JowiHue User Guide

Getting started

Documentation state:plugin version 4.0.5.3

The JowiHue plugin for HS4 enables control of several brands of Zigbee devices with Homeseer version 4. The JowiHue plugin also enables control of the Hue Play HDMI Sync Box.

Nowadays there are many devices, switches, lights, sensor and thermostats controllable with the ZigBee protocol. This plugin enables control of all of these devices in one mix, delivering a user friendly local control. No cloud services are used by this plugin, so your privacy stays in your house.

To run this plugin you will need at least one gateway bridge device with that. The bridge can be a Philips Hue Bridge or a RaspBee/ConBee gateway with deCONZ on it. This plugin uses the REST API to communicate with them.
If you have a Philips Hue bridge, you can also add the Hue Play HDMI Sync Box to be controlled by this plugin.

The fun part is that you can can still control the same devices with other apps from other devices. But besides the fun while using the tablets or phones, you also might want a stable and reliable control, even without the need of holding a device to control the system. Entering a room should be enough to switch on lights. This is where this plugin comes in handy in combination with events and actions from HomeSeer.

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JowiHue

Current capabilities:

- Support for Windows and Linux
- Multiple bridge support with the ability of creating scenes crossing bridges.
- Supported bridge devices: Philips Hue Bridge, the ConBee and RaspBee gateways with deCONZ interface in any combination and number
- Support for Philips Hue HDMI Sync Box (will work only when combined with the Philips Hue Bridge) *in development *
- With the deCONZ gateways there is instant response for signals of switches and motion sensors.
- When using deCONZ 2.12.4 or higher deCONZ can serve as an alarmsystem, actively supported by the plugin.
- Supported Zigbee devices, this is an growing list. You can check the current state for deCONZ here (not complete)
- Support for creation of Presets. Presets are light recipes that can be applied to any color bulb by event or scene.
- Support for creation of Scenes, local scenes can combine any lights from different bridges. (Remote) Scenes present on the Hue bridge can also be used in the plugin.
- Snapshot functionality to copy current settings of a light for Presets and Scenes.
- Advanced Scene editor where you can choose to use presets on a group of lights, or create a new recipe.
- Animation of lights. Combine scenes to achieve nice combined effects, like creating an alert effect, or a combination of scenes to create a romantic mood during dinner with changing light effects.
- Advanced Animation editor
- Animations can last a specific amount of time or can be stretched until a set time (eg sunrise, sunset or time of your choice).
- Support for several types of sensors like Philips motion sensors, Ikea motion sensors, Hue Taps, Dimmer Switches, IKEA remotes and dimmers.
- Support for Bridge Grouping of lights.
- Full control of lights and groups through devices page.
- Optionally recover last known settings after switching (power off) off a bulb and switching it back on.
- Keep track of lifetime information per light and create a lifetime report on request.
- Event triggering based on status of groups of lights or individual lights.
- Event actions available for setting lights, groups, with presets, scenes or animations
- Color conversions possible from RGB or Hex colors and Kelvin for respective commands.
- Scripting engine for direct control of the lights

- Perform maintenance on the bridges for lights, groups and sensors.

For questions or issues regarding the JowiHue plugin go to the JowiHue forum
For additional hints or tips that are not in this help document check this thread on the JowiHue forum

Installation

In the HS4 webpage select the Plugins menu, All and choose to install the plugin by selecting it.
After installation activate the plugin by enabling it in the Plugins menu, Manage page.

Important note:
On a Windows machine running HomeSeer there will be a popup asking to allow the plugin access to the network. this is needed to enable UPNP scans for the plugin. Please allow the plugin for this access. otherwise it will not find any bridges.

Once started you will see a line in the log that the plugin is not yet registered to any bridge initially. Also, once it finds any bridge on the local network, it will tell you how many bridges it sees in the network. This might take a minute, so please give it some time to discover all bridges.
Once a bridge is found you will see this as a line in the log of HS4. Refresh the HomeSeer page once. You will then find the JowiHue entry in the plugins menu. You can now choose the "Add new bridge" page and proceed from there to “Registering a bridge or Gateway”

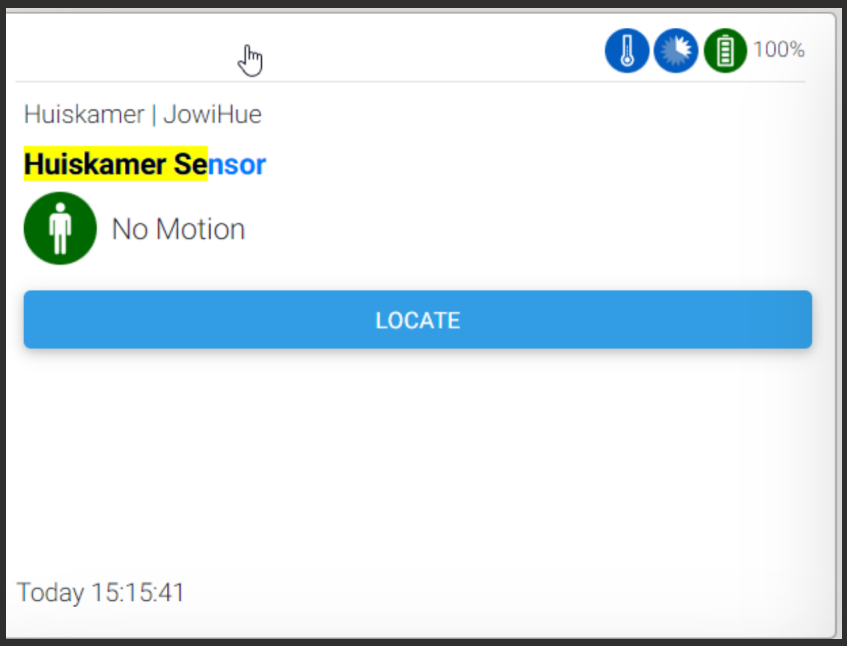
Upgrading from HS3

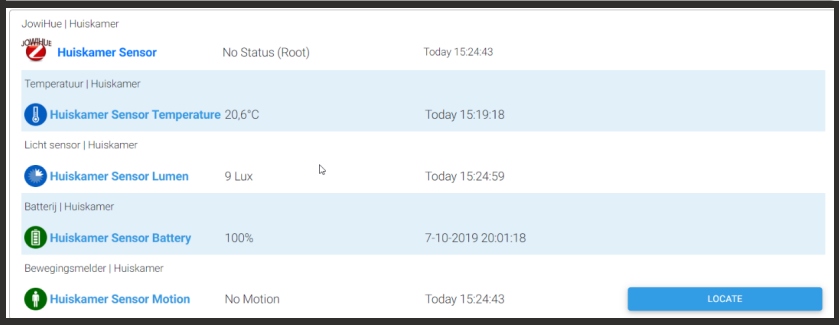
Converting devices from the HS3 JowiHue to HS4 JowiHue is a one way conversion. The only way to have the old plugin run on the system again is returning to a backup.
Make sure to have a backup! The conversion of devices is a one time, one way step. Once the conversion has started, be sure to let the plugin finish the conversion otherwise you might experience issues that only can be resolved by restoring the backup and redoing it. If you have to interrupt the first run, please restore a backup.
Below a global description what is going to happen during the conversion of HS3 JowiHue devices:

Conversion of devices

If you have an existing installation of the HS3 version of JowiHue, the available devices will have to be converted to the new structure HS4 is using. In HS3 devices were handled as Standalone devices or as Parent/Child devices. HS4 does no longer work with Standalone devices other then handling it as a legacy device. The Parent/Child devices are now handled as Device(s) with Features.

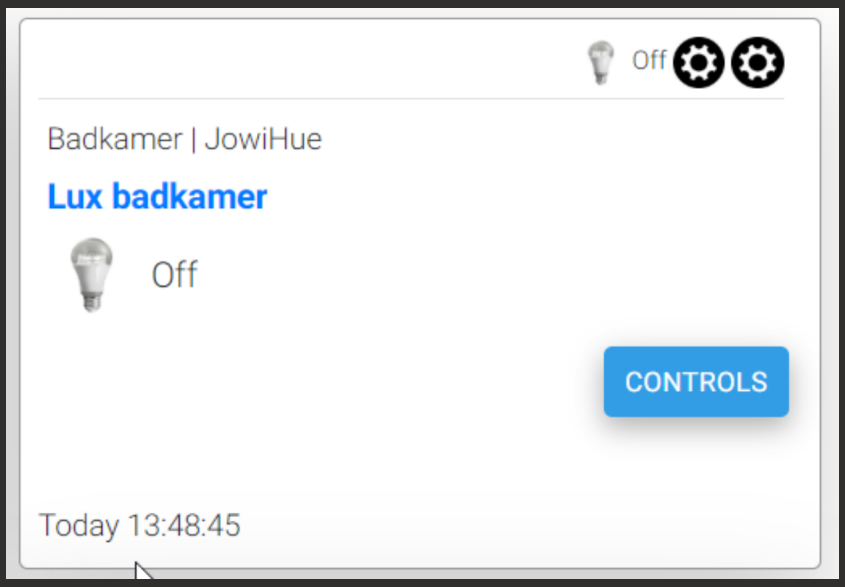
As an example: A physical Multi-sensor device will now be added as a single device with several features (like temperature, motion and lumen capabilities) Views will show the device as one (tile), with the extra features shown as small icons or - when in tile view - with the features and their values below the device.



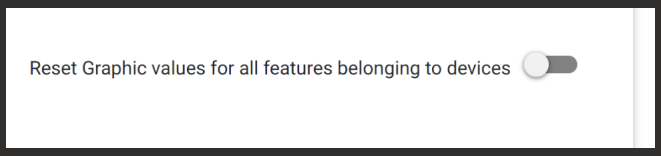


The conversion for devices that are standalone will add a feature and use the old device as device, doubling the buttons.
Important! events controlling the previous standalone devices will have to be updated, so the event will address the feature device. The plugin will warn when events are triggered on the (now parent) device instead of the feature. Once the event is changed to address the feature of the device, the warning will dissapear.

Using the tile view has a challenge for devices that hold many buttons.HS4 will try to show the controls, but when there are too many, HS4 will combine those controls to one button called "Controls" . The JowiHue uses many buttons on on/off devices for Lights. The buttons were added for dimming sliders, dim up/down, on/off and Alert/Blink.



During the conversion the plugin will create a new feature “Extra” and place some of the buttons of the orginal parent on this device. Once you have changed all events addressing the device instead of the features, go to the properties of the device/JowiHue tab and enable the reset Graphics values and press the save button. This wil remove all buttons on the device level.



Naming of devices

Naming of devices and features has changed a lot. During conversion the plugin does not rename devices yet. But later on, once conversion is done and you decide to rename a device, the plugin will rename the features according to their 'feature' function. It is really like the HS3 version does already for color lights, it creates a set of childs (features) with (Hue), (Sat) etc naming behing the light's name. This method now also used for sensors and switches.

