

flow7 Home Screen shortcuts

Creating HTTP/JSON Shortcuts for direct device control

Overview

A more advanced feature of flow7 is the ability to add shortcuts that send an HTTP or JSON command to a device. This is particularly useful if you want a home screen icon to invoke an immediate action, rather than opening an app to do it. Good examples are choosing a lighting scene, starting a radio preset or switching on a smart socket. Most modern IP controllable devices support HTTP or JSON control. Refer to the manufacturer for information on ports and commands.

This application note shows how to create an HTTP shortcut and associate it with an icon. It also provides examples for Rako Lighting, Sonoff power switches, Yamaha MusicCast devices and recalling SimpleControl activities.

Creating HTTP or JSON shortcuts

To create an HTTP shortcut, swipe from the left edge of the screen right, and then locate the settings folder. Press the  HTTP Shortcuts icon to open the app.

Press the  icon to add a new HTTP shortcut as follows:

Shortcut Name: The name you want to use for the shortcut on the home screen

Icon: An icon of your choice - not necessarily specific to the home screen icons, which you can edit (see flow7 TAB A installation manual)

Description: A description for the shortcut

Execute using: Leave this set to App, unless you want the shortcut to open in a web browser (e.g. a news feed)

Method: Choose **GET** for simple one-line HTTP commands. Choose **POST** for commands that have additional parameters - like JSON. See examples

URL: The address, port and instruction. See the examples below

Authentication: This is for username|password, if applicable

Request Headers: Not used in our examples

Response Settings: Leave as **Simple Toast** for a small result message, or **Ignore Silently** if you do not want confirmation that the command has been carried out successfully. See [here](#) for more information

Actions: Not used in our examples

Example - Rako Lighting (HTTP)

In this example, the Rako bridge is on IP Address 192.168.5.246. Rako HTTP conventions are room (ro), channel (ch), scene (sc), level (le), command (com). Refer to Rako's [documentation](#) for more specific scene and channel control. Here we are recalling scene 2 in room 12. Only a simple GET string is required.

× Edit Shortcut ▶ ✓

Appearance

Shortcut Name

Lights Bright 

Description

Basic Request Settings

Execute using...

App ▼

Method

GET ▼

URL

`http://192.168.5.245/rako.cgi?room=12&sc=2` { }

Example - Sonoff (tasmota) (HTTP)

iTead manufacture [Sonoff](#) products, many of which are inexpensive IoT inline mains relay modules. They are commonly used for lighting, heating and power control.

Tasmota is an alternative firmware for Sonoff which makes Sonoff devices controllable from simple HTTP commands, rather than relying on the internet and cloud services. All the Sonoff devices that we sell are pre-loaded with Tasmota.

In this example, the Sonoff switch is on IP Address 192.168.5.30. Tasmota HTTP conventions are prefixed with *cm?cmd=* and then *Power Toggle*, *Power on* and *Power Off*, as follows. Note that %20 is the ASCII for a space:

```
http://sonoff/cm?cmd=Power%20TOGGLE
```

```
http://sonoff/cm?cmd=Power%20On
```

```
http://sonoff/cm?cmd=Power%20off
```

Only a simple GET string is required. You can optionally add username and password credentials.



Example - Yamaha MusicCast (HTTP)

Yamaha MusicCast has an extensive API for power, source, volume, preset and media selection. See our separate Yamaha MusicCast API document for extensive examples.

In this example, the MusicCast player is on IP Address 192.168.5.219. The HTTP string is composed from the MusicCast API, and we are recalling preset 1

✕ Create Shortcut ▶ ✓

Appearance

Shortcut Name
Play Radio 2 

Description
Listen to radio two on MusicCast

Basic Request Settings

Execute using...
App ▼

Method
GET ▼

URL
http://192.168.5.219/YamahaExtendedControl/v1/netusb/recallPreset?zone=main&num=1 {}

Authentication

Authentication Method
No Authentication ▼

Example - Run an activity in SimpleControl (JSON)

SimpleControl is an iOS-based home control app. which combines traditional AV components and IoT devices into an integrated control solution. "Activities" (example: "watch TV") are macros which send commands to the various components in a system to simplify control. Synchronisation of multiple iOS devices is managed by "SimpleHub" - the software running on an Apple computer or an iOS Device. At any time a request can be sent to the SimpleHub to run an activity or control a device.

In this example, we refer to activities within SimpleControl. For device-specific control refer to the SimpleControl HTTP [documentation](#).

Activities have a unique ID (UUID), and can be recalled by sending the SimpleHub a JSON string. It is also possible to send direct commands to devices through the SimpleHub.

