

# ISPF

## An Experienced User Shares his Secrets

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# Introduction

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- Provide an overview on how to exploit several ISPF features
  - ISPF configuration
  - Stacking commands
  - MODEL command
  - Work Station Agent (WSA)
- Expectations
  - Familiarity with ISPF configuration and MODEL command
  - Capability to allocate personal ISPF data sets to allow testing
- Other Items
  - Links are provided to IBM manuals and other documents to assist in learning these features in more detail
  - May need to adjust Adobe Reader zoom value to view text

# Agenda

Link	Topic
<a href="#"><u>ISPF Configuration</u></a>	<ul style="list-style-type: none"> <li>Settings</li> </ul>
<a href="#"><u>Stacking Commands</u></a>	<ul style="list-style-type: none"> <li>Overview and implementation</li> </ul>
<a href="#"><u>MODEL Command</u></a>	<ul style="list-style-type: none"> <li>Obtain ISPF commands</li> <li>Add JCL utilities, SDSF REXX and REXX commands</li> </ul>
<a href="#"><u>Work Station Agent (WSA)</u></a>	<ul style="list-style-type: none"> <li>Overview and installation</li> <li>Transfer files using ISPF 3.7.2</li> </ul>
<a href="#"><u>Links</u></a>	<ul style="list-style-type: none"> <li>ISPF, REXX, TSO and SDSF manuals</li> <li>SHARE ISPF and REXX PPTs</li> <li>Websites</li> </ul>

# ISPF Configuration

# Introduction

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- Provide an overview of several ISPF configuration variables
  - Activate new features and enhancements
  - For new users, reduce the time it takes to configure the environment
- ISPF Configuration Dialog
  - Execute **ISPCCONF** after installing a new z/OS operating system
  - Syntax:  
→ **TSO ISPCCONF**
- Links
  - [SHARE, Tom Conley, Configuring ISPF for Fun and Profit](#)
  - [IBM Publication, ISPF Planning and Customization, Chapter 2](#)
- Items highlighted in yellow are settings used to implement stacking commands and Work Station Agent (WSA)

# ISPCCONF

Variable	Assigned	Notes
APPLID_FOR_SITE_COMMAND_TABLE	WFS	Allows for system/site wide command tables to be defined/used (WFSCMDS) <ul style="list-style-type: none"> <li>- WFS stands for Wells Fargo Site commands</li> <li>- The default is <b>NONE</b></li> </ul>
APPLID_FOR_USER_COMMAND_TABLE	WFU,WFU2, WFU3	Allows users to define up to three different user command tables (WFUCMDS, WFU2CMDS and WFU3CMDS) <ul style="list-style-type: none"> <li>- WFU stands for Wells Fargo User commands</li> <li>- The default is <b>NONE</b></li> </ul>
BLOCK_SIZE_FOR_TEMPORARY_CNTL_DATA_SETS BLOCK_SIZE_FOR_TEMPORARY_LIST_DATA_SETS BLOCK_SIZE_FOR_TEMPORARY_WORK_DATA_SETS	0 0 0	Set the block size to zero to obtain/use half track blocking <ul style="list-style-type: none"> <li>- The defaults are <b>800</b>, <b>3146</b> and <b>2560</b></li> </ul>
COMMAND_LINE_PLACEMENT	ASIS	Place the command line at the top <ul style="list-style-type: none"> <li>- The default is <b>BOTTOM</b></li> </ul>
DEFAULT_LIBDEF_PROCESSING_OPTION	STACK	When LIBDEFing data sets, the default will be STACK <ul style="list-style-type: none"> <li>- Prevents issues when stacking software on top of one another, specifically, removing previous LIBDEFed data sets</li> <li>- The default is <b>UNCOND</b></li> </ul>
DEFAULT_SYSTEM_NAME	ON	Displays the lpar name in the upper left hand corner of all panels <ul style="list-style-type: none"> <li>- The default is <b>OFF</b></li> </ul>

# ISPCCONF

Variable	Assigned	Notes
DISALLOW_WILDCARDS_IN_HLQ	YES	Prevents long enqueues on the master catalog - The default is NO
DISPLAY_EMPTY_MEMBER_LIST DISPLAY_EMPTY_MEMBER_LIST_PATTERN	YES YES	Capability to edit an empty PDS - The defaults are NO and NO
DISPLAY_SEQUENCE_NUMBERS	OFF	- The default is ON
DSLST_RM_ENABLED DSLST_RM_COMMAND	YES %CA1DS34	Allows executing a REXX program to obtain CA1 information when typing an "I", "S" or "M" next to a tape data set from ISPF 3.4 - CA1DS34 is an in-house written utility -- "I" invokes CA1, selects option "1 - INQ/UPD" and inserts the VOLSER to obtain the tape information -- "S" invokes CA1's Browse Module (TSOTIQ) and uses the data set name to obtain the tape information -- "M" invokes CA1's Tape Inquiry Program (TMSBINQ) and uses the VOLSER to obtain the tape information - The defaults are NO and %EDGRPD34
EDIT_RECOVERY_BLOCK_SIZE EDIT_RECOVERY_PRIMARY_QUANTITY EDIT_RECOVERY_SECONDARY_QUANTITY	27998 800 800	Allows for a large amount of changes and updates - The defaults are 13680, 40 and 200

# ISPCCONF

Variable	Assigned	Notes
LOG/LIST_JOB_CARD1	Job Card	<p>Define a standard JOB card format</p> <ul style="list-style-type: none"> <li>- Software can obtain and use it by coding “<a href="#">VGET (ZLLGJOB1 ZLLGJOB2 ZLLGJOB3 ZLLGJOB4)</a>”</li> <li>- The default is <a href="#">NONE</a></li> </ul>
HILITE_DOLOGIC HILITE_IFLOGIC HILITE_PAREN	ON ON ON	<p>Distinguishes lines of code and assists in troubleshooting</p> <ul style="list-style-type: none"> <li>- The defaults are <a href="#">OFF</a>, <a href="#">OFF</a> and <a href="#">OFF</a></li> </ul>
ISPCTL0_BLOCK_SIZE	0	<p>Set the block size to zero to obtain/use half track blocking</p> <ul style="list-style-type: none"> <li>- The default is <a href="#">800</a></li> </ul>
ISPF_TEMPORARY_DATA_SET_QUALIFIER	&SYSNAME.	<p>Inserts the lpar name in the second level qualifier of the ISPF temporary data set names</p> <ul style="list-style-type: none"> <li>- Allows logging on to multiple, concurrent TSOs within a sysplex</li> <li>- If the lpar name begins with a number, suggest placing the character ‘S’ in front of &amp;SYSNAME</li> <li>- The default is <a href="#">NONE</a></li> </ul>
LIST_DATA_SET_RECORDS_PER_BLOCK	231	<p>Set the list data set records per block to 231 for a 3390</p> <ul style="list-style-type: none"> <li>- LRECL 121 * 231 = 27951, half-track for a 3390</li> <li>- The default is <a href="#">26</a></li> </ul>

# ISPCCONF

Variable	Assigned	Notes
LIST_SYSOUT_CLASS	*	- The default is <b>NONE</b>
LOCAL_LIST_SYSOUT_CLASS	*	- The default is <b>NONE</b>
LOG_DATA_SET_BLOCK_SIZE	0	Set the block size to zero to obtain/use half track blocking - The default is <b>129</b>
LOG_DATA_SET_DISPOSITION	D	Delete the log data set - The default is <b>NONE</b>
LOG_PAGES_PRIMARY_QUANTITY	0	Not needed/used, decreases response time
LOG_PAGES_SECONDARY_QUANTITY	0	- The defaults are <b>10</b> and <b>10</b>
MAXIMUM_NUMBER_OF_SPLITSCREENS	32	Allows the capability to have 32 split screens - Set PF2= <b>START</b> , PF9= <b>SWAP NEXT</b> and PF21= <b>SWAP PREV</b> ; then, activate <b>SWAPBAR</b> - The default is <b>8</b>
NUMBER_OF_PFKEYS	24	Typing in <b>KEYS</b> will display “Number of Keys = <b>24</b> ” - The default is <b>12</b>
OUTLIST_BLOCK_SIZE	0	Set the Outlist Utility block size to zero to obtain half track blocking for OUTLIST data sets - The default is <b>13566</b>

# ISPCCONF

Variable	Assigned	Notes
PROFILE_SHARING	YES	Allows logging on to multiple, concurrent TSOs within a sysplex - Required to run multiple, concurrent z/OSMF ISPF sessions - The default is <b>NO</b>
RETREIVE_COMMAND_STACK_SIZE	4096	Allows saving/retrieving longer primary commands - The default is <b>512</b>
SCROLL_DEFAULT	CSR	Set the scroll default to cursor - The default is <b>PAGE</b>
SHOW_PFKEYS	OFF	Provides for more screen real estate - The default is <b>ON</b>
SITE_WIDE_INITIAL_MACRO	RESET	Prevents unnecessary messages from appearing when editing a data set or member - The default is <b>NONE</b>
STANDARD_NUMBERS	OFF	- The default is <b>ON</b>
STATS_EXT_ENABLED	YES	Extended statistics are kept for PDS members - The default is <b>NO</b>
TAB_TO_ACTION_BARS	NO	Pressing the HOME key will position the cursor on the primary command line - The default is <b>YES</b>

# ISPCCONF

Variable	Assigned	Notes
UNDO_STORAGE_SIZE	1024	Allocate 1024K of memory to edit UNDO command to be used for keeping history of edit changes - Enables SETUNDO command - The default is <b>0</b>
USE_KEYLISTS	NO	Makes the PF keys standard throughout ISPF - Assigns PF4=RETURN, PF5=RFIND, PF6=RCHANGE, P7=UP, PF8=DOWN, PF9=SWAP, PF10=LEFT, PF11=RIGHT and PF12=RETRIEVE - The default is <b>YES</b>
VSAM_BROWSE_ENABLED VSAM_BROWSE_COMMAND VSAM_EDIT_ENABLED VSAM_EDIT_COMMAND VSAM_VIEW_ENABLED VSAM_VIEW_COMMAND	YES %ISPF34B YES %ISPF34E YES %ISPF34B	Allows invoking a REXX program when browsing, editing or viewing a VSAM file - <b>ISPF34B/E</b> is an in-house written REXX program to invoke File-Aid/MVS ( <b>F1/2</b> ) or CBT183 ( <b>BR</b> ) - Allows the use of File-Aid/MVS REXX programs <b>F1</b> (Browse) and <b>F2</b> (Edit) - Allows the ability to install and invoke Ditto, File Manger or Review from the CBT tape - The defaults are <b>NO</b> and <b>FMNMAIN DSB /</b>
WSA_DOWNLOAD_DATA_SET	'SYS1.SISPGUI'	The data set name is inserted into the ISPF 3.7.1 screen - The default is ' <b>ISP.SISPGUI</b> '

# Stacking Commands

# Introduction

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- Stacking commands provide the capability to invoke any application from anywhere within ISPF and not have to be located at the user or main menu, reducing keystrokes
- Allows multiple software products to be stacked on one split screen and each split screen is a separate stack
- Stacking commands are implemented using the ISPF site and user command tables ([slide 6](#))

# Syntax

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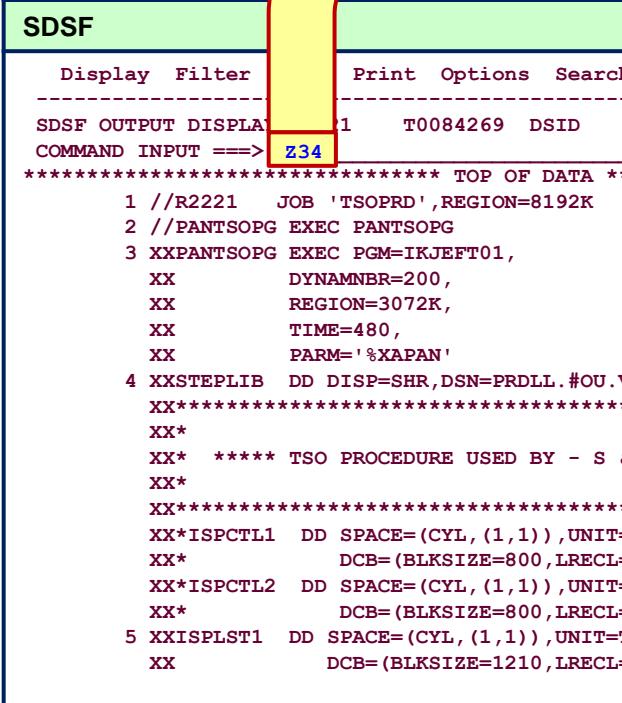
- All menu options are stacking commands
- IBM Primary Menu
  - Prefix the character “Z” in front of option (**Z##**)
  - Examples:
    - **Z1** will invoke ISPF option 1, Browse
    - **Z2** will invoke ISPF option 2, Edit
    - **Z34** will invoke ISPF option 3.4, Data Set List
    - **ZSD** will invoke ISPF option SD, SDSF
- Developer and System Menu
  - Type in the entry name
    - **CA7**, **ABENDAID**, **NDM**, **OPSMVS**, etc.
  - Only need to type in the 1<sup>st</sup> three or four characters
    - **ABE** for ABENDAID
    - **OPS** for OPSMVS

# How does it work?

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- A user in SDSF may have a need to invoke ISPF 3.4, Data Set List Utility, for a quick look at a data set
- By simply keying in **Z34** on the command line, ISPF 3.4 is stacked on top of the current dialog, without interrupting the SDSF session or starting up a new logical split screen
- The **END** or **RETURN** PFkeys (**PF3/4**) will cause an immediate return to the suspended dialog, in this case, SDSF

# Example



```

SDSF
Display Filter Print Options Search
-----
SDSF OUTPUT DISPLAY 1 T0084269 DSID
COMMAND INPUT ==> z34
***** TOP OF DATA ****
1 //R2221 JOB 'TSOPRD',REGION=8192K
2 //PANTSOPG EXEC PANTSOPG
3 XXPANTSOPG EXEC PGM=IKJEFT01,
XX      DYNAMNBR=200,
XX      REGION=3072K,
XX      TIME=480,
XX      PARM='%XAPAN'
4 XXSTEPLIB DD DISP=SHR,DSN=PRDLL.#OU.V
XX*****
XX*
XX* ***** TSO PROCEDURE USED BY - S & P - *****
XX*
XX***** 
XX*ISPCTL1 DD SPACE=(CYL,(1,1)),UNIT=TTEMP,
XX*          DCB=(BLKSIZE=800,LRECL=80,RECFM=FB)
XX*ISPCTL2 DD SPACE=(CYL,(1,1)),UNIT=TTEMP,
XX*          DCB=(BLKSIZE=800,LRECL=80,RECFM=FB)
5 XXISPLST1 DD SPACE=(CYL,(1,1)),UNIT=TTEMP,
XX          DCB=(BLKSIZE=1210,LRECL=121,RECFM=FBA)

```

**Z34**

Menu RefList RefMode Utilities Help

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Data Set List Utility

Option ==> \_\_\_\_\_ More: +

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 . . . PRSS.R2221.JCL \_\_\_\_\_

Volume serial . . . \_\_\_\_\_

Data set list options

Initial View	Enter "/" to select option
1 1. Volume	/ Confirm Data Set Delete
2 2. Space	/ Confirm Member Delete
3 3. Attrib	/ Include Additional Qualifiers
4 4. Total	/ Display Catalog Name
	- Display Total Tracks
	- Prefix Dsname Level

