



Abstract:

The purpose of this document is to describe Crimson's FTP feature and the configuration steps necessary to use it with an approved Red Lion Controls (RLC) product. This document does NOT provide a detailed description of FTP communication, but only an introduction sufficient to define the terms that are used throughout the remainder of this document.

Products:

CR3000 Human Machine Interface (HMI), Data Station Plus (DSP) (excludes LE model), G3 HMI, Graphite Controller, Graphite HMI, Modular Controller (excludes LE and V2 models) and ProductVity Station™

Use Case:

This document describes using Crimson to configure a device that will initiate FTP file transfers between its memory card and an FTP server. It also describes setting up FileZilla FTP server software for test and demonstration purposes.

Required Software:

Crimson 3.1, Crimson 3.0, or Crimson 2.0

Required Firmware:

Crimson 2.0: build 230+

Crimson 3.0 and 3.1: all builds

Required Operating System:

Microsoft Windows 2000, or above

Introduction

FTP stands for File Transfer Protocol. It's used on TCP/IP networks to exchange files between devices. An exchange is always made in a client/server fashion; a client connects to a server to access information by uploading (transfer to the server) or downloading (transfer from the server) data.

The Crimson's Sync Manager is an FTP client and therefore has to connect to a server for the functionality to work.

There are numerous FTP servers available on the market, some are free, and others are more professional but licensed. The example used in this document is FileZilla Server.

NOTE: Crimson FTP Sync Manager requires Crimson 2.0 (build 230+) or above and is only available to Windows 2000 or above users. Please update your version of Crimson to the latest; available online at www.redlion.net

Crimson Configuration

1. Start Crimson and go to the Navigation Pane and click on *Communications*, as shown in Figure 1.
2. Click on *Network*.
3. Click on the appropriate Ethernet tab; *Ethernet 1* in this case.
4. Configure the port settings as required by the application.

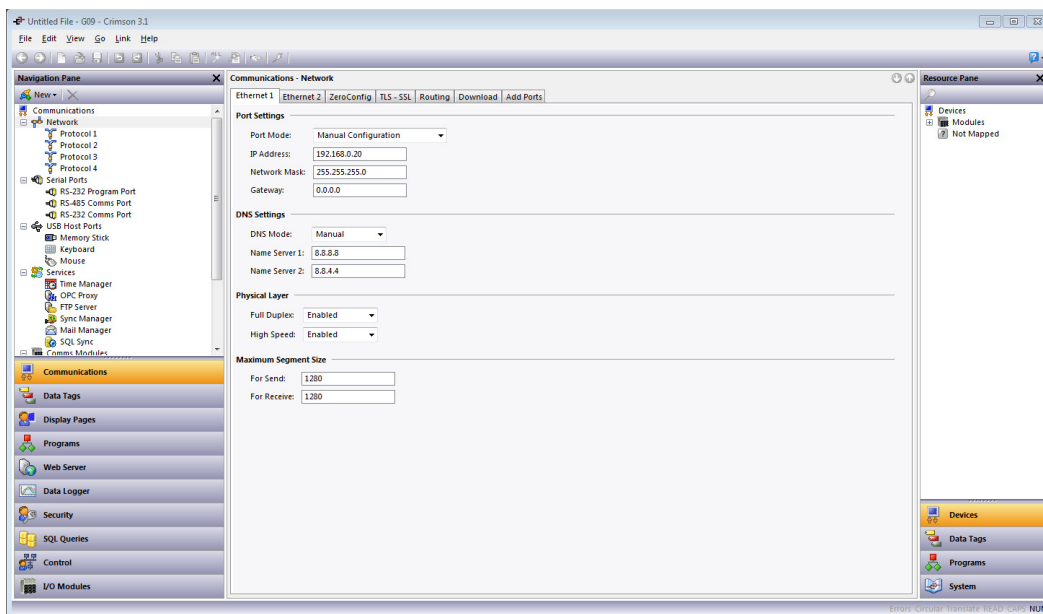


Figure 1.

