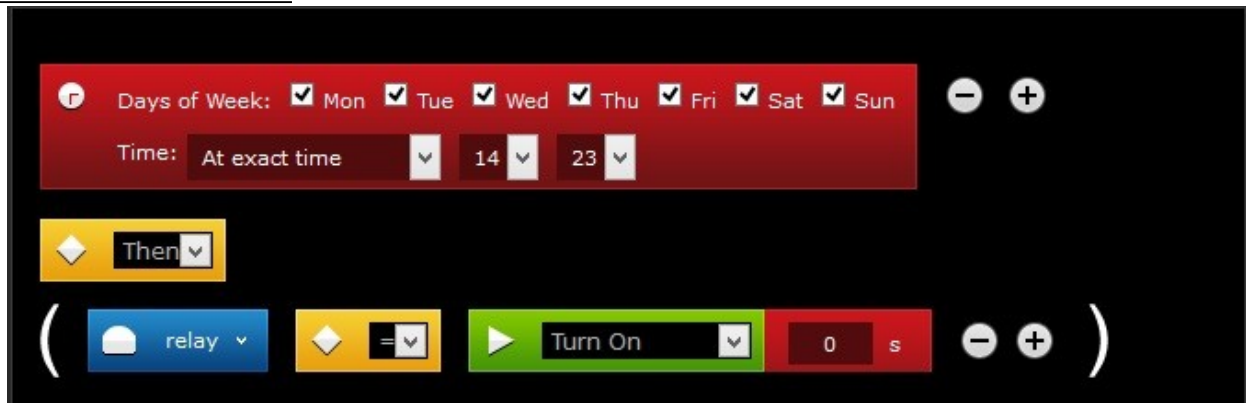


Max. running instances in Fibaro

An instance means a single event. In case of scenes in Fibaro system, it means a single event of Lua code. Each instance uses some memory, so it is important to evaluate the max. running instances appropriately. HC2 and HCL, like other computers, have limitation in terms of RAM and CPU.

In most cases, you just need one instance of the Lua code and the scene works properly.

1. Scenes based on time



In this type of scene, you must select „Start when Home Center 2 starts” (lua: %%autostart). You can find this option in „Genral” tab of each scene. It enables the controller to fall into „infinity loop” that checks conditions every one minute. Block scenes with some time specified as trigger starts one instance and it works properly with just 1 max. running instances set.

If a user starts the scene manually by clicking on ”run” (start scene without checking conditions) then the following message: „To many instances” pops up in Notification Center. Moreover, the scene would not run due to the fact that each click equals one instance. The scene would start from the button „run” on condition that more instances were selected in the first place.

Once the action is completed (considering the above example - Relay switch turned on), the instance is reset, which means it is no longer running.

2. Scenes with one triggering device



In the above example, the scene is triggered by relay – when turned ON. If the relay is ON, the scene turns ON the relay 2 and also starts counting 60 seconds. There is no need to increase the max. running instances, one instance is just enough.

What would happen if you increased the max. running instances to 2?

The second instance try to start the scene again, even though relay 2 is already turned ON by the first instance. 60 seconds after the first instance appeared, relay 2 will be Turned OFF. At the same

