

# 22E Run 5250 Through a Browser Using

System i Access for Web

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http://www.ibm.com/systems/i/software/access

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#### **System i Access Sessions**

#### Windows:

System i Access for Windows: What's New?

#### Web:

- Get to the Web Fast with System i Access for Web V6R1 (Overview)
- Run 5250 Through a Browser with System i Access for Web
- Database Access with System i Access for Web
- System i Access for Web: Setup and Configuration
- System I Access for Web: What an Administrator Needs to Know

Functional enhancements can be submitted via the FITS system. The url is: <a href="http://www.ibm.com/systems/i/software/access/">http://www.ibm.com/systems/i/software/access/</a>

And click on link "Request for Design Change"



# Try out System i Access for Web for yourself!

Start your browser and connect to the following web site:

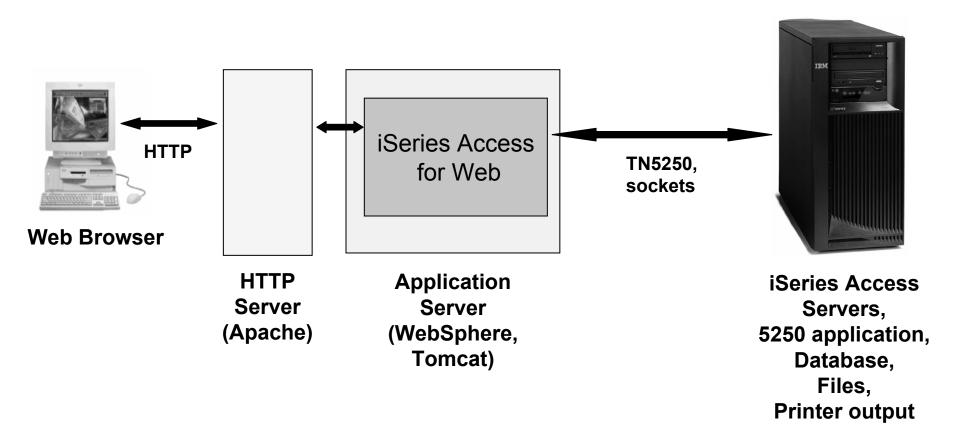
http://iseriesd.dfw.ibm.com/webaccess/iWAHome (case sensitive)

User ID = WACUST  Password = demo2pwd	This shows the basic look of System i Access for Web as we ship it. You can try various functions including working with printer output, creating database requests, etc. Click on the 5250 tab, sign onto the iSeries, then start an RPG application called BOATS and run it.
User ID = BOATADMIN  Password = demo2pwd	This is an example of how a customer might design a web page for their use. You will see that an end user could start the same BOATS application by clicking on the 5250 session, or they could have used HATS to run the application. You will also see other links that would let a user work with spoolfile information, work with IFS, run database requests, etc

Send email to: LLHIRSCH@us.ibm.com to reset the user profiles on iseriesd.dfw.ibm.com if either one gets disabled.



# System i Access for Web Overview





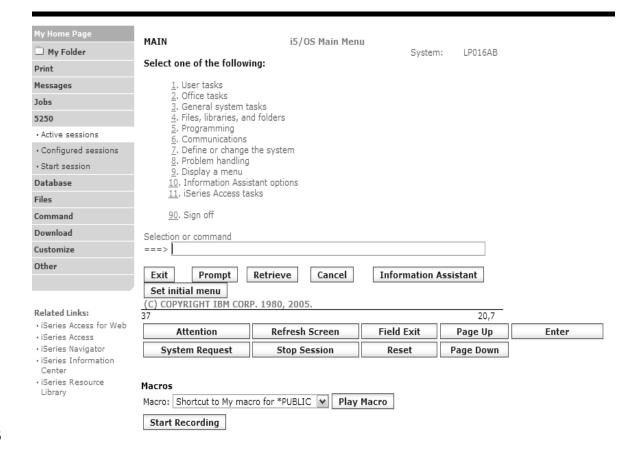
# System i Access for Web 5250 Interface

# Runs as an interactive job

 Only function in System i Access for Web that is interactive

#### TN5250 port

 Only function in System i Access for Web that uses TN5250 port



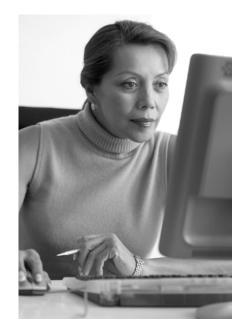


# Things to know

Because 5250 session is implemented using HTML, considerations to be aware of:

- Not intended to replace full function emulators like PC5250, Host On Demand, etc. for purposes of "heads-down" data entry type of operations
  - Does not include graphics, EHLAPPI, DDE functionality
  - Does not provide keyboard mapping
  - Does not support certain keys the way PC5250 does (ie, Field Exit)
- Does not include Printer Emulation (push to printer)
  - i5/OS strategy is Internet Printing Protocol (IPP) printing
  - System i Access for Web provides capability to convert spooled files to PDF
- No direct interaction with server, so unsolicited server messages can't be received.
  - Need to request refresh to see break messages
- Does not include file transfer from session





This is the only 5250 function you will likely extend to your users

**Preconfigured Sessions** 

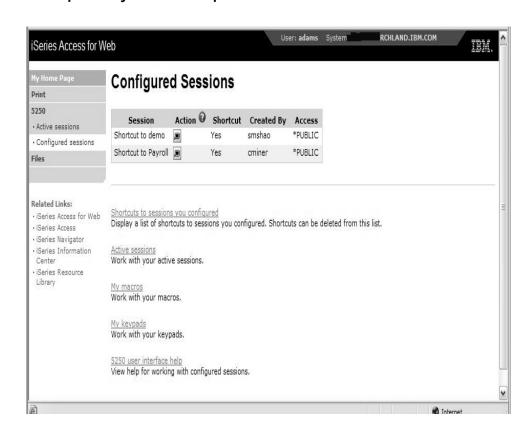


# **Run Pre-Configured 5250 Sessions**

You can limit users to connecting to only specific systems or running only specific applications.

- Create preconfigured 5250 sessions
- Then set policies to restrict users to only preconfigured sessions
- User selects 'Configured Sessions'
  - Only link provided
  - User has only one action
    - → to start a session

http://<systemi>:<port>/webaccess/iWAMain



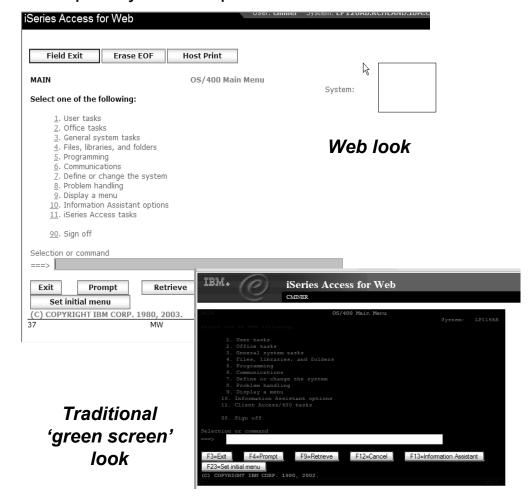


# **Run Pre-Configured 5250 Sessions**

If you do not want users using anything in System i Access for Web except 5250, you could:

- Simply give them the 5250 url address (ie, http://systemi/webaccess/iWA52 50)
- Set policies so users end up where you want them to be
  - Could include a macro so user bypasses i5/OS sign-on screen
- Predefine what screens will look like:
  - Colors
  - No Navigation pane

http://<systemi>:<port>/webaccess/iWA5250







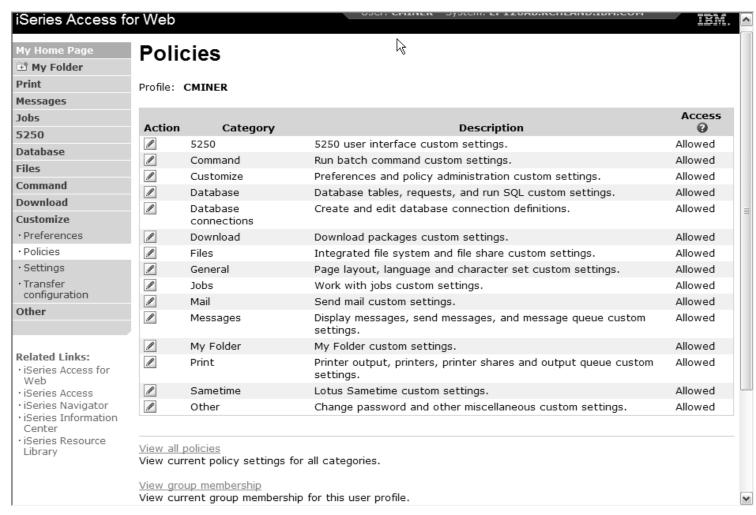
#### **Policies**

Policies are used by administrators to control the System i Access for Web functions and behavior



#### **Policies**

# Only i5/OS user profiles with \*SECADM authority can access "Customize → Policies"



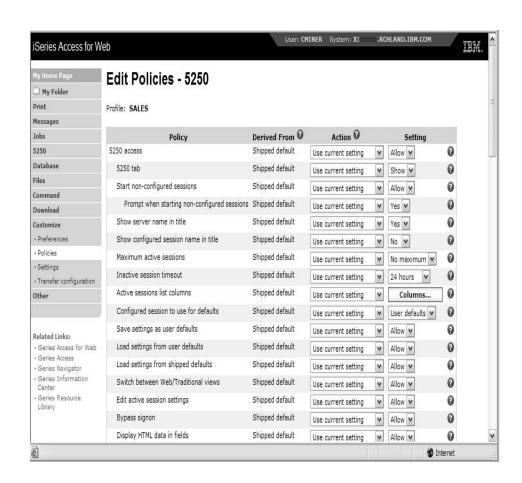


# **Setting Policies for 5250**

When any user attempts to start a 5250 session to i5/OS using System i Access for Web, a check is made to see what policies have been set for this i5/OS user profile prior to displaying any information.