5. Referring to Figure 2, go to the Navigation Pane and under *Services*, click on *Sync Manager*.
6. Set the *Enable Sync Manager* option to *Yes*.
7. Set the *Enable Log File Sync* option as appropriate for the application; *Yes* in this example.
8. Configure the *FTP Client* settings as required by the application.

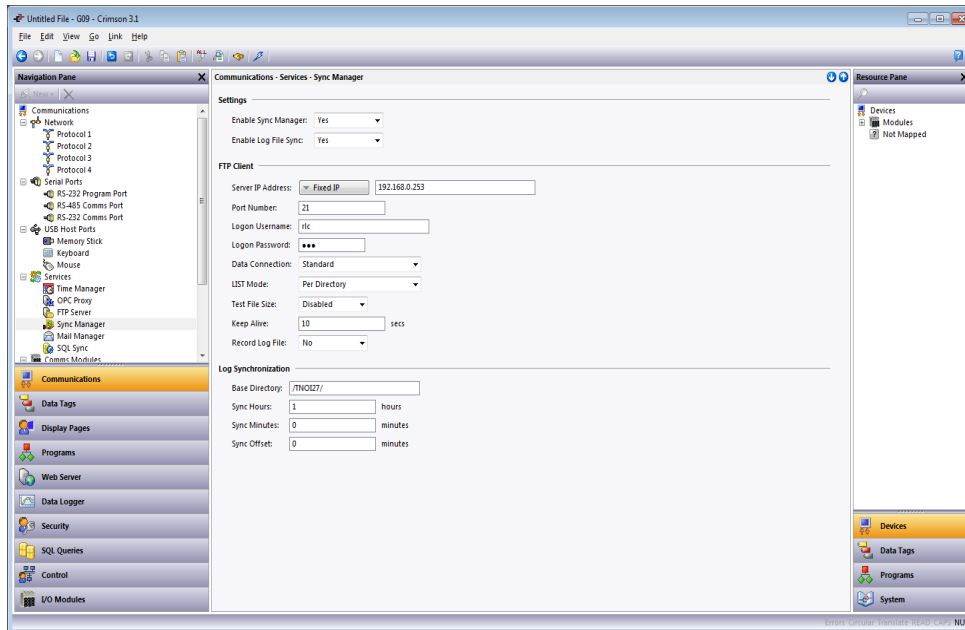


Figure 2.

9. The *Record Log File* option should only be set to *Yes* for troubleshooting purposes, otherwise set it to *No*, as in this example.
10. If the *Log File Sync* option was previously enabled, configure the *Log Synchronization* section:
 - a. *Base Directory*: directory structure BEYOND the user's home directory.

NOTE: RLC's home directory is `C:\FTP\rlc`; using `"/TNOI27/"` as the base directory will store files in `C:\FTP\rlc\TNOI27` on the server.
 - b. *Sync Hours*: how often, in hours, to sync.
 - c. *Sync Minutes*: how often, in minutes, to sync.
 - d. *Sync Offset*: used to offset sync if multiple devices are configured with the same sync frequency.

NOTE: Use only *Sync Hours* or *Sync Minutes* to quantify sync settings.

Functions for Manual FTP Exchange

Sending a File Manually to the Server

This function is used to transfer the defined file from the RLC device's memory card to the FTP server.

FtpPutFile(connection, local, remote, delete)

Argument	Type	Description
connection	int	FTP connection number, always 0
local	cstring	Local file name on memory card
remote	cstring	Remote file name on server
delete	int	If True, the source file is deleted after transfer

This function returns true if the transfer is successful, false otherwise.

In the following example, the file `Report.txt` will be transferred to the FTP server and deleted from the memory card upon successfully completing the transfer:

```
Example: Success = FtpPutFile(0, "/LOGS/Report.txt", "/Reports/Report.txt", 1);
```

File remote path is relative to server FTP root folder path.

Transferring a File Manually to the Server

This function will transfer the defined file from the FTP Server to the RLC device's memory card.

FtpGetFile(connection, local, remote, delete)

Argument	Type	Description
connection	int	FTP connection number, always 0
local	cstring	Local file name on memory card
remote	cstring	Remote file name on server
delete	int	If True, the source file is deleted after transfer

This function returns true if the transfer is successful, false otherwise.