Check the paragraph about renaming devices for more details on this subject

Known issues at this point

Not really an issue, but a limitation: The new tile view of HS4's device page has a limitation on the number of buttons and sliders. If a device has more buttons the tile view will only show one button "Control", which will popup a window showing all controls of the device. This is the case for On/Off devices for lights or groups.
During conversion of the devices a new device will be created with the name of the light or group with "(Extra)" added to it. This device holds several of the buttons of the On/Off device. But the conversion will not remove the same buttons from the on/off buttons as there might be device actions that control these buttons. This will give you time to update those events (using the new HS4 search functions will easy your job finding these)

Once all events are updated, enable the setting "clean On/OFF buttons" that will be visible in the settings page in the near future. this will clean the on/off devices and hide the settings for the future.

Useful links

For the latest information in releases and development regarding deCONZ and the REST API check the github site
On the github site you can find lots information on requested devices, or even supported devices that have not been documented (by entering model number of the device you are checking). Also you will find the latest release information here.

For Windows systems, you should get the latest downloads here, but be aware that you first check what the latest stable version is, as the downloads do not really make a difference between the stable and beta versions here!

For requesting support for issues or new devices you have you should go to the forum. Here you can check for issues on deCONZ/Phoscon and the REST API.

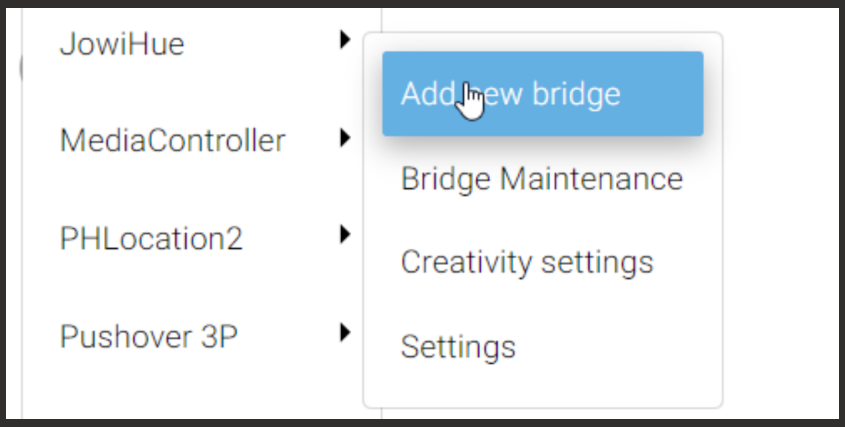
For installation instructions for the Conbee, the Raspbee or SD-Card images for a Raspbee, go to the conbee2site. You will find here also a list of compatible devices (incomplete, but that should change soon)

Connecting Bridges

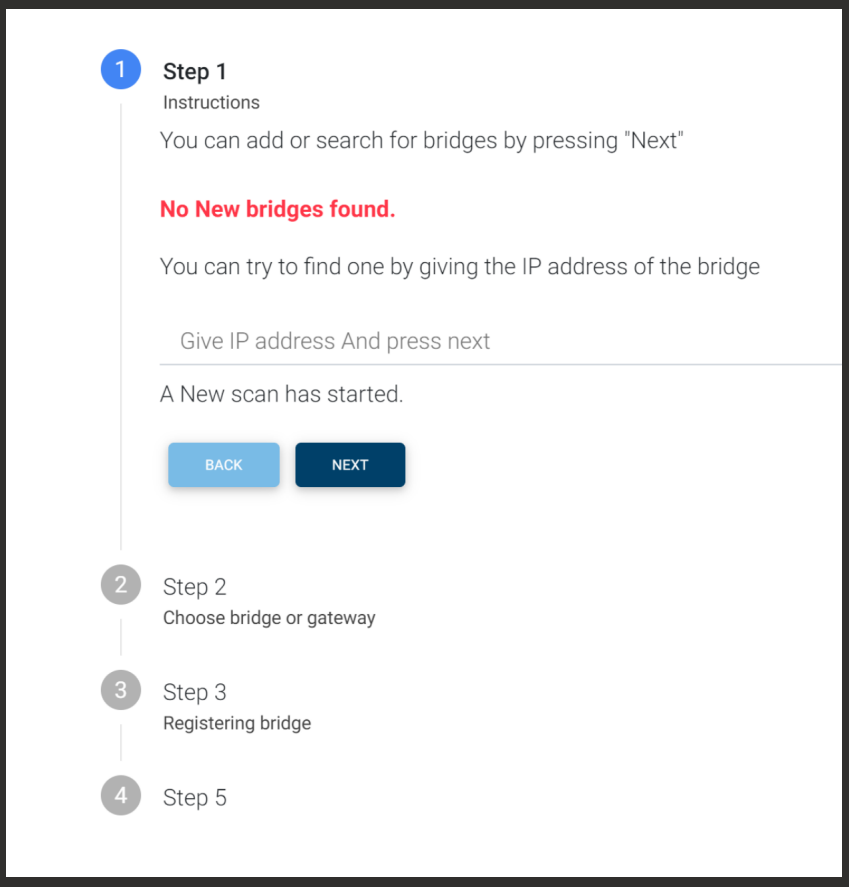
The JowiHue plugin can maintain multiple bridges, so if you are planning to use ;more then 50 lights and sensors (officially 63) on a Philips Hue bridge, or more then 200 on a RaspBee/ConBee gateway, this plugin will help you out with controlling them all from one point of view. All bridges on a local network can be found and used with this plugin.

Registration process

The plugin will scan the local network for available bridges by itself on a regular basis. Once it finds one or more bridges, it will report this in the HomeSeer log as "found new bridge [name of bridge] at [IP address]" and will enable you to register the bridge when you choose the "add bridge" option in the plugin's menu

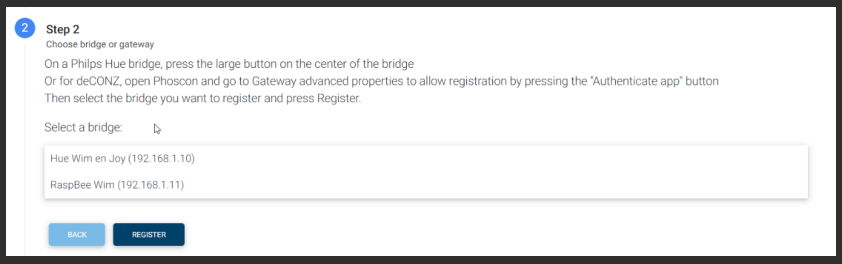


On the add new bridge page you will see a step by step guide on how to register a new bridge or gateway/
In the first step the plugin will show you how many bridges/gateways it has found. If no bridges are found, pressing the Next button will start a immdiate new search of bridges. This can take up to 30 seconds to show result. You will have to refresh the page after 30 seconds to see if new bridges are found. As an alternative, you can also fill in the IP address of the bridge directly. The plugin will then check the validity of the IP address and proceed.



In the next step a list of found bridges are shown. You have to select at least one bridge (even if there is only one) and press the register button.

- On a Philips Hue bridge press the register button and immediately press the central button on the Philips Hue bridge once.
- With the RaspBee/Conbee gateways, you'll have to go to Phoscon (normally you will find the botton for Phoscon on the top right of the deCONZ interface), login and proceed to settings\gateway. Press the advanced button and choose “authenticate app”. Press the register button on the JowiHue configuration page and then the authenticate app button.



Once registration is done - or timeout has occurred - the results will be shown on the page.

After registration

After a successful registration, the plugin will read the configuration of the bridge and create devices for lights and groups accordingly.
The bridge feature will show the state of the bridge, Available or Unreachable. A button is made available to cancel all running animations (bridge independant). If you want to cancel a specific animation, you can use events or scripting. Changing the bridges name can be done through the properties of the device, on the settings tab. .
Once registration is finished, extra info can be found on the menu entry "Bridge maintenance"

Finding additional or new bridges

The plugin will do a regular scan of the network to detect if new bridges are to be found. Normally it should find the new bridge somewhere within a maximum of 30 minutes after you connect the bridge. If you want to force the scan, go to the "add new bridge" page and press the Next button

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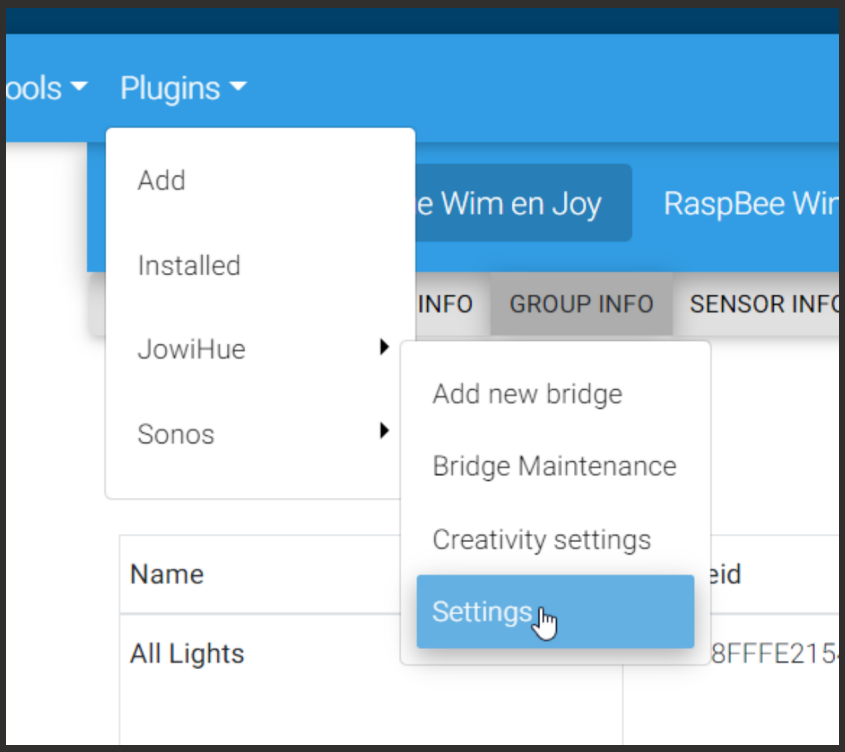
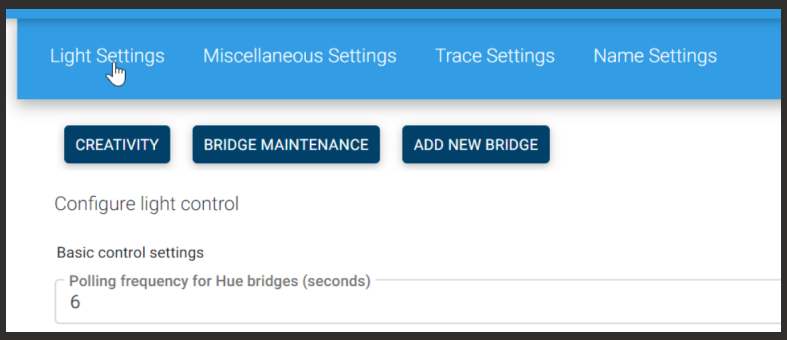
Settings

The main configuration of the plugin is done by going the the "Settings" page of the plugin:



The settings page holds 4 tabs, Light Settings, Miscellanious Settings, Trace Settings and Name settings.



Below the tabs there are buttons that will bring you directly to one of the other pages for the plugin, like the creativity page.

