



PDSMAN – EZYEDIT TSO Command Shell

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3:15 PM - 4:15 PM

17410

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TSO Command Shell

- ISPF Command Shell (=6) turbocharged!
- Features
 - Save commands for future recall
 - Recall and change commands before executing
 - Select commands using point-and-shoot
 - Select commands by number
 - Select commands by label (1-16 characters)
 - Use long commands (252 characters)
 - Use multiple commands (mini-CLIST/REXXs)
 - Execute ISPEXEC functions
 - Trap and browse command output
 - Pass data from cursor location as parameter

Agenda

Topic	Description
Implementation	Activate TSO Command Shell
Display	Overview of the TSO Command Shell panel
Executing Commands	Demonstrate recalling/executing commands
Parameter	Execute commands via a parameter to TSO
Cursor Data	Pass data to the command using the cursor
REXX and ISPEXEC	Execute a REXX program and ISPEXEC commands
Copy / Replace	Copy and replace a slot
Notes	Items of interest
Links	PDSMAN and other slide decks
Conclusion	Final comments

Disclaimers

- May need to adjust the Adobe Reader zoom value to view text
- Commands and screens may be slightly different depending on the operating system's version and release level
 - These commands and screen prints were executed on
 - **PDSMAN/EZYEDIT V7.70** and **z/OS V2R1**
- Security may prevent access to panels or executing commands
- For more detailed information, please reference the following manual:
 - **CA PDSMAN PDS Library Management**
 - **EZYEDIT Users Guide**
 - **Chapter 14: EZYEDIT Command Shell**

TSO Command Shell Implementation

- If the PDSMAN datasets (panels, etc.) are defined to the TSO logon procedure, no further action is necessary to enable the TSO Command Shell
- By default, PDSMAN dynamically adds the commands below to the in-storage copy of the system command table
 - OTSO (old TSO) is a backup of IBM's TSO command
 - TSO executes the new EZYEDIT TSO Command Shell

TSO Command Shell Display

Overview

- The next few slides demonstrate how to invoke the TSO Command Shell and provide an overview of the display panel

- To invoke the TSO Command Shell, type in **TSO** (or **TSO ?**) from any primary command line and press **ENTER**

```
Menu  Utilities  Compilers  Options  Status  Help
-----
                                ISPF Primary Option Menu
Option ==> TSO

                                More:  +
0  Settings      Terminal and user parameters      User ID . : R2221
1  View          Display source data or listings    Time. . . : 07:05
2  Edit          Create or change source data       Terminal. : 3278
3  Utilities     Perform utility functions          Screen. . : 1
4  Foreground    Interactive language processing    Language. : ENGLISH
5  Batch         Submit job for language processing Appl ID . : ISR
6  Command       Enter TSO or Workstation commands  TSO logon : IKJTISO01
7  Dialog Test   Perform dialog testing             TSO prefix: R2221
10 SCLM          SW Configuration Library Manager   System ID : SDV26
11 Workplace     ISPF Object/Action Workplace       MVS acct. : TSODVP
D  Developer     Developers Workbench              Release . : ISPF 7.1
E  Ezyedit       ISPF Productivity Facility
S  System        System Support Software
SD SDSF          System Display and Search Facility
U1 User1         Personal or Team Software (1)
U2 User2         Personal or Team Software (2)

Enter X to Terminate or Z to Terminate/Logoff
```

TSO – Results

- Invokes the TSO Command Shell

```
----- Ezyedit Command Shell -----  
COMMAND ==>  
  
----- Temporary Command Area ----- COL 1 TO 75  
1  
2  
3  
4  
5  
6  
7  
8  
----- Permanent Command Area ----- ROW 9 OF 17  
9  
10  
11  
12  
13  
14  
15  
16  
17
```

Panel – Areas

- Primary Command Area
 - Enter commands, command numbers or command labels
 - Extends for three lines, for a total of 226 characters
 - Allows for entering long commands
 - Allows for entering multiple commands separated by the command delimiter character
- Temporary Command Area
 - Contains the last 8 recently executed commands
 - Treated as a push down list
 - The line length is 252 characters; press **F10/F11**
- Permanent Command Area
 - Up to 100 static lines
 - Scrollable; press **F7/F8**
 - The line length is 252 characters; press **F10/F11**

Panel – Areas

- Display of the Primary, Temporary and Permanent Command Areas

```
----- Ezyedit Command Shell -----  
COMMAND ==>  
                                     Primary Command Area  
----- Temporary Command Area ----- COL  1  TO  75  
1  
2  
3  
4                                     Temporary Command Area  
5  
6  
7  
8  
----- Permanent Command Area ----- ROW  9  OF  17  
9  
10  
11  
12  
13                                     Permanent Command Area  
14  
15  
16  
17
```

F10/F11

- The Temporary/Primary Command Areas can be horizontally scrolled by one half the width of the display using **F10** (LEFT) and **F11** (RIGHT)

```
----- Ezyedit Command Shell -----  
COMMAND ==>  
  
----- Temporary Command Area ----- COL 38 TO 112  
1  
2  
3  
4  
5  
6  
7  
8  
----- Permanent Command Area ----- ROW 9 OF 17  
9  
10  
11  
12  
13  
14  
15  
16  
17
```

F10/F11 – 252 Characters

- For a maximum of 252 characters

```
----- Ezyedit Command Shell -----  
COMMAND ==>  
  
----- Temporary Command Area ----- COL 178 TO 252  
1  
2  
3  
4  
5  
6  
7  
8  
----- Permanent Command Area ----- ROW 9 OF 17  
9  
10  
11  
12  
13  
14  
15  
16  
17
```

SET PERMCOUNT [###]

- To increase the number of Permanent Command slots from 9 to 100 (maximum), type in **SET PERMCOUNT 100** and press **ENTER**

```
----- Ezyedit Command Shell -----
COMMAND ==> SET PERMCOUNT 100

----- Temporary Command Area ----- COL 178 TO 252
1
2
3
4
5
6
7
8
----- Permanent Command Area ----- ROW 9 OF 17
9
10
11
12
13
14
15
16
17
```