In the following example, the file `Recipes.csv` will be transferred from the FTP server to the CompactFlash Card but the original file will not be deleted from the PC:

```
Example: Success = FtpGetFile(0, "/Recipes.csv", "/Recipes/Rec001.csv", 0);
```

File remote path is relative to server FTP root folder path.

Install and Configure FileZilla Server

1. Download the FileZilla server setup file from <https://filezilla-project.org>
2. Run the setup file.
3. Referring to Figure 3, select the following options (at minimum):
 - a. FileZilla Server (Service)
 - b. Administration interface

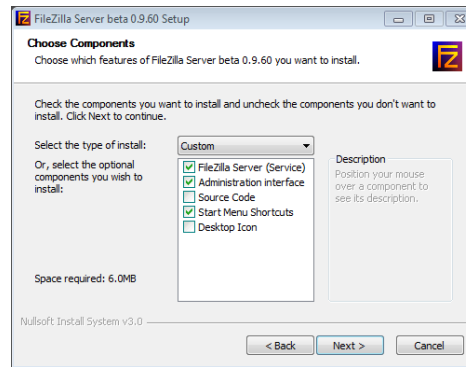


Figure 3.

4. Click *Next*; the Startup Settings popup appears, as shown in Figure 4.
5. Referring to Figure 4, choose the appropriate Startup settings.

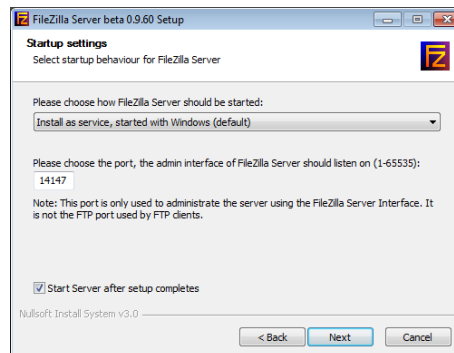


Figure 4.

6. Click *Next*.

7. Referring to Figure 5, select how it should be started.

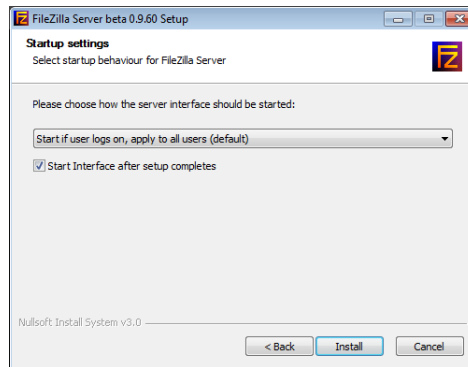


Figure 5.

8. Click *Install*.

9. Wait for the installation to complete. When the installation has been successfully completed, the Installation Complete popup appears, as shown in Figure 6.

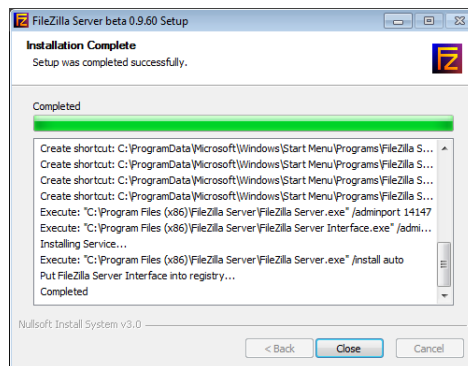


Figure 6.

