

5.0 DataLynx PLC

5.1 Server

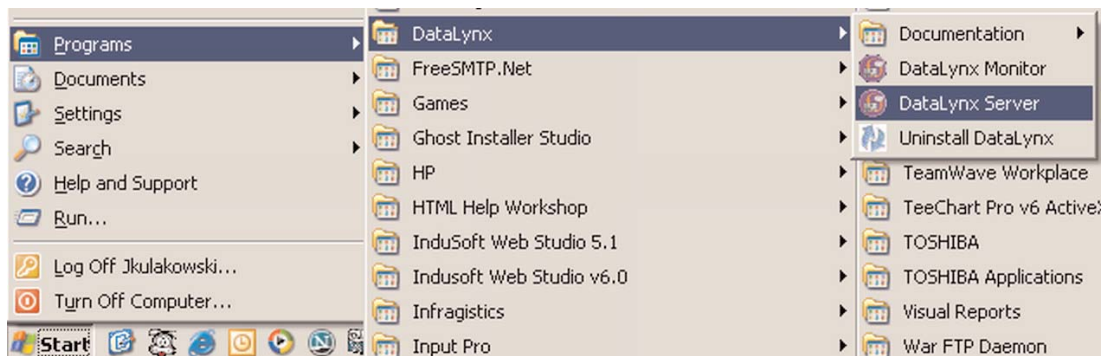
Overview

The DataLynx Server's primary function involves dialing up to PLC(s) and recording the data into text files in the format specified by the user.

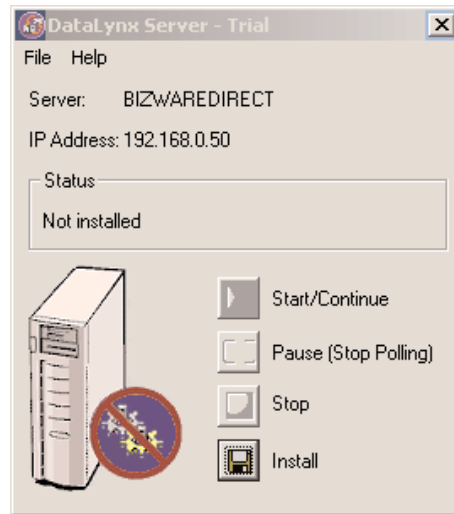
The format of the text file is set with the DataLynx Monitor. For more information on configuring the Server with the Monitor, refer to the Monitor section.

5.1.1 Installing Service

The DataLynx Server needs to be installed and run in order to run without user intervention. Doing so is a simple process. Go to: Start Button -> Program Files -> DataLynx -> DataLynx Server

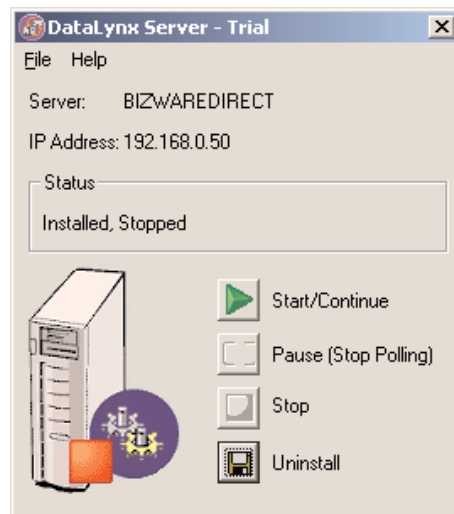


Click the "Install" button.



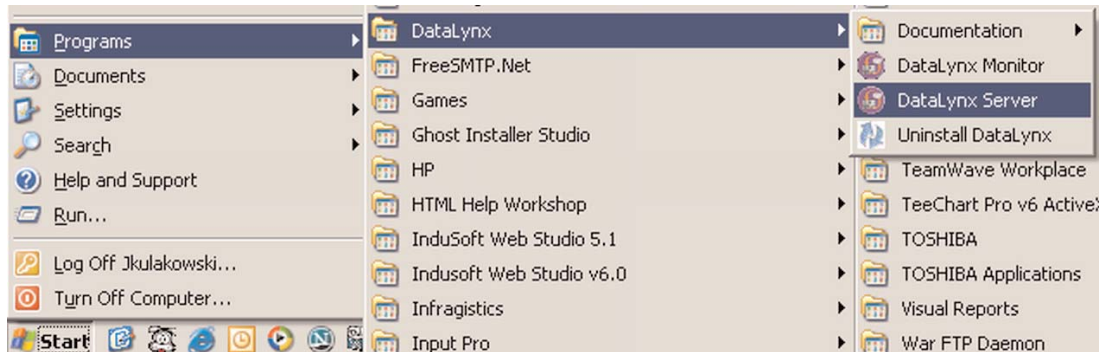
This window should appear showing "Status" as Installed, Stopped.

Note: This does not start the DataLynx Server. To start the Server, refer to the Running Service section.



