



Deep Dive Into System i Access for Web Session 2: Configuration and Controlling Access

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<http://www.ibm.com/systems/i/software/access/web>

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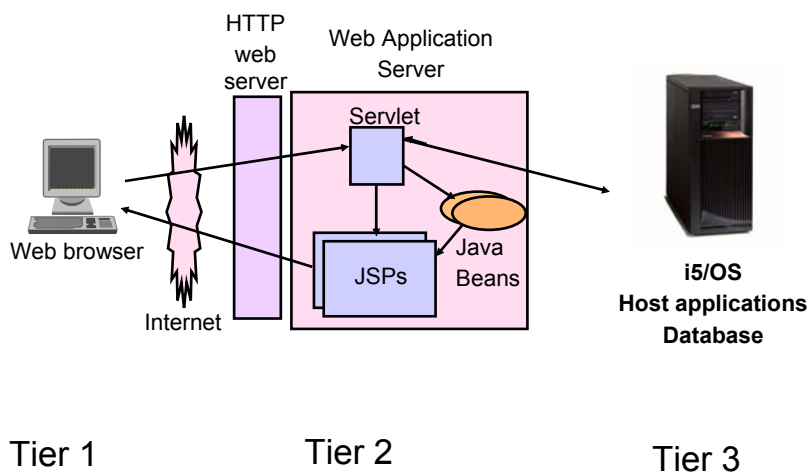


Agenda

- Part 1: Installation and Configuration
 - Hardware and software requirements
 - Supported web serving environments
 - Configuration steps
- Part 2: Runtime Considerations
 - Use of policies
 - Customizing the home page/template files

Part 1: Installation and Configuration

First you need a web-serving environment



Pieces of the web-serving environment

- HTTP Server (powered by Apache)
 - Front door for your system into your web serving environment
 - HTTP/HTTPS (SSL)
 - Listens for web requests on a specific TCP/IP port
 - Routes web requests between an end-user browser and a web application sever
- Web application server
 - WebSphere Application Server
 - Integrated Web application server
 - Provides a java virtual machine environment where web applications run
- Web application
 - System i Access for Web
 - Provides specific function that users access using a web browser
 - Deployed/installed within a web application server
- WebSphere Portal/Workplace
 - Web application deployed to WebSphere Application Server
 - Provides environment in which portlets are deployed and run.

Supported Web Application Servers

System i Access for Web **servlet** code can be used with any of the following web application servers:

System i Access for Web **portlet** code can be used with any of the following portal servers.

V6R1 System i Access for Web

- Integrated Web application server
- WebSphere® Application Server V6.1 and V6.0 – Express for i5/OS
- WebSphere Application Server V6.1 and 6.0 Base and Network Deployment

V6R1 System i Access for Web

- WebSphere Portal for Multiplatforms V6.0
- WebSphere Portal for Multiplatforms V5.1.0.1

V5R4 System i Access for Web

- Integrated Web application server
- WebSphere® Application Server V6.1 and V6.0 – Express for i5/OS
- WebSphere Application Server V6.1 and 6.0 Base and Network Deployment
- WebSphere Application Server V5.1 - Express for iSeries
- WebSphere Application Server V5.0 - Express
- WebSphere Application Server V5.1 and 5.0 Base and Network Deployment Editions
- ASF Tomcat

V5R4 System i Access for Web

- IBM Workplace Services Express V2.6 (V5R4 iSeries Access for Web)
- IBM Workplace Services Express V2.5
- WebSphere Portal for Multiplatforms V6.0
- WebSphere Portal for Multiplatforms V5.1.0.1
- WebSphere Portal Express for Multiplatforms V5.0.2
- WebSphere Portal Express Plus for Multiplatforms V5.0

Performance...???

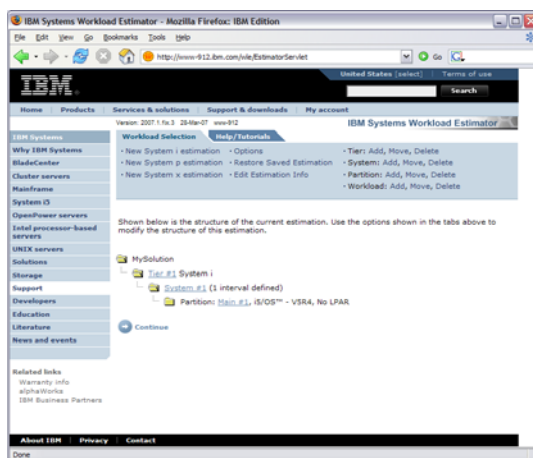
- Does running System i Access for Web affect performance?
 - Products like System i Access for Web don't put much load on i5/OS...

- How does the web application server affect performance?
 - If you have an older, under-powered System i, then performance may not be good...if you have a newer, bigger System i, then performance won't be an issue (unless you already are running your System i at maximum capacity).
 - Use the **IBM Systems Workload Estimator** to see what performance will be if WAS is added to your System i at: <http://www-912.ibm.com/wle/EstimatorServlet>
 - There is a Workload Estimator for **WebFacing** Workloads. System i Access for Web will be similar (depending on what functions of System i Access for Web are being used).

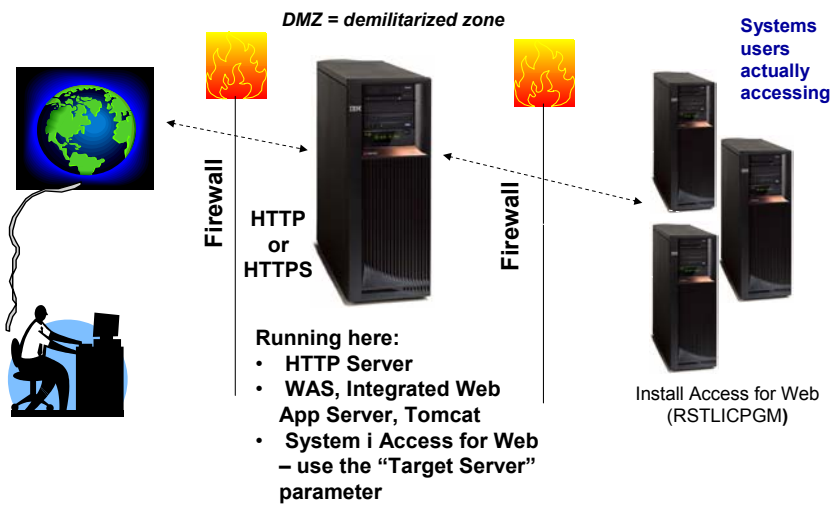
- Fine-tuning your web application server
 - If performance is not as good as expected, look in the WebSphere Information Center
 - <http://publib.boulder.ibm.com/infocenter/wasinfo/v6r1/index.jsp?topic=/com.ibm.websphere.base.iseries.doc/info/iseres/ae/welc6topinstalling.html>

Performance Considerations...

Use the **IBM Systems Workload Estimator** at
<http://www-912.ibm.com/wle/EstimatorServlet>



Setting up your web application server



Only need to set up 1 web application server

Port Requirements Comparison

System i Access for Windows
(5722-XE1)* (5761-XE1)

System i Access for Web
(5722-XH2) (5761-XH2)

- 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 389 (636) for LDAP
- Port 5555 (5566) for Mgmt Central
- Port 53 if using DNS Server

- Port 80 (or any other port) for HTTP Server
- Port 443 (or any other port) for HTTPS Server

***See Information APAR II12227 for detailed information**

Hardware/Software Requirements



Client Browser Requirements


- These browsers have been tested with **V6R1** System i Access for Web:
 - Firefox 2.0 (Windows® and Linux®)
 - Internet Explorer 6.0 with Service Pack 1 (Windows)
 - Internet Explorer 7.0 Windows)
 - Mozilla 1.7 (Windows, Linux, and AIX®)
 - Opera 9.2 (Windows and Linux)
- These browsers have been tested with **V5R4** System i Access for Web:
 - Firefox 1.0.2 (Windows, Linux)
 - Internet Explorer 6.0 with Service Pack 1 (Windows)
 - Opera 7.54 (Windows, Linux)
 - Mozilla 1.7 (Windows, Linux, AIX)
 - Other browsers that support the current HTTP and HTML specifications should work, but have not been tested with System i Access for Web.

- **Set browser to allow 'Cookies'**

- **System i Access for Web requires that the web browser allow cookies. Set the cookie configuration option to allow cookies.**



i5/OS Software Requirements

Product Number	Product Name	Option	\$
5722-SS1 5761-SS1	V5R4 System i Access for Web: V5R3 or V5R4 i5/OS V6R1 System i Access for Web: V5R4 or V6R1 i5/OS	Base	w/HW
57xx-SS1	i5/OS - Extended Base Directory Support	3	N/C
 57xx-SS1	i5/OS - AFP Compatibility Fonts	8	N/C
57xx-SS1	i5/OS - Host Servers	12	N/C
57xx-SS1	i5/OS QShell Interpreter	30	N/C
57xx-SS1	If you plan to use Secure Sockets Layer (SSL)... • i5/OS Digital Certificate Manager • Cryptographic Service Provider	34 35	N/C N/C
57xx-DG1	IBM HTTP Server for iSeries	Base	N/C
57xx-JV1	Developer Kit for Java Developer Kit for Java Version 1.3 Developer Kit for Java Version 1.4 Developer Kit for Java Version 5.0 J2SE 5.0 32 bit (Check WebSphere doc for required version)	Base 5 6 7 8	N/C N/C N/C N/C
57xx-JC1	Toolbox for Java	Base	N/C
57xx-TC1	TCP/IP Connectivity Utilities for iSeries	Base	N/C

Note: xx = "22" for V5R4, "61" for V6R1



i5/OS Software Requirements (continued)

Product Number	Product Name	Option	\$
57xx-XW1	System i Access Family	Base	\$
57xx-XH2	System i Access for Web • Ships with 57xx-XW1 iSeries Access Family • V5R4 System i Access for Web runs on i5/OS V5R3 and V5R4 • V6R1 System i Access for Web runs on i5/OS V5R4 and V6R1	Base	part of XW1
5722-IP1	IBM Info Print Server (Optional) -- enables best PDF output but is not required to view PDF output)	Base	\$

Note: xx = "22" for V5R4, "61" for V6R1

i5/OS Software Requirements (continued)

Product Number	Product Name	Option	\$
5733-W61 5733-W60 5722-E51 5733-W51 5722-IWE 5733-WS5	<p>One, or more, of the following web servers</p> <ul style="list-style-type: none"> • WebSphere Application Server V6.1 for i5/OS (all three editions) • WebSphere Application Server V6.0 for OS/400 (all three editions) • WebSphere Application Server V5.1 - Express for iSeries • WebSphere Application Server V5.1 for iSeries (Base and ND) • WebSphere Application Server V5.0 - Express for iSeries • WebSphere Application Server V5.0 for iSeries (Base and ND) 	See documentation	
57xx-DG1	<ul style="list-style-type: none"> • integrated Web application server • Apache Software Foundation Tomcat 		
• • • •	<ul style="list-style-type: none"> • WebSphere Portal for iSeries (Express and Express Plus) V5.0.2.2 • WebSphere Portal Enable for Multiplatforms V5.1.0.1 • WebSphere Portal V6.0 • IBM Workplace Services Express V2.5, V2.6 		

Note: xx = "22" for V5R4, "61" for V6R1

Refer to the documentation for the individual web serving environments additional requirements that may not be listed above.

