

PROMIS Tutorial – SMS Data Collection System

This tutorial explains on a step by step base how to setup a basic implementation of Promis in combination with SMS-transmitters. For this tutorial we used an SMS-transmitter configured for tide monitoring.

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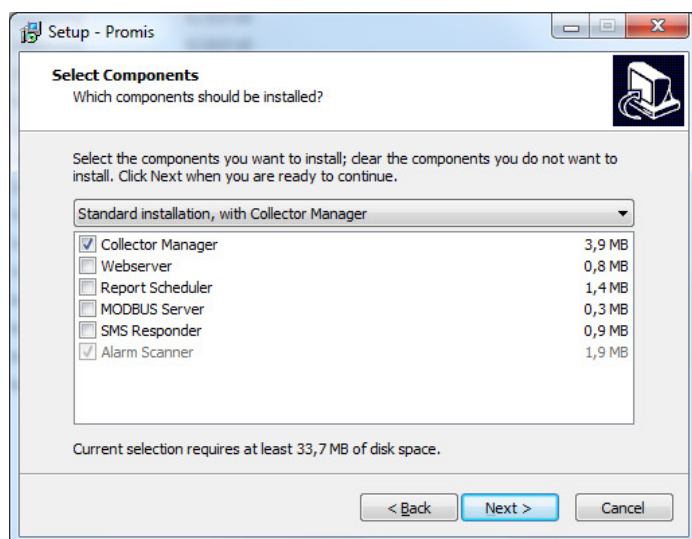
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1. Install Promis

If you did not already install Promis, please download and run <http://www.projex.nl/download/promissetup.exe>.

Follow the obvious steps of the setup procedure and choose 'Standard installation' if you want to use Promis without additional components (e.g. Web Server).

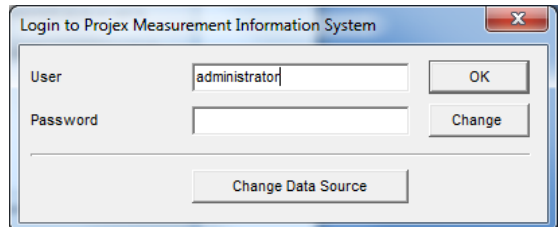
- Its required that you have administrator rights to be able to run setup.



2. Start Promis

The setup procedure has installed a desktop shortcut to start Promis. When you start Promis for the first time or with the intention to configure collectors/components it is: **a)** required that you have administrator rights and **b)** you should start Promis in administrator mode (right mouse click the shortcut and choose 'Run as Administrator').

- After an initial installation with an empty database the Promis user name to login with is 'Administrator' and having a blank password.

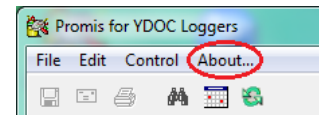


3. Unlock Promis

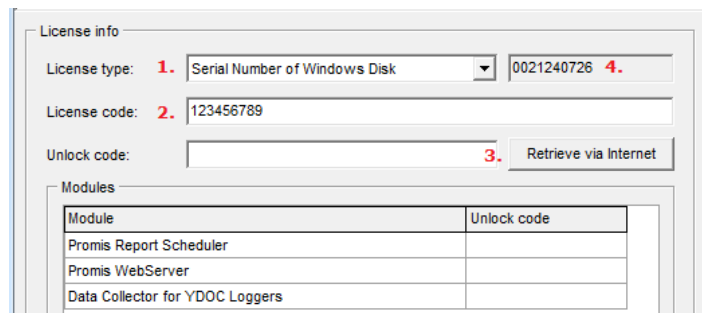
Promis is a data collection suite of scalable components and depending on your license you are permitted to use additional components, define a certain number of users and collect data from a licensed number of loggers/sources.

After buying a license you are receiving a unique license code and you can use this license code to unlock Promis on one PC of your choosing. Please choose the PC with care as this is a onetime operation. If you want to change to another PC afterwards, you have to renew your license involving additional costs.

