Configuring ISPF for Fun and Profit

Session 10948
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Abstract

Do you have a hard time configuring ISPF? Do you want to create the same ISPF look and feel for your users? Would you like to set up ISPF for better performance? If you answered 'YES' to any of these questions, this session is for you! Come to this session to learn how to configure ISPF for lean and mean operation. Teach ISPF to dance to your tune, for a change! In this session, the speaker will also include an online demonstration and a real-time ISPF configuration session.

Agenda

- ISPF Configuration History
- ISRCONFG - The "Old" Way
- ISPCCONF Dialog Setup
- ISPCCONF - The "New" Way
- Create and Compile the Keyword File
- Convert ISRCONFG to ISPCCONF
- Miscellaneous Topics
- The WAC ISPF Configuration
- Summary
- Finally...

ISPF Configuration History

- In the past, ISPF Configuration was difficult because configuration data was stored in many places and code referencing it was inconsistent
- ISRCONFG load module
- ISPSPROF system default table
- ISREDIT edit profile table ZDEFAULT profile
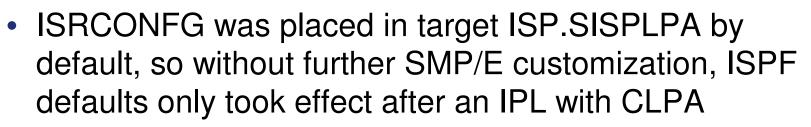- Hard-coded defaults in various ISPF load modules

ISPF Configuration History

- Unfortunately, ISRCONFG, ISPSPROF, and ISREDIT didn't control all ISPF config items

- Problems were difficult to diagnose because you never knew where ISPF would get the information; sometimes a hard-coded default would override your explicit specification

- Configuring ISPF began with creating an SMP/E usermod installing the ISRCONFG load module, but there were problems with this method
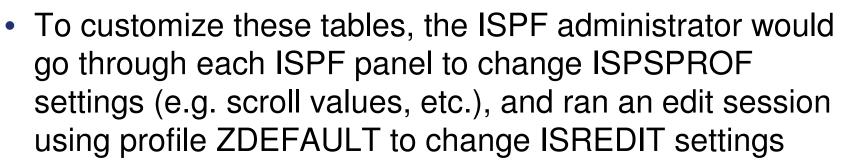
ISRCONFIG - The "Old" Way

- ISRCONFG was placed in target ISP.SISPLPA by default, so without further SMP/E customization, ISPF defaults only took effect after an IPL with CLPA

- ISRCONFG did not create defaults for all ISPF settings, so ISPF configuration tables ISP.SISPTENU(ISPSPROF) and ISP.SISPTENU(ISREDIT) had to be customized
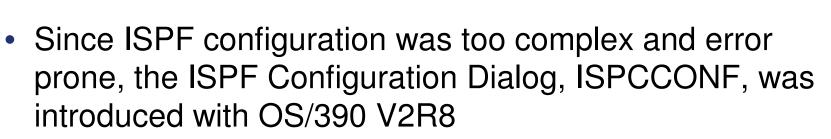
ISRCONFIG - The "Old" Way

- To customize these tables, the ISPF administrator would go through each ISPF panel to change ISPSPROF settings (e.g. scroll values, etc.), and ran an edit session using profile ZDEFAULT to change ISREDIT settings

- An SMP/E usermod was then created to add the updated ISPSPROF and ISREDIT to the system

- Unfortunately, some ISPF modules ignored ISRCONFG, ISPSPROF, ZDEFAULT, etc., so they used their own hard-coded defaults

ISPCCONF - The "New" Way

- Since ISPF configuration was too complex and error prone, the ISPF Configuration Dialog, ISPCCONF, was introduced with OS/390 V2R8

- ISPCCONF was designed to combine ISRCONFG, ISPSPROF, and ISREDIT ZDEFAULT settings into a single load module ISPCFIGU (VSAM configuration load module ISPCFIGV also created if VSAM keywords are specified in ISPCCONF by the ISPF administrator)

ISPCCONF - The "New" Way

- ISPCCONF is half of the solution, the other half is the ISPF code modified to honor ISPCCONF

- While ISPSPROF and ISREDIT are still distributed in ISP.SISPTENU, they are empty members only used as placeholders

- If you still want to use ISPSPROF and ISREDIT, they will override ISPCFIGU module, but not recommended

