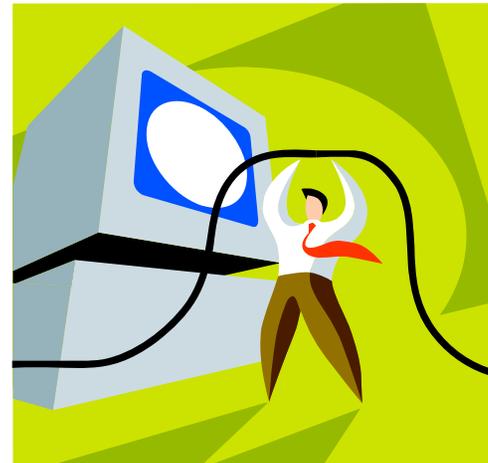
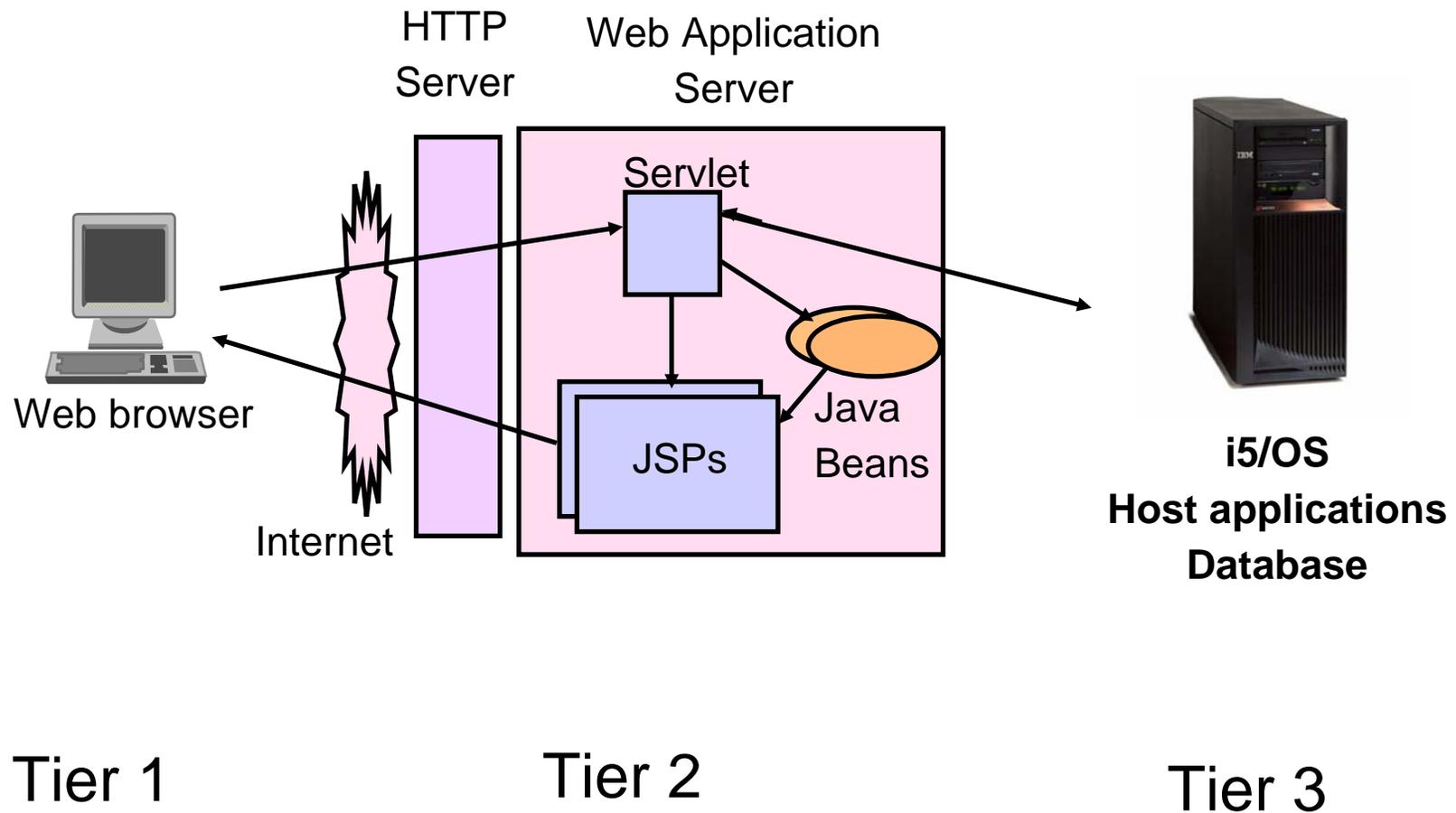


Part 2. Installation and Configuration



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
 - 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

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

- **Integrated web application server – announced October 10, 2006**
- **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**

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

- **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**

Is your AS/400, iSeries, or System i ready?

**Under 512Mb
Under 300 CPW**

Bxx, Cxx, Dxx, Exx, Fxx

S10, S01, Pxx

S20 / #2161, #2163

100, 150

170 /

#2159, #2160, #2164, #2289, #2290, #2291, #2292 #2407,

#2408, #2409

200, 20S, 250

270 / #2422, #2423, #2424, #2248, #2452, #2454

3xx, 4xx

500, 510, 50S

53S / #2154

530 / # 2150, # 2151

600

620 / #2175, #2179, #2180, #2181

720 / #2061

820 / #2425, #2426, #2457, #2456

**512Mb–1GB
300-500 CPW**

S30 / #2257

S20 / #2170, #2165

170 / #2176, #2183, #2383, #2384, #2385, #2386

270 / #2250, #2431

53S / #2155

530 / #2150, #2151

600 / All

620 / #2175, #2179, #2180, #2181

720 / #2161

820 / #2425, #2426, #2456, #2457

**WAS Express with
few concurrent
users**

**Over 1GB
And
500 CPW**

SB1, SB2, SB3, S20(1), S30(1), S40, 170 / #2388

270 / #2252, #2253, #2432, #2434

53S / #2156, #2157

530 / #2153, #2162

730, 740, 800 / #2464

810, 825, 870, 890, i5 520, i5 550, i5 570, i5 595 / All

**Complex web
applications with
many concurrent
users**

Performance...???

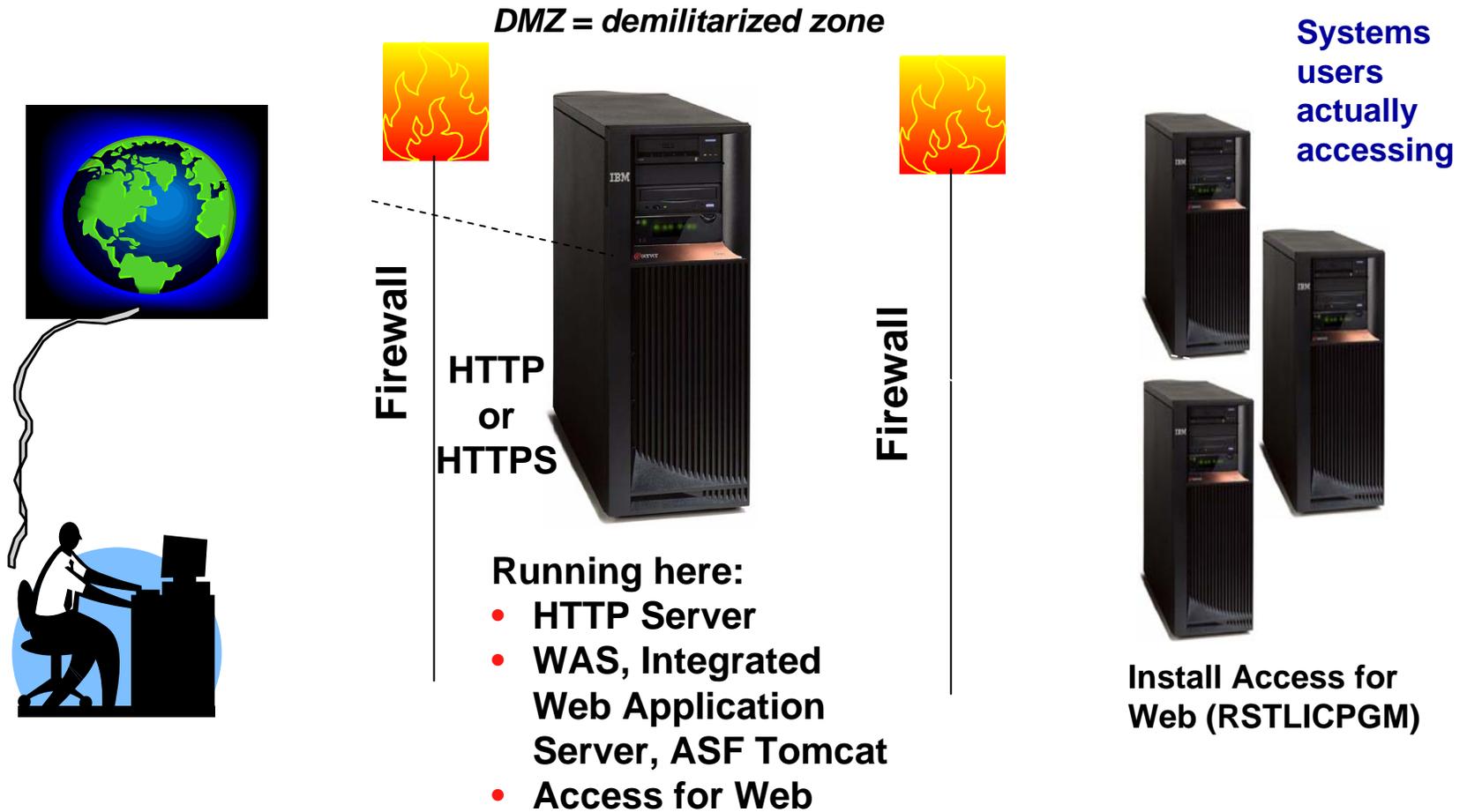
- Does running System i Access for Web affect performance?
 - Products like System i Access for Web don't put much load on i5/OS...
- How does the web application server affect performance?
 - If you have an older, under-powered System i5, then performance may not be good...if you have a newer, bigger System i5, then performance won't be an issue (unless you already are running your System i5 at maximum capacity).
 - Use the **IBM Systems Workload Estimator** to see what performance will be if WAS is added to your System i5 at: <http://www-912.ibm.com/wle/EstimatorServlet>
 - There is a Workload Estimator for **WebFacing** Workloads. iSeries 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/iseries/ae/welc6topinstalling.html>

Performance Considerations...