To unlock Promis select the 'About'-option from the 'Menu'-bar:



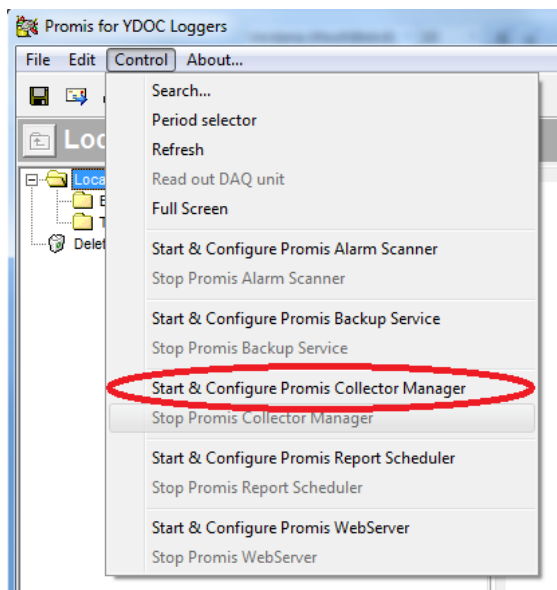
In the 'About'-box choose (1.) 'Serial number of Windows Disk' as license type, (2.) enter your license code and (3.) click the 'Retrieve'-button to get access to our licensing-server and to bind your license to this PC.



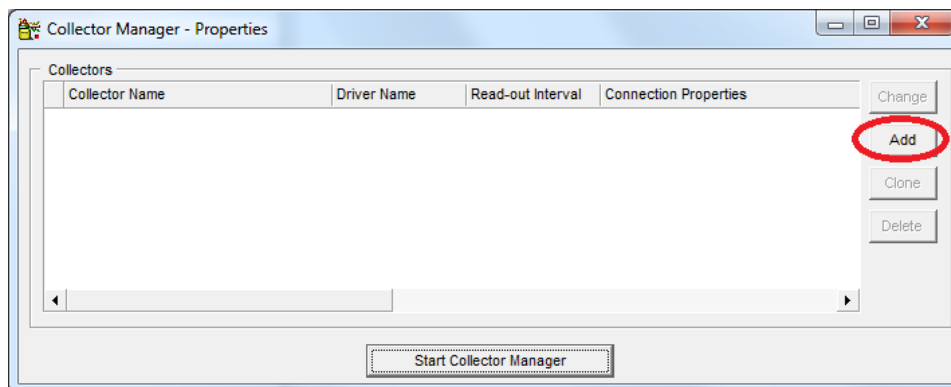
If you can't get access to the licensing-server, please handover (4.) the SN# of your hard disk to your distributor, so he can provide you with the necessary unlock codes to be entered manually.

4. Configure the Collector Manager

The function of the 'Collector Manager' is to connect to and read out data acquisition devices or loggers and to import the collected data into the Promis database automatically. The 'Collector Manager' comes with several OEM specific collector drivers and several generic collector drivers. In case of OEM specific collector drivers the collector is aware of the configuration of the device and is capable to create a Promis location and according tags in the database automatically. In case of some generic collector drivers, locations and tags must be created and linked to devices and according channels/fields/registers manually. In this tutorial we describe how to deploy the generic SMS driver.



To configure the collector select the 'Start Collector Manager' from the 'Control'-menu.



In the 'Collector Manager - Properties'-screen click the 'Add'-button to add a new collector to the list. The maximum number of collectors you may add is depending on the maximum number of collectors permitted by your license.

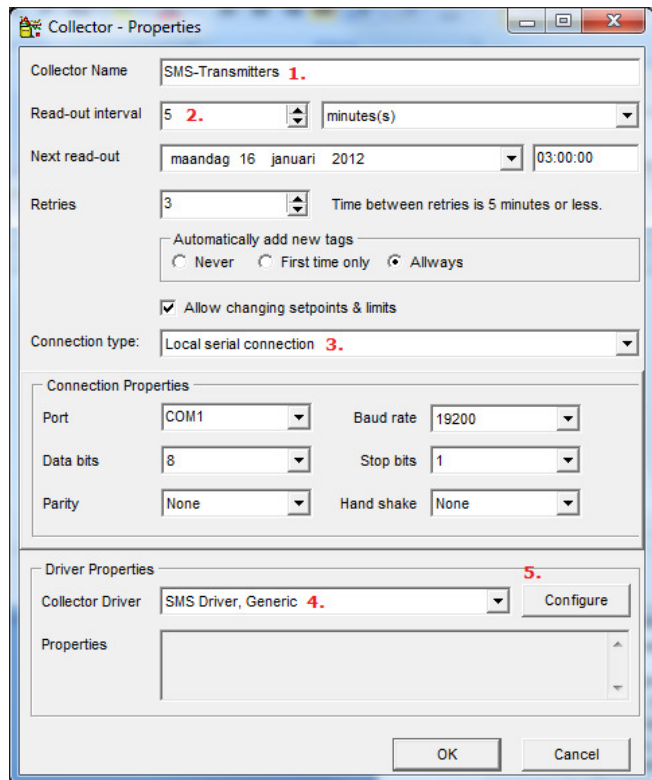
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After clicking the 'Add'-button the 'Collector – Properties'-screen will pop-up.

