



IBM eServer J iSeries J

Session: 409136

Using iSeries Access for Web *in a Web-Connected World!*

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IBM @ server iSeries



IBM eServer iSeries



Abstract

Are you tired of trying to keep software up-to-date on your networked PCs?

- Then you should use iSeries Access for Web in your network

Do you have an iSeries with 70 CPW and 256 MB of Memory?

- Then you can use iSeries Access for Web...

Are you looking for a simple solution that you can set up in a couple of hours?

- Then iSeries Access for Web is for you...



Abstract:

The iSeries Access Family has expanded its offering to include a browser-based option called 'iSeries Access for Web'. Many iSeries customers are looking for a fast, easy, and zero-admin alternative for connecting to their servers -- and iSeries Access for Web is that solution! Come to this session to learn how this product can simplify your PC network administration while at the same time offering end user functions customers help come to expect with Client Access products.

By the end of this session, attendees will be able to:

1. See how 5250, database and IFS access can be used from a browser.
2. See how an administrator can set up front pages for different groups of users.
3. See how users can work with printers, print jobs, etc. on the server.

Demo this to your customers...

You can try iSeries Access for Web, WebSphere Host Publisher or WebFacing by:

- Accessing the following web site through your browser:
 - ▶ <http://iseriesd.dfw.ibm.com/webaccess/iWAHome> (case sensitive)
This is a Marketing machine in Dallas - DEMOnet
- Use the following User ID and password to sign into the **EXPERIENCED USER** page:
 - ▶ User ID of WUSER
 - ▶ Password of GUEST1 (a one, not an L)

This shows the basic look of Access for Web as we ship it. You can try various functions -- including working with printer output and the options we provide. You can click on the 5250 tab, sign onto the iSeries, then start an RPG application called BOATS and run it.

- Start up a different another browser session to same url address above, and use the following User ID and password to sign into the Access for Water **INEXPERIENCED USER** page:
 - ▶ User ID of BOATADMIN
 - ▶ Password of ADMIN1BOAT (a one, not an L)

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 if they had used WebFacing or Host Publisher they could run the application with them. So click on all 3 links and see the same application in different views. You will also see other links that would let a user work with spoolfile information, work with IFS, run database requests, etc..

What is iSeries Access for Web?

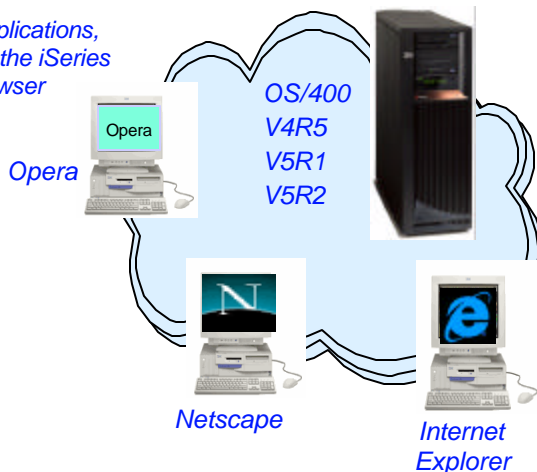
End users can leverage business information, applications, and resources across an enterprise by extending the iSeries resources to the client desktop through a web browser

Provides access to iSeries through a browser

- 5250 access
- Access to database, integrated file system, printers, output queues, jobs
- Can run batch commands and send/receive messages

It has the following advantages:

- Is server based
- Requires only a browser on the client, no configuration required at desktop, no applets installed on desktop
- Uses industry standard protocols - HTTP, HTTPS and HTML



Notes: What is iSeries Access for Web?

iSeries Access for Web

iSeries Access for Web is a lightweight, browser-based access to your iSeries servers

Pure Java servlet-based access

- iSeries Access for Web is a set of servlets that run on the iSeries servers as extensions to the HTTP server. It provides access to functions such as database, file, print, and messages on the iSeries server.

Industry-standard protocol

- iSeries Access for Web uses the industry standard HTTP and HTTPS protocols and does not use any proprietary TCP/IP ports and protocols. Firewall issues are much more manageable as a result.

Lightweight Access

- The intent of iSeries Access for Web is lightweight and casual access of iSeries servers from a web browser. Most of the iSeries Access for Web functions have minimal browser requirements and would work with almost any browser on any platform.

Server-based

- iSeries Access for Web is entirely server based. There is no client code to install and manage. Simply install and configure on the server, access from any web browser.

Object-level security

- Access to the iSeries data is based on iSeries object level security. Users and groups have only access to the data they are authorized to.

Fully customizable

- Access to iSeries Access for Web functionality can be restricted for users and groups of users. iSeries Access for Web is fully customizable.

HTML and other internet mime types

Responses from the iSeries Access for Web servlets are formatted and tagged with the appropriate mime types. Some of the mime types used are (others may be used and added in the future):

- HTML (text/html)
- binary (application/octet-stream)
- text (text/plain)
- MS Excel (application/vnd.ms-excel)
- Lotus 1-2-3 (application/vnd.lotus-1-2-3)
- GIF images (image/gif)
- TIFF images (image/tiff)
- HP PCL (application/vnd.hp-PCL)
- AFP (application/vnd.ibm.modcap)

In most cases, the request implies the resulting data type. iSeries Access for Web servlets retrieve the data, format the data in appropriate formats, tags it with the appropriate mime type, and sends the response back to the client

Browser Requirements for Access for Web

Netscape

- **Version 4.7 (AIX[®], Linux)**
- **Version 6.2 (Windows)**

Microsoft[®] Internet Explorer

- **Version 6.0 (Windows)**

Opera

- **Version 5.0 (Linux)**
- **Version 6.0 (Windows)**

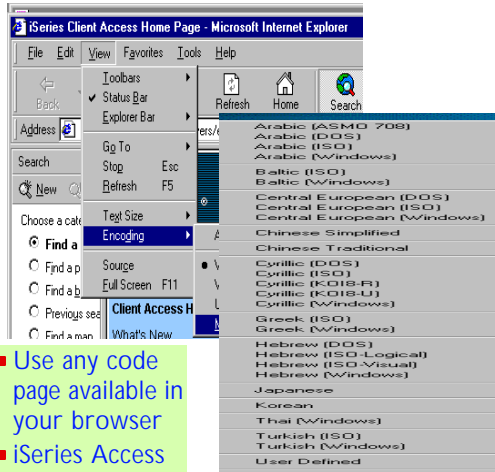
Can be used on any workstation operating system that supports one of these browsers:

- ▶ Windows
- ▶ Linux
- ▶ Macintosh
- ▶ UNIX....

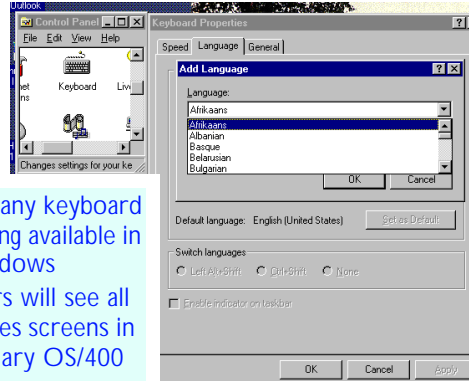


Other browsers (for these and other platforms) that support the current HTTP and HTML specifications should work but have not been tested with iSeries Access for Web.

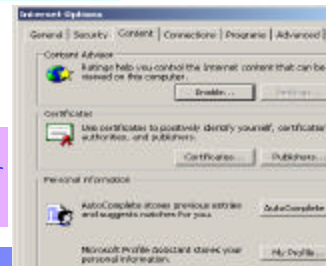
Fully Integrated with your browser...



- Use any code page available in your browser
- iSeries Access for Web, V5R2, translated into 33 NLVs (including DBCS)



- Use any keyboard setting available in Windows
- Users will see all iSeries screens in primary OS/400 language



- Set up your SSL through your browser

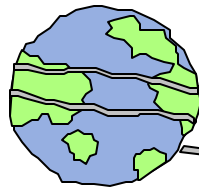
Notes: Language Enablement

iSeries Access for Web - 5722-XH1, V5R1
 iSeries Client Access Family (5722-XW1) ships with the locked media. However, iSeries Access for Web (5722-XH1) nor WebSphere Host Publisher are not on the V5R1 locked media but ship on separate CDs.

- iSeries Access for Web is English only. English only is defined to mean:
- The product is not translated to other languages.
 - The product is NLV enabled.
 - The install media contains all language options but each option is populated with English MRI, and the IBM Distribution Center language "bins" contain the English MRI. When an order is placed for a specific language, the media package will have English MRI.
 - When you specify the language you want installed, the proper language-specific directories will be created, but the MRI modules will be English modules.

iSeries Access for Web - 5722-XH2, V5R2
 iSeries Client Access Family (5722-XW1) ships with the locked media. iSeries Access for Web (5722-XH2) ships on the V5R2 locked media. WebSphere Host Publisher is on separate CDs.

- iSeries Access for Web, 5722-XH2, V5R2 is available in the following NLVs:
- French
 - Italian MNCS
 - Swedish
 - Hebrew
 - German MNCS
 - Finnish
 - Japan
 - Traditional Chinese
 - Romanian
 - Brazil Portuguese
 - Czech
 - German
 - Russian
 - Polish
 - Spanish
 - Turkish
 - Slovenian
 - Danish
 - Norway
 - Portuguese
 - Simplified Chinese
 - Arabic
 - Belgium Dutch
 - Slovakian
 - Dutch
 - Croatian
 - French Belgium
 - Italian
 - Greek
 - Korean
 - French Canadian
 - Hungarian



Let's Connect!



Start Your Browser...

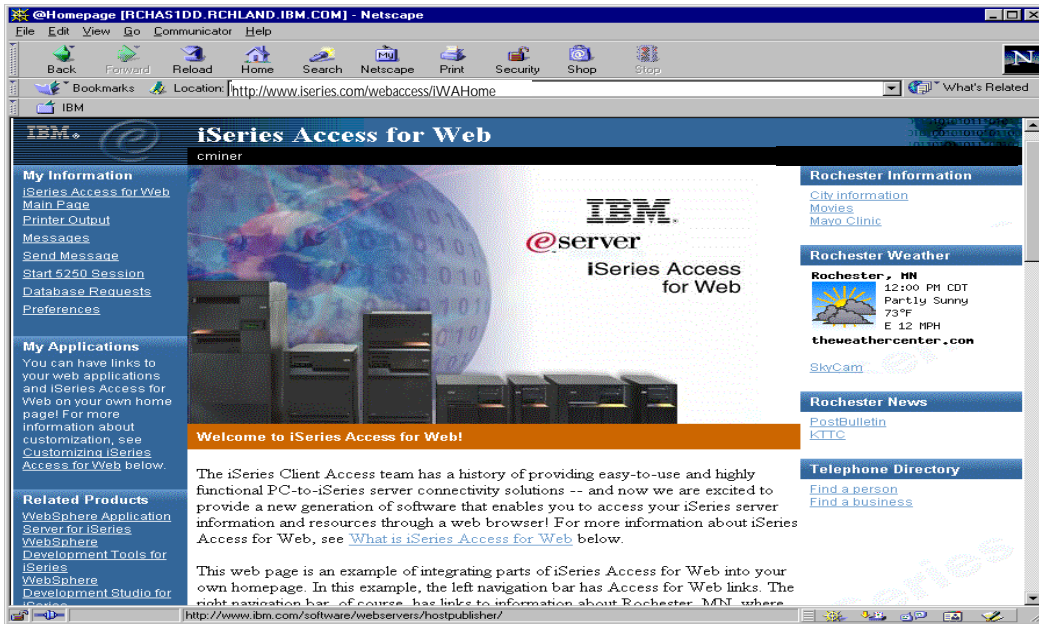
The screenshot shows a web browser window with the address bar containing <http://www.iseries.com/webaccess/IWAHome>. The main content area displays the IBM eServer iSeries website, including a navigation menu on the left and a main heading 'Midrange servers: iSeries'. An 'Enter Network Password' dialog box is open, prompting the user to enter their user name and password. The dialog box contains the following fields:

- Site: iseries.com
- Realm: iseries.com
- User Name: omnicr
- Password: [masked]

There is a checkbox for 'Save this password in your password list' and 'OK' and 'Cancel' buttons. A red arrow points from the 'User Name' field in the dialog box to the 'User Name' field in the browser's address bar.

- Open browser
- Key in iSeries url
- Prompted for OS/400 user id and password

Front Page = www.<iseries>.com/webaccess/iWAHome



Main Page = www.<iseries>.com/webaccess/iWAMain



Functions You Can Perform...

My Personal Folder

Print

- Printer output
- Printers
- Internet Printers
- Printer shares
- Output Queues

Database

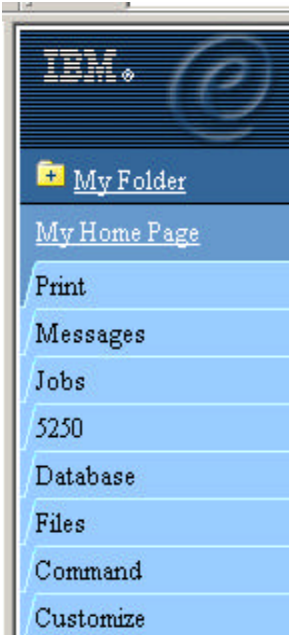
- Tables
- My Requests
- Run SQL
- Copy Data to Table
- Import Requests

5250

- Start 5250 Session

Commands

- Run commands (Batch)



Files

- Browse Files (in IFS)
- File Shares (in NetServer)

Messages

- Display Messages
- Send Messages
- Operator Messages
- Message Queue



(Star) = requires V5R2, 5722-XH2, iSeries Access for Web

Jobs

- User Jobs
- Server Jobs

Customize

- Administrator controls access to functions by user or group of users:
 - Can customize front page
 - Can limit what tasks can be performed

Controlling Access to iSeries functions

When an iSeries Access for Web user attempts to access any function on the iSeries, the following sequence of checks are made to authenticate user access:

- **User profile**
- **Group profile(s)**
- ***PUBLIC profile**
 - *PUBLIC profile is the set of default policy settings shipped with Access for Web
 - The defaults allow most functions to be available to all users



A quick strategy when rolling out Access for Web on your system:

- Use the Customize Group Profiles function and customize the *PUBLIC group profile to 'Deny' functions for all users in a single step
 - You need *SECADM authority to customize profiles
 - Note: you should add an Administration Group or a specific User Profile for yourself first so that you don't lock yourself out of specific functions as you change the *PUBLIC profile
- You can then 'Allow' specific users access to functions via their User or Group profiles

Notes: Controlling Access - Strategies

Below is a more detailed description of the sequence of checks made when a policy decision needs to be made for a logged on user

- If the policy setting is specific to the user profile, it will be enforced.
- If the policy setting is not specific to the user profile, group profiles that the user is a member of are checked. If the policy is set for any of these group profiles, it will be enforced.
- If the policy setting is not found in any of the user's group profiles, a special group, *PUBLIC is checked. If the policy has been set in the *PUBLIC group profile, it will be enforced.
- If the policy setting is not found in the user's profile, any group profiles, or the *PUBLIC group profile, the shipped default policy setting will be used.

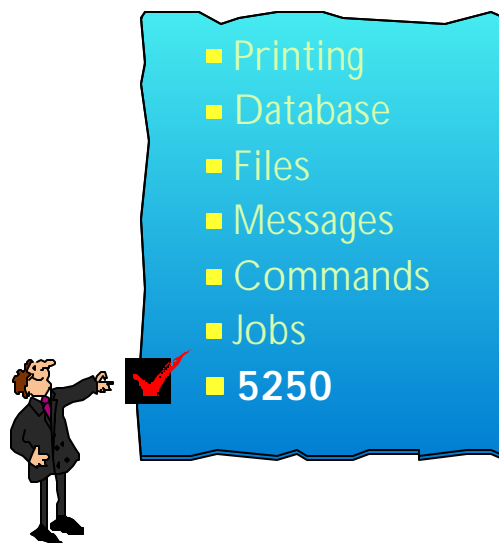
The Customize function allows administrators to set policies for users and groups of users.

These policies control:

- Functions a user can perform
- How certain information is presented to the user.

When a function is restricted, its navigation bar content is removed. Access to the servlet is restricted, and it takes affect immediately.

Administrators with *SECADM special authority are automatically authorized to administer settings for users and groups of users that they have authority to. These administrators can then grant other user profiles permission to administrate iSeries Access for Web functions.

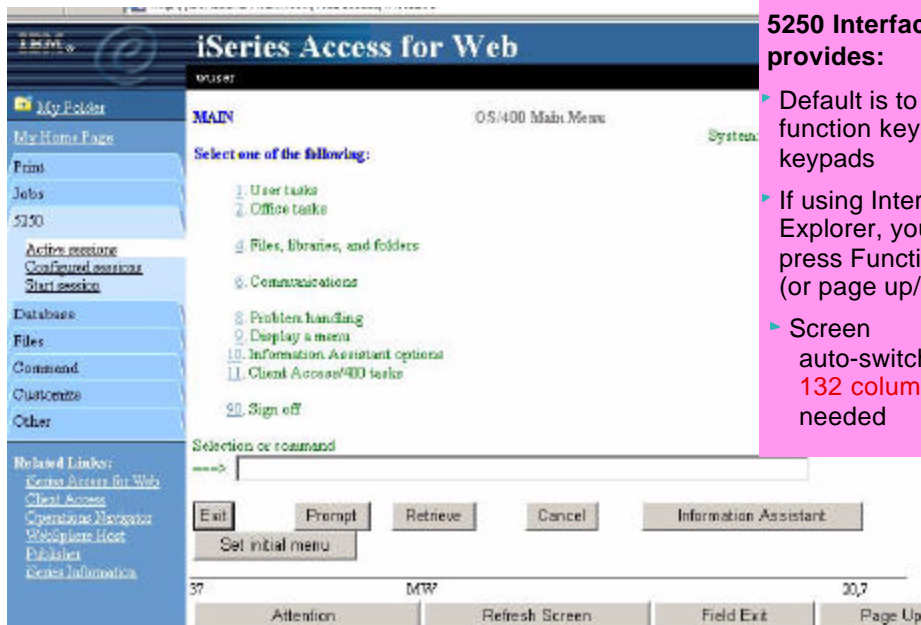


This is the only function in the iSeries Access for Web product that requires 'interactive'.

All other functions run as 'batch' tasks on the iSeries



5250 - Default 'Web View' look



5250 Interface now provides:

- ▶ Default is to show function keys on keypads
- ▶ If using Internet Explorer, you can press Function keys (or page up/down)
- ▶ Screen auto-switches to **132 columns** as needed

Notes: Configuring a 5250 Session

The following capabilities are available when using any supported browser on any desktop operating system:

Workstation ID - this enables you to identify the device name (DEVNAME) that you wish to use for your 5250 user interface session. Then when a session is started, the device name you selected will be displayed in the Display field of the active session sign-on screen.

- Use user ID - tells iSeries Access for Web to use the already authenticated user ID for the workstation ID.
- Specify workstation ID - tells iSeries Access for Web to use a workstation ID you have chosen. The maximum length for this value is ten characters. Additional characters are truncated. The workstation ID cannot start with a number and it cannot contain a blank or any of the following characters: &, *, %, =, +. If you choose this option and do not enter a value, then the iSeries server will generate a workstation ID
- Avoid duplicates for this user - when this option is enabled, the 5250 user interface adds a wild card character to the device name to make it unique for the current user. If the specified device name already contains ten characters, the last character is truncated before adding the wild card character. If this option is not enabled, only one session can be started with the specified device name. Start session requests with the same name cannot be started.
- Avoid duplicates with other users - this option will eliminate device name conflicts with other users on the same server. When this option is enabled, the iSeries server adds a wild card character to the device name to make it unique for all users on the server. If the specified device name already contains ten characters, the last character is truncated before adding the wild card character. If this option is not enabled, only one session can be started with the specified device name for the specified server. Start session requests with the same name cannot be started.

Port / Code Page - you can identify what iSeries port to use and your desired NLV code page.

132 column support - In the V5R1 release you had only the ability to have an 80-column session. With V5R2, the 5250 interface will auto-switch into 132 column mode as needed.