To identify the UUIDs associated with rooms and activities, you send an http request to the hub on port 47147 from a browser:

Example: `http://192.168.5.237:47147/api/v1/activities`

The response is a formatted list of activities which can be requested as a shortcut from flow7

Example (one activity from the list output):

```
{
  "icon": "BBC Radio 2.png",
  "roomuuid": "86F3BBDC-C61B-44F3-9AA4-AE8FE96701C4",
  "name": "Kitchen: Listen To Radio 2",
  "uuid": "34EA4E99-9124-4C09-AE9E-4BFD49322660"
}
```

The only information required from the output is the appropriate activity UUID (in bold above). To apply this as an HTTP/JSON shortcut we use the **POST** method in HTTP shortcuts. JSON Parameters (in this case activity UUID) are placed in the request body:

× Edit Shortcut **▶** **✓**

Appearance

Shortcut Name
Listen to BBCR2 

Description

Basic Request Settings

Execute using...
App ▼

Method
POST ▼

URL
http://192.168.5.237:47147/api/v1/runactivity **{}**

Authentication

Authentication Method
No Authentication ▼

Request Headers

ADD HEADER

Request Body

Request Body Type
Custom Text ▼

Content-Type
text/plain

Request Body
{ "activity_uuid" : "34EA4E99-9124-4C09-AE9E-4BFD49322660" } **{}**

Response Settings

Response Type
Simple Toast ▼

Testing HTTP/JSON shortcuts

On any shortcut edit page, use the play transport icon in the top right of the app bar to test a function

Using a PC or MAC to create shortcuts | Deploying on multiple devices

From the cog (settings) icon in the main page of HTTP Shortcuts, you can import and export all HTTP Shortcuts as a .xml file. This makes it easy to deploy shortcuts across multiple flow7 devices and makes editing considerably easier using a suitable XML editor (e.g. Adobe Brackets (free)). Utilities such as Cx file explorer (a free file manager app for Android) make it easy to transfer files to and from flow7 using FTP.

Blocks of shortcut code can be copied and pasted within the .xml file. Be careful to ensure that each command has a unique **id**, as highlighted in the example below:

```
{
  "acceptAllCertificates": false,
  "authentication": "none",
  "bodyContent": "",
  "contentType": "text/plain",
  "delay": 0,
  "description": "Switch kickboards on in the kitchen",
  "executionType": "app",
  "feedback": "simple_response",
  "headers": [],
  "iconName": "white_penguin",
  "id": 12,
  "launcherShortcut": false,
  "method": "GET",
  "name": "Kickboard heaters",
  "parameters": [],
```

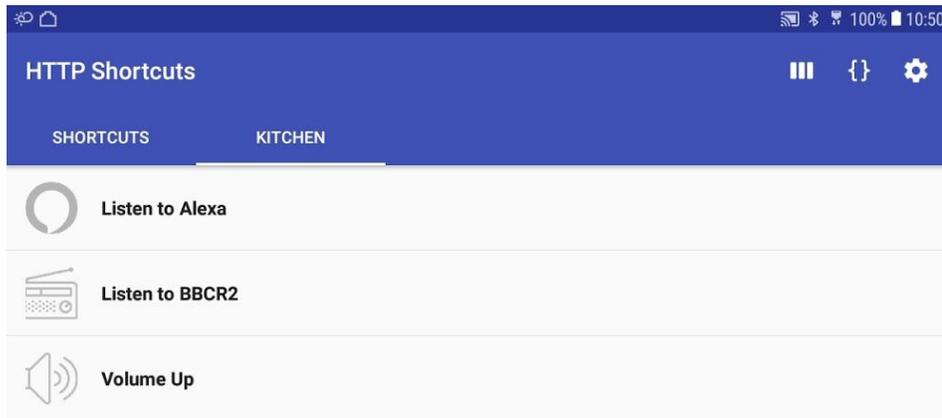
```
"password": "",
"requestBodyType": "x_www_form_urlencode",
"retryPolicy": "none",
"serializedBeforeActions": "[]",
"serializedFailureActions": "[]",
"serializedSuccessActions": "[]",
"timeout": 10000,
"url": "http://192.168.5.30/cm?cmd=power toggle",
"username": ""
},
```

Adding HTTP/JSON Shortcuts to the Home Screen

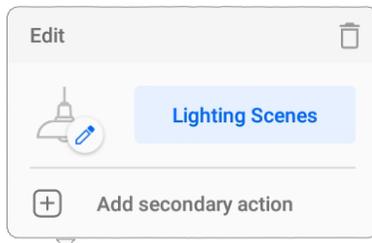
To add an HTTP/JSON shortcut to the home screen, touch and hold an area in the lower part of the screen until the customisation menu appears.

1. Press the + and  then to add an icon shortcut
2. Choose  Shortcut to navigate the shortcuts menu
3. Choose  HTTP Shortcuts to open the HTTP Shortcuts app.

4. Navigate to the shortcuts list you want to use and choose the shortcut:



5. A shortcut to the HTTP/JSON action will be created on the Home Screen
6. Editing icons: Once a shortcut has been created on the home screen, it's icon can be changed by touching and holding the icon. When the edit bubble appears click the blue pencil over the icon. The icon options bubble will appear, where you can choose from a generic icon, from the gallery, or from installed icon packs.



flow7 TAB A devices come with pre-installed icons in the gallery for most control system and smarthome applications. Our website also has a request form if you cannot find a suitable icon for the shortcut you are creating.

Powered Flowers Ltd.

Fircroft Business Centre

Edenbridge UK TN8 6EN

www.flow7.co.uk