A collector should obviously have (1.) a name. For each collector (2.) an automatic read-out schedule can be applied, ranging from once per minute to several weeks. In this case we check every 5 minutes if new SMS message are received.

The 'Collector Manager' supports several types of connections (Network, Serial and Modem), in this tutorial we choose (3.) a serial port connection, because the GSM-Modem receiving the SMS-messages from the transmitter is connected to COM1.

You have to, depending on the type of device you want collect data from, choose (4.) a proper collector driver. On this tutorial we choose the generic 'SMS'-driver. Click (5.) the 'Configure'-button to configure the driver specific properties.



In this case the SMS-transmitter transmits one message per hour (to save on transmission costs) containing a tidal height value per 10 min. and a battery voltage as last value.

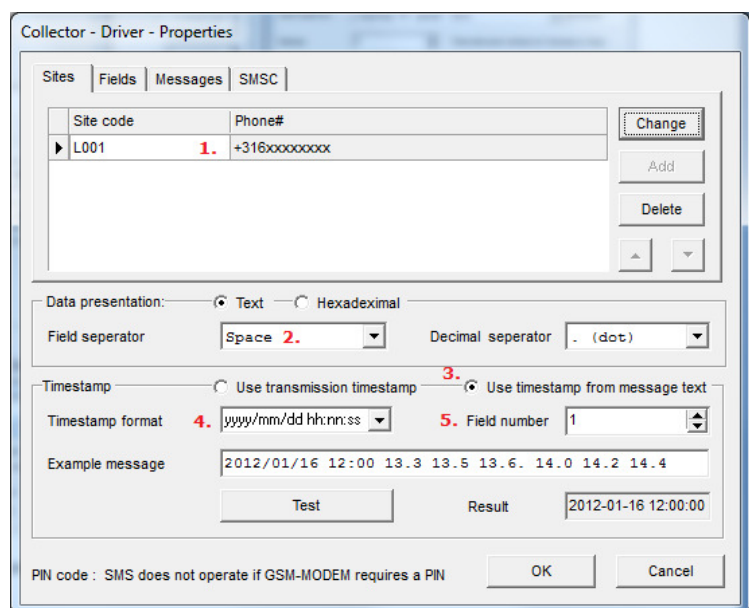
2012/01/16 12:00 13.3 13.5 13.6. 14.0 14.2 14.4 12.3

For each SMS-transmitter you have to specify a unique 'Site'-code and add (1.) it's phone# to the 'Site'-list.

The fields in the message are separated with (2.) a 'Space'.

Instead of the timestamp of the SMS itself, we timestamp in this case the values with (3.) a timestamp supplied in the SMS-text and specify how it is (4.) formatted and (5.) at which field it starts.

- You can add up to 8 SMS-transmitters per collector definition (you can add more collectors using the same GSM-Modem if you have more than 8 SMS transmitters)
- The GSM-MODEM shouldn't require a PIN.

