TRBOnet Enterprise/PLUS

Alarm Management
User Guide
Version 5.4

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Contents

1   Introduction

1.1   About This Guide

This document is intended for administrators setting up evaluation and proof-of-concept deployments of MOTOTRBO Dispatch over IP solutions. The document describes how to configure and use the Alarm Management feature.

1.2   About TRBOnet

TRBOnet is a suite of professional applications for MOTOTRBO digital two-way radio networks. TRBOnet manages voice and data communication paths across network endpoints. It provides a unified graphical dispatcher workbench interface for the entire range of workforce fleet management tasks.

For more information about TRBOnet products, refer to our website.

1.3   Contacts

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EMEA	+44 203 608 0598	info@trbonet.com — general and commercial inquiries
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APAC	+61 28 607 8325	https://trbonet.com/kb/ — online knowledge base

2   Overview

The Event/Alarm Management feature allows you to create rules for Alarms, Emails, Notifications, Text Messages to radios, and other events. When a configured rule is executed, the appropriate action(s) will start.

For example, an external application sends some text data, which contains the text "alarm", to TRBOnet software. The text "Alarm" is configured as the rule to start sending a predefined voice message (for example, "Alarm in Sector N") to selected radios (for example, the group "firemen"). As a result, the group "firemen" are notified about an emergency condition.

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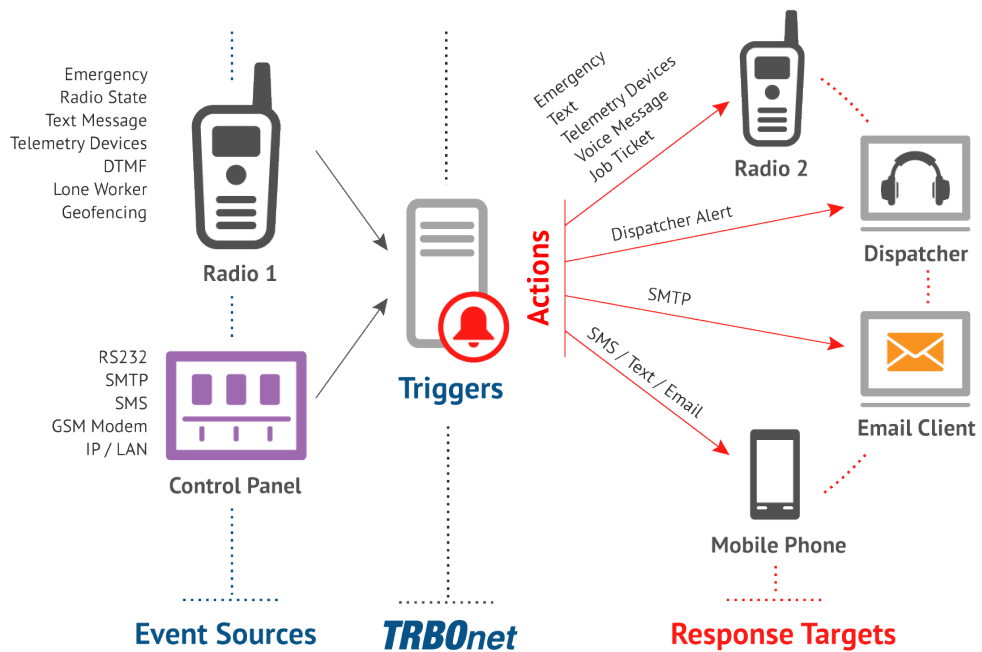
3 Configuring Rules

This section describes how to configure rules for a variety of events.

