

Alarms Management

XX281-20-03



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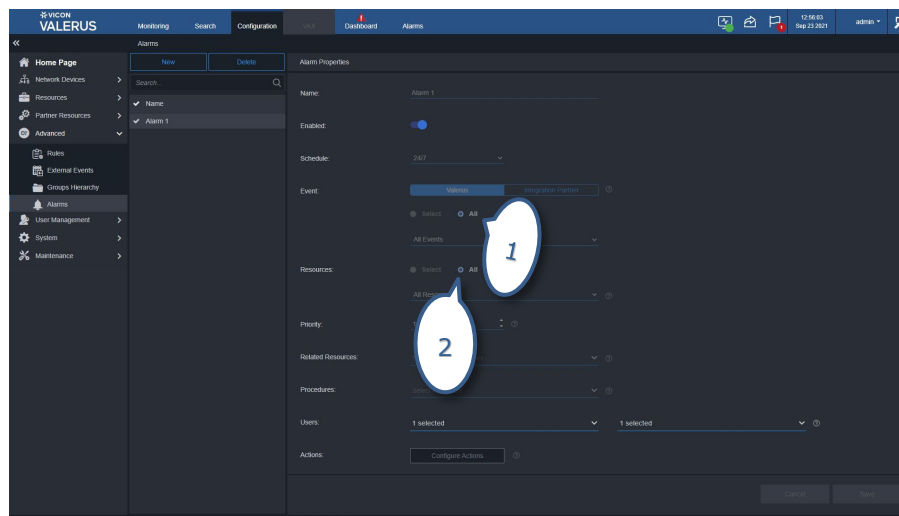
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General

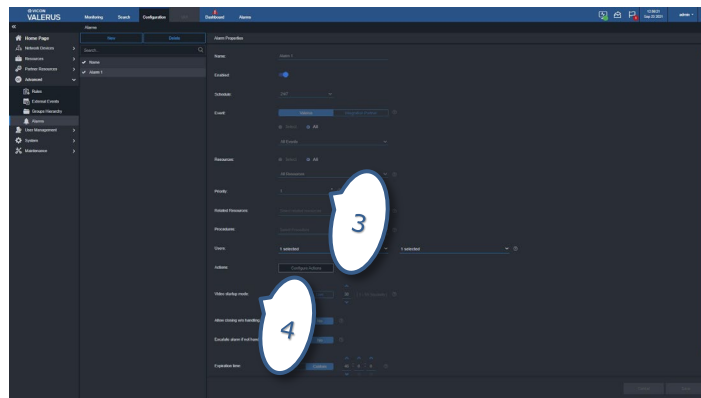
As an enterprise level video management solution, Valerus VMS provides a coherent and easy-to-use Alarms Management application. To use Alarms Management in the most useful and efficient way, it is important to understand the definition of events and alarms as used by Valerus.

Licensing Considerations:

- The Alarms Management feature is available for the PRO (with limited functionality) and ENTERPRISE tiers. Refer to the bullets and graphics below for details.
- For the PRO tier, in Alarms configuration, selections will be limited to All Events (1) and All Resources (2); the Select radio button will be grayed out, not allowing filtering by event or resource. The Priority, Related Resources, Procedures and Actions (3) will also not be available (grayed out); User/Role selection is allowed.



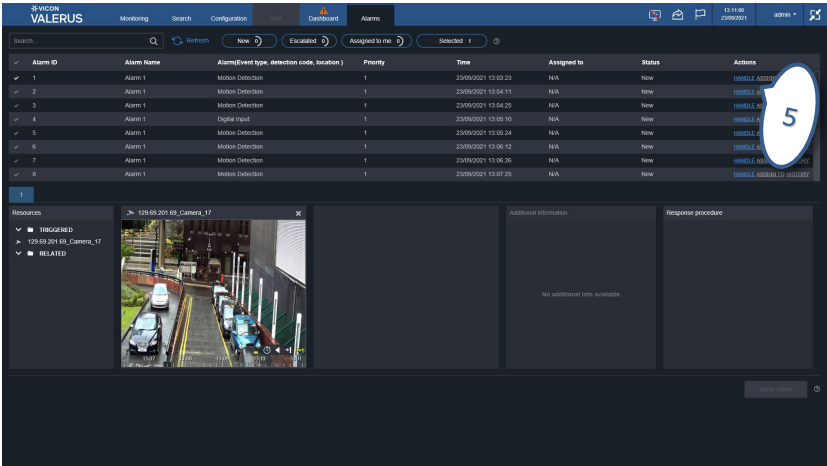
- The Video startup mode (4), Allow closing w/o handling, Escalate alarm if not handled and Expiration time will remain at default values.



- There will be no ability to set up Procedures.

Refer to the Alarms Configuration section later in this manual for details on these settings.

- In the Alarms tab, only the Handle (5) alarm will be available in the Actions column, and this allows closing alarms. Additional information will not be displayed.



For the details about these settings, refer to the Alarms Management section of this manual.

Understanding Alarms

Remember: All alarms are events but not all events are alarms. The purpose of the Alarms Management system is to define which events will be elevated to alarm status and alert the operator.