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

# STACK – Utility

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- An in-house utility called **STACK** or **STK** was developed to display all available stacking commands
- Displays all available commands defined in the site (**WFSCMDS**) or user (**WFU[2|3]CMDS**) command tables
- Lists all entries on the Developers, System and ISPF menus, plus TSO commands like **PING**, **NETSTAT**, etc.
- An easy way to locate, execute and obtain product information

# STACK – Example

- Typing in **STACK** or **STK** from any panel displays all stacking commands

----- ( Stacking Commands ) ----- Row 1 to 12 of 342			
Command	==>	Scroll ==> CSR_	
<b>Command:</b> F xxx - Find text    L xxx - Locate text    S xxx - Sort column O xxx - Only text    R - Reset display    X xxx - Exclude text D - Save to DSN    M - Mail    P - Print H - Hide header			
<b>Line:</b> S - Exec software, B - Tutorial, I - DSN info, X - Exclude row			
S	Command	Trunc	Description
-	-----	-----	-----
-	AAVIEW	3	AbendAid Hotkey
-	ABENDAID	3	Dump Analysis Tool
-	AMBLIST	3	Load Module Map and Cross Reference Listing
-	APFLIST	4	APF Data Sets
-	APPC	0	Advanced Program To Program Communication
-	ASID	0	Address Space Identifier (ASID) Usage Summary
-	AUTOCMDS	5	OPSMVS - MVS Automation Commands
-	AXCIS	0	Administration
-	BAT	0	Batch Job Statistics for CA7, TSO, STC, etc.
-	BDT	0	Bulk Data Transfer
-	BLKSIZE	4	Data Set Block Size and Space Recommendation
-	BMCADM	4	DB2 BMC Administrative Products [DB2A]

# Pros & Cons

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- Pros
  - Enhances productivity in ISPF
  - Allows invoking multiple applications on one screen and on top of one another
  - The "Stacking" capability is limited only by the amount of TSO virtual storage
  - Saves typing and reduces the amount of time needed to invoke the facility
  - Typing in “=??” will remove the entire stack
    - Where ?? is an ISPF menu entry
    - Examples: =3.4, =D.ABENDAID, =X, etc.
- Cons
  - When two or more applications are stacked on the same split screen
    - Only one, the application on top of the stack, is accessible
    - Applications in the middle of the stack are inaccessible

# Implementation – ISPCCONF

- ISPF Configuration Utility
  - Type in  
→ TSO ISPCCONF
  - Define and set
    - APPLID\_FOR\_SITE\_COMMAND\_TABLE = WFS
    - APPLID\_FOR\_USER\_COMMAND\_TABLE = WFU, WFU2, WFU3
    - DEFAULT\_LIBDEF\_PROCESSING\_OPTION = STACK
- The user command table allows programmers to create their own personal or team stacking commands
  - WFUCMDS, WFU2CMDS and/or WFU3CMDS
- Ensure ISPCFIGU module, created by ISPCCONF, is located in
  - LPA or LNK List
  - or ISPLLIB (STEPLIB) allocated to TSO logon proc

# Implementation – ISPF 3.9

- The next few slides will demonstrate how to create a site command table ([WFSCMDS](#)) using ISPF 3.9, Commands
- Use the same process to create user command tables ([WFUCMDS](#), [WFU2CMDS](#) and [WFU3CMDS](#))
- Prerequisite
  - Must allocate a PDS or PDSE data set to ISPTABL DD card
    - This data set is where the site command table will be saved ([WFSCMDS](#))
    - Preferably a data set concatenated to the ISPTLIB DD card
      - Allows easy testing and validating of site commands
    - The data set attributes must be RECFM=FB,LRECL=80
  - Highlighted in **yellow** is data typed in on the ISPF 3.9, Commands, panel

# Implementation – ISPF 3.9

- Invoke ISPF 3.9 and insert the site command table name ([WFS](#))

```
Command Table Utility
Command ===> _____
Specifications
Application ID . . WFS
Enter "/" to select option
Show description field
Command table search order
Application table . . : ISP
User table 1 . . . . :
User table 2 . . . . :
User table 3 . . . . :
Site table 1 . . . . :
Site table 2 . . . . :
Site table 3 . . . . :
System table . . . . : ISP

If no application ID is specified, the current application ID will be
used. The name of the command table to be processed is formed by
prefixing the application id to the string 'CMDS'. For example:
Application ID . . TST results in a command table name of 'TSTCMDS'.
```

# Implementation – ISPF 3.9

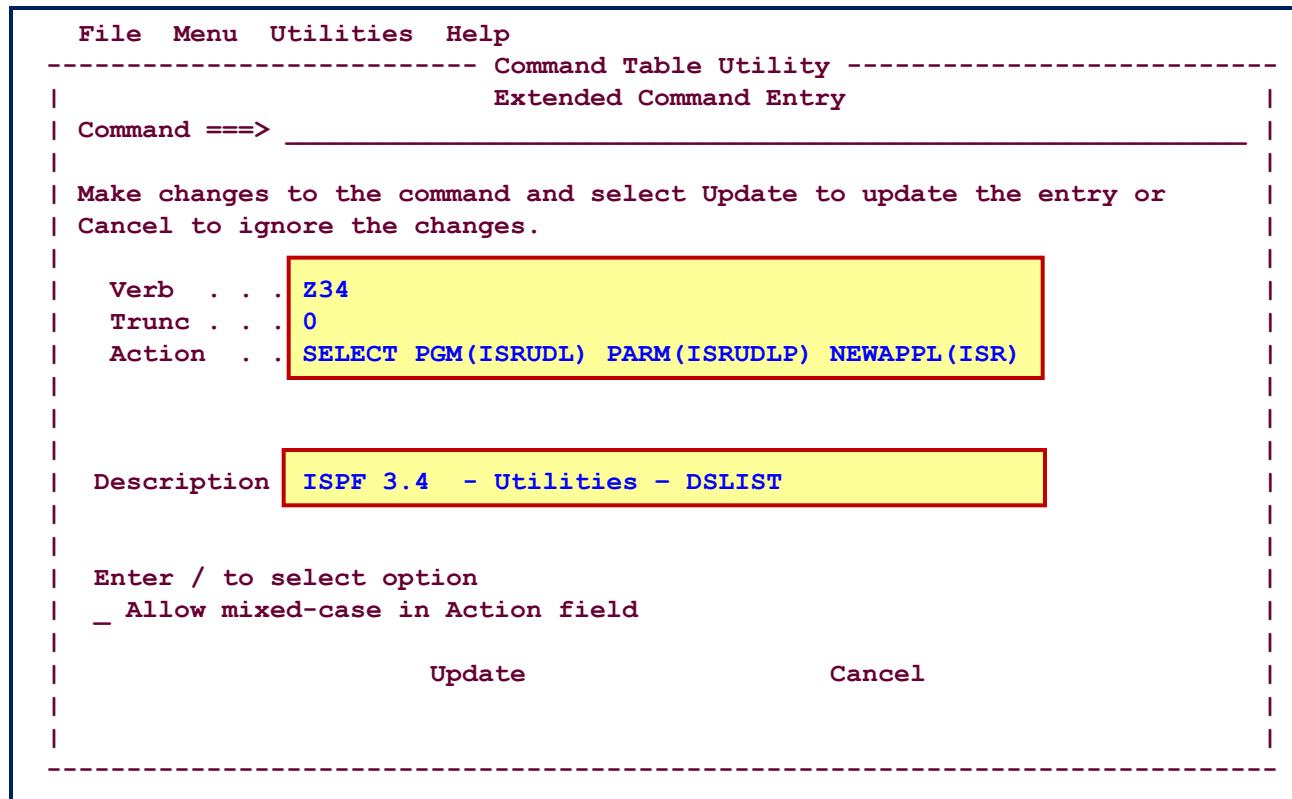
- Tab down to an entry and type in “E” for edit

```
File Menu Utilities Help
-----
Update WFSCMDS          Row 1 to 15 of 17
Command ===> _____      Scroll ===> CSR_____
Insert (I), delete (D), repeat (R) and edit (E) command entries.
Enter END command to save changes or CANCEL to end without saving.

    Verb      T Action
E _____ -  
_____ -  
_____ -  
_____ -  
_____ -  
_____ -  
_____ -  
_____ -  
_____ -  
_____ -  
_____ -  
_____ -  
_____ -  
_____ -  
_____ -  
_____ -  
_____ -
```

# Implementation – ISPF 3.9

- Insert the Verb (stacking command), the Trunc (number of characters needed), the Action (what to execute/invoke) and the Description



# Implementation – ISPF 3.9

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- VERB
  - Stacking command
  - Must follow IBM's naming convention
    - 1<sup>st</sup> char = A-Z \$#@ and 2<sup>nd</sup>-8<sup>th</sup> char = A-Z 0-9 \$#@
  - Must be 2 to 8 characters in length
- TRUNC
  - The minimum number of characters the user must type
  - If zero or equal to the verb length, the entire command must be entered
- ACTION
  - SELECT command, program or selection panel to be given control
- Description
  - Brief description/purpose of command
  - 80 characters or less

# Implementation – ISPF 3.9

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- Repeat the process for all menu entries
- Terminate/re-invoke ISPF and test typing in a stacking command
- Copy the site command table ([WFSCMDS](#)) into an ISPTLIB data set accessible to everyone
- To update the active site command table ([WFSCMDS](#))
  - Make a copy (ex: [WFSNCMDS](#))
  - Use ISPF 3.9 to make changes ([WFSNCMDS](#))
  - Copy with replace ([WFSNCMDS](#) → [WFSCMDS](#))
  - Terminate/re-invoke ISPF and validate

# Suggestions

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- Always define site commands with three or more characters
  - Stacking commands take precedence over menu options
  - Prevents menu conflicts
- Prefix the character “**Z**” in front of all IBM Primary Menu options
  - Very few selection menus use the character **Z** and a number (**Z1**, **Z2**, etc.)
- Ensure software LIBDEFing data sets use sub parameter **STACK**
  - Change default LIBDEF processing option to **STACK** in the site command table ([Slide 6](#))
  - Do not use LIBDEF sub parameter **UNCOND**
    - Prevents removing previous LIBDEFed data sets

# Suggestions

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- To prevent S878 abends, due to several split screens and stacks
  - Increase the TSO logon size to 8 megabytes (8192K) or above the line
  - Set the REXX/CLIST variable storage above the line
    - ➔ **TSO PROFILE VARSTORAGE(HIGH)**
- Use ISPF 3.9, Commands (Create/change application command table)
  - Specifically designed for updating the site and user command tables
  - Whereas ISPF 3.16, Tables (ISPF Table Utility) is a general purpose utility
    - Used to update a wide variety/range of tables

# Notes

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- Command table search order

Order	Command Table	Member
1	User command table 1	WFUCMDS
2	User command table 2	WFU2CMDS
3	User command table 3	WFU3CMDS
4	Site command table 1	WFSCMDS
5	Site command table 2	
6	Site command table 3	
7	System table	ISPCMDS

# IVPs

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- Some Independent Vendor Products (IVPs) provide the ability to implement stacking commands
- CA – PDSMAN
  - Initialization parameter
    - Use **\$EZYCMD** to define site commands
  - Pros
    - Refresh the site command table by executing the following MVS command:  
**➔ F PDSMAN,REFRESH**
  - Cons
    - To test/validate, must use a different Ipar from the one the general TSO population is using
    - Must terminate/re-invoke ISPF to access new commands
    - Does not allow user command tables

# CBT Tape

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- Several command table utilities can be found on the CBT Tape
- Link
  - [CBT Downloads](#)
- Files
  - [183 – Gilbert Saint-flour's collection](#)
    - FASTPATH – Another way to create/use a site command table
  - [312 – Lionel Dyck Collection of Utilities. A thru R](#)
    - ISPFCMDS – Dynamically update ISPF Command Table
  - [349 – REXX to update in core ISPF command table on the fly](#)
    - Prevents having to exit and re-invoke ISPF
  - [578 – General ISPF Table Handling Facility – Roy Gardiner](#)

# Docs

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- Technical Support, 2003, Lionel Dyck
  - [ISPF – Command Tables for the Average Users](#)
- Using command tables to define commands
  - [ISPF – V2R1 – Users Guide – Vol 1](#)

# MODEL Command

# Introduction

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- MODEL command
  - IBM edit macro
  - Quickly/easily obtain skeleton ISPF commands
  - Most useful, but least known/utilized
  - Continually being updated/enhanced by IBM
  - Only usable in EDIT and VIEW mode
- Links
  - SHARE, Session 11567, Aug 2012, Liam Doherty and Peter Van Dyke
    - [ISPF Editor – Beyond the Basics, Hands-On Lab](#)
  - SHARE, Session 2646, August 22, 2002, Lionel B. Dyck
    - [ISPF – Design Coding Hints and Tips](#)
  - Chapter 4, Using edit models
    - [ISPF – V2R1 – Edit and Edit Macros](#)

# Enhanced

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- The MODEL command can be enhanced to provide the following:
  - IBM, OEM and in-house JCL skeletons
  - SDSF REXX examples
  - REXX commands
- The next few slides display the following:
  - Changes highlighted in the IBM **ISREMCLS** panel
  - The **ISREMJCL** panel containing table of contents of all JCL utilities
  - Sample JCL skeletons, **MIEHLIST** and **MUTKT**
  - Changes highlighted in the IBM **ISREMRXC** panel
  - Where to obtain SDSF REXX and REXX commands
- Highlighted in **yellow** are changes made to the IBM panels

# JCL – ISREMCLS – Panel

## Model Classes

Option ==> \_\_\_\_\_

Enter number or Class of model.

Enter END command to cancel MODEL command.