Configure My 5250 Session...

IBM iSeries Access for Web
wuser

Active Session Settings

► Web or Traditional view

General

Session:

Default view: Web

Enable advanced JavaScript functions for Internet Explorer

Server

Server: myiseries.ibm.com

Port: 99

Code page: 37

Workstation ID

Workstation ID: cminer

Use user ID: No

Specify workstation ID: Yes

Avoid duplicates for this user: No

Avoid duplicates with other users: Yes

► If using Internet Explorer, check this box so you can use Function keys (or page up/down)

► Can Specify a Workstation (device) ID. Wildcard support similar to PC5250

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Notes: Configuring a 5250 Session

The following capabilities are available when using any supported browser on any desktop operating system:

Configured Sessions - this function is located on your '5250' tab and is used to configure a new session or to modify an existing session configuration. You can create multiple different sessions configurations for a single user. If you have an active session page and modify your configuration for this currently active session, you can use the 'Save' button to permanently save any settings you have changed in your current active session. Then later when you connect to your iSeries server, and select to 'Configured session', you can start any one of your previously configured sessions without having to provide any additional information. Other actions you can perform from this panel are:

- Edit - to change session configuration settings
- Delete - to delete a session configuration
- Configure new session - to create a new session configuration

Additionally, when you are using the 'Configured Sessions' function, you can specify to:

- Save As Defaults - this will save your current settings as your defaults. Then later if you configure a new session those saved default values will be used as your initial values, or if you simply select to 'Start Session', the default settings will be used to start the session
- Load Defaults - this button can be used to replace the current settings with the currently configured default settings.
- Load Shipped Defaults - pressing this button will replace the current settings with the shipped default settings. If you never use the Load Defaults button, then the Load Shipped Defaults has the same effect as the Load Defaults.

Active Sessions - this function is located on your 5250 tab and is used to display a list of your active 5250 sessions. Once a session is started, it remains active until it is either stopped or it times out after a period of inactivity. Closing the browser or signing off an active 5250 session does not stop the session. To stop a session and end the connection, you can:

- Stop - select the 'Stop' action displayed on the Active Sessions panel. This will end the session between the browser and the iSeries server. Another way to end an active session is to use the Stop Session button on a configured keypad.
- The Inactive session timeout policy controls how long a session can be idle before it times out and is ended. You can set a value in this policy by selecting the 'Customize' tab, then selecting either a User, Group, or Selected profile, then selecting '5250'. You can set the timeout value anywhere from 15 minutes to 7 days.
- Reconnect - if you leave an active session page to view another web page or you close the browser while a session is active, you can use 'Reconnect' on the Active Sessions panel to reconnect to an active session. You can also use the browser's back button. If you use the back button, use the Refresh Screen keypad button to synchronize the web page with the current 5250 session state.

Select 5250 'look and feel' you want to use

► Default is 'Web' View

► Check box to show all Function Keys on screen 4

► Deselect to show Function Keys instead of Buttons 5

► Change screen colors 6

Notes: Customizing a 5250 Session

Switching Views - two views, Web View and Traditional View, are provided. The view style can be changed while a session is active. The supported views are:

- Web View - (default) presents 5250 screens that will look similar to other web pages. The web view uses links for menu options, cursor positioning, and retrieving message text help. Since the browser's default background colors are used for displaying screens, you can modify colors through your browser tools.
- Traditional View - the traditional view preserves the 5250 look and feel and behaves more like a typical 5250 user interface rather than a web page. By default, the familiar 5250 color scheme is used, but can be changed through the iSeries Access for Web configuration options.
- Additionally, either view can be customized for: menu items as links; function key descriptions as buttons; "more..." as button; message area as link; fixed versus proportional font; show/hide navigation bar; show/hide function key bar; enable/disable macros

Enable cursor positioning - this setting specifies whether non-input fields are implemented as links or as plain text.

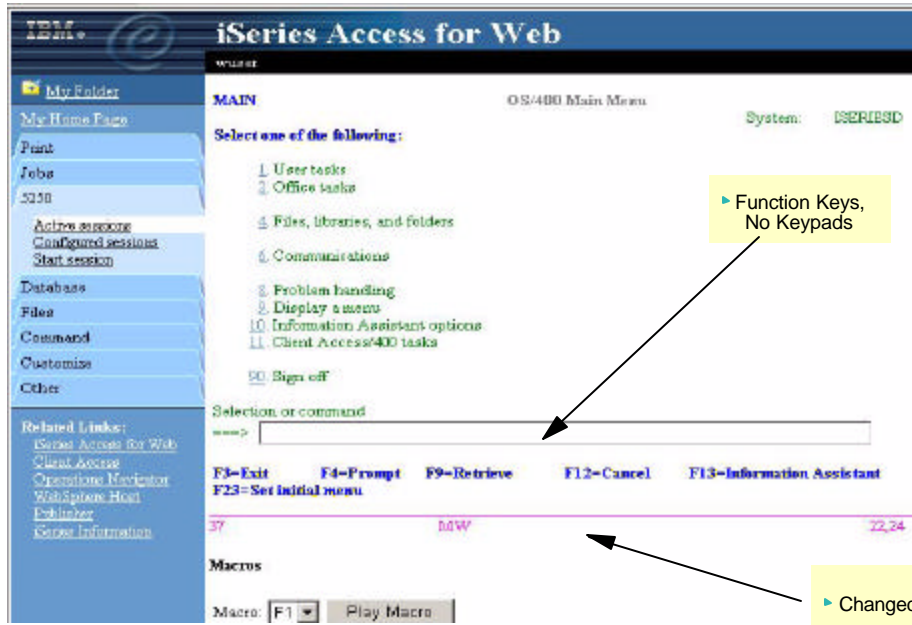
- If non-input fields are implemented as links, choosing a link updates the current cursor position for the active session. This is useful for functions which use the current cursor position.
- If Enable message text line as help link is also enabled, the message text setting overrides the cursor positioning behavior. This will enable you to perform a number of iSeries functions to complete tasks such as:
 - When prompting a command, the F1 key displays help for a parameter if the cursor is positioned on a parameter name.
 - When prompting a command the F4 key displays possible values for a parameter if the cursor is positioned in the input area for a parameter.
 - If the cursor is positioned on the command line, the F9 key retrieves previously run commands.

Enable active function keys as buttons - this setting specifies whether the active function keys are enabled as buttons or displayed as text. If configured this way, you do not need to use your mouse to press a button to enable a function key - you can simply press the function key on my keyboard to evoke the function key. Even if you chose to display the function keys as text, you can also combine invoking the use of the function key bar, a configured keypad, or the function keys on the keyboard through additional configuration options.

- One thing to note is that you can only use keyboard keys (other than the Enter key) if you are running Internet Explorer, and have also checked the box under 'General' that says 'Enable advanced JavaScript functions for Internet Explorer'. Use of the Enter key is supported with both Netscape and Internet Explorer (when running on a Windows desktop) when the JavaScript function is enabled. If you are using Netscape or Opera browsers, or not running on Windows desktops, then you will particularly like the new capabilities for displaying where the function key bar is placed on the 5250 screen (above, below, on the side), and the ability to set up customized keypads to define what functions keys are displayed.

Enable "More..." as button - if you check this box then you will need to use your mouse to press a button on fields containing "More...". If you don't check this field, then "More..." fields will be displayed as text and you can retrieve additional pages by using a page down key on they keyboard (or optionally a keypad).

After I changed my 'Configured Session'...



Look after Selecting 'Traditional' View



Notes: A New 5250 Interface in V5R2 for those on the go...

The 400 Newsletter, Special OS/400 V5R2 Edition, Volume 11, Number 36 -- August 29, 2002, by Becky Schmieding

It's 9 p.m., the phone rings, and your boss asks if you could check on a program that's running and access some sales data. You've left your notebook PC at the office and your home PC doesn't have iSeries Access for Windows loaded, so what do you do? You can access your iSeries from your home PC by using the new 5250 interface available in V5R2 iSeries Access for Web.

I can hear it from here: "What? IBM has another product for 5250 support?" As a semi-expert on PC5250, I too was a bit skeptical of what this new interface was going to be like. However after looking and playing around with it for a while, I am very impressed with the speed and functionality of this interface.

What Do You Want from 5250 Interface?

As I evaluated this 5250 interface, I thought about the functions currently available with PC5250 in iSeries Access for Windows (formerly Client Access Express). I also thought about what I really like and what I really like and what I really need in order to be productive.

In addition to this new 5250 interface, with iSeries Access for Web, I have access to the iSeries database and Integrated File System (IFS), printers and output queues, as well as the capability to run batch commands and send/receive messages.

Configuring the Session

One of the most appreciated enhancements to PC5250 in the past couple releases is what is called generic Workstation ID (i.e., the capability to have a session configured and allow that definition to be used multiple times yet have a unique workstation ID for each session). Of course we would all agree that it would also be good to have a 5250 interface that has the capability to automatically switch from 80 to 132 columns and back as the screen data requires. Both of these functions are available with iSeries Access for Web's new 5250 interface.

Customizing the Visible Interface

Everyone likes to be unique and have the ability to set up their sessions with their own color schema and, while some people would prefer to see the 5250 interface looking like their traditional green on black PC5250 displays, others would prefer it to look more like a Web interface. iSeries Access for Web supports showing the 5250 interface in either the traditional green on black or the Web view. It also allows you to redefine the colors displayed in either format.

Customizing the User Interface

What you see on the display and will use is important. To avoid the retraining of users, you need to ensure that the interfaces are the same whether you are using iSeries Access for Web 5250 interface or iSeries Access for Windows PC5250. You want Enter to be Enter and you want to be able to use function keys (F1 through F24, Page Up and Page Down keys) as they were intended to be used--by pressing the keys. You do not want to select these functions using the point-and-click method. iSeries Access for Web 5250 interface provides the Enter key support, and, if Enable advanced JavaScript functions for Internet Explorer is selected or left as default on the Session Configuration screen, you will also be able to use the F1 through F24 and Page Up/Page Down keys directly when using Microsoft Internet Explorer. The keyboard is not customizable like PC5250, but there is the capability to customize keypads, which are similar to PC5250 pop-up keypads

Notes: Article (continued)...

While PC5250 keypads are moveable and "sticky" (for more than one-time use), iSeries Access for Web keypads are configured to be on or off, in one or all of three set locations (above, below, and to the left of the 5250 display) and are displayed until removed from the configuration. Just like PC5250, macros and/or function keys can be assigned to a location on the keypad.

Another key function in PC5250 that any new 5250 interface will need is hot spot support. iSeries Access for Web has a hot spot function that PC5250 doesn't have: an easy way to allow menu option to be a hot spot. With PC5250, you either need to select Enter string at cursor position or create macros for menu options. However with iSeries Access for Web, you simply select Enable menu items as links. In addition, there is an option to Enable message text line as help link, which allows you to click on displayed error messages and be taken to the help text for that message.

Just like PC5250, you can make function keys show on the display as hot spots by selecting Enable active function keys as buttons. iSeries Access for Web also allows you to decide how those keys should be displayed: with key and action shown (i.e., F3=Exit, F12=Cancel) or with only function shown (i.e., Exit, Cancel) by selecting or deselecting Show function key text (Fxx=) on button (See Figure 2). One more item that can easily be made into a hot spot is the More... text on the display screens. More... means there are more options or information on another screen that can be accessed by pressing the Page Down or Page Up buttons. Just specify the Enable More... as button.

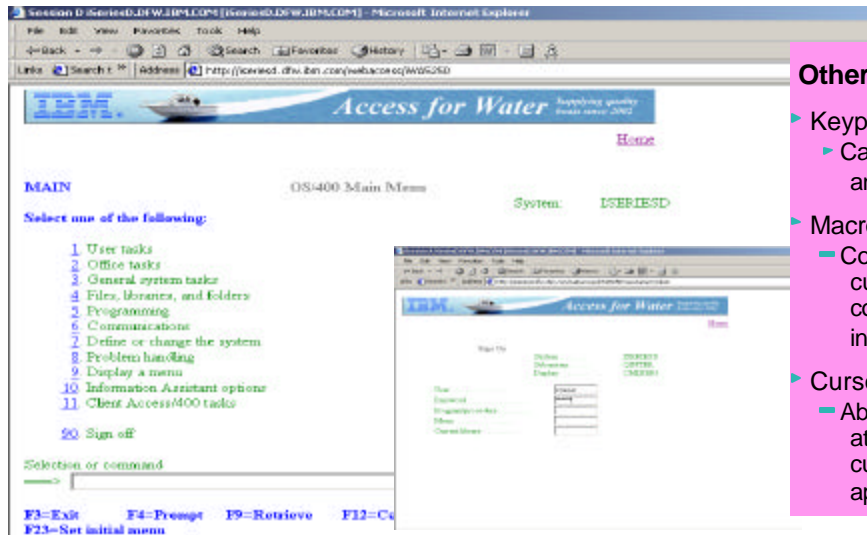
Speeding the Macros

When using PC5250, I've always found macros to be a way of speeding some repetitive task. So support of macros would be a requirement for any 5250 interface. It would also be nice if I could convert my existing macros. This time, iSeries Access for Web delivers one of my two requirements. It supports the recording and playing of macros. PC5250 has macro support in both VBScript or PC5250 format that contains a series of keystrokes, while iSeries Access for Web macros contain a series of cursor position commands and user interfaces. Unfortunately, there is no conversion between PC5250 macro support (either PC5250 macros or VBScript format) to iSeries Access for Web macro support. However, maybe I can trade the macro performance for lack of macro conversion. PC5250 recently added an option to remove think time during macro record, which helped speed macros during playback. However, if you recorded a macro that moved through multiple screens, you would still see each screen. With iSeries Access for Web's 5250 interface, you move from the first screen to the last screen without displaying the screens in-between. This macro performance might just be worth re-recording your existing PC5250 macros in order to save execution time.

Other Interesting Tidbits

Once you've configured a session, it will be displayed on the Configured Session page where you can either edit, delete, or start that session. (Think of a session like a PC5250 workstation profile.) Once you've started a session, you can switch between sessions by going to the Active Session page, which will show you the sessions you have initiated, and you will be able to either reconnect to that session or stop the session. By the way, if you want a quick way of starting a session, just click on Start Session tab.

No longer designated for 'casual use'



Other capabilities

- ▶ Keypads
 - ▶ Can define, put anywhere on screen...
- ▶ Macros
 - Contains a series of cursor position commands and user input
- ▶ Cursor positioning
 - Ability to place cursor at non-input fields for cursor sensitive applications

Even your OS/400 screens look better...

Notes: Keypads, Macros, etc

The following capabilities are available when using any supported browser on any desktop operating system:

Keypad customization - keypads contain buttons for invoking actions such as function keys and macros. You can use 'My Keypads' to configure the number, location, and content of keypads displayed on active 5250 sessions. The configuration of the keypads is used for all sessions and is not associated with a specific session configuration. Options for customizing the use of keypads are:

- Configure Keypad - associates actions with each button in the keypad. The list of available actions is displayed in a drop-down list for each button. A value of None indicates a button is not displayed in the specified keypad position. Not showing selected buttons is useful for arranging buttons so they are easier to locate visually-customizable keypads
- Show Keypad - identifies where the keypad is to be displayed (above, next to, or below the 5250 screen). Keypad settings enable you to have any combination of the top, side, and bottom keypads displayed. The default is to display the bottom keypad only.
- Keypad Layout - identifies the number of rows and columns you want displayed. After changing the keypad size, you can use the Configure button to define the actions associated with each button. Decreasing the size of a keypad without reconfiguring it removes buttons and their associated functions. Increasing the size of a keypad without reconfiguring it, does not add additional buttons.

Macro support - macros can be used to automate repetitive tasks. The macro support in the 5250 interface in iSeries Access for Web is different than the support in PC5250 emulation in iSeries Access for Windows. PC5250 macros contain a series of keystrokes, whereas the iSeries Access for Web 5250 user interface macros contain a series of cursor position commands and user input. You can perform the following macro functions:

- Record a macro - to create a macro, use the 'Start Recording' button on an active session page. Once recording is started, all subsequent cursor position changes and user input are recorded in the macro. Recording can be paused with the 'Pause Recording' button. Recording resumes with the 'Resume Recording' button. To stop the recording process, use the 'Stop Recording' button. To save the macro after recording, you specify a unique name in the 'My Macros' list.
- Play a macro - to play a macro, choose the macro from the drop-down list on the active session page and click the 'Play' button. Macros can be used in any session, regardless of where they were created, and you can also assign macros to keypad buttons.

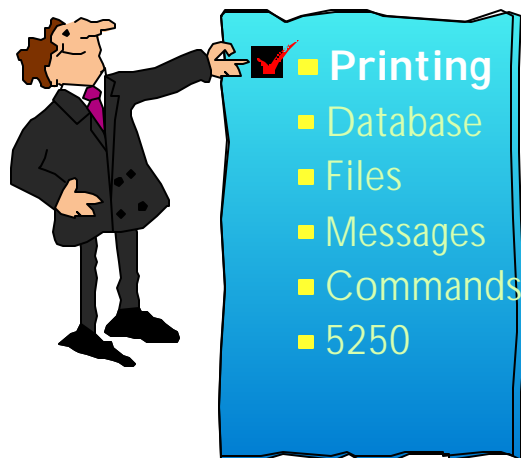
Customize Timeout Value...

Customize - 5250
Profile: CMINER

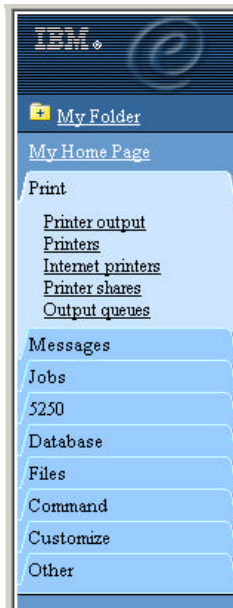
| Policy | Derived From | Action | Setting |
|--------------------------|-----------------|---------------------|----------|
| 5250 tab | Shipped default | Use current setting | Show |
| Start 5250 sessions | Shipped default | Use current setting | Allow |
| Inactive session timeout | Shipped default | Use current setting | 24 hours |

OK Cancel

Telnet sessions not automatically freed up by OS/400 when browser closed



Basic Printer tasks an End User might want to do...



Access printers and printer output on your iSeries server with iSeries Access for Web

- Printer output
- Printers
- Internet Printers
- Printer shares
- Output Queues

Notes: Printing Support

iSeries Access for Web provides a simple web type interface to work with print related objects on the iSeries. The Print objects may be accessed through the "Print" tab or the url

"http://<yourServer>/webaccess/iWAMain?tab=print". The Print tab contains five links: Printer Output, Printers, Internet Printers, Printer Shares and Output Queues. Access to these objects can be restricted by customizing the policies of the Print function. On selection of the Print tab, the user is presented with links to each of the options available on the expanded Print tab and a short description of the function each option performs. You can access the print objects by selecting them on the description page or by selecting one of the options on the Print tab itself.

Printer Output - The default policy settings for Printer Output, presents the user with a list of all of the spooled files which exist on the system for the signed on user. The list of spooled files includes important information about the spooled file such as file name, creation date and time, pages per copy and status. A list of actions that may be performed on the spooled file is also provided. The attributes displayed and the spooled file actions allowed, are customizable through the Preferences option on the Customize tab. The actions which may be performed on a spooled file include the ability to Hold, Release and cause the spooled file to be printed next. You may also preview the spooled file in GIF, TIFF, PCL or AFP formats. There are two ways to preview AFP formatted spooled files. You may use the AFP viewer plugin or the AFP Viewer program shipped with Client Access Express. The AFP Viewer program can also be used to view SCS spooled files. Most types of spooled files may be viewed in GIF, TIFF and PCL formats.

Printers - The default policy settings for the Printers list, provides the user with the basic view of all the printers which exist on the system. The list of printers includes attributes of the printer such as name, description and current status. It also provides a list of actions that may be performed on the printer. The type of printer view ie Basic or Advanced and the attributes displayed and the actions allowed, are customizable through the Preferences option on the Customize tab. This actions which may be performed on a

printer using the advanced view Vary on and Vary off the printer device, Hold and Release the output queue associated with the printer and Hold, Release, Start and Stop the writer job associated with the printer. If the writer job has a message waiting on it, you may also view and answer the message.

