



## ***Production Management System***

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# ***Transporter Programmer/Operator Reference Manual***

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Supporting Washington State's Community and Technical Colleges*

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# Section I: Introduction and Setup

Section I provides a brief introduction to Transporter and describes the steps you need to complete in order to set up Transporter.

## Introduction

Transporter is a file transfer utility that uses DS lines (distributed system lines) in a DS network (DSN) to move files from one HP3000 to another. The system accepts transfer requests through a command interface program and then executes these requests in priority and chronological sequence in an offline fashion.

Requests entered into the system are placed in one of five request queues. These queues in order of priority are: System, Supervisor, High (or Urgent), Normal, and Low. All queues except System and Supervisor are available to the “normal” user.

All requests entered into the system are assigned a one- to four- digit Job Identification Number. This number is used in the maintenance commands to refer to a specific request.

Once requests have been completed the queue file record is deleted and added to a history file.

## Transporter Setup

To set up Transporter, you need to complete the following tasks:

- Restore files and programs
- Initialize the queue and history files
- Initialize or build the node file
- Transporter UDC files
- Test the installation

### Restore Files and Programs

To set up the Transporter for use on an HP3000, first the program and data files **must** be installed. These include:

- 1 TPCMO.EXC.TSS
- 2 TPMON.EXC.TSS
- 3 TPSLV.EXC.TSS
- 4 TPQUE DATA. TSS
- 5 TPQUEK.DATA.TSS
- 6 TPNODE.DATA. TSS
- 7 TPFCY.DATA.TSS
- 8 TPHELP.OATA.TSS
- 9 TPHIST.DATA.TSS

These may be Restored from a Store tape created on any system with the Transporter already installed.

## Initialize the Queue and History Files

To initialize the Queue and History files, run the command interface program:

```
:RUN TPCMD.EXC.TSS
```

At the prompt supplied, enter the initialize commands:

```
TPCMD> INIT Q  
TPCMD>INIT HIST
```

Then exit :

```
TPCMD>EXIT
```

## Initialize or Build the Node File

If a node file already exists (LISTF TPNODE.DATA.TSS), first unscramble the data in the file by running the command interface and use the INIT NODE command as follows:

```
:RUN TPCMD.EXC.TSS;INFO="INIT NODE;U"
```

Then open (TEXTIN) the file into the editor to make changes. If the node file does not already exist, go directly to the editor to build one.

The node file must contain one record for each valid destination node and one record for the local system. Records are free-format with four (4) fields separated by commas. If any of the four fields are unused or empty, the comma for that field must still be present as a placeholder. The four data items in order are:

1. DSLINE name of the target node, this is referred to by Transporter as the nodename
2. Node Type
3. Node Group Number of one to three digits
4. Logon ID of the Transporter supervisor ID on the target system. Records are in this format

**nodename , nodetype , nodegroup , supervisor-logon**

nodename	This entry is 1 to 8 characters long and must match the appropriate DSLINE name used to reach this node. A good source of valid nodenames to be entered into the TPNODE file is the NETCON database for DSN/DS.
node type	This entry is 0 to 8 characters long. If nonblank, valid entries are:  HOME indicates that this node is the local system.  TAPE indicates that file transfer to this node is available by tape exchange only

nodegroup	This entry is 1 to 3 numeric digits long. It is an arbitrary number assigned to separate the nodes into groups. It is used by the Transporter to allow multiple copies of Transporter to run while each processes only requests for a specific group.
Supervisor-login	This entry is 1 to 35 characters long and is the logon ID including passwords for the Transporter supervisor on the target system. Usually this ID is MGR.TSS but MANAGER.SYS and OPERATOR.SYS are also acceptable. Use only the username and account do not include a jobname or groupname.

Enter **all data** into the TPNODE file in **upper case** only.

**Examples:**

```
PRO1,HOME,001,MGR/PRO1MGR.TSS
DEV,001,MGR/SECRET.TSS
OA,001,MGR/DONTLOOK.TSS
RO10,002,MGR/PASSO10.TSS
RO30,002,MGR/PASSO30.TSS
R122,TAPE,TOOO,MGR.TSS
```

After modifying or adding data to the node file keep the file as an Unnumbered editor file.

```
/KEEP TPNODE.DATA.TSS,UNN
```

Then scramble the data in the file to preserve security. To do this run the command interface and use the INIT NODE command as follows:

```
:RUN TPCMD.EXC.TSS;INFO="INIT NODE;S"
```



## Transporter UDC Files

The following UDC's should be included in the account UDC file for the SYS account:

```
TPSTART GRP=1
OPTION NOLIST
RUN TPCMD.EXC.TSS;INFO:"STARTUP !GRP"
***

TPSHUT GRP=!
OPTION NOLIST
RUN TPCMD.EXC.TSS;INFO="SHUTDOWN !GRP"
***
```

Additionally, the following UDC should be included in the system UDC file:

```
TPCMD INFO=" "
RUN TPCMD.EXC.TSS;INFO="!INFO"
***
```

## Test the Installation

To test the installation of Transporter, logon to the operator console as OPERATOR.SYS and start the Transporter using the UDC's:

```
:TPSTART
```

After a few minutes the message "Transporter System Initiated" should be displayed on the system console.

Then shut the Transporter down:

```
:TPSHUT
```

After a few minutes the message "Transporter System Shutdown" should be displayed on the system console.

This page inserted for back-to-back printing.

## Section II: Operation and Use

This section describes how to use the Transporter commands and lists each command and the parameters associated with it.

### Using the Command Interface

Interaction with the Transporter system for both operators and users is through the command interface program TPCMD. This program will function at all times whether the transfer facility is operational or not. Transfer requests made while the transfer facility is non-operational will not be acted upon until the transfer facility has been started by the system operator.

There are two methods of running the command interface program: multiple command mode or single command mode. To enter multiple command mode enter:

```
:RUN TPCMD.EXC.TSS
```

or if the UDCs are installed:

```
:TPCMD
```

In this mode, the user will be prompted for input and prompting will continue until an EXIT command is entered. In batch, input lines should be included in the \$STDIN file (the job stream file) immediately following the RUN TPCMD... with the last input record being an EXIT.

