

# Import alarms from ABB800xA to Nimbus

Nimbus use OPC AE (Alarms and Events) to subscribe for alarm events from 800xA.

The Nimbus Alarm Server itself has no build-in feature for OPC AE but there is an external application, *NimOPC* (Nimbus OPC AE link), which is downloadable from [www.automatisera.nu](http://www.automatisera.nu).

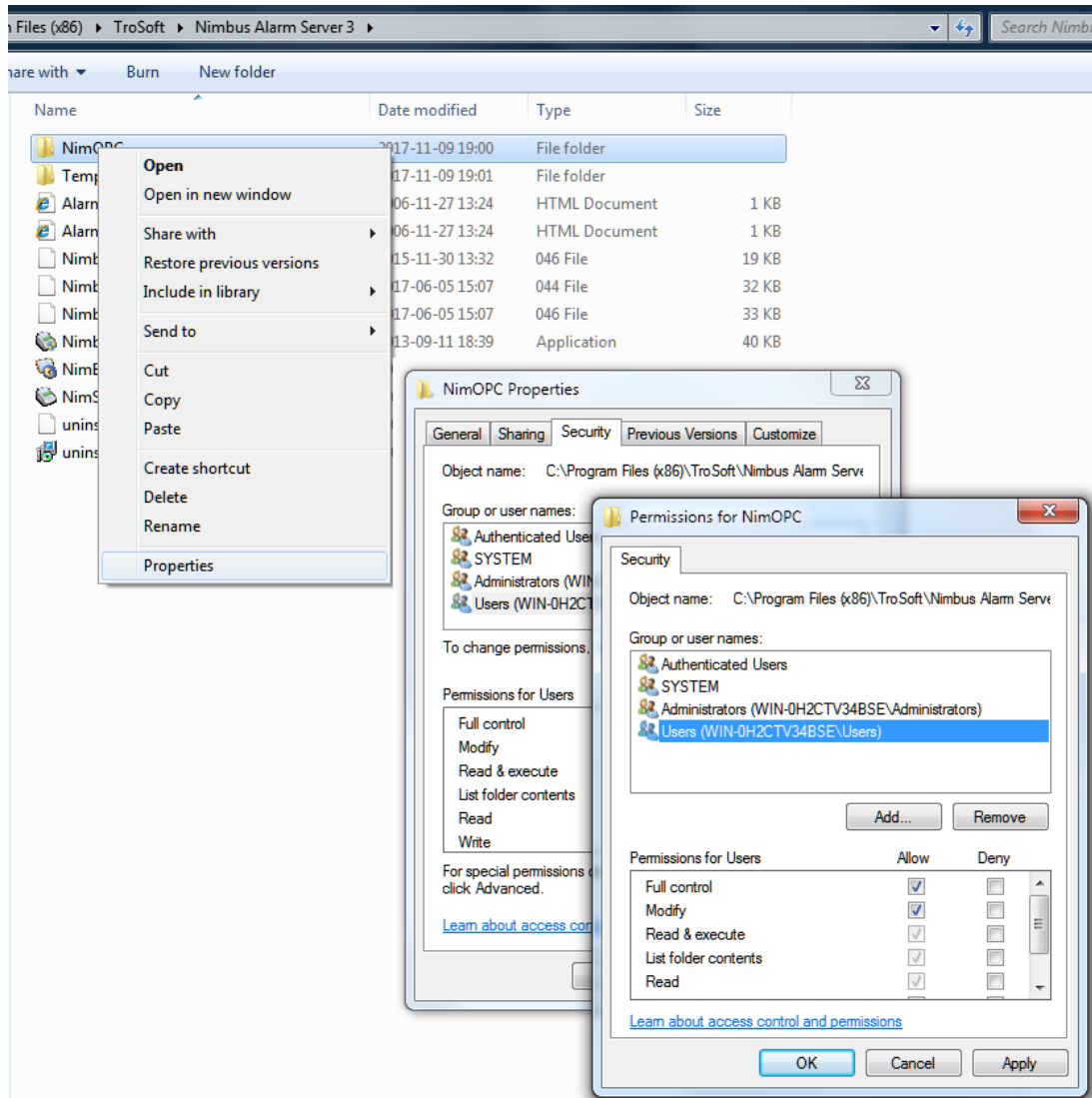
## Install and configure NimOPC

Create a new folder, *NimOPC*, where Nimbus Alarm Server were installed – usually *C:\Program Files (x86)\TroSoft\Nimbus Alarm Server 3*

Open the downloaded *NimOPC\_2.0.0.xx.zip* file and copy the files to the newly created *NimOPC* folder.

