ISPF Hidden Treasures and New Features

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Hidden Treasures and New Features in ISPF

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  - Recent Enhancements

- Member List
  - Recent Enhancements

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  - Recent Enhancements

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- z/OS UNIX Support
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  - Edit and Browse
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Hidden Treasures and New Features in ISPF…

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- Display System & User Id
- ISPF Client Gateway – ISPF from the Internet
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- User Command Tables
  - ISPF Table Utility
- Autotype Function
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DSLIST

- **DSLIST** personal_list_name | pattern
  - If a list name exists by that name, a data set list will be built based on the entries in the list
  - If a list name does not exist, the parameter is treated as a pattern

- **APPEND** command from within Data Set List
  - Adds entries to the displayed list
  - specify a personal list name or a pattern

- **REFRESH** command from within Data Set List
  - Refreshes display to original list filter criteria

- **EXCLUDE** command and X line command from within Data Set List
  - Excludes data sets displayed in list
  - Shadow line displayed
New Data Set List Commands - z/OS 1.2

**MEMBER command**
- allows the partitioned data sets in the list to be searched for a specific member name or pattern
- Syntax: `MEMBER string [X|EX|NX] [RECALL1|RECALL2]`
- Message field identifies data sets containing the member(s)

**SRCHFOR command**
- Invokes SuperC to search the listed data sets for strings
- Syntax: `SRCHFOR [string]`
- Displays panel used to specifying options for SuperC
- Message field identifies data sets containing the string
- SuperC output written to data set (default: `userid.SRCHDSL.LIST`)

Data Set List Enhancements

**Enhanced SORT command (z/OS 1.7)**
- Provides ability to sort a data set list in ascending or descending order
- Syntax: `SORT major-field [A|D] [minor-field] [A|D]`

**Display Total Tracks Value (z/OS 1.9)**
- New `Display Total Tracks` option added to the Data Set List Utility entry panel
- If selected, an additional header line showing the total tracks used by the data sets is displayed with the `Space` and `Total` views
- Pop-up window showing data collection progress displayed when calculating total tracks for a list of 50 or more data sets
Data Set List Enhancements . . .

- Block Line Commands (z/OS 1.10)
  - Allows Data Set List line commands to be entered in blocks
  - A block of line commands is marked by entering two forward slash characters (`//`) at the start and end of the block
  - The required line command is entered on the first or last line of the block, immediately following the two forward slash characters
  - All line commands, including TSO commands, Clists and REXX execs can be executed as block commands

- Include PREFIX in Dsname Level (z/OS 1.11)
  - New `Prefix Dsname Level` option added to the Data Set List Utility entry panel
  - If selected, ISPF will add the TSO prefix (if the user’s TSO profile has `PREFIX` defined) as the first qualifier if the Dsname Level entered is not enclosed in quotes

New Member List Commands - z/OS 1.5

- `SRCHFOR` command
  - Invokes SuperC to search the listed members for strings
  - Syntax: `SRCHFOR [string]`
  - Displays panel used to specifying options for SuperC
  - PROMPT column identifies members containing the string
  - SuperC output written to data set (default: `userid.SRCIBM.LIST`)

- `SORT PROMPT` command
  - Sorts members with messages in the PROMPT column to the top of the member list
  - Use after `SRCHFOR` command to group all members containing `string` at the top of the member list
Member List Enhancements

- **Enhanced SORT command (z/OS 1.7)**
  - Provides ability to sort a data set list in ascending or descending order
  - Syntax: `SORT major-field [A|D] [minor-field] [A|D]

- **New FILTER command (z/OS 1.8)**
  - Used to display only those members having an attribute matching a specified value
  - Syntax: `FILTER [field operator value]

  * field member list column name
  * operator EQ, NE, LE, LT, GE, or GT
  * value the comparison value

  - Member List SRCHFOR command also enhanced to optionally display only those members containing the SRCHFOR string

