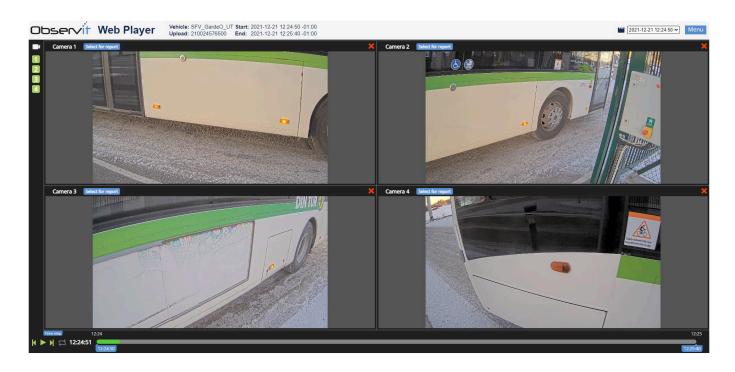
5.2.2. Using the Web Player

Web Player overview

The web player contains several features to make it easy for an operator to locate damages and generate reports to be sent to vehicle engineers, insurance companies or government agencies.



- Camera list
 To the far left a list of available cameras is shown, click to open/close individual cameras.
- Selection of available recordings
 In the top right corner is a dropdown list of available recordings, listed chronologically with date and time.
- Menu-button
 Mouseover expands to provide access to creation of pdf reports with images from all cameras.
- Single camera report
 Next to each camera name, you'll find a "Select for report" button, this generates a pdf report from that specific camera.
- These are the basic features of the Observit Web Player, please keep reading to get familiar with the video controller.



Focus on single camera A single click on a camera image opens / closes a focused view of the selected camera stream.

Video controller

Using the video controller it's easy to navigate to your desired time period using Start / Stop and Forward / Back.

Toggling the Repeat-button automatically restarts the video when the end has been reached.

Timeline

A single click on the timeline moves the marker and when play is pressed, the video will resume from the position of the marker.

Choice of time for export / report

Zoom

If you want a closer look at the details, use the scroll wheel while hovering or double click on a video to zoom in on a single camera.

5.2.2.1. Generating reports

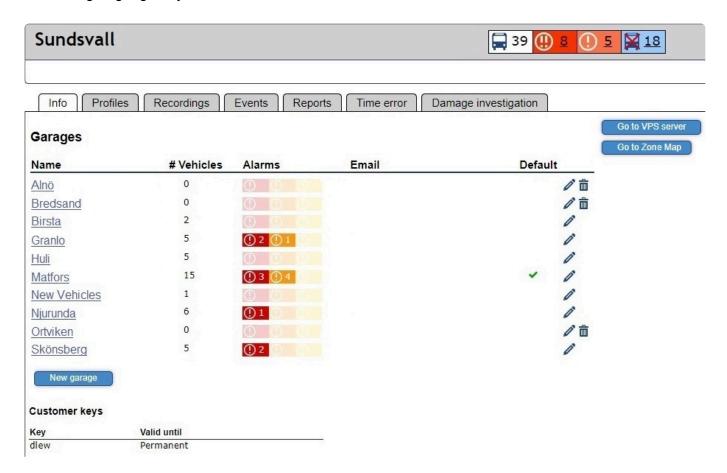
Report overview



- Menu Report
 Navigate to the desired time by clicking on or dragging the timeline
- Report description
 Text field for information regarding damage, incidents, etc.
- Create report
 Generates a PDF report with images and the entered information, after it's been generated, the report will be available shortly in Observit Enterprise Center.

5.3. Editing garages

To edit a garage, go to your Traffic area in OEC.



Add a new garage

To add a new garage to your traffic area, click on the "New garage"-button below your garages.



Delete a garage

To remove a garage, the garage must be without vehicles. If the garage contains vehicles, first go to the garage, and move all vehicles to another garage.

If the garage is empty, a trash can icon will be visible next to the garage name. Clicking on the icon

opens a popup, confirm deletion by clicking the OK button.



Edit a garage

Click on the pen icon next to the garage you wish to alter, and a popup with options will appear.

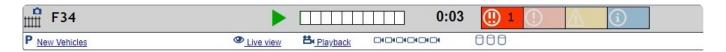


From here, it's possible to change the name, specify a default e-mail address for automatic video uploads or to enable/disable this garage as the default garage.

