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Overview

LoggerNet Admin is used as the telemetry platform to collect data from the Pakbus OS dataloggers. The system can collect through a variety of comms options from digital radio to UDP. The backbone of the system is run from a virtual server and consists of the LoggerNet admin client. The server RDP Name is *LoggerNet* with the Flcont credentials.

The Client has all the stand LoggerNet features;

Setup:	Is used for defining the LoggerNet connections
Connect:	Is used to manually interrogate a logger and to check logger/sensor function
Status Monitor:	Shows the current schedule status of the loggers and can be used to collect data
Task Master:	Shows the scheduled task, can be used for running backups, moving data and calling secondary stations

Although the LoggerNet Client is run on the server the stored data is held on ARES
\\pnt-cd1\Telemetry\Loggernet Telemetry
This stores the returned .dat files and holds the .dsn files used to decode the data set; a batch file is used to push all the data into the original archive and the LoggerNet.hts directory.

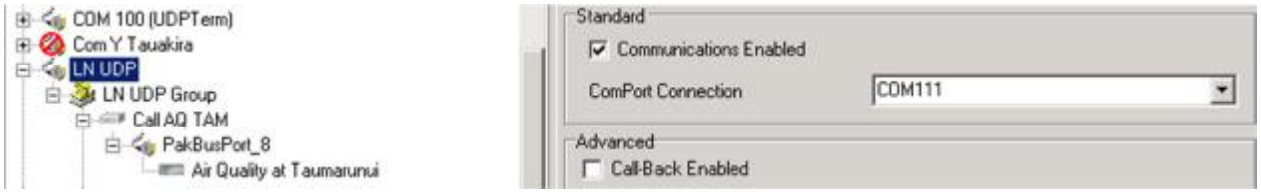
Setup

The LoggerNet setup tree is built around defining communication groups to the logger. Predefined paths are available or new one can be created, TCP/IP connections can be added as direct com roots but other devices can be mapped to available com ports.

Build the tree as required, adding Pakbus ports if needed and then attaching hardware. Individual hardware on a Pakbus port must have unique addresses and the same baud rate, use separate if needed to match the deployed loggers.

To enable dual comms with sites an application is used between LoggerNet and the comms ports, LNcomms uses the SQL database to define the dual coms paths available (See section on Setting up coms ports for more detail). The link to LNcomms requires the sites to be set up as if on a phone modem.

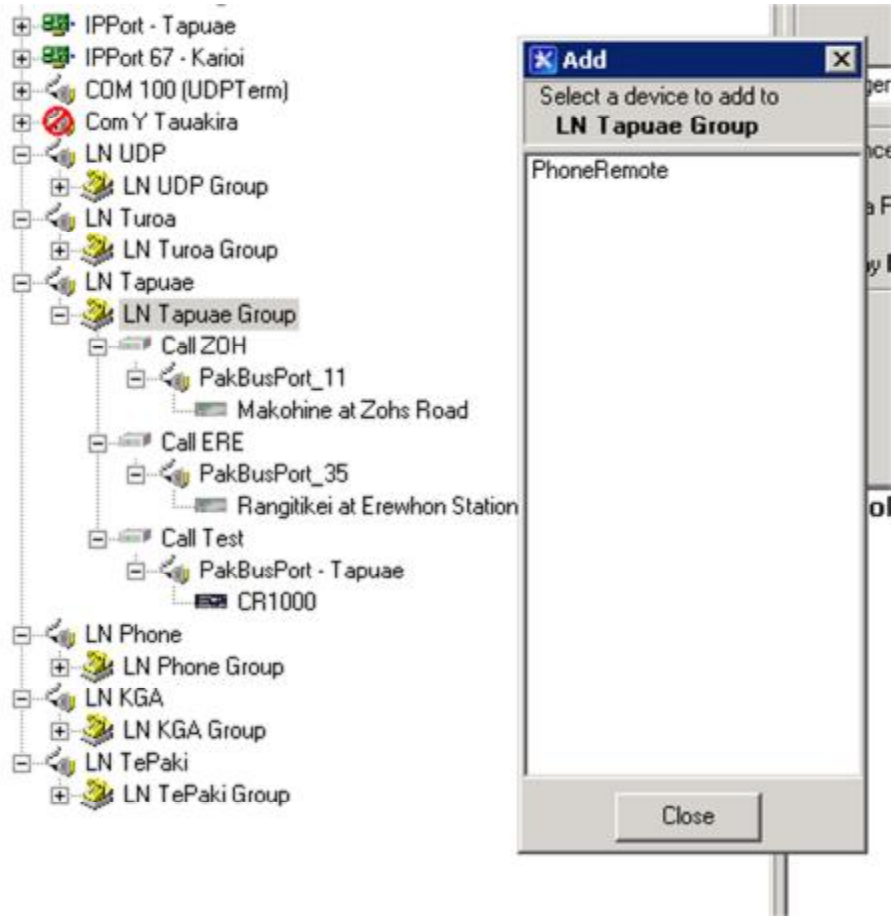
Use LN <descriptor> to define com ports, i.e. LN UDP; add IPPort -XXX for TCP connections i.e. IPPort – KAH



