

Introduction to TSO



Gerhard Adam

What Will We Learn?



An overview of the TSO/ISPF online environment.

TSO Overview

- Real-time interface to z/OS
- Basic commands to interact with z/OS
- Runs ISPF as a menu-driven system
- Runs script languages [CLIST and REXX]

TSO/ISPF Usage

- Editing facility
- Utility functions
- Interface to other products
- Development platform

Logging In To TSO

z/OS Z112S Level 1103

IP Address =

VTAM Terminal =

Application Developer System

```
          // 0000000 SSSSS
         // 00 00 SS
zzzzzz // 00 00 SS
      zz // 00 00 SSSS
     zz // 00 00  SS
    zz  // 00 00  SS
zzzzzz // 0000000 SSSS
```

System Customization - ADCD.Z112S.*

==> Enter "LOGON" followed by the TSO userid. Example "LOGON IBMUSER" or

==> Enter L followed by the APPLID

==> Examples: "L TSO", "L CICSTS32", "L IMS3270", "L CICSTS41"

LOGON Screen

```
File Edit View Tools Help
Clear Erase PA1 PA2 PA3 EraseF

----- TSO/E LOGON -----

Enter LOGON parameters below:                                RACF LOGON parameters:

Userid    ===> USER01

Password  ===> █                                           New Password ===>

Procedure ===> ISPFPROC                                    Group Ident  ===>

Acct Nmbr ===> ACCT#

Size      ===> 8192

Perform   ===>

Command   ===> ispf

Enter an 'S' before each option desired below:
      -Nomail          -Nonotice          S -Reconnect          -OIDcard

PF1/PF13 ==> Help    PF3/PF15 ==> Logoff    PA1 ==> Attention    PA2 ==> Reshow
You may request specific help information by entering a '?' in any entry field
```

ISPF Menu

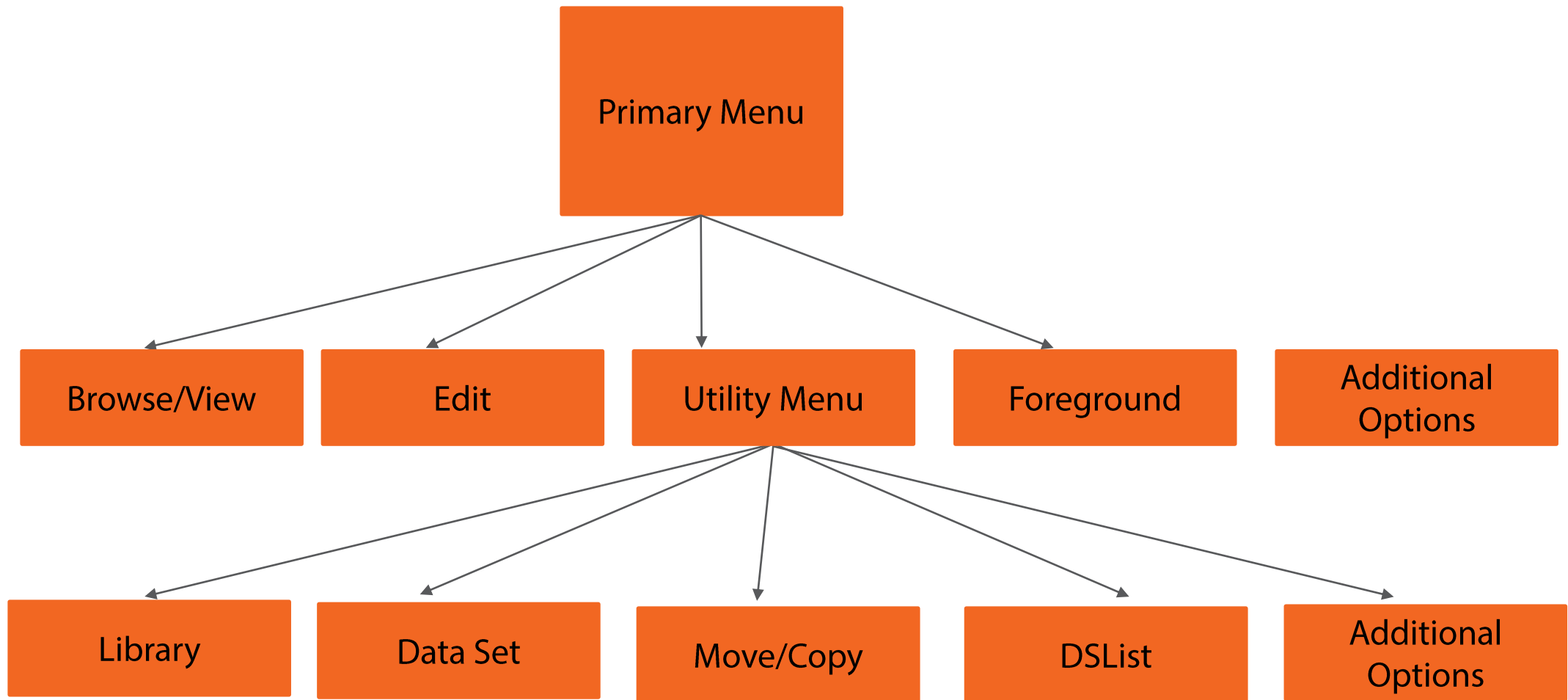
```
Menu  Utilities  Compilers  Options  Status  Help
-----
                                ISPF Primary Option Menu
Option ==>
0  Settings      Terminal and user parameters      User ID . : USER01
1  View          Display source data or listings   Time. . . : 06:22
2  Edit          Create or change 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 : ISPFPROC
7  Dialog Test  Perform dialog testing            TSO prefix: USER01
8  LM Facility  Library administrator functions   System ID : SYSA
9  IBM Products IBM program development products  MVS acct. : ACCT#
10 SCLM         SW Configuration Library Manager  Release . : ISPF 5.0
11 Workplace   ISPF Object/Action Workplace
M  More        Additional IBM Products
S  SDSF        Spool Display and Search Facility

Enter X to Terminate using log/list defaults
```

