
Chapter 14. Requesting parallel FTP transfers on a z/OS system

The parallel File Transfer Protocol (FTP) utility is designed to send documentation in a more efficient manner to IBM FTP sites. The utility sections the input file into smaller files that are sent in parallel resulting in shorter transmission time for very large data sets (like stand-alone dumps).

There are two work files for each parallel FTP session (called the "A" file and the "B" file). Each of the "A" work files are filled by copying records from the input file. When the "A" files are full, the FTP sessions are started in parallel. At the same time, each of the "B" work files are filled by copying records from the input file. When the "B" files are full and the transfer of the "A" files is complete, transfer of the "B" files start. This process continues between the "A" and the "B" files, until everything in the input file is sent.

You can have up to nine parallel FTP sessions running simultaneously. The work data sets are dynamically allocated and can range in size from 1 MB to 9,999 MB. You can experiment to see what works best in your environment, but here are some guidelines:

- Start with three or four parallel FTP sessions. Too many parallel FTP sessions can saturate the network link.
- Use medium size work data sets.

If the work data sets are very small in relationship to the input data set, you can end up with too many files on the IBM FTP sites. For example, if you are sending a 100 GB z/OS stand alone dump and make the work data set size 1 MB, you create 100,000 files on the IBM FTP site, which exceeds the IBM limit of 999 files. This also causes a lot of delay by starting and stopping the FTP sessions for each file.

If the work data sets are very large in relationship to the input file size, the amount of overlap time is decreased. When the program first starts, it must fill the "A" work files before it starts transmitting any data, which means the copy time is not overlapping with data that needs to be sent through FTP. For example, if you were sending a 1 GB dump and you set the work data set size to 1 GB (1,000 MB), there is no overlap between copying the records and sending the work files.

JCL statements

The JCL statements for the parallel FTP program are:

SYSPRINT

The data set can be either SYSOUT or a sequential data set. The data set must be RECFM=FB, LRECL=120.

SYSUT1

The sequential data set to transfer to IBM. For example, the dump data set that you are sending to IBM.

SYSIN

A sequential data set that uses the following control statements. Must be RECFM=FB, LRECL=80.

The parallel FTP utility is managed through the following JCL control statements with these guidelines:

- Use an asterisk (*) in the first column to indicate comments.
- Use control statements that are in form VERB=OPERAND.
- Mixed case verbs and operands are allowed.
- The operand starts in the column after the equal sign and goes to the first blank column.
- Anything following the first blank is ignored.
- Do not use blanks from column one to the end of the operand.

TARGET_SYS

The name of the TCP/IP system to transfer the files to using FTP. One through 64 characters, dotted decimal format is allowed, no default value, and it must be specified.

USERID

The userid on the target system that is used to send the files. One through 16 characters, no default value, and it must be specified.

PASSWORD

The password for the userid on the target system. One through 64 characters and the default is blanks.

TARGET_DSN

The prefix for the file names on the target system. One through 64 characters, no default value, and it must be specified.

WORK_DSN

The prefix for the data set names of work files on the sending system. One through 40 characters, no default value, and it must be specified.

WORK_DSN_SIZE

The size of the work files in megabytes. One through four decimal digits and the is default 100 MB.

DATACLAS

The data class to use when allocating the work files on the sending system. One through eight characters with no default value.

STORCLAS

The storage class to use when allocating the work files on the sending system. One through eight characters with no default value.

CC_FTP

The number of parallel FTP sessions to use when transmitting the files. One or two decimal digits, the value must be between one and nine, and the default is two.

Example:

```
//FTP      EXEC PGM=MTFTP2
//STEPLIB DD DISP=SHR,DSN=SHANNON.MTFTP.LOAD
//SYSUDUMP DD SYSOUT=*
//SYSPRINT DD SYSOUT=*
//SYSUT1  DD DISP=SHR,DSN=H44IPCS.WESSAMP.TRKS055K
//SYSIN   DD *
userid=anonymous
password=anonymous
TARGET_SYS=testcase.boulder.ibm.com
TARGET_DSN=/toibm/mvs/wessamp.bigfile
```

```
work_dsn=wes.ftpout  
cc_ftp=03  
work_dsn_size=500  
//
```