OPC Points Set up in SKF @ptitude Observer

Introduction

This document contains some basis on the Open Process Control (OPC) application and a brief procedure on how to set up OPC measurement points in SKF @ptitude Observer. The procedure covers:

- OPC basis
- Procedure
  - OPC server set up
  - OPC channel set up
  - Measurement point set up

OPC basis

OPC stands for Open Process Control (previously object linking and embedding (OLE) for process control) and it is an open, flexible and plug-and-play software communication standard designed to exchange real time automation data (interoperability in the automation industry) between PC-based clients using Microsoft operating systems. OPC is a specification that has been developed by a team of more than 120 companies to produce an interface that makes possible the interoperability between automation/control applications, field systems/devices and business/office applications. Currently, the OPC Foundation is in charge of the OPC standard. The OPC Foundation is dedicated to ensure the interoperability by creating and maintaining open specifications that standardize the communication of acquired process data, alarm and event records, historical data and batch data to multi-vendor enterprise systems and between production devices like sensors, instruments, PLCs, RTUs, DCSs, HMIs, trending subsystems, alarm subsystems and more as used in the process industry, manufacturing and in acquiring and transporting oil/gas and minerals.

The OPC enables a software, such as SKF @ptitude Observer, to route its data to the OPC server. In return, the OPC server stores and shares data that are from all the OPC clients. Generally, there are two different generations of OPC, OPC (which is generally referred to as Standard OPC) and OPC UA.

There are two ways of working with OPC in conjunction with SKF @ptitude Observer:

- **Using the Internal Built-in OPC Server:** In the SKF @ptitude Observer Monitoring suite, there is a built-in OPC UA server in the monitor service component. If enabled, it can automatically publish all data that the SKF @ptitude Observer system captures.
- **Using External OPC Servers:** To be able to use OPC servers in SKF @ptitude Observer, you need to set up a configuration for the available OPC servers so that the SKF @ptitude Observer Monitor service can recognize the OPC servers. SKF @ptitude Observer Monitor can not only handle MasCon / SKF Multilog IMx On-line Systems, but also be the logical data gatherer/distributor for OPC. Therefore, it is not needed to have SKF @ptitude Observer running in order to use OPC in your application. However, you do need to set up OPC servers and OPC channels in SKF @ptitude Observer while the SKF @ptitude Observer Monitor is connected to SKF @ptitude Observer.

Procedure

1 First, it is necessary to verify in your OPC server the alias group and contents that you need to send to the SKF @ptitude Observer database or where you want to write from SKF @ptitude Observer. In our case, the alias group is called "OPC Test" and the contents are "Output 1, 2 and 3". Each content will be connected to SKF @ptitude Observer via OPC channels.