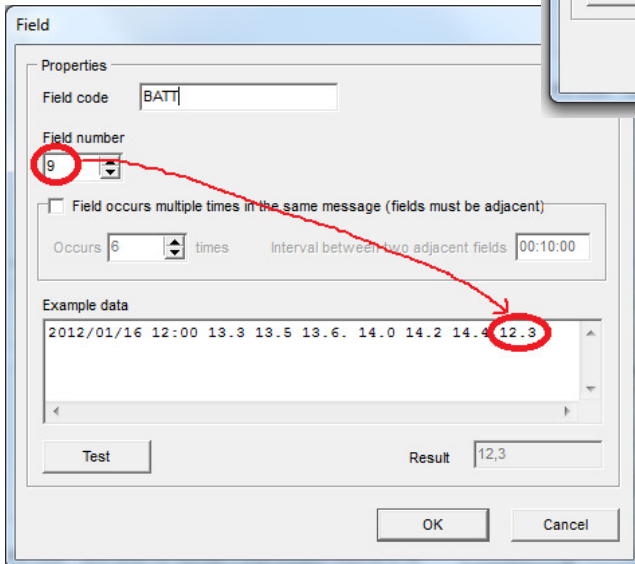
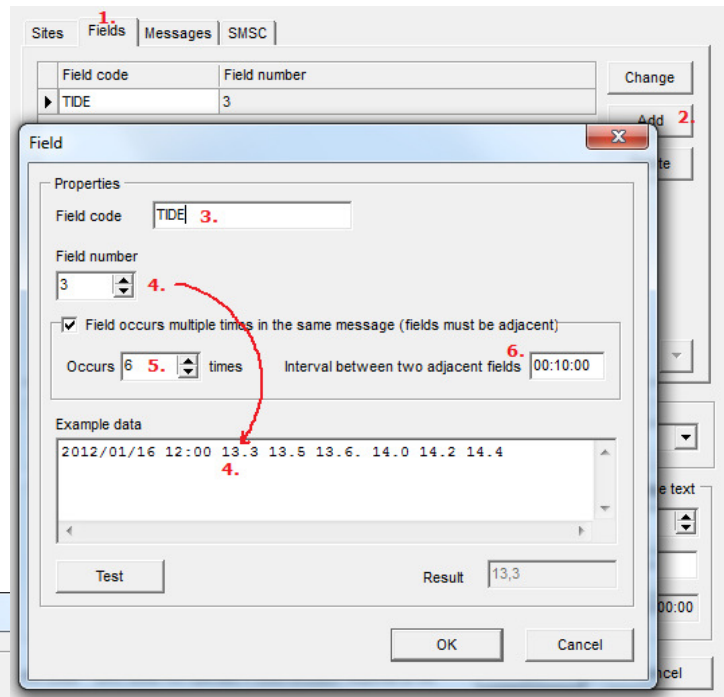


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A message can contain several value fields. The fields of interest can be identified on (1.) the 'Fields'-page.

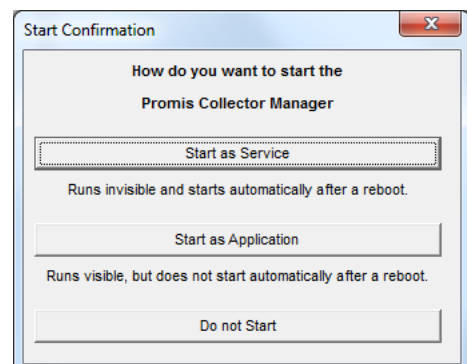
Click (2.) the 'Add'-button to specify which field(s) contain(s) the tidal value.

Each fields should have (3.) a unique code to identify the field. Specify (4.) the (start) position of the field(s), which is 3 in this case as the timestamp is occupying the first two fields. The tidal value is a repetitive field (5.) occurring 6 times in the message with (6.) a 10 minute interval in between them.



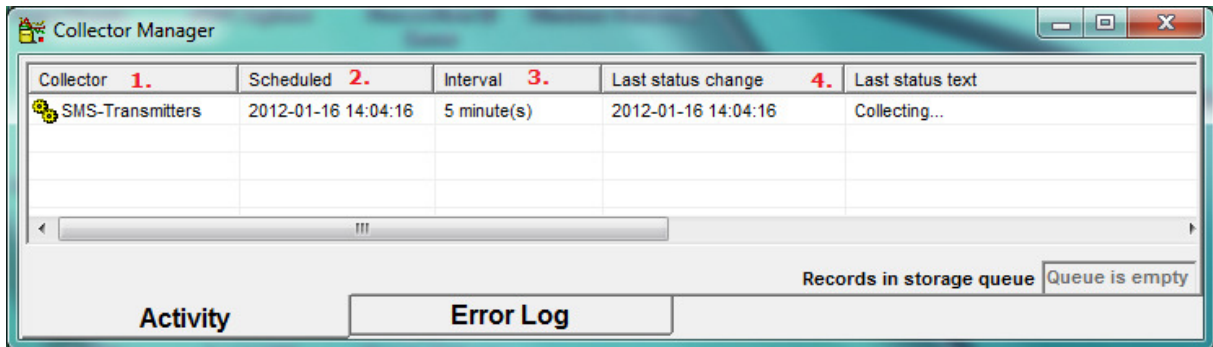
The battery voltage value is the 9th (last) field in the message and occurs only once.