SET PERMCOUNT [###] – PF7/8

- The number of Permanent Command slots will be increased to 100, press **F8** (DOWN) and **F7** (UP) to view all the slots

```
----- Ezyedit Command Shell -----  
COMMAND ==>  
  
----- Temporary Command Area ----- COL 1 TO 75  
1  
2  
3  
4  
5  
6  
7  
8  
----- Permanent Command Area -----  
9  
10  
11  
12  
13  
14  
15  
16  
17
```

ROW 9 OF 108

SET PERMCOUNT [###] – Results

- Paging down will display the other Permanent Command slots

```
----- Ezyedit Command Shell -----  
COMMAND ==>  
  
----- Temporary Command Area ----- COL 1 TO 75  
1  
2  
3  
4  
5  
6  
7  
8  
----- Permanent Command Area -----  
18  
19  
20  
21  
22  
23  
24  
25  
26  
ROW 18 OF 108
```

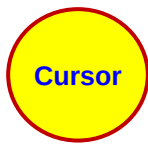
TSO Command Shell Executing Commands

Executing Commands

- The next few slides will demonstrate how to execute commands from within the TSO Command Shell using point-and-shoot, a number or a label

Point-and-Shoot

- To use point-and-shoot, position the cursor on the command row and press **ENTER**



The diagram illustrates the 'Point-and-Shoot' technique in the Ezyedit Command Shell. A yellow circle labeled 'Cursor' has a red line pointing to the command row in the 'Permanent Command Area'. The command row is highlighted with a green box and contains the text '9 LISTALC'. The shell interface shows a 'Temporary Command Area' with rows 1 through 8 and a 'Permanent Command Area' with rows 9 through 17. The command row (row 9) is the target for the point-and-shoot action.

```
----- Ezyedit Command Shell -----  
COMMAND ==>  
  
----- Temporary Command Area ----- COL 1 TO 75  
1  
2  
3  
4  
5  
6  
7  
8  
----- Permanent Command Area ----- ROW 9 OF 108  
9 LISTALC  
10  
11  
12  
13  
14  
15  
16  
17
```

Point-and-Shoot – Results

- Executes IBM's LISTALC command and returns to the TSO Command Shell

```
NULLFILE
TERMFILE
TERMFILE
R2221.ISPPROF
SYSAX.OP.WFP.OPSTLIB
SYSAX.OP.WFP.OPSEXEC
SYSAX.OP.WFP.OPSEXEC
SYSAX.OP.SET2.OPSEXEC
SYS1.HELP
SYSSS.ISPF.TSOHELP
PRDSS.R2221.ISPEXEC
SYSSS.ISPF.ISPEXEC
SYS1.ISPF.EXEC
SYS1.SBLSCLI0
SYSAX.PUBLIC.ISPEXEC
SYSAX.OP.SET2.REXX
PRDSS.R2221.ISPREXX
PRDSS.ISPF.ISPREXX
SYSSS.ISPF.MENU.ISPREXX
SYSSS.ISPF.ISPREXX
SYSSS.ISPF.EDIT.MACROS.ISPREXX
SYS1.ISRCLIB
SYS1.CMDPROC
***
```

Number

- To use the slot number, type in the slot number containing the command and press **ENTER**

```
----- Ezyedit Command Shell -----  
COMMAND ==> 9  
  
----- Temporary Command Area ----- COL 1 TO 75  
1  
2  
3  
4  
5  
6  
7  
8  
  
----- Permanent Command Area ----- ROW 9 OF 108  
9 LISTALC  
10  
11  
12  
13  
14  
15  
16  
17
```

Number – Results

- Executes IBM's LISTALC command and returns to the TSO Command Shell

```
NULLFILE
TERMFILE
TERMFILE
R2221.ISPPROF
SYSAX.OP.WFP.OPSTLIB
SYSAX.OP.WFP.OPSEEXEC
SYSAX.OP.WFP.OPSEEXEC
SYSAX.OP.SET2.OPSEEXEC
SYS1.HELP
SYSSS.ISPF.TSOHELP
PRDSS.R2221.ISPEXEC
SYSSS.ISPF.ISPEXEC
SYS1.ISPF.EXEC
SYS1.SBLSCLI0
SYSAX.PUBLIC.ISPEXEC
SYSAX.OP.SET2.REXX
PRDSS.R2221.ISPREXX
PRDSS.ISPF.ISPREXX
SYSSS.ISPF.MENU.ISPREXX
SYSSS.ISPF.ISPREXX
SYSSS.ISPF.EDIT.MACROS.ISPREXX
SYS1.ISRCLIB
SYS1.CMDPROC
***
```

Number [parameter]

- To execute a command passing it a parameter, but not update the slot, type in the slot number followed by the parameter and press **ENTER**

```
----- Ezyedit Command Shell -----  
COMMAND ==> 9 HISTORY  
  
----- Temporary Command Area ----- COL 1 TO 75  
1  
2  
3  
4  
5  
6  
7  
8  
  
----- Permanent Command Area ----- ROW 9 OF 108  
9 LISTALC  
10  
11  
12  
13  
14  
15  
16  
17
```


Number [parameter] – Results

- Executes IBM's LISTALC passing it the parameter of HISTORY

```
--DSORG--CREATED-----EXPIRES-----SECURITY
NULLFILE
TERMFILE
TERMFILE
R2221.ISPPROF
  PO      06/02/2014   00/00/0000   NONE
SYSAX.OP.WFP.OPSTLIB
  PO      08/22/2013   00/00/0000   NONE
SYSAX.OP.WFP.OPSEEXEC
  PO      08/22/2013   00/00/0000   NONE
SYSAX.OP.WFP.OPSEEXEC
  PO      08/22/2013   00/00/0000   NONE
SYSAX.OP.SET2.OPSEEXEC
  PO      04/14/2015   00/00/0000   NONE
SYS1.HELP
  PO      10/06/2014   00/00/0000   NONE
SYSSS.ISPF.TSOHELP
  PO      08/18/2009   00/00/0000   NONE
PRDSS.R2221.ISPEXEC
  PO      05/14/2013   00/00/0000   NONE
SYSSS.ISPF.ISPEXEC
  PO      12/08/2010   00/00/0000   NONE
SYS1.ISPF.EXEC
***
```

