

API Specifications for the Abby Smart Gateway

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Table of contents

Update History	4
About this document	5
API Authorization	6
APIs	7
1. APIs for reading gateway information	7
1.1 Gateway Information	7
1.2 Gateway Status	8
1.3 List out all devices which connecting to gateway.....	9
2. APIs for controlling the lights.....	10
2.1 Turn light switch ON or OFF	10
2.2 Check current light switch ON/OFF status	11
2.3 Update light brightness.....	12
2.4 Check current light brightness	13
3. APIs for controlling the curtain shutters.....	14
3.1 Update curtain shutter position.....	14
3.2 Check current curtain shutter position	15
3.3 Move curtain shutter	16
3.4 Stop curtain shutter.....	17
4. APIs for controlling the air conditioners (AC - SPLIT TYPE)	18
4.1 Turn AC switch ON or OFF.....	18
4.2 Check current AC switch ON/OFF status.....	19
4.3 Update AC mode	20
4.4 Check current AC mode	22
4.5 Update AC fan speed.....	23
4.6 Check current AC Fan speed	25
4.7 Update AC temperature	26
4.8 Check current AC temperature.....	27
5. APIs for controlling Air Conditioners (AC-VRV TYPE)	28
5.1 Turn AC switch ON or OFF.....	28
5.2 Check current AC switch ON/OFF status.....	29
5.3 Update AC mode.....	30

5.4 Check current AC mode	32
5.5 Update AC fan speed.....	33
5.6 Check current AC Fan speed	35
5.7 Update AC temperature	36
5.8 Check current AC temperature.....	37
Misc	40

Update History

Date	Editor	Version	Updates
26, Oct, 2019	Zawa	1.6.1	Add API for Scene
18, June, 2019	Zawa	1.5.1	Modify ac/vrv status code description of it's mode
18, June, 2019	Zawa	1.5	Modify the Success Response content
7, April, 2019	Benny Chan	1.4	Add API for VRV Air conditioner
9, Nov, 2018	Chung Lai	1.3	Update the some special names
19, Oct, 2018	Chung Lai	1.2	Add folder "abby" in all API URLs
19, Oct, 2018	Chung Lai	1.1	Changed URL of API 1.2; added "list all device" API (1.3); added Error 503 response; Fixed some typo, etc
18, Oct, 2018	Chung Lai	1.0	Fine tune APIs and re-format the document
Aug, 2018	Benny Chan	0.21	Document creation

About this document

This document defines the APIs provided by the Abby gateway, which is installed in raspberry pi.

The APIs are used by any web-interface (Mobile Apps, websites, etc) to control the smart devices, such as lights, curtain and air conditioners.