Edit COMPARE Command

- **Syntax:** `COMPARE [member|data_set_name|NEXT|* [X] [SYSIN]]`
- Uses SuperC APIs to compare to data sets or members
- Changes are highlighted depending on if the change is new to the source (member or data set where COMPARE command was issued), only in the target, or common
- **NEXT** compares next member in hierarchy of ISPF library
- **X** excludes common lines except for a few around differences
- **SYSIN DD** has additional SuperC Process Statements

```
ITEM  PIF001,STG,3WU,(SPONGS) - 08.03  Changes are shown
Command:  Scroll +-> CO
000052  (Contact action="COMPILE")
000064  (Contact action="COMPILE")
000065  (Contact action="COMPILE")
000066  (Contact action="COMPILE")
000067  (Contact action="COMPILE")
000068  (Contact action="COMPILE")
000069  (Contact action="COMPILE")
000070  (Contact action="COMPILE")
000071  (Contact action="COMPILE")
000072  (Contact action="COMPILE")
000073  (Contact action="COMPILE")
000074  (Contact action="COMPILE")
```

- only in "target" (NEXT in this case)
- MD to "make data"
- only in "source"
- only in "source"
- new in "source"
- common
- common lines excluded by X parameter
- 350 lines not displayed
Edit COMPARE Enhancement (z/OS 1.11)

- The SYSIN keyword on the COMPARE command is enhanced to support a sub-parameter
  - User can specify the SuperC process statements data set name as a sub-parameter of the SYSIN keyword
    Syntax: `SYSIN(dsn)`
  - Alternatively, the user can request the display of a pop-up panel where the SuperC process statements data set name can be entered
    Syntax: `SYSIN(/)`

New Edit Primary Commands - z/OS 1.6

- **HIDE** command
  - Removes excluded line messages from the Edit/View display
  - Line number underscored to indicate "hidden" line(s)
  - Syntax: `HIDE X`
  - **RESET** primary command has **HIDE** option to allow redisplay of excluded line messages
    - Syntax: `RESET HIDE`  

- **COLS** command
  - Causes a columns line to be displayed at the top of each Edit/View data screen (i.e. stays with the Edit/View display)
  - Syntax: `COLS [ON|OFF]`
Other Edit Enhancements

- **UNDO after SAVE (z/OS 1.9)**
  - Allows reversal of edit changes made prior to SAVE commands during the current edit session

- **New KEEP option added to the edit SETUNDO command**
  - Syntax:
    
    ```
    +-STORAGE-+
    >>>----SETUNDO------------------------><
    +-SETU----+  +-RECOVER-|
    +-ON------|
    +-OFF------|
    +-KEEP----+
    ```

  - Where:
    - **KEEP** Has the same effect as **STORAGE** and also prevents the SAVE command from clearing the UNDO buffers in storage

- **Multiple Targets for MOVE/COPY (z/OS 1.10)**
  - Suffix of K (keep) can now be used with MOVE/COPY destination line commands A, B, O and OO
    
    - Enter **AK**, **BK**, **OK**, or **OOK** line commands to indicate a multiple target MOVE/COPY command
    
    - Enter ‘final’ destination line command (A, B, O or OO) to initiate the ‘multiple target’ MOVE/COPY
    
    - ‘Final’ destination must be after the line where the **AK**, **BK**, **OK**, or **OOK** command was entered
Other Edit Enhancements...

- **New Edit Line Commands for HEX Display (z/OS 1.11)**
  - New edit line commands to display selected lines in hexadecimal format:
    - `HX`: display a single line in hexadecimal format
    - `HXX`: display a block of lines in hexadecimal format
  - The `HX` and `HXX` line commands act as a toggle by switching a line's display format between normal and hexadecimal format.

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Connect Without GUI

- **SETTINGS**
  - Workstation pulldown (or **GUIINIT**)
    - Workstation connection
    - Without GUI display
  - Allows workstation commands
    - **FILEXFER**
      - Edit on workstation
    - **SELECT WSCMD**
z/OS UNIX Directory List Utility (z/OS 1.8)

- Available as ISPF option 3.17
- Provides most of the functions supported by the ISHELL utility

z/OS UNIX Directory List Utility . . .