- Go to **Administration** (1), **Event/Alarm Management** (2) to configure Event/Alarm Management:
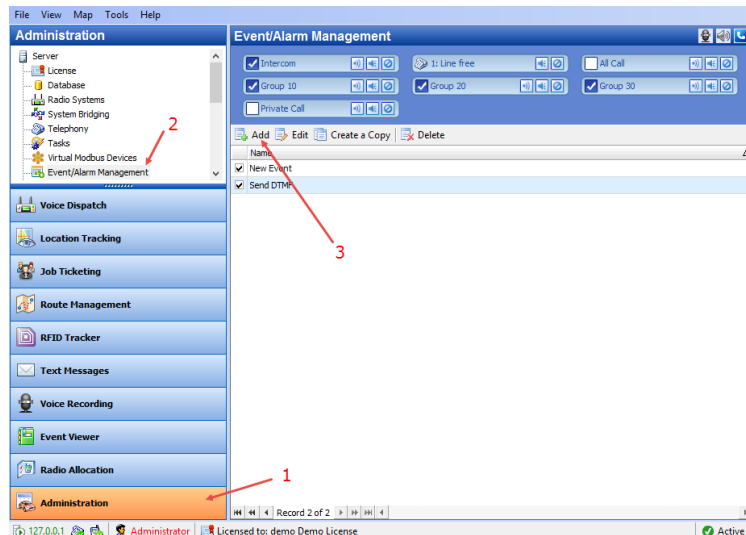
- Click **Add** (3) to add a new Event/Alarm Management rule.

> Note: The administrator can also create a copy of the existing Event/Alarm Management rule. Select a rule in the list and click the **Create a Copy** button. The system will create a copy of the rule with the same configuration parameters.

- **Name**
Enter a name for the rule.

3.1   Events

- On the **Source** tab (1), click **Add** (2) to add a new event source for the rule.
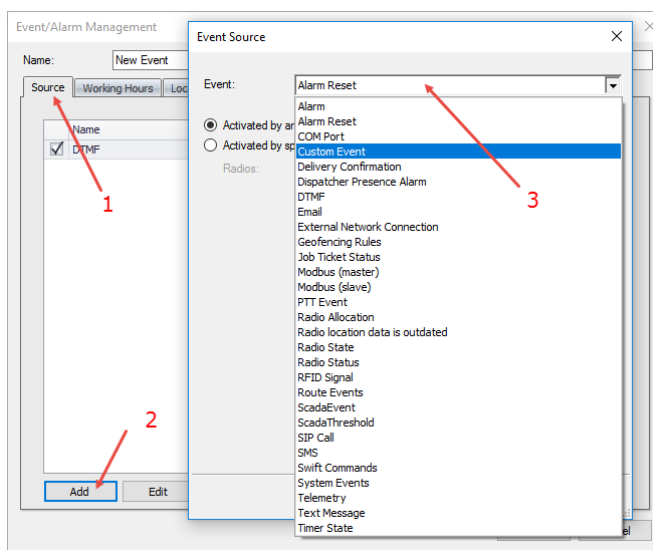
- **Event**
   From the drop-down list (3), select the event to set for the rule.

The following events can be added to the rule:

3.1.1   Alarm

- **Activated by any radio**
   An alarm is triggered on/for any radio in the system.

- **Activate by specific radios only**
   An alarm is triggered on/for selected radios in the system.

- Alarm

   - **Emergency Alarm**
      An Emergency alarm is received from the radio.

   - **Man Down**
      A Man-Down alarm is received from the radio.

   - **No Movement**
      A No-Movement alarm is received from the radio.

   - **Lone Worker**
      A Lone-Worker alarm is triggered for the radio.

   - **Crash Detect**
      A Crash-Detect alarm is received from the radio.

   - **Geofencing**
      A Geofencing alarm is triggered for the radio.

   - **RFID Tracker**
      An RFID alarm is triggered for the radio.

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- ▪ **All**
  Any of the above-listed alarms is triggered on/for the radio.

- **Do not perform if radio is in alarm mode**
  Select this option to not perform the associated action upon receiving a repeated alarm from the radio.

- **All Systems**
  An alarm is triggered on all radio systems.

- **Selected Systems**
  An alarm is triggered on selected radio systems.

3.1.2 Alarm Reset

- **Activated by any radio**
  An alarm is reset for any radio in the system.

- **Activate by specific radios only**
  An alarm is reset for selected radios in the system.

3.1.3 COM Port

- **COM Port**
  Select the COM Port connection configured in TRBOnet Server.