- Field-level help is available so you can make the correct configuration decision

ISPCCONF Dialog Setup

- To setup the ISPCCONF dialog, allocate a keyword file, a text file of options that will be used to generate load modules ISPCFIGU and ISPCFIGV containing ISPF defaults

- The keyword file must be a PDS, and have a minimum record length of 255 for variable format records, and 251 for fixed format records

- For space, CYL,(1,1,45) should allow enough room and directory space to store multiple members for testing and backup purposes

ISPCCONF Dialog Setup

- Since ISPCCONF is a default part of ISPF and can be executed by any user, be sure to secure LINKLIST, LPA, or any other candidate loadlib datasets to prevent an unauthorized user from either accidentally or deliberately changing ISPF defaults

Create and Compile Keyword File

- After setting up ISPCCONF, you can proceed to creating and compiling the keyword file
- Enter "TSO ISPCCONF" on command line or "ISPCCONF" from ISPF option 6
- The ISPF Configuration Utility menu is displayed, showing the last keyword file you worked with
- NOTE: The following screen shots were taken from a z/OS V1R13 system. Some of the fields shown may not be applicable to lower levels of ISPF.

Create and Compile Keyword File

```
Session A
File  Edit  Font  Transfer  Macro  Options  Window  Help

                              ISPF Configuration Utility
Option ===> █

   1   Create/Modify Settings and Regenerate Keyword File
   2   Edit Keyword File Configuration Table
   3   Verify Keyword Table Contents
   4   Build Configuration Table Load Module
   5   Convert Assembler Configuration Table to Keyword File
   6   Build SMP/E USERMOD


Keyword File Data Set
   Data Set . . . 'TCONLEY.ISPF.KEYWORD'
   Member . . . . DEFAULT

Configuration Table Assembler Source Data Set
   Data Set . . . _____
   Member . . . . _____

   Output File Content for Keyword File
   2   1. Include only non-default values
       2. Include defaults as comments
       3. Include all values


Current Configuration Table
   Keyword File : PEL.ISPF.CONFIG.KEYWORD.FILE(SYSTEM)
   Identifier . : ISPCFIGU              Level  . . . : 480R8001
   Compile Date : 2011/08/28            Compile Time : 11:04




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```

Create and Compile Keyword File

- This menu also displays current ISPF configuration table, keyword file that generated it, and date and time it was compiled

- Enter dataset name and member name of keyword file

- Enter option 1, Create/Modify Settings and Regenerate Keyword File

- Recommend default for Output File Content for Keyword File, option 2, so that all ISPF configuration options are displayed in keyword file, with defaults commented out

- This will clearly show customized configuration items

- Hit enter to display Create/Modify ISPF Configuration

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Create and Compile Keyword File

```
 Session A
 File  Edit  Font  Transfer  Macro  Options  Window  Help

                         Create/Modify ISPF Configuration          Defaults loaded
         Option ===>

         General ISPF Settings               System Profile (ISPSPROF) Settings
         1  Editor Settings                  6  Log and List Defaults
         2  Edit/View/Browse VSAM Settings   7  Terminal and User Defaults
         3  PDF Exits and Other PDF Settings 8  Workstation Defaults
         4  ISPF Site-wide Defaults          9  Workstation Download Defaults
         5  ISPDFLTS, CUA Colors, and Other
            DM Settings


         Output Keyword File
           Data Set . . .  'TCONLEY.ISPF.KEYWORD'
           Member . . . .  SHAREATL


         Instructions:
           Enter option to change configuration settings,
           END or EXIT command to generate keyword file, or
           CANCEL command to exit without keyword file generation








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```

Create and Compile Keyword File

- Note the message "Defaults loaded"; this indicates creation of new keyword member SHAREATL

- If modifying an existing keyword member, the message "Keyword file loaded" will be displayed

- Enter 1 to bring up Modify PDF Edit Configuration Settings

Create and Compile Keyword File

Create and Compile Keyword File

- After modifying the PDF Edit Options, hit PF3 to return to Create/Modify ISPF Configuration Menu
- Select option 3 to Modify PDF Configuration Settings

Create and Compile Keyword File

Create and Compile Keyword File

- After modifying PDF Configuration Settings, hit PF3 to return to Create/Modify ISPF Configuration Menu
- Select option 4 for Modify ISPF Sitewide Defaults

