



Configuring ISPF for Fun and Profit

Session 10948 Wednesday, March 14, 2012 Thomas Conley Pinnacle Consulting Group, Inc. (PCG) 59 Applewood Drive Rochester, NY 14612-3501 P: (585)720-0012

F: (585)723-3713

pinncons@rochester.rr.com

http://home.rochester.rr.com/~pinncons

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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.

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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





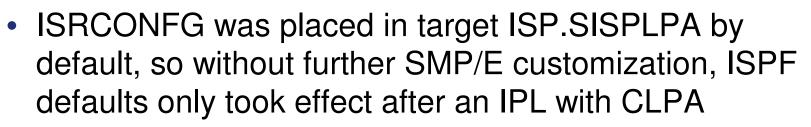
ISPF Configuration History

- 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





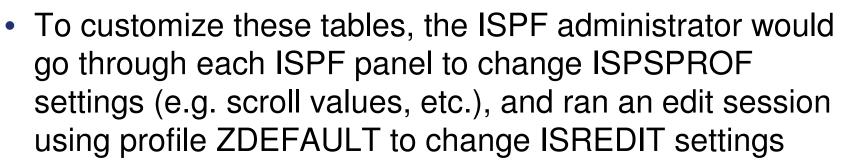
ISRCONFIG - The "Old" Way



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



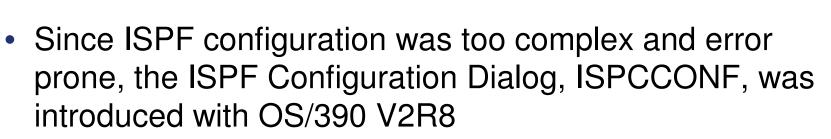
ISRCONFIG - The "Old" Way



- 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



 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

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- 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.

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Create and Compile Keyword File

Session A File Edit Font	Iransfer 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		
	<pre>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</pre>		
	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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- 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/Modify ISPF Configuration Defaults loaded
	General ISPF SettingsSystem Profile (ISPSPROF) Settings1 Editor Settings6 Log and List Defaults2 Edit/View/Browse VSAM Settings7 Terminal and User Defaults3 PDF Exits and Other PDF Settings8 Workstation Defaults4 ISPF Site-wide Defaults9 Workstation Download Defaults5 ISPDFLTS, CUA Colors, and Other DM Settings9 Workstation Download Defaults
	Output Keyword File Data Set <u>'TCONLEY.ISPF.KEYWORD'</u> Member <u>SHAREATL</u>
	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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- 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



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<u>File</u> <u>Edit</u> Font	Iransfer Macro Qotions Window Help
	Modify PDF Edit Configuration Settings Command ===>
	More: + Miscellaneous Edit Settings
	Maximum Number of Edit Profiles <u>25</u> Maximum Number of Edit Clipboards 11 Site-wide Initial Macro Maximum Initial Storage for Edit <u>0</u> Maximum Edit Clipboard Size <u>0</u> Undo Storage Size <u>0</u> Text Flow Terminators <u>.</u> &<
	Edit CUT Default Action <u>REPLACE</u> (APPEND or REPLACE) Edit PASTE Default Action <u>KEEP</u> (DELETE or KEEP)
	Enter "/" to select option / Allow Edit Highlighting / Default Editor to have Highlighting Enabled / Highlight Assembler Continuation Errors / Default Editor to have Action Bars Present
	7 Warn on Trailing Blank Truncation 7 Allow Creation of CREATE/REPLACE Target Data Set Force ISRE776 if RCHANGE passed arguments Enable Extended Statistics
	Edit Preserve Settings Enter "/" to select option _ Preserve VB record length _ Force the Preserve VB record length Selection
	Edit Recovery Data Set Settings SCLM Warning Level
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- After modifying the PDF Edit Options, hit PF3 to return to Create/Modify ISPF Configuration Menu
- Select option 3 to Modify PDF Configuration Settings



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	Move/Copy Settings Enter "/" to select option / Allow Creation of Move/Copy Ta	nget Data Se <mark>t</mark>	
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- After modifying PDF Configuration Settings, hit PF3 to return to Create/Modify ISPF Configuration Menu
- Select option 4 for Modify ISPF Sitewide Defaults