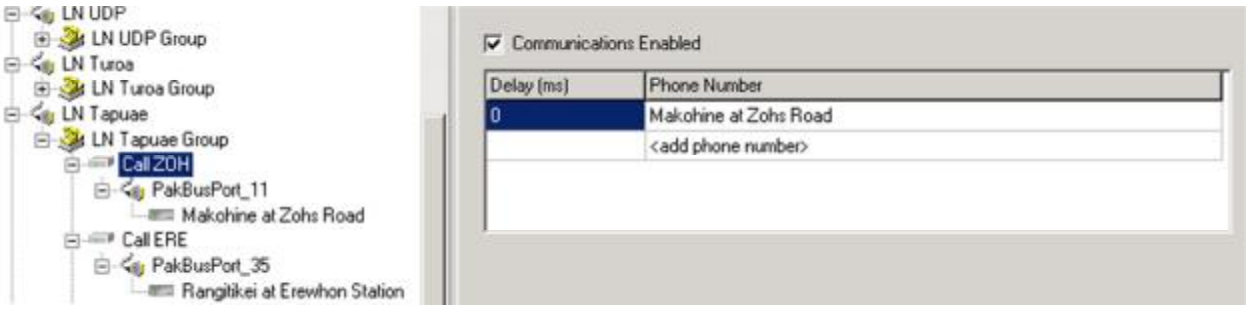
Set the base modem as LN <Descripton> Group i.e. LN UDP Group

For the remote modem use Call XXX and include the full site name as the Phone Number
Include the actual coms paths available as notes, IP address radio, phone number etc to aid in BCP rebuild
Leave the Pakbus port settings unchanged but should be on 9600 baud

Sites should be added to the correct calling group in LoggerNet, the available groups are defined by the primary call path such as UDP, Phone or Radio. Select the desired Base modem and ADD a new Phone Remote



A PakBus Port and datalogger can then be add to this remote
Name the phone remote Call XXX with XXX being the site code
In the Phone Number field add the full site name, This will match an entry in the SQl database, in the notes field include a comment for all available comms options for the site