The following sequence of checks are made to authenticate user access:

- User profile
- Group profile
- \*PUBLIC profile
   (\*every System i Access for
   Web user is a member of
   \*PUBLIC user group)





# Policy settings to use only Preconfigured sessions

Set all the policies listed below to "deny" in order to limit users to using only preconfigured 5250 sessions.

- Start non-configured sessions
- Create configured session
- Copy configured session
- Delete configured session
- Rename configured session
- Edit configured session
- Create configured session shortcut
- Copy configured session shortcut
- Delete configured session shortcut
- Rename configured session shortcut

http://<systemi>:<port>/webaccess/iWAMain



In this example, other policies were also set to remove other functions from the Navigation pane



#### Policy settings to use only 5250 (no navigation pane)

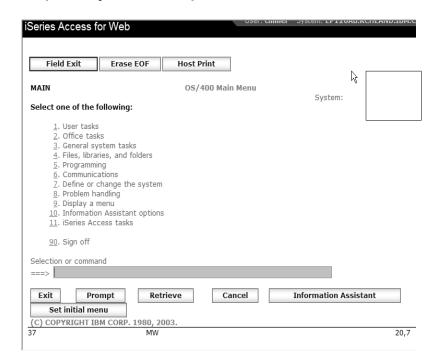
Here are some policies you could set to enable a user to go directly to a 5250 session and not see anything else in System i Access for Web

- Leave "Start non-configured sessions" on Allow
- Set "Prompt when starting nonconfigured sessions" to No
- In "Configured session to use for defaults", add a previously created Configured session that you have given this user/group profile a shortcut to

To entirely remove the Navigation pane, go to category "General"

– Navigation = Deny

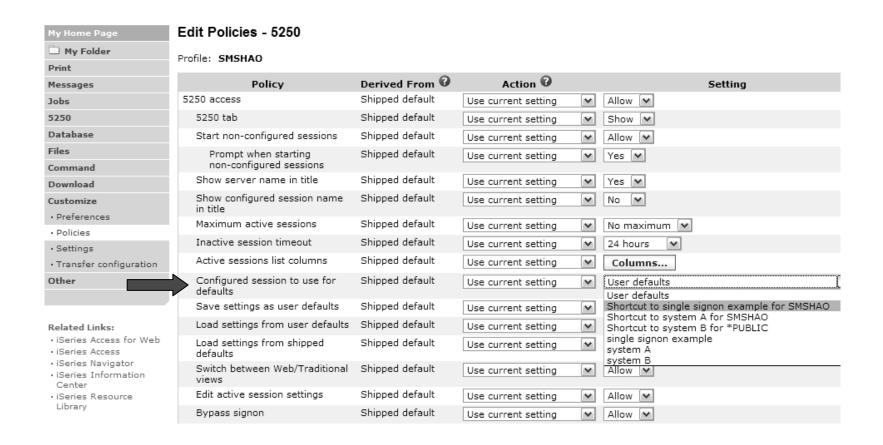
http://<systemi>:<port>/webaccess/iWA5250





# **Setting Default Session**

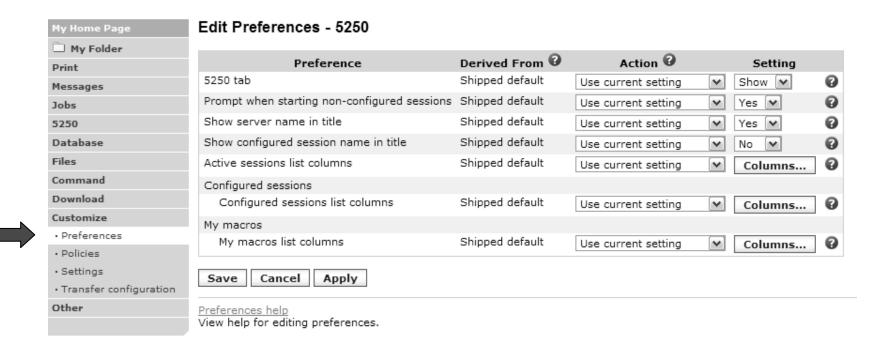
#### Select the shortcut to the session to use as the default and apply the policy





#### **5250 Preferences**

#### Preferences are settings that the user can modify







Starting a 5250 session



#### **How to Start a 5250 Session**

# Two options:

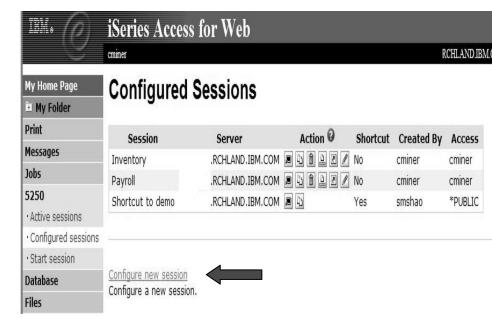
#### 1. Select 'Start Session'

- Fill in information on Start
   Session and connect
- To save the session, select 'Active Session Settings' link at bottom of screen, modify any information you wish, then click on 'Save'

2. Select 'Configured Sessions'

- Select 'Configure New Session' link on lower screen
- Set up as you wish, then click on 'Save'

Series Access for Web Start Session My Folder Print Messages lobs 5250 Configured sessions Workstation ID ( Use user ID O Specify workstation ID Command Avoid duplicates for this user Avoid duplicates with other users Download Initial macro ☑ Bypass signon Related Links: Display HTML data in fields iSeries Access for iSeries Access Start Session iSeries Navigator iSeries Information iSeries Resource Library Work with your active sessions. Work with your configured sessions.

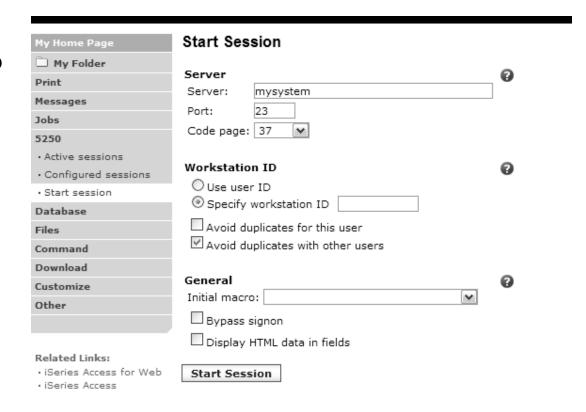


2



# **Use "Start Session" Dynamically**

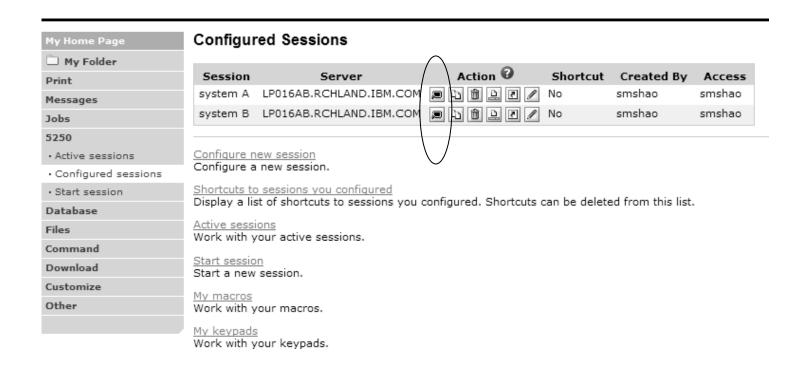
- Specify the system to connect
- Select the session attributes
  - Port, code page, workstation ID, etc.
- Start session





# **Start a Configured Session**

- Configured sessions list shows the list of sessions for the logged in user
- Select the "Start" icon for the session to start