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<u>rite Eat Font</u>	i Tauxa Gonn Zhnne IIinna Deh	
	Modify ISPF Sitewide Defaults	
	Command ===>	
	More: + If you select any RESET fields in the sections: ISPF Site-wide Defaults, CUA Color Settings, Log and List Defaults, Terminal and User Defaults, Workstation Defaults, or Workstation Download Defaults you must increment the Sitewide Defaults Version Level field to enable the RESET fields you have selected. Increment only the last 3 digits of the Sitewide Defaults Version Level. ISPF is always shipped with the Sitewide Defaults Version Level field set to 43000. This value does not change with new versions or releases of ISPF.	
	Sitewide Defaults Version Level <u>43000</u>	
	General settingsReset flagsEnter "/" to select optionEnter "/" to select optionTab to Point and Shoot-Z Tab to Action Bars-Use Session Manager-Z Jump From Leader Dots-Z Always Show Split Line-Z Long Messages in Pop-ups-Edit PRINTDS Command-Z Reset Option 7.1 Dialog Test Panel-11. ISPYFP2. ISPYFPB-3. ISPYFPB-	
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- 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



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VIE	W TCONLEY.ISPF.KEYWORD(SHAREATL) - 01.00	Columns 00001	NNN72
Cor	mand $==>$	Scroll ===>	CSR
>	* **********************************	****	*****
	001 /* ISPF Configuration table definition. Generate		
	002 /* Created 21:47:12 on 13 Mar 2012		*/
000	003 /* by user TCONLEY.		*/
	004 /* Defaults were included as comments.		*/
	005 / *		*/
	006 OUTLIST_BLOCK_SIZE = 0		
	007 EDIT_RECOVERY_BLOCK_SIZE = 279		
	008 STATS_EXT_ENABLED = YES		
	009 RECOVERY = 0N		
	010 NULLS = ALL		
	011 DISPLAY_SEQUENCE_NUMBERS = OFF		
	012 HILITE = ON		
	013 HILITE_DOLOGIC = ON		
	014 HILITE_IFLOGIC = ON		
	015 HILITE_PAREN = ON 016 HILITE FIND = OFF		
	016 HILITE_FIND = OFF 017 TAB_TO_ACTION_BARS = NO		
	018 COMMAND_LINE_PLACEMENT = ASI		
	019 USE_KEYLISTS = NO	. 5	
	020 SHOW_PFKEYS = OFF		
	021 SCROLL_DEFAULT = CSF		
	022 STATUS_AREA_DEFAULT = CAL		
	023 LIST_DATA_SET_RECORDS_PER_BLOCK = 231		
000	024 LOG_DATA_SET_BLOCK_SIZE = 0		
	025 BLOCK_SIZE_FOR_TEMPORARY_CNTL_DATA_SETS = 0		
000	026 BLOCK_SIZE_FOR_TEMPORARY_LIST_DATA_SETS = 0		
	027 BLOCK_SIZE_FOR_TEMPORARY_WORK_DATA_SETS = 0		
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Create and Compile Keyword File

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ing For Louis Tiguras		ISPF Configu	uration Utility	Keyword fil	e saved
	Option ===> 1 Create/Modify S 2 Edit Keyword Fi 3 Verify Keyword 4 Build Configura 5 Convert Assembl 6 Build SMP/E USE	le Configuration ⁻ Table Contents tion Table Load Mo er Configuration ⁻	Table		
	Keyword File Data Data Set Member 5	TCONLEY. ISPF. KEYWO	' סאכ		
	Configuration Tabl Data Set Member				
	<u>2</u> 1. Include or	ent for Keyword F ly non-default va faults as comments l values	lues		
		EL. ISPF. CONFIG. KEY	(WORD.FILE(SYSTEM) Level : 480 Compile Time : 11	0R8001 :04	
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- 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



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	ISPF Configuration Utility
	Build Configuration Table Load Module
	Input Keyword File Data set Data Set <u>'TCONLEY.ISPF.KEYWORD'</u> Member <u>SHAREATL</u>
	Output Configuration Table Load Module Data Set Data Set <u>'TCONLEY.ISPF.LOADLIB'</u>
	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
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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"



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Session A			X
<u>File Edit Font</u>	ransfer Macro Options Window Help		
	ISPF Configuration Utility Load mod	ule	built
	 Create/Modify Settings and Regenerate Keyword File Edit Keyword File Configuration Table Verify Keyword Table Contents Build Configuration Table Load Module Convert Assembler Configuration Table to Keyword File Build SMP/E USERMOD 		
	Keyword File Data Set Data Set <u>'TCONLEY.ISPF.KEYWORD'</u> Member <u>SHAREATL</u>		
	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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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



- 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!)





• 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)



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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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- 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



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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 halftrack blocking

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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 <u>http://home.roadrunner.com/~pinncons/TSO LOGON with</u> <u>the Same Userid on Multiple LPARs in a Sysplex.pdf</u>
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 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





- 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

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





SHARE Interview - Fearly

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

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