Professional Services

Generic FTP Solution

Version 1.0

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Version History

- Version 1.0, April 2020 – first release

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Introduction

The SolarEdge Monitoring Platform generates a daily site performance report for subscribers, and uploads it to their FTP system. A separate report file is generated for each site.

Requirements

CSV File Format

The report data in the file are presented in CSV (comma separated values) format.

Each CSV file contains 30 minutes of data. It is composed of readings taken at 5 minute intervals from all inverters, sensors, and meters in the site.

A CSV file, displayed in an Excel sheet, is shown in the figure below:

	A	B	C	D	E	F	G	H	I	J
3		7E144453-2	7E144453-29	7E144453-2	7E144453-2	7E144453-29	7E144453-29	7E144453-29	7E144453-2	7E144453-2
4		Energy	AC Power(production)	AC Voltage	AC Current	AC Frequency	Active Power	Reactive Power	Cosphi	DC Voltage
5		E_INT	P_AC	U_AC	I_AC	F_AC	P_AC	Q_AC	COS_PHI	U_DC
6		kWh	W	V	A	Hz	W	VAr		V
7	2020-03-03T07:34:41 +10:0	39421400	496	250.328	1.0234	49.9139	169	-190	1	747.562
8	2020-03-03T07:39:41 +10:0	39421500	579	252.828	1.0938	50.1022	197	-190	1	747.938
9	2020-03-03T07:44:41 +10:0	39421500	624	251.141	1.0625	49.9335	203	-171	1	748.062
10	2020-03-03T07:49:41 +10:0	39421600	574	251.516	1.0859	50.1323	194	-190	1	748.125
11	2020-03-03T07:54:41 +10:0	39421600	556	252.688	1.0313	49.9683	187	-177	1	748.5
12	2020-03-03T07:59:41 +10:0	39421700	781	254.766	1.2734	50.0471	263	-182	1	747.375
13										

	K	L	M	N	O	P	Q	R	S	T	U
3	7E144453-29	7E144453-2	7E144453-2	7E144138-0	7E144138-0B	7E144138-0	7E144138-0	7E144138-0B	7E144138-0B	7E144138-0B	7E144138-0
4	Temperature	Status	Error	Energy	AC Power(production)	AC Voltage	AC Current	AC Frequency	Active Power	Reactive Power	Cosphi
5	T	Status	Error	E_INT	P_AC	U_AC	I_AC	F_AC	P_AC	Q_AC	COS_PHI
6	Â°C			kWh	W	V	A	Hz	W	VAr	
7	42.0598	Active		40786200	508	250.5	1.0313	49.9136	173	-190	1
8	40.8574	Active		40786200	579	252.859	1.0625	50.1032	193	-183	1
9	41.1584	Active		40786300	628	251.391	1.0781	49.9421	210	-169	1
10	41.3869	Active		40786300	619	251.297	1.1406	50.1251	213	-190	1
11	41.6789	Active		40786400	536	252	1.0313	49.964	179	-185	1
12	42.0277	Active		40786500	776	254.375	1.2969	50.0592	258	-199	1
13											

The data in the file is stored in the following format:

1. Title row 1:
   - A. First field: "Timestamp"
   - B. For each inverter on site: 2 titles with "Inverter <relative order>"
   - C. For each Sensor on site: titles with "Sensor <sequence number>"
   - D. For each meter on site: titles with "Meter <sequence number>"
2. Title row 2 (component types):
   - E. First field: <empty>
   - F. For each inverter on site: 2 titles with "inverter"
   - G. For each sensor on site: title "sensor"
   - H. For each meter on site: title "meter"
3. Title row 3 (serial numbers):
   - I. First field: <empty>
   - J. For each inverter/meter: <serial number>
4. Title row 4 (metrics type):
   - K. First field:<empty>
   - L. Inverters
     - Energy
     - AC Power(production)
     - AC Voltage
     - AC Current
     - AC Frequency
     - Active Power
     - Reactive Power
     - Cosphi
     - DC Voltage
     - Temperature
     - Status
     - Error
   - M. Sensors
     - Irradiance
     - Ambient temperature