? [number]

- To recall a command to the primary command line, and modify it prior to execution, type in ? and the slot number and press ENTER

```
----- Ezyedit Command Shell -----
COMMAND ==> ?9

----- Temporary Command Area ----- COL 1 TO 75
1
2
3
4
5
6
7
8

----- Permanent Command Area ----- ROW 9 OF 108
9 LISTALC
10
11
12
13
14
15
16
17
```

? [number] – Results

- Recalls the command to the primary command line, allowing modifications to be made, prior to executing

```
----- Ezyedit Command Shell -----  
COMMAND ==> LISTALC  
  
----- Temporary Command Area ----- COL 1 TO 75  
1  
2  
3  
4  
5  
6  
7  
8  
  
----- Permanent Command Area ----- ROW 9 OF 108  
9 LISTALC  
10  
11  
12  
13  
14  
15  
16  
17
```

- Labels can be defined to entries in the Permanent Command Area
- Provides an alternative way to execute commands
 - Can use descriptive names to make commands easier to remember
- Syntax
 - Start in column 1
 - 1-16 characters in length
 - Delimited by a semi-colon (:))

Label

- To execute a command saved with a label, type in the label and press **ENTER**

```
----- Ezyedit Command Shell -----  
COMMAND ==> LA  
  
----- Temporary Command Area ----- COL 1 TO 75  
1  
2  
3  
4  
5  
6  
7  
8  
----- Permanent Command Area ----- ROW 9 OF 108  
9 LA: LISTALC  
10  
11  
12  
13  
14  
15  
16  
17
```

Label – Results

- Executes IBM's LISTALC command and returns to the TSO Command Shell

```
NULLFILE
TERMFILE
TERMFILE
R2221.ISPPROF
SYSAX.OP.WFP.OPSTLIB
SYSAX.OP.WFP.OPSEEXEC
SYSAX.OP.WFP.OPSEEXEC
SYSAX.OP.SET2.OPSEEXEC
SYS1.HELP
SYSSS.ISPF.TSOHELP
PRDSS.R2221.ISPEXEC
SYSSS.ISPF.ISPEXEC
SYS1.ISPF.EXEC
SYS1.SBLSCLI0
SYSAX.PUBLIC.ISPEXEC
SYSAX.OP.SET2.REXX
PRDSS.R2221.ISPREXX
PRDSS.ISPF.ISPREXX
SYSSS.ISPF.MENU.ISPREXX
SYSSS.ISPF.ISPREXX
SYSSS.ISPF.EDIT.MACROS.ISPREXX
SYS1.ISRCLIB
SYS1.CMDPROC
***
```

Label [parameter]

- To pass a parameter to a command using a label, type in the label followed by the parameter and press **ENTER**

```
----- Ezyedit Command Shell -----  
COMMAND ==> LA HISTORY  
  
----- Temporary Command Area ----- COL 1 TO 75  
1  
2  
3  
4  
5  
6  
7  
8  
  
----- Permanent Command Area ----- ROW 9 OF 108  
9 LA: LISTALC  
10  
11  
12  
13  
14  
15  
16  
17
```

Label [parameter] – Results

- Executes IBM's LISTALC passing it the parameter of HISTORY

```
--DSORG--CREATED-----EXPIRES-----SECURITY
NULLFILE
TERMFILE
TERMFILE
R2221.ISPPROF
  PO      06/02/2014   00/00/0000   NONE
SYSAX.OP.WFP.OPSTLIB
  PO      08/22/2013   00/00/0000   NONE
SYSAX.OP.WFP.OPSEEXEC
  PO      08/22/2013   00/00/0000   NONE
SYSAX.OP.WFP.OPSEEXEC
  PO      08/22/2013   00/00/0000   NONE
SYSAX.OP.SET2.OPSEEXEC
  PO      04/14/2015   00/00/0000   NONE
SYS1.HELP
  PO      10/06/2014   00/00/0000   NONE
SYSSS.ISPF.TSOHELP
  PO      08/18/2009   00/00/0000   NONE
PRDSS.R2221.ISPEXEC
  PO      05/14/2013   00/00/0000   NONE
SYSSS.ISPF.ISPEXEC
  PO      12/08/2010   00/00/0000   NONE
SYS1.ISPF.EXEC
***
```


? [label]

- To recall a command to the primary command line, and modify it prior to execution, type in ? followed by the label and press ENTER

```
----- Ezyedit Command Shell -----
COMMAND ==> ?LA

----- Temporary Command Area ----- COL 1 TO 75
1
2
3
4
5
6
7
8

----- Permanent Command Area ----- ROW 9 OF 108
9 LA: LISTALC
10
11
12
13
14
15
16
17
```

? [label] – Results

- Recalls the command to the primary command line, allowing modifications to be made, prior to executing

```
----- Ezyedit Command Shell -----  
COMMAND ==> LISTALC  
  
----- Temporary Command Area ----- COL 1 TO 75  
1  
2  
3  
4  
5  
6  
7  
8  
  
----- Permanent Command Area ----- ROW 9 OF 108  
9 LA: LISTALC  
10  
11  
12  
13  
14  
15  
16  
17
```

TSO Command Shell Parameter

TSO [parameter]

- The next few slides will demonstrate how to execute commands by passing the slot number or a label as a parameter to the TSO Command Shell
- This method will execute the command, but not display the TSO Command Shell unless the command is to be modified prior to execution
- Note
 - In the Permanent Command Area, define slot number 9 as **LA: LISTALC**