- | | |
|-------------------|---|
| – WebSphere | http://www.ibm.com/systems/i/software/websphere/index.html/ |
| – Portal V5.0.2.2 | http://publib.boulder.ibm.com/pvc/wp/502/smbi/en/InfoCenter/index.html |
| – Portal V5.1.0.1 | http://publib.boulder.ibm.com/infocenter/wp51help/index.jsp |
| – Portal V6.0 | http://publib.boulder.ibm.com/infocenter/wpdoc/v6r0/index.jsp |
| – Workplace V2.5 | http://publib.boulder.ibm.com/infocenter/wseic/v2r5/index.jsp |
| – Workplace V2.6 | http://publib.boulder.ibm.com/infocenter/wseic/v2r6/index.jsp |
| – ASF Tomcat | http://www.ibm.com/systems/i/software/http/index.html/ |

System i Hardware Requirements

Models/Processor features/Memory

Refer to the web application server documentation to determine what server models, processor features, and the memory requirements are for your web serving environment

- WebSphere Application Server
 - <http://www.ibm.com/systems/i/software/websphere/index.html/>
- ASF Tomcat
 - <http://www.ibm.com/systems/i/software/http/index.html/>
- WebSphere Portal Express/Express Plus for iSeries V5.0.2.2
 - <http://publib.boulder.ibm.com/pvc/wp/502/smbi/en/InfoCenter/index.html>
- WebSphere Portal V5.1.0.1
 - <http://publib.boulder.ibm.com/infocenter/wp51help/index.jsp>
- WebSphere Portal V6.0
 - <http://publib.boulder.ibm.com/infocenter/wpdoc/v6r0/index.jsp>
- Workplace Services Express V2.5
 - <http://publib.boulder.ibm.com/infocenter/wseic/v2r5/index.jsp>
- Workplace Services Express V2.6
 - <http://publib.boulder.ibm.com/infocenter/wseic/v2r6/index.jsp>

Server disk space

- 470MB
- 365MB

Software product

- V5R4 System i Access for Web
- V6R1 System i Access for Web

System i Access for Web - Web Serving Environments Supported



3 Options for setting up the Access for Web environment

1. Integrated Web application server
 - Simplest to set up
 - Preconfigured HTTP web server
 - User created instances
2. Express Runtime Web Environments
 - All components provided in a single package
 - Greatly simplifies the complexity of the environment
 - Most automated
 - Running web environment when installation completes
 - Desktop icon linking to the deployed web environment
3. Step by Step
 - Greatest flexibility
 - Choice of **WebSphere Application Server** version
 - May already have components on your system



1. Integrated Web Application Server

- Simplest to set up
- Preconfigured HTTP web server
- User created instances



What is it, does System i Access for Web support it?

- What is the i5/OS integrated Web application server?
 - A web application engine much like ASF Tomcat
 - Uses minimal system resources, similar to ASF Tomcat
 - Minimal effort by an Administrator to maintain
 - Administrative instance with preconfigured HTTP web server
 - User created instances
 - V5R4 is the last release i5/OS will contain ASF Tomcat
- How is it packaged?
 - With i5/OS
 - 57xx-DG1 IBM HTTP Server for i5/OS
 - Available in PTF package/group
 - V6R1 GA Cumulative PTF package
 - V5R4 SF99114 latest available level
 - V5R3 SF99099 latest available level
- System i Access for Web support
 - V5R4 System i Access for Web supports only the Administrative instance
 - V6R1 System i Access for Web supports
 - Administrative instance
 - User created instances



To use System i Access for Web in this environment

Administrative instance and preconfigured HTTP web server

1. Stop the Web Administration for i5/OS
 - ENDTCPSVR SERVER(*HTTP) HTTPSVR(ADMIN)
2. Load/apply latest PTFs (review cover letters for any additional information)
 - V6R1 GA cumulative PTF package
 - V5R4 SF99114 group for product 5722-DG1
 - V5R3 SF99099 group for product 5722-DG1
3. Load/apply latest System i Access for Web PTF
 - V6R1 SI29664 or later
 - V5R4 SI29607 or later
4. Configure System i Access for Web
 - QSH
 - cd /QIBM/ProdData/Access/Web2/install
 - cfgaccweb2 -appsvrtype *INTAPPSVR
5. Start the Web Administration for i5/OS
 - STRTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN)
6. Start preconfigured HTTP web server
 - STRTCPSVR SERVER(*HTTP) HTTPSVR(IWADFT)
7. Open a browser to System i Access for Web using preconfigured HTTP port
 - http://>system_name>:2020/webaccess/iWAMain
8. Done!



To use System i Access for Web in this environment

User-created instance and HTTP web server (requires use of V6R1 System i Access for Web on V5R4 or V6R1 i5/OS)

1. Load/apply latest PTFs (review cover letters for any additional information)
 - V6R1 GA cumulative PTF package
 - V5R4 SF99114 group for product 5722-DG1
2. Load/apply latest **V6R1** System i Access for Web PTF
 - V6R1 SI29664 or later
3. Start the Web Administration for i5/OS
 - STRTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN)
4. Use the Web Administration for i5/OS wizard to create an instance of the integrated Web application server and an HTTP web server.
 - http://<system_name>:2001/HTTPAdmin
5. Configure System i Access for Web
 - QSH
 - cd /QIBM/ProdData/Access/Web2/install
 - cfgaccweb2 -appsvrtype *INTAPPSVR -instance <instance_name>
6. Start integrated Web application server and HTTP web server using the Web Administration for i5/OS interface.
 - http://<system_name>:2001/HTTPAdmin
7. Open a browser to System i Access for Web using HTTP port you specified
 - http://>system_name>:<port>/webaccess/iWAMain
8. Done!

Integrated Web application server

Questions regarding the integrated
Web application server option?



2. Web Enable Feature – Express Runtime Environment

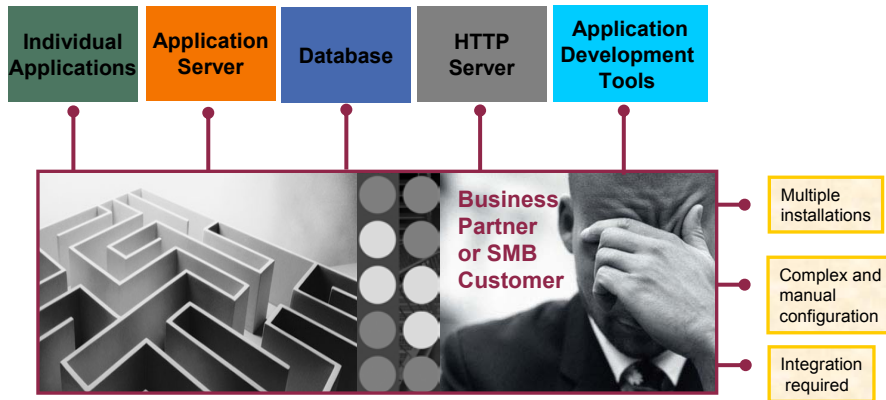


- All components provided in a single package
- Greatly simplifies the complexity of the environment
- Most automated
- Running web environment when installation completes
- Desktop icon linking to the deployed web environment

What is the problem?

The complexity of the web-serving environment

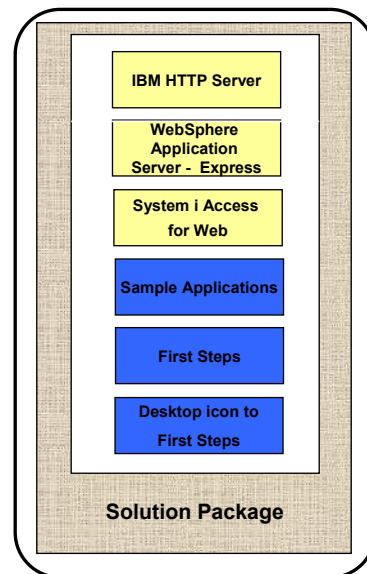
- Several parts/pieces to install
- Can be challenging to configure all the parts/pieces



What is the solution?

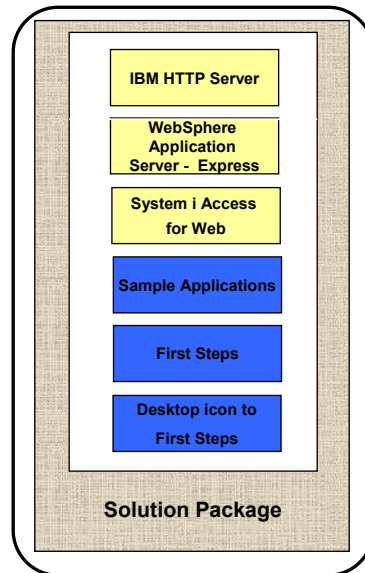
- Put all the parts/pieces into a single package

- Middleware components
 - HTTP web server
 - WAS Express 6.x
 - System i Access for Web
 - PTFs are included
- Sample applications – modernizing an RPG application (flight400) using the following technologies:
 - HATS, WebFacing, Web Services
- First Steps
 - Web page with links to System i Access for Web, Samples, web administration, Information
- Getting Started Document
- Deployment help text
- Product licenses



What is the solution? (continued)

- Make the package easily deployable
 - Easy to use wizard run from Windows workstation
 - Middleware is uploaded, installed/configured
 - System i Access for Web is set up
 - Sample applications are set up
 - FirstSteps webpage is deployed
 - Web-serving environment is ready for immediate use
 - Desktop icon to FirstSteps web page



Target Audience

- i5/OS customers and partners
 - Anyone wanting/needing a simple way to setup web-serving on their i5/OS
- Users of the following:
 - [System i Access for Web](#) – end user web browser access to i5/OS resources
 - WDHT / HATS / WebFacing applications
 - J2EE web applications (JSF, JSP, servlets, EJBs, etc)
 - SOA applications (web services, including RPG/COBOL integration)
 - Demo of an application modernized using SOA, HATs and WebFacing
- Partners
 - Modify a similar solution to include their applications
 - Obtain SAT and source from PartnerWorld
 - Rebuild solution to include their application



Packaging/Ordering

Express Runtime Web Environments 5722-WE2 5761-WE2

Can also be ordered separately

– No-charge feature of 5722-WE2 Web Enablement for i5/OS

- Order feature 5905 for CDs
- Order feature 5906 for a DVD

- V5R4 i5/OS
 - 5722-WE2 V1R1M0 = WAS 6.0.2.9 & V5R4 System i Access for Web
 - 5722-WE2 V1R2M0 = WAS 6.1.0.11 & V5R4 System i Access for Web
- V6R1 i5/OS
 - 5761-WE2 V1R1M0 = WAS 6.1.0.11 & V6R1 System i Access for Web
- Ships with all i5/OS orders
 - V5R4 – ships CDs, DVD is orderable
 - V6R1 – ships DVDs
 - All media contained in a single shrink wrapped package
- Packaged along with WebSphere Application Server - Express product CDs
 - Label on package identifies the two products and their purposes
 - Products identified on media labels
 - Look for DVD labeled: Express Runtime Web Environments V1R1, contains everything you need

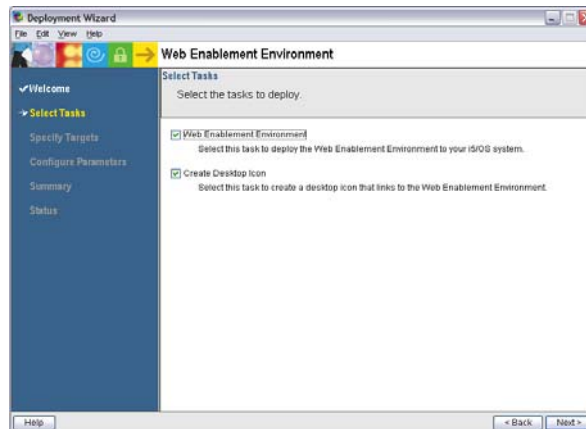


Installation/Setup Process

- Read the ReadMe packaged with the product
 - Verify requirements for Windows workstation and i5/OS system
- From a Windows workstation, launch the deployment wizard
 - Provide credentials
 - Specify i5/OS system to deploy
 - Name the HTTP web server, WebSphere profile/application server, ports
 - Optionally a backend i5/OS for System i Access for Web to connect
- Deployment wizard runs
 - Pushing middleware from workstation/media to the i5/OS system
 - Installs/configures middleware
 - Install/configures System i Access for Web, sample applications, FirstSteps web page
 - Creates desktop icon on Windows workstation
- Deployment wizard complete
 - Click desktop icon named Web_Enablement_Environment_V5R4M0 or Web_Enablement_Environment_V6R1M0
 - FirstSteps webpage provides links to web environment, System i Access for Web, sample applications
 - Administrator can then distribute web browser URL to users
 - GO LICPGM will list
 - 5733-SO1 Base Express Runtime Web Environments
 - 5733-SO1 1 Web Enablement Environment

