Description www.gauge4free.com
Weather station data upload protocol

1. What is gauge4free.com?

Our free service offers a central location where data from your remote devices can be gathered, stored and offered for further inspection and analyze in nice graphic forms. The system implies 2 parties, the central server hosted at www.gauge4free.com, offering free services for data upload, store and display, and remote devices which must implement the upload protocol in their software/firmware. The media for data transmission is the Internet, the service having the primary goal to support devices using GPRS network as the first transmission segment, such as the intelligent GSM/GPRS modules and terminals marketed by Round Solutions GmbH & Co KG.

The first device category implemented in our server software is for weather stations, a popular and very useful device that must run in many cases in remote places. Future categories will implement support for remote counters, electricity, liquid or gas flow meters, etc.

2. Server info

2.1. Server URL is http://www.gauge4free.com .

The data upload is made by means of simple GET HTTP queries, with parameters directly embedded in the query URL. The URL of upload processing server script is:

http://www.gauge4free.com/members/store.php

2.2. The user agent of the GET query must be set to:

User-Agent: Round Solutions g4f client

Failing to set the correct user agent will make the server refuse the data upload.

2.3. Membership. In order to be able to use the free services you must register for an account on www.gauge4free.com.

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3. Upload format

3.1. Example of valid URL

The following URL shows all parameters implemented in weather station upload protocol:

http://gauge4free.com/members/store.php?proto=ws&imei= xxx278xxx197xxx &pwd=b&tin=238&tout=-30&hin=45&hout=86&dew=-45&wspd=23&wdir=1234&wch=-52&pa=8795&pr=10178&r1=00

3.2. Example of the GET query

GET /members/store.php? proto=ws&imei= xxx278xxx197xxx
&pwd=b&tin=238&tout=-30&hin=45&hout=86&
dew=-45&wspd=23&wdir=1234&wch=-52&pa=8795&
pr=10178&r1=00 HTTP/1.0
Host: gauge4free.com
User-Agent: Round Solutions g4f client

Note: from GET to HTTP/1.0 must be a **single line**, and the query must be ended with a **double CR-LF** pair.

3.3. Weather station protocol query parameters

The following parameters can or must be present in the query:

proto protocol type, must be set to **ws** for a weather station. Required.

imei IMEI number of GSM/GPRS transmitting device. Required.

pwd the password of your gauge4free account. Required.

tin temperature indoor, in tenths of Celsius degrees. In the above example, 23.8 °C.

tout temperature outdoor, in tenths of Celsius degrees. In the above example, -3 °C.

hin relative humidity indoor, in percents (%). In the above example, 45%.

hout relative humidity outdoor, in percents (%). In the above example, 86%.

dew temperature of dewpoint, in tenths of Celsius degrees. In the above example, -4.5 °C.

wspd wind speed, in tenths of meters per second (m/s). In the above example, 2.3 m/s.

wdir wind direction, in tenths of degrees.

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In the above example, wind from 123.3 degrees.

wch wind chill in tenths of Celsius degrees.
In the above example, -5.2 °C.

pa absolute pressure, in tenths of hPa.
In the above example, 879.5 hPa.

pr relative pressure, in tenths of hPa.
In the above example, 1017.8 hPa.

r1 rain amount in latest one hour, in mm.
In the above example, 0 mm (no rain).

4. Remote device protocol implementation

The software in the remote device must comply with the above upload protocol.

Round Solutions offers a free implementation of a remote weather stations based on the cheap and good LaCrosse WS2300 weather station and a good range of GSM/GPRS modules and terminals with internal Python script engine. To get the application please go to:

http://www.roundsolutions.com/techdocs

6. Getting help and tech support

gauge4free website contains a growing section for **Help & FAQ** questions. Please sign in and read.

If stuck, the next step is to register, sign in and use Round Solutions technical support forum at http://www.roundsolutions.com/forum . Many questions are already answered, please do a good read before posting.

If still stuck, our technical support team is answering at ts@rounsolutions.com email address.

7. Improving, extending, new services

If you need or have an idea of new device categories which will be nice to implement, extended history graphs, other parameters and so on, please do not hesitate to email at ts@rounsolutions.com for a talk.

Have fun!

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