



GreenIQ GardenKit API

Rev 2.0, August 5, 2015.

Overview

[GreenIQ](#) revolutionise gardening with the Smart Garden Hub and cuts outdoor water consumption by 50%. The GardenKit API is a REST API which gives the developer all the components that are required to build a full or partial app for the Smart Garden Hub. When you use the GardenKit, you agree GreenIQ's API [License Agreement](#).

To start working with our API contact us at developers@greeniq.co we will give you client ID and client secret which are needed to start working with the API.

Use our [Python3 SDK](#) to implement your first GardenKit app or use it as the REST API usage example.

Having questions? Email us to developers@greeniq.co

API Calls Index

All API calls should be called using http **POST** method.

access_token

Given GreenIQ account credentials, client ID and client secret returns an access token, with which the developer can access the API.

URL: https://greeniq.net/oauth2/access_token

Example

```
{“username”=“XXX”, “password”=“YYY”, client_id=‘ZZZZ’, client_secret=‘TTTTT’, grant_type=‘password’}
```

Result:

```
{
  "access_token": "ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWIwZjI5",
  "expires_in": 315360000,
  "scope": "",
  "refresh_token": "MjlyYjQ5NWQtOGIxMC00OGRiLWExYzMtNWJlYjlkNDViYTgz",
  "token_type": "Bearer"
}
```

Registration

get_user_details.php

Return the account details

URL: https://greeniq.net/php/api/v2/account/get_account_details.php

Method: GET

Example:

```
{“access_token”: “ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWIwZjI5”}
```

set_user_details.php

Set the account details

URL: https://greeniq.net/php/api/v2/account/update_user_details.php

Method: POST

Example:

```
access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWIwZjI5
data =
{
  "firstname": "AAA",
  "familyname": "BBBB",
```

```
"email": "aaa@greeniq.co",  
"lat": "0.04",  
"lon": "0.05",  
"termandpromo_0": "true",  
"termandpromo_1": "false"  
}
```

Network

setup_wifi

Sets hub's wifi connection.

URL: <https://greeniq.net/php/api/v2/wifi/setup.php>

Method: POST

Example:

```
access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5  
ssid = XXX  
wifipass = XXX
```

wifi_network_list

Returns the list of wifi networks which are "seen" by the hub.

URL: https://greeniq.net/php/api/v2/wifi/wifi_networks_list.php

Example:

```
access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5
```

get_wifi_status

Returns real time hub connectivity attempt status

URL: https://greeniq.net/php/api/v2/wifi/get_wifi_status.php

Example:

```
access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5
```

Hub's ports configuration and state

get_ports_config

Returns a JSON with all ports configuration and current state

URL: https://greeniq.net/php/api/v2/config_and_state/get_ports_state_and_config.php

Example:

```
access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5
```

Result:

```

{"status":true,"data":
{"master":true,
"Ports":
[{"number":1,"name":"abc","configuration":"Auto","shown":"True","presentation_index":"0","active":false,"progress":0,"end_time":null},
{"number":2,"name":"2","configuration":"Auto","shown":"True","presentation_index":"1","active":false,"progress":0,"end_time":null},
{"number":3,"name":"","configuration":"Off","shown":"False","presentation_index":"3","active":false,"progress":0,"end_time":null},
{"number":4,"name":"","configuration":"Off","shown":"False","presentation_index":"4","active":false,"progress":0,"end_time":null},
{"number":5,"name":"","configuration":"Off","shown":"False","presentation_index":"5","active":false,"progress":0,"end_time":null},
{"number":6,"name":"cdc","configuration":"Auto","shown":"True","presentation_index":"2","active":false,"progress":0,"end_time":null}]}

```

set_ports_config

Sets irrigation ports configuration.

URL: https://greeniq.net/php/api/v2/config_and_state/set_ports_state_and_config.php

Example:

access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5

data =

```

{
  "master": true,
  "ports": [
    {
      "number": 1,
      "name": "abc",
      "configuration": "Auto",
      "shown": "True",
      "presentation_index": "0"
    },
    {
      "number": 2,
      "name": "2",
      "configuration": "Auto",
      "shown": "True",
      "presentation_index": "1"
    },
    {
      "number": 3,

```

```

        "name": "",
        "configuration": false,
        "shown": "False",
        "presentation_index": "3"
    },
    {
        "number": 4,
        "name": "",
        "configuration": false,
        "shown": "False",
        "presentation_index": "4"
    },
    {
        "number": 5,
        "name": "",
        "configuration": true,
        "shown": "False",
        "presentation_index": "5"
    },
    {
        "number": 6,
        "name": "cdc",
        "configuration": "Auto",
        "shown": "True",
        "presentation_index": "2"
    }
}

```

get_program_attributes

get irrigation program attributes.