After committing your changes and finally closing the 'Collector Manager - Properties'-screen, Promis asks you how to start the 'Collector Manager'. For testing purpose you could start it as a visible application, but for operational purpose it is recommended to start the collector as a service. A service runs invisible in the background independent of the logged on user (very handy incase Promis is installed on a server used by several remote desktop users) and will automatically restart when the PC powers up (e.g. after a power outage).



5. Run the Collector Manager

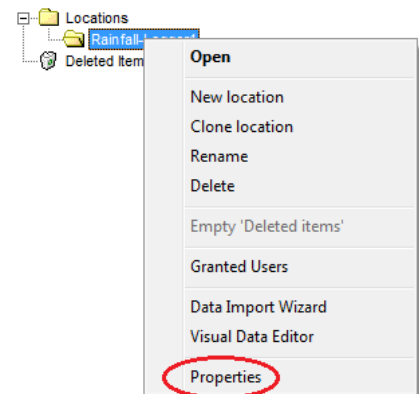
When running the collector as a visible application the 'Activity'-window will show a line for each collector. This line will show when (2.) the next read-out is scheduled and with (3.) which interval. It also displays (4.) the status of the last operation.



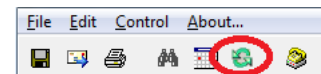
When log data is collected for the first time, a location with a name equal to the collector name (1.) will be created in the Promis database.

6. Configure a transmitter location

To (re)configure the location properties of an transmitter location, right click the corresponding name in the 'locations'-pane and select the 'Properties'-option.



- If the concerned location is not displayed in the location tree, you might need to click the 'Refresh'-button to re-load the location tree from the database.



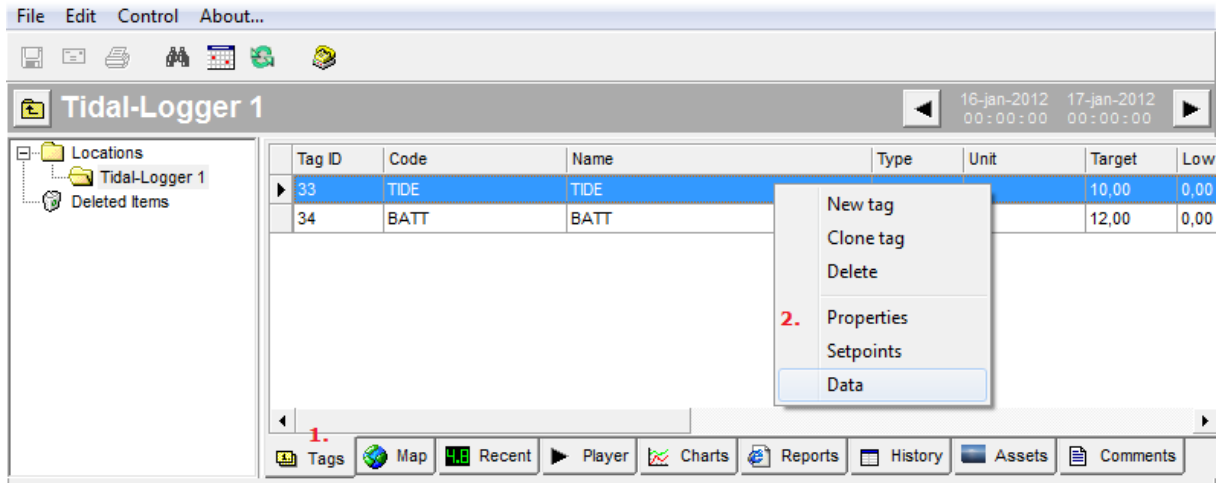
Each location should obviously have (1.) a name and (2.) a unique code to identify the location. To let the 'Collector Manager' import data to this location its linked to (3.) the previously configured 'SMS-transmitters' collector.

