
4 File Transfer Information - Reflection

This section contains information for users of Reflection Series terminal Emulation software from Walker, Richer & Quinn, Inc.

Within this section, references to "VMS" pertain to OpenVMS-VAX and VAX/VMS only. Statements made regarding Reflection refer to both Reflection for DOS and Reflection for Windows, unless noted specifically otherwise.

4.1 File Transfer To/From VMS

If you're using Reflection/2 or Reflection/4, you probably already know how to use it for file transfer. If so, then this will be old hat to you. If not, this may be of help to you.

WRQ includes a VMS-side file transfer program with their Reflection Series software for DOS and Windows. The program is called VAXLINK2, or just VAXLINK for the older WRQ products. WRQ also includes a Reflection script for uploading this program to your VMS system. As the name implies, these are for OpenVMS-VAX only. If included on your distribution diskettes or CD-ROM, the OpenVMS-Alpha version would be called ALPHALK2.EXE or ALPHALK2.IMG. ALPHALK2.EXE is available on The SYS\$COMMAND BBS. It is also available as ALPHALK2.DHX and ALPHALK2.HEX. See section 3.3.1 of this manual which describes the process for obtaining the "hexified" forms of these programs (3.3.1 refers to C-Kermit; however, the process is identical for these programs).

4.1.1 Uploading the File Transfer Program

In order to accomplish any file transfer to or from a VMS system, you must be at your DCL prompt. If you're in All-in-1 or some other menu or application, quit that program and get to the DCL prompt before proceeding.

WRQ did develop an All-in-1 add-in called Direct-to-1; however, as of this writing, that product has been sold off to another third party, loele/Griggs and Assoc. Refer to the Direct-to-1 documentation for more information.

4.1.1.1 Uploading the File Transfer Program - Reflection for DOS

In Reflection for DOS, you get to the file transfer menu by pressing F6 from the main Reflection menu, then press F7 to begin uploading the VAXLINK2 program. Simple enough.

From here on, when you initiate a file transfer between your workstation and your VMS system, Reflection expects to be able to send a command similar to the following:

```
RUN VAXLINK2
```

...which is why you must be at a DCL prompt.

4.1.1.2 Uploading the File Transfer Program - Reflection for Windows

In Reflection for Windows, you can invoke the UPLOADVX.RCL script to perform the upload of VAXLINK2.EXE by going to the Command Window (ALT W W ENTER, or click on "Window" on the menu bar, then click on the "Command Window" item. In the command window, type the name of the script (UPLOADVX.RCL) and press ENTER. If immediate mode is turned off, you may need to select that line, then press ALT R ENTER, or click on the "RUN!" item in the command window menu bar. You can also open that script file, load it into the Command Window, select the entire text (ALT E A, or click on the "Edit" item in the Command Window menu bar, then click on the "Select All" item), then select the "RUN!" item on the Command Window menu bar.

By the way - if you're beginning to get the impression that keyboarding is actually faster than mousing at times, many Windows experts would agree with you!

From here on, when you initiate a file transfer between your workstation and your VMS system, Reflection expects to be able to send a command similar to the following:

```
RUN VAXLINK2
```

...which is why you must be at a DCL prompt.

4.1.1.3 After Uploading the File Transfer Program

Once you have uploaded the VAXLINK(2) program, it will be in your current default directory on your current default device. That makes it accessible to you while those defaults remain in effect.

To make VAXLINK(2) accessible regardless of your current defaults, move it (COPY or RENAME) to your login directory and add the appropriate line to your LOGIN.COM file:

```
$ DEFINE VAXLINK SYS$LOGIN:VAXLINK.EXE
```

or

```
$ DEFINE VAXLINK2 SYS$LOGIN:VAXLINK2.EXE
```

Again, you will most likely be using VAXLINK2, unless you have V3.x of Reflection for DOS or Windows.

