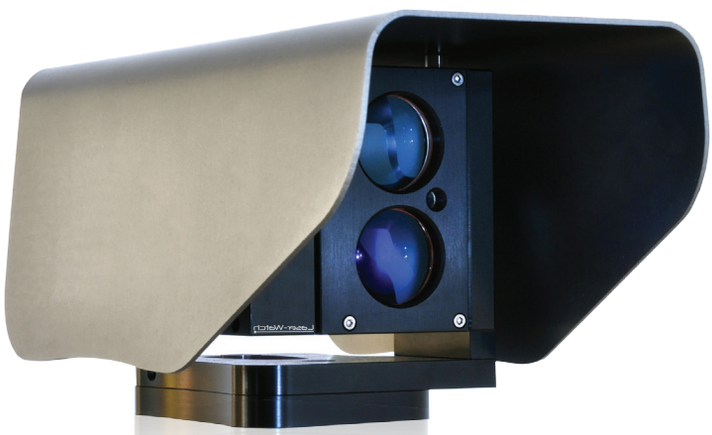
GJD
DETECT & SECURE

WHITE PAPER

Setting up alarm Zones and the reference point

Understanding the benefits with laser based surveillance



SYSTEM CERTIFICATION ISO 9001 SGS

CEDIA MEMBER

bsia british security industry association

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Introduction

The Laser-Watch is a powerful sensor for detecting objects and humans with high accuracy at long distances, without the needs of lights, reflectors or separate transmitters/receivers used by other systems.

Calculating the distance of any object up to 500 meters away at 400 Hz, the sensor has the ability of lowering the false alarm rate to a minimum while increasing the number of detected objects. To reach the full potential of the system it is important to know how to create alarm zones and reference points for intended purpose.

This paper will guide you through the marina scenario, describing the ideas of virtual fences, alarm zones, reference points and network alarms. It also includes a step by step guide of how to set up alarm zones and reference points in the user friendly web interface.

Case scenario - Marina

To meet the increased numbers of boat and engine thefts, a large marina for private usage requires an alarm system capable of detecting intruding boats, the Laser-Watch is perfect for this application.



Image 1 - One of the piers in the marina

The position of the Laser-Watch should be carefully planned to ensure good functionality and maximum efficiency of the sensor.

An aerial photo of the marina, (Image 2) shows that the area can be fully secured with two units. Both units can be placed on the outer bridge to reduce the risk of vandals. The chosen locations makes it possible to create separate alarm zones for each part of the marina and to set up reference points.