- |            |   |
|------------|---|
| 1 CLIST    | - ISPF services in CLIST commands                 |
| 2 COBOL    | - ISPF services in COBOL programs                 |
| 3 EXEC     | - ISPF services in EXEC commands                  |
| 4 FORTRAN  | - ISPF services in FORTRAN programs               |
| 5 MSGS     | - Message format                                  |
| 6 PANELS   | - Panel formats and statements                    |
| 7 PLI      | - ISPF services in PLI programs                   |
| 8 SKELS    | - File tailoring control statements               |
| 9 PASCAL   | - ISPF services in PASCAL programs                |
| 10 REXX    | - SDSF function and ISPF services in REXX execs   |
| 11 DTL     | - ISPF Dialog Tag Language formats and statements |
| 12 C       | - ISPF services in C/370 programs                 |
| 13 SCLM    | - SCLM Project Definition Macros                  |
| 14 ARCHDEF | - SCLM Architecture Definition templates          |
| 15 JCL     | - JCL for selected utility programs (USER-ADDED)  |

# JCL – ISREMCLS – Panel

```

)PANEL KEYLIST(ISRSNAB,ISR)
)ATTR DEFAULT() FORMAT(MIX)           /* ISREMCLS - ENGLISH - 5.8 */
 0D TYPE(PS)
 05 TYPE(PT)
 06 TYPE(PIN)
 09 TYPE(FP)
 0A TYPE(NT)
 11 TYPE(SAC)
 10 TYPE(ET)
 27 TYPE(NEF) CAPS(ON) PADC(USER)
 28 AREA(SCRL) EXTEND(ON)
)BODY WINDOW(76,22) EXPAND(..) CMD(ZCMD)
.. .Model Classes. ...
.Option ==>.Z. .
.
.Enter number or Class of model.
.Enter.END.command to cancel MODEL command.
.SAREA40
)AREA SAREA40
 1 .CLIST  .- ISPF services in CLIST commands
 2 .COBOL  .- ISPF services in COBOL programs
 3 .EXEC   .- ISPF services in EXEC commands
 4 .FORTRAN .- ISPF services in FORTRAN programs
 5 .MSGS   .- Message format
 6 .PANELS .- Panel formats and statements
 7 .PLI    .- ISPF services in PLI programs
 8 .SKELS  .- File tailoring control statements
 9 .PASCAL .- ISPF services in PASCAL programs
 10 .REXX   .- SDSF function and ISPF services in REXX execs
 11 .DTL   .- ISPF Dialog Tag Language formats and statements
 12 .C     .- ISPF services in C/370 programs
 13 .SCLM   .- SCLM Project Definition Macros
 14 .ARCHDEF .- SCLM Architecture Definition templates
 15 .JCL   .- JCL for selected utility programs (USER-ADDED)
)INIT
.ZVARS = '(ZCMD)'
&ZWINITL =
.HELP = ISR2P100
.MSG = ''                      /* BLANK MSG INITIALLY */
&ISRMCLAS = ''                /* AND THE CLASS HOLDER VARIABLE */
.CURSOR = 'ZCMD'
)PROC
IF (&ISRMONCL = 'Y')           /* ARE WE ONLY OBTAINING A CLASS ? */
  &ISRMCLAS = TRANS(TRUNC(&ZCMD,'.')) 1,CLIST 2,COB 3,EXEC 4,FORT
  5,MSGS 6,PANELS 7,PLI 8,SKELS 9,PASCAL 10,REXX 11,DTL 12,C
  13,SCLM 14,ARCHDEF *,*)
  /*                                     @H1C@H5C*/
&TMPTRAIL = .TRAIL            /* Save any remaining      @H1A*/

```

```

IF (&ISRMONCL != 'Y')          /* ARE WE ONLY OBTAINING A CLASS ? OZ83844*/
  &ISRMDSPL =
  &ZCMD = TRUNC (&ZCMD,'.')
  &TMPTRL = .TRAIL
IF (&ZCMD = 'COBOL') &ZCMD = TRUNC(&ZCMD,3)
IF (&ZCMD = 'EXEC') &ZCMD = TRUNC(&ZCMD,4)
*REXX(ZCMD, JCLQUAL, CNTLQUAL, PROCQUAL, INSTQUAL)          /* @A2 */
  IF (POS("JCL",ZCMD) > 0) THEN                         /* @A2 */
    JCLQUAL = ZCMD                                         /* @A2 */
  ELSE                                                     /* @A2 */
    JCLQUAL = "JCL"                                         /* @A2 */
  IF (POS("CNTL",ZCMD) > 0) THEN                         /* @A2 */
    CNTLQUAL = ZCMD                                         /* @A2 */
  ELSE                                                     /* @A2 */
    CNTLQUAL = "CNTL"                                         /* @A2 */
  IF (POS("PROC",ZCMD) > 0) THEN                         /* @A2 */
    PROCQUAL = ZCMD                                         /* @A2 */
  ELSE                                                     /* @A2 */
    PROCQUAL = "PROC"                                         /* @A2 */
  IF (POS("INST",ZCMD) > 0) THEN                         /* @A2 */
    INSTQUAL = ZCMD                                         /* @A2 */
  ELSE                                                     /* @A2 */
    INSTQUAL = "INST"                                         /* @A2 */
*ENDREXX
&ZCMD = TRANS (&ZCMD)
CLIST,1 COB,2 EXEC,3 FORTRAN,4 FORT,4B MSGS,5A PANELS,6
MENUS,6A ISPPLIB,6B PLI,7 PLI,7A PLIOPT,7B PLS,7C SKELS,8 PROCS,8A ISPPLIB,8B
PASCAL,9 REXX,10 DTL,11 C,12 CPP,1C SCLM,13 ARCHDEF,14 JCL,15 ' ',' ',*,*)
IF (&ZCMD != ' ') &ZCMD = '&ZCMD.' &ZMPTRL
&ZSEL = TRANS (TRUNC (&ZCMD,'.'))
  1,'PANEL (ISREMCMP)'
  2,'PANEL (ISREMCOB)'
  3,'PANEL (ISREMEXC)'
  4,'PANEL (ISREMFTN)'
  4A,'PANEL (ISREMFTN)'
  4B,'PANEL (ISREMFTN)'
  5,'PGM (ISRECMBR) PARM (ISREMMSG NOSEQ)'
  5A,'PGM (ISRECMBR) PARM (ISREMMSG NOSEQ)'
  6,'PANEL (ISREMPNL)'
  6A,'PANEL (ISREMPNL)'
  6B,'PANEL (ISREMPNL)'
  7,'PANEL (ISREMPII)'
  7A,'PANEL (ISREMPII)'
  7B,'PANEL (ISREMPII)'
  7C,'PANEL (ISREMPII)'
  8,'PANEL (ISREMSKL)'
  8A,'PANEL (ISREMSKL)'
  8B,'PANEL (ISREMSKL)'

```

# JCL – ISREMCLS – Panel

```

9,'PANEL(ISREMPAS)'
10,'PANEL(ISREMRXC)'
11,'PANEL(ISREMDTL)'
12,'PANEL(ISREMWLN)'
1C,'PANEL(ISREMWLN)'
13,'PANEL(ISREMFLM)'
14,'PANEL(ISREMARC)'
15,'PANEL(ISREMJCL)'
&JCLQUAL,'PANEL(ISREMJCL)'          /* @A2 */
&CNTLQUAL,'PANEL(ISREMJCL)'        /* @A2 */
&PROCQUAL,'PANEL(ISREMJCL)'        /* @A2 */
&INSTQUAL,'PANEL(ISREMJCL)'        /* @AO */
ISPCLIST,'PANEL(ISREMCMF)'         /* @A1 */
ISPREXX,'PANEL(ISREMRXC)'          /* @A1 */
ISPEXEC,'PANEL(ISREMRXC)'          /* @A1 */
'',
*, '?')
IF (&ZSEL = '?')
/* IF (&ISRMDSPL != 'RETURN') ** REPLACED BY OY33372*/
IF (&ZMACRO = 'N')                  /* OY33372*/
&ZEMTEMP = &ZCMD                 /* SET VARIABLE FOR MSG OZ91267*/
.MSG = ISRYM012
&ZCMD = ''                         /* RESET CMD LINE = BLANK OZ91267*/
.RESP = 'ENTER'                     /* WANT TO RESET RESP FOR RE-ENT */
/* IF (&ISRMDSPL = 'RETURN') ** REPLACED BY OY33372*/
ELSE                                /* OY33372*/
.RESP = 'END'
&ISRMCLAS = '?'
.MSG = ISRYM012                      /* INVALID CLASS OY33372*/
&ISRMEND = 'N'                      /* SET THE END INDICATOR TO NO */
IF (.RESP = END)                    /* DID WE GET AN END FROM WHERE */
  IF (&ISRMDSPL != 'RETURN')        /* WAS IT BECAUSE WE HAVE MEMBER */
    &ISRMEND = 'Y'                  /* ITS BECAUSE USER HIT END KEY */
  IF (&ISRMONCL = 'Y')              /* ARE WE ONLY OBTAINING A CLASS */
    IF (.RESP != 'RETURN')          /* Has user hit extended return */
      IF (&ISRMCLAS != ' ')        /* Make sure we have some class */
        IF (&TMPTRAIL = ' ')        /* Just class entered @H1A*/
        .RESP = END                 /* ONLY WANT CLASS, NO OTHER DISP.*/
        IF (&TMPTRAIL != ' ')        /* More than class entered @H1A*/
&ZEMTEMP = &ZCMD                  /* Set variable for message @H1A*/
.MSG = ISRYM012                      /* Set message number @H1A*/
&ZCMD = ''                          /* Reset cmd line = blank @H1A*/
.RESP = 'ENTER'                     /* Reset RESP to Re-enter @H1A*/
&ZMSG = .MSG                        /* SET MESSAGE VARIABLE @L1A*/
VPUT(ZMSG) PROFILE
)PNTS
FIELD(ZPS01001) VAR(ZCMD) VAL(1)
FIELD(ZPS01002) VAR(ZCMD) VAL(2)

```

```

FIELD(ZPS01003) VAR(ZCMD) VAL(3)
FIELD(ZPS01004) VAR(ZCMD) VAL(4)
FIELD(ZPS01005) VAR(ZCMD) VAL(5)
FIELD(ZPS01006) VAR(ZCMD) VAL(6)
FIELD(ZPS01007) VAR(ZCMD) VAL(7)
FIELD(ZPS01008) VAR(ZCMD) VAL(8)
FIELD(ZPS01009) VAR(ZCMD) VAL(9)
FIELD(ZPS01010) VAR(ZCMD) VAL(10)
FIELD(ZPS01011) VAR(ZCMD) VAL(11)
FIELD(ZPS01012) VAR(ZCMD) VAL(12)
FIELD(ZPS01013) VAR(ZCMD) VAL(13)
FIELD(ZPS01014) VAR(ZCMD) VAL(14)
FIELD(ZPS01015) VAR(ZCMD) VAL(15) /* @AO */
)END
/* 5694-A01 (C) COPYRIGHT IBM CORP 1980, 2005 */
/* ISPDTLC Release: 5.8. Level: PID */
/* z/OS 01.08.00. Created - Date: 24 Oct 2005, Time: 13:16 */
/*
----- Wells Fargo Changes -----
/* FLG YYMMDD USERID DESCRIPTION
/* --- --- --- --- --- */
/* @A2 100519 R2221 Last level qual. = JCL, CNTL, PROC, INST */
/* @A1 100203 R2221 Added .ISPCLIST, .ISPREXX, and .ISPEXEC */
/* @AO 090118 R2221 Added Option Number 15 - JCL utilities */
/* @AO 090118 R2221 Find everything that was modified execute: */
/* @AO 090118 R2221 ==> X ALL;F '15' ALL;F "ISREMJCL" ALL */
/*

```

# JCL – ISREMJCL – Panel

## JCL Utility Models

Option ==> \_\_\_\_\_

Enter an option or move the cursor on JCL utility and press ENTER.

Enter END command to cancel MODEL command.

More: +

### IBM

- I1 AMATERSE - Terse a file
- I2 AMBLIST - Print linkage attributes
- I3 BPXBATCH - Run USS shell scripts
- I4 CPPUPDTE - Search/update
- I5 DFDSS - Backup/restore files
- I6 DFSORT - Sort/merge files
- I7 EZACFSM1 - Symbolic Interpreter
- I8 ICETOOL - Sort/merge files
- I9 ICKDSF - Init disk pack
- I10 IDCAMS - Def/del/alter VSAM/GDGs
- I11 IEBCOPY - Copy/del/move PDS mbr
- I12 IEBGENER - Copy sequential files
- I13 IEBPTPCH - Print and punch
- I14 IEBUPDTE - Create/alter PDS mbr
- I15 IEHLIST - List PDS directory
- I16 IEHPROGM - Rename/del/cat file
- I17 IEFBR14 - Create/delete file

### OEM

- O1 AFCLOGR1 - Extract OPERLOG records
- O2 CAL2X2WB - Execute CA7 Commands
- O3 CINEWCP2 - CICS New Copy
- O4 COB2EZT - Conv. COBOL to Eztplus
- O5 COMPAREB - Compare two files
- O6 CONSOLE - Execute MVS commands
- O7 COPYCAT - Copy a tape
- O8 DAF - Dataset Audit Facility
- O9 DJCTEST - Abend job or set RC
- O10 DMS - CADISK Backup/Restore
- O11 EXAMBATX - CA Examine Compare
- O12 FCSWAIT - Wait a duration of time
- O13 FILEAID - Copy/update/print files
- O14 FTP - Transmit a file
- O15 FTPSEC - Transmit a file secured
- O16 GENMAIL - Email using IEBGENER
- O17 GSVXBAT - Execute SYSVIEW cmds

# JCL – ISREMJCL – Panel

## JCL Utility Models

Option ==> \_\_\_\_\_

Enter an option or move the cursor on JCL utility and press ENTER.

Enter END command to cancel MODEL command.

More: - +

I17 IEFBR14	- Create/delete file	O17 GSVXBAT	- Execute SYSVIEW cmd's
I18 IFASMFDP	- Dump SMF records	O18 LISTF	- List DASD volumes
I19 IFCEREP1	- Dump LOGREC	O19 MZCCMPB1	- Event Action compare
I20 IKJEFT01	- TSO batch	O20 PDS	- PDS utility
I21 IMASPZAP	- Zap/dump a module	O21 PDSEASY	- Batch Ezyedit
I22 IRXJCL	- Execute REXX program	O22 PDSTM13	- Library map/analysis
I23 ISRSUPC	- Search/compare	O23 PDSTM18	- String scan/replace
I24 REXXCL	- Compile/link REXX pgm	O24 PDSTM25	- Member size analysis
I25 TRSMAIN	- Terse a file	O25 PDSTM27	- Duplicate mbr reporting
I26 SDSF	- SDSF batch	O26 PDSTM32	- Delete generation mbrs
I27 SMP	- IBM's ChangeMan	O27 PDSTM33	- PDS/mbr compare
JCL		O28 PDSTM36	- PDS/mbr compare
J1 COMMAND	- Command card	O29 PDSTM37	- PDS/mbr compare
J2 DD	- DD card	O30 PDSMERGE	- Merge PDS datasets
J3 JCLLIB	- Proclib card	O31 PKZIP	- Zip/unzip a file
J4 JOB	- Job card	O32 QWIKREF1	- MVS/Quick Reference
J5 JOBPARM	- Jobparm card	O33 SASSBSTR	- Execute CA7 commands
		O34 SAVRS	- Obtain syslog/reports

# JCL – ISREMJCL – Panel

## JCL Utility Models

Option ==> \_\_\_\_\_

Enter an option or move the cursor on JCL utility and press ENTER.

Enter END command to cancel MODEL command.