Internet Printers - The default policy settings for the Internet Printers list, provides the user with a list of all the Internet printers which have been configured on the system. The list of printers includes attributes of the printer such as name, output queue, url, data type, printer file and authentication method. You may select the linked name of the output queue to see a list of all spooled files that reside on the output queue and if the internet printer is a defined printer device, you may click on the linked name to list and work with the printer.

Printer Shares - The default policy settings for the Printer Shares list, provides the user with a list of all the Printer Shares which have been configured on the system. The list of printer shares includes attributes of the printer share such as name, output queue, printer driver, data type, number of users and description. You may select the linked name of the output queue to see a list of all spooled files that reside on the output queue and if the share is a defined printer device, you may click on the linked name to list and work with the printer.

Output Queues - The default policy settings for the Output Queues list, provides the user with a list of all the output queues which have been configured on the system. The list of output queues includes attributes of the output queue such as name, status, number of files and writer name. A list of actions that may be performed on the output queue is also provided. The attributes displayed and the output queue actions allowed, are customizable through the Preferences option on the Customize tab. The actions which may be performed on an output queue include Hold and Release. You may also select the linked name of the output queue to see a list of all spooled files that reside on the output queue.

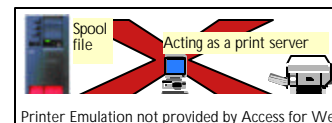
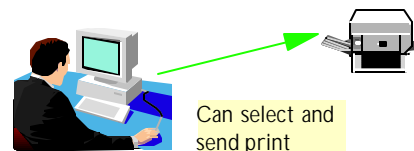
Example of Printer Output screen

| File Name | User Data | Creation Date/Time | Pages Per Copy | Copies | Status | Action | Preview | User |
|-----------|-----------|--------------------|----------------|--------|--------|--|---------|-------|
| QPDPSPST | | 1/2/03 7:22 AM | 1 | 1 | Ready | Hold Print Next Delete PDF GIF TIFF PCL AFP Viewer | | WUSEI |
| QPRTSPLQ | | 1/2/03 8:09 AM | 1 | 1 | Ready | Hold Print Next Delete PDF GIF TIFF PCL AFP Viewer | | WUSEI |
| QPDPSPST | | 1/13/03 8:54 AM | 1 | 1 | Ready | Hold Print Next Delete PDF GIF TIFF PCL AFP Viewer | | WUSEI |
| QSYSPT | WRKSYSVAL | 1/2/03 8:04 AM | 3 | 1 | Ready | Hold Print Next Delete PDF GIF TIFF PCL AFP Viewer | | WUSEI |
| QPDPSPST | | 1/14/03 2:30 PM | 1 | 1 | Ready | Hold Print Next Delete PDF GIF TIFF PCL AFP Viewer | | WUSEI |
| QSYSPT | WRKSYSVAL | 1/2/03 8:04 AM | 3 | 1 | Ready | Hold Print Next Delete PDF GIF TIFF PCL AFP Viewer | | WUSEI |
| QPDPSPST | | 1/16/03 8:52 AM | 6 | 1 | Ready | Hold Print Next Delete PDF GIF TIFF PCL AFP Viewer | | WUSEI |

Viewing Spool File Options...

SCS and AFP Spool File information can be viewed via the 'Printer Output' tab:

- **PDF**
 - Converted and displayed in browser. Will use InfoPrint Server product if installed.
- **GIFs (AFP & SCS)** *Improved in V5R2*
 - With just your standard browser.
- **TIFF Viewer/Plugin (AFP & SCS)**
 - Ships with Windows
- **AFP Viewer (AFP & SCS)**
 - Comes with Client Access Express for Windows
- **AFP Plugin (AFP only)**
 - Download from IBM website printers.ibm.com/R5PSC.NSF/Web/afpwb
- **PCL Plugin**
 - Without plugin, you could still download file to PC, then print it with PCL print driver



Notes: Plugins

Plugins are tiny software programs that add functionality to your web browser. While your browser lets you view the images and text on most web pages, plug-ins add the capability to hear music or other sounds, watch full-motion video, or enjoy multimedia presentations.

• You can visit the Netscape plug-ins directory (<http://home.netscape.com/plugins/information.html?cp=pif>), where you can browse through all of the plug-ins that are currently available. Or, when you encounter a web page on the Internet that requires a plug-in, Netscape's "Plug-in Finder" will automatically offer you the plug-in you need.

Viewing other types of output:

- You can view AFP and SCS as GIFs with just your standard browser.
- You can view AFP and SCS output as TIFF using a TIFF viewer/plugin (Windows 98 & 2000 ship with one)
- You can view AFP and SCS output with AFP Viewer shipped with Client Access Express to view AFP and SCS output, you will need to associate the application with the AFP and SCS mime types. See next pages for directions.
- You can view AFP output with AFP plugin. The plugin can be downloaded from <http://www.printers.ibm.com/R5PSC.NSF/web/afpwb>.
- You can use a PCL Plugin. One is www.swiftview.com - plugin available for HP-UX, Solaris2.4, Windows 95/98/NT, Linux. Supports PCL, HPGL, TIFF, JPEG, and other formats.

Viewing AFP or SCS output in PDF format:

- If the IBM InfoPrint Server (5722-IP1) product is installed on the iSeries server, Access for Web will use this product to perform conversions to PDF.
- If the InfoPrinter Server product is not installed on the iSeries server, then Access for Web uses its own built-in PDF conversion tool to convert SCS or AFP printer output to PDF.

Will use this product for PDF conversions if installed. But not required.

Infoprint Server for iSeries (5722-IP1)

- **Converts any standard iSeries output file to PDF**
- Provides automatic e-mail of any iSeries output file using PDF
- PDF files can be routed to iSeries output queues for printing on PDF-capable printers
- **PDF files can also be routed to the iSeries integrated file system for "downstream" electronic access**
- Provide ability to segment an iSeries output file by logical group and create individual PDF files for each segment
- Provide a user exit to facilitate customization and ID lookup for the e-mail process
- Provide real text, high-fidelity PDF output, enabling search, navigation, and superior performance through the output
- Transform PCL print files into AFP
- Transform PostScript Level 3™ print files into AFP
- **Transform PDF print files into AFP**
- Convert applications formatted using iSeries page definitions to AFP (Note that Infoprint Designer for iSeries uses page definitions for page formatting)
- Convert standard AFP print files to fully encapsulated AFP files, meaning externally referenced resources such as fonts, page segments, and overlays are built in
- Index AFP print files for use with Web browsers and archival
- Convert standard Internet image file formats — GIF, TIFF, and JPEG — to iSeries (AFP) image format

Notes: Infoprint Server for iSeries

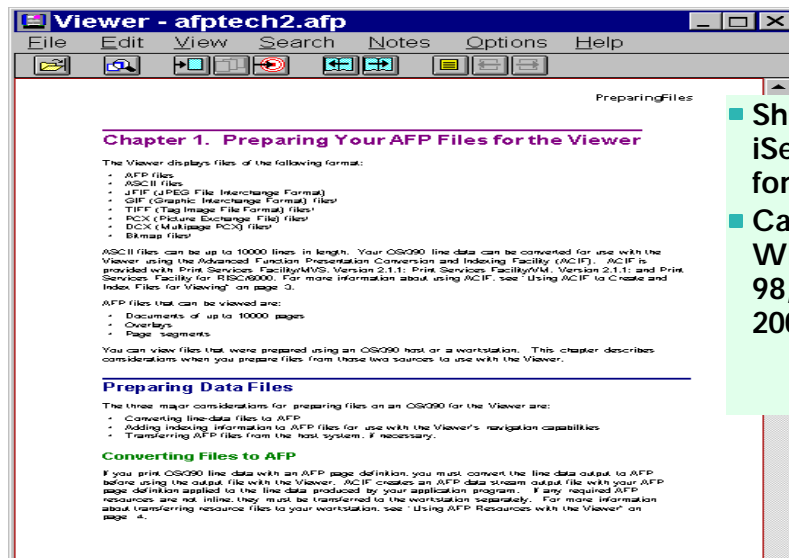
Infoprint Server for iSeries integrates PDF support into the OS/400® output architecture. The PDF subsystem enables the production of PDF from any standard OS/400 output format — SCS, AFP™, IPDS™, even OfficeVision/400™ format. PDF transformation creates text-based, non-image ASCII PDF. This ability to create full text PDF files delivers document fidelity while preserving the ability to navigate through the document or report. Text-based PDF is far smaller than PDF created as full-page image. This means superior network and user performance characteristics. PDF files can be written to the Integrated File System (IFS), iSeries output queues, or passed to the automatic e-mail function.

Web-ready AFP output - A key strength of the AFP architecture is the division of documents into logical components. The AFP print file may only contain application data while overlay, image, and font resources are stored externally. This works well for printing when the iSeries is in control but limits the ability to distribute AFP data electronically. Infoprint Server resolves this problem by enabling the creation of portable, or Web-ready, AFP data. This is accomplished by embedding the external resources within the distribution file. Infoprint Server also adds the ability to index the AFP data enabling easy navigation through the document or report. At the receiving end, there is a downloadable AFP plug-in for Web browsers that resolves this Web-ready output file for viewing.

Networked printing - A core focus of Infoprint Server is applying the substantial print management capabilities of iSeries servers to the proliferation of output pages and printers in today's typical enterprise networks. Client, network, and even ERP applications are generating documents and reports in ASCII data streams — PostScript®, PDF, and PCL — that are designed for personal and workgroup applications. While printing personal applications on personal printers works satisfactorily, printing business applications on network-attached printers can create both financial and management problems. ASCII data streams lack the capabilities of iSeries servers to manage print jobs effectively page by page to the printer with full error recovery. Using many slow-speed network printers generally creates higher total printing costs than when the printing volume is consolidated on faster, more cost-effective printers, and provides no central point of control.

Infoprint Server provides the bridge to iSeries print management and iSeries-attached printers. Infoprint Server transforms use the integrated, iSeries transform infrastructure to convert PostScript, PDF, and PCL documents and reports to AFP. You simply route a target file to the iSeries and the print data stream will be automatically detected and the appropriate transform applied. Additionally, the PostScript and PDF to AFP transforms have been jointly developed by IBM and Adobe®, combining excellence and experience in both datastreams. The iSeries printing architecture is built around AFP, an architecture designed for high volumes and reliable delivery. The iSeries can apply its IPDS interactive dialog with the printer and superior printing management function to the task of printing the job. The control and management is assured regardless of whether printers are direct-attached or network-attached.

AFP Viewer



- Ships with iSeries Access for Windows
- Can use on Windows 95, 98, Me, NT 4.0, 2000, XP

Set up AFP Viewer for Internet Explorer users

The screenshot shows the 'Edit File Type' dialog box for 'Print AFP'. The 'Description of type' is 'Print AFP', the 'Content type (MIME)' is 'application/vnd.ibm.modcap', and the 'Default extension for content type' is '.afp'. The 'Actions' list contains 'OPEN' and 'print'. The 'Application used to perform action' is 'C:\Program Files\IBM\Client Access\AFPViewr'. The 'Use DDE' checkbox is unchecked.

| Size | Type | Modified |
|------|-------------|----------------|
| | File Folder | 5/4/99 1:48 PM |
| | File Folder | 5/5/99 1:30 PM |
| | File Folder | 8/9/00 8:57 AM |
| | File Folder | 8/9/00 8:57 AM |
| | File Folder | 12/11/00 10:30 |

Editing action for type: Print AFP

Action: OPEN

Application used to perform action: C:\Program Files\IBM\Client Access\AFPViewr

Use DDE

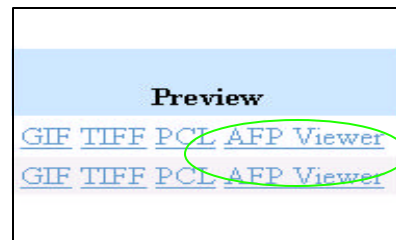
Create 'New File Type' for

- AFP output
- SCS output

Notes: How to set up to use AFP Viewer for IE

Directions for using the AFP Viewer that ships with Client Access Express for Windows (5722-XE1)

- Client Access Express for Windows (5722-XE1) is installed on your iSeries in folder /QIBM/ProdData/CA400/Express/Install/Image/. Map a network drive to your iSeries and get to this folder. Run the Setup.exe program contained in this folder.
- Pick the 'Custom Install' option, then select **AFP Workbench Viewer**. You may also want to install the **Printer Drivers** (AFP Printer Driver and SCS printer Driver) too. Your AFP Viewer is now installed on your PC
- Now you need to associate the AFP Viewer with the AFP and SCS mime types. Go into Explorer --> View --> Options. Then select File Types --> New Type.
- Set up to print AFP output with the AFP Viewer.
 - Set Content Type (mime) = application/vnd.ibm.modcap
 - Set Default Extension for Content Type = afp
 - Add New Action = Open, then on next panel click on the Browse button to find the AFP Viewer .EXE (it should be in "C:\Program Files\IBM\Client Access\AFPViewr\ftdwinvw.exe")
 - Add another New Action = Print, then put in same path as above (ie, "C:\Program Files\IBM\Client Access\AFPViewr\ftdwinvw.exe")
 Now you are ready to print AFP output.

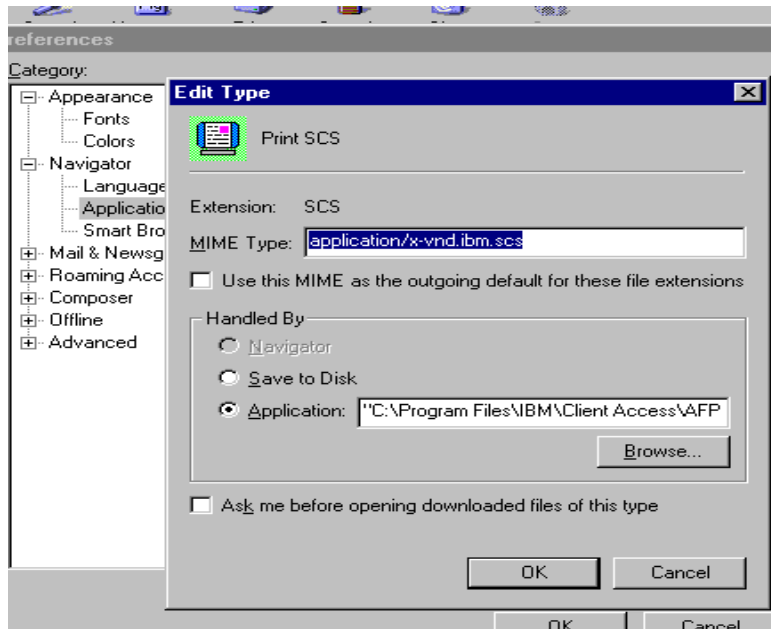


- Set up to print SCS output with the AFP viewer.
 - Set Content Type (mime) = application/x-vnd.ibm.scs
 - Set Default Extension for Content Type = scs
 - Add New Action = Open, then on next panel click on the Browse button to find the AFP Viewer .EXE (it should be in "C:\Program Files\IBM\Client Access\AFPViewr\ftdwinvw.exe")
 - Add another New Action = Print, then put in same path as above (ie, "C:\Program Files\IBM\Client Access\AFPViewr\ftdwinvw.exe")
 Now you are ready to print SCS output .

See next page for example of this information.

Notes: these are directions work for Internet Explorer

Set up AFP Viewer for Netscape users



Create 'New Type' for

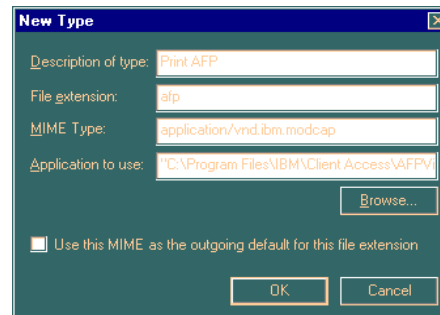
- AFP output
- SCS output

Notes: How to set up to use AFP Viewer for Netscape

Directions for using the AFP Viewer that ships with Client Access Express for Windows (5722-XE1)

1. Client Access Express for Windows (5722-XE1) is installed on your iSeries in folder
/QIBM/ProdData/CA400/Express/Install/Image/. Map a network drive to your iSeries and get to this folder. Run the Setup.exe program contained in this folder.
2. Pick the 'Custom Install' option, then select **AFP Workbench Viewer**. You may also want to install the **Printer Drivers** (AFP Printer Driver and SCS printer Driver) too. Your AFP Viewer is now installed on your PC
3. Now you need to associate the AFP Viewer with the AFP and SCS mime types. Start Netscape, then select 'Edit' --> Preferences from toolbar. Then select 'Applications'.
4. Now create a 'New Type' to use with AFP output:
 - Description: Print AFP (or whatever name you wish)
 - Set File Extension = afp
 - Set Mime Type = application/vnd.ibm.modcap
 - Application to use: = "C:\Program Files\IBM\Client Access\AFPViewer\afdwinw.exe"
 Now you are ready to print AFP output.

Notes: these are directions work for Netscape



5. Set up to print SCS output with the AFP viewer.
 - Description: Print SCS (or whatever name you wish)
 - Set File Extension = scs
 - Set Mime Type = application/x-vnd.ibm.scs
 - Application to use: = "C:\Program Files\IBM\Client Access\AFPViewer\afdwinw.exe"
 Now you are ready to print SCS output .

Use 'Customize' to allow/deny use of printer functions

My Home Page
Profile: CMINER

| Policy | Derived From | Action | Setting |
|-----------------------------|-----------------|---------------------|------------|
| Print tab | Shipped default | Use current setting | Show |
| Printer output | Shipped default | Use current setting | Allow |
| Hold/release printer output | Shipped default | Use current setting | Deny |
| Print next | Shipped default | Use current setting | Allow |
| Delete printer output | Shipped default | Use current setting | Deny |
| PDF transform | Shipped default | Use current setting | Allow |
| GIF preview | Shipped default | Use current setting | Deny |
| TIFF preview | Shipped default | Use current setting | Deny |
| PCL preview | Shipped default | Use current setting | Deny |
| AFP preview | Shipped default | Use current setting | Deny |
| Printer output list columns | Shipped default | Use current setting | Columns... |
| Printers | Shipped default | Use current setting | Allow |
| Vary on/off printers | Shipped default | Use current setting | Deny |

Use 'Preferences' to set up what columns/order to show

iSeries Access for Web

Columns - Printer Output

Select which columns to display.

| Column | Selected |
|--|-------------------------------------|
| <input checked="" type="checkbox"/> File Name | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> User Data | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> Creation Date/Time | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> Pages Per Copy | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> Copies | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> Status | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> Action | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> Preview | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> User | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> Job Name | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> Job Number | <input type="checkbox"/> |
| <input type="checkbox"/> File Number | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> Output Queue | <input checked="" type="checkbox"/> |
| <input checked="" type="checkbox"/> Priority | <input checked="" type="checkbox"/> |
| <input type="checkbox"/> Form Type | <input type="checkbox"/> |

iSeries Access for Web

Column Order - Printer Output

To change the order in which columns are displayed, change columns with larger order values.

| Order | Column |
|-------|--------------------|
| 10 | File Name |
| 20 | Creation Date/Time |
| 30 | Pages Per Copy |
| 40 | Copies |
| 50 | Status |
| 60 | Action |
| 70 | Preview |
| 80 | User |
| 90 | Job Name |
| 100 | Output Queue |
| 110 | Priority |
| 120 | Form Type |
| 130 | Printer |

'Customized' View...