- **Regular Expression**
  Enter the text or characters that the external application data must contain.

3.1.4 Custom Event

- **Event ID**
  Enter the ID of the event.

3.1.5 Delivery Confirmation

- **Activated by any radio**
  A delivery is confirmed/not confirmed on any radio in the system.

- **Activate by specific radios only**
  A delivery is confirmed/not confirmed on selected radios in the system.

- **Text message delivered**
  Text message delivery is confirmed.

- **Text message not delivered**
  Text message delivery is not confirmed.

- **Telemetry delivered**
  Telemetry delivery is confirmed.

- **Telemetry not delivered**
  Telemetry delivery is not confirmed.

3.1.6 Dispatcher Presence Alarm

- **All Dispatchers**
  A presence alarm is triggered for any of the dispatchers.

- **Selected Dispatchers**
  A presence alarm is triggered for selected dispatchers only.

3.1.7 DTMF

- **Activated by any radio**
  A specific DTMF command is received from any radio.

- **Activate by specific radios only**
  A specific DTMF command is received from selected radios in the system.

- **Command**
  Enter a DTMF command.

3.1.8 Email

- **Sender**
  Enter the sender of an email.

- **Recipient**
  Enter the recipient of an email.

- **Regular Expression**
  Enter the text or characters that the email must contain.

3.1.9 External Network Connection

- **Connection**
  Select the TCP/IP connection configured in TRBOnet Server.

- **Regular Expression**
  Enter the text or characters that the external application data must contain.

3.1.10 Geofencing Rules

- **Activated by any radio**
  A Geofencing rule is triggered for any radio.

- **Activate by specific radios only**
  A Geofencing rule is triggered for selected radios in the system.

- **All Rules**
  Any of the Geofencing rules is triggered.

- **Selected Rules**
  Only selected Geofencing rules are triggered.

3.1.11 Job Ticket Status

This event is triggered when the job ticket status changes to the selected status.

- **Statuses**
  Select the job ticket status(es).

3.1.12 Modbus (master)

This event is triggered when the specified memory cell on the connected Modbus device being polled by TRBOnet Server holds the specific value.

- **Connection**
  Select the Modbus master connection configured in TRBOnet Dispatch Console.

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- **Table**
  Select the Modbus table.

- **Address**
  Enter the memory address on the Modbus device.

- **Value**
  Enter the value that is held in the specified memory address.

3.1.13 Modbus (slave)

This event is triggered when the connected Modbus device sends a command to write the specified value to the specific memory cell.

- **Connection**
  Select the Modbus slave connection configured in TRBOnet Dispatch Console.

- **Table**
  Select the Modbus table.

- **Address**
  Enter the memory address on the Modbus device.

- **Value**
  Enter the value to be written to the specified memory address.

3.1.14 PTT Event

This event is triggered when the PTT button is pressed (the specified number of times during the specific interval) on the radio.

- **Activated by any radio**
  The PTT button is pressed on any radio.

- **Activate by specific radios only**
  The PTT button is pressed on selected radios.

- **PTT Press**
  Enter how many times the PTT button must be pressed.

- **Interval**
  Enter the time interval during which the specified number of PTT presses must occur.

3.1.15 Radio Allocation

This event is triggered when the radio is taken/returned by the user(s).

- **Activated by any radio**
  The selected user takes/returns any radio.

- **Activate by specific radios only**
  The selected user takes/returns selected radios.

- **Users**
  Select the user(s).

- **User Signed In**
  Select this option to trigger the event when the user signs in.

- **User Signed Out**
  Select this option to trigger the event when the user signs out.

3.1.16 Radio location data is outdated

This event is triggered when location data from the radio(s) is outdated.

- **Activated by any radio**
  The event is triggered from any radio.

- **Activate by specific radios only**
  The event is triggered from selected radio(s) only.

- **Monitoring**
  Select which location data (GPS, Beacon, or both) to consider.

- **Interval**
  Enter the time interval, in seconds, during which location data are not received from the radio(s).

- **Online Only**
  Select this option so that only online radios will be considered.