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

The screenshot shows the IBM Systems Workload Estimator web application running in Mozilla Firefox. The browser window title is "IBM Systems Workload Estimator - Mozilla Firefox: IBM Edition". The address bar shows the URL "http://www-912.ibm.com/wle/EstimatorServlet". The page features the IBM logo and a navigation menu with links for Home, Products, Services & solutions, Support & downloads, and My account. The main content area is titled "IBM Systems Workload Estimator" and includes a "Workload Selection" tab. Under this tab, there are links for "New System i estimation", "New System p estimation", and "New System x estimation". A "Help/Tutorials" tab is also visible. The page displays a tree structure of the current estimation, showing "MySolution" containing "Tier #1 System i", which in turn contains "System #1 (1 interval defined)", which contains "Partition: Main #1, i5/OS™ - V5R4, No LPAR". A "Continue" button is located below the tree structure. The footer of the page includes links for "About IBM", "Privacy", and "Contact".

Setting up your web application server



Only need to set up 1 web application server

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

*See Information APAR
II12227 for detailed
information

iSeries Access for Web (5722-XH2)

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

Hardware/Software Requirements



Client Browser Requirements

- These browsers have been tested with **V5R4** iSeries 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.
 - These browsers have been tested with **V5R3** iSeries Access for Web:
 - Netscape 4.7 (AIX)
 - Netscape 7.0 (Windows, Linux)
 - Internet Explorer 6.0 with Service Pack 1 (Windows)
 - Opera 7.11 (Windows, Linux)
 - Mozilla 1.3 and 1.4 (Windows, Linux)
 - 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	V5R3 System i Access for Web: V5R2 OS/400 or V5R3 i5/OS V5R4 System i Access for Web: V5R3 or V5R4 i5/OS	Base	w/HW
5722-SS1	i5/OS - Extended Base Directory Support	3	N/C
5722-SS1	i5/OS - AFP Compatibility Fonts	8	N/C
5722-SS1	i5/OS - Host Servers	12	N/C
5722-SS1	i5/OS QShell Interpreter	30	N/C
5722-SS1	If you plan to use Secure Sockets Layer (SSL)... • i5/OS Digital Certificate Manager • Cryptographic Service Provider	34 35	N/C N/C
5722-DG1	IBM HTTP Server for iSeries	Base	N/C
5722-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
5722-JC1	Toolbox for Java	Base	N/C
5722-TC1	TCP/IP Connectivity Utilities for iSeries	Base	N/C



i5/OS Software Requirements (continued)

Product Number	Product Name	Option	\$
5722-XW1	System i Access Family	Base	\$
5722-XH2	System i Access for Web <ul style="list-style-type: none"> • Ships with 5722-XW1 iSeries Access Family • V5R3 iSeries Access for Web runs on OS/400 V5R2 and i5/OS V5R3 • V5R4 iSeries Access for Web runs on i5/OS V5R3 and V5R4 	Base	part of XW1
5722-IP1	IBM Info Print Server (Optional -- enables best PDF output but <u>is not</u> required to view PDF output)	Base	\$

i5/OS Software Requirements (continued)

Product Number	Product Name	Option	\$
5733-W61 5733-W60 5722-E51 5733-W51 5722-IWE 5733-WS5 5722-DG1 * * * *	<p><u>One, or more, of the following web servers</u></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) • integrated Web application server • Apache Software Foundation Tomcat • 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 	See documentation	

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

- WebSphere <http://www.ibm.com/servers/eserver/iseries/software/websphere/wsappserver/>
- 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/servers/eserver/iseries/software/http/>

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/servers/eserver/series/software/websphere/wsappserver/>
- ASF Tomcat
 - <http://www.ibm.com/servers/eserver/series/software/http/>
- 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

- 275MB
- 470MB

Software product

- V5R3 System i Access for Web
- V5R4 System i Access for Web

System i Access for Web



3 Options for setting up the Access for Web environment

- 1. Integrated Web application server**
 - Simplest to set up
 - Preconfigured HTTP web server

- 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



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
 - V5R4 is the last release i5/OS will contain ASF Tomcat
- **How is it packaged**
 - 5722-DG1 IBM HTTP Server for i5/OS
 - Available in the DG1 group PTF
 - V5R4 SF99114 level 6 or later
 - V5R3 SF99099 level 14 or later
- **System i Access for Web support**
 - Only V5R4 System i Access for Web can be used
 - V5R4 System i Access for Web can be installed and is supported on...
 - V5R3 i5/OS
 - V5R4 i5/OS

To use System i Access for Web within this environment

1. Stop the Web Administration for i5/OS
 - ENDTCPSPVR SERVER(*HTTP) HTTPSPVR(ADMIN)
2. Load/apply latest 5722-DG1 group PTF (review cover letters for any additional information)
 - V5R4 SF99114
 - V5R3 SF99099
3. Load/apply latest V5R4 System i Access for Web PTF
 - SI25551 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) HTTPSPVR(*ADMIN)
6. Start preconfigured HTTP web server
 - STRTCPSVR SERVER(*HTTP) HTTPSPVR(IWADFT)
7. Open a browser to System i Access for Web using preconfigured HTTP:port
 - http://<system_name>:2020/webaccess/iWAMain
8. Done!

Integrated Web application server

Questions regarding
the integrated
Web application server
option?



2. Web Enable Feature – Express Runtime Environment

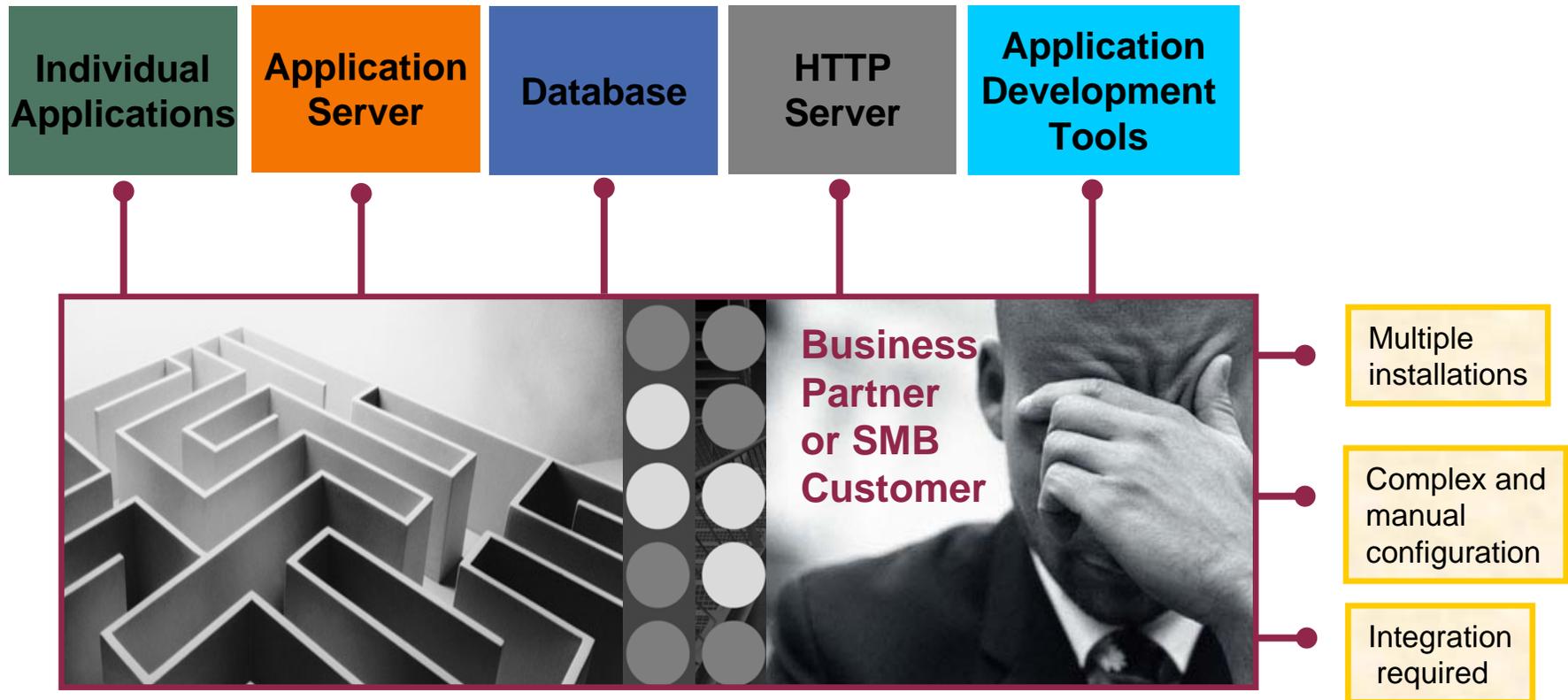


- All components provided in a single package
- Greatly simplifies the complexity of the environment
- Most automated
- Running web environment when installation completes
- Desktop icon linking to the deployed web environment

What is the problem?

