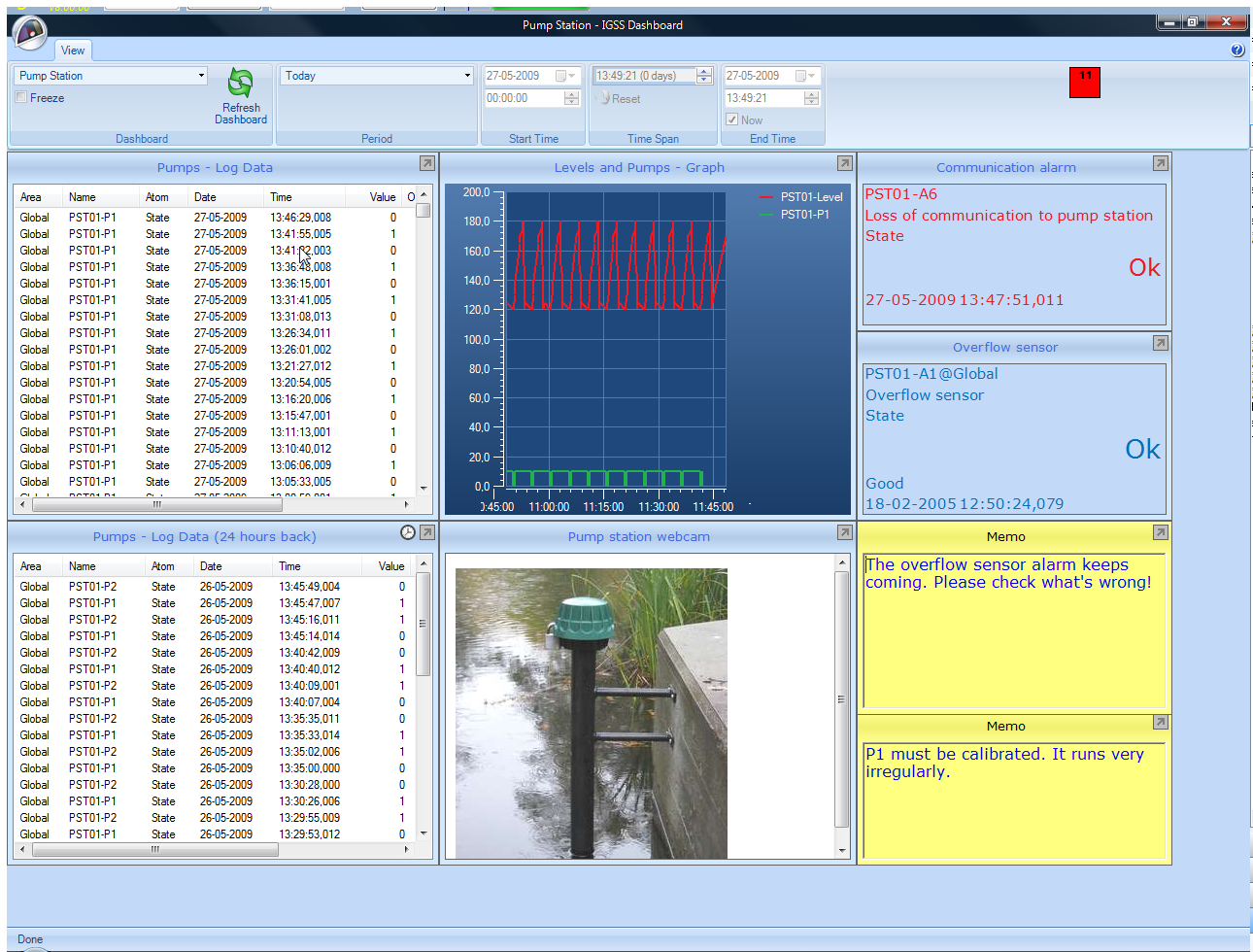


# Exercise – Configure a Dashboard for Pump Stations

In this example, we will build a dashboard which will provide the user with a fast overview of the state of the pump station. The example shows objects from the Pump Station diagram of our Demo configuration.

## The final pump station dashboard

The picture below shows the dashboard we want to configure.



