Transporting files between MVS and MVS or between MVS and a Workstation

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If there is a need to transport any file from the IBM MVS computing systems to another IBM MVS computing system or to any other computing environment that supports TCP/IP FTP then you can use this very simple ISPF dialog. It was designed to simplify the task of using the native TSO FTP command. The FTP Batch ISPF dialog is invoked from any ISPF command prompt by entering:

TSO %FTPB

You will be presented with the following panel. There is a reasonable tutorial behind this dialog (however it is a work in progress so your feedback on the dialog and tutorial are welcome).

For purposes of explanation the dialog will be shown sending a member of SYS1.PARMLIB from one of the IBM MVS systems to the IBM MVS system known as NKAISERD.

```
------------------------ TCP/IP FTP Dialog --------------------------   1.207
Command ===>

Source Data Set ===> 'sys1.parmlib'
                     member of '*' for all members if PDS or pattern x*
Target Information:
 Hostname       ===> nkaiserd                                          or ?
 Host Data Set  ===>
                     New dsname or file name
User Information:
   Userid     ===> syslbd
   Password   ===>            Verify Password ===>          blank for anonymous

Optional Information:
   MVS Target ===> Yes        Is the target system running MVS? Yes or No
   Binary     ===> No         Yes or No (use No for MVS to MVS)
   Firewall   ===> No         Address if Yes ===> internet.kaiperm.org
   Initial    ===> _____________________________________________________________ <
      cmds    ===> _____________________________________________________________ <

       Move cursor to field and press HELP (PF1) or
       See the IBM TCP/IP User's Guide for more information on FTP
```

This dialog invokes FTP in a *push* type fashion in that it will copy the specified data set to the specified target host.

In this example the source data set is **SYS1.PARMLIB** and we are going to transmit (copy) it to the system with a hostname of **NKAISERD**. You must enter a valid userid and password. The password is entered twice as a means of verification since the field is a non-display field.

If you enter a Hostname of ? then you will be prompted with a list of previously used Hostnames to select from. You may select any number of hostnames to FTP to, but note that the userid specified on this panel with its associated password will be used for all selected hosts.

Under Optional Information the Binary is only required when doing an FTP to a non-390 (not MVS or VM) host system. The MVS Target defaults to **Yes** as the dialog needs to know the type of target system.

After filling out the first panel you will be presented with a second panel if the source data set is a partitioned data set:

```
-------------------------- TCP/IP FTP PDS Prompt -----------------------------
Command ===>

   You are transferring a partitioned data set (PDS).

   Create/Replace data set at target ===>        Yes (Create) or No (Replace)
   Delete target before FTP          ===>        Yes or No (on Create Only)
   Unload for transfer               ===> No     Yes or No

   Remote High Level Qualifier  ===> newhlq                    Target Node
                                                               optional

   Create SYSUT3 for IEBCOPY Unload  ===> No     Yes or No. Need for large PDS
   e.g. //SYSUT3 DD SPACE=(CYL,(50,50)),UNIT=SYSDA

   Note:  If you want to Re-Create the dataset specify Create and Delete

   You will now be prompted (unless you specified all members) to select the
   members for transfer to: asys.crdc.kp.org
```

On this panel you must specify if you want to create the data set at the target site. In this case we want to update an existing data set. The other option to unload is intended for libraries with a *blksize* in excess of 32752 because of an IBM FTP limitation (typically load libraries but also potential problems with CLIST or REXX libraries).

NOTE: With OS/390 Version 2 Release 10 FTP does support the transfer of load modules and FTPB has been updated to recognize this.

Data sets other than sequential (DSORG=PS) and partitioned (DSORG=PO) are supported by invoking DF/DSS to unload the data set(s), FTP the unloaded file to the target site, then submit via FTP a reload job to reload the data set(s) using DF/DSS.

Data sets within an HFS can also be transferred using this dialog.

After this panel, since we are transmitting a PDS, a member selection panel is displayed:

```
Member List -- SYS1.PARMLIB ------------------------------ ROW 00001 OF 00584
Command ===>                                                Scroll ===> CSR
Commands:      LOCATE, RESET, SELECT, SORT, HELP
Line commands: / or S = Select, B = Browse, \ or U = Unselect
   Name               VV MM  Created     Changed     Size  Init   Mod   ID
  ABENDAID            01.00 96/09/10 96/09/10 16:39    39    39     0 SYSCJH
  ADYSET00            01.00 96/12/18 96/12/18 09:12    15    15     0 SYSSJW
  ADYSET01
  APPCPM00            01.02 95/01/27 95/01/27 09:06     9     9     0 SYSMSS
```

The selection options are S to select a member for transmission, B to browse a member so you can verify it is really what you want to transmit, and U in case you accidentally selected a member but changed your mind.

To leave this panel you must **PF3** (end) and you will be presented with the following panel to proceed. Note that if you do not select any members, or the data set name is specified with a **(*)**, then all members will be transmitted.

```
--------------------- FTP Generalized Submit/Exec Panel -----------------------
 Select Processing Option: ===>

     B - Browse the generated FTP job
     E - Edit the generated FTP job
     S - Submit the generated FTP job
     X - eXecute FTP now in the foreground

 Review/Update:
      Local Batch Job Card:
 ===>  //SYSLBDJ JOB 666001,'FTP',NOTIFY=SYSLBD,
 ===>  // TIME=15,MSGLEVEL=1,REGION=6M
 ===>  //HOLD OUTPUT JESDS=ALL,DEFAULT=Y,OUTDISP=(HOLD,HOLD)
```

You will have a default job card set up for you which you can change. Any changes will be remembered for these three statements.