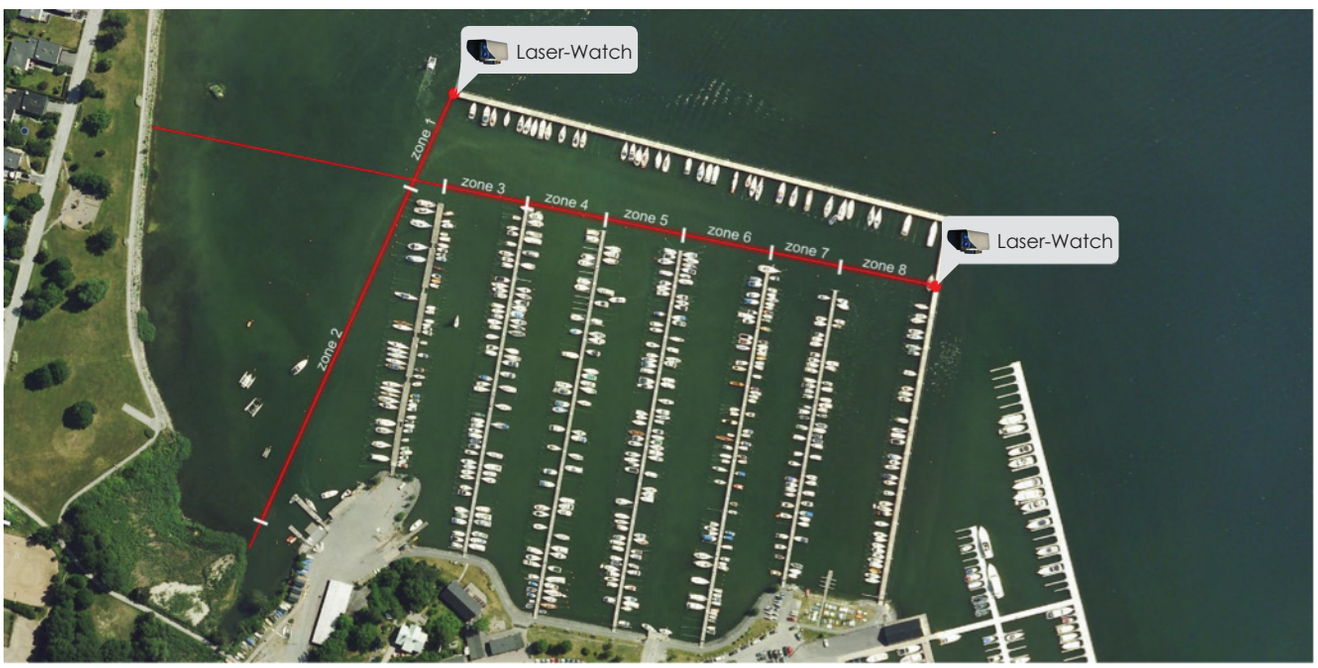


Image 2 - An aerial photo of the marina

With separate zones for each part of the marina, the surveillance system can be programmed for different actions depending on which zone an object has been detected. For example, zone 2 and 3 in the picture above covers a guest harbour, for which the system can be set to always alert the harbour master when boats arrive, while the other zones are only active during night time.

It is virtually impossible to see intruders in the dark, but knowing the exact zone the intruder has been detected in means security personnel quickly can get to the right place. The system can also choose the best camera angles and automatically point a PTZ camera to the location of the object.

Reference points are used to detect tampering, for example if someone tries to re-align the system, or if the weather conditions are really bad.

ALARM ZONE PARAMETERS

With the units in place and well aligned, alarm zones are created in the web interface with four parameters: Zone name, Near distance, Far distance and Alarm sensitivity. 20 alarm zones and one reference point can be set for each system.

Zone name

The zone name is used to ease administration of the sensors. With multiple units over a large area, zone names are a fast way of knowing which sensor and alarm that is active. The zone name has a maximum length of 30 characters. (Note: Special characters might take more space)

Near distance

Start distance of the alarm zone, measured in meters. The near distance can be set anywhere in the line of sight, between 0 and 500m. Decimals are separated with a dot (.)

Far distance

End distance of the alarm zone, measured in meters. The far distance can be set anywhere in the line of sight, between 0 and 500m, but has to be greater than near distance. Decimals are separated with a dot (.)

