5.0 DataLynx PLC

5.1 Server

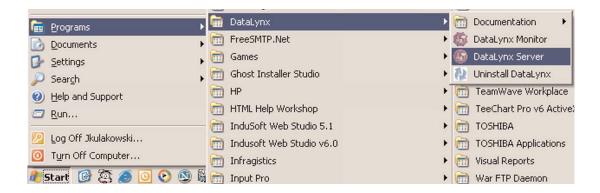
Overview

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.

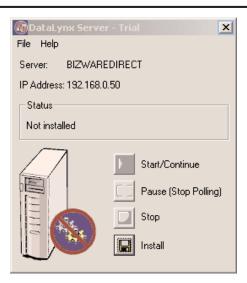
The format of the text file is set with the DataLynx Monitor. For more information on configuring the Server with the Monitor, refer to the Monitor section.

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.

🚳 DataLynx Serve	r - Trial	×
<u>F</u> ile Help		
Server: BIZWARE	EDIRECT	
IP Address: 192.168.0).50	
Status		
Installed, Stopped		
	Start/Continue Pause (Stop Pol Stop Uninstall	ling)

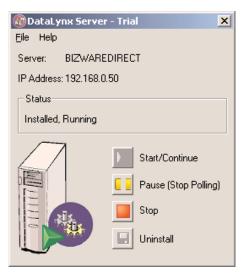
5.1.2 Running Service

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

	Programs >	6	DataLynx	۲		Documentation
	Documents >		FreeSMTP.Net	۲	6	DataLynx Monitor
P	– Settings 🔹 🕨		Games	+	6	DataLynx Server
-	Search →	. 💼	Ghost Installer Studio	۲	2	Uninstall DataLynx
	Help and Support	1	HP	+		TeamWave Workplace
-	Run		HTML Help Workshop	•		TeeChart Pro v6 Active
_	Zanni	1	InduSoft Web Studio 5.1	•		TOSHIBA
2	Log Off Jkulakowski		Indusoft Web Studio v6.0	•	1	TOSHIBA Applications
0	Turn Off Computer	1	Infragistics	•	6	Visual Reports
<u>#</u> 5	tart 🝺 🖉 🥭 📴 📀 🕲 🕯	6	Input Pro	•	1	War FTP Daemon

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

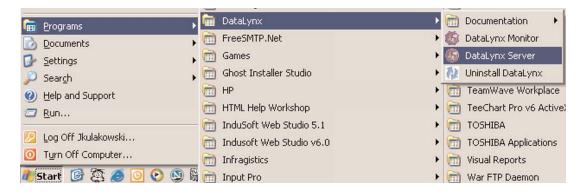
Note: It may take a couple of minutes for the Server to start running.



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

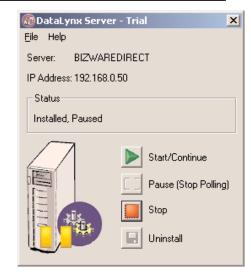


This window will appear - Assuming Running

🚳 DataLynx Servei	r - Trial	X
<u>F</u> ile Help		
Server: BIZWARE	DIRECT	
IP Address: 192.168.0	.50	
Status		
Installed, Running		
	Start/Continue Pause (Stop Point) Stop Uninstall	

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



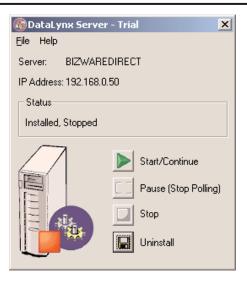
5.1.4 Stopping

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

		-		~	
📻 Programs 🕨 🕨		DataLynx	•		Documentation •
Documents		FreeSMTP.Net	+	6	DataLynx Monitor
Settings	. 💼	Games	•	6	DataLynx Server
Dearch		Ghost Installer Studio	+	限	Uninstall DataLynx
 Help and Support 		HP	+		TeamWave Workplace
Run		HTML Help Workshop	+		TeeChart Pro v6 Active
	- 🛅	InduSoft Web Studio 5.1	•		TOSHIBA
🖉 Log Off Jkulakowski	1	Indusoft Web Studio v6.0	+	1	TOSHIBA Applications
O Turn Off Computer		Infragistics	•		Visual Reports
🦺 Start 🔞 🔯 🥭 💽 📀 🕲 🖗	1	Input Pro	+		War FTP Daemon