To enter single command mode enter:

```
:RUN TPCMD.EXC.TSS;INFO="any valid Transporter command"
```

or if the UDCs are installed:

```
:TPCMD "any valid Transporter command"
```

In this mode the command string entered will be acted upon, then the command interface program will terminate. This method may also be used in batch processing.

## Transporter Command Syntax

Transporter command syntax is similar to MPE command syntax. With a command verb entered after the prompt, followed by a parameter string. Major parameters are separated from each other by a semi-colon (;) except for the DSLINE name or nodename, it is delimited by a colon (:).

Users from the SYS account and from the TSS account are recognized as Supervisory Users and may enter any Transporter command. All other users may enter a subset of the commands available. Also, some commands have additional options available for Supervisory Users.

Commands available to all users are: ALTER, DELETE, MSG, PRINT, RESET, SEND, SHOW, HELP, and EXIT.

Additional commands for Supervisory Users are: INIT, GET, REORG, SHUTDOWN, STARTUP, and SHOW ALL.

## Transporter Commands

Transporter commands fall into four functional groups. Those groups and the commands in them are:

- Commands to initiate data transfer: GET, MSG, PRINT, and SEND.
- Commands to monitor and maintain transfer requests: ALTER, DELETE, RESET, and SHOW.
- Commands to maintain the Transporter system: INIT, REORG, SHUTDOWN, and STARTUP.
- Miscellaneous commands: DO, HELP and EXIT.

### Commands to Initiate Data Transfer

GET	Use to retrieve a file from a remote system. This command is available only to the system operator or manager and can be used only to copy files to the SYS account.
MSG	Use to send a message to the operator console on a remote system. The message is also logged to the history file of the remote system.
PRINT	Use to send a file to the line printer on a remote system, with or without using carriage control. Environment files are also supported.
SEND	Use to send a file from the local system to a remote system. This is the most commonly used command in this category.

### Commands to Monitor and Maintain Transfer Requests

ALTER	Use to change the priority or the destination traits of a request.
DELETE	Use to remove a request from the Transporter queue. Jobs already in

	progress cannot be deleted. Jobs cannot be deleted from the history file.
RESET	Use to remove the error flag from a request that was aborted and return it to a waiting state.
SHOW	Use to display the queue file, the history file, an individual job from the queue file, or the list of valid nodenames. Individual job numbers cannot be displayed from the history file.

## Commands to Maintain the Transporter System

INIT	Use to purge all data from the queue file or the history file and reset these files to their initial conditions. Also use to scramble or unscramble the passwords in the node file.
REORG	Use to maintain the queue file and the history file without destroying the data contained in them.
SHUTDOWN	Use to disable the transfer operation. This command is issued once for each Transporter task running. The SHUTDOWN request will not be processed until any in-progress request has completed.
STARTUP	Use to enable the transfer operation. This command initiates a batch job with the job name of: TPnnnn, where nnnn is the number of the nodegroup.

## Miscellaneous Commands

DO	Use to redirect command input to a disc file.
HELP	Use to display command syntax. All commands are displayed. Commandscannot be displayed individually..
EXIT	Use to terminate the command interface program.

## MPE Commands

MPE commands may be entered at the TPCMD> prompt by preceding the command with explanation mark (!). Any command allowed by the COMMAND intrinsic may be used. UDCsare not allowed.

## Command Descriptions

On the following pages are the descriptions of the Transporter commands. These descriptions are organized in alphabetical order showing first the individual command syntax followed by explanations of the use of the command and its parameters.

Items specified in square brackets ([ ]) are optional. If multiple items are enclosed in the same pair of brackets, only one may be specified if used. Items not enclosed are mandatory parameters.

## ALTER Command

ALTER is used to change the priority or the destination traits of a request.

```
ALTER jobid#      [;HIGH]
                  [;NORM[AL]]
                  [;LOW]
                  [;TAPE]
                  [;SUP]
                  [;SYS]

[; USER=username .acctname]

[; NODE =nodename]

[;INODE= [intermediate-nodename]]
        [nodetype]]
```

### ALTER Command Parameters

jobid#	The one- to four-digit Job Number assigned to the request at the time it was first entered.
;HIGH ;NORMAL ;LOW ;TAPE ;SUP ;SYS	These are the job priorities. If the job priority is to be changed, select one of these to append to the ALTER command.  <b>Note:</b> SUP (Supervisor) and SYS (System) are only available to Supervisory users.
;USER=	Use this parameter to alter the logon user that Transporter will use to logon to the remote system for this request. If specified, both the username and account name must be specified.
;NODE=	Use this parameter to alter the nodename of the remote system with which the transfer will take place.
;INODE=	Use this parameter to alter the NODE TYPE or intermediate nodename (these two data items share the same field in the queue file records).

## DELETE Command

DELETE is used to remove a request from the Transporter queue. Jobs already in progress cannot be deleted. Jobs cannot be deleted from the history file.

```
DELETE jobid#[,jobid#...]
```

### DELETE Command Parameters

jobid#	<p>This parameter indicates the Job Number of the request to be deleted from the Transporter queue. Supervisory Users may delete any request; all others can delete requests only for the MPE account they are currently logged on under.</p> <p>Requests will be deleted from the queue file only. Deleted requests are not recorded in the history file.</p>
--------	--

## DO Command

The DO command directs the Transporter to execute commands stored as an MPE disc file.

```
DO filename ;EXIT
            ;NOEXIT
```

### DO Command Parameters

filename	The name of an MPE disc file containing valid Transporter commands. The file must be a sequential, <b>unnumbered</b> file of fixed length ASCII records. Record length may be up to 252 characters.
;EXIT ;NOEXIT	Use this parameter to select the action of the Transporter after the end of file has been reached on the DO file. If EXIT is specified, the Transporter command interface will terminate at end of file. With NOEXIT, the user will be prompted for more command input. This parameter is ignored if the command interface is in the single command mode (by using the ;INFO= option). Default is EXIT.