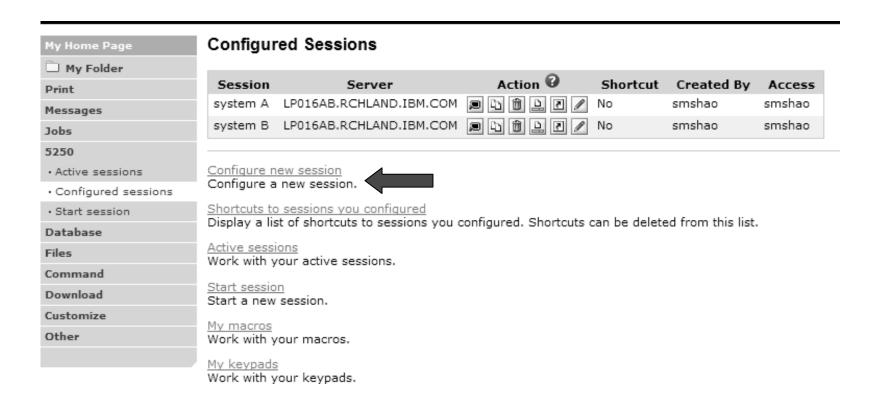


# **Configuration options** for 5250 sessions



# **Configure a New Session**

#### Select the "Configure new session" link





# Setting up a 5250 Session

#### **Select Session Name**

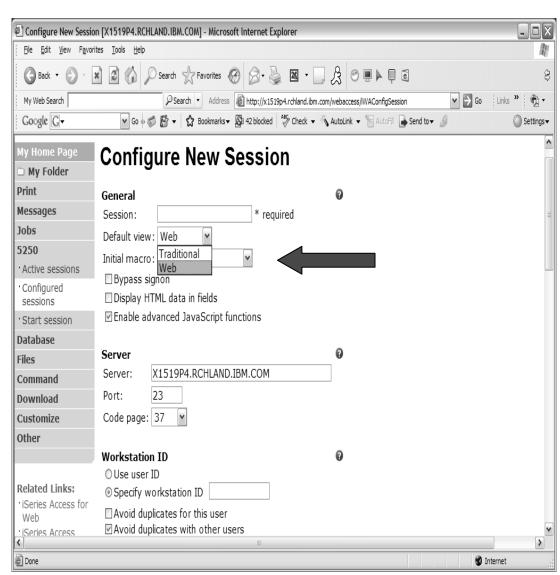
Name of this 'Configured' session

#### **Determine screen look**

- Web View is default
- Traditional View can be selected

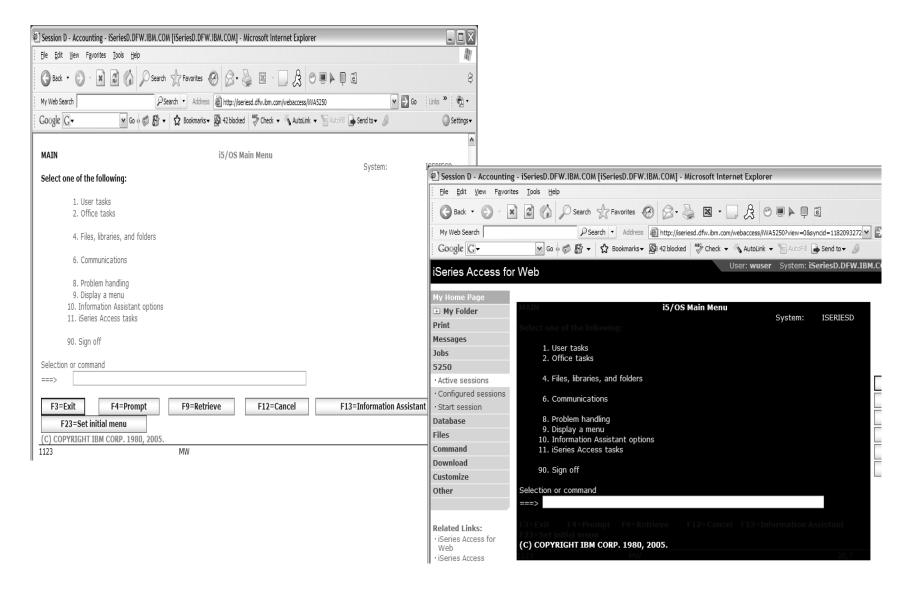
#### Select System i to connect to

- Enter System Name or TCP/IP address
- Port Address





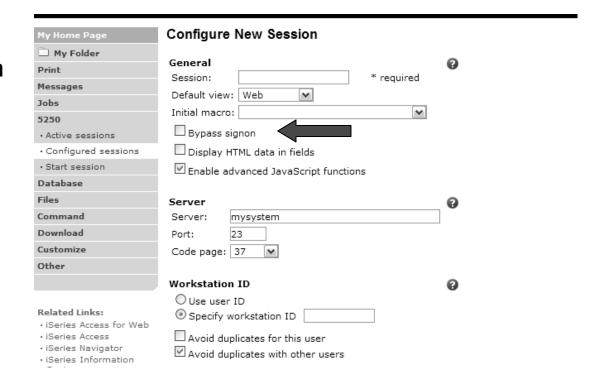
#### Web View Vs Traditional View





# Bypass Signon – V5R4 and later

- Uses the credential the user used to login to System i Access for Web
- Option available for configured and dynamically started session



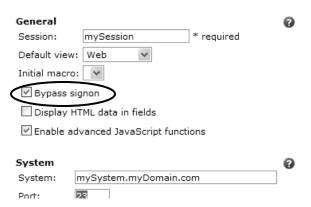


# Bypass Signon – V5R4 and later

- QRMTSIGN system value must be \*VERIFY
- Select bypass signon when starting or configuring a session

#### Start Session System 0 System: mvSvstem.mvDomain.com Port: Code page: 37 Workstation ID 0 O Use user ID Specify workstation ID Avoid duplicates for this user Avoid duplicates with other users General a V ✓ Bypass signor Display HTML data in fields Start Session

#### **Configure New Session**



- System i Access for Web must be configured for application authentication or application server authentication with Kerberos for bypass signon to be available
  - CFGACCWEB2 AUTHTYPE(\*APP) ...
    - Uses the credential the user used to log in to System i Access for Web
  - CFGACCWEB2 AUTHTYPE(\*APPSVR)
     AUTHMETHOD(\*KERBEROS) ... new in V6R1!



# Configuring a New Session – Workstation ID

Workstation ID		
O Use user ID		
Specify workstation ID		
Avoid duplicates for this user		
Avoid duplicates with other users		

Use user ID	System i Access for Web authenticated user ID is used for the workstation ID, up to ten characters.
Specify workstation ID	Enter a workstation ID of your choice, up to ten characters.  If you select the radio button and leave the text field blank, a value is generated by i5/OS. The default device name starts with <i>QPADEV</i> .
Avoid duplicates for this user:	When this option is enabled, a wild card character is added to the device name to make it unique for the current user.
Avoid duplicates with other users:	When this option is enabled, the server adds a wild card character to the device name to make it unique for all users on the server.



#### **Workstation ID**

You can enter keyword and special characters, like you do for PC5250. Here is how they are handled.

Computer name or User name (&COMPN, &USERN): These keywords are accepted.

- However, they will not resolve to the PC name and the Windows login user ID like they do in PC5250
- Computer name: resolved to the System i name
- User name: resolved to the user profile name of the web application server job.
- Also note that using the &COMPN and &USERN keywords could result in workstation IDs that are longer than ten characters which would then be truncated.

#### Session Type ID (%):

- This will add an "S" to workstation ID, indicating that this is a display session.
- With PC5250, a "P" would replace the "%" if a printer session was started. However, System i Access for Web only has display sessions.



#### Workstation ID (continued)

Keyword and special characters, continued...

**Short session ID (\*):** Adding this character will make the ID unique for this user.

- The System i Access for Web option *Avoid duplicates for this user* causes the "\*" character to be added at the end of the ID.
- Therefore, if you use both the "\*" and Avoid duplicates for this user, then two special characters will be added to the workstation ID.

Collision Avoidance ID (=): Adding this character will make the session ID unique.

- The System i Access for Web option *Avoid duplicates with other users* causes the "=" character to be added at the end of the string.
- Therefore, if you use both the "=" and Avoid duplicates with other users, then two "=" will be added to the string..



#### **Configuring a New Session** (continued)

# Web View and Traditional View settings

- Many keyboard and screen settings can be set to improve end user productivity and satisfaction
- Can also set up different text colors

Create a consistent 'look' for all your users...

Web	Traditional
✓ Show navigation bar	✓ Show navigation bar
The state of the contraction of	
Show action links	✓ Show action links
Show hotspot links	Show hotspot links
✓ Show JavaScript indicator	✓ Show JavaScript indicator
Display text using fixed width font	☑ Display text using fixed width font
☑ Enable "More" as button	☐ Enable "More" as button
☑ Enable menu items as links	☐ Enable menu items as links
Show function key bar	✓ Show function key bar
✓ Show macros section	✓ Show macros section
Show operator information area (OIA)	Show operator information area (OIA)
☐ Show active sessions	☐ Show active sessions
☑ Enable cursor positioning	☐ Enable cursor positioning
Position cursor at exact location	Position cursor at exact location
☑ Enable message text line as help link	☐ Enable message text line as help link
☑ Enable active function keys as buttons	☐ Enable active function keys as button
$\square$ Show function key text (Fxx=) on button	
Foreground colors 5250 Browser	Foreground colors 5250 Browser
Black: Black 🕶	Black: Black 🕶
Blue:	Blue: Blue v
Green: Green ✓ Cyan: Teal ✓	Green: Green 🕶 Cyan: Teal 🕶
Cyan: Teal Y Red: Red Y	Cyan: Teal ✓ Red: Red ✓
Magenta: Fuchsia V	Magenta: Fuchsia >
Brown: Yellow Y	Brown: Yellow Y
White: Gray 🕶	White: White 🔻
	Operator information area (OIA)
Operator information area (OIA) Color: Black	Color: Blue 🕶



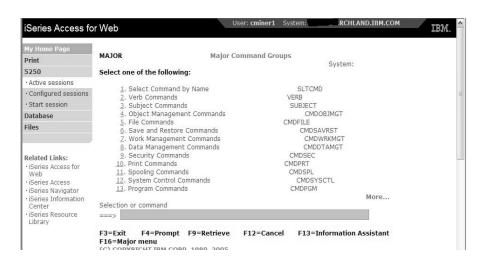
# Example: 5250 - Proportional Width vs. Fixed Width

Default for 'Web View' is to display output using Proportional width fonts

To change to Fixed width fonts, check the box that says:

Display text using fixed width fonts

Users can also do this on-the-fly by clicking on the "Active session settings" link and change the setting for this connection, or by switching to Traditional view.