3.1.17 Radio State

This event is triggered when the radio changes its status (online/offline, fixed/lost GPS, detected/lost beacon).

- **Activated by any radio**
  The event is triggered from any radio.

- **Activate by specific radios only**
  The event is triggered from selected radio(s) only.

Select one or more of the following options:

- **Radio is detected as offline**
- **Radio is detected as online**
- **Radio gets a GPS fix**
- **Radio loses a GPS fix**
- **Radio detects a beacon**
  In addition, select the beacon(s) to be detected by the radio.
- **Radio loses a beacon**
  In addition, select the beacon(s) to be lost by the radio.

3.1.18 Radio Status

This event is triggered when the radio gets the specified **Status**.

3.1.19 Route Events

This event is triggered when various route events occur (route started/finished, waypoint attended/not attended, etc.).

- **Activated by any radio**
  The event is triggered for any radio.

- **Activate by specific radios only**
  The event is triggered for selected radio(s) only.

- **Events**
  In the list, select the route event(s) to be triggered.

- **All Routes**
  The event is triggered for all routes.

- **Selected Routes**
  The event is triggered for selected routes only.

3.1.20 SCADA Event

This event is triggered when a certain SCADA tag equals (is less, greater, less or equal, greater or equal) a certain value.

- Click the **Add** button.

- Select the tag, the relation symbol and the value.

3.1.21 SCADA Threshold

This event is triggered when a certain SCADA tag's value exceeds the defined threshold.

- **Tag**
  Select the tag from the drop-down list.

- **Error State**
  Choose this option to trigger the event when the tag's value falls into the error state.

- **Default State**
  Choose this option to trigger the event when the tag's value falls into the default state.

- **Custom Threshold**
  Choose this option to trigger the event when the tag's value exceeds the specified threshold.

3.1.22 Schedulers

This event is triggered when the selected schedulers are started.

- **Scheduler**
  Select the scheduler(s) in the list.

3.1.23 SIP Call

This event is triggered when there is an incoming call from the specified Caller ID.

- **Caller SIP ID**
  Enter the SIP ID of the caller. Note that an empty ID means that the event will be triggered when there is an incoming call from any SIP ID.

3.1.24 SMS

This event is triggered when there is an incoming SMS.

- **Activated by any phone**
  The event is triggered for an incoming SMS from any phone number.

- **Activate by specific phones only**
  The event is triggered for an incoming SMS from the selected phone number(s).

  - **Phones**
    Populate the list of phone numbers by using the **Add** button.

- **Text Contains**
  Enter the text that must be present in the SMS message to trigger the event. Leaving this box blank means that the message may contain any text.

3.1.25 Swift Commands

This event is triggered when a Swift command is sent to the radio(s).

- **Activated by any radio**
  The event is triggered for any radio.

- **Activate by specific radios only**
  The event is triggered for selected radio(s) only.

- **Event**
  Select the Swift command from the drop-down list.

- **Description**
  Enter a description.

3.1.26 System Events

This event is triggered when one or more of the following system events are triggered.

- **Lost connection to master device**
- **Restored connection to master device**
- **Failover (primary server disconnected)**
- **Failback (primary server reconnected)**
- **Swift Agent alarm**
- **Other system events**

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3.1.27 Telemetry

This event is triggered when a telemetry command is received from the radio.

- **Activated by any radio**
  The event is triggered when receiving telemetry from any radio.

- **Activate by specific radios only**
  The event is triggered when receiving telemetry from selected radio(s) only.

- **VIO**
  Enter the VIO-pin on the radio.