## Task 1: Load the Demo configuration and set the Dashboard program to auto start

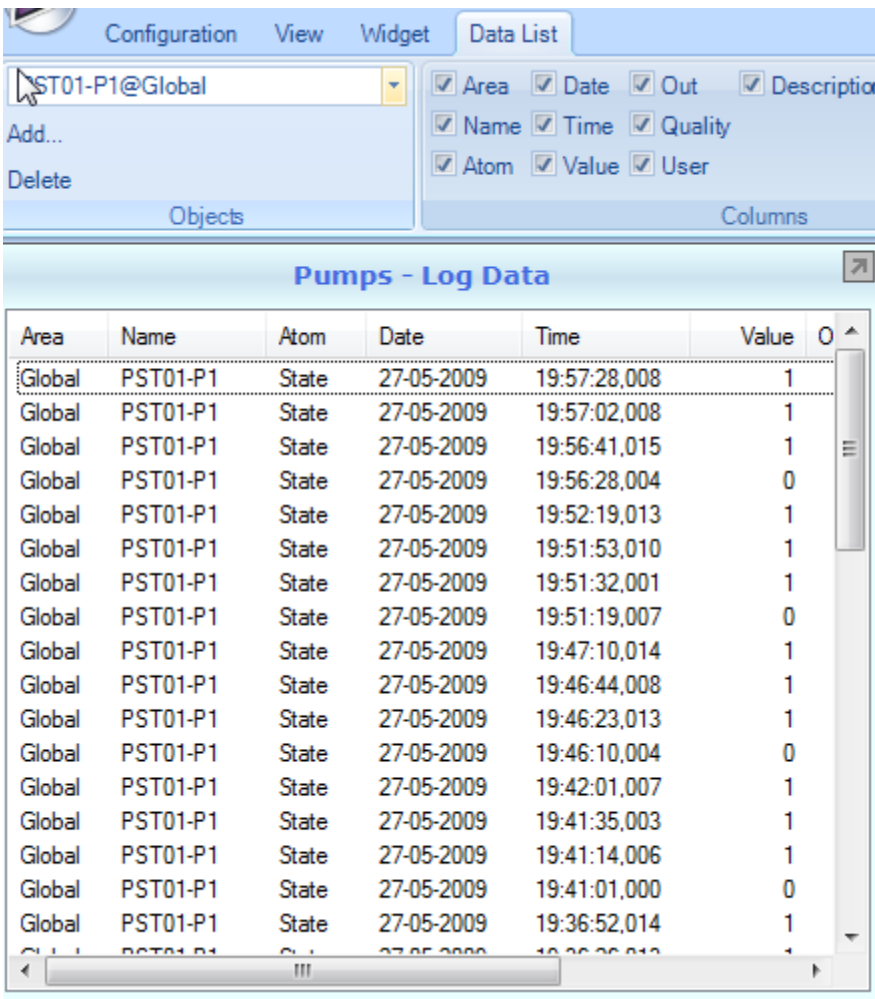
1. Make sure that the IGSS Demo configuration is the current configuration. If not, open this configuration in the **System Configuration** module.
2. On the **Startup** tab under **Auto start**, select the **Dashboard** check box.
3. In the **File** menu, select **Save and Exit**.
4. Start the Demo configuration by clicking the **Start** button in the **IGSS Starter** bar. The Dashboard program will now load automatically.

**Task 2: Create the pump station dashboard**

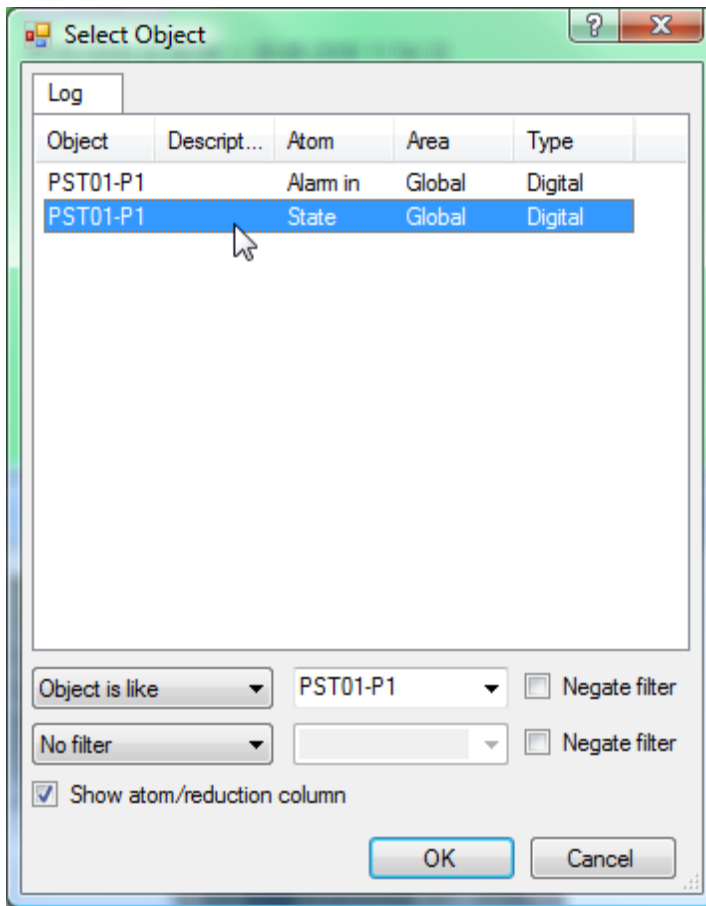
1. By default, the Dashboard program starts in View mode. Switch to Configuration mode by pressing CTRL + D or select **Configuration Mode** in the Application button menu.
2. Click the **Add New** button.
3. Type the name of the new dashboard - **Pump Station** and click **OK**.
4. Select the **Default** check box. This will auto start the Pump Station dashboard the next time you load the Dashboard program.