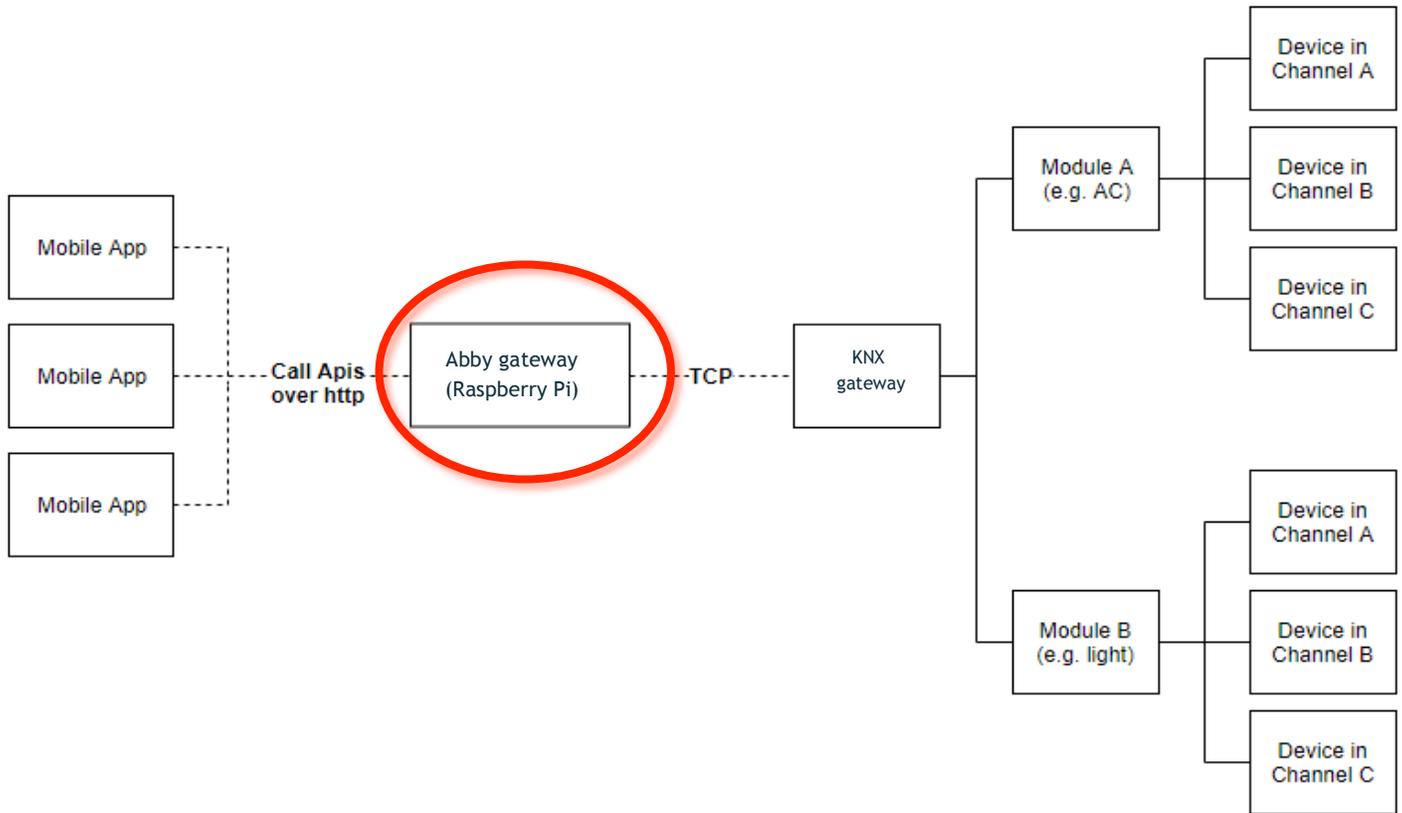


Figure: relationship diagram of different components.

API Authorization

All APIs must over HTTPS protocol and using the HTTP "Authorization: Basic" headers and the username and password colon-separated and then base64-encoded.

If a call is made to a URL that the anonymous user has access/permissions to, auth headers will be ignored.

Permissions are per network per gateway. If multiple gateways are being accessed simultaneously, care should be taken by administrator to ensure that the permissions for a given user are consistent across the gateways they are given access to.

In this API specification, there are 2 kinds of permission: **view & update**. The API calls should use the user with correct permission, otherwise, it will throw unauthorized error (401).

The users and their permission are defined in Abby gateway application.

APIs

1. APIs for reading gateway information

1.1 Gateway Information

p.s. if could be run when Abby Gateway is turned off or not connected

URLs:	/abby/gateway_info
Method:	GET
Permission:	view
Parameters:	None
Example Call:	<a href="https://<gateway address: port>/abby/gateway_info">https://<gateway address: port>/abby/gateway_info
Success Response:	<p>Code:200</p> <p>Content-Type: application/json</p> <pre>{ "code":Integer, "result":String, "data":{ "gateway_id" : Integer, "room_id" : Integer, "version" : String } }</pre> <p>Meanings of parameters:</p> <p><i>gateway_id</i>: ID of the gateway. Defined in config file of Abby gateway.</p> <p><i>room_id</i>: ID of the room that gateway to serve. For displaying the room name in App. Defined in config file of Abby gateway.</p> <p><i>version</i>: Version number of current API software. If version is not matched, the App should be updated. Defined in config file of Abby gateway.</p>
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p> <p>Code: 500 Internal Server Error Meaning: The server had an error.</p>

1.2 Gateway Status

p.s. if could be run when Abby Gateway is turned off or not connected

URLs:	/abby/gateway_status
Method:	GET
Permission:	view
Parameters:	None
Example Call:	<a href="https://<gateway address: port>/abby/gateway_status">https://<gateway address: port>/abby/gateway_status
Success Response:	<p>Code:200</p> <p>Content-Type: application/json</p> <pre>{ "code":Integer, "result":String, "data":{ "temperature" : String, "gateway_status" : String } }</pre> <p>Meanings of parameters:</p> <p><i>temperature</i>: CPU Temperature of the device, should show a warning in App if the temperature is too hot.</p> <p><i>gateway_status</i>: The gateway is running or not, either “RUNNING” or “STOPPED”. The gateway is STOPPED if the Abby Gateway is not connected or is not switched on. With STOPPED condition, other APIs will throw Error 503.</p>
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p> <p>Code: 500 Internal Server Error Meaning: The server had an error.</p>

1.3 List out all devices which connecting to gateway

p.s. if could be run when Abby Gateway is turned off or not connected

URLs:	/abby/gateway_devices
Method:	GET
Permission:	view
Parameters:	None
Example Call:	<a href="https://<gateway address: port>/abby/gateway_devices">https://<gateway address: port>/abby/gateway_devices
Success Response:	<p>Code: 200</p> <p>Content-Type: application/json</p> <pre> { "code": Integer, "result": String, "data": { "devices": [{ "type": String, "id": Integer, "name": String }, { "type": String, "id": Integer, "name": String }] } } </pre> <p>Meanings of parameters:</p> <p><i>devices</i>: List of devices connecting to gateway, to update the List in App.</p> <p><i>type</i>: Type of the devices, will be “light”, “curtain”, “ac”, etc.</p> <p><i>id</i>: Device ID to be used in API calls</p> <p><i>name</i>: The default name to be displayed on screen, is defined in Abby gateway.</p>
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p> <p>Code: 500 Internal Server Error Meaning: The server had an error.</p>