More: -

J5 JOBPARM - Jobparm card  
 J6 IF - If card  
 J7 INCLUDE - Include card  
 J8 OUTPUT - Output card  
 J9 ROUTE - Route card  
 J10 SET - Set card

O34 SAVRS - Obtain syslog/reports  
 O35 SDEBYSDE - Side by side comparison  
 O36 SHOWMVS - IPL information  
 O37 SYSLOGSC - Extract OPERLOG records  
 O38 SYSWAIT - Wait a duration of time  
 O39 TAPEMAP - Print contents of tape  
 O40 TASID - System monitor  
 O41 TMSBINQ - Inquire on CA1 tape  
 O42 UTGZ - Send message to console  
 O43 UTJE - Abend on program RC  
 O44 UTJM - Empty sequential DSN  
 O45 UTJP - Issue MVS commands  
 O46 UTKT - Abend job w/ user code  
 O47 UTONY - Print PDS members  
 O48 VSPRIME - VSAM prime

## Application

A1 APPLJCL - Personal/Team JCL

# JCL – ISREMJCL – Panel

```

)PANEL KEYLIST (ISRSNAB,ISR)
)ATTR DEFAULT(%+) FORMAT(MIX)      /* ISREMPLI - ENGLISH - 5.0 */
% TYPE(TEXT) INTENS(HIGH) COLOR(TURQ)
+ TYPE(TEXT) INTENS(LOW) COLOR(GREEN)
[ TYPE(PS)
] TYPE(NT)
OD TYPE(PS)
05 TYPE(PT)
06 TYPE(PIN)
09 TYPE(FP)
0A TYPE(NT)
11 TYPE(SAC)
22 TYPE(WASL) SKIP(ON) GE(ON)
10 TYPE(ET)
27 TYPE(NEF) CAPS(ON) PADC(USER)
28 AREA(SCRL) EXTEND(ON)
)BODY WINDOW(80,22) EXPAND(..) CMD(ZCMD)
... .JCL Utility Models ...
.Option ===>Z. .

.Enter an option or move the cursor on JCL utility and press ENTER.
.Enter.END.command to cancel MODEL command.
.SAREA40
)AREA SAREA40
%IBM
%OEM+
+I1 [AMATERSE]- Terse a file          01 [AFCLOGR1]- Extract OPERLOG records
+I2 [AMBLIST ]- Print linkage attributes 02 [CAL2X2WB]- Execute CA7 Commands
+I3 [BPXBATCH]- Run USS shell scripts   03 [CINEWCP2]- CICS New Copy
+I4 [CPPUPDTE]- Search/update          04 [COB2EZT ]- Conv. COBOL to Eztplus
+I5 [DFDSS ]- Backup/restore files     05 [COMPAREB]- Compare two files
+I6 [DFSORT ]- Sort/merge files       06 [CONSOLE ]- Execute MVS commands
+I7 [EZACFSM1]- Symbolic Interpreter    07 [COPYCAT ]- Copy a tape
+I8 [ICETOOL ]- Sort/merge files       08 [DAF ]- Dataset Audit Facility
+I9 [ICKDSF ]- Init disk pack        09 [DJCTEST ]- Abend job or set RC
+I10[IDCAMS ]- Def/del/alter VSAM/GDGs 010[DMS ]- CADISK Backup/Restore
+I11[IEBCOPY ]- Copy/del/move PDS mbr   011[EXAMBATX]- CA Examine Compare
+I12[IEBGENER ]- Copy sequential files 012[FCSWAIT ]- Wait a duration of time
+I13[IEBPTPCH]- Print and punch       013[FILEAID ]- Copy/update/print files
+I14[IEBUPTDE]- Create/alter PDS mbr   014[FTP ]- Transmit a file
+I15[IEHLIST ]- List PDS directory     015[FTPSEC ]- Transmit a file secured
+I16[IEHPROGM]- Rename/del/cat file   016[GENMAIL ]- Email using IEBGENER
+I17[IEFBR14 ]- Create/delete file     017[GSVXBAT]- Execute SYSVIEW cmdns
+I18[IFASMFDP]- Dump SMF records      018[LISTFT ]- List DASD volumes
+I19[IFCEREP1]- Dump LOGREC           019[MZCCMPB1]- Event Action compare
+I20[IKJEFT01]- TSO batch             020[PDS ]- PDS utility
+I21[IMASZPAP]- Zap/dump a module    021[PDSEASY ]- Batch Ezedyedit
+I22[IRXJCL ]- Execute REXX program    022[PSDM13]- Library map/analysis
+I23[ISRSUPC ]- Search/compare         023[PSDM18]- String scan/replace

```

```

+I24[REXXCL ]- Compile/link REXX pgm   024[PSDM25 ]- Member size analysis
+I25[TRSMMAIN ]- Terse a file          025[PSDM27 ]- Duplicate mbr reporting
+I26[SDSF ]- SDSF batch                026[PSDM32 ]- Delete generation mbrs
+I27[SMP ]- IBM's ChangeMan            027[PSDM33 ]- PDS/mbr compare
+I28[SMP ]- IBM's ChangeMan            028[PSDM36 ]- PDS/mbr compare
+I29[SMP ]- IBM's ChangeMan            029[PSDM37 ]- PDS/mbr compare
+I30[SMP ]- IBM's ChangeMan            030[PDMSMERGE]- Merge PDS datasets
+I31[PKZIP ]- Zip/unzip a file        031[PKZIP ]- Zip/unzip a file
+I32[QWIKREF1]- MVS/Quick Reference  032[QWIKREF1]- MVS/Quick Reference
+I33[SASSBSTR]- Execute CA7 commands 033[SASSBSTR]- Execute CA7 commands
+I34[SAVRS ]- Obtain syslog/reports 034[SAVRS ]- Obtain syslog/reports
+I35[SDEBYSDE]- Side by side comparison 035[SDEBYSDE]- Side by side comparison
+I36[SHOWMVS ]- IPL information       036[SHOWMVS ]- IPL information
+I37[SYSLOGSC]- Extract OPERLOG records 037[SYSLOGSC]- Extract OPERLOG records
+I38[SYSWAIT ]- Wait a duration of time 038[SYSWAIT ]- Wait a duration of time
+I39[TAPEMAP ]- Print contents of tape 039[TAPEMAP ]- Print contents of tape
+I40[TASID ]- System monitor          040[TASID ]- System monitor
+I41[TMSBINQ ]- Inquire on CA1 tape  041[TMSBINQ ]- Inquire on CA1 tape
+I42[UTGZ ]- Send message to console 042[UTGZ ]- Send message to console
+I43[UTJE ]- Abend on program RC      043[UTJE ]- Abend on program RC
+I44[UTJM ]- Empty sequential DSN    044[UTJM ]- Empty sequential DSN
+I45[UTJP ]- Issue MVS commands      045[UTJP ]- Issue MVS commands
+I46[UTKT ]- Abend job w/ user code  046[UTKT ]- Abend job w/ user code
+I47[UTONY ]- Print PDS members      047[UTONY ]- Print PDS members
+I48[VSPrime ]- VSAM prime           048[VSPrime ]- VSAM prime

+Application+
+A1 [APPLJCL ]- Personal/Team JCL

```

)INIT  
.ZVARS = '(ZCMD)  
&ZWINTITLE = ''  
.HELP = #ISREMJC  
IF (&ISRMDSPL = 'RETURN')  
.RESP = END  
.CURSOR = 'ZCMD'  
)REINIT  
REFRESH(ZCMD)  
)PROC  
&ZCMD = TRUNC(&ZCMD,'.')  
&ZMPTRL = .TRAIL  
&ZCMD = TRANS(&ZCMD)  
AMATERSE,I1 AMBLIST,I2 BPXBATCH,I3 BPXBATSL,I3  
CPPUDTE,I4 IPOUPDTE,I4  
DFDSS,I5 DFSORT,I6 ICEMAN,I6 SORT,I6 EZACFSM1,I7  
ICETOOL,I8 ICKDSF,I9 IDCAMS,I10 IEBCOPY,I11  
IEBGENER,I12 GENER,I12 IEBPTPCH,I13 IEBUPDTE,I14 IEHLIST,I15  
IEHPROGM,I16 IEFBR14,I17 BR14,I17 IFASMFDP,I18 SMFDMP,I18  
IFCEREP1,I19 LOGREC,I19 IKJEFT01,I20 TSOBATCH,I20 TSO,I20

# JCL – ISREMJCL – Panel

```

IMASPZAP,I21 ZAP,I21 IRXJCL,I22 ISRSUPC,I23 REXXCL,I24
TRSMAIN,I25 SDSF,I26 SMP,I27
AFCLOGR1,O1 CAL2X2WB,O2 CA7,O2 CINEWCPY2,O3 COB2EZT,O4 COMPAREB,O5
CONSOLE,O6 COPYCAT,O7 DAF,O8 DJCTEST,O9 DMS,O10
CADISK,O10 EXAMBATX,O11
FCSWAIT,O12 FILEAID,O13 FAMVS,O13
FTP,O14 FTPSEC,O15 GENMAIL,O16 GSvxVBAT,O17 LISTF,O18
MZCCMPB1,O19 PDS,O20 PDS86,O20
PDSEASY,O21 EZY,O21 PDSM13,O22 PDSM18,O23 PDSM25,O24, PDSM27,O25
PDSM32,O26 PDSM33,O27 PDSM36,O28 PDSM37,O29
PDSMERGE,O30 PKZIP,O31 QWKREF1,O32
QW,O32 SASSBSTR,O33 SAVRS,O34 SAVERS,O34 SDEBYSDE,O35
SHOWMVS,O36 SYSLOGSC,O37 SYSWAIT,O38 TAPEMAP,O39 TASID,O40
TMSBINQ,O41 CA1,O41 TMS,O41 UTGZ,O42 UTJE,O43 UTJM,O44
UTJP,O45 UTKT,O46 UTONY,O47 VSPRIME,O48
COMMAND,J1 DD,J2 JCLLIB,J3 JOB,J4 JOBPARM,J5 SYSAFF,J5
IF,J6 INCLUDE,J7 OUTPUT,J8 ROUTE,J9 SET,J10
APPLJCL,A1
' ','*',*)
IF (&ZCMD = ' ') &ZCMD = '&ZCMD..&ZTMPTRL'
&ZSEL = TRANS (TRUNC (&ZCMD,'.'))
I1,'PGM(ISRECBMR) PARM(MAMATERS)'
I2,'PGM(ISRECBMR) PARM(MAMBLIST)'
I3,'PGM(ISRECBMR) PARM(MBPPXBATC)'
I4,'PGM(ISRECBMR) PARM(MCPPUDT)'
I5,'PGM(ISRECBMR) PARM(MDFSS )'
I6,'PGM(ISRECBMR) PARM(MDFSORT )'
I7,'PGM(ISRECBMR) PARM(MEZACFSM)'
I8,'PGM(ISRECBMR) PARM(MICETOOL)'
I9,'PGM(ISRECBMR) PARM(MICKDSF )'
I10,'PGM(ISRECBMR) PARM(MIDCAMS )'
I11,'PGM(ISRECBMR) PARM(MIEBCOPY)'
I12,'PGM(ISRECBMR) PARM(MIEBGENE)'
I13,'PGM(ISRECBMR) PARM(MIEBPTPC)'
I14,'PGM(ISRECBMR) PARM(MIEBUPDT)'
I15,'PGM(ISRECBMR) PARM(MIEHLIST)'
I16,'PGM(ISRECBMR) PARM(MIEHPROG)'
I17,'PGM(ISRECBMR) PARM(MIEFBRI4)'
I18,'PGM(ISRECBMR) PARM(MIFASMD)'
I19,'PGM(ISRECBMR) PARM(MIFCEREP)'
I20,'PGM(ISRECBMR) PARM(MIKJEFT0)'
I21,'PGM(ISRECBMR) PARM(MIMASPA)'
I22,'PGM(ISRECBMR) PARM(MIRXJCL )'
I23,'PGM(ISRECBMR) PARM(MISRSUPC)'
I24,'PGM(ISRECBMR) PARM(MREXXCL )'
I25,'PGM(ISRECBMR) PARM(MTRSMAIN)'
I26,'PGM(ISRECBMR) PARM(MSDSF )'
I27,'PGM(ISRECBMR) PARM(MSMP )'

```

```

O1,'PGM(ISRECBMR) PARM(MAFCLOGR )'
O2,'PGM(ISRECBMR) PARM(MCAL2X2W )'
O3,'PGM(ISRECBMR) PARM(MCINEWCP )'
O4,'PGM(ISRECBMR) PARM(MCOB2EZT )'
O5,'PGM(ISRECBMR) PARM(MCOMPARE )'
O6,'PGM(ISRECBMR) PARM(MCONSOLE )'
O7,'PGM(ISRECBMR) PARM(MCOPYCAT )'
O8,'PGM(ISRECBMR) PARM(MDAF )'
O9,'PGM(ISRECBMR) PARM(MDJCTEST )'
O10,'PGM(ISRECBMR) PARM(MDMS )'
O11,'PGM(ISRECBMR) PARM(MEXAMBAT )'
O12,'PGM(ISRECBMR) PARM(MFCSWAIT )'
O13,'PGM(ISRECBMR) PARM(MFILEAID )'
O14,'PGM(ISRECBMR) PARM(MFTP )'
O15,'PGM(ISRECBMR) PARM(MFTPSEC )'
O16,'PGM(ISRECBMR) PARM(MGENMAIL )'
O17,'PGM(ISRECBMR) PARM(MGSVXBAT )'
O18,'PGM(ISRECBMR) PARM(MLISTF )'
O19,'PGM(ISRECBMR) PARM(MMZCCMPB )'
O20,'PGM(ISRECBMR) PARM(MPDS )'
O21,'PGM(ISRECBMR) PARM(MPDSEASY )'
O22,'PGM(ISRECBMR) PARM(MPDSSM13 )'
O23,'PGM(ISRECBMR) PARM(MPDSSM18 )'
O24,'PGM(ISRECBMR) PARM(MPDSSM25 )'
O25,'PGM(ISRECBMR) PARM(MPDSSM27 )'
O26,'PGM(ISRECBMR) PARM(MPDSSM32 )'
O27,'PGM(ISRECBMR) PARM(MPDSSM33 )'
O28,'PGM(ISRECBMR) PARM(MPDSSM36 )'
O29,'PGM(ISRECBMR) PARM(MPDSSM37 )'
O30,'PGM(ISRECBMR) PARM(MPDSSMERG )'
O31,'PGM(ISRECBMR) PARM(MPKZIP )'
O32,'PGM(ISRECBMR) PARM(MQWKREF )'
O33,'PGM(ISRECBMR) PARM(MSASSBSTR )'
O34,'PGM(ISRECBMR) PARM(MSAVRS )'
O35,'PGM(ISRECBMR) PARM(MSDEBYSDE )'
O36,'PGM(ISRECBMR) PARM(MSHOWMVS )'
O37,'PGM(ISRECBMR) PARM(MSYSLOGS )'
O38,'PGM(ISRECBMR) PARM(MSYSWAIT )'
O39,'PGM(ISRECBMR) PARM(MTAPEMAP )'
O40,'PGM(ISRECBMR) PARM(MTASID )'
O41,'PGM(ISRECBMR) PARM(MTMSBINQ )'
O42,'PGM(ISRECBMR) PARM(MUTGZ )'
O43,'PGM(ISRECBMR) PARM(MUTJE )'
O44,'PGM(ISRECBMR) PARM(MUTJM )'
O45,'PGM(ISRECBMR) PARM(MUTJP )'
O46,'PGM(ISRECBMR) PARM(MUTKT )'
O47,'PGM(ISRECBMR) PARM(MUTONY )'
O48,'PGM(ISRECBMR) PARM(MVSPRIME )'