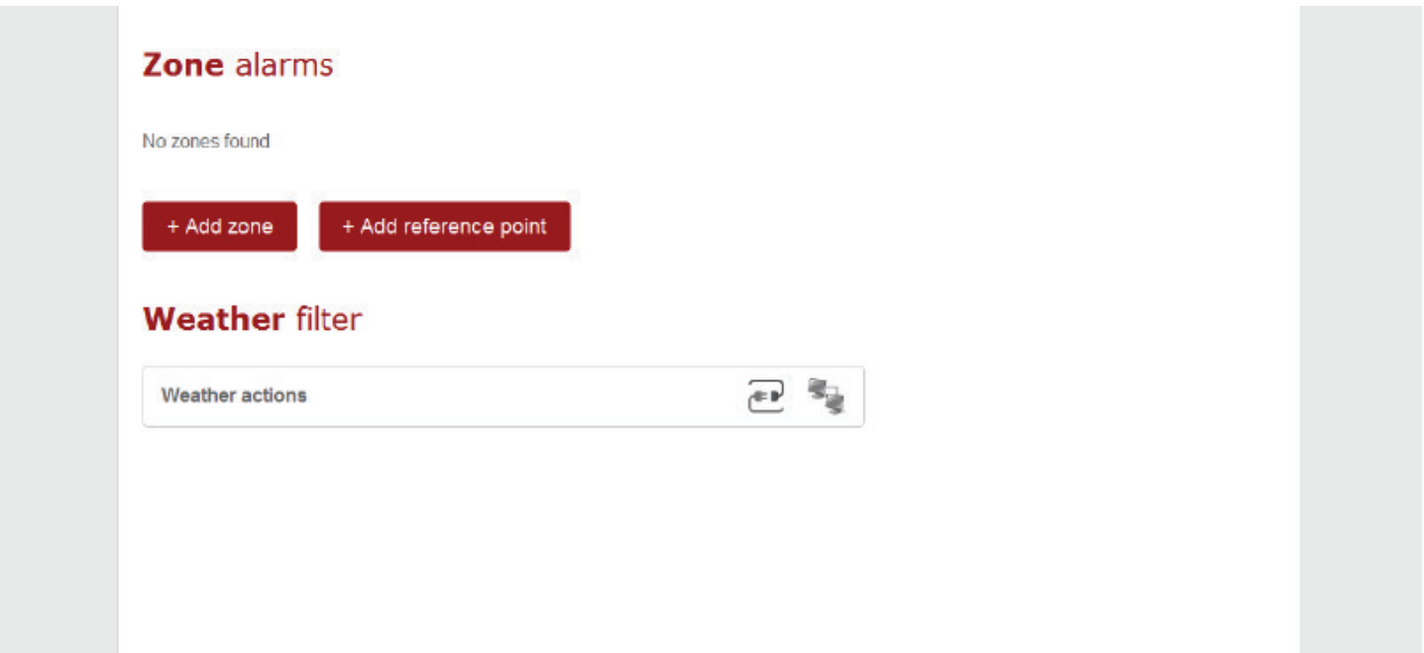
Alarm sensitivity

Alarm sensitivity is adjusted with a slider and can be set between 1 and 5. The sensitivity values are illustrated with symbols. A boat for lowest sensitivity (1) and a motorcycle for highest sensitivity (5). Medium sensitivity (3) is illustrated with a human. This is the default value. It is important to choose alarm sensitivity for intended use to keep the false alarm rate as low as possible.

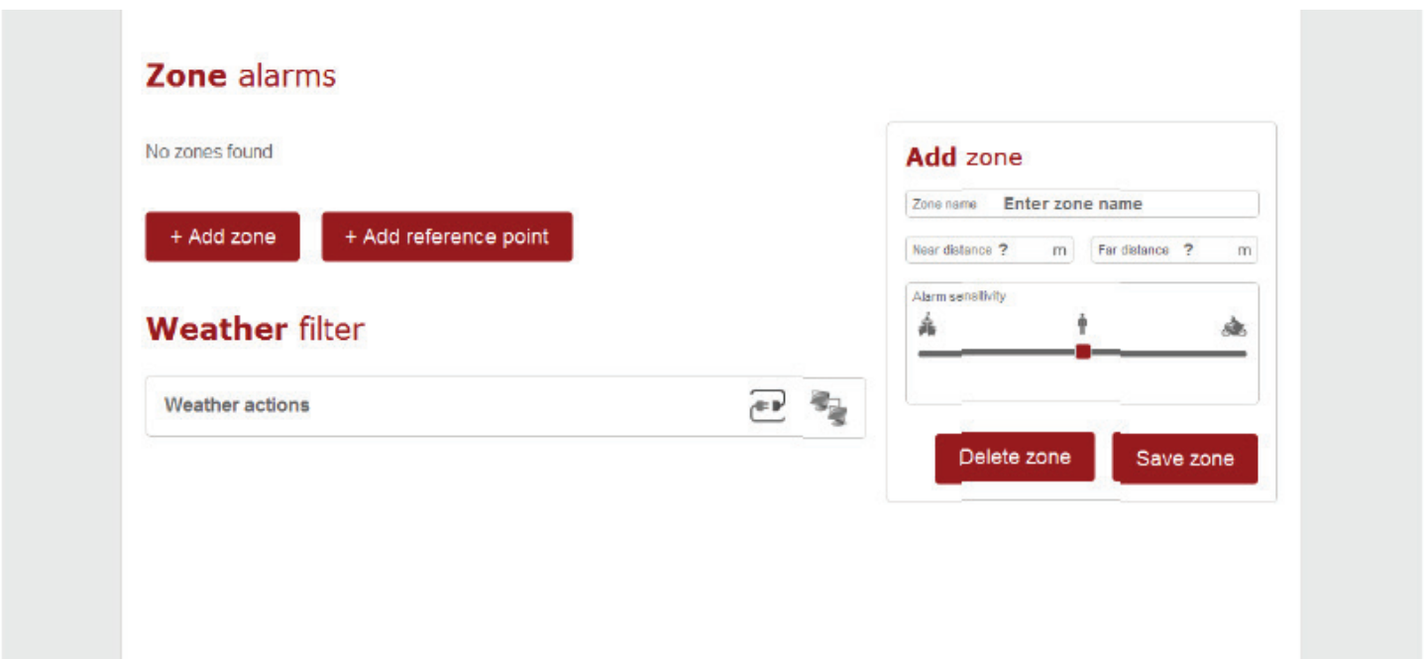
The alarm sensitivity field also includes a checkbox to control alarm behaviour if multiple objects appear in the zone. This is called Multiple alarms and is enabled as default. The setting allows the unit to trigger new alarms when previous objects remain in the zone.

