How to add Beijer iX HMI import to Nimbus

Beijer iX devices are able to send alarm events as emails to Nimbus using the *Alarm Distributor*. This document describes how to setup *Beijer iX Developer* to send emails to Nimbus and how to configure Nimbus to receive and parse them using the built-in *SMTP* (*Simple Mail Transfer Protocol*) server.

(X) 📃 🚽	9 - 64	• •)		22				Proper	ties	iX Developer 2.10 - Demo_PC_1024x768_Example5 (Trial)
	Home	Project	t Syste	em I	insert	View	Dynamic	s Ge	neral	Actions	
Alarm Distributor	Audit Trail	Data Logger	F1 Function Keys	Recipe	Reports	Scheduler	Screen	Script Module	Abc Text Library		
and the second se				Funct	tions						

In you *iX Developer* project select *Insert* and add the *Alarm Distributor* (if not already added in the *Functions* pane)

Project Explorer 🗸 🗸 🗙	Home × Alarm Server × Alarm Distributor ×	
Screens (62)		
 Functions (10) 	Alarm Distributor	
Alarm Distributor	Route : Add Delete Configure Distribution Devices]
Audit Trail	Name Receivers Alarm Filter Scheduler	_
F1 Function Keys	Nimbus Parallel Receivers Address Book	
Multiple Languages	Receiver Selection	
Reports		
Scheduler		
Security		
🔁 Tags		
Text Library		
Recipes (1)		
Script Modules (3)		
Data Loggers (1)		

In the Project Explorer select the Alarm Distributor and add a new Route. Name it ex Nimbus

(X) Properties			
Email Device Print Settings	From Name :	Byggnad 02 AS01	*
SMS Device TCP Server	From Email Address :	as01@mydomain.	se
	SMTP Server Name/IP :	192.168.123.82	
	Port :	25	
	Code page :		
	Authentication Mode :	None	•
	User Name :		
	Password :		
	Distribution	r	
	Retry Sending :	5	(times)
	lime Interval : Define the format of th	300	(seconds)
	alarm variable by replac braces, such as: State is	ing the correspond {0}	ding value (see the list below) in curly
	Subject :	State: {0} Time: {:	1}
	Body :	1} Id: {2} Text: {3} Name: {4} Count: {5}	
	{0}=State, {1}=StateTime =AlarmItemDisplayNam =NormalTime, {9}=Ackn	e, {2}=AlarmId, {3}= le, {5}=Count, {6}=A lowledgeTime	AlarmText, {4} ActiveTime, {7}=InactiveTime, {8}
			OK Cancel

In the *Alarm Distributor* select *Configure Distribution Devices*. Fill in the *Email Device* settings as above. *Subject* and *Body* format settings above are default values. The format need to have the default format.

The *SMTP Server Name/IP* should be the IP-address (or *DNS* name) to the server running *Nimbus Alarm Server*. Port number may be changed. If changed from the default port 25 also parameter *SpecificPortForSMTP_Beijer* in *Nimbus_Server.ini* must be enabled (semicolon removed) and changed to reflect same number. Ensure the selected port number will pass through any firewalls. Port 25 is the default SMTP port and sometimes there are services running in a default Windows installation using this port number.

The *From Email Address* will by default be inserted in the *Nimbus Area field* [t1] and can be used for filtering.

Unfortunately there is no way to make a general filter for *Groups* because the *Group name* is not sent in the email. If Nimbus should distribute different alarm categories etc, you will have to add some filter to the *Alarm Tag* or *Alarm Text*, ex '*A-Alarm - Temperature is too High*' and ex *use 'A-Alarm**' as criteria in Nimbus profiles.

	Addre	ess Boo	k			
	Home	Delete]		Show Selection •	Import •
	First Name	Last Name	Email Address	Phone Number		
₽	Nimbus		larm@mydomain.se			

In the *Alarm Distributor* tab *Receivers select Address Book*. Add the Nimbus email receiver. The *Email Address* will not be used by Nimbus and has nothing to do with the Nimbus receivers.

Receiver Selection Select which receivers the ala Selected Receivers	arms defined by this route shall be o	distributed to All Receivers
Email: Nimbus	<<	Email Nimbus SMS Printer
		OK Cancel

In the *Alarm Distributor* tab *Receivers* select *Receiver Selection*. Add the newly created Nimbus email receiver.

