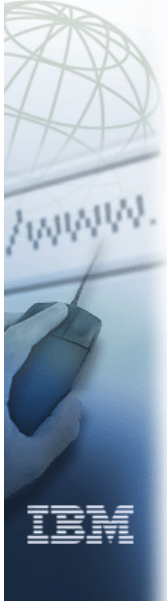


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# ISPF Enhancements z/OS V1R9



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AFP	DFSMSrmm	Language Environment	SecureWay
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# ISPF Enhancements



- Edit and browse z/OS UNIX files
  - Implements z/OS UNIX file support into “native” ISPF EDIT and BROWSE
- Support for editing ASCII data
- Mixed case in command tables



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# Changes to Edit Entry Panel



```
Menu RefList RefMode Utilities Workstation Help
-----
                                Edit Entry Panel
Command ==> _____

ISPF Library:
Project . . . PELEG
Group . . . JCL
Type . . . VERS5
Member . . . _____ (Blank or pattern for member selection list)

Other Partitioned, Sequential or VSAM Data Set, or z/OS UNIX file:
Name . . . /u/peleg
Volume Serial _____ (If not cataloged)

Workstation File:
File Name . . . _____

Initial Macro . . . _____
Profile Name . . . _____
Format Name . . . _____
Data Set Password . . . _____
Record Length . . . _____

Options
/ Confirm Cancel/Move/Replace
- Mixed Mode
- Edit on Workstation
- Preserve VB record length
```



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## Specifying the z/OS UNIX Path Name



- ❑ / (forward slash) Identifies an absolute path name
- ❑ ~ (tilde) Represents the path name for the user's home directory
  - ~/test/tst1.sh specifies /u/smith/test/tst1.sh
- ❑ . (dot) Represents the path name for the current working directory
  - ./pgma.c specifies /u/proj1/dev/pgma.c when the current working directory is /u/proj1/dev/
- ❑ .. (dot dot) Represents the path name for the parent directory of the current working directory
  - ../test/pgma.c specifies /u/proj1/test/pgma.c when the current working directory is /u/proj1/dev/



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## Using Record Length



- ❑ Record length field is added to allow a record length to be specified when browsing a z/OS UNIX file
  - Value entered in this field is used by ISPF to display the data in the file as fixed-length records, rather than using the new line character to delimit each record
  - This is useful for browsing files which have very long records if the new line character is used as a delimiter
- ❑ Allows a record length used by the editor to load the records into the edit session as fixed-length records
  - When the file is saved it is saved with fixed length records and allows conversion from variable length file to a fixed length file



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# Browse a z/OS UNIX File



## Browse the file with no Record Length specified

[Menu](#) [Utilities](#) [Compilers](#) [Help](#)

```
BROWSE      /Z19RB1/samples/magic                Line 00000000 Col 001 072
Command ==> _____ Scroll ==> HALF
***** Top of Data *****
# Magic
#..Magic file for "file" command.
#
#..The fields of this file are as follows:
#..byte offset, value type, optional operator (= by default), value
#..to match (numeric or string), and string to be printed. Numeric
#..values may be decimal, octal, or hex. Also note that the last
#..string may have 1 printf format spec.
#..The '>' in occasional column 1's is magic: it forces file to
#..continue scanning and matching additional lines. The first line
#..afterwards not so marked terminates the search.
#
#..Magic numbers are the byte codes at the start of a file which indicate
```



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# Browse a z/OS UNIX File



## Browse the file with a Record Length of 40

[Menu](#) [Utilities](#) [Compilers](#) [Help](#)

```
BROWSE      /Z19RB1/samples/magic                Line 00000000 Col 001 040
Command ==> _____ Scroll ==> HALF
***** Top of Data *****
# Magic.#..Magic file for "file" command
#..#.#..The fields of this file are as fol
#..lows:#.byte offset, value type, optiona
#..l operator (= by default), value.#.to ma
#..tch (numeric or string), and string to b
#..e printed. Numeric.#.values may be deci
#..mal, octal, or hex. Also note that the
#..last.#.string may have 1 printf format s
#..pec.#.#..The '>' in occasional column 1's
#..is magic: it forces file to.#.continue s
#..canning and matching additional lines.
```