## GET Command

GET is used to retrieve a file from a remote system. This command is available only to the system operator or manager and can be used only to copy files to the SYS account.

```
GET filename[,newfilename]:node name

    [ ;HIGH]
    [ ;NORM[AL]]
    [ ;LOW]
    [ ;TAPE]
    [ ;SUP]
    [ ;SYS]
    [ ;RET[RY]]
    [ ;NORET[RY]]

    [ ;USER= [username]]
             [username .acctname]]
```

### GET Command Parameters

filename	The name of the file to be retrieved from the remote system. If no group or account is specified in the name and the USER parameter is not specified, the group and account of the user making the request is assumed. If USER is specified, the account of the USER is assumed for a non-specified account and PUB is assumed for a non-specified group. Lockwords may also be specified; default of no lockword is assumed.
,newfilename	Use this parameter to give a different name to the file resulting from the request than the name to which it would have defaulted. If not specified, the default for the GET command is "filename" minus the group and account. (This will cause the file to be retrieved to the group and account that Transporter is running in, usually SYSMGR.SYS.)
:nodename	This is the DSLINE name of the remote system to be used in the request. Nodenames not present in the Node File will not be accepted.
;HIGH ;NORMAL ;LOW ;TAPE ;SUP ;SYS	These are the job priorities. If needed, select one to be appended to the end of the GET command. If not specified, NORMAL is assumed. SUP (Supervisor) and SYS (System) are only available to Supervisory Users.
;RETRY ;NORETRY	This parameter specifies that upon failure of the Transporter to satisfy a request, the request be retried after a minimum of five minutes has elapsed. ( <b>Note:</b> If there is another request to be processed, more than five minutes may elapse before the retry is attempted.) Default is NORETRY. However, if a DSLINE error is detected as the reason for the failure, a RETRY is attempted regardless of which is specified.

;USER=	Use this parameter to specify the logon ID to be used by Transporter to logon to the remote system for this request. If the account is not specified, the account of the user making the request is assumed. If USER is not specified at all and the account in “filename” is different than the requesting user's account, then MGR is used with the account from “filename”. If USER= is not specified and the account of “filename” matches the logon account of the requesting user, then the same logon ID as the requesting user is assumed.
--------	--

## INIT Command

INIT is used to purge all data from the queue file or the history file and reset these files to their initial conditions, or to scramble or unscramble the passwords in the node file.

```
INIT  [Q]
      [HIST]
      [NODE [;S][;U]]
```

### INIT Command Parameters

Q HIST NODE	Select one: <ul style="list-style-type: none"><li>• Q specifies the queue file (TPQUE).</li><li>• HIST specifies the history file (TPHIST).</li><li>• NODE specifies the node file (TPNODE).</li></ul>
;S ;U	To be used only with NODE. <ul style="list-style-type: none"><li>• ;S specifies the password data in the node file is to be scrambled.</li><li>• ;U specifies the passwords should be unscrambled.</li></ul> <p><b>Note:</b> Transporter will recognize whether or not the passwords are scrambled and use them accordingly.</p>

## MSG Command

MSG is used to send a message to the operator console on a remote system. The message is also logged into the history file of the remote system.

**MSG** **nodename:message-text**

(Message-text is a maximum of 80 characters)

### MSG Command Parameters

nodename:	This is the DSLINE name of the remote system to be used in the request. Nodenames not present in the Node File will not be accepted. The message-text will be sent to this system's console as a TELLOP message.
message-text	This is the text of the message to be sent to the remote-system. All characters following nodename: will be sent. No special consideration is needed for quotation marks, apostrophes, etc.

**Note:** Characters highlighted in reverse video are added to the start of message text. Sending system information is also added to the message.

Messages are logged to the history file of both the sending and receiving systems.

## PRINT Command

PRINT is used to send a file to the line printer on a remote system, with or without carriage control. Environment files are also supported.

```
PRINT filename:nodename

[;HIGH]
[;NORM[AL]]
[; LOW]
[;TAPE]
[;SUP]
[;SYS]

[;CCTL]

[;ENV=filename]

[;USER= [username]]
        [username.acctname]]
```

### PRINT Command Parameters

filename	This parameter is the name of the file to be copied (FCOPY) to the device LP on the remote system. If the group and/or account is not specified, these are assumed to be the same as the logon group and/or account of the requesting user.
:nodename	This is the DSLINE name of the remote system to be used in the request. Nodenames not present in the Node File will not be accepted.
;HIGH ;NORMAL ;LOW ;TAPE ;SUP ;SYS	These are the job priorities. If needed, select one to be appended to the end of the PRINT command. If not specified, NORMAL is assumed. SUP (Supervisor) and SYS (System) are only available to Supervisory Users.
;CCTL	If used, this parameter specifies that the first character in the file being sent should be interpreted as a carriage control character.
;ENV=	If used, this parameter specifies the name of an environment file to be used in printing the file. The environment file must reside on the remote system where the printing is to be done.
;USER=	This parameter can be used to specify the logon ID to be used by Transporter to logon to the remote system for this request. If the account is not specified, the account of the user making the request is assumed. If USER= is not specified at all and the account in "filename" is different than the requesting user's account, then MGR is used with the account from "filename". If USER= is not specified and the account of "filename" matches the logon account of the requesting user, then the same logon ID as the requesting user is assumed.

## **REORG Command**

REORG is used to reset the EOF pointer for the TPQUE file to agree with the actual EOF. This command also cycles the TPHIST file.

**REORG**

REORG has no parameters

### **REORG Command Parameters**

The REORG command accepts no parameters. The REORG command should only be used while the Transporter transport mechanism is shut down. Also, no users or jobs that might issue Transporter command should be logged on the system while the TPREORG job is running.