```

# JCL – ISREMJCL – Panel

```

J1,'PGM(ISRECMBR) PARM(MCOMMAND)'
J2,'PGM(ISRECMBR) PARM(MDD) '
J3,'PGM(ISRECMBR) PARM(MJCLLIB) '
J4,'PGM(ISRECMBR) PARM(MJOB) '
J5,'PGM(ISRECMBR) PARM(MJOBPARM) '
J6,'PGM(ISRECMBR) PARM(MIF) '
J7,'PGM(ISRECMBR) PARM(MINCLUDE) '
J8,'PGM(ISRECMBR) PARM(MOUTPUT) '
J9,'PGM(ISRECMBR) PARM(MROUTE) '
J10,'PGM(ISRECMBR) PARM(MSET) '
A1,'PANEL(ISREMAPP) '
      '
      *,?')
IF (&ZSEL = '?')
  &ZEMTEMP = &ZCMD
  .MSG = ISRYM013
  &ZCMD = ''
  IF (&ZMACRO = 'Y')
    .RESP = 'END'
    /* If a macro command @OY38423*/
    /* don't display error @OY38423*/
  &ISRMMEMB = '?'
  /* Indicate no member fnd@OY38423*/
  &ISRMMEND = 'N'
  /* SET THE END INDICATOR TO NO */
  IF (.RESP = END)
    /* IF ENDING, WHY ... WHO CAUSED */
    IF (&ISRMONCL != 'Y')
      /* MAKE SURE ITS NOT A CLASS OP. */
      IF (&ISRMDSPL != 'RETURN ')
        /* MAKE SURE ITS NOT END ON MBR. */
        &ISRMEND = 'Y'
        /* NO - ITS BECAUSE USER HIT END */
  &ZMSG = .MSG
  /* Set message variable */
  VPUT(ZMSG) PROFILE
  /* Save message in prof pool */
  )PNTS
FIELD(ZPS01001) VAR(ZCMD) VAL(I11)
FIELD(ZPS01002) VAR(ZCMD) VAL(O1)
FIELD(ZPS01003) VAR(ZCMD) VAL(I2)
FIELD(ZPS01004) VAR(ZCMD) VAL(O2)
FIELD(ZPS01005) VAR(ZCMD) VAL(I3)
FIELD(ZPS01006) VAR(ZCMD) VAL(O3)
FIELD(ZPS01007) VAR(ZCMD) VAL(I4)
FIELD(ZPS01008) VAR(ZCMD) VAL(O4)
FIELD(ZPS01009) VAR(ZCMD) VAL(I5)
FIELD(ZPS01010) VAR(ZCMD) VAL(O5)
FIELD(ZPS01011) VAR(ZCMD) VAL(I6)
FIELD(ZPS01012) VAR(ZCMD) VAL(O6)
FIELD(ZPS01013) VAR(ZCMD) VAL(I7)
FIELD(ZPS01014) VAR(ZCMD) VAL(O7)
FIELD(ZPS01015) VAR(ZCMD) VAL(I8)
FIELD(ZPS01016) VAR(ZCMD) VAL(O8)
FIELD(ZPS01017) VAR(ZCMD) VAL(I9)
FIELD(ZPS01018) VAR(ZCMD) VAL(O9)
FIELD(ZPS01019) VAR(ZCMD) VAL(I10)
FIELD(ZPS01020) VAR(ZCMD) VAL(O10)

```

```

FIELD(ZPS01021) VAR(ZCMD) VAL(I11)
FIELD(ZPS01022) VAR(ZCMD) VAL(O11)
FIELD(ZPS01023) VAR(ZCMD) VAL(I12)
FIELD(ZPS01024) VAR(ZCMD) VAL(O12)
FIELD(ZPS01025) VAR(ZCMD) VAL(I13)
FIELD(ZPS01026) VAR(ZCMD) VAL(O13)
FIELD(ZPS01027) VAR(ZCMD) VAL(I14)
FIELD(ZPS01028) VAR(ZCMD) VAL(O14)
FIELD(ZPS01029) VAR(ZCMD) VAL(I15)
FIELD(ZPS01030) VAR(ZCMD) VAL(O15)
FIELD(ZPS01031) VAR(ZCMD) VAL(I16)
FIELD(ZPS01032) VAR(ZCMD) VAL(O16)
FIELD(ZPS01033) VAR(ZCMD) VAL(I17)
FIELD(ZPS01034) VAR(ZCMD) VAL(O17)
FIELD(ZPS01035) VAR(ZCMD) VAL(I18)
FIELD(ZPS01036) VAR(ZCMD) VAL(O18)
FIELD(ZPS01037) VAR(ZCMD) VAL(I19)
FIELD(ZPS01038) VAR(ZCMD) VAL(O19)
FIELD(ZPS01039) VAR(ZCMD) VAL(I20)
FIELD(ZPS01040) VAR(ZCMD) VAL(O20)
FIELD(ZPS01041) VAR(ZCMD) VAL(I21)
FIELD(ZPS01042) VAR(ZCMD) VAL(O21)
FIELD(ZPS01043) VAR(ZCMD) VAL(I22)
FIELD(ZPS01044) VAR(ZCMD) VAL(O22)
FIELD(ZPS01045) VAR(ZCMD) VAL(I23)
FIELD(ZPS01046) VAR(ZCMD) VAL(O23)
FIELD(ZPS01047) VAR(ZCMD) VAL(I24)
FIELD(ZPS01048) VAR(ZCMD) VAL(O24)
FIELD(ZPS01049) VAR(ZCMD) VAL(I25)
FIELD(ZPS01050) VAR(ZCMD) VAL(O25)
FIELD(ZPS01051) VAR(ZCMD) VAL(I26)
FIELD(ZPS01052) VAR(ZCMD) VAL(O26)
FIELD(ZPS01053) VAR(ZCMD) VAL(I27)
FIELD(ZPS01054) VAR(ZCMD) VAL(O27)
FIELD(ZPS01055) VAR(ZCMD) VAL(O28)
FIELD(ZPS01056) VAR(ZCMD) VAL(J1)
FIELD(ZPS01057) VAR(ZCMD) VAL(O29)
FIELD(ZPS01058) VAR(ZCMD) VAL(J2)
FIELD(ZPS01059) VAR(ZCMD) VAL(O30)
FIELD(ZPS01060) VAR(ZCMD) VAL(J3)
FIELD(ZPS01061) VAR(ZCMD) VAL(O31)
FIELD(ZPS01062) VAR(ZCMD) VAL(J4)
FIELD(ZPS01063) VAR(ZCMD) VAL(O32)
FIELD(ZPS01064) VAR(ZCMD) VAL(J5)
FIELD(ZPS01065) VAR(ZCMD) VAL(O33)
FIELD(ZPS01066) VAR(ZCMD) VAL(J6)
FIELD(ZPS01067) VAR(ZCMD) VAL(O34)
FIELD(ZPS01068) VAR(ZCMD) VAL(J7)

```

# JCL – ISREMJCL – Panel

```

FIELD(ZPS01069) VAR(ZCMD) VAL(O35)
FIELD(ZPS01070) VAR(ZCMD) VAL(J8)
FIELD(ZPS01071) VAR(ZCMD) VAL(O36)
FIELD(ZPS01072) VAR(ZCMD) VAL(J9)
FIELD(ZPS01073) VAR(ZCMD) VAL(O37)
FIELD(ZPS01074) VAR(ZCMD) VAL(J10)
FIELD(ZPS01075) VAR(ZCMD) VAL(O38)
FIELD(ZPS01076) VAR(ZCMD) VAL(O39)
FIELD(ZPS01077) VAR(ZCMD) VAL(O40)
FIELD(ZPS01078) VAR(ZCMD) VAL(O41)
FIELD(ZPS01079) VAR(ZCMD) VAL(O42)
FIELD(ZPS01080) VAR(ZCMD) VAL(O43)
FIELD(ZPS01081) VAR(ZCMD) VAL(O44)
FIELD(ZPS01082) VAR(ZCMD) VAL(O45)
FIELD(ZPS01083) VAR(ZCMD) VAL(O46)
FIELD(ZPS01084) VAR(ZCMD) VAL(O47)
FIELD(ZPS01085) VAR(ZCMD) VAL(O48)
FIELD(ZPS01086) VAR(ZCMD) VAL(A1)
)END
*-----
*----- Wells Fargo Changes -----
*----- This panel is invoked by using the TSO edit command "MODEL",
*----- which in turn invokes panel ISREMCLS. Below is the flow-chart:
*----- MODEL --> ISREMCLS --> ISREMJCL --> M*****
*----- IBM Cmd IBM panel User Panel User Skeleton
*----- FLG YYMMDD USERID DESCRIPTION
*----- @B8 131216 R2221 Added EZACFSM1
*----- @B7 130620 R2221 Added CINEWCP2
*----- @B6 130605 R2221 Added DMS (CADISK)
*----- @B5 121206 R2221 Added GSVKBAT
*----- @B4 121106 R2221 Added PDSM27 and PDSM37
*----- @B3 120928 R2221 Added SYSLOGSC
*----- @B2 120729 R2221 Added FTPSEC
*----- @B1 120717 R2221 Added ICETOOL
*----- @AZ 120629 R2221 Added PDSMERGE
*----- @AY 120523 R2221 Added MZCCMPB1 and EXAMBATX
*----- @AX 120113 R2221 Added AFCLOGR1 and FCSWAIT
*----- @AW 120113 R2221 Added DAF
*----- @AU 110602 R2221 Added VSPRIME
*----- @AT 110518 R2221 Added PDSM36
*----- @AS 110206 R2221 Added PDSMAN programs
*----- @AR 100818 R2221 Added BPXBATCH (BPXBATSL)
*----- @AQ 100812 R2221 Chged SYSAFF to JOBPARM
*----- @AP 100812 R2221 Removed COMMAND Utility

```

```

/* @AO 100812 R2221 Added JCL COMMAND, IF, INCLUDE and SET */
/* @AN 100809 R2221 Added COMPAREB and SDEBYSD */
/* @AM 100714 R2221 Removed Insync */
/* @AL 100702 R2221 Added PDS */
/* @AK 100630 R2221 Fixed Point-n-shoot */
/* @AJ 100628 R2221 Added SYSWAIT */
/* @AI 100611 R2221 Chged QW to QWIKREF1 */
/* @AH 100609 R2221 Added CAL2X2WB, CA7 commands using CCI */
/* @AG 100513 R2221 Added UTGZ, UTJE/JM/JP, UTKT and UTONY */
/* @AF 100507 R2221 Added FILEAID adn DJCTEST */
/* @AE 100504 R2221 Added IRXJCL and REXXCL */
/* @AD 100503 R2221 Fixed ICEMAN and QW when passing as parm */
/* @AC 100503 R2221 Added Cobol to Eztreive Converter */
/* @AB 100425 R2221 Added capability for application JCL */
/* @AA 100419 R2221 Removed NDM, suggest using NDMDSN utility */
/* @A9 100126 R2221 Added CPPUPDTE */
/* @AB 091228 R2221 Added ROUTE card */
/* @A7 091202 R2221 Added TASID, SHOWMVS, IFCEREPI, IFASMFDP */
/* @A6 091006 R2221 Consolidated tape entries into OEM / Misc. */
/* @A5 090922 R2221 Add INSYNC */
/* @A4 090917 R2221 Add OUTPUT, SYSAFF, and JCLLIB */
/* @A3 090916 R2221 Add AMATERSE, CONSOLE2, GENMAIL, and SAVRS */
/* @A2 090915 R2221 Removed invalid software */
/* @A1 011025 S915460 Added descriptions to programs */
/* @A0 020225 S915460 Added FDRMAP */
*----- -----

```

# JCL – Skeletons

## MIEHLIST

```
/*
/* PURPOSE: PDS, VTOC OR CATALOG LISTING
/*
/* MANUFACTURER: DFSMSDFP UTILITIES
/*
)IEHLIST EXEC PGM=IEHLIST
//SYSPRINT DD SYSOUT=
//DD1 DD DISP=OLD,UNIT=SYSALLDA,VOL=SER=#####
//SYSIN DD *
)N*
)N* List a PDS directory in hexadecimal format
)N*
LISTPDS DSNAME=(*****.*****.*****),          X
      VOL=SYSDA=#####
)N*
)N* List a PDS directory attributes (only valid for executables)
)N*
)N LISTPDS DSNAME=(*****.*****.*****),FORMAT,          X
      VOL=SYSDA=#####
)N
)N*
)N* Retrieve a VTOC listing
)N*
)N LISTVTOC FORMAT,VOL=DISK=#####
)N
)N*
)N* Partitioned Dataset (PDS) listing
)N*
)N LISTPDS {DSNAME=(dsn1{,dsn2...})}
)N     {,DUMP|FORMAT}
)N     {,VOL=device=serial}
)N
)N*
)N* Volume Table of Contents (VTOC) listing
)N*
)N LISTVTOC {DUMP|FORMAT}
)N     {,INDEXDSN=SYS1.VTOCIX.xxxxxx}
)N     {,DATE=ddyy}
)N     {,VOL=device=serial}
)N     {,DSNAME=(dsn1{,dsn2...})}
)N
)N*
```

## MUTKT

```
/*
/* PURPOSE: ABEND JOB WITH USER CODE
/*
//STEP010 EXEC PGM=UTKT,PARM=999,COND=(0,EQ,??????)
)N*
)N* Description:
)N*   'UTKT' was written to provide a graceful abend exit
)N*   point for test and production jobs when JCL execution
)N*   needs to be stopped due to prior step execution return
)N*   codes.
)N*
)N* PARM field:
)N*   The number of characters present in the PARM field
)N*   determines the user abend code to be issued. In the
)N*   below example, UTKT abends with a user 0003.
)N*
)N* PARM field limitations:
)N*   - Can contain any combination of alphanumeric and
)N*     national ($,#,@) characters.
)N*   - Up to 100 characters are allowed
)N*
```

# ISREMRXC – Panel

## REXX Models

Option ===> \_\_\_\_\_

Enter a number or move the cursor to a line and press Enter.

Enter the END command to cancel the MODEL command.

**SDSF REXX**

S0 SDSFREXX

**ISPF Variables**

V1 VGET

V2 VPUT

V3 VERASE

V4 VSYM

**ISPF Display Services**

D1 DISPLAY

D2 TBDISPL

D3 SETMSG

D4 PQUERY

D5 ADDPOP

D6 REMPOP

**ISPF Workstation**

X1 FILESTAT

X2 FILEXFER

X3 WSCON

X4 WSDISCON

**ISPF File Tailoring**

F1 FTOOPEN

F2 FTINCL

F3 FTCLOSE

F4 FTERASE

**ISPF Tables**

T1 TABLES

**ISPF Library Access**

L0 LIBACC

**ISPF Miscellaneous**

M0 MISC

**REXX Commands**

RX REXXCMDS

# SDSF REXX

---

- Link
  - [IBM System Display and Search Facility Downloads](#)

# REXX – Commands – Implementation

- Create the REXX command panel ([ISRRXCMD](#))
- Invoke MVS/Quick Reference ([QW](#))
  - Select “C”, Request Reference Information by Category
  - Select “PROGLANG”, Programming Languages Syntax Descriptions
  - Select “Z/OS REXX SYNTAX”
  - Select desired REXX command
  - Type in “[CUT ALL](#)”
- Create a new skeleton member
  - Type in [QWPASTE](#)
  - Insert “[\)N](#)“ to make all lines notes and adjust text
- Add the entry to the REXX command panel ([ISRRXCMD](#))

# REXX – ISRRXCMD – Panel

## REXX Commands and Functions

Option ==> \_\_\_\_\_

Enter a REXX command or move the cursor over REXX command and press ENTER.

Enter END command to cancel MODEL command.