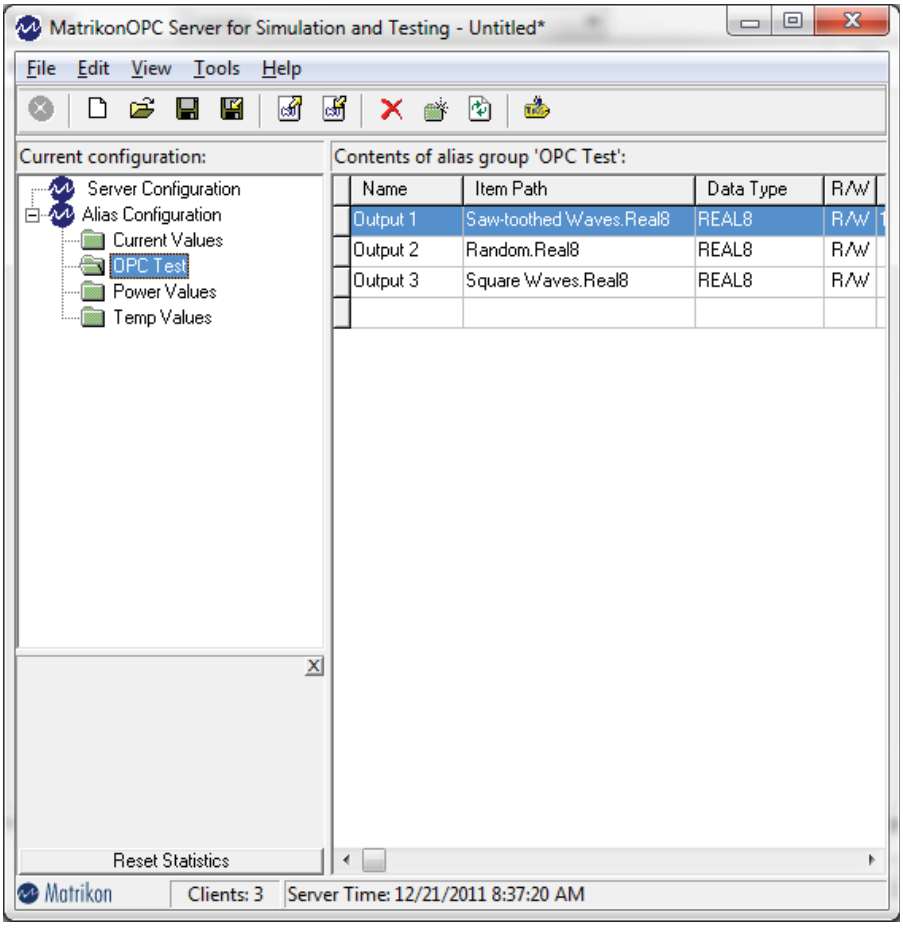

Fig. 1. Alias group "OPC Test" and its contents.

2 Once the OPC Server information is verified, it is necessary to associate it with SKF @ptitude Observer. To do that, proceed with the following steps:

- Go to the **On-line** menu and select **OPC Servers** (→ **fig. 2**).
- From the **OPC Server and channel settings** window (→ **fig. 3**), click **Add** in "OPC Servers" area.
- From the **OPC Server** window (→ **fig. 4**):
  - Give a suitable **Name** to the server.
  - Select "OPC" as the **Server type**.
  - Enter the OPC server IP address and then select the server from the available list.
  - Enter the **Scan interval** you want to use and then click **OK**.

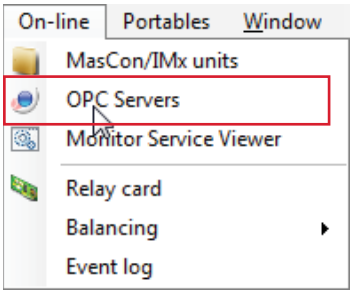

Fig. 2. Select OPC Servers from the On-line menu.

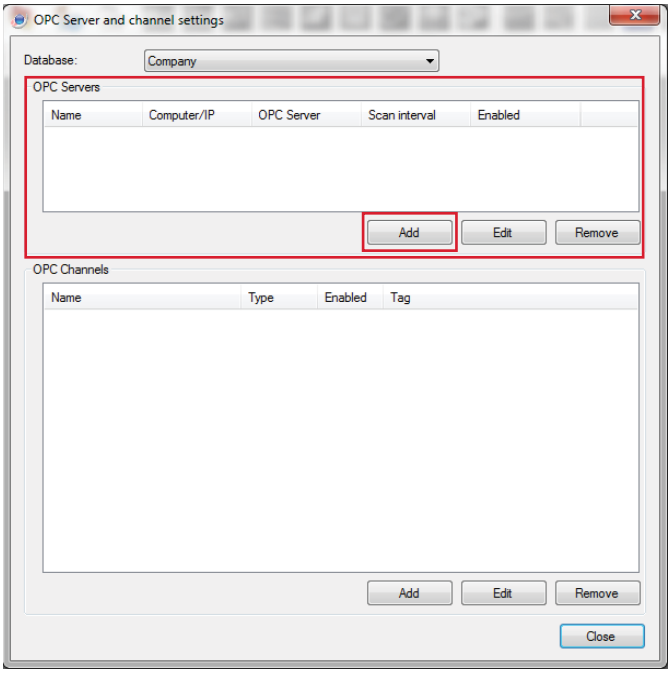

Fig. 3. Click Add from the "OPC Servers" area.