- **Command**
  From the drop-down list, select the command for the selected VIO.
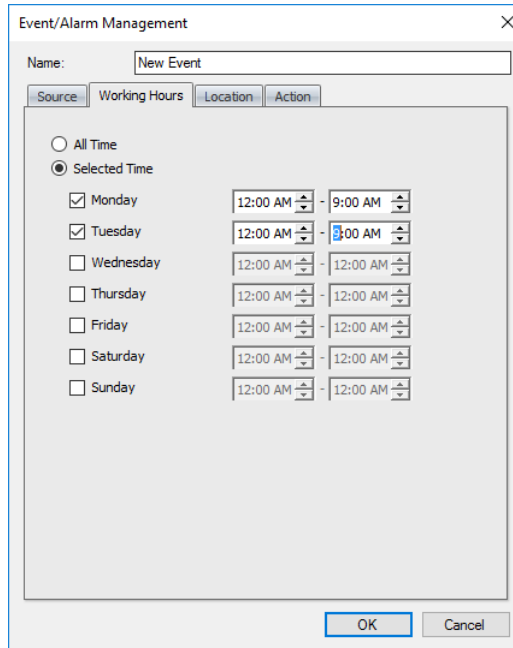
3.1.28 Text Message

This event is triggered when a text message is received from the radio.

- **Activated by any radio**
  The event is triggered when receiving a text message from any radio.

- **Activate by specific radios only**
  The event is triggered when receiving a text message from selected radio(s) only.

- **Text Contains**
  Enter the text that must be present in the text message to trigger the event. Leaving this box blank means that the message may contain any text.

3.2   Working Hours

- Click the **Working Hours** tab to set the time at which the rule will be valid.


- **All Time**

  Choose this option so that the rule will be valid all the time.

- **Selected Time**

  Choose this option so that the rule will be valid on the selected days of the week at the specified time.

  - Select the days of the week and specify the working hours.

3.3   Location

- Click the **Location** tab to set the regions inside or outside of which the rule will be valid.

  When a region(s) is (are) selected, the events specified in the **Source** tab must take place inside/outside the selected region(s) to start the action(s).

  > Note: When **COM Port** and/or **External Network Connection** are selected as the event source, the **Location** rule should not be used.
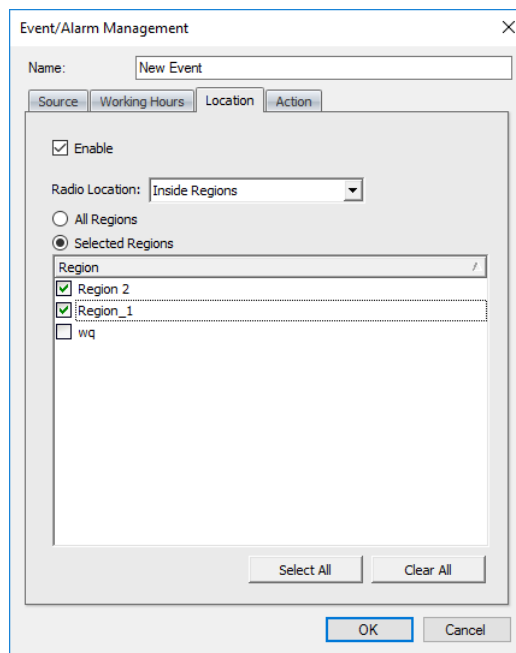
- **Enable**
  Select this option to apply **All Regions/Selected Regions** to the rule.

- **Radio Location**
  From the drop-down list, select whether the rule will be valid
  Inside Regions or **Outside Regions**.

- **All Regions**
  Choose this option to apply the rule inside/outside all map regions.

- **Selected Regions**
  Choose this option to apply the rule only inside/outside selected regions.

  - **Region**
    In the list, select the region(s).

3.4 Actions

- Click the **Action** tab (1) to set actions for the rule.

  In the Actions list, the administrator can add and configure the action types to be started when the events configured and selected in the **Source** page are triggered.