Light Settings

Polling frequency
With this parameter you can set the frequency of polling the bulbs for changes for Philips Hue bridges. The value given here is in seconds. Be aware not to set this value too low as it can cause the bridge to respond slow to requests. . In my current situation 4.0 seconds works very well even with other apps doing their thing with the lamps in high speed, but this all will depend on the number of bulbs you have as well as the speed of your local network.
Note: This setting is ignored for a deCONZ gateway once the webhook is set. In this case you will see a remark in the log like ““Refresh bridge xxxxxxx set to 45 seconds after establishing direct connection”” From here on the polling frequency for the deCONZ gateway is ignored.

Standard transition time

With this value you can set a standard transition time when dimming command or on command is given. This will enable a gradual change for the lights. Transition time is shown in tenths of seconds. It is known that when you use a transition time and a light has been powered on - but the light itself was off - the transition will start from the last used color setting.

Colorloop Speed
This option is only shown if a deCONZ gateway is shown. You can set the speed value here used for prssing the Colorloop button on the light devices.
Accepted values are 1 to 255, where 1 is very. .very fast, and 255 would then be very. .very slow.

Standard dimming value change
This is the value change used when the down or Up buttons on the bright devices for lights or groups are pressed. Depending on the button used this value is used as positive or negative value.

Standard hue value change
This is the value change used when the Hue down or Hue up buttons on the Hue devices for lights or groups are pressed. Depending on the button used this value is used as positive or negative value.
Note: If the value of the hue device is raising higher then the maximum hue level (65535), or dropping below 0, the plugin will correct this and cycle through the hue range without issues.

Standard saturation value change
This is the value change used when the down or up buttons on the saturation devices for lights or groups are pressed. Depending on the button used this value is used as positive or negative value.

Use transition for switching lights off
Standard the plugin will not use transition times when an off command is send to lights. This is because a lot of lightbulbs are set to the last known light brightness when a on command is send. When the bulb was set off with a transition time, the last known brightness is at '1'. So the light then comes on at a very low level, which is often not wanted. If you enable this option it is advised to use the JowiHue actions or the device's dim level to directly set the wanted brighness instead of just setting the device to "On".

Show Kelvin temprature for color temperature
If you want, you can display the kelvin colour temperature on the CT devices of the plugin, this could feel more familiar then the Mired values used by the bridges.

Skip changing dim value when using color voice commands
Enabling this option will prevent voice command of changing bright levels. this can cause the resulting color on the light to differ. . .

Only use group devices for Luminaries (Philips Beyond/Phoenix, etc. on Philips Hue Bridges)
Luminaries often hold multiple LED's in a group like the bottom part of this light or the top of this lights. One could control every single light, but it is a lot more controllable when combined in the Luminary groups that are created. This option will hide the separate lights.

Miscellaneous options

Default Location and default Location2

You can set the default location values here for new devices being created here.

Temperature decimals
You can choose to show 0 to 2 decimals on temperature devices. This setting is used for all temperature devices

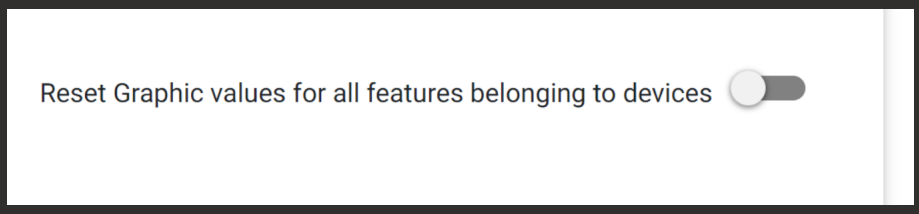
Hide Phoscon groups for sensors
When sensors are added to deCONZ and Phoscon recognises the sensor a new empty lightgroup is added. This group is empty and is not really needed to let the JowiHue plugin function on sensor signals. Phoscon uses these groups to act on the signal (e.g. Motion). For the plugin this are the events in HomeSeer. By enabling this option the plugin will no longer create the group devices in HS4

Show Lux values on lightlevel devices
Set this option to recalculate the Lux values from lightlevel devices.

Enable energy reporting to the HS Energy database when available
The deCONZ gateways can report energy usage on selected plugs. By enabling this option the energy reported will be send to the Energy database of HS4

If possibe values of a deCONZ device are not in sync with the HS device, automatically sync the HS device
The latest deCONZ version (V2.12.0 and higher) are delivering a new service for Remotes, Switches and Push buttons. You can automatically use the correct values in a new device when it becomes available for deCONZ. There is no update of the plugin's device database needed anymore. By default this option is disabled as some users do not like the descriptions to be changed automatically.

When this option is enabled, existing device status values will be adjusted automatically when the plugin starts. This is the setting I would advice.
When this option is disabled, the plugin will log lines during startup if it findes devices that do not hold the same status values as deCONZ is advising. You can then correct these values by going to the device's properties and choose to reset the graphic values for all features (do not forget t press the save button. . .). This will then put the correct values for the features selectivily for the features of the particular device.



Trace settings

On this page you can set how the plugin should do its logging. For normal operation all options should be off, to make sure performance is maximised while running.

Extended logging for running event actions
This option is very usefull when you want to check the events that trigger actions in the plugin. Every action, device action and plugin action is reported when executed.

Enable debugging
Enabling this option will send debug info to the HS4 log. This level gives you a bit more insight on the processes the plugin is running, which might help you in a basic analisys of issues you might see. Settig this option will send all debug information to the HS4 log. If also Logging to console and/or logging to file are enabled, the log will be replicated to these areas.

Enable detailed tracing
Enabling this option will send detailed information on processes to the console or plugins log file. Because of the amount send, this logging is not send to the HS4 log to save some performance. Enabling this option will automatically disable the debug option as this level of logging is included in this option. Use this option only when requested by the developer as this is taking a performance toll.

Send log to console
If enabled, the log will be send to the developers console in HS3 when enabled in the manage plugins page. A restart of the plugin might be needed to see the console after enabling it.

Send log to file
If enabled all logging will also be send to a log file. When using the deep trace option, this option should also be used, so the file can be send to the plugin owner to analyse if needed. The log created is placed in the \logs subdirectory from the HS3 installation directory. When the plugin is restarted the current log file is renamed to JowiHue-last.log to prevent the log to be lost with a restart

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Name settings

The plugin uses the device names to set the name on the bridges and gateways. The features on a device, like a motion sensor or a temperature sensor are named to the device with an extension as configured on this page. The configuration will only become active when a device is renamed. If you rename a feature afterwards, the feature will not change until the device's name is changed.

Bridge maintenance

The Bridge Maintenance page enables you to change contents or perform actions on the bridge itself. Use these pages with caution as any updates you take immediate effect.You cannot undo these changes, other then re-adding lights or sensors to the bridge following the standard procedures.

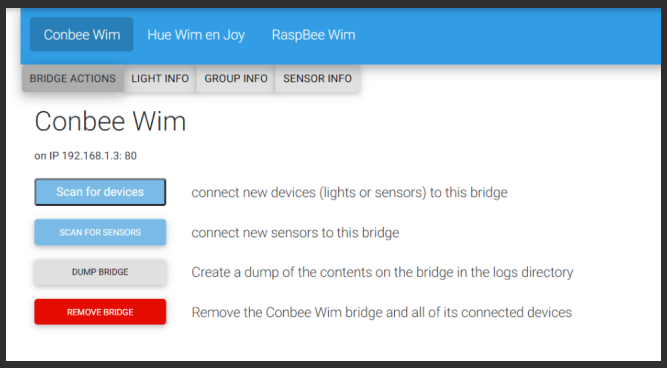
Warning: This page seems not to work on Firefox. I have not yet been able to find the cause yet.

On the bridge maintenance page you can do the following tasks per bridge:

- Perform bridge actions, like adding new devices or removing the bridge
- Check and remove lights on the bridge
- Check, add and remove groups on the bridge
- Check and remove sensors on the bridge
- Enable or disable the alarmsystem on a deCONZ gatewa and configure its functioning

Bridge actions:

- Scan for new lights and/or sensors
- Dump the information coming from a bridge to a log file
- Remove a bridge and all connected devices from HomeSeer



The scan for devices will start a scan for devices on the selected bridge. Both lights and scensors will be found. Using the scan for sensors will narrow the search down, but the end result is exact the same, with the exception it will not find any lights.
When you want to add a light or sensor, check the user guide of the device you want to add. Most often it is easiest to start the scan, immediately followed by a reset of the device to be found.

The Dump bridge button does not work yet. It is only creating a file in the logs sub directory that will hold all the details send by the bridge to the plugin.

The Remove bridge button will remove ALL devices belonging to that bridge and the bridge itself from HS4 and will also reset all information on the database belonging to the bridge.
After pressing the button a popup will be shown with a warning on the chosen action. Pressing the button will then perform its action.

Lights

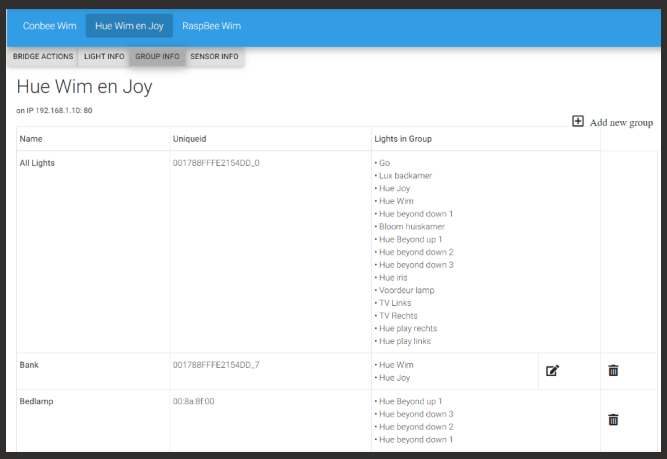
- View light information and eventually delete a light from the bridge. Removing a light from the bridge will also remove the HS4 device and its features.

Groups

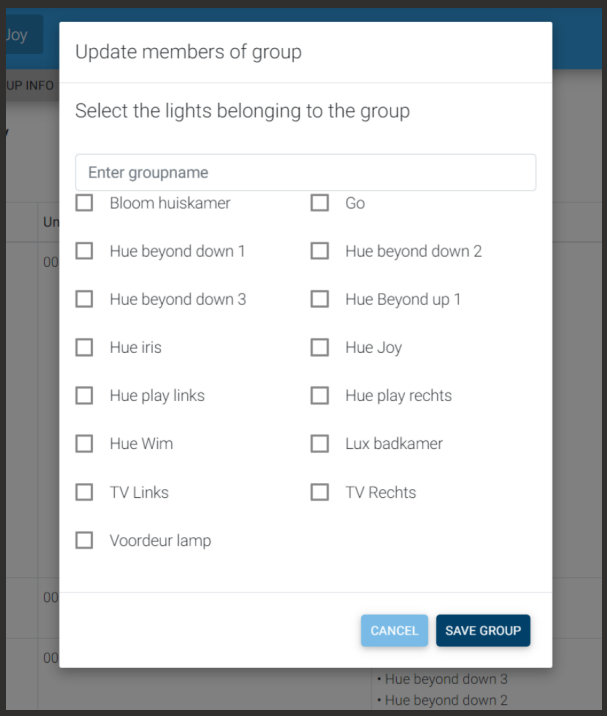
- View, add, edit and remove groups from the bridge (and corresponding devices)

Groups are created as entry on the bridge. A group can hold several lights. The advantage is using groups is that when a group is addressed by the plugin, all members of that group respond at the same time.
As a example, if you have six lights in a row and you send an on command to each of these six lights, you will see a little lag between lights effectively going on. If these lights are joined in a group, the lag will be hardly seen anymore as the command is send to all at the same moment. So especially when

you have a larger number of lights, it is good to think about logical grouping of lights. On this page you can create and edit the groups to your liking.