In Valerus, there are many events that continuously occur and get reported; some of these events are inconsequential while others have a higher significance. Some examples of events are:

- Motion detection sent by camera
- Input sensor triggered when door is open
- Hard drive failure reported
- NVR offline
- External system event (Thermal Radar detection, LPR reader, etc.)

While it is important that the VMS log all these events and allow searching through them, the system administrator may want to define some events to have a higher significance, ones that should be elevated to ALERT the operator when they occur. The Valerus Alarms Management System was built for the purpose of creating a clear definition of the events that are elevated to an alarm status and provide the tools to review and investigate them. The definition of an alarm includes the specific event being elevated and defining all the information that is included with it, as well as the alarm life cycle.

Valerus Alarms Management

The Alarms Management solution consists of using a few modules, which together deliver the full alarm management experience.

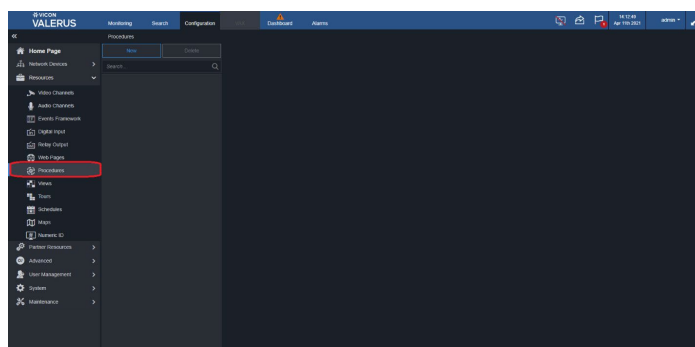
- Alarms configuration: Under Advanced in Configuration, this provides a streamlined process that allows defining which events are elevated to an alarm, which resources are bundled with it and define the life cycle of the alarm.
- Procedures: Under Resources in Configuration, this provides an optional tool that allows the creation of step-by-step procedures to follow when an alarm occurs, and this can then be attached to the alarm to assist the operator when an alarm occurs.
- Alarms Management screen: A tab on the top of the Valerus interface dedicated for alarms management, this screen will show the alarms along with their status. From this screen, the operator can work to review and categorize alarms, as well as acknowledge and close them.
- Alarm Query: Added in the Events Query in Search, there is now an option to filter by those events that were configured as alarms.

Together these modules allow the Administrators, Supervisors and various Operators to keep track of and manage alarms. Each of these modules will be discussed in detail following.

Procedures

Procedures are used for Alarms Management, in the Advanced/Alarm section and on the Alarms tab. It is an optional tool used to set up a step-by-step protocol for what should happen when an alarm occurs. This procedure can be attached to the alarm to assist the user with directions on what to do when there is an alarm. Procedures are only available in the Enterprise tier.

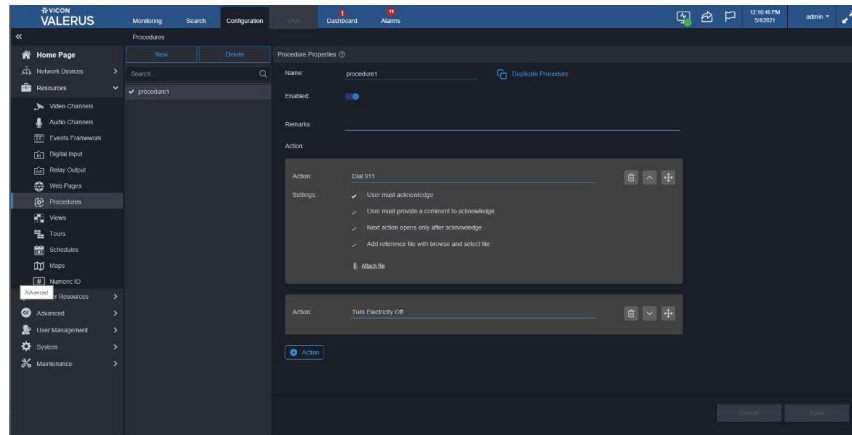
From the Configuration, Resources list, select Procedures.



Procedures must be created **before** defining the alarms, so they can be selected as part of the alarm creation process and included in the alarm creation process.

Creating a New Procedure

- From the Procedures screen, click New. The procedure editor screen displays. Enter the information for the following options.

