

8.3 Protocol Hub

The Protocol HUB section stores the configuration for every connected device. You can configure it by importing settings from an Excel file.

Configuration

CONFIGURATION

IMPORTED SIGNALS

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PROTOCOL LOGGER

SCRIPT-RUNNER

Protocol configuration

IMPORT PROTOCOL CONFIGURATION

Here you can import Excel configuration file. Up to 1000 signals are allowed. All previous signals will be replaced.

Configuration file:

Choose FileNo file chosen

Import configuration

PLC (IEC-61499) Boot file:

Choose FileNo file chosen

Import FBOOT file

IEC61850 Client model file:

Choose FileNo file chosen

Import client model file

IEC61850 Server model file:

Choose FileNo file chosen

Import server model file

DOWNLOAD CONFIGURATION

Template configurations:

Download

In this tab, a user can:

- Import new configuration from Excel file (.xls, .xlsx formats). If any errors in the file are found, the device will not be imported, and the importing process will be stopped.
- Import .fboot file for PLC.
- Import the IEC61850 Server model file
- Import the IEC61850 Client model file
- Download the current configuration Excel file.
- Download a template configuration Excel file.

Imported Signals

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IMPORTED SIGNALS

☒ Column filter

☒ Device name

☒ Signal alias

☒ State

Save Changes

☒ Signal name

☒ Value

☒ Attributes

☒ Device alias

☒ Units

☒ Time

Device name	Signal name	Device alias	Signal alias	Value	Units	State	Attributes	Time
SMS receiver	sms sim select	sms1	sms-select	0				2024-06-17 15:14:49.92
SMS receiver	sms modem reset	sms1	sms-modem					
SMS receiver	sms relay select	sms1	sms-relay					
Internal data	sim select	wcc1	sim-select	0			cot=10	2024-06-17 15:14:49.92
Internal data	modem reset	wcc1	modem-reset					
Internal data	internet status	wcc1	internet-status	1				2024-06-17 15:11:47.77
Internal data	roaming status	wcc1	roaming-status	0				2024-06-17 15:11:47.78
Internal data	signal quality	wcc1	signal-quality	-119				2024-06-17 15:11:47.78
Internal data	sim status	wcc1	sim-status	1				2024-06-17 15:11:47.78
Internal data	relay on	wcc1	relay	0				2024-06-17 15:11:47.78
SMS receiver admin	SMS reboot	sms-admin	sms-reboot					

The imported signals section shows basic information about the applied configuration. This section is used for viewing only. Column filter allows the signals to be filtered according to the information needed.

Event Log

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DEVICE EVENTS

Auto refresh

Column filter

Device name

Signal alias

Attributes

Save Changes

Signal name

Value

Direction

Device alias

Timestamp

Number of items: 50

Device name	Signal name	Device alias	Signal alias	Value	Timestamp	Attributes	Direction
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
WCC Lite	GPIO Relay	wcc1	relay	42.000000	2024-06-17 12:22:42.200	cot=10	M
WCC Lite	GPIO Relay	wcc1	relay	42.000000	2024-06-17 12:22:42.200	cot=7	M
WCC Lite	GPIO Relay	wcc1	relay	42.000000	2024-06-17 12:22:42.200		C
WCC Lite	Date second	wcc1	date-second	42.000000	2024-06-17 12:22:42.200		M
WCC Lite	Netstat ETH1 RX	wcc1	netstat-eth1-rx	0.027000	2024-06-17 12:22:42.50		M
WCC Lite	Netstat ETH0 RX	wcc1	netstat-eth0-rx	0.027000	2024-06-17 12:22:41.862		M
WCC Lite	Uptime	wcc1	uptime	195.760000	2024-06-17 12:22:41.505		M
WCC Lite	RAM usage	wcc1	ram-usage	34.100000	2024-06-17 12:22:41.487		M
WCC Lite	CPU usage	wcc1	cpu-usage	50.000000	2024-06-17 12:22:41.481		M
WCC Lite	LED blue heartbeat	wcc1	blue-heartbeat	0.000000	2024-06-17 12:22:41.393		M
WCC Lite	GPIO Relay	wcc1	relay	1.000000	2024-06-17 12:22:41.390		M
WCC Lite	GPIO Relay	wcc1	relay	39.000000	2024-06-17 12:22:39.805	cot=10	M

Download events log archive:

Download

Event Log is the timestamped status data. It allows reviewing the latest events and changes for devices' state changes in chronological order. The newest events are shown at the top of the list. WCC Lite will timestamp the status data with a time resolution of one millisecond. Column filter allows filtering of the data according to the information needed.

Initially, all breakers, protection contacts digital status input points in the WCCLite; events captured from IEDs (Intelligent electronic devices) shall be configured as Event Log points. It's possible to assign any digital status input data point in the WCCLite as an SOE point with an Excel template during configuration.

Each time a device changes state, the WCClite will save it with timetag in internal storage. Event Log can also be downloaded by pressing the download button at the bottom of the page.

Events are recorded only for devices with the *log* field set to 1.

Protocol Connections

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PROTOCOL CONNECTIONS

Device name	Device alias	Protocol	Host	Status	Timestamp
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
IOMod 8Di8DO	IOMod88	IEC 60870-5-101 master	PORT1	Disconnected	2024-06-17 15:25:20
DNP3 SCADA system	DNP3_SCADA	DNP3 slave	192.168.1.2	Disconnected	2024-06-17 15:24:50
Modbus SCADA system	Modbus_SCADA	Modbus TCP slave	192.168.1.2	Disconnected	2024-06-17 15:24:49
IEC104 SCADA system	IEC104_SCADA	IEC 60870-5-104 slave	192.168.1.2	Disconnected	2024-06-17 15:24:43
IEC101 SCADA system	IEC101_SCADA	IEC 60870-5-101 slave	PORT2	Disconnected	2024-06-17 15:24:41

The protocol connections section shows configured devices and their respective ports, and statuses.

Protocol Logger

CONFIGURATIONIMPORTED SIGNALSEVENT LOGPROTOCOL CONNECTIONSPROTOCOL LOGGERSCRIPT-RUNNER

PROTOCOL LOGGER

Protocol	Configuration	Log level		
iec101-master	ttyPORT1	DISABLED	Set logger	Download log
iec104-slave	0-0-0-0-2404	DISABLED	Set logger	Download log
iec101-slave	ttyPORT2	DISABLED	Set logger	Download log
dnp3-slave	dnp3-tcp-slave	DISABLED	Set logger	Download log
modbus-slave	0-0-0-0-502	DISABLED	Set logger	Download log

Protocol logger allows users to set a certain debug level for any protocol. The debug log can then be downloaded as a file by clicking the Download log button. To set the logger, click on the Set logger button and select the debug level and time in which the logger will be active. Debug levels can be seen in the picture below.

Set Level:

DISABLED

EMERG

ALERT

CRIT

ERR

WARNING

NOTICE

INFO

DEBUG

DISABLED

Set Time (seconds):

3600

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