Sixnet

Starting an IPm Project Configuration

Requirements

- SIXNET Tool Kit Installed
- Licensing – SCS and Datalogging options
- SX-1131-32 or larger

Getting started

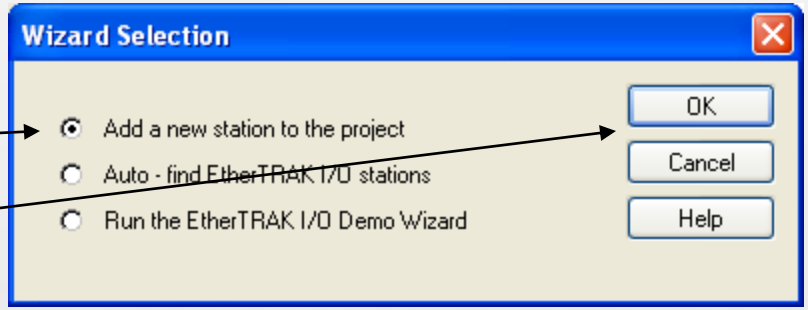
- Run the SIXNET Tool Kit
- Select File Menu - > New Project

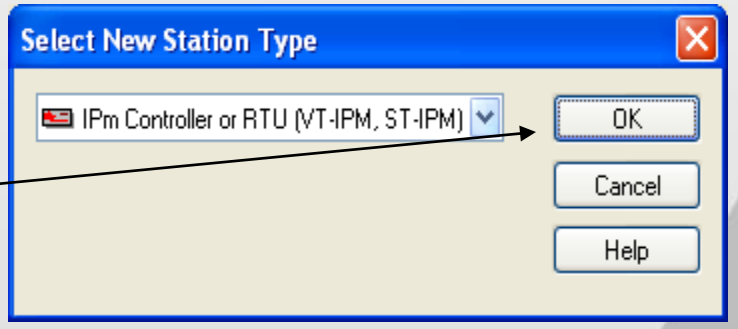
Wizard Selection widow

- Ok

Select New Station Type

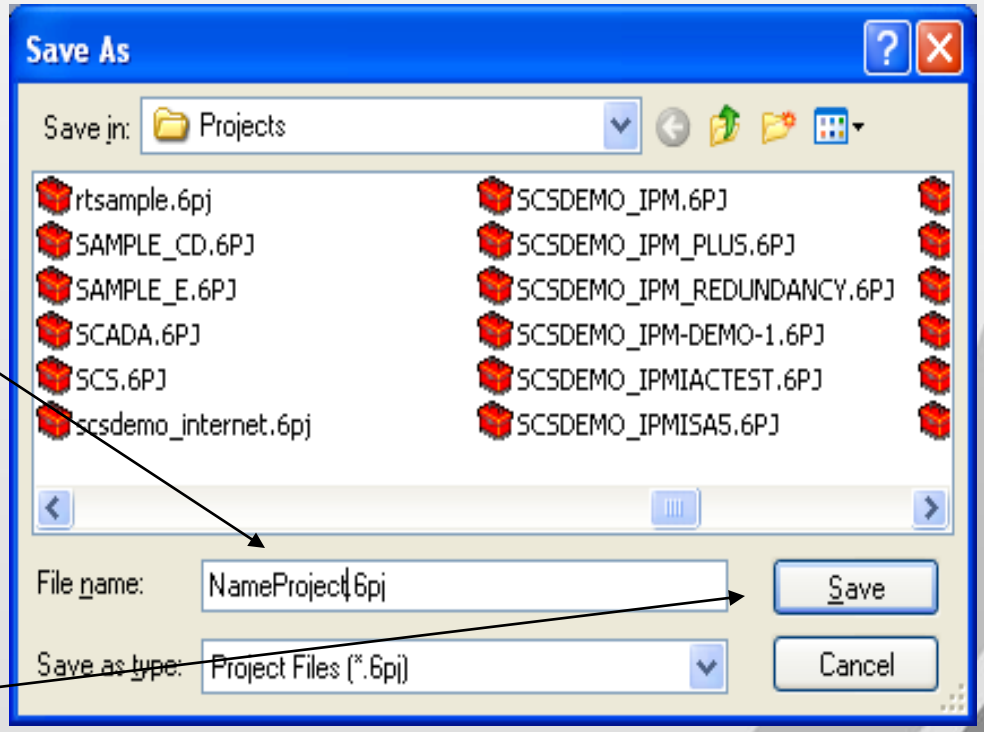
