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Internet of Things (IoT)

Using Rules and Actions with IBM Watso Platform Cloud Analytics

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Overview

Skill Level: Beginner

With IBM Watson IoT Platform you can set up rules and actions that trigger from your IoT device recipe uses a simulated device to set cloud analytics rules and actions for three metrics: tempera object temperature.

Ingredients

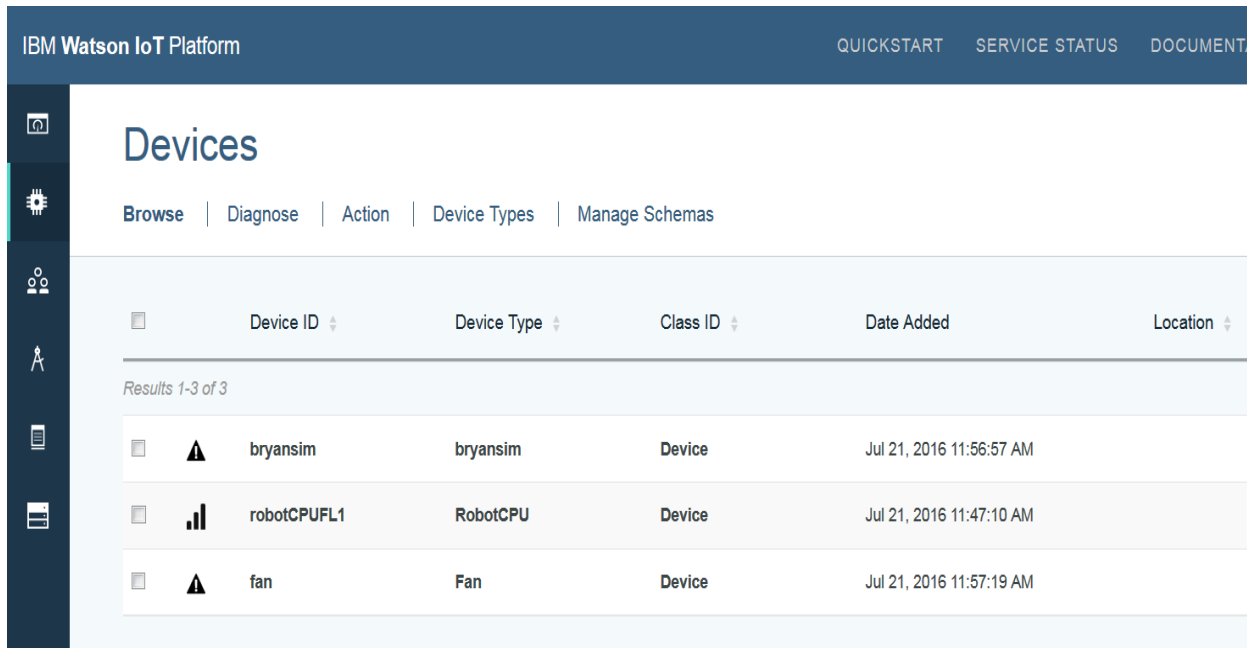To follow this recipe you will require:

- An instance of Watson IoT Platform running in Bluemix.

Step-by-step

1   Registering the iotsensor with Watson IoT Platform

Before you can receive events and datapoints from the sensor, your must register it with Wa
following these steps. This step is only required the first time that your follow this recipe.

1. In your Watson IoT Platform dashboard, select **Devices** from the menu pane, then click
   right.

		Device ID ⇕	Device Type ⇕	Class ID ⇕	Date Added	Location ⇕
					Results 1-3 of 3	
☐	⚠	bryansim	bryansim	Device	Jul 21, 2016 11:56:57 AM	
☐	.ıl	robotCPUFL1	RobotCPU	Device	Jul 21, 2016 11:47:10 AM	
☐	⚠	fan	Fan	Device	Jul 21, 2016 11:57:19 AM	

2. Click **Create device type**. Creating a device type will make it easier to find and identify
   after connecting it.

3. Enter **iotsensor_device** as the device type name then click **Next** and then click **Create**.

4. Click **Next**.

5. Enter **iotsensor** as the device ID.

6. Click **Next**.

7. Provide an authentication token, or accept an automatically generated token. Providing authentication token may be useful for recalling it later, for example "MyDevice".