**Task 3 A: Configure the first log data widget**

This widget will show log data for the two pumps, PST01-P1 and PST01-P2. It will be shown in the top left corner of the dashboard as shown below:



1. On the **Configuration** tab, click the **Log Data** button.
2. On the **Data List** tab, click the **Add** button.
3. In the **Select Object** dialog box, place the cursor in the first filter field. We will use the default filter type, **Object is like**.
4. Type **PST01-P1**. This will create two entries in the list. Double-click the one where the atom is **State**.



5. You will now see log data in the widget for this object.

Area	Name	Atom	Date	Time	Value
Global	PST01-P1	State	26-05-2009	11:10:08,001	0
Global	PST01-P1	State	26-05-2009	11:15:12,000	0
Global	PST01-P1	State	26-05-2009	11:20:16,012	0
Global	PST01-P1	State	26-05-2009	11:23:23,002	0
Global	PST01-P1	State	26-05-2009	11:27:05,002	0
Global	PST01-P1	State	26-05-2009	11:27:38,010	1
Global	PST01-P1	State	26-05-2009	11:32:12,007	0
Global	PST01-P1	State	26-05-2009	11:32:45,007	1
Global	PST01-P1	State	26-05-2009	11:37:19,004	0
Global	PST01-P1	State	26-05-2009	11:37:52,000	1
Global	PST01-P1	State	26-05-2009	11:42:26,004	0
Global	PST01-P1	State	26-05-2009	11:42:59,011	1
Global	PST01-P1	State	26-05-2009	11:47:33,006	0
Global	PST01-P1	State	26-05-2009	11:48:06,014	1
Global	PST01-P1	State	26-05-2009	11:52:40,005	0
Global	PST01-P1	State	26-05-2009	11:53:13,011	1
Global	PST01-P1	State	26-05-2009	11:57:47,002	0

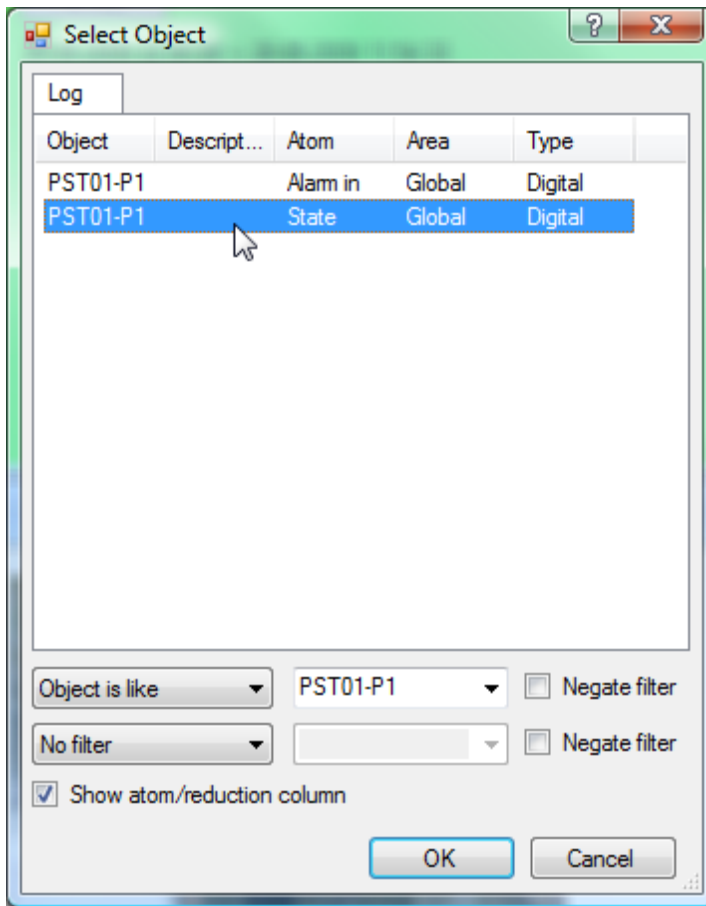
6. Repeat steps 2-4, now choosing the second pump, PST01-P2.
7. Select the Widget tab and change the caption text to **Pumps - log data**.

**Task 3 B: Configure the second log data widget with a time offset**

This widget will show log data for the two pumps, PST01-P1 and PST01-P2, but with a time offset of 24 hours. This will allow the user to compare when the pumps started/stopped now and 1 day ago. Place the second log widget just below the first one as shown below:

Log Data						
Area	Name	Atom	Date	Time	Value	0
Global	PST01-P1	State	26-05-2009	11:10:08,001	0	
Global	PST01-P1	State	26-05-2009	11:15:12,000	0	
Global	PST01-P1	State	26-05-2009	11:20:16,012	0	
Global	PST01-P1	State	26-05-2009	11:23:23,002	0	
Global	PST01-P1	State	26-05-2009	11:27:05,002	0	
Global	PST01-P1	State	26-05-2009	11:27:38,010	1	
Global	PST01-P1	State	26-05-2009	11:32:12,007	0	
Global	PST01-P1	State	26-05-2009	11:32:45,007	1	
Global	PST01-P1	State	26-05-2009	11:37:19,004	0	
Global	PST01-P1	State	26-05-2009	11:37:52,000	1	
Global	PST01-P1	State	26-05-2009	11:42:26,004	0	
Global	PST01-P1	State	26-05-2009	11:42:59,011	1	
Global	PST01-P1	State	26-05-2009	11:47:33,006	0	
Global	PST01-P1	State	26-05-2009	11:48:06,014	1	
Global	PST01-P1	State	26-05-2009	11:52:40,005	0	
Global	PST01-P1	State	26-05-2009	11:53:13,011	1	
Global	PST01-P1	State	26-05-2009	11:57:47,002	0	
Global	PST01-P1	State	26-05-2009	11:58:20,000	1	

1. On the **Configuration** tab, click the **Log Data** button.
2. On the **Data List** tab, click the **Add** button.
3. In the **Select Object** dialog box, place the cursor in the first filter field. We will use the default filter type, **Object is like**.
4. Type **PST01-P1**. This will create two entries in the list. Double-click the one where the atom is **State**.



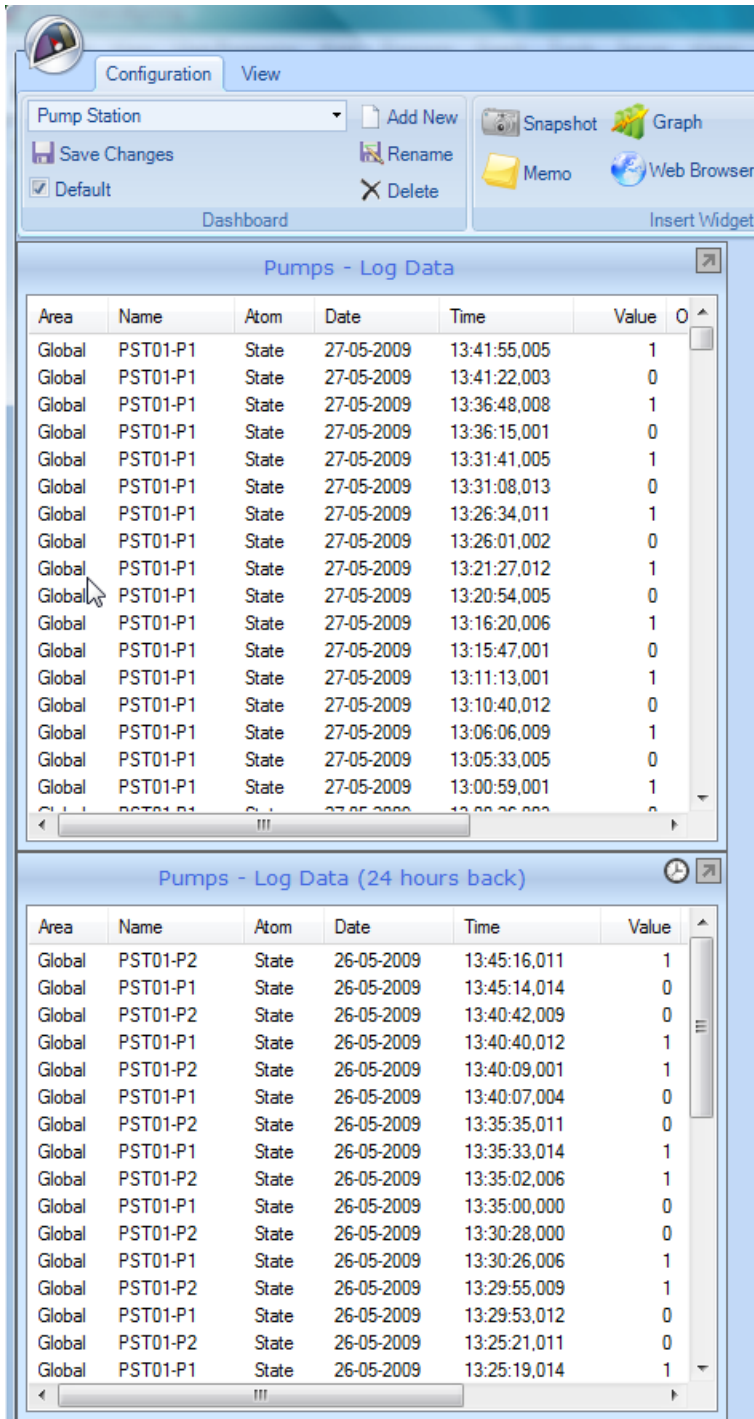
5. You will now see log data in the widget for this object.

