

33.1 Devices configuration

Protocol HUB uses configuration in excel file format. Each sheet represents a specific part of configuration:

- **Devices** contains device list and protocol related configuration.
- **Signals** contains a list of signals and their options.

First line on each sheet is a header row that contains parameter name for each column. Header order determines parameter names for each following row. Every line after the header is a new entry. An empty row is interpreted as end of sheet. Any rows after empty row are discarded.

Devices sheet

Devices sheet contains all devices to be configured on gateway. Each row represents one device and its settings. Following options are required for each device:

- **name** - Name of the device. Used for representation only.
- **description** - A short description for the device. Used for representation only.
- **device_alias** - A unique short name for the device. It is used for linking signals to a device.

 Alias can only contain alphanumeric characters and dashes (- and _). Alias must be unique for each device.

- **protocol** - Protocol type to use on device. Exact values of protocols are written in every protocol documentation. Please look into range of supported protocols:

IEC 61850 MMS:

- IEC 61850 Client (since FW 1.5.0)
- IEC 61850 Server (since FW 1.5.0)

IEC 60870-5:

- IEC 60870-5-101 master
- IEC 60870-5-101 slave
- IEC 60870-5-103 master
- IEC 60870-5-104 master
- IEC 60870-5-104 slave

DNP 3.0 Serial/LAN/WAN:

- DNP3 Master
- DNP3 Slave

Modbus Serial/TCP:

- Modbus RTU/ASCII
- Modbus TCP

Metering protocols:

- DLMS/COSEM (since FW 1.3.0)
- IEC 62056-21 (since FW 1.2.13)
- MBus Serial
- MBus TCP
- Elgama (Meters based on IEC 62056-21 / 31 protocols)

Industrial IOT protocols:

- MQTT

- RESTful API

Specific protocols:

- Aurora (ABB PV inverters protocol)
- PowerOne (ABB PV inverters protocol)
- SMA Net (SMA PV inverters protocol)
- Kaco (Kaco PV inverters protocol)
- Ginlong (Ginlong PV inverters protocol)
- Solplus (Solutronic AG PV inverters protocol)
- ComLynx (Danfoss PV inverters protocol)
- Delta (Delta PV inverters protocol)
- Windlog (Wind sensors from RainWise Inc.)
- Vestas (Wind turbines protocol)
- Internal data
- VBus.



Although device name rules aren't strictly enforced, it is highly advised to give a unique name for every new device. Identical device names might introduce confusion while searching for signal in Imported Signals tab.

Optional settings

- **enable** - Flag to enable or disable device on system. Can contain values 0 or 1.
- **event_history_size** - Maximum number of signal events to save on device for later review. Older records will be erased. This feature is only available on cloud firmware.

Serial port settings

Required for any protocol that uses serial line communication.

- **device** - Serial port for communication (**PORT1/PORT2**)
- **baudrate** - Serial port speed. Valid values:

- 300
- 600
- 1200
- 2400
- 4800
- 9600
- 19200
- 38400
- 57600
- 115200

- **databits** - Number of data bits (6-9)
- **stopbits** - Number of stop bits (1-2)
- **parity** - Parity mode (none/even/odd)
- **flowcontrol** - Flow control method (none/hardware/software)

TCP/IP settings

Settings for any protocol that uses communication over TCP/IP. Note that all TLS certificates and keys are stored in single folder therefore only name and not the path should be filled in respective fields.



TLS fields are only supported for IEC 61850 Client and Server, IEC-60870-5-104 Slave and DNP3 Master and Slave.

- **ip** - IP address for master protocol to connect to;
- **bind_address** - one of local IP addresses to bind the server to. Connections through other network devices will be ignored;
- **host** - space separated host IP addresses of master devices;
- **port** - TCP port to listen for incoming connections;
- **tls_local_certificate** - name of local TLS certificate;
- **tls_peer_certificate** - name of certificate authority (CA) TLS certificate;
- **tls_private_key** - name of private key for making TLS connections.

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