2. APIs for controlling the lights

2.1 Turn light switch ON or OFF

URLs:	/abby/light_switch_update
Method:	GET
Permission:	update
Parameters:	<ul style="list-style-type: none"> - <i>light_id</i>: 2 digits integer, define which light will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway. - <i>mode</i>: 1 digit integer, 0 or 1. 0 means off and 1 means on
Example Call:	<p><a href="https://<gateway address: port>/abby/light_switch_update/<light_id>/<mode>">https://<gateway address: port>/abby/light_switch_update/<light_id>/<mode></p> <p>example: https://192.168.1.100:8000/abby/light_switch_update/01/1</p>
Success Response:	<p>Code:200</p> <p>Content-Type: application/json</p> <pre>{ "code":Integer, "result":String, "data":{ "light_switch_status" : Integer } }</pre> <p>Meanings of parameters:</p> <p><i>result</i>: “SUCCESS” or “FAIL”. It will fail if light_id is not found, or mode is undefined.</p> <p><i>light_switch_status</i>: the status of light switch after update. 0 means off and 1 means on</p>
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p> <p>Code: 500 Internal Server Error Meaning: The server had an error.</p> <p>Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.</p>

2.2 Check current light switch ON/OFF status

URLs:	<code>/abby/light_switch_status</code>
Method:	GET
Permission:	view
Parameters:	- <i>light_id</i> : 2 digits integer, define which light will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway.
Example Call:	<code>https://<gateway address: port>/abby/light_switch_status/<light_id></code> example: <code>https://192.168.1.100:8000/abby/light_switch_status/01</code>
Success Response:	Code: 200 Content-Type: application/json <pre>{ "code": Integer, "result": String, "data": { "light_switch_status" : Integer } }</pre> Meanings of parameters: <i>result</i> : "SUCCESS" or "FAIL". It will fail if <i>light_id</i> is not found. <i>light_switch_status</i> : the status of light switch. 0 means off and 1 means on
Error Responses:	Code: 401 Unauthorized Meaning: User name or password provided is not correct. Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested. Code: 500 Internal Server Error Meaning: The server had an error. Code: 503 Service Unavailable Meaning: Abby Gateway is switched off or cannot be connected, service unavailable.

2.3 Update light brightness

URLs:	/abby/light_brightness_update
Method:	GET
Permission:	update
Parameters:	<ul style="list-style-type: none"> - <i>light_id</i>: 2 digits integer, define which light will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway. - <i>value</i>: 3 digit integer (e.g. 000 - 255) 0 means 0% and 255 means 100%
Example Call:	<p><a href="https://<gateway address: port>/abby/light_brightness_update/<light_id>/<value>">https://<gateway address: port>/abby/light_brightness_update/<light_id>/<value></p> <p>example: https://192.168.1.100:8000/abby/light_brightness_update/01/150</p>
Success Response:	<p>Code:200</p> <p>Content-Type: application/json</p> <pre>{ "code":Integer, "result":String, "data":{ "light_brightness_status" : Integer } }</pre> <p>Meanings of parameters:</p> <p><i>result</i>: “SUCCESS” or “FAIL”. It will fail if light_id is not found, or the light is turned off, or the value is out of range.</p> <p><i>light_brightness_status</i>: the status of light brightness after update. 0 = 0%, 255 = 100%.</p>
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p> <p>Code: 500 Internal Server Error Meaning: The server had an error.</p> <p>Code: 503 Service Unavailable Meaning: Abby Gateway is switched off or cannot be connected, service unavailable.</p>

2.4 Check current light brightness

URLs:	/abby/light_brightness_status
Method:	GET
Permission:	view
Parameters:	- <i>light_id</i> : 2 digits integer, define which light will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway.
Example Call:	<a href="https://<gateway address: port>/abby/light_brightness_status/<light_id>">https://<gateway address: port>/abby/light_brightness_status/<light_id> example: https://192.168.1.100:8000/light_brightness_status/01
Success Response:	Code:200 Content-Type: application/json <pre>{ "code":Integer, "result":String, "data":{ "light_brightness_status" : Integer } }</pre> Meanings of parameters: <i>result</i> : “ SUCCESS ” or “ FAIL ”. It will fail if light_id is not found, or the light is turned off. <i>light_brightness_status</i> : the status of light brightness. 0 = 0%, 255 = 100%.
Error Responses:	Code: 401 Unauthorized Meaning: User name or password provided is not correct. Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested. Code: 500 Internal Server Error Meaning: The server had an error. Code: 503 Service Unavailable Meaning: Abby Gateway is switched off or cannot be connected, service unavailable.

3. APIs for controlling the curtain shutters

3.1 Update curtain shutter position

URLs:	/abby/curtain_shutter_update
Method:	GET
Permission:	update
Parameters:	<ul style="list-style-type: none"> - <i>curtain_id</i>: 2 digits integer, define which curtain will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway. - <i>value</i>: 3 digit integer (e.g. 000 - 255) 0 means 0% and 255 means 100%
Example Call:	<p><a href="https://<gateway address: port>/abby/curtain_shutter_update/<curtain_id>/<value>">https://<gateway address: port>/abby/curtain_shutter_update/<curtain_id>/<value></p> <p>example: https://192.168.1.100:8000/curtain_shutter_update/01/150</p>
Success Response:	<p>Code:200</p> <p>Content-Type: application/json</p> <pre>{ "code":Integer, "result":String, "data":{ "curtain_shutter_status" : Integer } }</pre> <p>Meanings of parameters:</p> <p><i>result</i>: “SUCCESS” or “FAIL”. It will fail if curtain_id is not found, or value is out of range.</p> <p><i>curtain_shutter_status</i>: the status of curtain shutter position after update. 0 = 0%, 255 = 100%.</p>
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p> <p>Code: 500 Internal Server Error Meaning: The server had an error.</p> <p>Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.</p>

