

# SprayLogic OPC Server

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SprayLogic™ OPC server manual

Version 1.9

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# About SprayLogic OPC Server

## Welcome to the SprayLogic™ OPC Server

The SprayLogic™ OPC server allows you to set up communication between any OPC client (HMI, Alarm handling, Logging and Trending, ...) and an AutoJet Technologies SprayLogic powered control device.

You can use the software package to

- run a local OPC server
- configure OPC servers on the local PC or on other PC's .

The recommended operating systems for installing the OPC server are Windows Vista, Windows Server 2008 R2, Windows 7, Windows Server 2012 and Windows 8.

Windows XP Pro and Windows XP Embedded should work as well, provided all Windows updates and Internet Explorer updates are installed.

To know how to quickly set up a SprayLogic™ OPC server, read SprayLogic™ OPC in 5 minutes.

Your comments and suggestions on this software are more than welcome. Please address them to:

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# System Requirements

The following are system requirements for installing the SprayLogic™ OPC server (configurator part included):

■ Software requirements:

- Windows XP, Windows Vista, Windows Server 2008 R2, Windows 7, Windows Server 2012 or Windows 8 with latest service packs installed.

■ Hardware requirements:

- 1.6 GHz or faster processor
- 1 GB of RAM (1.5 GB if running on a virtual machine)
- 10 GB of available hard disk space
- At least one serial port available (this can be on an USB to serial device or an Ethernet to serial adapter)
- For modem communication, a Hayes compatible modem should be used.

# SprayLogic OPC Server features

## Key features

- Import tags from SprayLogic™ Controller programs (acp files)
- Flexible address space definition with folders and subfolders
- Manual overriding of OPC tag values (either a fixed manual value or a changing simulation signal)
- Changing engineering units
- Changing alarm messages
- Import and Export tags to and from CSV (comma separated values) files
- Build in OPC client for rapid testing of your OPC data connections
- The server can be used with DCOM for intranet and Internet applications
- The configurator can be used with COM. This makes it possible for scripts or other software to make changes to the address space. E.g. this is used by the SprayLogic Remote Control tool to import the address space of controllers.
- The server provides access to tags using the OPC DA 1.0A, OPC DA 2.0,
- OPC DA 3.0 and OPC AE 1.02 specifications
- The server can be configured to use XML DA using the XML DA wrapper (included, but not installed by default)
- The server can provide access to multiple control devices simultaneously (provided multiple COM ports are available)
- Error checking communication protocol available
- Configurable baud rate (if provided by the control device)
- The server logs status information in the Windows Event log
- The server can connect to devices over a telephone line (requires a modem in the PC and on the control device location)
- Online help in the configurator.





# SprayLogic OPC in 5 minutes

## Installation of the package

### ● If you got the software on a CD

1. Insert the CD
2. If it automatically starts, go to step 4
3. If it does not automatically start, browse to the CD in the file explorer and start setup.exe .
4. Accept the license agreement
5. Choose a destination folder. Normally the default is fine.
6. Select the typical installation type. This will install both the configurator and the server on the local PC.
7. Finish the installation

### ● If you got the software from the Internet

1. Start setup.exe
2. Accept the license agreement
3. Choose a destination folder. Normally the default is fine.
4. Select the typical installation type. This will install both the configurator and the server on the local PC.
5. Finish the installation

## • Import a configuration

### ● For an AutoJet 2250 or 2250+ Controller and if you have the SprayLogic™ PC software installed on the PC

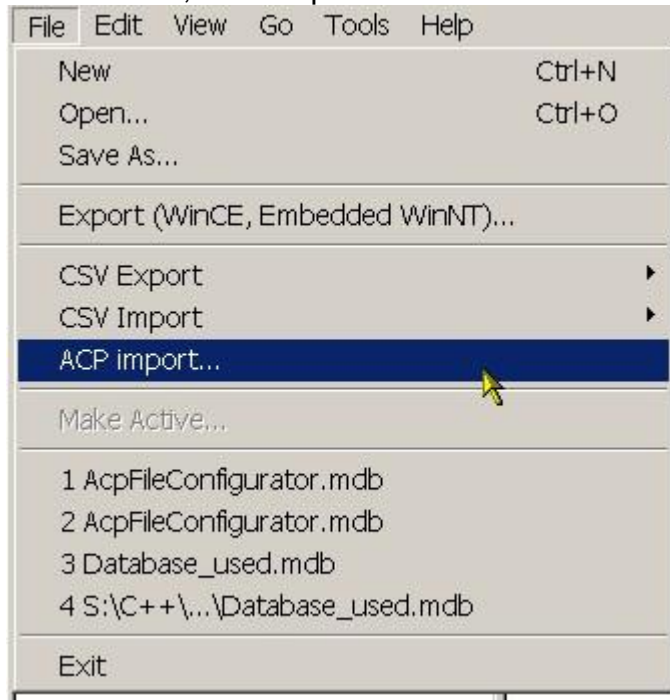
1. Start the SprayLogic™ PC software.
2. Open the application file you want to use, connect the 2250(+) to the PC and run the program. Don't forget to store it, if you want to keep using it.

