

【天猫精灵系列】 天猫精灵 **X1** +  
**Home Assistant** 智能家居示例：整  
合 **AliGenie** 服务

Phodal Huang

September 8, 2017

目录

步骤 1: 条件准备 . . . . .	3
步骤 2: 使用 ngrok 分享服务 . . . . .	3
步骤 3: OAuth 授权 (待续) . . . . .	4
步骤 4: 配置 AliGenie 服务 . . . . .	4
步骤 5: 完成 . . . . .	9

玩点什么: <https://www.wandianshenme.com>

原文链接:<https://www.wandianshenme.com/play/tmall-x1-home-assistant-example>

本来想自己写一个天猫精灵的 Skill，来融合自己的智能家居系统。但是发现天猫精灵的开发者平台 AliGenie，要实现这样的功能比较难，需要自己：

- 搭建一个外网可以访问的 Home Assistant
- 编写相应的 Skill

第一步『搭建一个外网可以访问的 Home Assistant』，目前对我来说比较困难。第二步，则在开发者的钉钉群里，有一个叫『胡志远』的先驱已经完成了这个工作。由于这份代码没有外传出来，便发到我的 GitHub 上：

<https://github.com/phodal/tmall-x1-home-assistant-example>

## 步骤 1: 条件准备

在了解详细的配置之前，先让我们了解一下，天猫精灵智能家居开发的基本流程：

1. 将 Raspberry Pi 映射到外网
2. 编写相应的 OAuth 2.0 代码
3. 编写相应的 Skill

## 步骤 2: 使用 ngrok 分享服务

以前我们可以通过 ADSL 配个端口映射，借此让本机服务在外网可以访问，但是现在这个方法几乎是不可能的。反正，我试了几个相应的服务都不行。因此，就需要自己搭建 Ngrok 服务。

在先前的《[低廉的亚马逊 Amazon Alexa 与 Raspberry Pi、Ngrok 进行家庭自动化灯开关](#)》中，我们介绍了如何安装 ngrok 进行穿透：

1. 下载相应的 zip 文件：

<https://ngrok.com/download> (PS: 获取稳定的 ARM Linux 版)

2. 使用 SCP 将其复制到您的 Raspberry Pi 上。我喜欢使用 winSCP。你可以在这里找到它：

<https://winscp.net/eng/download.php>

3. 解压：

```
1 unzip ngrok-stable-linux-arm.zip
```

## 4. 运行:

```
1 sudo ./ngrok http 5000
```

## 步骤 3: OAuth 授权 (待续)

天猫精灵智能家居采用通用的 OAuth2.0 开放授权协议, 可以让 AILabs 在不获取合作方用户名和密码的前提下, 访问用户授权的资源, 协议规范可以访问 OAuth2.0 官方网站: <https://oauth.net/2/>

其鉴权流程如下所示:

1. AILabs 在合作方开放平台注册一个应用, 获取到相应的 App id 和 App secret
2. AILabs 应用向合作方 OAuth2.0 服务发起一个授权请求
3. 合作方 OAuth2.0 服务向用户展示一个授权页面, 提醒用户 AILabs 应用需要获取用户的哪些信息
4. 用户授权 AILabs 客户端应用后, 可获得一个 access\_token
5. 通过 access\_token, AILabs 应用可以通过合作方开放的 API 访问用户授权的数据