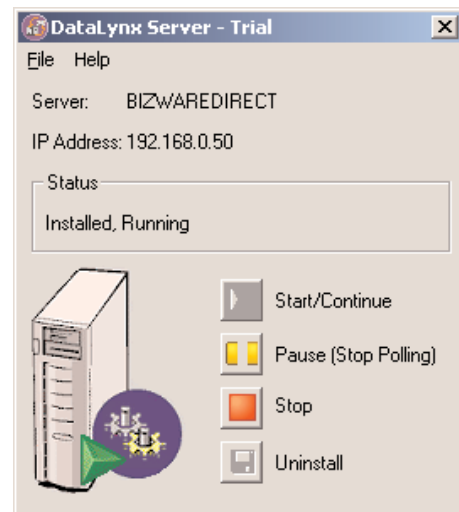
5.1.2 Running Service

If you do not already have the DataLynx Server Window open, go to: Start Button -> Program Files -> DataLynx -> DataLynx Server



This window will appear assuming DataLynx is not installed. Click the "Start/Continue" button.

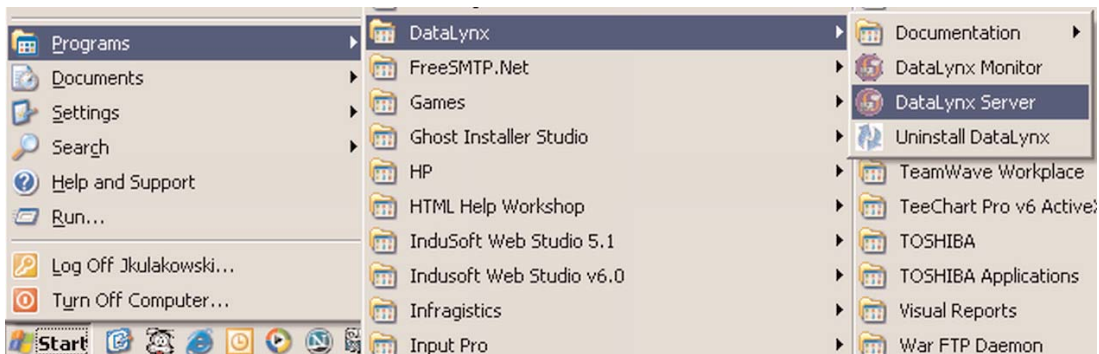
Note: It may take a couple of minutes for the Server to start running.



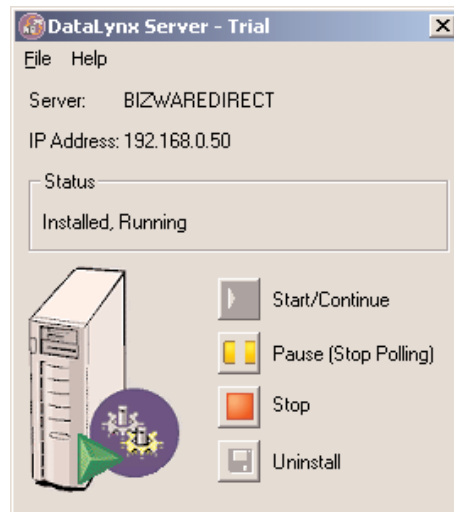
5.1.3 Pausing

Pausing forces the Server to stop polling for PLC input. This can be useful when configuring the Server because it will prevent irrelevant data from being stored.

If you do not already have the DataLynx Server Window open, go to: Start Button -> Program Files -> DataLynx -> DataLynx Server



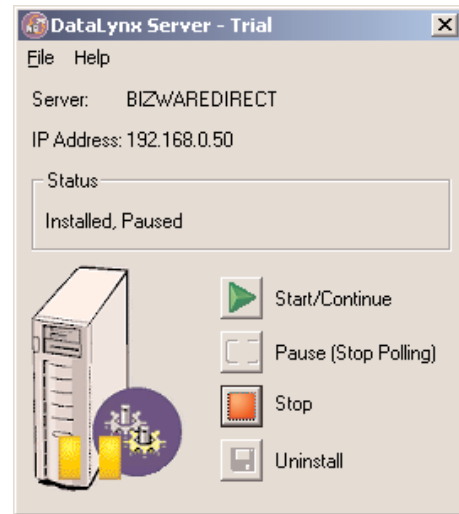
This window will appear -
Assuming Running