## RESET Command

RESET is used to remove the error flag from a request that was aborted and return it to a waiting state.

```
RESET jobid#
```

### RESET Command Parameters

jobid#	<p>This parameter is the Job Number of the request to be returned to the Waiting state. Any job, regardless of status, may be reset; therefore, care should be used in RESETing jobs that are marked In Progress (IP).</p> <p>When a job is RESET, the queue file record for the request is marked as Waiting (WT) and zero (0) is moved to the Error Code. The Original Error Code field and Retry Count field are not modified.</p>
--------	---

## SEND Command

SEND is used to send a file from the local system to a remote system.

```
SEND filename[,newfilename]: nodename

[;HIGH]
[;NORM[AL]]
[;LOW]
[;TAPE]
[;SUP]
[;SYS]

[;REP[LACE]]
[;NOREP[LACE]]

[;RET[RY]]
[;NORET[RY]]

[;DEL[ETE]]
[;NODEL[ETE]]

[;RELE[ASE]]
[;NOREL[EASE]]

[;USER= [username]]
        [username.acctname]]
```

### SEND Command Parameters

filename	This parameter is the name of the file to be sent to the remote system. If the group and/or account is not specified, these are assumed to be the same as the logon group and/or account of the requesting user.
newfilename	Use this parameter to give a different name to the file resulting from the request than the name to which it would have defaulted. If not specified and USER= is not specified, the default is the same name as in "filename". If not specified and USER= is specified, the default is "filename" minus the group and account specification (this will have the effect of putting the file in the home group of the specified username).
:nodename	This is the DSLINE name of the remote system to be used in the request. Nodenames not present in the Node File will not be accepted.
;HIGH ;NORMAL ;LOW ;TAPE ;SUP ;SYS	These are the job priorities. If needed, select one to be appended to the end of the SEND command. If not specified, NORMAL is assumed. SUP (Supervisor) and SYS (System) are only available to Supervisory Users.
;USER=	Use this parameter to specify the logon ID to be used by Transporter to logon to the remote system for this request. If the account is not specified, the account of the user making the request is assumed. If



	USER= is not specified at all and the account in “filename” is different than the requesting user’s account, then MGR is used with the account from “filename”. If USER= is not specified and the account of “filename” matches the logon account of the requesting user, then the same logon ID as the requesting user is assumed.
;REPLACE ;NOREPLACE	If REPLACE is specified, any file on the remote system with the same name as the file to be copied is purged before the transfer is attempted. The default is NOREPLACE.
;RETRY ;NORETRY	This parameter specifies that upon failure of the Transporter to satisfy a request, that the request be retried after a minimum of five minutes has elapsed. ( <b>Note:</b> If there is another request to be processed, more than five minutes may elapse before the retry is attempted.) Default is NORETRY. However, if a DSLINE error is detected as the reason for the failure, a RETRY is attempted regardless of which is specified.
;DELETE ;NODELETE	If DELETE is specified, this parameter indicates that upon successful completion of the request, the original file is to be purged from the sending system. Default is NODELETE.
;RELEASE ;NORELEASE	If RELEASE is specified, this parameter indicates that upon successful completion of the request the new file created on the receiving system is to have an MPE RELEASE command issued to allow any user to access the file. Default is NORELEASE.

### SEND Command Example

```

:TPCMD

TPCMD 5.0 *           Center for Information Services
11/06/02           3101 Northup Way, Bellevue, WA   98004

TPCMD> SEND TPSLATE:DEV;USER=DCWS.SSDEV

FILE SIZE = 626 SECTORS

ESTIMATED TRANSMIT TIME          0 HRS 06 MIN @ 4800 BPS
                                0 HRS 04 MIN @ 9600 BPS

JOB ACCEPTED JOBID=0002
TPCMD> EXIT

END OF PROGRAM

```

### TRANSPORTER JCW Values

If any job is accepted by the Transporter and is assigned a Job ID Number, the JCW “TPJCW” will be set to equal the assigned number. This number will be in the range of 0-9999. If an error occurs, the TPJCW will be set to a value of 10000 + the error code.

## SHOW Command (Operator)

SHOW is used to display the queue file, the history file, an individual job from the queue file, or the list of valid nodenames. Individual job numbers cannot be displayed from the history file.

```
S[HOW]    [jobid#]
          [ALL]
          [NODE]

          [Acctname]
          [@]

          [username.acctname]
          [ @.@]

          [!]

          [;HIST]
          [;BOTH]

          [;status-code]
```

Default SHOW is for the user's logon username and account.

From SYS account users, SHOW @, SHOW @.@ and SHOW ALL will have identical results.

## SHOW Command (User)

SHOW is used to display the queue file, the history file, an individual job from the queue file, or the list of valid nodenames. Individual job numbers cannot be displayed from the history file.

```
S[HOW]    [jobid#]
          [NODE]
          [acctname]
          [username.acctname]

          [ ;HIST]
          [ ;BOTH]

          [ ;status-code]
```

Default SHOW is for the user's logon username and account.

From a non-SYS account, SHOW acctname and SHOW username.acctname can only show the user's logon account.

### SHOW Command Parameters

**Note:** Refer to syntax descriptions for information on which parameters may be specified by Supervisory Users only; see SHOW Command (Operator).

jobid#	Indicates the Job Number of a queue file record for which the detail information is to be displayed.
ALL	Indicates that a summary display of all records in the specified file(s) is to be displayed.
NODE	Indicates that a list of valid nodes is to be displayed from the Node File (TPNODE).
acctname @	Indicates that a summary display of all records for the specified account in the specified file(s) is to be displayed.
username.acctname @.@	Indicates that a summary display of all records for the specified username and account in the specified file(s) is to be displayed.
! (exclamation point)	Indicates that detail information for all records (including control records) in the specified file is to be displayed. This is the only way to get a detail display from the History File (TPHIST).

**Select one of the above listed parameters.** Default is to show a summary display of records in the Queue File (TPQUE) for the logon username and account.

;HIST                    Use these parameters to specify the file from which the display is to  
;BOTH                    be done.

