

Transmitting a File from a TCP TRAKKER Antares Terminal to a TFTP Server Using Static Filenames

TRAKKER Antares terminals loaded with a TCP protocol and running firmware version 2.2 and above contain a Trivial File Transfer Protocol (TFTP) client. The host must also be running a TFTP server application. This exercise uses EZ-TFTP from Softech. A 30 day trial version is available on the Softech web site <http://www.cyberasiawest.com/softech/>.

This section describes how to set up a keypress action to begin a file transfer. The method described here can only transmit files. The filenames are static—they must be set at compile time and cannot be changed at runtime. The EZBuilder application created for this example is on the EZBuilder CD-ROM with the filename EZTFTP1.IMP.

To create and populate a data file for transmission from EZBuilder

1. Start EZBuilder and click Select File - New Application.
2. Click File - New Screen.
3. Click File - Add Field to receive data that will be written to a file and set the following properties:

Display Attribute INVERSE.

Data Type String.

Display Only False.

Visible True.

Note: You may Add labels as desired to identify the screen or field.

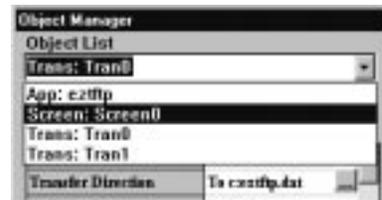
4. Click the On Entry tab.
5. Set the Clear Field action to True.



6. Click File - New Transaction to create a transaction. Write the contents of the field to the file C:EZTFTP.DAT.
7. Click Transfer Direction and then click  to access the Transaction Direction Editor.
8. Set the following parameters:
 Direction box Click Transaction To.
 Source/Destination box Click File and select or enter C:EZTFTP.DAT.



9. Click OK.
10. Copy the data field from the Source Fields list to the Transaction Fields list by double-clicking on the data field name.
11. In Object Manager, select Screen0 from the Object List.
12. In Viewport, double-click the input field.
13. Click the On Exit tab and set Do Transaction to Tran0 (the transaction you created earlier).
14. Click the KP/Events tab and then click F10.
15. Click  to access the Key Action Selection Editor.
16. Click Send File to Controller and select the file C:EZTFTP.DAT.



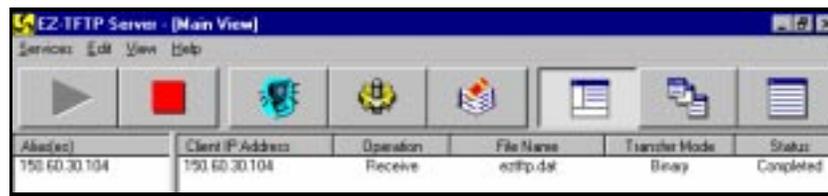
17. Click OK.
18. Build the application and download it to the terminal.
19. Start the TFTP server, configure the terminal for the host IP address of the TFTP server and run the application.

Note: If you are using EZ-TFTP, you do not need to configure a port number on the TRAKKER Antares terminal.



20. You can now populate a data file by entering data in the input field and pressing the enter key. Once the data file is populated, press F10 to trigger the key action, Send file to the Controller.

If the transfer is successful, there is no feedback in the EZ-TFTP Server window; however, if the transfer fails, a status message is displayed on the bottom line. In this example, the file was successfully sent to the server.



Transferring Files Between a TCP TRAKKER Antares Terminal and a TFTP Server

TRAKKER Antares terminals loaded with a TCP protocol and running firmware version 2.2 and above contain a Trivial File Transfer Protocol (TFTP) client. The host must also be running a TFTP server application. This exercise uses EZ-TFTP from Softech.

This example application starts a transmit or receive by pressing a key. Using the approach described here, the application can transmit and receive files with names that are set at compile time. The names cannot be changed during runtime. The EZBuilder application created for this example is on the EZBuilder CD-ROM with the filename EZTFTP2.IMP.

To transfer files using static filenames

1. Start EZBuilder and click Select File - New Application.

2. Click File - New Screen.
3. Create a data input field to receive data that is written to a file and set the following properties:

Display Attribute INVERSE.

Data Type String.

Display Only False.

Visible True.