DataLynx User Manual

Click the "Pause (Stop Listening)" button, and this window should appear

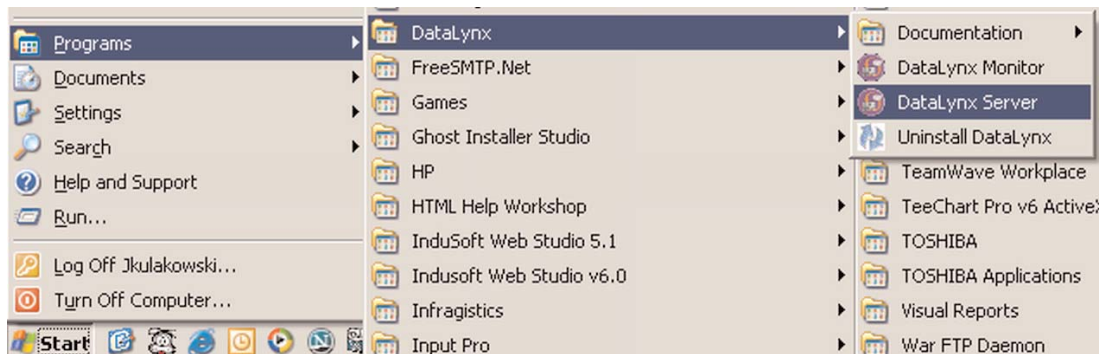
Note: This does not stop the DataLynx Server. To stop the Server refer to the Stopping section



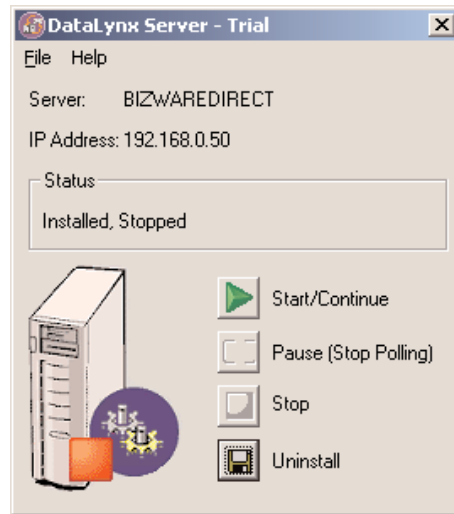
5.1.4 Stopping

Stopping the DataLynx Server completely stops the program, instead of stopping polling. This feature is useful because the Server must stop before you can uninstall it.

If you do not already have the DataLynx Server Window open, go to: Start Button -> Program Files -> DataLynx -> DataLynx Server



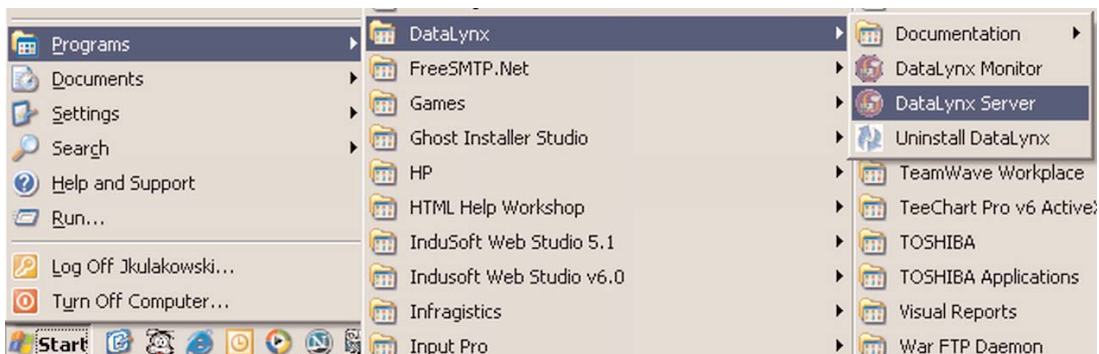
In the DataLynx Server Window, click the "Stop" button, and this window should appear.



5.1.5 Diagnosing

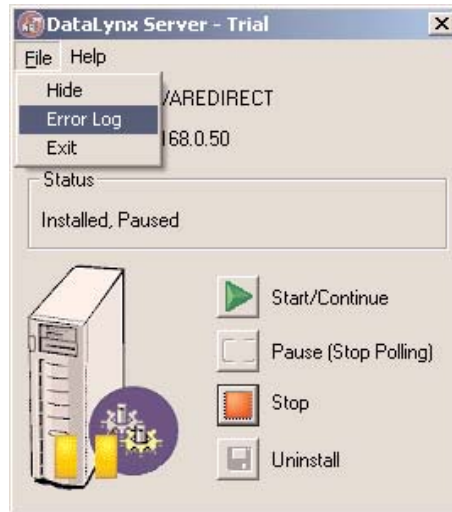
Diagnosing the DataLynx Server allows the user to troubleshoot and view real-time events.

If the DataLynx Server Window is not open, go to: Start Button -> Program Files -> DataLynx -> DataLynx Server