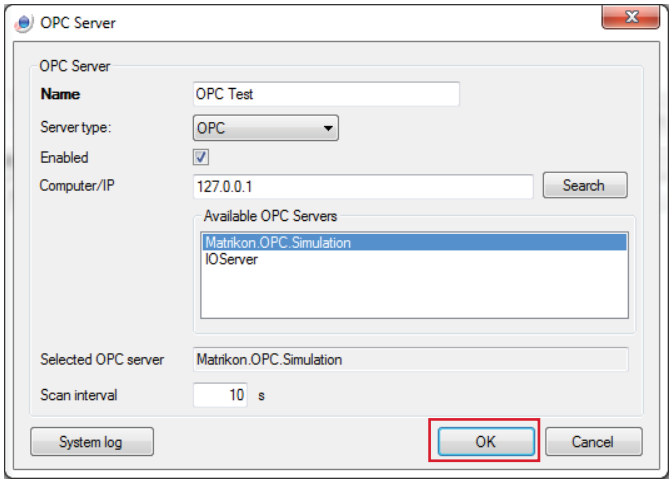

Fig. 4. Enter the OPC Server information.

3 Once the OPC Server is associated, it is necessary to add the channels (connected to the OPC alias group contents).

- From the **OPC Server and channel settings** window (**→ fig. 5**), click **Add** from the "OPC Channels" section.
- In the **OPC Channel** window, enter a suitable **Name** for the channel (**→ fig. 6**).
- Define if the channel will be used as an input or output according to your needs.
- Click the search button (**...**) and wait a few seconds until the OPC alias list appears (**→ fig. 7**).
- From the list, select the content you want to use in the channel, click **OK** and close the OPC Server window.

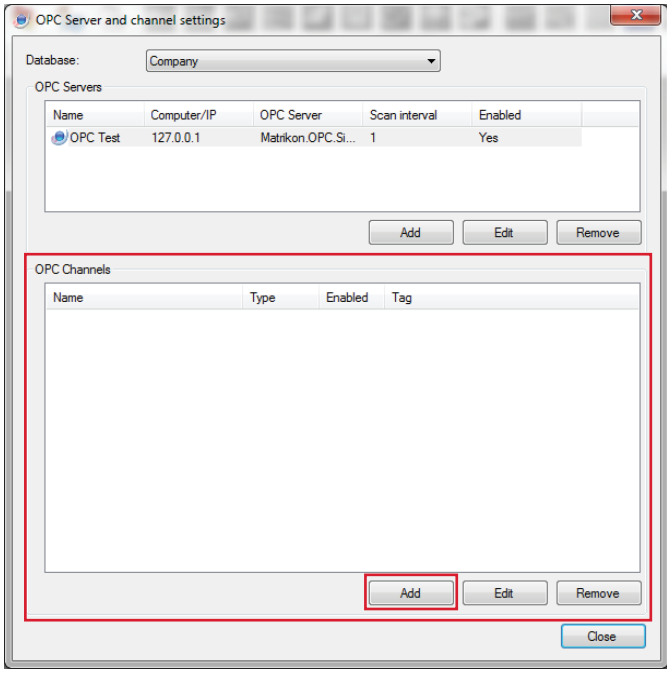

Fig. 5. Click Add from the "OPC Channels" section.

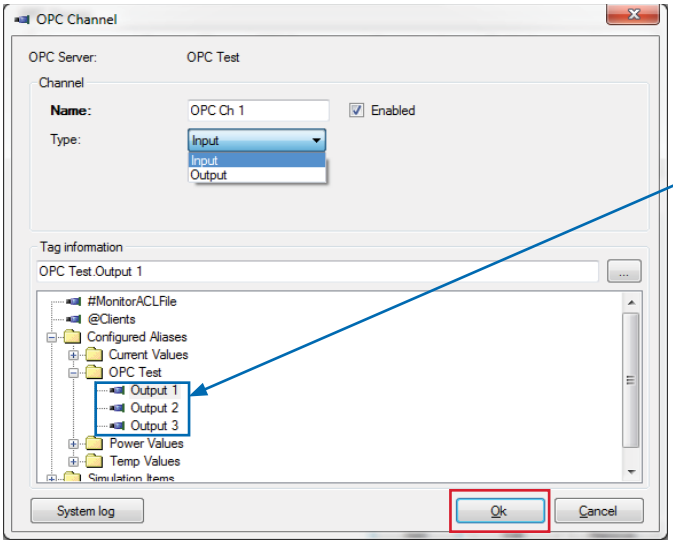

Fig. 6. Enter the channel name and select the type.