Add zones and reference point

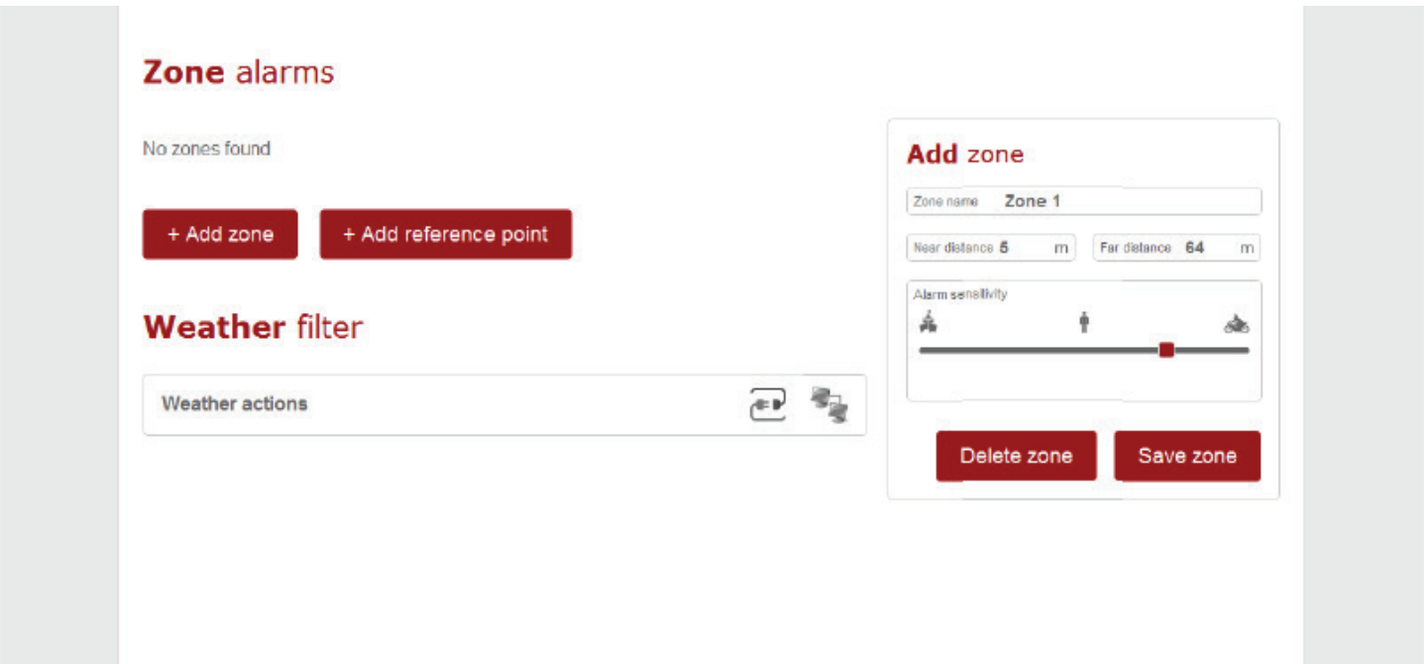
1. Click on "Alarm settings" in the top menu. Zone alarms and Weather filter is shown.