- Its allowed to link one single data source/collector to multiple locations, e.g. to have one location for each individual SMS-transmitter.

Location name Tidal-Logger 1 1.	Location code TIDAL1 2.
Location description	Refresh rate of Map & Recent values page 60 Sec.
Remarks	
<input checked="" type="checkbox"/> This location is linked to a data acquisition source	
<input checked="" type="radio"/> Collector Manager compatible data source	SMS-Transmitters 3.

7. Configure tags

When log data from a logger is received and one or more tags recorded in the log data are not having a corresponding tag in the Promis database, the collector will automatically create the necessary tags in the database. It could however that you want to make some changes to the default appearance of the tag like naming and limits.



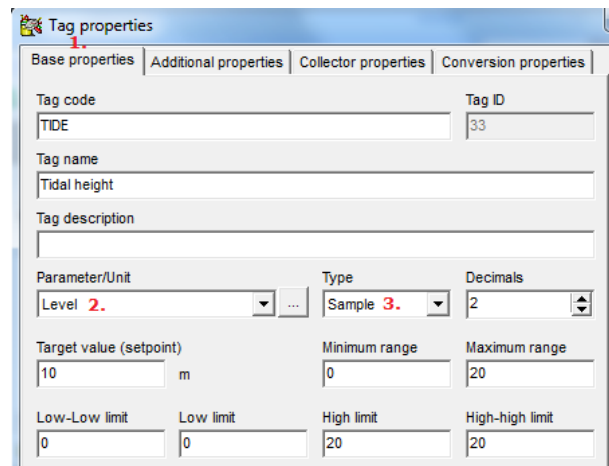
To (re)configure a tag select (1.) the 'Tags'-page of a particular location and right click the Tag you want to (re)configure and select (2.) the 'Properties'-option.

You may change anything on (1.) the 'Base properties'-page to your convenience.

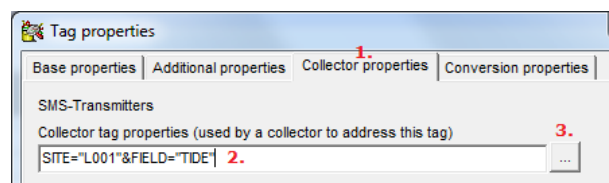
- It's wise to use a proper codification philosophy for your tags. E.g. that your 'Tidal' tags over all your locations are having the same 'Tag code'.

Tidal height is measured in m and therefore we should select (2.) a parameter with m as unit. If such a parameter is not in the list you can add one manually by clicking the '...'-button.

It is recommended that you set (3.) the Type of the tag to 'Sample' as this will affect the default appearance of the tag.

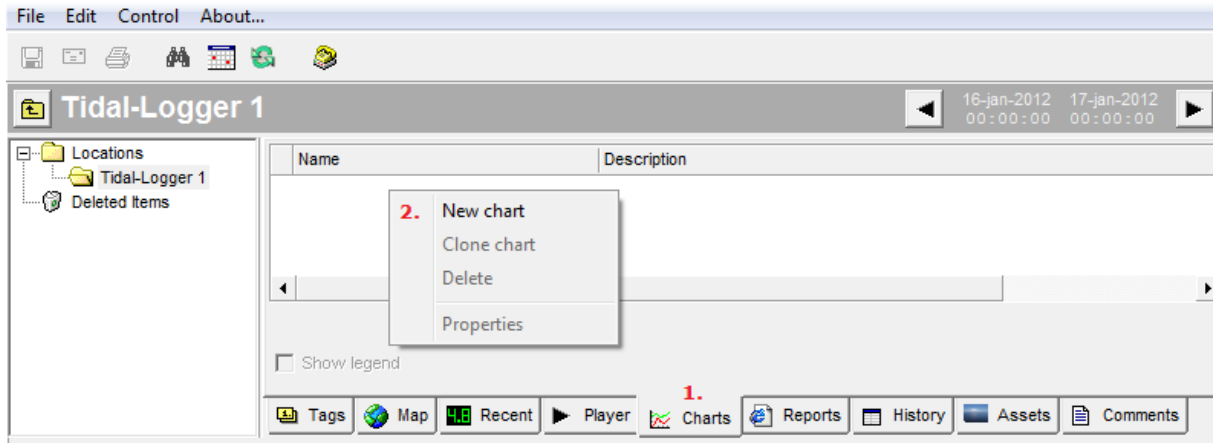


The link between a Promis tag and a device channel/field/register is defined on (1.) the 'Collector properties'-page by (2.) a driver specific properties string in the 'Collector tag properties'-box. This string can be edited manually (if you know the formatting rules), but it's more handy to edit the driver specific properties by clicking (3.) the '...'-button, this will pop-up a driver specific configuration screen.