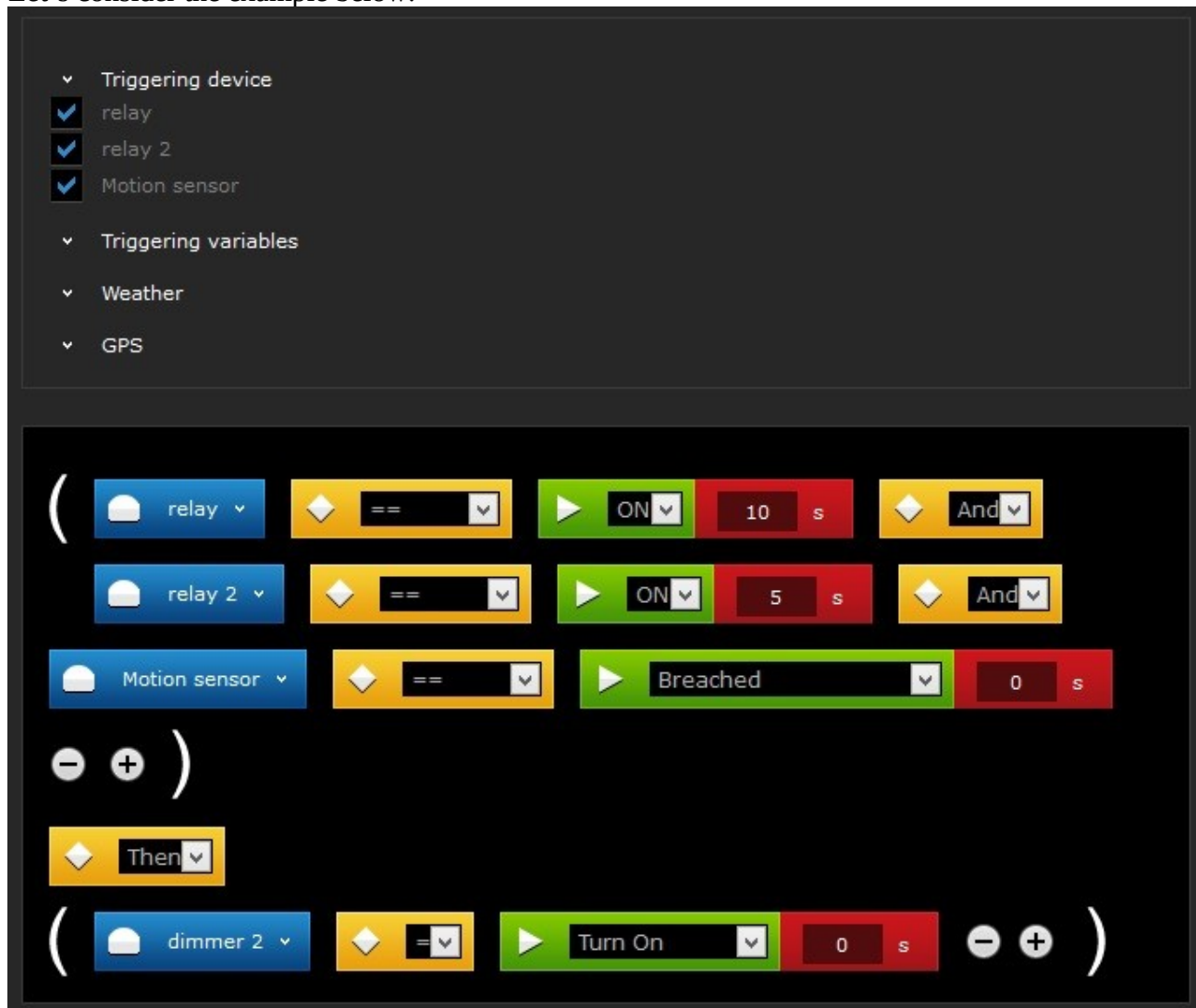
time, the second instance counts to 60 seconds to Turn OFF the relay 2. Once 60 seconds passed, the second instance sends „turn OFF” command to relay 2 – that has already been Turned OFF by the first instance.

To sum up, the second instance is useless and have no impact on the way that the scene is running. Moreover, this is a waste of memory and CPU capacity of the controller.

It is a similar case when you use Fibaro Motion sensor (FGMS) as a trigger. Changing status from breached to unbreached and the other way round, starts the scene and one instance.

3. When do we need more instances?

Let's consider the example below:



The scene is triggered by changing status of relay, relay2 and Motion sensor. The scene starts if all three conditions are met:

- relay ON
- relay 2 ON
- Motion sensor Breached

When status of relay is changed to ON, an instance starts counting to 10 seconds. Not all the conditions are met, therefore the action (dimmer 2 Turn ON) is not executed. If during the 10 seconds relay 2 changed status to ON, the second instance starts. It's counting to 10 and 5, yet the last condition (Motion sensor – breached) is not met – the scene does not start. But if the Motion

gets breached during this time, the third instance will start the scene, providing the previous two conditions have not been changed (still ON).

Please note that if you did not set any delay in the red blocks (0 instead of 10 and 5), just one instance is needed.

Let's consider one more example. A scene is triggered by Motion Sensor when unbreached for 60 seconds. Changing status to unbreached starts one instance that counts to 60 seconds. As default, Motion sensor may be breached every 8 seconds (this is determined by parameter 2), that means during 60 seconds it could be breached up to 7 times. In this case, it is advisable to change max. running instances. You can set 3 instances and test the scene. It is not recommended to increase the max. running instances, as it has a negative impact on the z-wave network, battery consumption, RAM and CPU usage.

It is very important to find the right balance between functionality of scenes and usage of the controller. Now, you have a tool to control it thanks to max. running instances.

All in all, the number of instances depends on the type of scene and expected functionalities. Vast majority of scenes need just one instance. The max. running instances can be determined in the general tab of each scene.