

DEFINE FILE

The DEFINE FILE command adds a file to the *TCP/IP for VSE* file system. The file can be a VSAM file, a VSE library, the ICCF library set, the POWER queues, a sequential file an HFS repository, or a Dataspace.

Syntax: `DEFine FILE TYPE={ESDS|KSDS|SAM|LIBRARY|ICCF|POWER|VSAMCAT|VTOC|HFS|DSPACE} [,DLBL=name8] ,PUBLIC=pubname [,DRIVER=member] [,ALLOWsite={Yes|No} [,READonly={Yes|No}] [,CC={Yes|No}] [,TRcc={YES|NO}] [,CRlf={Yes|No}] [,RECFm=F|FB|V|VB|S|SV|SU|SB] [,LRECL=num] [,BLKsize=num] [,GID=snum] [,UID=snum][,TRANslate=name16] [,SITE={Yes|No}][,DBLOCKS=num] [,EXT=name8] [VOLid=volser] [,CIPHER={NULL-SHA1|SDESCBC-NULL|SDESCBC-SHA1|TDESCBC-NULL|TDESCBC-SHA1|AES128C-NULL|AES128C-SHA1|AES192C-NULL|AES192C-SHA1|AES256C-NULL|AES256C-SHA1|KEYMASTER}] [,CIPHERKEY=CIALHFSK]`

Arguments: TYPE= - Specifies the type of dataset being defined.

 ESDS - VSAM ESDS dataset. FTP read requests result in the entire file being transmitted.

 KSDS - VSAM KSDS dataset. FTP read requests result in the entire file being transmitted. Write requests are processed as VSAM INSERT operations.

 SAM - Sequential Access Method dataset.

 LIBRARY - A VSE Library. Performing a directory listing on the public name returns a list of the sub libraries. Further qualifying the public name with a sub library name (such as public.name.sublib) returns a list of the members. FTP read requests retrieve the contents of a member. Write requests create or replace the contents of a member.

 ICCF - ICCF library structure. Directory listing is not supported. To retrieve data, use a fully qualified name consisting of the public name, the library number, and the member name (such as *pubname.num.member*). Writing to an ICCF library is not supported.

 Note that, in order to access an ICCF library via FTP, your FTP userid and password MUST be identical to your ICCF userid and password.

 POWER - POWER queues. To retrieve information from POWER, specify the public name qualified with LST, RDR, or PUN, followed by class, followed by job name. Two additional qualifiers, job number and job suffix, may also be appended as needed. Writing to POWER creates a file on the specified queue.

 VSAMCAT - VSAM catalog. A directory list returns the names of all files in that catalog. Supported operations include reading, writing, creating, deleting, renaming, and appending. A full list of supported operations is provided in the *TCP/IP for VSE User's Guide* in the FTP section.

 VTOC - An entire VSE volume. You can perform limited operations on a file defined with TYPE=VTOC. A list of operations supported by TYPE=VTOC is contained in the *TCP/IP for VSE Installation Guide*.

DEFINE FILE *(continued)*

- HFS - CSI's Hierarchical File System. This file type supports a PC or Linux-type file system with multiple subdirectory levels and long file names.
- DSPACE - Causes a dataspace to be allocated and used as a file.
-
- DLBL= - A DLBL name. This specifies the DLBL statement to be used to open the file. It must be accessible to the *TCP/IP for VSE* partition. Files of type "POWER" do not require or use a DLBL.
-
- PUBLIC= - A unique name that identifies this dataset to users. This name follows the same rules as VSE dataset names, so you can set the public name equal to the actual dataset name. For a discussion of public names, see "File System Names" in Chapter 3 of the *TCP/IP for VSE Installation Guide*.
-
- DRIVER= - If specified, this phase is loaded from the library search list when the dataset's driver is initialized. In general, you should let this value default to the phase provided for the file type.
-
- READonly= - This setting can be used to selectively limit FTP access to this file.
- No - FTP users may write to and update this file, subject to other security procedures. This is the default.
- Yes - Users will NOT have write or update access to this file, regardless of other security procedures.
-
- ALLOWsite= FTP SITE commands that are specific to a file type (eg, SITE PALTER) are passed to the file I/O driver of the file currently being accessed. Code NO with this parameter overrides whatever may be specified in the FTPD definition and can be used to prevent unauthorized commands from being issued.
- No - FTP users may NOT pass SITE commands to the file I/O driver associated with this file.
- Yes - FTP users may pass SITE commands to the file I/O driver associated with this file.
-
- EXT= - For TYPE=VSAMCAT, allows specification of a "suffix" to be appended to the file name. For example, EXT=".TXT" would ensure that references to the files in the catalog would all be assumed to be "text".
-
- CC= - Provides a default value for the FTP SITE CC command. If not specified, the value is supplied by client or user.
- Yes - The first byte of each record is assumed to be a carriage control byte and this byte is retained as part of the data.
- No - During downloads (from VSE), the first byte of each record is discarded. During uploads (to VSE) a blank character is prefixed to each record.
-
- TRcc= - Provides a default value for the FTP SITE TRCC command. If not specified, the value is supplied by client or user.
- No - No special processing will be performed to simulate carriage control.
- Yes - ANSI carriage control codes (+, 0, -, 1) will cause simulation by the inclusion of additional forms control characters (CR, LF, FF) in the output records.
-
- CRIf= - Provides a default value for CRLF record delimiter processing. If not specified, the value is supplied by client or user.
-