Set the folder access rights on the new *NimOPC* folder for group *Users* to *Full control*, by right clicking the *NimOPC* folder -> *Properties* -> *Security* -> *Edit*.

Select *Users* group and check *Full control*. Click *Ok* twice.



Folder access rights needs to be changed, or it will be difficult to edit *NimOPC.ini*

Open the *NimOPC.ini* file. Uncomment the *Progid=ABB.OPCEventServer* row. Save *NimOPC.ini*.

Start *800xA* if it not running. Start *NimOPC.exe* as *Administrator*. If it does not connect to the *800xA* AE server, try to run it using an account with proper rights (access might need to be setup in *800xA*).

If you get a question about exposing ports to the network, select desired networks and *Ok*. *NimOPC* exposes a TCP socket port where *Nimbus* will connect (usually port 14000).

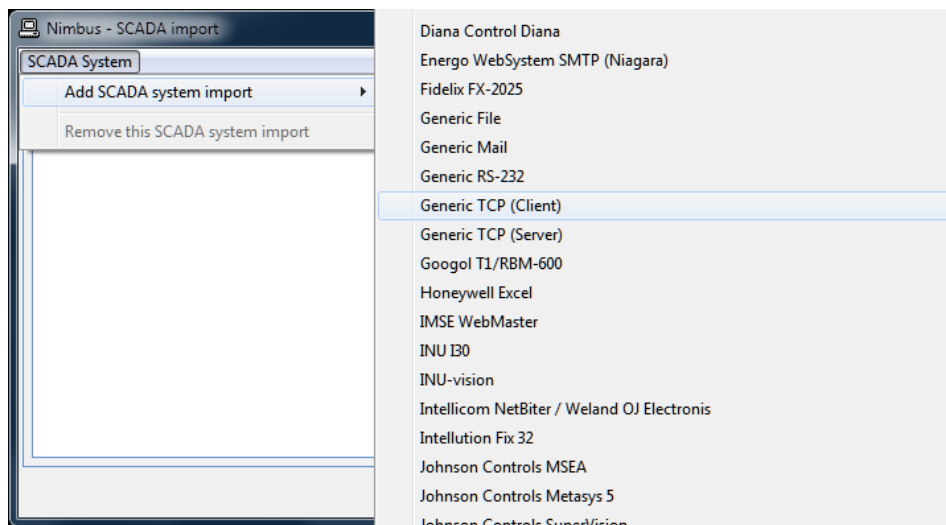
ABBServer\_AE\_Emulator - Connected (server is running and we are subscribing) - NimOPC