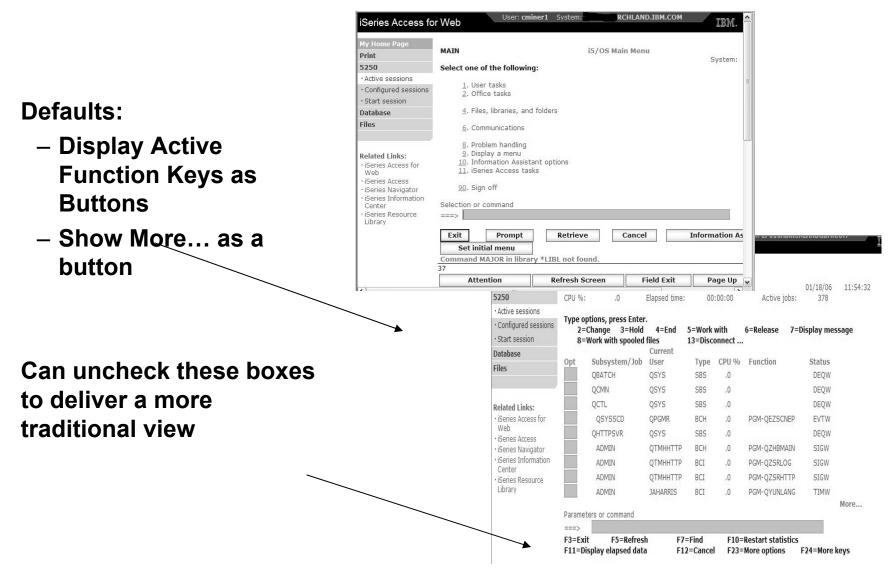
#### **Fonts**

#### System i Access for Web 5250 is rendered with HTML

- Fonts are controlled by the browser
- Use browser options to change the font style and font size



# **Enable Active Function Keys As Buttons**

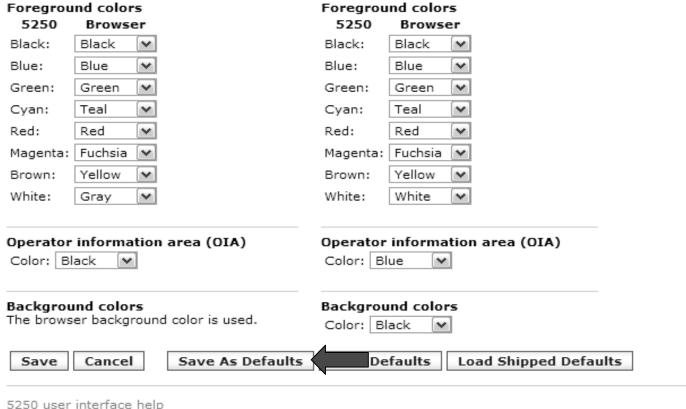




# **Setting User Defaults**

"Save As Default" saves this session configuration as the default for the current user.

Can be performed from active session settings or configured session settings.

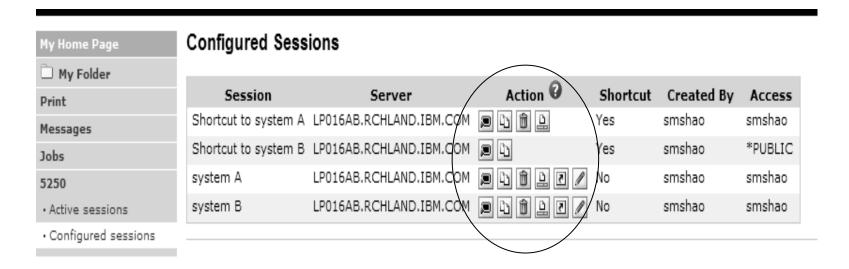


5250 user interface help

View help for editing a configured session.



# **Configured Session Actions**



Start	Start the configured session
Сору	Make a copy of the configured session for yourself
Delete	Delete the configured session
Rename	Rename the configured session
Create Shortcut	Share the configured session with another user or group of users
Edit	Change the configured session settings



# **Creating Shortcuts to your configured sessions**



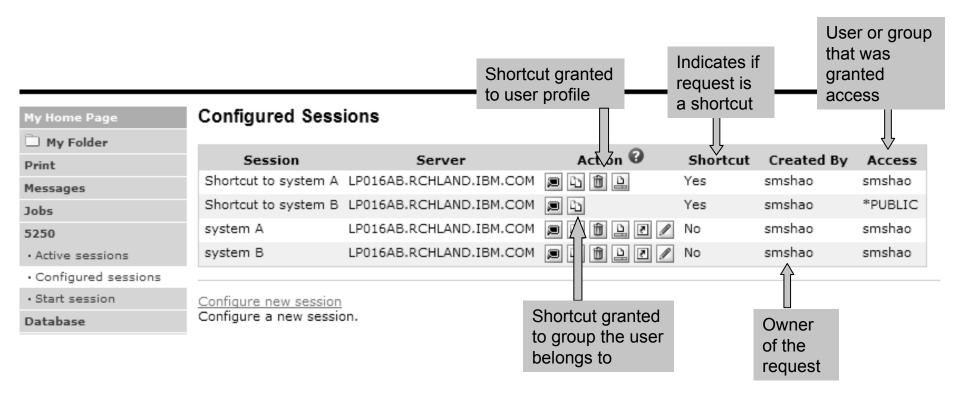


#### **Shortcuts**

- Shortcut is a pointer to a System i Access for Web object
  - Configured 5250 session
  - Database request
  - Shortcuts to an object are deleted when the object is deleted
- The objects is only accessible to the user that created it
- Can share the object with other users
  - Create shortcut for user or group to share with user or group
- User of the shortcut has read only access to the object
  - Cannot modify or delete the object



## **Shortcut Example**





## Create 'Shortcuts' to Configured Sessions

# Your Configured Session

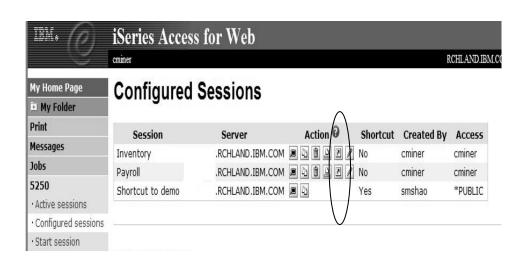
–Create 'Shortcuts' for other users

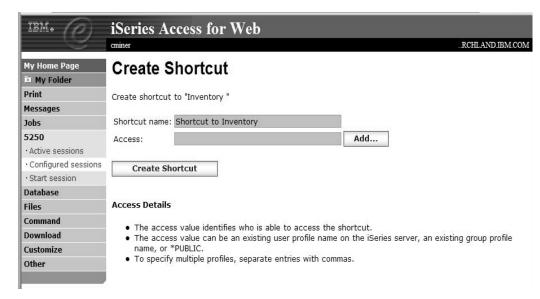
#### Can set Policies

-To restrict what users can do with your shortcut.

#### -Do not allow users to:

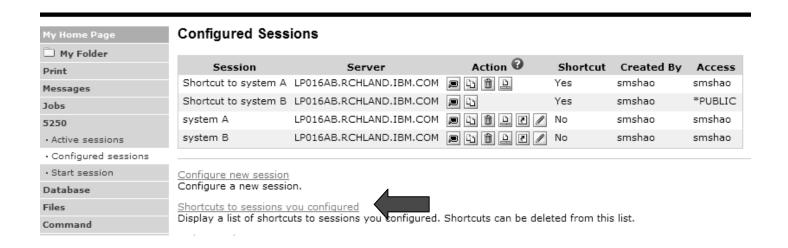
- Copy your shortcut
- Delete your shortcut
- Rename your shortcut







## **Finding Shortcuts You Created**

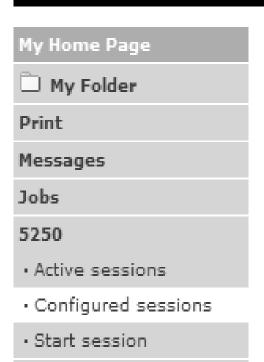


## Click the "Shortcuts to sessions you configured" link



## **Managing Shortcuts You Created**

- List of shortcuts you created
- Delete shortcuts you created

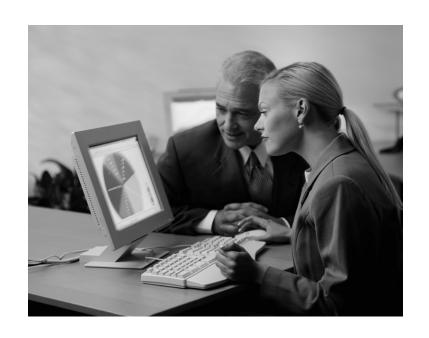


## Shortcuts to Sessions You Configured



Session	Shortcut	Access	Action
system A	Shortcut to system A	smshao	Û
system B	Shortcut to system B	*PUBLIC	Û





Creating Macros

Shortcuts to Macros

Adding Macros to

Preconfigured Sessions



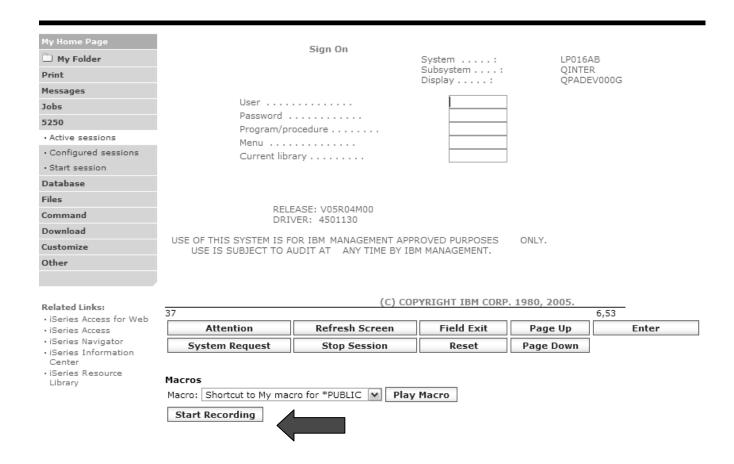
#### **Macros**

## **Behave differently than PC5250**

- Keys processed on a screen by screen basis
  - PC5250 every key is recorded and played back
  - System i Access for Web cursor positioned in field and keys entered into field
- On a given screen, keys may not be processed in the same order as they are entered
- Functionally equivalent, but behaves differently