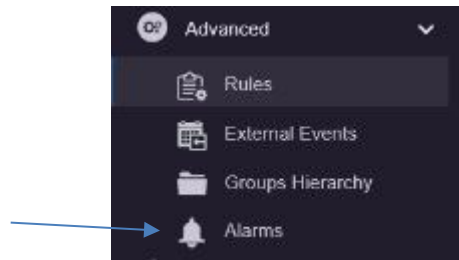


- Name: Assign a name to the procedure.
- Duplicate procedure: If you want to base this new procedure on an existing one, select Duplicate procedure link and select the similar procedure to create a copy that can be modified and saved as a new one.
- Enable/Disable the procedure with the slide button.
- Remarks: Add in any Remarks that might help to describe or assist with this procedure (optional field).
- Actions: One empty action is displayed for a new procedure; for each action provide the details of the specific settings.
 - Action: Name the action in a way that will tell the operator exactly what to do, for example, Call 911.
 - Settings: Defines this specific action attributes. Select from:
 - User must acknowledge: Forces the user to check the checkmark when going through the procedure. If this is not done, the Close button will not be enabled.
 - User must provide a comment to acknowledge: Dialog box pops up when the user checks the checkmark and asks for a text comment.
 - Next action opens only after acknowledge: The next step in the procedure will only be displayed to the operator after the checkmark is checked for this step and will pace the operator through the actions.
 - Reference file can be attached to the procedure for operator use, which can include extra instructions or a picture (supported file formats: .jpg, .png, doc, xlw, pdf).
- On each action window, there is an option to delete it, collapse it and move it to change the order of actions by dragging them up or down.

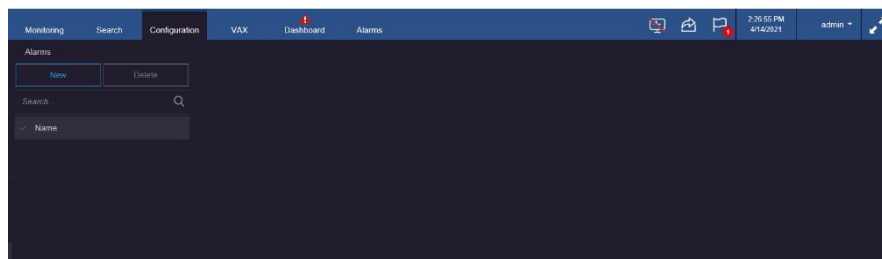
Alarms Configuration

The Alarms screen defines which events are elevated to an alarm level, what resources are bundled with it and the life cycle for the alarm. After events are in the system, it can be determined which of these would be helpful to an operator and then added to Alarms Management.

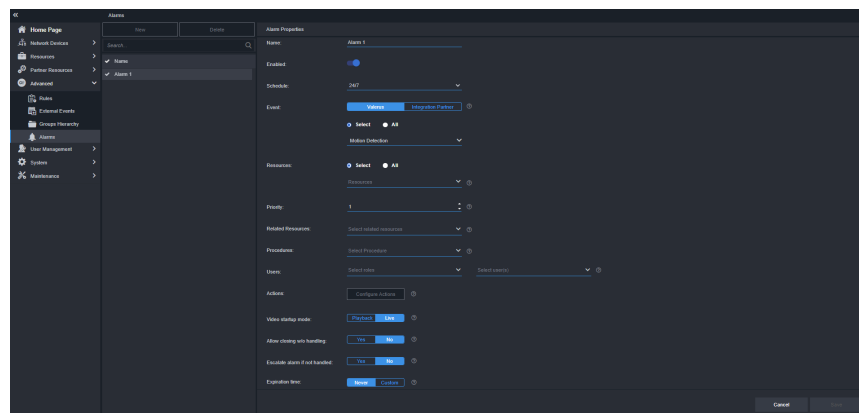
- Under Valerus Configuration, Advanced, select Alarm.



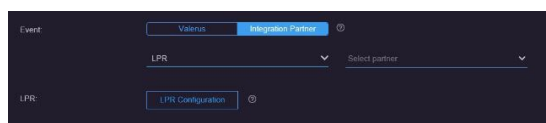
- The following screen displays.



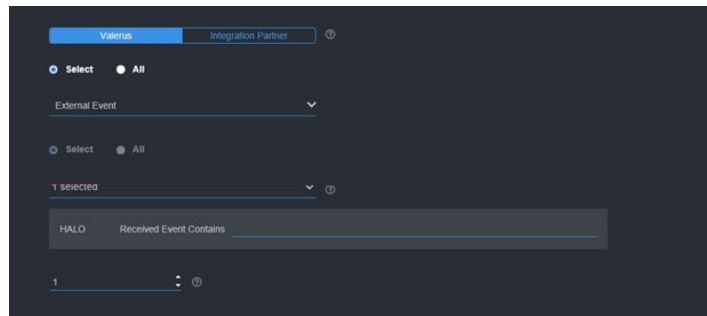
- Click the New button. The alarms editor screen displays.



- Assign a name to the alarm in the Name field.
- The Enable/Disable button allows the alarm to be temporarily disabled as needed without deleting it. Use the slide button to enable/disable.
- Select a schedule from the dropdown list to define a schedule for this specific alarm to run on. This allows using an existing schedule or creating a new schedule using the scheduling system in Valerus. It is important to identify the correct schedule for each alarm to minimize the number of unwanted alarms.
- In the Event field, select the events that will be the trigger of this alarm from the two options, events generated from Valerus or events coming from an Integration Partner. The display will change accordingly.