8. Verify that the summary information shown is correct and then click **Add**.

9. In the device information page, copy and save the following device information

   - Organization ID

   - Device Type

   - Device ID

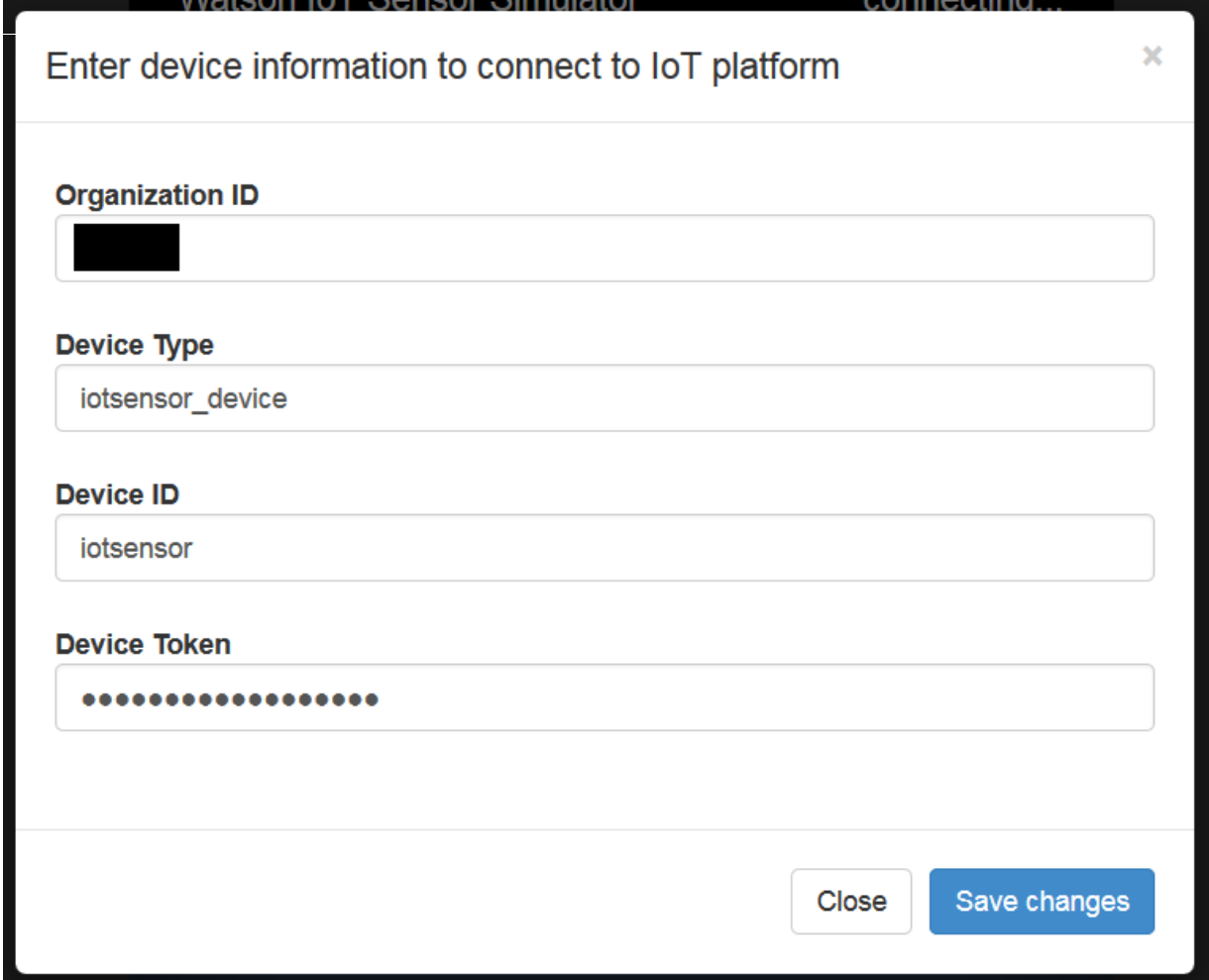   - Authentication method

   - Authentication token

2   # Connect the iotsensor to the Watson IoT Platform

This step connects the iotsensor to the registered device in your Watson IoT Platform orgar

