



## Manage Rules

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### Configuring Rules and Actions

Asset Locator rule engine allows to keep track of your assets using location and environmental monitoring. The rules keep track of your assets using the location and the status of the associated tags. You can have different types of rules that check for conditions like asset movement, change in asset location, entering or exiting of asset into a specific building, floor, zone (logical area) or change in asset conditions like temperature or humidity or battery level (of associated tag). When the conditions are fulfilled, the rules trigger actions like sending SMS, Emails, HTTP notifications or even modification of asset attributes.

The Asset Locator rules can be configured and modified at any time. Asset Locator rules are meant to save massively on manual operations and give the business more assurance concerning the precision of their asset record and outright docility conditions.

Below are a few examples of usecases using rules:

- **Temperature:** Send notifications when the temperature of a tag attached to an asset goes **Below/Above** a temperature or **Between/Out of Range** of temperatures
- **Battery:** Send notifications when the battery levels of a tag attached to an asset goes **Below/Above** a percentage level or **Between/Out of Range** of percentage levels.
- **Humidity:** Send notifications when the humidity of a tag attached to an asset goes **Below/Above** a percentage level or **Between/Out of Range** of percentage levels
- **Missing:** Send notifications when a tag attached to an asset is uncommunicative. Also send notifications when the asset/tag reappears.
- **Location Dwell:** Send notifications when a tag attached to an asset is within a configured location, which could be a Campus, Building, Floor, Zone, or chokepoint.
- **Location Entrance:** Send notifications when a tag attached to an asset enters **From** a certain location **To** a certain location, where location could be a Campus, Building, Floor, Zone, or chokepoint. Note that both locations must be different for this notification.
- **Location Exit:** Send notifications when a tag attached to an asset exits **From** a certain location **To** a certain location, where location could be a Campus, Building, Floor, Zone, or chokepoint. Note that both locations must be different for this notification.

- **Button Press:** Send notifications when an emergency button on a tag (attached to an asset) is pressed, assuming that tag transmits immediately.
- **Motion:** Send notifications when a tag attached to an asset experiences one or more motion types. Motion type is tag-vendor dependent.
- **Attribute Condition:** Update the value of an attribute and observe the attribute updates on the Locator Tab. You can label assets based on their status. The available attribute types are displayed in the image. You can add a new attribute from **Assets>Columns>Add New Field**.

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- Step 1** In the left navigation pane, click **Configure>Rules>Add**.
- Step 2** Enter a **Name** for the rule. This will be used in the content of notifications sent via SMS, E-mail, API, or system alert.
- Step 3** Choose a **Priority**.
- Step 4** Enter a description for the rule.
- Step 5** Click the **Enabled** button to activate or deactivate the rule.
- Step 6** (Optional) Click the **Advanced** button to enable the **ASSET FILTER** pane, which allows you to restrict the scope of the rule to a particular category, department, or asset. If disabled, the rule is applicable to all categories, department or assets.
- a) In the **ASSET FILTER** pane, choose a **Category** or **Department** or specific asset(s) on which the rule is to be applied.
- Step 7** Select the condition under which the rule is to be applied on:
- **Temperature:** You are notified when the temperature of a tag attached to an asset goes **Below/Above** a temperature or **Between/Out of Range** of temperatures. Supported units include Celsius and Fahrenheit.
  - **Humidity:** You are notified when the humidity of a tag attached to an asset goes **Below/Above** a percentage level or **Between/Out of Range** of percentage levels.
  - **Battery:** You are notified when the battery levels of a tag attached to an asset goes **Below/Above** a percentage level or **Between/Out of Range** of percentage levels.
  - **Attribute:** You are notified based on the value of an attribute.
- Note** Attributes support the date time format.
- **Missing:** You are notified when a tag attached to an asset is uncommunicative for over five minutes. You are also notified when the asset reappears.
- Note**
- Missing alert is generated when a tag is not heard for over five minutes. If the tag stays missing, you will receive another alert as per the configured **Repeat Notification Every** interval of the Action.
  - A reappearance alert is generated when the tag is heard from again.
- **Location:** You are notified according to location of an asset.

- Note**
- Use Location entrance to track an asset which moves between two different locations only. Alert is not triggered if an asset returns to a location after exiting the same location. Refer to the example below:
    - a. Location Entrance condition is **From** Building B **To** Building A.
    - b. Asset enters Building A.
    - c. Asset leaves Building A for a time, say 30 minutes or eight hours.
    - d. Asset returns to Building A. Alert is not triggered as Asset did not enter from Building B.
  - **Repeat notification delay** value of an Action is ignored for Location **Exit** and **Entrance** conditions.
  - For all other Location conditions, **Repeat notification delay** is pertinent. If an asset leaves a zone, re-enters a zone, and leaves the zone again before the **Repeat notification delay** time is up, you receive only an initial alert indicating that the asset is missing. The next alert is generated only after the **Repeat notification delay** interval is up. The example below illustrates the same:
    - a. **Repeat notification delay** is configured for one hour.
    - b. Asset leaves premises at 9:00 AM. An alert is generated.
    - c. Asset returns to premises at 9:15 AM. No alert is generated.
    - d. Asset leaves premises at 9:30 AM. No alert is generated until the hour is up.