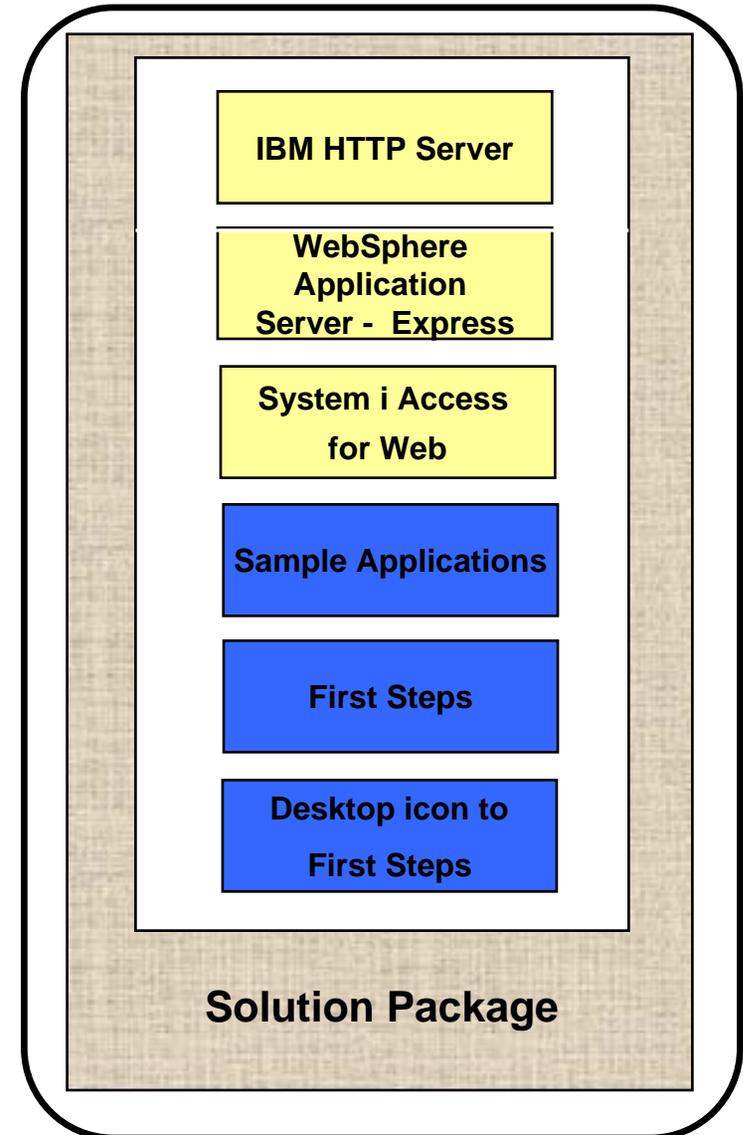
The complexity of the web-serving environment

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



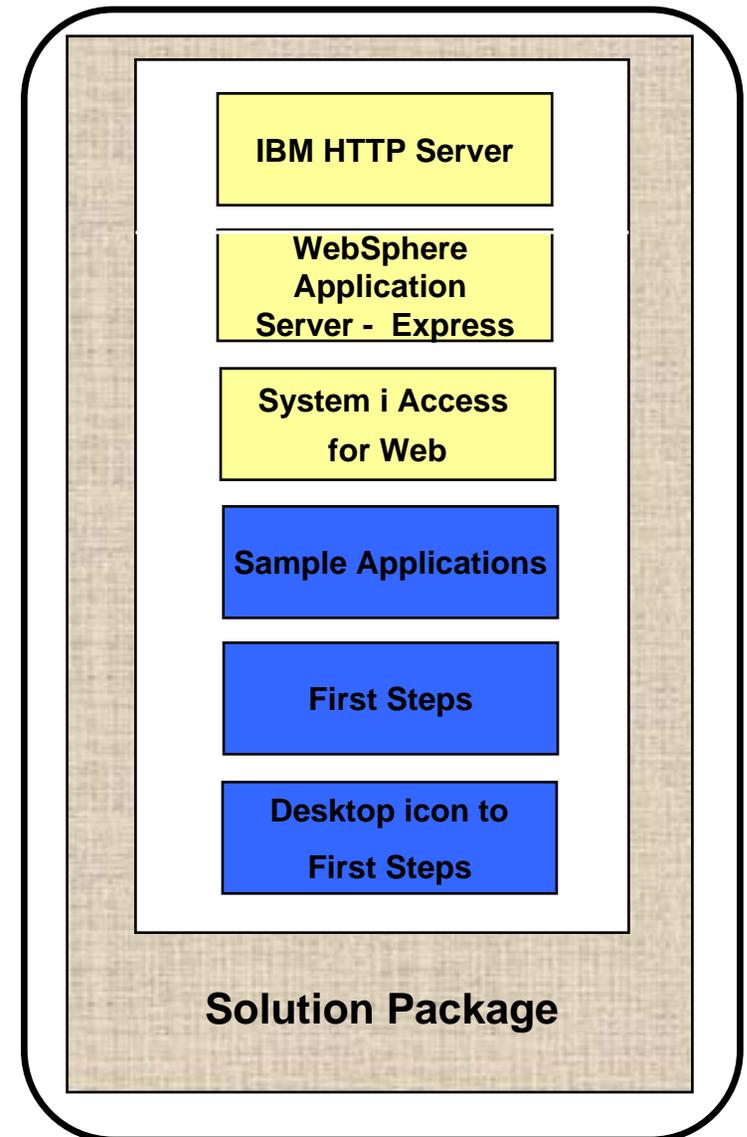
What is the solution?

- Put all the parts/pieces into a single package
 - Middleware components
 - HTTP web server
 - WAS Express 6.0.2.9
 - V5R4 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

- **V5R4 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

5722-WE2 Express Runtime Web Environments

- Ships with all V5R4 i5/OS orders
 - Since October 2006
 - DVD only
 - 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

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

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_V5 R4M0`
 - 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

Windows workstation software/hardware requirements

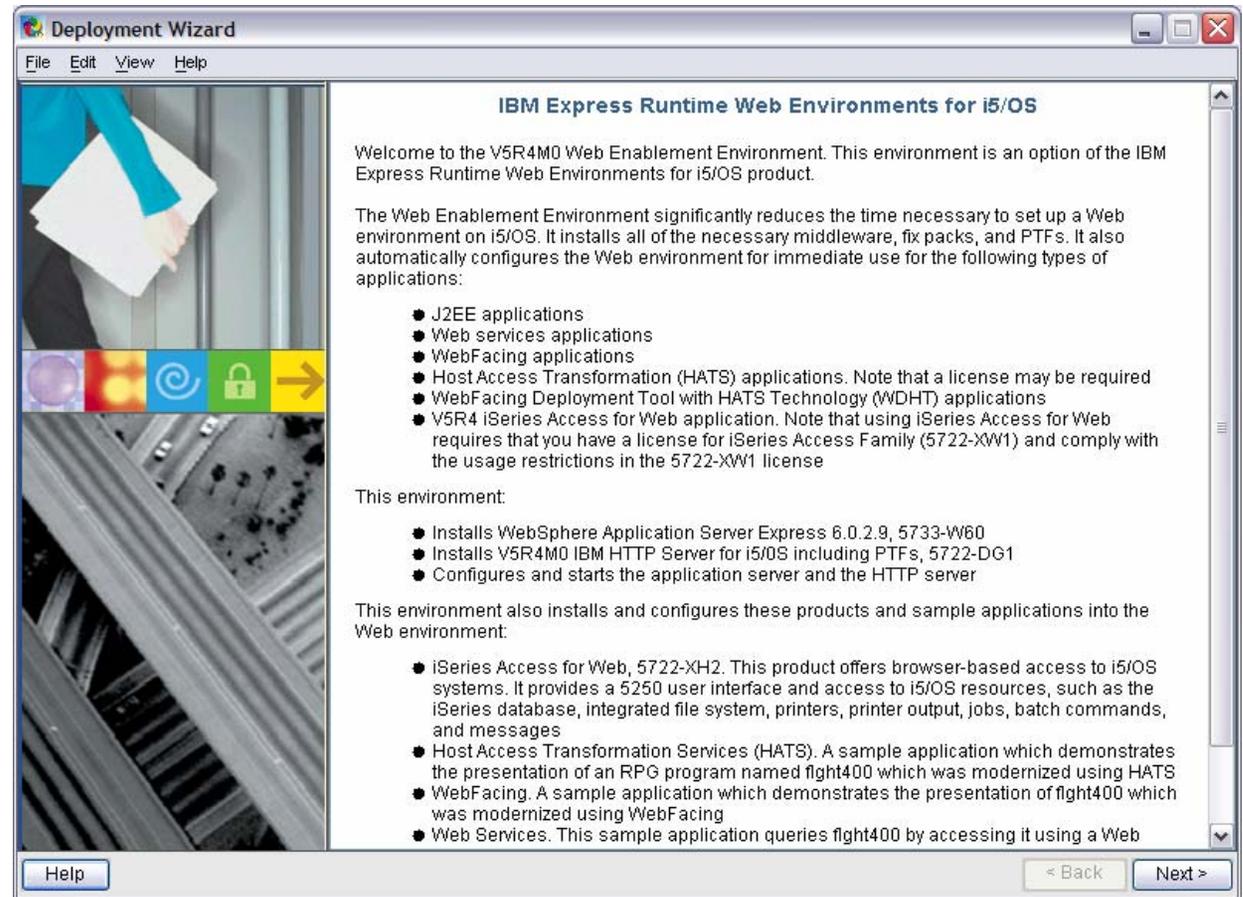
- **Windows operating systems**
 - Windows XP Professional SP2
 - Windows 2000 Server SP4
 - Windows 2000 Advanced Server SP4
 - Windows 2000 Professional SP3
 - Windows Server 2003, Standard Edition SP1
 - Windows Server 2003, Enterprise Edition SP1
- **Web browser**
 - Windows Internet Explorer 6 or later
 - Firefox 1.5 or later
- **Windows workstation hardware requirements:**
 - Minimum 512MB of memory; 1GB recommended
 - At a minimum, an Intel Pentium III class processor with a minimum clock speed of 600MHz. A Pentium IV class processor with a minimum clock speed of 1.2GHz is recommended
 - A local area network (LAN) connection
 - At least 1.5GB of free disk space

i5/OS Software/Hardware Requirements

- **5/OS V5R4 (5722-SS1)**
 - option 3 - Extended Base Directory Support
 - option 8 - AFP(TM) Compatibility Fonts
 - option 12 - Host Servers
 - option 30 - QShell
- **Recommended PTFs:**
 - i5/OS Cumulative PTF Group SF99540 Level 6066 or later
 - Java Group PTF SF99291 Level 2 or later
 - DB2 Universal Database for iSeries Group PTF SF99504 Level 2 or later
- **Software products**
 - 5722-JV1 Java Developer Kit 1.4 - *BASE, option 5, option 6
 - 5722-JC1 Toolbox for Java
 - 5722-TC1 TCP/IP Connectivity Utilities
 - 5722-XW1 System i Access Family
 - 5722-QU1 Query - if you want to run reports using the HATS or WebFacing sample applications
- **i5/OS hardware requirements:**
 - It is recommended that you use the IBM Systems Workload Estimator to help estimate your hardware needs.