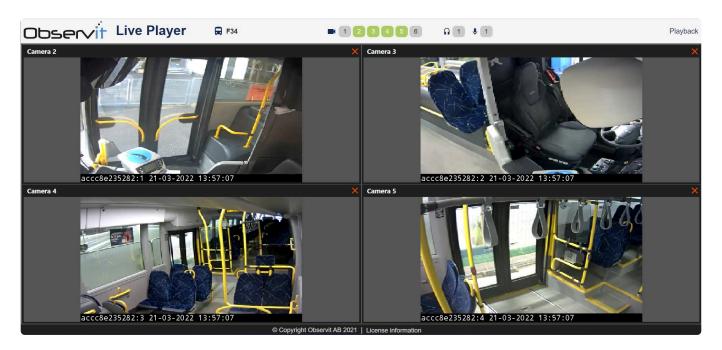
If chosen as the default garage, any new vehicles added to that traffic area will be placed in this garage.

5.4. Live view

When in a vehicle fitted with the Live view function, simply select "Live view" next to the eye icon and a new window will open.



To select cameras, click on the camera number in the list and a camera view will open. If you wish to stop viewing a camera, simply click on its number again and the video will be closed.



If one or more cameras have microphones, the option to listen to audio is also available. And if one or more cameras are equipped with a speaker, pressing the microphone button will allow the user to be heard in the bus.

5.5. Observit Guardian

Using Observit Guardian

Please click on <u>Observit Guardian</u> to download a pdf-guide, with simple instructions on how to use our Guardian feature.

5.6. Playback video

To learn how to use Observit Playback, <u>click here</u> to download your own PDF version of our guide.

5.7. Request upload

In order to view previously recorded video from one or more cameras, first we need to fetch it from the vehicle to the server.

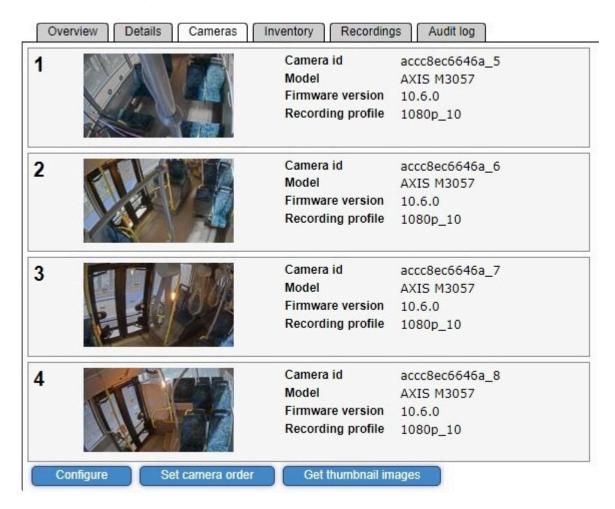
It's an easy process, to find out how, simply download your own copy of our guide: <u>Fetching video</u> and get started.

And as always, if you have any questions, please hit us up with an email to support@observit.com or use our <u>Helpdesk</u> to keep track of your tickets.

As soon as an upload is completed, an e-mail will be sent to notify you that the request was successful. To make sure that these e-mails don't get stuck in your e-mail junk holder, please add "noreply@observit.info" and "noreply@observit.com" to your trusted e-mail recipients.

5.8. Set Camera order

Normally the camera order is set when the installation of C3 is done in a vehicle, but it may also be done afterwards by using the Camera order function in OEC.



To set a new camera order, select a vehicle with C3 enabled cameras, go to the Cameras tab, and click the Camera order button.



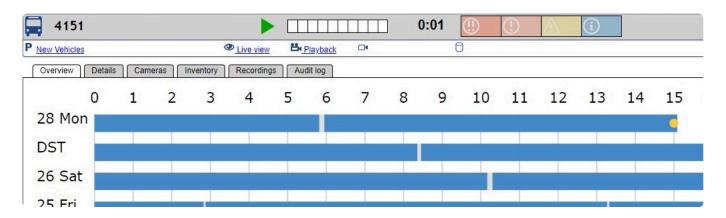
Several arrows will now be visible, simply click on an arrow to move a camera up or down until the cameras have the preferred order, then click on Save below the camera list.