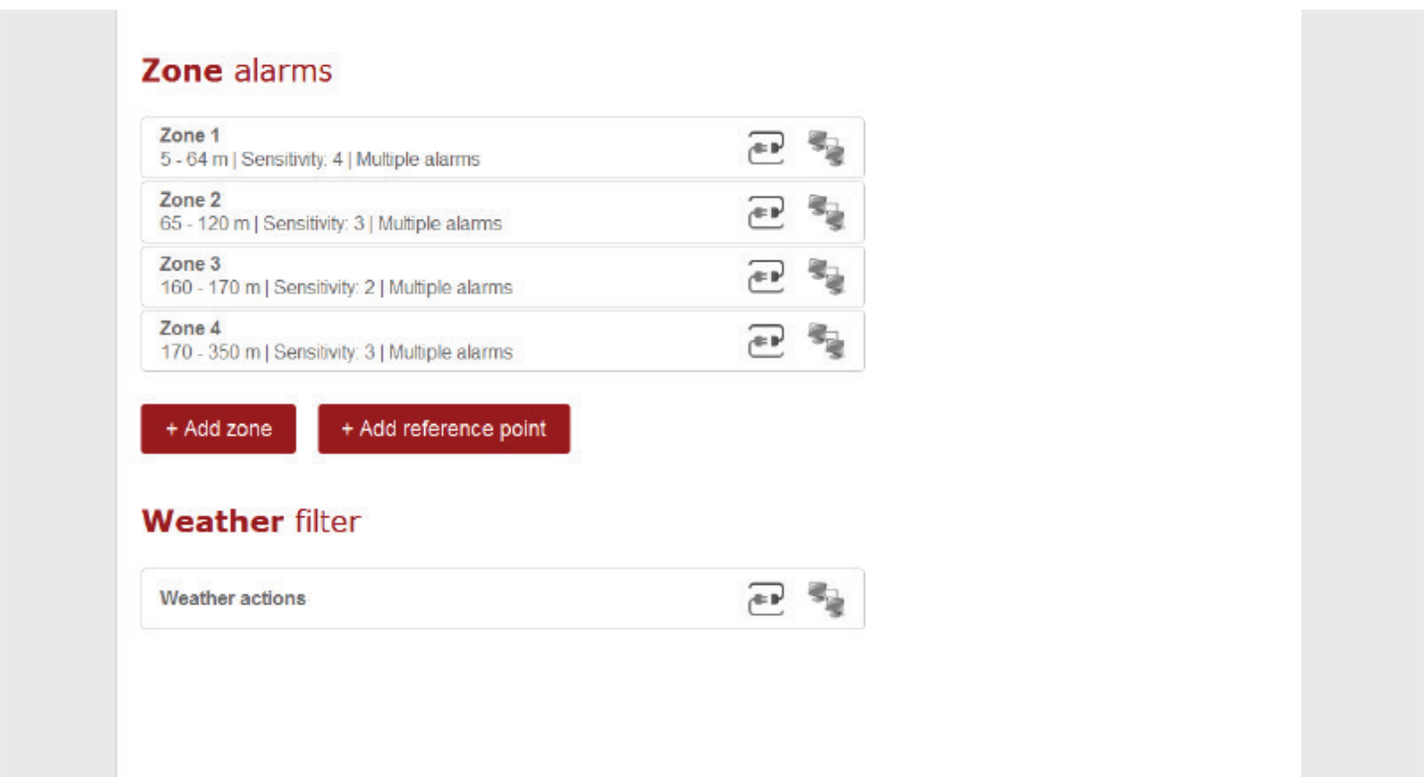
2. Click on "+ Add zone". The zone settings appear on the right.