Source	Time	Sever...	NewState	Condition	Subcondition	Event...	Message	ChangeM...	EventType	To Nimbus	[t0] Tag	[t1] A
+26562=573FC001	2022-12-19 15:...	100	0x0001	0256210209	+26562=573FC001	1	Fliz#kt: Avslagen si#ker...	0x0001	0x0004	Inactive	+26562=573FC001	
+2646a=573SA002	2022-12-19 15:...	100	0x0001	0246310230	+2646a=573SA002	1	Spjiz#ll: Liz#ge Hand iz#l...	0x0001	0x0004	Inactive	+2646a=573SA002	
+2646a=573SA001	2022-12-19 15:...	100	0x0001	0246310230	+2646a=573SA001	1	Spjiz#ll: Liz#ge Hand iz#l...	0x0001	0x0004	Inactive	+2646a=573SA001	
+2646a=573AK001	2022-12-19 15:...	100	0x0001	0246310228	+2646a=573AK001	1	Fliz#kt: Liz#ge Hand iz#l...	0x0001	0x0004	Inactive	+2646a=573AK001	
+26562=573FC001	2022-12-19 15:...	100	0x0003	0256210209	+26562=573FC001	1	Fliz#kt: Avslagen si#ker...	0x0003	0x0004	Active	+26562=573FC001	
+2646a=573SA002	2022-12-19 15:...	100	0x0003	0246310230	+2646a=573SA002	1	Spjiz#ll: Liz#ge Hand iz#l...	0x0003	0x0004	Active	+2646a=573SA002	
+2646a=573SA001	2022-12-19 15:...	100	0x0003	0246310230	+2646a=573SA001	1	Spjiz#ll: Liz#ge Hand iz#l...	0x0003	0x0004	Active	+2646a=573SA001	
+2646a=573AK001	2022-12-19 15:...	100	0x0003	0246310228	+2646a=573AK001	1	Fliz#kt: Liz#ge Hand iz#l...	0x0003	0x0004	Active	+2646a=573AK001	
Nimbus Alarm Server	2022-12-19 14:...	--		Connected								

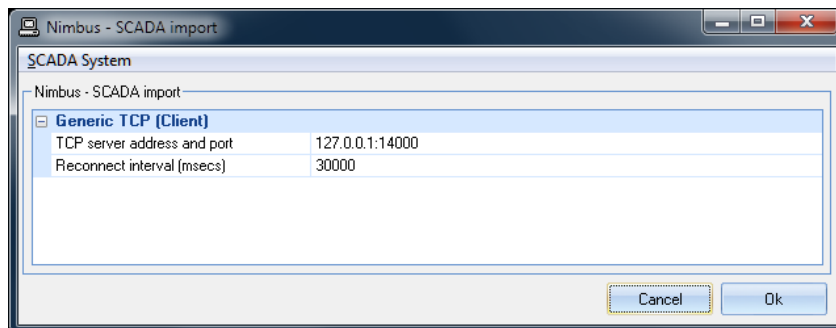
The title bar show some info and the text *ABB.OPCEventServer*.

Some events will hopefully appear in the list when they occur. *NimOPC* will automatically subscribe to all events.

## Configure Nimbus to connect to NimOPC



In *Nimbus Explorer* select *Setup -> SCADA import setup*. Select *SCADA System -> Add SCADA system import ->Generic TCP (Client)*



*Nimbus* has default values as above.

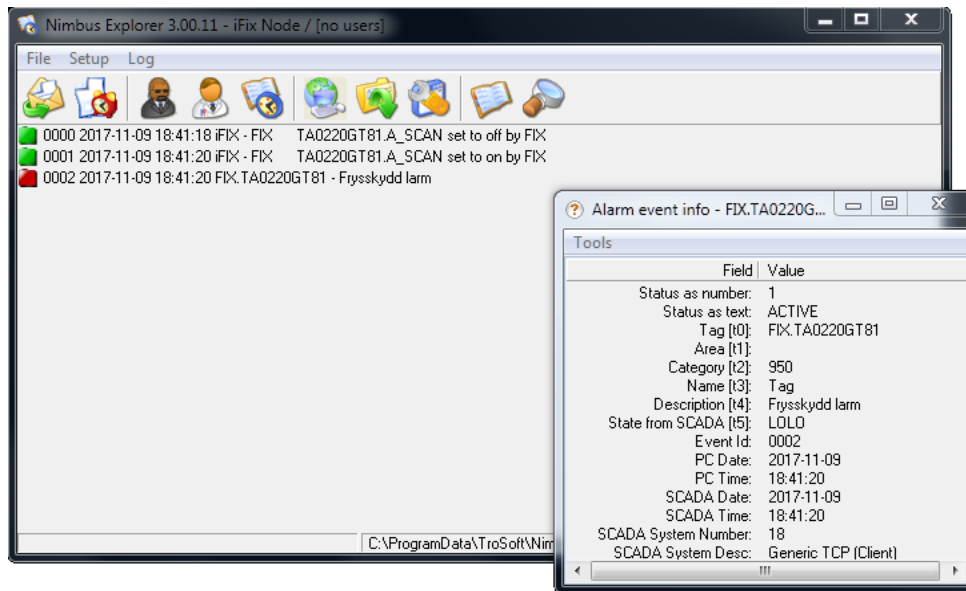
*Nimbus Alarm Server* may aswell be installed in some other server than the *NimOPC / ABB800xA* node. If that is the case the above IP should be changed and necessary firewalls be configured accordingly.