ISPF

- Session settings
- Utility functions
- Browse/Edit functions
- Interface to other products/components utilizing ISPF

ISPF Panel Hierarchy



ISPF Basic Navigation

- Select menu option
- Use compound selection (3.2)
- Use '=' to jump directly to a particular screen (=3.4)
- PF Keys for actions

PF Key Defaults

- PF1 – Help Facility
- PF2 – Split screen
- PF3 – END
- PF5 – RFIND
- PF6 – RCHANGE
- PF7/PF8 – Scroll forward/backward
- PF9 – Switch split screen
- PF10/PF11 – Scroll right/left

ISPF Menu

```
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-----
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Enter X to Terminate using log/list defaults
```

ISPF Edit

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
-----
EDIT          GADAM2.JCL.CNTL(ABEND20) - 01.00          Columns 00001 00072
Command ==>                                         Scroll ==> CSR
***** ***** Top of Data *****
000001 LAB3ASM  CSECT
000002          STM   R14,R12,12(R13)
000003 *****
000004 *   SET REGISTER R5 AS THE BASE
000005 *****
000006          LR    R5,R15
000007 R0          EQU   0
000008 R1          EQU   1
000009 R2          EQU   2
000010 R3          EQU   3
000011 R4          EQU   4
000012 R5          EQU   5
000013 R6          EQU   6
000014 R7          EQU   7
000015 R8          EQU   8
000016 R9          EQU   9
000017 R10         EQU  10
000018 R11         EQU  11
000019 R12         EQU  12
```

Utility Selection Panel (=3)

```
Menu Help
-----
Utility Selection Panel
Option ==> 1
-----
1 Library      Compress or print data set.  Print index listing.  Print,
                rename, delete, browse, edit or view members
2 Data Set    Allocate, rename, delete, catalog, uncatalog, or display
                information of an entire data set
3 Move/Copy   Move, copy, or promote members or data sets
4 Dslist      Print or display (to process) list of data set names.
                Print or display VTOC information
5 Reset       Reset statistics for members of ISPF library
6 Hardcopy    Initiate hardcopy output
7 Transfer    Download ISPF Client/Server or Transfer data set
8 Outlist     Display, delete, or print held job output
9 Commands    Create/change an application command table
* Reserved    This option reserved for future expansion
11 Format      Format definition for formatted data Edit/Browse
12 SuperC     Compare data sets (Standard Dialog)
13 SuperCE    Compare data sets Extended (Extended Dialog)
14 Search-For Search data sets for strings of data (Standard Dialog)
15 Search-ForE Search data sets for strings of data Extended (Extended Dialog)
```

Library Utility 3.1

