khimo

Control 4 | Khimo

Khimo

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1.1 | Khimo module for Control4 - Version 1.0

This document describes the Khimo module for Control4. The driver will attempt to automatically detect the devices of the system and give access to them through Khimo's central server (referred to as 'server' throughout this document.).

In current version the supported devices are: 'relays' , 'light' , 'lightscenes', 'thermostat' and 'contacts'. Please do not hesitate to contact us requesting support for the devices you most frequently use, we are continuously working on expanding the list of supported devices.

The devices are classified in three groups: Visible, Invisible and Unknown.

Visible devices are those that were identified automatically and are visible on Control4's navigation. It is the installer's responsibility to verify that non off the visible devices imply any type of security risks. To avoid exposing a device it is possible to set it to 'Invisible'.

Invisible devices are those that were identified automatically and that the Khimo module decided not to expose on the server. It is up to the installer to decide if these devices should be exposed(Example: A door lock). Another type of 'Invisible' items are those which are not part of the navigation.

Unknown are devices that the Khimo module did not recognize automatically.(It is possible to set the proxy of those devices in order for them to be recognized by the Khimo module)

Each device has configurable options that will provide Khimo with additional information about it. This will help to achieve a better device representation in Khimo. Examples:

- Distinguish an ordinary light from a dimmable one.

- Assign labels to relays according to the function they perform (open a door, turn on a device, etc).

2 | Setup the Khimo module

1. Create a new project on Khimo and use the generated credentials to set the Khimo module ID and PSK. Remember that the credentials should not be revealed to anybody, it could compromise the security of Khimo.

   (a) Authentication is required to allow the Khimo module to communicate with the server. After adding the driver, set the ID and PSK given by khimo in the properties tab to allow the driver to connect to the server.

   (b) The Khimo module will automatically detect changes in signals within the project. After a few minutes the Khimo module will notify the server of the changes. To avoid waiting, signals can be manually sent by pressing SendKhimoSignals in the actions tab.

   (c) Any interaction with the driver is done through the Lua interpreter in Composer.

3 | Command Functions

To modify the project configuration execute any of the following Command Functions on the Lua interpreter. Some of the commands can be executed directly from Composer's actions tab. The output of all the commands will be displayed in the Lua interpreter tab.

- SetVisible(deviceId) Set the visibility property to 'Visible' for the device with id 'deviceId'.
- SetInvisible(deviceId) Set the visibility property to 'Invisible' for the device with id 'deviceId'.
- SetProxy(id, proxy) Change the proxy of the device with id 'deviceId'. In the current version the available proxies are: 'light', 'relay' , 'thermostat' and 'contacts'.
- SetKhimoOpt(id, kOp) Add or replace 'kOp' Khimo options to device with id 'id'. kOp format: {option1=value1, option1=value2} The supported Khimo options are listed in the Khimo Options section.
- ShowVisible() Displays visible devices, ordered by room.
- ShowInvisible() Displays invisible devices, ordered by room.
- ShowUnknown() Displays unknown devices, ordered by room.
- ShowAll() Displays visible and invisible devices, ordered by room.
- ConnectToKhimo() Force a reconnection with server.
- SendKhimoSignals() Sends the current state of the project to the server.
- Help() Displays a short description of every available function.
- Test(id) Test the device with id 'id'. This command applies only to devices which are either a light or a relay.

4 | Khimo Options

Khimo options are used to extend device description, allowing the server detect subclases of devices or custom labels.

Example:

- light: {dimmer='true'} or {dimmer='false'} The 'dimmer' parameter specifies if the light is a switch or a dimmer.
- relay: {l_on='ON',l_off='OFF',toggle='on'} The l_on and l_off determines how this signals will be display in the server. The toggle parameter can be set to either 'on' or 'off'. If set to 'on' then the server will display only one button, which will toggle the relay. If set to 'off' then two buttons will be displayed in the server: one labeled l_on and one labeled l_off.

5 | Properties

- Khimo Id and Khimo PSK: Authentication credentials for a project. These credentials are generated by the server when a project is created and must only be saved in the driver properties. Revealing this information outside of the driver configuration could compromise the security of an installation.