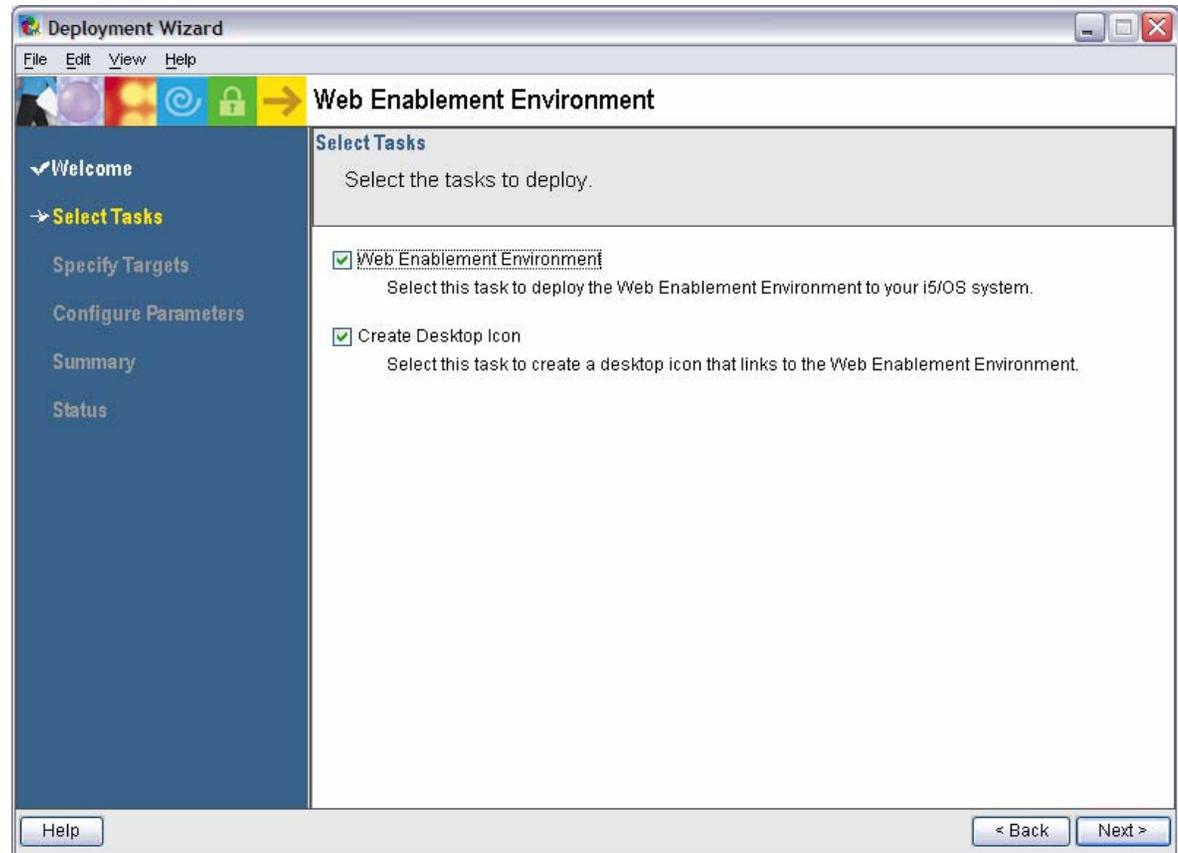
Demonstration

After accepting the license agreements, this is the first page of the deployment wizard



Demonstration (continued)

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

The screenshot shows the 'Deployment Wizard' window with the 'Specify Target Computers' step selected. The wizard is titled 'Web Enablement Environment' and contains the following elements:

- Navigation pane (left):** Includes 'Welcome', 'Select Tasks', 'Specify Targets' (with 'Web Enablement Environment' and 'Create Desktop Icon' sub-items), 'Configure Parameters', 'Summary', and 'Status'.
- Header:** 'Specify Target Computers - Web Enablement Environment'.
- Instructions:** 'Provide the host name or IP address for the target computer where you want to deploy Web Enablement Environment.'
- Operating system:** 'OS/400 (i5/OS)'. Below this, it says 'Provide a user ID and password with administrative privileges for the target computer.'
- Fields:**
 - 'Target Computer:' with the value 'MySystem.mycompany.com'.
 - 'User ID:' with the value 'DOUGB'.
 - 'Password:' with a masked field '*****'.
- Options:** An unchecked checkbox labeled 'Save this login information'.
- Buttons:** 'Test connections', '< Back', and 'Next >'.
- Footer:** A 'Help' button.

Demonstration (continued)

The deployment wizard displays this page for the desktop icon, click **Next**

The screenshot shows a window titled "Deployment Wizard" with a menu bar (File, Edit, View, Help) and a toolbar with icons for back, forward, and refresh. The main content area is titled "Web Enablement Environment" and contains the following text and form elements:

- Specify Target Computers - Create Desktop Icon**
- Provide the host name or IP address for the target computer where you want to deploy Create Desktop Icon.
- Operating system: **Windows**
- Provide a user ID and password with administrative privileges for the target computer.
- Target Computer:
- User ID:
- Password:
- Save this login information
-

At the bottom of the window, there is a "Help" button on the left and "< Back" and "Next >" buttons on the right.

Demonstration (continued)

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

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

The screenshot shows the 'Deployment Wizard' window for 'Web Enablement Environment'. The left sidebar shows the progress: Welcome, Select Tasks, Specify Targets, and 'Configure Parameters' (selected). The main area is titled 'Configure Parameters - HTTP and application server names and ports'. It contains a 'Typical' tab and an 'Advanced' tab. The 'Typical' tab has four configuration fields, all marked with an asterisk to indicate they are required:

Parameter	Value
* HTTP server name	MYHTTPSVR
* HTTP server port	10000
* Application server name	MYAPPSVR
* Application server starting port	10001

At the bottom of the window, there are 'Help', '< Back', and 'Next >' buttons.

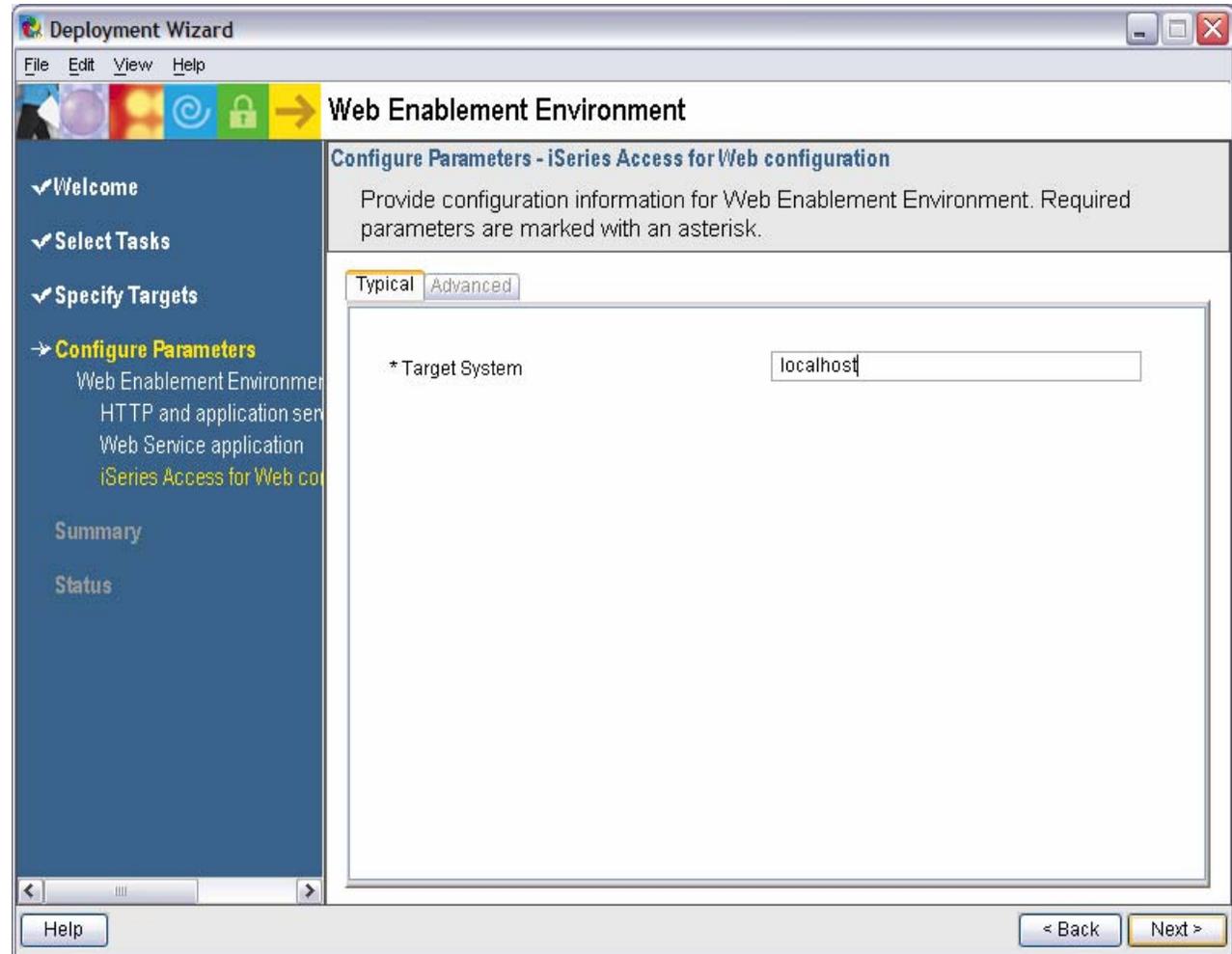
Demonstration (continued)

Deployment of the sample applications requires a security officer level user ID/password

The screenshot shows the 'Deployment Wizard' window with the 'Configure Parameters - Web Service application' step selected. The left sidebar shows a tree view with 'Configure Parameters' expanded to 'Web Service application'. The main area contains a 'Typical' tab and an 'Advanced' tab. The 'Typical' tab is active, showing three required fields: '* User profile' (containing 'SECOFR'), '* Password' (masked with asterisks), and '* Verify password:' (masked with asterisks). The window has a standard menu bar (File, Edit, View, Help) and navigation buttons ('< Back' and 'Next >') at the bottom.