Define LISTALC

- Define IBM's LISTALC command to a Permanent slot with the label **LA** and exit out of the TSO Command Shell by pressing **F3** (END)

```
----- Ezyedit Command Shell -----  
COMMAND ==>  
  
----- Temporary Command Area ----- COL 1 TO 75  
1  
2  
3  
4  
5  
6  
7  
8  
  
----- Permanent Command Area ----- ROW 9 OF 108  
9 LA: LISTALC  
10  
11  
12  
13  
14  
15  
16  
17
```

TSO [number]

- To bypass displaying the TSO Command Shell and execute a command using the slot number, type in **TSO 9** and press **ENTER**

```
Menu  Utilities  Compilers  Options  Status  Help
-----
Option ==> TSO 9

                                ISPF Primary Option Menu
                                More:      +

0  Settings      Terminal and user parameters      User ID . : R2221
1  View          Display source data or listings    Time. . . : 12:49
2  Edit          Create or change source data       Terminal. : 3278
3  Utilities     Perform utility functions          Screen. . : 1
4  Foreground    Interactive language processing    Language. : ENGLISH
5  Batch         Submit job for language processing  Appl ID . : ISR
6  Command       Enter TSO or Workstation commands  TSO logon : IKJTSO01
7  Dialog Test   Perform dialog testing             TSO prefix: R2221
10 SCLM          SW Configuration Library Manager    System ID : SDV21
11 Workplace     ISPF Object/Action Workplace       MVS acct. : TSOPRD
D  Developer     Developers Workbench               Release . : ISPF 7.1
E  Ezyedit       ISPF Productivity Facility
S  System        System Support Software
SD SDSF          System Display and Search Facility
U1 User1         Personal or Team Software (1)
U2 User2         Personal or Team Software (2)

Enter X to Terminate or Z to Terminate/Logoff
```

TSO [number] – Results

- Executes IBM's LISTALC command and does not display the TSO Command Shell

```
NULLFILE
TERMFILE
TERMFILE
R2221.ISPPROF
SYSAX.OP.WFP.OPSTLIB
SYSAX.OP.WFP.OPSEEXEC
SYSAX.OP.WFP.OPSEEXEC
SYSAX.OP.SET2.OPSEEXEC
SYS1.HELP
SYSSS.ISPF.TSOHELP
PRDSS.R2221.ISPEXEC
SYSSS.ISPF.ISPEXEC
SYS1.ISPF.EXEC
SYS1.SBLSCLI0
SYSAX.PUBLIC.ISPEXEC
SYSAX.OP.SET2.REXX
PRDSS.R2221.ISPREXX
PRDSS.ISPF.ISPREXX
SYSSS.ISPF.MENU.ISPREXX
SYSSS.ISPF.ISPREXX
SYSSS.ISPF.EDIT.MACROS.ISPREXX
SYS1.ISRCLIB
SYS1.CMDPROC
***
```

TSO [number] [parameter]

- To execute a command and pass it a parameter using a slot number, type in **TSO 9 HISTORY** and press **ENTER**

```
Menu  Utilities  Compilers  Options  Status  Help
-----
Option ==> TSO 9 HISTORY

                                More:  +
0  Settings      Terminal and user parameters      User ID . : R2221
1  View          Display source data or listings    Time. . . : 12:49
2  Edit          Create or change source data       Terminal. : 3278
3  Utilities     Perform utility functions          Screen. . : 1
4  Foreground    Interactive language processing    Language. : ENGLISH
5  Batch         Submit job for language processing Appl ID . : ISR
6  Command       Enter TSO or Workstation commands TSO logon : IKJTSO01
7  Dialog Test   Perform dialog testing             TSO prefix: R2221
10 SCLM          SW Configuration Library Manager   System ID : SDV21
11 Workplace     ISPF Object/Action Workplace       MVS acct. : TSOPRD
D  Developer     Developers Workbench              Release . : ISPF 7.1
E  Ezyedit       ISPF Productivity Facility
S  System        System Support Software
SD SDSF         System Display and Search Facility
U1 User1        Personal or Team Software (1)
U2 User2        Personal or Team Software (2)

Enter X to Terminate or Z to Terminate/Logoff
```


TSO [number] [parameter] – Results

- Executes IBM's LISTALC passing it the parameter of HISTORY

```
--DSORG--CREATED-----EXPIRES-----SECURITY
NULLFILE
TERMFILE
TERMFILE
R2221.ISPPROF
  PO      06/02/2014   00/00/0000   NONE
SYSAX.OP.WFP.OPSTLIB
  PO      08/22/2013   00/00/0000   NONE
SYSAX.OP.WFP.OPSEEXEC
  PO      08/22/2013   00/00/0000   NONE
SYSAX.OP.WFP.OPSEEXEC
  PO      08/22/2013   00/00/0000   NONE
SYSAX.OP.SET2.OPSEEXEC
  PO      04/14/2015   00/00/0000   NONE
SYS1.HELP
  PO      10/06/2014   00/00/0000   NONE
SYSSS.ISPF.TSOHELP
  PO      08/18/2009   00/00/0000   NONE
PRDSS.R2221.ISPEXEC
  PO      05/14/2013   00/00/0000   NONE
SYSSS.ISPF.ISPEXEC
  PO      12/08/2010   00/00/0000   NONE
SYS1.ISPF.EXEC
***
```

TSO ?[number]

- To recall a command to the primary command line of the TSO Command Shell using a slot number, type in **TSO ?9** and press **ENTER**

```
Menu  Utilities  Compilers  Options  Status  Help
-----
                                ISPF Primary Option Menu
Option ==> TSO ?9

                                More:      +
0  Settings      Terminal and user parameters      User ID . : R2221
1  View          Display source data or listings    Time. . . : 12:49
2  Edit          Create or change source data       Terminal. : 3278
3  Utilities     Perform utility functions          Screen. . : 1
4  Foreground    Interactive language processing    Language. : ENGLISH
5  Batch         Submit job for language processing  Appl ID . : ISR
6  Command       Enter TSO or Workstation commands  TSO logon : IKJT001
7  Dialog Test   Perform dialog testing             TSO prefix: R2221
10 SCLM          SW Configuration Library Manager   System ID : SDV21
11 Workplace     ISPF Object/Action Workplace       MVS acct. : TSOPRD
D  Developer     Developers Workbench              Release . : ISPF 7.1
E  Ezyedit       ISPF Productivity Facility
S  System        System Support Software
SD SDSF          System Display and Search Facility
U1 User1         Personal or Team Software (1)
U2 User2         Personal or Team Software (2)

Enter X to Terminate or Z to Terminate/Logoff
```