- Ok





Name the project

- Name the project
- Save

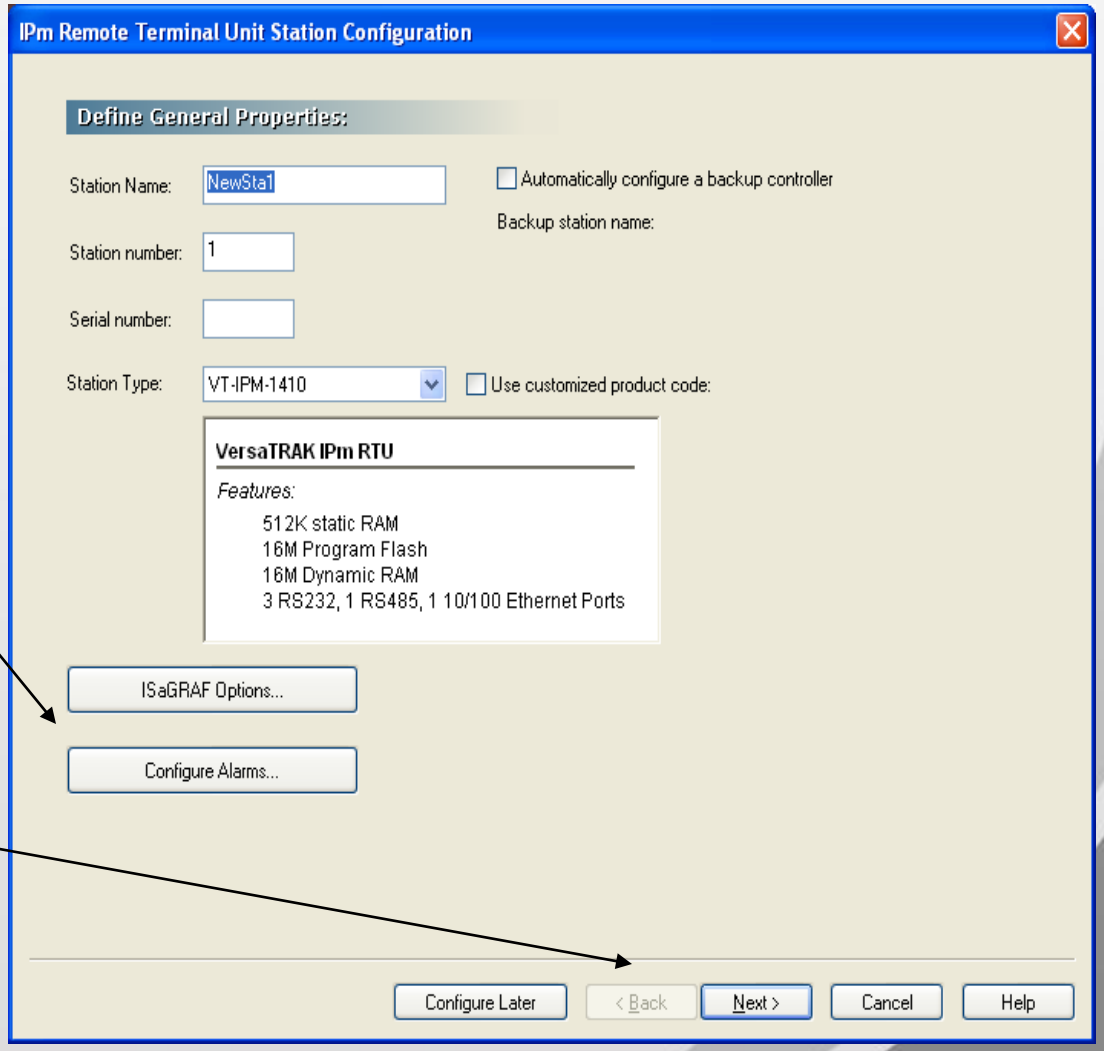


General Configuration

- Add
- Add or change
- Add serial number
- Select station type

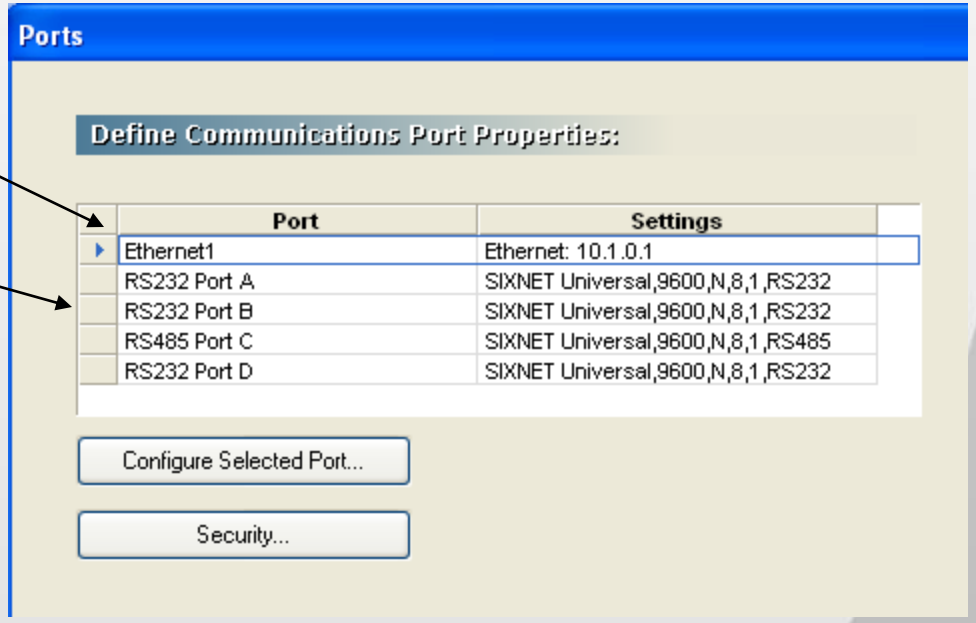
- Can be configured later

- Select next to use configuration Wizard



Ports

- Set IP address
- Set Serial ports
- Changes will take effect after an IPm load is complete