3. Close the SprayLogic™ PC software.

● For all AutoJet Controllers

4. Start the SprayLogic™ OPC configurator (from the start menu, or from Program Files (x86)\AutoJet\OPC Configurator).

5. Select File, ACP Import... in the menu.

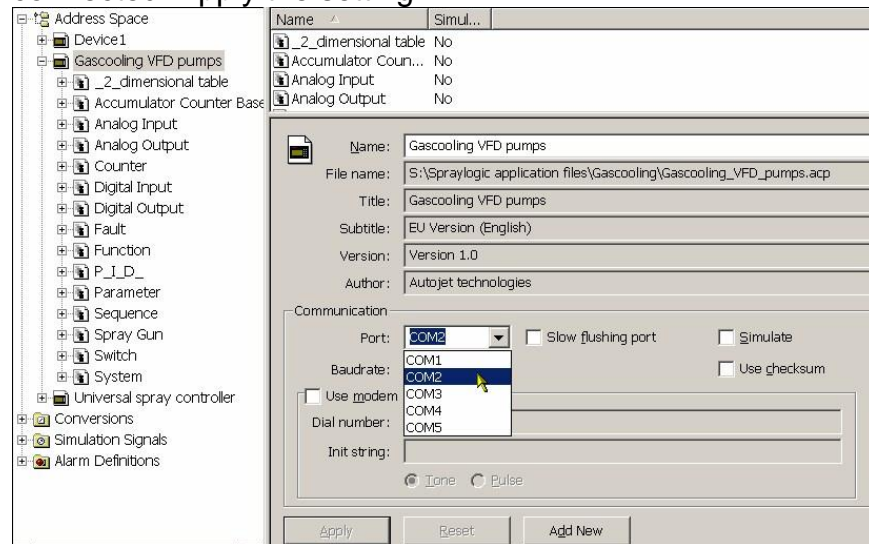


6. Select the ACP file you received for the AutoJet Controller (for a 2250(+) this is the file you just opened in the SprayLogic™ PC software). Make sure that the acp file is meant for the software version and revision that is in the controller. The acp file may be on the CD you received.

7. Wait till the import process has finished.

8. Open Address Space in the tree view and select the name of the application you have just imported.

9. Select the COM port on the PC where the control device is connected. Apply the setting.



10. Exit the configurator (File, Exit)

## . Test the OPC server

That's it. Your OPC server should be up and running now. To test it, connect to it using an OPC client. You can download a free test client from the Internet, e.g. OPC DataSpy. You can find others on <http://www.opcconnect.com/freestuf.php>.

The OPC server should be visible as AutoJet.ACPFileServerDA for Data Access and AutoJet.ACPFileServerAE for Alarm & Events . All the public tags from the acp file should be visible. You should be able to look at the values and change them. All fault messages from the controller should be available as events.

It is also possible to test the OPC server from the SprayLogic OPC configurator. To do this, enable monitor view (in the view menu). Then select one of the function blocks in the address space tree (not the anchors of the function block) and enable the checkbox in the monitor view. If the controller is connected, you should see the current value:

The screenshot displays the SprayLogic OPC configurator interface. On the left, the 'Address Space' tree shows a hierarchy: Gascooling > \_2\_dimensional table > Analog Input > Temperature 1. The 'Temperature 1' block is selected, showing its sub-items: 'filtered value' and 'unfiltered value'. The main panel shows the 'Name' field set to 'Temperature 1' and a 'Simulate' checkbox. Below this are 'Apply', 'Reset', and 'Add New' buttons. At the bottom, a table displays the current values for the selected items.

Name	Simulate	Generate Alarms	Limit Alarm Def.	Digital Alarm Def.
filtered value	No	No		
unfiltered value	No	No		

Item ID	Value	Timestamp	Quality	Subquality	Limit
<input checked="" type="checkbox"/> Gascooling.Analog Input.Temperature 1.filtered value	614.3694	06/18/03 09:43:02.621	Good	Non-specific	Not Limited
<input checked="" type="checkbox"/> Gascooling.Analog Input.Temperature 1.unfiltered value	614.3694	06/18/03 09:44:43.216	Good	Non-specific	Not Limited

Ready 2 Object(s)

# Installation

## Installing the OPC server

### ● If you got the software on a CD

1. Insert the CD
2. If it automatically starts installation, go to step 4
3. If it does not automatically start installation, browse to the CD in Windows File Explorer and start setup.exe .
4. Accept the license agreement
5. Choose a destination folder. Normally the default is fine.
6. Select the installation type. Most people will select Typical here. It is possible to select each of the following parts separately in a custom install:

#### ● OPC server

This is the OPC server that runs as a background program. It includes the OPC administrator, that lets you select what data file the OPC server should use.

#### ● OPC configurator - Unicode version

This is the application that lets you change the data that is available from the OPC server.

#### ● Help files

This installs the help files for the OPC server on the PC.

7. Finish the installation

### ● If you got the software from the Internet

1. Start setup.exe
2. Continue reading at step 4 in the previous topic.

# Configuration

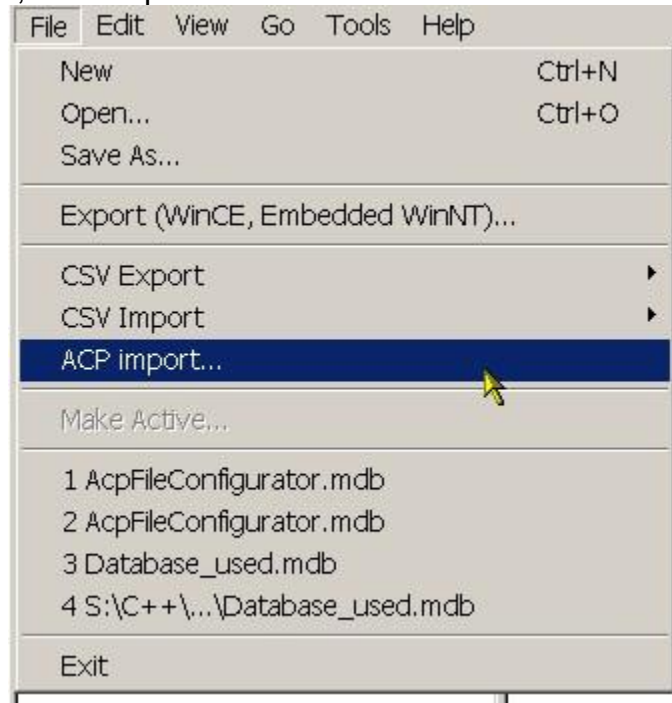
## Configuring the OPC server

This OPC server has to be configured according to the control devices it is connected to. Configuration includes:

- Importing the address space for the control devices from the AutoJet Controller Program (.acp file).
- Changing the application name.
- Selecting and configuring the COM port for each control device
- Optionally changing the conversions (units) for specific tags (defaults are metric)
- Optionally adding extra conversions
- Optionally changing tag names (be careful with this, you have to match the tags in the client application)
- Optionally changing the alarm messages (be careful with this, you could have to match certain strings in the client application)
- Optionally generating simulation signals (useful to test OPC clients if the target system is not available)

## Importing the Address Space

1. Start the SprayLogic™ OPC configurator (from the start menu, or from Program Files (x86)\AutoJet\OPC Configurator).
2. Select File, ACP Import... in the menu.