3.2 Check current curtain shutter position

URLs:	/abby/curtain_shutter_status
Method:	GET
Permission:	view
Parameters:	- <i>curtain_id</i> : 2 digits integer, define which curtain will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway.
Example Call:	<a href="https://<gateway address: port>/abby/curtain_shutter_status/<curtain_id>">https://<gateway address: port>/abby/curtain_shutter_status/<curtain_id> example: https://192.168.1.100:8000/curtain_shutter_status/01
Success Response:	Code:200 Content-Type: application/json <pre>{ "code":Integer, "result":String, "data":{ "curtain_shutter_status" : Integer } }</pre> Meanings of parameters: <i>result</i> : “SUCCESS” or “FAIL”. It will fail if <i>curtain_id</i> is not found. <i>curtain_shutter_status</i> : the status of curtain shutter position. 0 = 0%, 255 = 100%.
Error Responses:	Code: 401 Unauthorized Meaning: User name or password provided is not correct. Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested. Code: 500 Internal Server Error Meaning: The server had an error. Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.

3.3 Move curtain shutter

URLs:	/abby/curtain_shutter_move
Method:	GET
Permission:	update
Parameters:	<ul style="list-style-type: none"> - <i>curtain_id</i>: 2 digits integer, define which curtain will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway. - <i>mode</i>: 1 digit integer (e.g. 0 - 1) 0 means UP, 1 means DOWN
Example Call:	<p><a href="https://<gateway address: port>/abby/curtain_shutter_move/<curtain_id>/<mode>">https://<gateway address: port>/abby/curtain_shutter_move/<curtain_id>/<mode></p> <p>example: https://192.168.1.100:8000/curtain_shutter_move/01/1</p>
Success Response:	<p>Code:200</p> <p>Content-Type: application/json</p> <pre>{ "code":Integer, "result":String, "data":{ "curtain_shutter_move_status" : Integer } }</pre> <p>Meanings of parameters:</p> <p><i>result</i>: “SUCCESS” or “FAIL”. It will fail if curtain_id is not found, or mode is undefined.</p> <p><i>curtain_shutter_move_status</i>: the status of curtain shutter movement after update. 0 means UP, 1 means DOWN.</p>
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p> <p>Code: 500 Internal Server Error Meaning: The server had an error.</p> <p>Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.</p>

3.4 Stop curtain shutter

URLs:	/abby/curtain_shutter_stop
Method:	GET
Permission:	update
Parameters:	<ul style="list-style-type: none"> - <i>curtain_id</i>: 2 digits integer, define which curtain will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway. - <i>mode</i>: 1 digit integer (e.g. 0) 1 means STOP
Example Call:	<p><a href="https://<gateway address: port>/abby/curtain_shutter_stop/<curtain_id>/<mode>">https://<gateway address: port>/abby/curtain_shutter_stop/<curtain_id>/<mode></p> <p>example: https://192.168.1.100:8000/curtain_shutter_stop/01/1</p>
Success Response:	<p>Code:200</p> <p>Content-Type: application/json</p> <pre>{ "code":Integer, "result":String, "data":{ "curtain_shutter_stop_status" : Integer } }</pre> <p>Meanings of parameters:</p> <p><i>result</i>: “SUCCESS” or “FAIL”. It will fail if curtain_id is not found, or mode is undefined.</p> <p><i>curtain_shutter_move_status</i>: the status of curtain shutter movement after update. 1 means STOP.</p>
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p> <p>Code: 500 Internal Server Error Meaning: The server had an error.</p> <p>Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.</p>

4. APIs for controlling the air conditioners (AC - SPLIT TYPE)

4.1 Turn AC switch ON or OFF

URLs:	/abby/ac_switch_update
Method:	GET
Permission:	update
Parameters:	<ul style="list-style-type: none"> - <i>ac_id</i>: 2 digits integer, define which air conditioner will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway. - <i>mode</i>: 1 digit integer. 0 means off and 1 means on.
Example Call:	<p><a href="https://<gateway address: port>/abby/ac_switch_update/<ac_id>/<mode>">https://<gateway address: port>/abby/ac_switch_update/<ac_id>/<mode></p> <p>example: https://192.168.1.100:8000/ac_switch_update/01/1</p>
Success Response:	<p>Code:200</p> <p>Content-Type: application/json</p> <pre>{ "code":Integer, "result":String, "data":{ "ac_switch_status" : Integer } }</pre> <p>Meanings of parameters:</p> <p><i>result</i>: “SUCCESS” or “FAIL”. It will fail if ac_id is not found, or the mode is undefined.</p> <p><i>ac_switch_status</i>: the status of current AC switch after update. - 0 means off and 1 means on</p>
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p> <p>Code: 500 Internal Server Error Meaning: The server had an error.</p> <p>Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.</p>

4.2 Check current AC switch ON/OFF status

URLs:	/abby/ac_switch_status
Method:	GET
Permission:	view
Parameters:	- <i>ac_id</i> : 2 digits integer, define which air conditioner will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway.
Example Call:	https://<gateway address: port>/abby/ac_switch_status/<ac_id> example: https://192.168.1.100:8000/ac_switch_status/01
Success Response:	Code:200 Content-Type: application/json <pre>{ "code":Integer, "result":String, "data":{ "ac_switch_status" : Integer } }</pre> Meanings of parameters: <i>result</i> : “SUCCESS” or “FAIL”. It will fail if <i>ac_id</i> is not found. <i>ac_switch_status</i> : the status of current AC switch after update. - 0 means off and 1 means on
Error Responses:	Code: 401 Unauthorized Meaning: User name or password provided is not correct. Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested. Code: 500 Internal Server Error Meaning: The server had an error. Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.