10. Click *Close*.

11. Start the FileZilla Server Interface (if it did not automatically open after completing the install).

12. Referring to Figure 7, choose the appropriate Host and Port, as previously defined in Step 5.

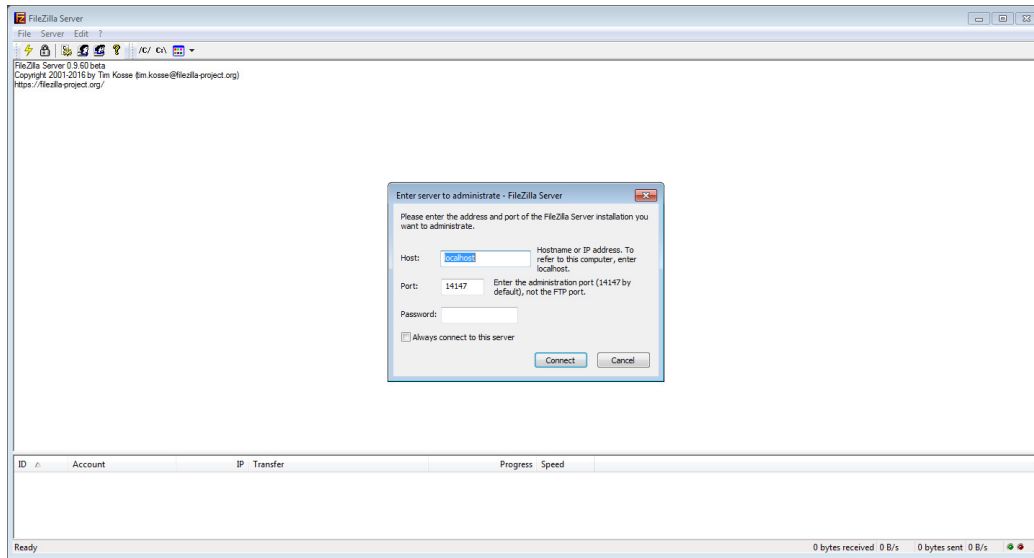


Figure 7.

13. Click *Connect*.

Create and Configure a New User in FileZilla

1. Referring to Figure 8, click *Edit-Users* from the Menu bar.
2. Select *General* under the Page heading.
3. Click the *Add* button under the Users heading.
4. Define the new user's name and group (as applicable).

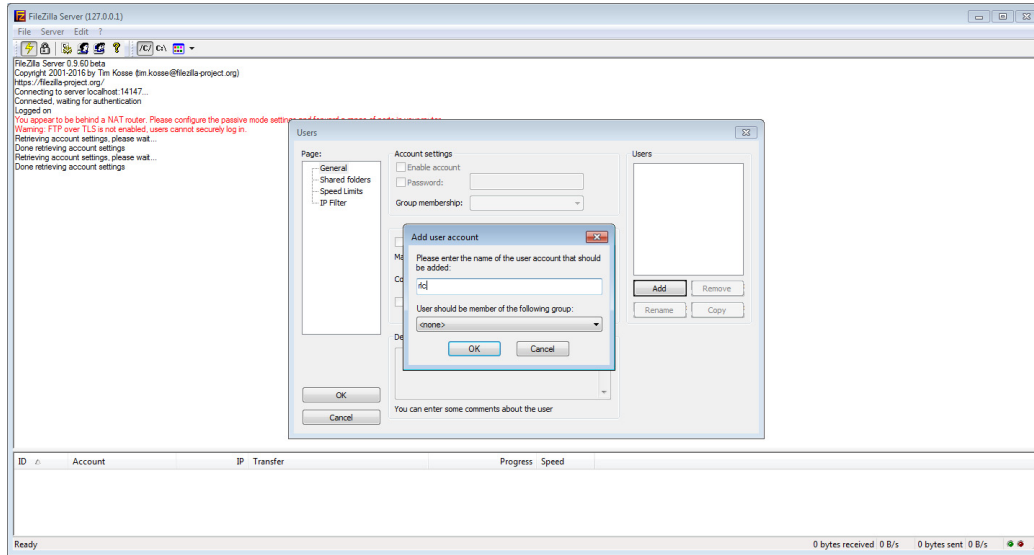


Figure 8.

5. Click *OK*.

6. Referring to Figure 9, enable the *Password* option under Account settings, by selecting the box.
7. Specify a password for the new user and click *OK*.