On this page you can add a new group by pressing the plus button ( ) on the right of the top row. This will bring up a popup where you can set the name of the group and select the lights belonging to the group.The same window will be shown if you click on the edit button( ). Not all groups can be edited as you will see. The most important is the "all lights" group. This group is a system group on the bridges, that hold all lights (and plugs) known to the bridge. the only way to remove a light out of this group is deleting the light itself.
There are also some other types of groups that cannot be editing, like the luminary groups, which hold the led lights inside a luminary, which are static.



Removing a group (if possible) can be done by pressing the trash icon ( ) on the right of the group. A warning will be shown on a popup window where the choice can be made definitive by pressing the ok button.

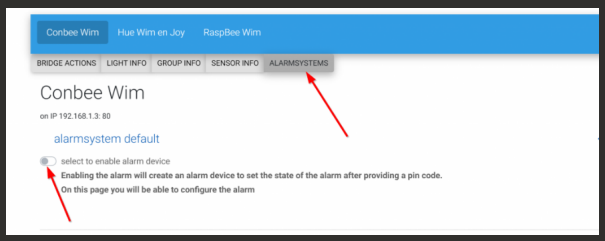
Sensors

- View sensors and switch information and eventually delete a sensor from the bridge. Removing a sensor will also remove the HS4 device and its features.

Alarm systems

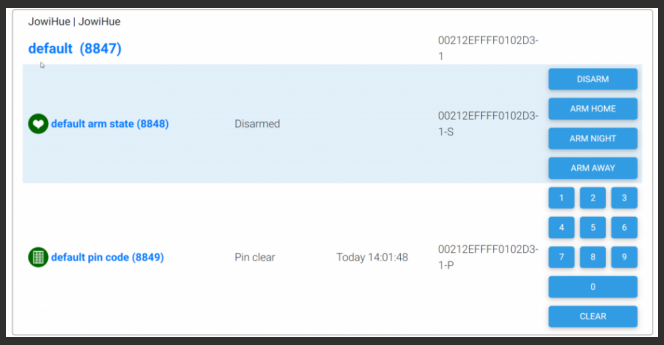
If you have a deCONZ installation with version 2.12.4 or higher, using deCONZ as an alarm system is supported. The plugin will then show this as a button in the menu's of the Bridge Maintenance page. At this moment development of the alarmsystem for deCONZ is still ongoing, so this will probably result in changes for the plugin in the near future. Below the current guidance for using the alarm system.

When you select the alarmsystems button for the first time, you need to enable the alarmsystem for the deCONZ gateway:



Using the alarmsystem devices

When you enable the alarm the alarm device will be created with two features, a state panel feature and a pincode feature.

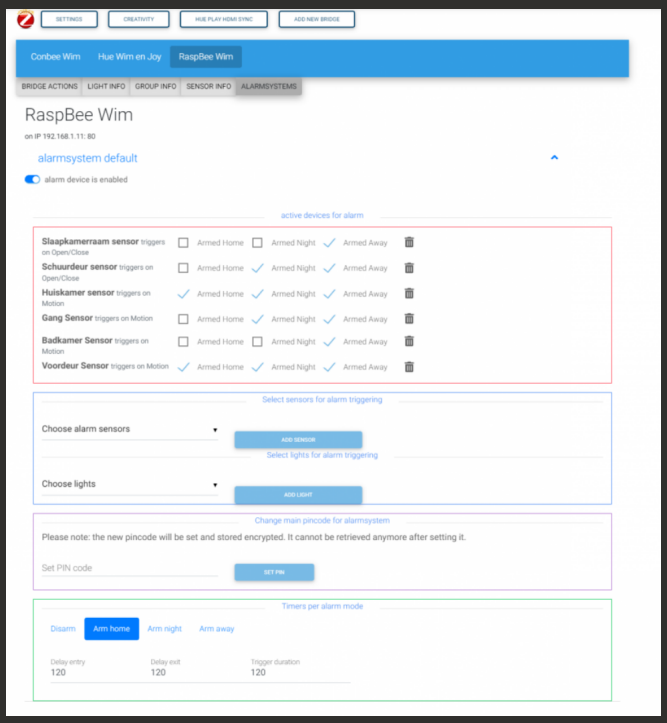


When you want to control the state panel, you first need to set the correct pincode with the pin code feature. It has to match the code known by deCONZ.

Panel actions will not be accepted by deCONZ without or with a wrong pincode.
For this reason, it will not be possible to use the device actions in events to disarm the system. Instead use the JowiHue actions in the event to change the state of the alarmsystem. The advantage of using JowiHue actions is that these actions are HS device independent so will still work if a HS device was removed and recreated.

Configuring the alarmsystem devices

You can configure the alarm device once it is enabled. In the current state of the deCONZ beta alarmsystem, you can assign sensors and lights as 'active' device that can trip the alarm. You can selectively assign these devices to trip when either Alarm Home, Alarm Night or Alarm Away states are set. As a sample the bedroom motion sensor can be active in Arm Away mode, but can be inactive for Arm Night.



Devices that can be selected in the selections are Motion sensors, Vibration sensors, Keypads (in development), Switches and Remotes.
In a near future version of deCONZ and the plugin, external events can be added as well to trigger the alarm, for example through HS Events triggering on other devices, like X10 or Z-Wave devices with the help of HomeSeer events.

Set pincode

If you have enabled the alarm system for the first time, you will need to set a pincode before you can operate the devices or create events operating the alarmsystem. The pincode is set on deCONZ and deCONZ will from then on expect this pincode for all operations. For use in events, this pincode is stored encrypted by the plugin and will not show on any page of HS.
Note: If you set the standard pin code through another app (like Phoscon), you wil also need to set the correct code here, otherwise the JowiHue actions wil not work anymore!

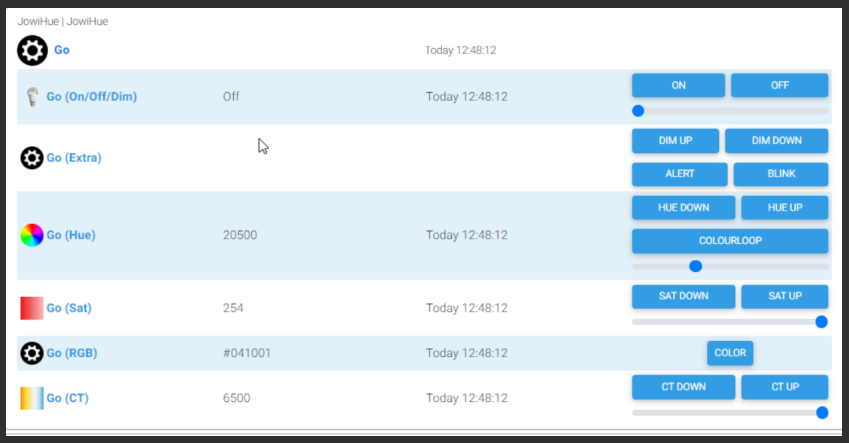
Set Timers

You can configure the timers used by the alarmsystem for each state of the system. There is a timer for delay entry (how much time you have to disarm the system when entering the house), delay exit (how much time you need to exit the house after setting the alarm state). You can set these timers for each alarmsystem state.

Using the plugin

Lights and plugs

Once the bridge is connected correctly all lights from the bridge will be imported by the plugin and Homeseer devices will be created, matching the possibilities of the lights.
When you add a new light or group to the bridge, the new light device or group device should be visible after a maximum period of 10 minutes as the plugin will check its configuration with the bridge once every 10 minutes. Restarting the plugin will immediately refresh the bridge configuration and build the new devices needed.
Each light is represented as a device with features in HomeSeer. This enables control dim/on or off, and, if the light is able to show colors: Hue, Saturation, RGB, color temperature, Alert and Color loop.



Names of lamps and groups are derived from the bridge. Renaming a light can easily be done through the properties of the main device.
Changing the name in the properties will also reflect on the bridge (and in all apps accessing the bridge). Naming of the devices will follow the rules for renaming devices

On the JowiHue tab of a light bulb properties you will be able to configure to recover the last known settings after powering off (e.g. by using a powered switch) . If power is restored it will take a second or so before the plugin discovers a light is reachable again, so at first the light will start with the default settings and after a few seconds the light will be reset to its last know settings before being powere off, if this option has been set.

The light devices values will refresh automatically. Either instantly when deCONZ is used or based on the polling frequency setting for Philips bridges. The optimal polling frequency for the Philips bridge

will depend on the speed of your network and the number of lights you are using. If this rate is set too high, you might see the status regularly change to “unreachable” while seeing the bulb itself still responding to other signals.

There are many plug devices available, they all act as Zigbee routers and have an on/off state. Some plugs even have power measurement. The plugin will add features to show the power usage when this possible. By enabling energy reporting this information can also be stored in the HomeSeer Energy database

Groups

Groups are an important feature in the Zigbee environment. When you have defined groups Groups on the bridge and send a command to a group, all lamps in that group will respond with a far better synchronous effect then when sending the same signal to each light separately. Especially when you want to address a higher number of lights (>4). Using groups also enables you to separate control of different areas/zones/rooms. The only drawback on using groups is that the speed of commands send has to be a bit slower. But the plugin is taking care of that internally, so do not worry about that.

With the help of the JowiHue plugin you can create/change and delete groups on the bridges. Each group you create is stored in the bridge and each bulb separately is made aware of its membership to a group, enabling fast responses to changes on group level. Because of making the lamps aware of its membership, it is needed to make sure lamps are reachable (holding power, but can be off) during the group setup.

Creating groups can be done through the page Bridge Maintenance, by selecting the Groups button. For more details on this check the group information paragraph.

Sensors

There are many sensors available and new ones are added regularly.
The plugin is prepared to add even unknown sensors and will try to make the possible statuses available to HomeSeer devices so events can trigger on their signals when needed. A list of now known sensor types:

Presence sensors, Fire sensors, Smoke sensors, Gas sensors, Water sensors, Temperature sensors, Humidity sensors, Pressure sensors and combined multisensors

Button sensors (remote controls and switches)

These come from different brands, like Philips, Ikea, Aqara, Xiaomi, Tuya, Heiman and others are still being added.