                          If not specified, display is from the Queue File (TPQUE).

                          If ;HIST is specified, display is from the History File (TPHIST)

                          If ;BOTH is specified, display is from both files.

;status-code            If used, may be one of: WT, IP, CD, CX, ER, or LN. This will  
                          cause only those records of the specified status to be displayed.

### SHOW Summary Display Headings

The SHOW summary display prints a heading line across the screen with one line below the headings for each record to be displayed. Headings and values are:

Q (Queue Priority)	Values:  * (asterisk) System S            Supervisor H            High or Urgent N            Normal L            Low T            Tape
JOB#	This is the Job Number.
NODENAME	This is the DS LINE name of the remote system.
USERNAME	This is the Username of the requesting user.
ACCOUNT	This is the Account name of the requesting user.
RT (Request Type)	Values:  SF                    SEND GF                    GET PR                    PRINT PC                    PRINT ;CCTL MS                    MSG ** (two asterisks) SHUTDOWN
STA (Request Status)	Values:  WT            Waiting IP            In Progress CD            Completed CX            Completed from remote system ER            Error LN            Error (DSLIN error)

ERR# (Current Error Code)	This code may be either a DSN/DS error (these may be found in Appendix B of the DSN/DS manual) or an MPE File System or Command Interpreter error. User discretion is needed to determine which error source applies.
REP (Replace/NoReplace)	Values: N    NOREPLACE Y    REPLACE
DEL (Delete/NoDelete)	Values: N    NODELETE Y    DELETE
RET (Retry/NoRetry)	Values: N    NORETR Y    RETRY
REL (Release/NoRelease)	Values: N    NORELEASE Y    RELEASE
FILENAME/MSG	The first 16 characters of the filename or message to be transferred.

## SHUTDOWN Command

SHUTDOWN is used to disable the transfer operation. This command is issued once for each Transporter task running. The SHUTDOWN request will not be processed until any In Progress request has completed.

`SHUTDOWN node-group#`

### SHUTDOWN Command Parameters

node-group#	This indicates the node group of Transporter batch task to be shutdown. Transporter batch tasks have the job name <code>TPnnnn</code> , where <i>nnnn</i> is the node-group#. If there are multiple Transporter tasks running on the system for the same node-group, the first task to go idle will be shut down. Therefore, a SHUTDOWN must be issued for each Transporter task running.
-------------	---

## STARTUP Command

STARTUP is used to enable the transfer operation.

```
STARTUP node-group# [ ;TEST ]
```

### STARTUP Command Parameters

node-group#	This indicates the node group of the Transporter batch task to be started. Transporter batch tasks have the job name TP <i>nnnn</i> , where <i>nnnn</i> is the node-group. At least one STARTUP command must be issued for each node-group to be processed. Multiple tasks for the same node-group are also legal.
;TEST	Addition of this parameter will put the transfer facility (TPMON) into “test” mode. Various messages about events and data being processed will be displayed in the \$STDLIST. Use of this parameter may cause a small degradation of Transporter performance.

## **EXIT and HELP Commands**

EXIT is used to terminate the command interface.

**E[EXIT]**

HELP is used to display command syntax. All commands are displayed. Commands are not displayed individually.

**HELP**

## **EXIT and HELP Command Parameters**

The EXIT and HELP commands do not accept any parameters. Parameters entered will be treated as comments.



## Section III: Maintenance

Three of the Transporter data files require periodic maintenance: the Queue File (TPQUE), the History File (TPHIST), and the Node File (TPNODE).

### Queue File Maintenance

The Transporter Queue File is an MPE KSAM file. As records are added to and deleted from the queue, the EOF pointer will only increase and not decrease. Therefore, periodically, before the EOF pointer approaches the FILE LIMIT of the file, the file must be either reorganized or reinitialized. The most desirable method is the reinitialization, which is done by using the INIT Q command. This command will, however, destroy all data in the queue file. Therefore, if there are outstanding requests in the queue, a reorganization must be used. To do this, use the REORG command (described below). When Queue File is more than 70% full, the Transporter monitor program (TPMON) will display the following message to the operator console during its startup initialization:

**WARNING THE TRANSPORTER QUEUE FILE NEEDS MAINTENANCE**

### History File Maintenance

The Transporter History file is an MPE sequential file. Records are added to the end of the file during Transporter operation. No operation removes records from the History File. As records are added, the EOF pointer for the file will approach the FILE LIMIT, and like the Queue File, the History File must be cleaned before the two limits are equal. To do this, use the REORG command (described below). If this file is more than 70% full, the Transporter monitor program (TPMON) will display the following message to the operator console during its startup initialization:

**WARNING THE TRANSPORTER HISTORY FILE NEEDS MAINTENANCE**

If you issue a REORG to maintain the Queue File, the REORG will also apply to the History File. For the History File this means the current file is shifted into a five-file cycle of previous files (TPHISTI through TPHIST5) and a new working History File is built (TPHIST).

An alternate method of maintaining the History File is by using the INIT HIST command. This command will, however, purge all data from the History File and, therefore, should only be used if there is no longer any reason to refer to the data contained in the file.

Both the REORG and INIT must be done with the Transporter shut down.

## Using the REORG Command

To maintain the Queue File or History File when they are 70% or more full, use the following steps:

1. Shut down the Transporter using either the OPI command **OPI TSTOP** or type **:TPSHUT**  
Wait for the message “Transporter System Shutdown.”
2. To reorganize the Transporter files, type **:TPCMD “REORG”**  
This command will initiate a job to clean up the Transporter files.  
Wait for the message “Transporter Que Maintenance Done.”
3. Start up the Transporter using either the OPI command **OPI TSTART** or type **:TPSTART**

## Node File Maintenance

The Transporter Node File contains a list of valid Transporter destinations. As changes to the DS network are made, these changes must be noted in the Node File residing on all affected systems. For information regarding the use and setup of this file, refer to Section I, Introduction and Setup.