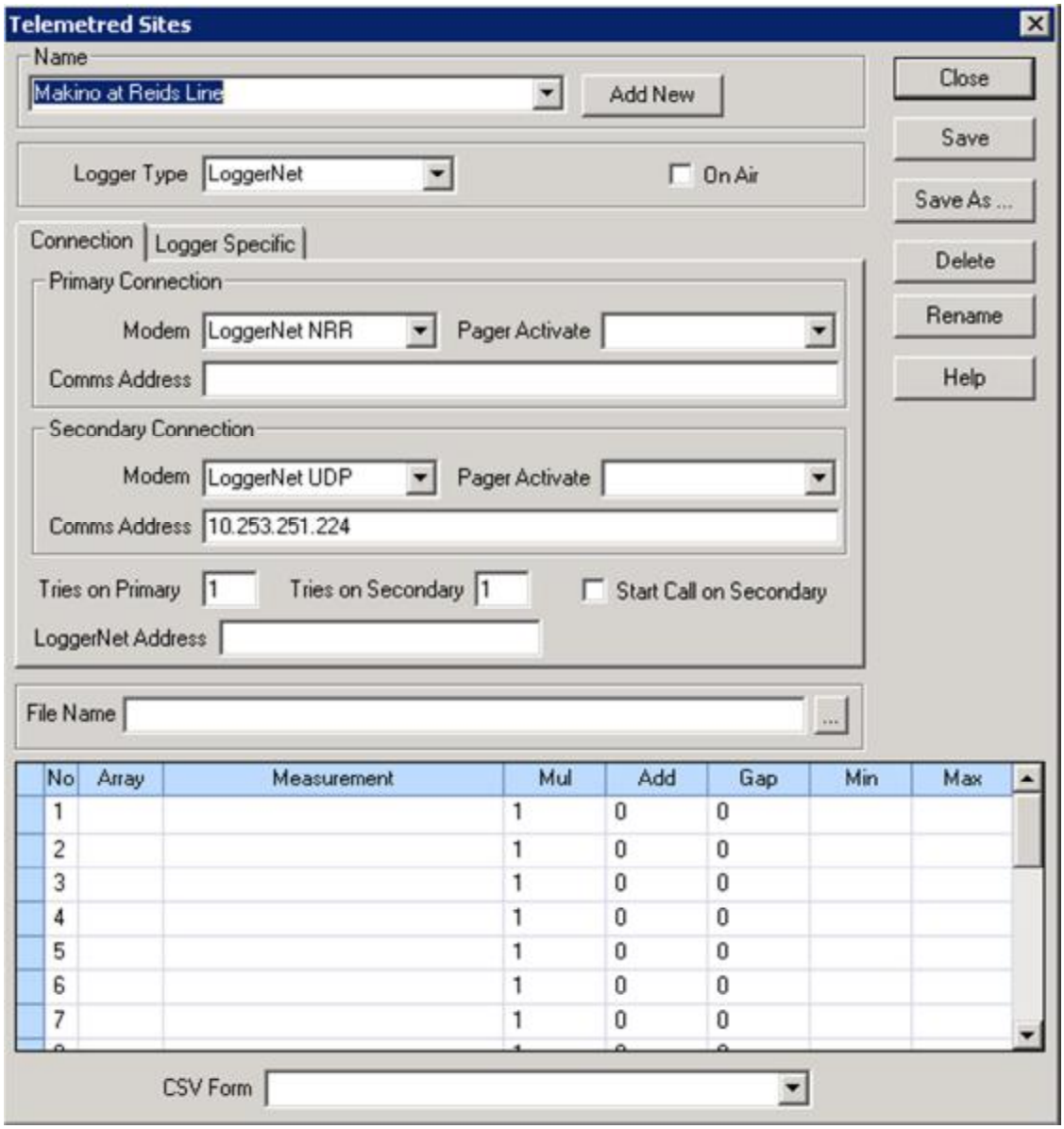


LoggerNet Telemetry Basics

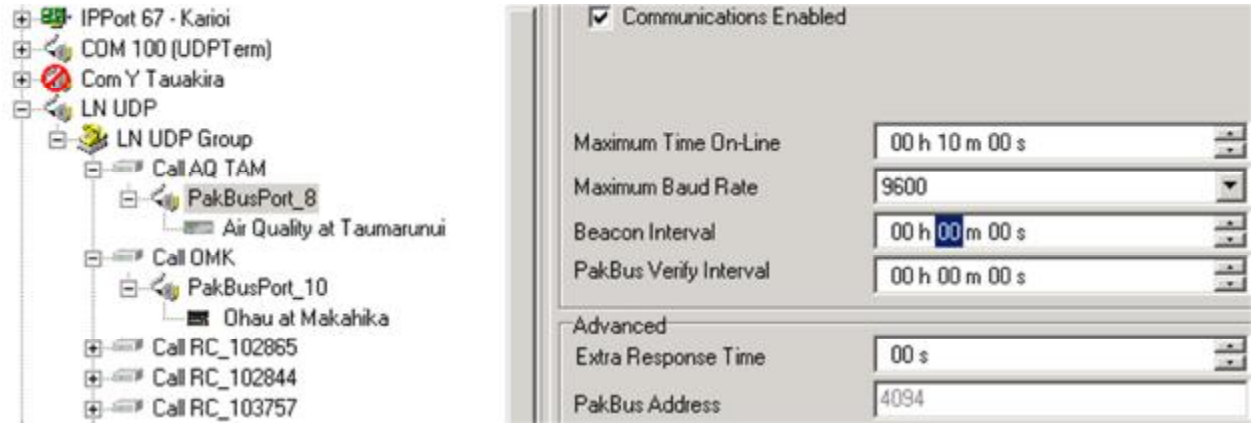
SQL Database setup with TelemClient

To enable the dual comms function LNcomms application is used as a conduit between LoggerNet and the comms ports, it links to the SQL database that holds the information for the call paths available for the site. The TelemClient is used to edit the database.