More: +

ABBREV	ABS	ADDRESS	ARG	BITAND	BITOR
BITXOR	BOOLEAN	B2X	CALL	CENTER	COMPARE
CONDITION	COPIES	C2D	C2X	DATATYPE	DATE
DELSTACK	DELSTR	DELWORD	DIGITS	DO	DROP
DROPBUF	D2C	D2X	ERRORTEXT	EXECIO	EXECUTIL
EXIT	EXTERNALS	FIND	FORM	FORMAT	FUZZ
GETMSG	HE	HI	HT	IF	INDEX
INSERT	INTERPRET	ITERATE	JUSTIFY	LASTPOS	LEAVE
LEFT	LENGTH	LINESIZE	LISTDSI	MAKEBUF	MAX
MIN	MSG	MVSVAR	NEWSTACK	NOP	NUMERIC
OPTIONS	OUTTRAP	OVERLAY	PARSE	POS	PROCEDURE
PROMPT	PULL	PUSH	QBUF	QELEM	QSTACK
QUEUE	QUEUED	RANDOM	RETURN	REVERSE	RIGHT
RT	SAY	SELECT	SETLANG	SIGN	SIGNAL
SOURCELINE	SPACE	STORAGE	STRIP	SUBCOM	SUBSTR
SUBWORD	SYMBOL	SYSCPUS	SYSDSN	SYSVAR	TE
TIME	TRACE	TRANSLATE	TRUNC	TS	UNTIL
UPPER	USERID	VALUE	VERIFY	WHILE	WORD

# REXX – ISRRXCMD – Panel

```

)PANEL KEYLIST (ISRSNAB,ISR)
)ATTR DEFAULT(%+_ ) FORMAT(MIX)          /* ISREMPLI - ENGLISH - 5.0 */
[ TYPE(PS)
] TYPE(NT)
0D TYPE(PS)
05 TYPE(PT)
06 TYPE(PIN)
09 TYPE(FP)
0A TYPE(NT)
11 TYPE(SAC)
22 TYPE(WASL) SKIP(ON) GE(ON)
10 TYPE(ET)
27 TYPE(NEF) CAPS(ON) PADC(USER)
28 AREA(SCRL) EXTEND(ON)
)BODY WINDOW(80,22) EXPAND(..) CMD(ZCMD)
.. .REXX Commands and Functions. ..
.Option ==>.Z. .
.
.Enter a REXX command or move the cursor over REXX command and press ENTER.
.Enter.END.command to cancel MODEL command.
.SAREA40
)AREA SAREA40
+ [ABBREV ] [ABS      ][ADDRESS   ][ARG      ][BITAND   ][BITOR    ]
+ [BITXOR ] [BOOLEAN  ][B2X      ][CALL      ][CENTER   ][COMPARE  ]
+ [CONDITION ][COPIES  ][C2D      ][C2X      ][DATATYPE][DATE     ]
+ [DELSTACK ] [DELSTR   ][DELWORD  ][DIGITS   ][DO       ][DROP     ]
+ [DROPBUF  ][D2C      ][D2X      ][ERRORTEXT][EXECIO   ][EXECUTIL]
+ [EXIT     ][EXTERNALS][FIND     ][FORM     ][FORMAT   ][FUZZ     ]
+ [GETMSG   ][HE       ][HI       ][HT       ][IF       ][INDEX    ]
+ [INSERT   ][INTERPRET][ITERATE ][JUSTIFY ][LASTPOS ][LEAVE    ]
+ [LEFT    ][LENGTH   ][LINESIZE ][LISTDSI ][MAKEBUF ][MAX     ]
+ [MIN     ][MSG      ][MVSVAR   ][NEWSTACK ][NOP      ][NUMERIC  ]
+ [OPTIONS  ][OUTTRAP ][OVERLAY ][PARSE    ][POS      ][PROCEDURE]
+ [PROMPT  ][PULL     ][PUSH     ][QBUF    ][QELEM   ][QSTACK   ]
+ [QUEUE   ][QUEUED  ][RANDOM  ][RETURN   ][REVERSE ][RIGHT    ]
+ [RT      ][SAY      ][SELECT   ][SETLANG ][SIGN    ][SIGNAL   ]
+ [SOURCELINE][SPACE   ][STORAGE ][STRIP   ][SUBCOM  ][SUBSTR   ]
+ [SUBWORD  ][SYMBOL   ][SYSPCUS ][SYSDSN  ][SYSVAR  ][TE       ]
+ [TIME    ][TRACE   ][TRANSLATE][TRUNC   ][TS      ][UNTIL    ]
+ [UPPER   ][USERID  ][VALUE    ][VERIFY   ][WHILE   ][WORD     ]
+ [WORDINDEX][WORDLENGTH][WORDPOS ][WORDS   ][XRANGE  ][X2B     ]
+ [X2C     ][X2D      ]]

)INIT
.ZVARS = '(ZCMD)'
&ZWINTTL = ''
.HELP = #ISREMJC
IF (&ISRMDSPL = 'RETURN ')
  .RESP = END

```

```

.CURSOR = 'ZCMD'
)REINIT
REFRESH(ZCMD)
)PROC
&ZCMD = TRUNC (&ZCMD,'.')
&ZMPTRL = .TRAIL
IF (&ZCMD ~= ' ') &ZCMD = '&ZCMD..&ZMPTRL'
&ZSEL = TRANS (TRUNC (&ZCMD,'.'))
ABBREV , 'PGM(ISRECMBR) PARM(MRXABBRE)'
ABS    , 'PGM(ISRECMBR) PARM(MRXABS  )'
ADDRESS , 'PGM(ISRECMBR) PARM(MRXADDRE)'
ARG    , 'PGM(ISRECMBR) PARM(MRXARG  )'
BITAND , 'PGM(ISRECMBR) PARM(MRXBITAN)'
BITOR  , 'PGM(ISRECMBR) PARM(MRXBITOR)'
BITXOR , 'PGM(ISRECMBR) PARM(MRXBITXO)'
BOOLEAN , 'PGM(ISRECMBR) PARM(MRXBOOLE)'
B2X   , 'PGM(ISRECMBR) PARM(MRXB2X  )'
CALL   , 'PGM(ISRECMBR) PARM(MRXCALL )'
CENTER , 'PGM(ISRECMBR) PARM(MRXCENTE)'
COMPARE , 'PGM(ISRECMBR) PARM(MRXCOMP)' 
CONDITION , 'PGM(ISRECMBR) PARM(MRXCONDI)'
COPIES , 'PGM(ISRECMBR) PARM(MRXCOPIE)'
C2D   , 'PGM(ISRECMBR) PARM(MRXC2D  )'
C2X   , 'PGM(ISRECMBR) PARM(MRXC2X  )'
DATATYPE , 'PGM(ISRECMBR) PARM(MRXDATAT)'
DATE   , 'PGM(ISRECMBR) PARM(MRXDATE )'
DELSTACK , 'PGM(ISRECMBR) PARM(MRXDEL )'
DELSTR  , 'PGM(ISRECMBR) PARM(MRXDELST)'
DELWORD , 'PGM(ISRECMBR) PARM(MRXDELW0)'
DIGITS , 'PGM(ISRECMBR) PARM(MRXDIGIT)'
DO     , 'PGM(ISRECMBR) PARM(MRXDO  )'
DROP   , 'PGM(ISRECMBR) PARM(MRXDROP )'
DROPBUF , 'PGM(ISRECMBR) PARM(MRXDROPB)'
D2C   , 'PGM(ISRECMBR) PARM(MRXD2C  )'
D2X   , 'PGM(ISRECMBR) PARM(MRXD2X  )'
ERRORTEXT , 'PGM(ISRECMBR) PARM(MRXERROR)'
EXECIO , 'PGM(ISRECMBR) PARM(MRXEXECI)'
EXECUTIL , 'PGM(ISRECMBR) PARM(MRXEXECU)'
EXIT   , 'PGM(ISRECMBR) PARM(MRXEXIT )'
EXTERNALS , 'PGM(ISRECMBR) PARM(MRXEXTER)'
FIND   , 'PGM(ISRECMBR) PARM(MRXFIND )'
FORM   , 'PGM(ISRECMBR) PARM(MRXFORM )'
FORMAT , 'PGM(ISRECMBR) PARM(MRXFORMA)'
FUZZ   , 'PGM(ISRECMBR) PARM(MRXFUZZ )'
GETMSG , 'PGM(ISRECMBR) PARM(MRXGETMS)'
HE    , 'PGM(ISRECMBR) PARM(MRXHE  )'
HI    , 'PGM(ISRECMBR) PARM(MRXHI  )'
HT    , 'PGM(ISRECMBR) PARM(MRXHT  )'

```

# REXX – ISRRXCMD – Panel

```

IF      , 'PGM(ISRECMBR) PARM(MRXIF   )'
INDEX   , 'PGM(ISRECMBR) PARM(MRXINDEX)'
INSERT  , 'PGM(ISRECMBR) PARM(MRXINSER)'
INTERPRET , 'PGM(ISRECMBR) PARM(MRXINTER)'
ITERATE  , 'PGM(ISRECMBR) PARM(MRXITERA)'
JUSTIFY  , 'PGM(ISRECMBR) PARM(MRXJUSTI)'
LASTPOS  , 'PGM(ISRECMBR) PARM(MRXLASTP)'
LEAVE    , 'PGM(ISRECMBR) PARM(MRXLEAVE)'
LEFT     , 'PGM(ISRECMBR) PARM(MRXLEFT )'
LENGTH   , 'PGM(ISRECMBR) PARM(MRXLENGT)'
LINESIZE  , 'PGM(ISRECMBR) PARM(MRXLINES)'
LISTDSI  , 'PGM(ISRECMBR) PARM(MRXLISTD)'
MAKEBUF  , 'PGM(ISRECMBR) PARM(MRXMAKEB)'
MAX      , 'PGM(ISRECMBR) PARM(MRXMAX  )'
MIN      , 'PGM(ISRECMBR) PARM(MRXMIN  )'
MSG      , 'PGM(ISRECMBR) PARM(MRXMSG  )'
MVSVAR   , 'PGM(ISRECMBR) PARM(MRXMVSVA)'
NEWSTACK , 'PGM(ISRECMBR) PARM(MRXNEWST)'
NOP      , 'PGM(ISRECMBR) PARM(MRXNOP  )'
NUMERIC  , 'PGM(ISRECMBR) PARM(MRXNUMBER)'
OPTIONS  , 'PGM(ISRECMBR) PARM(MRXOPTIO)'
OUTTRAP  , 'PGM(ISRECMBR) PARM(MRXOUTTR)'
OVERLAY  , 'PGM(ISRECMBR) PARM(MRXOVERL)'
PARSE    , 'PGM(ISRECMBR) PARM(MRXPARSE)'
POS      , 'PGM(ISRECMBR) PARM(MRXPOS  )'
PROCEDURE , 'PGM(ISRECMBR) PARM(MRXPROC)'
PROMPT   , 'PGM(ISRECMBR) PARM(MRXPROMP)'
PULL     , 'PGM(ISRECMBR) PARM(MRXPULL )'
PUSH     , 'PGM(ISRECMBR) PARM(MRXPUSH )'
QBUF    , 'PGM(ISRECMBR) PARM(MRXQBUF )'
QELEM    , 'PGM(ISRECMBR) PARM(MRXQELEM)'
QSTACK   , 'PGM(ISRECMBR) PARM(MRXQSTAC)'
QUEUE   , 'PGM(ISRECMBR) PARM(MRXQUEUE )'
QUEUED  , 'PGM(ISRECMBR) PARM(MRXQUEUD)'
RANDOM   , 'PGM(ISRECMBR) PARM(MRXRANDO)'
RETURN   , 'PGM(ISRECMBR) PARM(MRXRETUR)'
REVERSE  , 'PGM(ISRECMBR) PARM(MRXREVER)'
RIGHT    , 'PGM(ISRECMBR) PARM(MRXRIGHT)'
RT      , 'PGM(ISRECMBR) PARM(MRXRT   )'
SAY      , 'PGM(ISRECMBR) PARM(MRXSAY  )'
SELECT   , 'PGM(ISRECMBR) PARM(MRXSELEC)'
SETLANG  , 'PGM(ISRECMBR) PARM(MRXSETLA)'
SIGN    , 'PGM(ISRECMBR) PARM(MRXSIGN )'
SIGNAL   , 'PGM(ISRECMBR) PARM(MRXSIGNA )'
SOURCELINE , 'PGM(ISRECMBR) PARM(MRXSOURC)'
SPACE   , 'PGM(ISRECMBR) PARM(MRXSPACE )'
STORAGE  , 'PGM(ISRECMBR) PARM(MRXSTORA)'
STRIP   , 'PGM(ISRECMBR) PARM(MRXSTRIP )'

```

```

SUBCOM   , 'PGM(ISRECMBR) PARM(MRXSUBCO )'
SUBSTR  , 'PGM(ISRECMBR) PARM(MRXSUBST )'
SUBWORD  , 'PGM(ISRECMBR) PARM(MRXSUBWO )'
SYMBOL   , 'PGM(ISRECMBR) PARM(MRXSYMBO )'
SYSPCUS  , 'PGM(ISRECMBR) PARM(MRXSYSCP )'
SYSDSN   , 'PGM(ISRECMBR) PARM(MRXSYSDS )'
SYSVAR   , 'PGM(ISRECMBR) PARM(MRXSYSVA )'
TE       , 'PGM(ISRECMBR) PARM(MRXTE   )'
TIME     , 'PGM(ISRECMBR) PARM(MRXTIME )'
TRACE    , 'PGM(ISRECMBR) PARM(MRXTRACE )'
TRANSLATE , 'PGM(ISRECMBR) PARM(MRXTRANS )'
TRUNC   , 'PGM(ISRECMBR) PARM(MRXTRUNC )'
TS       , 'PGM(ISRECMBR) PARM(MRXTS   )'
UNTIL   , 'PGM(ISRECMBR) PARM(MRXUNTIL )'
UPPER   , 'PGM(ISRECMBR) PARM(MRXUPPER )'
USERID   , 'PGM(ISRECMBR) PARM(MRXUSERI )'
VALUE    , 'PGM(ISRECMBR) PARM(MRXVALUE )'
VERIFY   , 'PGM(ISRECMBR) PARM(MRXVERIFY )'
WHILE   , 'PGM(ISRECMBR) PARM(MRXWHITE )'
WORD    , 'PGM(ISRECMBR) PARM(MRXWORD )'
WORDINDEX , 'PGM(ISRECMBR) PARM(MRXWORDI )'
WORDLENGTH , 'PGM(ISRECMBR) PARM(MRXWORDL )'
WORDPOS   , 'PGM(ISRECMBR) PARM(MRXWORDP )'
WORDS    , 'PGM(ISRECMBR) PARM(MRXWORDS )'
XRANGE   , 'PGM(ISRECMBR) PARM(MRXXRANG )'
X2B     , 'PGM(ISRECMBR) PARM(MRX2B   )'
X2C     , 'PGM(ISRECMBR) PARM(MRX2C   )'
X2D     , 'PGM(ISRECMBR) PARM(MRX2D   )'
' ', '
*,'?')
IF (&ZSEL = '?')
&ZEMTEMP = &ZCMD
.MSG = ISRYM013
&ZCMD = ''
*DSLST
IF (&ZMACRO = 'Y')          /* If a macro command @OY38423*/
  .RESP = 'END'             /* don't display error @OY38423*/
  &ISRMMEMB = '?'           /* Indicate no member fnd@OY38423*/
&ISRMEND = 'N'              /* SET THE END INDICATOR TO NO */
IF (.RESP = END)            /* IF ENDING, WHY ... WHO CAUSED */
  IF (&ISRMONCL -= 'Y')      /* MAKE SURE ITS NOT A CLASS OP. */
    IF (&ISRMDSP = 'RETURN ') /* MAKE SURE ITS NOT END ON MBR. */
      &ISRMEND = 'Y'           /* NO - ITS BECAUSE USER HIT END */
&ZMSG = .MSG                /* Set message variable */
VPUT(ZMSG) PROFILE          /* Save message in prof pool */
)PNTS
FIELD(ZPS01001) VAR(ZCMD) VAL(ABBREV)
FIELD(ZPS01002) VAR(ZCMD) VAL(ABS)