URL: https://greeniq.net/php/api/v2/config_and_state/get_program.php

Example:

access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5

data = {"port_number":1, "program_number":2}

Result:

```

{
    "status": true,
    "data": {
        "2": {
            "enable": "False",
            "shown": "False",

```

```
        "weather_dependency": "False",
        "schedule_by": "weekdays",
        "on": {
            "time": "00:00"
        },
        "weekdays": "1111111",
        "duration": "01",
        "off": {
            "time": "00:01"
        }
    }
}
}
```

set_program_attributes

set irrigation program attributes.

URL: https://greeniq.net/php/api/v2/config_and_state/set_program.php

Example:

access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5

```
data = {
    "port_number": "1",
    "program_number": "1",
    "schedule_by": "weekdays",
    "weekdays": "1000111",
    "on": {
        "time": "12:00"
    },
    "duration": "10"
}
```

set_lighting_program

set lighting program attributes.

URL: https://greeniq.net/php/api/v2/config_and_state/set_lighting_program.php

Example:

access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5

```
data = {
    "program_number": "1",
    "weekdays": "1000111",
    "on": {
```

```
        "time": "12:00",
        "method": "dusk",
        "minutes_after": "5"
    },
    "off": {
        "time": "12:30",
        "method": "dusk",
        "minutes_before": "10"
    }
}
```

get_off_hours

get prohibited hours for irrigation

URL: https://greeniq.net/php/api/v2/config_and_state/get_off_hours.php

Example:

`access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5`

Result:

```
{
  "status": true,
  "data": {
    "enabled": "On",
    "start_time": "22:00",
    "end_time": "23:00"
  }
}
```

set_off_hours

set prohibited hours for irrigation

URL: https://greeniq.net/php/api/v2/config_and_state/set_off_hours.php

Example:

`access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5`

`data = {`

```
{
  "enabled": "On",
  "start_time": "15:30",
  "end_time": "16:30"
}
```

get_seasonal_adjust

get seasonal adjust factors(by months)

URL: https://greeniq.net/php/api/v2/config_and_state/get_seasonal_adjust.php

Example:

access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5

```
data = {  
  {  
    "port_number": 2  
  }  
}
```

Result:

```
{  
  "status": true,  
  "data": {  
    "Jan": "1.0",  
    "Feb": "1.0",  
    "Mar": "1.0",  
    "Apr": "1.0",  
    "May": "1.0",  
    "Jun": "1.0",  
    "Jul": "1.0",  
    "Aug": "1.0",  
    "Sep": "1.0",  
    "Oct": "1.0",  
    "Nov": "1.0",  
    "Dec": "1.0"  
  }  
}
```

set_seasonal_adjust

set seasonal adjust factors(by months)

URL: https://greeniq.net/php/api/v2/config_and_state/set_seasonal_adjust.php

Example:

access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5

```
data =  
{  
  "port_number": "1",  
  "months": {  
    "Jan": "30",  
    "Jul": "45",  
    "Nov": "90"  
  }  
}
```


get_percent_adjust

get percent adjust factors

URL: https://greeniq.net/php/api/v2/config_and_state/get_percent_adjust.php

Example:

`access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5`

Result:

```
{
  "status": true,
  "data": {
    "method": "Auto",
    "limit": "100"
  }
}
```

set_percent_adjust

set percent adjust factors

URL: https://greeniq.net/php/api/v2/config_and_state/set_percent_adjust.php

Example:

`access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5`

`data =`

```
{
  "method": "Auto",
  "limit": "70"
}
```

General purpose configuration and state

Get_hub_info

Return general Hub information (version, time zone, mac address).