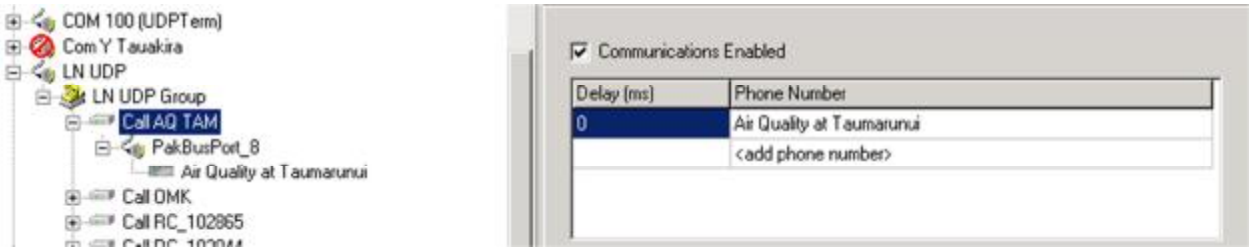
Add a new site with the full hilltop site name and set up the primary and secondary Connections.



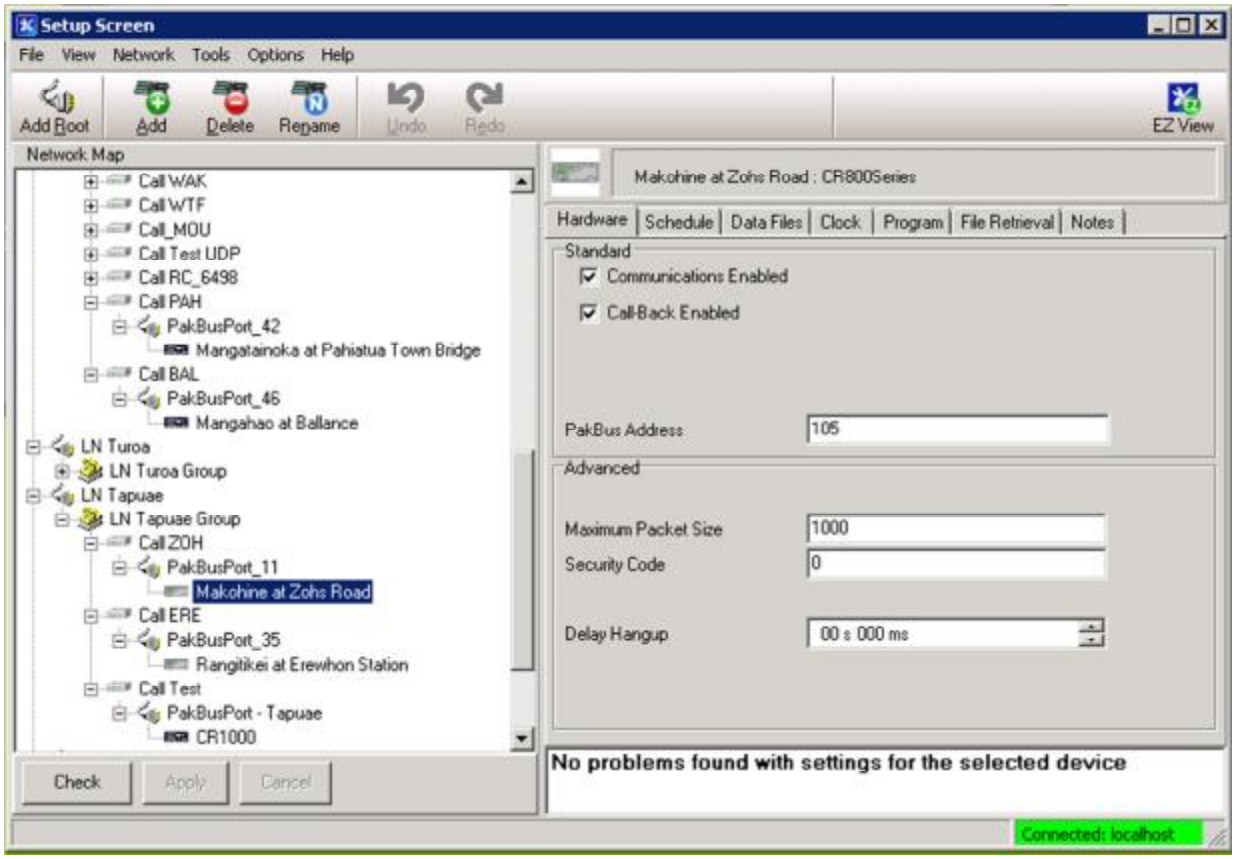
The beacon Interval can cause some issue with BCP operation and should be set to 00 h 00m 00s , this is only used for pakbus networks with store and forward.