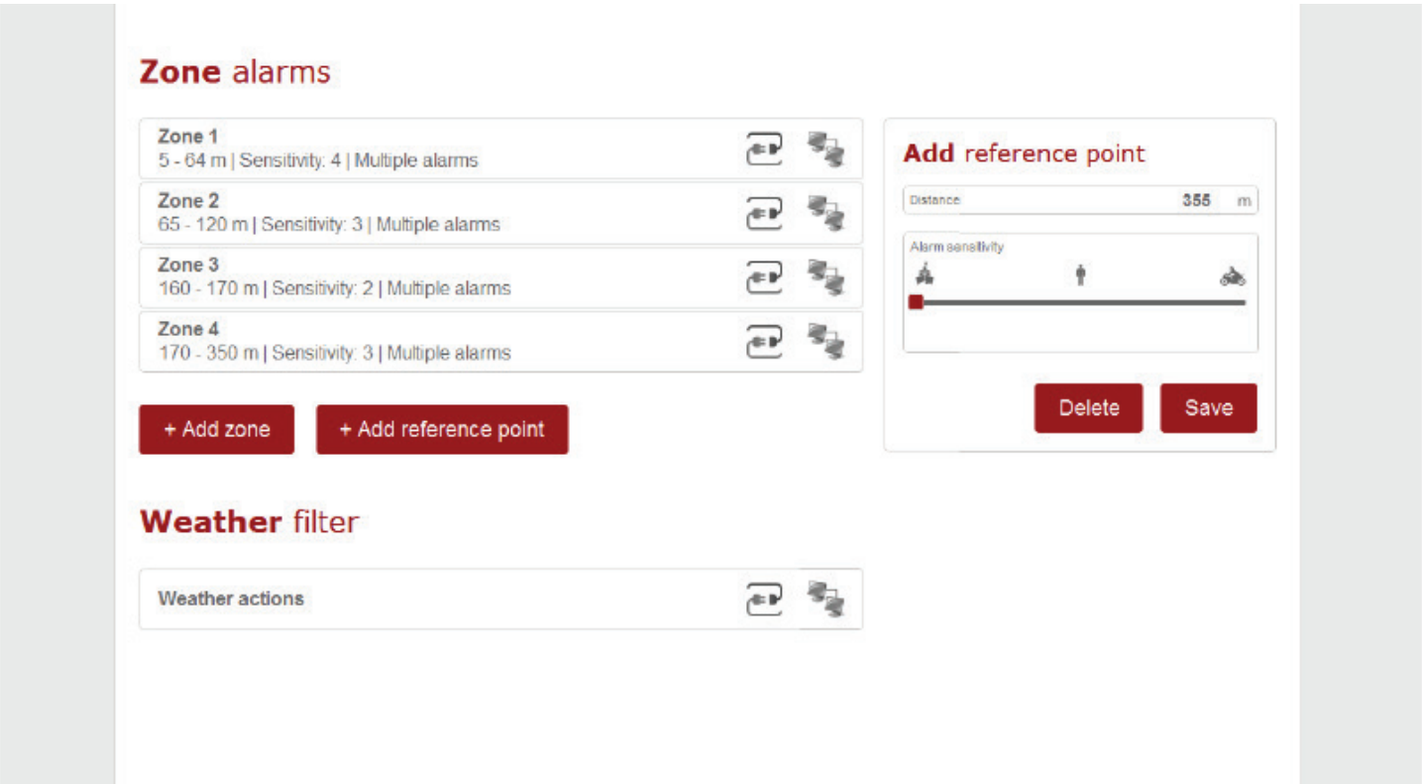
3. Fill in the zone parameter fields and press the “Save zone” button.