My Folder

My Home Page

Print

Printer output

Printers

Internet printers

Printer shares

Output queues

Jobs

5250

Database

Printer Output for wuser

| File Name | User Data | Creation Date/Time | Pages Per Copy | Copies | Status | Action | Preview | User |
|-----------|-----------|--------------------|----------------|--------|--------|----------------------------|-------------------------|---------|
| QPDPSPSTS | | 1/2/03 7:22 AM | 1 | 1 | Ready | Hold Print Next Delete PDF | GIF TIFF PCL AFP Viewer | WUSER Q |
| QPRTSPLQ | | 1/2/03 8:09 AM | 1 | 1 | Ready | Hold Print Next Delete PDF | GIF TIFF PCL AFP Viewer | WUSER Q |
| QPDPSPSTS | | 1/13/03 8:54 AM | 1 | 1 | Ready | Hold Print Next Delete PDF | GIF TIFF PCL AFP Viewer | WUSER Q |

My Folder

My Home Page

Print

Printer output

Printers

Internet printers

Printer shares

Output queues

Jobs

5250

Database

Printer Output for wuser

Less columns, sorted differently

| File Name | Creation Date/Time | Action | Pages Per Copy | Copies | Form Type | Priority | Job Name |
|-----------|--------------------|----------------|----------------|--------|-----------|----------|----------|
| QPDPSPSTS | 1/2/03 7:22 AM | Print Next PDF | 1 | 1 | *STD | 3 | QPRTJOB |
| QPDPSPSTS | 1/13/03 8:54 AM | Print Next PDF | 1 | 1 | *STD | 5 | QPRTJOB |
| QSYSPRT | 1/2/03 8:04 AM | Print Next PDF | 3 | 1 | *STD | 5 | QPRTJOB |
| QPDPSPSTS | 1/14/03 2:30 PM | Print Next PDF | 1 | 1 | *STD | 5 | QPRTJOB |
| QSYSPRT | 1/2/03 8:04 AM | Print Next PDF | 3 | 1 | *STD | 5 | QPRTJOB |
| QPDPSPRT | 1/14/03 8:52 AM | Print Next PDF | 6 | 1 | *STD | 5 | QPRTJOB |

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Printers

My Folder

My Home Page

Print

Printer output

Printers

Internet printers

Printer shares

Output queues

Messages

Jobs

5250

Database

Files

Comment

Customize

Other

Related Links:

Generic Access for Web Client Access

Operational Navigator

WebSphere Host

Database

Generic Information

Printers

| Printer | Printer Status | Printer Action | Printer Description | Output Queue |
|------------|-----------------|------------------------|-----------------------------|--------------------|
| AFPMAIUS | Stopped | Make Unavailable Start | AFP Printer for test | QUSBSYS/AFPMAIUS |
| APPRENATA | Unavailable | Make Available Start | | QUSBSYS/APPRENATA |
| APRDINTER | Unavailable | Make Available Start | DEPTB | QUSBSYS/APRINTER |
| APRDINTER1 | Unavailable | Make Available Start | DEPTB | QUSBSYS/APRINTER1 |
| ARENATA | Vary on pending | Make Unavailable Start | renata test printers | QUSBSYS/ARENATA |
| ATZA | Unavailable | Make Available Start | DEVICE CREATED FOR ECHASLDD | QUSBSYS/ATZA |
| DEMPDF | Unavailable | Make Available Start | | QUSBSYS/DEMPDF |
| DEMSNMP | Stopped | Make Unavailable Start | | QUSBSYS/DEMSNMP |
| LAWPDFPRTR | Unavailable | Make Available Start | | QUSBSYS/LAWPDFPRTR |
| IWAAFP | Unavailable | Make Available Start | Printer for Access for Web | QUSBSYS/IWAAFP |

- 1 If you have restricted which printers a user have access to via iSeries NetServer, then only those printers would show up in this list

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Internet Printers

| Internet Printer | Output Queue | URL | Printer Data Type |
|------------------|-----------------|---|------------------------|
| IppSec | QUSBSYS/IPP | http://RCHAS1DD.631/ipp/printers/IppSec | SNA Character String |
| IppBasic | QUSBSYS/IPP | http://RCHAS1DD.631/ipp/printers/IppBasic | Auto-select |
| ARENATAip | QUSBSYS/ARENATA | http://RCHAS1DD.631/ipp/printers/ARENATAip | Auto-select |
| TWAAFP | QUSBSYS/TWAAFP | http://RCHAS1DD.631/ipp/printers/TWAAFP | Advanced function prin |
| IppPrinter | QUSBSYS/PRINTER | http://RCHAS1DD.631/ipp/printers/IppPrinter | Auto-select |
| Ipp | QUSBSYS/IPP | http://RCHAS1DD.631/ipp/printers/Ipp | Auto-select |
| DBMPDF | QUSBSYS/DBMPDF | http://RCHAS1DD.631/ipp/printers/DBMPDF | Auto-select |

- This view is filtered to include only iSeries print resources configured to support IPP

- Printer devices or output queues
- The most important information shown on the Internet printers form is the URL. This URL is used by the IPP client to access the iSeries print resources.

- These print resources can be controlled via Access for Web

- Can use the 'hold, release, delete, view' functions to work with these spooled file resources

Notes: Internet Printers use IPP

IPP

IPP printing allows you to send and manage print information from a variety of remote sites by sending print information over the Internet or Intranet. IPP is a versatile printing method, and should be supported by a variety of printers and network adapters. This protocol provides the advantages of printing with LPR/LPD, but is significantly easier to manage and troubleshoot because print status information is available during the printing process. IPP also provides excellent security by allowing SSL encryption.

IPP printing solutions communicate using TCP/IP ports, and require an HTTP server, Java, and Digital Certificate Manager (if SSL is used). Not all devices support IPP, so verify hardware compatibility before implementing an IPP-based printing solution.

Situation

You need to provide printing services across several existing LANs, which consist of both PCs and several servers, and must include your sales staff at several remote offices across the country. Because your printing solution ties in existing hardware from a several LANs, you require a printing solution that will be compatible with a wide variety of printers and network adapters. Moreover, you will have to configuring printers and work with print jobs and errors at several remote sites. Also, since some of the communication involves confidential information, you require a printing solution that provides secure communication. With these needs in mind, you decide that printing over your corporate Intranet will be the most versatile option, so you need to configure your network to support IPP printing.

Details

IPP printing requires an IPP server handling requests from a variety of IPP client devices. Since this communication uses HTTP, print requests can travel over your company's Intranet or over the Internet. IPP uses SSL to encrypt communication and provide secure connections.

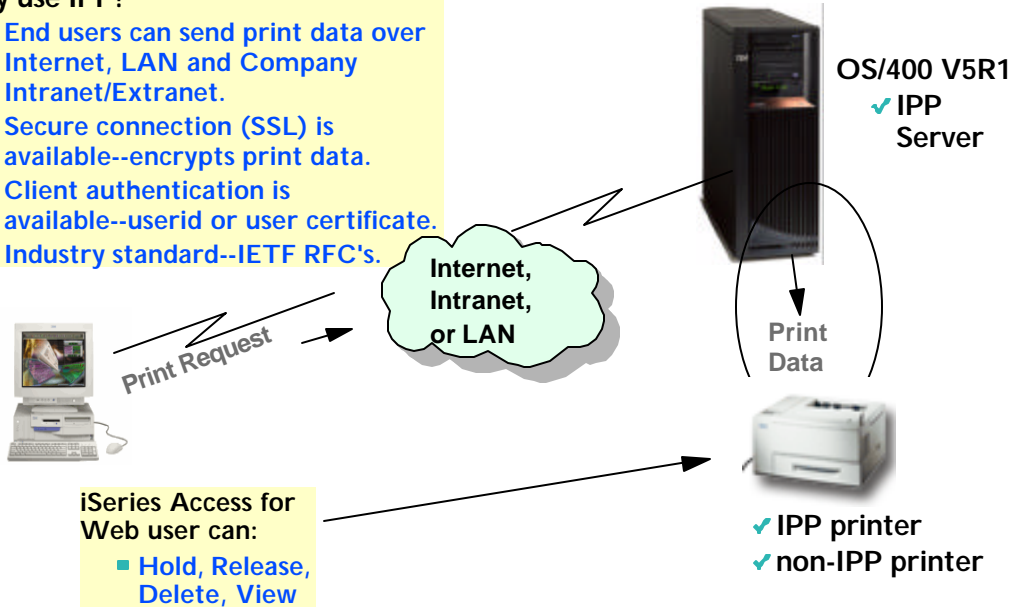
IPP server is available in OS/400 V5R1.

The IPP driver requires V5R2.

Internet Printer Support - OS/400 V5R1

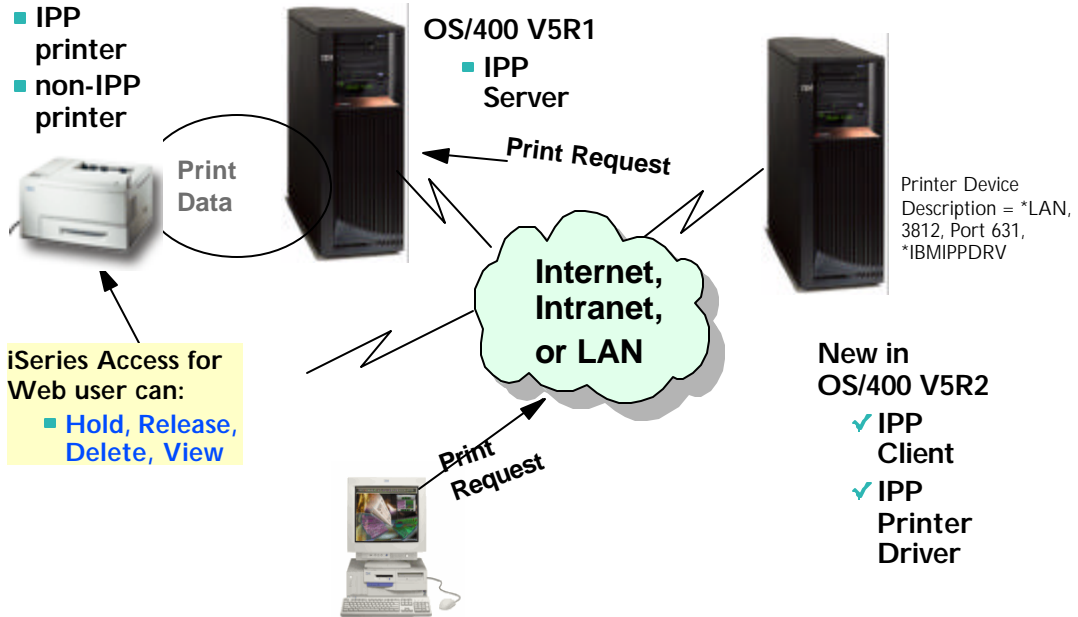
Why use IPP?

- End users can send print data over Internet, LAN and Company Intranet/Extranet.
- Secure connection (SSL) is available--encrypts print data.
- Client authentication is available--userid or user certificate.
- Industry standard--IETF RFC's.



Internet Printer Support - OS/400 V5R2

- IPP printer
- non-IPP printer



Notes: IPP Printer Support

With OS/400 V5R1, the iSeries can function as an IPP server. This support on the iSeries allows an IPP client to print over the internet, intranet, or LAN to an iSeries-configured printer, via the iSeries. OS/400 V5R1 cannot function as an IPP client.

With OS/400 V5R2, the iSeries can function as an IPP server, just like it could with V5R1. But, in addition, it can function as an IPP client. The IPP client function is part of the base OS/400 V5R2. With the IPP client function, a user can send spool files over the internet, intranet, or LAN to an IPP-enabled printer (or, to a printer configured on an IPP-enabled server, such as an iSeries). The following new functions are provided in OS/400 V5R2:

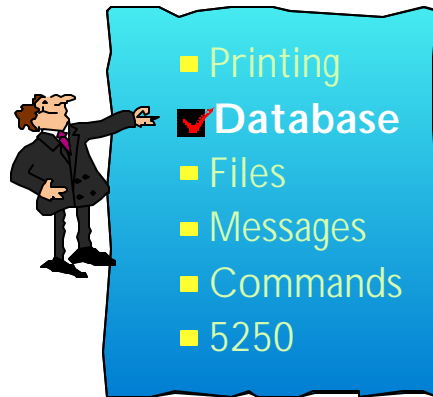
- New OS/400 printer driver
- New driver, named *IBMIPPSRV
- New driver is implemented according to standard IPP V1.1. The IPP protocol has two versions, IPP V1.0 and IPP V1.1.
 - IPP V1.1 is on the IETF standards track. Secure connections using TLS on port 631 was added in IPP V1.1.
 - IPP V1.0 is a subset of IPP V1.1. Except for secure connections on port 631, the IPP print driver (*IBMIPPSRV) will work with IPP V1.0 printers.

By creating a *LAN, 3812, Port 631, *IBMIPPDV printer device description on a V5R2 iSeries, a user can print from the iSeries over the internet, intranet or LAN to an IPP-enabled printer (or, to a printer which is configured on an IPP-enabled server, such as an iSeries).

Only one well-known port has been allocated to IPP at this time. That is port 631. The IPP client or IPP server is expected to manage whether the connection on port 631 is secure or non-secure. The IPP printer may require a SSL/TLS session to be established. (Note, IBM printers that support IPP, only support SSL at this time. Not TLS). The iSeries user may want to require a SSL/TLS session. A new printer device configuration parameter is provided so that the IPP print driver can be configured to only establish secure connections.

Output Queues example...

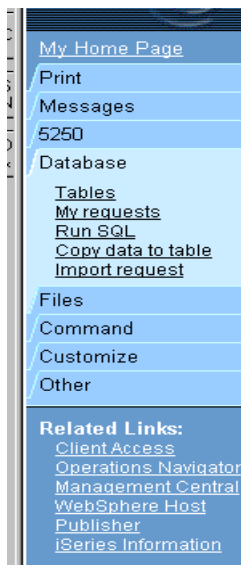
| Output Queue | Status | Action | Files | Writer |
|-------------------------------|----------|-------------------------|-------|--------|
| QGPL/ADAFIN | Held | Release | 0 | |
| QGPL/ADAFIN1 | Released | Hold | 0 | |
| QGPL/EFLORES | Released | Hold | 0 | |
| QGPL/GPA# | Released | Hold | 0 | |
| QGPL/OBJOUTQ2 | Released | Hold | 0 | |
| QGPL/QDKT | Released | Hold | 0 | |
| QGPL/QPRINT | Released | Hold | 6832 | |
| QGPL/QPRINTS | Released | Hold | 13 | |
| QGPL/QPRINT2 | Released | Hold | 0 | |



A camp for young students recently used the iSeries Access for Web database functions to query, view, and listen to MPEG files stored as BLOBs in the iSeries database.

The students could run a query against the song titles, generate a list of songs they like, and email the database results to someone who could then cut a CD with the songs they picked

Work with DB2 UDB for iSeries



Access database tables on your iSeries server with iSeries Access for Web

■ Tables

- View contents of a table using Quick View
- Add or update records using 'Insert and Update'
- Perform actions without having knowledge of SQL and its syntax

■ List previously saved requests

- Run or Edit Requests
- Copy, Delete, and Rename actions

■ RUN SQL using SQL Wizard

■ Exchange spreadsheet data with iSeries

■ Import existing Client Access Express for Windows Data Transfer requests

Notes: Access database tables on iSeries

Tables

- View a list of database tables on your iSeries server.
- Perform actions on these tables without having knowledge of SQL and its syntax.
- View the contents of a table in a paged list, using the Quick view action.
- Add and update records in a table using the Insert and Update actions.
- Create your own customized SQL request for a table using the Create SQL request action.

My requests

- View a list of previously saved requests.
- Run or Edit requests from this list.
- Manage lists using the Copy, Delete, and Rename actions
- Create and manage shortcuts to requests

Run SQL

- Run SQL statements dynamically.
- View output as a paged list or in a popular file format, like Microsoft Excel or Lotus 1-2-3. (Output format depends on how you have your browser configured and whether the browser can locate a plug-in for the output type you choose.)
- Customize how data is returned by setting options specific to the output type.
- Build SELECT statements using an SQL Wizard.
- Save requests for repeated use.

Copy data to table

- Copy existing data files from your PC to a database table on your iSeries server.
- These data files can be in many popular file formats, including Microsoft Excel and Lotus 1-2-3.
- Replace the contents of a table or add data to an existing table.
- Create a new database table based on the contents of a workstation file
- Save requests for repeated use.

Import request

- Import Client Access Data Transfer upload and download requests into iSeries Access for Web copy data and SQL requests.
- Imported requests are automatically converted to iSeries Access for Web format.
- Run and edit converted requests on your iSeries server just like other copy data and SQL requests.

iSeries Database Tables

Lotus SmartSuite - Freelance Graphics - [W02.WebAccess]

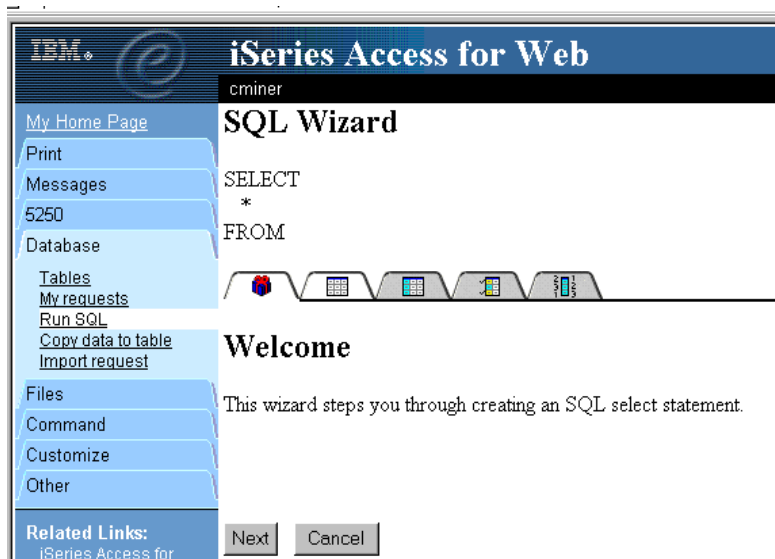
Tables - Microsoft Internet Explorer

Address http://tchas1dd/webaccess/WADbTables

5250 Tables filter: *USRLIBL

| Database | Table | Description | Action |
|----------------------|------------------|---|---|
| Tables | QGPL.BASICCSV | | Insert Update Quick view Run SQL Copy data to table |
| My requests | QGPL.LK_105KTMM | | Insert Update Quick view Run SQL Copy data to table |
| Run SQL | QGPL.QAOEFFVL | FORM FIELD VALID VALUES FILE | Insert Update Quick view Run SQL Copy data to table |
| Copy data to table | QGPL.QASUUSRPMPT | | Insert Update Quick view Run SQL Copy data to table |
| Import request | QGPL.QCLSRC | DEFAULT SOURCE DATA BASE FILE FOR CL SOURCE | Insert Update Quick view Run SQL Copy data to table |
| Files | QGPL.QCMDSRC | DEFAULT SOURCE DATA BASE FILE FOR CMD DEF SRC | Insert Update Quick view Run SQL Copy data to table |
| Command | | | |
| Customize | | | |
| Other | | | |
| Related Links: | | | |
| Client Access | | | |
| Operations Navigator | | | |
| Management Central | | | |
| WebSphere Host | | | |
| Publisher | | | |
| iSeries Information | | | |

SQL Wizard



SQL Wizard enables you to:

- Select tables
- Select which columns to return
- Add conditions to your select statement
- Select the columns by which you want the data sorted

Notes: Run SQL

SQL Output Details

When the SQL statement is run, the output is displayed in the browser, or it can be loaded using another application or saved to a file. The output behavior is dependent on the selected SQL output type and on the current browser settings. Most output types support settings for additional output customization. The following output types are supported:

- Preview - Paged-table list format, displayed in the browser. The maximum number of rows returned in the list can be limited, using Customization to set a database preference.
- Comma Separated Value - Text format where fields are separated by commas.
- Data Interchange Format - Format that represents data in rows and columns. The DIF format is used for data interchange between spreadsheet programs and other application programs.
- Hyper Text Markup Language - Format commonly used by internet browsers. The rows per table setting controls whether the output is returned as a paged-list, similar to the preview type, or as a single HTML page.
- Lotus 1-2-3 Version 1 - Format used by Lotus 1-2-3 Version 1. The generated output can also be used with newer versions of the Lotus 1-2-3 application. Output is truncated to 8192 rows, since 8192 rows is the maximum sheet size supported by the Lotus 1-2 3 version 1 format.
- Microsoft Excel 3 - Binary Interchange File Format used by Microsoft Excel 3. The generated output can also be used with newer versions of the Microsoft Excel application. Output is truncated to 16384 rows, since 16384 rows is the maximum number of rows supported by the Microsoft Excel 3 format.