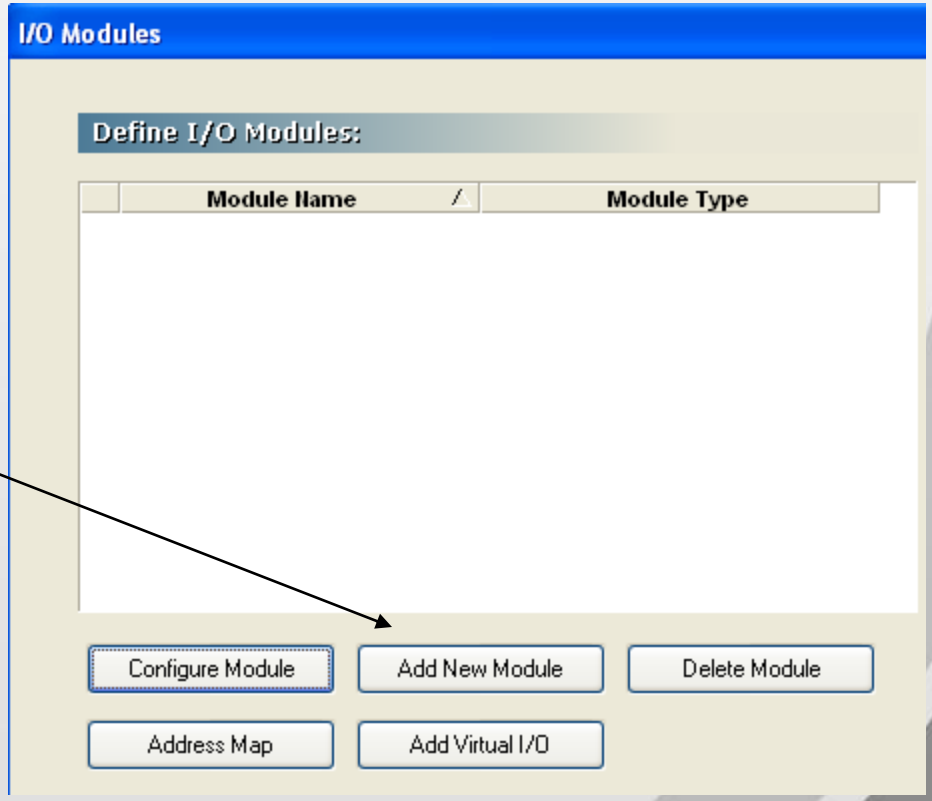


Add I/O modules

- I/O module include

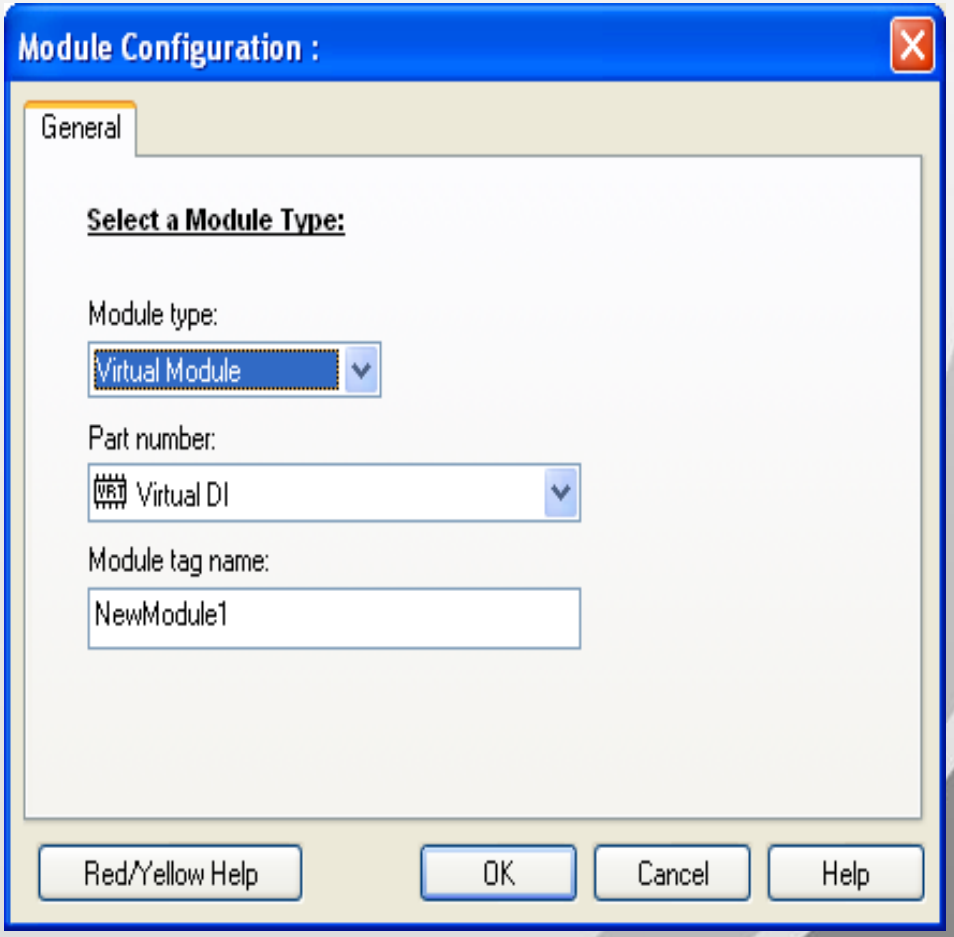
Virtual, Physical (ST), & Status modules

- Select Add New Module



Add Virtual Module

- Add Virtual Module
- Virtual DI
- Name Module

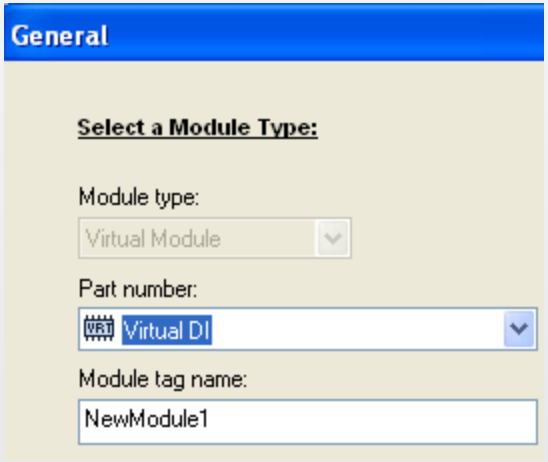


Virual Module configuraiton

- General CFG
- Next
- Discrete Options

Leave to default

- Next



Tag I/O

- Enter Tag names or use Auto Name for uniform tag entry

- Example of Auto Name

Discrete Tags

Auto Name | Copy Prior

I/O Type	I/O Address	I/O Tag Name	OFF Message	ON Message	
D IN	X0				N/A
D IN	X1				N/A
D IN	X2				N/A
D IN	X3				N/A
D IN	X4				N/A
D IN	X5				N/A
D IN	X6				N/A
D IN	X7				N/A

Discrete Tags

Auto Name | Copy Prior

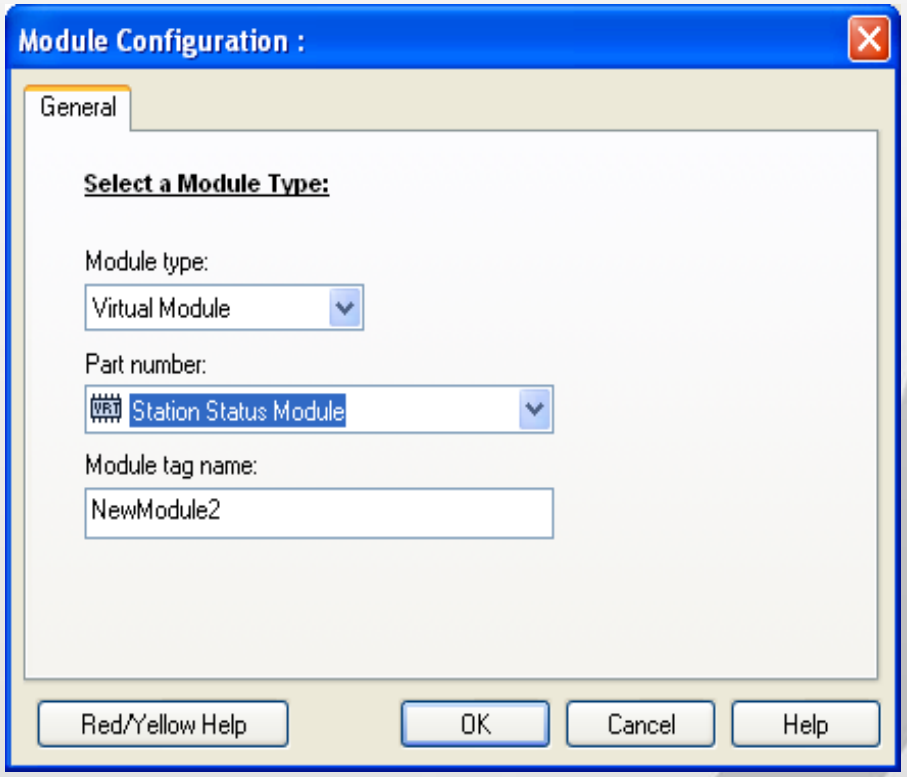
I/O Type	I/O Address	I/O Tag Name	OFF Message	ON Message	
D IN	X0	Pump10			N/A
D IN	X1	Pump11			N/A
D IN	X2	Pump12			N/A
D IN	X3	Pump13			N/A
D IN	X4	Pump14			N/A
D IN	X5	Pump15			N/A
D IN	X6	Pump16			N/A
D IN	X7	Pump17			N/A

Repeat Add new module

- Add 3 additional modules
- Virtual DO – Tag IO
- Virtual AI - Tag IO
- Virtual Station Status Module

See next slide for details on the station status module. IO transfers will be required to be able to assign a status bit or tag.

