What an Administrator Needs to Know about IBM i Access for Web: Restricting Access and other Security Considerations

Speaker Name: Wayne Bowers (wbowers@us.ibm.com)



IBM Power Systems

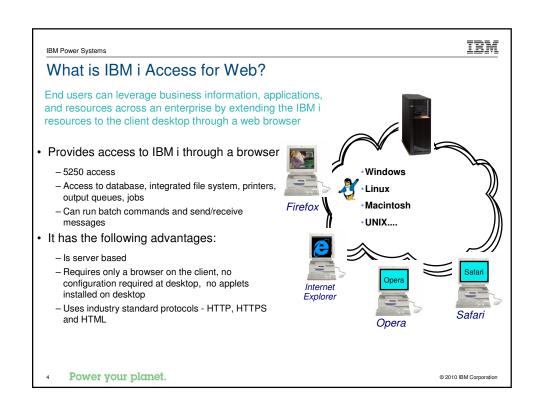
IBM

Agenda

- Overview
- IBM i Access for Web Runtime Considerations
 - Use of policies
 - Customizing the home page/template files
- IBM i Access for Web Environment Security Considerations
 - SSL and VPN
 - Authentication security options
 - 5250 bypass signon notes

Power your planet.







IBM Power Systems

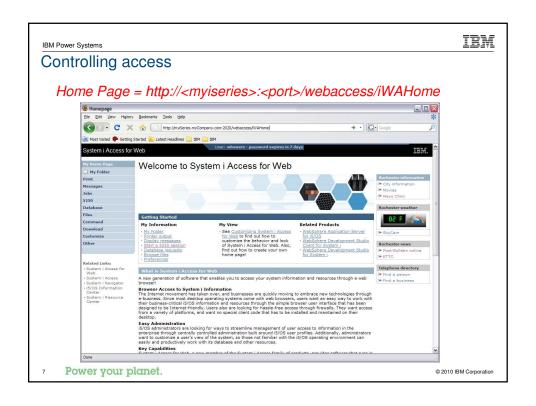
IBM

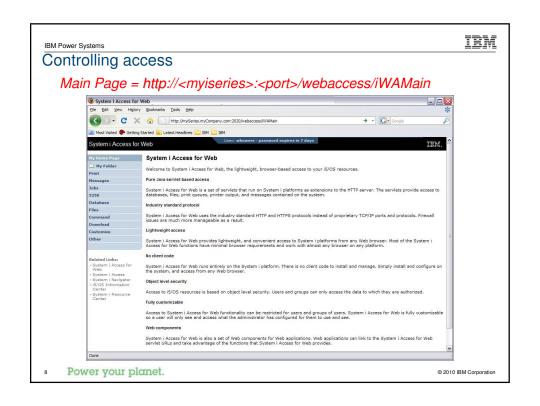
Controlling Access

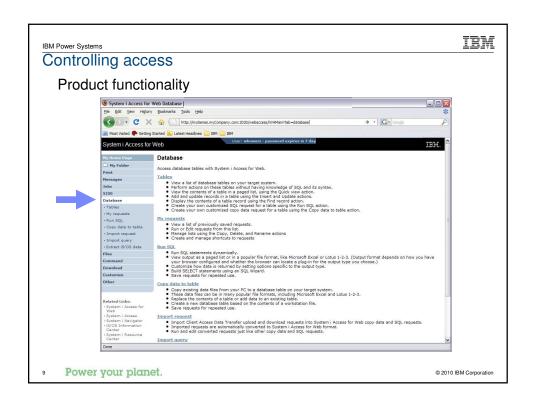
3 methods to control access using IBM i Access for Web

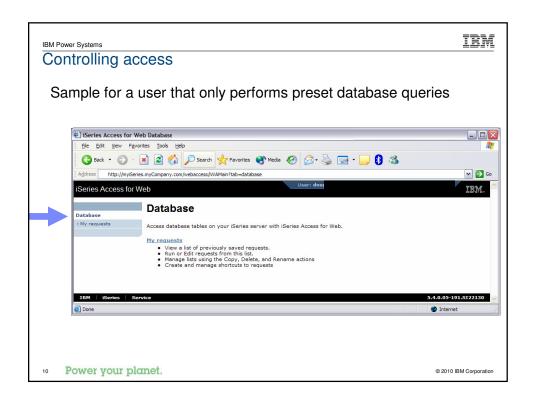
- **Administration Policies**
 - Administrators can use the Customize function to set policies for users and groups of users.
- **User Preferences**
 - Users can set their own Preferences for things like
 - What tabs are available in the navigation bar
 How to view output (default rows/columns per page)
 How to filter output
- Customize the Home page and template files
 - Administrators can use the Customize function to replace the default IBM i Access for Web home page with their own home
 - page.

 Administrators can use the Customize function to replace the default template that defines the layout, look, and feel of IBM i Access for Web pages
 - Style sheets The look of the IBM i Access for Web page content is now controlled by external style sheets.

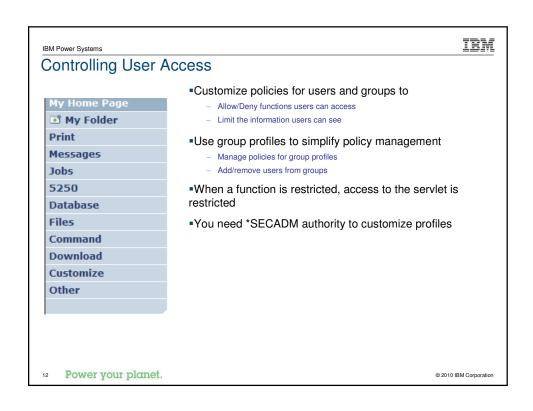












BM Power Systems

Notes: Controlling Access - How & Whom?

- 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.
 - It takes effect immediately
- Administrators with *SECADM special authority are automatically authorized to administer settings for users and groups of users to which they have authority.
- These administrators can then grant other user profiles permission to administer IBM i Access for Web functions.

Power your planet.

© 2010 IBM Corporation

Controlling User Access

- IBM i Access for Web ships with
- default policy settings

 Default allows most functions to be available to all users
- •Use *PUBLIC to set policies for all users
- Strategy:
- Grant an administrator profile access to all functions
- Deny access to all functions to *PUBLIC
- Then allow specific users/groups access to specific functions



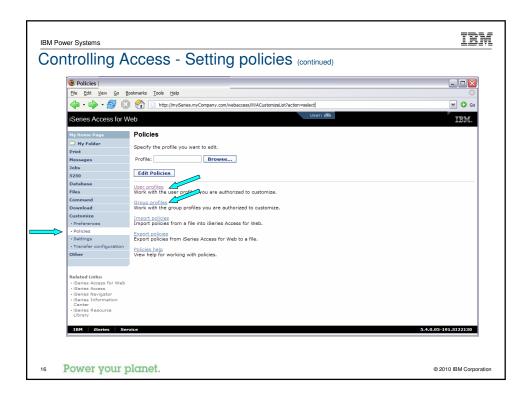
14 Power your planet.