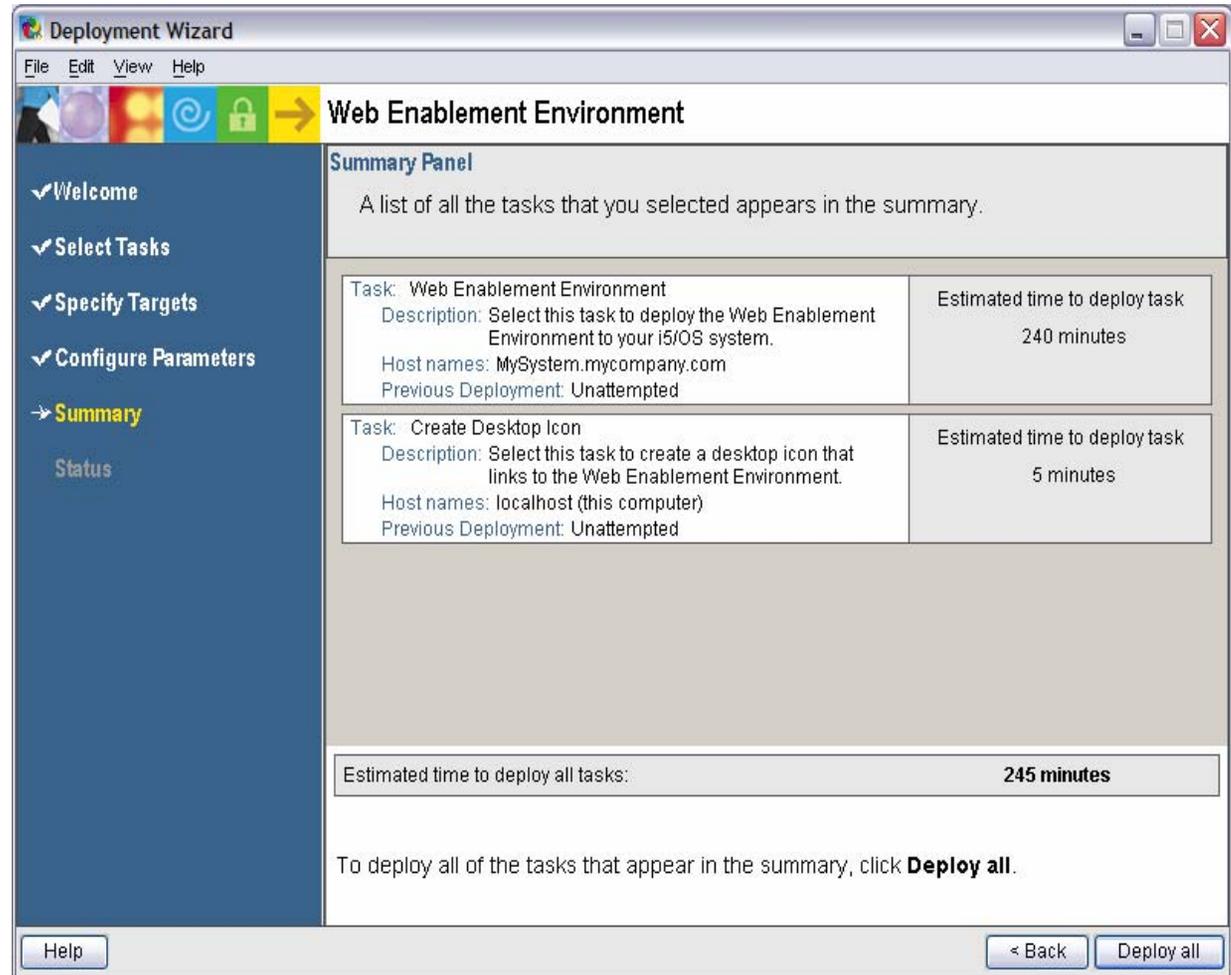
Demonstration (continued)

System i Access for Web can connect to the i5/OS system deploying to or another in the network



Demonstration (continued)

Summary page, click
Deploy all



Demonstration (continued)

Progress of the deployment

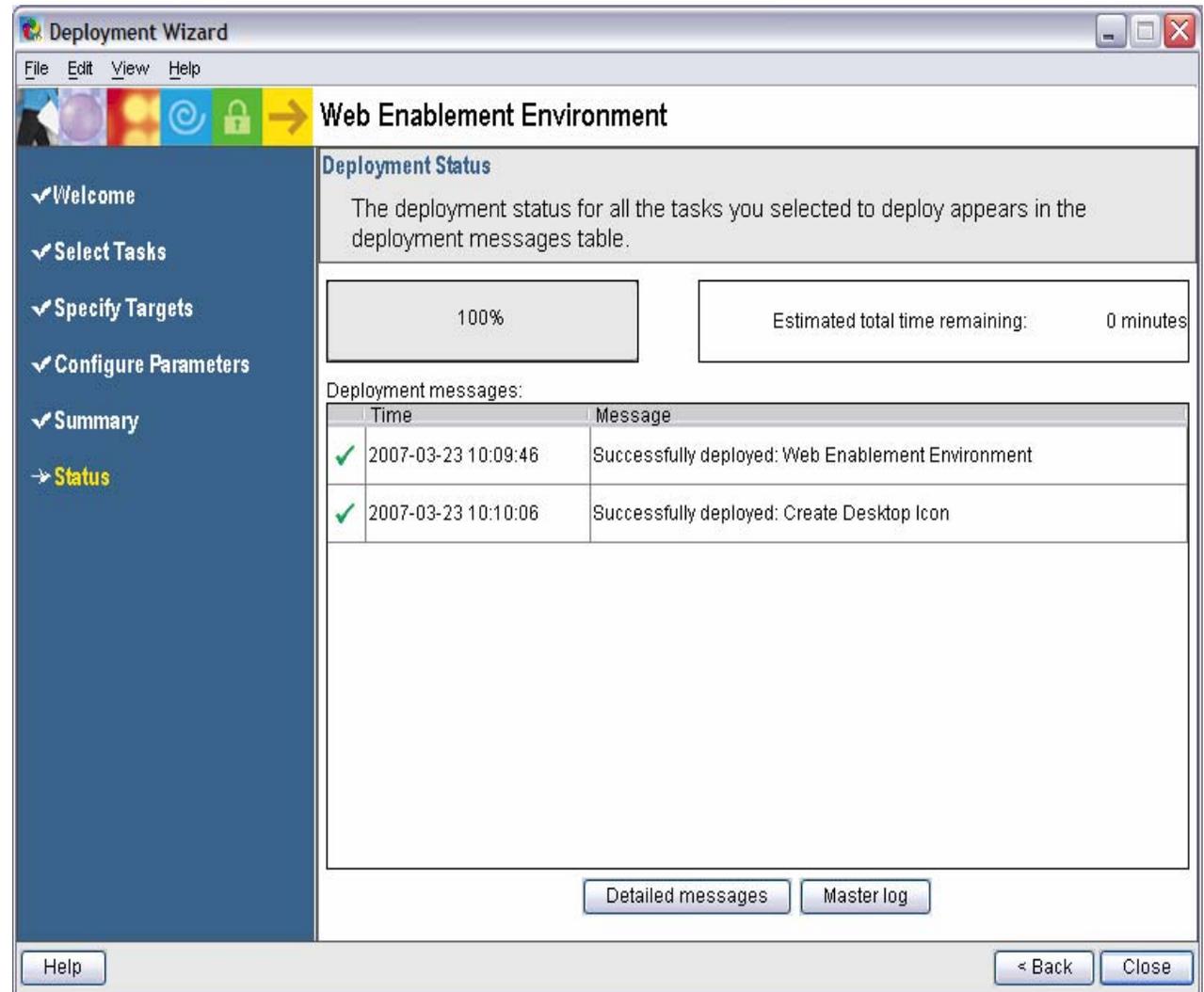
The screenshot shows the 'Deployment Wizard' window for 'Web Enablement Environment'. The left sidebar contains a list of steps: Welcome, Select Tasks, Specify Targets, Configure Parameters, Summary, and Status (which is currently selected). The main area displays the 'Deployment Status' section, which includes a progress bar at 1% and an estimated total time remaining of 4 hours and 5 minutes. Below this is a table of deployment messages.

Time	Message
2007-03-23 08:15:30	Deploying: Web Enablement Environment
2007-03-23 08:13:13	Waiting to deploy: Create Desktop Icon

Buttons at the bottom of the window include 'Help', '< Back', 'Detailed messages', 'Master log', and 'Stop Deployment'.

Demonstration (continued)

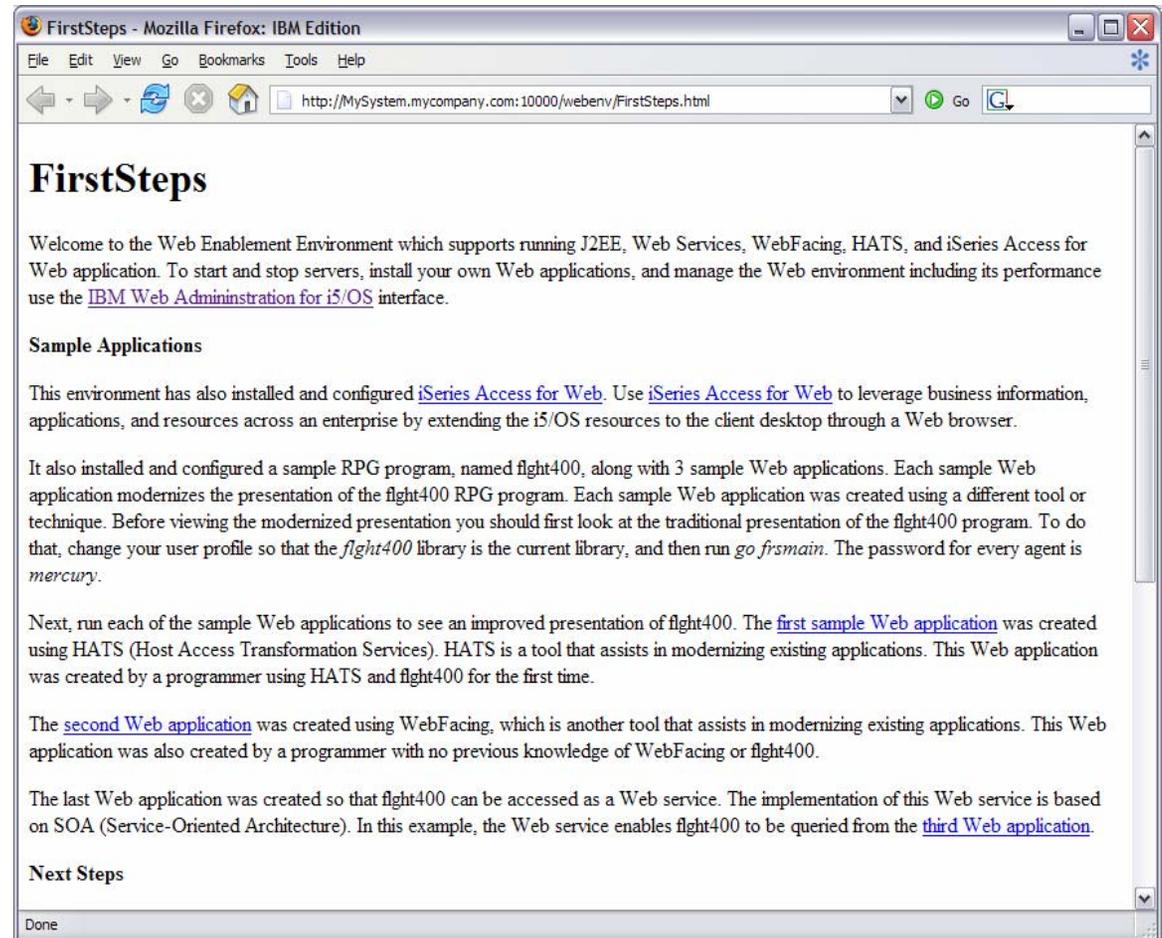
Successful completion



Demonstration (continued)