Area	Name	Atom	Date	Time	Value
Global	PST01-P1	State	26-05-2009	11:10:08,001	0
Global	PST01-P1	State	26-05-2009	11:15:12,000	0
Global	PST01-P1	State	26-05-2009	11:20:16,012	0
Global	PST01-P1	State	26-05-2009	11:23:23,002	0
Global	PST01-P1	State	26-05-2009	11:27:05,002	0
Global	PST01-P1	State	26-05-2009	11:27:38,010	1
Global	PST01-P1	State	26-05-2009	11:32:12,007	0
Global	PST01-P1	State	26-05-2009	11:32:45,007	1
Global	PST01-P1	State	26-05-2009	11:37:19,004	0
Global	PST01-P1	State	26-05-2009	11:37:52,000	1
Global	PST01-P1	State	26-05-2009	11:42:26,004	0
Global	PST01-P1	State	26-05-2009	11:42:59,011	1
Global	PST01-P1	State	26-05-2009	11:47:33,006	0
Global	PST01-P1	State	26-05-2009	11:48:06,014	1
Global	PST01-P1	State	26-05-2009	11:52:40,005	0
Global	PST01-P1	State	26-05-2009	11:53:13,011	1
Global	PST01-P1	State	26-05-2009	11:57:47,002	0
Global	PST01-P1	State	26-05-2009	11:58:20,000	1

6. Repeat steps 2-4, now choosing the second pump, PST01-P2.

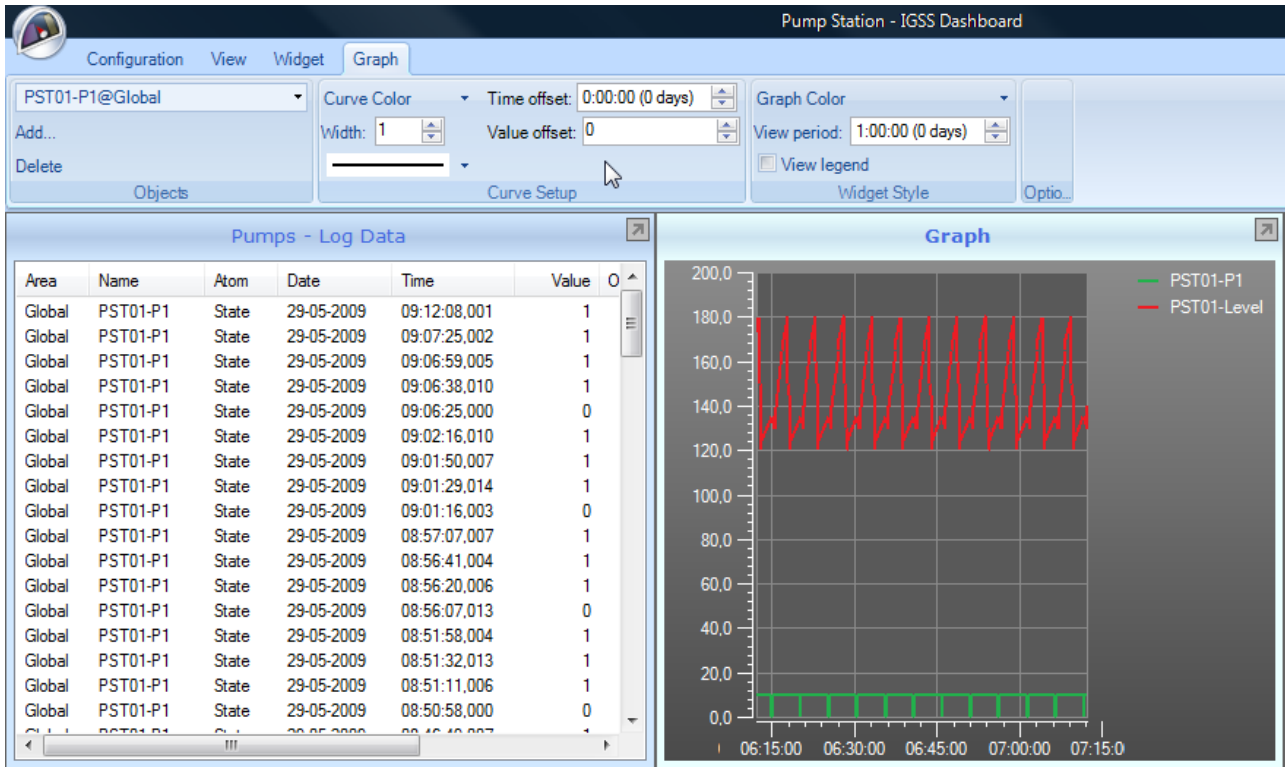
7. In the **Time Offset** group, enter **-24:00:00** to make a time offset of 24 hours from the current period (selected on the **View** tab).