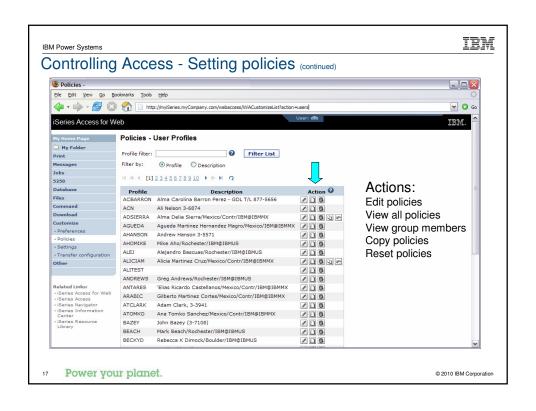
BM Power Systems

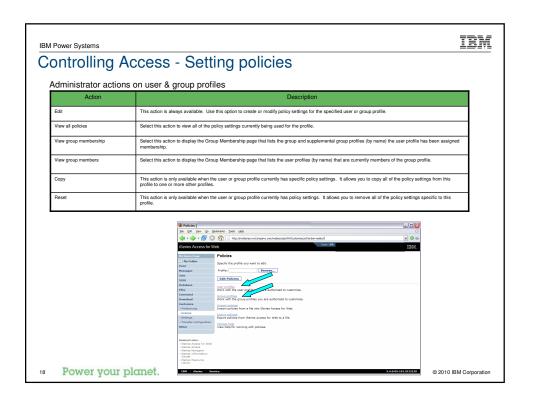
Notes: Controlling Access - Strategies

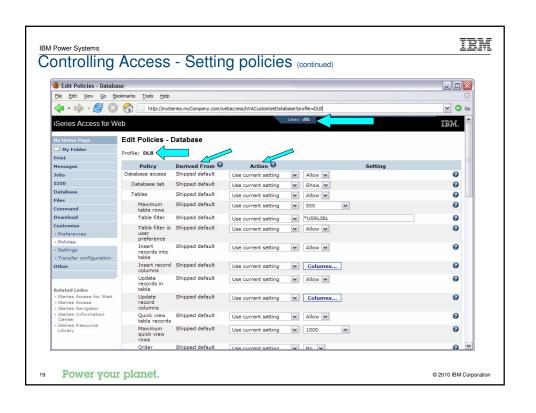
- IBM i Access for Web ships with a set of default policy settings. The default policy settings allow most of
 the IBM i Access for Web functions to be available for all users. Without any customization, users
 accessing IBM i Access for Web could begin using most of the available functions.
- As an administrator of this product, you may not want your users to be able to access all of these
 functions. It is the responsibility of an administrator to restrict functions they do not want their users to be
 able to access.
- One of the quickest strategies that can be deployed to restrict a function from all users is to use the Customize Group Profiles function and customize the *PUBLIC group profile.
- This group profile is defined such that every user is a member of this group. So, for example, if you were
 to customize the *PUBLIC profile and set the "Browse files" and "File shares" file functions to "Deny",
 you would restrict file system access from this product for all users.
- If some of your users required access to this function, you could specifically customize their user profiles
 and set this function back to "Allow". In this way, only users that have been specifically allowed access
 will be able to use that function, all others would not have access.
- It should be noted that the *PUBLIC group profile includes the administrator user ID that is used to customize other group and user profiles. If you were to deny functions for *PUBLIC, this would affect the administrator user profile. As you customize IBM i Access for Web for *PUBLIC, you may want to consider specifically allowing your administrator user profile to have access so that it is not locked out of IBM i Access for Web functions.

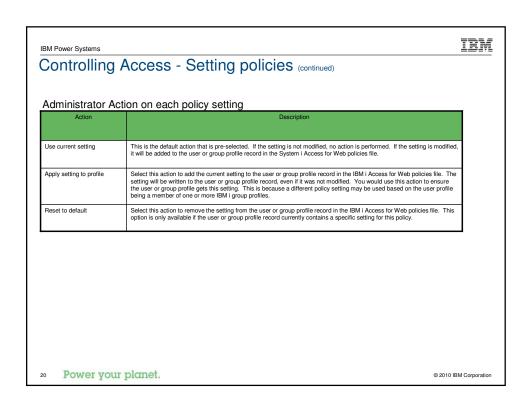
Power your planet.











Controlling Access - Setting policies (continued)

The "Derived From" column (displayed when editing policy and preference settings) indicates where the policy setting that will be used for this user profile was found.

Action	Description
Profile setting	Indicates the setting is currently specific to the profile being customized. The setting had previously been applied to this profile
Group – (groupName)	Indicates the setting is not specific to the profile being customized, but is being derived from the specified IBM i group profile and the user is a member of this group.
*PUBLIC setting	Indicates the setting is not specific to the profile being customized. No setting was found in any IBM i group profile memberships. The setting is being derived from the "PUBLIC group settings. This is a special group profile available to IBM i Access for Web administrators. All user profiles are automatically members of this special group profile. Administrators can modify this group profile to easily apply settings to all IBM i Access for Web users.
Shipped default	Indicates the setting is not specific to the profile being customized, no setting was found in any IBM i group profile memberships, or the special *PUBLIC group profile. The setting is being derived from a shipped default value.
Parent policy	Indicates the function is a sub-function of a higher level category, and its policy setting is being controlled by a top level policy setting. For example, Tables is a sub-function of Database. If Database is restricted, Tables will be restricted as well and would show its being controlled by a parent policy.

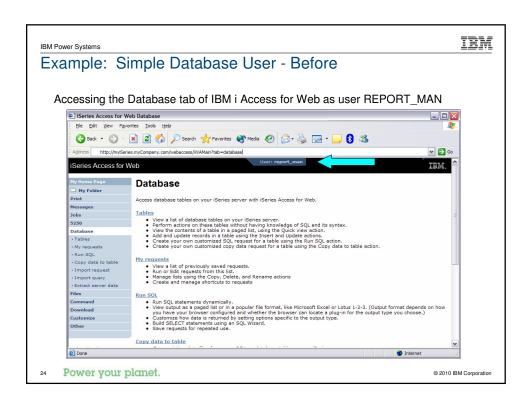
Power your planet.