1. Go to: http://watson-iot-sensor-simulator.mybluemix.net/

2. When prompted, enter the device information to connect to Watson IoT Platform.

Enter device information to connect to IoT platform   ✕

Organization ID

▇▇▇▇

Device Type

iotsensor_device

Device ID

iotsensor

Device Token

•••••••••••••••••••

Close   Save changes

3. Verify that the connecting message changes to the name of your device, i.e. iotsensor. T
connected to Watson IoT Platform.

4. In the Device browse dashboard, click your device and verify that data is being received


3   Optional step: Create a board and some cards

At this point, you can create a board and some cards from your Watson IoT Platform dashb
can be used to keep track of device data, for example the temperature, humidity and objec
sent by the iotsensor. To set up a new board follow these steps.

1. In your Watson IoT Platform dashboard click **Create New Board** in the upper right.

2. Give the board a name and description.

3. Click **Next** then **Create**.

4. Click on the board you have just created.

5. Click **Add New Card** in the upper right.

6. Select the style of visualization, and select the iotsensor as the data source.
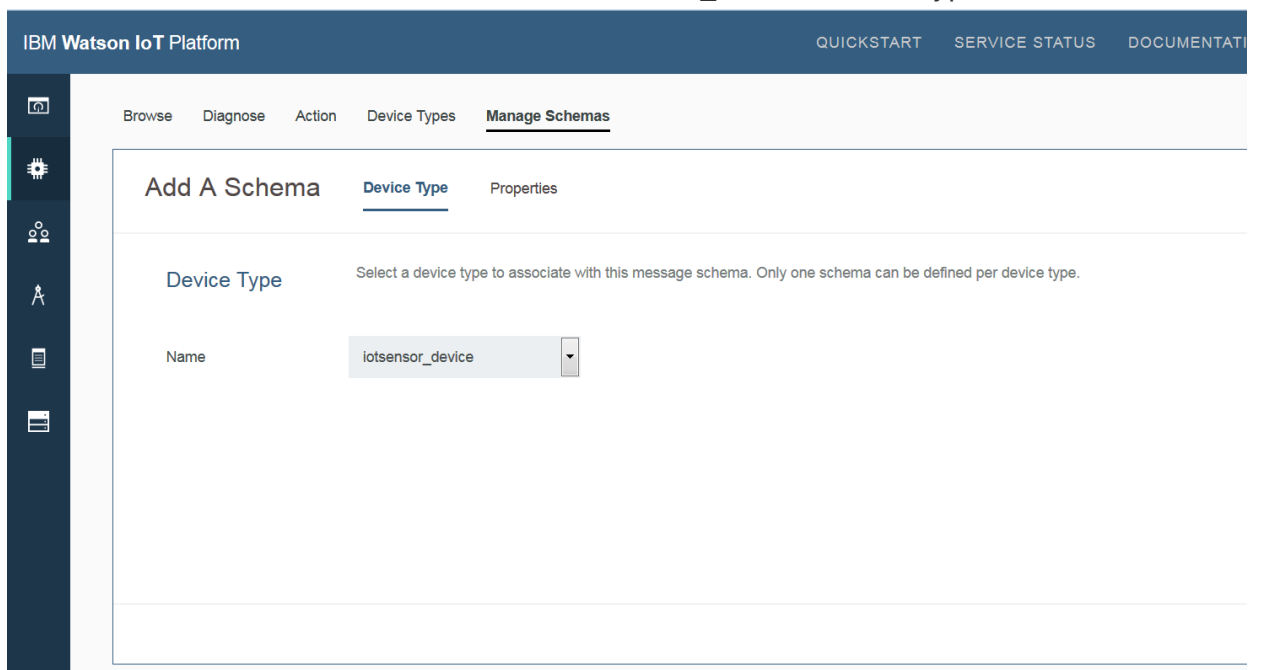
4   Create an iotsensor_device Schema

To be able to create rules that are triggered based on the datapoints from your device prop
these properties in a device type schema.