- Microsoft Excel 4 - Binary Interchange File Format used by Microsoft Excel 4. The generated output can also be used with newer versions of the Microsoft Excel application. Output is truncated to 16384 rows, since 16384 rows is the maximum number of rows supported by the Microsoft Excel 4 format.
- Text - Plain Plain text format used for editing, displaying and printing. No separator characters are placed between the fields of data.
- Text - Tab Delimited Text format where fields are separated by tab characters.

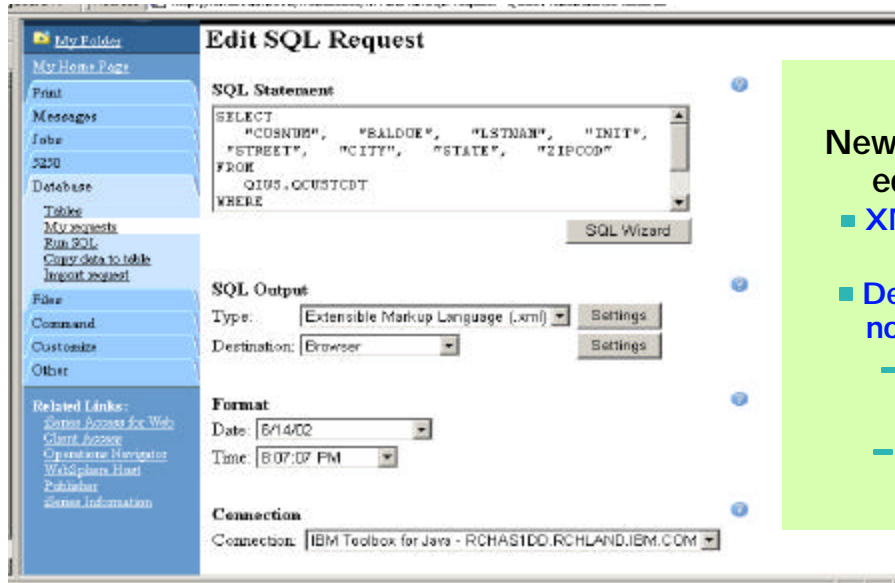
Format Details

The format settings control how values in date and time columns are returned. Available formats are the short, medium, long, and full formats for the current language. The standard ISO date and time formats are also available. Some languages do not support four different date and time formats. Therefore, some entries in the format lists can be identical.

Connection Details

The connection setting controls the database connection used to run the SQL statement. Database connections can be defined by the system administrator, using Database Customization

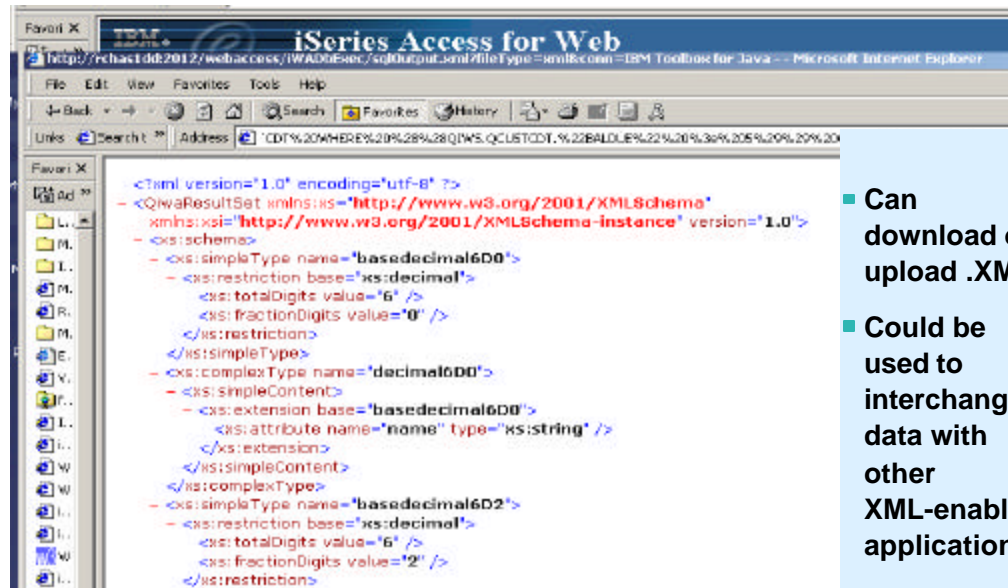
My Request Built Using SQL Wizard



New in V5R2 edition

- XML output type
- Destinations now include
 - Mail as an attachment
 - My Folder

Output Converted to XML



- Can download or upload .XML
- Could be used to interchange data with other XML-enabled applications

Notes: V5R2 Enhancements

Database

- New file types - .PDF and .XML (Excel)
 - Can download database information into .PDF. Can configure functions such as page size, orientation, margins, table header and footer, column heading, table style, alignment...
 - Can download or upload .XML. Could be used to interchange data with other XML- enabled applications
- New destinations
 - Can mail results to another user or to yourself, and can receive query status in e-mail
 - Can place result in another user's folder or in your own folder, and can receive query status in your own folder

Requests I can run...

The screenshot shows the 'iSeries Access for Web' interface. The main content area is titled 'My Requests' and displays a table of database requests. The table has columns for Request, Description, Action, Shortcut, Created By, and Access. The interface includes a left-hand navigation menu with options like 'My Folders', 'Jobs', 'Database', and 'Files'. The user's name 'cminer' and the URL 'RCHAS1DD.RCHLAND.IBM.COM' are visible at the top of the page.

| Request | Description | Action | Shortcut | Created By | Access |
|-------------------------------|---|---|----------|------------|---------|
| A ShortCut | Select from the Parts table - Looking for NULL Descriptions | Run Copy | Yes | wademo | *PUBLIC |
| bargains | | Run Copy | Yes | boatadmin | *PUBLIC |
| QCUST Balance Due | Check for balance due over 5 | Run Copy Delete Rename Create Shortcut Edit | No | cminer | cminer |
| Shortcut to Customer List | All customers - output to Excel | Run Copy | Yes | jrbaier | *PUBLIC |
| Shortcut to My Upload Request | My Upload Request | Run Copy | Yes | wa01 | *PUBLIC |
| short belle | | Run Copy | Yes | jek | *PUBLIC |
| ShortUpload | | Run Copy | Yes | jek | *PUBLIC |
| terryShort | | Run Copy | Yes | jek | *PUBLIC |

Upload Data

Address <http://rchas1dd/webaccess/WADbUpload>

IBM iSeries Access for Web
cminer

Copy Data to Table

My Home Page
Print
Messages
5250
Database
Tables
My requests
Run SQL
Copy data to table
Import request
Files
Command
Customize
Other

File to Copy
File:
File type: Comma Separated Value (.csv)
Character set: Plain Text (.txt)
Comma Separated Value (.csv)
Microsoft Excel 3 (.xls)
Microsoft Excel 4 (.xls)
Data Interchange Format (.dif)
Text - Tab Delimited (.txt)
Lotus 1-2-3 Version 1 (.wk1)

Table to Rec
Table:
Action: Replace data if table exists

Connection
Connection: IBM Toolbox for Java - RCHAS1DD.RCHLAND.

Copy Data to Table Save Request

- Upload data from spreadsheet to database
- Can 'Replace' contents of table or 'Append' to existing data

Import a Client Access Data Transfer request

Import Client Access Data Transfer Request [RCHAS1DD.RCHLAND.IBM.COM] - Microsoft Internet Explorer

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites History Mail Print Edit

Address <http://rchas1dd/webaccess/WADbImport> Go Links

IBM iSeries Access for Web
cminer RCHAS1DD.RCH

Import Client Access Data Transfer Request

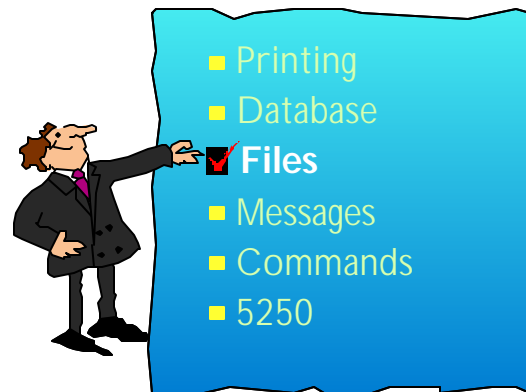
Specify the Client Access Data Transfer request you want to import. The request will be converted to an Access for Web request.

Note: The converted Access for Web request could work differently than the Client Access request. Verifying the converted request is strongly recommended.

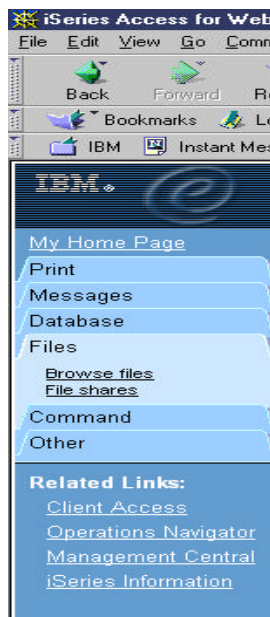
Client Access request: Browse...

Character set: Western (ISO-8859-1)

Import Request



Access Files on Your iSeries Server



- Upload and download files via:
 - **Navigate and browse the directories located on your iSeries server IFS**
 - **Using File Manager like interface**
- Integrated File System (IFS)
 - **Navigate and browse the directories located on your iSeries server IFS**
 - **Using File Manager like interface**
- iSeries NetServer
 - **View a list of the iSeries NetServer file shares**
 - **Browse the NetServer file shares and navigate the directories from the file share list**
 - **Using File Manager like interface**

Work with PC Files in the IFS

Directory Contents /CMINER/

[Copy Files to Server](#)
Copy files to the current directory.

[Create directory](#)
Create subdirectory in current directory.

| Name | Size (bytes) | Type | Modified | |
|---------------------------------------|--------------|------|------------------------|---|
| / (Parent Directory) | | | | |
| 5250Customize.bmp | 2359350 | File | 05/23/2002 10:54:32 PM | Copy Rename Delete Mail |
| 5250CustomizeMore.bmp | 2359350 | File | 05/23/2002 10:54:50 PM | Copy Rename Delete Mail |
| AFFviewer1.bmp | 787510 | File | 05/23/2002 10:55:05 PM | Copy Rename Delete Mail |
| BIRDSING.BMP | 26678 | File | 06/13/2002 02:38:08 PM | Copy Rename Delete Mail |
| En3Fish.bmp | 6632934 | File | 05/23/2002 10:56:14 PM | Copy Rename Delete Mail |

New actions in the V5R2 version include:

- Copy file
- Rename file and directory
- Delete file and directory
- Mail file as attachment
- Create directory

Copy files to IFS...

Copy Files to Server

Specify the file to copy to directory /CMINER on RCHAS1DD.RCHLAND.IBM.COM.
Data is copied in binary format.

File:

Replace file

Notes: File Mime -Type Mapping

Access for Web uses the file extension to determine the file content types. The file content type is used by the browser to determine how best to render the information. For example, files with an extension of .htm, .html, or .txt are rendered in the browser windows. The browser will also attempt to determine what browser plugin to use for the given file content type. For example, a file with a .pdf extension will cause the browser to attempt to load the Adobe Acrobat Reader.

Access for Web provides a way to extend or override our shipped file extension to file content mapping. This can be done by creating a file call extensions.properties in /QIBM/UserData/Access/Web/Config directory. Some examples of extension.properties entries are:

```
out=text/plain
lwp=application/vnd.lotus-wordpro
```

A list of file content types, also known as mime-types, can be found at <ftp://ftp.isi.edu/in-notes/iana/assignments/media-types/media-types>.

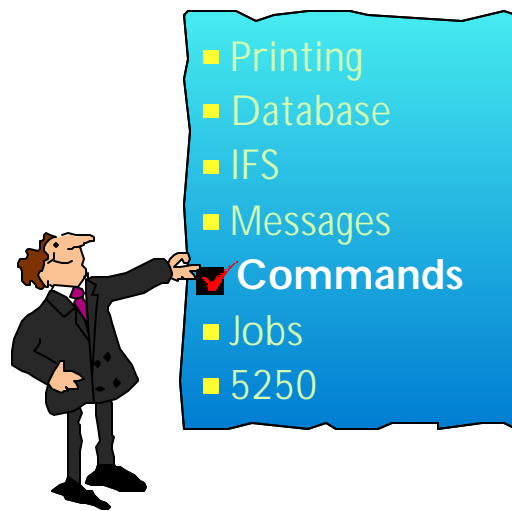
See example of information there at right.

MEDIA TYPES
(last updated 2001 August 16)

[RFC2045,RFC2046] specifies that Content Types, Content Subtypes, Character Sets, Access Types, and conversion values for MIME mail will be assigned and listed by the IANA.

Content Types and Subtypes

| Type | Subtype | Reference |
|------|----------------------|-------------------|
| text | plain | [RFC2646,RFC2046] |
| | richtext | [RFC2045,RFC2046] |
| | enriched | [RFC1896] |
| | tab-separated-values | [Paul Lindner] |
| | html | [RFC2854] |
| | sgml | [RFC1874] |
| | vnd.latex-z | [Lubos] |
| | vnd.fmi.flexstor | [Hurttta] |
| | uri-list | [RFC2483] |
| | vnd.abc | [Allen] |
| | rfc822-headers | [RFC1892] |
| | vnd.in3d.3dml | [Powers] |
| | prs.lines.tag | [Lines] |
| | vnd.in3d.spot | [Powers] |
| | css | [RFC2318] |
| | xml | [RFC3023] |



Run CL Commands on iSeries

The screenshot shows the 'Command' tab in the iSeries Access for Web interface. The left sidebar contains navigation options: My Folder, My Home Page, Print, Messages, Jobs, 3250, Database, Files, Command (selected), My commands, Run command, Search, Customized, and Other. The main content area is titled 'Command' and includes the following sections:

- My commands**: List and use previously saved commands.
- Run command**: Run a CL command on your iSeries server.
- Search**: Search for CL commands on your iSeries server.

Additional information is provided in a purple callout box:

- Additions to V5R2 version**
 - Commands can be saved and retrieved later
 - Can search for commands by name or description
 - New destinations
 - email and my folder

Notes: Commands

The Command tab enables you to run batch-level iSeries commands. New in V5R2 iSeries Access for Web, you can now also search for CL commands on the iSeries, and save commands you have previously run. Interactive commands can be prompted and run as well, but you receive only success or failure from the iSeries server; however if you specify *PRINT for the output you could then view the spooled file output of the interactive command using the iSeries Access for Web Print function.

Search and prompting - you can search for specific CL commands to run by either providing a partial command name (i.e. DSP*) or providing words contained in command text descriptions (i.e. user profile). Commands matching the search criteria are returned in a list. When an incomplete command is specified, the Command function supports prompting the command to help a user complete the command. In addition to the basic prompting function, the command prompter page also displays help for individual parameters of a command in a separate browser window.

My Commands - a 'Save' action on a previously run command allows you to name and save a command for later use, and then access it through the My Commands tab. You can additionally overwrite an existing command and create a new command

Run Command - enables you to run a new command or select a previously run command from the Previous Commands list.

Although the Commands function is primarily designed to run batch commands, you could run an interactive command (ie, one that is sending back input or something you want) and tell the interactive command to send its results to *PRINT. Then once that command ran and it put the result on the printer output file, you could use the Print, 'Print Output' function and look at the results of that interactive command). You can select any of the following output types for the completion status message:

- o Browser - you can send the completion status to your browser
- o Mail - you can e-mail the completion status message to your e-mail address
- o Folder - you can save the completion status message in your Personal Folder

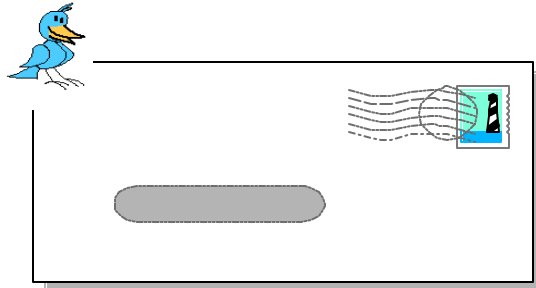
An advantage of sending command completion status as an e-mail attachment or to a Personal folder is that the command is submitted in the background, and the browser page is updated immediately with a message saying the command was submitted. Using these new output options enables users to submit additional Run Command requests without having to wait for the current command to complete

Command Search...

| Command | Library | Description |
|---------------------------|---------|-------------------------------|
| WRKACTJOB | QSYS | Work with Active Jobs |
| WRKNETJOB | QSYS | Work with Network Job Entries |
| DSPACTJOB | QSYS | Display Active Prestart Jobs |
| WRKJOBIS | QSYS | Work with Jobs using JS |

The screenshot also shows the search criteria: Command: wrk active job, Library: *LUBL, and search options for Command name and Text description. A yellow arrow points from the 'WRKACTJOB' command in the table to the 'Work with Active Jobs (WRKACTJOB)' page on the right.

'Mail' option for output



e-Mail - V5R2

Ability to 'e-mail' results as attachment

- Can send results to a recipient with status sent to sender for:
 - A database (SQL) action
 - CL command
 - File command
 - PDF view of print information

- A one-step way to distribute information across the network, and particularly useful when recipient is:
 - Not an iSeries user
 - Does not have access to a web browser

Set up my session for e-mail capability...

IBM eServer iSeries Access for Web

cmminer RCHAS1DD.RCHLA

My Folder

My Home Page

Print

Messages

Jobs

5250

Database

Files

Command

Customize

Preferences

User profiles

Group profiles

Selected profile

Other

Related Links:

Customize - Mail

Profile: CMINER

| Policy | Derived From | Action | Setting |
|-----------------------------------|-----------------|---------------------|--------------------|
| Send mail | Shipped default | Use current setting | Allow |
| SMTP mail server 1 | Profile setting | Use current setting | us.ibm.com |
| E-mail address 2 | Profile setting | Use current setting | cmminer@us.ibm.com |
| E-mail address is user preference | Shipped default | Use current setting | Allow |

OK Cancel

1. To set up SMTP server setting:

- Use *PUBLIC to set up same address for all users
- If blank, Access for Web will use information in SDD

2. e-Mail address must be set for each user

Notes: e-mail information

Attaching information to an e-mail

New 'Mail' Support

V5R2 iSeries Access for Web allows you to e-mail database query results, printer output PDF's, command completion notifications, and other files to anyone with an e-mail address. The mail function is available from several places in iSeries Access for Web, including Database, Files, and Commands – so you can attach the results from an SQL request or mail a file located in the integrated file system. You can also send e-mail notifications to users when items are saved in Personal Folders. This provide a one-step way to distribute information across the network, and will be particularly useful when recipients are not iSeries users.

You could tell iSeries Access for Web that you want to attach your PDF output to an e-mail instead of showing it in your browser. You can also have the PDF sent to your browser, or my folder, or as an e-mail attachment. After selecting the e-mail option, the PDF can be put in a note as an attachment. Now put in an e-mail address, add a message, and send the note along with the PDF attachment.

In order for anyone to use the e-mail option there must be an SMTP mail server somewhere in your network that the iSeries can access, and this address has to be defined to Access for Web. An iSeries administrator can quickly set up the SMTP mail server address for all Access for Web users by clicking on the 'Customize' function, then selecting Group Profiles, and then selecting 'Edit' on the *PUBLIC group profile. Alternatively, since many iSeries customers use the OS/400 System Distribution Directory (SDD) to keep user information and it already has configured e-mail addresses in there, Access for Web will get e-mail addresses from the SDD if the email address is blank.

In order for specific users to use the Mail function their e-mail address must be configured in their user profile. Your administrator could configure this for each user, or he could allow users to configure their own e-mail addresses in the 'Mail Preferences' portion of the Customize tab on the iSeries Access for Web navigation bar.

Select Mail Option for Printer Output (PDF)...