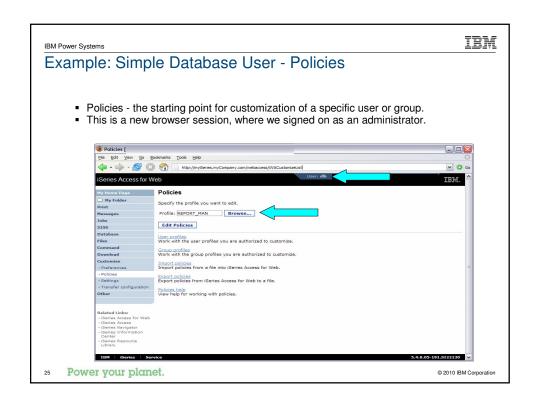


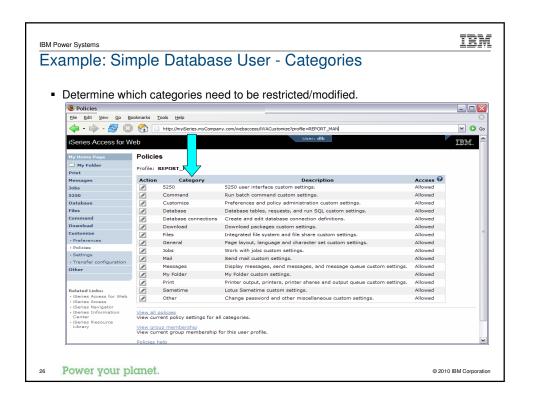
Example: Simple Database User

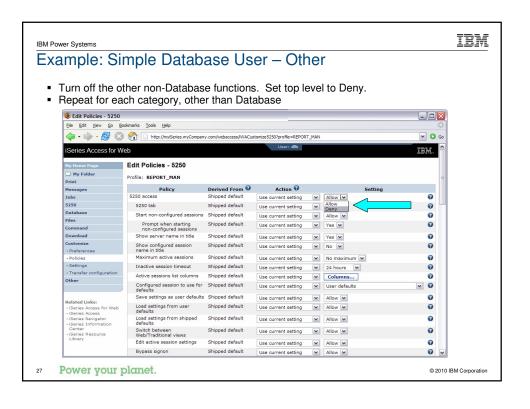
- The following screen shots step through setting the policies so a specific user only has the ability to run preconfigured database gueries to generate reports.
- This example shows
 - the "Before" picture of what DB functions a user can perform with no customization of System i Access for Web
 - the specific database policies to set to restrict our user named REPORT_MAN
 - what general policies need to be set to restrict use of non-DB related functions by REPORT MAN
 - The "After" picture of what REPORT_MAN can do
- When the policy is set, it takes effect immediately.

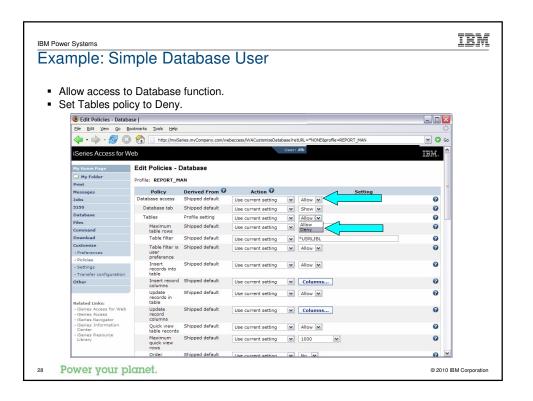
23 Power your planet.

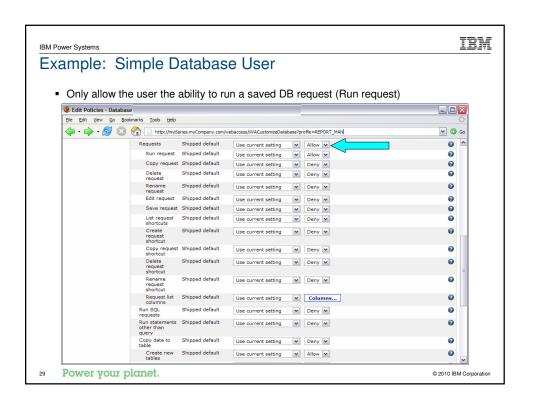


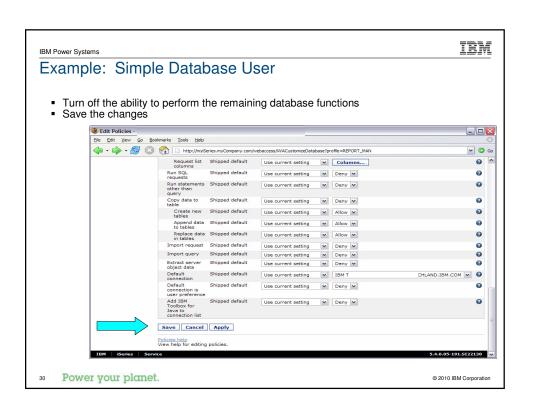


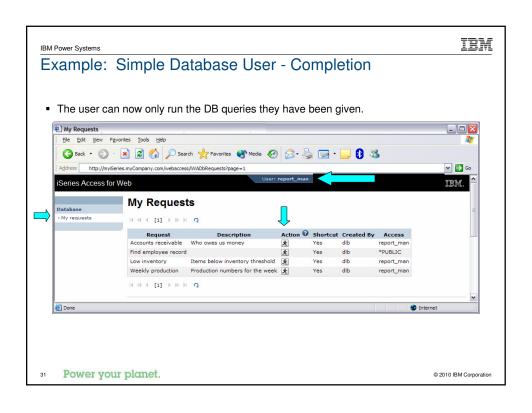














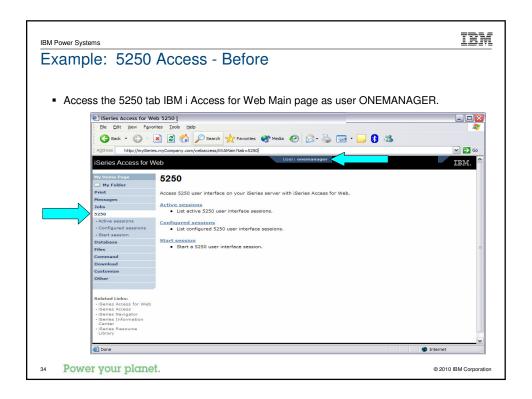
IBM IBM Power Systems

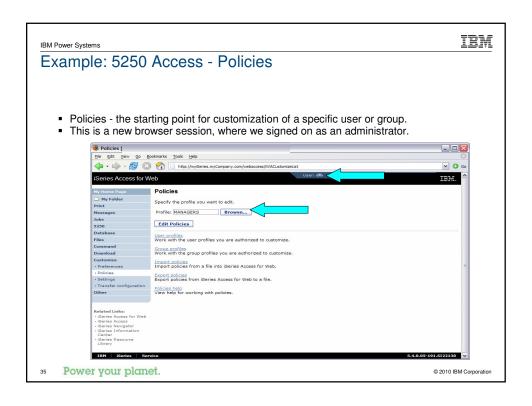
Example: 5250 Access

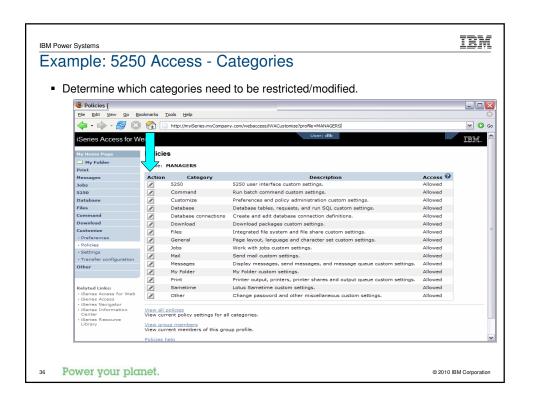
- The following screen shots step through setting up the items necessary to allow a group of users to use a single pre-configured 5250 session.
- In this example, ONEMANAGER is one of the user profiles in the MANAGERS group.
- This example shows
 - Creating a 5250 session and 5250 session shortcut to be used by the management team
 Making the 5250 session shortcut the session used by the MANAGERS group profile.