TSO ?[number] – Results

- Invokes the TSO Command Shell and places the command associated with the slot number on the primary command line

```
----- Ezyedit Command Shell -----
COMMAND ==> LISTALC

----- Temporary Command Area ----- COL 1 TO 75
1 LISTALC HISTORY
2
3
4
5
6
7
8
----- Permanent Command Area ----- ROW 9 OF 108
9 LA: LISTALC
10
11
12
13
14
15
16
17
```

TSO [label]

- To execute a command using a label, type in **TSO LA** and press **ENTER**

```
Menu  Utilities  Compilers  Options  Status  Help
-----
                                ISPF Primary Option Menu
Option ==> TSO LA

                                More:      +
0  Settings      Terminal and user parameters      User ID . : R2221
1  View          Display source data or listings    Time. . . : 12:49
2  Edit          Create or change source data       Terminal. : 3278
3  Utilities     Perform utility functions          Screen. . : 1
4  Foreground    Interactive language processing    Language. : ENGLISH
5  Batch         Submit job for language processing  Appl ID . : ISR
6  Command       Enter TSO or Workstation commands  TSO logon : IKJTSO01
7  Dialog Test   Perform dialog testing             TSO prefix: R2221
10 SCLM          SW Configuration Library Manager    System ID : SDV21
11 Workplace     ISPF Object/Action Workplace        MVS acct. : TSOPRD
D  Developer     Developers Workbench               Release . : ISPF 7.1
E  Ezyedit       ISPF Productivity Facility
S  System        System Support Software
SD SDSF          System Display and Search Facility
U1 User1         Personal or Team Software (1)
U2 User2         Personal or Team Software (2)

Enter X to Terminate or Z to Terminate/Logoff
```

TSO [label] – Results

- Executed IBM's LISTALC command and does not display the TSO Command Shell

```
NULLFILE
TERMFILE
TERMFILE
R2221.ISPPROF
SYSAX.OP.WFP.OPSTLIB
SYSAX.OP.WFP.OPSEXEC
SYSAX.OP.WFP.OPSEXEC
SYSAX.OP.SET2.OPSEXEC
SYS1.HELP
SYSSS.ISPF.TSOHELP
PRDSS.R2221.ISPEXEC
SYSSS.ISPF.ISPEXEC
SYS1.ISPF.EXEC
SYS1.SBLSCLI0
SYSAX.PUBLIC.ISPEXEC
SYSAX.OP.SET2.REXX
PRDSS.R2221.ISPREXX
PRDSS.ISPF.ISPREXX
SYSSS.ISPF.MENU.ISPREXX
SYSSS.ISPF.ISPREXX
SYSSS.ISPF.EDIT.MACROS.ISPREXX
SYS1.ISRCLIB
SYS1.CMDPROC
***
```

TSO [label] [parameter]

- To execute a command and pass it a parameter using a label, type in **TSO LA HISTORY** and press **ENTER**

```
Menu  Utilities  Compilers  Options  Status  Help
-----
                                ISPF Primary Option Menu
Option ==> TSO LA HISTORY

                                More:      +
0  Settings      Terminal and user parameters      User ID . : R2221
1  View          Display source data or listings    Time. . . : 12:49
2  Edit          Create or change source data       Terminal. : 3278
3  Utilities     Perform utility functions          Screen. . : 1
4  Foreground    Interactive language processing    Language. : ENGLISH
5  Batch         Submit job for language processing  Appl ID . : ISR
6  Command       Enter TSO or Workstation commands  TSO logon : IKJTSO01
7  Dialog Test   Perform dialog testing             TSO prefix: R2221
10 SCLM          SW Configuration Library Manager    System ID : SDV21
11 Workplace     ISPF Object/Action Workplace       MVS acct. : TSOPRD
D  Developer     Developers Workbench               Release . : ISPF 7.1
E  Ezyedit       ISPF Productivity Facility
S  System        System Support Software
SD SDSF          System Display and Search Facility
U1 User1         Personal or Team Software (1)
U2 User2         Personal or Team Software (2)

Enter X to Terminate or Z to Terminate/Logoff
```

TSO [label] [parameter] – Results

- Executes IBM's LISTALC passing it the parameter of HISTORY

```
--DSORG--CREATED-----EXPIRES-----SECURITY
NULLFILE
TERMFILE
TERMFILE
R2221.ISPPROF
  PO      06/02/2014   00/00/0000   NONE
SYSAX.OP.WFP.OPSTLIB
  PO      08/22/2013   00/00/0000   NONE
SYSAX.OP.WFP.OPSEEXEC
  PO      08/22/2013   00/00/0000   NONE
SYSAX.OP.WFP.OPSEEXEC
  PO      08/22/2013   00/00/0000   NONE
SYSAX.OP.SET2.OPSEEXEC
  PO      04/14/2015   00/00/0000   NONE
SYS1.HELP
  PO      10/06/2014   00/00/0000   NONE
SYSSS.ISPF.TSOHELP
  PO      08/18/2009   00/00/0000   NONE
PRDSS.R2221.ISPEXEC
  PO      05/14/2013   00/00/0000   NONE
SYSSS.ISPF.ISPEXEC
  PO      12/08/2010   00/00/0000   NONE
SYS1.ISPF.EXEC
***
```

TSO ?[label]