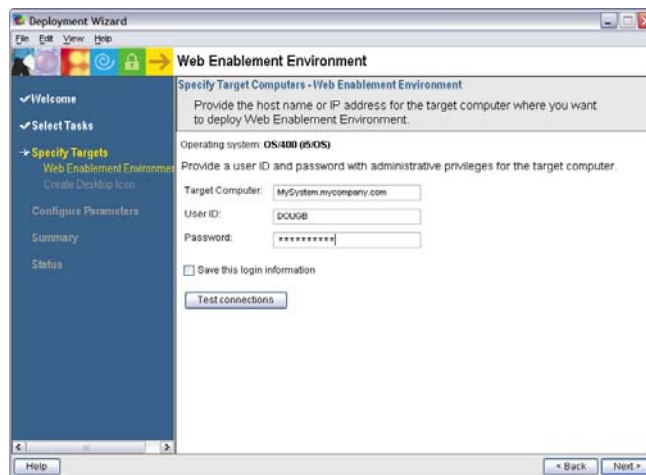
Demonstration

Launch the wizard. Deploy the web environment and create the desktop icon to the FirstSteps webpage



Demonstration (continued)

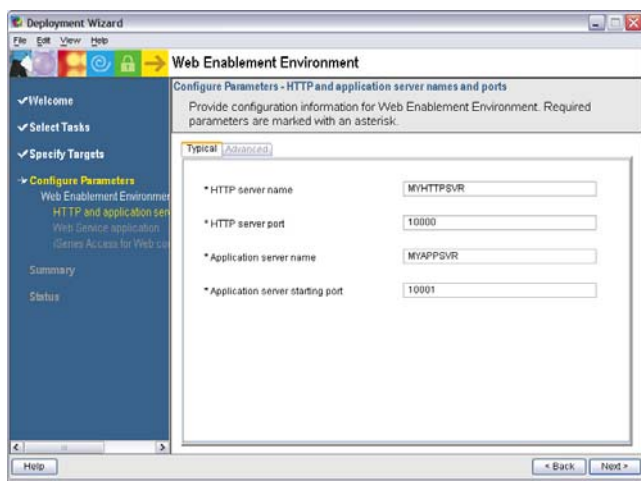
Name of **i5/OS** system to deploy the environment to



Demonstration (continued)

Name the **HTTP** web server and it's port

Name the **WebSphere** profile/app server and it's port range



Questions regarding the Express Runtime Web Environments option?



3. Step by Step



- Greatest flexibility
- Choice of WebSphere Application Server version
- May already have components on your system

Formula for successful setup and configuration

You need to do the following in this order:

1. Decide what web application server environment to run
2. Install System i Access for Web on your i5/OS system
3. Verify, load, apply any additional PTFs
 - Cumulative PTF package
 - WebSphere, HTTP web server for i5/OS, integrated Web application server
 - System i Access for Web
4. Setup web-serving environment
5. Configure System i Access for Web
6. Verify the installation and configuration

Information resources:

- These steps are detailed in System i Access for Web InfoCenter information
- Examples at <http://www.ibm.com/systems/i/software/access/web/doc.html>

Decide what web application server environment to run



Which web application server environment?

System i Access for Web can be deployed to a variety of web serving environments.

– Servlets

- Integrated Web application server
- WebSphere Application Server V6.1 for i5/OS (Express, Base, Network Deployment)
- WebSphere Application Server V6.0 for OS/400 (Express, Base, Network Deployment)
- WebSphere Application Server V5.1 - Express for iSeries
- WebSphere Application Server V5.1 for iSeries (Base and Network Deployment)
- WebSphere Application Server V5.0 - Express for iSeries
- WebSphere Application Server V5.0 for iSeries (Base and Network Deployment)
- ASF Tomcat
 - ASF Tomcat is delivered within the IBM HTTP Server for i5/OS product (5722-DG1)
 - V5R4 i5/OS is last release for ASF Tomcat on i5/OS

– Portlets

- IBM WebSphere Portal – Express/Express Plus for Multiplatforms V5.0.2.2
- IBM WebSphere Portal Enable for Multiplatforms V5.1.0.1
- IBM WebSphere Portal V6.0
- IBM Workplace Services Express V2.5, V2.6

Install System i Access for Web on your i5/OS system



Install System i Access for Web on your i5/OS system



Installing System i Access for Web

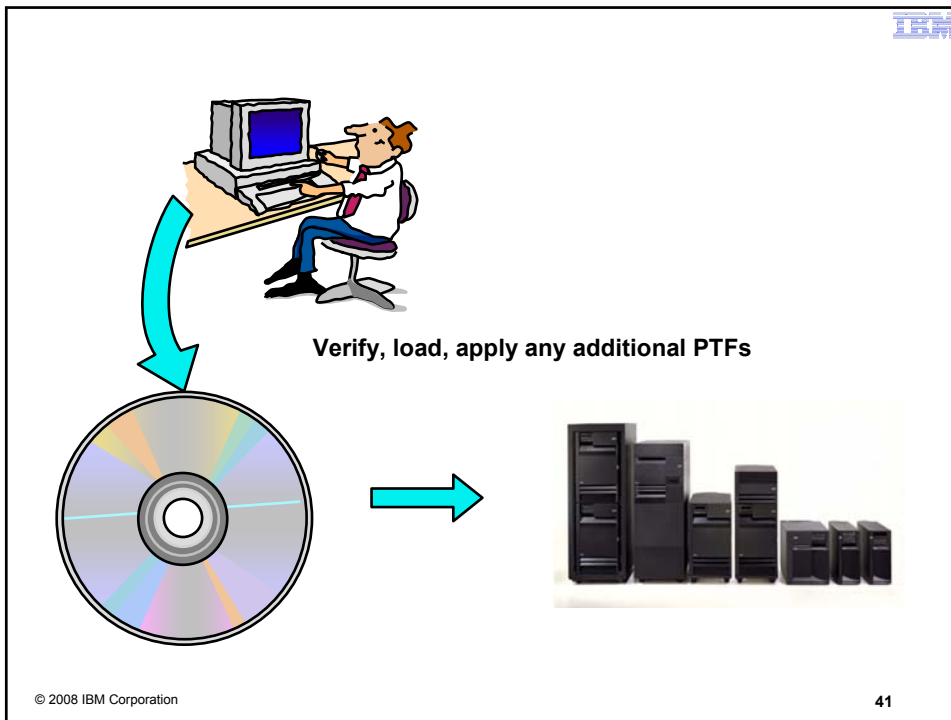
- Use the RSTLICPGM command to restore (install) the licensed program
- RSTLICPGM LICPGM(5722XH2) DEV(OPT01) OPTION(*BASE) - V5R4 version
- RSTLICPGM LICPGM(5761XH2) DEV(OPT01) OPTION(*BASE) - V6R1 version

The restore will...

- Create library QIWA2 and objects in QIWA2
- Create file system directories
 - /QIBM/ProdData/Access/Web2/...
 - /QIBM/UserData/Access/Web2/...
- Set basic ownership/authorities for library and file system objects

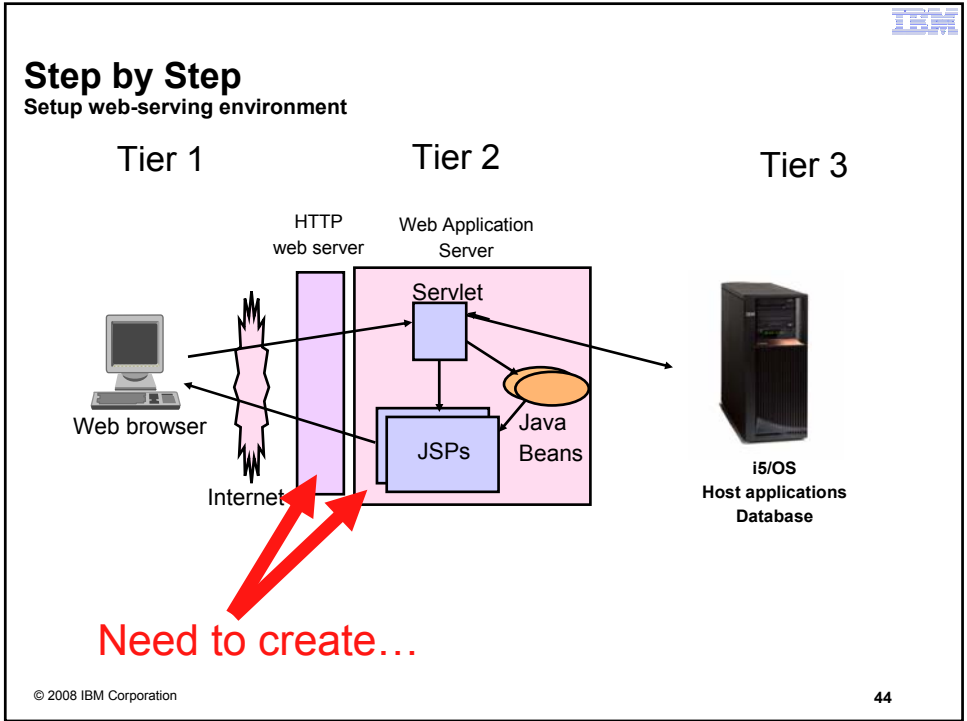
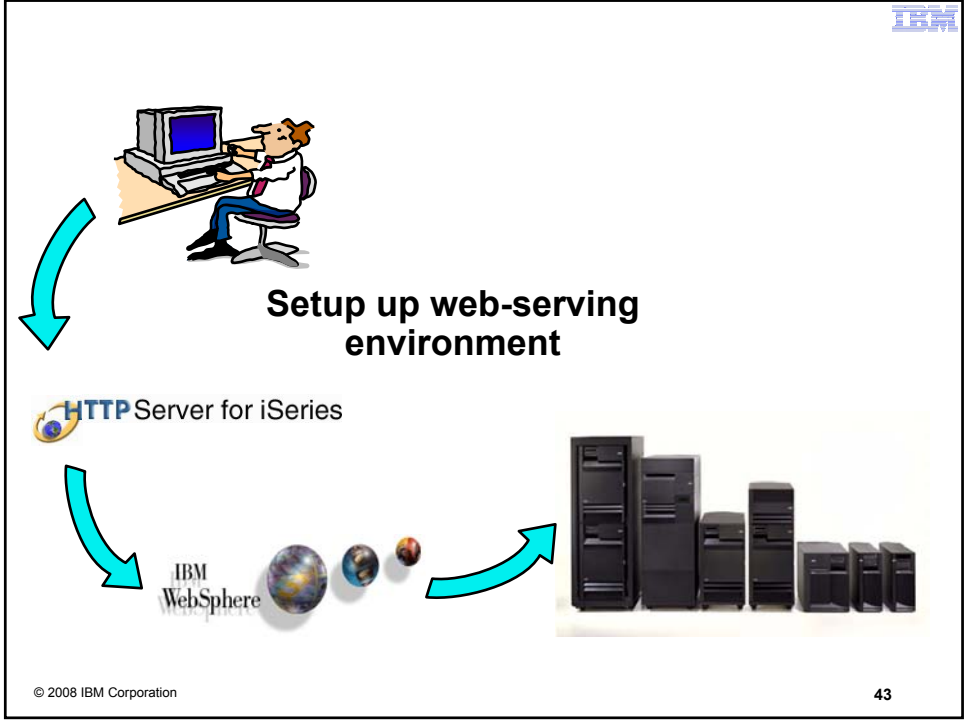
The restore will not...