4.3 Update AC mode

URLs:	/abby/ac_mode_update
Method:	GET
Permission:	update
Parameters:	<ul style="list-style-type: none"> - <i>ac_id</i>: 2 digits integer, define which air conditioner will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway. - <i>mode</i>: digit integer <ul style="list-style-type: none"> - 0 means automatic (0 will map to 00 in raspberry pi) - 1 means heating (1 will map to 01 in raspberry pi) - 3 means cooling (3 will map to 03 in raspberry pi) - 9 means fan (9 will map to 09 in raspberry pi) - 14 means dry (14 will map to 0E in raspberry pi)
Example Call:	<p><a href="https://<gateway address: port>/abby/ac_mode_update/<ac_id>/<mode>">https://<gateway address: port>/abby/ac_mode_update/<ac_id>/<mode></p> <p>example: https://192.168.1.100:8000/ac_mode_update/01/2</p>
Success Response:	<p>Code:200 Content-Type: application/json</p> <pre>{ "code":Integer, "result":String, "data":{ "ac_mode_status" : Integer }</pre> <p>Meanings of parameters:</p> <p><i>result</i>: “SUCCESS” or “FAIL”. It will fail if ac_id is not found, or the AC is switched off, or the mode is undefined.</p> <p><i>ac_mode_status</i>: the status of AC mode after update.</p> <ul style="list-style-type: none"> - 0 means automatic - 1 means heating - 3 means cooling - 9 means fan - 14 means dry
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p>

	<p>Code: 500 Internal Server Error Meaning: The server had an error.</p> <p>Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.</p>
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4.4 Check current AC mode

URLs:	<code>/abby/ac_mode_status</code>
Method:	GET
Permission:	view
Parameters:	- <i>ac_id</i> : 2 digits integer, define which air conditioner will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway.
Example Call:	<code>https://<gateway address: port>/abby/ac_mode_status/<ac_id></code> example: <code>https://192.168.1.100:8000/ac_mode_status/01</code>
Success Response:	<p>Code:200</p> <p>Content-Type: application/json</p> <pre>{ "code":Integer, "result":String, "data":{ "ac_mode_status" : Integer } }</pre> <p>Meanings of parameters:</p> <p><i>result</i>: “SUCCESS” or “FAIL”. It will fail if <i>ac_id</i> is not found, or the AC is switched off.</p> <p><i>ac_mode_status</i>: the status of current AC mode.</p> <ul style="list-style-type: none"> - 0 means automatic (00 will map to 0 in raspberry pi) - 1 means heating (01 will map to 1 in raspberry pi) - 3 means cooling (03 will map to 3 in raspberry pi) - 9 means fan (09 will map to 9 in raspberry pi) - 14 means dry (0E will map to 14 in raspberry pi)
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p> <p>Code: 500 Internal Server Error Meaning: The server had an error.</p> <p>Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.</p>

4.5 Update AC fan speed

URLs:	/abby/ac_fan_update
Method:	GET
Permission:	update
Parameters:	<ul style="list-style-type: none"> - ac_id: 2 digits integer, define which air conditioner will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway. - mode: 1 digit integer. <ul style="list-style-type: none"> - 0 means Auto - 10 means SPEED-1 - 30 means SPEED-2 - 50 means SPEED-3 - 70 means SPEED-4 - 90 means SPEED-5
Example Call:	<p><a href="https://<gateway address: port>/abby/ac_fan_update/<ac_id>/<mode>">https://<gateway address: port>/abby/ac_fan_update/<ac_id>/<mode></p> <p>example: https://192.168.1.100:8000/ac_fan_update/01/3</p>
Success Response:	<p>Code:200</p> <p>Content-Type: application/json</p> <pre>{ "code":Integer, "result":String, "data":{ "ac_fan_status" : Integer } }</pre> <p>Meanings of parameters:</p> <p>result: “SUCCESS” or “FAIL”. It will fail if ac_id is not found, or AC is switched off, or the mode is undefined.</p> <p>ac_fan_status: the speed of AC fan after update. 0 means Auto, 10 means SPEED-1, 50 means SPEED-3.</p>
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p> <p>Code: 500 Internal Server Error Meaning: The server had an error.</p>

	<p><i>Code: 503 Service Unavailable</i> Meaning: Gateway is switched off or cannot be connected, service unavailable.</p>
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4.6 Check current AC Fan speed