5.9. Use Audio

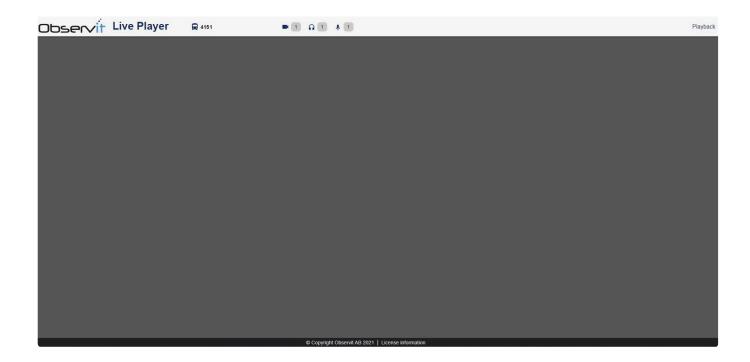
In order to use audio (listen and speak with people in a vehicle), the following requirements must be met:

- · At least one camera equipped with both a microphone and a speaker
- · C3 app installed in the camera
- · Active network connection in vehicle

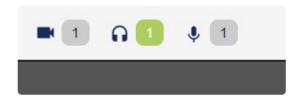
Locate a vehicle in OEC that fits the above requirements.



Click on "Live view" and a new window with the Observit Live player will open.



By clicking on the button "1" next to the headphone icon, live audio from the vehicle will be heard. The button will change color to green to indicate that the microphone is active.



If a vehicle has multiple cameras with microphones, a new button for each microphone will be shown in the Live player.

To stop listening to live audio, simply click on "1" again.

Speaking

Likewise, by clicking on "1" next to the microphone icon, any audio picked up by your microphone will be played from the speaker in the camera.

The button will change color to green to indicate that the microphone is active.



To turn off the speaker, simply click on "1" again.

Just as if vehicle has multiple microphones, multiple speakers in a vehicle will allow a user to speak through the speaker of their choice.

Live player uses either your built in microphone or an external one and must also be enabled in your browser in order to pick up audio.

5.10. Video quality settings

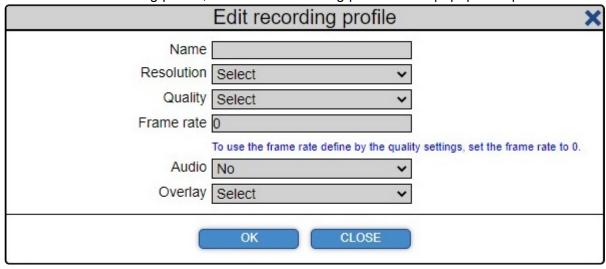
The recording profiles in OEC control how video is captured by cameras, using these settings it's possible to adjust video recordings to any needs.

It can be done in either high quality with high fps, in low quality with low fps or in any combination of the two.

Name	Resolution	Quality	FPS	Audio	Overlay	
720p	1280x720 (16:9) 720p	Medium	5	No	Vehicle sensor time	
1080p	1920x1080 (16:9) 1080p	High	10	No	Overlay 1	
720p_15fps_no_audio	1280x720 (16:9) 720p	High	15	No	Vehicle sensor mac time	
1080p_5	1920x1080 (16:9) 1080p	Medium	5	No	Overlay 1	
1080p_15	1920×1080 (16:9) 1080p	Medium	15	No	Overlay 1	
540p_10	640x480 (4:3) VGA	Medium	10	No	Vehicle sensor mac time	
1080p_10	1920×1080 (16:9) 1080p	Medium	10	Yes	Vehicle sensor mac time	
60p_10	160x90 (16:9)	Low	10	No	Vehicle sensor mac time	
SL_Standard_12	800x600 (4:3) SVGA	Medium	12	No	Vehicle sensor mac time	
1080p_12	1920×1080 (16:9) 1080p	Medium	12	No	Overlay 2	
1080p20fps	1920x1080 (16:9) 1080p	High	20	No	Vehicle sensor mac time	
Recording profiles that are us	ed cannot be edited or removed.					

- Name The name of your profile
- · Resolution Resolution shown in pixels and format
- · Quality The level of detail in your videos
- FPS Number of frames per second
- · Audio Select if audio should be included or not
- Overlay Option to add an overlay
- Edit & Delete Select the pen or trash can icon next to a edit/delete a profile

To add a new recording profile, select Add recording profile and a popup will open.



Start by giving your profile a name, fill in the details of how the cameras should capture video and click on "OK". Your new overlay is now available for use.