- Click **Add** (2) to add an action:
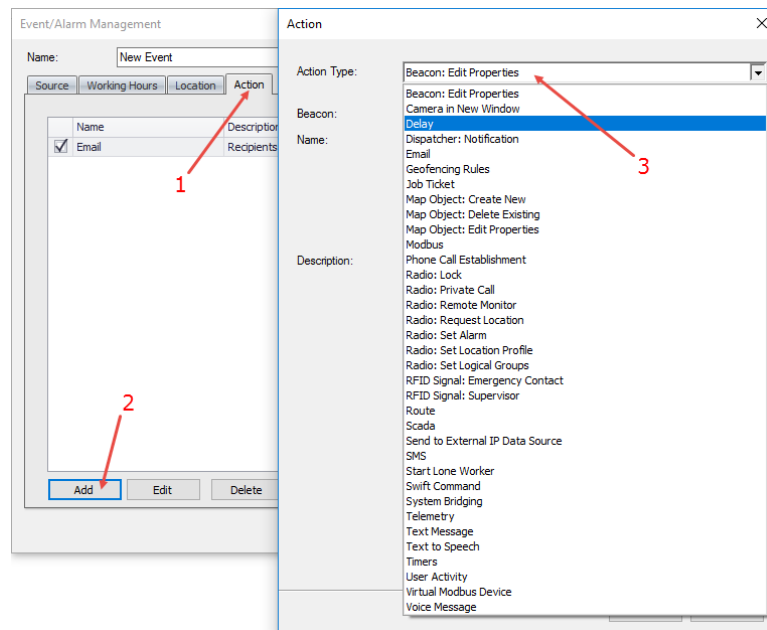
- ▪ **Action Type**
  From the drop-down list (3), select the action type.

The following actions can be added to the rule:

3.4.1 Beacon: Edit Properties

- **Beacon**
  Select the beacon to edit.

- **Name**
  Enter the new name for the beacon.
  Click links below to add specific fields to the beacon name.

- **Description**
  Enter the new description for the beacon.
  Click links below to add specific fields to the beacon description.

3.4.2 Camera in New Window

- **Dispatchers**
  In the list, select the dispatcher(s) for whom to display the window.

- **Cameras**
  From the drop-down list, select the camera to be displayed in the window.

3.4.3 Delay

- **Interval**
Set the time interval, in seconds, for a delay between actions.

3.4.4 Dispatcher: Notification

- **Dispatchers**
In the list, select the dispatcher(s) for whom to display the notification.

  - **Show always**
Select this option so that the dispatcher won't be able to hide the visibility of the notification dialog box.

- **Severity**
From the drop-down list, select the notification severity ('Information', 'Warning', or 'Alarm').

- **Text**
Enter the text of the notification.

- **Variables**
Click the fields to add them to the notification text.

3.4.5 Email

- **Recipients**
In the list, select the email group(s) to which the email message will be sent.

- **Subject**
Enter the subject of the email message.

- **Variables**
Click the fields to add them to the email subject.

- **Text**
Enter the text of the email message.

- **Variables**
Click the fields to add them to the email text.

3.4.6 Event/Alarm Management Rules

In the table of available Event/Alarm Management rules, select actions for the rules:

- **Enable** to enable the rule.
- **Disable** to disable the rule.
- **Toggle** to toggle the rule state.
- **Execute** to execute the rule's action.

3.4.7 Geofencing Rules

In the table of available Geofencing rules, select actions for the rules:

- **Enable** to enable the rule.
- **Disable** to disable the rule.
- **Toggle** to toggle the rule state.

3.4.8 Job Ticket: Create and Assign

- **Enable Deadline**
  Select this option and enter the ticket's **Deadline** (in minutes, hours, or days).

- **Recipients**
  In the list, select the radio(s)/radio group(s) to which to assign the ticket.

- **Send to source radio**
  Select this option to assign the ticket to the radio that triggered the source event.

- **Notify on status changes**
  Select this option to send notifications to Dispatchers, Email and/or SMS groups when a Job Ticket status changes.

- **Notify if ticket is not accepted within**
  Select this option to send notifications to dispatchers, Email and/or SMS groups if a radio does not accept the Job Ticket within the time specified in the box below.

- **Notification List**
  Click this link and choose the recipients of selected notifications.

- **Assign tickets to groups via selected systems**
  Select this option and in the list below, select the radio system(s).

- **Description**
  Enter the description of the ticket.

- **Variables**
  Click the fields to add them to the ticket description.

3.4.9 Lone Worker

- **Radios**
  In the list, select the radio(s).

- **Source Radio**
  Select this option to also set the Lone Worker task for the radio that triggered the source event.