- Next to Advanced Tab



Station Status Module

- Use these to monitor communications to SIXNET or 3rd party devices
- Virtual modules that contain discrete inputs that reflect the communication health
- I/O Transfers should be configured before assigning the status tag
- Once a transfer is configured the transfer name will appear as an option in the tag tab -> feature column. Select one transfer per status bit
- With valid communications the Station Status discrete register will be set TRUE (1)
- Can be used to monitor SIXNET and Modbus communications via Serial and Ethernet
- Take appropriate action if a distributed station or module goes offline by monitoring these registers in your ISaGRAF program or Windows applications
- Distributed stations or modules will be reported in their last known state if communication is halted with a Scan Enable flag

Advanced Properties

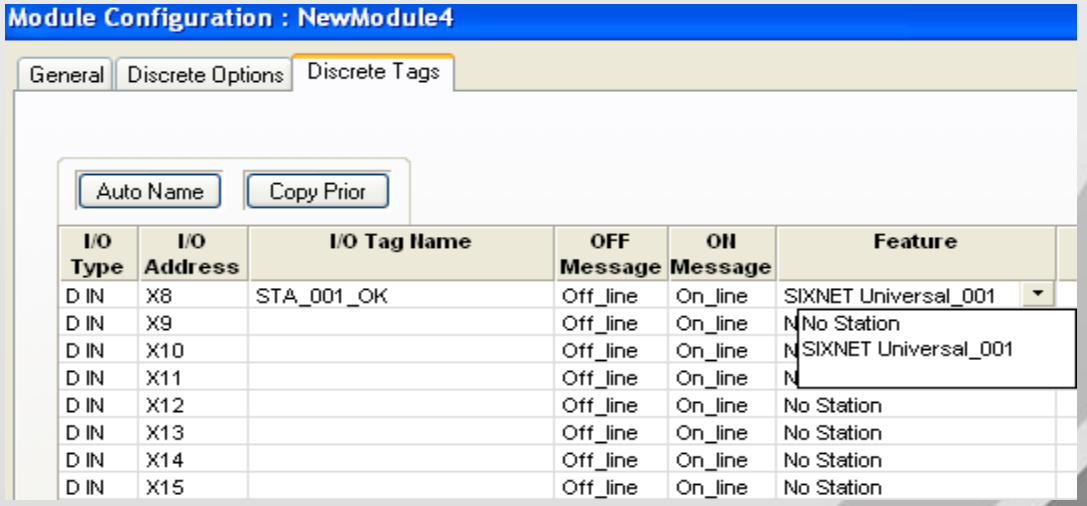
- No changes required for this sample IPm setup
- I/O register assignments can be modified –Assign Resources
- Disable External I/O bus communications only applies to - ST bus
- Disable physical input reads
- Watchdog Options – special features
- Services – Requires licensing options

I/O Transfers

- Select add new transfer wizard
- Identify station to communicate (Station Number)
- Next
- Name the Transfer
- Next
- Select Transfer Type –
- Next
- Select Communications
- Next
- Scan Options – default ok
- Next
- I/O Options – Map IO from Local (IPM) to/from Remote (any device)
- Next -> Finish

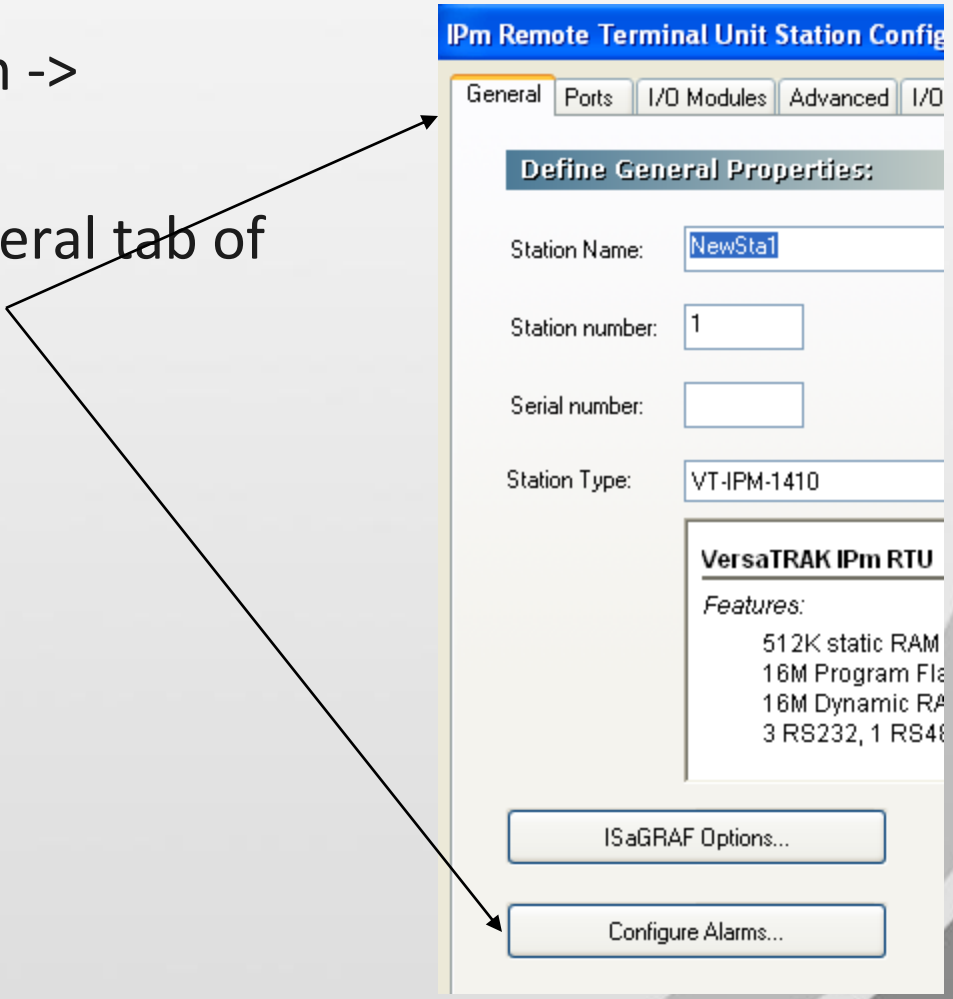
Assign Status bit

- Goto back to IPm configuration - I/O Module tab
- Select Station Status Module – Configure
- Goto Discrete Tab
- SIXNET Universal_001 is the transfer created in this project
- If a Modbus transfer was configured the Modbus would appear in drop down.
- If two transfers were configured then two options would be available in drop down list



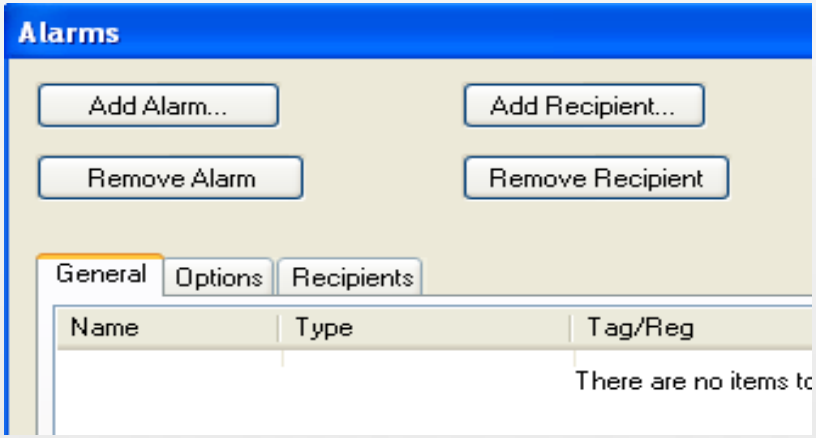
Add an alarm to trigger a datalog record

- Configure IPm – Select IPm -> configure
- Alarm configuration – General tab of IPm configuration