- Make any changes to HTTP web server configurations
- Make any changes to web application server configurations
- Enable use of System i Access for Web



Verify, load, apply any additional PTFs

- Each component of the web application serving environment has PTFs
 1. WebSphere Application Server
 - <http://www.ibm.com/systems/i/software/websphere/index.html>
 2. Integrated Web application server
 - <http://www.ibm.com/systems/i/software/http/index.html>
 3. i5/OS Cumulative PTF package
 4. HTTP web server
 - <http://www.ibm.com/systems/i/software/http/index.html>
 5. WebSphere Portal/Workplace Services Express
 - Refer to the Portal and Workplace Information Center documentation
 6. System i Access for Web
 - <http://www.ibm.com/systems/i/software/access/web/servicepacks.html>
- PTFs for the above components should be verified and updated as needed



Notes: Set up web-serving environment

- HTTP web server
 - Front door for into your web serving environment
 - HTTP/HTTPS (SSL)
 - Listens for web requests on a specific TCP/IP port
 - An HTTP server is configured to "talk" to a specific web application server
 - Routes web requests between end-user browser and a web application server

- WebSphere web application server (WAS)
 - Profiles (instances) are created containing a web application server
 - The web application server provides an environment for the deployment and management of web applications
 - Many different WAS versions can be installed and coexist on an i5/OS system
 - All web applications running within a web application server share the same name space.
 - You could create multiple profiles (instances) on a single i5/OS for the following reasons:
 - To create separate development environments for different developers. This allows them to have different versions of the same objects in their own name space.
 - To create separate development and test environments

Setup web-serving environment

Use IBM Web Administration for i5/OS

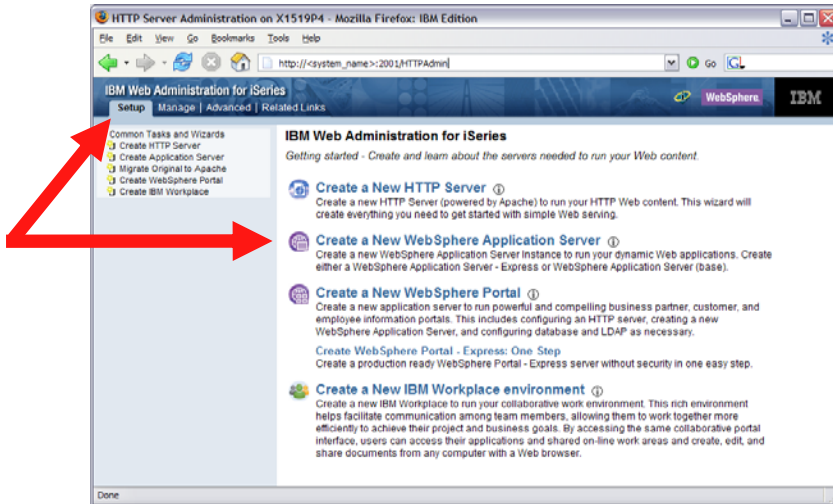
- Easy to use wizard that prompts for required information and does all the work

- STRTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN)

- `http://<system_name>:2001/HTTPAdmin`

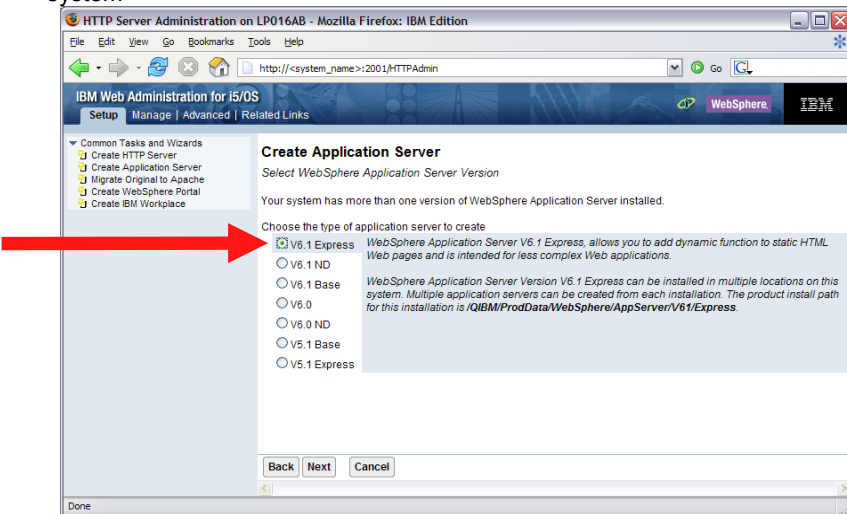
Setup web-serving environment (continued)

Setup → Create Application Server



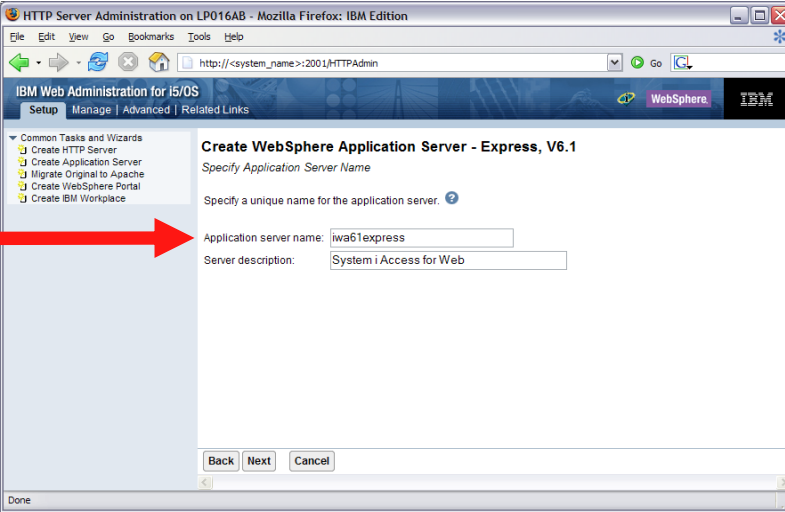
Setup web-serving environment (continued)

Select version of WebSphere Application Server of those installed on your system



Setup web-serving environment (continued)

Enter a name for the web application server, optionally a description



HTTP Server Administration on LP016AB - Mozilla Firefox: IBM Edition

IBM Web Administration for i5/OS

Setup | Manage | Advanced | Related Links

Common Tasks and Wizards

- Create HTTP Server
- Create Application Server
- Migrate Original to Apache
- Create WebSphere Portal
- Create IBM Workplace

Create WebSphere Application Server - Express, V6.1

Specify Application Server Name

Specify a unique name for the application server.

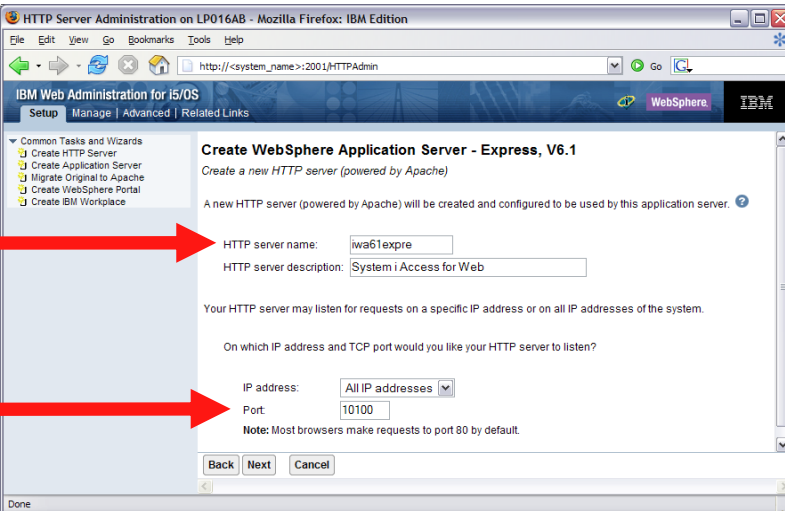
Application server name:

Server description:

Back Next Cancel

Setup web-serving environment (continued)

Enter name for HTTP server, optional description, port on which this HTTP server will listen



HTTP Server Administration on LP016AB - Mozilla Firefox: IBM Edition

IBM Web Administration for i5/OS

Setup | Manage | Advanced | Related Links

Common Tasks and Wizards

- Create HTTP Server
- Create Application Server
- Migrate Original to Apache
- Create WebSphere Portal
- Create IBM Workplace

Create WebSphere Application Server - Express, V6.1

Create a new HTTP server (powered by Apache)

A new HTTP server (powered by Apache) will be created and configured to be used by this application server.

HTTP server name:

HTTP server description:

Your HTTP server may listen for requests on a specific IP address or on all IP addresses of the system.

On which IP address and TCP port would you like your HTTP server to listen?

IP address:

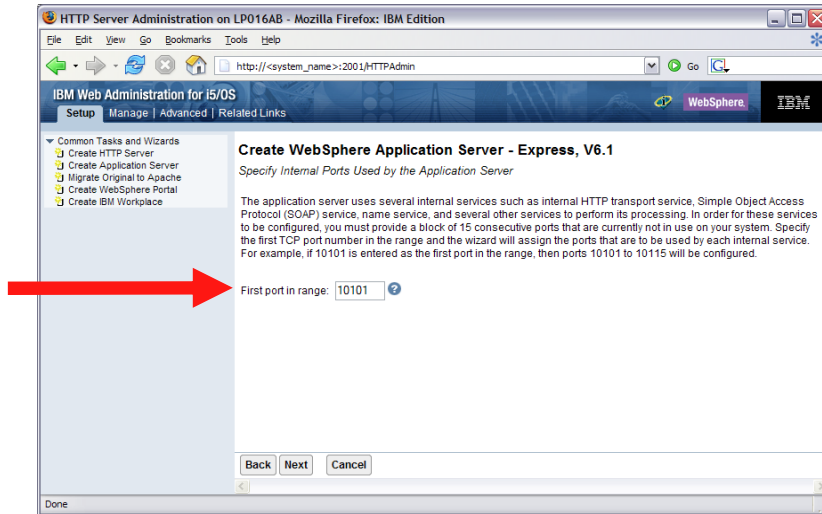
Port:

Note: Most browsers make requests to port 80 by default.

Back Next Cancel

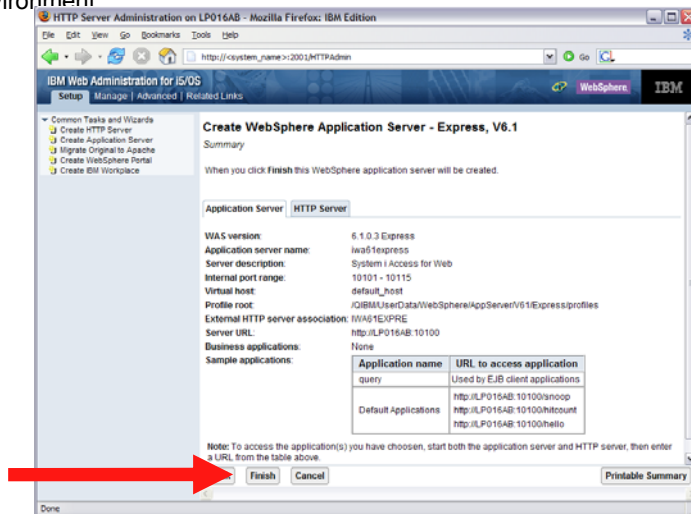
Setup web-serving environment (continued)

Enter first port in a range of available ports – the communication ports between the HTTP server and WAS