URL: https://greeniq.net/php/api/v2/config_and_state/get_hub_info.php

Example:

`access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5`

Result:

```
{
  "status": true,
  "data": {
    "serial_number": "40000015\n",
    "time_zone": "Asia/Jerusalem",
    "mac_address": "80:1f:02:da:33:55",
    "mac_address_eth": "b8:27:eb:a1:aa:82",
  }
}
```

```
    "eth_ip_address": "N/A",
    "lan_ip_address": "192.168.0.60",
    "time_info": "Sun Jul 24 2016, 12:19 IDT",
    "os_version_data": "March 2016: Full Hotpost v2.0 installation included through
cloud update including hub code and latest bug fixes such as white screen",
    "is_3g": false
  }
}
```

get_hub_status

Return Hub real-time connectivity state

URL: https://greeniq.net/php/api/get_hub_status.php

Example:

`access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5`

Result:

```
{
  "status": true,
  "data": {
    "timezone": "Asia/Jerusalem",
    "version": "4.0501",
    "last_seen": 1469352541,
    "ssid": "GreenIQRD",
    "signal_strength": "",
    "connectivity_message": "NA",
    "state": "CONNECTED",
    "state_message": "",
    "HUB_ETH_MAC_ADDRESS": "b8:27:eb:a1:aa:82",
    "HUB_WIFI_MAC_ADDRESS": "80:1f:02:da:33:55"
  }
}
```

Hub Irrigation Schedule and Events

get_irrigation_schedule

Given time range return planned irrigation events

URL: https://greeniq.net/php/api/v2/events/get_irrigation_schedule.php

Example:

`access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5`

Result:

```
{
```

```

    "status": true,
    "data": [
      {
        "start_time": 1467396000,
        "end_time": 1467397800,
        "formatted_start_time": "Jul 01, 06:00PM",
        "formatted_end_time": "Jul 01, 06:30PM",
        "duration": 30,
        "formatted_duration": "30 minutes",
        "program": 3,
        "type": "PLANNED",
        "zone": 1
      },
      {
        "start_time": 1469836800,
        "end_time": 1469838600,
        "formatted_start_time": "Jul 30, 12:00AM",
        "formatted_end_time": "Jul 30, 12:30AM",
        "duration": 30,
        "formatted_duration": "30 minutes",
        "program": 2,
        "type": "PLANNED",
        "zone": 1
      }
    ]
  }
}

```

get_next_irrigation

Returns coming irrigation time and duration for all zones.

URL: https://greeniq.net/php/api/v2/events/get_next_irrigation.php

Example:

`access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5`

Result:

```

{
  "status": true,
  "data": [
    {

```

```

        "start_time": 1469365200,
        "end_time": 1469367000,
        "formatted_start_time": "Jul 24, 01:00PM",
        "formatted_end_time": "Jul 24, 01:30PM",
        "duration": 30,
        "formatted_duration": "30 minutes",
        "program": 2,
        "type": "PLANNED",
        "zone": 1
    },
    {
        "start_time": 1469368320,
        "end_time": 1469368380,
        "formatted_start_time": "Jul 24, 01:52PM",
        "formatted_end_time": "Jul 24, 01:53PM",
        "duration": 1,
        "formatted_duration": "1 minutes",
        "program": 1,
        "type": "PLANNED",
        "zone": 3
    },
    {
        "start_time": 1469520000,
        "end_time": 1469520600,
        "formatted_start_time": "Jul 26, 08:00AM",
        "formatted_end_time": "Jul 26, 08:10AM",
        "duration": 10,
        "formatted_duration": "10 minutes",
        "program": 1,
        "type": "PLANNED",
        "zone": 2
    }
}

```

get_hub_events

Given time range, returns hub downtime and connectivity outage events

URL: https://greeniq.net/php/api/v2/events/get_hub_events.php

Example:

access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5

```
data = {"from_date":"2016-07-01","to_date":"2016-07-30"}
```