## Section IV: Transporter System Internals

This section describes the six files and three programs that make up the Transporter system.

### Transporter Data Files

The Transporter system requires six data files. These files are all stored in the DATA group of the TSS account.

#### TPQUE

This file is the Transporter request queue. It is an MPE KSAM file. To avoid a failure of the Transporter system, this file must be periodically reorganized by using the INIT Q command. If this file is destroyed, it may be rebuilt by running KSAMUTIL and issuing the following command:

```
BUILD TPQUE;KEYFILE=TPQUEK;KEY=B,1,12;KEY=B,9,4;KEY=B,13,8,,DUP&;  
KEY=B,21,8,,DUP;REC=-252,1,F,ASCII;DISC=2000,16,1
```

Then initialize with the INIT Q command of TPCMD.

The primary record key for the file is a composite data item composed of the queue identifier (priority), the date the request was entered, the time the request was entered, and a unique job ID number. Three alternate keys are supplied:

- Job ID number
- MPE Account Name of the requesting user
- MPE User Name of the requesting user. For the COBOL record description of this record see Figure 4.1 on page 33.

#### TPQUEK

This file is the KSAM key file for the TPQUE file.

#### TPHIST

This file is the Transporter request history file. All completed requests are deleted from the request queue file and written to the history file. Additionally the records are written to this file from Transporter systems running on other CPU's. These externally written records can be identified by the value of "CX" in the Request Status (QFR-REQUEST-STATUS). To avoid failure of the Transporter system, this file should be cleaned of records when the EOF is approaching the file limit size (usually 2000). If this file should be destroyed, it may be rebuilt using the following MPE command:

```
BUILD TPHIST;REC=-252,1,F,ASCII;DISC=2000,32,1
```

This file uses the same record format as the TPQUE file (see Figure 4.1 on page 33).

## **TPNODE**

This file contains a list of valid destinations for the Transporter system. This file is an **unnumbered** editor file (fixed length records, 72 characters long) in free-form format with one record for each valid destination node. Each record contains four (4) data items separated by commas. These items are, in order:

1. DSLINE name of the target node
2. Node Type or DSLINE name of an intermediate node
3. Node Group Number of one to three digits
4. Logon ID (including passwords) of the Transporter supervisor ID on the target system. This ID is usually MGR.TSS but may be MANAGER.SYS or OPERATOR.SYS.

If there is no Node Type or Intermediate Node, this should be indicated by a null entry between two (2) commas in the location it would have normally appeared. Node Types are:

HOME	This indicates the nodename of the user's own system.
TAPE	This indicates that the associated nodename is not available through DNS/DS but through tape exchange only.

## **TPFCY**

This file is a data file required for the Transporter mechanism to process PRINT requests. This file supplies \$STDIN information to the FCOPY program.

## **TPHELP**

This file is the text file containing the HELP command information. It is a standard editor file (including line numbers, which are stripped before the data is displayed).

Any information to be displayed can be entered in this file. But it should not contain more information than will fit in the screen memory found on user terminals.

**Figure 4.1: Transporter System Queue File  
Cobol Record Description**

```

***  TRANSPORTER
***  COPY ELEMENT: CFDTPQUE
***  COBOL "FD" AND RECORD DESCRIPTION FOR TRANSPORTER
***  SYSTEM QUEUE FILE.

FD TRNSPRTR-QUE-FILE .
LABEL RECORDS ARE STANDARD DATA RECORD IS QUE-FILE-RECORD.
01 QUE-FILE-RECORD.
    05 QFR-RECORO-KEY.
07 QFR-QUE-NUMBER          PIC X(2).
88 QFR-SYSTEM_QUE        VALUE "00".
88 QFR-SUPERVISOR-QUE    VALUE "10".
88 QFR-URGENT-QUE        VALUE "20".
88 QFR-NORMAL-QUE        VALUE "30".
88 QFR-LOW-QUE           VALUE "40".
88 QFR-TAPEONLY-QUE      VALUE "80".
88 QFR-GARBAGE-QUE       VALUE "99".
88 QFR-OS-QUE            VALUE "XT."
07 QFR-OATE              PIC S9(4) COMP.
07 QFR- TIME             PIC S9(8) COMP.
07 QFR-SERIAL-NUMBER     PIC 9(4).
07 QFR-ALTKEY-1         REDEFINES QFR-SERIAL-
NUMBER.
09 FILLER                PIC X(4).
05 QFR-ALTKEY-2.
07 QFR-REQUEST-ACCOUNT  PIC X(8).
05 QFR-ALTKEY-3.
07 QFR-REQUEST-USER     PIC X(8).
05 QFR-REQUEST-TYPE     PIC X(2).
88 QFR-SEND-FILE        VALUE "SF".
88 QFR-GET -FILE        VALUE "GF".
88 QFR-PRINT-REQUEST    VALUE "PR" "PC".
88 QFR-MSG-REQUEST      VALUE "MS".
88 QFR-SHUTDOWN-REQUEST VALUE "***".
05 QFR-REQUEST-STATUS   PIC X(2).
88 QFR-REQ-PENDING      VALUE " " "WT".
88 QFR-REQ-IN-PROGRESS  VALUE "IP".
88 QFR-REQ-COMPLETE-DSN VALUE "CD".
88 QFR-REQ-COMPLETE-TAPE VALUE "CT".
88 QFR-REQ-DS           VALUE "CX".
88 QFR-REQ-ERROR        VALUE "ER".
88 QFR-LINE-ERROR       VALUE "LN".
05 QFR-ERROR-CODE       PIC X(4).
05 QFR-TAPE-VSN         PIC X(6).
05 QFR-XMIT-5TART.
07 QFR-XSDATE           PIC S9(4) COMP.
07 QFR-XSTIME           PIC S9(8) COMP.
05 QFR-XMIT-END.
07 QFR-XEDATE           PIC S9(4) COMP.
07 QFR-XETIME           PIC S9(8) COMP.
05 QFR-FILE-SIZE        PIC 9(6).
05 QFR-LAST-RECORD-SENT PIC 9(8) COMP.
05 QFR-RETRY-COUNT      PIC 9(4) COMP.
05 QFR-MESSAGE-INFO.
07 QFR-REQUEST-FILENAME PIC X(40).
07 QFR-NEW-FILENAME     PIC X(40).
07 QFR-ENV-FILE         REDEFINES QFR-NEW-FILENAME PIC X(40).
05 QFR-REMOTE-NODE      PIC X(8).
05 QFR-INTERMEDIATE-NODE PIC X(8).
05 QFR-REMOTE-LOGON     PIC X(36).