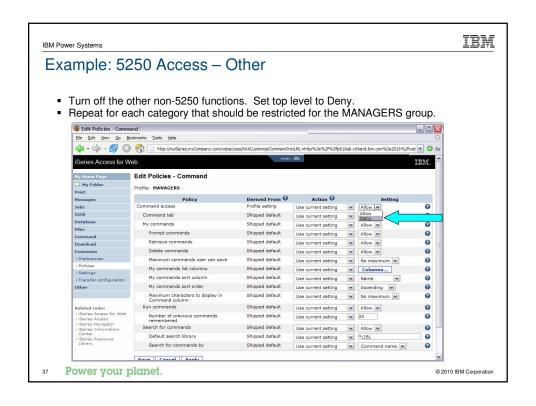
 - Restricting access to other functions in System i Access for Web.
- When the policy is set, it takes effect immediately.

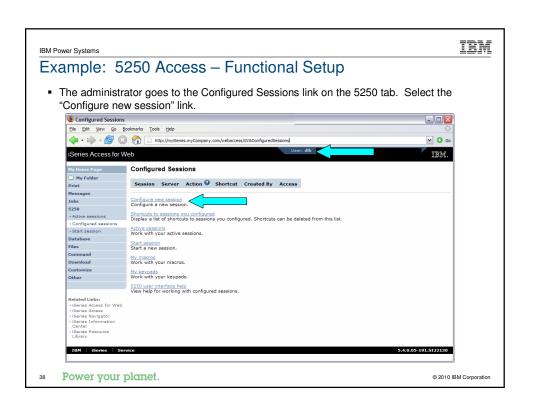
Power your planet.