4. Click the On Entry tab and set Clear Field to True.

5. Click the On Exit tab.

6. Double-click Do Transaction to create a new transaction.

7. Click Transfer Direction and then click  to access the Transaction Direction Editor.

8. Set the following properties:

Direction box Click Transaction To.

Source/Destination Click File and select or enter C:DATA.TXT.

9. Copy the data field and any desired system fields from the Source Fields list to the Transaction Fields list.

10. In Object Manager, select Screen0 from the Object List.

11. In Viewport, double-click the input field.

- Click the On Exit - On Val Fail tab and set Navigation Choice to <Current Field>.
- Click the On Exit - On Val Succeed tab and set Navigation Choice to <Current Field>.

12. Create two new fields with the following settings:

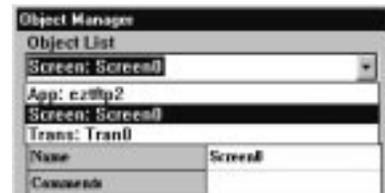
Display Attribute Set to NORMAL for both fields.

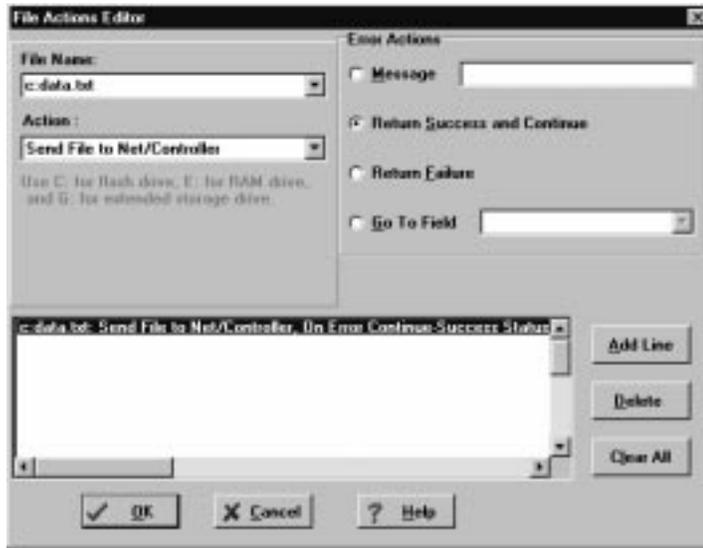
Display Only Set to True for both fields. This prevents the cursor from staying in the fields.

Visible Set to False for both fields. Since these are dummy fields, they do not need to be displayed.

13. While one of the new fields is the active object, click the On Exit tab.

14. Click File Setup and then click  to access the File Actions Editor.





15. Enter the following information:

File Name Select or enter the name of the file to transmit.

Action select the operation Send File to Net/Controller.

Error Actions Click Return Success and Continue.

Add Line

Click this button. The following line appears in the status window:

```
c:data.txt: Send file to Net/Controller; On Error Continue
Success Status
```

16. Click OK.

17. Click the On Exit - On Val Fail tab and set the following properties and actions:

Message Enter the failure message you want to appear at the bottom of the screen in case of an error.

Beep Set to <ERROR>.

Navigation Choice Set to go to the data input field.

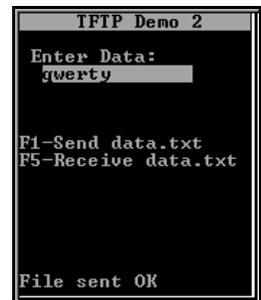


18. Click the On Exit - On Val Succeed tab and set the following properties and actions:
 - Message Enter the success message you want to appear at the bottom of the screen if the operation is successful.
 - Beep Set to <SUCCESS>.
 - Navigation Choice Set to go to the data input field.
19. Go to the second new field and create a similar file action by repeating steps 11 - 17.

Note: In the File Actions Editor, set the Action field to Receive File From Controller.

20. Make the data input field the active object and click the KP/Events tab.
21. Select a key to trigger the transmit.
 - For example, click F1 and then click  to access the Key Actions Editor.
 - Go To Field Click and select or enter Screen0.Field1 (the field that was set up previously for transmit).
22. Click OK.
23. Select another key to trigger the receive.
 - For example, click F5 and then click  to access the Key Actions Editor.
 - Go To Field Click and select or enter Screen0.Field2 (the second field that was set up previously for transmit).
24. Build the application and download it to your terminal.
25. Start the TFTP server and configure the terminal for the Host IP address and run the application.