1. In the Watson IoT Platform dashboard, select **Devices** from the menu pane, then selec
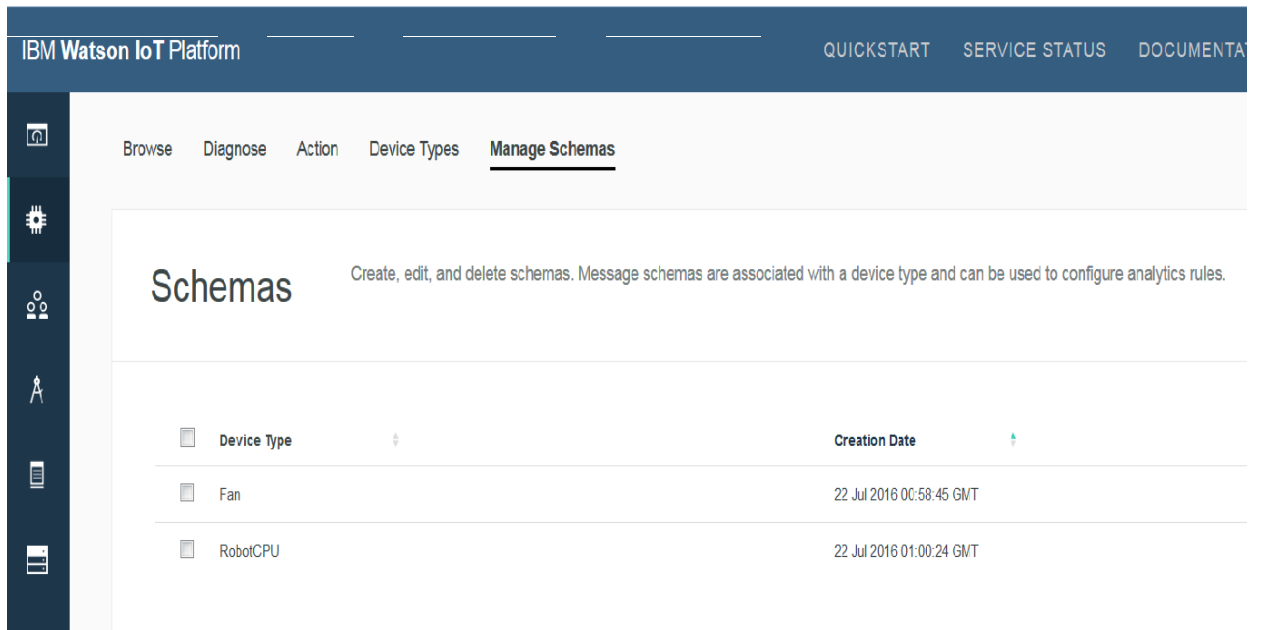
2. Click **Add Schema**.

3. In the **Add a schema** editor, select the **iotsensor_device** device type and click **Next**.

4. Click **Add property**.

5. Selected the **From Connected** tab.

Manual	Virtual Property	From Connected

Add multiple properties from connected devices

Select one or more properties to add to the schema. These properties can later be edited to set attributes as name and data unit.

Important: Each property must be unique for a schema.

☑	Property	⇕	Type	⇕
☑	d.name		string	
☑	d.temperature		float	
☑	d.humidity		float	
☑	d.objectTemp		float	

Cancel

6. Select the following properties:

- name
- temperature
- humidity
- objectTemp

7. Click **OK** to save the schema.

Create iotsensor rules and actions

This step creates the rules and actions which will trigger based on data from the iotsensor.

1. In the Watson IoT Platform dashboard select **Rules** from the menu pane then click **Crea**

2. Click **Create A Rule**.

3. Name the rule **Temp too high**.

4. Select the **iotsensor_device** device type and then click **Next**.

Add New Cloud Rule

* Name: Temp too high

Description: The temperature exceeds 21 C.

* Applies to: ⓘ   iotsensor_device

Cancel   Ne

5. In the rule builder, click **New Condition** rule block to edit it.

6. Select the temperature property and enter **21** as the static value to compare to.

Temp too high

The temperature exceeds 21 C.