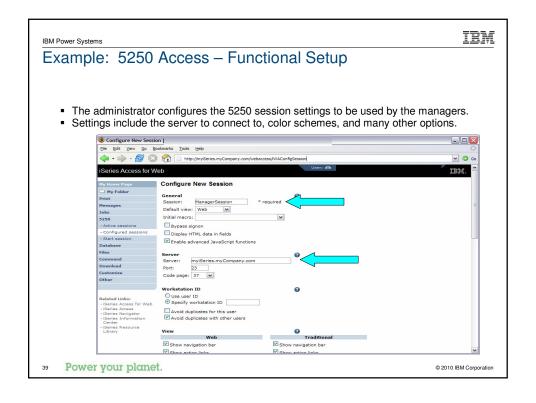


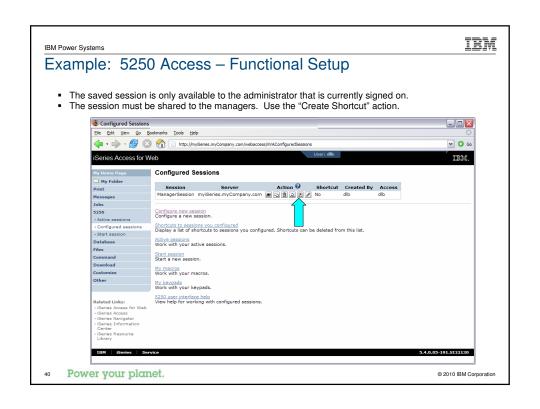


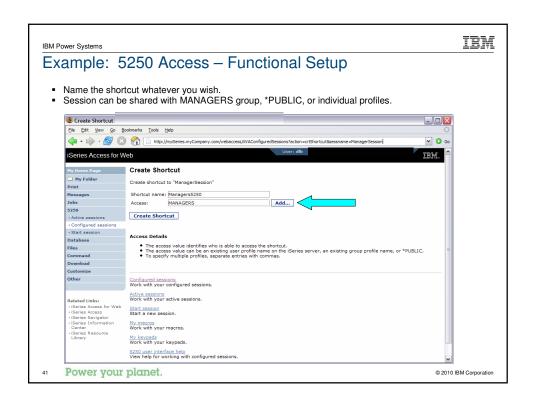


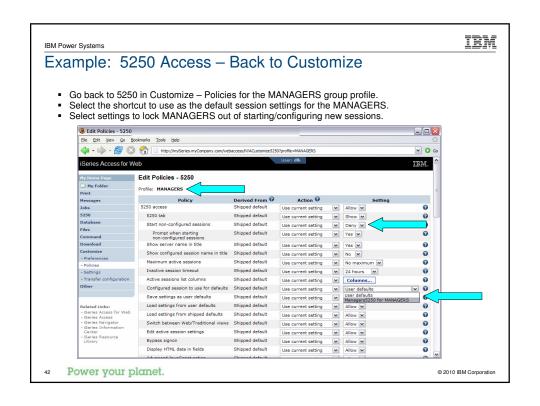


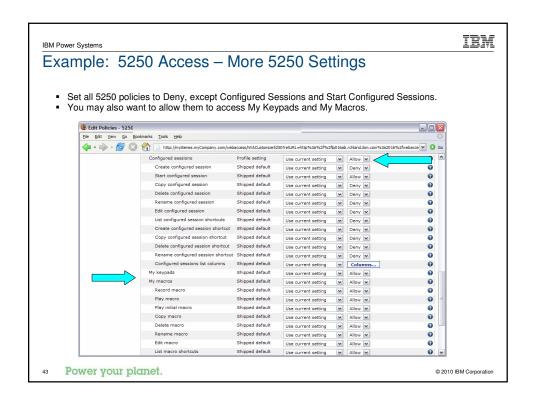


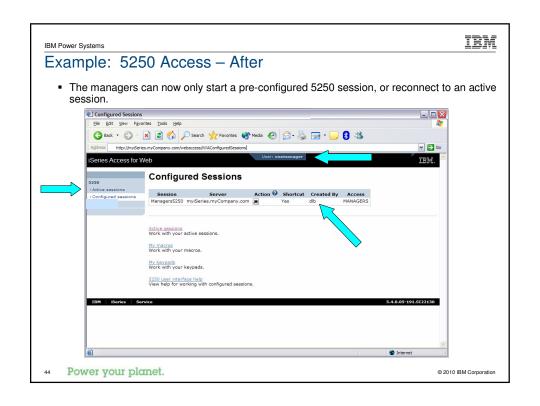


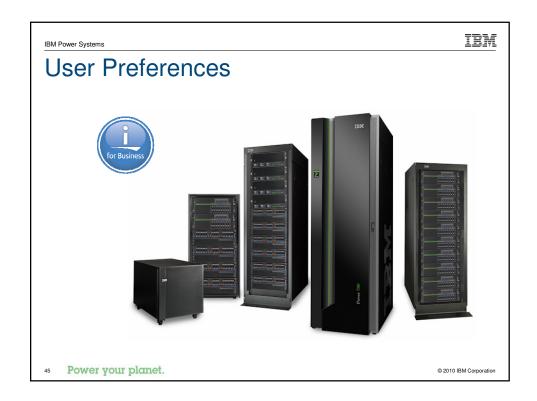












IBM Power Systems

IBM

User Preferences

- The Preferences function allows users to customize IBM i Access for Web settings to meet their needs.
- By default, all users are allowed to modify their preferences.
- Preferences are a subset of the complete list of available policy settings.
- Users can set the following types of preferences
 - Column inclusion and ordering for functions that display output in columns.
 Number of rows per page to display on output.

 - Show or hide navigation bar tabs.
 - Preferred language and character set.
 - Database table filters and default database connection.
 - Number of commands to save in the run command history.

IBM Power Systems

User Preferences (continued)

- Restricting access to Preferences
 - Administrators can deny specific users or groups from accessing their preferences.
 This is controlled by the "Edit preferences" policy.

 - This policy is useful in organizations where administrators want to set up all customization options for users and ensure users are not able to modify any preference settings.

Power your planet.

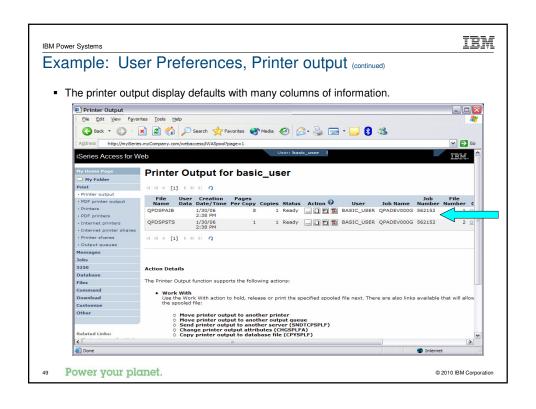
© 2010 IBM Corporation

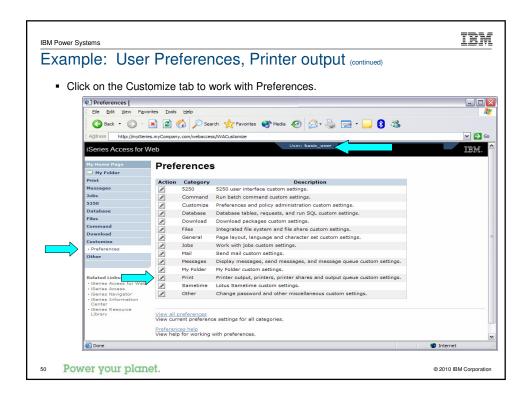
IBM

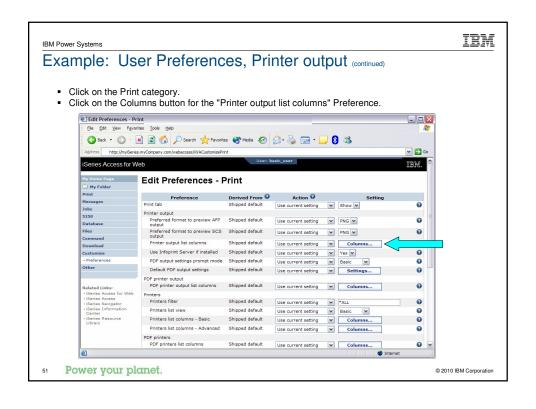
IBM

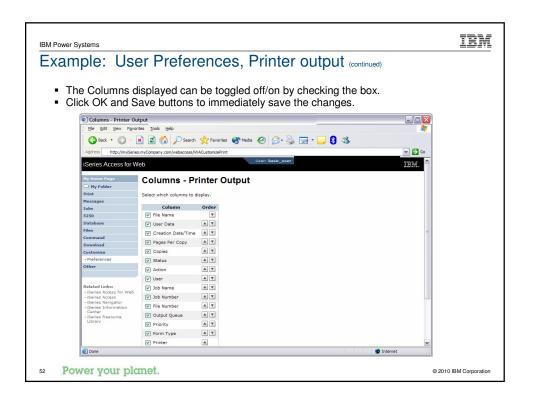
Example: User Preferences, Printer output

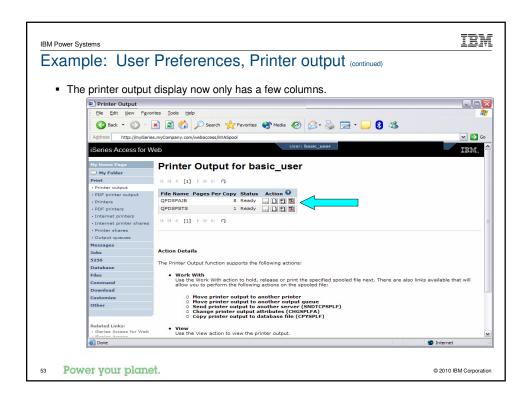
- The following screen shots step through setting a user preference for Printer output.
- This example shows
 - the default printer output page for user BASIC_USER.
 - what settings the user can modify to change the printer output page output.
 - the printer output page after user BASIC_USER modifies the preferences.
- When the preference is set, it takes effect immediately.