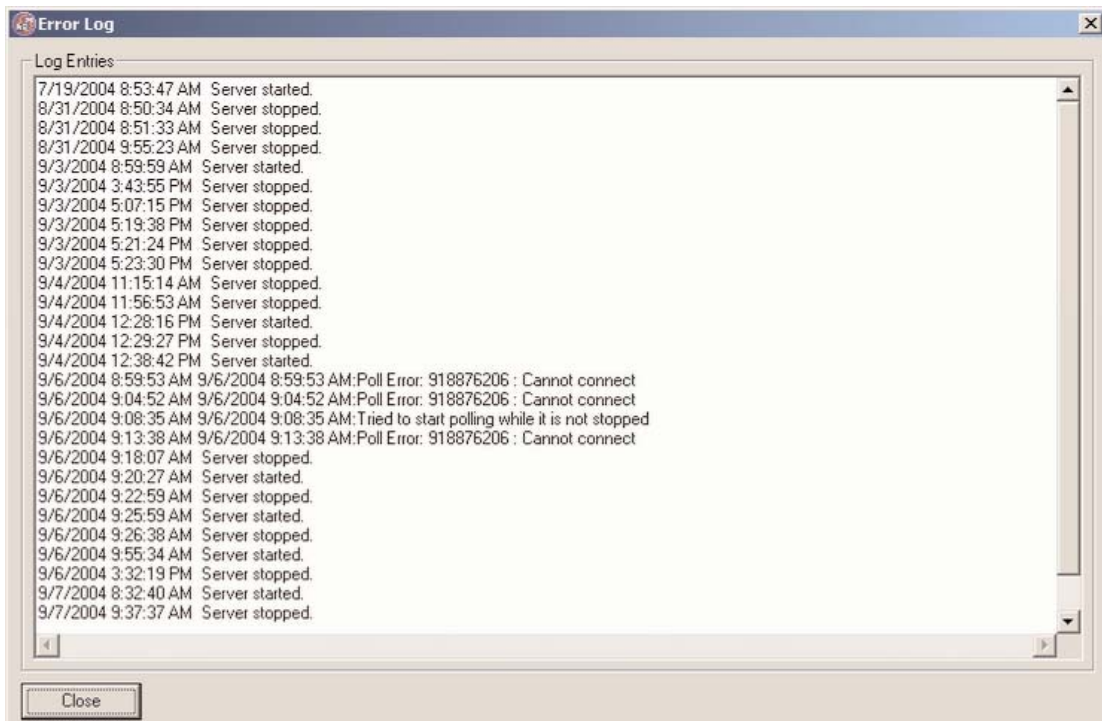


DataLynx User Manual

In the DataLynx Server Window, go to the menu:
File->Error Log



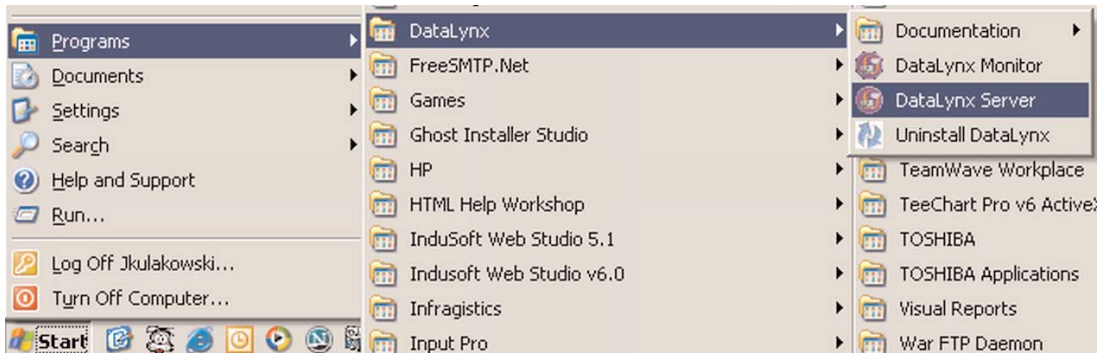
The Diagnostics Window below should appear.



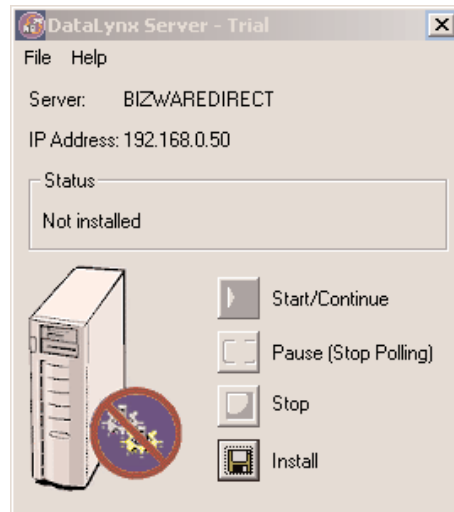
5.1.6 Uninstalling

For troubleshooting reasons, it is a good idea to uninstall the Server entirely.