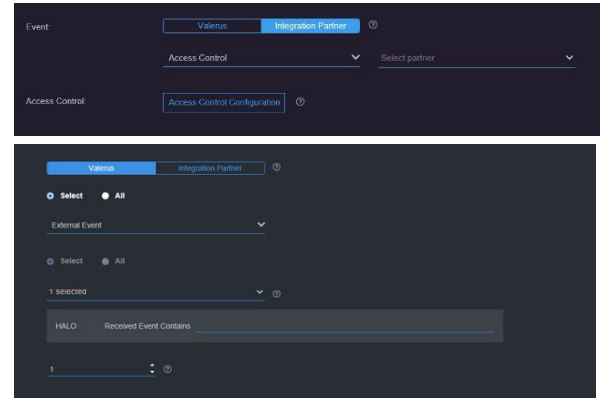
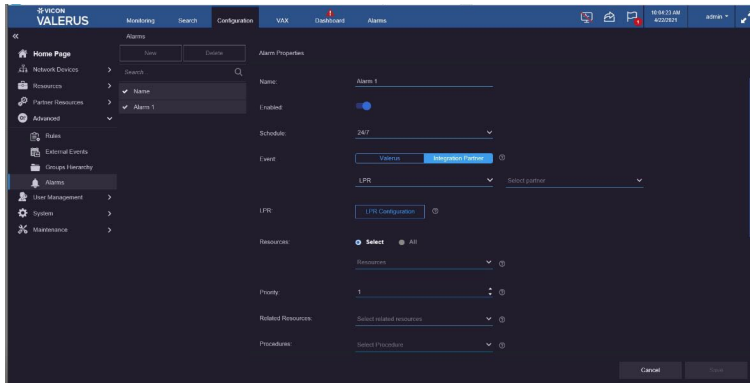


- For Valerus events, using the Select button, choose the event type from the dropdown; an All button can be used to select all event types in the list. Note that it is usually not recommended to define All events as alarms, as this will overload the system by elevating any event in the system to the Alarms Management system. When selecting external event as the triggering resource, it is possible to specify the listener and the message that should be received from the external source as the trigger of the alarm.

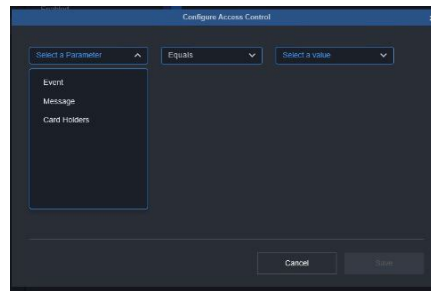


- From the Resources dropdown (Select button), choose the device (i.e., camera) that the event is expected to trigger an alarm for. Multiple resources can be selected and will be treated as a logical OR if an alarm occurs; if an event is detected on one or the other device, the alarm will be triggered. Up to 5 devices can be linked to an alarm, so if, for example, 10 cameras need to be selected, two alarms will need to be defined. An All button can be used to select all resources in the list.
- Enter a priority for the alarm, 1-5, with 1 being the highest. This priority level can be used later to sort the alarms in the Alarms Management screen.
- Using the Related Resources dropdown, select the resource(s) that will also be available when the alarm is triggered, creating an alarm bundle or package. This is useful if the resource selected for the alarm trigger does not provide video, for example a sensor providing digital input, but it may also be useful when there are multiple cameras in the same area with different views (i.e., motion detected from camera A relates to camera B in the same area); having a related camera resource can provide a video display to see the alarm. The related resources will show on the Alarms Management screen along with the triggering resource.
- As an added option, one of the procedures created (remember to create procedures prior to defining the alarms) can be selected to go along with the alarm.
- Select the users who will receive this alarm notification from the roles or users dropdown (or a combination of both). This is important in situations where certain alarms should be shared with specific users while others may need to be shared with different users (for instances where it is inappropriate for some users to view video from certain areas, i.e., alarms from the women's wing in a mixed prison should only go to the women's wing operators).
- Configure the actions that will be run by this alarm. This will determine what should happen in Valerus when this specific alarm occurs. For example, if there is motion detected by a camera in the pool area, the camera can pop-up and display to show if someone is in the pool in distress. This is done in a similar manner to the rules in Valerus.
- Select how the video will startup for the alarm when it is selected, Live at the current time or Playback up to 60 seconds pre-alarm. Default is Live.
- Select from a variety of options for the life cycle of this alarm in the Alarms Management screen.
 - Choose if this alarm can be closed without being handled by an operator. Default is No.
 - The alarm can be escalated if it is not handled in a certain period of time (greater than 45 seconds). If set, the status of this alarm on the Alarms Management screen will change to escalated after selected time. Default is No.