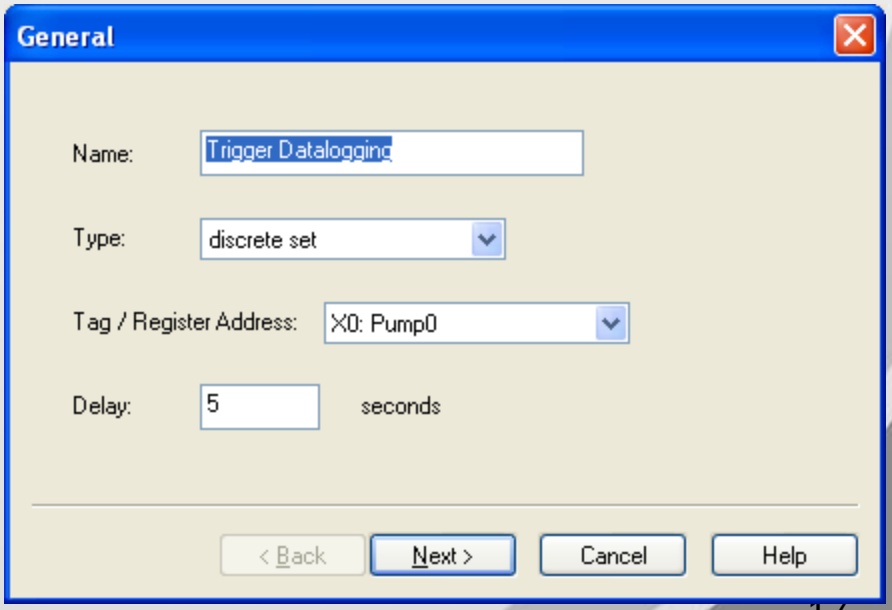


Alarm configuration

- Add Alarm

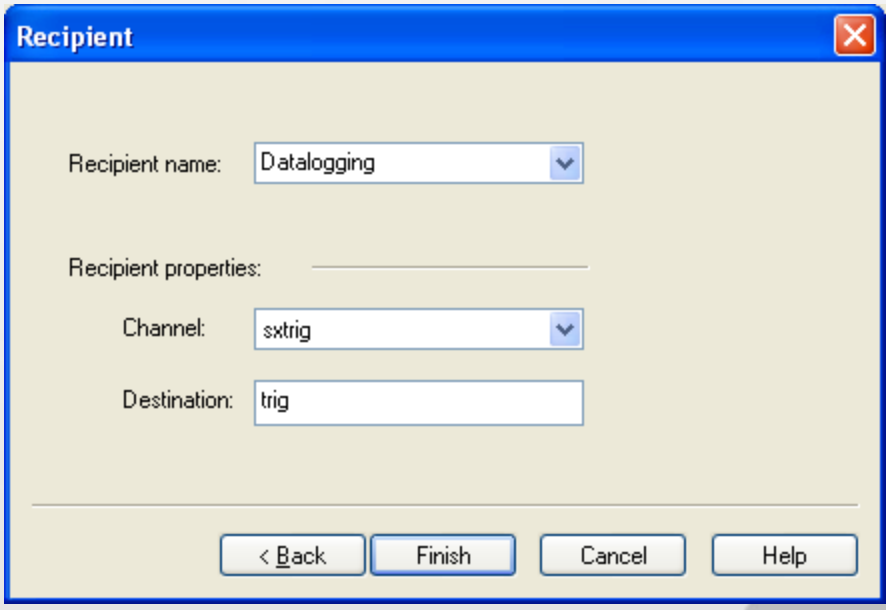


- Add Name
- Type – Discrete Set
- Tag – Pump1



Recipient

- Add recipient name
- Channel- sxtrig
- Destination trig

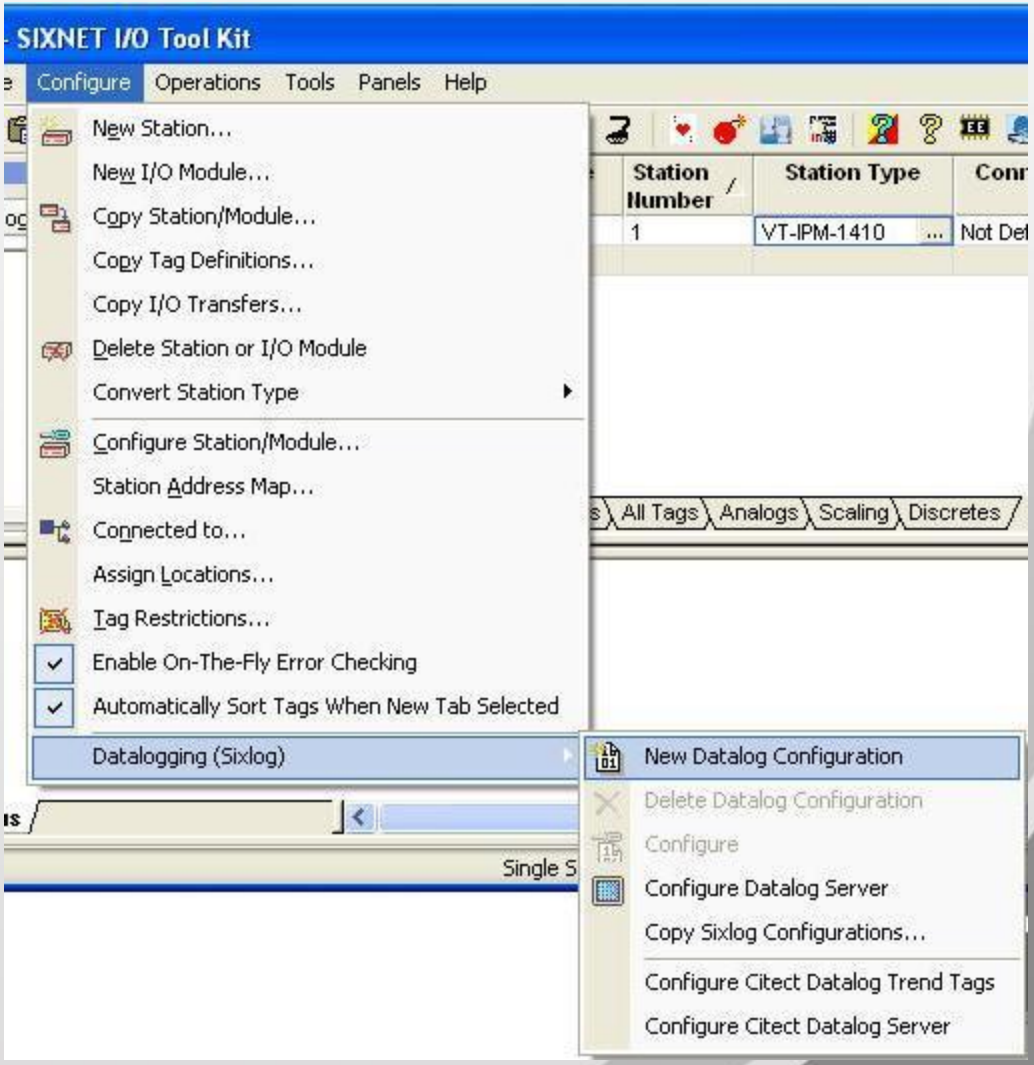


Basic Setup is complete

- It’s most important to assign tags first
- With tags assigned you can proceed to setup datalogging (tags will be ready to assign), add I/O transfer Scan Enable bits (tags will be ready to assign), and Export Tags to ISAGRAF project.