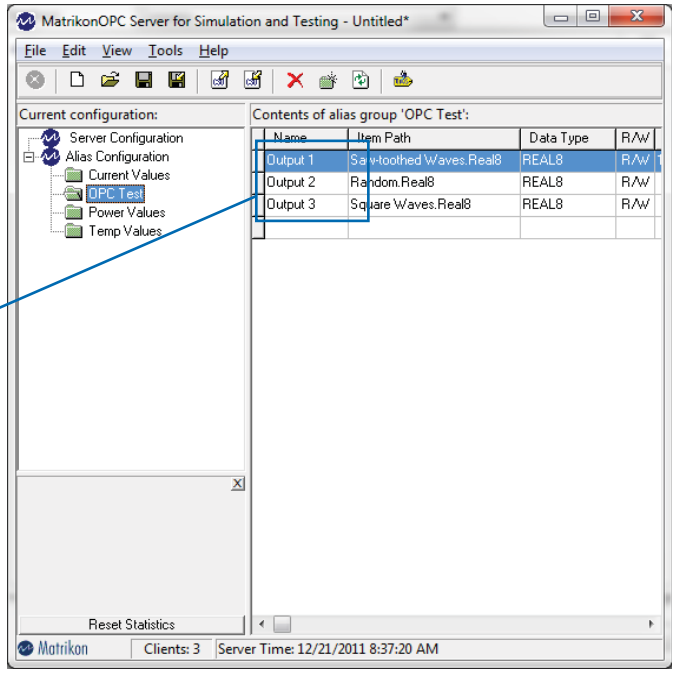

Fig. 7. OPC alias list.

4 Finally, you will be able to create OPC measurement points in order to trend OPC alias content.

- When adding a measurement point in a machine, select **OPC Server** and **OPC** trend based measurement point (**→ fig. 8**).
- Click **OK**.
- From the **Meas. point** window (**→ fig. 9**), give a suitable **Name** and **Description** for the measurement point.
- Select the **OPC Server** and **OPC Channel** and then click **OK**.

It will then be possible to see the data read from the OPC Server (**→ fig. 10**).

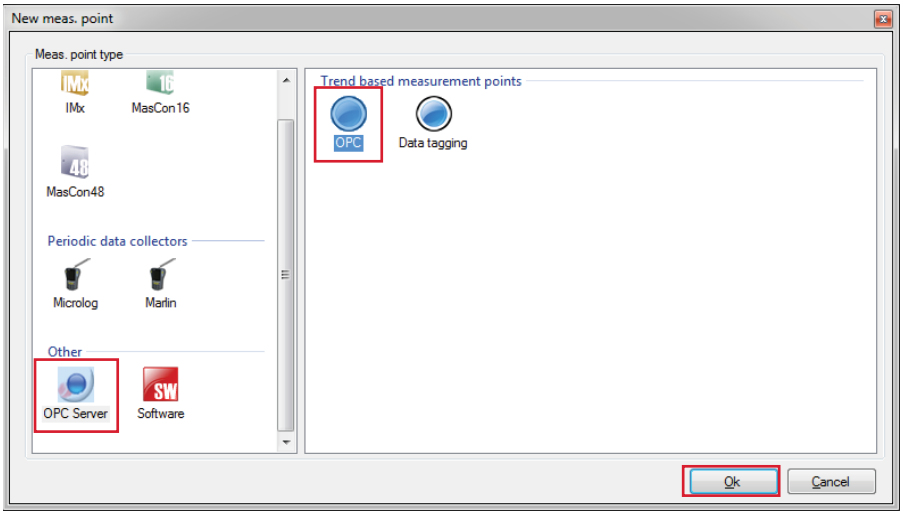

Fig. 8. Select OPC Server and then OPC for the trend based measurement points.