Create and Compile Keyword File

Create and Compile Keyword File

- After going through all ISPF options, hit PF3 (END) to save keyword file

- A View screen is then displayed showing the keyword file and all customized options

- Hit PF3 (END) to leave keyword file display

- Message "Keyword file saved" is displayed on ISPF Configuration Utility menu

Create and Compile Keyword File

Create and Compile Keyword File

Create and Compile Keyword File

- Option 2 Edit Keyword File Configuration Table is not recommended; use ISPCCONF menus to create syntactically correct keyword file

- Option 3 Verify Keyword Table Contents ensures a syntactically correct keyword file

- Option 4 Build Configuration Table Load Module creates ISPCFIGU and ISPCFIGV modules from the keyword file

- Entering '4' brings up the following pop-up menu

Create and Compile Keyword File


```
ISPF Configuration Utility
                    Build Configuration Table Load Module
Command ===>

Input Keyword File Data set
  Data Set . . . 'TCONLEY.ISPF.KEYWORD'
  Member . . . . SHAREATL

Output Configuration Table Load Module Data Set
  Data Set . . . 'TCONLEY.ISPF.LOADLIB'

Optional fields (leave blank for ISPF to use defaults)
  Object data set  . . . _____
  Configuration member   _____    (Defaults to ISPCFIGU)
  VSAM member  . . . . . _____    (Defaults to ISPCFIGV)


    2. Include defaults as comments
    3. Include all values


Current Configuration Table
  Keyword File : PEL.ISPF.CONFIG.KEYWORD.FILE(SYSTEM)
  Identifier . : ISPCFIGU              Level  . . . : 480R8001
  Compile Date : 2011/08/28            Compile Time : 11:04
```

Convert ISRCONFG to ISPCCONF

- Recommend linklist load library for easy installation and maintenance since new defaults can be set with "F LLA,REFRESH" MVS command
- Use default values for everything else
- Hit Enter to generate load modules
- Note message "Load module built"

Create and Compile Keyword File

```
                         ISPF Configuration Utility              Load module built
    Option ===>

    1    Create/Modify Settings and Regenerate Keyword File
    2    Edit Keyword File Configuration Table
    3    Verify Keyword Table Contents
    4    Build Configuration Table Load Module
    5    Convert Assembler Configuration Table to Keyword File
    6    Build SMP/E USERMOD


    Keyword File Data Set
       Data Set . . .  'TCONLEY.ISPF.KEYWORD'
       Member . . . .  SHAREATL

    Configuration Table Assembler Source Data Set
       Data Set . . .  _____
       Member . . . .  _____

       Output File Content for Keyword File
       2   1. Include only non-default values
           2. Include defaults as comments
           3. Include all values


    Current Configuration Table
       Keyword File : PEL.ISPF.CONFIG.KEYWORD.FILE(SYSTEM)
       Identifier . : ISPCFIGU              Level  . . . : 480R8001
       Compile Date : 2011/08/28            Compile Time : 11:04
```

Convert ISRCONFG to ISPCCONF

- Option "5" on ISPCCONF menu converts ISRCONFG to a keyword table

- The assembler source MUST be assembler source; if you try to use a usermod with JCL and SMP/E wrapped around it, ISPCCONF will not recognize the source

- Not really relevant today, but if you have ISRCONFG source laying around and you've never run ISPCCONF….

Miscellaneous Topics

- Unfortunately, option "6", the "Build SMP/E USERMOD" option, is not suitable for use

- The FMID, target, and DLIB datasets must be specified manually, and are not checked for accuracy

- While a syntactically correct USERMOD is built, the ++DATA and ++PROGRAM elements ISPCFIGx are not shipped by ISPF, so the USERMOD will not notify you of a regression when ISPCCONF maintenance is applied

Miscellaneous Topics

- Dialog uses superseded USERMODs, but USERMODs are RESTOREd and re-APPLY'd, not superseded

- A PRE field should be supplied for the prerequisite ISPF maintenance, but you have to add that manually

- Do not use the USERMOD option; rely on ISPF service to issue HOLDDATA for PTFs requiring ISPCCONF to rebuild ISPCFIGx; open a PMR if they forget

The WAC ISPF Configuration

- Following is the WAC (World According to Conley) method for configuring ISPF, a set of recommendations for settings to improve ISPF performance and usability

- If these settings work for you and you agree with them, great; but if not, don't hesitate to do something else if it's appropriate for your installation (Your Mileage May Vary!)