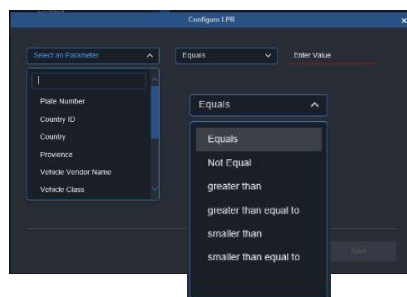
- An alarm can be set to expire if it is not handled in a certain period of time (greater than 90 seconds); select never or custom to set the time. It is recommended to set a specific time here to ensure that alarms that are past due will be closed automatically to prevent an endless list of alarms from forming. Default is 48 hours.
- When the alarm is set to trigger by an Integration Partner event, select the event type from the dropdown list, for example LPR or Access Control, and the specific partner from the next dropdown (this list is expected to update as new partners are added). **Refer to guides for VAX Access Control and Neural Labs LPR as needed for details.**



- Configure the specific parameters that will trigger the alarm for that type of partner event, as explained below.
 - The different partners have different triggering options, as they perform different actions. When opening the alarm configuration for a specific type of system, it will provide the relevant options as well as expressions allowing defining a specific event, for example.
 - To define an Access Control alarm, select the parameter needed from event, message or card holders. Select an expression from the field for Equals/Not Equals; this field will display Contains if message is selected. Finally, enter a Value or text if message is selected. Click Save to complete the configuration.



- The typical type of alarm from an access control system can be when a door is forced open or when access is denied for a specific door.
- To define an LPR alarm, select the parameter needed from the dropdown; plate number, country ID, country, province, vehicle vendor name and vehicle class are some from a long list of options. Select an expression from the field for Equals; this dropdown changes depending on the parameter selected. Finally, enter a Value. Click Save to complete the configuration.



- The typical type of alarm from an LPR system can be searching for a specific plate number, but more commonly it will be a trigger by plates that show on a “blacklist” in the LPR system.
- In this Integration Partner screen, it is possible to add multiple terms for the alarm by adding “Additional Criteria” and using either a logical And or Or between them.
- All the other fields are the same as for a Valerus event.

Alarms Management

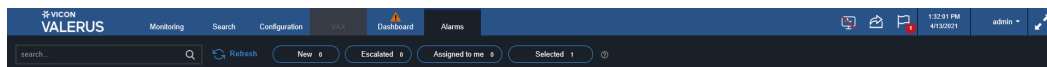
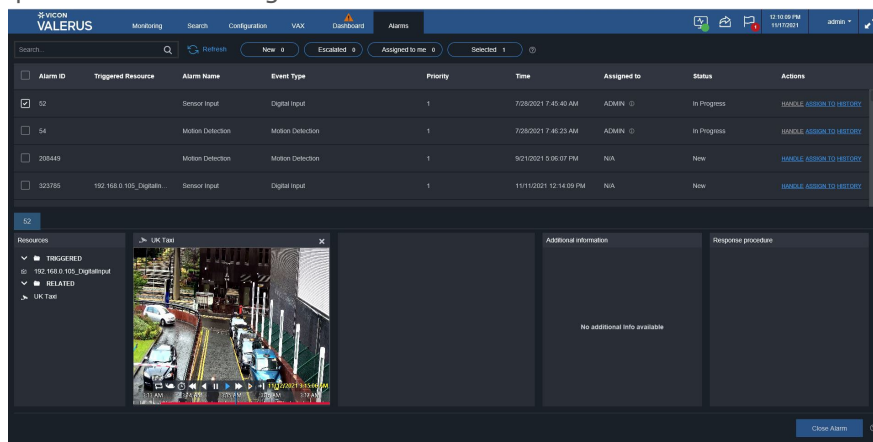
Alarms is a main tab on the top of the Valerus interface. This screen is dedicated for Alarms Management and shows the alarms along with their status; these are the events that have been elevated to alarm status set in the Advanced, Alarms screen in Configuration. From this screen, the operator can work to review and categorize the alarms. This tab can be moved to another monitor for ease of use.

When this alarm screen is not in focus, a number will display on top of the tab showing the number of **new** alarms added since it was last closed. There is also an audible “ping” sound when a new alarm comes in; this can be turned off in User Settings if necessary.



Note: The Alarms Management feature is available for the PRO (with limited functionality) and ENTERPRISE tiers. In the Alarms tab, for those in the PRO tier, only the Handle alarm will be available in the Actions column to allow closing alarms. Additional information will not be displayed.

- The alarm will show for the users that have been defined in the configuration phase. This means different users may get and work on different alarms, while others (Admin, for example) will see them all.
- The columns on the alarm list allow clicking and sorting the list in an order that is relevant. This way, some users can decide to work on alarms by the order of their arrival while others can decide to sort by the priority set for the alarms or by their type.
- On the top of the alarm page, there are several filtering options meant to simplify the selection of the alarms the operator needs to view and work on. They sort the alarms in whatever sense of urgency works best for the operator. The filtering buttons will turn blue when selected.