To open the DataLynx Server Window, go to: Start Button
-> Program Files -> DataLynx -> DataLynx Server



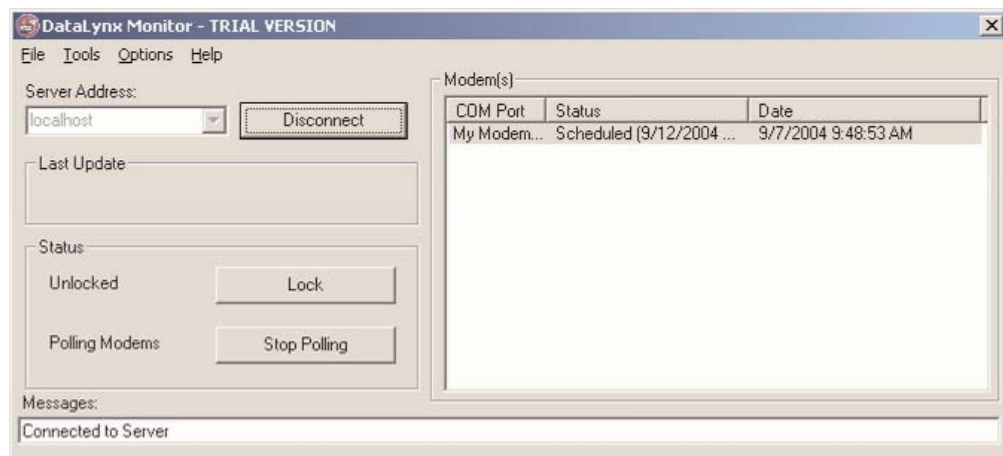
Click on the "Uninstall" button, and this window should appear.



5.2 Monitor

Overview

The DataLynx Monitor allows the user to configure the DataLynx Server and retrieve its data files over the network. Also, the DataLynx Monitor permits the user to troubleshoot. Below is the main screen and the explanations of each field:



Server Address: Field where one enters the address of the DataLynx Server

Last Update: Denotes the most recent PLC input time

Status: Displays the Server's locked and listening state

Modem(s): Displays list of currently configured modems on the Server as well as each modem's status

Note: Modems only lists the last update. Check the date to verify if you are receiving information when expected.

Messages: Displays updates from the Server as well as from the Monitor itself

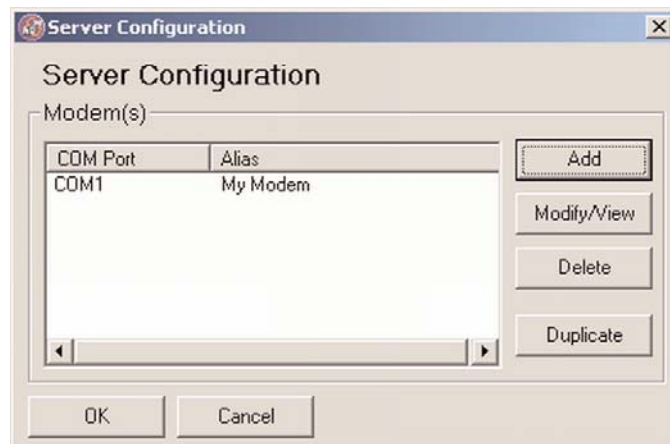
5.2.1 Configuring

Note: The Server must be connected in order to configure the Server.

Go to the menu:
Options -> Configure
Server



A list of modems, if any, configured for the Server will appear.



DataLynx User Manual

To add a modem, click on the "Add" button, and a Modem Configuration screen like the following will appear.

Modem Configuration

Modem Configuration • Text Files • Database

Modem Settings

Alias: Baud Rate: 9600 # Retries: 3

COM Port: COM1 Browse... Parity: None

Phone Number: Add Delete

Data Files

Phone Number:

Data Directory: Browse...

Alias (Optional):

Use Alias in Filename

New Data File Cycle:

Field Separation:

Log Phone Number

Display header for fields (Uses field alias for header label)

Log Time Stamp in Data Files

Example Filename:

Archiving and Deleting

Archive Files Cycle:

Archived Files Directory: Browse...

Delete Files Cycle:

Modbus RTU

Station Number: 1 One-Dial Test

Diagnostics

Poll Interval

Timed Interval Every HH: 00 MM: 00

Day Interval S M T W Th F S

At Time HH: 00 MM: 00

Fields

Add Edit Delete

Alias	Address	Type	Attributes

Modbus RTU DirectLogic Memory

OK Cancel

Below is an explanation of each of the Modem's Configuration Window's fields:

Alias: Optionally, a more descriptive name for the modem, e.g., "My PC's Modem"

COM Port: The port the modem will use

Baud Rate: The speed that the modem will connect at

Parity: Parity that the modem will use; "none" is the default parity and is preferred for most modems.

Retries: Number of times DataLynx will try to read data before it reports an error

Below is an explanation of each of the Phone Number's Configuration fields:

Phone Number: The phone number DataLynx is to dial

Data Directory: Where the data files will be stored

Alias: Optional, a more descriptive name of the phone number, e.g., "Plant One in Atlanta"

Use Alias in Filename: Configures DataLynx to use the alias in the data logged file name

New Data file Cycle: Configures DataLynx's new file creation cycle

Field Separation: Configures either tab or comma to be used in separating individual fields

Log Phone Number: Configures DataLynx to log the phone number in the data file

Log Alias: Configures DataLynx to log the alias in the data file

Display header for fields: Configures DataLynx to log the headers in the first line of the data file

Log Timestamp in Data Files: Configures DataLynx to log the date and time in the data file

Example Filename: Illustrates an example file name given the current configuration

Archiving and Deleting:

Archive Files Cycle: Configures DataLynx to archive monthly/yearly. Archives by zipping files into a zip file.