## 步骤 4: 配置 AliGenie 服务

你可以从 <https://github.com/phodal/tmall-x1-home-assistant-example> 中获取一份相应的配置。

其 skill 如下所示:

```
1 {
2   "name" : "HAtest",
3   "invocationName" : "智能家居",
4   "createTime" : 1502277802000,
5   "image" :
6     "https://g.alicdn.com/forest/ai-platform-web/4.0.83/img/default_domain.png",
7   "shortDesc" : "",
8   "longDesc" : "",
9   "oldSamples" : [ ],
10  "newSamples" : [ ],
11  "category" : "智能家居",
12  "accountLinkUrl" : "",
13  "serviceProviders" : [ ],
```

```

13  "privacyUrl" : "",
14  "termsUrl" : "", "services" : [ {
15    "name" : "switch_off",
16    "description" : "关闭开关",
17    "method" : "POST",
18    "url" :
19      "http://yourhomeassistantsite/api/services/switch/turn_off?api_password=yourpassword"
20    "inputParams" : [ {
21      "name" : "entity_id",
22      "description" : "",
23      "required" : true,
24      "sample" : "switch.aircondition_sw"
25    } ],
26    "response" : "[\n {\n  \"attributes\": {\n    \"No motion since\":
27      0,\n    \"battery_level\": 53,\n    \"device_class\":
28      \"motion\", \n    \"friendly_name\": \"Hall motion2\"\n  }, \n
29      \"entity_id\": \"binary_sensor.motion_sensor_158d00012353c3\", \n
30      \"last_changed\": \"2017-08-10T17:53:42.395085+00:00\", \n
31      \"last_updated\": \"2017-08-10T17:53:42.395085+00:00\", \n
32      \"state\": \"off\"\n }, \n {\n  \"attributes\": {\n
33      \"assumed_state\": false, \n    \"entity_id\": [\n
34      \"binary_sensor.motion_sensor_158d000171b983\", \n
35      \"binary_sensor.motion_sensor_158d00012353c3\", \n
36      \"binary_sensor.motion_sensor_158d0001a2b1df\"\n    ], \n
37      \"friendly_name\": \"Hall\", \n    \"order\": 1\n  }, \n
38      \"entity_id\": \"group.hall\", \n    \"last_changed\":
39      \"2017-08-10T17:53:42.413496+00:00\", \n    \"last_updated\":
40      \"2017-08-10T17:53:42.413496+00:00\", \n    \"state\": \"off\"\n
41    }, \n {\n  \"attributes\": {\n    \"assumed_state\": true, \n
42      \"auto\": true, \n    \"entity_id\": [\n
43      \"switch.pcserver\", \n    \"switch.aircondition_sw\"\n
44    ], \n    \"friendly_name\": \"all switches\", \n    \"hidden\":
45      true, \n    \"order\": 8\n  }, \n    \"entity_id\":
46      \"group.all_switches\", \n    \"last_changed\":
47      \"2017-08-10T17:53:42.570712+00:00\", \n    \"last_updated\":
48      \"2017-08-10T17:53:42.570712+00:00\", \n    \"state\": \"off\"\n

```

```

    },\n {\n  \attributes\": {\n    \assumed_state\": true,\n    \friendly_name\": \"空调\"\n  },\n  \entity_id\":\n  \switch.aircondition_sw\",,\n  \last_changed\":\n  \2017-08-10T17:53:42.564282+00:00\",,\n  \last_updated\":\n  \2017-08-10T17:53:42.564282+00:00\",,\n  \state\": \off\"\n  }\n]\",
26 \"extendInfo\" : \"\" }, {
27   \"name\" : \"switch_on\",
28   \"description\" : \"打开开关\",
29   \"method\" : \"POST\",
30   \"url\" :
      \"http://yourhomeassistantsite/api/services/switch/turn_on?api_password=yourpassword\",
31   \"inputParams\" : [ {
32     \"name\" : \"entity_id\",
33     \"description\" : \"设备ID\",
34     \"required\" : true,
35     \"sample\" : \"switch.aircondition_sw\"
36   } ],
37   \"response\" : \"[\n {\n  \attributes\": {\n    \assumed_state\":\n    true,\n    \auto\": true,\n    \entity_id\": [\n\n    \switch.pcserver\",,\n    \switch.aircondition_sw\"\n  ],\n  \friendly_name\": \all switches\",,\n  \hidden\":\n  true,\n  \order\": 8\n  },\n  \entity_id\":\n  \group.all_switches\",,\n  \last_changed\":\n  \2017-08-10T17:49:40.546452+00:00\",,\n  \last_updated\":\n  \2017-08-10T17:49:40.546452+00:00\",,\n  \state\": \on\"\n  },\n {\n  \attributes\": {\n    \assumed_state\": true,\n    \friendly_name\": \"空调\"\n  },\n  \entity_id\":\n  \switch.aircondition_sw\",,\n  \last_changed\":\n  \2017-08-10T17:49:40.527380+00:00\",,\n  \last_updated\":\n  \2017-08-10T17:49:40.527380+00:00\",,\n  \state\": \on\"\n  }\n]\",
38   \"extendInfo\" : \"\"
39 },],
40 \"smalltalks\" : [ ],
41 \"nluSolution\" : \"SFIC\",