IF: Add one or more conditions. ⏱ Trig

temperature   X

> 21

OR
⊕

Set The Condition

* Property: temperature x ▼

Operator: > | >= | < | <= | == | !=

Compare with: ⦿ Static value
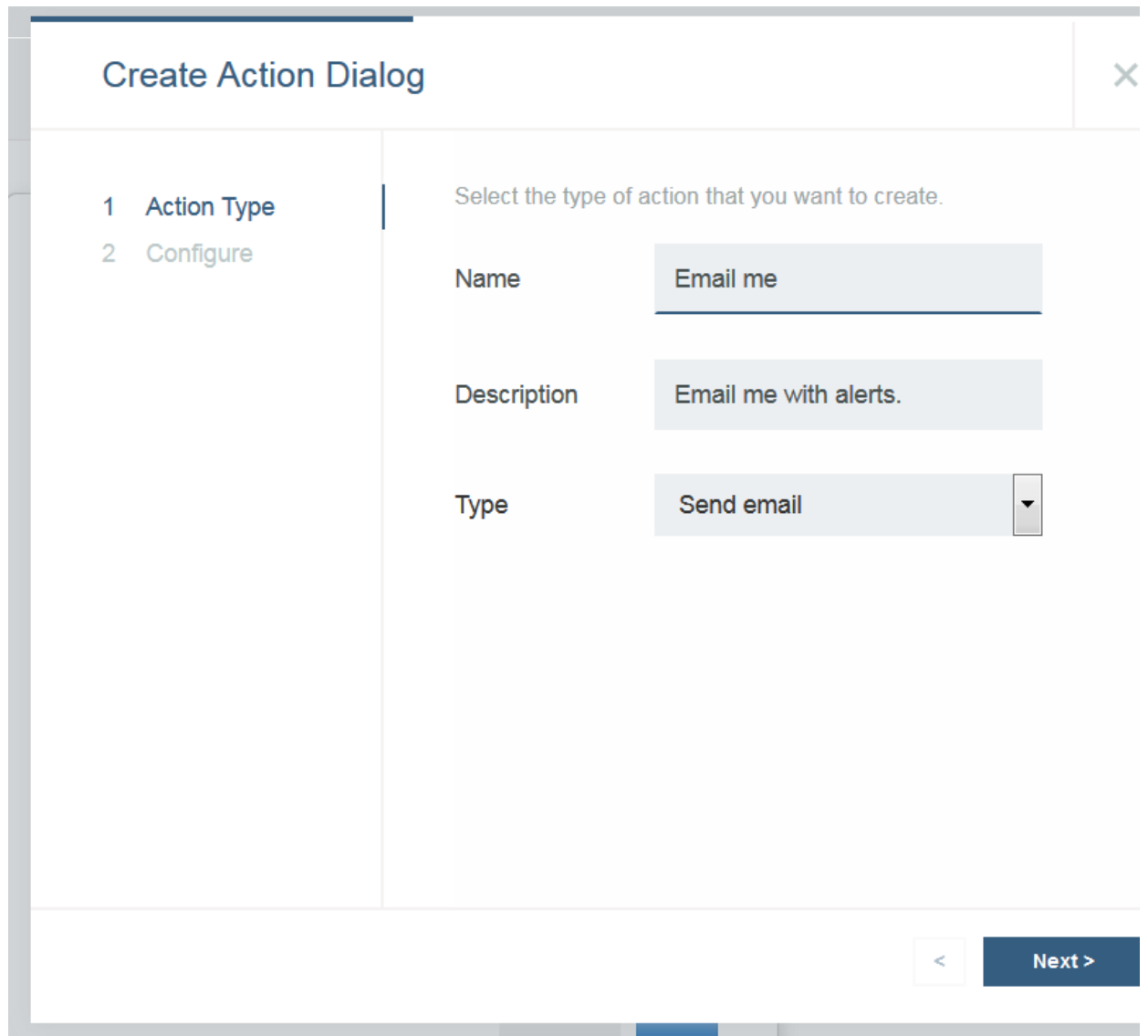   ◯ Property