- Module temperature
- Wind speed

N. Meters
- Energy

5. Title row 5 (Header type):
   A. E_INT (Energy)
   B. P_AC (AC Power)
   C. U_AC (AC Voltage)
   D. I_AC (AC Current)
   E. F_AC (AC Frequency)
   F. P_AC (Active Power)
   G. Q_AC (Reactive Power)
   H. COS_PHI (Cosphi)
   I. U_DC (DC Voltage)
   J. T (Temperature)
   K. Status
   L. Error
   M. M_AC_E_EXP (Energy)
6. Title row 6 (dimension type):
   A. KwH
   B. W
   C. V
   D. A
   E. Hz
   F. W
   G. VAr
   H. <empty>
   I. V
   J. Â°C
   K. <empty>
   L. <empty>
   M. KwH
7. Each row, based on data readings at 5 minute intervals shall contain:
   A. Timestamp – The local time at which the data was recorded (the “interval ending” timestamp: for example, “2:05pm” means that the data represents energy production between 2:00pm and 2:05pm).
   The Timestamp field is encoded as ASCII text, according to the ISO-8601 extended format:
   YYYY-MM-DDThh:mm:ss[+][-]HH:mm
   B. For each inverter
      - Energy
   C. For each Sensors
      - Irradiance
      - Ambient temperature
      - Module temperature
      - Wind speed
   D. For each meter
      - Energy

Components in the Report

Data from all inverters, sensors and export/import meters on site are included in the report.

- If there are no inverters or export/import meters on-site, the report will only include data from the meter that is available.
- If no inverter or meters are on-site, no data will be available.

Missing Telemetries

In the event of missing telemetries, no record entry should be recorded for the associated time interval. The report does not contain empty entries - once the telemetry resumes, the next record contains all telemetry data received since the previous record entry in the file.

If no telemetries were received, the file will be transferred with header data only.

FTP Credentials

Files are uploaded to the subscriber FTP site using the FTP credential of the subscriber site. Each file shall be uploaded using the FTP credentials of the site that it represents.

The subscriber should send their server's FTP credentials to SolarEdge by email: professional.services@solaredge.com

FTP credentials shall include:

- Server URL
- Username
- Password

Files Generation and Delivery Schedule

- Files shall be created for each registered site every 30 minutes and uploaded to the subscriber's FTP server.
- Each file created contains data based on telemetries generated between 30 to 60 minutes ago. For example, the file created and delivered at 14:00 contains site data that was generated between 13:00-13:30.
- Before uploading site data to the subscriber's FTP server for the first time, a JSON configuration file shall be uploaded to the server in order to test connectivity.

File Naming Convention

The following format shall be used: <Site ID>_<the UTC time that the file was extracted in YYMMDDhhmmss format>

For example, if the Site ID is 22222, and the file was extracted at 1:30 PM on March 25, 2020, then the file name will be:

22222_20200325133000.csv

Auditing

The report files are be stored by SolarEdge until they are transferred to the subscriber.

File Upload Error Notification

In the event of a file upload error, an email message is sent to the subscriber as follows:

- To: <subscriber>
- From: professional.services@solaredge.com
- Subject: FTP Reporting Error
- Text: FTP reporting failed on <last attempt timestamp> for <site ID> as a result of the following exception: <exception type>, <exception stack trace>

Support Contact Information

If you have technical problems concerning SolarEdge products, please contact us:

https://www.solaredge.com/service/support

Before contact, make sure to have the following information at hand:

- Model and serial number of the product in question.
- The error indicated on the product SetApp mobile application LCD screen or on the monitoring platform or by the LEDs, if there is such an indication.
- System configuration information, including the type and number of modules connected and the number and length of strings.
- The communication method to the SolarEdge server, if the site is connected.
- The product's software version as it appears in the ID status screen.