3. Select the ACP file that is present in the control device. Make sure it is the same version and revision.
4. Wait till the import process has finished.
5. Open Address Space in the tree view and check whether the name of the application you have just imported is indeed the one in the control device.

## Changing the Application Name

The application name only needs to be changed if multiple controllers with the same application are connected the server.

1. Open Address space in the tree view and select the application that you have just imported
2. Change the Name property in the frame on the right.

3. Now you can import the same ACP file again for a second controller (see Importing the Address Space)
4. Repeat step 1 till 3 for each controller that has to be connected to the OPC server.

## Communication

### Configuring the COM Port

1. Open Address space in the tree view and select the application that you have just imported
2. Change the Communication Port in the frame on the right to the port where the control device is connected to.  
It is possible to enter a non-existing communication port. This has to be done if the configuration database has to be copied to another PC, where that Communication Port does exist.  
If the control device has to be contacted using a modem, enter the COM port of the modem.  
It is possible to have multiple applications with the same Communication port setting. Only one of them will work at a certain moment however, depending on which one receives the first OPC client request. This situation can be used for test purposes, but should not be used for production systems (since communication cables will have to be swapped at the same time as the OPC client changes tags).
3. Optionally the Use Checksum flag can be set. This prevents faulty value to be produced in case of communication errors on a noisy line. It lowers the communication speed by about 10%. Normally you can safely leave this disabled.
4. Optionally the Slow Flushing Port flag can be set. This prevents the OPC server from flushing the communication port at regular times. This setting is needed for some serial to Ethernet converters, that take a long time to flush the communication port. In all other cases you can safely leave this disabled.
5. Optionally change the baud rate for communication. You should change the baud rate on the control device to the same setting. Remark that some AutoJet controllers have a fixed baud rate of 38400 baud.
6. See Connection over a modem line if the communication has to happen over a modem line.



## Connecting over a Modem Line

1. Open Address space in the tree view and select the application that you have just imported
2. Select the Communication Port where the local modem is connected to.
3. Select the Use Modem flag in the frame on the right.
4. Enter the telephone number that has to be dialed in the "Dial Number" field. This can include comma (,) characters that represent a time delay during dialing.
5. Enter an modem initialization string if needed. These commands will be send to the modem before it starts to dial. Normally this can be left blank.
6. Select Tone or Pulse, depending on the type of dialing needed by your Telecom operator. In most cases this will be Tone, older equipment will need Pulse dialing.



When configuring the OPC server for modem use, the OPC server will start to dial the configured number whenever an OPC clients requests information from the control device. This can become expensive! Also be aware that if DCOM security is not configured properly for the OPC server, anybody on the local network can send OPC request to the server and trigger the dialing. Also, the OPC server will only drop the line if no more clients requests a tag from the control device anymore. To know when the modem has dialed and for how long, check the event log.

## Conversions

### Changing Conversions

1. Open Address space in the tree view and select the application
2. Select the OPC tag in the tree for which the conversion has to be changed.
3. Select another conversion from the drop down list. Keep the Use Conversion flag enabled.
4. See Adding Conversions to add new conversions to the drop down list.

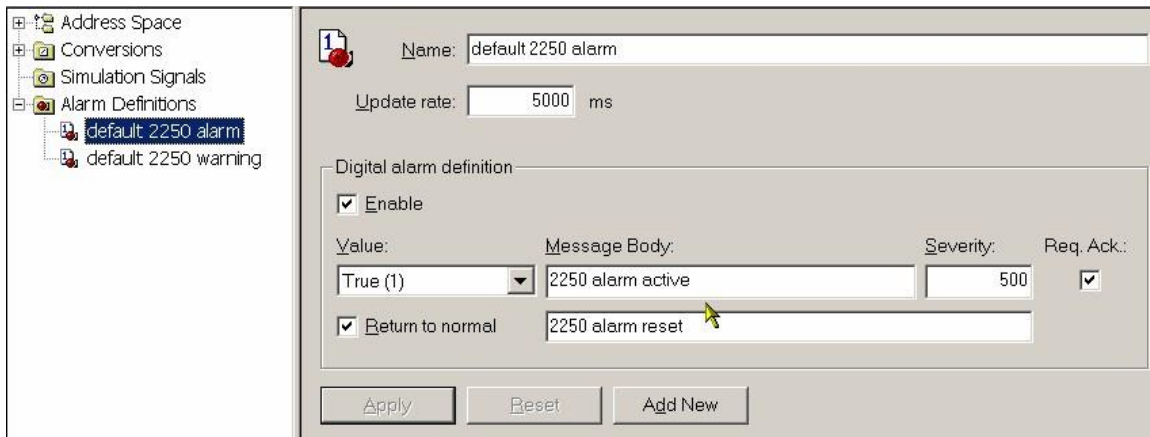
## Adding Conversions

1. If a certain unit is not available, it can be created in the conversions list.
2. Right click on "Conversions" in the tree, and select "New", "Conversion".
3. Give the new conversion a name (e.g. ml/cm<sup>2</sup>)
4. Fill in the IR (instrument range). This is in units as used on the control device (normally SI units, in this case m<sup>3</sup>/m<sup>2</sup>). Normally this can be a range of 0 to 1.
5. Fill in the EU (engineering units). This is in units as visible on the OPC client (in this case ml/cm<sup>2</sup>). Enter the values that correspond to the IR values (in this case 0 m<sup>3</sup>/m<sup>2</sup> corresponds to 0 ml/cm<sup>2</sup> and 1 m<sup>3</sup>/m<sup>2</sup> corresponds to 100 ml/cm<sup>2</sup>).
6. Apply the changes.
7. Select the conversion for the tags that need them (see Changing conversions).