- Horizontal scrolling via the RIGHT and LEFT primary commands
- Column order and size can be customized via Options pull-down
z/OS UNIX Directory List Utility. . .

- Primary commands available:
  - EDIT - edit a file in the current directory
  - FIND - find a string within a filename
  - LEFT - scroll the directory list columns to the left
  - LOCATE - locate a directory list entry based on the sort order
  - REFRESH - redisplay directory list with any changes that have occurred
  - RESET - redisplay list removing line commands and messages
  - RIGHT - scroll the directory list columns to the right
  - SAVE - write the directory list data to a data set
  - SORT - sort the directory list by the specified fields

- Line commands available:
  - E - edit a file
  - B - browse a file
  - N - create a new file
  - L - list a directory
  - D - delete a file
  - R - rename a file
  - V - view a file (z/OS 1.9)
  - EA - ASCII edit (z/OS 1.9)
  - VA - ASCII view (z/OS 1.9)
  - RA - REFLIST Add (z/OS 1.10)
  - FS - File System (z/OS 1.11)
  - CO - copy data out
  - CI - copy data in
  - I - display attributes
  - MM - modify mode fields
  - MX - modify extended attributes
  - X - execute a command
  - MO - Modify Owner (z/OS 1.11)
  - MG - Modify Group (z/OS 1.11)
  - MF - Modify Format (z/OS 1.11)
  - UA - User Auditing (z/OS 1.11)
  - AA - Auditor Auditing (z/OS 1.11)
z/OS UNIX Support Enhancements. . .

**Use ISPF Edit and Browse for z/OS UNIX Files (z/OS 1.9)**
- Edit/View/Browse “Other” Data Set Name fields support entry of z/OS UNIX pathnames
- z/OS UNIX Directory List displayed when pathname for directory entered in the “Other” Data Set Name field
- z/OS UNIX pathname can be specified as an operand with the following edit primary and macro commands
  - COMPARE
  - COPY
  - CREATE
  - MOVE
  - REPLACE
- BROWSE, EDIT, and VIEW services enhanced to support processing of z/OS UNIX files
- FILEXFER service enhanced to support the upload and download of z/OS UNIX regular files
- Personal data set lists enhanced to support the saving and retrieval of z/OS UNIX pathnames

**Support for Editing ASCII Data (z/OS 1.9)**
- ASCII edit automatically invoked for z/OS UNIX files tagged with CCSID 819 (US ASCII)
- ASCII edit can be selected for z/OS UNIX files not tagged by either:
  - Selecting the Edit ASCII data option on the Edit/View Entry panel
  - Using the z/OS UNIX Directory List Utility (option 3.17) EA line command
- File tagged with CCSID of 819 when saved
- ASCII edit available with the EDIT and VIEW services by using the new ASCII keyword parameter
New UDLIST Command – z/OS 1.10

- Used to display a z/OS UNIX Directory List (option 3.17) from any command line

Syntax: `UDLIST [personal_list_name | pathname]`

- If a personal list name is provided, a directory list will be built based on the pathname entries in the list
- Alternatively, the pathname for a directory can be specified
  - but most command lines are CAPS(ON) – cannot enter mixed-case pathnames
- If no parameter is specified with the `UDLIST` command a popup displays:
  - Popup allows user to:
    - enter a mixed-case pathname
    - select a personal list

Directory List Enhancements – z/OS 1.11

- z/OS UNIX commands can be entered in the command field on the z/OS UNIX Directory List panel
  - Requires option “Enter z/OS UNIX commands in Command field” to be selected on the directory list options panel
  - Entering a `/` (forward slash) in the command field displays a panel with a command field 255 characters in length

- Default line commands can be defined for different file types
  - Default line command is processed when the cursor is placed in the line command field and the ENTER key is pressed
  - IBM-supplied default line commands:
    - Directory: `L` (List)
    - Regular file: `B` (Browse)
    - Character special: `I`
    - FIFO: `I`
    - Symbolic link: `I`
  - User can change default line commands on the “z/OS UNIX Directory List Default Line Commands” panel available from the Options pull-down
Using Multiple Screens