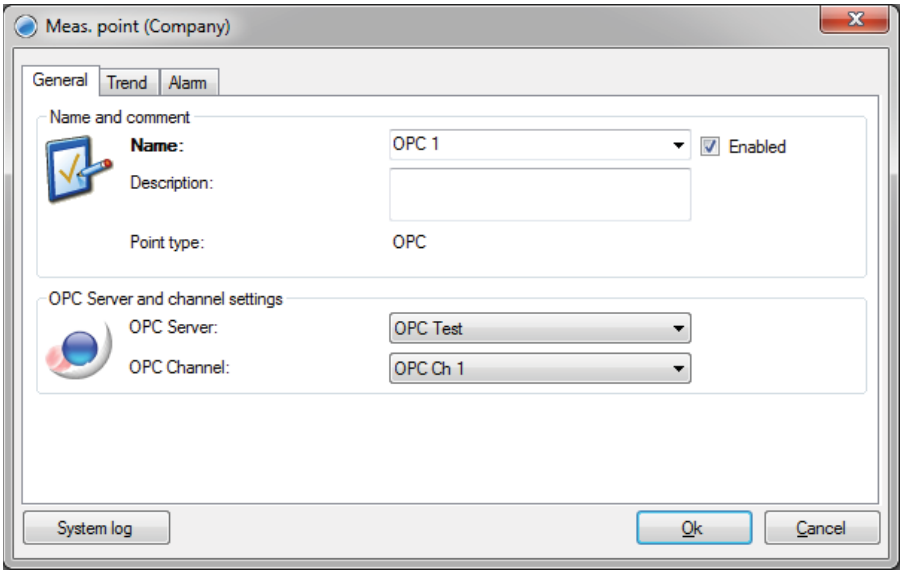

Fig. 9. Enter the name and description for the measurement point.

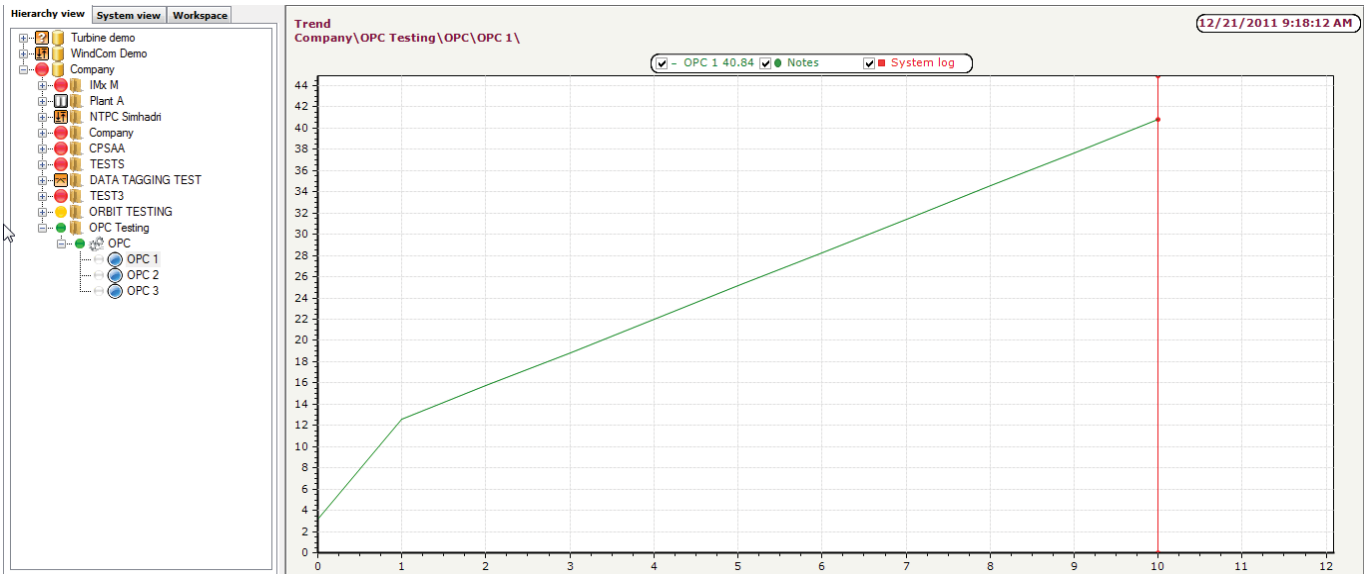

Fig. 10. Data read from the OPC Server.

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