4. Add the zone the rest of the zones by repeating step 1 - 3. Zones can be edited by clicking the zone field.



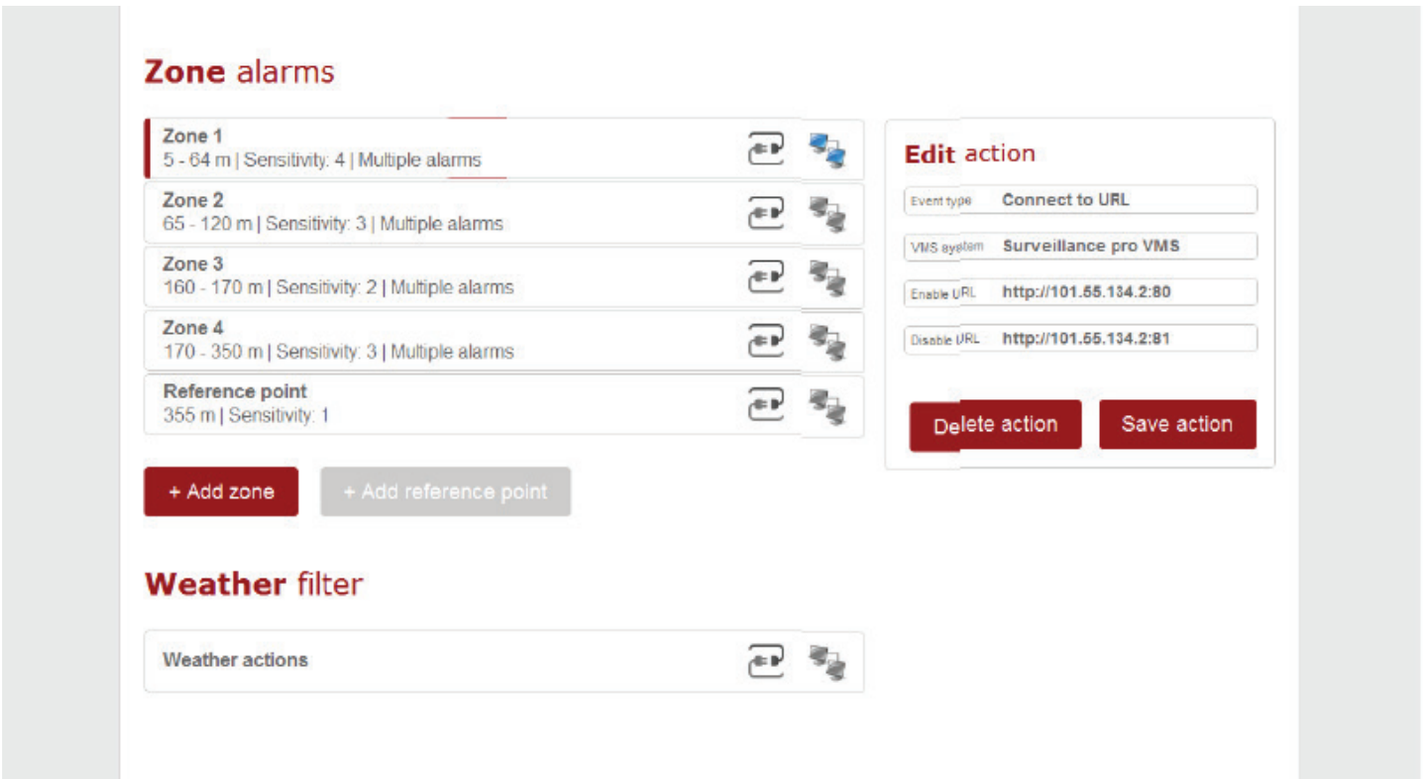
5. Add a reference point by clicking "+ Add reference point" and fill in the parameters. Confirm with the "Save" button.