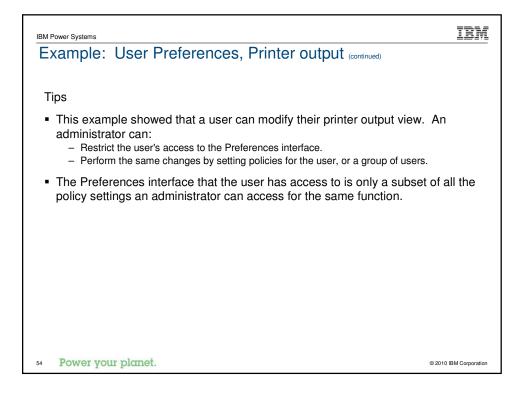










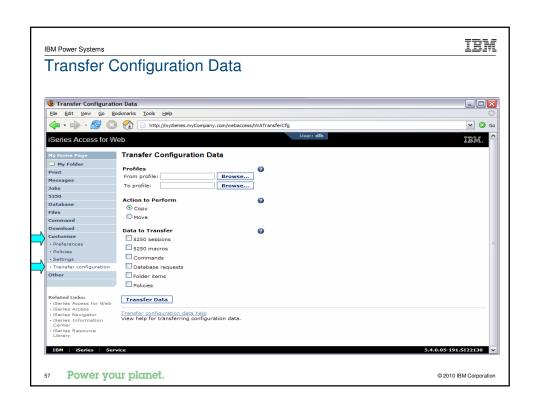




Policies and Tools

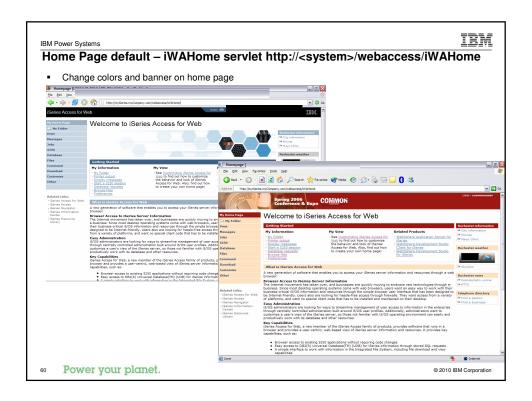
- Import/Export policy settings export policies to a different system
 - Pick a user or group for export
- Transfer configuration data from one user to another on the same system
 - Move and copy operations supported for:
 - 5250 sessions and macros
 - · Saved commands
 - · Database requests
 - · My Folder items
 - · Policies

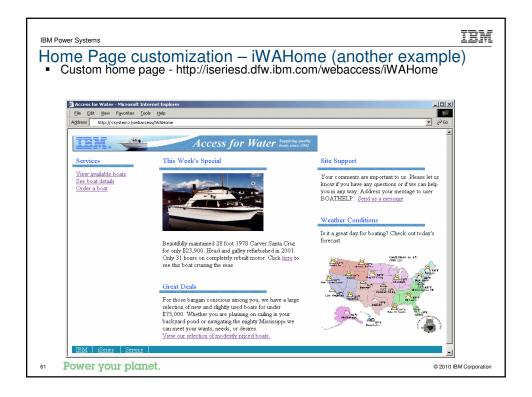
Power your planet.





Home Page Customization A default home page is displayed when the iWAHome servlet is invoked. - http://<mySystem.myCompany.com>/webaccess/iWAHome - it's a starting point to highlight functions. - It's an example of how to build your own home page or pages that access IBM i Access for Web functionality. The Customize function allows you to replace the default home page. Default home page replacement can be done for all users (*PUBLIC), or can be changed for only certain users and/or groups of users. Great article - example - "Build a quick and easy Web site with System i Access for Web" - Janet Weber - http://www.ibm.com/servers/eserver/iseries/access/pdf/build_website_article.pdf - Updated Oct 2006 in System i News - 'Tailor System i Access for Web' Power your planet.

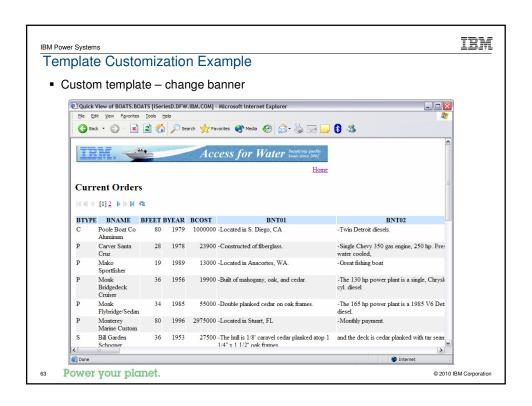


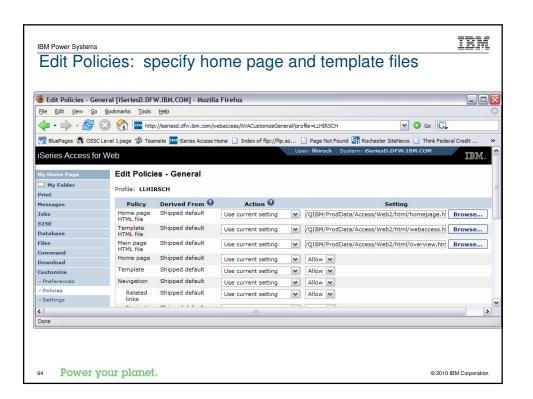


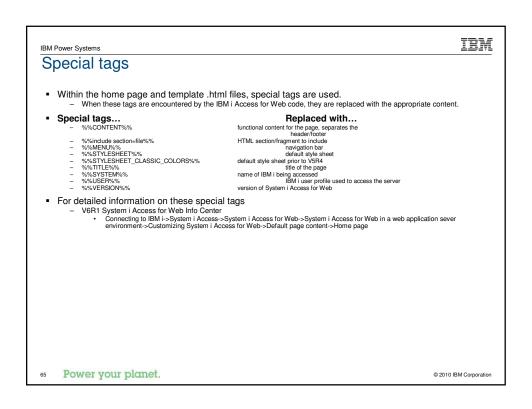
IBM i Access for Web has a default look for it functional pages. This look is controlled by a template file and cascading style sheet. The template file has sections to specify Header/footer areas of functional pages. Where IBM i Access for Web content is placed in the page. The Customize function allows you to replace the default template file. Default template file replacement can be done for all users (*PUBLIC), or can be changed only for certain users and/or groups of users.

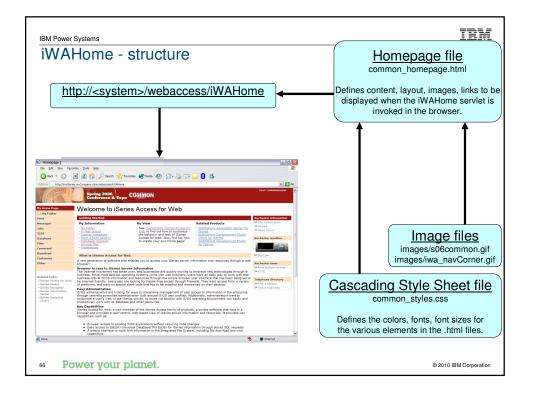
Power your planet.