```
Menu  RefList  Utilities  Help
-----
                                Library Utility
Option ==> _____

blank Display member list      I Data set information      B Browse member
  C Compress data set          S Short data set information D Delete member
  X Print index listing        E Edit member              R Rename member
  L Print entire data set      V View member              P Print member

                                Enter "/" to select option
                                / Confirm Member Delete
                                _ Enhanced Member List

ISPF Library:
Project . . . USER01
Group . . . ISPF
Type . . . LIBRARY
Member . . . _____ (If B, D, E, P, R, V, or blank selected)
New name . . _____ (If R selected)

Other Partitioned or Sequential Data Set:
Data Set Name . . . _____
Volume Serial . . . _____ (If not cataloged)

Data Set Password . . . _____ (If password protected)
```

Data Set Utility 3.2

Menu RefList Utilities Help

Data Set Utility

Option ==> _____

A Allocate new data set	C Catalog data set
R Rename entire data set	U Uncatalog data set
D Delete entire data set	S Short data set information
blank Data set information	V VSAM Utilities

ISPF Library:

Project . . . USER01_
Group . . . ISPF
Type LIBRARY_

Other Partitioned or Sequential Data Set:

Data Set Name . . . _____
Volume Serial . . . _____ (If not cataloged)

Data Set Password . . . (If password protected)

Data Set Allocation

```
Menu  RefList  Utilities  Help
-----
                                Data Set Utility
Option ==> A
-----
      A Allocate new data set
      R Rename entire data set
      D Delete entire data set
blank Data set information
      C Catalog data set
      U Uncatalog data set
      S Short data set information
      V VSAM Utilities

ISPF Library:
Project . . . USER01
Group   . . . IMS
Type    . . . DATA

Other Partitioned, Sequential or VSAM Data Set:
Data Set Name . . . _____
Volume Serial . . . _____ (If not cataloged, required for option "C")

Data Set Password . . . _____ (If password protected)
```

Data Set Allocation

```
Menu  RefList  Utilities  Help
-----
                          Allocate New Data Set                          Top of data
Command ==> _____
                                                    More: +
Data Set Name . . . : USER01.CLASS.LIBRARY
Management class . . . _____ (Blank for default management class)
Storage class . . . _____ (Blank for default storage class)
Volume serial . . . : PRO001 (Blank for system default volume) **
Device type . . . _____ (Generic unit or device address) **
Data class . . . _____ (Blank for default data class)
Space units . . . : CYLINDER (BLKS, TRKS, CYLS, KB, MB, BYTES
                             or RECORDS)
Average record unit _____ (M, K, or U)
Primary quantity . . : 1 (In above units)
Secondary quantity . : 1 (In above units)
Directory blocks . . : 20 (Zero for sequential data set) *
Record format . . . : FB
Record length . . . : 80
Block size . . . . : 27920
Data set name type : PDS (LIBRARY, HFS, PDS, or blank) *
                    (YY/MM/DD, YYYY/MM/DD
Expiration date . . : _____ YY.DDD, YYYY.DDD in Julian form
```

Move Copy Utility 3.3

```
Menu  RefList  Utilities  Help
-----
                                Move/Copy Utility
Option ==> _____

C  Copy data set or member(s)          CP Copy and print
M  Move data set or member(s)         MP Move and print
L  Copy and LMF lock member(s)       LP Copy, LMF lock, and print
P  LMF Promote data set or member(s)  PP LMF Promote and print

Specify "From" Data Set below, then press Enter key

From ISPF Library:
  Project . . . . USER01          (--- Options C, CP, L, and LP only ---)
  Group  . . . .  ISPF            . . . . _____ . . . . _____
  Type   . . . .  LIBRARY         . . . . _____ . . . . _____
  Member . . . . _____       (Blank or pattern for member list,
                                "*" for all members)