* Value: 21

Cancel   OK

7. Click **OK** to save the condition.

8. Click the **New Action** block.

9. In the **Set The Action** dialog, click **Add action**.
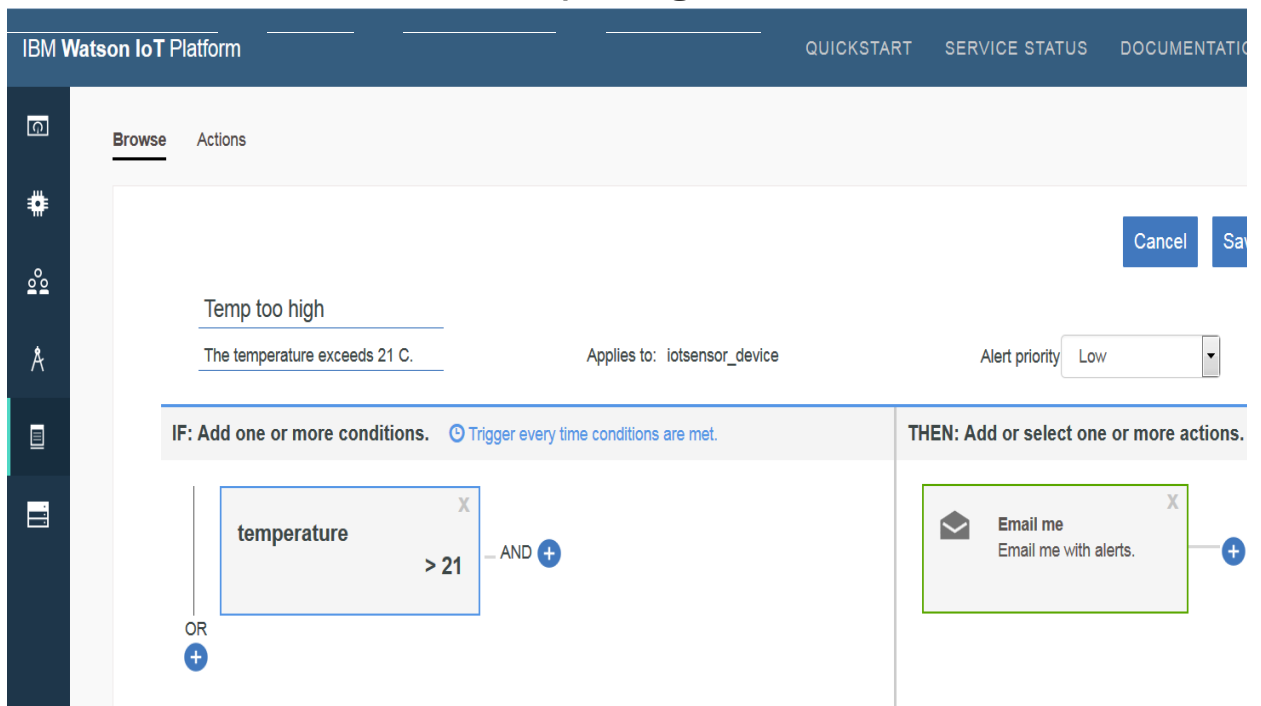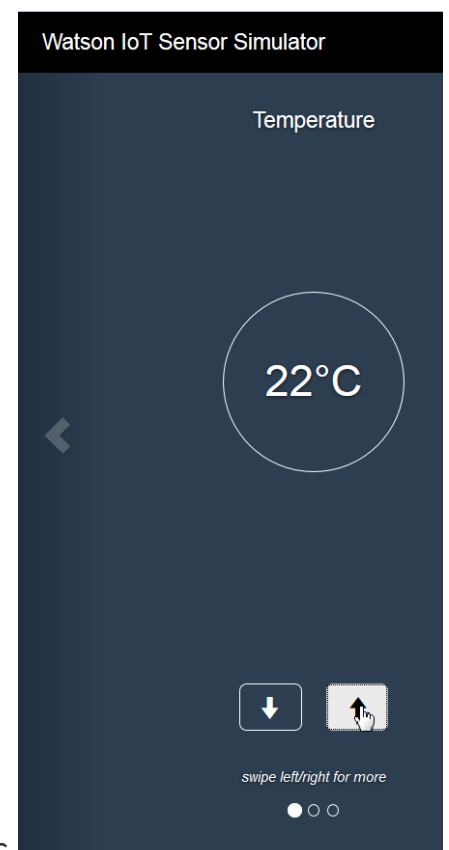