Note: If you are using EZ-TFTP, you do not need to configure a port number on the terminal.



26. You can now populate a data file by entering data into the input field and pressing the enter key. Once the file is populated, press F1 or F5. These key actions send the cursor to one of the invisible fields. Since the fields are Display Only, the cursor will exit the field immediately.
 - Upon exit, the File Action - Send File to Controller or Receive File from Controller is executed. The error or success message you defined appears at the bottom of the screen. Check the TFTP server to make sure the file transfer was successful.

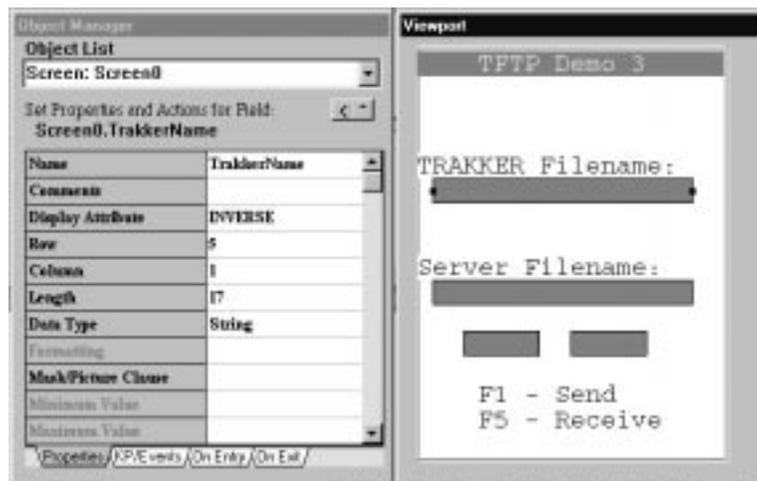
Transferring Files Between a TCP Server and a TCP TRAKKER Antares Terminal Client Using Dynamic Filenames

TRAKKER Antares terminals loaded with a TCP protocol and running firmware version 2.2 and above contain a Trivial File Transfer Protocol (TFTP) client. The host must also be running a TFTP server application.

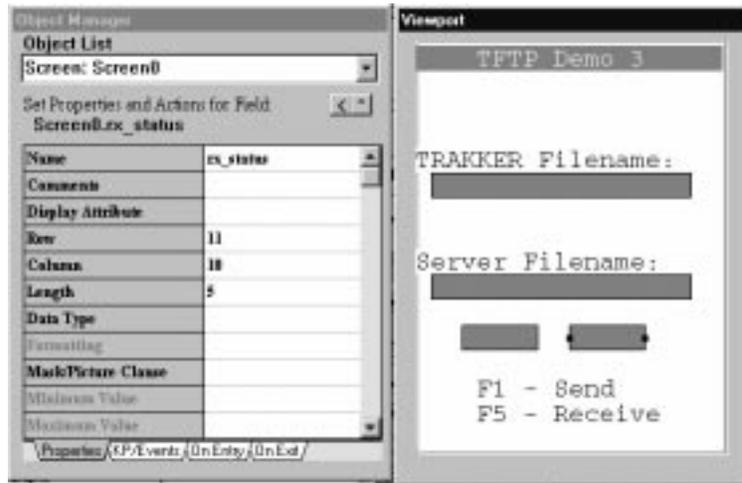
In this exercise we will set up a keypress action that begins the file transfer. The method described here can only transmit files. The EZBuilder application created for this example is on the EZBuilder CD-ROM with the filename EZTFTP3.IMP.

To build an application

1. Start EZBuilder and click Select File - New Application.
2. Click File - New Screen.
3. Create two data input fields, one for the terminal filename and the other for the TFTP Server filename.
4. Set Name the fields TrakkerName and ServerName. Add any desired labels to the screen.



5. Create two more fields. These are dummy fields and are invisible so you can place them anywhere on the screen. Name these fields tx_status and rx_status, respectively.



Set the following properties for the two new fields:

Display Only True.

Attribute Normal.

Visible False.

These settings enable the cursor to skip through the field without waiting for input and the fields are invisible. These fields are created to control when files are transmitted and received.