Add actions

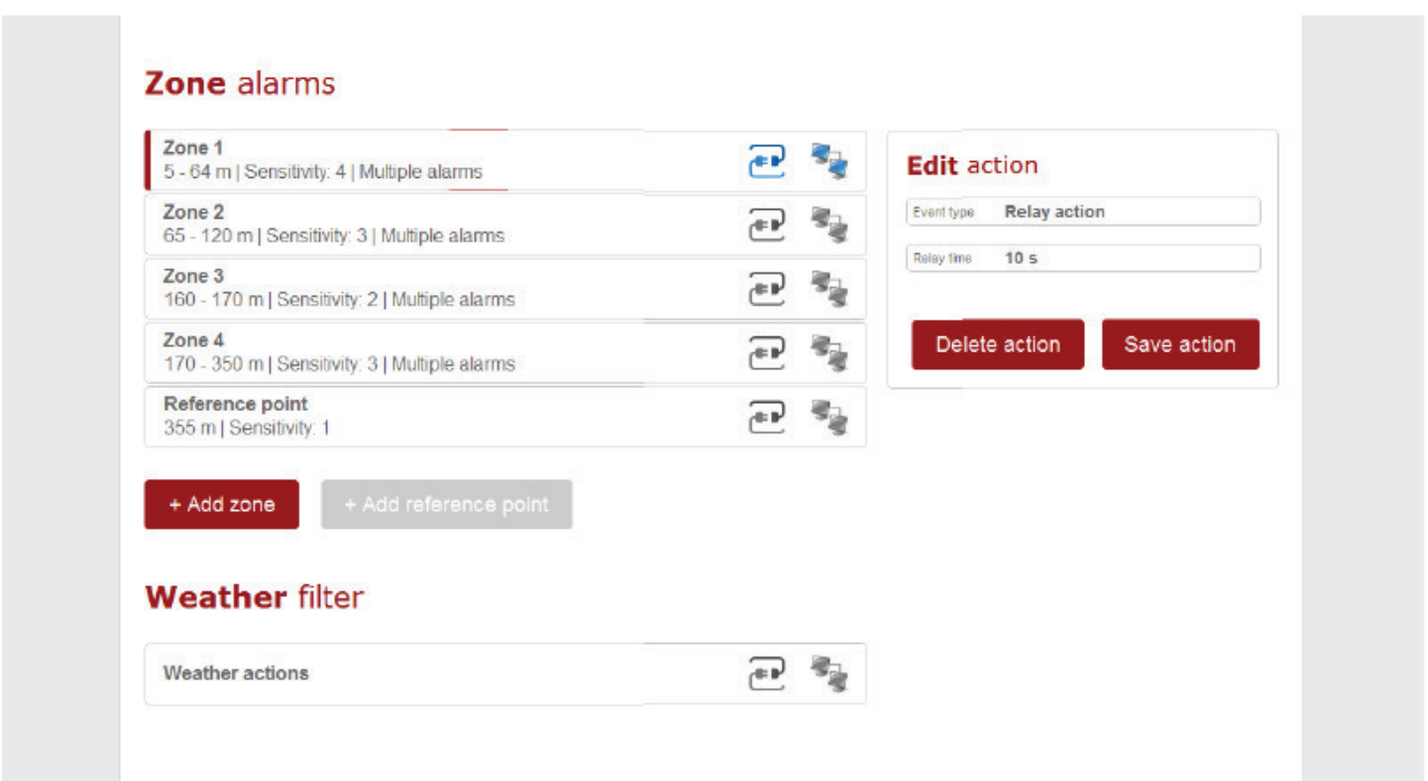
6. Add actions for a zone by clicking on the network icon, for URL connection alarms, or connector icon, for relay action, for desired zone. The icon to colour when the action is used.

a. "Connect to URL"
- Select the right VMS system in the drop-down list. Choose "other" if your system is missing. Depending on VMS system the input parameters below might change.
- Alarm enable: URL to connect to at the start of an event. Distance data and up time can be attached by adding %d for distance and %u for unit up time in milliseconds.
- Alarm disable: URL to connect to at the end of an event.



b. "Relay action"

- Relay time: Sets the time the relay is switched on at the event.



7. Repeat step 6 for each zone and for the reference point.



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