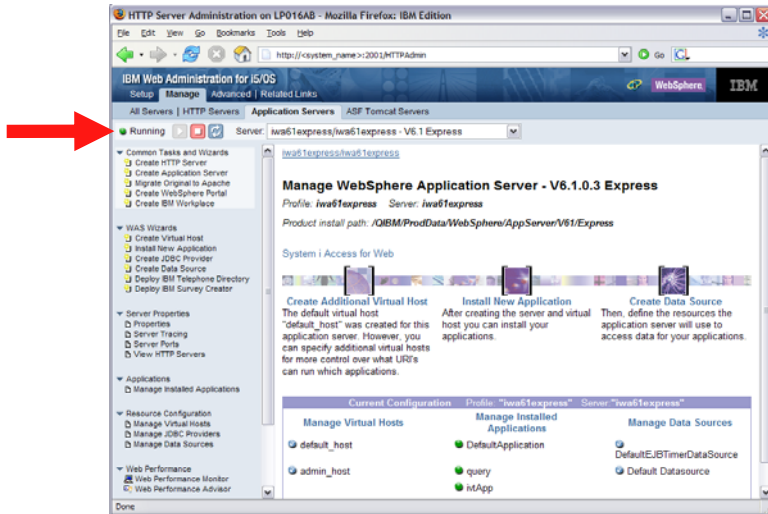
Setup web-serving environment (continued)

A few other steps in the wizard, then click Finish to create the web-serving environment



Setup web-serving environment (continued)

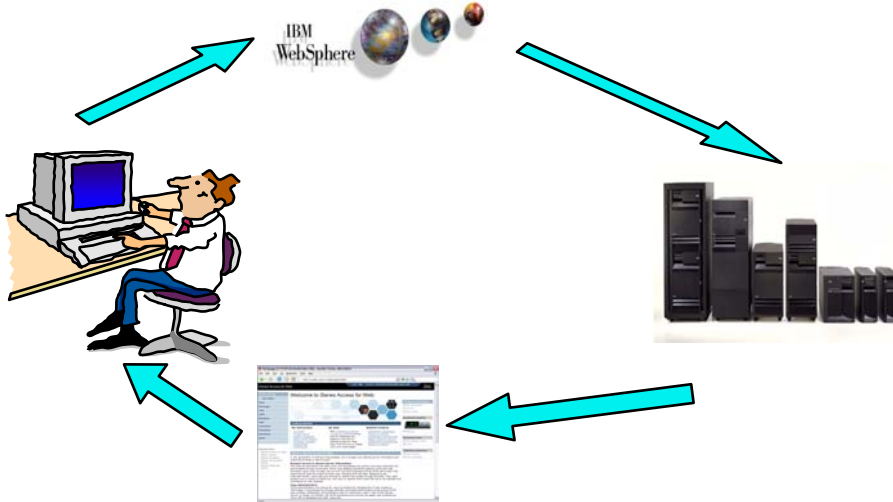
Environment is ready for configuratoin when status reaches Running



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Configure System i Access for Web



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Configure System i Access for Web

System i Access for Web must be deployed (configured) to a running web application server

System i Access for Web provides CL and QShell commands

- CL commands – QIWA2 library
 - CFGACCWEB2 Configure System i Access for Web
 - STRACCWEB2 Start System i Access for Web
 - ENDACCWEB2 End System i Access for Web
 - RMVACCWEB2 Remove System i Access for Web
- QShell - /QIBM/ProdData/Access/Web2/install
 - cfgaccweb2 Configure System i Access for Web
 - straccweb2 Start System i Access for Web
 - endaccweb2 End System i Access for Web
 - rmvaccweb2 Remove System i Access for Web

Commands are provided to...

- Ease the complexity of deploying a web application
- Check dependencies
- Invoke appropriate WebSphere tool to deploy a web application
- Perform additional required setup
- /QIBM/UserData/Access/Web2/... structure
- Allows for PTFs that make use of the normal i5/OS PTF tools

Configure System i Access for Web (continued)

Use available documentation →

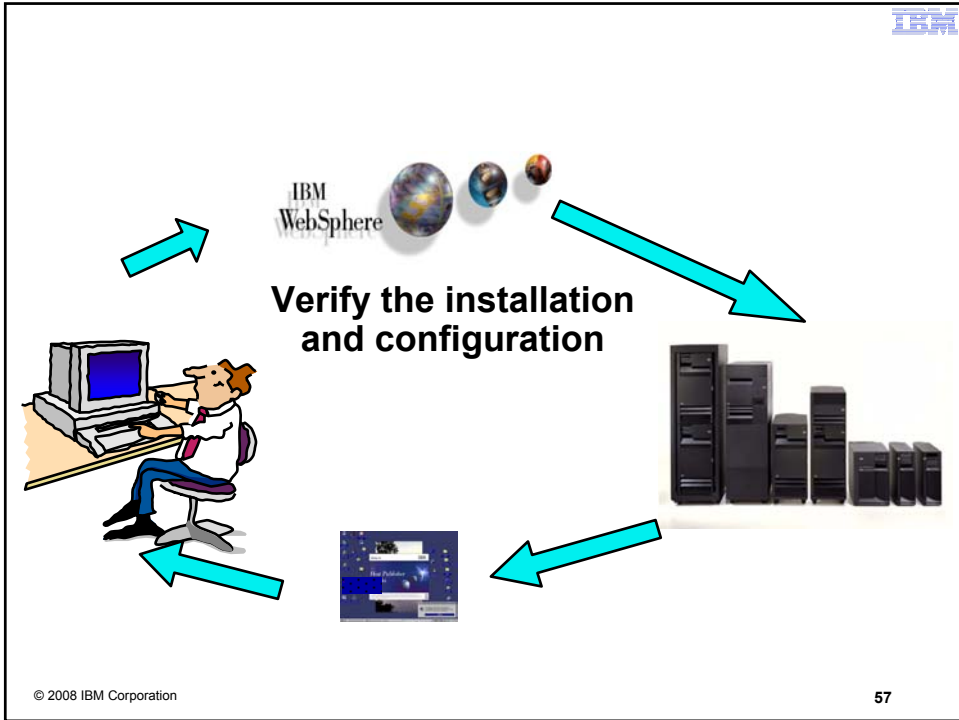
- System i Access for Web – Information Center
 - Place to start to get System i Access for Web installed and running

When the commands are run →

- The WebSphere web application server must be running before running the CFGACCWEB2 or RMVACCWEB2 commands
- The WebSphere web application server will need to be restarted after the CFGACCWEB2 or RMVACCWEB2 commands
 - No updates are made to the HTTP web server configuration.

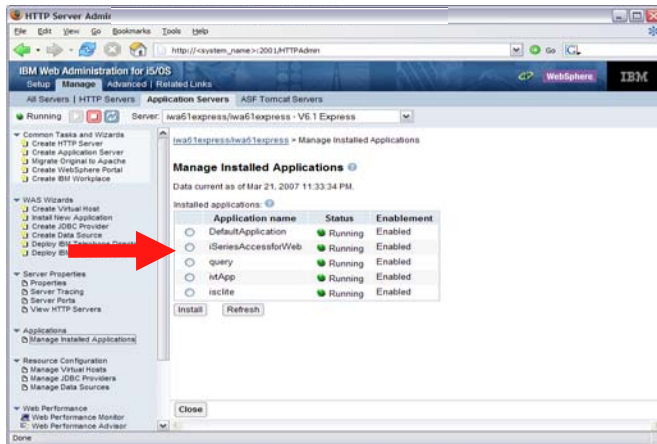
Notes

- **Do not use the web administration interface or WebSphere Admin console to configure (deploy) or remove System i Access for Web**
- **Do not attempt to migrate a WebSphere environment to another WebSphere environment when System i Access for Web is configured**



Verify the installation and configuration

IBM Web Administration for i5/OS → Applications → Manage Installed Applications





When things do not work

- Verify the HTTP web server is running
- Verify the WebSphere web application server was restarted after running CFGACCWEB2
- Verify the WebSphere web application server is running
- Verify you have the latest group PTFs for the HTTP web server and WebSphere Application Server.
- Verify that System i Access for Web is listed as an installed application in the WebSphere application server (via the IBM Web Administration for i5/OS interface)
- Look at System i Access for Web logs

High level translated log	/QIBM/UserData/Access/Web2/logs/cmds.log
Low level untranslated log	/QIBM/UserData/Access/Web2/logs/cmdstrace.log
Logs for specific WAS servers. Note: some logs may be EBCDIC requiring use of WRKLNK i5/OS command to view them	/QIBM/UserData/Access/Web2/logs/<appsvrtype>/<wasprf>/<appsvr>/logs/*

- Next, if needed, the doc will lead you to the WebSphere Application Server or Portal logs



Part 2: Runtime Considerations



Controlling Access

3 methods to control access using System i Access for Web

- **Administration Policies**
 - Administrators can use the Customize function to set policies for users and groups of users.

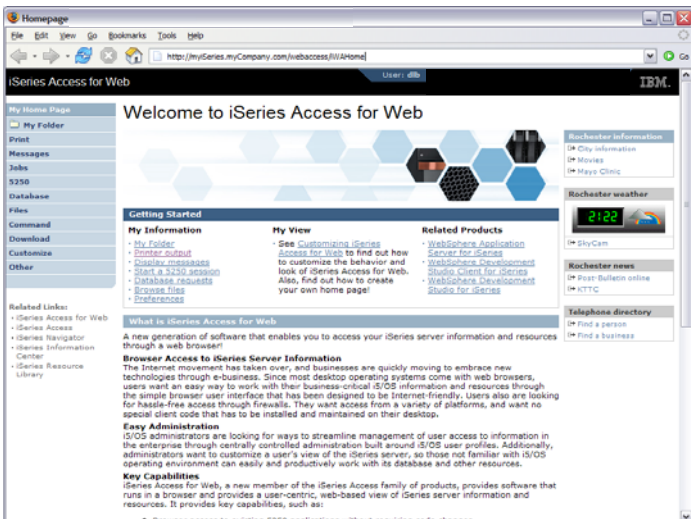
- **User Preferences**
 - Users can set their own Preferences for things like
 - What tabs are available in the navigation bar
 - How to view output (default rows/columns per page)
 - How to filter output

- **Customize the Home page and template files**
 - Administrators can use the Customize function to replace the default System 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 System i Access for Web pages
 - Style sheets - The look of the System i Access for Web page content is now controlled by external style sheets.