5.11. Zone Mapper

Using Zone Mapper

Please click on <u>Zone Mapper</u> to download a pdf-guide, with easy instructions on how to use our Zone Mapper feature.

6. Support

Contacting Observit support

Either send an email to support@observit.com, use our <u>Helpdesk</u> to keep track of your tickets or call us at +46 60 616750 (Sweden).

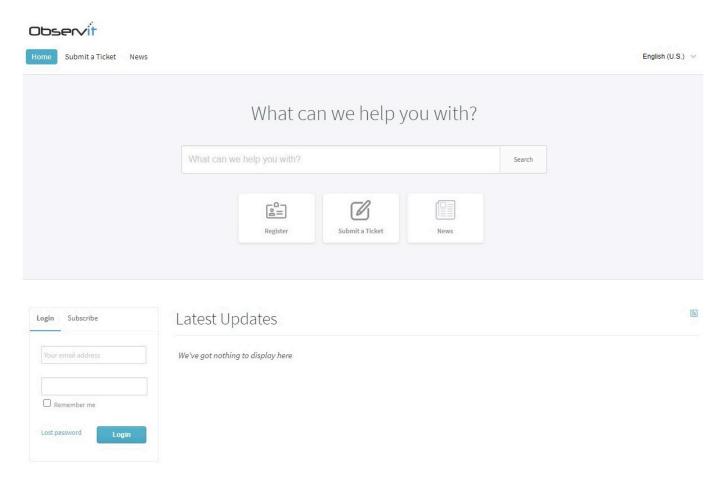
If you need help using our Helpdesk, please go to our <u>How to: Helpdesk</u> guide.

6.1. Helpdesk

How to: Using Observit helpdesk.

If you're a partner or a recurring customer, keeping track of your conversations with our support is easily managed through our <u>Helpdesk</u>

From there you can view all your issues, feature requests or general inquiries that you might have.



Already have an account?

Input your credentials under Login and select the Login button below. Any updates to your active tickets will be displayed automatically.

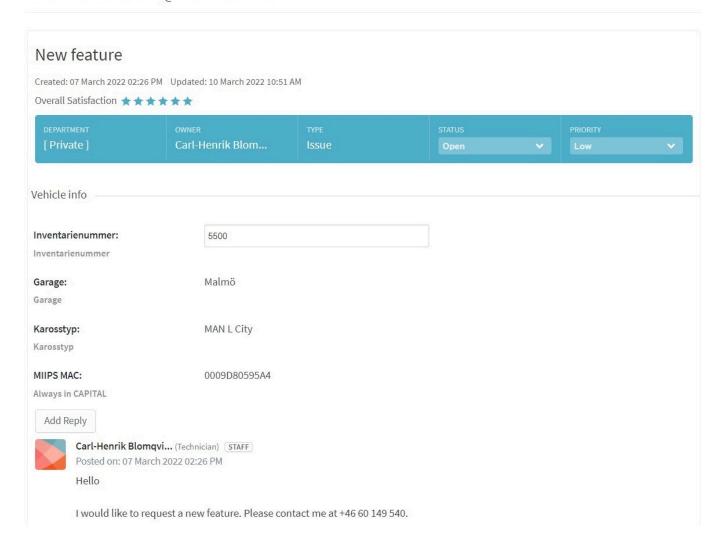
To see all of your tickets, simply select "My tickets", here you'll see all your active and resolved tickets, with an option to hide all resolved ones.



Replying and editing.

By selecting a ticket, detailed information about the ticket and any replies will become visible. If the issue has been resolved, under "STATUS" please select "Closed" and the Save Changes button. If not, select "Add Reply" and type in your reply to us, and press Send. The page will reload, and your reply will be shown at the bottom.

View Ticket: #BQN-279-21249



Don't have an account, and don't want to wait?

No problem, just select "Submit a Ticket" and we'll take fix an account for you.

Select department "Observit" and click on Next. Input your name and e-mail, as well as a description of your issue, press Submit, and we will get back to you as soon as possible.

Your ticket details

If you are reporting a problem	ı, please remember to provi	de as much information th	at is relevant to the issue as p	ossible.
General Information				
First and Last Name				
Email				
Generic				
JIRA Ticket URL:				
Your Message				
Subject				
Attach Files [Add File]				
Accounties [O Add File]				
☐ I consent for Kayako to pro	ocess my data and agree to	the terms of the Privacy Po	blicy	
Submit				

Thank you for using our How to's.