Install From a ZIP File

This description shows a certain possibility to install a package with files available in a ZIP file. The following steps are assumed to be done already when starting the description. To make it easier the instructions and the job provided are using a specific package named ISPFSFTP that is available already and for which all the files are provided in a ZIP file.

- You have created a work directory named "workdir" under your z/OS UNIX home directory.
- You have uploaded the ZIP file "ispfsftp.zip" binary into this directory, for example by using "sftp", "ftp" or "ftps".

To use the job that we provide for my example environment with terminal emulation code page 1141 and the pipe replacement (|) in this code page of being the exclamation mark (!) you need to retrieve these two values for your environment first.

What is my terminal emulation code page or ccsid as known to ISPF?

Place the following short REXX code into an arbitrary PDS or PDSE data set that you have already (and if you do not have a REXX library concatenated via ddname SYSPROC or SYSEXEC).

```
/* REXX ShowCP5 */
Trace O
Address ISPEXEC "VGET ZTERMCP5"
Say "My 5 char terminal CP known by ISPF is:" ztermcp5
```

Simply use the following command to run the REXX SHOWCP5 (if placed into a PDS/PDSE 'hering.job.cntl').

```
tso ex 'hering.job.cntl(showcp5)' ex
```

In my actual situation this gives the following information.

```
My 5 char terminal CP known by ISPF is: 01141
***
```

As an alternative you can go to ISPF "Dialog Test" and then select "Variables". Then enter command "I ztermcp5" and you should see the actual value as known by ISPF as well.

What is the 1047 pipe character (|) replacement in the ccsid that I'm using?

Simply open an OMVS shell from within your TSO/ISPF session and enter the following commands to see the correct replacement character. I do it based on the ccsid 1141 as found before. You just use your corresponding terminal emulation code page.

```
$> echo "|" > /tmp/pipe.char
$> iconv -f1141 -t1047 /tmp/pipe.char
!
$> rm /tmp/pipe.char
$>
```

So, my replacement character is the exclamation mark (!). I'll use this in the next job to unzip, convert and place the files in the ZIP file "ispfsftp.zip". Following the job follows with all the settings for my environment as found.

Suggested Job to unzip the ZIP File, convert the files and place them as desired

The job is created based on BPXBATCH/BPXBATSL and it is assumed that you are authorized to place the files in USS and members in MVS as needed. All the commands, values and local settings in your case are marked in **RED** and need to be changed for your environment or your actual package and ZIP file.

```
//INSTALL  EXEC PGM=BPXBATSL,PARM='PGM /bin/sh -c $STDIN!$ICONV!sh'
//STDIN    DD DATA,DLM=##
echo Switching to work directory $WORKDIR ...
cd $WORKDIR; RC=$?
if [ $RC -ne 0 ]; then; echo "\nRC=$RC" > /dev/fd2; exit 1; fi

trap 'rc=$?; echo RC=$rc; if [ $rc -gt $RC ]; then RC=$rc; fi;' err
trap 'if [ $RC -ne 0 ]; then echo "\nFinal Rc=$RC" > /dev/fd2; exit 1; \
else exit 0; fi' exit
function place_uss_file
{
  if [ -n "$2" ]; then TF=$2; else TF=$1; fi
  echo Placing USS file to "$USS_DIR/$TF" ...
  [ -e  "$1" ] &&
  iconv -f819 -t1047 "$1" > "$USS_DIR/$TF" &&
  chmod 755 "$USS_DIR/$TF"
}
function place_mvs_mbr
{
  if [ -n "$2" ]; then TM=$2; else TM=$1; fi
  echo Placing MVS member $TM to ddname MVSPDS ...
  [ -e  "$1" ] &&
  iconv -f819 -t1047 "$1" > "$1.CONVED" &&
  cp "$1.CONVED" "//DD:MVSPDS($TM)"
}

echo Extracting ZIP file ispfsftp.zip ...
jar -xf ispfsftp.zip
place_uss_file ssh_askpass
place_uss_file mvs2uss
place_uss_file uss2mvs
place_uss_file mvsalloc
place_uss_file ispfssh
place_uss_file ispfsftp.unix ispfsftp
place_uss_file mvs2unix
place_uss_file unix2mvs
place_mvs_mbr mvsalloc
place_mvs_mbr mvs2unix
place_mvs_mbr unix2mvs
place_mvs_mbr ibatsftp
place_mvs_mbr ispfsftp
find . -type f ! -name ispfsftp.zip -exec rm {} ";"
##
//STDENV   DD DATA,DLM=##
WORKDIR=/u/hering/workdir
USS_DIR=/u/hering/bin
STDIN=/bin/cat //dd:STDIN
ICONV=iconv -f1141 -t1047
_BPX_SHAREAS=MUST
_BPX_BATCH_UMASK=0022
PATH=/bin:/java/M00000/V8062/bin/
##
//MVSPDS   DD DSN=HERI.REXX.EXEC,DISP=SHR
//STDOUT   DD SYSOUT=*,LRECL=136,RECFM=VB
```

Notes...

- The text and characters marked in RED are those that you need to adapt according to your environment.
- Especially I'm installing the USS files into directory "bin" under my home directory "/u/hering".
- The MVS PDS members are placed into the REXX library 'HERING.REXX.EXEC'.
- The PATH setting in STDENV assures that we find java utility "jar".

Following the job output data in STDOUT for a successful run...

```
Switching to work directory /u/hering/workdir ...
Extracting ZIP file ispfsftp.zip ...
Placing USS file to /u/hering/bin/ssh_askpass ...
Placing USS file to /u/hering/bin/mvs2uss ...
Placing USS file to /u/hering/bin/uss2mvs ...
Placing USS file to /u/hering/bin/mvsalloc ...
Placing USS file to /u/hering/bin/ispfssh ...
Placing USS file to /u/hering/bin/ispfsftp ...
Placing USS file to /u/hering/bin/mvs2unix ...
Placing USS file to /u/hering/bin/unix2mvs ...
Placing MVS member mvsalloc to ddname MVSPDS ...
Placing MVS member mvs2unix to ddname MVSPDS ...
Placing MVS member unix2mvs to ddname MVSPDS ...
Placing MVS member ibatsftp to ddname MVSPDS ...
Placing MVS member ispfsftp to ddname MVSPDS ...
```

And that is it.