## Changing Alarm Messages

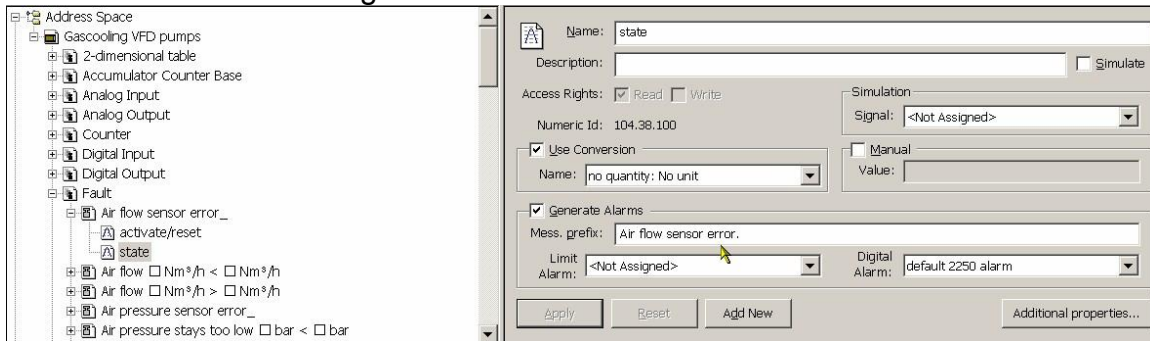
This is only needed if you use an AE (Alarm & Events) client to connect to the OPC server. The default messages are composed of the strings "2250 alarm" or "2250 warning", followed by the fault caption as used on the display of the control device.

The two strings can be changed by selecting Alarm Definitions in the tree, and then the default 2250 alarm or warning. It is possible to change both the message for alarm active and alarm reset. More strings could be added here, to create different categories of alarms (also change the Severity level numbers in this case).



Since the fault captions are normally formatted for use on the control device display, they sometimes include special characters like ®, ® and ®. These are replaced on the 2250 screen by the fault values at the time the fault occurred. This function is not implemented in the OPC server at this time, therefore it is better to change these captions to some other messages.

The fault captions can be changed by selecting the Application in the address space, then the Fault function blocks, then the function block that needs to be changed and then the state tag of that function block. The Message Prefix string is what needs to be changed:



# Troubleshooting

## Troubleshooting the installation

### • Installation errors

Normally the installation should finish without errors. If you get an error about a specific file that could not be replaced, try deleting this file manually. This can happen if the file was busy during installation (e.g. if you used OPC before and opcenum.exe is still running). Then try installing again.

### • OPC Core components errors

If during or after installation an error occurs relating to one of the following files, there is a problem with the OPC Core components:

- opcenum.exe
- opcproxy.dll
- opccomn\_ps.dll
- opc\_aeps.dll
- opcbc\_ps.dll
- opcComnRcw.dll
- opcDAAuto.dll
- opcchda\_ps.dll
- opcSec\_PS.dll

These files are installed by most OPC clients and servers. None of these should overwrite more recent versions of the file. However some clients and servers are faulty and do this anyway (not the SprayLogic OPC server). To fix these problems:

- Remove all these files from the windows/system32 directory
- Download the most recent OPC Core Components Redistributable from the OPC Foundation website (<http://www.opcfoundation.org/Downloads>)
- Install this Redistributable

If problems still occur after this, try registering the files manually from a command prompt:

- `opcenum.exe /regserver`
- `regsvr32 opcpool.dll` (and/or other dll's)
- `Program Files (x86)\AutoJet\OPC server\AcpFileServer.exe /regserver`

## • Manual installation

Installing this software package manually is possible, though not recommended. On embedded systems this is often the only way to install the software. These are the files you need to copy to the target system:

Name	required	description
AcpFileAdministrator.exe	Optional	A tool to select the tag database used by the OPC server
AcpFileConfigurator_uc.exe	Optional	A tool to configure the tag database and to fill the tag database from an AutoJet Controller Program (acp file)
Xerces-c_3_1.dll	Optional	File needed by AcpFileConfigurator_uc.exe. Should be copied in the same place as AcpFileConfigurator_uc.exe.
help/*	Optional	Directory with html help. Should be copied in the same place as AcpFileConfigurator_uc.exe.
OPC Core Components Redistributable.msi	Required	The OPC foundation core components redistributable. Most OPC clients also contain this package and will have installed it for you. The latest version of this can be found at <a href="http://www.opcfoundation.org/Downloads/">http://www.opcfoundation.org/Downloads/</a> .
AcpFileServer.exe	Required	The SprayLogic OPC server itself.

After copying the files to the target system, the OPC server should be registered. To do this, start the server once from the command prompt like this:  
`AcpFileServer.exe /RegServer.`