Archived Files Directory: Where the zipped files will be stored

Delete Files Cycle: How often DataLynx will delete the files

Modbus: Station #- the station # configured in the PLC

DataLynx User Manual

Diagnostics: One-Dial Test: Allows the user to perform a trial dial up and poll to confirm that the configuration will work

Poll Interval:

Timed Interval: allows the user to specify the poll to occur at specific timed intervals

Note: If you have multiple phone numbers, each poll will dial each of the phone numbers at the poll interval. In contrast, if each phone number had an individual poll interval, there eventually would be a conflict in poll times.

Day Interval: Allows the user to specify the poll to occur at certain days and times

Fields: User-entered fields that DataLynx will request when polling

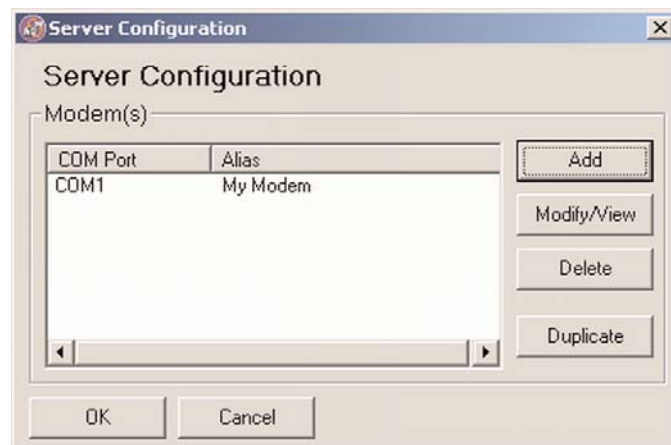
5.2.2 Modifying a Modem

To modify a modem, go to menu:

Options-> Configure Server



A list of modems, if any, configured for the Server will appear:



DataLynx User Manual

Click on the "Modify/View" button, and a Modem Configuration screen will appear with the PLC data.

The Modem Configuration window below is an example:

The screenshot shows the "Modem Configuration" window with the following settings:

- Modem Settings:** Alias: My Modem, Baud Rate: 9600, # Retries: 3, COM Port: COM1, Parity: None.
- Phone Number:** 1112222
- Data Files:** Phone Number: 1112222, Data Directory: C:\My Data, Alias (Optional): (empty), Use Alias in Filename: unchecked, New Data File Cycle: Daily, Field Separation: Comma, Log Phone Number: unchecked, Display header for fields: unchecked, Log Time Stamp in Data Files: unchecked. Example Filename: 1112222-Jan-1-2003.csv
- Archiving and Deleting:** Archive Files Cycle: Never, Archived Files Directory: (empty), Delete Files Cycle: Never
- Modbus RTU:** Station Number: 1
- Diagnostics:** One-Dial Test
- Poll Interval:** Day Interval selected, M, T, W, Th, F, S checkboxes checked, At Time HH: 12, MM: 30
- Fields:** A table with columns Alias, Address, Type, Attributes. Rows: Water Level (40004, Integer), Temperat... (40010, Float), Part Num... (40100, ASCII, Length 4).
- Buttons:** Add, Edit, Delete
- Radio Buttons:** Modbus RTU selected, DirectLogic Memory unselected.
- Footer:** OK, Cancel

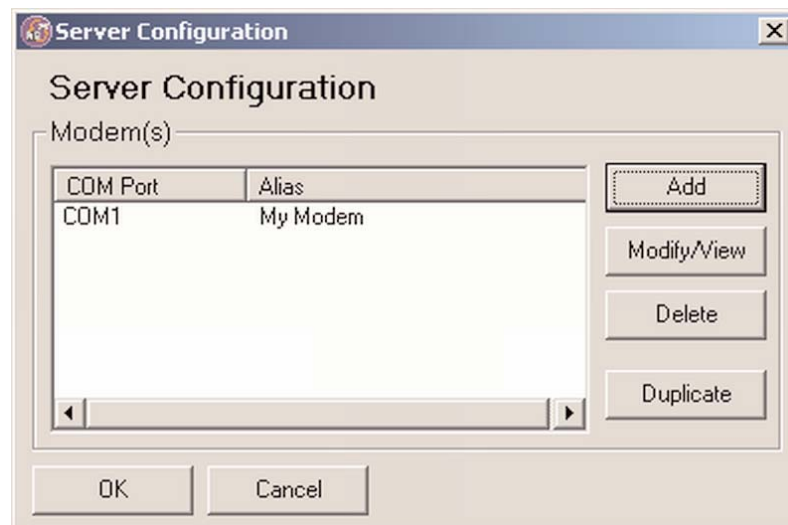
Once finished making changes, click the "OK" button or "Cancel" to discard your changes.