Port number should correspond to the port number set in *NimOPC.ini*. The default value is *14000*.

Start the *Nimbus Server* either using *Service Control Manager* if it is installed as service or using the *File* menu.

Nimbus should now connect to the *NimOPC* application, this will be indicated in the *NimOPC list view*.

Try some test alarms and ensure they appear in *Nimbus Explorer*.



In the above example some events have been sent from *NimOPC* to the *Nimbus Alarm Server*.

Double click the alarm event to open the *Alarm Event Info* form.

## Configure the NimOPC application to run as service

To install *NimOPC* as service start *NimOPC* using the command line switch */i* from an elevated command prompt, ex:

```
NimOPC.exe /i
```

Uninstall from services using the */u* command line switch (stop the application first)

The first time *NimOPC* needs to be started manually using the *Service Control Manager (SCM)*.

Usually *NimOPC* should be run using the same service account as 800xA. The default user is *Local System Account*.

Also select *Startup type: Automatic (Delayed start)* to ensure 800xA has started properly before *NimOPC* starts.

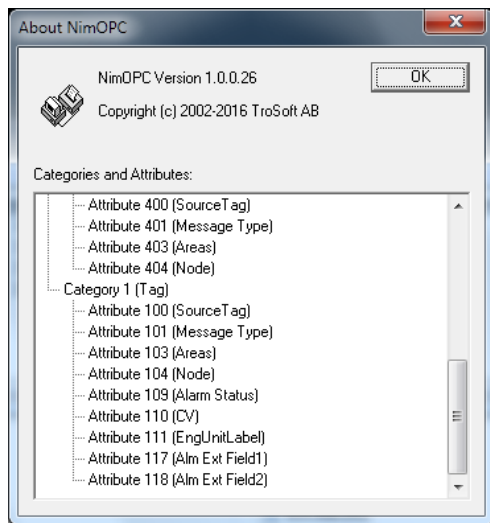
Warning! When starting *NimOPC* as service (or restarting it) ensure that you do not have any running *NimOPC* application instance. The first started *NimOPC* - whether it is a service or application does not matter - will use the TCP and will prevent any following *NimOPC* from using that port.