# Troubleshooting the Configurator

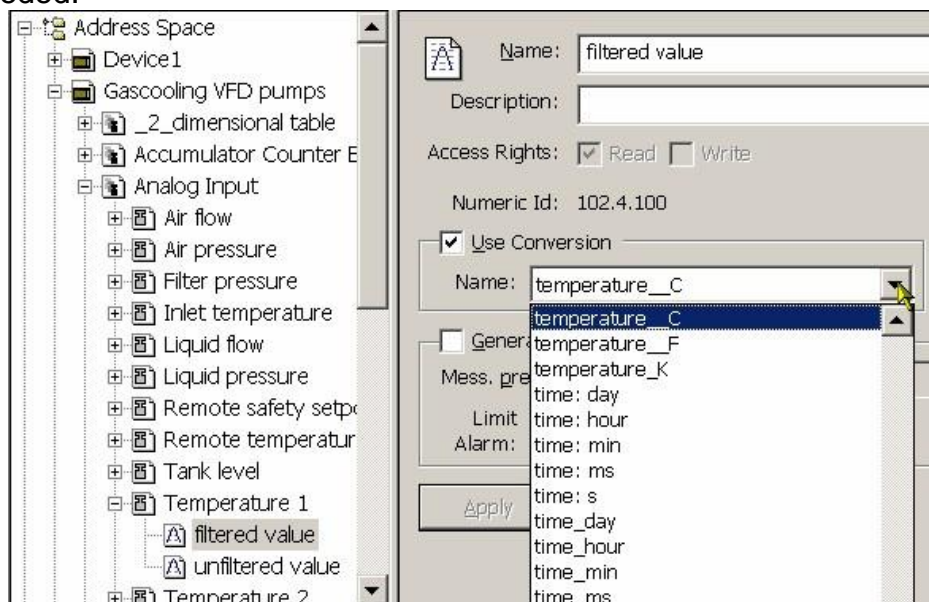
## • Frequently asked questions

### ● The tag names and units contain underscores (\_) or question marks (?)

- This is because you are using the non-Unicode version of the Configurator, or used it before. This version replaces all non ASCII alphanumeric characters with underscores. On operating systems that support Unicode, you can use the Unicode version of the configurator, that does not have this limitation.
- All versions of the Configurator precede leading spaces and numbers with underscores. This is because according to OPC Specifications names should not start with a space or number.
- All versions of the Configurator replace dots (.) by underscores. This is because the dot is a character in OPC tags, that separate the different levels of the address space tree.
- When you import acp files in a database using the Unicode version of the Configurator, and then open that database using the non-Unicode version, all non ASCII characters will be shown as question marks. This is because the non-Unicode version of the configurator cannot display that Unicode character. Using both the Unicode and non-Unicode version is discouraged for this reason.

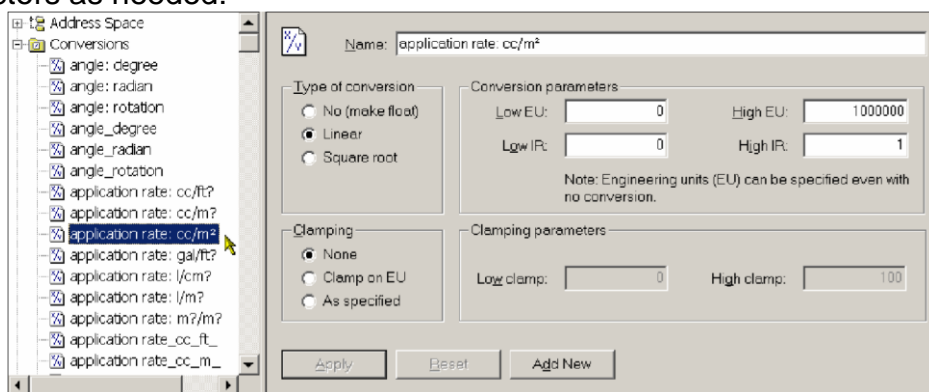
■ **A value appears in my OPC client in the wrong unit.**

- This could be because the wrong unit was selected in the configurator. Find the tag in the configurator and change the unit as needed:



Also check if the "use Conversion" check box is on.

- This could be because the conversion was changed in a wrong way. Find the conversion in the configurator and change the conversion factors as needed:



The AutoJet controllers only support units with Linear conversions. Clamping should be set to None in most cases.

The EU (Engineering Units) are the units the OPC server uses (in this case  $\text{cc/m}^2$ ). The IR (Instrument Range) are the units the control device uses. All AutoJet controllers uses the SI base units internally, so for application rate this is  $\text{m}^3/\text{m}^2$ .

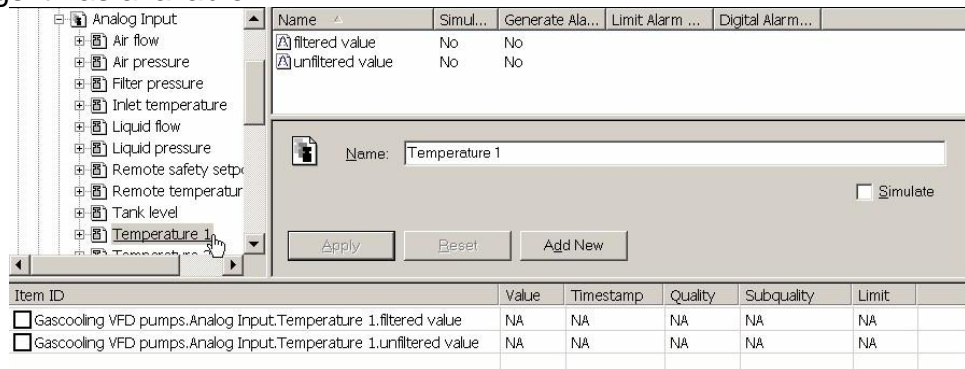
The values here are correct, since  $1 \text{ m}^3/\text{m}^2$  equals  $1000000 \text{ cc/m}^2$  and  $0 \text{ m}^3/\text{m}^2$  equals  $0 \text{ cc/m}^2$ .



- This could be because somebody used the wrong unit in the SprayLogic PC program. Fix it as shown above and ask the developer to fix it. Otherwise you will have the wrong unit again if you import a new version of the controller software.

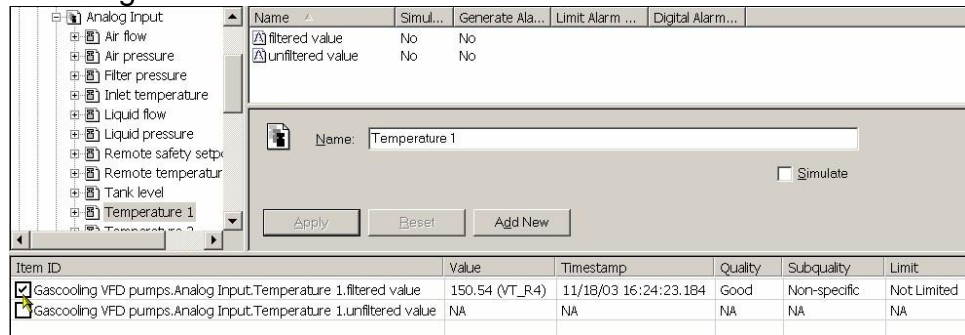
### ● No tags are shown when I select the Monitor View.