- To recall a command to the primary command line using a label, type in **TSO ?LA** and press **ENTER**

```
Menu  Utilities  Compilers  Options  Status  Help
-----
                                ISPF Primary Option Menu
Option ==> TSO ?LA

                                More:  +
0  Settings      Terminal and user parameters      User ID . : R2221
1  View          Display source data or listings    Time. . . : 12:49
2  Edit          Create or change source data       Terminal. : 3278
3  Utilities     Perform utility functions          Screen. . : 1
4  Foreground    Interactive language processing    Language. : ENGLISH
5  Batch         Submit job for language processing Appl ID . : ISR
6  Command       Enter TSO or Workstation commands TSO logon : IKJTSO01
7  Dialog Test   Perform dialog testing             TSO prefix: R2221
10 SCLM          SW Configuration Library Manager   System ID : SDV21
11 Workplace     ISPF Object/Action Workplace       MVS acct. : TSOPRD
D  Developer     Developers Workbench              Release . : ISPF 7.1
E  Ezyedit       ISPF Productivity Facility
S  System        System Support Software
SD SDSF          System Display and Search Facility
U1 User1         Personal or Team Software (1)
U2 User2         Personal or Team Software (2)

Enter X to Terminate or Z to Terminate/Logoff
```


TSO ?[label] – Results

- Invokes the TSO Command Shell and places the command associated with the label on the primary command line

```
----- Ezyedit Command Shell -----  
COMMAND ==> LISTALC  
  
----- Temporary Command Area ----- COL 1 TO 75  
1 LISTALC HISTORY  
2  
3  
4  
5  
6  
7  
8  
----- Permanent Command Area ----- ROW 9 OF 108  
9 LA: LISTALC  
10  
11  
12  
13  
14  
15  
16  
17
```

TSO Command Shell Cursor Data

Cursor Data

- The TSO Command Shell allows passing data from the cursor position directly to a command
 - Avoids re-keying the information, saving typing
- Cursor data can be inserted into commands by a forward slash (/) in the command syntax
- Example:
 - LISTCAT ENTRY('/') ALL
- Note
 - The cursor data special character (/) can be changed using the **SET CSRDATA x** command

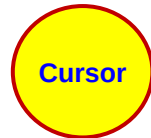
Cursor Data – Define Statement

- Define IBM's LISTCAT statement to a Permanent slot using the backslash (/) where the dataset name would normally be defined

```
----- Ezyedit Command Shell -----  
COMMAND ==>  
  
----- Temporary Command Area ----- COL 1 TO 75  
1  
2  
3  
4  
5  
6  
7  
8  
----- Permanent Command Area ----- ROW 9 OF 108  
9 LC: LISTCAT ENTRY ('/') ALL  
10  
11  
12  
13  
14  
15  
16  
17
```

TSO [number]

- To execute the command by slot from the EZYEDIT Dataset List screen, type in **TSO 9**, place the cursor on the DSN and press **ENTER**



```
EZYEDIT Dataset List TSTSS.R2221.VSAM* ----- Row 1 of 6
COMMAND ==> TSO 9                                SCROLL ==> CSR
Enter: S=Select D=Delete F=Space-Rel R=Rename I=Vtoc-Info Z=Compress F1=Help
Command   Name                                     Message      Volume
-----
TSTSS.R2221.VSAM.FILE3                            *VSAM*
TSTSS.R2221.VSAM.FILE3.DATA                        DMDE30+
TSTSS.R2221.VSAM.FILE3.INDEX                      DMDE30+
TSTSS.R2221.VSAM.FILE4                             *VSAM*
TSTSS.R2221.VSAM.FILE4.DATA                        DMD211
TSTSS.R2221.VSAM.FILE4.INDEX                      DMD211
***** Bottom of Data *****
```

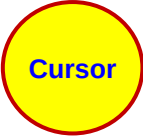
TSO [number] – Results

- Executes IBM's LISTCAT passing it the dataset name

```
CLUSTER ----- TSTSS.R2221.VSAM.FILE3
IN-CAT --- USERCAT.TEST41
HISTORY
  DATASET-OWNER----- (NULL)      CREATION-----2012.243
  RELEASE-----2          EXPIRATION-----0000.000
SMSDATA
  STORAGECLASS ---STANDARD      MANAGEMENTCLASS-STANDARD
  DATACLASS -----VSAMDEF      LBACKUP ---0000.000.0000
  CA-RECLAIM----- (YES)
  EATTR----- (NULL)
  BWO STATUS-----00000000      BWO TIMESTAMP---00000 00:00:00.0
  BWO----- (NULL)
RLSDATA
  LOG ----- (NULL)      RECOVERY REQUIRED -- (NO)      FRLOG -----
---- (NULL)
  VSAM QUIESCED ----- (NO)      RLS IN USE ----- (NO)      LOGREPLICATE--
----- (NO)
  LOGSTREAMID----- (NULL)
  RECOVERY TIMESTAMP LOCAL-----X'0000000000000000'
  RECOVERY TIMESTAMP GMT-----X'0000000000000000'
  PROTECTION-PSWD----- (NULL)      RACF----- (NO)
ASSOCIATIONS
  DATA-----TSTSS.R2221.VSAM.FILE3.DATA
***
```

TSO [label]

- To execute the command by label from IBM's ISPF 3.4 Dataset List, type in **TSO LC**, place the cursor on the dataset and press **ENTER**



```
Menu Options View Utilities Compilers Help
-----
DSLIST - Data Sets Matching TSTSS.R2221.VSAM                      Row 1 of 6
Command ==> TSO LC                                           Scroll ==> CSR

Command - Enter "/" to select action                                Message                                Volume
-----
TSTSS.R2221.VSAM.FILE3                                         *VSAM*
TSTSS.R2221.VSAM.FILE3.DATA                                     DMDE30+
TSTSS.R2221.VSAM.FILE3.INDEX                                   DMDE30+
TSTSS.R2221.VSAM.FILE4                                         *VSAM*
TSTSS.R2221.VSAM.FILE4.DATA                                    DMD211
TSTSS.R2221.VSAM.FILE4.INDEX                                    DMD211
***** End of Data Set list *****
```