5.2.3 Deleting

To delete modems, go to menu: Options->Configure Server



A list of modems, if any, configured for the Server will appear:

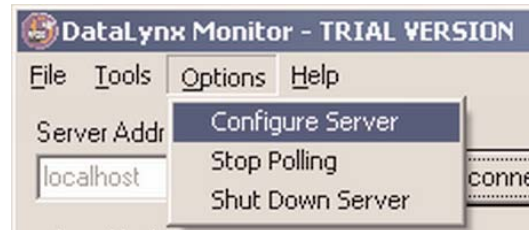


Select the modem to delete and click the "Delete" button.

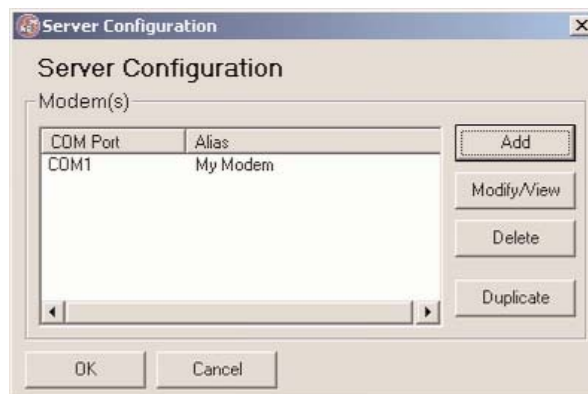
5.2.4 Duplicating

A modem listing may be created and duplicated. This duplicating option is a great time-saving feature for those with many modems with similar configurations.

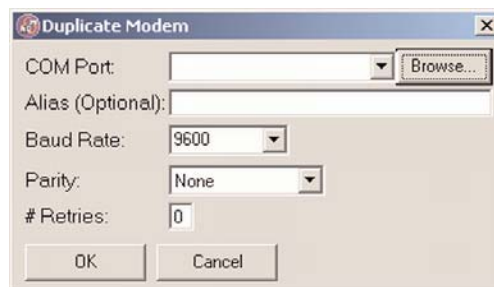
To duplicate a modem listing, go to menu: Options ->Configure Server



A list of modems, if any, configured for the Server will appear.



Click the "Duplicate" button, and a window will appear asking for COM Port, Alias , Baud Rate, Parity, and # Retries. Enter the necessary information and click "OK" to save changes, otherwise click "Cancel" to discard changes.



5.2.5 Connecting

Connecting to a DataLynx Server is important because it allows the user to configure the DataLynx Server and retrieve its data files.

In the main screen portion labeled Server Address: enter the Address.



A screenshot of a software interface showing a 'Server Address:' label above a text input field containing 'localhost'. To the right of the input field is a button labeled 'Connect'.

Then press the "Connect" button. If the connection has been made, the "Connect" button text will become "Disconnect."



A screenshot of the same software interface as above, but the button now displays the text 'Disconnect'.

5.2.6 Hiding

Hiding is a convenient feature for temporarily placing the Monitor out of view for later access. To hide the Monitor, go to the menu: File->Hide



Notice that the DataLynx icon appears on the task bar:



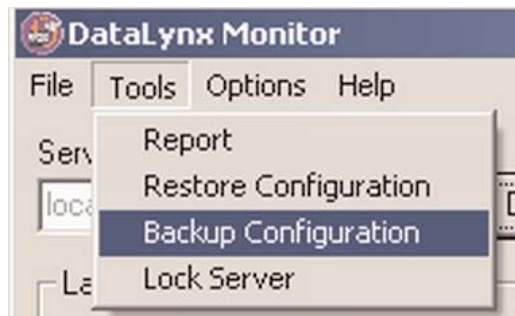
Conversely, the application may be restored by right clicking on the icon and selecting the "Restore" item:



5.2.7 Backing Up and Restoring

Backing Up

Backing up the configuration allows the user to safely restore all changes in the event of a hardware failure. To back up the configuration, go to the menu: Tools->Backup Configuration



You will be prompted for a filename. Click "Save" and note where you saved the file for a possible future restoration.

Restoring

To restore the configuration, go to the menu: Tools->Restore Configuration The following window should appear.



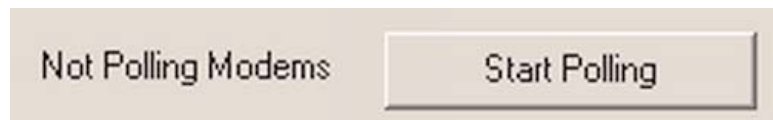
You will be prompted for a filename. Click "Open" and the Server/Monitor should be restored to its original state.

5.2.8 Polling

The DataLynx Server maintains "polling" and "not polling" states for PLC input. The user may change the polling state from the Monitor as well as from the Server program.

Changing the polling state can be useful when in the process of installing new PLCs or changing the PLC configuration to prevent the Server from receiving irrelevant data.

Click on the "Start Polling" button (If the button states "Stop Polling" that means the Server is already listening).



If successful, the status should now read "Polling Modems."



To Make the Server Stop Polling, click on the "Stop Polling" button.