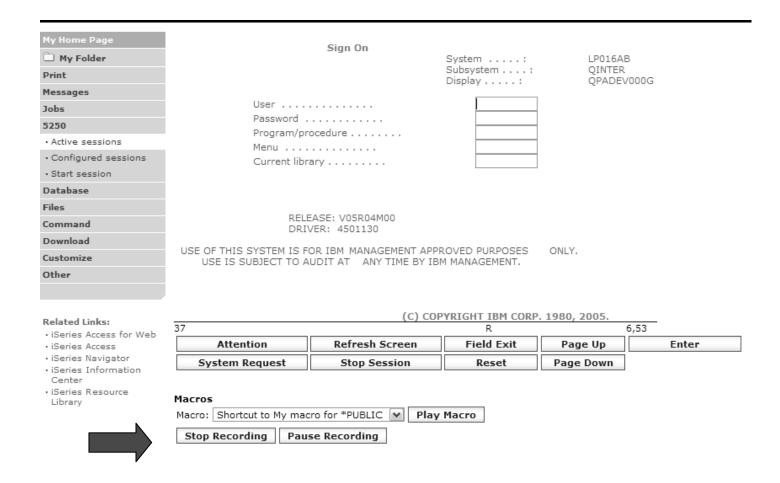


## **Recording Macros**



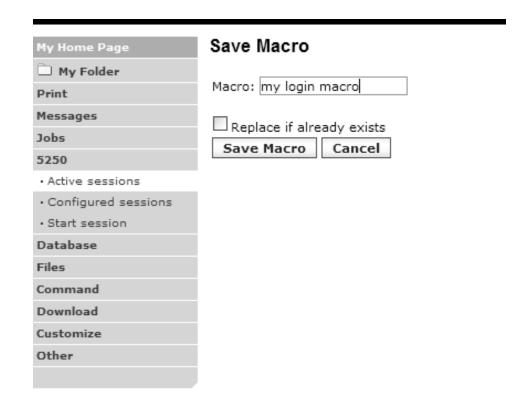


## **Stop Recording**



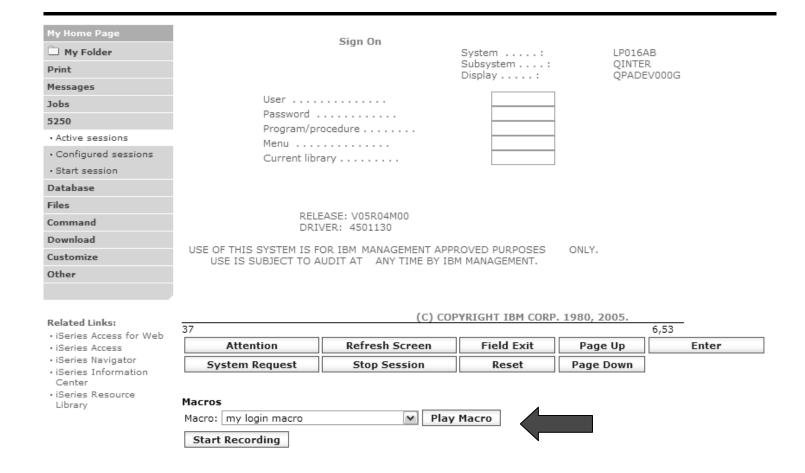


## **Naming the Macro**





## **Playing Macro**

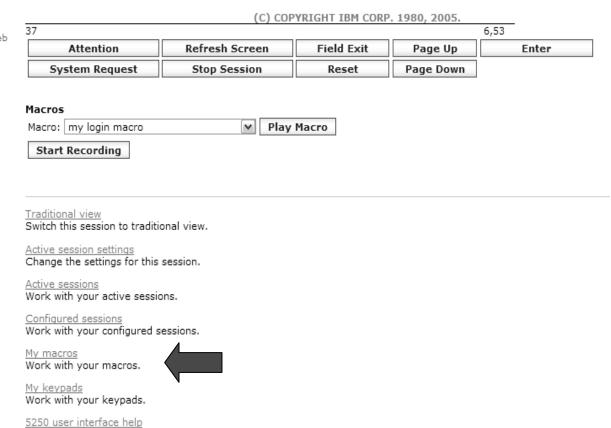




## **Managing Macros**

#### Related Links:

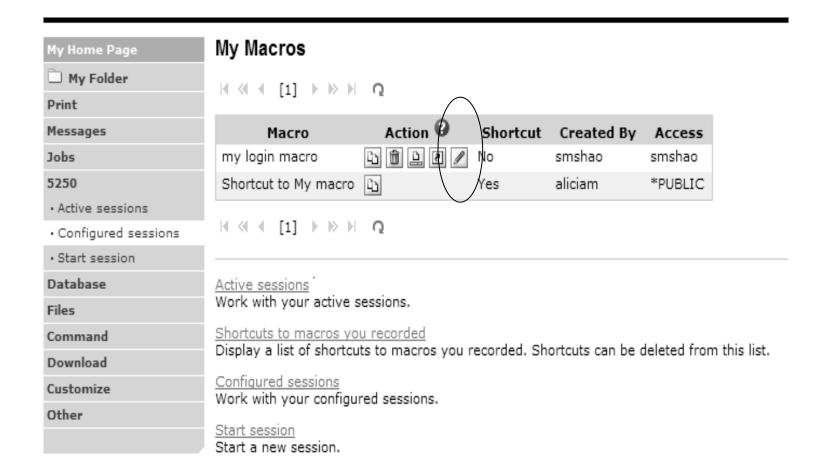
- · iSeries Access for Web
- iSeries Access
- · iSeries Navigator
- iSeries Information Center
- iSeries Resource Library



View help for using the 5250 user interface.



## My Macro List → Edit Macro





## Single Sign On with Macro

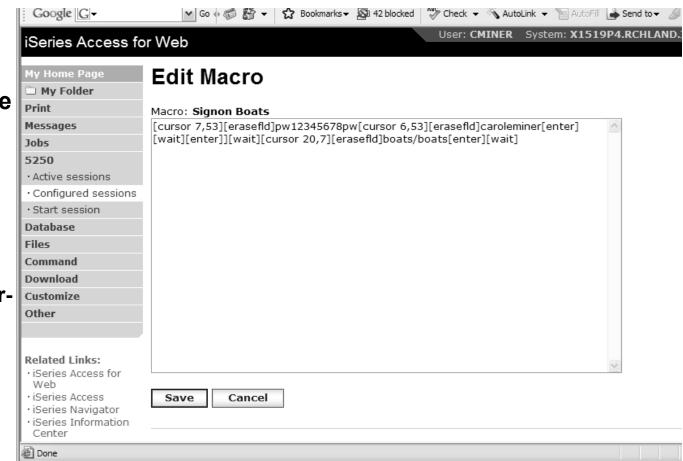
- Create a macro to login to 5250
  - Using your own user ID and password
- Edit the macro and replace your user ID and password with directives to use the user's login
- Share the macro (create shortcut) with the user or group
- Associate the macro with a session so the macro is executed when the session starts
- Share the session (create shortcut) with the user or group



#### **Editing a Macro**

This macro was created to bypass the i5/OS sign-on screen and to put the user directly into an RPG application called BOATS.

 Note that the user-ID and password are listed in clear text.





#### **Edit Macro**

# Replace the recorded user ID with [user] Replace the recorded password with [password]





## **Supported Commands for Macros**

#### The supported cursor positioning commands are:

General macro commands	General macro co	mmands
[attn] - Attention	[pf1] - F1	[pf12] - F12
[altview] - Alternate View	[pf2] - F2	[pf13] - F13
[backspace] - Backspace	[pf3] - F3	[pf14] - F14
[backtab] - Backtab	[pf4] - F4	[pf15] - F15
[bof] - Beginning of field	[pf5] - F5	[pf16] - F16
[clear] - Clear	[pf6] - F6	[pf17] - F17
[down] - Cursor down	[pf7] - F7	[pf18] - F18
[left] - Cursor left	[pf8] - F8	[pf19] – F19
[right] - Cursor right	[pf9] - F9	[pf20] - F20
[cursel] - Cursor select	[pf10] - F10	
[up] - Cursor up	[pf21] – F	21
[delete] - Delete character	[pf11] - F11	
[dspsosi] - Display SO/SI	[pf22] – F	22
[dup] - DUP field	[help] - Help	[pf22] - F23
[enter] - Enter	[home] – Home	[pf24] – F24
[eof] - End of field	insert] - Insert	
[eraseeof] - Erase EOF	[newline] - New line	
[erasefld] - Erase field	[pa1] - PA1	
[erinp] - Erase input	[pa2] - PA2	
[fldext] - Field exit	[pa3] - PA3	
[fieldmark] - Field mark	[pageup] - Page up	
[field-] - Field minus	[pagedn] - Page dow	'n
[field+] - Field plus	[reset] - Reset	
22E: Dun 5250 Through a Prower II	[sysreq] - System reg	quest

# Bi-directional text support commands

[base] - Base [close] - Close [fldrev] - Field reverse [latinlayer] - Latin layer [screenrev] - Screen reverse