TSO [label] – Results

- Executes IBM's LISTCAT passing it the dataset name

```
CLUSTER ----- TSTSS.R2221.VSAM.FILE3
IN-CAT --- USERCAT.TEST41
HISTORY
  DATASET-OWNER----- (NULL)      CREATION-----2012.243
  RELEASE-----2      EXPIRATION-----0000.000
SMSDATA
  STORAGECLASS ---STANDARD      MANAGEMENTCLASS-STANDARD
  DATACLASS -----VSAMDEF      LBACKUP ---0000.000.0000
  CA-RECLAIM----- (YES)
  EATTR----- (NULL)
  BWO STATUS-----00000000      BWO TIMESTAMP---00000 00:00:00.0
  BWO----- (NULL)
RLSDATA
  LOG ----- (NULL)      RECOVERY REQUIRED -- (NO)      FRLOG -----
---- (NULL)
  VSAM QUIESCED ----- (NO)      RLS IN USE ----- (NO)      LOGREPLICATE--
----- (NO)
  LOGSTREAMID----- (NULL)
  RECOVERY TIMESTAMP LOCAL-----X'0000000000000000'
  RECOVERY TIMESTAMP GMT-----X'0000000000000000'
  PROTECTION-PSWD----- (NULL)      RACF----- (NO)
ASSOCIATIONS
  DATA-----TSTSS.R2221.VSAM.FILE3.DATA
***
```


TSO Command Shell REXX and ISPEXEC

Overview

- The next few slides demonstrate how to define/execute an in-house written REXX program and ISPEXEC commands in the TSO Command Shell

- Define commands to Permanent slots as shown below

```

----- Ezyedit Command Shell -----
COMMAND ==>

----- Temporary Command Area ----- COL 1 TO 75
1
2
3
4
5
6
7
8
----- Permanent Command Area ----- ROW 9 OF 108
9 SYSID /* DISPLAY SYSTEM INFO. (IN-HOUSE REXX) */
10 BR: ISPEXEC BROWSE DATASET('/') /* LABEL: BROWSE DATASET USING CURSOR */
11 ED: ISPEXEC EDIT DATASET('/') /* LABEL: EDIT DATASET USING CURSOR */
12
13
14
15
16
17

```

REXX Program

- To execute the in-house written REXX program (SYSID) assigned to entry number 9, type in **TSO 9** and press **ENTER**

```
Menu  Utilities  Compilers  Options  Status  Help
-----
                                ISPF Primary Option Menu
Option ==> TSO 9

                                More:      +
0  Settings      Terminal and user parameters      User ID . : R2221
1  View          Display source data or listings    Time. . . : 07:05
2  Edit          Create or change source data       Terminal. : 3278
3  Utilities     Perform utility functions          Screen. . : 1
4  Foreground    Interactive language processing    Language. : ENGLISH
5  Batch         Submit job for language processing  Appl ID . : ISR
6  Command       Enter TSO or Workstation commands  TSO logon : IKJTSO01
7  Dialog Test   Perform dialog testing             TSO prefix: R2221
10 SCLM          SW Configuration Library Manager    System ID : SDV26
11 Workplace     ISPF Object/Action Workplace        MVS acct. : TSODVP
D  Developer     Developers Workbench               Release . : ISPF 7.1
E  Ezyedit       ISPF Productivity Facility
S  System        System Support Software
SD SDSF          System Display and Search Facility
U1 User1         Personal or Team Software (1)
U2 User2         Personal or Team Software (2)

Enter X to Terminate or Z to Terminate/Logoff
```

REXX Program – Results

- Executes the **SYSID** REXX program displaying the system information

```
----- ( WELLS FARGO ) -----  
      LPAR = SDV26          SYSPLEX = TSTPLEX          LOCATION = TMP  
-----  
      ZOS VER  = 1.12          SYSRES-1 = SDRSX1          SYSRES-2 = SDRSX2  
      LAST IPL = SUNDAY        4 Nov 2012 (12.309)          00:03:06  
-----  
***
```

- Type in **TSO BR**, place the cursor on the dataset name and press **ENTER**

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
-----
EDIT          TSTSS.R2221.JCL.CNTL1(TEST1) - 01.03          Columns 00001 00072
Command ==> TSO BR          Scroll ==> CSR
***** ***** Top of Data *****
000001 //@SSTEST1 JOB (SST), 'KOSS',MSGCLASS=T,CLASS=R,NOTIFY=&SYSUID
000002 /*-----*
000003 /*  PURPOSE:  EXECUTE IEFBR14
000004 /*-----*
000005 //IEFBR14 EXEC PGM=IEFBR14
000006 //SHR      DD  DISP=SHR,DSN=TSTSS.R2221.JCL.CNTL1
***** ***** Bottom of Data *****
```

ISPEXEC – Results

- Executes **ISPEXEC BROWSE DATASET('/')** defined to the label **BR**

Menu Functions Utilities Help						
BROWSE TSTSS.R2221.JCL.CNTL1				Row 00001 of 00018		
Command ==>				Scroll ==> CSR		
Name	Prompt	Size	Created	Changed	ID	
. ASM		2034	2010/08/07	2012/02/09 07:49:50	R2221	
. ASMB		2034	2011/05/11	2011/05/11 03:00:40	R2221	
. COBOL		1516	2011/05/02	2012/03/22 12:16:00	R2221	
. DATA01		19	2011/05/11	2011/05/11 05:08:06	R2221	
. DATA02		23	2011/05/02	2011/05/02 11:40:28	R2221	
. FIXDISP		43	2011/05/02	2011/05/02 07:48:34	R2221	
. FIXJCL		16	2012/02/09	2012/02/09 07:51:42	R2221	
. IDCAMS		1	2011/04/05	2011/08/31 10:31:55	R2221	
. JCLPROC		7	2011/04/19	2011/05/02 07:49:00	R2221	
. JCL010		16	2010/09/08	2011/05/02 12:13:59	R2221	
. JCL020		7	2011/05/02	2011/05/02 08:40:25	R2221	
. JCL030		13	2011/05/02	2011/05/02 07:45:03	R2221	
. JCL060		16	2011/05/03	2011/05/03 13:51:25	R2221	
. REXX		21	2011/05/02	2011/05/02 08:47:31	R2221	
. TEST1		10	2012/10/29	2012/10/29 04:09:35	R2221	
. TEST2		10	2012/10/29	2012/10/29 04:09:05	R2221	
. TEST3		15	2012/10/29	2012/10/29 04:10:52	R2221	
. TEST4		10	2012/10/29	2012/10/29 05:00:16	R2221	
End						

TSO Command Shell Copy / Replace

Overview

- The next few slides will demonstrate how to copy or replace an entry by typing its number in the slot
 - Eliminates having to retype or COPY/PASTE the entry

Copy

- To copy an existing entry to another slot, type in the slot number and press **ENTER**