```

# REXX – ISRRXCMD – Panel

```

FIELD(ZPS01003) VAR(ZCMD) VAL(ADDRESS)
FIELD(ZPS01004) VAR(ZCMD) VAL(ARG)
FIELD(ZPS01005) VAR(ZCMD) VAL(BITAND)
FIELD(ZPS01006) VAR(ZCMD) VAL(BITOR)
FIELD(ZPS01007) VAR(ZCMD) VAL(BITXOR)
FIELD(ZPS01008) VAR(ZCMD) VAL(BOOLEAN)
FIELD(ZPS01009) VAR(ZCMD) VAL(B2X)
FIELD(ZPS01010) VAR(ZCMD) VAL(CALL)
FIELD(ZPS01011) VAR(ZCMD) VAL(CENTER)
FIELD(ZPS01012) VAR(ZCMD) VAL(COMPARE)
FIELD(ZPS01013) VAR(ZCMD) VAL(CONDITION)
FIELD(ZPS01014) VAR(ZCMD) VAL(COPIES)
FIELD(ZPS01015) VAR(ZCMD) VAL(C2D)
FIELD(ZPS01016) VAR(ZCMD) VAL(C2X)
FIELD(ZPS01017) VAR(ZCMD) VAL(DATATYPE)
FIELD(ZPS01018) VAR(ZCMD) VAL(DATE)
FIELD(ZPS01019) VAR(ZCMD) VAL(DELSTACK)
FIELD(ZPS01020) VAR(ZCMD) VAL(DELSTR)
FIELD(ZPS01021) VAR(ZCMD) VAL(DELWORD)
FIELD(ZPS01022) VAR(ZCMD) VAL(DIGITS)
FIELD(ZPS01023) VAR(ZCMD) VAL(DO)
FIELD(ZPS01024) VAR(ZCMD) VAL(DROP)
FIELD(ZPS01025) VAR(ZCMD) VAL(DROPBUF)
FIELD(ZPS01026) VAR(ZCMD) VAL(D2C)
FIELD(ZPS01027) VAR(ZCMD) VAL(D2X)
FIELD(ZPS01028) VAR(ZCMD) VAL(ERRORTEXT)
FIELD(ZPS01029) VAR(ZCMD) VAL(EXECIO)
FIELD(ZPS01030) VAR(ZCMD) VAL(EXECUTIL)
FIELD(ZPS01031) VAR(ZCMD) VAL(EXIT)
FIELD(ZPS01032) VAR(ZCMD) VAL(EXTERNALS)
FIELD(ZPS01033) VAR(ZCMD) VAL(FIND)
FIELD(ZPS01034) VAR(ZCMD) VAL(FORM)
FIELD(ZPS01035) VAR(ZCMD) VAL(FORMAT)
FIELD(ZPS01036) VAR(ZCMD) VAL(FUZZ)
FIELD(ZPS01037) VAR(ZCMD) VAL(GETMSG)
FIELD(ZPS01038) VAR(ZCMD) VAL(HE)
FIELD(ZPS01039) VAR(ZCMD) VAL(HI)
FIELD(ZPS01040) VAR(ZCMD) VAL(HT)
FIELD(ZPS01041) VAR(ZCMD) VAL(IF)
FIELD(ZPS01042) VAR(ZCMD) VAL(INDEX)
FIELD(ZPS01043) VAR(ZCMD) VAL(INSERT)
FIELD(ZPS01044) VAR(ZCMD) VAL(INTERPRET)
FIELD(ZPS01045) VAR(ZCMD) VAL(ITERATE)
FIELD(ZPS01046) VAR(ZCMD) VAL(JUSTIFY)
FIELD(ZPS01047) VAR(ZCMD) VAL(LASTPOS)
FIELD(ZPS01048) VAR(ZCMD) VAL(LEAVE)
FIELD(ZPS01049) VAR(ZCMD) VAL(LEFT)
FIELD(ZPS01050) VAR(ZCMD) VAL(LENGTH)

```

```

FIELD(ZPS01051) VAR(ZCMD) VAL(LINESIZE)
FIELD(ZPS01052) VAR(ZCMD) VAL(LISTDSI)
FIELD(ZPS01053) VAR(ZCMD) VAL(MAKEBUF)
FIELD(ZPS01054) VAR(ZCMD) VAL(MAX)
FIELD(ZPS01055) VAR(ZCMD) VAL(MIN)
FIELD(ZPS01056) VAR(ZCMD) VAL(MSG)
FIELD(ZPS01057) VAR(ZCMD) VAL(MVSVAR)
FIELD(ZPS01058) VAR(ZCMD) VAL(NEWSTACK)
FIELD(ZPS01059) VAR(ZCMD) VAL(NOP)
FIELD(ZPS01060) VAR(ZCMD) VAL(NUMERIC)
FIELD(ZPS01061) VAR(ZCMD) VAL(OPTIONS)
FIELD(ZPS01062) VAR(ZCMD) VAL(OUTTRAP)
FIELD(ZPS01063) VAR(ZCMD) VAL(OVERLAY)
FIELD(ZPS01064) VAR(ZCMD) VAL(PARSE)
FIELD(ZPS01065) VAR(ZCMD) VAL(POS)
FIELD(ZPS01066) VAR(ZCMD) VAL(PROCEDURE)
FIELD(ZPS01067) VAR(ZCMD) VAL(PROMPT)
FIELD(ZPS01068) VAR(ZCMD) VAL(PULL)
FIELD(ZPS01069) VAR(ZCMD) VAL(PUSH)
FIELD(ZPS01070) VAR(ZCMD) VAL(QBUF)
FIELD(ZPS01071) VAR(ZCMD) VAL(QELEM)
FIELD(ZPS01072) VAR(ZCMD) VAL(QSTACK)
FIELD(ZPS01073) VAR(ZCMD) VAL(QUEUE)
FIELD(ZPS01074) VAR(ZCMD) VAL(QUEUED)
FIELD(ZPS01075) VAR(ZCMD) VAL(RANDOM)
FIELD(ZPS01076) VAR(ZCMD) VAL(RETURN)
FIELD(ZPS01077) VAR(ZCMD) VAL(VERSE)
FIELD(ZPS01078) VAR(ZCMD) VAL(RIGHT)
FIELD(ZPS01079) VAR(ZCMD) VAL(RT)
FIELD(ZPS01080) VAR(ZCMD) VAL(SAY)
FIELD(ZPS01081) VAR(ZCMD) VAL(SELECT)
FIELD(ZPS01082) VAR(ZCMD) VAL(SETLANG)
FIELD(ZPS01083) VAR(ZCMD) VAL(SIGN)
FIELD(ZPS01084) VAR(ZCMD) VAL(SIGNAL)
FIELD(ZPS01085) VAR(ZCMD) VAL(SOURCELINE)
FIELD(ZPS01086) VAR(ZCMD) VAL(SPACE)
FIELD(ZPS01087) VAR(ZCMD) VAL(STORAGE)
FIELD(ZPS01088) VAR(ZCMD) VAL(STRIPE)
FIELD(ZPS01089) VAR(ZCMD) VAL(SUBCOM)
FIELD(ZPS01090) VAR(ZCMD) VAL(SUBSTR)
FIELD(ZPS01091) VAR(ZCMD) VAL(SUBWORD)
FIELD(ZPS01092) VAR(ZCMD) VAL(SYMBOL)
FIELD(ZPS01093) VAR(ZCMD) VAL(SYSCPUS)
FIELD(ZPS01094) VAR(ZCMD) VAL(SYSSDN)
FIELD(ZPS01095) VAR(ZCMD) VAL(SYSVAR)
FIELD(ZPS01096) VAR(ZCMD) VAL(TE)
FIELD(ZPS01097) VAR(ZCMD) VAL(TIME)
FIELD(ZPS01098) VAR(ZCMD) VAL(TRACE)

```

# REXX – ISRRXCMD – Panel

```

FIELD(ZPS01099) VAR(ZCMD) VAL(TRANSLATE )
FIELD(ZPS01100) VAR(ZCMD) VAL(TRUNC )
FIELD(ZPS01101) VAR(ZCMD) VAL(TS )
FIELD(ZPS01102) VAR(ZCMD) VAL(UNTIL )
FIELD(ZPS01103) VAR(ZCMD) VAL(UPPER )
FIELD(ZPS01104) VAR(ZCMD) VAL(USERID )
FIELD(ZPS01105) VAR(ZCMD) VAL(VALUE )
FIELD(ZPS01106) VAR(ZCMD) VAL(VERIFY )
FIELD(ZPS01107) VAR(ZCMD) VAL(WHILE )
FIELD(ZPS01108) VAR(ZCMD) VAL(WORD )
FIELD(ZPS01109) VAR(ZCMD) VAL(WORDINDEX )
FIELD(ZPS01110) VAR(ZCMD) VAL(WORDLENGTH)
FIELD(ZPS01111) VAR(ZCMD) VAL(WORDPOS )
FIELD(ZPS01112) VAR(ZCMD) VAL(WORDS )
FIELD(ZPS01113) VAR(ZCMD) VAL(XRANGE )
FIELD(ZPS01114) VAR(ZCMD) VAL(X2B )
FIELD(ZPS01115) VAR(ZCMD) VAL(X2C )
FIELD(ZPS01116) VAR(ZCMD) VAL(X2D )
)END
*-----
/*----- Wells Fargo Changes -----*/
*----- This panel is invoked by using the TSO edit command "MODEL", -----
/* which in turn invokes panel ISREMCLS. Below is the flow-chart: -----
*----- MODEL --> ISREMRCX --> ISRRXCMD --> M***** -----
/* IBM Cmd IBM panel User Panel User Skeleton */
/* -----
/* FLG YYMMDD USERID DESCRIPTION */
/* --- -----
/* @AO 100630 R2221 Developed Panel */
*----- */

```

# REXX – Skeletons

## MRXPOS

```
)NPOS (Position)
)N
)N+-----+
)N|           |
)N| >>--POS(needle,haystack-----)>< |
)N|           +-start+-               |
)N|           |                   |
)N+-----+
)N
)NReturns the position of one string, needle, in another haystack.
)N(See also the INDEX and LASTPOS functions.) Returns 0 if needle is
)Nthe null string or is not found or if start is greater than the
)Nlength of haystack. By default the search starts at the first
)Ncharacter of haystack (that is, the value of start is 1). You can
)Noverride this by specifying start (which must be a positive whole
)Nnumber), the point at which the search starts.
)N
)NHere are some examples:
)N
)N POS('day','Saturday')      -> 6
)N POS('x','abc def ghi')     -> 0
)N POS(' ', 'abc def ghi')    -> 4
)N POS(' ','abc def ghi',5)   -> 8
)N
)N+-----+
```

## MRXSAY

```
)NSAY
)N
)N+-----+
)N|           |
)N| >>--SAY-----;>< |
)N|           +-expression+- |
)N|           |                   |
)N+-----+
)N
)NSAY writes a line to the output stream. This typically displays it
)Nto the user, but the output destination can depend on the
)Nimplementation. The result of expression may be of any length. If
)Nyout expression, the null string is written.
)N
)NIf a REXX exec runs in TSO/E foreground, SAY displays the expression
)Non the terminal. The result from the SAY instruction is formatted
)Nto the current terminal line width (as defined by the TSO/E TERMINAL
)Ncommand) minus 1 character. In TSO/E background, SAY writes the
)Nexpression to the output stream, which is SYSTSPRT. In either case,
)Nwhen the length is undefined (LINESIZE() returns 0), SAY uses a
)Ndefault line size of 80.
)N
)NIf an exec runs in a non-TSO/E address space, SAY writes the
)Nexpression to the output stream as defined by the OUTDD field in the
)Nmodule name table (see item -MODNAMET). The system default is
)NSYSTSPRT. The ddname may be changed on an application basis or on a
)Nsystem basis.
)N
)NExample:
)N
)N data=100
)N Say data 'divided by 4 =>' data/4
)N /* Displays: "100 divided by 4 => 25" */
)N
)N+-----+
```

---

# Work Station Agent

# Introduction

---

- Work Station Agent (WSA) was introduced in ISPF V4 in MVS/ESA (1994)
- WSA is most useful for customers with the following tendencies:
  - Have a lot of screen real estate, several monitors connected to their PC
  - Prefer to use one editor to modify and view mainframe/PC files
  - Frequently download/upload files from their workstation
- Links
  - TSO Times, Spring 2004, Dave Salt
    - [Performing File Transfer using ISPF Work Station Agent \(WSA\)](#)
  - Appendix A, Installing the Client/Server Component
    - [ISPF – V2R1 – Users Guide – Vol 1](#)

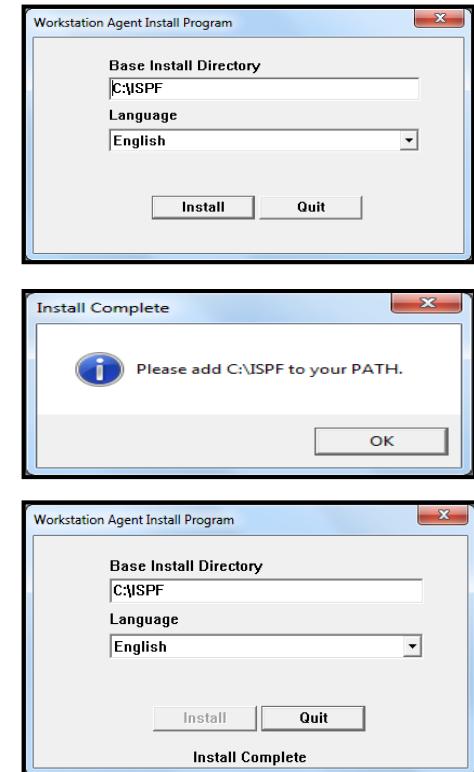
# Pros & Cons

---

- Pros
  - Easily transfer all members in a PDS file to a folder
  - **SPLIT** adds a new logical screen, acts like **START**
- Cons
  - Work Station Agent must be active
  - Maximum fixed window size, can not enlarge
  - Window can be resized smaller, but hides screen
  - Not supported
    - Character-level color, intensity and highlighting
    - Field-level intensity and highlighting
  - **FIND** does not work in browse mode
  - Can not initiate GUI display while in split screen mode

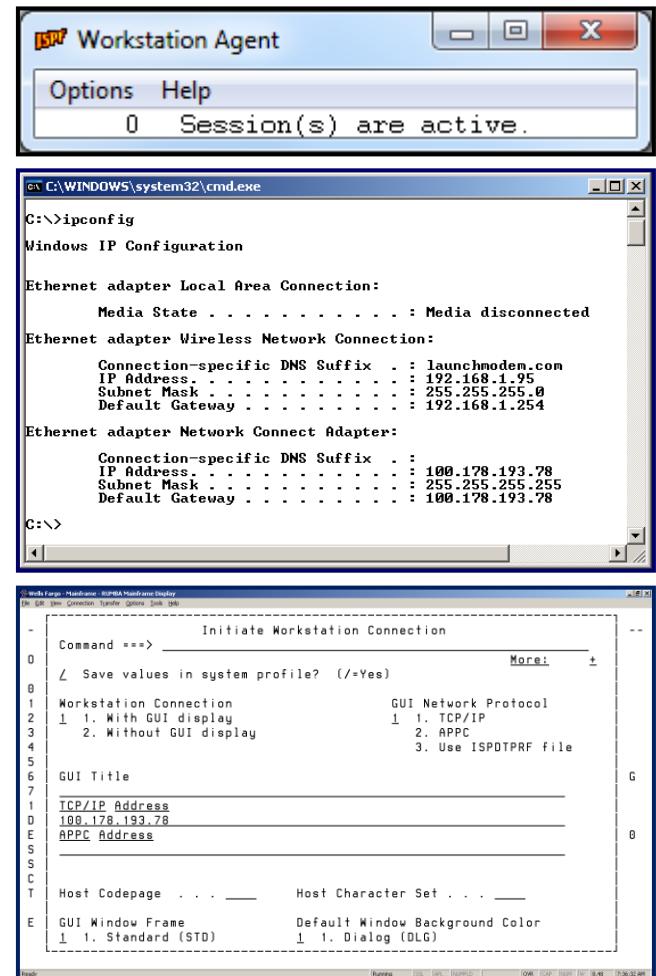
# Install on PC

- Download the following PDS member into a Windows folder called “**C:\ISPF**” and add the extension ‘**.EXE**’
  - **SYS1.SISPGUI(ISPGUINX)**
- Double click on “**C:\ISPF\ISPGUINX.EXE**”
  - Type in “**C:\ISPF**” and click the “**Install**” button
  - Disregard the message and click the “**OK**” button
  - Click the “**QUIT**” button