Sensors that have a on/off or true/false setting, like a presence detector, or a fire alarm should work without issue on the plugin.
When a sensor has the possibility to send different values, like a switch (on/off/hold/release/double clicks etc) the plugin will set a large range on the device to catch the values if the sensor is not yet known by the plugin. That way you can still use events with the plugin. Once you know which values are set by the sensor, post the found values on the Homeseer forum, so the plugin author can update these values for other users. In a next update those values can be incorporated by the plugin.

Remotes and Switches

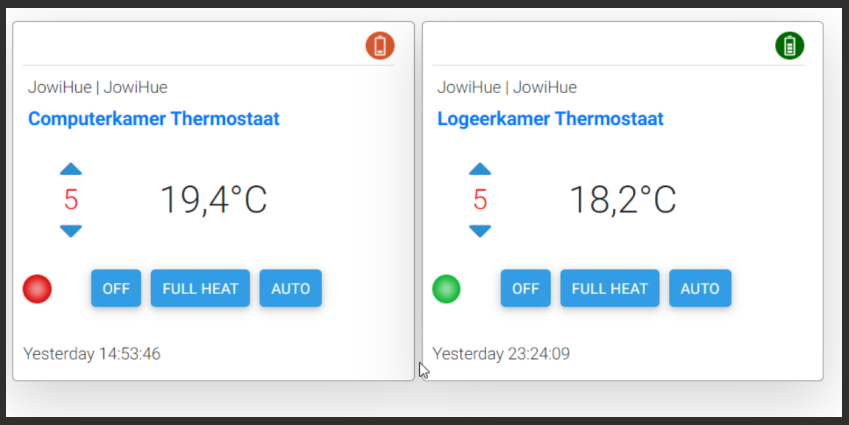
The JowiHue plugin supports several remote controls. And the number is still growing as more devices come available. If you have a remote control that is not yet known by the plugin or not showing the correct status values, let the author know and give him as much information as possible on the new sensor.
You can start a scan for new sensors on the bridge maintenance page of the plugin. Once pressed, you need to reset the remote control sensor to be be recognized by the bridge or gateway. A remote control sensor can come configured out of the box for a set of lights. In that case first follow the brands usage guide for a complete reset of the sensor before trying to connect it to the bridge or gateway.

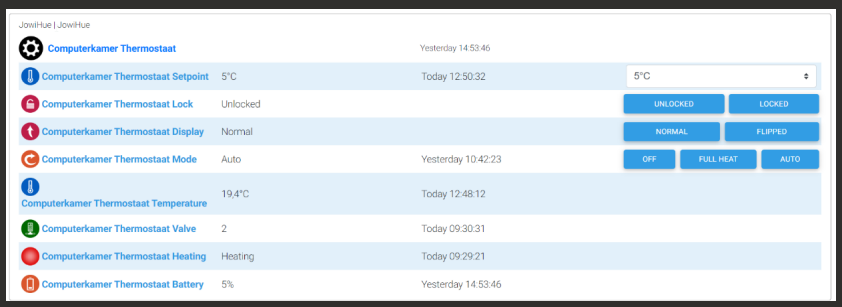
As remotes cannot be 'set' to other values, so the HomeSeer devices created for the remotes have no controls. They update their state when buttons are pressed. Based on these states you can trigger events to control other devices.

Note:
When using a remote control sensor on the Philips bridge, response is going to be slower compared to having the remote control sensor on a deConz gateway. This is because the Philips Hue bridge needs to be polled before the plugin can see the change, where the deConz gateway forwards the change directly to the plugin when a change happens so an immediate response is possible.

Thermostats

There are a few thermostats available through deCONZ. The JowiHue plugin supports to control these. Here are some samples of the Eurotronic Valve thermostats.



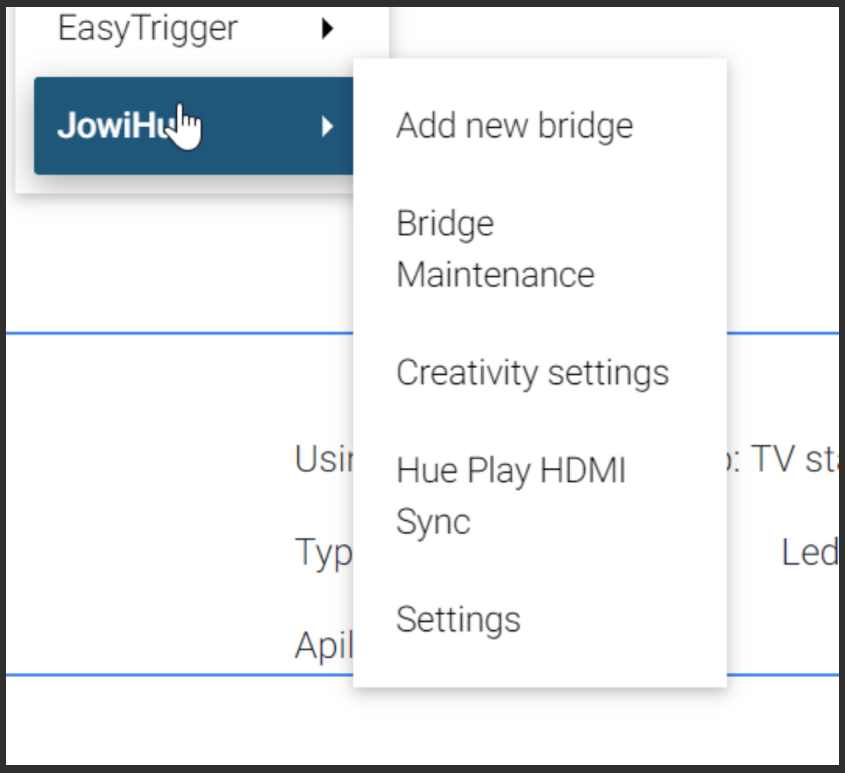


Alarm system, keypads and locks

Please check the bridge maintenance page for configuring the alarm system on a deCONZ gateway. This information will be expanded in the next versions of the plugin.

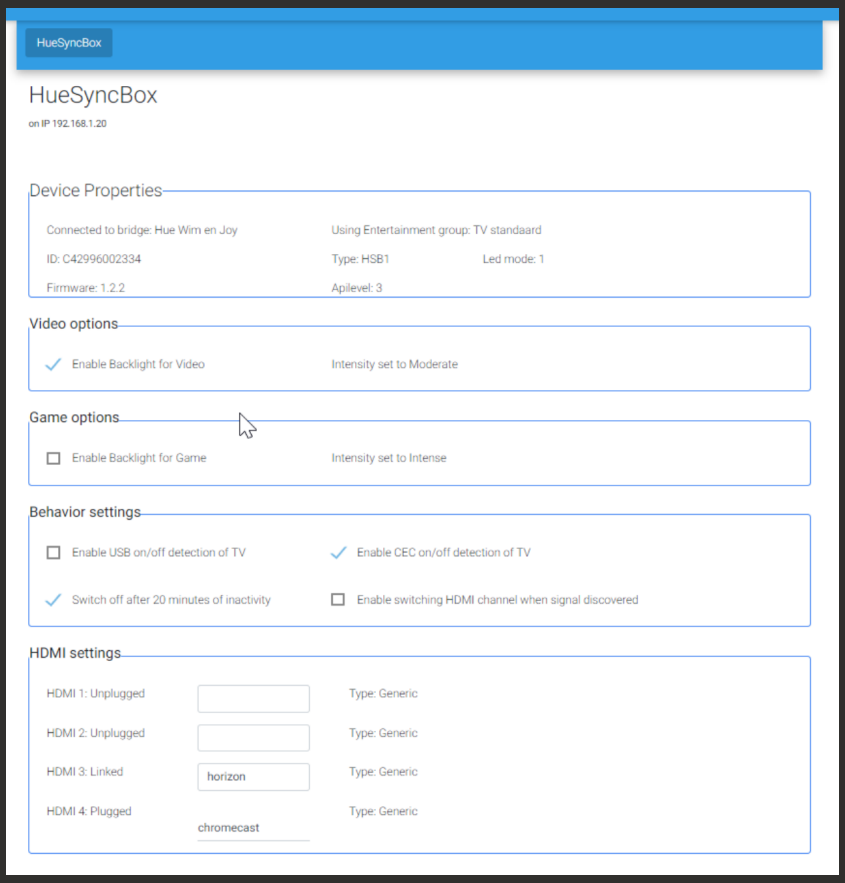
Hue Play HDMI Sync Box

The plugin supports control of Philips Hue Play HDMI Sync boxes. If a new box is found the plugin menu will be extended with an extra page for these boxes.

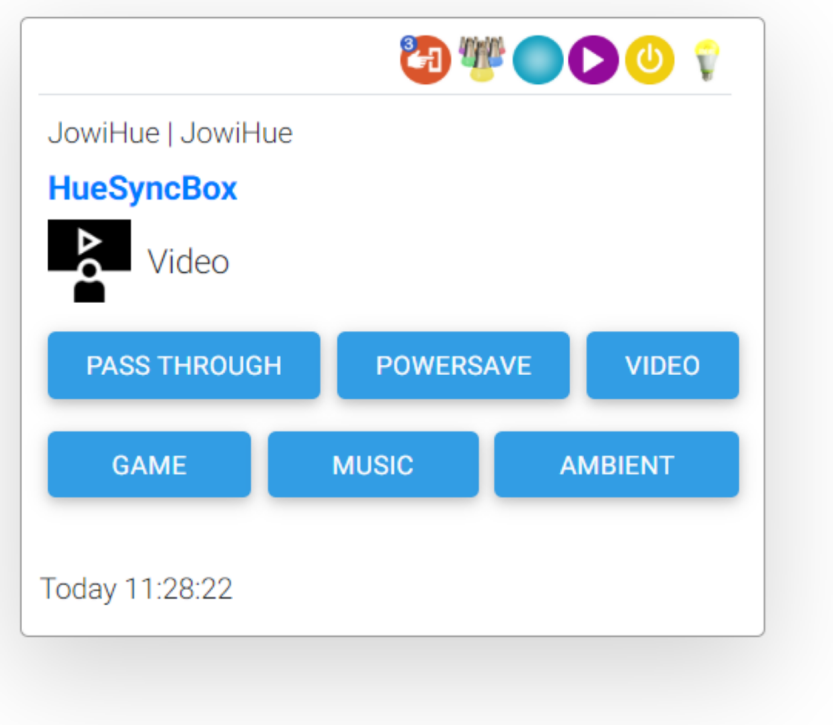


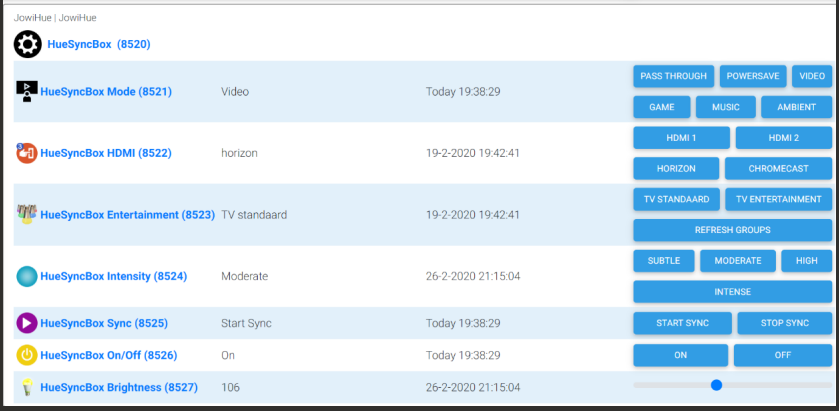
When the page is opened the plugin will create a tab for every Philips Hue Play HDMI box. If the plugin is not yet registered on the box, the page will show instructions to register the plugin on the box. This involves starting the registration button on the page and holding the on/off button on the Hue play box until it give a short green flash. Then the plugin has a registration on the box and the plugin will create the needed devices in Homeseer.