To make VAXLINK(2) accessible to ALL your Reflection users, move it (COPY or RENAME) to SYS\$SYSTEM: (SYS\$COMMON:[SYSEXE] on clusters), set the protection to allow W:E, and add the appropriate line to your system startup procedures:

```
$ DEFINE/SYSTEM VAXLINK SYS$SYSTEM:VAXLINK.EXE
```

or

```
$ DEFINE/SYSTEM VAXLINK2 SYS$SYSTEM:VAXLINK2.EXE
```

Again, you will most likely be using VAXLINK2, unless you have V3.x of Reflection for DOS or Windows. You may even need both of them, depending upon whether or not you have users with old versions of Reflection.

If your VMS System is OpenVMS-Alpha, you'll need the ALPHALK2.EXE program which is available on The SYS\$COMMAND BBS. You'll need to use C-Kermit or the HEX/ASCII method (DEHEX.COM and ALPHALK2.DHX, or VMSDEH.MAR and ALPHALK2.HEX) to get the program onto your VMS System. Once you have it, rename it to VAXLINK2.EXE, and define a logical to indicate its location.

4.2 File Transfer and All-in-1

There is a product available which allows file transfer to/from All-in-1. It's called Direct-to-1. Up until the middle of 1993, it was sold directly by WRQ. It is now being sold, supported and enhanced by loele/Griggs and Associates, Inc. of Paoli, PA. Contact them at (215)296-5770.

For Direct-to-1, you will want to make VAXLINK(2) accessible to all of your Reflection users who also use All-in-1 by following the instructions in the previous section.

4.2 File Transfer To/From A BBS Using Reflection

Reflection does support XMODEM file transfers, as well as ASCII (text) mode file transfers. The newer versions of Reflection for DOS and Windows even include support for ZMODEM. We will address XMODEM transfers in this discussion.

4.2.1 File Transfer To/From A BBS Using Reflection for DOS

To set up for transferring files to/from a BBS using Reflection for DOS, first you must check your file transfer setup. Get to the Reflection main menu, press F6 to bring up the File Transfer panel, then press F6 again to bring up the File Transfer Setup panel. Use the F1 and F2 keys to select the XMODEM protocol, then press F5 to activate the revised setup. That takes you back to the File Transfer panel. Press F8 to resume your connection to the BBS (or your host).

When on-line to the BBS, select the file that you wish to download. When the BBS prompts you to begin your download, get to the Reflection main menu, and press F6 to bring up the File Transfer panel. Enter the local file name and path information and select the transfer method: "A" for ASCII or "B" for Binary (usually Binary). Then, press F2 to begin to Receive the file. When the transfer completes, press F8 to resume your session. You should also clear the Reflection menu (usually this is F9, but may have been remapped).

On some BBSes, the download may time out while you are entering the local file information. Since Reflection retains most of that info., you will be quicker on the second and subsequent attempts. Keep trying, but with some BBSes, it just might not work.

The procedure for uploading is very similar. Tell the BBS what you're sending. When the BBS says to start your upload, get to the Reflection main menu, and press F6 to bring up the File Transfer panel. Enter the local file name and path information and select the transfer method: "A" for ASCII or "B" for Binary (usually Binary). Then, press F1 to begin

to Send the file. When the transfer completes, press F8 to resume your session. You should also clear the Reflection menu (usually this is F9, but may have been remapped).

Again, on some BBSes, the upload may time out while you are entering the local file information. Since Reflection retains most of that info., you will be quicker on the second and subsequent attempts. Keep trying, but with some BBSes, it just might not work.

In case you receive an error message such as "Invalid command" when you attempt to initiate the XMODEM transfer from the the File Transfer panel, you can use the Reflection command line and enter the appropriate commands, such as:

```
XR SAMPLE.TXT
```

or

```
XS MYFILE.ZIP
```

"XR" and "XS" are abbreviations for XRECEIVE and XSEND. See the HELP in Reflection (on the command line) or refer to your documentation.

4.2.2 File Transfer To/From A BBS Using Reflection for Windows

To set up for transferring files to/from a BBS using Reflection for Windows, first you must check your file transfer setup. Select the "File" menu from the main menu bar, and select the "Transfer Setup" item from the File menu. Then, select XMODEM as the Transfer Protocol.

