

Package ‘microinverterdata’

October 24, 2024

Type Package

Title Collect your Microinverter Data

Version 0.2.0

Description Collect and normalize local microinverter energy and power production data through off-cloud API requests. Currently supports 'APSystems', 'Enphase', and 'Fronius' microinverters.

License MIT + file LICENSE

BugReports <https://github.com/CamembR/microinverterdata/issues>

URL <https://camembr.github.io/microinverterdata/>,
<https://github.com/CamembR/microinverterdata>

Encoding UTF-8

Imports cli, dplyr, glue, httr2, lubridate, purrr, readr, rlang,
tidyr, units

RoxygenNote 7.3.2

Suggests httpstest2, knitr, pins, rmarkdown, tibble, testthat (>=
3.0.0)

Config/testthat/edition 3

VignetteBuilder knitr

NeedsCompilation no

Author Christophe Regouby [aut, cre, cph]

Maintainer Christophe Regouby <christophe.regouby@free.fr>

Repository CRAN

Date/Publication 2024-10-24 08:10:02 UTC

Contents

get_alarm	2
get_device_info	2
get_output_data	3

query_ap_device	4
query_ap_devices	4
query_enphaseenergy_device	5
query_enphaseenvoy_device	6
query_fronius_device	7
query_fronius_devices	8

Index	9
--------------	----------

get_alarm	<i>Get inverter device alarms</i>
-----------	-----------------------------------

Description

Get inverter device alarms

Usage

```
get_alarm(device_ip, model = "APSystems")
```

Arguments

device_ip	list or vector of devices IP address
model	the inverter device model. Currently only "APSystems" is supported.

Value

a dataframe with one row of device information per 'device_id' answering the query.

Examples

```
## Not run:
get_alarm(c("192.168.0.12", "192.168.0.230"))

## End(Not run)
```

get_device_info	<i>Get inverter device information</i>
-----------------	--

Description

Get inverter device information

Usage

```
get_device_info(device_ip, model = "APSystems")
```

Arguments

device_ip list or vector of devices IP address
 model the inverter device model. Currently only "APSystems" is supported.

Value

a data-frame with one row of device information per 'device_id' answering the query.

Examples

```
## Not run:
get_device_info(c("192.168.0.12", "192.168.0.230"))

## End(Not run)
```

get_output_data	<i>Get inverter output data</i>
-----------------	---------------------------------

Description

Get inverter output data

Usage

```
get_output_data(device_ip, model = "APSystems", ...)
```

Arguments

device_ip list or vector of devices IP address
 model the inverter device model. Currently only "APSystems" "Enphase-Envoy", "Enphase-Energy" and "Fronius" are supported.
 ... additional parameters passed to the inverter if needed.

Value

a dataframe with one row of device output power and energy per 'device_id' / 'inverter' combination.

Examples

```
## Not run:
get_output_data(c("192.168.0.12", "192.168.0.230"))

## End(Not run)
```

query_ap_device	<i>AP System single device query</i>
-----------------	--------------------------------------

Description

AP System single device query

Usage

```
query_ap_device(device_ip, query)
```

Arguments

device_ip	IP address or name of the device
query	the API query string

Value

a data-frame with a 'device_id' column and the '\$data' turned into as many columns as expected

See Also

Other device queries: [query_ap_devices\(\)](#), [query_enphaseenergy_device\(\)](#), [query_enphaseenvoy_device\(\)](#), [query_fronius_device\(\)](#), [query_fronius_devices\(\)](#)

Examples

```
## Not run:
query_ap_device(device_ip = "192.168.0.234", query = "getDeviceInfo")

## End(Not run)
```

query_ap_devices	<i>AP System multi-device query</i>
------------------	-------------------------------------

Description

AP System multi-device query

Usage

```
query_ap_devices(device_ip, query)
```

Arguments

device_ip	list or vector of each device IP address or name
query	the API query string

Value

a data-frame with a 'device_id' column and the '\$Body\$Data' turned into as many columns as expected

See Also

Other device queries: [query_ap_device\(\)](#), [query_enphaseenergy_device\(\)](#), [query_enphaseenvoy_device\(\)](#), [query_fronius_device\(\)](#), [query_fronius_devices\(\)](#)

Examples

```
## Not run:
query_ap_devices(device_ip = c("192.168.0.234", "192.168.0.235"),
                 query = "getDeviceInfo"
                 )

## End(Not run)
```

```
query_enphaseenergy_device
```

Enphase Energy single device query

Description

as a port of <https://github.com/sarnau/EnphaseEnergy/blob/main/enphaseStreamMeter.py>

Usage

```
query_enphaseenergy_device(
  device_ip = "enphase.local",
  query,
  username = Sys.getenv("ENPHASE_USERNAME"),
  password = Sys.getenv("ENPHASE_PASSWORD")
)
```

Arguments

device_ip	IP address or name of the device
query	the API query string
username	the username needed to authenticate to the inverter. Defaults to the 'ENPHASE_USERNAME' environment variable.
password	the password needed to authenticate to the inverter. Defaults to the 'ENPHASE_PASSWORD' environment variable.