PDF Output Settings

PDF device type: *IP40300

Drawer 1 paper size: *LETTER

Drawer 2 paper size: *LETTER

Destination: [Dropdown Menu]

- Browser
- Mail as attachment
- Personal folder

Restore original pages

Device Type Details

*IP40140

Specifies the type of printer device that the IPDS to PDF transform will emulate.

The transform will emulate an Infoprint 40 printer device at 240 dots per inch resolution. The transform works like a TCP/IP connected 240 dpi IPDS Infoprint 40 with the 4820

Address your e-mail...see PDF attachment there...

iSeries Access for Web

eminer: RCHAS1DD.RCHLAND.IB

Mail as Attachment Settings

From: eminer@us.ibm.com

To: smshao@us.ibm.com

cc:

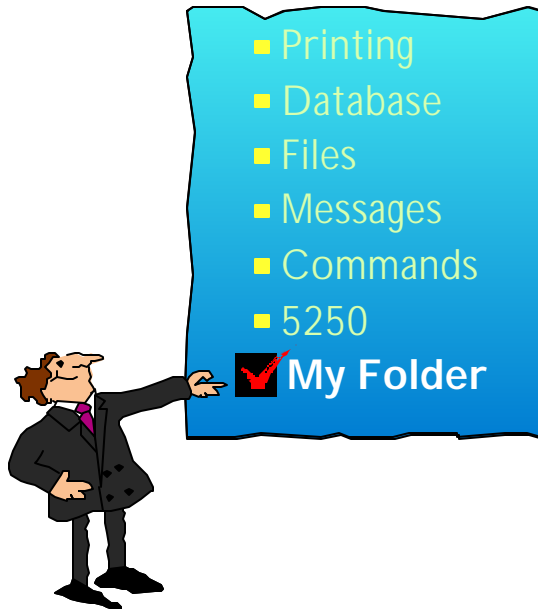
bcc:

Subject: Today's Job Log

Here's the information you requested.

Attachment: QPJOBLOG.244790.CMNER.QDFTJOB.D.1.PDF

OK Cancel



My Folder - new in V5R2 version...

My Folder

- **Container resides on the web server and can only be accessed by owner**
 - Good for long-running requests (ie, actions performed asynchronously so the browser is not tied up)
 - An easy way to avoid large attachments (ie, a large query result)
- **Can place information in other users' My Folders**
 - Performing requests for someone else
 - Mechanism for workflow.

Combine new Mail function with My Folder function to:

- ▶ Perform requests for someone else
- ▶ Distribute results to a group of users
- ▶ Send email to other when you place information in their Folder
- ▶ Be notified when new items are placed in your Folder

Notes: Mail and My Folder

New 'My Folder' Support

The V5R2 iSeries Access for Web has a new My Folder concept that enables items to be placed in a user's Personal Folder. A current user or another user may place items in a Personal Folder. The Personal Folder is particularly attractive if you have a long-running task to perform as rather than tying up your browser waiting for it to complete. You might use the My Folder support to perform requests for someone else or to distribute results to a group of users as you can simply indicate to send the results to the Personal Folders when it completes. The Personal Folder that can be accessed via the "My Folder" link in the navigation pane, and it special icons will display to represent if there are items that have been placed in the Personal Folder as well as if there are any new/unopened items. The following types of items can be sent to a personal folder.

- SQL output generated by Run SQL
- PDF output created from Printer output
- Command completion status generated by Run Command (can only be sent to a user's own Personal Folder)

My Folder can contain items with the following information: Item description, Status, From, Data/Time, and Size. It has an 'Actions' column that lists the available actions for items in the folder. You would be able to perform actions, such as: Mark All Opened, Mark All Unopened, Delete all Opened items, Delete all items, and Delete Selected items

Choose 'My Folder' as output destination...

iSeries Access for Web
cminer

PDF Output Settings

PDF device type: *IP40300

Drawer 1 paper size: LETTER

Drawer 2 paper size: LETTER

Destination: Personal folder

Restore original p

Run

Device Type Details

Specifies the type of printer device that the IPDS to PDF transform will emulate.

***IP40240**

The transform will emulate an Infoprint 40 printer device at 240 dots per inch resolution. The transform works like a TCP/IP connected 240 ppi IPDS Infoprint 40 with the 4820 feature with the following exceptions:

- Object area shading and base area shading is supported.

Select Folders to receive your output

iSeries Access for Web
cminer

Browse Folder Owners

Folder owners:

- CELIAD (Celina Gutierrez user testing TL877-2758 GDLXD1)
- CELINA (Celina Magallanes - Gdl Testing 877-2758)
- CMINER (Carole Miner 3-4606)
- COOLGROUP (Janet Weber 3-1811)
- CSKY (Carl Pecinovsky (3-3861))
- CSMITH (Chris Smith - 3-4127 - WebAccess / Toolbox)
- CSMITHTMP
- DANG (Dan Gathje 3-5696)
- DANNY (Dan Moravec 3-0904)
- DANNY2 (Dan Moravec 3-0904)
- DAW (David Wall 3-5329)
- DAWALL (Dave Wall 3-5329)
- DBM (Dave Murray)
- DEMOUSERS
- DEMOUSER1

OK Cancel

Go to 'My Folder' to see output...

WebAccess 102001.0

My Folder

[1]

| Item | Status | From | Date/Time | Size | Action |
|---------------------------------|----------|-----------|-----------------|------|--|
| <input type="checkbox"/> SBJJOB | Unopened | webaccess | 5/3/02 12:32 PM | 82 | Open Delete Rename Mark opened |

Delete Selected Items

[1]

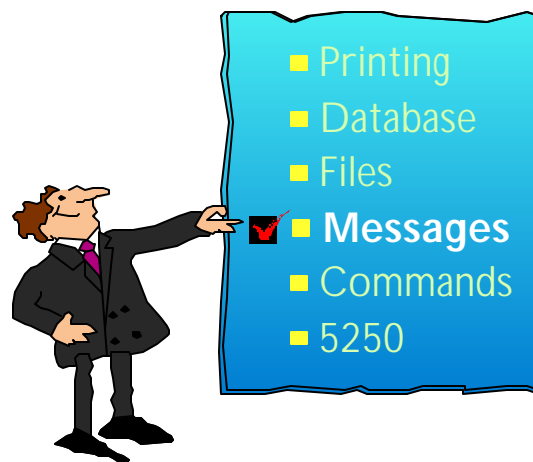
Related Links:

- [Series Access for Web](#)
- [Client Access](#)
- [Operations Navigator](#)
- [WebSphere Host](#)
- [Publishing](#)
- [Series Information](#)

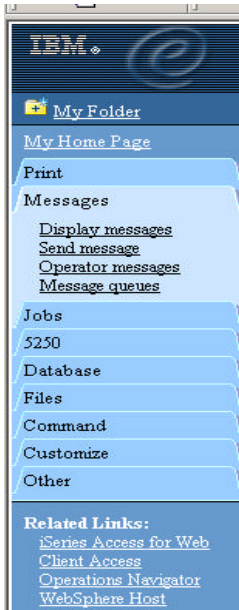
[Mark all opened](#)
Change the status of all items in this folder to opened

[Mark all unopened](#)
Change the status of all items in this folder to unopened

[Delete all opened items](#)

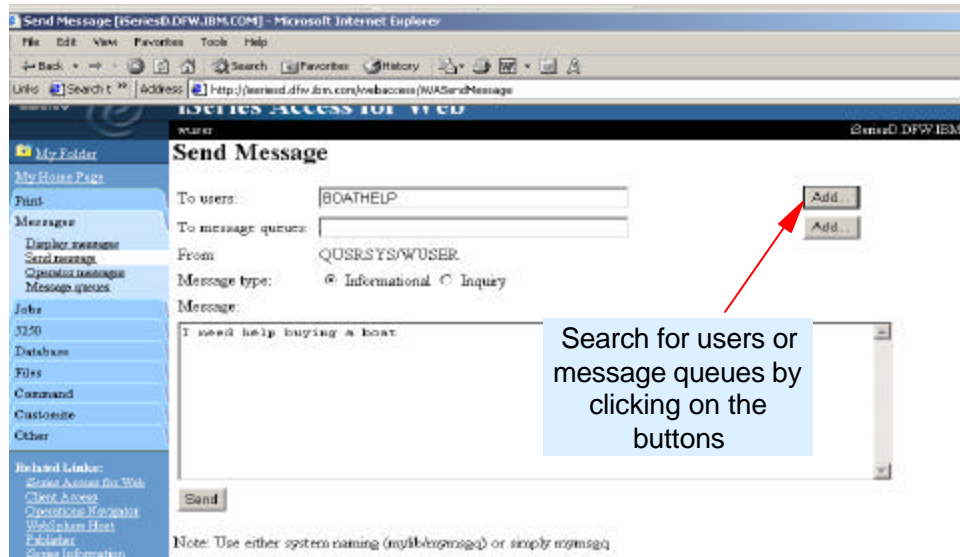


Messages



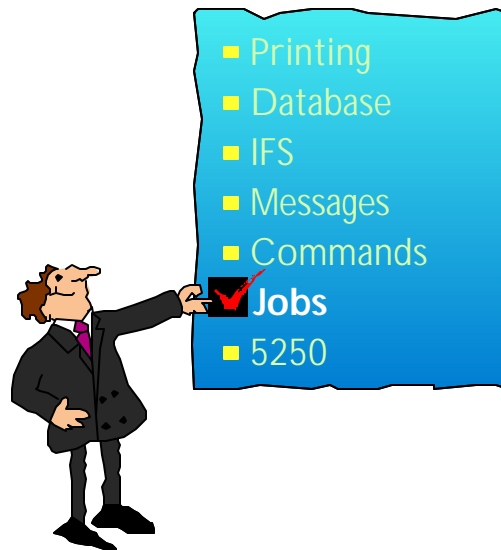
- **Send messages**
 - Send a message to [users](#) and [message queues](#)
- **Display messages**
 - Display, answer and manage messages in the message queue for the [logged on user](#)
- **Operator Messages**
 - Display, answer and manage messages in the [system operator message queue](#)
- **Message queues**
 - Select, display and manage messages in [message queues](#)

Send a message...



Operator Messages...

| ID | Message Text | Type | Date/Time | Severity | Action |
|---------|--|---------------|------------------|----------|------------------------|
| CPF2638 | Unable to obtain lock on device QCF167A300. | Diagnostic | 10/10/02 4:42 PM | 40 | Delete |
| CPF2456 | Log version QHST02282A in QSYS closed and should be saved. | Informational | 10/10/02 3:46 PM | 0 | Delete |
| CPF31A6 | Cross-reference problem type 1 notification 6033 for request 51. | Informational | 10/10/02 3:44 PM | 60 | Delete |
| CPF31A6 | Cross-reference problem type 1 notification 6033 for request 51. | Informational | 10/10/02 3:43 PM | 60 | Delete |
| CPF31A6 | Cross-reference problem type 1 notification 6033 for request 51. | Informational | 10/10/02 3:42 PM | 60 | Delete |
| CPF31A6 | Cross-reference problem type 1 notification 6033 for request 51. | Informational | 10/10/02 3:41 PM | 60 | Delete |
| CPF31A6 | Cross-reference problem type 1 notification 6033 for request 51. | Informational | 10/10/02 3:40 PM | 60 | Delete |
| CPF31A6 | Cross-reference problem type 1 notification 6033 for request 51. | Informational | 10/10/02 3:39 PM | 60 | Delete |



Jobs - access jobs on your iSeries server...

iSeries Access for Web
cminer RCHASID

Jobs

Access jobs on your iSeries server with iSeries Access for Web.

Jobs

- List and manage user jobs on your iSeries server.
- View job logs for active jobs.
- View printer output for completed jobs.

Server jobs

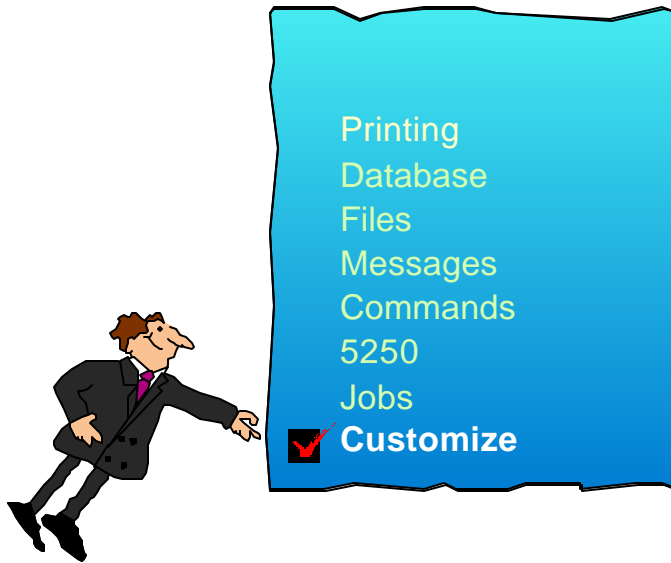
- List and manage server jobs on your iSeries server.
- View job logs for server jobs.

New in V5R2 edition

My 'Server' jobs

Server Jobs for cminer

| Job | Detailed Status | Server | Run Priority | Thread Count | Action |
|------------|---------------------------|----------------------------------|--------------|--------------|--|
| QGYSERVER | Waiting for dequeue | OS/400 Open List Server | 20 | 1 | Hold Delete/End Job Log Properties |
| QJWFSEKVS0 | Waiting for dequeue | OS/400 TCP File Server | 20 | 1 | Hold Delete/End Job Log Properties |
| QZDASOINIT | Waiting for dequeue | OS/400 TCP Database Server | 20 | 1 | Hold Delete/End Job Log Properties |
| QZDASOINIT | Waiting for dequeue | OS/400 TCP Database Server | 20 | 1 | Hold Delete/End Job Log Properties |
| QZRCSRVS | Waiting for message | OS/400 TCP Remote Command Server | 20 | 1 | Hold Delete/End Job Log Properties |
| QZRCSRVS | Waiting for message | OS/400 TCP Remote Command Server | 20 | 1 | Hold Delete/End Job Log Properties |
| QZRCSRVS | Running | OS/400 TCP Remote Command Server | 20 | 1 | Hold Delete/End Job Log Properties |
| QZRCSRVS | Waiting for time interval | OS/400 TCP Central Server | 20 | 1 | Hold Delete/End Job Log Properties |



Access for Web can be the window to iSeries resources

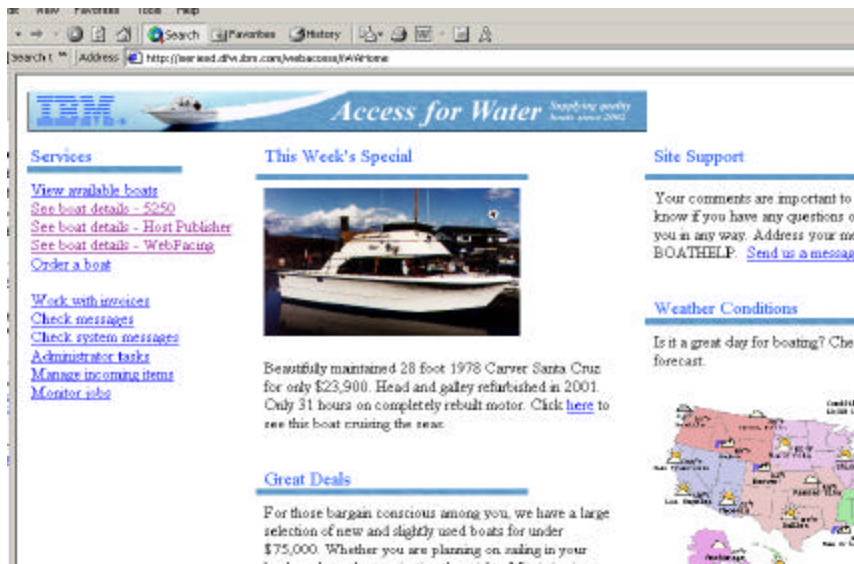
Different look/interface for different browser users

iSeries Access for Web

- Shipped/Default method of accessing iSeries resources
 - ▶ For a more experienced iSeries end user, this provides a highly productive interface for working with all iSeries resources
- Customize user 'window' to iSeries
 - ▶ For the inexperienced user -- and to tightly control exactly what functions a user can perform on your iSeries -- as easy-to-use Customize function enables iSeries administrators to create unique 'windows' to the iSeries.
 - ▶ These are associated with OS/400 profiles -- thus an administrator could create many different 'windows' for different types of users.



Customized 'Access for Water' Web Page!



Access for Web provides customization capabilities

- Could be used as 'entry' point to iSeries
- Run your Host Publisher or WebFacing applications from here

Notes: Customizing iSeries Access Front Page

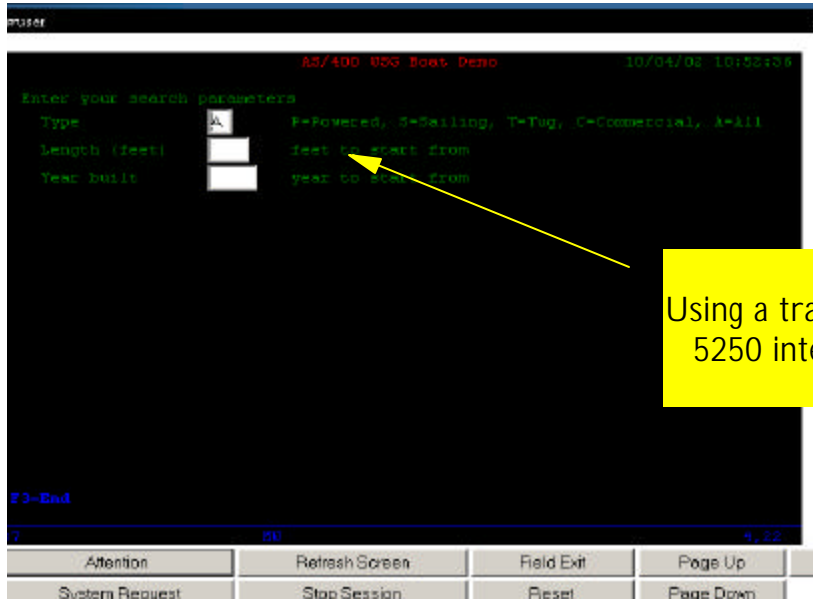
As you have seen in the previous charts, the front page of iSeries Access for Web can be 100% modified to look however your customer wants it to look. The Web page I see when I key in the url is the Web page associated with my USER ID. I could be the only one in my group profile that sees a particular view of the Web page, or I could be in a group profile with many other users. There is no limit as to how many different 'front pages' a customer may want to design/use for different groups of users.

Designing a front page is quite easy, it simply requires knowledge of HTML (not Java or other programming languages). One could use any one of their favorite HTML tools (like MS FrontPage, etc).

To see step-by-step how we customized our 'Access for Water' web page -- look in the recently published Redbook (<http://publib-b.boulder.ibm.com/cgi-bin/searchsite.cgi?query=SG24-6804>)

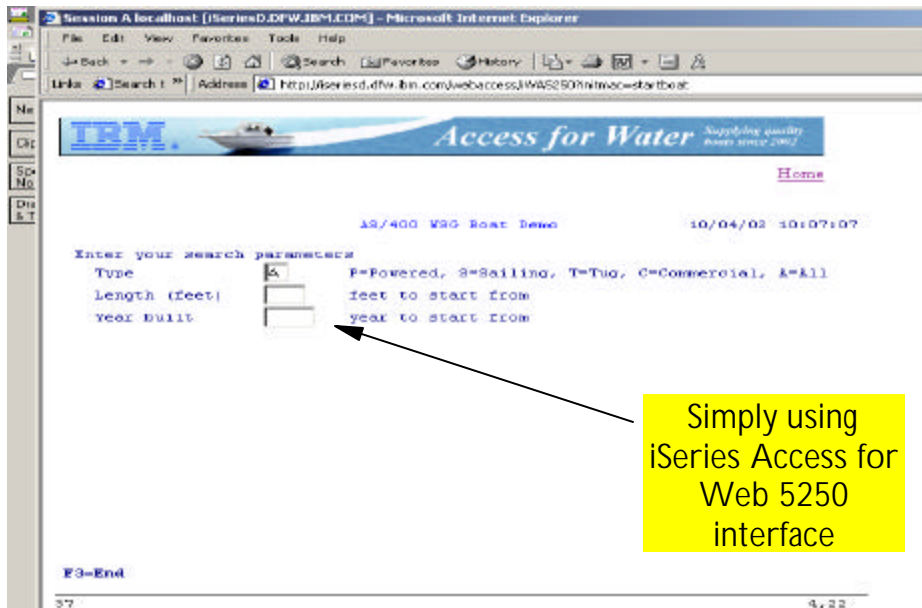
You can easily view or download this document by going to the iSeries Access web page at www.ibm.com/eserver/iseries/access, then follow page to iSeries Access for Web.