#### Other macro commands

[cursor row,column] - Locate cursor at specified row and column. Row and column must be numbers.
[password] – authenticated password [pause] - Pause 1 second [pause n] - Pause n seconds [user] – authenticated user-ID [wait] - Wait for input

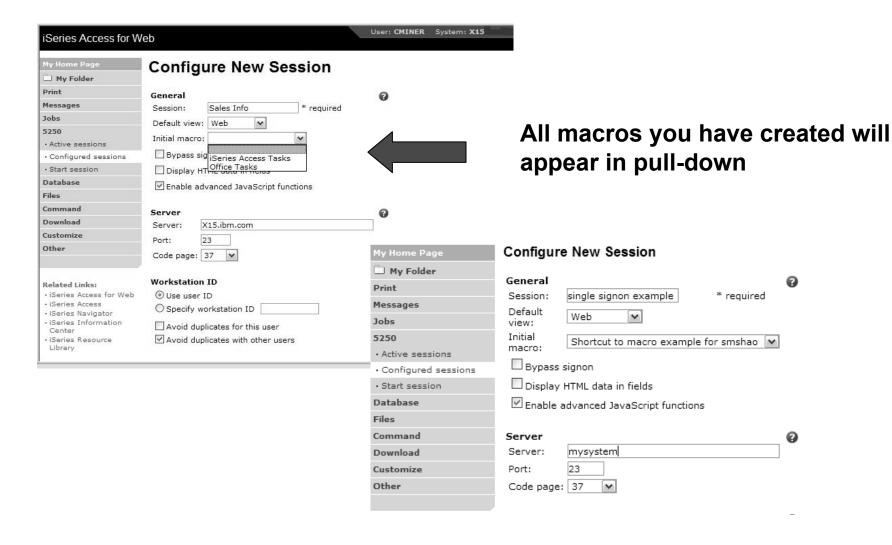


## **Sharing a Macro**





#### Add a macro to a New Session





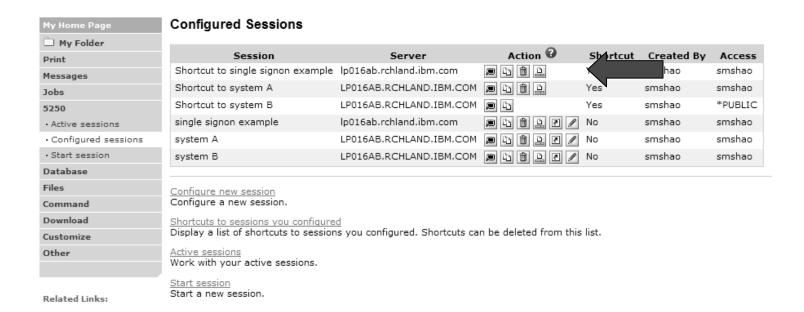
#### Share the Session / Share the Macro



My Home Page	Create Shortcut		
My Folder	Create shortcut to "macro example"		
Print	Create shortcut to macro example		
Messages	Shortcut name: Shortcut to macro example		
Jobs	Access: smshao Add		
5250			
· Active sessions	Create Shortcut		
<ul> <li>Configured sessions</li> </ul>			
Start session	Access Details  ◆ The access value identifies who is able to access the shortcut.  ◆ The access value can be an existing user profile name on the iSeries server, an existing group profile name, or *PUBLIC  ◆ To specify multiple profiles, separate entries with commas.		
Database			
Files			
Command			
Download			
Customize			
Other	My macros Work with your macros.		



## **Starting the Session**

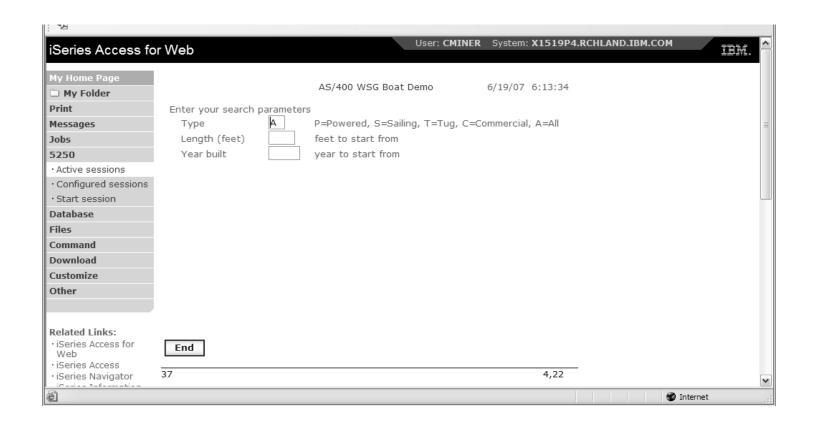


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#### **Start Session Result**

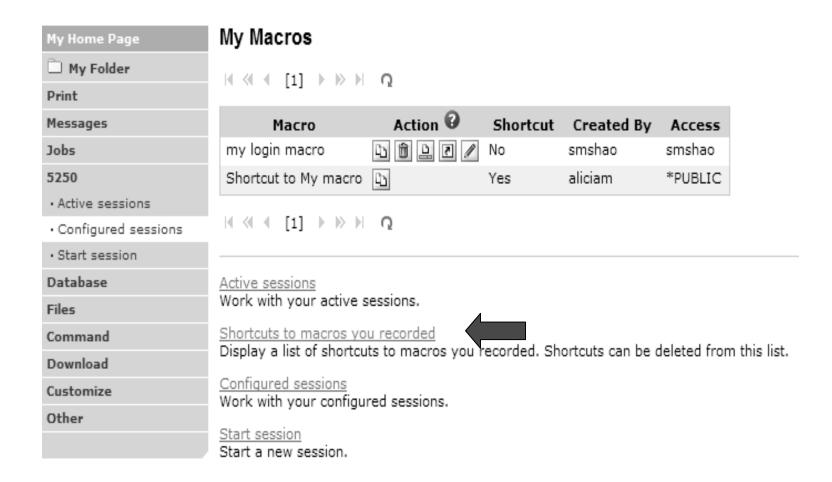
- User is taken directly to the application
- 5250 session is logged in using the user's ID and password





## **Managing Macro Shortcuts**

#### Shows all macros I have created, plus shortcuts



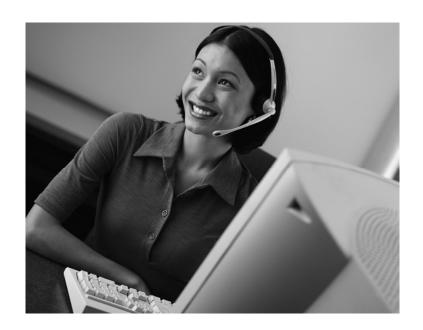


#### **Macro Shortcut List**

#### Shows just shortcuts I have created







#### **Active Sessions**



#### **Active Session**

- An active session is a session that has been started
  - Dynamically or configured session
- A user may have more than one active session





## **Active Session Life Span**

- Session resides on the server, not the workstation
- Session remains active until
  - User ends (stops) the session, or
  - Session time out due to inactivity
    - Time out value is configurable through Access for Web



# Taking advantage of active session behavior

- Leave the session and browse on the web, or
- Leave your workstation and go to another workstation and
- Reconnect to your session



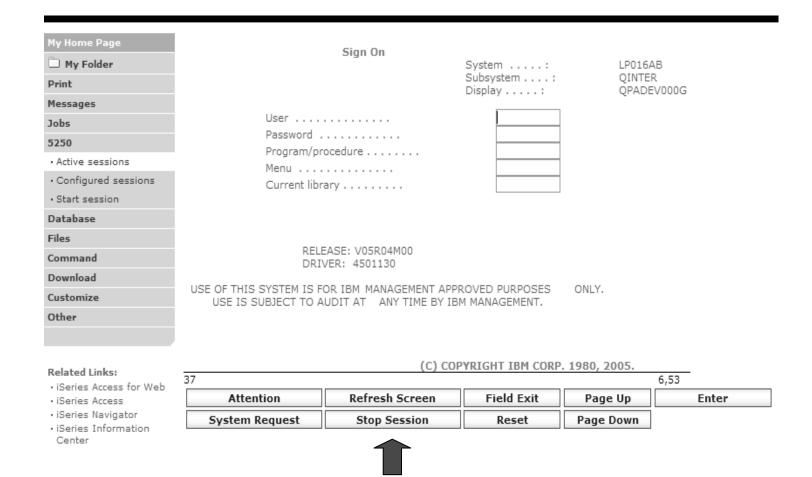
## **Ending a Session**

Closing the browser or turning off the workstation does not end the session

- Two ways to end a session
  - From an active session
  - From active session list
- Properly cleaning up TN5250 connection
  - Frees up resources in application server (Access for Web)
  - Frees up resources on target server (TN5250)



## **Ending a Session from Active Session**



#### End this active session



## **Ending a Session from Active Session List**





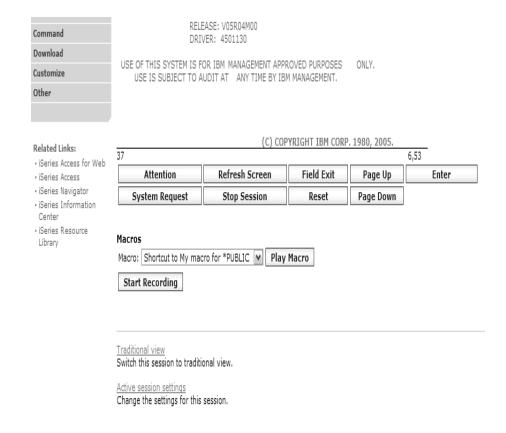
## **Changing Active Session Settings**

# Does not affect the configured session settings

- The changes are tied to the running instance of the session
- Changes only affect how this particular active session behaves