URLs:	<code>/abby/ac_fan_status</code>
Method:	GET
Permission:	view
Parameters:	- <i>ac_id</i> : 2 digits integer, define which air conditioner will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway.
Example Call:	<code>https://<gateway address: port>/abby/ac_fan_status/<ac_id></code> example: <code>https://192.168.1.100:8000/ac_fan_status/01</code>
Success Response:	Code:200 Content-Type: application/json <pre>{ "code":Integer, "result":String, "data":{ "ac_fan_status" : Integer } }</pre> Meanings of parameters: <i>result</i> : “ SUCCESS ” or “ FAIL ”. It will fail if <i>ac_id</i> is not found, or AC is switched off. <i>ac_switch_status</i> : the speed of current AC fan. 0 means Auto, 10 means SPEED-1, 50 means SPEED-3.
Error Responses:	Code: 401 Unauthorized Meaning: User name or password provided is not correct. Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested. Code: 500 Internal Server Error Meaning: The server had an error. Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.

4.7 Update AC temperature

URLs:	/abby/ac_temp_update
Method:	GET
Permission:	update
Parameters:	<ul style="list-style-type: none"> - <i>ac_id</i>: 2 digits integer, define which air conditioner will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway. - <i>temp</i>: 2 digit integer, ranged from 18-30. The value in terms of degree celsius to set. e.g. 18 means 18°C.
Example Call:	<p><a href="https://<gateway address: port>/abby/ac_temp_update/<ac_id>/<temp>">https://<gateway address: port>/abby/ac_temp_update/<ac_id>/<temp></p> <p>example: https://192.168.1.100:8000/ac_temp_update/01/18</p>
Success Response:	<p>Code:200</p> <p>Content-Type: application/json</p> <pre>{ "code":Integer, "result":String, "data":{ "ac_temp_status" : Integer } }</pre> <p>Meanings of parameters:</p> <p><i>result</i>: “SUCCESS” or “FAIL”. It will fail if ac_id is not found, or AC is switched off, or the temp is out of range.</p> <p><i>ac_temp_status</i>: the target AC temperature after update, in terms of degree Celsius.</p>
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p> <p>Code: 500 Internal Server Error Meaning: The server had an error.</p> <p>Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.</p>

4.8 Check current AC temperature

URLs:	/abby/ac_temp_status
Method:	GET
Permission:	view
Parameters:	- <i>ac_id</i> : 2 digits integer, define which air conditioner will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway.
Example Call:	<a href="https://<gateway address: port>/abby/ac_temp_status/<ac_id>">https://<gateway address: port>/abby/ac_temp_status/<ac_id> example: https://192.168.1.100:8000/ac_temp_status/01
Success Response:	Code:200 Content-Type: application/json <pre>{ "code":Integer, "result":String, "data":{ "ac_temp_status" : Integer } }</pre> Meanings of parameters: <i>result</i> : “ SUCCESS ” or “ FAIL ”. It will fail if <i>ac_id</i> is not found, or AC is switched off. <i>ac_temp_status</i> : the current AC temperature, in terms of degree Celsius.
Error Responses:	Code: 401 Unauthorized Meaning: User name or password provided is not correct. Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested. Code: 500 Internal Server Error Meaning: The server had an error. Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.

5. APIs for controlling Air Conditioners (AC-VRV TYPE)

5.1 Turn AC switch ON or OFF

URLs:	/abby/vrv_switch_update
Method:	GET
Permission:	update
Parameters:	<ul style="list-style-type: none"> - ac_id: 2 digits integer, define which air conditioner will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway. - mode: 1 digit integer. 0 means off and 1 means on.
Example Call:	<p><a href="https://<gateway address: port>/abby/vrv_switch_update/<ac_id>/<mode>">https://<gateway address: port>/abby/vrv_switch_update/<ac_id>/<mode></p> <p>example: https://192.168.1.100:8000/vrv_switch_update/01/1</p>
Success Response:	<p>Code:200</p> <p>Content-Type: application/json</p> <pre>{ "code":Integer, "result":String, "data":{ "ac_switch_status" : Integer } }</pre> <p>Meanings of parameters:</p> <p>result: “SUCCESS” or “FAIL”. It will fail if ac_id is not found, or the mode is undefined.</p> <p>ac_switch_status: the status of current AC switch after update. - 0 means off and 1 means on</p>
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p> <p>Code: 500 Internal Server Error Meaning: The server had an error.</p> <p>Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.</p>

5.2 Check current AC switch ON/OFF status

URLs:	<code>/abby/vrv_switch_status</code>
Method:	GET
Permission:	view
Parameters:	- <i>ac_id</i> : 2 digits integer, define which air conditioner will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway.
Example Call:	<code>https://<gateway address: port>/abby/vrv_switch_status/<ac_id></code> example: <code>https://192.168.1.100:8000/vrv_switch_status/01</code>
Success Response:	Code:200 Content-Type: application/json <pre>{ "code":Integer, "result":String, "data":{ "ac_switch_status" : Integer } }</pre> Meanings of parameters: <i>result</i> : “SUCCESS” or “FAIL”. It will fail if <i>ac_id</i> is not found. <i>ac_switch_status</i> : the status of current AC switch after update. - 0 means off and 1 means on
Error Responses:	Code: 401 Unauthorized Meaning: User name or password provided is not correct. Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested. Code: 500 Internal Server Error Meaning: The server had an error. Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.