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## ISPF ENQ Requests on z/OS UNIX Files



- ❑ To avoid possible data corruption, ISPF issues an exclusive ENQ request to prevent two or more users from editing the same z/OS UNIX file at the same time
  - The ENQ major name is SPFEDIT
  - The ENQ minor name is a 12 bytes string comprising these 3 binary integers:
    - The file's i-node number (4 bytes)
    - The file's device number (4 bytes)
    - A sysplex indicator (4 bytes), set to 1 when z/OS UNIX is running with SYSPLEX(YES)



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## ISPF Personal Data Set Lists



- ❑ z/OS V1R9 supports saving and retrieval of z/OS UNIX file path names
  - For file path names that are used frequently
- ❑ Retrieval of path names is supported on the ISPF Edit, View, and Browse panels
  - Allows a path name to be entered in the “Other” data set name field
- ❑ Retrieval of path names is also supported on the z/OS UNIX Directory List Entry panel
  - Users can also add path names manually to their personal data set lists



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# REFACTD Command



File View Options Help

Personal Data Set List

Command ==> \_\_\_\_\_

Enter a list action to perform or select a data set entry to retrieve.  
Action: S=Save A=Save As D=Delete this list E=Extended Edit L=DSLIS

Action	Name	Description	Created	Referenced
_	REFLIST	Last 30 referenced data sets		07/08/01 15:08

Select Data Set, DSLIST Level or z/OS UNIX file

	Volume	WS
. /u/peleg	_____	__
. /u/peleg/temp	_____	__
. /u/rogers	_____	__
. /u/rogers/rich.txt	_____	__
. /u/rogers/tst102	_____	__
. /u/rogers/CEEDUMP.2006061	_____	__
. /u/rogers/CEEDUMP.20060614.094113.67305623	_____	__
. /Z19RB1/samples/magic	_____	__
. 'SYS1.TCPPARMS'	_____	__
. 'CPAC.PROCLIB'	_____	__
. 'SYS1.IBM.PROCLIB'	_____	__
. 'SYS1.PARMLIB'	_____	__
. 'HAIMO.OUTPUT'	_____	__
. 'HAIMO.RESOLV.OMP'	_____	__
. 'SYS1.PROCLIB'	_____	__
. 'SYS1.PROCLIB'	_____	TCBSY1
. 'SYS1.PARMLIB'	_____	TCBSY1
. QESVP.EXEC	_____	__



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# PDF Editor Primary Commands



- When using the PDF editor to edit or view data, the following commands can be entered on the command line
  - COMPARE command
  - COPY command
  - CREATE command
  - MOVE command
  - REPLACE command
- These commands now support the specification of a z/OS UNIX path name as an operand
  - The pathname is new and is specified in the same format accepted by the “Other” data set name field on the edit panels



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# PDF Editor Primary Commands



File Edit Edit\_Settings Menu Utilities Compilers Test Help

```
EDIT /u/rogers/rich.txt Columns 00001 00072
Command ==> compare /u/peleg/aaaa Scroll ==> HALF
***** Top of Data *****
000001 asdfsadf
000002 asdfasdfasdfasdf
***** Bottom of Data *****
```

File Edit Edit\_Settings Menu Utilities Compilers Test Help

```
EDIT ROGERS.JCL.VERS5(GENER) - 01.15 Columns 00001 00072
Command ==> create /u/rogers/gener Scroll ==> HALF
***** Top of Data *****
CC0100 //ROGERSC JOB (POK,999),MSGCLASS=T,NOTIFY=ROGERS
000200 //PRINT EXEC PGM=IEBGENER
000300 //SYSPRINT DD SYSOUT=T
000400 //SYSUT2 DD SYSOUT=J
000500 //SYSUT1 DD DISP=OLD,DSN=ROGERS.JCL.VERS5(GENER)
000600 //TAPE DD DSN=(ROGERS.A),DISP=(NEW,KEEP),UNIT=3490
000700 //SYSIN DD DUMMY
000800 /*
CC0900 //
***** Bottom of Data *****
```



