How to add SAIA Visi.Plus to Nimbus

SAIA Visi.Plus can send alarm events as TCP socket events to Nimbus using the *Alarm Manager*. This document describes how to setup *SAIA Visi.Plus* to send alarm events and how to configure Nimbus to receive and parse them using the built-in TCP socket server.

First of all install Nimbus Alarm Server (see separate instructions)

Add SAIA Visi.Plus SCADA import to Nimbus

Start *Nimbus Explorer* (right click and '*Run as Administrator*') from the start button menu shortcut. Actually Nimbus Explorer should always be run as *Administrator* by selecting this option in the shortcut.



Select Setup -> SCADA import Setup.

You will need to have Nimbus Alarm Server release 2.00.23 or later (this example is from *Nimbus release 3.00.04*).

🖳 Nimbus - SCADA import	Diana Control Diana
SCADA System	Energo WebSystem SMTP (Niagara)
Add SCADA system import	Fidelix FX-2025
	Generic File
Remove this SCADA system import	Generic Mail
	Generic RS-232
	Generic TCP (Client)
	Generic TCP (Server)
	Googol T1/RBM-600
	Honeywell Excel
	IMSE WebMaster
	INU I30
	INU-vision
	Intellicom NetRiter / Weland OI Flectronis

Select SCADA System -> Add SCADA system import -> Generic TCP (Server).

That's it. Restart *Nimbus Alarm Server* if it was already running. The Nimbus Server has a built-in TCP socket.

🗟 Nimbus E	Explor	er 3.00.04 - <no name=""> / [no users]</no>	
File Setup	Log]	
		Show Active System Log Show Debug Window History System Log Clear main Window	STOP 2016-04-19
		,	

Open the debug window for future use and begin configure Visi.Plus.

Configure SAIA Visi.Plus alarm export to TCP socket

Start the *AlmMng.exe* program in your *Visi.Plus BIN*-folder.



Open the program using mouse right-click on the icon in the *Notify* area.

SAIA ViSi+AlarmManager - 1.5					
File View S	ettings Help				
X 🖺 .	Printer				
DMS-Name	Alarms Forwarding (Sockets, Scripts)	Message			
Device1:Tem	NTP-Server Connection	20.02.2013 15:49:23 / Device1:Temp001:Signal:Value /			
	Log Settings				
	Settings Watchdog				

Select Settings -> Alarms Forwarding (Sockets, Scripts)

External Alarm Receiver	Program		Sock	at Sottingo			
Program (incl. path), to	which the alarm via		IP1:	127.0.0.1	Port 1:	1500C Test	OK
command line parameter	er will be passed:		IP 2:	Γ	Port 2:	0 Test	Cancel
1		>	IP 3:		Port 3:	0 Test	Help
		Test	IP 4:		Port 4:	0 Test	
Alarm Format Settings —							-
First control character	0	Sec. cor at end o	trol cha	aracter SCIII: 0	Sel	Portal format	
Sequence Nr.:	103	Delimete	т. Г.				
Format:	#Z(1:0:2) #Y•#m•#c	II#H:#M:#S	#N #P	#T [10]			
Fest DMS:	Device1.Temp001:	SignaMalue			>	1	
Test-Strin	0 2017-02-08 14:25	16 Device1	TempO	01:SignalValue B00	70 0	Preview	
Send Uptions	7 Prioritu 2	E Prioritu	3	Priority 4	Г	Priority 5	
	Thomy 2			i i iioiiy i		, nony o	
I comming alarms		Iv leaving) alarms			quits	
Send Watch Dog Test S	String						7
Time period in sec.:	60				Se	end Test WD	
Send Watch Dog to	o Port 1	∏ Sen	d Watc	h Dog to Port 3			
Send Watch Dog to	o Port 2	🗖 Sen	d Watci	h Dog to Port 4			
Format (#T):	#T				_		
Message:					-		
watch Dog String:					_	Preview	
n alon b og olning.						. Ionom	
Send Status String							
Format (#T):	#T					Preview	
-							
AlmMng start up	Message:						
	Status String:						
AlmMng shut down	Message:						

Enter the IP-address to the server where Nimbus is installed. In this case *Nimbus Alarm Server* is installed on the same server as *Visi.Plus*, hence the localhost *127.0.0.1* address. The port number should be *15000*, as it is the default port used by Nimbus. It can be changed in the *Nimbus SCADA Import settings*.