5.3 Update AC mode

URLs:	/abby/vrv_mode_update
Method:	GET
Permission:	update
Parameters:	<ul style="list-style-type: none"> - ac_id: 2 digits integer, define which air conditioner will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway. - mode: 1 digit integer <ul style="list-style-type: none"> - 0 means fan only (0 will map to 00 in raspberry pi) - 1 means heating (1 will map to 01 in raspberry pi) - 2 means cooling (2 will map to 02 in raspberry pi) - 3 means auto (3 will map to 03 in raspberry pi) - 7 means dry (7 will map to 07 in raspberry pi)
Example Call:	<p><a href="https://<gateway address: port>/abby/vrv_mode_update/<ac_id>/<mode>">https://<gateway address: port>/abby/vrv_mode_update/<ac_id>/<mode></p> <p>example: https://192.168.1.100:8000/vrv_mode_update/01/2</p>
Success Response:	<p>Code:200 Content-Type: application/json</p> <pre>{ "code":Integer, "result":String, "data":{ "ac_mode_status" : Integer } }</pre> <p>Meanings of parameters:</p> <p>result: “SUCCESS” or “FAIL”. It will fail if ac_id is not found, or the AC is switched off, or the mode is undefined.</p> <p>ac_mode_status: the status of AC mode after update.</p> <ul style="list-style-type: none"> - 0 means fan only - 1 means heating - 2 means cooling - 3 means auto - 7 means dry
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p> <p>Code: 500 Internal Server Error Meaning: The server had an error.</p>

	<p><i>Code: 503 Service Unavailable</i></p>
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Meaning: Gateway is switched off or cannot be connected, service unavailable.

5.4 Check current AC mode

URLs:	/abby/vrv_mode_status
Method:	GET
Permission:	view
Parameters:	- <i>ac_id</i> : 2 digits integer, define which air conditioner will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway.
Example Call:	<a href="https://<gateway address: port>/abby/vrv_mode_status/<ac_id>">https://<gateway address: port>/abby/vrv_mode_status/<ac_id> example: https://192.168.1.100:8000/vrv_mode_status/01
Success Response:	Code:200 Content-Type: application/json <pre>{ "code":Integer, "result":String, "data":{ "ac_mode_status" : Integer } }</pre> Meanings of parameters: <i>result</i> : “ SUCCESS ” or “ FAIL ”. It will fail if <i>ac_id</i> is not found, or the AC is switched off. <i>ac_mode_status</i> : the status of current AC mode. - 0 means fan only (00 will map to 0 in raspberry pi) - 1 means heating (01 will map to 1 in raspberry pi) - 2 means cooling (03 will map to 2 in raspberry pi) - 3 means auto (03 will map to 3 in raspberry pi) - 7 means dry (07 will map to 7 in raspberry pi)
Error Responses:	Code: 401 Unauthorized Meaning: User name or password provided is not correct. Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested. Code: 500 Internal Server Error Meaning: The server had an error. Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.

5.5 Update AC fan speed

URLs:	/abby/vrv_fan_update
Method:	GET
Permission:	update
Parameters:	<ul style="list-style-type: none"> - ac_id: 2 digits integer, define which air conditioner will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway. - mode: 1 digit integer. <ul style="list-style-type: none"> - 1 means Fan Low - 2 means Fan Mid 1 - 3 means Fan Mid 2 - 4 means Fan Mid 3 - 5 means Fan High
Example Call:	<p><a href="https://<gateway address: port>/abby/vrv_fan_update/<ac_id>/<mode>">https://<gateway address: port>/abby/vrv_fan_update/<ac_id>/<mode></p> <p>example: https://192.168.1.100:8000/vrv_fan_update/01/3</p>
Success Response:	<p>Code:200</p> <p>Content-Type: application/json</p> <pre>{ "code":Integer, "result":String, "data":{ "ac_fan_status" : Integer } }</pre> <p>Meanings of parameters:</p> <p>result: “SUCCESS” or “FAIL”. It will fail if ac_id is not found, or AC is switched off, or the mode is undefined.</p> <p>ac_fan_status: the speed of AC fan after update. 0 means SPEED-1, 1 means SPEED-2, 2 means SPEED-3.</p>
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p> <p>Code: 500 Internal Server Error Meaning: The server had an error.</p>

	<p><i>Code: 503 Service Unavailable</i> Meaning: Gateway is switched off or cannot be connected, service unavailable.</p>
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5.6 Check current AC Fan speed

URLs:	<code>/abby/vrv_fan_status</code>
Method:	GET
Permission:	view
Parameters:	<p>- <i>ac_id</i>: 2 digits integer, define which air conditioner will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway.</p>
Example Call:	<p><code>https://<gateway address: port>/abby/vrv_fan_status/<ac_id></code></p> <p>example: <code>https://192.168.1.100:8000/vrv_fan_status/01</code></p>
Success Response:	<p>Code:200</p> <p>Content-Type: application/json</p> <pre>{ "code":Integer, "result":String, "data":{ "ac_fan_status" : Integer } }</pre> <p>Meanings of parameters:</p> <p><i>result</i>: “SUCCESS” or “FAIL”. It will fail if <i>ac_id</i> is not found, or AC is switched off.</p> <p><i>ac_switch_status</i>: the speed of current AC fan.</p> <ul style="list-style-type: none"> - 1 means Fan Low - 2 means Fan Mid 1 - 3 means Fan Mid 2 - 4 means Fan Mid 3 - 5 means Fan High
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p> <p>Code: 500 Internal Server Error Meaning: The server had an error.</p> <p>Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.</p>