Result:

```
{
  "status": true,
  "data": [
    {
      "start_time": 1467766020,
      "end_time": 1467880500,
      "formatted_start_time": "Jul 06, 12:47AM",
      "formatted_end_time": "Jul 07, 08:35AM",
      "duration": 1908,
      "formatted_duration": "1908 minutes",
      "zone": "outage",
      "type": "DOWNTIME"
    },
    {
      "start_time": 1468431480,
      "end_time": 1468432080,
      "formatted_start_time": "Jul 13, 05:38PM",
      "formatted_end_time": "Jul 13, 05:48PM",
      "duration": 10,
      "formatted_duration": "10 minutes",
      "zone": 1,
      "type": "IRRIGATION"
    },
    {
      "start_time": 1468484700,
      "end_time": 1468485960,
      "formatted_start_time": "Jul 14, 08:25AM",
      "formatted_end_time": "Jul 14, 08:46AM",
      "duration": 21,
      "formatted_duration": "21 minutes",
      "zone": "connection_outage",
      "type": "CONNECTION_OUTAGE"
    },
    {
      "start_time": 1469361600,
      "end_time": 1469362980,
      "formatted_start_time": "Jul 24, 12:00PM",
      "formatted_end_time": "Jul 24, 12:23PM",
      "duration": 23,
      "formatted_duration": "23 minutes",

```

```
        "zone": 1,  
        "type": "IRRIGATION"  
    }  
  ]  
}
```

Work with Sensors

get_sensors_list

Returns list of sensors (Koubachi/FlowerPower) associated with the hub

URL: https://greeniq.net/php/api/v2/sensors/get_sensors_list.php

Example:

access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5

Result:

```
{  
  "status": true,  
  "data": [  
    {  
      "sensor_number": 1,  
      "model": "flower_power",  
      "type": "enabler",  
      "serial_number": "9003B70000E82F60",  
      "name": "Flower power 2F60"  
    },  
    {  
      "sensor_number": 2,  
      "model": "flower_power",  
      "type": "enabler",  
      "serial_number": "9003B70000E7ADC7",  
      "name": "Flower power ADC7"  
    },  
    {  
      "sensor_number": 22,  
      "model": "plantlink",  
      "type": "enabler",  
      "serial_number": "4896908525961216",  
      "name": "Entrance"  
    },  
    {  
      "sensor_number": 23,  
      "model": "plantlink",  
      "type": "enabler",  
      "serial_number": "4896908525961216",  
      "name": "Entrance"  
    }  
  ]  
}
```

```

        "model": "plantlink",
        "type": "enabler",
        "serial_number": "5209984462749696",
        "name": "Forest"
    },
    {
        "sensor_number": 24,
        "model": "plantlink",
        "type": "enabler",
        "serial_number": "6455121922752512",
        "name": "Drips"
    }
]
}

```

get_sensors_config

Indicates which sensors of the following are enabled (Flow sensor, Rain sensor, Netatmo, Koubachi, FlowerPower) and sensors to zone association.

URL: https://greeniq.net/php/api/v2/sensors/get_sensors_config.php

Example:

access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5

Result:

```

{
    "status": true,
    "data": {
        "netatmo": {
            "state": true,
            "username": "odidahan@gmail.com"
        },
        "flower_power": {
            "state": true,
            "username": "odi@greeniq.co"
        },
        "koubachi": {
            "state": false,
            "username": ""
        },
        "rain_sensor": {
            "state": false,
            "username": ""
        }
    }
}

```

```

    }
    "flow_sensor": {
        "state": true,
        "username": "none",
        "sub_model": "FS-6600H",
        "datamode": "datamode_litters"
    }
    "plantlink": {
        "state": true,
        "username": "odi@greeniq.co"
    }
    "zones_associations": [
        ]
    }
}

```

set_sensors_config

Enable/Disables sensors + associates zones with sensors.

URL: https://greeniq.net/php/api/v2/sensors/set_sensors_config.php

Example:

access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5

data =

```

{
    "flow_sensor": {
        "state": false
    },
    "netatmo": {
        "state": true
    },
    "rain_sensor": {
        "state": true
    },
    "plantlink": {
        "state": true
    },
    "zones_associations": [
        {
            "sensor_number": "1",
            "zone": "4"
        }
    ]
}

```



```

    },
    {
        "sensor_number": "11",
        "zone": "1"
    },
    {
        "sensor_number": "11",
        "zone": "3"
    },
    {
        "sensor_number": "22",
        "zone": "5"
    }
]
}

```

get_sensors_readings

Given sensor type (Koubachi, FlowerPower/ Netatmo) returns sensors readings and their impact on irrigations.