The WAC ISPF Configuration

- Option 1, Editor Settings

  Enter '/' for Enable Extended Statistics

  Change edit recovery dataset blocksize to half-track blocking (27998 on a 3390) for better performance and space utilization

  For edit options, check RECOVERY ON (safety, recovery, investment protection), uncheck NUMBER ON and change NULLS to NULLS ON ALL (increase user productivity in EDIT)

The WAC ISPF Configuration

- Option 1, Editor Settings

  In Edit Highlighting, check HILITE ON, Highlight DO/END logic, Highlight IF logic, and Match parentheses (user productivity, but there is higher overhead; testing shows about an 8X increase in service units for HILITE, but to the naked eye there's no degradation)

  Uncheck highlight FIND strings (personal preference, a lot of hits on one screen make data hard to read)

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The WAC ISPF Configuration

- Option 3, PDF Exits and Other PDF Settings

    Specify 0 (zero) for Outlist Utility Block Size to get half-track blocking for OUTLIST datasets

    Specify '/' for Enable RM/Tape Commands, and specify appropriate RM/Tape Command and APPLID

    If running a storage manager other than HSM, modify the Volume for Migrated Data Sets and Delete Command for Migrated Data Sets fields for correct values

The WAC ISPF Configuration

- Option 4, ISPF Sitewide Defaults

  Uncheck Tab to Action Bars, uncheck Use Keylists, uncheck Show Pfkeys

  Set Select Option 7.1 Dialog Test Panel to ISPYFPA, set Command Line Placement to Asis, set Scroll Default to CSR, set Status Area Default to Calendar

  If you want Empty Member List support, check Allow Empty Member List and Allow Empty Member List (nomatch)

  Set List Data Set Records per Block to 231 for a 3390 (LRECL 121 * 231 = 27951, half-track for a 3390)

  Specify 0 (zero) for all ISPF dataset blocksizes to get half-track blocking

The WAC ISPF Configuration

- ## Option 4, ISPF Sitewide Defaults

  For multisystem and multiple logon support, specify
  SYS&SYSNAME Additional Temporary Data Set Qualifier
  to create LPAR-unique temporary dataset names and
  eliminate need for ISPF exit 16

  Specify "/" for Multi-logon Profile Sharing (required to
  support OSMF's multiple ISPF window facility)

  If enabling multiple logon support, create shared ISPF profile
  dataset and modify logon exec, etc., to allocate

  For more information regarding multiple logon, refer to
  http://home.roadrunner.com/~pinncons/TSO LOGON with
  the Same Userid on Multiple LPARs in a Sysplex.pdf

The WAC ISPF Configuration

- Option 5, ISPDFLTS, CUA Colors, and Other DM Settings

  Set SITE for Site Command Table 1

  Set USER for User Command Table 1

  Set Retrieve Command Stack Size to 4096

  Set the Default Primary Panel to ISR@PRIM

  Set the Default LIBDEF Processing Option to STACK

  Change Action Bar Separator Line to color to Yellow

The WAC ISPF Configuration

- Option 6, Log and List Defaults

  Create valid Log/List job cards

  Set the Log Primary and Secondary Quantity to 0

  Enter '/' for Message ID

  Set the List Primary and Secondary Quantity to 1

- Option 7, Terminal and User Defaults

  Set Number of Keys to 24

  Check the Message Identifier field to assist debugging

The WAC ISPF Configuration

- Option 8 Workstation Defaults can remain unchanged
- Option 9 Workstation Download Defaults can remain unchanged
- That's the WAC ISPF Configuration!

DEMO TIME!

- Synchronize your watches
- Time me
- GO!

Summary

- Discussed ISPF Configuration History
- Reviewed ISRCONFG methods for customizing ISPF
- Introduced ISPCCONF dialog for customizing ISPF
- Demonstrated how to Create and Compile keyword file
- Showed how to convert from ISRCONFG to ISPCCONF
- Discussed Miscellaneous Topics such as SMP/E usermod
- Discussed WAC (World According to Conley) method for configuring ISPF

Finally…

- Please fill out an evaluation, your comments help me to deliver a better presentation

- Online evaluations are available at http://atlanta.share.org/sessionevaluation

- I'm interested in hearing about your ISPCCONF experiences, positive or negative; if you encounter any unique situations or problems using ISPCCONF to configure ISPF, please let me know about them by sending an Email to pinncons@rochester.rr.com