8. Select the **Widget** tab and change the caption text to **Pumps - log data (24 hours back)**.
9. Position and resize the two widgets so that they take up approx. 30 % of the workspace from the left side:

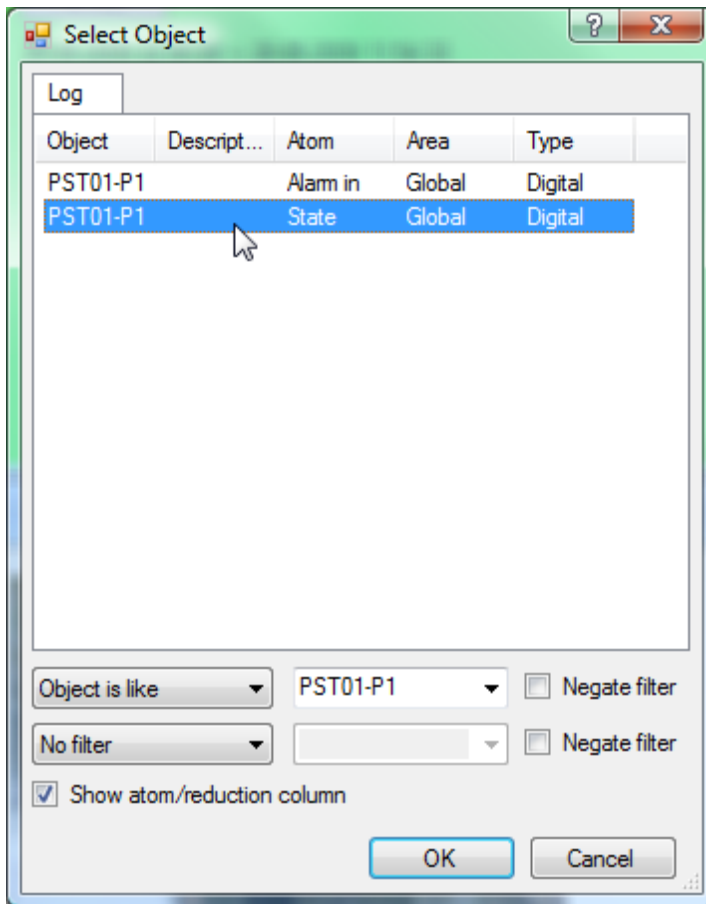


### Task 4: Configure the graph widget

This widget will show a graph for the objects, PST01-Level (analog) and PST01-P1 (digital). Place the widget just right of the first log data widget as shown below:



1. On the **Configuration** tab, click the **Graph** icon.
2. Position the graph adjacent to the Pumps - Log Data widget.
3. On the **Data List** tab, click the **Add** button.
4. In the **Select Object** dialog box, place the cursor in the first filter field. We will use the default filter type, **Object is like**.
5. Type `PST01-P1`. This will create two entries in the list. Double-click the one where the atom is **State**.



6. Repeat steps 3-4, now choosing the pump station level meter, PST01-Level.
7. Let's change the line color for PST01-P1. Click the **Line Color** drop-down arrow and select a green color.
8. Let us change the background color of the graph. Click the **Graph Color** drop-down arrow and select a dark blue color. The **View Period** is by default set to 1 hour. This means that the user will get data from the last hour of the period in the graph. But he will also have the option of viewing the trend for the whole period in the graph widget.

*The graph is now complete and should look like the one above.*

### Task 6: Configure the web browser widget

This widget will show a live picture from a webcam set up in the pump station. Place the widget just below the graph widget.