URL: https://greeniq.net/php/api/v2/sensors/get_sensors_readings.php

Example:

`access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWIwZjI5`

Result:

```

{
  "status": true,
  "data": [
    {
      "sensor_number": 1,
      "serial_number": "9003B70000E82F60",
      "model": "flower_power",
      "enable": true,
      "formatted_sensor_data": "?",
      "sensor_data": -9999,
      "valid": false
    },
    {
      "sensor_number": 2,
      "serial_number": "9003B70000E7ADC7",
      "model": "flower_power",
      "enable": true,
      "formatted_sensor_data": "?",

```

```

        "sensor_data": -9999,
        "valid": false
    },
    {
        "sensor_number": 22,
        "serial_number": "4896908525961216",
        "model": "plantlink",
        "enable": false,
        "formatted_sensor_data": "42%",
        "sensor_data": 42,
        "valid": true
    },
    {
        "sensor_number": 23,
        "serial_number": "5209984462749696",
        "model": "plantlink",
        "enable": false,
        "formatted_sensor_data": "40%",
        "sensor_data": 40,
        "valid": true
    },
    {
        "sensor_number": 24,
        "serial_number": "6455121922752512",
        "model": "plantlink",
        "enable": true,
        "formatted_sensor_data": "0%",
        "sensor_data": 0,
        "valid": true
    }
]
}

```

connect_sensors

Given user's sensor account credentials the API call associates user's GreenIQ account with sensor account.

URL: http://greengo-systems.com/php/api/v2/sensors/connect_sensors.php

Example:

`access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5`

`data =`

```

{
  "netatmo":{"username":"XXX","password":"XXX"},

```

```
"plantlink": {"username": "XXX", "password": "XXX"}
}
```

Result:

```
{
  "status": true,
  "data": {
    "netatmo": {
      "status": true,
      "message": ""
    },
    "plantlink": {
      "status": true,
      "message": ""
    }
  }
}
```

get_datamode

Get the water consumption units - liters/gallons

URL: https://greeniq.net/php/api/v2/sensors/get_datamode.php

Example:

access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWIwZjI5

Result:

```
{"status":true,"data":"litters"}
```

set_datamode

Set the water consumption units - liters/gallons

URL: https://greeniq.net/php/api/v2/sensors/set_datamode.php

Example:

access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWIwZjI5

data =:

```
{"datamode":"litters"}
```

get_flowdata

Get the formatted flow date that collects from the flow meter

URL: https://greeniq.net/php/api/v2/sensors/get_flow_data.php

Example:

access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWIwZjI5

Result:

```
{
  "status": true,
```

```
"data": {  
    "flow_one_day": false,  
    "flow_seven_days": false,  
    "flow_thirty_days": false,  
    "saved_one_day_amount": false,  
    "saved_seven_days_amount": false,  
    "saved_thirty_days_amount": "N.A",  
    "max_value": 5000  
}
```

Weather & Data analysis

hub_weather_info

Returns weather readings and source (public weather station, private NETATMO weather station, social NETATMO weather)

URL:https://greeniq.net/php/api/v2/weather/hub_weather_info.php

Example:

access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5

Result:

```
{  
    "status": true,  
    "data": {  
        "weather_factor": 0.79219493177388,  
        "validity": "valid",  
        "last_timestamp": 1469356646  
    }  
}
```

weather_info

Returns detailed weather information for display them(not only for analysis).

URL:https://greeniq.net/php/api/v2/weather/weather_info.php

Example:

access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5

Result:

```
{  
    "status": true,  
    "data": {
```

```
    "temprature": 24.8,  
    "humidity": 61.1,  
    "wf": 0.79219493177388,  
    "validity": "valid",  
    "delta_minutes": 7,  
    "source": "LOCAL_STATION",  
    "image_enum": "mostlycloudy",  
    "precipitation_today": 0,  
    "precipitation_today_normalized": 0,  
    "evapotranspiration": 10.36,  
    "evapotranspiration_normalized": 10  
  }  
}
```

get_savings

Returns hub's daily/weekly and monthly water savings in percentage, compared to planned irrigation time.

URL: https://greeniq.net/php/api/v2/analysis/get_savings.php

Example:

`access_token = ZDFkYTE3NTAtZGUyMC00OTQ5LWE2MzYtNWU3NTNkOWlwZjI5`

Result:

```
{  
  "status": true,  
  "data": {  
    "24HOURS": "18%",  
    "7DAYS": "15%",  
    "30DAYS": "7%"  
  }  
}
```