## Configure NimOPC for more info

### Attributes

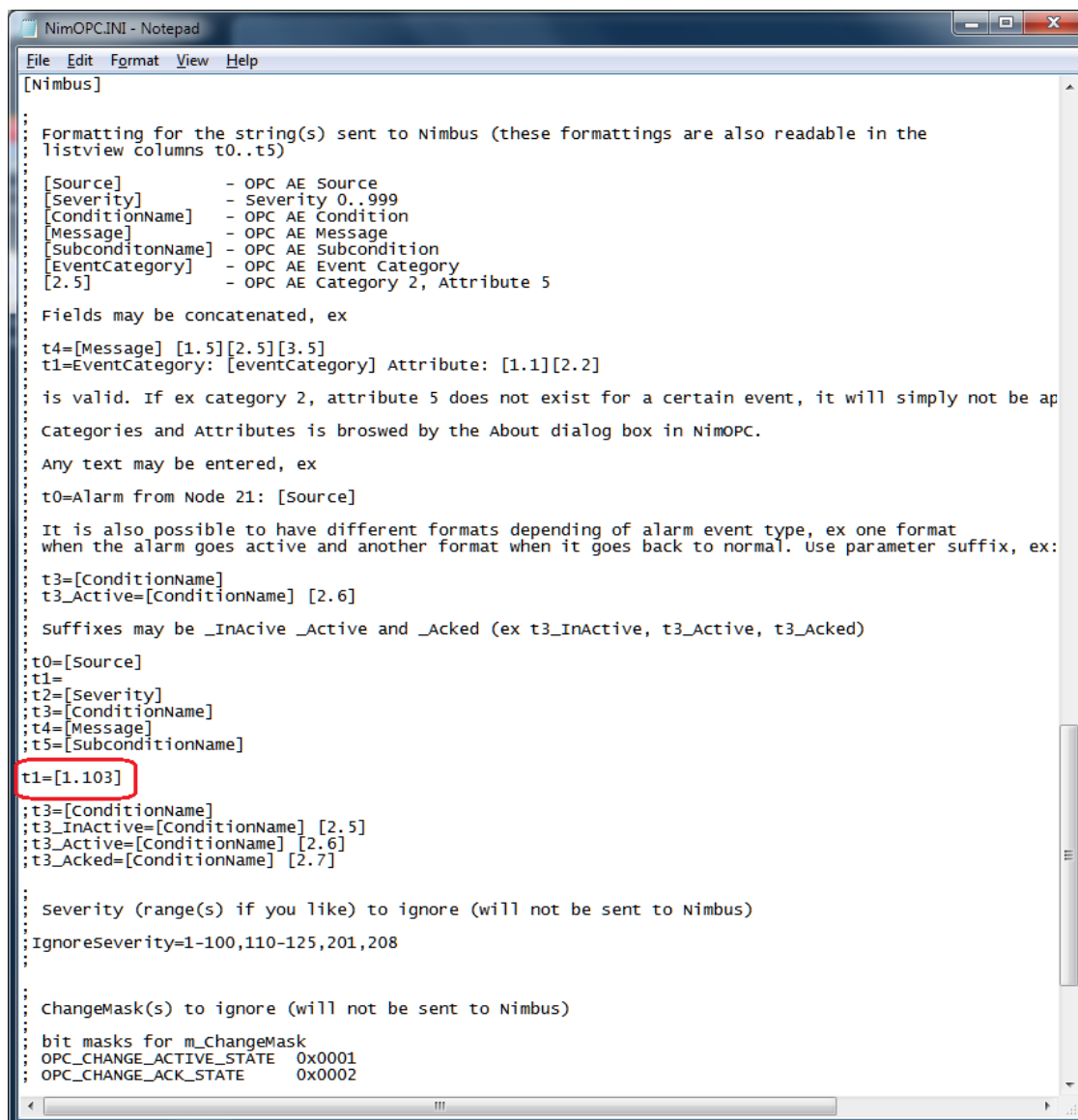
The *800xA OPC AE server* is able to provide some more information about each alarm event. This is in the OPC world known as *Attributes*.

Show the *NimOPC* form, select *Help -> About NimOPC*



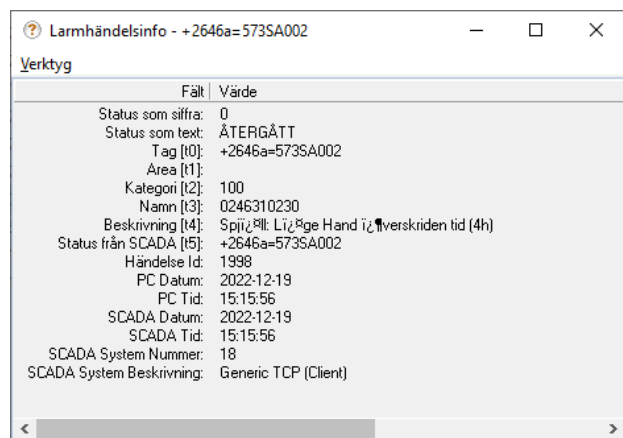
Here you can see what numbers the attributes have.

Open the *NimOPC.ini* file.



Select the field(s) where to put the new attributes. In the example above we just use the *1.103 Areas* attribute and put into the *T1*-field.

Save *NimOPC.ini*. Restart *NimOPC*.