- **Lone Worker**
  In the list, select the Lone Worker task(s). Or, click the plus button on the right to create a new Lone Worker task.

- **Action**
  Select whether to **Start** or **Stop** the selected Lone Worker task(s).

3.4.10 Map Object: Create New

- **Type**
  Select the object type.

- **Name**
  Enter the name of the created object.
  Click links below to add specific fields to the object name.

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3.4.11 Map Object: Delete Existing

- **Delete only automatically created map objects**
  Select this option to delete only those map objects that were created automatically.

- **Radius**
  Specify the radius, in meters. There will be deleted only those map objects that are located within this radius around the radio that triggered the source event.

3.4.12 Map Object: Edit Properties

- **Map Object**
  Select the map object to be edited.

- **Name**
  Enter the new name for the map object.
  Click links below to add specific fields to the object name.

- **Description**
  Enter the new description for the map object.

- **Additional parameters**
  Select the new object type, if a point object is to be edited.
  Select the new color, fill and transparency, if the object is a region or a route.

3.4.13 Modbus

- **Connection**
  Select the Modbus master connection.

- **Slave ID**
  Enter the Slave ID of the Modbus device.

- **Type**
  Select the Modbus data type.

- **Address**
  Enter the memory address whose value to set.

- **Value**
  Enter the value to set to the specified address.

3.4.14 Phone Call Establishment

Called Party

- **Type**
  Select the called party (Radio Group, Radio Unit, Phone account, or Dispatcher).

- **Channel**
  If the Radio Group is selected above, select the radio channel through which to make the phone call.

- **Target**
  Select the call target which depends on the type (radio group, radio, phone number, dispatcher or dispatcher group).

- **Priority**
  Select the priority of the radio call.

Caller

- **SIP ID**
  Enter the SIP ID of the caller.

- **Play audio**
  Select this option to play the audio message, and then select one of the following:

  - **Recorded Audio Message**
    Choose to either:

    - **Load form file**

    or:

    - **Record message**

  - **Text to Speech**
    Choose this option and enter the text to be converted to speech.
    Click links below to add specific fields to the text.

3.4.15 Radio: Lock

- **Radios**
  In the list, select the radio(s) to be locked.

  - **Source Radio**
    Select this option so that the radio that triggered the source event will be locked.

- **Unlock**
  Select this option and enter the time period, in minutes, after which the radio(s) will be unlocked.

- **Reason**
  Enter the reason for disabling the radio(s).

- **Variables**
  Click the fields to add them to the reason text.

3.4.16 Radio: Private Call

- **Radio**
  From the drop-down list, select the radio to which to make a private call.

  - **Source Radio**
    Select this option so that a private call will be made to the radio that triggered the source event.

- **Dispatchers**
  In the list, select the dispatcher(s) who will be prompted to make a private call to the specified radio.

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- **Online Dispatchers**
    Select this option so that only online dispatchers will prompted to initiate a private call to the specified radio.

- **Description**
    Enter the text that will be displayed in the dialog box prompting the dispatcher to make a private call to the radio.

- **Variables**
    Click the fields to add them to the notification text.

3.4.17 Radio: Remote Monitor

- **Radio**
    From the drop-down list, select the radio on which to activate the microphone in hidden mode (remote monitor duration – 30 sec.)

    - **Source Radio**
        Select this option so that the microphone will be activated on the radio that triggered the source event.

3.4.18 Radio: Request Location

This action will send a location request to the radio that triggered the source event.

3.4.19 Radio: Set Alarm

This action will set an alarm for the radio that triggered the source event.

3.4.20 Radio: Set Location Profile

- **Radios**
    In the list, select the radio(s) for which to set the location profile.

    - **Source Radio**
        Select this option so that the location profile will also be set for the radio that triggered the source event.

    - **Radios in Alarm**
        Select this option so that the location profile will also be set for the radios that are in Alarm mode.

- **Action**
    Select whether to Start or Stop Location Trigger.

- **Location Profile**
    Select the location profile to set for the selected radio(s).

- **Perform forcibly**
    Select this option so that the location trigger will be restarted, regardless of whether it has already been started.