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# PDF Editor Primary Commands



- ❑ If editing file /u/rogers/gener on the command line, copy /u/rogers/jcl1, copies data from file jcl1 into the current file being edited

Copies after (A)

File Edit Edit\_Settings Menu Utilities Compilers Test Help

```
EDIT /u/rogers/gener Columns 00001 00072
Command ==> copy /u/rogers/jcl1 Scroll ==> HALF
***** Top of Data *****
000001 //ROGERSC JOB (POK,999),MSGCLASS=T,NOTIFY=ROGERS
000002 //PRINT EXEC PGM=IEBGENER
000003 //SYSPRINT DD SYSOUT=T
000004 //SYSUT2 DD SYSOUT=J
000005 //SYSUT1 DD DISP=OLD,DSN=ROGERS.JCL.VERS5(GENER)
000006 //TAPE DD DSN=(ROGERS.A),DISP=(NEW,KEEP),UNIT=3490
000007 //SYSIN DD DUMMY
000008 /*
```



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# PDF Editor Primary Commands



**MOVE** command moves a file into the file that is currently being edited

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT      /u/rogers/cbprnt                      Columns 00001 00072
Command ==> move /u/rogers/data                Scroll ==> HALF
***** Top of Data *****
A00001 //COMPRESS JOB (999,POK), 'PAUL ROGERS', CLASS=A,MSGCLASS=T,
```

**REPLACE** command replaces the data in the file named gener at /u/rogers with the existing data in the edit screen /u/rogers/cbprnt

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT      /u/rogers/cbprnt                      Columns 00001 00072
Command ==> replace /u/rogers/gener           Scroll ==> HALF
***** Top of Data *****
CC0001 //ROGERSC JOB (POK,999),MSGCLASS=T,NOTIFY=ROGERS
000002 //PRINT EXEC PGM=IEBGENER
000003 //SYSPRINT DD SYSOUT=T
000004 //SYSUT2 DD SYSOUT=J
000005 //SYSUT1 DD DISP=OLD,DSN=ROGERS.JCL.VERS5(GENER)
000006 //TAPE DD DSN=(ROGERS.A),DISP=(NEW,KEEP),UNIT=3490
000007 //SYSIN DD DUMMY
000008 /*
CC0009 //
***** Bottom of Data *****
```



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# MOVE Command Warning



Move has been requested for z/OS UNIX file:  
/u/rogers/data  
Moved files are deleted.

## Instructions:

Press ENTER key to confirm move request.  
(Moved files will be deleted.)

Enter END or EXIT command to return to the  
edit session without moving data.



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## Support for Editing ASCII Data

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- ❑ With the increasing use of Java and WebSphere products on z/OS
  - More and more data is stored in ASCII files on z/OS
- ❑ One example is XML documents for WebSphere Application Server
  - Prior to z/OS V1R9, there were few facilities available in z/OS to display and change ASCII data, especially under ISPF
  - ISPF users can download their ASCII files to a workstation that supports the ASCII character set, edit the files on the workstation, and upload them back to the z/OS system



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## Support for Editing ASCII Data

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- ❑ In z/OS V1R9, an ASCII editing facility is provided through the ISPF editor
  - The ASCII editing facility translates ASCII data in a file to EBCDIC before displaying it at the terminal and translates EBCDIC data to ASCII when receiving input from the terminal to write to the file
  - A new SOURCE primary command for the ISPF editor is provided in z/OS V1R9 to control the ASCII editing facility
- ❑ To activate the ASCII editing facility for a file:
  - Start editing the file as you would for a normal EBCDIC file
  - Enter the following command:
    - SOURCE ASCII