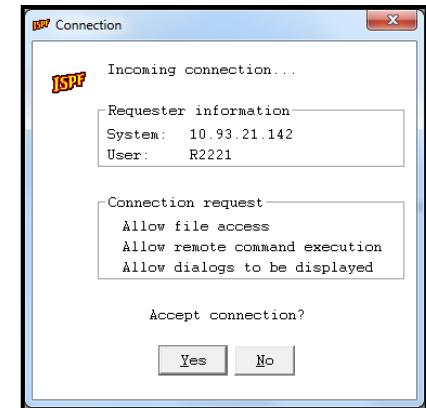
# Activation

- Once installed, click on “**WSA.exe**”
- Obtain the workstation IP address
  - From Windows
    - Click “**Start**”
    - Select “**Run**”
    - Insert “**CMD**”
    - Type in “**IPCONFIG**”
- From ISPF type in “**WSCON**”
  - Type “**1**” for “**Workstation Connection**”
  - Insert “**TCP/IP Address**”

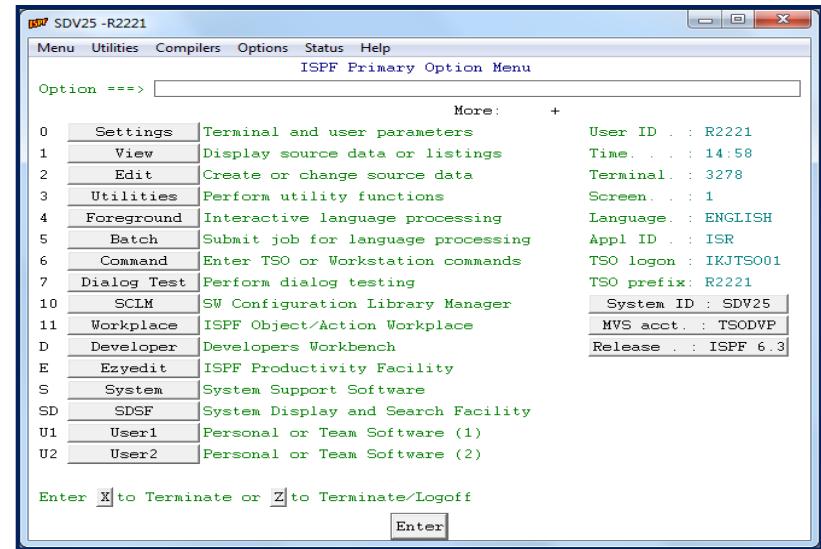


# Activation

- Windows “Connection” screen will appear
  - Click the “Yes” button



- ISPF in GUI mode



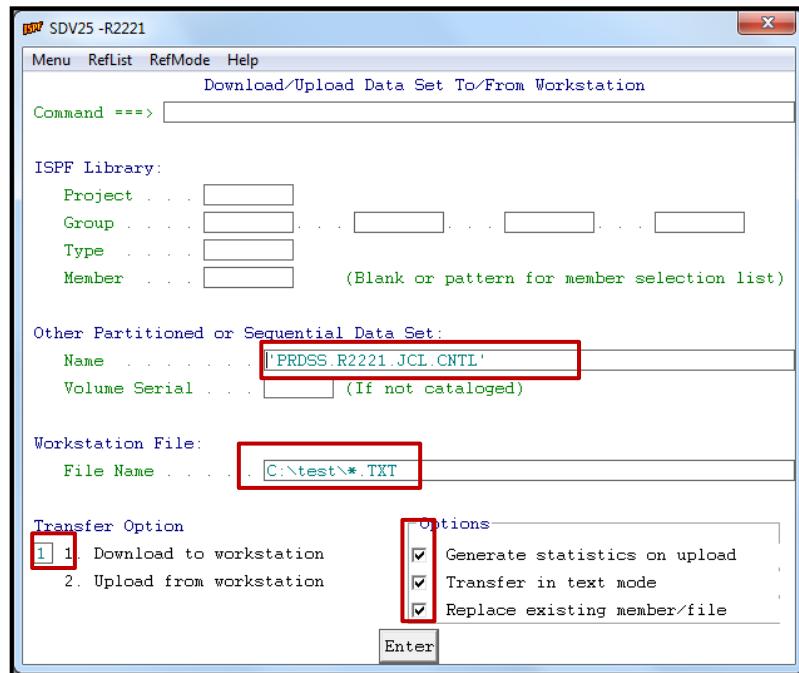
# Commands

---

- **SPLIT** or **START** creates new GUI screen
- **SWAP LIST** display and select screen
- **SWITCH [3270|GUI]** between modes
- **WSDISCON** terminates GUI session

# ISPF 3.7.2 – Transfer Files

- ISPF 3.7.2 is an easy way to transfer PDS members to a PC folder



Name	Prompt	Size	Created	Changed	ID
\$\$TITLE		0	2011/02/06	2011/05/12 09:45:00	R2221
\$\$DOC		6	2012/03/20	2012/03/22 13:51:04	R2221
##DSN		25	2012/05/24	2012/11/20 04:53:45	R2221
AFCLOGR1		30	2012/04/02	2013/01/31 14:34:14	R2221
ALIAS	*XFER	3	2011/06/30	2013/01/16 13:42:25	R2221
ALIASDET	*XFER	12	2011/01/27	2011/02/15 07:03:00	RB112
ALIASMEN	*XFER	28	2011/03/25	2011/03/25 05:52:16	R2221
A1		42	2012/05/24	2012/05/31 09:23:27	R2221
BATCH		26	2010/11/03	2013/04/23 14:23:05	R2221
BBDAHHML					
BRUCE		2	2012/12/15	2012/12/15 03:53:08	R2221
BRUCET		1	2012/12/15	2012/12/15 03:53:18	R2221
BR14		7	2013/06/26	2013/08/24 05:13:11	R2221
BR14A		4	2011/10/24	2013/12/02 12:35:25	R2221
BR14B		2	2011/10/24	2011/10/24 16:19:12	R2221
CA7		62	2010/11/16	2013/09/05 12:20:56	R2221
CA7BATCH		17	2012/05/11	2012/05/11 08:10:11	R2221
CA7QUE		29	2013/09/05	2013/09/05 12:32:06	R2221
CA7TEST		18	2013/08/19	2013/08/19 09:53:29	R2221

# Links

# ISPF – Manuals

Version	Manual	Link
Website	N/A	<a href="#">ISPF – Manuals and Tools</a>
Red Manual	SG24-6981-02	<a href="#">ABC's of Z/OS Systems Programming – Vol 1</a>
V2R01	SC19-3619-00	<a href="#">ISPF – Dialog Developer's Guide and Reference</a>
V2R01	SC19-3620-00	<a href="#">ISPF – Dialog Tag Language Guide and Reference</a>
V2R01	SC19-3621-00	<a href="#">ISPF – Edit and Edit Macros</a>
V2R01	SC19-3622-00	<a href="#">ISPF – Messages and Codes</a>
V2R01	GC19-3623-00	<a href="#">ISPF – Planning and Customizing</a>
V2R01	SC19-3624-00	<a href="#">ISPF – Reference Summary</a>
V2R01	SC19-3625-00	<a href="#">ISPF – SCLM Guide and Reference</a>
V2R01	SC19-3626-00	<a href="#">ISPF – Services Guide</a>
V2R01	SC19-3627-00	<a href="#">ISPF – User's Guide – Vol 1</a>
V2R01	SC19-3628-00	<a href="#">ISPF – User's Guide – Vol 2</a>
V1R13	SC34-4821-09	<a href="#">ISPF – Dialog Developer's Guide and Reference</a>
V1R13	SC34-4824-09	<a href="#">ISPF – Dialog Tag Language Guide and Reference</a>
V1R13	SC34-4820-10	<a href="#">ISPF – Edit and Edit Macros</a>

# ISPF – Manuals

Version	Manual	Link
V1R13	SC34-4815-10	<a href="#">ISPF – Messages and Codes</a>
V1R13	GC34-4814-09	<a href="#">ISPF – Planning and Customizing</a>
V1R13	SC34-4816-10	<a href="#">ISPF – Reference Summary</a>
V1R13	SC34-4817-11	<a href="#">ISPF – SCLM Guide and Reference</a>
V1R13	SC34-4819-10	<a href="#">ISPF – Services Guide</a>
V1R13	SC34-4822-10	<a href="#">ISPF – User's Guide – Vol 1</a>
V1R13	SC34-4823-10	<a href="#">ISPF – User's Guide – Vol 2</a>

# REXX – Manuals

Version	Manual	Link
V2R01	SA32-0972-00	<a href="#">REXX – Reference</a>
V2R01	SA32-0982-00	<a href="#">REXX – User's Guide</a>
V2R01	SA23-2283-00	<a href="#">REXX – UNIX System Services</a>
V2R01	SH19-8160-06	<a href="#">REXX – Compiler/Library – User's Guide and Reference</a>
V2R01	SH19-8179-03	<a href="#">REXX – Compiler/Library – Diagnosis Guide</a>

# TSO – Manuals

Version	Manual	Link
V2R01	SA32-0977-00	<a href="#">TSO – Administration</a>
V2R01	SA32-0975-00	<a href="#">TSO – Command Reference</a>
V2R01	SA32-0976-00	<a href="#">TSO – Customization</a>
V2R01	SA32-0979-00	<a href="#">TSO – General Information</a>
V2R01	SA32-0970-00	<a href="#">TSO – Messages</a>
V2R01	SA32-0984-00	<a href="#">TSO – Primer</a>
V2R01	SA32-0981-00	<a href="#">TSO – Programming Guide</a>
V2R01	SA32-0973-00	<a href="#">TSO – Programming Services</a>
V2R01	GA32-0983-00	<a href="#">TSO – System Diagnosis: Data Areas</a>
V2R01	SA32-0974-00	<a href="#">TSO – System Programming Command Reference</a>
V2R01	SA32-0971-00	<a href="#">TSO – User's Guide</a>

# SDSF – Manuals

Version	Manual	Link
Website	N/A	<a href="#">SDSF Downloads</a>
Red Manual	SG24-7419-00	<a href="#">Implementing REXX Support in SDSF</a>
V2R01	SA23-2274-00	<a href="#">SDSF – Operation and Customization</a>
V1R13	SA22-7670-15	<a href="#">SDSF – Operations and Customization</a>
V1R12	SA22-7670-14	<a href="#">SDSF – Operations and Customization</a>
V1R11	SA22-7670-12	<a href="#">SDSF – Operations and Customization</a>
V1R10	SA22-7670-11	<a href="#">SDSF – Operations and Customization</a>
V1R09	SA22-7670-10	<a href="#">SDSF – Operations and Customization</a>
V1R08	SA22-7670-09	<a href="#">SDSF – Operations and Customization</a>
V1R07	SA22-7670-08	<a href="#">SDSF – Operations and Customization</a>
V1R06 & V1R05	SA22-7670-07	<a href="#">SDSF – Operations and Customization</a>
V1R04	SA22-7670-04	<a href="#">SDSF – Operations and Customization</a>
V1R03	SA22-7670-02	<a href="#">SDSF – Operations and Customization</a>
V1R02	SA22-7670-01	<a href="#">SDSF – Operations and Customization</a>

# SHARE – ISPF

Session	Author	Link
13939	Peter Van Dyke	<a href="#">ISPF Editor – Beyond The Basics Hands-on Lab</a>
13839	Peter Van Dyke	<a href="#">ISPF Behind the Scenes</a>
13571	Peter Van Dyke	<a href="#">ISPF Hidden Treasures and New Features</a>
12718	Thomas Conley	<a href="#">Configuring ISPF for Fun and Profit</a>
11708	Peter Van Dyke	<a href="#">ISPF Panels Advanced</a>
8676	Peter Van Dyke,	<a href="#">ISPF User's Boot Camp</a>
8363	Rod Feak	<a href="#">When Worlds Collide – ISPF Tools for the Windows World</a>
2277	Liam Doherty	<a href="#">ISPF Panels – Dialog Tag Language (DTL)</a>

# SHARE – REXX

Session	Author	Link
14019	Brian Marshall	<a href="#">REXX programming for the z/OS programmer</a>
13817	Barry L. Lichtenstein	<a href="#">An Introduction to Using REXX with Language Environment</a>
13670	Virgil Hein	<a href="#">REXX Language Coding Techniques</a>
13494	John Franciscovich	<a href="#">Introduction to REXX Workshop</a>
11751	Thomas Conley	<a href="#">Rexx Power Tools – The PARSE Command</a>
11701	Chip Wood	<a href="#">Accessing SDSF Data from Rexx and Java</a>
11549	Bruce Koss	<a href="#">REXX – Troubleshooting</a>
10425	Eric Rosenfeld	<a href="#">Analyzing Your RACF Database Using REXX</a>
7485	Thomas Conley	<a href="#">Learn to Program in Rexx – Hands-on Lab</a>
5490	Michael Onghena	<a href="#">RACF's R_admin Interface: Now Served with REXX!</a>
2344	Chip Wood	<a href="#">SDSF Rexx API Usage Tutorial</a>
2341	Rod Feak	<a href="#">SDSF Rexx in a Production Environment – User Experience</a>
1579	David Ashley	<a href="#">Using Rexx Complier Hands-on Lab</a>
1569	Ahilan Rajadeva	<a href="#">Rexx and z/OS UNIX Services</a>

# Websites

Link
<a href="#"><u>ABCs of Systems Programming</u></a>
<a href="#"><u>Andy's MVS Page</u></a>
<a href="#"><u>Cardett Associates – Database Query Tools</u></a>
<a href="#"><u>CBT Tape</u></a>
<a href="#"><u>DFSORT – Documentation and Code</u></a>
<a href="#"><u>Doug Nadel – Tools and Toys</u></a>
<a href="#"><u>Frank Clarke – REXX Tools</u></a>
<a href="#"><u>GSF Software – Downloads</u></a>
<a href="#"><u>ISPF – Manuals and Tools</u></a>
<a href="#"><u>ISPF – Request For Enhancement (RFE)</u></a>
<a href="#"><u>Kenneth Tomiak – Stuff</u></a>
<a href="#"><u>Ken's Universe</u></a>
<a href="#"><u>Leonard Woren – Free Stuff</u></a>
<a href="#"><u>Lionel B. Dyck – Freeware</u></a>
<a href="#"><u>Mark's MVS Utilities</u></a>

# Websites

Link
<a href="#"><u>Michael Joseph Clearly – Freeware</u></a>
<a href="#"><u>Parallel Sysplex – Tools and Wizards</u></a>
<a href="#"><u>PDS2PDS – PDS Comparison</u></a>
<a href="#"><u>Planet MVS</u></a>
<a href="#"><u>Review – Browser and Editor</u></a>
<a href="#"><u>Schlabb – REXX, TCPIP, etc.</u></a>
<a href="#"><u>SDSF – Downloads</u></a>
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<a href="#"><u>WLM – Downloads</u></a>
<a href="#"><u>ZOS – V1R13 – PDF Manuals</u></a>
<a href="#"><u>ZOS – V2R01 – PDF Manuals</u></a>

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Any questions or comments please contact

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