10. Add the email action and click **OK**.

6 Activate the rule and send some data to test the rule

1. In the **Rules** browser, activate the **Temp too high** rule.

2. Open the iotsensor at http://watson-iot-sensor-simulator.mybluemix.net/ Note: If you a
   you must reconnect by using the same credentials as in step 2.

3.

Use the up arrow to raise the temperature to 22 degrees.

View the dashboard alert and the email alert

Overview 1. In the Watson IoT Platform dashboard select **Boards** from the menu pane, the select th
   card to open it.

Ingredients

2. The rule is now included in the **Rules I Manage** card and alerts from this rule will appea
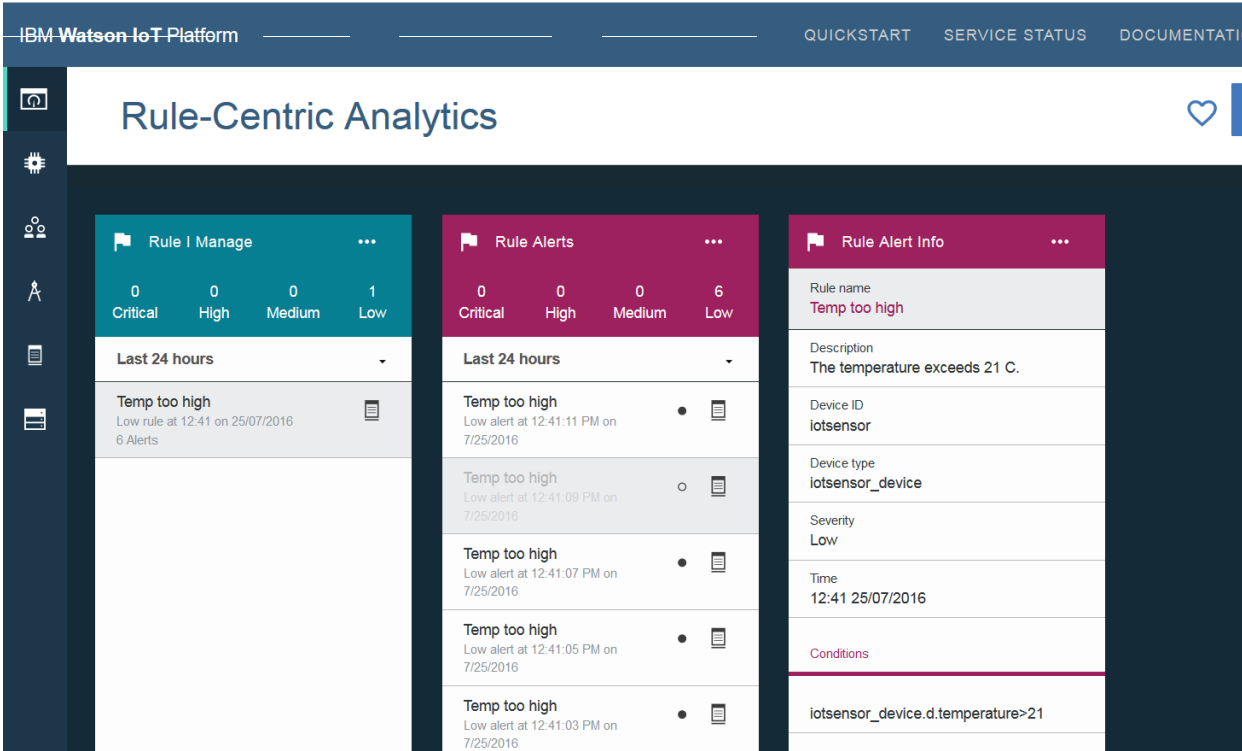
3. Select an alert instance to see the alert details, the triggering condition, the property da
rule was triggered, and the action that was taken.