Click the desktop icon
named:

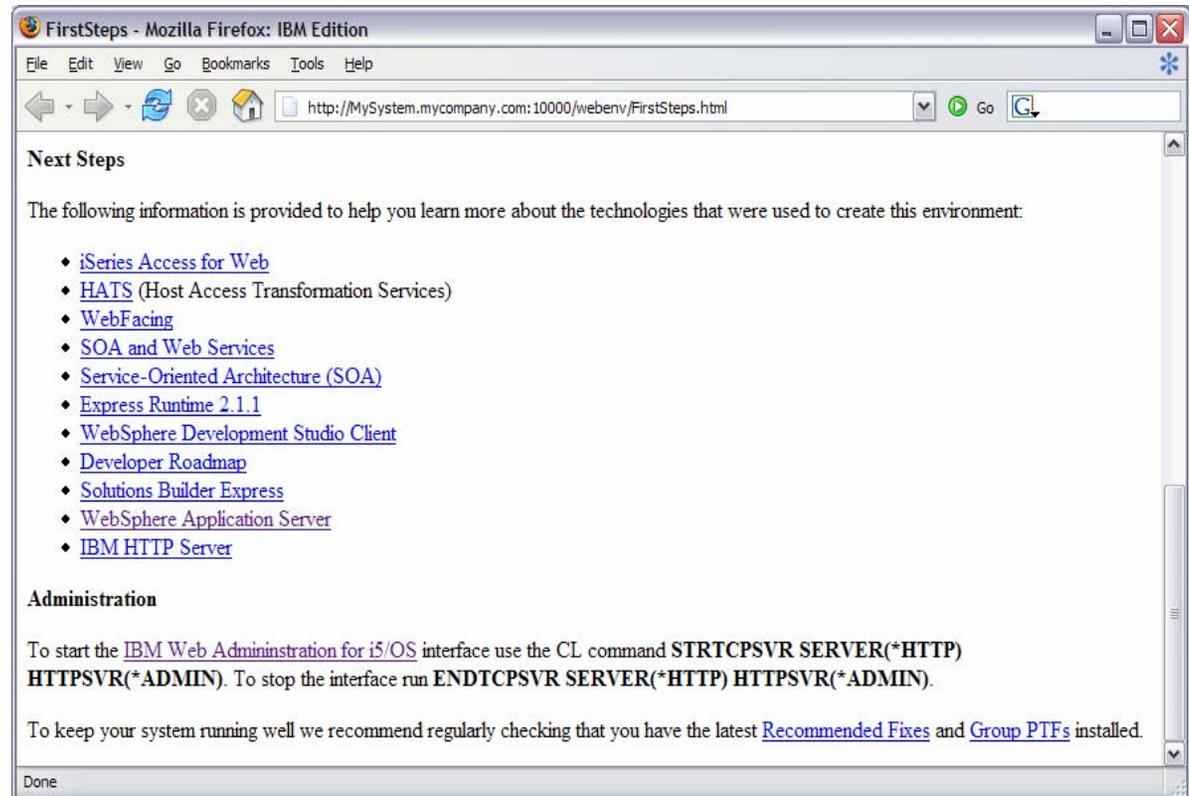
“Web_Enablement_
Environment_V5R4M0”



Demonstration (continued)

Click the desktop icon
named:

“Web_Enablement_
Environment_V5R4M0”



**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
 - 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
- 450047 LAB: System i Access for Web Installation and Configuration
- Examples at <http://www.ibm.com/systems/i/software/access/web/doc.html>

Decide what web application server environment to run



Decide what web application server environment to run

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

– **Servlets**

- **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**
 - **The ASF Tomcat included as part of the no-charge IBM HTTP Server for iSeries (5722-DG1)**
 - **ASF Tomcat PTFs are delivered within the IBM HTTP Server for iSeries Group HTTP PTFs.**

– **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**

<http://www.ibm.com/servers/eserver/series/software/websphere/wsappserver/docs/doc.html>

The screenshot shows a Mozilla Firefox browser window displaying the IBM WebSphere Application Server for i5/OS documentation page. The browser title is "IBM WebSphere Application Server for i5/OS: Documentation - Mozilla Firefox: IBM Edition". The address bar shows the URL "http://www-03.ibm.com/servers/eserver/series/software/websphere". The page features the IBM logo and a navigation menu with links for Home, Products, Services & industry solutions, Support & downloads, and My account. The main content area is titled "WebSphere Application Server for i5/OS" and includes a "Documentation" section with a list of links for various versions (6.1, 6.0, 5.1, 5.0, 4.0) and their respective editions. A sidebar on the left contains a "System i" menu with links to WebSphere home, What's New, About WebSphere, Ordering, Documentation, FAQs, Business Solutions, Samples, PTFs, Performance, Coexistence, Migration, Forum, and Related Resources. A right sidebar contains a "Need directions?" section with a "System i Developer Road Atlas" link and a "Get Adobe Reader" button. The page is updated as of June 9, 2006.

IBM WebSphere Application Server for i5/OS: Documentation - Mozilla Firefox: IBM Edition

File Edit View History Bookmarks Tools Help

http://www-03.ibm.com/servers/eserver/series/software/websphere

Country/region [select] Terms of use

Search

Home Products Services & industry solutions Support & downloads My account

← System i

WebSphere home

What's New

About WebSphere

Ordering

Documentation

FAQs

Business Solutions

Samples

PTFs

Performance

Coexistence

Migration

Forum

Related Resources

WebSphere Application Server for i5/OS

Updated: June 9, 2006

Documentation

WebSphere Application Server Version 6.1 for i5/OS is now available. To find out more about the new version or any other of the supported versions - please click on the links:

- Version 6.1
- Version 6.0
- Version 5.1:
 - WebSphere Application Server
 - WebSphere Application Server for Developers
 - WebSphere Application Server Network Deployment
 - WebSphere Application Server - Express
- Version 5.0:
 - WebSphere Application Server
 - WebSphere Application Server Network Deployment
 - WebSphere Application Server - Express
- Version 4.0:
 - Advanced Edition
 - Advanced Single Server Edition

Need directions?

System i Developer Road Atlas

→ IBM System i Developer Road Atlas

An Independent Analysis of the iSeries Developer Roadmap - Updated for 2006 (1.4MB)

The Business Benefits of iSeries Application Modernization (183KB)

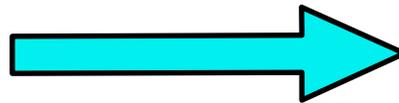
Get Adobe Reader

Emerging Technology

→ Dynamic web site development for the non-technical

Done

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) product 5722-XH2
- RSTLICPGM LICPGM(5722XH2) DEV(OPT01) OPTION(*BASE)

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

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

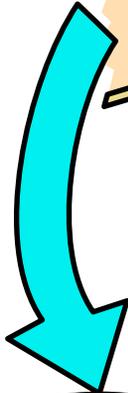
No coexistence between V5R2, V5R3, and V5R4 System i Access for Web

If System i Access for Web is already installed on the i5/OS system...

- Installing/upgrading to a later release will replace the installed version.
- QIWA2/CFGACCWEB2 must be run after installing a newer release of System i Access for Web.
- Running CFGACCWEB2 enables/deploys new functions.
- The web application server must be restarted after CFGACCWEB2 is run.
- Refer to the InfoCenter information for information on upgrading from a previous release to V5R4 System i Access for Web.



Verify, load, apply any additional PTFs



Verify, load, apply any additional PTFs

- **Each component of the web application serving environment has PTFs**
 - 1. WebSphere Application Server**
 - 2. i5/OS Cumulative PTF package**
 - 3. HTTP web server**
 - 4. WebSphere Portal/Workplace Services Express**
 - 5. System i Access for Web**

- **PTFs for the above components should be verified and updated as needed**

The following pages provide specific detail on each of the above →

Verify, load, apply any additional PTFs (continued)

1. WebSphere Application Server

- <http://www.ibm.com/servers/eserver/series/software/websphere/wsappserver/>
- Click the **PTFs** link, click the link for i5/OS release/WebSphere version
- V5R4 i5/OS
 - WRKPTFGRP SF99323 v6.1 for i5/OS
 - WRKPTFGRP SF99312 v6.0 for OS/400
 - WRKPTFGRP SF99311 v5.1 Express for iSeries
 - WRKPTFGRP SF99308 v5.1 Base Edition
 - WRKPTFGRP SF99309 v5.1 Network Deployment Edition
- V5R3 i5/OS
 - WRKPTFGRP SF99322 v6.1 for i5/OS
 - WRKPTFGRP SF99301 v6.0 for OS/400
 - WRKPTFGRP SF99275 v5.1 Express for iSeries
 - WRKPTFGRP SF99285 v5.1 Base Edition
 - WRKPTFGRP SF99286 v5.1 Network Deployment Edition
 - WRKPTFGRP SF99272 v5.0 Express for iSeries
 - WRKPTFGRP SF99287 v5.0 Base Edition
 - WRKPTFGRP SF99288 v5.0 Network Deployment Edition

Verify, load, apply any additional PTFs (continued)

2. i5/OS Cumulative PTF package

- The WebSphere Application Server group PTF identifies an i5/OS Cumulative PTF package.
- The i5/OS PTF package specified is the level the WebSphere group PTF was tested with.
- You may be able to successfully run with an earlier or later cumulative PTF package.