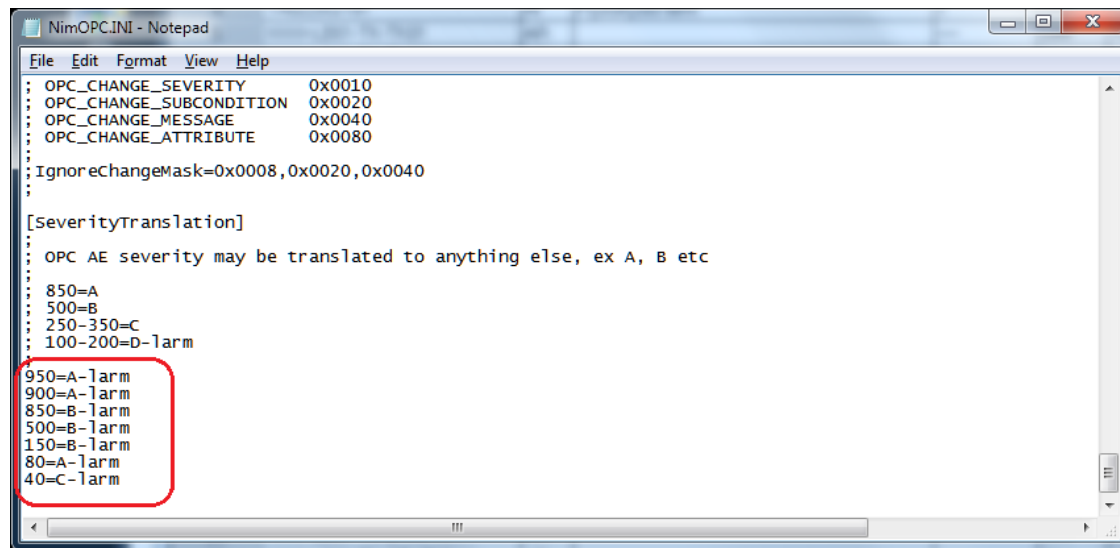


This is how it looks in Nimbus (the sample is from an simulator unfortunately presenting ÅÄÖåäö wrong).

## Category / Severity

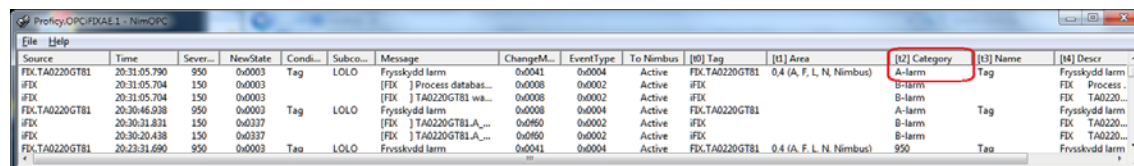
Category may also differ from plant to plant and customer needs.

The severity may be translated by *NimOPC* to something more

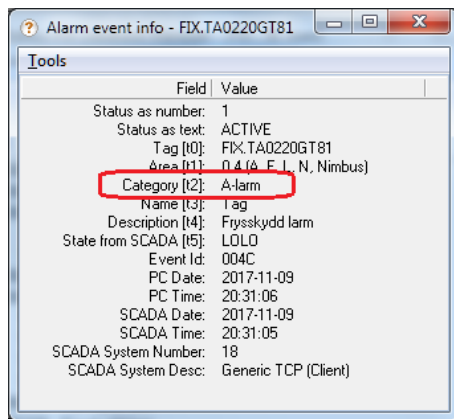


Enter the Severity number and what it should be translated to in the *[SeverityTranslation]* section.

Save *NimOPC.ini*. These changes take effect immediately, no programs need to be restarted.



Here, the previous severity number *950* is now translated to the text *A-larm* before it is sent to *Nimbus*.



This is how it looks in Nimbus. The text may be used as filter in the *Alarm Route Profiles* just as any other field.

## Other settings and filters

There are some other settings in *NimOPC.ini* that change the behaviour and look. Ex to filter out unwanted events (operator messages).

Unfortunately there are no specific documentation for *NimOPC*, however the INI-file is pretty well commented.