Running Boats application with traditional 5250 interface...



Using a traditional 5250 interface

Boats Application - iSeries Access for Web 5250 interface



Simply using iSeries Access for Web 5250 interface

Boats application - WebFacing

Boats
AS/400 WSG Boat Demo 10/03/02 20:36:37

Enter your search parameters

Type P=Powered, S=Sailing, T=Tug, C=Commercial, A=All
 Length (feet) feet to start from
 Year built year to start from

WebFacing

Boats applications - Host Publisher

BOATS OF THE SEVEN SEAS

Select:

Type of Boat
 All Boats
 Commercial
 Sailing
 Tug
 Power

Minimum Length
 DON'T CARE
 10
 20
 30
 40
 50
 75
 100
 200
 300

Earliest Year Built
 DON'T CARE
 1940
 1950
 1960
 1970
 1980
 1990
 2000

Process Data Clear Data

Host Publisher

Task Oriented...Not Function Oriented

Services

- [View available boats](#)
- [See boat details - 5250](#)
- [See boat details - Host Publisher](#)
- [See boat details - WebFacing](#)
- [Order a boat](#)
- [Work with invoices](#)
- [Check messages](#)
- [Check system messages](#)
- [Administrator tasks](#)
- [Manage incoming items](#)
- [Monitor jobs](#)

Invoice Details:

To: Joe Customer
1234 Beach Street
Hometown, CA 12345

Date: Thursday, June 13, 2002
Invoice No: 9876543
Payment Due: Monday, July 15, 2002

| Description | Part No. | Quantity | | |
|--------------|----------|----------|------|--------|
| Hunter 33.5 | 004356 | 1 | | |
| Boat trailer | 199234 | 1 | | |
| Boat anchor | 043993 | 1 | FREE | \$0.00 |

Subtotal: \$59,700.00
Tax: 7.00%
TOTAL: \$63,879.00

- Selected 'work with invoices'
- Requested PDF output
- Can now attach to an email and send

Customizing Access

iSeries Access for Web
webaccess

Customize Group Profiles

To add or change settings for a profile, select Edit.

| Profile | Description | Action |
|------------|--------------------------------|---|
| *PUBLIC | Default settings for all users | Edit |
| COOLGROUP | Janet W | Edit |
| GROUPA | RENATA E. G | Edit |
| GROUPB | Juan Pablo H | Edit |
| GRUPOC | Daniel E. | Edit Copy Reset |
| JAVAVULP00 | JAVAVULP00-Dept | Edit |
| SALESMEN | Test group for Carole Miner | Edit Copy Reset |
| TESTGROUP1 | | Edit |
| TESTG1 | GDL TEST 5257 | Edit |
| TESTG2 | | Edit |

- *PUBLIC is default user group shipped by Access for Web.
- Any setting you put in here will apply to all Access for Web users
 - Access to information is checked via:
 - OS/400 user profile
 - Group settings
 - *PUBLIC settings

Notes: iSeries Administrator Customization

User based customization

iSeries Access for Web allows for customizing what functions a specific user can perform and what a specific function will look like when accessed. These customizations will control items both from a user-interface level as well as from a servlet functional level. This means if a function is restricted, the "menu" or navigation content will be restricted, as well as the servlet will be restricted if a user tries to access a servlet directly via its URL. Customizations are tailorable based on the iSeries user profile of the user accessing our servlets. Since iSeries also supports a primary group, secondary groups, and *PUBLIC, the iSeries Access for Web customization function also allows customizers to control items at these levels. It should be noted that if an administrator turns off access to Printers at the *PUBLIC level, but has it turned on at the PRINTADM user profile level and if PRINTADM attempts to use iSeries Access for Web, they will have access to the Printers function.

Home page customization

iSeries Access for Web ships a default home page that users will see when they access the product. This default home page will contain links to iSeries Access for Web functions, as well as links to other IBM sites such as the iSeries home page, and iSeries publications. If customizers choose to, they can make additions/deletions/changes to our default home page HTML file. They can also provide their own home page HTML file. Similar to User based customization of function, Home page customization also allows for different users and groups to have different home page content. This is done by specifying different home page HTML files for the individual users or groups.

Customization editor

iSeries Access for Web has a customize function that allows administrators and regular users to tailor the functions available from and information presented by iSeries Access for Web. Administrators (those with IOSYSCFG authority) have access to all customization functions.

- change the settings for any user profile or group profile
- enable or disable functions or sub-functions
- change the defaults for how information is presented
 - change the order of columns, hide unwanted function menus, hide unwanted columns of information, change the default system settings, customize the iSeries Access for Web home page, customize the headers and footers of the HTML template
- Regular users will be allowed to change certain personal settings:
 - change the order that accessible information is presented (ie, change the order of columns), hide extraneous information (ie, hide unwanted functions, hide unwanted columns of information)
- Regular users will not be allowed to:
 - change the settings for other users or groups, enable functions or sub-functions that were disabled by an administrator

The customization settings are stored in a fashion that takes into account the hierarchical nature of user and group profiles. Settings may be stored for individual users or groups. Additionally, there will be administrator supplied system settings and so-called factory settings which are the IBM-supplied defaults. Settings not specified for an individual user will be derived from the group settings or next higher node in the hierarchy. The order for deriving settings is as follows:

- (1) User profile, (2) Group profile(s), (3) Administrator-supplied system defaults (UserData), (4) IBM-supplied defaults (ProdData)

Example: Customize Group called 'Salesmen'

iSeries Access for Web
webaccess

Customize Group Profile

Profile: **SALESMEN**

To customize this profile, select a category.

| Category | Description |
|--------------------------------------|--|
| General | Page layout, language and character set custom settings. |
| Print | Printer output, printers, printer shares and output queue custom settings. |
| Messages | Display messages, send message, and message queue custom settings. |
| Jobs | Work with jobs custom settings. |
| 5250 | 5250 session custom settings. |
| Database | Database tables, requests, and run SQL custom settings. |
| Database connections | Create and edit database connection definitions. |
| Files | Integrated file system and file share custom settings. |
| Command | Run batch command custom settings. |
| Mail | Send mail custom settings. |
| My folder | My folder custom settings. |
| Administration | Administration and preferences control custom settings. |
| Other | Change password and other miscellaneous custom settings. |

Group 'Salesmen' View after Customization...

Before...



After...



- Only 5250 tab left after customization of 'Salesmen' group
- You could remove other items by using HTML editor product (like Front Page, Composer, etc)

Customizing Database Access...

The screenshot shows the 'Customize - Database' configuration page. The left sidebar contains a navigation menu with items: My Folder, My Home Page, Print, Messages, Jobs, Database, Files, Command, Customize, Preferences, User profiles, Group profiles, Selected profile, Other, and Related Links. The main content area shows the configuration for the 'GROUPA' profile.

Customize - Database

Profile: GROUPA

| Policy | Derived From | Action | |
|---------------------------------|-----------------|---------------------|----------|
| Database tab | Shipped default | Use current setting | Show |
| Tables | Shipped default | Use current setting | Allow |
| Maximum table rows | Shipped default | Use current setting | 500 |
| Table filter | Shipped default | Use current setting | *USRLIBL |
| Table filter is user preference | Shipped default | Use current setting | Allow |
| Insert records into table | Shipped default | Use current setting | Allow |
| Update records in table | Shipped default | Use current setting | Allow |
| Quick view table records | Shipped default | Use current setting | Allow |
| Maximum quick view rows | Shipped default | Use current setting | 1000 |
| Requests | Shipped default | Use current setting | Allow |
| Run request | Shipped default | Use current setting | Allow |
| Copy request | Shipped default | Use current setting | Allow |
| Delete request | Shipped default | Use current setting | Allow |

Notes: Select to allow/disallow 'Database' Tab

Tables

- Maximum table rows
 - (50 100 250 500 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 No maximum)
- Show tables filter as a preference
- Insert records into table
- Update records in table
- Quick view table records -
 - Maximum quick view rows (50 100 250 500 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 No maximum)

Requests

- Run, Copy, Delete, Rename, Edit or Save requests

Shortcuts

- List, Create, Copy, Delete, Rename shortcuts
- Request list columns

Run SQL requests

- Run statements other than query

Copy data to table

- Create new tables
- Append data to tables
- Replace data in tables

Import request

Default connection

Show default connection as a preference

Add IBM Toolbox for Java to connection list

Notes: Customizing User Access to iSeries

Administrator Capabilities = Policies

- **Home Page Customization**
 - Can change whole look and feel of iSeries Access for Web, and have many different views based on users/groups
- **User or Group Customization**
 - Customize what functions a specific user can perform and what a specific function will look like when accessed.
- **Customization Editor**
 - Use to adjust how information is presented to users, to allow/deny users to set individual preferences...

End User Capabilities = Preferences

- **Users can adjust how information is presented to them.**
For example:
 - A user can adjust the columns to display when viewing a list
 - A user can indicate the number of items to display per page in the list

All based on 'User Profiles'

Notes: Customize iSeries Access for Web

Customize iSeries Access for Web

The iSeries Access for Web pages you are looking at in this presentation are examples of the pages that you can customize. You can integrate your own web applications into the iSeries Access for Web applications. For example, you could use Host Publisher to build web interfaces to your own existing 5250 applications. For more information about Host Publisher, WebFacing (part of the WebSphere Development Studio for iSeries), and other web development products, see [Related Products](#).

Customize - Set preferences to control how information is presented when using iSeries Access for Web. Administrators are able to customize settings and control which functions are available for other users or groups. Since an iSeries user profile is required to access iSeries Access for Web, customized settings are associated with user profiles. Customized settings can also be associated with iSeries group profiles, so members of groups without settings specific to their user profile will inherit settings from their group profiles. This allows administrators to easily customize the settings for whole groups of users without having to customize all users individually.

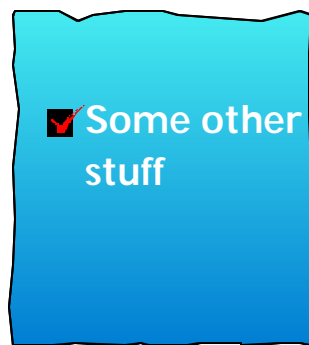
Preferences - The Preferences function on the **Customize** tab allows users to control how information is presented to them. By default, users are able to set their own preferences. Any preference modifications will be saved and associated with their iSeries user profile. These preferences will be used every time the user logs on.

User Profiles - the User Profiles function on the **Customize** tab is available only to iSeries Access for Web administrators. This function displays a list of user profile names retrieved from the iSeries server. The list of profiles includes the ones the administrator is allowed to update. From this list, the administrator can select a user profile to customize.

Group Profiles - the Group Profiles function on the **Customize** tab is available only to iSeries Access for Web administrators. This function displays a list of group profile names retrieve from the iSeries server. The list of profiles includes the one the administrator is allowed to update. From this list, the administrator can select a group profile to customize. A special group profile, *PUBLIC, can be used to customize default settings for all users.

Selected Profile - the Selected Profile function on the **Customize** tab is available only to iSeries Access for Web administrators. This function allows administrators to customize profiles by entering a specific user or group name.

See [Administering Users and Groups](#) in the iSeries Access for Web Setup Guide for more information on how to administer iSeries Access for Web policy settings.



Change your iSeries password...

Change Password - Netscape

File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Shop Stop

Bookmarks Location: http://lpar1b2m/webaccess/MAChangePassword

IBM Instant Message Internet Lookup New&Cool

iSeries Access for Web

My Home Page

Print

Messages

Database

Files

Command

Other

Change password

Logout

Change Password

Old Password:

New Password:

Confirm New Password:

Change Password

Diagnostic Traces...

Trace [LPAR1B2M.RCHLAND.IBM.COM] - Netscape

File Edit View Go Communicator Help

Back Forward Reload Home Search Netscape Print Security Shop Stop

Bookmarks Location: http://lpar1b2m/webaccess/WADebugInfo.jsessionid=SBEUD0QAAAACCIFDVWAN...

IBM Instant Message Internet Lookup New&Cool

iSeries Access for Web

My Home Page

Print

Messages

Database

Files

Command

Other

Change password

Logout

Trace

Categories

Information

Diagnostic

Warning

Error

IBM Toolbox for Java

Location

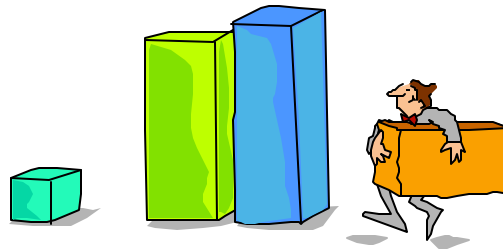
Trace file:

The file will default if not specified.

Apply

[Logs and traces](#)

Packaging & Ordering



Packaging and Ordering

| V5R2 5722-XW1 iSeries Access Family | V5R1 5722-XW1 iSeries Client Access Family |
|---|--|
| <ul style="list-style-type: none"> • 5722-XE1, V5R2 iSeries Access for Windows | <ul style="list-style-type: none"> • 5722-XE1, V5R1 AS/400 Client Access Express for Windows |
| <ul style="list-style-type: none"> • 5722-XH2, V5R2 iSeries Access for Web | <ul style="list-style-type: none"> • 5722-XH1, V5R1 iSeries Access for Web |
| <ul style="list-style-type: none"> • 5724-B81, V4.0 WebSphere Host Publisher | <ul style="list-style-type: none"> • 5648-E25, V3.5 WebSphere Host Publisher |
| | Customers with Software Subscription can get V5R2 clients by ordering no-charge Feature No. 2645 of Product No. 5722-XW1 |

Server Software Requirements for Access for Web (5722-XH2, V5R2)

If you plan to use **ASF Tomcat** web application server...

requires an iSeries with 70 cpw & 256 MB memory

| Product No | Product Name | Option | \$ |
|------------|---|-----------|------|
| 5722-SS1 | OS/400 V5R1 or V5R2 | Base | |
| 5722-SS1 | OS/400 Extended Base Directory Support | 3 | |
| 5722-SS1 | OS/400 AFP Compatibility Fonts | 8 | w/HW |
| 5722-SS1 | OS/400 Host Servers | 12 | |
| 5722-SS1 | OS/400 QShell Interpreter | 30 | |
| 5722-SS1 | OS/400 Digital Certificate Manager (optional, if you plan to use SSL) | 34 | |
| 5722-XW1 | iSeries Access Family iSeries Access Enablement Support Be sure to get Service Pack 3 - SI05427 | Base 1 | \$ |
| 5722-JV1 | Java Developer Kit | Base | N/C |
| 5722-JV1 | Java Developer Kit Version 1.2 | 3 | N/C |
| 5722-JV1 | Java Developer Kit Version 1.3 (needed only for Arabic language users) | 5 | N/C |
| 5722-JC1 | Toolbox for Java | Base | |
| 5722-TC1 | TCP/IP Connectivity Utilities for iSeries | Base | N/C |
| 5722-DG1 | IBM HTTP Server for iSeries <ul style="list-style-type: none"> The ASF Tomcat web application server is part of IBM HTTP Server for iSeries. ASF Tomcat PTFs are delivered within the IBM HTTP Server for iSeries Group PTFs. These PTFs contain all the fixes required to bring the HTTP Server up to a specific fix level. Select PTFs from the HTTP Server Web site (www.ibm.com/eserver/iseries/software/http) and follow the links appropriate for your version of OS/400 | Base | N/C |
| 5722-AC2 | Cryptographic Access Provider (56-bit) (if you plan to use SSL) | | N/C |
| 5722-AC3 | Cryptographic Access Provider (128-bit) (if you plan to use SSL) | | N/C |
| 5722-IP1 | IBM Infoprint Server (optional) | Base | \$ |

Notes: Hardware & Performance Guidelines

iSeries Access for Web

- Sends HTML pages no larger than to any pages you might be receiving through your browser today (nK)
- Administrator can configure the maximum size of a list (could set it to 500 bytes per page)

ASF Tomcat

Requires an iSeries with 70 cpw & 256 MB memory.

Please note the following HARDWARE Prerequisites for WAS:

Systems hosting applications using enterprise beans

Any of the following servers (recommended minimums):

- Model AS/400e Server 170 with processor feature 2385
- Model AS/400e Server 720 with processor feature 2062
- Model AS/400e Server 270 with processor feature 2252
- Model AS/400e Server 820 with processor feature 2396
- 1 gigabyte of memory (recommended minimum)

Systems hosting applications using servlets and JavaServer Pages only:

Any of the following servers (recommended minimums):

- Model AS/400e Server 170 with processor feature 2292
- Model AS/400e Server 720 with processor feature 2061
- Model AS/400e Server 270 with processor feature 2248
- Model AS/400e Server 820 with processor feature 2395
- 512 megabytes of memory (recommended minimum)

Note: Systems below these recommended minimums may be used in environments that support a limited number of users and where longer server initialization times can be tolerated.

Run the workload estimator at:

<http://www-912.ibm.com/supporthome.nsf/document/23393024>

- The workload estimator. See <http://as400service.ibm.com/servlet/EstimatorServlet>. The workload estimator provides recommended minimums for memory requirements for WebSphere--and they are greater than traditional workloads. Additional information is planned to better explain that the increased memory requirements of emerging workloads is likely to conflict with some memory and performance adjust scenarios that previously worked acceptably for more traditional workloads that require less memory.

We are attempting to provide guidelines for WebSphere Application Server and other emerging workloads on the web through various documents such as:

- The performance capabilities guidelines documents. See <http://publib.boulder.ibm.com/pubs/html/as400/online/chgfrm.htm>
- The WebSphere performance whitepaper. See <http://www-1.ibm.com/servers/eserver/iseries/software/websphere/wsappserver/product/PerformanceConsiderations.html>. Some of the discussion (for example, the discussion of maximum activity level) may be a bit generic and we are planning to provide some examples for specific WebSphere configurations.
- The minimum recommended system requirements for WebSphere. See <http://www-1.ibm.com/servers/eserver/iseries/software/websphere/wsappserver/docs/as400v35/docs/instprqr.html>
- The performance tools are updated with each release. Operations Navigator and PM/400 provide many state-of-the-art performance analysis function to iSeries customers.

Server Software Requirements for Access for Web (5722-XH2, V5R2)

If you plan to use **WebSphere Application Server...**

| Product Number | Product Name | Option | \$ |
|----------------|---|-----------|------|
| 5722-SS1 | OS/400 V5R1 or V5R2 | Base | |
| 5722-SS1 | OS/400 Extended Base Directory Support | 3 | |
| 5722-SS1 | OS/400 AFP Compatibility Fonts | 8 | w/HW |
| 5722-SS1 | OS/400 Host Servers | 12 | |
| 5722-SS1 | OS/400 QShell Interpreter | 30 | |
| 5722-SS1 | OS/400 Digital Certificate Manager (if you plan to use SSL) | 34 | |
| 5722-XW1 | iSeries Access Family iSeries Access Enablement Support Be sure to get Service Pack 3 - SI05427 | Base 1 | \$ |
| 5722-JV1 | Java Developer Kit | Base | N/C |
| 5722-JV1 | Java Developer Kit Version 1.2 | 3 | N/C |
| 5722-JV1 | Java Developer Kit Version 1.3 | 5 | N/C |
| 5722-JC1 | Toolbox for Java | Base | |
| 5722-TC1 | TCP/IP Connectivity Utilities for iSeries | Base | N/C |
| 5722-DG1 | IBM HTTP Server for iSeries | Base | N/C |
| 5733-WS4 | WebSphere Application Server Single Server V4.0.3 | | \$ |
| 5733-WA4 | WebSphere Application Server Advanced Server V4.0.3 | | \$ |
| 5722-IWE | Coming...WebSphere Express V5.0 Use IBM Workload Estimator for iSeries for recommended minimum requirements for your server hardware at www.ibm.com/eserver/iseries/support/servlet/EstimatorServlet | | \$ |
| 5722-AC2 | Cryptographic Access Provider (56-bit) (if you plan to use SSL) | | N/C |
| 5722-AC3 | Cryptographic Access Provider (128-bit)(if you plan to use SSL) | | N/C |
| 5722-IP1 | IBM Infoprint Server (optional) | Base | \$ |

First Install Customer Assistance

First Install Customer Assistance for Websphere Application Server Standard or Advanced Edition for iSeries or AS/400.