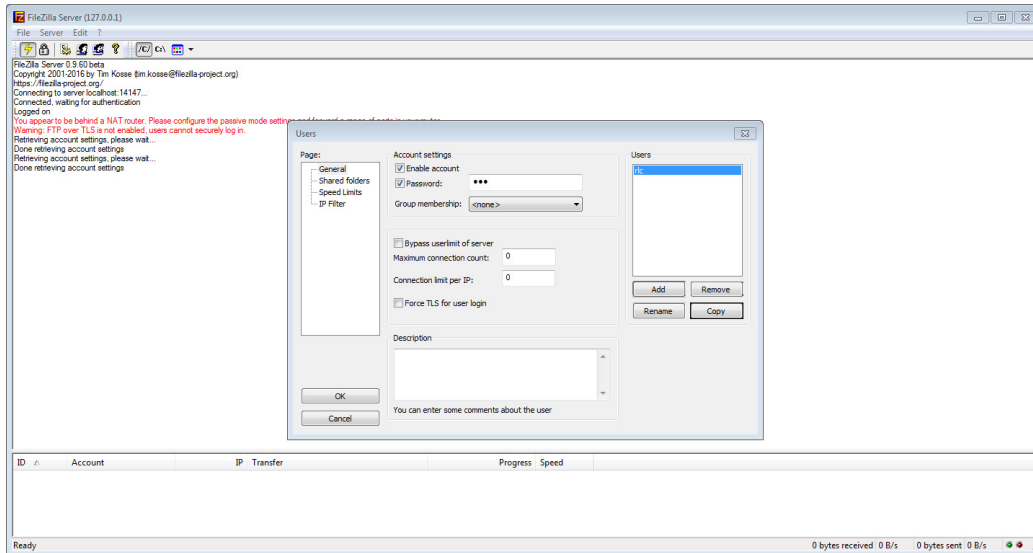


Figure 9.

8. Referring to Figure 10, click *Shared folders* under the Page: heading.
9. Click the new user's name under the Users heading; *rlc* in this case.

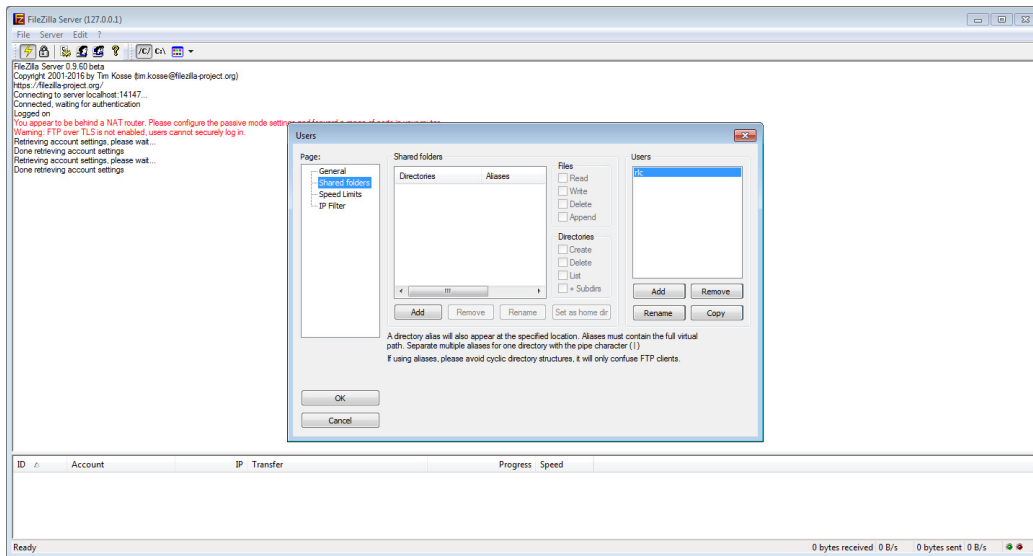


Figure 10.

