

## COPYPAX V2.3

REXX procedure COPYPAX allows the user to use the pax command in copy mode. It can be used from the TSO foreground but should be used in a TSO batch job.

COPYPAX uses the pax command in copy mode to copy a source to a target structure with the following functions and additional benefits:

- A test is done to verify that the source and the target structure are located in different file systems. This avoids problems that may occur if the target structure is located within the source structure as pax could get into a never-ending loop.
- If desired, a test is done to verify that the target directory is empty. However, you can also do copying even if the target structure is not empty to allow merging of file systems.
- The pax option "-X" is used to avoid skipping over mount point boundaries.
- If desired, invalid file descriptor files are corrected when pax has finished its copy processing. You should skip this step if you know that the file system does not contain any character special files. (Normally just directory "/dev" contains such entries.)
- You can get a clear advice in the job log (just when the job starts) how to stop processing, if this should ever be needed. Therefore, it is suggested to run the job with no time out being specified.
- You can switch on verbose "pax" output listing all entries copied or created. This includes the definition of missing mount points.
- You can skip looking for and correcting invalid file descriptor files.

Here is a sample JCL using COPYPAX with the default options:

```
//UNIXJOB JOB , 'COPYPAX',NOTIFY=&SYSUID.,REGION=0M,SYSTEM=xxxx
//* -----
//* Use pax to copy source directory structure to target directory
//* -----
// SET SOURCED='/u/hering' <=== Source directoy
// SET TARGETD='/tmp/hering' <=== Target directoy
//* -----
// SET TIMEOUT=R0 <=== Timeout value in seconds, 0=no timeout
// SET REXXLIB=HERING.ZFS.REXX.EXEC <=== SYSEXEC library
//* -----
//COPYPAX EXEC PGM=IKJEFT01,PARM='COPYPAX &TIMEOUT &SOURCED &TARGETD'
//SYSEXEC DD DSNAME=&REXXLIB.,DISP=SHR
//CPPXPARM DD DATA,DLM=##
TARGET_MUST_BE_EMPTY=Y < Target structure must be empty (--Y--!N)
CORRECT_INV_FD_FILES=Y < Correct invalid fd files (--Y--!N)
COPY_PAX_VERBOSE=N < List all objects copied or created (Y!--N--)
NO_FILE_OVERWRITE=N < Prevent replacing of existing files (Y!--N--)
PROCESS_INFO_MSGS=Y < Display process data in batch mode (--Y--!N)
##
//SYSTSIN DD DUMMY
//SYSTSPRT DD SYSOUT=*,LRECL=136,RECFM=VB
//* -----
```

Timeout values may be specified as follows.

- |    |  |
|----|--|
| R0 | No automatic timeout, output messages are shown as they appear (preferred setting!). |
| 0  | No automatic timeout, output messages are shown after copy processing is complete.   |
| nn | Copy processing will be canceled after nn secs if not yet finished.                  |

Finally sample job log data for this job:

```
-----  
The main process ID for this job is 67305701. If you should need to stop  
processing use the following UNIX command in authorized mode to do this:  
kill 67305701  
-----
```

```
Verifying existence of source directory /u/hering...  
Verifying existence of target directory /tmp/hering...  
Copying the source to the target structure using pax...  
Searching for and correcting invalid target file descriptor entries...  
READY  
END
```