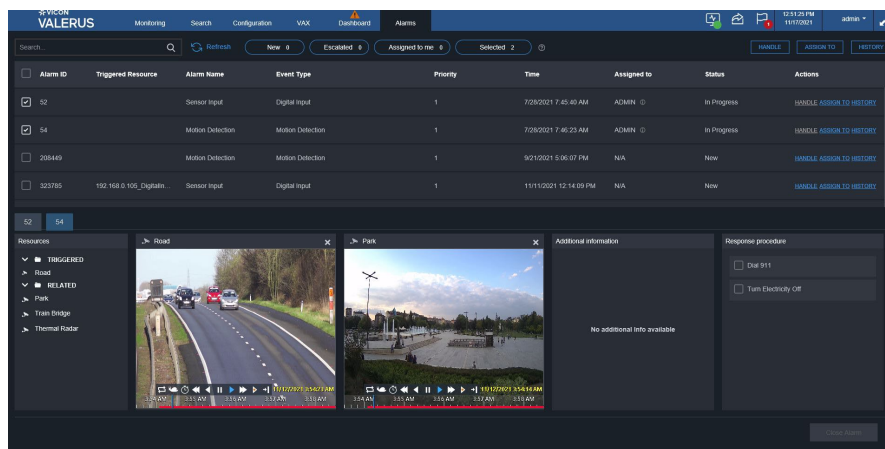


- The Search field allows a free text search by Alarm ID (automatically generated by the system), Name or type of alarm.
- The **New** filter will show only the alarms with a status of new in the list. This button will also show the number of new alarms that are incoming and being processed for this status.
- The **Escalated** filter shows only alarms whose status is escalated (as defined in the Alarms configuration screen). This button will also show the number of alarms in this status.
- The **Assigned to me** filter will show only the alarms that have been assigned to the current user who is logged in. This button will also show the number of alarms in this status. This is one of the most useful viewing options when multiple users are working on alarms, as they can limit the list to only those alarms they are handling at the time.
- The **Selected** filter will show only the alarms that are currently selected from the list by this operator (multi-selection of alarms). This button will also show how many alarms are currently selected.

- Although the alarm page refreshes automatically every 15-30 seconds, clicking the **Refresh** button will manually refresh the screen as needed.

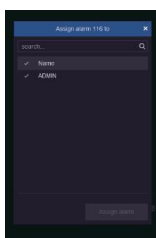
Using the Alarms Screen

After the alarms have been sorted per the operator's needs, each open alarm can be addressed. An open alarm is an alarm that came into the system, is on the list but has not been assigned to anyone or has not been selected to handle by anyone. The ultimate goal is closing the alarms, which can only be done after handling of the alarm based on its life cycle settings. Additionally, after selecting and playing an alarm, a Snapshot, Bookmark and Export (video and audio) can be created and is supported by the player.

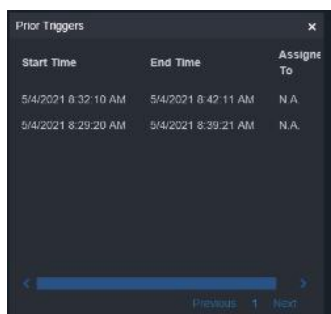


For each alarm in the list, there is an ID, Triggered Resource, Name, Event, Priority, Time, Assigned to, Status and Actions. In the Actions column, the alarm can be:

- Selected to handle by the current user. Choosing to handle an alarm will assign it to the user and change its status to In Progress. It will also enable working on a procedure (if one has been created) and closing the alarm.
- Assigned to a user. This will open a list of all users that are configured to get this alarm; select one to assign to it. Similar to handling, the status will change to In Progress.



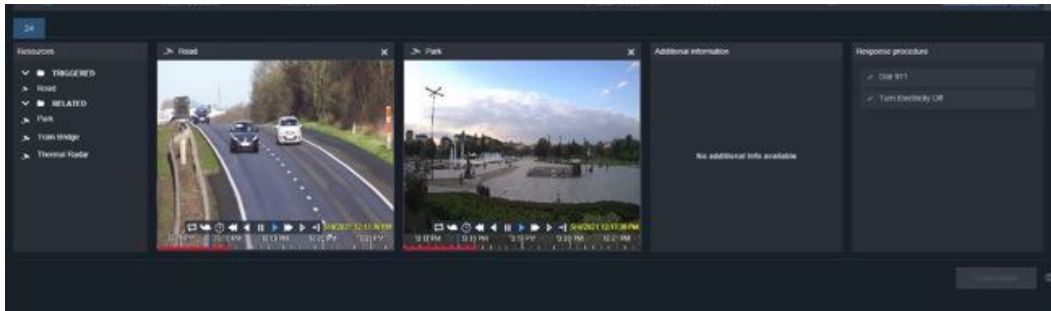
- History review. Displaying on the bottom area, in place of the Resources list, a list of times when this specific alarm has triggered in the past, providing information on a repetitive alarm.



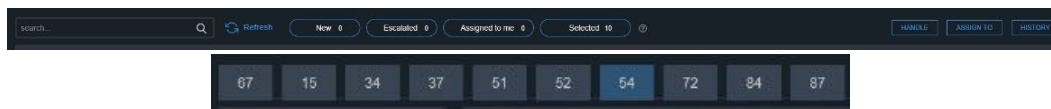
- Click on the alarm to display its information as it was configured; a display with alarm details opens at the bottom of the screen. Its camera ID number appears in a blue tab above the details; if multiple alarms are selected, there will be multiple tabs shown with the one currently in focus highlighted in blue. The resources associated with the alarm when configured are listed on the left, including what triggered

the alarm, and the related resources selected in configuration; video from those resources, with a full player, are displayed, either live or playback (also selected in configuration). There are two players available, so the first two resources will be shown by default; if the operator needs to view any of the other resources on the list, they can be dragged over in the same way it's done everywhere in Valerus.