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



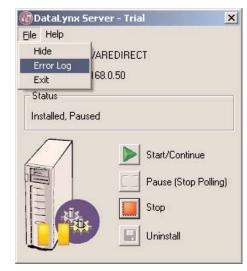
5.1.5 Diagnosing

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

		_	-		_	
6	Programs •	6	DataLynx	Þ		Documentation
			FreeSMTP.Net	+	6	DataLynx Monitor
P	Settings		Games	•	6	DataLynx Server
0	Search +		Ghost Installer Studio	•	12	Uninstall DataLynx
0	Help and Support	6	HP	×		TeamWave Workplace
-	Run		HTML Help Workshop	۲		TeeChart Pro v6 Active
_	72		InduSoft Web Studio 5.1	•		TOSHIBA
2	Log Off Jkulakowski		Indusoft Web Studio v6.0	•	1	TOSHIBA Applications
0	Turn Off Computer		Infragistics	•	1	Visual Reports
2	Start 🕜 🔯 🥭 💽 📀 📓	6	Input Pro	•	1	War FTP Daemon

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



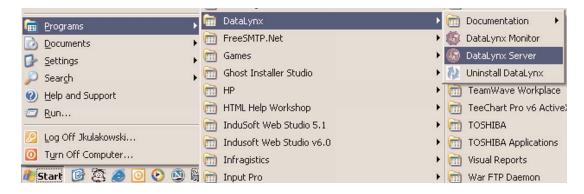
The Diagnostics Window below should appear.

.og Entries	
7/19/2004 8:53:47 AM Server started.	-
3/31/2004 8:50:34 AM Server stopped.	
3/31/2004 8:51:33 AM Server stopped.	
3/31/2004 9:55:23 AM Server stopped.	
8/3/2004 8:59:59 AM Server started.	
8/3/2004 3:43:55 PM Server stopped.	
3/3/2004 5:07:15 PM Server stopped.	
3/3/2004 5:19:38 PM Server stopped.	
3/3/2004 5:21:24 PM Server stopped. 3/3/2004 5:23:30 PM Server stopped.	
3/3/2004 5:23:30 PM Server stopped. 3/4/2004 11:15:14 AM Server stopped.	
3/4/2004 11:15:14 AM Server stopped. 3/4/2004 11:56:53 AM Server stopped.	
3/4/2004 12:28:16 PM Server started.	
3/4/2004 12:29:27 PM Server stopped.	
3/4/2004 12:38:42 PM Server started.	
3/6/2004 8:59:53 AM 9/6/2004 8:59:53 AM:Poll Error: 918876206 : Cannot connect	
3/6/2004 9:04:52 AM 9/6/2004 9:04:52 AM:Poll Error: 918876206 ; Cannot connect	
3/6/2004 9:08:35 AM 9/6/2004 9:08:35 AM: Tried to start polling while it is not stopped	
3/6/2004 9:13:38 AM 9/6/2004 9:13:38 AM:Poll Error: 918876206 : Cannot connect	
3/6/2004 9:18:07 AM Server stopped.	
3/6/2004 9:20:27 AM Server started.	
3/6/2004 9:22:59 AM Server stopped.	
3/6/2004 9:25:59 AM Server started.	
3/6/2004 9:26:38 AM Server stopped.	
3/6/2004 9:55:34 AM Server started.	
3/6/2004 3:32:19 PM Server stopped.	-
3/7/2004 8:32:40 AM Server started.	
3/7/2004 9:37:37 AM Server stopped.	
	1
	<u> </u>

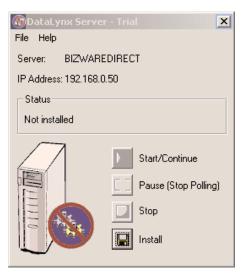
5.1.6 Uninstalling

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:

ver Address:		Modem(s)		
alhost	Disconnect	COM Port Mu Modern	Status Scheduled (9/12/2004	Date 9/7/2004 9:48:53 AM
st Update				
atus				
Jnlocked	Lock			
Polling Modems	Stop Polling			

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:	🚳 DataLynx Monitor - TRIAL VER	SION
Options -> Configure	<u>File Tools</u> Options <u>H</u> elp	
Server	Server Addr Configure Server	
Server	Stop Polling Shut Down Server	conne
		and its second

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

Server Config	uration	
Server Co Modem(s) —	nfiguration	
COM Port	Alias	Add
COM1	My Modem	Modify/View
		Delete
•		Duplicate
ок	Cancel	

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

Modem Configuration	
lodem Configuration © Text Files C Database	
Alias Baud Rate: 9600 COM Port: COM1 Browse Parity: None	▼ #Retries:3
ione Number: Add Delete]
Data Files Phone Number: Data Directory: Alias (Optional) Use Alias in Fileneme New Data File Cycle: Field Separation: Display header for fields (Uses field alias for header label) Log Time Stamp in Data Files Example Filename Archiving and Deleting	Poli Interval Timed Interval Day Interval S M I V M Th At Time HH: 00 MM: 00 Fields Add Edit Delete
Archive Files Cycle: Archived Files Directory: Delete Files Cycle:	

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

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.