- We would like to welcome new customers to the Websphere arena and provide them with assistance that may be needed to install and configure Websphere Application Server, either Standard or Advanced Edition. By starting with a working instance of Websphere Application Server and reviewing the sample programs provided, your time spent with Websphere Application Server will be more productive and enjoyable. Through your application and acceptance into this program, the Rochester Support Center will provide you with 8:00AM - 5:00PM Central Standard Time phone support assistance in setting up a Websphere Application Server test environment.

This assistance includes:

1. Documentation clarification
2. Verify you have all Prerequisites available: Software, Hardware, PTF's, and Communication configurations
3. Creation of a default Websphere instance
4. Configuration and enablement of Websphere for an HTTP server
5. Installation and use of Websphere Client based Admin Console (excluded Firewall configuration)
6. Validate the above by running of a sample servlet.

<http://www.iseries.ibm.com/developer/websphere/assistance.html>

Getting Access for Web installed & running...

How is iWA installed and configured on the iSeries server

To get iSeries Access for Web installed and running on the iSeries server, a series of steps must be performed. These steps are outlined in great detail in the iSeries Access for Web Setup & Users Guide. To help you understand what these steps are, below is a highlevel summary of the steps it takes to get iSeries Access for Web up and running...

1. Run **RSTLICPGM** server command to install iSeries Access for Web on the iSeries server.
2. Load/Apply any iSeries Access for Web PTFs, and any other dependent product PTFs.
3. Perform HTTP server setup (if not already done).
4. Perform Web application server setup (ie, WebSphere Application Server or Tomcat)(if not already done).
5. Run iSeries Access for Web CL command **CFGACCWEB2** is run to configure iSeries Access for Web within the Web application server.
6. On WebSphere Application Server Advanced Single Server Edition V4.0 and ASF Tomcat, iSeries Access for Web starts when the Web application server is started
7. On WebSphere Application Server Advanced Edition V4.0, you must additionally run the iSeries Access for Web CL command **STRACCWEB2** to start iSeries Access for Web.

Now when Web browser user invokes URL `http://<server_name>/webaccess/iWAHome`, they are using iSeries Access for Web

Notes: Configuring iSeries Access for Web

Examples for CFGACCWEB2

Example 1: Configuring ASF Tomcat

```
CFGACCWEB2 APPSVRTYPE(*ASF TOMCAT)
TCSVRNAME(TOMCAT)
  TCHOMEDIR(*ASF Tomcat/tomcat) TCUSRPRF(QTMHHTTP)
  SRCSVRTYPE(*WAS40SNG) SRCSVRINST(DEPTABC)
  SHRUSRDTA(*YES)
```

This command will configure iSeries Access for Web for an ASF Tomcat server called Tomcat. This example also shows that this configuration will be based on a configuration that was performed in a previous example. User generated data will be shared between the source configuration and this new configuration.

Example 2: Configuring WebSphere Advanced Edition 4.0

```
CFGACCWEB2 APPSVRTYPE(*WAS40ADV) PORT(5098)
WASINST(*DEFAULT)
```

This command will configure iSeries Access for Web for the default administrative server (instance) of WebSphere Advanced Edition 4.0. The iSeries Access for Web web container that is configured will use an HTTP transport port value of 5098.

Example 3: Configuring WebSphere Advanced Single Server Edition 4.0

```
CFGACCWEB2 APPSVRTYPE(*WAS40SNG) WASINST(DEPTABC)
```

This command will configure iSeries Access for Web for a user created administrative server (instance) called DEPTABC within WebSphere Advanced Single Server Edition 4.0.

Example 4: Configuring WebSphere Application Server 5.0

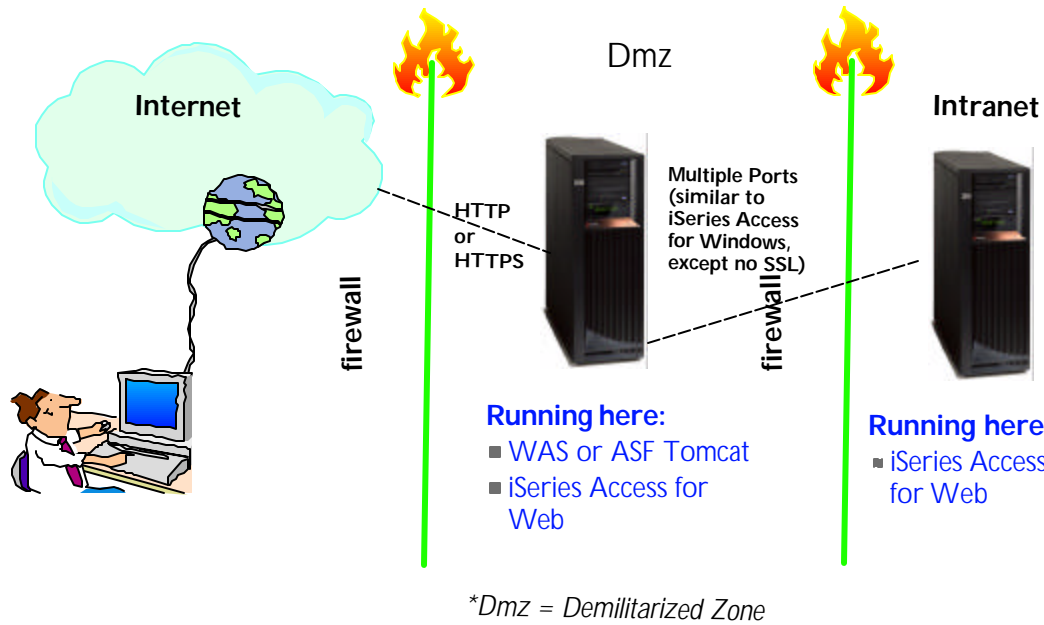
```
CFGACCWEB2 APPSVRTYPE(*WAS50)
WASINST(DEPTXYZ)
This command will configure iSeries Access for Web for a user created administrative server (instance) called DEPTXYZ within WebSphere Application Server 5.0.
```

Example 5: Configuring WebSphere Application Server - Express 5.0

```
CFGACCWEB2 APPSVRTYPE(*WAS50EXP)
WASINST(*DEFAULT)
  SRCSVRTYPE(*WAS40ADV) SRCSVRINST(*DEFAULT)
  SHRUSRDTA(*NO)
```

This command will configure iSeries Access for Web for the default administrative server (instance) of WebSphere Application Server - Express 5.0. This example also shows that this new configuration will be based on a configuration that was performed in a previous example. User generated data will be copied from the source configuration to this new configuration

Using a Dmz*



Port Requirement Comparison

iSeries Access for Windows (5722-XE1)*

- Port 449 for Port Mapper
- Port 8476 (9476) for Sign-on
- Port 8470 (9470) for Central
- Port 8472 (9472) for Data Queues
- Port 8471 (9471) for Database
- Port 8475 (9475) for Remote Commands
- Port 8473 (9493) for Print
- Port 2001 (2010) for Web Admin
- Port 446 (448) for DDM
- Port 23 (992) for Telnet
- Port 137, 138 for NetServer
- Port 8480 for USF
- Port 389 (636) for LDAP
- Port 5555 (5566) for Mgmt Central
- Port 53 if using DNS Server

iSeries Access for Web

- HTTP (Port 80 default or any port)
- Port HTTPS Port 443 or any port)

* See Information APAR II12227 for detailed information

Concurrent Usage



Must have iSeries Access Family Licensed Program Product (5769-XW1 or 5722-XW1) installed on Server

- **All products do license checking**

- Access for Windows acquires a license when either PC5250 or Data Transfer is used
- Web Access acquires a license when any function is used
- Host Publisher is checked at runtime

- **Each product acquires a license when connecting to an iSeries**

- If you use the products simultaneously you would be using more than 1 license while connected



Summary

Who will benefit from iSeries Access for Web?

- Any iSeries customer -- **with any hardware model** - can quickly get started working in a Web environment
 - ▶ If your system is not capable of running WAS, you can easily install the ASF Tomcat web application server. ASF Tomcat runs on hardware with 70 CPW and 256 MB memory
- Any iSeries customer -- **with little Web experience** - can easily get started working in a Web environment
 - ▶ iSeries Access for Web is simple to install and configure
 - ▶ There is no programming skills required to set it up
- Any iSeries customer -- **with no training or setup on users' desktops** - can extend the reach of iSeries resources to your end users
 - ▶ Use customize facility to set up view ('window') to iSeries and to control access to various iSeries resources
 - all built around OS/400 user profiles
 - ▶ Uses standard HTML, uses existing HTTP/HTTPS ports

A great first step to get your iSeries into e-business

New opportunities...

iSeries users who:

- **Want no special software installed on their desktops**
- **Want access from a variety of desktop operating systems**
- **Want a simple Internet access to their iSeries**
- **Want no special firewall settings for user access**
- **Want to use familiar browser functions like Cut & Paste, Print, ...**



Notes: Who will use iSeries Access for Web?

The Internet movement has taken over and businesses are quickly moving to embrace these technologies through e-business!

Since almost all desktop operating systems come with web browsers, users want an easy way to work with their business critical OS/400 information and resources through this simple user interface that has been designed to be Internet friendly. Users also are looking for hassle-free access through firewalls. They want access from a variety of platforms, and want no special client code that has to be installed and maintained on their desktop.

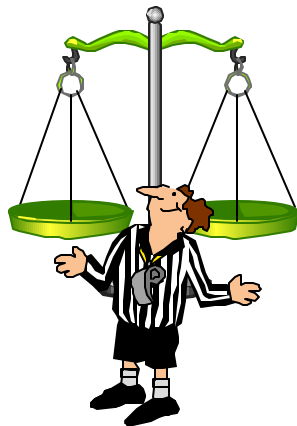
iSeries customers are looking for ways to streamline management of user access to information in the enterprise through centrally controlled mechanisms built around OS/400 user profiles. Additionally, they want to customize a user's view of the iSeries servers, so those not familiar with OS/400 operating environment can easily and productively work with its database and other resources.

A new means of accessing the iSeries, called iSeries Access for Web, provides software that runs on the server and provides access through a browser and provides an application user-centric, web-based portal view of iSeries or AS/400 application and information.

The iSeries Access Family' Product ID is 5722-XW1. It is orderable for OS/400 V5R1 and OS/400 V5R2. The iSeries Access for Web offering -- which is included in the iSeries Access Family Product -- has two Product IDs

- 5722-XH2 is the latest offering and ships with the V5R2 offering, but also work on OS/400 V5R1. This version runs on WAS 4.0 or later, and ASF Tomcat.
- 5722-XH1 was the first offering and ships with the V5R1 offering. It works with OS/400 V4R5 and V5R1 and is part of the Family offering. This was a late-add for V5R1 and was made generally available September 28, 2001. It is provided on a separate iSeries CD (ie, it is not on the locked media). This version runs on WAS 3.5 only.

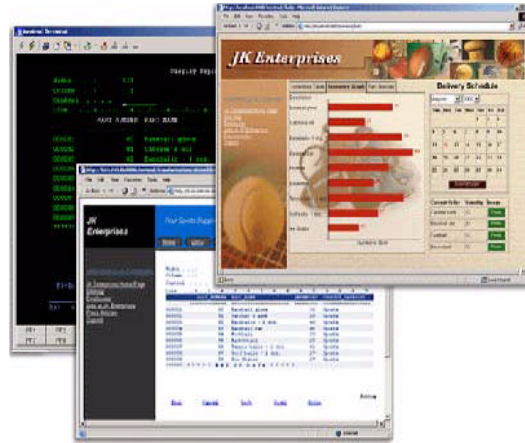
iSeries Access for Web is designed as a set of web components for web applications. Thus, a web application can simply invoke or link to its URLs and take advantage of the functions it provides. Additionally iSeries Access for Web is a set of servlets that run on the server as an extension to the HTTP server; this makes it a Pure Java servlet and is Server-based. There is no client code to install or manage. Install and configure the code on the server and access server resources from any supported web browser. Industry standard protocols, HTTP and HTTPS, are used by iSeries Access for Web. Since it needs no proprietary TCP/IP ports or protocols, considerations surrounding firewall usage are easily manageable.



HATS Limited Edition

Host Access Transformation Server (HATS)

- Supports multiple types of user interfaces - 5250, 3270
- Translates system screens also
- Rules-based data stream translator
- Designer is plug-in to WebSphere Studio Development Tools
- User interface customization available
- Merge/split applications and screens



*Sold as part of the
WebSphere Host Integration
Solution from SWG*

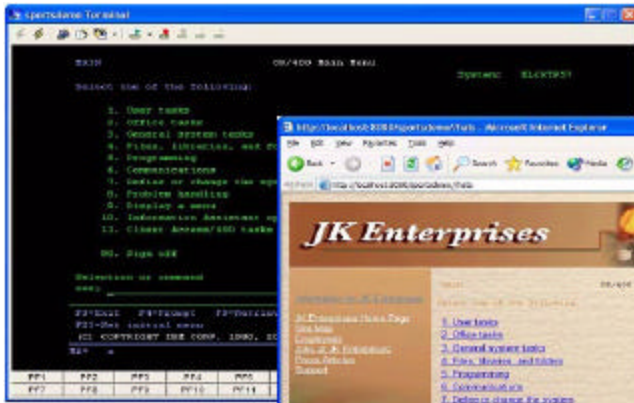
HATS Limited Edition is a subset of HATS...

- **Works on all 5250 screens**
 - ▶ Converts 5250 screens (applications, system screens) to a point & click Web interface
 - ▶ Delivers HTML to the desktop
 - ▶ Only software needed on the client is a Web browser
- **Screens are converted on the fly, in real time**
 - ▶ Selection lists can be converted to hot links, buttons, drop-down menus, or option lists (radio buttons)
 - ▶ PF keys are can be converted to buttons or hot links
- **No programming necessary**
 - ▶ Stock HTML templates included with product or can use customer-provided HTML
 - ▶ Doesn't break if changes are made to 5250 application
 - ▶ No need to access source code



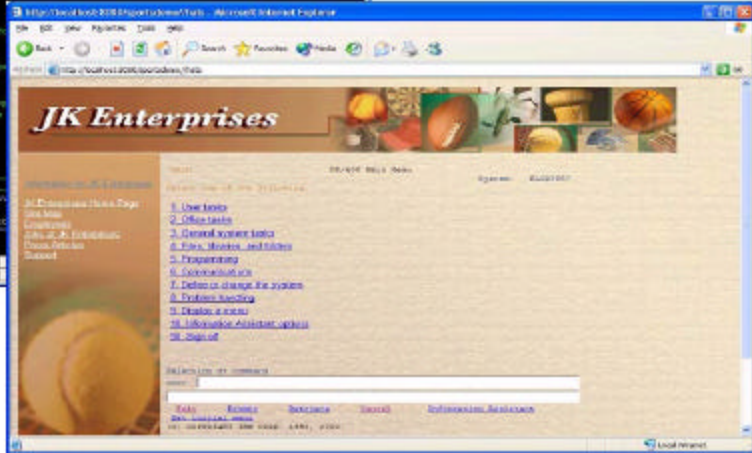
*A quick and easy way
to put iSeries
applications on the
Web*

HATS Limited Edition: Real-time Screen Conversion

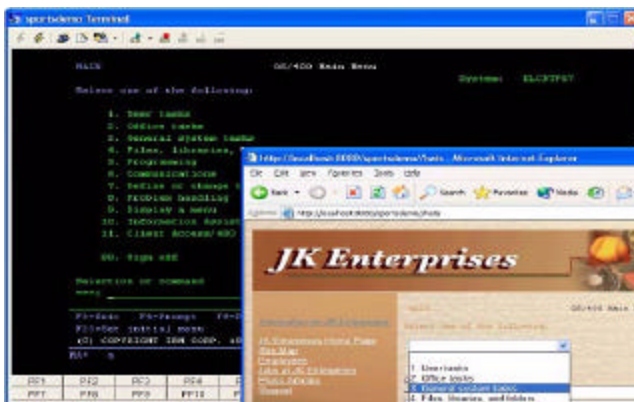


Traditional green screen

HATS Limited Edition on-the-fly conversion using customer-provided HTML (logo and graphics)

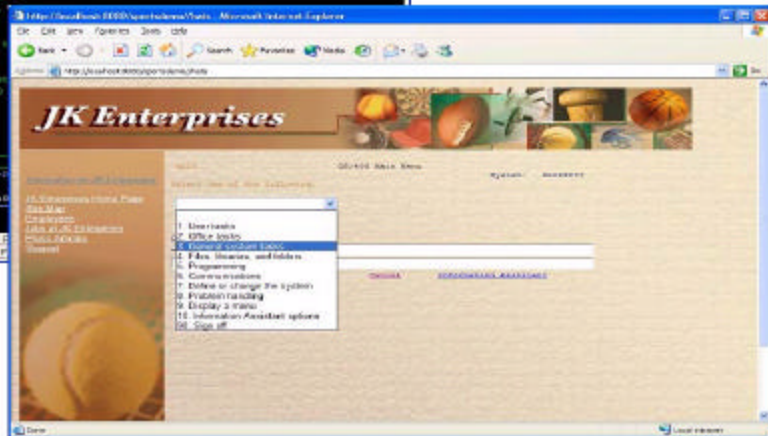


HATS Limited Edition: Drop-down Menu



Traditional green screen

HATS Limited Edition on-the-fly conversion with drop-down menu



HATS Limited Edition: Details

- **Runs on either WebSphere Application Server V4.0 or V5.0**
 - ▶ Also supports WAS V5 - Express for iSeries
- **Supports Internet Explorer and Netscape browsers**
- **Provides host keyboard support**
- **Supports Secure Sockets Layer (SSL) security**

Part of iSeries Access Family - 5722-XW1

- **Available 6/30/03**
 - ▶ Will automatically ship with new orders of 5722-XW1
 - ▶ Existing 5722-XW1 customers can order no-charge Feature Number 2646 to receive HATS Limited Edition and a version of WebSphere Host Publisher that will run on WAS V5 Express

iSeries Access Family (5722-XW1) customers will be able to order a chargeable upgrade to full HATS offering

- ▶ Order Number will be made available at a later date

Notes: HATS Limited Edition

A new web site is being built for HATS Limited Edition that will be linked off the main iSeries Access home page (www.ibm.com/eserver/series/access). Its direct link will be <http://www.ibm.com/eserver/series/access/hats/>. This page will initially have just the January 2003 announcement information.

- "HATS Limited Edition" is a subset of the full HATS for iSeries product. HATS Limited Edition will be available with the iSeries Access Family on 6/30/2003.

The following information is in the iSeries Access Family section of the IBM Announcement Letter 203-007 (http://www.ibm.com/usalets&parms=H_203-007) pertains to both HATS Limited Edition and to the WebSphere Host Publisher V4.0.1 (that supports WAS 5.0/WAS - Express).

- "Starting on June 30, 2003, new shipments of iSeries Access Family V5.2 (5722-XW1) will additionally include the HATS Limited Edition and WebSphere Host Publisher V4.01 products. If you have already received the V5.2 version of iSeries Access Family, order a refresh of 5722-XW1.

We will be refreshing the iSeries Access Family (5722- XW1) for both V5R1 and V5R2. That is, 5722-XW1 customers at either of those releases can order the "iSeries Access Family refresh". The Feature # will be feature 2646 (same feature for both releases).

The refresh delivery then will be on CD -- and will include both HATS LE and Host Pub 4.0.1. The availability date for this refresh in the RFA is June 30, 2003.

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| IBM | |

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