

OpcOdbc SimApi User Guide

1. Introduction

This document is the user guide for the OpcOdbc SimApi. It is used by SIMCA-Batch On-Line to connect to both OPC for process data and ODBC for batch data through the same SimApi.

The OpcOdbc SimApi reads current data through an OPC DA interface, historical data through an OPC HDA interface and batch data through an ODBC interface.

This SimApi is no longer developed (it is deprecated). It has been replaced by the separate OPC SimApi and the separate ODBC interface.

2. Configuration

The configuration stores the setting in a settings file in the *Program Data* directory:

(Win7): C:\ProgramData\Umetrics\SimApi

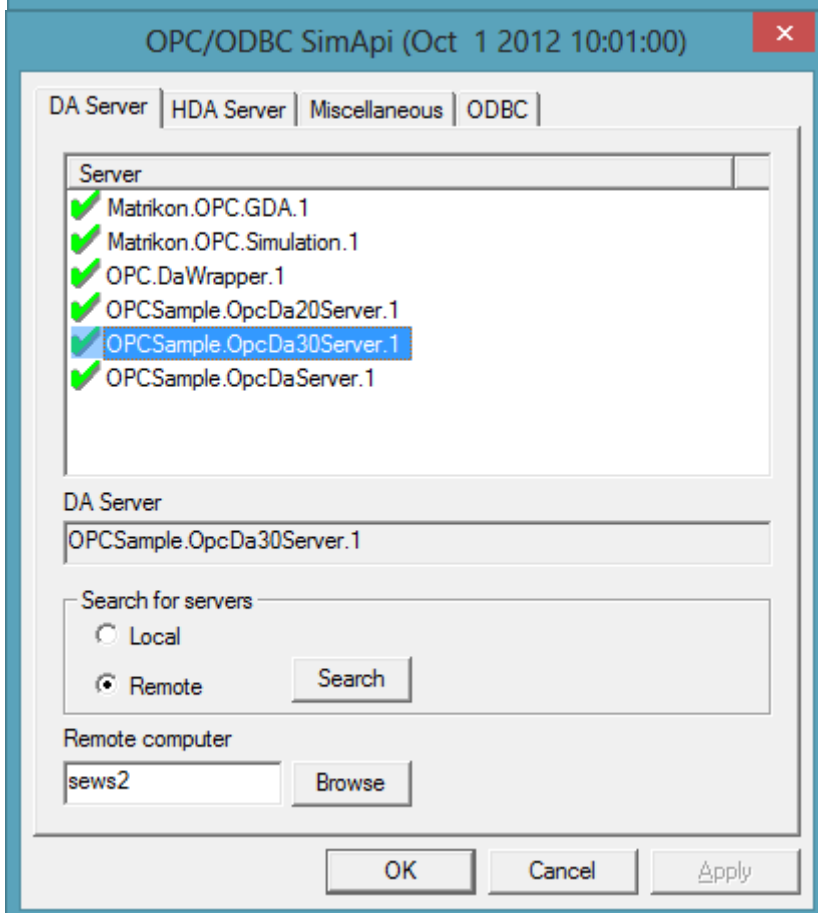
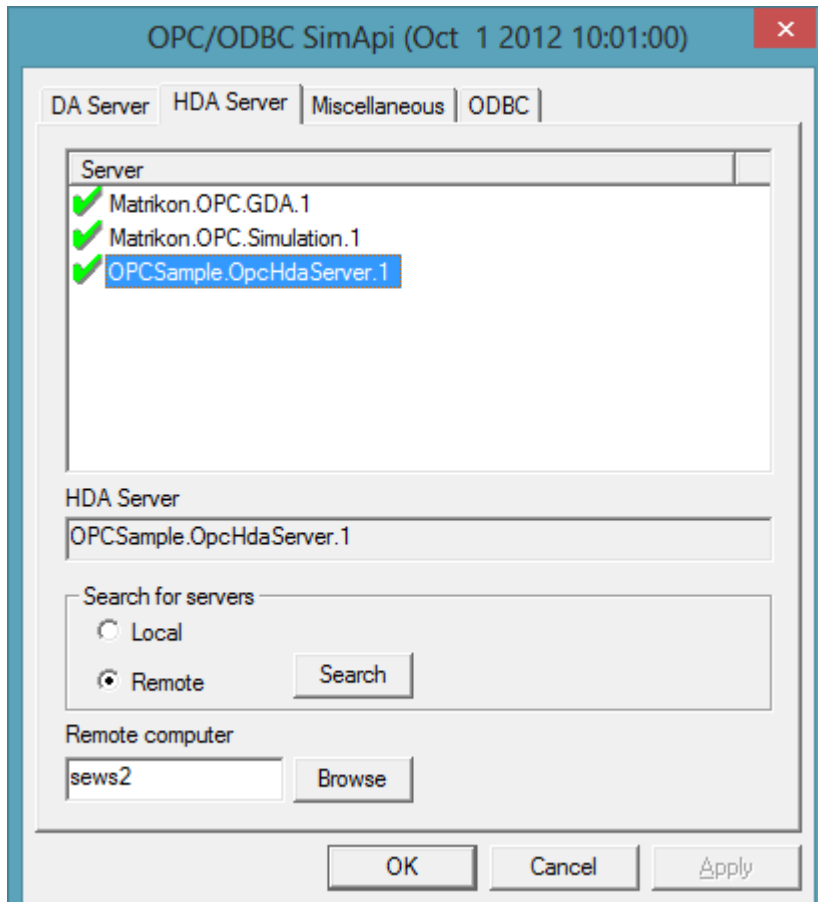
(WinXP): C:\Documents and Settings\All Users\Application Data\Umetrics\SimApi