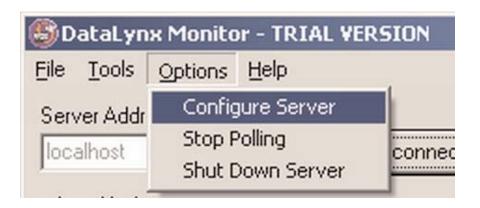
Day Interval: Allows the user to specify the poll to occur at certain days and times

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

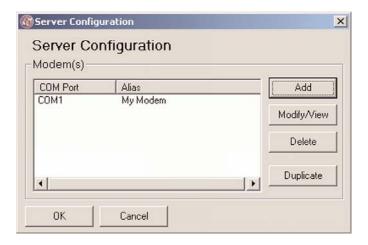
5.2.2 Modifying a Modem

To modify a modem, go to menu:

Options-> Configure Server



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



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:

odem Configuration @ Text Files C Database	
odem Settings Alias My Modem Baud Rate: 9600 COM Port: COM1 ▼ Browse Parity: None	▼ #Retries.3
one Number: Add Delete	
12222	
Data Files Phone Number: 1112222	
	C Timed Interval Every HH: 00 MM: 00
Data Directory: C:\My Data Browse	Day Interval SV M T W Th F S
Alias (Optional)	At Time HH: 12 MM: 30
Use Alias in Filename	Fields
Vew Data File Cycle: Daily	Add Alias Address Type Attributes 1 Water Level 40004 Integer
Field Separation: Comma	Temperat 40010 Float F
	Edit Part Num 40100 ASCII Length 4 F
Log Phone Number	Delete
Display header for fields (Uses field alias for header label)	
Log Time Stamp in Data Files	
Example Filename: 1112222-Jan-1-2003.csv	
Archiving and Deleting	
Archive Files Cycle: Never	
Archived Files Directory: Browse	
Delete Files Cycle: Never	
Modbus RTU Diagnostics	
Station Number: 1 One-Dial Test	
	Modbus RTU C DirectLogic Memory

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

🚳 DataL	ynx Monito	or - TRIAL VE	RSION
File Tool:	5 Options	Help	
Server Ad	dr Config	gure Server	
localhost	Stop F	Polling Down Server	conne

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

🐻 Server Config	juration	×
Server Co Modem(s) —	nfiguration	
COM Port COM1	Alias My Modem	Add Modify/View Delete
ок	Cancel	Duplicate

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	🛞 DataLynx Monitor - TRIAL VERSION			
listing, go to menu:	<u>File T</u> ools	Options	Help	
Options ->Configure Server	Server Addr	Configure Server		
Server	localhost	Stop P		conne
	Incomment	Shut D	own Server	

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

COM Port	Alias	Add
COM1	My Modem	Modify/Viev Delete
		Duplicate

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.

🗿 Duplicate Mo	dem	×
COM Port: Alias (Optiona	J):	Browse
Baud Rate:	9600 💌	
Parity:	None	
# Retries:	0	
ОК	Cancel	

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.

Server Address:		
localhost	•	Connect

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

Server Address:		
localhost	-	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

😂 DataLynx Monitor				
File	$\underline{T}ools$	Options	Help	
Hi	de	ess:		
Exit			-	

Notice that the DataLynx icon appears on the task bar:



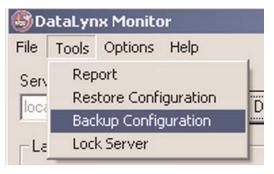
Conversely, the application may be restored by right clicking on the icon and selecting the "Restore" item:



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."

Polling Modems

Stop Polling

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



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

Not Polling Modems Start Polling

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"	_ Status	
button.	Unlocked	Lock

A screen will appear asking for the lock code.

🚳 Lock Server		×
Please enter th	e password to lock the	e server.
Password:		
,		
OK	Cancel	

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

Unlock

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:	🍪 D	ataLyr	nx Monito	or
Tools -> Report	Eile	Tools	Options	Help
L	Serv	Rep	oort	
	loca	Dee	tore Conf	iguration
	lioce	Bac	kup Config	guration
	_ La	Loc	k Server	
	Me	ma		

D

A report screen like the following dialog box should appear:

@Report	×
Select a phone line and then select a file, optionally you can select	the modem
To open a file click the Open or the Open With button. To save the file to this computer click the Save button	
Modem: (My Modem) CDM1	Open
Alias Phone # Atlanta 918876206	Open With
	Save
	Close

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

	odem) COM1	918876206-January-01-2004.csv	Gpen
Phone Line(s) Alias Phone #		918876206-January-02-2004.csv 918876206-January-03-2004.csv	
Atlanta	918876206	918876206-September-06-2004.csv	Open With
			Save

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.