When the registration is successful the page will refresh and you will see the options that can be set by the plugin.



The device will hold several features where you can set the mode, HDMI input channel, Intensity, start or stop the Sync, or to select the entertainment group to use.
Creating Entertainment groups has to be done with the Philips Hue App.
You can use events to (for example) set the entertainment group based on the sync mode, or time, light outside etc.
Or select the HDMI channel based on other devices that are set on of off, many possibilities here!





Creativity

You can reach the creativity page by choosing the plug-ins menu on the Homeseer webpage and expanding the JowiHue menu choice to select the Creativity page. On this page you will find three tabs: Presets, Scenes and Animation.

Presets
A preset is a light recipe for color setting that you can use in scenes and event actions. This enables you to create a definition of a light setting you like and then use this setting in any scene on any (color) light.

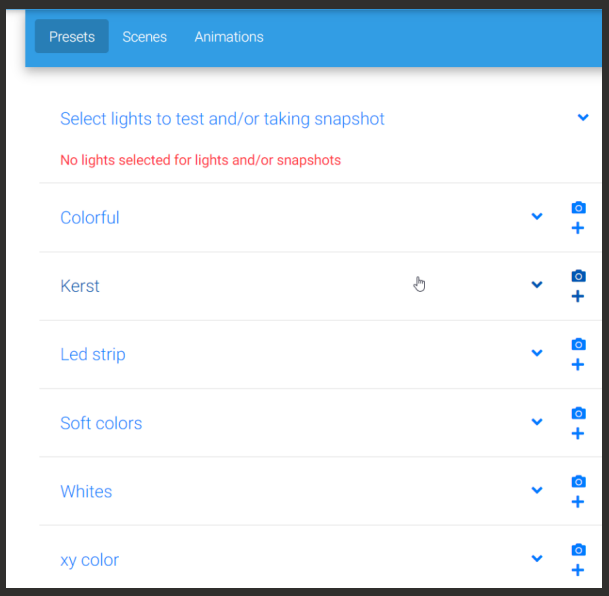
Scenes
A scene is a setting for one or several group of lights which creates an ambiance to your liking. A scene can be a simple set of settings to selected lights or complex, with multiple settings combined on different lights, to achieve a ambiance effect that is functional to you.

You can reach the creativity page by choosing the plug-ins menu on the Homeseer webpage and expanding the JowiHue menu choice to select the Creativity page. On this page you will find three tabs: Presets, Scenes and Animation.

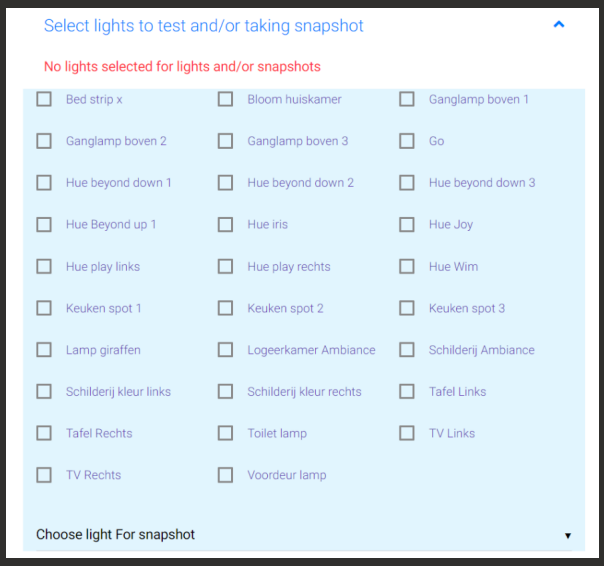
Animations
An animation is a group of scenes that will be changed one after another according to your configuration.
An animation involves at least two scenes. Animations can be 'stretched' in time through event actions, where the event trigger will start the animation. The animation will then end at a set time or dynamically at sunset/sunrise.
An animation can be used as an alert, where lights are reset to their original setting after ending the alert. Even an already started animation will continue to run after another animated alert ends, if configured for this.

Presets

Presets are light recipes that you can create to use in Scenes or Events. You can create a recipe based on Hue and saturation, color temperature or cie Colorspace (xy) values. This recipe may then be applied to any (number of) color light. All, edits done in presets are immediately saved in the database.



When you open the creativity page, it will initially open on the Presets page. The first block of information will show the line with "Select lights to test and/or taking a snapshot.
In this block you can select the light(s) you want to use to test your preset on. these light will be used to send the setting of the preset you are changing/creating.



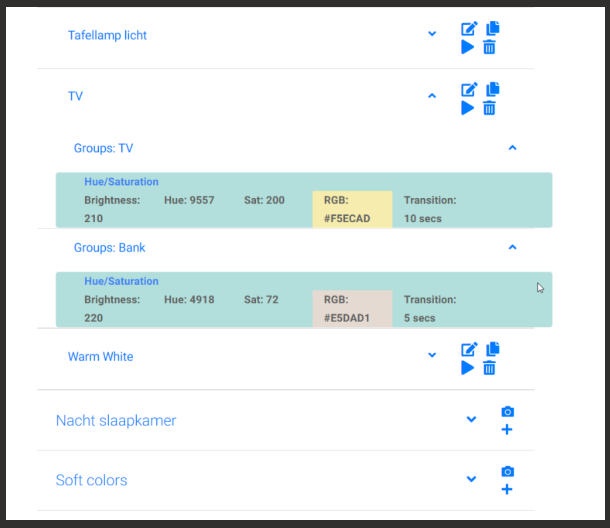
On the bottom of this block you can select one light to use for the snapshot(s). If you press on the camera button (next to the group names. A snapshot of the current setting of the selected light will then be taken in written in a preset called "Snapshot" and placed in the selected group.

On group level you have two available icons, one camera for taking a snapshot, a plus sign for adding a new preset to the selected group. Pressing the plus sign will open a new window where you can name the preset and edit its settings and test them.

If you open a preset group (in this sample "Colorful") you will see a list of presets in that group. You can open each preset and see the settings of this preset. Here you will also be able to edit the preset, copy the preset, test it, or delete it by pressing the appropriate buttons.

Scenes

In the scenes tab you can create new scenes, change, group and delete them by navigating through the slider menu's. You can even create a scene by taking a snapshot of current settings of your lights. By creating the demos set on the presets tab you can create some scenes to look and feel how scenes work The use of standard icons should make it easy to understand the functions of the buttons used here. All changes on this page are immediately saved.



The setup of the scenes page is very similar to the presets, as it is showing groups, scenes inside a group and the details-which can be multiple steps as one scene can hold multiple settings. Each set of settings inside a scene can address a preset, or the same details as used for presets. Each scene holds icons for edit, copy, test and delete. On group level you can add a scene or take a snap shot

If you take a snapshot by clicking on the camera icon, the plugin will take settings of every light that is on. It will also try to group the lights having the same settings in one detail step, to minimize the number of steps in the scene. It will save the snap shot with the name "Snapshot". You can then check this new scene and edit it to remove all that is not necessary in this scene. After this is finished, you can rename the scene and use it.

Animations

In the animation tab you can create new animations, change and delete them by navigating through the slider menu's. With the first installation of the database a few animations have already been added for you, so you can use them as they are, or play with them to understand how it works.

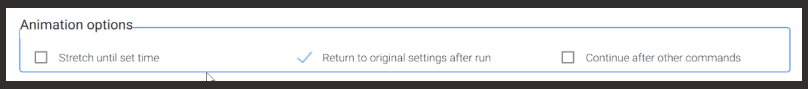
An animation is a group of at least two scenes that will change one after another in the timespan you configured. An animation can put scenes in sequence an eventually loop through them in a configurable manner and time

Animations can be 'stretched' in time through Homeseer event triggering, where the event trigger will start the animation and the animation ends at a set time or at sunset/sunrise at event execution or when ended explicitly. An animation can be used as an alert, where lights are reset to their original setting after ending the alert. Even another animation will continue to run after a animated alert ends. This is set in the options of an animation
Standard Homeseer icons should make it easy to understanding the functions of the buttons used. All changes on this page are immediately saved once the animation is approved as complete by the plugin.

While editing or adding a new animation you will see the following field area's:

Animation Options

In the new animation the first part is an area for setting the options of the animation.



Stretch time until set time
Enabling the stretch option wil enable the use of dynamic timing for the animation. An event is used to start this animation. The event could trigger at sunset and set the endtime for the animation at 11 PM for example. The stratch functionality will make sure the timings in the animation will adjust to have the animation finished at 11 PM.
Or an event can trigger when it gets dark, but if it is dark before sunset it can start an animation to stretch until sunset really starts. No matter if sunset is starting at 4 PM or 9 PM, the animation will be running and ending at sunset time. If light comes back before sunset, another event could cancel the animation if needed.
Or the event could go through sleep colors until sunrise and is triggered by starting sleepmode in the bedroom.

NOTE: At this state of HS4 the end time cannot yet be set. Only sunset and sunrise options are available!

An sample animation "stretchit" consists of three scenes without loops. Stretching is enabled for this animation.

- scene A (stretch * 3) * scene B (stretch * 2) * scene C (stretch * 1) Next, we create an event which triggers at 9 PM in the evening, with the event action set to run animation "stretchit" until 10PM (any time could be used here of course).

First the plugin will calculate the value of stretching needed for correct timing. In this example the base line period is 10 minutes. As a result, scene A will run for 103=30 *minutes, scene B for* 102=20 minutes and scene C for 10*1=10 minutes.

With stretching disabled, the column for Stretch factor is replaced by wait time. Wait time is to be configured in 1/10 of seconds, enabling a very precise timing of the animation. In this case you always know exactly how long the animation will run.

When creating a animation based on the wait time, be sure to test it with different timings. If you are using a scene with 4 lights involved, a wait time of 0.1 second is not going to work as each light command on the bridge is already using 0.1 second. As a rule of thumb, minimum wait time to be used is the number of lights involved in a step * 0.1 second.
When addressing groups in scenes, the same rule of thumb should then change to number of groups involved * 1 second.

Return to original settings
This setting gives you the ability to return to original light settings after finishing the animation. When you decide to create some sort of alerting effect and want to return to original settings after this animation, select this option.