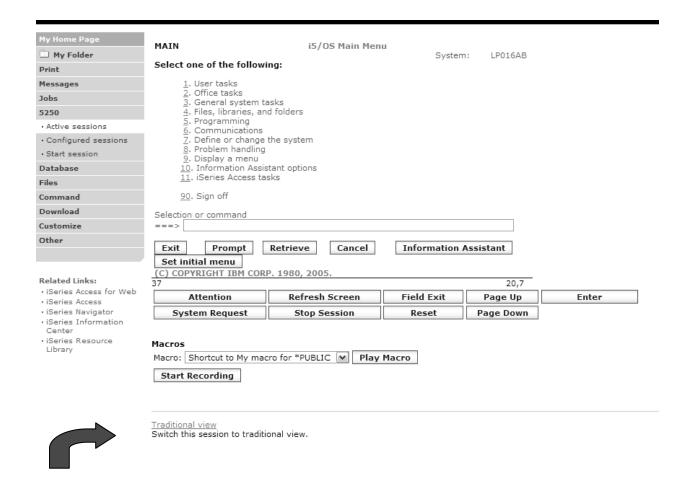
#### Some settings are not modifiable

- Server name
- Port
- Code page
- Workstation ID
- Default view (web or traditional)
- Initial macro





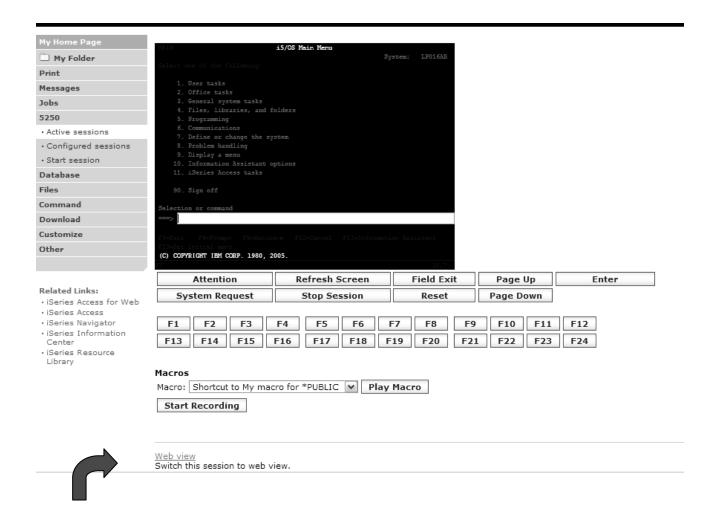
#### **Active Session - Web View**



#### Switch to traditional view by selecting the "Traditional view" link



#### **Active Session - Traditional View**



#### Switch to web view by selecting the "Web view" link



#### Web View vs. Traditional View

#### **Web View**

- Proportional font
- Menu displayed as links
- Active function keys displayed as buttons
- Allows cursor positioning at non-input fields
- Display "More..." as button
- Message line (25<sup>th</sup> line) treated as help

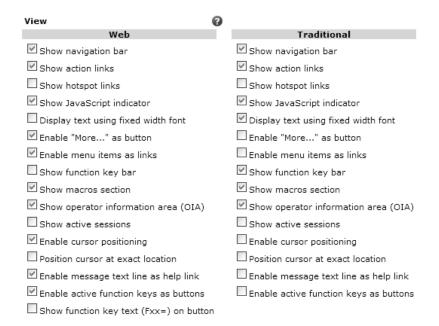
#### **Traditional View**

- Fixed width font
- Function key bar (F1-F24)
- Background color configurable (default is black)

- All the view settings are configurable.
- Configure web and traditional view settings for your environment.



## **Cursor Positioning**







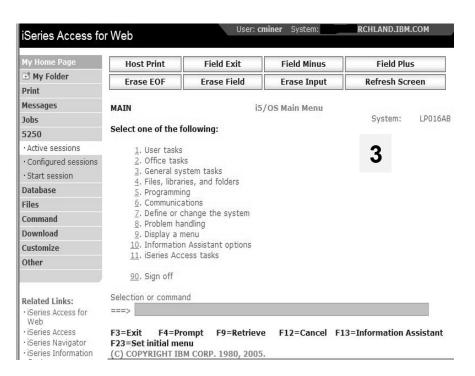
## **Keypads**

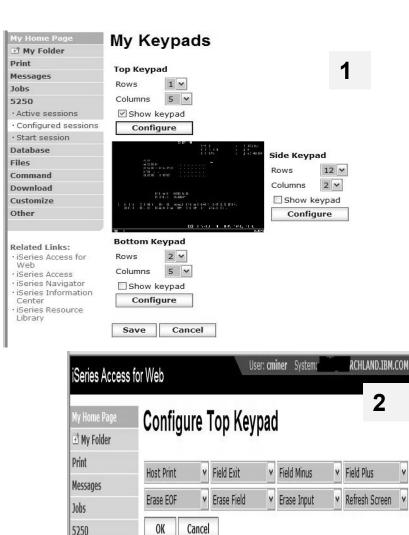


### My Keypads

# Configuring a Keypad is a very effective way to simplify many end user tasks

 For example, a button to do a 'Host Print' of a screen





Active sessions

Configured sessions



### **Keypads**

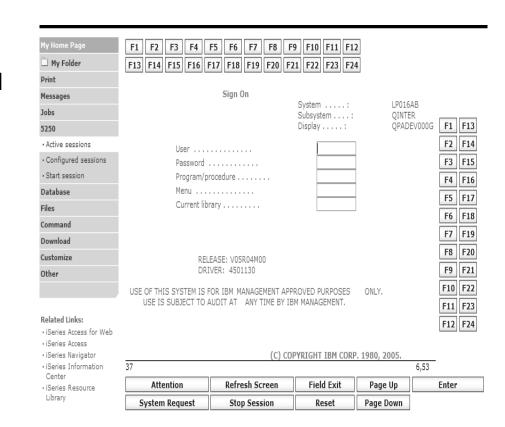
#### Three sets of keypads

- Top, right, and bottom
- Each set can be customized
- Each set can be turned on or off

# Macros can be assigned to keypad

#### Configuration is per user

- One keypad configuration per user
- Global across all session configurations
- Not tied to session configuration



## Keypads cannot be set by administrator for users



### **Configuring Keypad**



USE OF THIS SYSTEM IS FOR IBM MANAGEMENT APPROVED PURPOSES ONLY. USE IS SUBJECT TO AUDIT AT ANY TIME BY IBM MANAGEMENT.

#### Related Links:

- · iSeries Access for Web
- iSeries Access
- iSeries Navigator
- iSeries Information Center
- iSeries Resource Library



#### Macros

Macro: Shortcut to My macro for \*PUBLIC V Play Macro

Start Recording

#### Traditional view

Switch this session to traditional view.

#### Active session settings

Change the settings for this session.

#### Active sessions

Work with your active sessions.

#### Configured sessions

Work with your configured sessions.

#### My macros

Work with your macros.

#### My keypads

Work with your keypads.

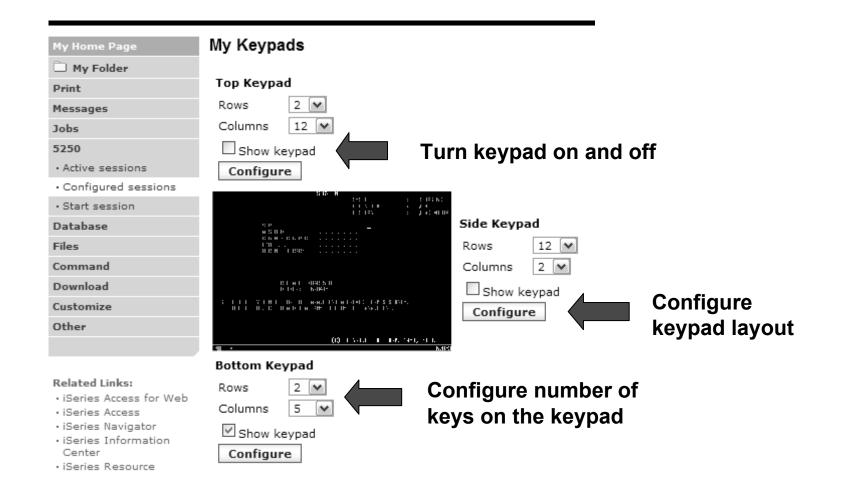
#### 5250 user interface help

View help for using the 5250 user interface.