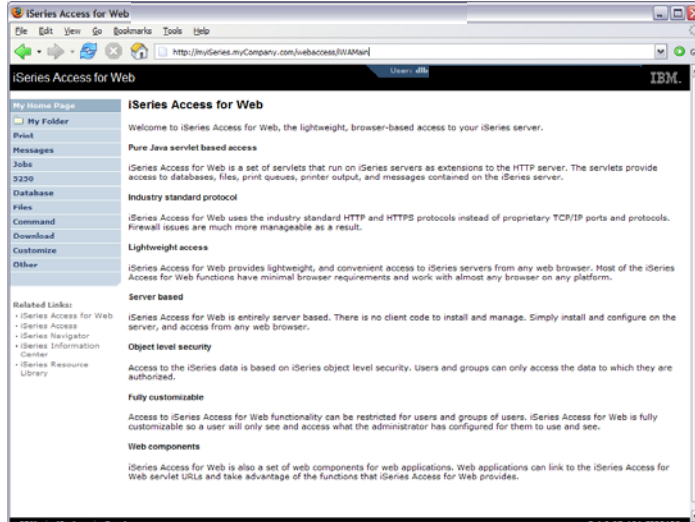
Controlling access

Home Page = <http://<myiseries>:<port>/webaccess/iWAHome>



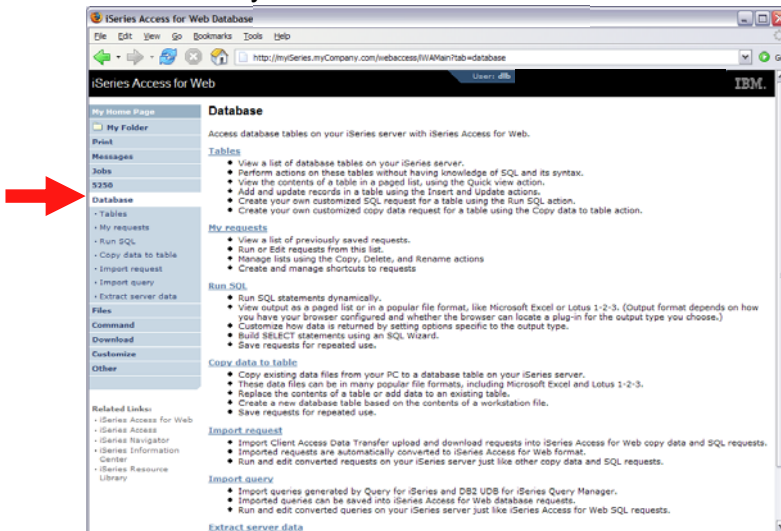
Controlling access

Main Page = <http://<myiseries>:<port>/webaccess/iWAMain>



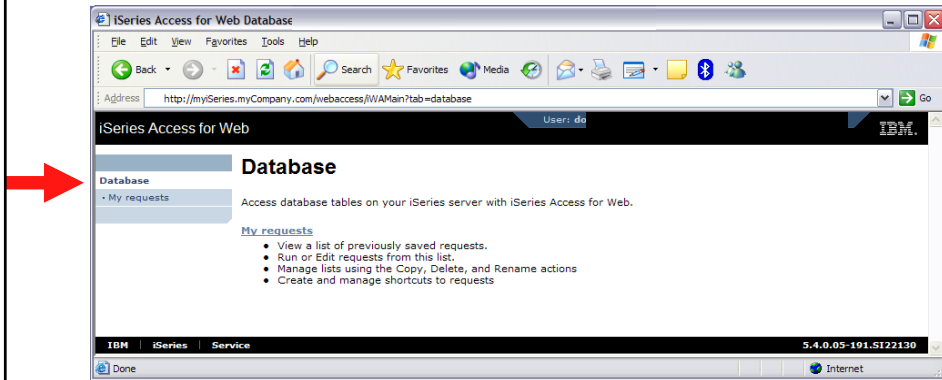
Controlling access

Product functionality



Controlling access

Sample for a user that only performs preset database queries



Controlling Access: Setting policies for users and groups of users

Controlling User Access



My Home Page
My Folder
Print
Messages
Jobs
5250
Database
Files
Command
Download
Customize
Other

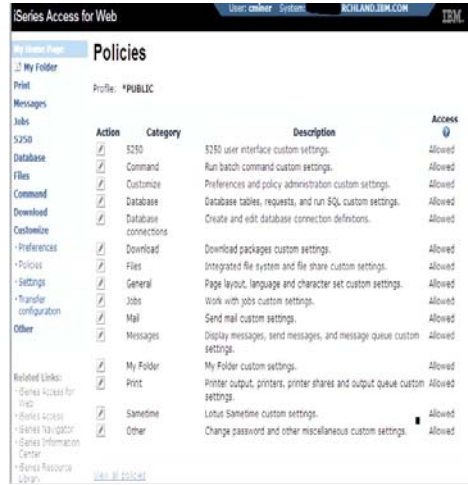
- Customize policies for users and groups to
 - Allow/Deny functions users can access
 - Limit the information users can see
- Use group profiles to simplify policy management
 - Manage policies for group profiles
 - Add/remove users from groups
- When a function is restricted, access to the servlet is restricted
- You need *SECADM authority to customize profiles

Notes: Controlling Access - How & Whom?

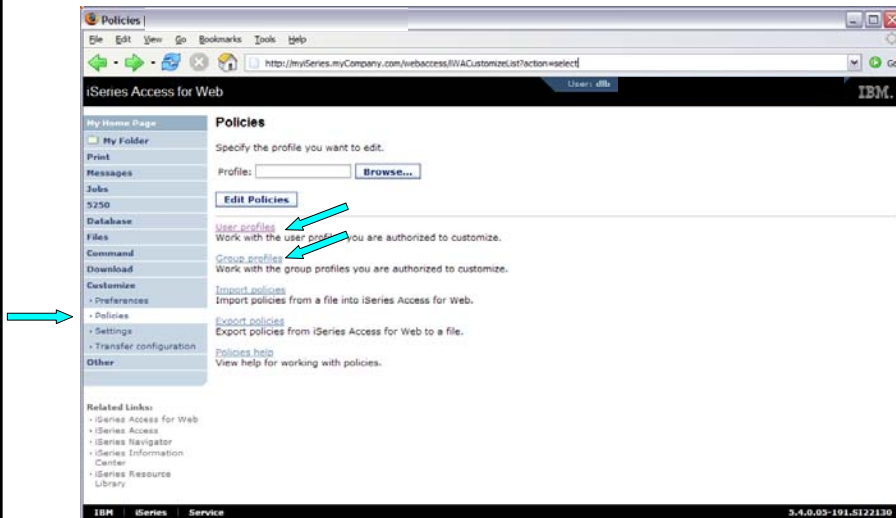
- The Customize function allows administrators to set policies for users and groups of users.
- These policies control...
 - Functions a user can perform.
 - How certain information is presented to the user.
- When a function is restricted...
 - Its navigation bar content is removed.
 - Access to the 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 System i Access for Web functions.

Controlling User Access

- System 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



Controlling Access - Setting policies (continued)



Controlling Access - Setting policies (continued)

Policies - User Profiles

Profile filter: **Filter List**

Filter by: Profile Description

Profile	Description	Action
ACBARRON	Alma Carolina Barron Perez - GDL T/L 877-5656	[edit] [view]
ACN	Ali Nelson 3-6874	[edit] [view]
ADSIERRA	Alma Delia Sierra/Mexico/Contr/IBM@IBMXX	[edit] [view] [copy] [reset]
AGUEDA	Agueda Martinez Hernandez Magro/Mexico/IBM@IBMXX	[edit] [view]
AHANSON	Andrew Hanson 3-5571	[edit] [view]
AHOMIKE	Mike Aho/Rochester/IBM@IBMUS	[edit] [view]
ALEJ	Alejandro Bascuas/Rochester/IBM@IBMUS	[edit] [view]
ALICJAM	Alicia Martinez Cruz/Mexico/Contr/IBM@IBMXX	[edit] [view] [copy] [reset]
ALTEST		[edit] [view]
ANDREWS	Greg Andrews/Rochester/IBM@IBMUS	[edit] [view]
ANTARES	Elias Ricardo Castellanos/Mexico/Contr/IBM@IBMXX	[edit] [view]
ARABIC	Gilberto Martinez Cortes/Mexico/Contr/IBM@IBMXX	[edit] [view]
ATCLARK	Adam Clark, 3-3941	[edit] [view]
ATOMKO	Ana Tomko Sanchez/Mexico/Contr/IBM@IBMXX	[edit] [view]
BAZEY	John Bazey (3-7108)	[edit] [view]
BEACH	Mark Beach/Rochester/IBM@IBMUS	[edit] [view]
BECKYD	Rebecca K Dimock/Boulder/IBM@IBMUS	[edit] [view]

Actions:
 Edit policies
 View all policies
 View group membership
 View group members
 Copy policies
 Reset policies

Controlling Access - Setting policies (continued)

Edit Policies - Database

Profile: DLB

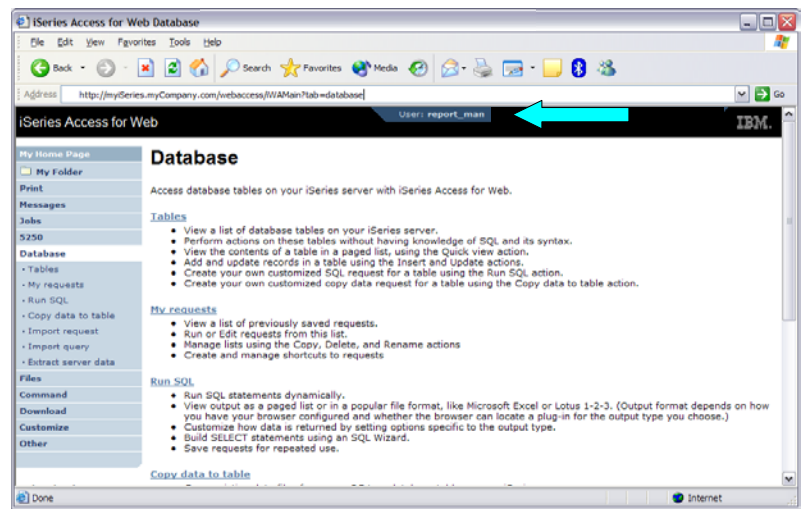
Policy	Derived From	Action	Setting
Database access	Shipped default	Use current setting	Allow
Database tab	Shipped default	Use current setting	Show
Tables	Shipped default	Use current setting	Allow
Maximum table rows	Shipped default	Use current setting	500
Table filter	Shipped default	Use current setting	*USRLIBL
Table filter is user preference	Shipped default	Use current setting	Allow
Insert records into table	Shipped default	Use current setting	Allow
Insert record columns	Shipped default	Use current setting	Columns...
Update records in table	Shipped default	Use current setting	Allow
Update record columns	Shipped default	Use current setting	Columns...
Quick view table records	Shipped default	Use current setting	Allow
Maximum quick view rows	Shipped default	Use current setting	1000
Order	Shipped default	Use current setting	No

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 queries 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.

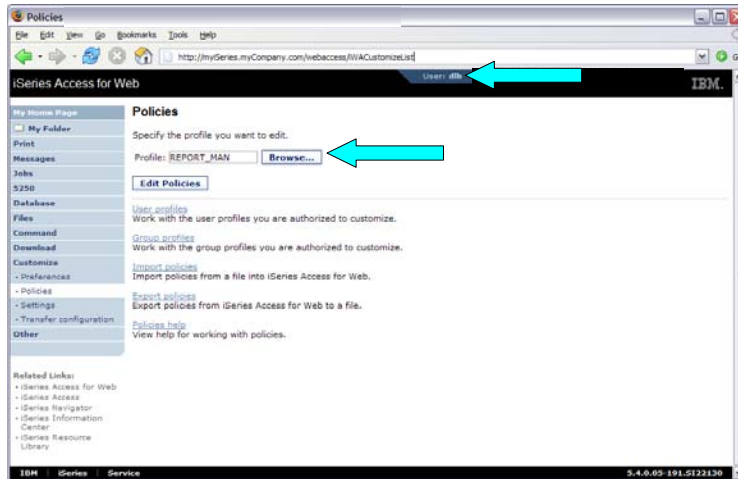
Example: Simple Database User - Before

Accessing the Database tab of System i Access for Web as user REPORT_MAN



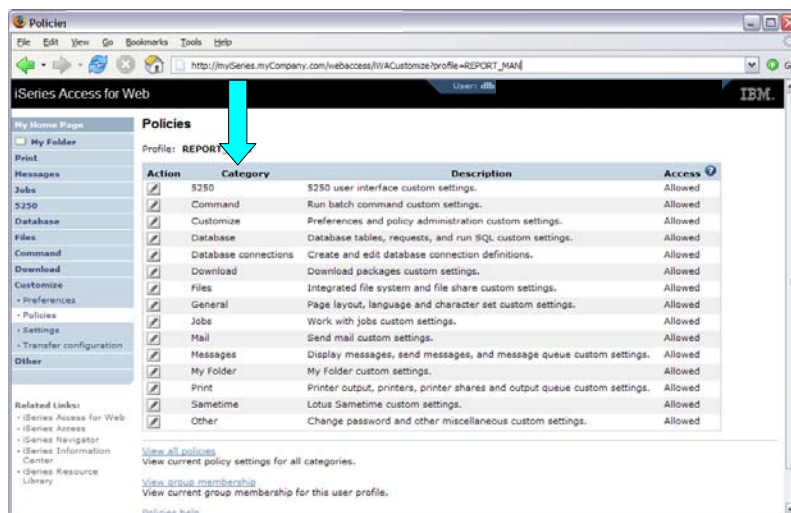
Example: Simple Database User - Policies

- Policies - the starting point for customization of a specific user or group.
- This is a new browser session, where we signed on as an administrator.