- ISPF allows up to 32 synchronously multi-tasking screens under one ISPF session

- Create new logical screens using:
  - `SPLIT [NEW]` command
    - reposition horizontal line separating 2 screens on 3270 display
    - new logical screen created when `NEW` specified
  - `START` command
    - creates new logical screen with different "initial dialog"

```
START PANEL(panel) | PGM(program) | CMD(command)
| [select_parameters]
| | ISPF_command
| | primary_option_menu_option
```

- Navigate screens using:
  - `SWAP [LIST | PREV | NEXT | screen name | n]` command
  - ISPF Task List panel (invoked using `SWAP LIST` command)

### ISPF Task List - Swap List Command

```
ISPF Task List
Active ISPF Logical Sessions
- Start a new screen
- Start a new application
  Application Name

<table>
<thead>
<tr>
<th>Name</th>
<th>Panelid</th>
<th>Applid</th>
<th>Session Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 DSLOT</td>
<td>ISR05950</td>
<td>ISR</td>
<td>3270</td>
</tr>
<tr>
<td>2 EDIT</td>
<td>ISRED0E2</td>
<td>ISR</td>
<td>3270</td>
</tr>
<tr>
<td>3 WORK</td>
<td>ISM0101</td>
<td>ISR</td>
<td>3270</td>
</tr>
<tr>
<td>4 DTEST</td>
<td>ISPTDY01</td>
<td>ISR</td>
<td>3270</td>
</tr>
<tr>
<td>5 SCLM</td>
<td>FLK0011</td>
<td>ISR</td>
<td>3270</td>
</tr>
<tr>
<td>...</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

```

"Other" screen
Current screen
SWAPBAR – z/OS 1.10

- Simplifies the task of swapping between ISPF logical screens
- Displays at the bottom of the physical screen point-and-shoot fields associated with each logical screen for the session
  - Use the point-and-shoot field to invoke the associated logical screen
  - Tip: Customize your terminal emulator to make the action of clicking the mouse to simulate:
    1) placing the cursor
    2) Pressing the ENTER key
- Enabled using the new SWAPBAR system command

Syntax:  

SWAPBAR [ON|OFF]

Display System and User Id – z/OS 1.7

- New ISPF command provided which allow the system name and/or user ID to be displayed on all ISPF panels
  - SYSNAME [ON|OFF] - Display | Remove system name
  - USERID [ON|OFF] - Display | Remove user ID
ISPF Client Gateway - ISPF from the Internet

- The Gateway provides an interface for client (and z/OS UNIX) applications to run TSO and ISPF commands and services
- Runs in z/OS UNIX and is invoked upon a request for a TSO or ISPF command
  - TSO address space established
  - If an ISPF command is requested
    - ISPF data sets are allocated and an ISPF session is established
- Command requests and command output in XML format
- Gateway IVP provides a web page for entering TSO and ISPF commands
  - /usr/lpp/ispf/bin/ISPZIVP.html
  - /usr/lpp/ispf/bin/ISPZIVP.cgi
- Shipped with z/OS 1.10
  - Backfitted to z/OS 1.8 and 1.9 (APAR OA27190)

ISRDDN Utility

- Fullscreen display of DD allocations
- Build a member list based on a DD
- Invocation: SELECT PGM(ISRDDN) - DDLIST command
- Browse (B), Edit (E), View (V), Free the entire DD (F), Compress a PDS (C), Provide additional data set information (I), Display list of users of jobs using a data set (Q)
ISRDDN - Primary Commands

*MEMBER name [string]*
- scans allocations for a particular member
- *string* restricts the search to DDs with *string* in their name.
- Uses CSVQUERY to locate load modules