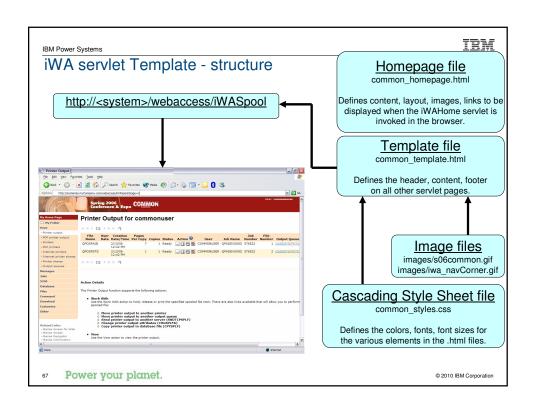
IBM



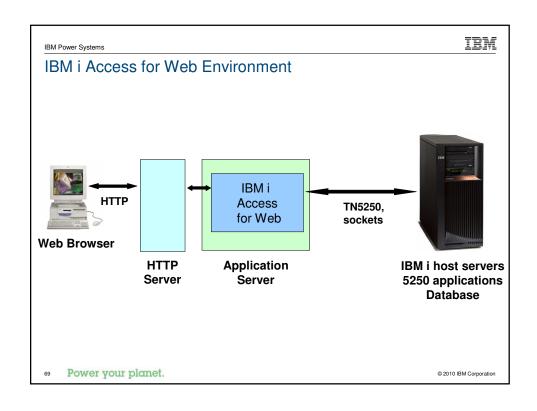


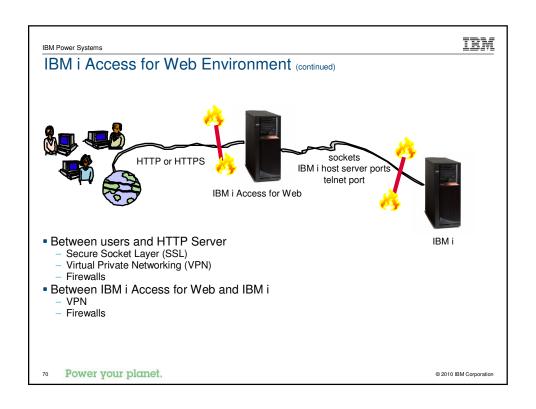












IBM

Secure Sockets Layer

- Used for data confidentiality between Web browser and HTTP server

 - Digital certificates used to determine trust relationships
 Point to Point encryption for all data (PC App to Server App)
 Part of the standard HTTPS protocol
- See Info Center for specific details on Configuration and Setup.
 - See the "Configure WebSphere Security" topic
- Levels of SSL
 - TLSv1, SSLv3 recommended, use 128-bit or higher
 - SSLv2 should not be used anymore. Disable in clients and server (APAR SE25734)

Power your planet.

© 2010 IBM Corporation

IBM

Virtual Private Networking

- Used for data confidentiality between Web browser and HTTP server
 - Digital certificates and User authorization used establish tunnel
 End to End encryption for all data (PC to Server tunnel)
 Allows any protocol, including standard HTTP
- See Info Center for specific details on Configuration and Setup.
 - See the "Virtual Private Networking" topic



Security Options: Authorization and Authentication

- How does the user authenticate to IBM i Access for Web?
- How does IBM i Access for Web authenticate with IBM i?
- IBM i Access for Web in a WebSphere Single Signon (SSO) environment
- Special considerations for 5250

Power your planet.



Authorization

- Authorization is verifying that authenticated users have permission to access requested resources
- IBM i Access for Web uses the IBM i user profile and object level security to authorize access to IBM i resources
- IBM i Access for Web provides application level control of access to functions through policies
 - Policies can be administered at the IBM i user and group profile levels



Power your planet.

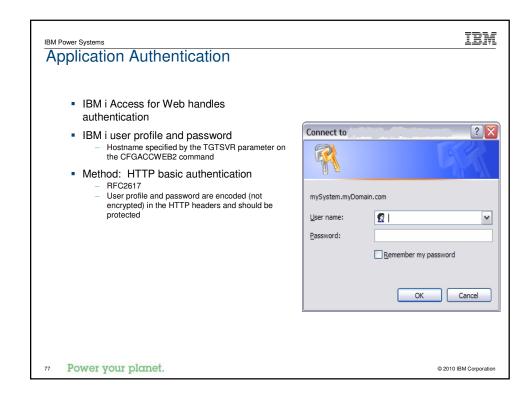
© 2010 IBM Corporation

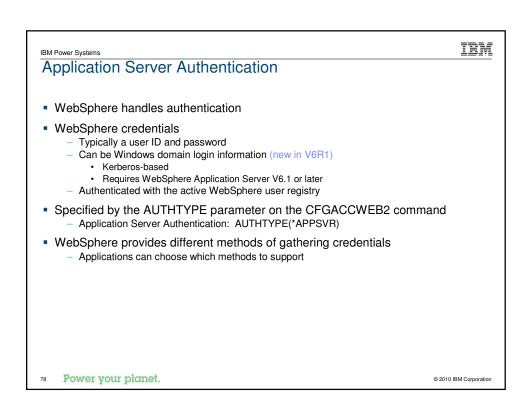
Authentication

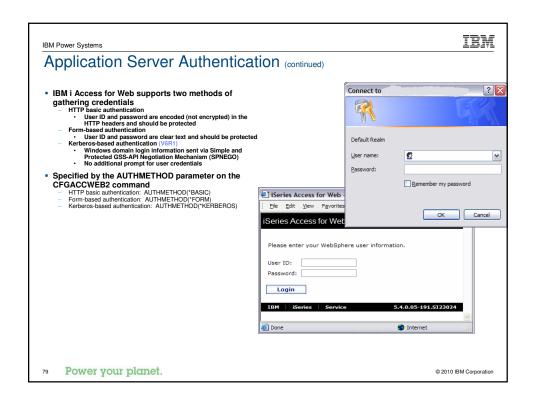
IBM

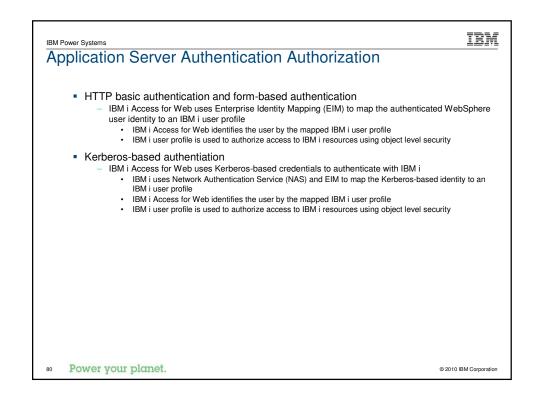
- Authentication is verifying the identity of the user
- IBM i Access for Web supports two types of authentication
 - Application
 - IBM i Access for Web handles the authentication
 - Application Server
 - WebSphere Application Server handles the authentication
- Specified by the AUTHTYPE parameter on the CFGACCWEB2 command
 - Application: AUTHTYPE(*APP)
 - Application Server: AUTHTYPE(*APPSVR)

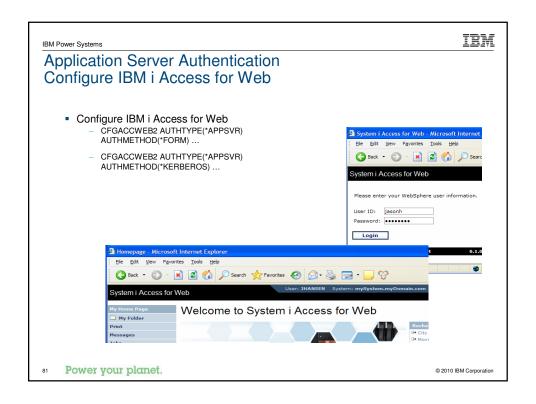
76 Power your planet.