Home × Alarm Server × Alarm Distributor ×	
👔 Alarm Distributor	
Route : Add Delete	Configure Distribution Devices
Name	Receivers Alarm Filter Scheduler
> Nimbus	Alarm String Filters
	Alarm Name:
	Alarm Group:
	Alarm Text:
	Note: The filter criterias above correspond to the properties for a received alarm item from the client. The filter string shall be expressed using Regular Expressions. If all alarms shall pass a filter string the string shall be empty.
	Alarm Status(es) to distribute
	Acknowledged Normal

In the *Alarm Distributor* tab *Alarm Filter* select as above. If you should filter out some specific groups etc enter them here. Leave the fields blank to include all groups.

Home × Alarm Server × Alarm Distributor ×	
Alarm Distributor	
Route : Add Delete	Configure Distribution Devices
Name	Receivers Alarm Filter Scheduler
Nimbus	Add Delete
	Period Day Start Time Stop Time Name
	I Daily Thursday 00:00:00 23:59:59 Daily 00:00:00 to 23:59:

In the *Alarm Distributor* tab *Scheduler* enter as above (*Day* has no function when *Daily* is selected). The basic principle is to send all alarms 24/7 to Nimbus and setup a time filter in the *Nimbus Alarm Route Profiles*.

m Items Alarm Groups									
me									
	R Properties			0.0					
Add - Delete	Actions Alarm Distribution	C Enable Sending To Alarm	Distributor Server			Sett	ings Show	Selection •	Import_
atal Warran	Server Mode	Internal							
Text		C External			Remote Ack Expression	Enable Distribution	Repeat Count	Action	-
Temperature is too high		IP Number Server	192.168.1.1		-			(and a state of the state of t	
måtem 1 Temperature is too Low		Queue Length	200			10	10		
ettern2 Simulation Alarm 1			Lange Contraction of the second se			10	15		
nttem3 Simulation Alarm 2		Port number	13000		-	10	10		

In the Alarm Server tab Alarm Items, select Settings and enable sending to the Internal Alarm Distributor Server.

-													
Add	- Delete										ettings	Selection •	Import.
Digital Rea													
lane	Text	Tag	Expression	Condition	Trigger Value	History	Acknowledge Required	Remote Acknowledge	Remote Ack Expression	Enable Distribut	on Repeat Count	Action	
um@tem0	Temperature is too high	AlarmText1		GreaterThan	0	107	14			10	23		
mitem1	Temperature is too Low	AlarmText2		GreaterThan	0	1	191			10	12		
nčtem2	Simulation Alarm 1	DigitalAlarm0		EqualTo	1	19	9			100	10		
Creation	Simulation Alarm 2	DigitalAlarm1		EqualTo	1		W			12	10		
	When do him a filment W	m Divital Alarm 7		···· EqualTo	- 1	V.	4			- 9	1		

arm Itoms	Alarm Groups													
ж														
A.44	Dulate	-												Show Selection
HUU														
lane	Text	Activ	Active	inactiv	Inactive Foreground	Admowledge Background	Admowledge Foreground	Normal Background	Normal Foreground	Remote	Remote	Enable Distributi	Action	
Name Ngtal	Text	Activ	Active	Inactiv	Inactive Foreground	Admowledge Background	Admowledge Foreground	Normal Background	Normal Foreground	Remote	Remote	Enable Distribut	Action	

Now tick the *Enable Distribution* check box either for each alarm to be sent to Nimbus or for each group to be sent. If you tick the *Enable Distribution* check box in the *Alarm Group* you don't have to tick each alarm in that group - they will all be distributed.

How to add a the iX HMI 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.

🧟 N	limb	us Explorer 3.00.04 - <no name=""></no>	/ [no users]	_ • ×
File	Set	up Log		
		User Setup) 🔇 🔛 🔊	
		Receiver Setup		
		Route Profiles Setup		
		Receiver Type Setup		
		SCADA import Setup		
		Server Setup		
	✓	Toolbar]	
		C:\ProgramData\TroSoft	Nimbus Alarm Server 3\Primary	STOP 2016-04-19

Select Setup -> SCADA import.

You will need to have Nimbus Alarm Server release 2.00.34 or later (this example is from *Nimbus release 3.00.04*).

🖳 Nimbus - SCADA import	
SCADA System	
Add SCADA system import	ABB 800xA
Remove this SCADA system import	ABB Freelance
	ABB MasterPiece
	ABB MicroSCADA
	Bastec BASx
	Beijer Electronics E-/E1000-series/iX devices
	Bravida Integra
	Cerberus Algorex
	Cerberus CSDL
	Collectric Collibri

Select SCADA System -> Add SCADA system import -> Beijer Electronics E-/E1000-series/iX devices.