```

```
42 "instructions" : null,  
43 "settingLinkUrl" : null, "copyrightUrl" : "",  
44 "qualificationUrl" : "",  
45 "hasConfirmCompliance" : null  
46 }
```

对应的打开设备，配置是：

```
1 {  
2 "name" : "关闭设备",  
3 "description" : "",  
4 "type" : "",  
5 "useWebhook" : false,  
6 "precedingIntents" : [ ],  
7 "userSays" : [ {  
8 "text" : "关闭@{device_name}",  
9 "labelledText" : "关闭@{device_name}",  
10 "type" : "SAMPLE",  
11 "typeUI" : "TEMPLATE"  
12 } ],  
13 "followUps" : [ ],  
14 "parameters" : [ {  
15 "required" : true,  
16 "name" : "device_name",  
17 "entity" : "device_name",  
18 "prompts" : [ ],  
19 "replyTemplates" : [ ],  
20 "valueReference" : "device_name",  
21 "defaultValue" : ""  
22 } ],  
23 "responses" : [ {  
24 "name" : "reply_ok",  
25 "speeches" : [ "关闭@{device_name} 完成" ],  
26 "parameters" : [ ]  
27 }, {  
28 "name" : "reply_failed",  
29 "speeches" : [ "关闭@{device_name} 失败" ],
```

```

30     "parameters" : [ ]
31 } ], "executeLogic" : {
32     "type" : "XML_CONFIG",
33     "content" : "<?xml version=\"1.0\" encoding=\"UTF-8\"?>\n<intent
        xmlns=\"http://www.da.alibaba.com/coin/ide/task/template\"
        xmlns:xsi=\"http://www.w3.org/2001/XMLSchema-instance\"
        xsi:schemaLocation=\"http://www.da.alibaba.com/coin/ide/task/template
        ../template/intent_config.xsd\">\n  <params>\n    <param
        name=\"device_name\"
        type=\"String\">Request.getSlotValue(\"device_name\")</param>\n
        </params>\n  <process-branches>\n    <branch name=\"dowork\">\n
        <params />\n      <process-branches>\n        <branch
        name=\"desk_lamp\">\n          <params>\n            <param
        name=\"var_desk_lamp\"
        type=\"Map(String,String)\">Map.of(\"entity_id\", \"light.desk_lamp\")</param>\n
            <param name=\"Result\"
        type=\"String\">Service.request(\"light_off\", var_desk_lamp)</param>\n
            </params>\n          <process-switch>\n
        <default reply-node=\"reply_ok\" />\n          </process-switch>\n
        </branch>\n        <branch name=\"air_condition\">\n
        <params>\n          <param name=\"var_air_condition\"
        type=\"Map(String,String)\">Map.of(\"entity_id\", \"switch.aircondition_sw\")</param>\n
          <param name=\"Result\"
        type=\"String\">Service.request(\"switch_off\", var_air_condition)</param>\n
          </params>\n        <process-switch>\n
        <default reply-node=\"reply_ok\" />\n        </process-switch>\n
        </branch>\n      </process-branches>\n    <process-switch>\n      <case
        branch-name=\"desk_lamp\">device_name==\"台灯\"</case>\n
        <case branch-name=\"air_condition\">device_name==\"空调\"</case>\n
        <default reply-node=\"reply_failed\" />\n
        </process-switch>\n    </branch>\n  </process-branches>\n
        <process-switch>\n      <case
        branch-name=\"dowork\">device_name!=null</case>\n      <default
        reply-node=\"reply_failed\" />\n    </process-switch>\n</intent>\n\n",
34     "jsonContent" : null,

```



```
35   "args" : [ "$device_name=空调" ]
36 }, "webhook" : {
37   "url" : "",
38   "headers" : [ ]
39 }
40 }
```

更详细的配置可以见 GitHub: <https://github.com/phodal/tmall-x1-home-assistant-example>

步骤 5: 完成

待续

原文链接: <https://www.wandianshenme.com/play/tmall-x1-home-assistant-example>