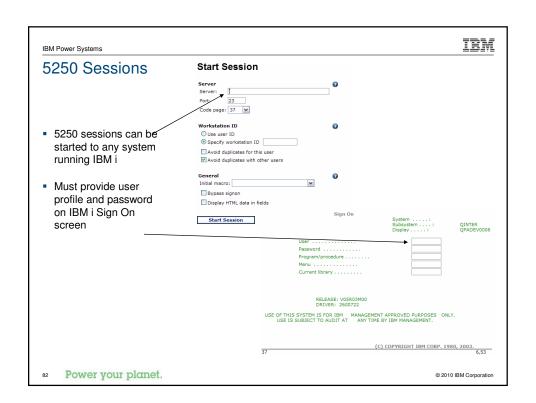


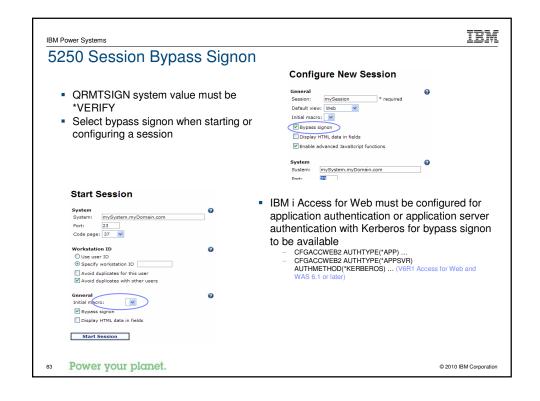


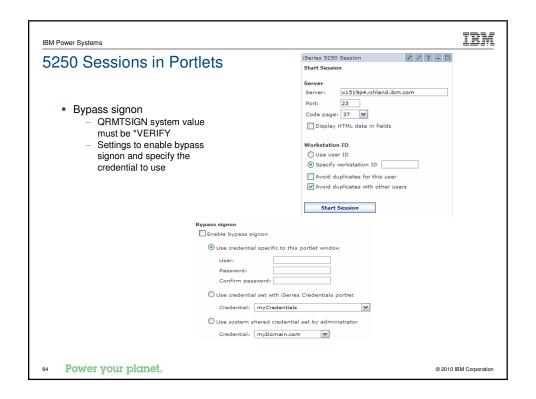












Try out Access for Web for yourself!

Start your browser and connect to the following web site:

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

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

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

85 Power your planet.

© 2010 IBM Corporation

IBM

IBM Power Systems

Special notices

This document was developed for IBM offerings in the United States as of the date of publication. IBM may not make these offerings available in other countries, and the information is subject to change without notice. Consult your local IBM business contact for information on the IBM offerings available in your area.

Information in this document concerning non-IBM products was obtained from the suppliers of these products or other public sources. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

IBM may have patents or pending patent applications covering subject matter in this document. The furnishing of this document does not give you any license to these patents. Send license inquires, in writing, to IBM Director of Licensing, IBM Corporation, New Castle Drive, Armonk, NY 10504-1785 USA.

All statements regarding IBM future direction and intent are subject to change or withdrawal without notice, and represent goals and objectives only.

The information contained in this document has not been submitted to any formal IBM test and is provided "AS IS" with no warranties or guarantees either expressed or implied.

All examples cited or described in this document are presented as illustrations of the manner in which some IBM products can be used and the results that may be achieved. Actual environmental costs and performance characteristics will vary depending on individual client configurations and conditions.

IBM Global Financing offerings are provided through IBM Credit Corporation in the United States and other IBM subsidiaries and divisions worldwide to qualified commercial and government clients. Rates are based on a client's credit rating, financing terms, offering type, equipment type and options, and may vary by country. Other restrictions may apply. Rates and offerings are subject to change, extension or withdrawal without notice.

IBM is not responsible for printing errors in this document that result in pricing or information inaccuracies.

All prices shown are IBM's United States suggested list prices and are subject to change without notice; reseller prices may vary.

IBM hardware products are manufactured from new parts, or new and serviceable used parts. Regardless, our warranty terms apply.

Any performance data contained in this document was determined in a controlled environment. Actual results may vary significantly and are dependent on many factors including system hardware configuration and software design and configuration. Some measurements quoted in this document may have been made on development-level systems. There is no guarantee these measurements will be the same on generally-available systems. Some measurements quoted in this document may have been estimated through extrapolation. Users of this document should verify the applicable data for their specific environment.

Revised September 26, 2006

86 Power your planet.

IBM IBM Power Systems

Special notices (cont.)

IBM, the IBM logo, ibm.com AIX, AIX (logo), AX 6 (logo), AS/400, Active Memory, BladeCenter, Blue Gene, CacheFlow, ClusterProven, DB2, ESCON, I5/OS, (logo), IBM Business Partner (logo), IntelliStation, Load Leveler, Lotus, Lotus Notes, Operating System/400, OS/400, PartnerLink, PartnerWorld, PowerPC, pSeries, Rational, RISC System/600, RS/6000, THINK, Twoli, Twoli Management Environment, WebSphere, xSeries, 2/OS, zSeries, AIX SL, Chiphopper, Chipkilli, Cloudscape, DB2 Universal Database, DS4000, DS6000, D

The Power Architecture and Power.org wordmarks and the Power and Power.org logos and related marks are trademarks and service marks licensed by Power.org. UNIX is a registered trademark of The Open Group in the United States, other countries or both. Linux is a registered trademark of Linus Torvalds in the United States, other countries or both.

Microsoft, Windows and the Windows logo are registered trademarks of Microsoft Corporation in the United States, other countries or both.

Intel, Itanium, Pentium are registered trademarks and Xeon is a trademark of Intel Corporation or its subsidiaries in the United States, other countries or both.

AMD Opteron is a trademark of Advanced Micro Devices, Inc.

AMD Opteron is a trademark of Advanced Micro Devices, Inc.

Java and all Java-based trademarks and logos are trademarks of Sun Microsystems, Inc. in the United States, other countries or both.

TPC-C and TPC-H are trademarks of the Transaction Performance Processing Council (TPPC).

SPECInt, SPECIp, SPECiphs, SPECWeb, SPECiAppServer, SPEC OMP, SPECviewpert, SPECapc, SPECipm, SPECipm, SPECmail, SPECimap and SPECsts are trademarks of the Standard Performance Evaluation Corp (SPEC).

NetBench is a registered trademark of Ziff Davis Media in the United States, other countries or both.

AlliVec is a trademark of Freescale Semiconductor, Inc.
Cell Broadband Engine is a trademark of Sony Computer Entertainment Inc.
InfiniBand, InfiniBand Trade Association and the InfiniBand of Sony Computer Entertainment Inc.
Other company, product and service names may be trademarks or service marks of others.

Revised February 9, 2010

Power your planet.