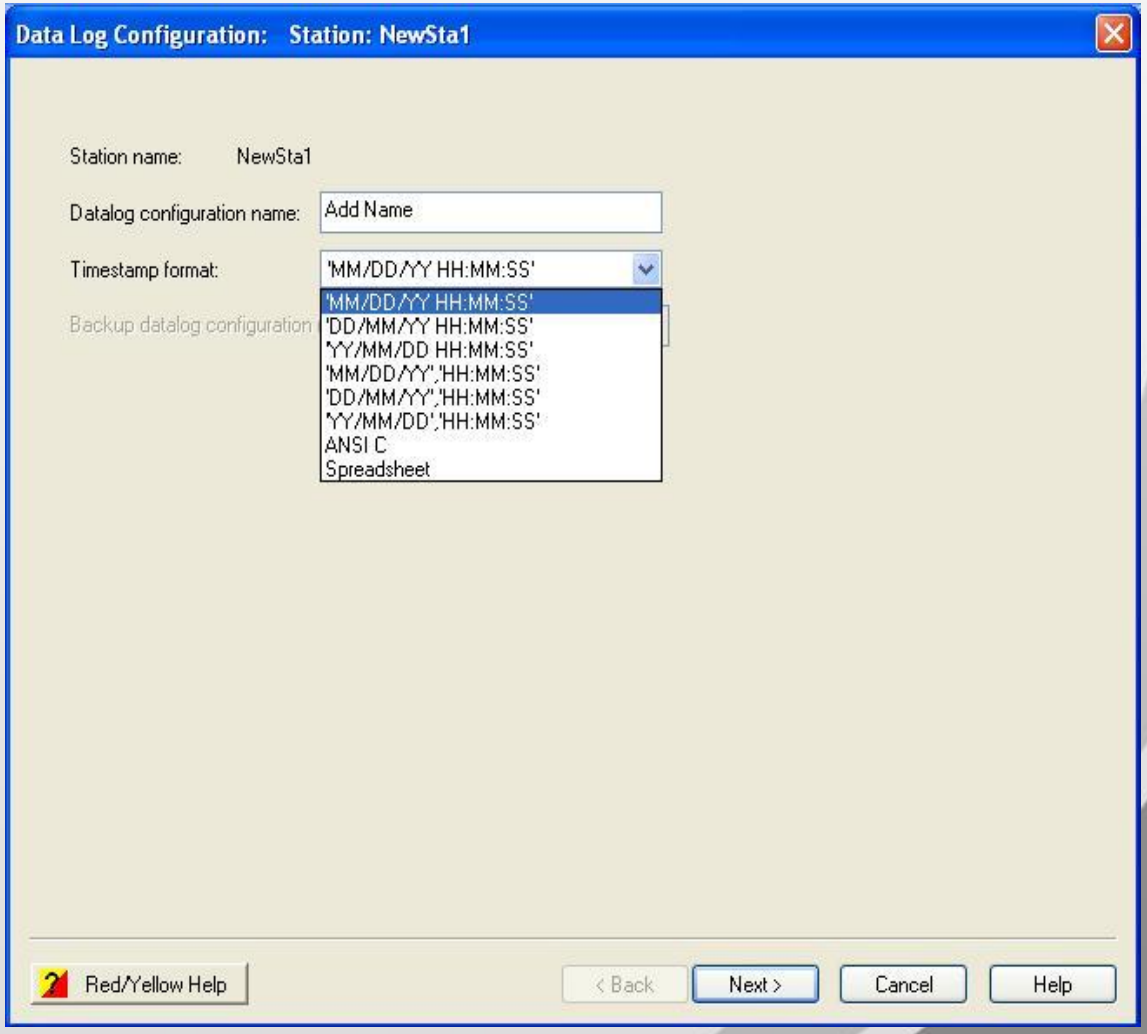
Starting a datalogging project

- Create New Tool Kit project (done)
- Add IPM to project (done)
- Assign tags to Onboard IO, or add tag to virtual IO modules (done)
- Add a new Datalog configuration to station