<table>
<thead>
<tr>
<th>Command</th>
<th>Current Data Set Allocation</th>
<th>Member Data Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>MESSAGE</td>
<td>Name</td>
<td>Data Set Name</td>
</tr>
<tr>
<td></td>
<td>ISPILIB</td>
<td>PORTDEV.VARPIE5.LIB</td>
</tr>
<tr>
<td></td>
<td>PORTDEV.STG.LIB</td>
<td>PORTDEV.INT.51F</td>
</tr>
<tr>
<td></td>
<td>PORTDEV.STG.51F</td>
<td>PORTDEV.INT.51F</td>
</tr>
<tr>
<td></td>
<td>PORTDEV.VDPE.51F</td>
<td>PORTDEV.VDPE.51F</td>
</tr>
<tr>
<td></td>
<td>VDPE.VRNLIB</td>
<td>VDPE.VRNLIB</td>
</tr>
<tr>
<td></td>
<td>VDPE.VRNLIB</td>
<td>VDPE.VRNLIB</td>
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</tr>
<tr>
<td></td>
<td>VDPE.VRNLIB</td>
<td>VDPE.VRNLIB</td>
</tr>
</tbody>
</table>

*ONLY* string | EXCLUDE string
- to show or exclude DDs with *string* in their name

ISRDDN - Primary Commands...

*SEARCH name*
- Same as MEMBER but does not search DD's

*LOAD name*
- Explicitly loads a module
- Uses ISPLLIB if available
- Browses result

*APF, LINKLIST (LI), PARMLIB, LPA (LP)*
- toggle commands to add/remove pseudo-DD names
- show the defined -
  - APF data sets
  - link-list data sets
  - PARMLIB data sets
  - LPA data sets
ISRDDN - Primary Commands...

- **CLIST**
  - creates a allocation CLIST in 'prefix.ISRDDN.CLIST'

- **COUNT [string]**
  - counts the number of members in PDSs

- **DUP**
  - searches all the PDSs in the displayed list and LPA
  - displays list of duplicate names

- **ENQ**
  - Enqueues on system

- **CON**
  - Enqueue contention

ISRDDN - Browse of Control Blocks

- **BROWSE STORAGE**
  - **SEQUENTIAL FILE**
    - Allocated to DDNAME ISRDDN
    - Fixed or VB
    - Max length of 230
      - First string on line is control block name
      - Second string is locator string
      - Everything else ignored

  - **ASCB**  CVT??+C?  Addr space control blk
  - **CVT**   10.?   Comm Vector Table
  - **TCB**   CVT??  Task Control Block

- Disassembly support available with z/OS 1.9

**NOTE**: ISRDDN is now documented in the ISPF User's Guide Volume I
User Command Tables

- ISPF supports up to 3 user command tables (z/OS 1.5)
  - APPLID for User command tables are defined in the ISPF configuration table
  - Searched before Site and System command tables

- Many sites now define USER as the APPLID for a User command table
  - Speak to your systems programmer if your site does not
  - Allows users to define their own ISPF commands
  - User command table saved in a personal table data set in the ISPTLIB DD concatenation

- Creating and updating user command tables
  - Option 3.9 can be used to create a user command table
    - Requires table data set allocated to the ISPTABL DD
  - Option 3.9 cannot update a user command table if it is open to your ISPF session
    - Copy table to another member; use option 3.9 to update new member; copy updated member back
    - With z/OS 1.9, use option 3.16 (ISPF Table Utility)

AUTOTYPE Function - z/OS 1.2

- AUTOTYPE function resolves a partial name in a panel Library or Other Data Set Name field
  - searches catalog or PDS directory to find names that match

- Most effective when assigned to a PF key

- Retrieves a maximum of 100 data set names and 700 member names

- Only available on panels enabled for AUTOTYPE
  - applications can use AUTOTYPE by making minor panel changes
  - DTL provides AUTOTYPE support
ISRDTLCV Macro

- Shipped in SISPEXEC library
- Converts the non-displayable characters in panel output from the DTL Conversion Utility (ISPDTLC) to editable characters
- Issue ISRDTLCV on edit command line of generated panel

Calendar Notebook

- &ZKIT = LO
  - Set in Primary Menu
  - Allows TBDISPL dialog for Calendar view
    - Keeps 15 lines of data for day selected
    - Day is highlighted to indicate note