From Other Partitioned or Sequential Data Set:
  Data Set Name . . . . _____
  Volume Serial . . . . _____ (If not cataloged)

Data Set Password . . . . _____ (If password protected)
```

Data Set List Utility 3.4 (1 of 3)

```
Menu  RefList  RefMode  Utilities  Help
-----
                                Data Set List Utility
Option ==> _____

blank Display data set list          P Print data set list
      V Display VTOC information      PV Print VTOC information

Enter one or both of the parameters below:
Dsname Level . . . USER01.*
Volume serial . . . _____

Data set list options
Initial View . . . 1  1. Volume          Enter "/" to select option
                       2. Space           / Confirm Data Set Delete
                       3. Attrib          / Confirm Member Delete
                       4. Total           /

When the data set list is displayed, enter either:
"/" on the data set list command field for the command prompt pop-up,
an ISPF line command, the name of a TSO command, CLIST, or REXX exec, or
"=" to execute the previous command.
```

Data Set List Utility 3.4 (2 of 3)

```
Menu Options View Utilities Compilers Help
-----
DSLIST - Data Sets Matching USER01.*                               Row 1 of 15
Command ==> _____ Scroll ==> CSR
-----
Command - Enter "/" to select action                               Message                               Volume
-----
      USER01.BTSDUMP.LIST                                         PRO003
      USER01.BTSOUT.LIST                                          OS39M1
      USER01.BTSPRNT.LIST                                         PRO003
      USER01.BTSPUNCH.DATA                                        WORK01
      USER01.BTSSNAP.LIST                                         OS39M1
      USER01.DB2CLASS.CLASS                                       PRO001
      USER01.IMS.DATA                                             WORK01
      USER01.ISPF.ISPPROF                                         PRO001
/      USER01.ISPF.LIBRARY                                         PRO003
      USER01.JCLCLASS.CNTL                                        WORK01
      USER01.PGMLIB                                              WORK01
      USER01.QALTPCB.DATA                                         OS39M1
      USER01.QALTRAN.DATA                                         PRO003
      USER01.QIOPCB.DATA                                         PRO003
      USER01.SPUFI.OUT                                           PRO003
***** End of Data Set list *****
```

Data Set List Utility 3.4 (3 of 3)

```
Menu  Options  View  Utilities  Compilers  Help
-----+-----+-----
D |           Data Set List Actio  Enter required field e  1 of 15
C |                                     |==> CSR
C | Data Set: USER01.ISPF.LIBRARY
C |                                     |
- | DSLIST Action                                     |-----|
  | 1.  Edit                                     12. Compress          | PRO003
  | 2.  View                                     13. Free              | OS39M1
  | 3.  Browse                                   14. Print Index      | PRO003
  | 4.  Member List                             15. Reset            | WORK01
  | 5.  Delete                                   16. Move             | OS39M1
  | 6.  Rename                                   17. Copy             | PRO001
  | 7.  Info                                     18. Refadd          | WORK01
  | 8.  Short Info                               19. Exclude          | PRO001
  | 9.  Print                                    20. Unexclude 'NX'   | PRO003
  | 10. Catalog                                  21. Unexclude first 'NXF' | WORK01
  | 11. Uncatalog                               22. Unexclude last 'NXL' | WORK01
  |                                     | OS39M1
  |                                     | PRO003
  | Select a choice and press ENTER to process data set action. | PRO003
-----+-----+-----
                                USER01.SPUFI.OUT                                PRO003
***** End of Data Set list *****
```

Interface to Products/Components

```
Display  Filter  View  Print  Options  Search  Help
-----
HQX7770  -----  SDSF PRIMARY OPTION MENU  -----
COMMAND INPUT ==>                                SCROLL ==> CSR

DA      Active users          INIT   Initiators
I       Input queue          PR     Printers
O       Output queue         PUN    Punches
H       Held output queue    RDR    Readers
ST      Status of jobs      LINE   Lines
                                     NODE   Nodes
LOG     System log          SO     Spool offload
SR     System requests     SP     Spool volumes
MAS    Members in the MAS
JC     Job classes         RM     Resource monitor
SE     Scheduling environments  CK    Health checker
RES    WLM resources
```

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