That's it. Restart *Nimbus Alarm Server* if it was already running. The Nimbus Server has a built-in SMTP server and there is no need to pass through any Exchange server etc (at least if both the iX devices and Nimbus are located at the same network)

Nimbus Explorer 3.00.04 - <no name=""> / [no users]</no>						
File Setup	Log					
	Show Active System Log Show Debug Window History System Log Clear main Window					
C:\ProgramData\TroSoft\Nimbus Alarm Server 3\Primary STOP 2016-04-						

Show the debug window and try to send an alarm from iX HMI.

Nimbus - Debug				
<u>File</u> <u>Filter</u>				
	Source/De	Time	Data	
→ TX	SCADA	11:39:42	220 trosoft.se Nimbus Mail server ready (your IP is 127.0.0.1:58243)<13><10>	
🗲 RX	SCADA	11:39:42	EHLO op.pan<13><10>	
🔿 TX	SCADA	11:39:42	500 syntax error<13><10>	
🗲 RX	SCADA	11:39:42	HELO op.pan<13><10>	
🔿 TX	SCADA	11:39:42	250 trosoft.se<13><10>	
🗲 RX	SCADA	11:39:42	MAIL FROM: <beijer@op.pan><13><10></beijer@op.pan>	
🔿 TX	SCADA	11:39:42	250 OK<13><10>	
🗲 RX	SCADA	11:39:42	RCPT TO: <nimbus@larmserver.nu><13><10></nimbus@larmserver.nu>	
🔿 TX	SCADA	11:39:42	250 OK<13><10>	
🗲 RX	SCADA	11:39:42	DATA<13><10>	
🔿 TX	SCADA	11:39:42	354 Start mail input; end with <crlf>.<crlf><13><10></crlf></crlf>	
🗲 RX	SCADA	11:39:43	From: "T15B" <beijer@op.pan><13><10></beijer@op.pan>	
🗲 RX	SCADA	11:39:43	To:nimbus@larmserver.nu<13><10>	
🗲 RX	SCADA	11:39:43	Message-ID: <8d52a0ebfb3445379b3e025eab1ff5ae@op.pan><13><10>	
🗲 RX	SCADA	11:39:43	Date: Wed, 02 Jul 2014 15:35:25 +0200<13><10>	
🗲 RX	SCADA	11:39:43	Subject: State: Active Time: 2014-06-27 1	
🗲 RX	SCADA	11:39:43	2:49:01<13><10>	
🗲 RX	SCADA	11:39:43	MIME-Version: 1.0<13><10>	
🗲 RX	SCADA	11:39:43	Content-type: text/plain; charset=utf-8<13><10>	
🗲 RX	SCADA	11:39:43	Content-Transfer-Encoding: quoted-printable<13><10>	
🗲 RX	SCADA	11:39:43	<13><10>State: Active Time: 2014-06-27 12	
🗲 RX	SCADA	11:39:43	:49:01 Id: 8fb4cea5-1f2b-4fbd-acde=<13><10>	
🗲 RX	SCADA	11:39:43	-78fee51a2089 Text: Tryck 10bars =C3=A5nga Larm L=C3=A5g AlarmItemD=<13	
🗲 RX	SCADA	11:39:43	isplayName: IPU1141_LALM Count: 1<13><10>	
🗲 RX	SCADA	11:39:43	<13><10>.<13>	
🗲 RX	SCADA	11:39:43	<10>	
🔿 TX	SCADA	11:39:43	250 OK<13><10>	
🗲 RX	SCADA	11:39:43	QUIT<13><10>	
	SCADA	11:39:43	221 trosoft.se Service Closing<13><10>	

If you get some text as above then all is fine (this example is not representative for an iX)

Now create *Receivers* and *Alarm Route Profiles* as usually.

How to add some extra text from iX

Subject :	State: {0} Time: {1}
Body :	State: {0} Time: {1} Id: {2} Text: {3} AlarmItemDisplayName: {4} Count: {5} ExtraText: Bryggargatan 25A, fläktrum plan 4

Nimbus could accept some extra texts from the iX EMail Body field. Open the file *Import_Beijer_Ix.imp file* in the Nimbus ..*Project\Import* folder.

Set for example field T3=ExtraText

Append tag ExtraText to the iX EMail body fie

Id (as in above example it is the address of the device)



Nimbus will then parse the information into the *Name {t3}* field as above.