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# Changing ASCII to EBCDIC



## New command

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT      PELEG.SRC(TEST8) 01.10 Columns 00001 00072
Command ==> _source ascii Scroll ==> HALF
***** ***** Top of Data *****
000001     ÉÁÈ /oÑ ã%/ÃÈ ã?É ¼ÑÁÏ¼Ñ>ã%ÍÁÁ+/_Á
000002 /oÑã%/ÃÈ ¼¼/%Ñ/ÉÁÈ
000003 /oÑã%/ÃÈ ¼¼_ø?ÈÈÈ
000004 /oÑã%/ÃÈ ¼¼/ÈÈÈÑÁ
000005     Ñ>ã%ÍÁÁ ø/ÈÇ >/_Á
***** ***** Bottom of Data *****

File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT      PELEG.SRC(TEST8) - 01.10 Columns 00001 00072
Command ==> _reset source Scroll ==> HALF
***** ***** Top of Data *****
000001 /* set api flags for __iew_includeName() */
000002 apiflags.__aliases = 1;
000003 apiflags.__imports = 1;
000004 apiflags.__attrib = 1;
000005 /* include path name */
***** ***** Bottom of Data *****
```

When you input or modify data at the terminal, the ISPF editor translates the data entered from the CCSID of the terminal to ASCII before storing the data in the file



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# ASCII Conversion



**Note:** The ASCII editing facility uses the z/OS Unicode Conversion Services to translate the data between ASCII (CCSID 850) and the CCSID supported by the terminal. It is required that z/OS Unicode Conversion Services be installed and the required translations specified to it, in order for the ASCII editing facility to be operable.



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## Handling Line Feed Characters



- ❑ Many times ASCII files contain line feed characters
  - When such an ASCII file is uploaded from the workstation to a fixed length data set, the data may not be structured correctly according to the line feed characters
- ❑ The LF primary command is a new ISPF editor primary command that restructures the data in the file based on the line feed characters
- ❑ After starting the editor, issue commands in order to activate the ASCII editing facility to restructure the ASCII file according to the line feed characters it contains:
  - Issue the SOURCE ASCII
  - Issue the LF command



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## LF Command



- ❑ After issuing the LF command, if the data is saved, it is saved in the realigned state
- ❑ There is no command to reverse the alignment
- ❑ The command should not be executed twice against the data, as the blanks following the line feed character will be interpreted as part of the data for the next line

File Edit Edit\_Settings Menu Utilities Compilers Test Help

```
EDIT          PELEG.SRC(TEST8) - 01.10          Columns 00001 00072
Command ==>  _____ Scroll ==> HALE
***** ***** Top of Data *****
000001      ÉÁÈ /øÑ ã%/ÁÈ á?É ¼ÑÁÏ¼Ñ>ã%ÍÁÁ+/_Á
000002 /øÑã%/ÁÈ ¼¼/%Ñ/ÉÁÈ
000003 /øÑã%/ÁÈ ¼¼Ñ_ø?ÊÈÈ
000004 /øÑã%/ÁÈ ¼¼/ÈÈÈÑÁ
000005      Ñ>ã%ÍÁÁ ø/ÈÇ >/_Á
***** ***** Bottom of Data *****
```



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# ISPF Command Table Utility



- ❑ In z/OS V1R9, ISPF allows you to define commands in ISPF command tables with lowercase characters using the ISPF Command Table Utility
- ❑ A new option field is added to the Command Table Utility
  - Extended Command Entry panel (panel ISPUCMX) to allow mixed case data entered in the Action field to be saved in the command table as mixed case



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# Command Table Utility



```
File  Menu  Utilities  Help
_____ Command Table Utility _____
ISPUCMX Extended Command Entry
Command ===> _____

Make changes to the command and select Update to update the entry or
Cancel to ignore the changes.

Verb . . . HFSLIST_
Trunc . . . 4
Action . . SELECT_CMD(%OSHELL df -kP)
_____
_____
_____

Description List all currently mounted file systems
_____

Enter / to select option
/ Allow mixed-case in Action field

Update
F1=Help      F2=Split    F3=Exit
F9=Swap      F12=Cancel

Cancel
F7=Backward  F8=Forward
```



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