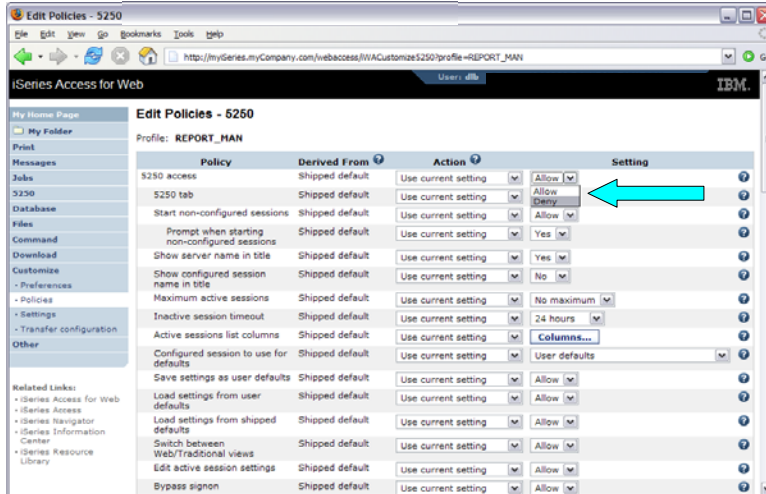
Example: Simple Database User - Categories

- Determine which categories need to be restricted/modified.



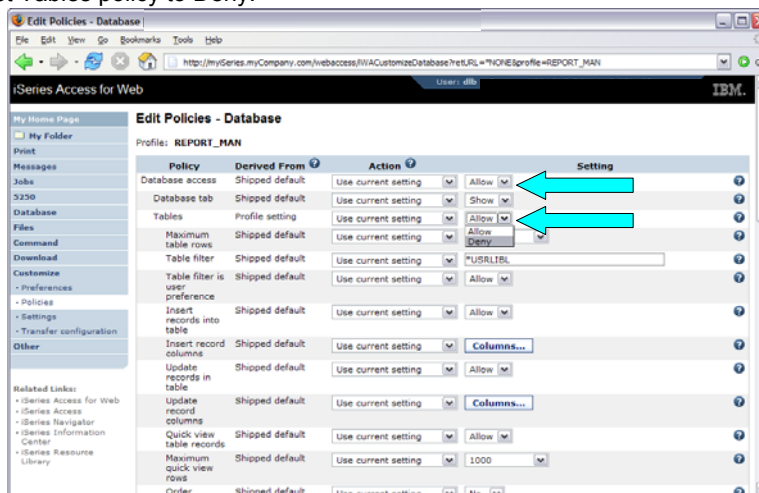
Example: Simple Database User – Other

- Turn off the other non-Database functions. Set top level to Deny.
- Repeat for each category, other than Database



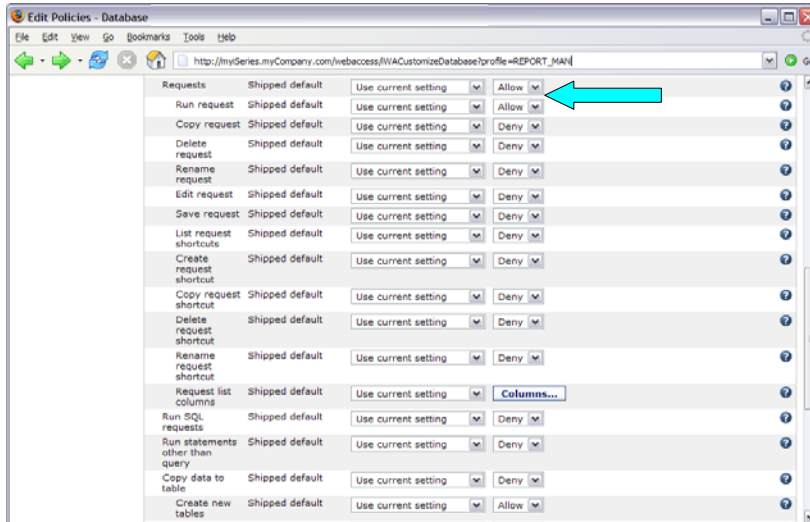
Example: Simple Database User

- Allow access to Database function.
- Set Tables policy to Deny.



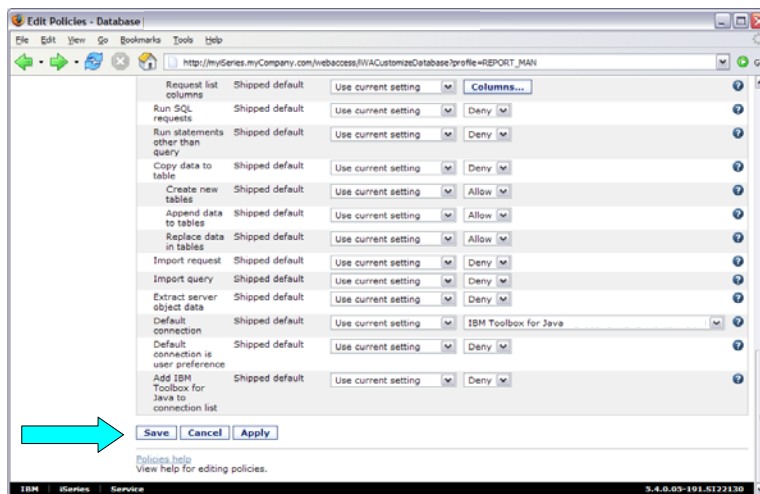
Example: Simple Database User

- Only allow the user the ability to run a saved DB request (Run request)



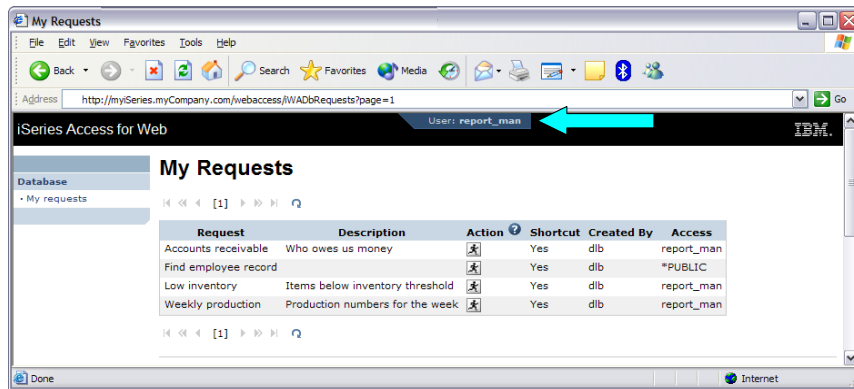
Example: Simple Database User

- Turn off the ability to perform the remaining database functions
- Save the changes



Example: Simple Database User - Completion

- The user can now only run the DB queries they have been given.



***User Preferences:
Users can set their own Preferences***

User Preferences

- The Preferences function allows users to customize System 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.
 - And more
- Restricting access to Preferences
 - Administrators can deny specific users or groups from accessing their preferences.
 - This is controlled by the "Edit preferences" policy.

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 policy is set, it takes effect immediately.

Example: User Preferences, Printer output (continued)

- The printer output display defaults with many columns of information.

The screenshot shows a web browser window titled 'Printer Output' for user 'basic_user'. The main content area displays a table of print jobs. The table has the following columns: File Name, User, Creation Date/Time, Pages, Copies, Status, Action, Job Name, and File Number. Two jobs are listed:

File Name	User	Creation Date/Time	Pages	Copies	Status	Action	Job Name	File Number
QPDSFAB	BASIC_USER	1/30/06 2:30 PM	8	1	Ready	[Icons]	QPADEV000G 562152	1
QPDSPTS	BASIC_USER	1/30/06 2:38 PM	1	1	Ready	[Icons]	QPADEV000G 562152	2

Below the table, there is an 'Action Details' section with a 'Work With' section containing several options:

- Move printer output to another printer
- Move printer output to another output queue
- Send printer output to another server (SND(CPSPLF))
- Change printer output attributes (CHGSP(LF))
- Copy printer output to database file (CPYSPLF)

Example: User Preferences, Printer output (continued)

- Click on the Customize tab to work with Preferences.

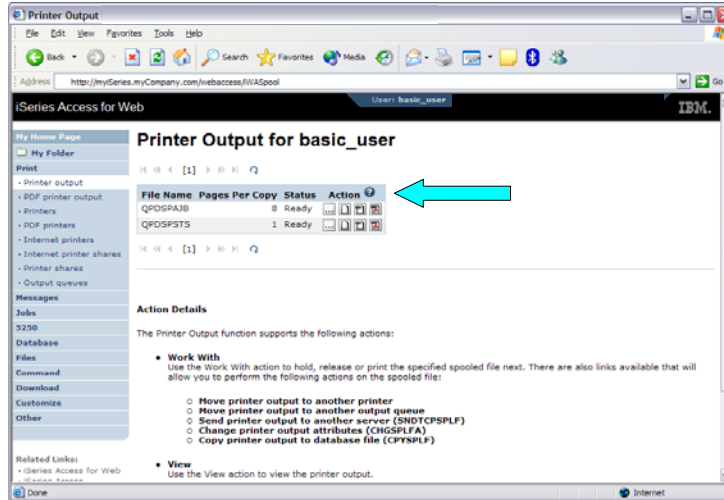
The screenshot shows a web browser window titled 'Preferences' for user 'basic_user'. The main content area displays a table of preference categories. The table has the following columns: Action, Category, and Description. All 'Action' checkboxes are checked.

Action	Category	Description
<input checked="" type="checkbox"/>	5250	5250 user interface custom settings.
<input checked="" type="checkbox"/>	Command	Run batch command custom settings.
<input checked="" type="checkbox"/>	Customize	Preferences and policy administration custom settings.
<input checked="" type="checkbox"/>	Database	Database tables, requests, and run SQL custom settings.
<input checked="" type="checkbox"/>	Download	Download packages custom settings.
<input checked="" type="checkbox"/>	Files	Integrated file system and file share custom settings.
<input checked="" type="checkbox"/>	General	Page layout, language and character set custom settings.
<input checked="" type="checkbox"/>	Jobs	Work with jobs custom settings.
<input checked="" type="checkbox"/>	Mail	Send mail custom settings.
<input checked="" type="checkbox"/>	Messages	Display messages, send messages, and message queue custom settings.
<input checked="" type="checkbox"/>	My Folder	My Folder custom settings.
<input checked="" type="checkbox"/>	Print	Printer output, printers, printer shares and output queue custom settings.
<input checked="" type="checkbox"/>	Sametime	Lotus Sametime custom settings.
<input checked="" type="checkbox"/>	Other	Change password and other miscellaneous custom settings.

At the bottom of the page, there are links for 'View all preferences', 'View current preference settings for all categories.', 'Preferences help', and 'View help for working with preferences.'

Example: User Preferences, Printer output (continued)

- AFTER: The printer output display now only has a few columns.

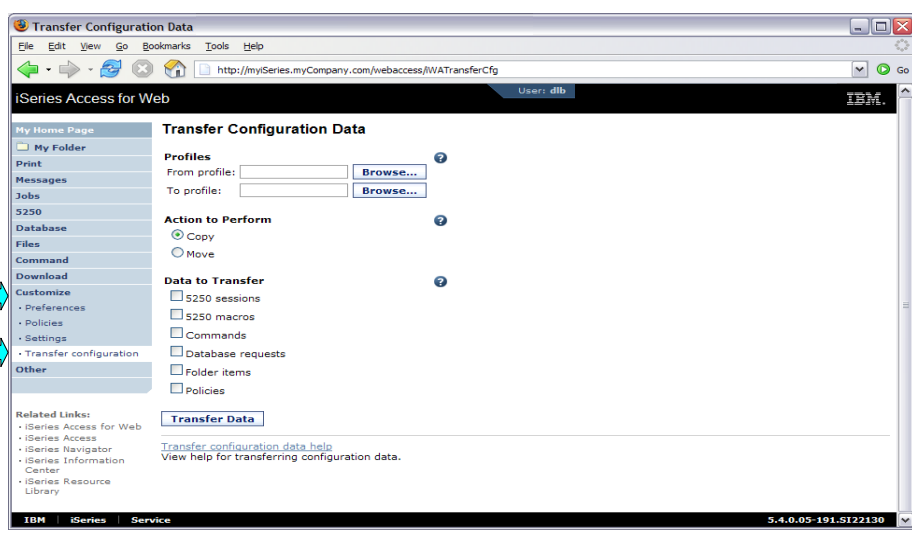


Policy Tools for Administrators

Policies and Tools

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

Transfer Configuration Data



Page customization

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 System 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/series/access/pdf/build_website_article.pdf
 - iSeries 400 Experts Journal
 - **Updated Oct 2006 in System i News - 'Tailor System i Access for Web'**



Template file customization

- System i Access for Web has a default look for its 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 System 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.