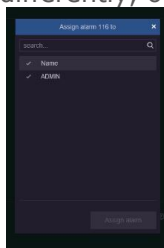
- There is a pane for "Additional information;" this is a dedicated area that is only in use when external integrated systems are the alarm source and provides information such as a license plate image from an LPR system or a card holder image from an access control system.
- There is a pane for a Response procedure for this alarm; if one has been created and associated with this alarm during configuration, it will be displayed here.



- Multiple alarms can be selected; up to 10 will create tabs. When multiple alarms are selected, it is possible to perform certain actions for the group. Click on the checkmark of each alarm to select it or click the checkmark next to Alarm ID to select all alarms. Handle, Assign To and History will display on the top of the screen for those selected; the alarm numbers for up to 10 selected alarms will display tabs above the details at the bottom (select a specific alarm tab to display its details).



- Clicking on Handle for the alarms selected now assigns all the selected alarms to the user that clicked.
- Clicking on Assign To for the alarm selected opens a list of users. An alarm can only be assigned to a user that is allowed for that alarm, as defined in the Alarms Configuration screen. Select a user on the list and click Assign alarm. In the case where this is done for a group of selected alarms, the user list will show only the common users among all selected, which may result in no users shown. If this occurs, the grouping should be done differently, or alarms should be handled individually.



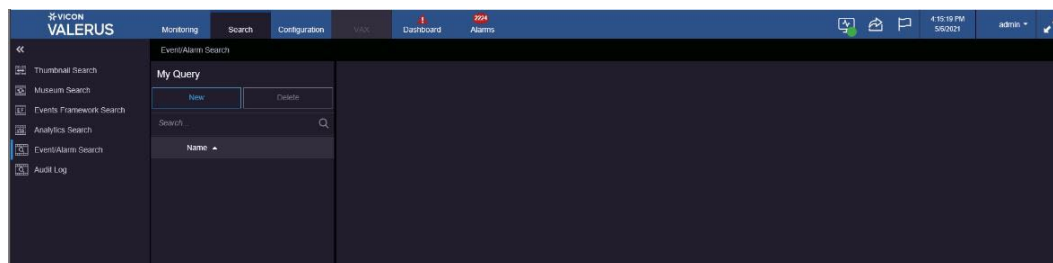
- If there is no procedure listed, the alarm can be closed (by the person it is assigned to) by clicking the Close Alarm button (it should turn blue to allow closing). If there is a Procedure, it will impact when this alarm can be closed. This depends on the way the procedure was configured and if any of the steps require the user to acknowledge them. If they do, the user will need to check those actions in the Response procedure box until the procedure is completed and the close button is enabled (turns blue). The alarm can now be closed. Note that if multiple alarms are selected, they **cannot** be closed as a group and must be closed individually.
- A Reason to close alarm box will display for every alarm; select from Event handled, False Alarm or Other and provide the information; then click Close Alarm. When an alarm is closed, it stays in the database history and can be searched using the Event/Alarm Search tool.



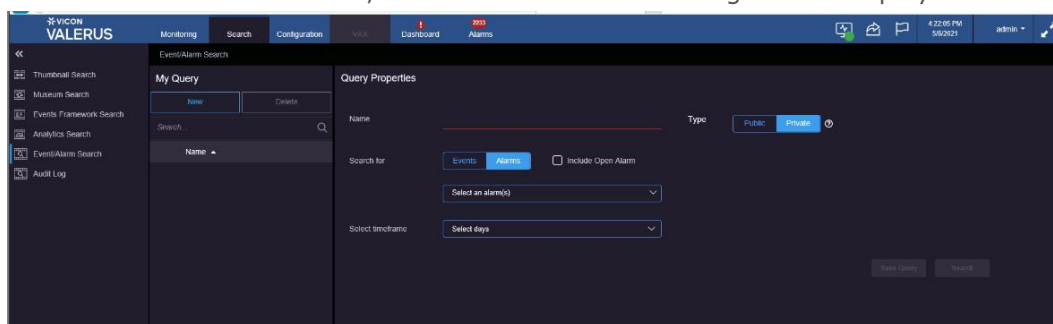
Alarm Search

Valerus provides an efficient Search tool; one of the searches is an Event/Alarm Search tool. Within the Events/Alarm Query, there is an option to filter only those events that were elevated to an alarm level.

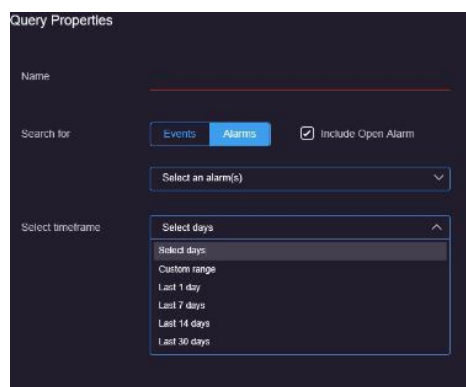
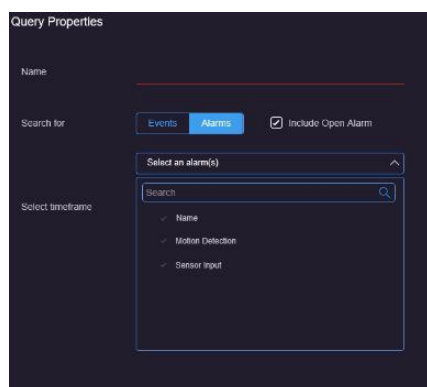
- Select the Search tab at the top of the main screen. Select Event/Alarm Search. Any previously created queries will be listed under My Query.