The data logger MUST be assigned with the full hilltop site name and correct Pakbus address



LoggerNet Telemetry Basics

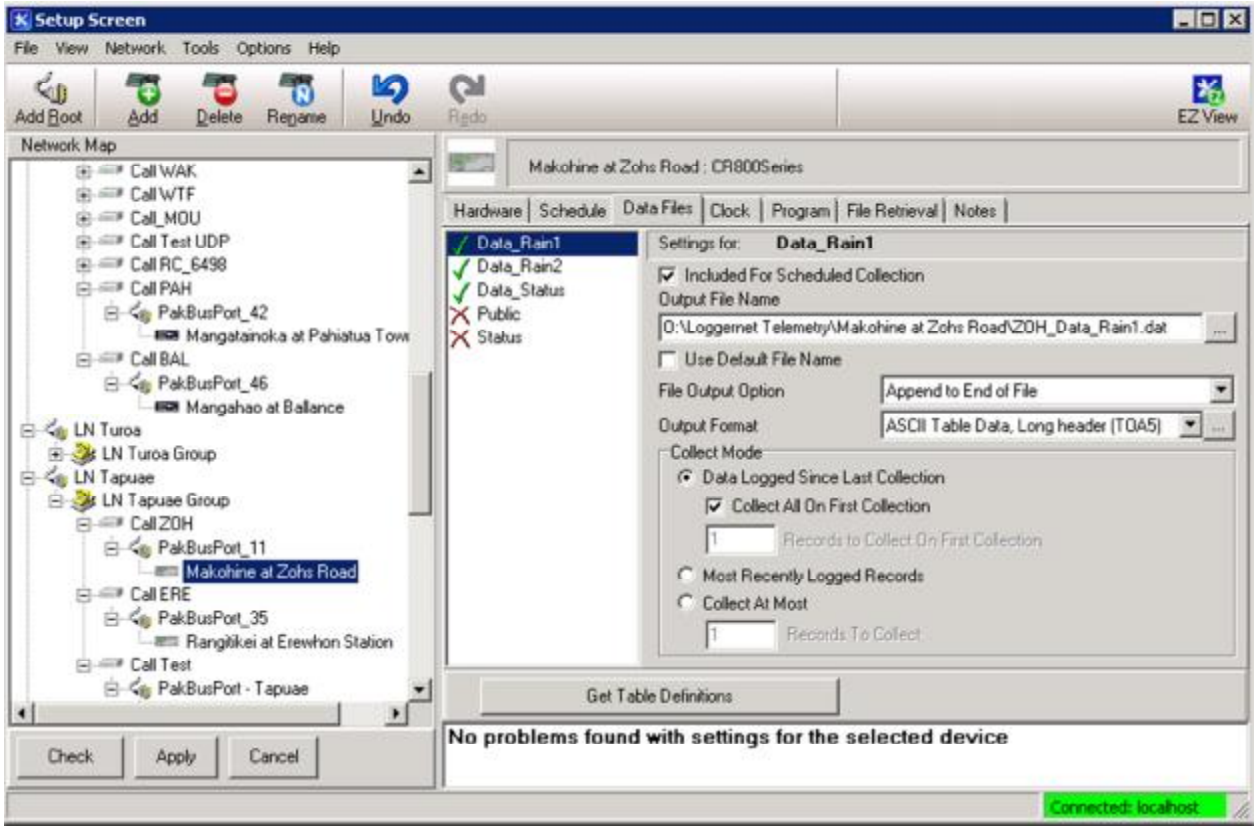


The Datalogger has a number of tabs for defining the connection

Hardware	Enable/disable communication, set the Pakbus address
Schedule	Set up the call schedule, for most sites use 30min interval with 1 retry
Data Files	Set up the Data files to record into the LoggerNet Telemetry directory. Store into a folder of the full site name with files saved as XXX_<table name>.dat. i.i. TEM_Data_5min.dat. For new site setups retrieve the table definitions first.
Clock	Enable the Automated Clock check with a 10s reset
Program	Will display the current logger program
File Retrieval	Not used, applicable to web cams etc
Notes	Enter relevant notes for the site, include the site code XXX

The Data files can be set, this will first require the table definitions to be retrieved from the remote logger, so is only possible once the logger has been installed with successful comms.