```

05 QFR-REPLACE-FLAG	PIC X(2).
88 QFR-NOREPLACE	VALUES " " "NO".
88 QFR-REPLACE	VALUE "RE".
05 QFR-INP-NUMBER	PIC 9999.
05 QFR-REQUEST-HANDLE	PIC X(20).
05 QFR-DEL-CODE	PIC X.
88 QFR-NODELETE	VALUES " " "N".
88 QFR-DELETE	VALUE "V".
05 QFR-RET-CODE	PIC X.
88 QFR-NORETRY	VALUES " " "N".
88 QFR-RETRY	VALUE "V".
05 QFR-REL-CODE	PIC X.
88 QFR-NORELEASE	VALUES " " "N".
88 QFR-RELEASE	VALUE "V".
05 QFR-ORIG-ERROR	PIC X(4).
05 QFR-STEP-NO	PIC 59(4) COMP0
05 QFR-TFILE	PIC X(8).

## Transporter Programs

The Transporter system is made up of three programs. These programs are stored in the EXC group of the TSS account. Source files are in the SRC group. The Relocatable library, RL.RL.TSS, is required to PREP all programs. All programs are written in COBOLII. The Required Copy Library is TPCPLIB.SRC.TSS.

### **TPCMD (TP1003C)**

This program is the command interface. It controls all functions of the Transporter system and accepts requests for data transfer. It can be run as either interactive or batch and will accept an INFO= string in the form of a single Transporter command to be executed.

Additional PREP parameters: ;MAXDATA=20000;CAP=IA,BA,PM,MR

### **TPMON (TP1001C)**

This program is the Transporter mechanism. It receives instructions from the command interface (TPCMD) via the TPQUEUE queue file. Normally, one copy of the program is run for each Node Group defined in the TPNODE file, but multiple copies are legal. The TPMON program receives the number of the Node Group it is to act upon via the PARM= parameter on the RUN MPE command. If this parameter is zero (0), the program will ignore the Node Groups and process all requests.

Normally, this program is initiated by the STARTUP command of the TPCMD command interface.

Additional PREP parameters: ;MAXDATA=20000;CAP=IA,BA,MR,PH\_PM

### **TPSLV (TP1002C)**

This program is the PTOPT slave program that is activated on the target node computer by the TPMON program on the local computer. It is used to supply the TPMON program with the logon information for the target username, to send messages to the system console on the target system, and to transfer records to the history file (TPHIST) on the target system. .

Additional PREP parameters: ;MAXDATA=20000;CAP=IA,BA,PM

For an overview flowchart showing the interrelation of the files and programs in the Transporter System, see Figure 4.2 on the following page.

Version numbers of all programs may be checked by using the following:

```
:RUN program;INFO="*VERS"
```