3.4.21 Radio: Set Logical Group

Select the logical groups to assign to the radio(s) that triggered the source event.

3.4.22 Route

- **Route**
    From the drop-down list, select the route to assign to the radio and start.

- **Radio Owner**
  From the drop-down list, select the radio user.

- **Radio**
  Select the radio to which to assign the route.

  - **Source Radio**
    Select this option so that the route will be assigned to the radio that triggered the source event.

- **Dispatcher**
  Select the dispatcher that will track the route.

3.4.23 SCADA

- **Tag**
  Select the tag to which to set the value.

- **Value**
  Enter the value to set to the selected tag.

3.4.24 Send to External IP Data Source

- **Connection**
  Select the TCP/IP connection configured in TRBOnet Server.

- **Message**
  Enter the message that will be sent to an external IP data source.
  Click links below to add specific fields to the message text.

3.4.25 SMS

- **Recipients**
  In the list, select the recipients of the SMS message.

- **Text**
  Enter the text of the message.

- **Variables**
  Click the fields to add them to the message text.

3.4.26 Swift Command

- **Radios**
  In the list, select the radio(s)/radio group(s) to which to send the Swift command.

  - **Source Radio**
    Select this option so that the Swift command will also be sent to the radio that triggered the source event.

- **Swift Event**
  Select the Swift command from the drop-down list.

3.4.27 System Bridging

- **Profiles**
  In the list, select the radio bridge(s) available across the radio systems.

- Choose to either **Activate** or **Deactivate** the selected radio bridge(s).

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3.4.28 Task Management

In the table of available tasks, select actions for the tasks:

- **Enable** to enable the task.
- **Disable** to disable the task.
- **Toggle** to toggle the task state.

3.4.29 Telemetry

- **VIO**
  Enter the VIO-pin on the radio.

- **Command**
  From the drop-down list, select the command for the selected VIO.

- **Recipients**
  In the list, select the radio(s)/radio group(s) to which to send the Telemetry command.

  - **Send to source radio**
    Select this option so that the Telemetry command will also be sent to the radio that triggered the source event.

3.4.30 Text Message

- **Dispatchers**
  In the list, select the dispatcher(s) to which to send the text message.

- **Radios**
  In the list, select the select the radio(s)/radio group(s) to which to send the text message.

  - **Send to source radio**
    Select this option so that the text message will also be sent to the radio that triggered the source event.

- **Sender**
  From the drop-down list, select the dispatcher who will send the text message.

- **Text Message**
  Enter the text of the text message.

- **Variables**
  Click the fields to add them to the message text.

3.4.31 Text to Speech

- Click the **Add** link.
  Select the **Call Type**, **Channel**, and **Call Target** to which the voice message will be sent.

- **Priority**
  Select the priority of the voice message.

- **Text**
  Enter the text to be converted to speech.

- **Variables**
  Click the fields to add them to the text.

3.4.32 User Activity

- **Radios**
  In the list, select the select the radio(s)/radio group(s) to which to assign the user activity.

  - **Source Radio**
    Select this option so that the user activity will also be assigned to the radio that triggered the source event.

- **Activity**
  From the drop-down list, select the user activity. Or click the ellipsis button on the right to create a new user activity.

- **Note**
  Enter the note for the user activity.
  Click links below to add specific fields to the note.

3.4.33 Virtual Modbus Device

- **Modbus Device**
  Select the Modbus device configured in TRBOnet Dispatch Console.

- **Table**
  Select the Modbus table.

- **Address Source**
  Select the memory address source (**Manual** or **Radio ID**).

- **Address**
  Enter the memory address, if **Manual** is selected above.

- **Value Source**
  Select the value source (**Manual**, **Beacon ID**, or **Map Region ID**).

- Enter the value, if **Manual** is selected above.

3.4.34 Voice Message

- **Voice Messages**
  In the list, select the predefined voice message(s). Or click the plus button on the right to create a new voice message.

  - **Send to source radio**
    Select this option so that the predefined voice message(s) will also be sent to the radio that triggered the source event.