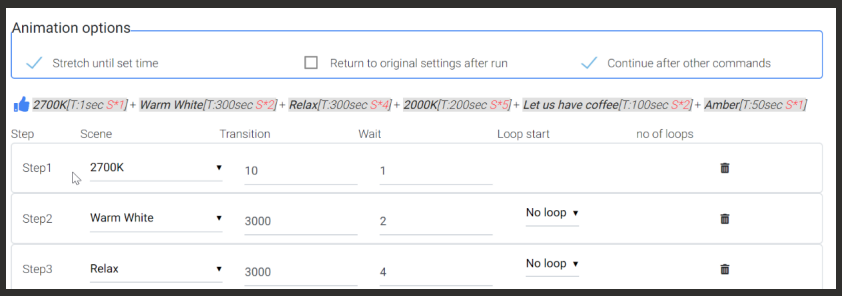
Continue after other Hue commands
The second option is to enable the possible cancelation of the animation. With this option the animation will be stopped when any other command of the JowiHue plugin is started. This might be important if you want to make sure a new scene or animation can take over when wanted. Be aware that even an alert or a device on will stop the animation.
Aside from this option, when any animation is running, a button will appear on the bridge device in the deviceutility page of Homeseer. The device string will tell you how many animations are running at

the same time. The button will enable you to forcefully stop all animations, no matter if “Continue when other commands are executed” is enabled or not.

Defining steps for the animation

An animation is made of steps. In every step a scene is used and duration (stretch or wait period) configured. An animation should exist of at least two steps (otherwise you could just start the scene right?). Above the defined step you’ll see a marker with the generated formula. If you start with an new animation you’ll see the marker with text like “Please select a first sequence”.

Once you select the first scene, the text will disappear and a formula will be displayed (but not yet approved). The marker will change to an thumbs-up sign, once you reach a valid formula. From this moment the animation can be saved. Each approved change will be reflected in the formula area:

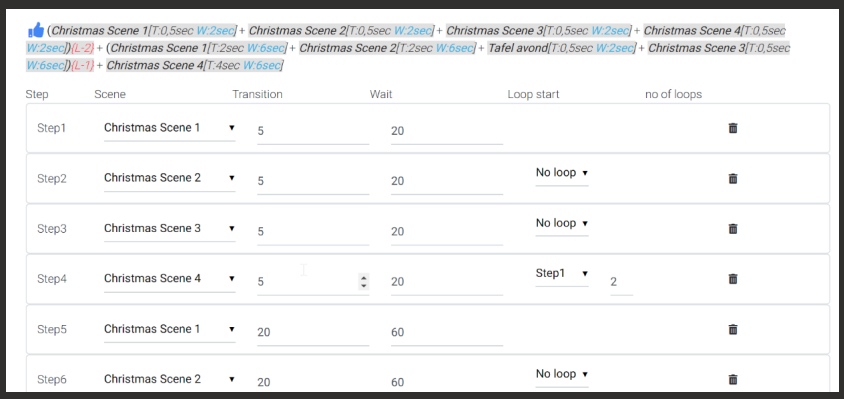


[S*x]=Stretch factor, [T:x]=Transition time, {L-x}= number of loops.

With every step you can define an alternative transition time in tenths of seconds.
Depending on the stretch setting the transition field will be followed by “Stretch *” or “Wait:”. For the stretch value, the base time calculated will be multiplied by the stretch value. For the Wait value, this value will result in a wait time in tenths of seconds.
The last step will have the '+' button on the right side. With this button you can add new steps when needed. Similarly, every step can be deleted by pressing the trash icon

Looping through scenes in an animation

A standard sequence will do for many situations, but in some scenarios you might want to loop back a few times before proceeding to the next step. This plugin can handle loops if you need it for an animation, preventing you to have to create dozens of steps to reach the same goal. The plugin will show with every step whether a loop is possible and, if so, to which step you could return without getting in trouble. The formula line will show you what is going to happen.



When using loops, you can set a infinite loop on the last defined step. To prevent things getting out of hand, when you set the infinite loop, the animation will ALWAYS be canceled when any other command on the set of lights involved is performed by the plugin. So loop ends when lights are switched off, or a scene is started or another animation starts, or the HS bridge device sends a cancel animation command.

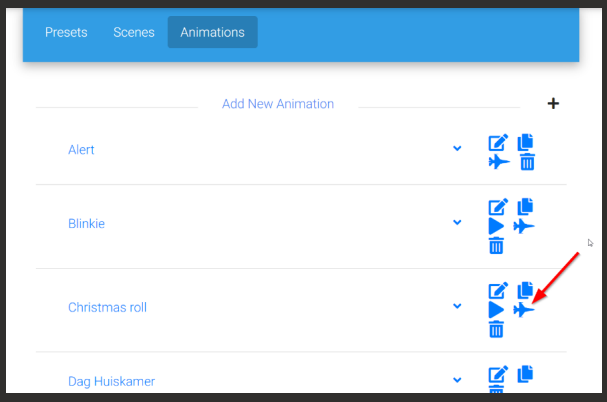
Practical information regarding animations

With animations you can create complex combinations of scenes. There is a bit of a challenge in timings when you use groups in your scenes. Advantage of using groups is that lights responds more synchronous to a command. But it also adds a bit more slowness to the speed of accepting commands by the bridge. You will not notice it when the wait time you are using is generating one command per second and you do not use more then 1 group in a scene. But you might notice it when you are have wait times less than 0.5 seconds. Just be sure to test them and adjust wait times when using high speed animations.

Creating a feature for an animation

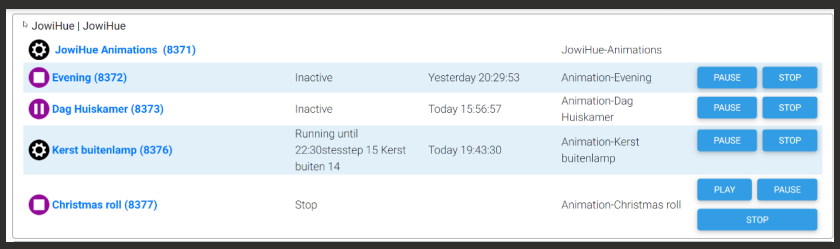
If an animation is complete and saved you can create a feature with holding device for this animation. This will enable you to follow the state of the animation while running. It also provides you with a play/pause/stop button and according statusses to control the animation. This is especially helpful when running longer animations. When an animation is paused, pressing the pause button again, or pressing the play button will unpause the animation. The animation will then proceed from the step it paused. In this way you have a lot of control on the animation flow. You have the same level of control with the JowiHue actions as well. Check the Action paragraph for details.

As an example, a light on the porch cycles through colors during the evening, controlled by a stretched animation. But when someone approaches the porch, a motion sensor reports motion and the light moves to bright white, while pausing the animation. If the motion sensor reports no motion after a while, the animation will return to its running state after waiting for three minutes (or whatever you configure in your events).
This is now possible!
Creation of the feature is done by pressing the fighter-jet button next to the animation in the animation list page.



If a device already exists for an animation, the icon is not shown.

The device holds buttons for playing, pausing and stopping the animations. The play button is not available for animations that have the stretch option enabled. This is done because these animations need an end time to be set first.



~~Import/Export of Creativity items~~

Events

Triggers

If any Hue light in group is on

With this trigger you can check if any light in a group is on and trigger based on that. This trigger is also available as condition

If any Hue light in group is off

Similar to the previous trigger, you can check if any light in a group is off and trigger based on that. Also available as condition.

Both of the above triggers are based on groups as you can already trigger on individual devices. No specific plugin triggers are needed for this.

Actions

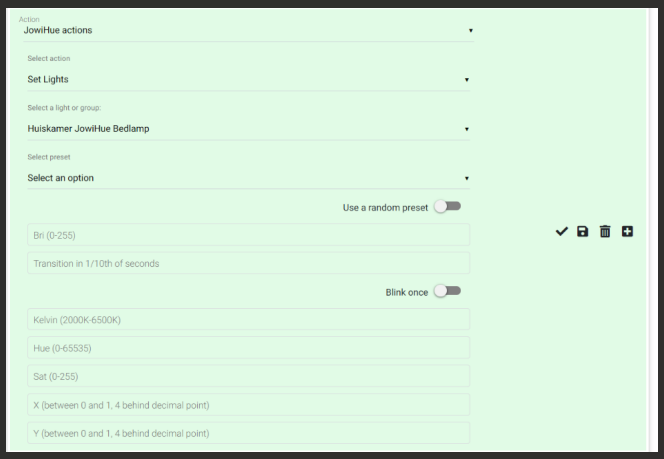
In event actions, when creating a new event you can define actions to be performed by the jowiHue plugin. To find the possible action you have to select “Jowihue:JowiHue actions” in the list, which will bring you to the possible actions:

- Set Lights
- Set Scene
- Animation actions
- Alarm actions

Remark: If you have an existing action, converted from HS3 or from before November 2020, the above list may show different results. If you select a different action (ie control a device) and navigate back to the JowiHue action, you will see the list is reset and shown correct as above.

Set Lights

With this event action you can set the preset or random preset group, brightness, Hue, saturation, color temperature, xy value and Transition time to a light or a group. If you are using the RaspBee/ConBee gateway you also choose to set the pace for the colorloop. Depending on the selected type of lights the above options will hide or be visible.



Set Scene

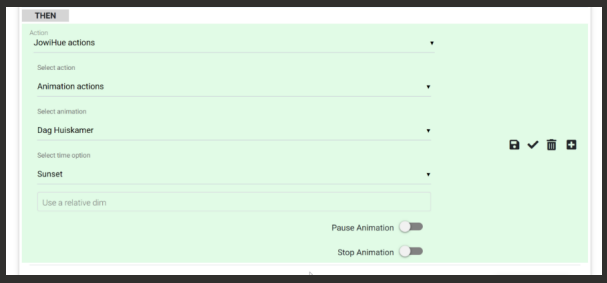
With this event action you can set the scene to be activated for your lights. You can trigger this event and it will set the lamps to the scene you defined through the Creativity page. In the scene you already have preselected the lights that are used for the scene, so there is no need to select lights. Just set the conditions to trigger the event, or create a manual event that could be triggered from other events or through HSTouch buttons. The plugin will also let you select scenes defined on the bridge.

Animation Actions

With events you can start an animation when the event triggers. Depending on the Animation Stretch option you see two options: If the animation is set to not stretching, you can simply select the animation to start it by action.

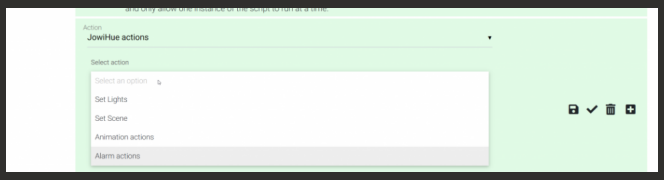
When the chosen animation has stretching option enabled you will see three radio buttons, enabling you to choose for Sunset, Sunrise or Set time. When Set time is chosen you can select the end time by entering a valid time notation in the end time field.

When you have selected an animation you can enable either the Pause Animation or Stop Animation switch. This will pause or stop the animation. To restart a paused animation, just retrigger the original event starting the animation (or another, starting the animation. This will unpause the event. When unpausing the stretched time field is ignored, the animation with continue with the same settings.