2.1 Selecting and configuring the OpcOdbc SimApi in the Server Options

Start the SIMCA-online Server Options utility from the start menu. Go to the SimApi tab and press Add...

Enter a name, browse to and select the OpcOdbcSimApi.dll. Click the *Configure...* button and the OpcOdbc SimApi Configuration is opened.

It consists of the four pages shown below. After making all the necessary settings a XML configuration file will be created. It and all the settings in it are described below.



OPC/ODBC SimApi (Oct 1 2012 10:01:00) ✕

DA Server | HDA Server | Miscellaneous | ODBC

Log File Size

Log Level

Check Quality

UTC Time

AsyncIO

Filter Type

HDA Read Type

Update Rate (s)

Check Alive Int. (s)

OPC/ODBC SimApi (Oct 1 2012 10:01:00) ✕

DA Server | HDA Server | Miscellaneous | ODBC

Data Source ID

User ID

Password

SQL Dialect

2.2 The XML Configuration File

The enclosed xml configuration file has 29 settings, which are grouped below into three logical sections, each of which are described in the sub sections.

```
<?xml version="1.0" ?>
<settings>
  <setting key="LogFileSize" value="1048576" />
  <setting key="LogLevel" value="3" />

  <setting key="CheckQuality" value="1" />
  <setting key="UseUtc" value="1" />
  <setting key="UseAsyncIO" value="1" />
  <setting key="UseFlatFilterType" value="1" />
  <setting key="HistoricalReadType" value="0" />
  <setting key="RequestedUpdateRate" value="0" />
  <setting key="CheckAliveInterval" value="60" />
  <setting key="DaServer" value="sews2" />
  <setting key="DaClassID" value="{ED0E3ADE-0CF5-47CD-A1AB-522E5E75D5CD}" />
  <setting key="HdaServer" value="sews2" />
  <setting key="HdaClassID" value="{6A5EEDEC-1509-4627-997F-993CCB65AB7C}" />

  <setting key="DSN" value="" />
  <setting key="UserID" value="" />
  <setting key="Password" value="" />
  <setting key="SqlDialect" value="standard" />
  <setting key="UnitsView" value="Units" />
  <setting key="UnitIDColumn" value="UnitID" />
  <setting key="BatchInformationView" value="BatchStartStop" />
  <setting key="BatchVariablesView" value="BatchInformation" />
  <setting key="BatchIDColumn" value="BatchID" />
  <setting key="BatchStartColumn" value="BatchStart" />
  <setting key="BatchStopColumn" value="BatchStop" />
  <setting key="BatchVariableNameColumn" value="BatchValueName" />
  <setting key="BatchVariableValueColumn" value="BatchValue" />
  <setting key="UseBatchVariables" value="1" />
  <setting key="UseUnits" value="0" />
  <setting key="MasterBatchID" value="" />
</settings>
```