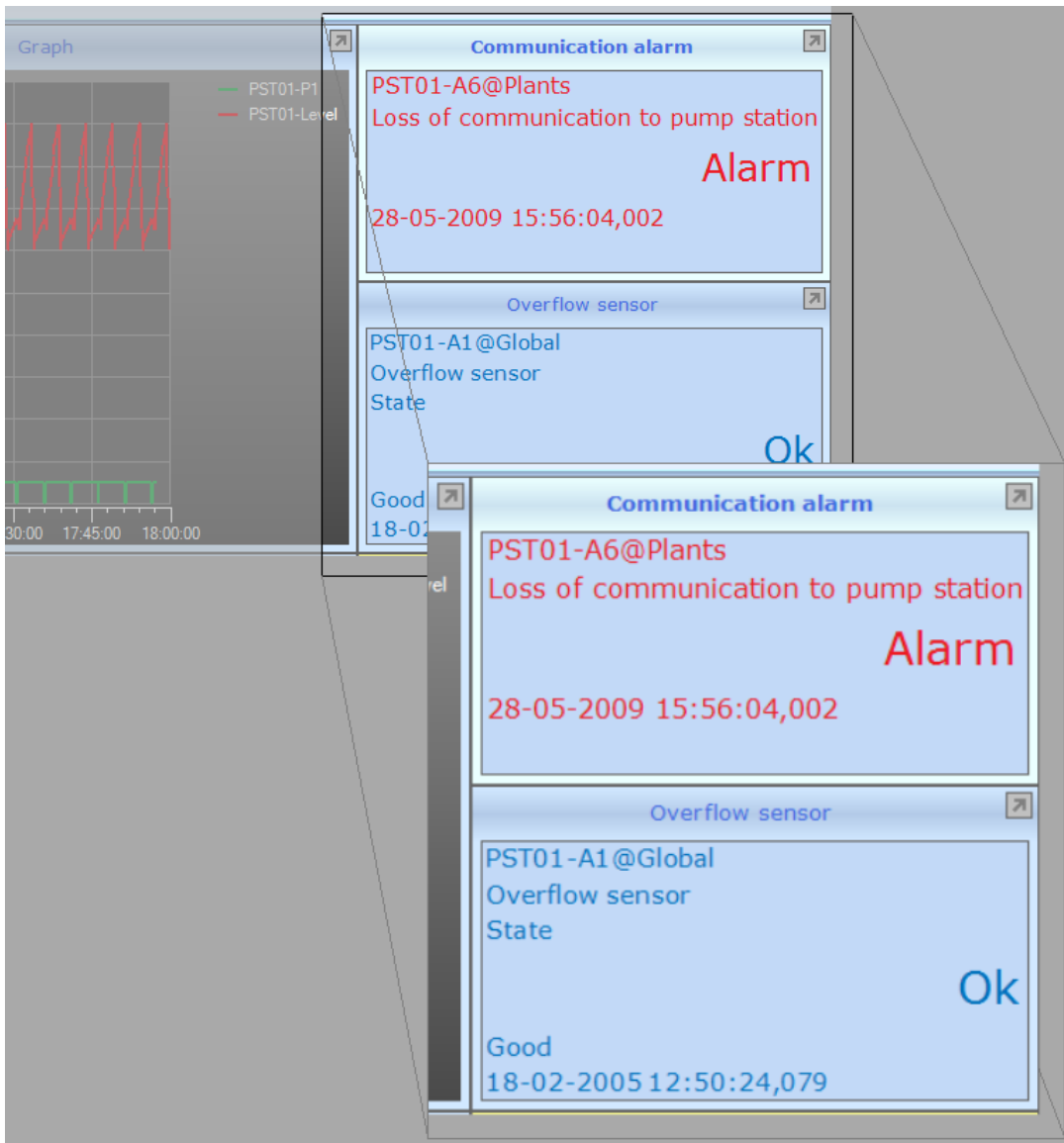


1. On the **Configuration** tab, click the Web Browser icon.
2. In the **URL** field, enter this web address, `http://www.mjk.com/typo3temp/bcb9f8fd98.jpg` This is just a static picture, but might have been a live webcam.
3. Select the **Never Show Scrollbars** check box.
4. Click the Widget tab.
5. Type `Pump station webcam`. This text will appear in the title bar of the widget.

*The widget is now complete and should look like the one above.*

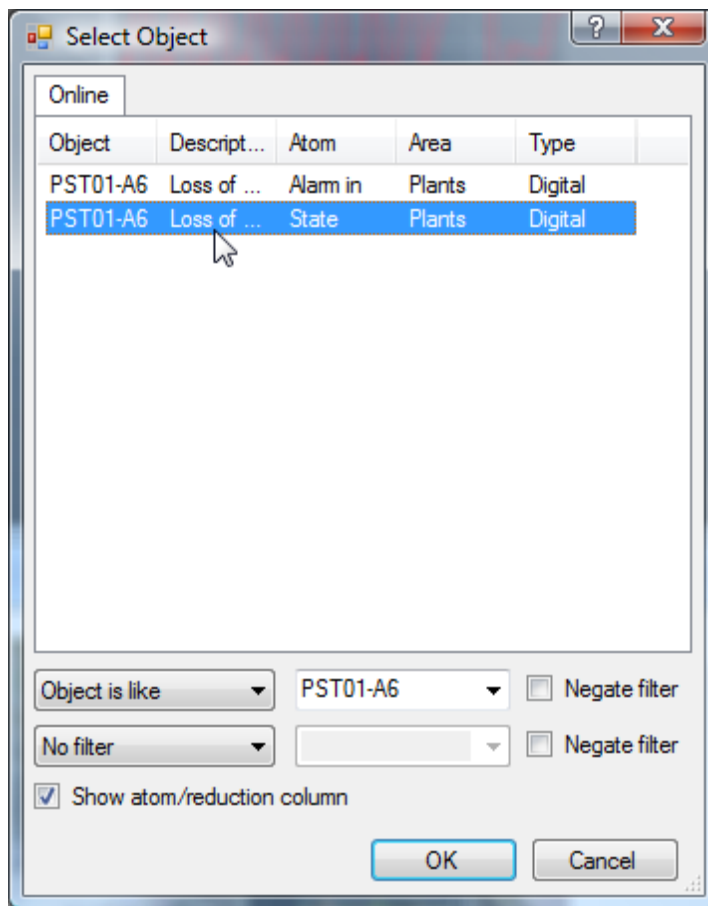
## Task 7: Configure the snapshot widgets

There are two online values we want to follow continuously:  
A communication alarm and the overflow sensor. We will show them in two snapshot widgets as shown below:



1. On the **Configuration** tab, click the **Snapshot** icon.
2. Place the widget adjacent to the graph widget and align it to the top of the workspace.
3. Click the **Select** button.
4. In the **Select Object** dialog box, place the cursor in the first filter field. We will use the default filter type, **Object is like**.

Type `PST01-A6`. This will create two atoms in the list. Double-click the one where the atom is **State**.



- The default information now appears in the widget. Let's make it very simple and remove some of the information.