Once the Table definitions have been received then direct the Output files to the LoggerNet Telemetery directory on <\\CD1\Telemetry\loggernet Telemetry> The data should be stored in a folder named with the full hilltop site name.
Data table formats are XXX_Data_tabledescription. i.e. ZOH_Data_Rain1
Map all the data tables but exclude the public and status



Once the Site has been defined then the scheduled data call will store data into the LoggerNet telemetry directory.

To decode the data a .dsn is required these are of the format

[Hilltop]
Style = csv
Form = {CSV file}
File = \\pnt-cd1\Telemetry\Loggernet Telemetry\full site name\XXX.dat
Site = {Enter site name}

With an example

[Hilltop]
Style = csv
Form = DATA_Status
File = \\pnt-cd1\Telemetry\Loggernet Telemetry\Whanganui at Te Maire\TEM_DATA_Status.dat
Site = Whanganui at Te Maire

The csv form needs to match the data table format with a number of prebuilt forms matching standard tables
Csv forms should be in the format DATA_<descriptor> with the standard forms used where possible
For unique tables such as some 15min items then use DATA_15min_,datasource or site specific> and should be program idependant and stay static with program upgrades if the table structure changes.

The XXX_Update.bat file is used to pull all the data together and output to .hts files
The original archive is \\pnt-cd1\original\internal\ with sites stored as XXX.hts

The update file format is

rem C:\HILLTOP\htsUpdate.exe "SOURCE" "DESTINATION" D (destination control)

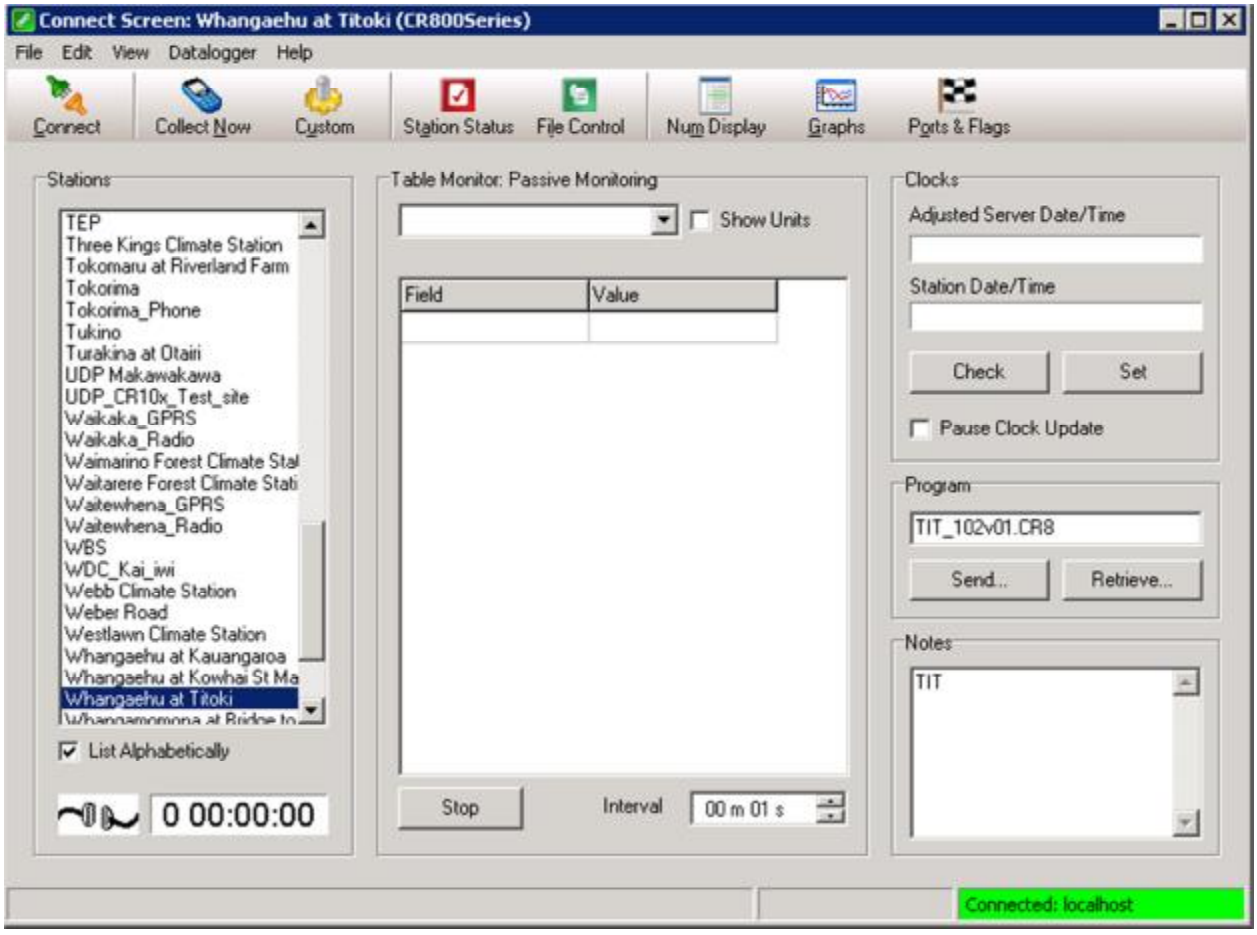
The source is the .dsn file with the destination as the original hts, a separate line si required for each dsn.
Next an update from the original hts to LoggerNet.hts is required.