4. Go to your email client to verify that the alert was sent as an email as expected.
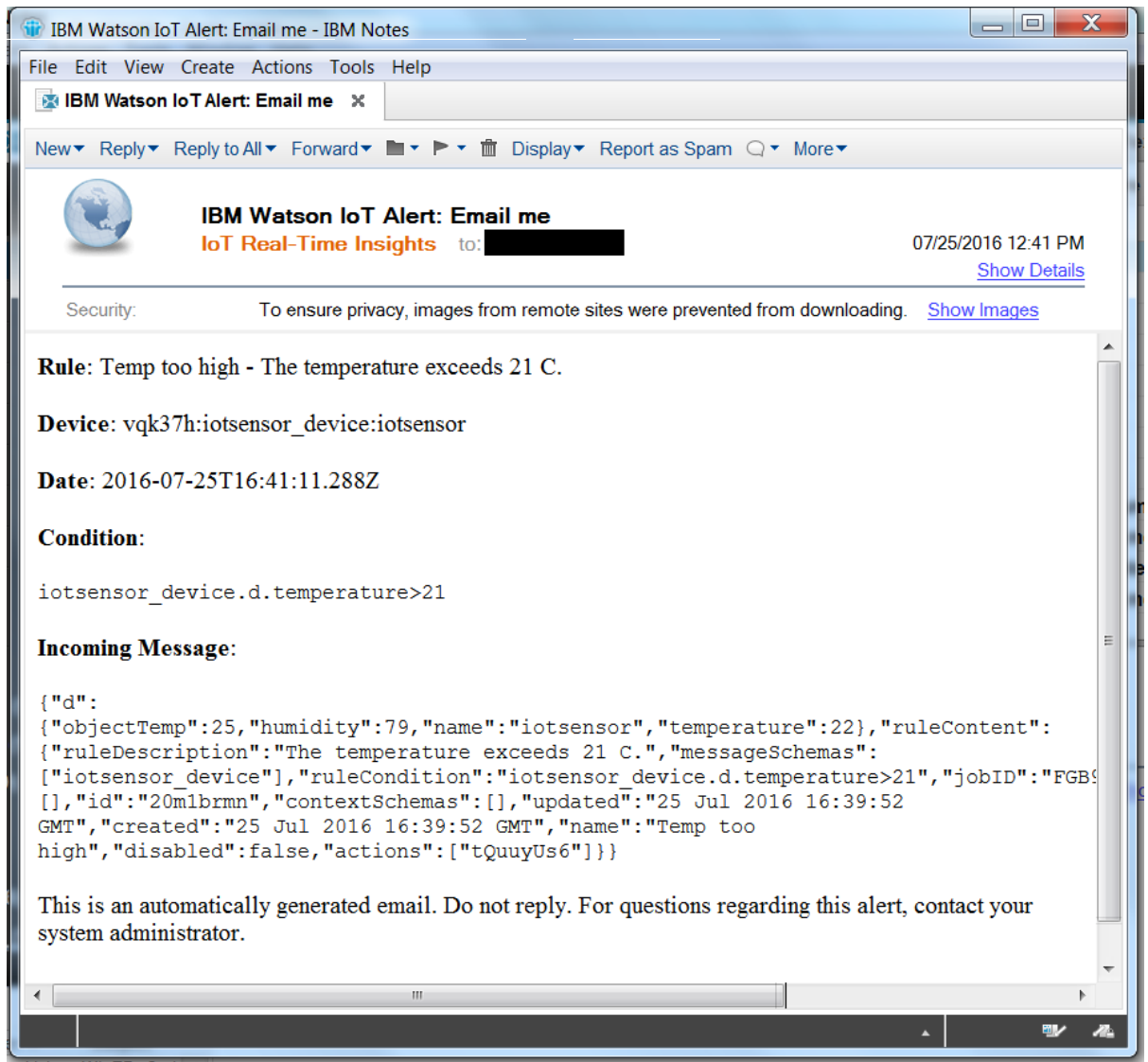
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by EdProsser

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