The Monitor View frame in the application shows the tags for the currently selected function block. Select a function block to see the tags it has available:



### ● No values are shown in the Monitor View

The check box in front of the Item ID has to be enabled in order to view the tag value:




### ● I think something went wrong and now the database is corrupt. Can I start from scratch again?

Yes, select File, New in the Configurator. Select either the same database or enter a new name. In the last case it is possible to return to the previous database using File, Open.  
Now import that acp again and configure. Select File, Make active... to make this new database the one used by the OPC server.

## Troubleshooting the server

### • Tag quality

-  The first indication of the status of the OPC server is the quality of the OPC data. Almost all OPC clients not only show the value of an OPC tag, but also the quality. These are the quality values used by this OPC server:

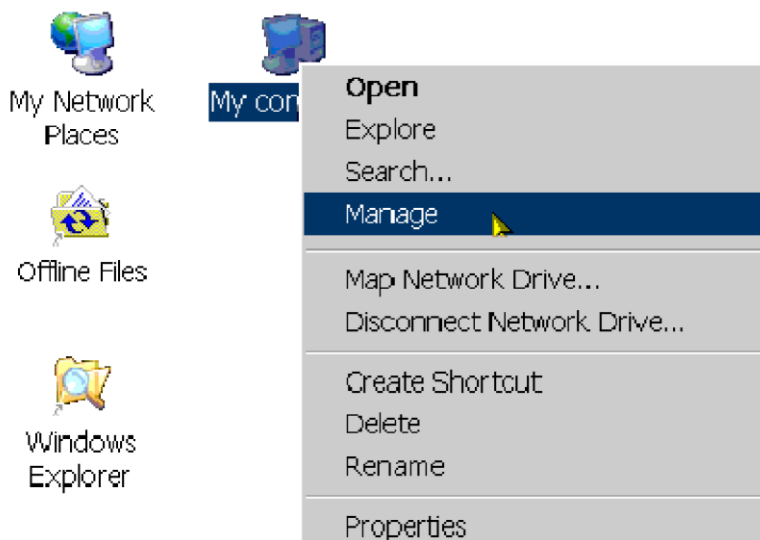
Quality	Substatus	Description
GOOD	Non-specific	The value is good.
GOOD	Local Override	The value has been overridden. The input has been disconnected and a manually entered value has been 'forced'.
BAD	Non-specific	The value is bad, but no specific reason is known.
BAD	Configuration Error	There is a problem with the configuration. For example, the application in the controller does not correspond to the one that was imported in the Configurator, and the item in question is not present in the controller. Check the Event viewer for more information.
BAD	Not Connected	The server is not connected to the control device at the moment. This quality is produced during modem dialing and negotiation time. After a successful connect, quality will change to GOOD. Check the Event viewer for more information.
BAD	Device Failure	A device failure has been detected
BAD	Sensor Failure	The sensor has failed. This corresponds to an error value in the controller device itself (e.g. sensor wire broken, division by zero, ...). Communication is fine in this case.

BAD	Last Known Value	Communications have failed. However, the last known value is available. Note that the 'age' of the value may be determined from the time stamp of the item.
BAD	Comm failure	There is a communication problem between the server and the control device. Check the Event viewer for more information.

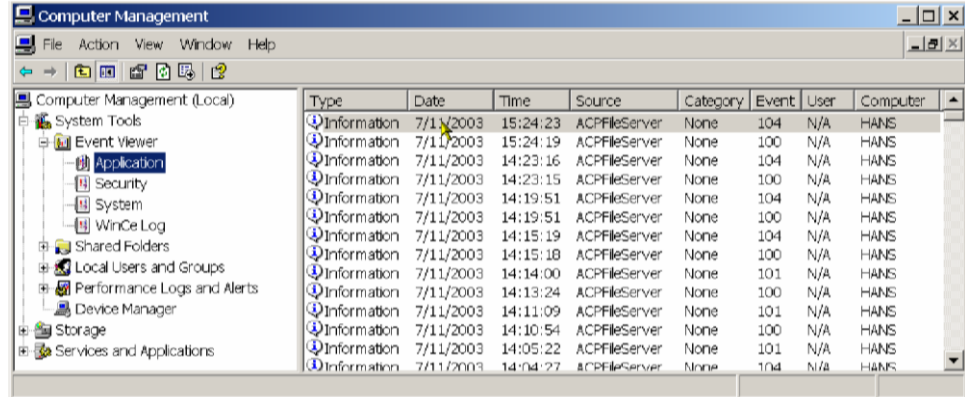
- If your OPC client does not support tag quality, try another client, or use the Monitor feature in the OPC Configurator.

### • Detailed connection information

- Since the OPC server runs as a background process on the PC, it had no means to show status and error messages on the screen. Instead, the OPC server logs all communication actions to the event viewer. To access the event viewer, go to the Management Console:

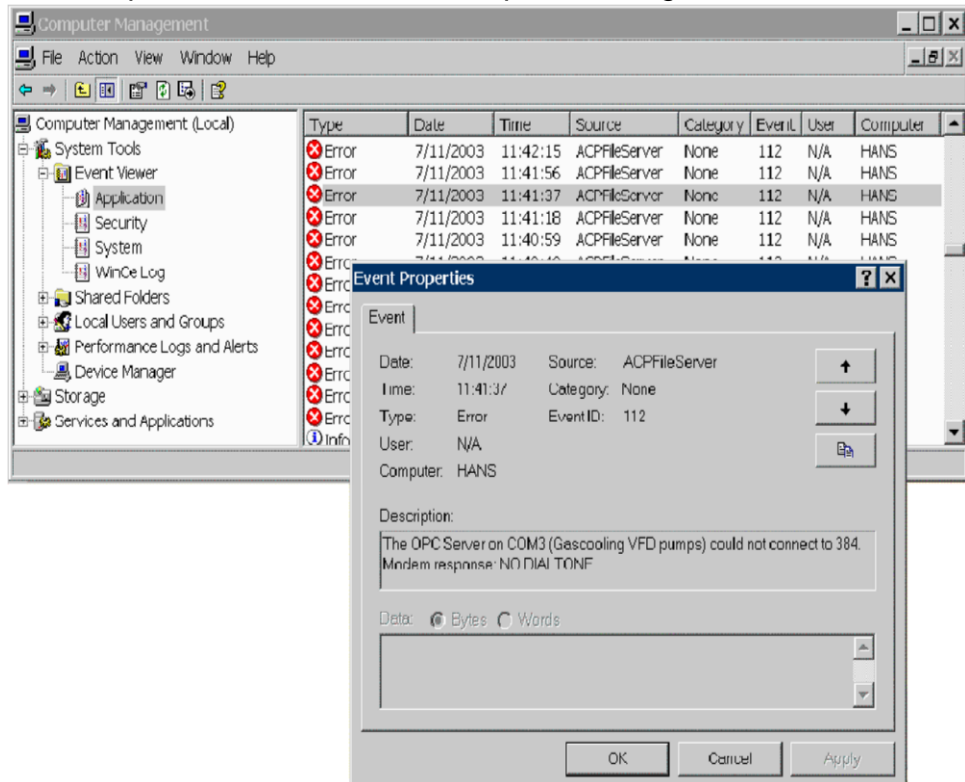


- The actions are logged in the Application Event Log, with ACPFileServer as the source.



Type	Date	Time	Source	Category	Event	User	Computer
Information	7/11/2003	15:24:23	ACPFileServer	None	104	N/A	HANS
Information	7/11/2003	15:24:19	ACPFileServer	None	100	N/A	HANS
Information	7/11/2003	14:23:16	ACPFileServer	None	104	N/A	HANS
Information	7/11/2003	14:23:15	ACPFileServer	None	100	N/A	HANS
Information	7/11/2003	14:19:51	ACPFileServer	None	104	N/A	HANS
Information	7/11/2003	14:19:51	ACPFileServer	None	100	N/A	HANS
Information	7/11/2003	14:15:19	ACPFileServer	None	104	N/A	HANS
Information	7/11/2003	14:15:18	ACPFileServer	None	100	N/A	HANS
Information	7/11/2003	14:14:00	ACPFileServer	None	101	N/A	HANS
Information	7/11/2003	14:13:24	ACPFileServer	None	100	N/A	HANS
Information	7/11/2003	14:11:09	ACPFileServer	None	101	N/A	HANS
Information	7/11/2003	14:10:54	ACPFileServer	None	100	N/A	HANS
Information	7/11/2003	14:05:22	ACPFileServer	None	101	N/A	HANS
Information	7/11/2003	14:04:27	ACPFileServer	None	104	N/A	HANS

- By double clicking on an event, the description of the event becomes visible. For direct communication with a device, the communication port and the application name are shown, for modem communication, the dial telephone number and the response string from the modem.



Type	Date	Time	Source	Category	EventID	User	Computer
Error	7/11/2003	11:42:15	ACPFileServer	None	112	N/A	HANS
Error	7/11/2003	11:41:56	ACPFileServer	None	112	N/A	HANS
Error	7/11/2003	11:41:37	ACPFileServer	None	112	N/A	HANS
Error	7/11/2003	11:41:18	ACPFileServer	None	112	N/A	HANS
Error	7/11/2003	11:40:59	ACPFileServer	None	112	N/A	HANS

Event Properties	
Date:	7/11/2003
Source:	ACPFileServer
Time:	11:41:37
Category:	None
Type:	Error
EventID:	112
User:	N/A
Computer:	HANS
<b>Description:</b> The OPC Server on COM3 (Gascooling VFD pumps) could not connect to 384. Modem response: NO DIAL TONE	
Data: <input checked="" type="radio"/> Bytes <input type="radio"/> Words	
<input type="button" value="OK"/> <input type="button" value="Cancel"/> <input type="button" value="Apply"/>	

## • Communication tags

- The communication folder of the address space contains a number of tags that can be helpful during troubleshooting:
  - Commands
    - Hang up
 

Writing some value (it does not matter what value) to the tag `AutoJet.ACPFileServerDA\ApplicationName.Communication.Commands.Hang up` causes a modem to hang up. The connection will be restored when needed.
    - Reconnect
 

Writing some value (it does not matter what value) to the tag `AutoJet.ACPFileServerDA\ApplicationName.Communication.Commands.Reconnect` causes a modem to hang up. The modem will dial again immediately. A serial connection without modem will be closed and reopened.
  - Configuration
    - Baudrate
 

Reading `AutoJet.ACPFileServerDA\ApplicationName.Communication.Configuration.Baudrate` will give the value of the baud rate (as `VT_I4` type). Writing a number to this tag, will cause the baudrate to change. This change is only temporary however. It is not written back to the mdb-file, so the change will be lost if the server is restarted. Use the OPC configurator to change the baud rate permanently.
    - Dial Number
 

Reading `AutoJet.ACPFileServerDA\ApplicationName.Communication.Configuration.Dial Number` will give the telephone number to be dialed on the modem (as `VT_BSTR` type). Writing a number to this tag, will cause the telephone number to change. This change is only temporary however. It is not written back to the mdb-file, so the change will be lost if the server is restarted. Use the OPC configurator to change the dial number permanently.
    - Init String
 

Reading `AutoJet.ACPFileServerDA\ApplicationName.Communication.Configuration.Init String` will give the modem initialization string that is used (as `VT_BSTR`

type). Writing a new string to this tag, will cause the modem init string to change. This change is only temporary however. It is not written back to the mdb-file, so the change will be lost if the server is restarted. Use the OPC configurator to change the init string permanently.