# TRANSPORTER SYSTEM FLOW

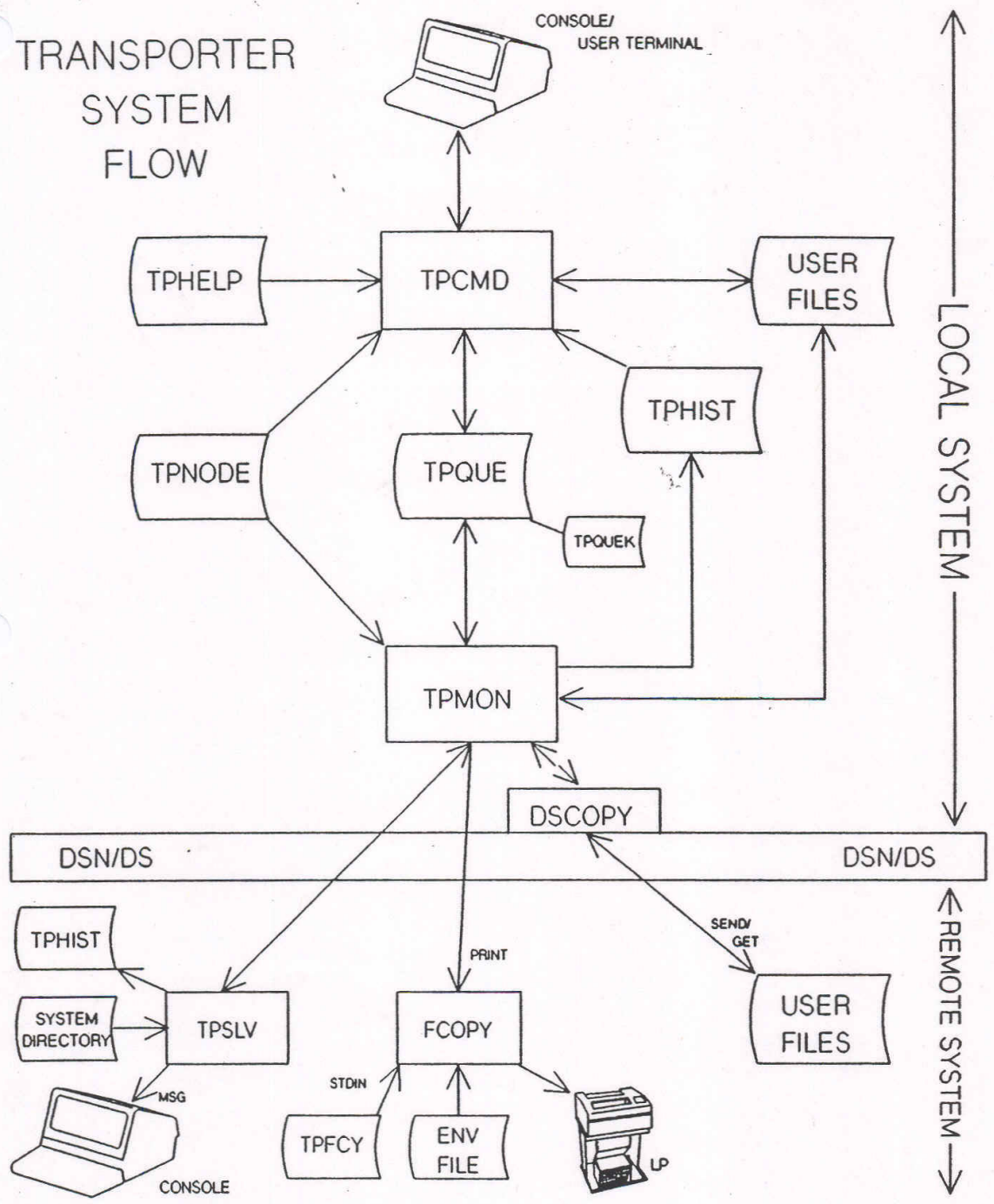


FIGURE 4.2



## Appendix A: Programmatic Access to Transporter

Transporter may be called from a user program using Process Handling. To do this, the system intrinsics CREATE and ACTIVATE are used. The Transporter command is passed to the command interface (TPCMD) via an INFO= string. In COBOLII the following items or their equivalent must be included in the Working Storage Section:

```
77 TRANSPORTER-COMMAND          PIC X(80) VALUE SPACE.

01 CREATE-PARAMETERS.
05 ITEM-NUMBERS.
07 ITEM-2                        PIC S9(4) COMP VALUE 2.
07 ITEM-3                        PIC S9(4) COMP VALUE 3.
07 ITEM-11                       PIC S9(4) COMP VALUE 11.
07 ITEM-12                       PIC S9(4) COMP VALUE 12.
07 ITEM-0                        PIC S9(4) COMP VALUE 0.
05 ITEM-LIST.
07 CRE-PARM                      PIC S9(4) COMP VALUE 0.
07 CRE-FLAGS                     PIC S9(4) COMP VALUE 1.
07 INFO-PTR                      PIC S9(4) COMP VALUE 0.
07 INFO-LENGTH                   PIC S9(4) COMP VALUE 0.
05 ITEM-ADDITIONAL.
07 ERRCD                         PIC S9(4) COMP VALUE 0.
07 PIN-NUMBER                    PIC S9(4) COMP VALUE 0.
07 RUN-NAME                      PIC X(14) VALUE TPCMD.EXC.TSS".
```

**Note:** TRANSPORTER-COMMAND may have a size up to PIC X(255); the VALUE clause of INFO-LENGTH must be equal to the size of TRANSPORTER-COMMAND.

To call the Transporter command interface (in COBOLII), a character string in the form of a valid Transporter command must be moved to TRANSPORTER-COMMAND (or included as a VALUE clause). And the following statements or their equivalent must be added to the source program at the point you want to call Transporter:

```
CALL INTRINSIC ".LOC." USING @TRANSPORTER-COMMAND
                        GIVING INFO-PTR.

CALL INTRINSIC ".CREATEPROCESS" USING ERRCD PIN-NUMBER
                        RUN-NAME ITEM-NUMBERS
                        ITEM-LIST.

CALL INTRINSIC ".ACTIVATE" USING PIN-NUMBER \3\.
```

Detailed explanation of the CREATEPROCESS and ACTIVATE intrinsics can be found in the *MPE V Intrinsics Reference Manual*. Explanation of the .LOC. pseudo-intrinsic is in the *COBOLII/3000 Reference Manual*.

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## Appendix B: Transporter Error Codes

The following error codes are valid only for Transporter version 7.0 and later.

Code	Source	Message
9001	TPMON	Error on rewriting queue entry to queue file.
9002	TPMON	Queue file record contains an invalid request type code.
9003	TPMON	Error deleting shutdown request from queue.
9004	TPMON	Error deleting queue file entry from queue.
9005	TPMON	Error on rewriting queue entry to queue file.
9006	TPMON	Request for remote system password failed due to PWRITE error.
9007	TPMON	Request for remote system password failed due to PREAD error.
9008	TPMON	Failure to activate PTOP slave program (POPEN error) .
9009	TPMON	Handshake with PTOP slave program failed due to PWRITE error.
9010	TPMON	Handshake with PTOP slave program failed due to PREAD error.
9011	TPMON	Handshake with prop slave program failed due version number mismatch.
9012	TPMON	Transfer of remote command failed due to PWRITE error.
9013	TPMON	Invalid status record returned after remote command execution (status flag1 not = 3).
9014	TPMON	Remote command execution failed, non zero condition code returned.
9015	TPMON	Retrieval of status record failed due to PREAD error.
9016	TPMON	Transfer of status record failed due to PWRITE error.
9017	TPMON	Transfer of history record failed due to PWRITE error.
7001	TPMON	File label not read, file or PV does not exist.
7002	TPMON	File label not read, Group or User does not exist.
7003	TPMON	File label not read, Account does not exist.
7004	TPMON	File label not read, illegal file name.
7005	TPMON	File label not read, illegal Group or User name.
7006	TPMON	File label not read, illegal Account name.

<b>Code</b>	<b>Source</b>	<b>Message</b>
7007	TPMON	File label not read, illegal request to DIR'READ.
7008	TPMON	File label not read, required parameter not passed to DIR'READ
7009	TPMON	File label not read, hard error while reading file label
7010	TPMON	File label not read, soft error while reading file label.

Additional error codes may be found in the *DS/3000 HP 3000 to HP 3000 Network Administrator Manual* (32185-90002), Appendix A (DS/3000 Errors). MPE Command Interpreter error codes do not have a single reference source.