```
----- Ezyedit Command Shell -----  
COMMAND ==>  
  
----- Temporary Command Area ----- COL 1 TO 75  
1  
2  
3  
4  
5  
6  
7  
8  
  
----- Permanent Command Area ----- ROW 9 OF 108  
9 LC: LISTC ENTRY ('/') ALL  
10  
11 9  
12  
13  
14  
15  
16  
17
```

Copy – Results

- Reproduces the entry, saving typing

```
----- Ezyedit Command Shell -----  
COMMAND ==>  
  
----- Temporary Command Area ----- COL 1 TO 75  
1  
2  
3  
4  
5  
6  
7  
8  
  
----- Permanent Command Area ----- ROW 9 OF 108  
9 LC: LISTC ENTRY(' / ') ALL  
10  
11 LC: LISTC ENTRY(' / ') ALL  
12  
13  
14  
15  
16  
17
```

Replace

- To replace an entry, type in the slot number and press **ENTER**

```
----- Ezyedit Command Shell -----  
COMMAND ==>  
  
----- Temporary Command Area ----- COL 1 TO 75  
1  
2  
3  
4  
5  
6  
7  
8  
  
----- Permanent Command Area ----- ROW 9 OF 108  
9 LC: LISTC ENTRY ('/') ALL  
10  
11 9A: LISTALC HISTORY  
12  
13  
14  
15  
16  
17
```

Replace – Results

- Replaces the entry

```
----- Ezyedit Command Shell -----  
COMMAND ==>  
  
----- Temporary Command Area ----- COL 1 TO 75  
1  
2  
3  
4  
5  
6  
7  
8  
  
----- Permanent Command Area ----- ROW 9 OF 108  
9 LC: LISTC ENTRY('/') ALL  
10  
11 LC: LISTC ENTRY('/') ALL  
12  
13  
14  
15  
16  
17
```

Notes

Items of Interest

- The maximum length of commands is 252 characters
- Saved commands are automatically converted to upper case
- Comments can be included by specifying a slash-asterisk comment indicator (/*) after the entry and before the comment text
- Command numbers or labels embedded in a saved command are not recognized

TSO Command Shell Commands

Overview

- The next few slides describe the following:
 - Special characters and how to change them
 - Trap commands
 - Other commands

Special Characters

Character	Description	Command
&	Command repeat character	SET REPEAT x
?	Command recall character	SET RECALL x
-	Trap and browse character	SET CMDTRAP x
/	Cursor data character	SET CSRDATA x
:	Command label delimiter	SET CMDLBL x
*	Execute outside ISPF character	SET USETSR x
\	Non-ISPF command delimiter	SET CMDDEL x
;	Command delimiter is the same as ISPF's	SET CMDDEL ISPF

Trap Commands

Command	Description
QUERY TRAP	Displays if the command trap is enabled
QUERY TRAPDD	Displays the current command trap DDname
SET TRAPDD xxxxxx	Alters the command trap DDname
SET TRAP ON	Enables the command trap for all commands
SET TRAP OFF	Disables the command trap
TRAP BROWSE	Browse the output trapped (SET TRAP ON)

Other Commands

Command	Description
SET PERMCOUNT nnn	Number of entries in the permanent command area (max 100)
QUERY CHARACTERS	Displays all special characters currently in use
MAXRC nn	Set the maximum return code allowable

Links

Links
PDSMAN – EZYEDIT – Introduction
PDSMAN – EZYEDIT – Selection Panel
PDSMAN – EZYEDIT – Dataset List
PDSMAN – EZYEDIT – Member List
PDSMAN – EZYEDIT – SPACE
PDSMAN – EZYEDIT – TSO Command Shell
PDSMAN – Introduction
PDSMAN – Member Versions
PDSMAN – FASTCOPY
PDSMAN – PDSEASY
PDSMAN – PDSM18
PDSMAN – PDSMURPT

Links
<u>ISPF – An Experienced User Shares His Secrets</u>
<u>ISPF – Workstation Agent (WSA)</u>
<u>OPSMVS – OPSLOG Overview</u>
<u>REXX and ISPF – Troubleshooting</u>
<u>SDSF – Beyond the Basics</u>

Conclusion

Final Comments

- PDSMAN provides a wide range of solutions to PDS and PDSE issues users face on a daily basis
 - Saves time and increases productivity
- Every PDSMAN/EZYEDIT release introduces new features and commands which are easy to understand, implement and use
- The tutorials and manuals are exceptional
 - Easy to read and understand
 - Suggest downloading the manuals periodically to obtain new updates

Thank You!

- A special thank you to the CA PDSMAN team for their technical input and assistance
- Suggest checking out the CA PDSMAN community web site at:
[CA – Mainframe Community – PDSMAN](#)
Or
[CA – Mainframe Community](#)
Select ‘**CA PDSMAN PDS Library Management**’ from the ‘**Products Covered**’ section located on the left hand side of the web page



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