6. Double-click Trakker Filename in the Viewport and then click the On Exit - On Val Fail tab.
7. Click Navigation Choice and then click  to access the Navigation Selection window.
8. Click Go to Field and select or enter the ServerName field.
9. Click OK.
10. Click the On Val Succeed tab and repeat steps 6-8.
11. Double-click ServerName and then click the On Exit - On Val Fail tab.
12. Click Navigation Choice and then click .
13. In the Navigation Selection window, click Go to Field and select or enter the TrakkerName field.





14. Click OK.
15. Click the On Val Succeed tab and repeat steps 11-13.
16. In the Viewport, double-click the TrakkerName field.
17. Click the KP/Events tab.
18. Select a key to trigger the transmit.
For example, click F1 and then click  to access the Key Action Selection Editor.
19. Click Go To Field and select or enter the tx_status field.
20. Click OK.
21. Select a key to trigger the receive.
For example, click F5 and then click .
22. In the Key Action Selection Editor, click Go To Field and select or enter the rx_status field.
23. Click OK.
24. In the Viewport, double-click the ServerName field and repeat steps 16-22.
25. Double-click the tx_status field.
26. Click the On Exit -Validation tab and then click User Function.
27. Click  to access the User Function Editor.
28. Enter the following line into the editor:

```
IM_ISGOOD(im_transmit_file(Screen0_TrakkerName_F,Screen0_ServerName_F));
```

Note: *im_transmit_file()* is a TRAKKER Antares PSK function. It takes two arguments, the source filename of the terminal file and the destination filename to use on the server. *im_transmit_file()* returns a status code. This status code is used as input to the Antares PSK macro. *im_isgood* returns a code that EZBuilder can use to determine success or failure. If *im_isgood* is not used, EZBuilder gets the status backwards.
29. Click OK.
30. Click the On Val Fail tab.
31. Click Message and then enter the message you want displayed in case of transmission failure.
Click Beep and select a failure beep sequence.
32. Click Navigation Choice and then click  to access the Navigation Selection window.
33. Click Previous Field and then click OK.
34. Click the On Val Succeed tab.

35. Click Message and then enter the message you want displayed for a successful transmission.
Click Beep and select a successful beep sequence.
36. Click Navigation Choice and then click .
37. In the Navigation Selection window, click Previous Field and then click OK.
38. Double-click the rx_status field.
39. Click the On Exit -Validation tab and then click User Function.
40. Click  to access the User Function Editor.
41. Enter the following line into the editor:

```
IM_ISGOOD(im_receive_file(Screen0_TrakkerName_F,Screen0_ServerName_F));
```

Note: *im_transmit_file()* is a TRAKKER Antares PSK function. It takes two arguments, the source filename of the terminal file and the destination filename to use on the server. *im_transmit_file()* returns a status code. This status code is used as input to the Antares PSK macro. *im_isgood* returns a code that EZBuilder can use to determine success or failure. If *im_isgood* is not used, EZBuilder gets the status backwards.

42. Click OK.
43. Click the On Val Fail tab.
44. Click Message and then enter the message you want displayed in case of transmission failure.
Click Beep and select a failure beep sequence.
45. Click Navigation Choice and then click .
46. Click Previous Field and then click OK.
47. Click the On Val Succeed tab.
48. Click Message and then enter the message you want displayed in case of a successful transmission
Click Beep and select a successful beep sequence.
49. Click Navigation Choice and then click .
50. Click Previous Field and then click OK.
51. Build the application and download it to the terminal.
52. Start the TFTP server.

53. Configure the terminal for the host IP address of the TFTP server.

Note: If you are using EZ-TFTP, you do not need to configure a port number on the terminal.

- To send a file, enter the name of the TRAKKER Antares file you are sending and the destination name of the file on the server. Press F1.
- To receive a file, enter the filename of the file on the server and the destination filename on the terminal. Press F5.

*Note: Both of the data input fields have key actions to send the cursor to one of the invisible fields. Since these fields are display only, the cursor will enter and then exit the field. Upon exit of the field, the appropriate User Function (*im_transmit_file()* or *im_receive_file()*) is executed.*

When the function is complete, EZBuilder beeps and displays the message you entered based on the success or failure of the transfer. The cursor goes back to one of the data input fields.