New Datalog Configuration

- Add Name
- Select Time stamp format
- Next



Capture parameters

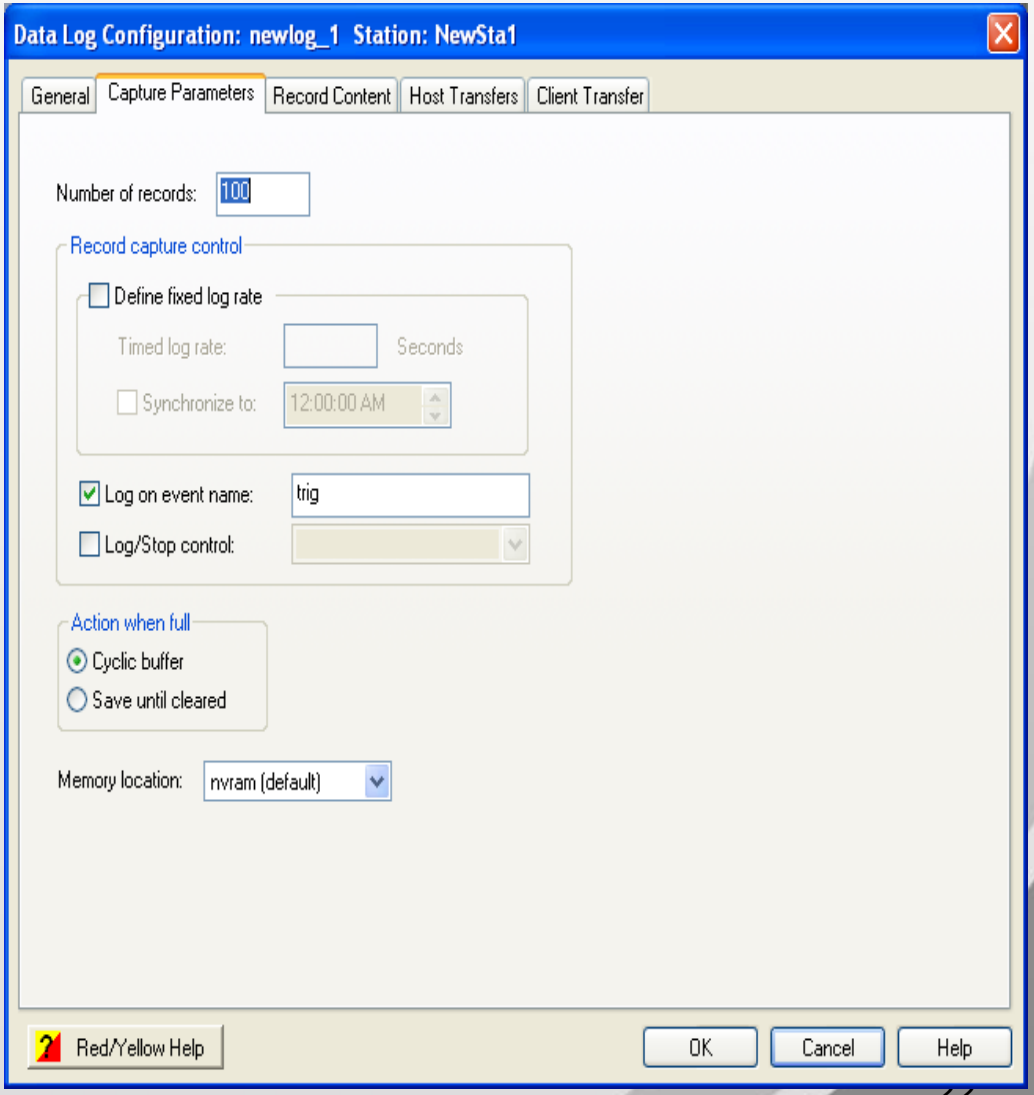
- Add Number of records

  Choose log rate (fast rate to verify records)
- Log on event – “trig”

  Controlled by ISaGRAF
- Log stop Control

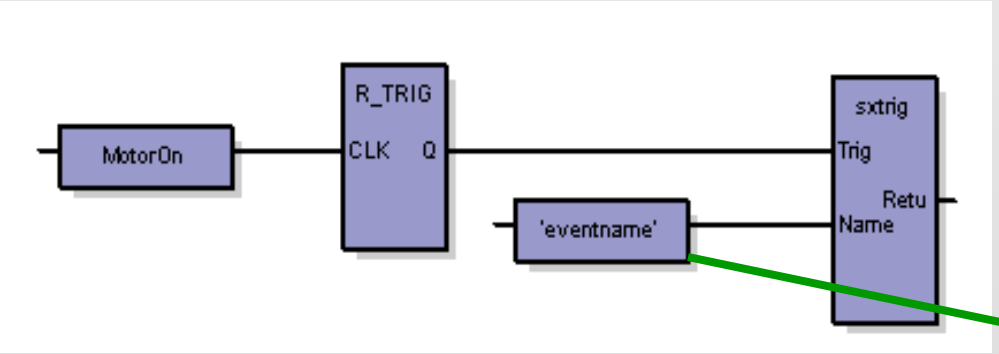
  Enable or disable logging via Discrete register
- Action when full
- Memory locations

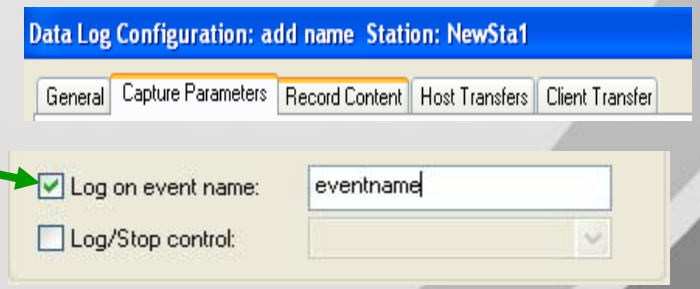
  Battery backed or Flash



Logging on Event

- One log file per event
- Program the event using the sxtrig function in ISaGRAF, or use the new Alarms feature
- Assign the sxtrig “Name”
- Use the sxtrig “Name” as the Event Name in the Dlog configuration
- Sample ISaGRAF code below

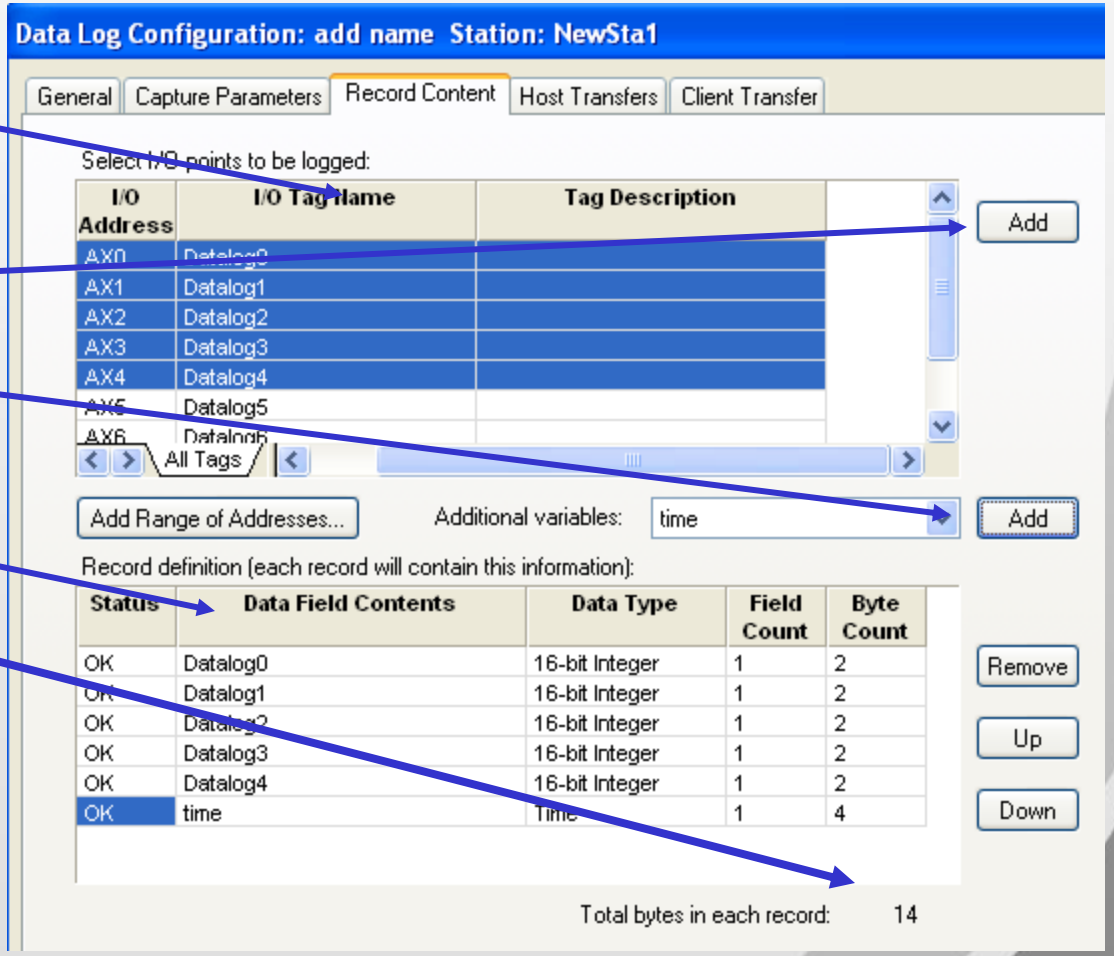




Record Content

- Pre-assigned tags readily available
- Highlight tags & Add
- Add Time stamp
- Content setup is complete
- Total Bytes in record

  (use this value to calculate storage abilities)