The LoggerNet Telemetry directory contains templates of both the dsn and update files.

LoggerNet Telemetry Basics

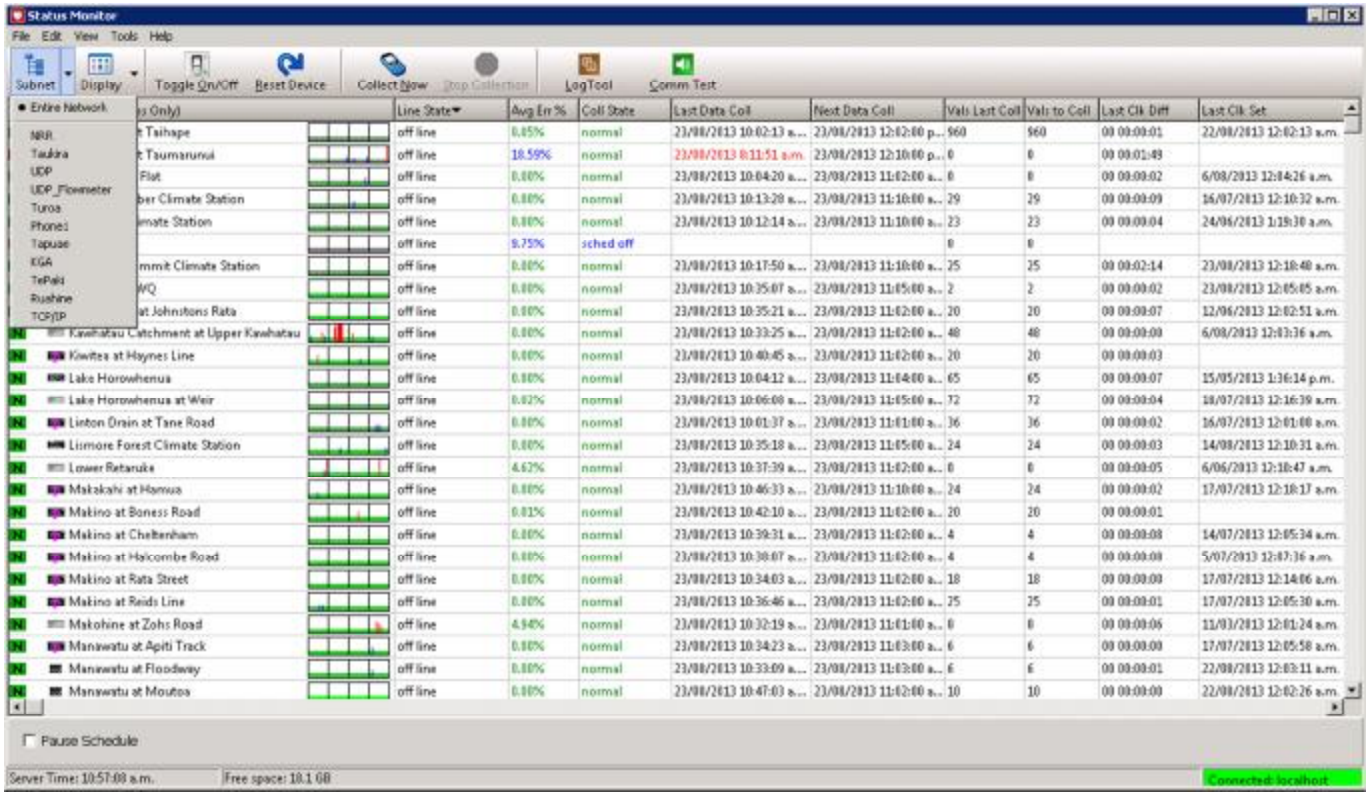
Connect

The Connect screen works as per in the field. Sites can be manually interrogated for function and sensor performance as well as flags activated and thresholds adjusted.
It is best to use the Status Monitor for data collection unless performing a custom collection.