Verify, load, apply any additional PTFs (continued)

3. HTTP web server

- <http://www.ibm.com/servers/eserver/series/software/http>
 - Click the Support tab

- V5R4 i5/OS
 - WRKPTFGRP SF99114

- V5R3 i5/OS
 - WRKPTFGRP SF99099

Verify, load, apply any additional PTFs (continued)

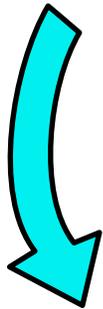
4. WebSphere Portal/Workplace Services Express

- Refer to the Portal and Workplace Information Center documentation
- IBM WebSphere Portal – Express/Express Plus for iSeries V5.0.2.2
 - <http://publib.boulder.ibm.com/pvc/wp/502/smbi/en/InfoCenter/index.html>
- IBM WebSphere Portal V5.1.0.1
 - <http://publib.boulder.ibm.com/infocenter/wp51help/index.jsp>
- IBM WebSphere Portal V6.0
 - <http://publib.boulder.ibm.com/infocenter/wpdoc/v6r0/index.jsp>
- IBM Workplace Services Express V2.5
 - <http://publib.boulder.ibm.com/infocenter/wseic/v2r5/index.jsp>
- IBM Workplace Services Express V2.6
 - <http://publib.boulder.ibm.com/infocenter/wseic/v2r6/index.jsp>

Verify, load, apply any additional PTFs (continued)

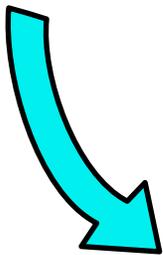
5. System i Access for Web

- <http://www.ibm.com/systems/i/software/access/web/servicepacks.html>
- **V5R4 - SI25551 (available Dec 2006)**
 - Contains support for WAS V6.1, Workplace Services Express V2.6, Portal V6.0, integrated web application server
 - Linux i386.rpm - SI24993
 - Linux ppc.rpm - SI24994
 - Linux ppc64.rpm - SI24995
 - Linux x86-64.rpm - SI24996
 - AFP Plugin Viewer - SI22919
- **V5R3 - SI23771 (available June 2006)**
 - Contains support for WAS V6.1, WAS V6.0, Portal V5.1.0.1, Workplace Services Express V2.5
 - Linux i386 rpm - SI24517
 - Linux ppc rpm - SI24518
 - AFP Plugin Viewer - SI14371
- Always check the cover letter special instructions, often will have to run CFGACCWEB2 to enable changes.
- Always check the website for latest PTF numbers

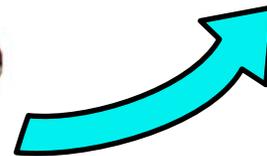


Setup up web-serving environment

 **HTTP** Server for iSeries

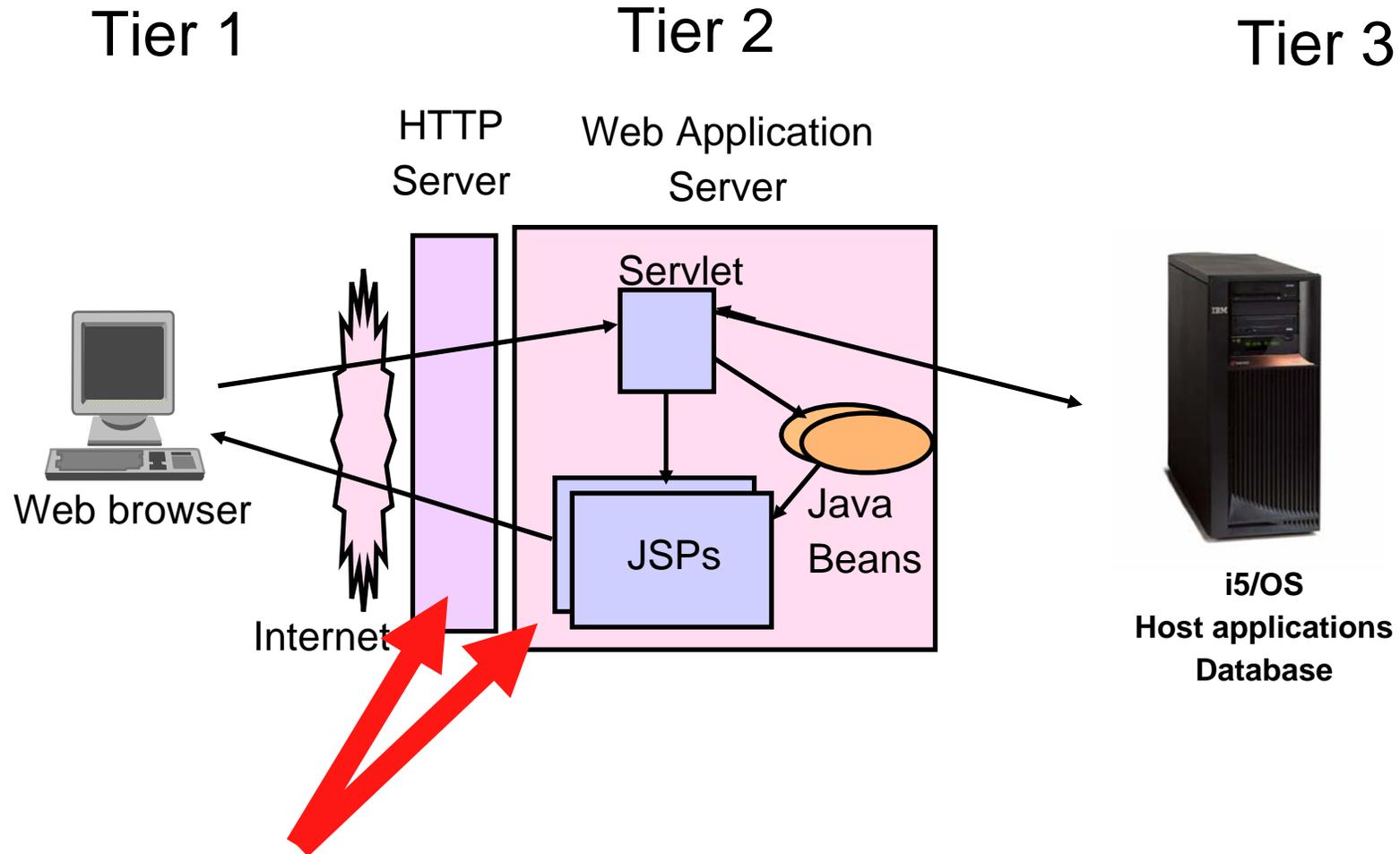


IBM
WebSphere



Step by Step

Setup web-serving environment



Need to create...

Setup web-serving environment (continued)

- **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 sever

- **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

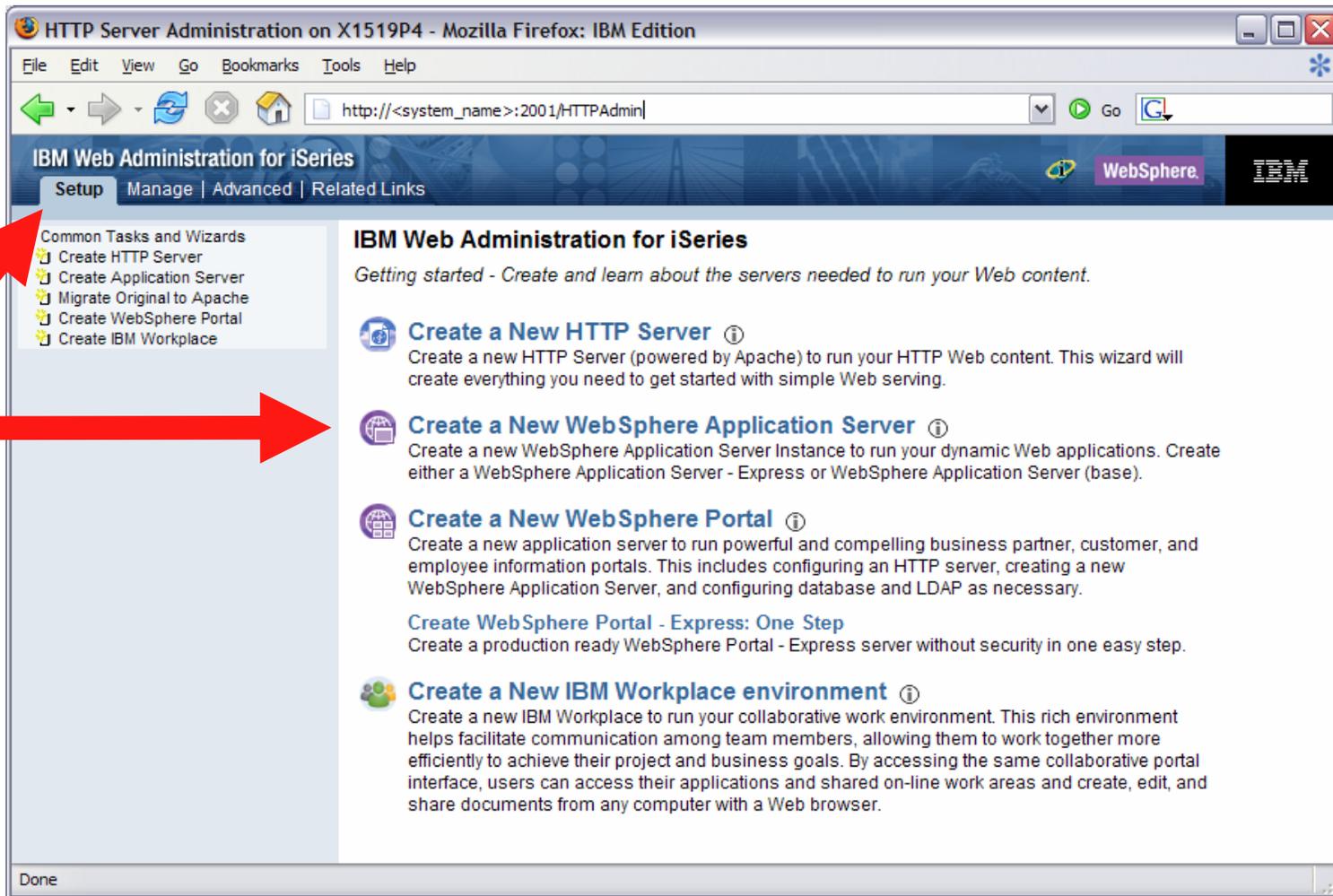
Setup web-serving environment (continued)

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 a New WebSphere Application Server