If the **Trigger on Chokepoints** is enabled, alert is generated only when assets enter the range of a chokepoint.

- **Motion:** You are notified when a tag attached to an asset experiences one or more motion types. Motion type is tag-vendor dependent. For Centrak tags, valid types are **Stationary** and **Movement**.
- **Button Press:** You are notified as soon as an emergency button on a tag attached to an asset is pressed, and the tag beacons immediately. Button type is tag-vendor dependent. Users can label buttons as needed. Below is a list of third party tags and their respective mapping on the Asset Locator dashboard.
  - **Aeroscout**
    - **Button Press:** You are notified as soon as the button on a Aeroscout tag attached to an asset is pressed.
    - **Tampering:** You are notified as soon as an Aeroscout tag attached to an asset is tampered with.
  - **Centrak**
    - **Button 1:** You are notified as soon as the green button on a Centrak tag attached to an asset is pressed.
    - **Button 2:** You are notified as soon as the yellow button on a Centrak tag attached to an asset is pressed.
    - **Button 3:** You are notified as soon as the red button on a Centrak tag attached to an asset is pressed.

**Step 8** Configure a delay for the actions to be performed when a rule condition occurs.

The delay can be of two types:

- **Trigger After Time:** Trigger an action only after a configured time delay. **IMMEDIATELY** triggers action at the next tag transmission. This field is dependent on the tag transmission period.

- **Trigger After Count:** Trigger an action only after a configured number of assets satisfy the condition.

**Step 9** Configure an action to be triggered after a condition is met. An action can be of four types:

- Email: Send emails at a configured frequency.
  - **Subject:** Enter a heading for your Email.
  - **Message:** Enter a message body for your Email.
  - **User's Email:** Choose addresses already configured on the Asset Locator dashboard.
  - **Other email addresses:** Enter addresses not configured on the Asset Locator dashboard.
  - **Repeat notification delay:** Configure frequency at which alerts must be sent to the Email addresses.
  - **Location-based Alerting:** Enter phone numbers not configured on the Asset Locator dashboard.
- SMS: Send SMS at a configured frequency.
  - **Message:** Enter a message body for your SMSs.
  - **Repeat notification delay:** Configure the frequency at which SMSs must be sent to the phone numbers.
  - **Users:** Note that only users with validated phone numbers appear here. To validate the phone number of a user, login as the user and click **User Settings** from the gear drop-down in the top-right corner. In the page that opens, click on **Phone Validation** and complete the steps provided.
  - **Location-based Alerting:** You can enter phone numbers not configured on the Asset Locator dashboard. This allows individual users to receive location-based alerts.  
  
However, individual users must opt in their phone numbers for receiving alerts by logging into their accounts on the Asset Locator dashboard. Follow the instructions from [Opting Your Device for Location-Based Notifications, on page 5](#).  
  
Administrators must also enable user tracking on the Asset Locator dashboard by updating the user data with the device MAC address. Follow the instructions from [Opting Your Device for Location-Based Notifications, on page 5](#).
- HTTP: Send messages to configured URLs at a configured frequency.
  - **URL:** Configure the URL of your server.
  - **Message:** Enter content for the body of the alert.
  - **Repeat notification delay:** Configure the frequency at which alerts are sent to the server.
  - **Disable Alerts:** Disables creation of alerts for a particular rule. This option can be used when notifications are forwarded to third party services for consumption.
- Asset Attribute: Update an attribute with a value.
  - **Asset Attribute:** Choose asset states, static fields, and custom fields configured for an asset on the Asset Locator dashboard.

- Note**
- Rules configured only with **Attribute update** action will not trigger alerts in the **Alerts** view.
  - All other alerts (action: SMS, Email, HTTP) will trigger alerts in the **Alerts** view in addition to performing configured actions.
  - You can assign **Open/In Progress/Done/Closed** status to an alert based on the progress of the alert.
  - Closing an alert without any action on an alert does not mean that an alert is gone from the system. You can view the alert in the **Closed** widget.

- Note**
- If tag transmission rate is once an hour, you should configure the **Repeat notification value** of an **Action** to be an hour or more.
  - **Trigger After** and **Repeat notification value** is dependent on Tag transmission rates.

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## Opting Your Device for Location-Based Notifications

This task is a prerequisite to enable location-based notifications to an individual user's email address or phone number. This task is necessary for the proper functioning of a rule configured with Location-based alerting.

- Step 1** (Administrator Task) From the **User Management > App Users** tab, you, as an Administrator, can click the respective  icon for a user. In the **User** dialog box that opens, enter a name and the MAC address of the user's mobile device or any device tag used to track the user.
- Step 2** (User Task) From the Asset Locator dashboard, you, as an Asset Locator user, must click **User Settings** from the gear drop-down in the top right corner. In the page that opens, click on **Phone Validation** button.
- Step 3** In the **Phone Validation** popup that is displayed, and follow the instructions displayed.
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