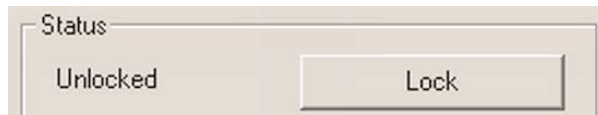
If successful the status should now read "Not Polling Modems."



5.2.9 Locking / Unlocking

Locking/Unlocking is a useful feature for preventing unwanted modem configurations and Server polling state changes. Steps to lock/unlock are below:

Click the "Lock" button.



A screen will appear asking for the lock code.



Enter the lock code, and Click "OK." If successful, the status section should now display a locked status:



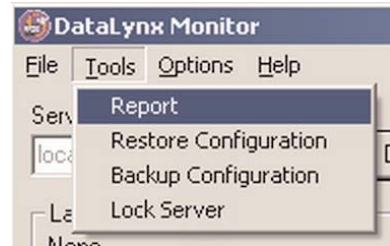
Warning: If you forget/lose the lock code you will NOT be able to unlock the Server.

Conversely, to unlock the Server, click the "Unlock" button, enter the code, and Click "OK."

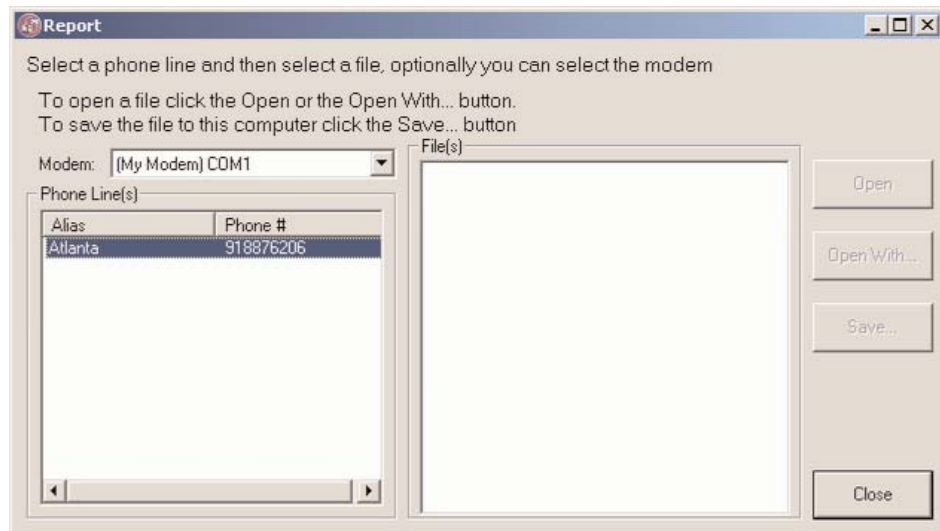
5.2.10 Reporting

Reporting is one of the most useful features of the Monitor. The user may view or save files generated by the Server over a network without having physical access to the Server.

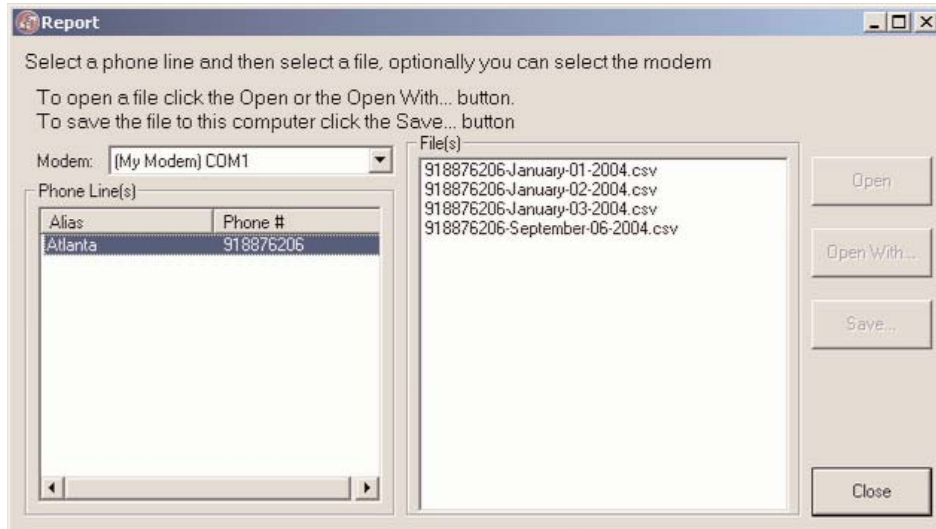
To view a report, go to menu:
Tools -> Report



A report screen like the following dialog box should appear:



Select the desired PLC data you wish to view in the modem/phone number list:



Now select a file in the File(s) list and click either the "Open," "Open With..." or the "Save" button. There is a difference between the "Open" and "Open With..." buttons. "Open" uses the default application to open the file. "Open With..." prompts you for the application in which to open the file.

Note: If you open the current log file outside of DataLynx (Example: log file straight from Excel), it will lock the file and not allow DataLynx to store data.