10. Click the *Add* button under Shared folders; the Browse for Folder popup appears, as shown in Figure 11.

11. Referring to Figure 11, browse to the location to use as this user's Home Directory.

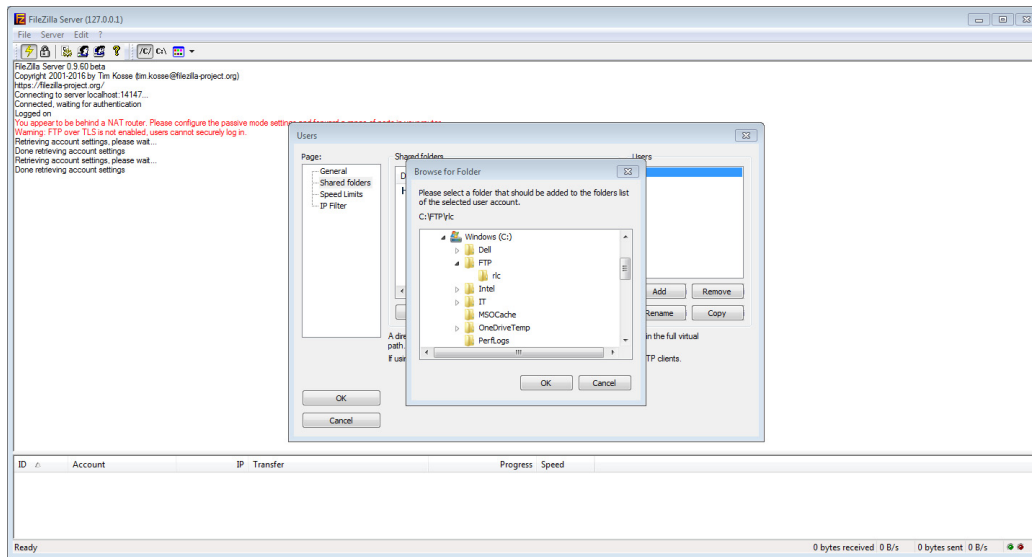


Figure 11.

12. Click OK.

13. Referring to Figure 12, select all of the boxes under the Files heading.

14. Select all of the boxes under the Directories heading.

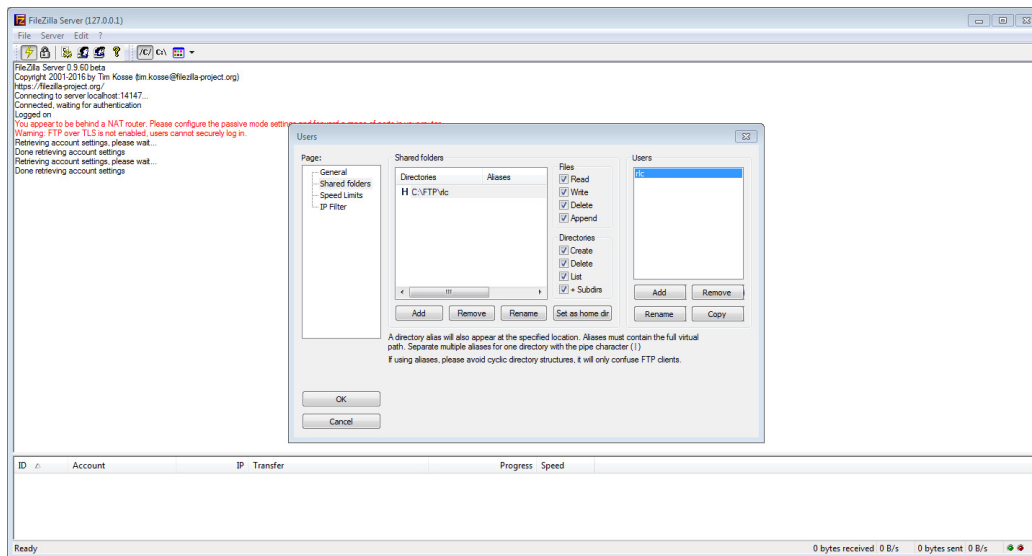


Figure 12.

15. Click the *Set as home dir* button.

16. Click OK.

Disclaimer

It is the customer's responsibility to review the advice provided herein and its applicability to the system. Red Lion makes no representation about specific knowledge of the customer's system or the specific performance of the system. Red Lion is not responsible for any damage to equipment or connected systems. The use of this document is at your own risk. Red Lion standard product warranty applies.

Red Lion Technical Support

If you have any questions or trouble contact Red Lion Technical Support by emailing support@redlion.net or calling 1-877-432-9908.

For more information: <http://www.redlion.net/support/policies-statements/warranty-statement>