When on-line to the BBS, select the file that you wish to download. When the BBS prompts you to begin your download, select the "File Transfer" item from Reflection's File menu, select "Receive", select the transfer method (ASCII or BINARY, usually BINARY), tell Reflection what name to give the file being received and where to put it, then select the Receive button from the "Local File Name" dialogue box. The transfer should begin shortly.

On some BBSes, the download may time out while you are entering the local file information. Since Reflection retains most of that info., you will be quicker on the second and subsequent attempts. Keep trying, but with some BBSes, it just might not work.

The procedure for uploading is very similar. Tell the BBS what you're sending. When the BBS says to start your upload, select the "File Transfer" item from Reflection's File menu, select "Send", tell Reflection what file to send, then select the Send button from the "Send File" dialogue box, and select the transfer method (ASCII or BINARY, usually BINARY). The transfer should begin shortly.

Again, on some BBSes, the upload may time out while you are entering the local file information. Since Reflection retains most of that info., you will be quicker on the second and subsequent attempts. Keep trying, but with some BBSes, it just might not work.

4.3 Sending BBS Files To VMS

In order to accomplish any file transfer to or from a VMS system, you must be at your DCL prompt. If you're in All-in-1 or some other menu or application, quit that program and get to the DCL prompt before proceeding.

Once you have successfully received a file from a BBS (or CompuServe, etc.), you can send it to VMS using the "WRQ" protocol. Go the File Transfer Setup menu and select the "WRQ" file transfer protocol, then go ahead and upload the file(s) to your VMS system. Remember that text libraries (.TLB files) and .ZIP archives must be treated as binary files, but require no other special handling. When in doubt, try BINARY first.

When transferring files to VMS as ASCII, the resulting file is SEQUENTIAL VARIABLE with implied carriage control. This is suitable for any text or "print-image" file, including, but limited to, program source, text messages and reports.

When transferring files to VMS as BINARY, the resulting file is SEQUENTIAL with 512 BYTE FIXED LENGTH records. This is suitable for executables (VMS .EXEs), text, object, macro and HELP libraries, as well as for .ZIP files and most other DOS archives, .GIF, .PCX and .JPG files, and any other non-text formats.

4.4 VMS File Transfer Tips

In order to accomplish any file transfer to or from a VMS system, you must be at your DCL prompt. If you're in All-in-1 or some other menu or application, quit that program and get to the DCL prompt before proceeding.

Text (ASCII) files of all kinds can be handled using the ASCII transfer method. When transferring to DOS (or Windows), VAXLINK(2) inserts a carriage-return/line-feed pair at the end of each record, which is how DOS delimits records in a file. When transferring from DOS (or Windows), VAXLINK(2) strips out the carriage-return/line-feed pair at the end of each record and creates a SEQUENTIAL VARIABLE file with implied carriage control.

Object files should first be packed into an object library. Reflection and VAXLINK(2) will mash these files up mercilessly if you try to treat them as either ASCII or BINARY.

Executables and libraries (text, object, macro and HELP libraries) should be treated as BINARY. When transferring in either direction, Reflection and VAXLINK(2) transfer the file as-is and they do not filter out any bytes.

Other types of RMS files can only be transferred from the command line in Reflection for DOS, or the Command Window in Reflection for Windows. To preserve the attributes of these files, you must transfer them as BINARY WITH-ATTRIBUTES. This includes, but is not limited to, indexed, virtual array and relative files. A typical command might look like this:

```
RECEIVE MYFILE.DAT FROM MYFILE.DAT BINARY WITH-ATTRIBUTES
```

...assuming MYFILE.DAT is an indexed file, for example. To transfer it back to VMS, simply substitute "SEND" for "RECEIVE", and "TO" for "FROM" in the above example, like so:

SEND MYFILE.DAT TO MYFILE.DAT BINARY WITH-ATTRIBUTES

The file must have been RECEIVED WITH-ATTRIBUTES, or the SEND command will fail.

4.5 Closing Comments

This discussion attempts to be thorough. However, it is impossible to anticipate every scenario. Take your time and use your head. Common sense will usually win out.