If not both programs are located on the same server, ensure any firewall rules (also the internal firewall) allow communication using this port.

Check the Send Options needed (in the above example we only want Priority 1 and 2 alarms)

The Alarm Format Settings format-string should look like:

#Z(1:0:2)|#Y-#m-#d|#H:#M:#S|#N||#P||#T[10]

Ensure you have exactly the same number of pipe characters etc. This format will be parsed by Nimbus like this:

[t0]	Тад	DMS-name (#N)	Lejonet Plan 1:AS101:ÅSKSKYDD:LARM:Value
[t1]	Area	(not used)	
[t2]	Category	Alarm Priority (#P)	1
[t3]	Name	(not used)	
[t4]	Description	Alarm text (#T)	Åskskydd utlöst
[t5]	State	(not used)	

The unused fields could of course also be set to some format value, however ensure not to change the number of pipe '|' characters.

Here are the format values in *Visi.Plus*:

#d #m #v	Day Month Year (\Y)	#N #-20N	DMS-Name DMS-Name - pad to 20 chars (fill blanks from behind)		#u #10u #T	Username Username (10 chars) Alarm text
#Y #H	Year (YYYY) Hours	#+20N	DMS-Name - pad to 20 chars (insert blanks ahead)		#C #E	Comment External text (with LF)
#M #S	Minutes Seconds	#-10n	DMS-Name - limit to 10 chars (cut chars ahead)		#E #P	External text (with CRLF) Alarm priority
		#+10n	DMS-Name - limit to 10 chars (cut chars from behind)		#R #s	Alarm group Speech output alarm
#X #t #x #c	Time TimeFLT (HH:M Date Date Time	M)	#Z(New:Done:Quit) #∨ #5.2∨ #z(On:Off) #VNAME #V^NAME	Current al Current va Current va Current va DMS-valu DMS-valu	arm stati alue (ani alue (ani alue (dig ie (same ie (highe	e (digital) alog) alog, 5 numbers, 2 comma) ital) : level) er level)

Now press the *Test* button and ensure the *Debug window* in Nimbus shows some data.

Click Ok and try to set an alarm in Visi.Plus and ensure it arrives in Nimbus Explorer:

Nimbus - Debug	
<u>File</u> <u>Eilter</u>	
Source/De Time Data	
🗧 🗲 RX 🔰 SCADA 🔄 17:07:18:578 🔄 1 2017-02-08 14:35:23 Lejonet Plan 1:AS101:ÅSKSKYDD:LARM:Value 1 Åskskydd utlöst <10	J>



Double click the alarm event to see some details.

? Alarm event info - Lejonet Plan 1:AS101:ÅSKSKYD 👝 💷 🗾				
Tools				
Field	Value			
Status as number:	1			
Status as text:	ACTIVE			
Tag [t0]:	Lejonet Plan 1:AS101:ASKSKYDD:LARM:Value			
Area.[t1]:	_			
Category [t2]:	1			
Name [t3]: Description [t4]:	Å alkale edal utläat			
State from SCADA [t5]:	Askskydd ullost			
Event Id:	30BC			
PC Date:	2017-02-08			
PC Time:	17:07:18			
SCADA Date:	2017-02-08			
SCADA Time:	14:35:23			
SCADA System Numb	58			
SCADA System Desc:	Generic TCP (Server)			

If you get some text as above then all is fine.

Now create Receivers and Alarm Route Profiles as usually.