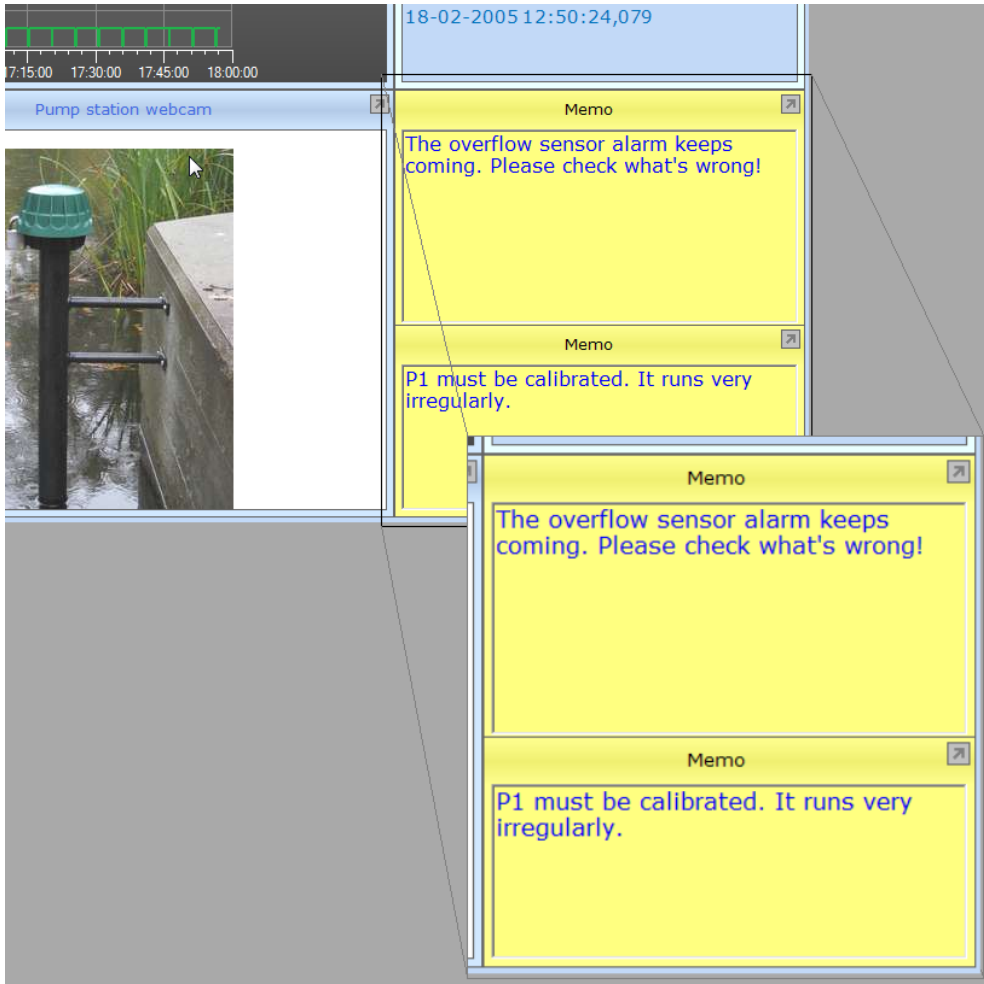
In the Display group, clear the check boxes for **Atom** and **Quality**.

- Change the color of the information and value to **red**.
- Repeat steps 3-6, only now using the object PST01-A1 and a blue color for the information and value.

*The snapshot widget is now complete and should now look like the picture above.*

## Task 8: Configure the memo widgets

We will allow users to put in two memos on the dashboard. The text can, of course, be edited by the users. However, if you want a memo with fixed text, you can lock the memo widget. The two memos will look like this:



1. On the **Configuration** tab, click the **Memo** icon.
2. Drag the memo widget to a position right of the webcam widget and below the overflow sensor widget.
3. On the **Memo** tab, change the filename of the text file holding the memo text to DashboardNote1.txt. The text the user enters in the memo widget will be written to this file.  
Enter the text:

"The overflow sensor alarm keeps coming. Please check what's wrong!"

4. Repeat steps 1 and 2, only placing the second memo just below the first one.
5. Change the filename to DashboardNote2.txt for the second memo. Enter the text:

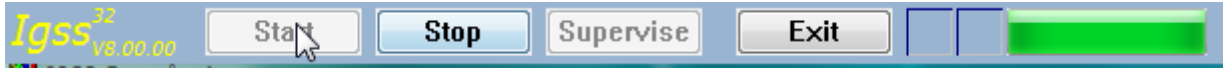
"P1 must be calibrated. It runs very irregularly."

*The memo widgets are complete and the dashboard is ready for use.*

**Task 9: Start the dashboard together with Supervise/Alarm**

Now we want to test our new dashboard, as the end user will see it during supervision.

1. In the **IGSS Starter** bar, click the **Stop** button to stop the data collection and shut down **Supervise** and **Alarm**.



2. Click the **Start** button to restart the configuration.

The pump station dashboard will now appear. The Dashboard program window will appear at the position where you last shut it down.

*You have successfully completed the IGSS Dashboard exercise.*