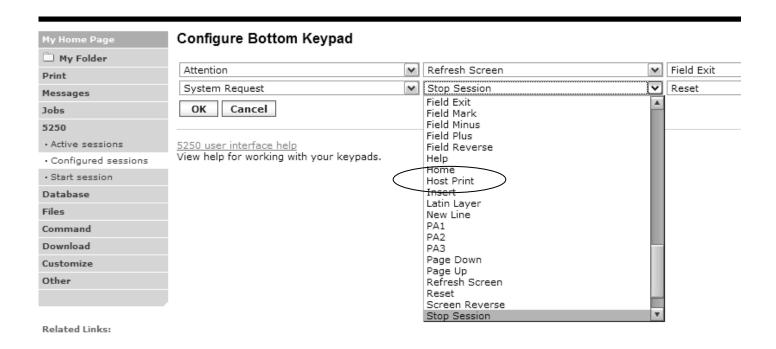


### **Configuring Keypad**





### **Configuring Keypad**







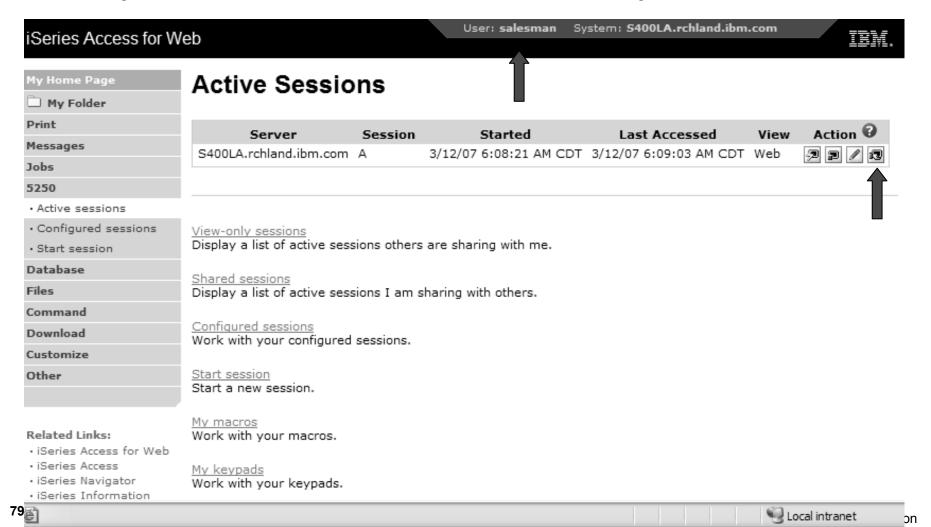
### **Shared Sessions**



### **Sharing an Active Session**

#### Give another user or group a read-only view into an active session

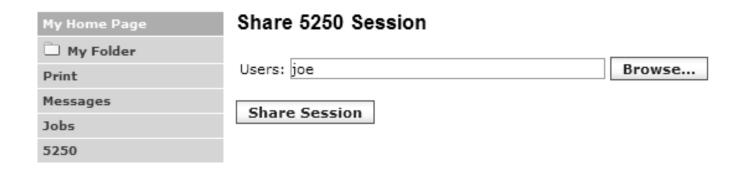
- Example: user SALESMAN shares session with help desk-JOE





### **Sharing an Active Session**

SALESMAN enters the user or group profile to share the session with Joe





#### **View-only Sessions**

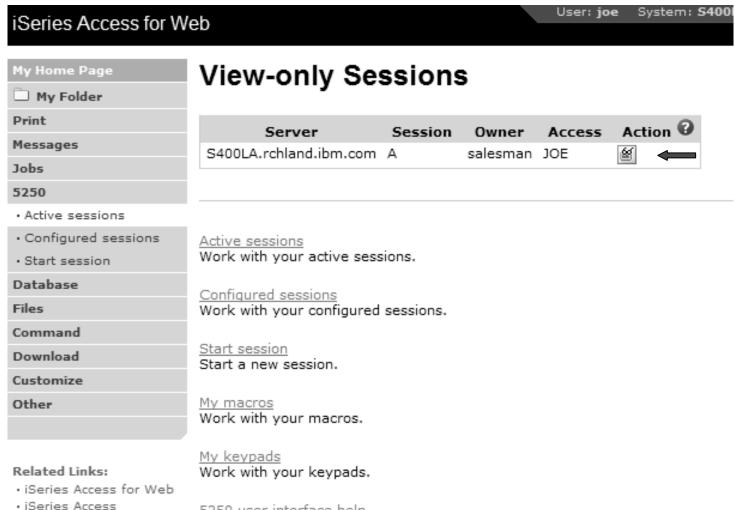
Help desk (Joe) now selects "View-only sessions" link to display the list





### **View-only Session List**

#### Joe clicks the "View" button to view the session



5250 user interface help



### **View-only Session**

View-only session: input fields are disabled.

Use the browser "Refresh" button to display updated screens.

My Home Page			v	Lorle with	Active 1	ohe		LP016AB
My Folder	Work with Active Jobs 03/11/06							18:19:58
Print	CPU 9	%: .0	Elapsed time	: 00	0:00:00	Active jobs:	341	
Messages		options, press En						
Jobs		:Change 3=Hole :Work with spoole		5=Work 13=Disc			'=Display me	essage
5250		Tronk min specie	Current	15 5.50				
Active sessions	Opt	Subsystem/Job OBATCH	User OSYS	Type SBS	CPU % .0	Function	Status DEQW	
Configured sessions	_	QCMN	QSYS	SBS	.0		DEQW	
Start session	_	QCTL	QSYS	SBS	.0		DEQW	
Database	_	QSYSSCD OHTTPSVR	QPGMR OSYS	BCH SBS	.0	PGM-QEZSCNEP	EVTW DEQW	
	_	ADMIN	OTMHHTTP	BCH	.0	PGM-QZHBMAIN	SIGW	
Files	_	ADMIN	QTMHHTTP	BCI	.0	PGM-QZSRLOG	SIGW	
Command	_	ADMIN	QTMHHTTP	BCI	.0	PGM-QZSRHTTP	SIGW	
Download	_	IWATOMCAT	QTMHHTTP	BCH	.0	PGM-QZHBMAIN	SIGW	M
Customize	Paran	neters or command						More
	===>	>						
Other				7=Find F10=Restart statistic 12=Cancel F23=More options		_		
						F24=More keys		
	37							10,2

22E: Run 5250 Through a Browser Using System i Access for Web - 2008 System i Connection Conference



### **Managing Shared Sessions**

SALESMAN selects "Shared sessions" from the "Active Sessions" list to display the list of active sessions that are being shared





#### **Shared Session List**

#### SALESMAN uses the "Stop sharing" button to stop sharing this session



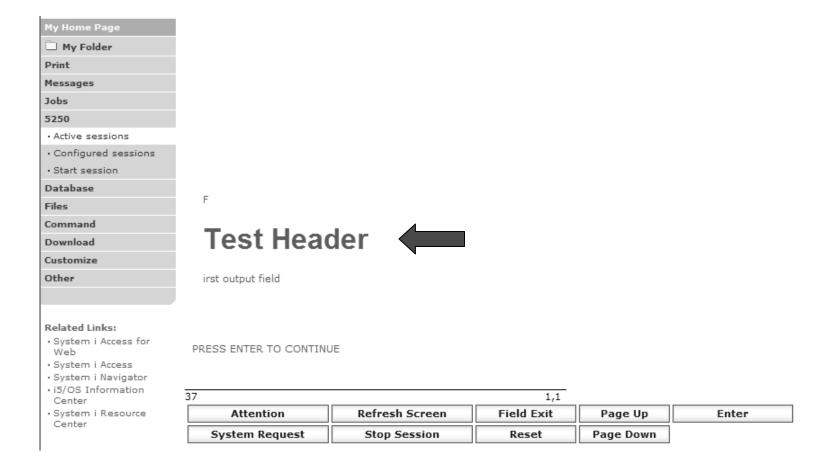


### **Other**



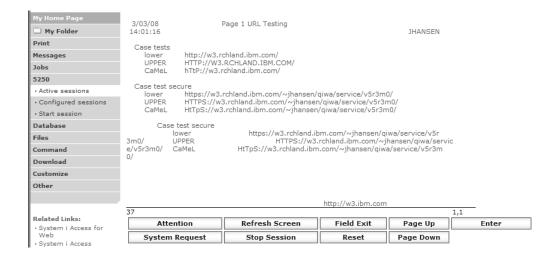
### **DDS HTML Support**

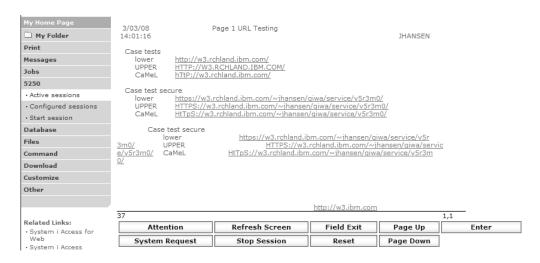
#### HTML contained within 5250 screen





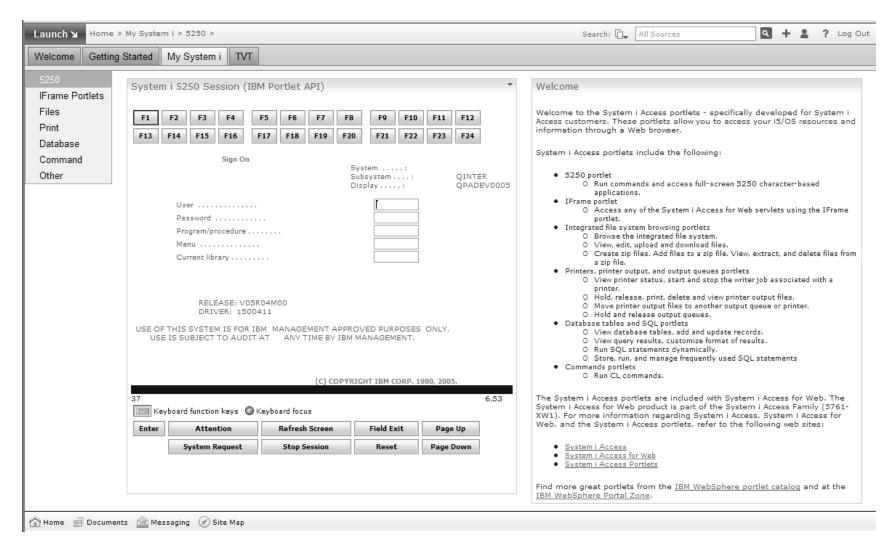
#### **Hotspot**







#### 5250 and Portal Server





### **Questions?**



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