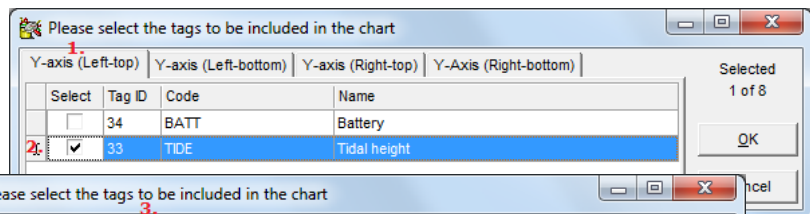
8. Define a basic chart

Promis has a very power full chart engine with a lot of features and possibilities, to be able to deploy all the features you need to get familiar with it and take your time by just trying things out. However defining a basic chart is as simple as a few mouse clicks.

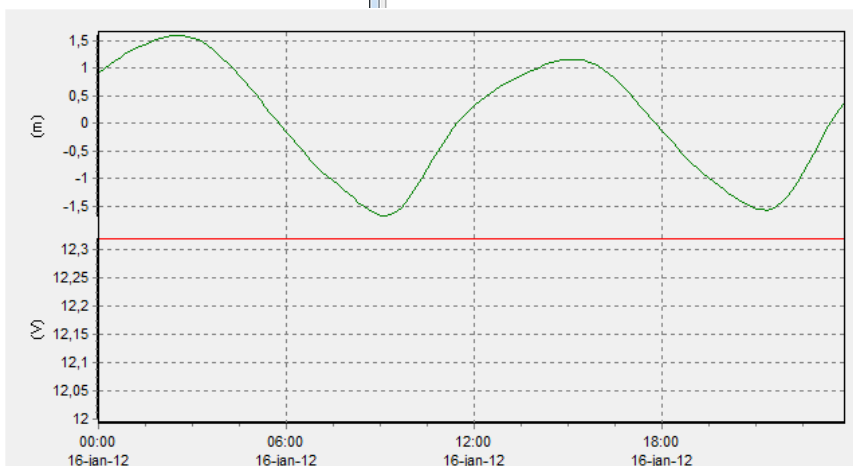
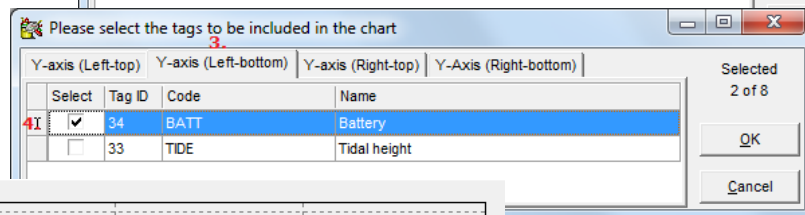


To define an new chart select (1.) the 'Charts'-page of a particular location and right click with your mouse in the (empty) chart list, followed by selecting (2.) the 'New chart'-option from the popup-menu. A window will pop-up that let you select the tags you want to visualize in the chart. If you select multiple tags per chart with values in non matching ranges (e.g. a tidal height and a battery voltage) one or more of the tags will not be scaled optimal when using one Y-axis. A basic chart can have 4 Y-axes: Two stacked Y-axes at the left and two at the right.

Assign (2.) the tidal height to (1.) the left-top Y-Axis.