2.2.1 SimApi Log File Specific Settings

- LogFileSize – The maximum allowed size of the log file before the file is truncated
- LogLevel – The higher the value the more information is printed to the log file (log level 3 = information). Maximum value is 4 and minimum value is 0

2.2.2 OPC Specific Settings

- CheckQuality – 1 means that the value for a tag with the OPC bad quality attribute is replaced with missing by the SimApi. 0 means ignore the quality information.
- UseUtc – 1 means that time from the OPC interface is interpreted as UTC time. 0 means local time.
- UseAsyncIO – 1 means that the asynchronous OPC specification is used for reading data. 0 means that the synchronous interface is used.
- UseFlatFilterType – Set to 1 to use the OPC_FLAT flag when retrieving items from the DA20 server, 0 to use a hierarchical view.

- HistoricalReadType – Sets the HDA Read Type to one of the following values
 - 0 – ReadRaw, Start = Null
 - 1 – ReadRaw, Start = End
 - 2 – ReadAtTime
- RequestedUpdateRate –the requested update rate (in milliseconds) is used when connecting to the DAServer.
- CheckAliveInterval – the check alive interval (in seconds) determines how often the connection to the OPC server should be verified (by contacting the server). If a connection cannot be verified an entry will be written to the SimApi log.
- DaServer – The name or complete network address of the DA server.
- DaClassID – The class id of the DA server.
- HdaServer - The name or complete network address of the HDA server.
- HdaClassID - The class id of the HDA server.

2.2.3 ODBC Specific Settings

- DSN – Data Source Name as set up in the Windows *ODBC Administrator* tool
- UserID – The User name for the database (if applicable). If the user and password is already set up in the ODBC driver, this value can be empty.
- Password – The Password of the user for the database (if applicable). If the user and password is already set up in the ODBC driver, this value can be empty.
- SQLDialect – The dialect to use. Could be any of these values: *standard, postgresql, db2, mssql, mysql, oracle, access, denodo, pi, yokogawa, oneColTS*. If left blank then standard will be used as default.
- UnitsView – The name of the view or table that holds the Units of the process (optional, can be left blank). This table should contain only one column with the names of the Units.
- UnitIDColumn – The name of the column in the BatchInformationView that holds the Unit names.
- BatchInformationView – the name of the view or table that contains the start and stop times of the batches (also sometimes known as the Batch Table or the Batch Node).
- BatchVariablesView – the name of the view or table that contains the batch conditions.
- BatchIDColumn – the name of the column with batch ids. The column must exist in both the BatchInformationView and BatchVariablesView.
- BatchStartColumn – the name of the column in BatchInformationView with start times of the batches
- BatchStopColumn – the name of the column in BatchInformationView with stop times of the batches
- BatchVariableNameColumn – the name of the column with batch condition variable names
- BatchVariableValueColumn – the name of the column with batch condition variable values
- UseBatchVariables – 1 if the BatchVariableView is to be used, 0 if not.
- UseUnits – 1 if the UnitsView is to be used, 0 if not.
- MasterBatchID – used to filter batch condition names in the BatchVariableView.

3. Support

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