5.7 Update AC temperature

URLs:	/abby/vrv_temp_update
Method:	GET
Permission:	update
Parameters:	<ul style="list-style-type: none"> - <i>ac_id</i>: 2 digits integer, define which air conditioner will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway. - <i>temp</i>: 2 digit integer, ranged from 18-30. The value in terms of degree celsius to set. e.g. 18 means 18°C.
Example Call:	<p><a href="https://<gateway address: port>/abby/vrv_temp_update/<ac_id>/<temp>">https://<gateway address: port>/abby/vrv_temp_update/<ac_id>/<temp></p> <p>example: https://192.168.1.100:8000/vrv_temp_update/01/18</p>
Success Response:	<p>Code:200</p> <p>Content-Type: application/json</p> <pre>{ "code":Integer, "result":String, "data":{ "ac_temp_status" : Integer } }</pre> <p>Meanings of parameters:</p> <p><i>result</i>: “SUCCESS” or “FAIL”. It will fail if <i>ac_id</i> is not found, or AC is switched off, or the <i>temp</i> is out of range.</p> <p><i>ac_temp_status</i>: the target AC temperature after update, in terms of degree Celsius.</p>
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p> <p>Code: 500 Internal Server Error Meaning: The server had an error.</p> <p>Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.</p>

5.8 Check current AC temperature

URLs:	/abby/vrv_temp_status
Method:	GET
Permission:	view
Parameters:	- <i>ac_id</i> : 2 digits integer, define which air conditioner will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway.
Example Call:	<a href="https://<gateway address: port>/abby/vrv_temp_status/<ac_id>">https://<gateway address: port>/abby/vrv_temp_status/<ac_id> example: https://192.168.1.100:8000/vrv_temp_status/01
Success Response:	Code:200 Content-Type: application/json <pre>{ "code":Integer, "result":String, "data":{ "ac_temp_status" : Integer } }</pre> Meanings of parameters: <i>result</i> : “ SUCCESS ” or “ FAIL ”. It will fail if <i>ac_id</i> is not found, or AC is switched off. <i>ac_temp_status</i> : the current AC temperature, in terms of degree Celsius.
Error Responses:	Code: 401 Unauthorized Meaning: User name or password provided is not correct. Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested. Code: 500 Internal Server Error Meaning: The server had an error. Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.

6. APIs for controlling the scene

6.1 Update Scene

URLs:	/abby/scene_update
Method:	GET
Permission:	update
Parameters:	<ul style="list-style-type: none"> - <i>scene_id</i>: 2 digits integer, define which light will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway. - <i>mode</i>: 3 digits integer, which is scene 1 is “0”, scene 2 is “1”,scene 254 is “253” Maximum is 254
Example Call:	<p><a href="https://<gateway address: port>/abby/scene_update/<scene_id>/<mode>">https://<gateway address: port>/abby/scene_update/<scene_id>/<mode></p> <p>example: https://192.168.1.100:8000/abby/scene_update/01/1</p>
Success Resp_uponse:	<p>Code:200</p> <p>Content-Type: application/json</p> <pre>{ "code":Integer, "result":String, "data":{ "scene_status" : Integer } }</pre> <p>Meanings of parameters: <i>result</i>: “SUCCESS” or “FAIL”. It will fail if scene_id is not found, or mode is undefined. <i>scene_status</i>: the status of scene after update. integer is the scene id</p>
Error Responses:	<p>Code: 401 Unauthorized Meaning: User name or password provided is not correct.</p> <p>Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested.</p> <p>Code: 500 Internal Server Error Meaning: The server had an error.</p> <p>Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.</p>

6.2 Check Scene Status

URLs:	/abby/scene_status
Method:	GET
Permission:	view
Parameters:	- <i>scene_id</i> : 2 digits integer, define which air conditioner will be called. Will map to corresponding Destination Address by a mapping table in Abby gateway.
Example Call:	<a href="https://<gateway address: port>/abby/scene_status/<scene_id>">https://<gateway address: port>/abby/scene_status/<scene_id> example: https://192.168.1.100:8000/scene_status/01
Success Response:	Code:200 Content-Type: application/json <pre>{ "code":Integer, "result":String, "data":{ "scene_status" : Integer }}</pre> Meanings of parameters: <i>result</i> : "SUCCESS" or "FAIL". It will fail if <i>scene_id</i> is not found. <i>scene_status</i> : the current scene status (3 digits integer - scene number).
Error Responses:	Code: 401 Unauthorized Meaning: User name or password provided is not correct. Code: 404 NOT FOUND Meaning: The server isn't up or an incorrect URL was requested. Code: 500 Internal Server Error Meaning: The server had an error. Code: 503 Service Unavailable Meaning: Gateway is switched off or cannot be connected, service unavailable.

Misc

All APIs subjects to change without notice. Please refer to latest version of documentation. For any questions, please enquiry to our technical officer.