DEFINE FILE *(continued)*

- Yes - Each record uploaded to VSE must be ended by an appropriate delimiter, generally CR/LF.
- On download, the appropriate delimiter will be added to each record.
- No - No delimiter(s) will be added on download and no delimiter(s) will be expected on upload. For incoming records, the datastream will be divided based on the LRECL value.
-
- RECFM= - Provides a default value for the FTP SITE RECFM command.
- Specify a record format of F, FB, V, VB, or S. (String format is valid only with Librarian files.) This value will NOT override the RECFM value specified on the DLBL definition. If not specified on either DLBL or DEFINE FILE, then it can be supplied via and FTP SITE command.
-
- LRECL= - Provides a default value for the FTP SITE LRECL command.
- This value is the logical record length. It is a numeric value and must be consistent with the value used when the file was created. The default is 80. See the tables that follow for information about LRECL selection.
- This value is not obtained from DLBL information and must be provided, either by DEFINE FILE or with an FTP SITE command.
-
- BLKsize= - Provides a default value for the FTP SITE BLKSIZE command.
- This value is the block size used in the dataset. This information must be consistent with the value used when the file was created. There is no default. See the tables that follow for information about BLKSIZE selection.
- This value is not obtained from DLBL information and must be provided, either by DEFINE FILE or with an FTP SITE command.
-
- TRANslate= - Provides a default value for the FTP SITE TRANSLATE command when the file must be translated between ASCII and EBCDIC mode. If omitted, the default is the TCP/IP for VSE default translate table.
- To be valid, the named translation table must be already loaded at the time the file is opened, rather than when DEFINE FILE is issued.
- The DEFINE TRANSLATION command explains the definition and loading of translate tables.
-
- SITE= - SITE commands are processed hierarchically. The FTP Daemon will handle most commands itself. Any command that it does not understand is then passed to the file I/O driver of the currently selected file, as determined by the last-issued CD command.
- No - FTP SITE commands that are NOT recognized by the FTP Daemon will not be passed to the file-specific driver routine..
- Yes - FTP SITE commands that are not recognized by the FTP Daemon will be passed to the file I/O driver routine for possible processing. This is the default.
-

DEFINE FILE *(continued)*

- GID= - Signed numeric, -9999999 through +9999999
- Defines this file as part of a group. *TCP/IP for VSE* does not use this field but passes it to the TCP/IP for VSE security exit. A GID value may also be assigned with DEFINE USER
-
- UID= - Signed numeric, -9999999 through +9999999
- Associates this file with a UNIX-style user ID. *TCP/IP for VSE* passes this field to the TCP/IP for VSE security exit. UID value may also be assigned with DEFINE USER
-
- DBLOCKS= - For TYPE=DSPACE, specifies the amount of space to be allocated to the virtual file.
-
- VOLid= - For TYPE=VTOC, this allows you to specify the Volume ID of the disk.
- CIPHER= - For TYPE=HFS files, this keyword indicates that files are to be stored in an encrypted form, using the specified method. If this parameter is omitted, then no encryption or decryption is performed.
-
- CIPHERKEY= - For encrypted TYPE=HFS files, this keyword provides the name of the phase that contains information on the encryption keys. The default phase is shipped with TCP/IP and contains sample keys. You should create your own phase with your own keys before using this feature in a production environment. More information is available in the *TCP/IP Programmers Guide*.
-

DEFINE FILE (continued)

Example:

```
IPN237I define file,public='power',type=power
IPN264I File defined, Dataset: POWER

IPN237I define file,public='tcPIP',dlbl=tcPIP,type=library
IPN264I File defined, Dataset: TCPIP

IPN237I define file,public='prd1',dlbl=prd1,type=library
IPN264I File defined, Dataset: PRD1

IPN237I define file,public='prd2',dlbl=prd2,type=library
IPN264I File defined, Dataset: PRD2

IPN237I define file,public='ijsysrs',dlbl=ijsysrs,type=library
IPN264I File defined, Dataset: IJSYSRS

IPN237I define file,public='analyze',dlbl=analyze,type=sam, -
IPN237I      recfm=fb,lrecl=4096,blksize=4096
IPN264I File defined, Dataset: IJSYSRS
```