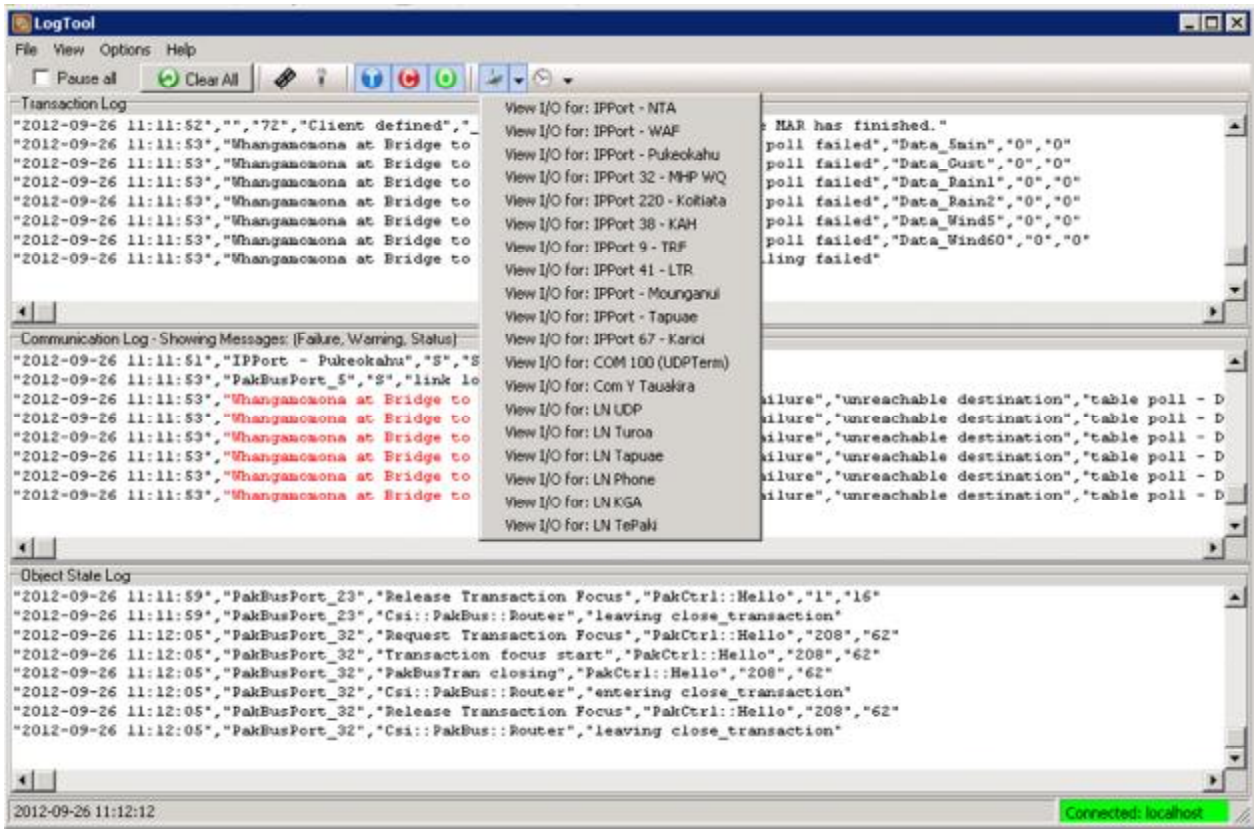
Status Monitor

The Status Monitor shows the comms and data state of the sites. Important fields are the “Netowrk map” and“Last Data Coll”



The Network Map shows the list of sites under the current Subnet. The Subnets are defined on the setup Menu and can be edited to show different collections. The site has a comms icon that is colour coded to the current status; a histogram shows the recent comms history.
The rest of the columns give relevant statistics on the call history with the “Last Data Coll” giving the last time the site was integrated.
Under “Tools” a State of operations log can be viewed to look at the schedule of current operations

From the Status Monitor the Log tool can be activated



This is a very useful tool for checking comms errors and following transactions. Access the low level log for the comms path of interest to see more site detail.

Task Master

The Task Master allows for scheduled tasks to be run either dependant or independent of site calls. The most useful application is to run the bat files for the hts data load after a successful call.