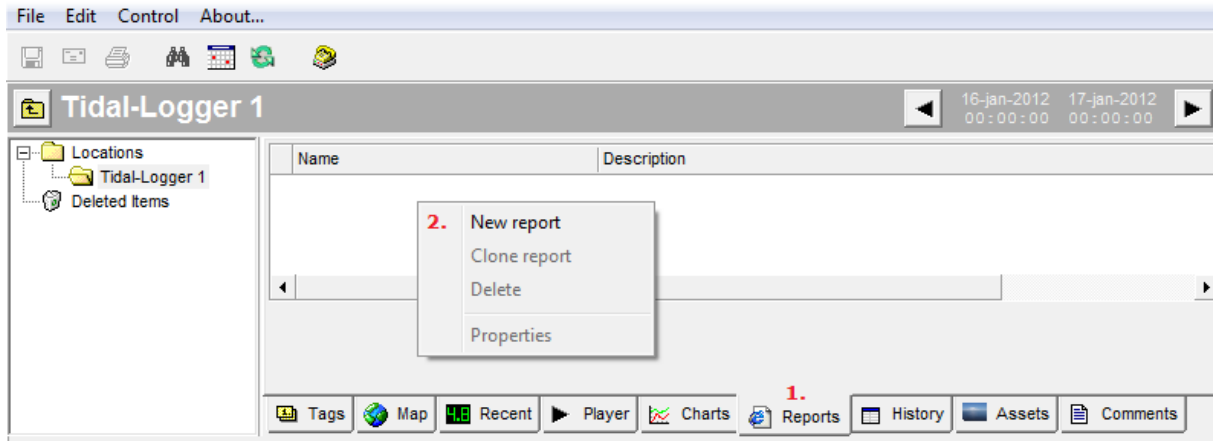


Assign (4.) the battery voltage to (3.) the left-bottom Y-axis.

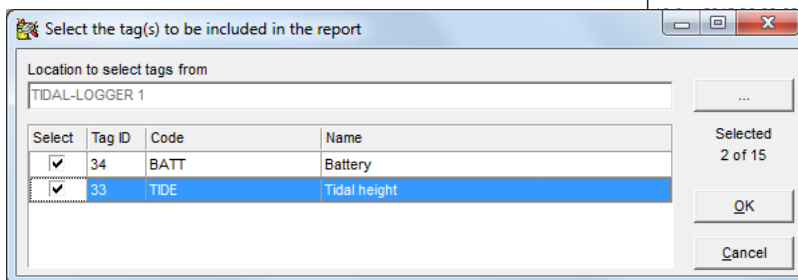


9. Define a standard report

Promis has a very power full report engine as well, but It requires some advanced IT skills to be able to create your own custom reports. Fortunately the software comes standard with several predefined report templates. Defining a report from a template is as simple as a few mouse clicks.



To define an new report select (1.) the 'Reports'-page of a particular location and right click with your mouse in the (empty) report list, followed by selecting (2.) the 'New report'-option from the popup-menu. A window will pop-up that let you select a report template from the templates directory, in this case we choose the file 'Standard Report.prd' and after loading, another window will pop-up that let you select the tags you want to be included in the report. I this case we choose tidal height and battery voltage.



Timestamp	Battery V	Tidal height m
16-Jan-2012 00:00:00	12.32	0.99
16-Jan-2012 01:00:00	12.32	1.26
16-Jan-2012 02:00:00	12.32	1.52
16-Jan-2012 03:00:00	12.32	1.55
16-Jan-2012 04:00:00	12.32	1.20
16-Jan-2012 05:00:00	12.32	0.58
	12.32	-0.10
	12.32	-0.74
	12.32	-1.25
	12.32	-1.63
	12.32	-1.33
	12.32	-0.44
	12.32	0.26
	12.32	0.68
	12.32	0.97
	12.32	1.14
16-Jan-2012 16:00:00	12.32	1.03
16-Jan-2012 17:00:00	12.32	0.56
16-Jan-2012 18:00:00	12.32	-0.08
16-Jan-2012 19:00:00	12.32	-0.69
16-Jan-2012 20:00:00	12.32	-1.18
16-Jan-2012 21:00:00	12.32	-1.51
16-Jan-2012 22:00:00	12.32	-1.35
16-Jan-2012 23:00:00	12.32	-0.47
17-Jan-2012 00:00:00	12.32	0.24
Summary	Battery V	Tidal height m
Count	25	25
Minimum	12.32	-1.63
Maximum	12.32	1.55
Average	12.32	0.05
Quantity		

The standard report is a tabular report in HTML format with a summary over the selected report period at the bottom. A similar report is available in CSV, XLSX and plain text format.