Host Transfer

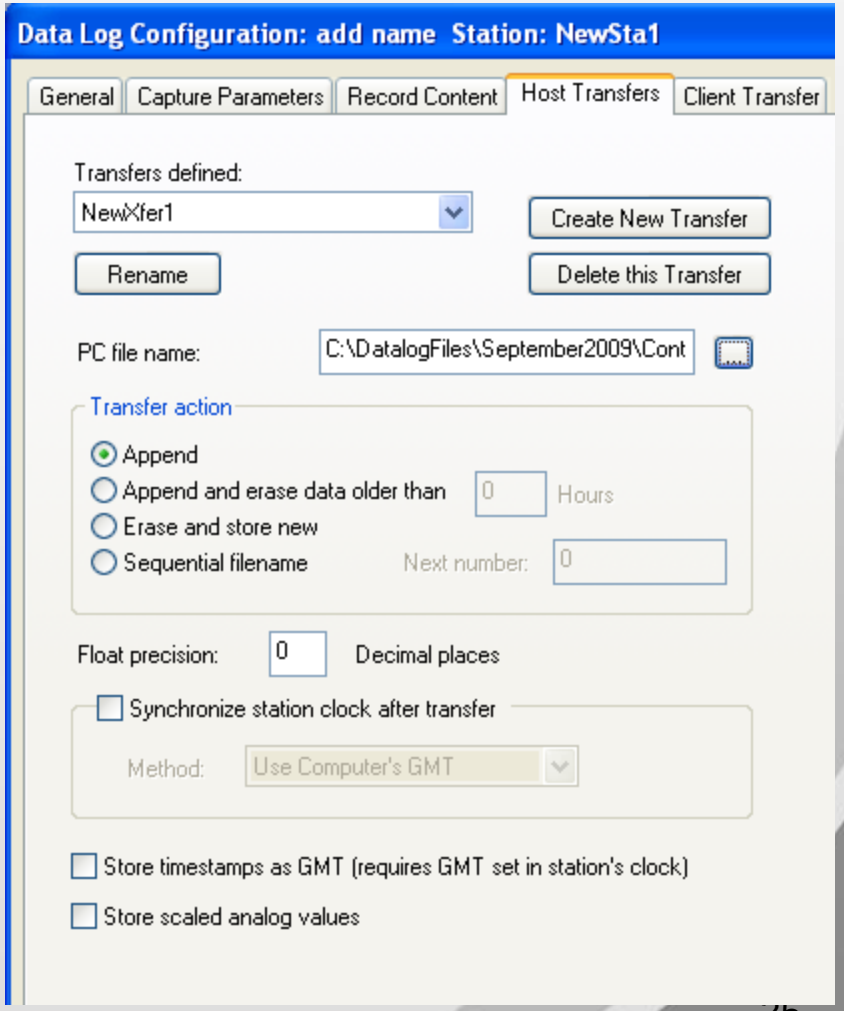
- **This is not required for sample project – leave to default**
- Host site will request records from station
- Use the Tool kit to read records
- Launch sxlogview.exe transfer command via:

-User programs C, Visual Basic etc..

-The "Run" command in Windows and other applications

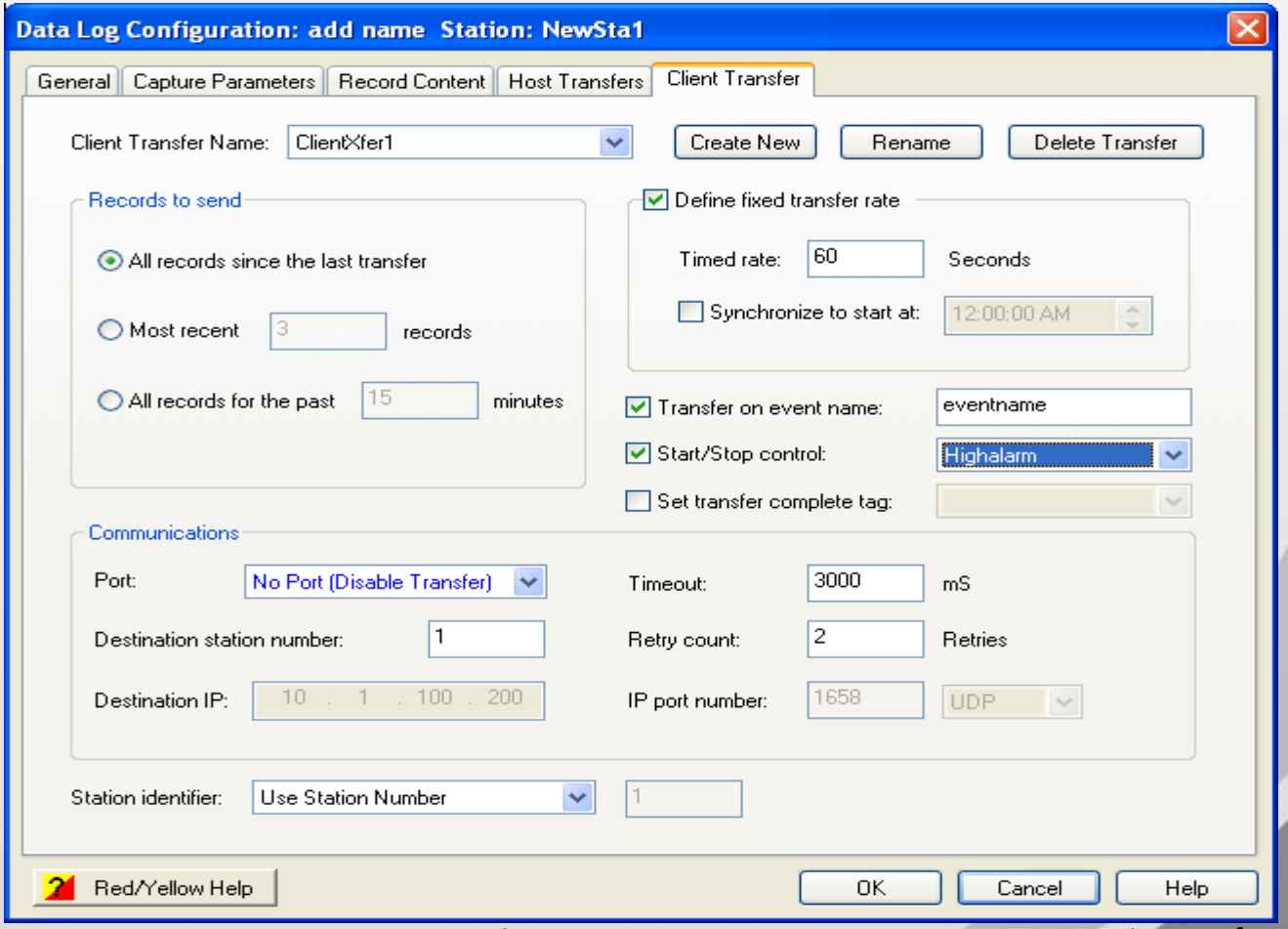
-Batch file

-Other applications capable of running Windows commands



Client Transfer

- **This is not required for sample project – leave to default**
- RTU initiates record transfer to the server



Basic datalog configuration complete