Value

a data-frame with a 'device_id' column and the '\$Body\$Data' turned into as many columns as expected

See Also

Other device queries: [query_ap_device\(\)](#), [query_ap_devices\(\)](#), [query_enphaseenvoy_device\(\)](#), [query_fronius_device\(\)](#), [query_fronius_devices\(\)](#)

Examples

```
## Not run:
query_enphaseenergy_device(query = "stream/meter")

## End(Not run)
```

```
query_enphaseenvoy_device
```

```
Enphase Envoy single device query
```

Description

as a port of [https://github.com/Matthew1471/Enphase-API/blob/main/Documentation/IQ Gateway API/IVP/Meters/Reports/Production.adoc](https://github.com/Matthew1471/Enphase-API/blob/main/Documentation/IQ%20Gateway%20API/IVP/Meters/Reports/Production.adoc)

Usage

```
query_enphaseenvoy_device(
  device_ip = "enphase.local",
  query,
  username = Sys.getenv("ENPHASE_USERNAME"),
  password = Sys.getenv("ENPHASE_PASSWORD")
)
```

Arguments

device_ip	IP address or name of the device
query	the API query string
username	the username needed to authenticate to the inverter. Defaults to the ‘ENPHASE_USERNAME’ environment variable.
password	the password needed to authenticate to the inverter. Defaults to the ‘ENPHASE_PASSWORD’ environment variable.

Value

a data-frame with a ‘device_id’ column and the ‘\$Body\$Data’ turned into as many columns as expected

See Also

Other device queries: [query_ap_device\(\)](#), [query_ap_devices\(\)](#), [query_enphaseenergy_device\(\)](#), [query_fronius_device\(\)](#), [query_fronius_devices\(\)](#)

Examples

```
## Not run:
query_enphaseenvoy_device(query = "reports/production")

## End(Not run)
```

query_fronius_device *Fronius single device query*

Description

as a port of <https://github.com/friissoren/pyfronius>

Usage

```
query_fronius_device(
  device_ip = "fronius.local",
  query,
  username = Sys.getenv("FRONIUS_USERNAME"),
  password = Sys.getenv("FRONIUS_PASSWORD")
)
```

Arguments

device_ip	IP address or name of the device
query	the API query string
username	the username needed to authenticate to the inverter. Defaults to the 'FRONIUS_USERNAME' environment variable.
password	the password needed to authenticate to the inverter. Defaults to the 'FRONIUS_PASSWORD' environment variable.

Value

a data-frame with a 'device_id' column and the '\$Body\$Data' turned into as many columns as expected

See Also

Other device queries: [query_ap_device\(\)](#), [query_ap_devices\(\)](#), [query_enphaseenergy_device\(\)](#), [query_enphaseenvoy_device\(\)](#), [query_fronius_devices\(\)](#)

Examples

```
## Not run:
query_fronius_device(query = "GetInverterRealtimeData.cgi?Scope=System")

## End(Not run)
```

query_fronius_devices *Fronius multi-device query*

Description

as a port of <https://github.com/friissoren/pyfronius>

Usage

```
query_fronius_devices(  
    device_ip = c("fronius.local"),  
    query,  
    username = Sys.getenv("FRONIUS_USERNAME"),  
    password = Sys.getenv("FRONIUS_PASSWORD")  
)
```

Arguments

device_ip	list or vector of each device IP address or name
query	the API query string
username	the username needed to authenticate to the inverter. Defaults to the 'FRONIUS_USERNAME' environment variable.
password	the password needed to authenticate to the inverter. Defaults to the 'FRONIUS_PASSWORD' environment variable.

Value

a data-frame with a 'device_id' column and the '\$Body\$Data' turned into as many columns as expected

See Also

Other device queries: [query_ap_device\(\)](#), [query_ap_devices\(\)](#), [query_enphaseenergy_device\(\)](#), [query_enphaseenvoy_device\(\)](#), [query_fronius_device\(\)](#)

Examples

```
## Not run:  
query_fronius_device(query = "GetInverterRealtimeData.cgi?Scope=System")  
  
## End(Not run)
```

Index

* device queries

- query_ap_device, 4
- query_ap_devices, 4
- query_enphaseenergy_device, 5
- query_enphaseenvoy_device, 6
- query_fronius_device, 7
- query_fronius_devices, 8

get_alarm, 2

get_device_info, 2

get_output_data, 3

query_ap_device, 4, 5–8

query_ap_devices, 4, 4, 6–8

query_enphaseenergy_device, 4, 5, 5, 6–8

query_enphaseenvoy_device, 4–6, 6, 7, 8

query_fronius_device, 4–6, 7, 8

query_fronius_devices, 4–7, 8