You have the option here of **Browsing** the JCL and FTP control statements, **Editing** them, **Submitting** the job for batch execution, or doing an online e**X**ecution.

Here is the JCL and FTP control statements for this transaction. Note that the **userid** is shown clearly but the ***password*** is hidden by **@** symbols. The password is protected in this way and is updated just before your **S**ubmit or e**X**ecute the FTP.

```
//SYSLBDJ JOB 666001,'FTP JOB',NOTIFY=&SYSUID,
// TIME=15,MSGLEVEL=1,REGION=6M,CLASS=L,MSGCLASS=X
//HOLD OUTPUT JESDS=ALL,DEFAULT=Y,OUTDISP=(HOLD,HOLD)
//*---------------------------------------------*
//*    FTP Batch JCL Generated by FTPB Dialog     *
//*    Release 1.130 on 6 Jan 1999  at 11:57:59   *
//*---------------------------------------------*
//FTPSTEP EXEC PGM=FTP,PARM='nkaiserd (EXIT'
//SYSPRINT DD SYSOUT=*
//INPUT    DD *
syslbd @
type e
mode b
cd 'SYS1.PARMLIB'
lcd 'SYS1.PARMLIB'
Put ABENDAID
Close
Quit
/*
****************************** Bottom of Data ********************************
```

If you selection option **X** the FTP will be initiated and all output messages will be trapped. When the FTP is complete you will be placed into browse on the message log for the transmission.

If you had selected **unload** then you would see the following submission panel:

```
---------------------- FTP Generalized Submit Panel --------------------------
Select Processing Option: ===>

    B - Browse the generated FTP job
    E - Edit the generated FTP job
    BL- Browse the generated Load JCL job
    EL- Edit the generated Load JCL job
    S - Submit the generated FTP job

Review/Update:                                          See Help for more info
     Local Batch Job Card:
===>  //SYSLBDI JOB 666001,'FTP',NOTIFY=SYSLBD,
===>  // TIME=15,MSGLEVEL=1,REGION=6M,CLASS=L,MSGCLASS=X
===>  //HOLD OUTPUT JESDS=ALL,DEFAULT=Y,OUTDISP=(HOLD,HOLD)
     Reload Batch Job Card:
===>  //SYSLBDI JOB 666001,'FTP',NOTIFY=SYSLBD,
===>  // TIME=15,MSGLEVEL=1,REGION=6M,CLASS=L,MSGCLASS=X
===>  //HOLD OUTPUT JESDS=ALL,DEFAULT=Y,OUTDISP=(HOLD,HOLD)
```

The ***Local Batch Job JCL*** is shown below. The steps in this job are:

UNLOAD	Use IEBCOPY to convert the PDS into a sequential data set
FTPSTEP	Run the FTP program to transfer the sequential data set to the target site and then submitting to the target site the reload JCL.
DELSTEP	Deletes the temporary data sets used by the job which include the JCL that is submitted at the target site to reload the sequential data set into a new or existing partitioned data set.
FTPPRINT	Prints the results of the reload JOB if the reload JOB completed within 10 minutes of being submitted by the FTPSTEP

Note that if your original data set is partitioned and has a **BLKSIZE** greater than 32752 then the **UNLOAD** step will be a 2 step process with the first step using **COPYMOD** to convert the data set into one with a smaller **BLKSIZE** and then converting that data set to a sequential data set. The **RELOAD** JOB will then reload the sequential data set into one with the correct **BLKSIZE**.

```
//SYSLBDI JOB 666001,'FTP',NOTIFY=SYSLBD,
// TIME=15,MSGLEVEL=1,REGION=6M,CLASS=L,MSGCLASS=X
//HOLD OUTPUT JESDS=ALL,DEFAULT=Y,OUTDISP=(HOLD,HOLD)
//*-------------------------------------------------*
//*    FTP Batch JCL Generated by FTPB Dialog     *
//*    Release 1.000 on 4 Jun 1997 10:19:11     *
//*-------------------------------------------------*
//UNLOAD EXEC PGM=IEBCOPY
//SYSPRINT DD SYSOUT=*
//INPUT    DD DISP=SHR,DSN=SYS1.PARMLIB
//OUTPUT   DD DISP=(,CATLG),UNIT=3390,
//         DSN=SYSLBD.UNLOAD.D970604.T1019135,
//         SPACE=(CYL,(10,0),RLSE)
//SYSIN    DD  *
  COPY INDD=INPUT,OUTDD=OUTPUT
  S M=(ABENDAID)
//FTPSTEP EXEC PGM=FTP,PARM='nkaiserd (EXIT'
//SYSPRINT DD SYSOUT=*
//INPUT    DD *
syslbd @@@@@@
type e
mode b
Put 'SYSLBD.UNLOAD.D970604.T1019135'
Put 'SYSLBD.LOAD.D970604.T1019135' FTPJCL.D970604.T1019135
Site filetype=jes
get FTPJCL.D970604.T1019135 FTPRPT.D970604.T1019135
site filetype=seq
delete FTPJCL.D970604.T1019135
Close
Quit
/*
//DELSTEP  EXEC PGM=IEFBR14
//DELLOAD  DD  DISP=(OLD,DELETE),DSN=SYSLBD.LOAD.D970604.T1019135
//DELULOAD DD  DISP=(OLD,DELETE),DSN=SYSLBD.UNLOAD.D970604.T1019135
/*
//PRINT   EXEC PGM=IEBGENER
//SYSPRINT DD DUMMY
//SYSUT2   DD SYSOUT=*
//SYSUT1   DD  DISP=(OLD,DELETE),DSN=SYSLBD.FTPRPT.D970604.T1019135
//SYSIN    DD DUMMY
/*
```

If you have any questions, comments, or suggestions to improve this document let me know.