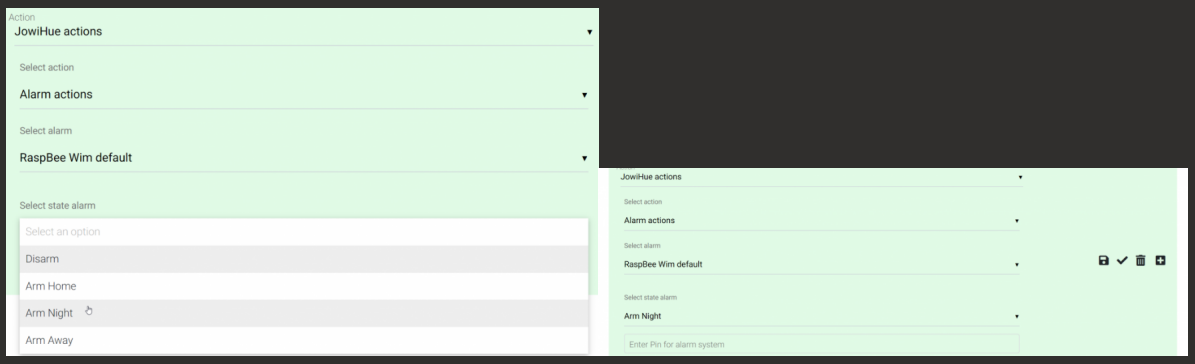
Alarm actions

You can use the alarmsystem in events. Using event conditions is based on devices as most events are. This might change in the future to JowiHue conditions. When setting the alarmsystem's states, use the JowiHue actions, not device actions as it is not possible to provide the pincode at the same time.



When you have select the Alarm action, you can select the alarm system to use (if there is only one, this will be selected already).
Next you can select the action to perform (Disarm/Arm Home/Arm Night/Arm Away)

Once you have selected the mode to set, a new field will be shown asking you to fill in the pin code. This is ***mandatory***. If the correct code is given, the action can be saved. If a wrong code is given, the field is emptied and an error line will be shown.



Scripting

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GetLights

Returns an array of string with all light names
Parameters: none

Syntax:

```
Dim Lights() as string = hs.PluginFunction("JowiHue", "", "GetLights", Nothing)`
```

GetGroups

Returns an array of string with all group names
Parameters: none

Syntax:

```
Dim Groups() as string = hs.PluginFunction("JowiHue", "", "GetGroups", Nothing)`
```

GetScenes

Returns an array of string with all scene names
Parameters: none

Syntax:

```
Dim Scenes() as string = hs.PluginFunction("JowiHue", "", "GetScenes", Nothing)
```

GetPresets

Returns an array of string with all preset names
Parameters: none

Syntax:

```
Dim Presets() as string = hs.PluginFunction("JowiHue", "", "GetPresets", Nothing)
```

GetAnimations

Returns an array of string with all animation names
Parameters: none

Syntax:

```
    Dim Animations() as string = hs.PluginFunction("JowiHue", "", "GetAnimations", Nothing)
```

ListRunningAnimations

Returns a list with all active animation names
Parameters: none

Syntax:

```
    Dim Animations() as List(of string) = hs.PluginFunction("JowiHue", "", "ListRunningAnimations",
Nothing)
```

SetLightsOff

Switch lights off
Returns a Boolean. True = successful, False = unsuccessful

Parameters:	Value	Description
Group :	True/False	if True groups will be addressed by this command, otherwise lights.
Name :		name of the group or light to be controlled

Syntax:

```
    Dim test As Boolean = hs.PluginFunction("JowiHue", "", "SetLightsOff", {True, "All Lights"})
```

SetLightsHueSat

Sets lights based on Hue mode
Returns a Boolean. True = successful, False = unsuccessful

Parameters:	Value	Description
Group	True/False	if True groups will be addressed by this command, otherwise lights.
Name		name of the group or light to be controlled
Bright	0-255 or Nothing	Value of brightness to be set. To keep the current setting use Nothing. Using 0 will result in an “off” for the light.
Hue	0-65535	Value of Hue to be set. To keep the current value use Nothing
Sat	0-255 or Nothing	Value of saturation to be set. To keep the current setting use Nothing
Transition	0-~ or Nothing	Value for transition time of the new setting. Value is in 1/10 of seconds. To have no transition use ‘Nothing’

Syntax:

```
    Dim test As Boolean = hs.PluginFunction("JowiHue", "", "SetLightsHueSat", {True, "All Lights",
Nothing, 65535, 255, 20})
```

SetLightsKelvin

Sets lights based on color temperature mode (“Whites”)
Returns a Boolean. True = successful, False = unsuccessful

Parameters:	Value	Description
Group	True/False	if True groups will be addressed by this command, otherwise lights.
Name		name of the group or light to be controlled
Bright	0-255 or Nothing	Value of brightness to be set. Value can be between 0 and 255. To keep the current value use ‘Nothing’. Setting Bright to 0 will result in an “off” for the light.
Kelvin	2000-6500	Value of Kelvin color temperature to be set.Value can include or omit the “K” in the value. To keep the current value use ‘Nothing’
Transition	0-~ or Nothing	Value for transition time of the new setting. Value is in 1/10 of seconds. To have no transition use ‘Nothing’

Syntax:

```
    Dim test As Boolean = hs.PluginFunction("JowiHue", "", "SetLightsKelvin", {True, "All Lights", Nothing, “3000K”, 20})
```

SetLightsRGB

Sets lights based on CIE color mode (“xy”)
Returns a Boolean. True = successful, False = unsuccessful

Parameters:	Value	Description
Group	True/False	if True groups will be addressed by this command, otherwise lights.
Name		name of the group or light to be controlled
Bright	1-255 or Nothing	Value of brightness to be set. Value can be between 0 and 255. Touse the RGB calculated value use ‘Nothing’.
RGB	0,0,0 to 255, 255,255	Value of RGB to be set. To keep the current value use ‘Nothing’
Transition	0-~ or Nothing	Value for transition time of the new setting. Value is in 1/10 of seconds. To have no transition use ‘Nothing’

Syntax:

```
    Dim test As Boolean = hs.PluginFunction("JowiHue", "", "SetLightsRGB", {True, "All Lights", Nothing, “255,255,0”, 20})
```

IncreaseLevel

Increases the bright, saturation and/or hue and ct level of a light or group of lights. The level of increase will be taken from the values on the configuration page.
Returns a Boolean. True = successful, False = unsuccessful

Parameters:	Value	Description
Group	True/False	if True groups will be addressed by this command, otherwise lights.
Name		name of the group or light to be controlled
IncBright	True/False	if true, brightness level will be increased, if false, no action will be done on brightness level

IncHue	True/False	if true, Hue level will be increased, if false, no action will be done on Hue level
IncSat	True/False	if true, saturation level will be increased, if false, no action will be done on saturation level
IncCT	True/False	if true, CT level will be increased, if false, no action will be done on colour temperature level

Syntax:

```
    Dim test As Boolean = hs.PluginFunction("JowiHue", "", "IncreaseLevel", {True, "All Lights", True, False, False, False})
```

DecreaseLevel

Decreases the bright, saturation and/or hue level of a light or group of lights. The level of decrease will be taken from the values on the configuration page.
Returns a Boolean. True = successful, False = unsuccessful

Parameters:	Value	Description
Group	True/False	if True groups will be addressed by this command, otherwise lights.
Name		name of the group or light to be controlled
DecBright	True/False	if true, brightness level will be decreased, if false, no action will be done on brightness level
DecHue	True/False	if true, Hue level will be decreased, if false, no action will be done on Hue level
DecSat	True/False	if true, saturation level will be decreased, if false, no action will be done on saturation level
DecCT	True/False	if true, CT level will be decreased, if false, no action will be done on colour temperature level

Syntax:

```
    Dim test As Boolean = hs.PluginFunction("JowiHue", "", "DecreaseLevel", {True, "All Lights", True, True, True, True})
```

SetPreset

Start a preset for the chosen lights
Returns a Boolean. True = successful, False = unsuccessful

Parameters:	Value	Description
Name Preset		name of the preset to be used
Lights		Name of lights or groups to be set with the preset. When you need to set more then one light or group add “;” beween the names (“Lamp 1;Lamp 2”)
Transitiontime	”0”-”9999999” or “”	transtiontime between quotes to use, or send empty string for default setting(“100” or “”)

Syntax:

```
    Dim test As Boolean = hs.PluginFunction("JowiHue", "", "SetPreset", { "Gold", "TableLight;KithchenLight",""})
```

SetPresetRandom

Start a random preset for the chosen lights
Returns a Boolean. True = successful, False = unsuccessful

Parameters:	Value	Description
Lights		Name of lights or groups to be set with the preset. When you need to set more then one light or group add “;” beween the names (“Lamp 1;Lamp 2”)
PresetGroup		Name of presetgroup to use for the random function. Leave empty whey you want to use all presets available
Transitiontime	”0”-”9999999” or “”	transtiontime between quotes to use, or send empty string for default setting(“100” or “”)

Syntax:

```
    Dim test As Boolean = hs.PluginFunction("JowiHue", "", "SetPresetRandom", {"TableLight;
KithchenLight","Colorfull",""})
```

StartScene

Starts a scene
Returns a Boolean. True = successful, False = unsuccessful

Parameters:	Value	Description
Name		Name of the scene to be started

Syntax:

```
    Dim test As Boolean = hs.PluginFunction("JowiHue", "", "StartAnimation", {"Alert"})
```

DimScene

Dims a scene
Returns a Boolean. True = successful, False = unsuccessful

Parameters:	Value	Description
Name		Name of the scene to be started
Dim	1-100	Percentage dim the scene will be dimmed)

Syntax:

```
    Dim test As Boolean = hs.PluginFunction("JowiHue", "", "DimScene", {"MyScene", 60})
```

StartAnimation

Starts an Animation
Returns a Boolean. True = successful, False = unsuccessful

Parameters:	Value	Description
Name		Name of the animationto be started
EndTime	“sunrise”, “sunset” or a valid time (seconds will be skipped)	If the animation has stretching enabled this parameter is needed, otherwise ‘Nothing’ should be used

Syntax:

```
Dim test As Boolean = hs.PluginFunction("JowiHue", "", "StartAnimation", {"Night", "sunrise"})
```

StopAnimation

Stops an Animation
Returns a Boolean. True = successful, False = unsuccessful

Parameters:	Value	Description
Name		name of the animation to be stopped. Use “all” to stop all running animations

Syntax:

```
Dim test As Boolean = hs.PluginFunction("JowiHue", "", "StopAnimation", {"Night"})
```

DimAnimation

Dims a animation to a relative value
Returns a Boolean. True = successful, False = unsuccessful

Parameters:	Value	Description
Name		name of the animation to be started Or “all” to dim all animations
Dim	1-100	Relative dim value the animation will be dimmed to.

Syntax:

```
Dim test As Boolean = hs.PluginFunction("JowiHue", "", "DimAnimation", {"MyAnimation", 60})
```

LifetimeReport

Returns an overview of usage per light in the HS3 log. It is helpful to plan this report on at a regular moment so you can filter the log and check on your lifetime usage.
Returns a Boolean. True = successful, False = unsuccessful
Parameters: none

Syntax:

```
Dim test As Boolean = hs.PluginFunction("JowiHue", "", "LifetimeReport", Nothing)
```