RECFM,
LRECL,
BLKSIZE

Acceptable values for RECFM, LRECL, and BLKSIZE depend on how you originally defined the file, the access method you use, and the mode of access (reading or writing). When the acceptable values are dependent on the mode of access, you need to specify which mode you are defining. If you specify one mode and then you need to access the file in the other mode, your administrator can issue a second DEFINE FILE command to give the file a second name with characteristics of the other mode. To supply values that are not accepted by the DEFINE FILE command, use SITE commands.

The sections that follow contain tables showing acceptable values for RECFM, LRECL, and BLKSIZE. Input indicates that you are reading from disk, and output indicates that you are writing to disk. These terms do not indicate whether you are using the FTP client or the FTP Daemon.

SAM and
SAM-
Managed
VSAM File
Considera-
tions

For sequential disk files and VSAM-managed SAM files, note the following information:

- Fixed-length records are padded when necessary. When padding occurs, text files are padded with blanks and binary files are padded with zeros.
 - To eliminate the need for SITE commands, your VSE administrator can define the same physical file with two different public names (for input and output) and assign different LRECL and BLKSIZE values to each.
 - You can process VSAM-managed SAM files as VSAM ESDS files, and it is more efficient to do so because the SAM emulation routines call VSAM anyway.
 - RECFM SU is interpreted as a spanned unblocked file. RECFM BU is interpreted as a spanned blocked file.
-

DEFINE FILE (continued)

RECFM	Input LRECL	Input BLKSIZE	Output LRECL	Output BLKSIZE
F	record size	N/A	record size plus 8	N/A
FB	record size	record size times blocking factor	record size	(record size times blocking factor) plus 8
V	maximum record size	N/A	maximum record size plus 8	N/A
VB	maximum record size	maximum block size	maximum record size	maximum block size plus 8
SU	maximum record size	N/A	maximum record size plus 8	N/A
SB	maximum record size	maximum block size	maximum record size	maximum block size plus 8

POWER File Considerations

For POWER files, note the following information:

- Fixed-length records are padded if necessary when writing to the POWER spool. When padding occurs, text files are padded with blanks and binary files are padded with zeros.
- The minimum LRECL for POWER RDR queue files is 80 and the maximum is 128.
- The minimum LRECL for POWER LST queue files is 1 and the maximum is 32766.
- The LRECL for POWER PUN queue files must be 80.
- The following table shows appropriate values:

RECFM	Input LRECL	Input BLKSIZE	Output LRECL	Output BLKSIZE
F	record size	N/A	N/A	N/A
V	maximum record size	N/A	N/A	N/A

VSAM File Considerations

For VSAM files, note the following information:

- The following table shows appropriate values:

DEFINE FILE *(continued)*

RECFM	Input LRECL	Input BLKSIZE	Output LRECL	Output BLKSIZE
F	record size	N/A	N/A	N/A
V	maximum record size	N/A	N/A	N/A

ICCF File Considerations

For ICCF files, note the following information:

- The files are read-only.
- The files always contain 80-byte records, regardless of specification.
- The following table shows appropriate values:

RECFM	Input LRECL	Input BLKSIZE	Output LRECL	Output BLKSIZE
F	N/A	N/A	N/A	N/A

Library File Considerations

For Library files, note the following information:

- FTP of phases is not supported.
- Records or a string file consisting of a single string of bytes.
- Library format *SV* is a special form of string file defined by Connectivity Systems. It is used to upload HTML members to VSE libraries.
- The following table shows appropriate values:

RECFM	Input LRECL	Input BLKSIZE	Output LRECL	Output BLKSIZE
F	80	N/A	80	N/A
SV	Variable	N/A	Variable	N/A
S	N/A	N/A	N/A	N/A

Related Commands:

AUTOLOAD	- Determines automatic loading of File I/O drivers when files are defined.
DEFINE FILEIO	- Defines a file I/O driver for a file type
DEFINE TRANSLATION	- Load and control ASCII/EBCDIC translation tables.
DELETE FILE	- Remove a file from the TCP/IP file system
MODIFY FILE	- Changes parameters and characteristics of an entry in the TCP/IP file system.
QUERY FILES	- Displays the contents of the TCP/IP file system.
QUERY FILEIO	- Displays the status of the File I/O driver programs.
SECURITY	- Control TCP/IP security functions.