Edit Policies: specify home page and template files

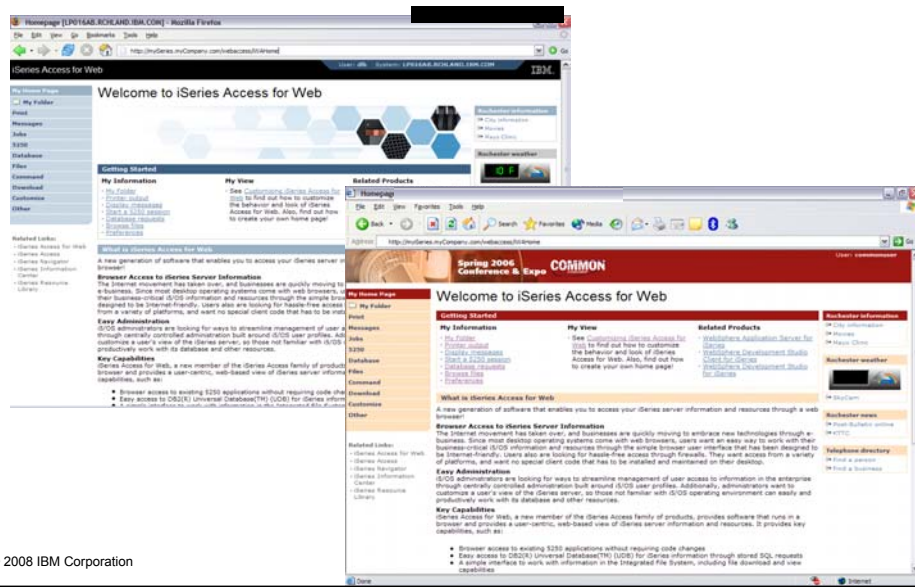
Policy	Derived From	Action	Setting
Home page HTML file	Shipped default	Use current setting	/Q1BM/ProdData/Access/Web2/html/homepage.h
Template HTML file	Shipped default	Use current setting	/Q1BM/ProdData/Access/Web2/html/webaccess.h
Main page HTML file	Shipped default	Use current setting	/Q1BM/ProdData/Access/Web2/html/overview.htm
Home page	Shipped default	Use current setting	Allow
Template	Shipped default	Use current setting	Allow
Navigation	Shipped default	Use current setting	Allow
Related links	Shipped default	Use current setting	Allow

Special tags

- Within the home page and template .html files, special tags are used.
 - When these tags are encountered by the System i Access for Web code, they are replaced with the appropriate content.
- **Special tags...**
 - %%CONTENT%%
 - %%include section=file%%
 - %%MENU%%
 - %%STYLESHEET%%
 - %%STYLESHEET_CLASSIC_COLORS%%
 - %%TITLE%%
 - %%SYSTEM%%
 - %%USER%%
 - %%VERSION%%
- **Replaced with...**
 - functional content for the page, separates the header/footer
 - HTML section/fragment to include navigation bar
 - default style sheet
 - default style sheet prior to V5R4
 - title of the page
 - name of iSeries being accessed
 - i5/OS user profile used to access the server
 - version of System i Access for Web
- For detailed information on these special tags
 - V5R4 System i Access for Web Info Center
 - Connecting to iSeries->System i Access->System i Access for Web->System i Access for Web in a web application sever environment->Customize System i Access for Web->Default page content->Home page

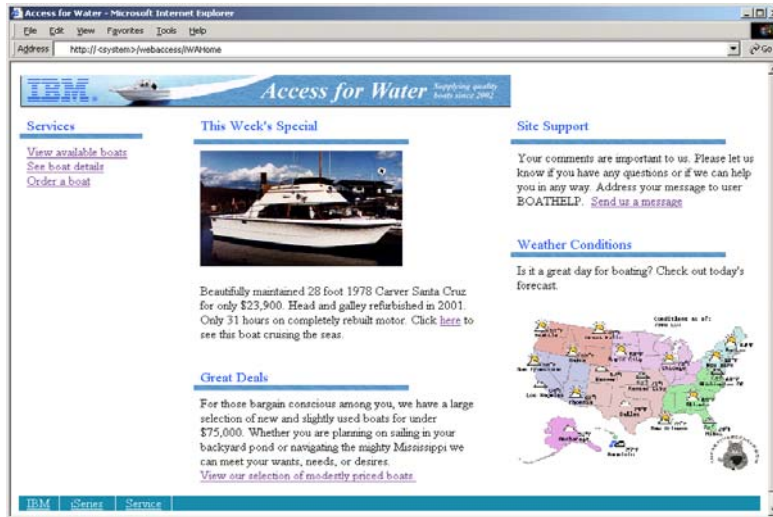
Home Page default – iWAHome servlet

http://<system>/webaccess/iWAHome



Home Page customization – iWAHome (another example)

- Custom home page - <http://iserieds.demos.ibm.com/webaccess/iWAHome>
 - Refer to chart 6 for info on how to access this sample

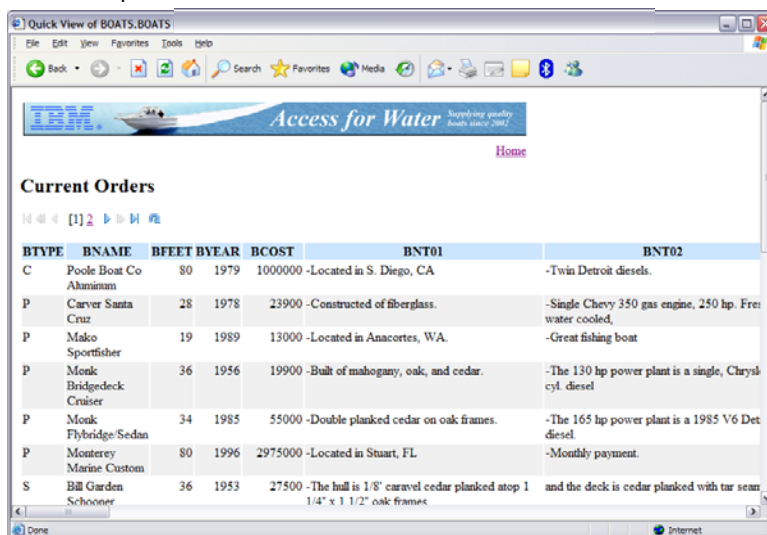


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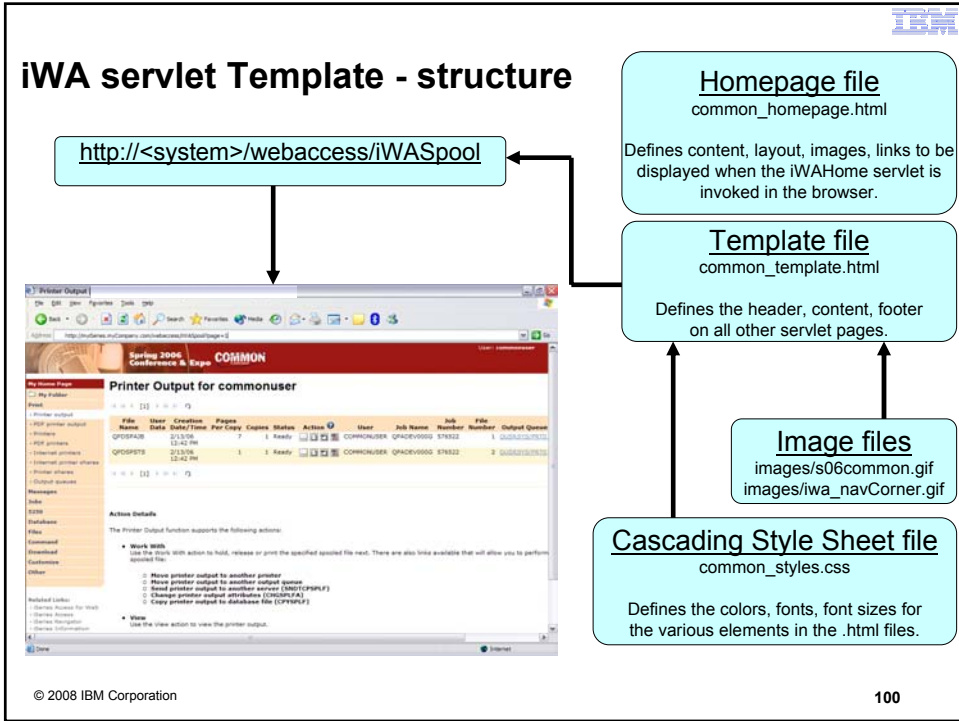
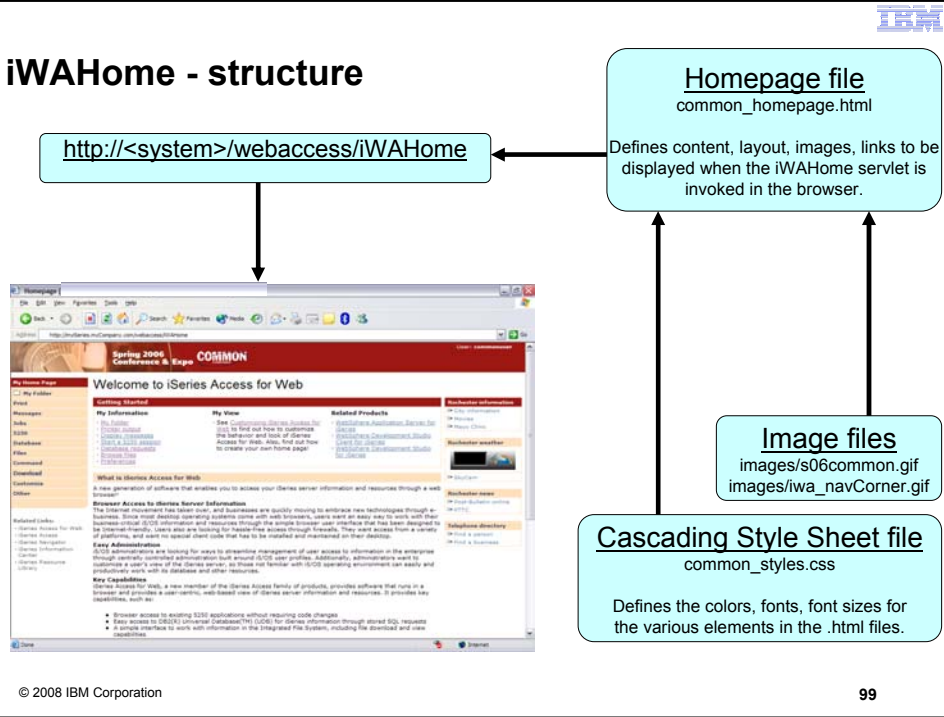
Home Page/Template Customization Example (continued)

- Custom template



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For a step-by-step example of how to customize the Home page and Template files:

ftp://ftp.software.ibm.com/as400/products/clientaccess/win32/presentations/2008_common_webcast/iAW_customize_home_page_charts.pdf

- Customizing policies to use different home page and template files
- Adding a different image as header, changing the footer
- Updating the cascading style sheet

NOTES: If using WAS Network Deployment

- For the WebSphere Application Server Network Deployment environment
 - WebSphere v5.0/5.1 Base Edition must be installed
 - WebSphere v6.0 Base/Express Edition must be installed
 - System i Access for Web does not support WebSphere instances/profiles that are federated to the WebSphere Network Deployment environment





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