● Port

Reading AutoJet.ACPFileServerDA\Application Name.Communication.Configuration.Port will give the communication port that is used (as VT\_BSTR type, e.g. COM1). Writing a new string to this tag (e.g. COM2), will cause the COM port to change. This change is only temporary however. It is not written back to the mdb-file, so the change will be lost if the server is restarted. Use the OPC configurator to change the COM port permanently.

● Slow flushing

Reading AutoJet.ACPFileServerDA\Application Name.Communication.Configuration.Slow flushing will give the setting whether the serial port uses slow flushing (as VT\_BOOL type). Writing a new value to this tag will cause the slow flushing setting to change. This change is only temporary however. It is not written back to the mdb-file, so the change will be lost if the server is restarted. Use the OPC configurator to change the setting permanently.

● Tone(0)/Pulse(1)

Reading AutoJet.ACPFileServerDA\Application Name.Communication.Configuration.Tone(0)/Pulse(1) will give the setting whether the modem uses tone or pulse dialing (as VT\_BOOL type). Writing a new value to this tag will cause the tone/pulse setting to change. This change is only temporary however. It is not written back to the mdb-file, so the change will be lost if the server is restarted. Use the OPC configurator to change the setting permanently.

● Use checksum

Reading AutoJet.ACPFileServerDA\Application Name.Communication.Configuration.Use checksum will give the setting whether checksums are used in communication (as VT\_BOOL type). Writing a new value to this tag will cause the checksum setting to change. This change is only temporary however. It is not written back to the mdb-file, so the change will be lost if the

server is restarted. Use the OPC configurator to change the setting permanently.



#### Use modem

Reading AutoJet.ACPFileServerDA\Application Name.Communication.Configuration.Use modem will give the setting whether a modem is used in communication (as VT\_BOOL type). Writing a new value to this tag will cause the modem setting to change. This change is only temporary however. It is not written back to the mdb-file, so the change will be lost if the server is restarted. Use the OPC configurator to change the setting permanently.



#### Events



#### Last error event

Reading AutoJet.ACPFileServerDA\Application Name.Communication.Events.Last error event will give the number of the last error written to the event log (as VT\_I4 type). These are the possible error events:

Event number (hexadecimal)	Description
C0000066	The OPC Server could not open its address space.  Probably a problem with the database (.mdb) file.
C0000067	The OPC Server could not open COMx for Application. Error: Some error
C0000069	The OPC Server could not communicate with the controller on COMx.  The application in the controller does not correspond to the application that the OPC server is configured for (Application).
C000006A	The application Application in the controller on COMx has changed. This could mean that the OPC server does not work correctly for all tags.

Event number (hexadecimal)	Description
C000006B	The OPC Server could not communicate with controller on COMx (Application).
C000006C	The OPC Server could not communicate with controller on COMx (Application), received garbage: garbage.
C000006D	The OPC Server does not support the same communication protocol as the controller on COMx.  Please contact the manufacturer of the OPC server and request an upgrade.
C0000070	The OPC Server on COMx (Application) could not connect to Dial number. Modem response: Modem response.
C0000071	The OPC Server on COMx (Application) lost connection to Dial number. Modem response: Modem response.



#### Last error event description

Reading AutoJet.ACPFileServerDA\Application Name.Communication.Events.Last error event description will give the text of the last error written to the event log (as VT\_BSTR type). See table above for the possible values.



### Last event

Reading AutoJet.ACPFileServerDA\Application Name.Communication.Events.Last event will give the number of the last message written to the event log (as VT\_I4 type). It is either one of the error messages above or one of the following:

Event number (hexadecimal)	Description
00000064	The OPC Server was started.
00000065	The OPC Server was stopped.
40000068	The OPC Server opened COMx for Application successfully.
4000006E	The OPC Server uses protocol version (Version) on COMx.
8000006F	The OPC Server on COMx could not get Tag
00000072	The OPC Server on COMx (Application) connected to Dial number. Modem response: Modem response.
00000073	The OPC Server on COMx (Application) closed the connection to Dial number.

### Last event description

Reading AutoJet.ACPFileServerDA\Application Name.Communication.Events.Last event description will give the text of the last message written to the event log (as VT\_BSTR type). See table above for the possible values.

## Status

### Description

Reading AutoJet.ACPFileServerDA\Application Name.Communication.Status.Description will give the text of the current status of the OPC server (as VT\_BSTR type). See table below for the possible values.

### Value

Reading AutoJet.ACPFileServerDA\Application Name.Communication.Status.Value will give the value of the current status of the OPC server (as VT\_I4 type). See table below for the possible values.

For non-modem connections:

Status value	Description
0	Port closed
1	Connecting
2	Port open, checking device
3	Port open
4	Port open, no answer
5	Disconnecting

For modem connections:

Status value	Description
0	Port closed
1	Connecting
2	Port open, initializing modem
3	Port open, dialing
4	Port open, busy, waiting to redial

Status value	Description
5	Port open, no dial tone, waiting to redial
6	Port open, no answer, waiting to redial
7	Port open, no carrier, waiting to redial
8	Modem connected, checking device
9	Modem connected
10	Modem connected, no answer
11	Closing modem connection, DTR cleared
12	Closing modem connection, +++ATH0 send

# Glossary

## O

**OPC:** stands for OLE for Process Control. OPC is a series of standards specifications for open connectivity, that allow data from devices to be transmitted on PC platforms using Microsoft's OLE COM (component object model) and DCOM (distributed component object model) technologies. They fill a need in automation like printer drivers did for Windows.

**OPC client:** An OPC client is PC software package that can get information from an OPC server. Typically these are applications to visualize or log data from devices or take actions on OPC events.

**OPC server:** An OPC server can be compared to a printer driver. It allows the device for which the OPC server is made to communicate to all OPC enabled PC applications (the OPC clients).

## U

**Unicode:** Unicode provides a unique number for every character, no matter what the platform, no matter what the program, no matter what the language. This code set allows computer programs to deal with non-western characters.