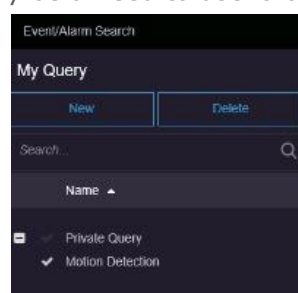
- Click New. From the Search for field, select Alarms. The following screen displays.



- Name the Query. The Query can be made Private, for use by only this user, or Public for anyone on the system to use.
- Typically, this search is used to review historical alarms that have been closed, as the open alarms show on the Alarms Management screen; however, if there is a need to include the open alarms as well, check the box provided. Select an alarm(s) from the dropdown list. The list includes the alarms that have been configured in the system. Select the number of days to be searched from the Select timeframe dropdown. If Custom is selected, a calendar displays to choose a specific day and time for the search.



- Save the Query to avoid creating it again if there may be a need to use it later. Once saved, this query will be listed and can be referred to at any time.



- Click Search. A list of alarms displays. Each alarm in the list can be selected and the video/audio played back. The display will include details about the alarm (its Name, Priority, Status, State, Time it occurred and Owner), as well as all the information that displays at the bottom of the Alarms Management screen when it is selected. To return to the Query screen, click the Back to Query button at the bottom of the list.

The left screenshot shows the 'EventAlarm Search' table with the following data:

Start Time	End Time	Triggered Resource	Alarms
12/6/2021 9:20:19 AM	12/6/2021 9:30:20 AM	KQ6G2N	Motion Detection
12/6/2021 9:19:59 AM	12/6/2021 9:30:00 AM	J4H6Vdgc	Motion Detection
12/6/2021 9:19:52 AM	12/6/2021 9:29:53 AM	KQ6G2N	Motion Detection
12/6/2021 9:19:12 AM	12/6/2021 9:29:13 AM	Road	Motion Detection
12/6/2021 9:19:00 AM	12/6/2021 9:29:01 AM	KQ6G2N	Motion Detection
12/6/2021 9:18:45 AM	12/6/2021 9:28:46 AM	102 160.0 100_Camera	Motion Detection
12/6/2021 9:18:14 AM	12/6/2021 9:28:15 AM	KQ6G2N	Motion Detection
12/6/2021 9:17:59 AM	12/6/2021 9:28:00 AM	KQ6G2N	Motion Detection
12/6/2021 9:17:56 AM	12/6/2021 9:27:56 AM	J4H6Vdgc	Motion Detection
12/6/2021 9:17:46 AM	12/6/2021 9:27:47 AM	KQ6G2N	Motion Detection
12/6/2021 9:17:38 AM	12/6/2021 9:27:39 AM	102 160.0 100_Camera	Motion Detection
12/6/2021 9:17:11 AM	12/6/2021 9:27:12 AM	Road	Motion Detection
12/6/2021 9:16:57 AM	12/6/2021 9:26:58 AM	J4H6Vdgc	Motion Detection
12/6/2021 9:16:38 AM	12/6/2021 9:26:40 AM	KQ6G2N	Motion Detection
12/6/2021 9:16:28 AM	12/6/2021 9:26:29 AM	102 160.0 100_Camera	Motion Detection
12/6/2021 9:16:10 AM	12/6/2021 9:26:11 AM	Road	Motion Detection
12/6/2021 9:15:46 AM	12/6/2021 9:25:47 AM	J4H6Vdgc	Motion Detection
12/6/2021 9:15:28 AM	12/6/2021 9:25:29 AM	KQ6G2N	Motion Detection
12/6/2021 9:15:09 AM	12/6/2021 9:25:10 AM	Road	Motion Detection
12/6/2021 9:14:56 AM	12/6/2021 9:25:57 AM	J4H6Vdgc	Motion Detection
12/6/2021 9:13:09 AM	12/6/2021 9:23:10 AM	KQ6G2N	Motion Detection
12/6/2021 9:11:55 AM	12/6/2021 9:21:56 AM	J4H6Vdgc	Motion Detection

The right screenshot shows the 'EventAlarm Search' table with a selected row, displaying details for Alarm ID 005305. The details include:

- Name: Motion Detection
- Priority: 1
- Time: 12/6/2021 9:19:59 AM
- Owner:
- Status: Expired
- State: Closed

The video feed shows a street scene with a car. The 'Response' section includes a 'Turn Electricity Off' button.

- For an LPR or VAX event, there is an *Advanced Filters* button that allows you to refine your search (including respective parameters for LPR Event search and VAX Event search).



VICON INDUSTRIES INC.

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