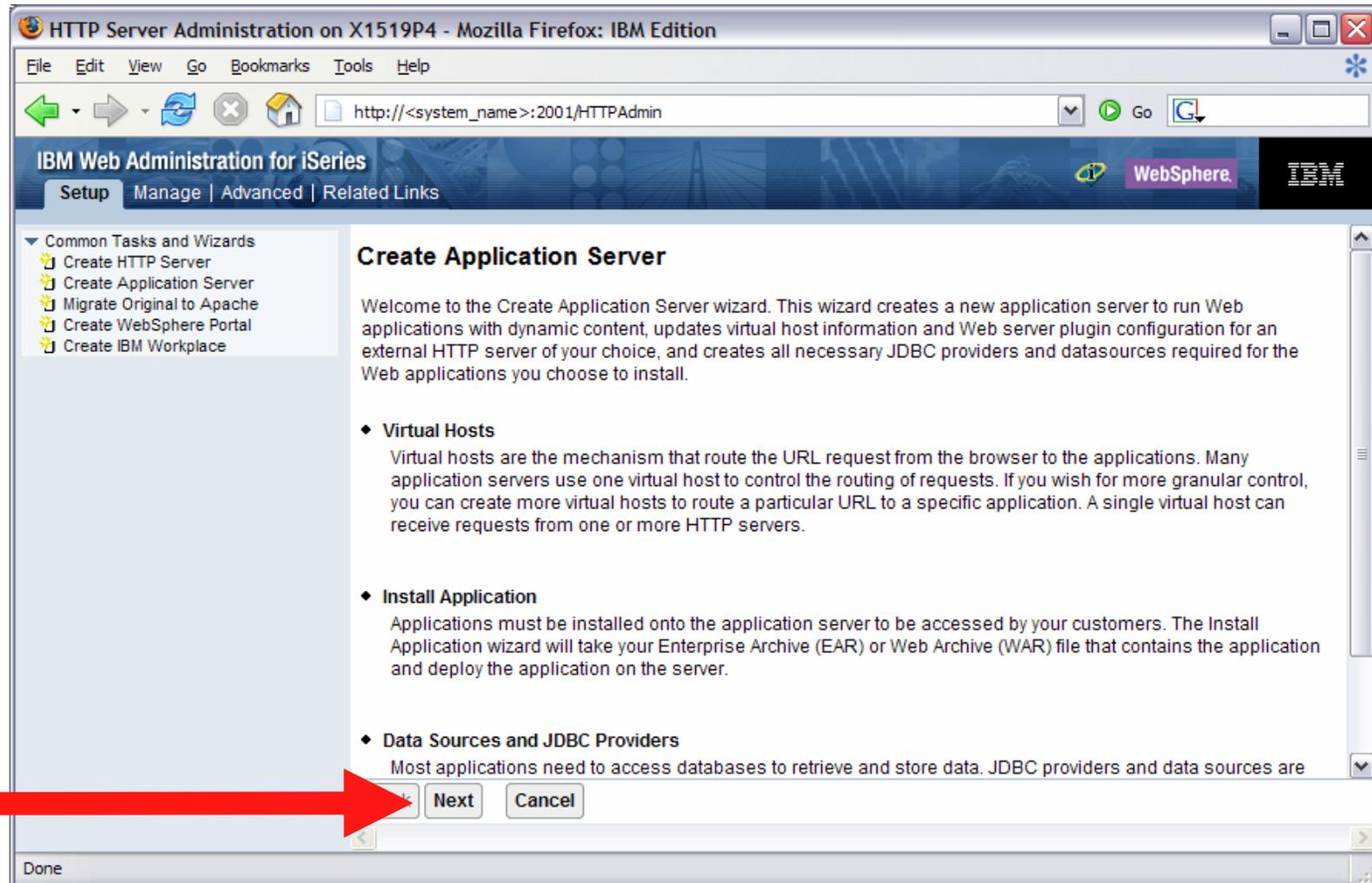
The screenshot shows the IBM Web Administration for iSeries interface in a Mozilla Firefox browser window. The browser title is "HTTP Server Administration on X1519P4 - Mozilla Firefox: IBM Edition". The address bar shows "http://<system_name>:2001/HTTPAdmin". The interface has a navigation bar with "Setup", "Manage", "Advanced", and "Related Links". A sidebar on the left lists "Common Tasks and Wizards" with options: "Create HTTP Server", "Create Application Server", "Migrate Original to Apache", "Create WebSphere Portal", and "Create IBM Workplace". A red arrow points from the "Create Application Server" option in the sidebar to the "Create a New WebSphere Application Server" option in the main content area. The main content area is titled "IBM Web Administration for iSeries" and contains a list of tasks:

- Create a New HTTP Server** ⓘ
Create a new HTTP Server (powered by Apache) to run your HTTP Web content. This wizard will create everything you need to get started with simple Web serving.
- Create a New WebSphere Application Server** ⓘ
Create a new WebSphere Application Server Instance to run your dynamic Web applications. Create either a WebSphere Application Server - Express or WebSphere Application Server (base).
- Create a New WebSphere Portal** ⓘ
Create a new application server to run powerful and compelling business partner, customer, and employee information portals. This includes configuring an HTTP server, creating a new WebSphere Application Server, and configuring database and LDAP as necessary.
[Create WebSphere Portal - Express: One Step](#)
Create a production ready WebSphere Portal - Express server without security in one easy step.
- Create a New IBM Workplace environment** ⓘ
Create a new IBM Workplace to run your collaborative work environment. This rich environment helps facilitate communication among team members, allowing them to work together more efficiently to achieve their project and business goals. By accessing the same collaborative portal interface, users can access their applications and shared on-line work areas and create, edit, and share documents from any computer with a Web browser.

The status bar at the bottom of the browser window shows "Done".

Setup web-serving environment (continued)

Click Next



Setup web-serving environment (continued)

Select version of WebSphere Application Server, click Next

HTTP Server Administration on LP016AB - Mozilla Firefox: IBM Edition

File Edit View Go Bookmarks Tools Help

http://<system_name>:2001/HTTPAdmin

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 Application Server

Select WebSphere Application Server Version

Your system has more than one version of WebSphere Application Server installed.

Choose the type of application server to create

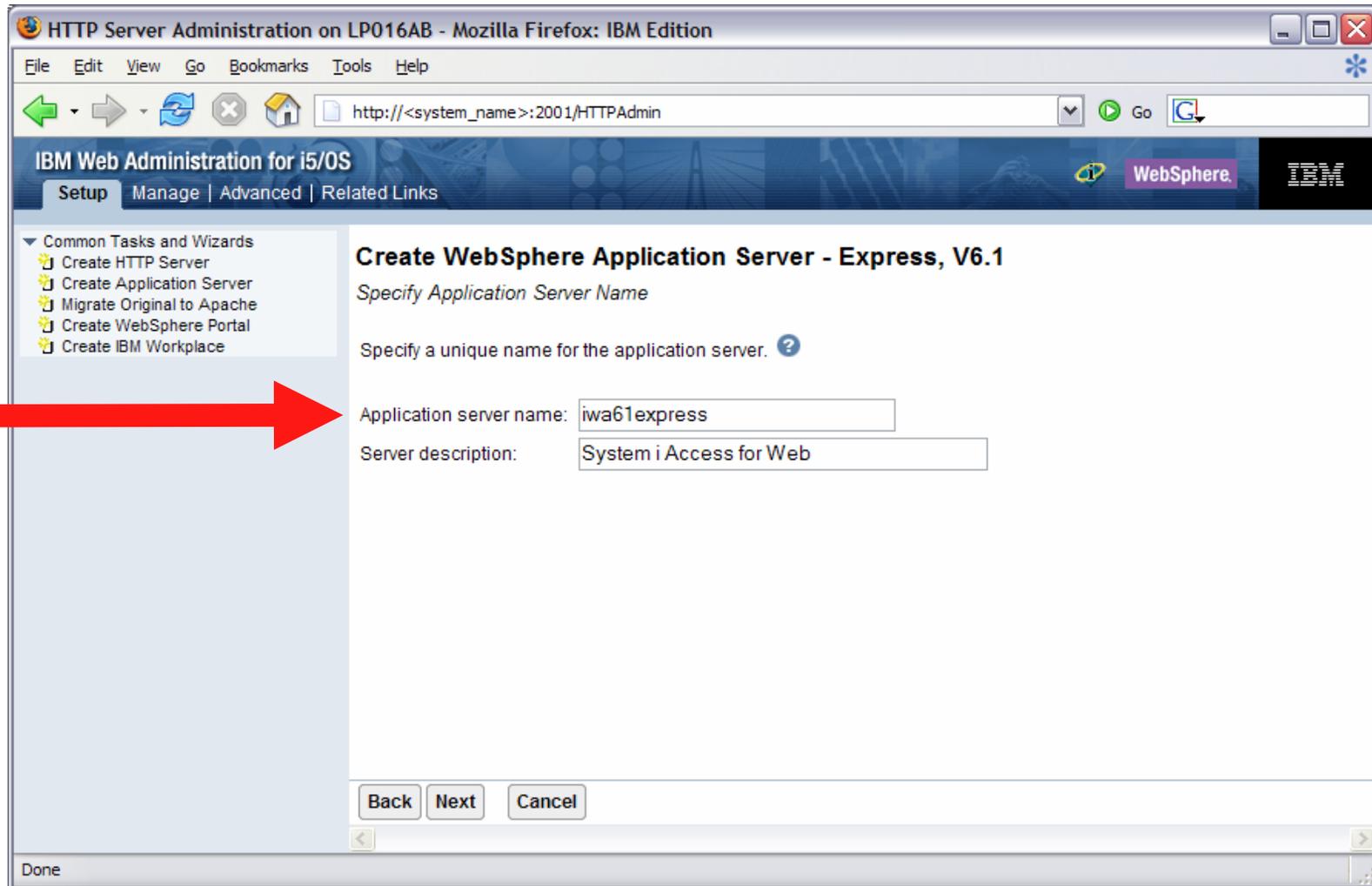
- V6.1 Express *WebSphere Application Server V6.1 Express, allows you to add dynamic function to static HTML Web pages and is intended for less complex Web applications.*
- V6.1 ND
- V6.1 Base *WebSphere Application Server Version V6.1 Express can be installed in multiple locations on this system. Multiple application servers can be created from each installation. The product install path for this installation is /QIBM/ProdData/WebSphere/AppServer/V61/Express.*
- V6.0
- V6.0 ND
- V5.1 Base
- V5.1 Express

Back Next Cancel

Done

Setup web-serving environment (continued)

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



HTTP Server Administration on LP016AB - Mozilla Firefox: IBM Edition

File Edit View Go Bookmarks Tools Help

http://<system_name>:2001/HTTPAdmin

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:

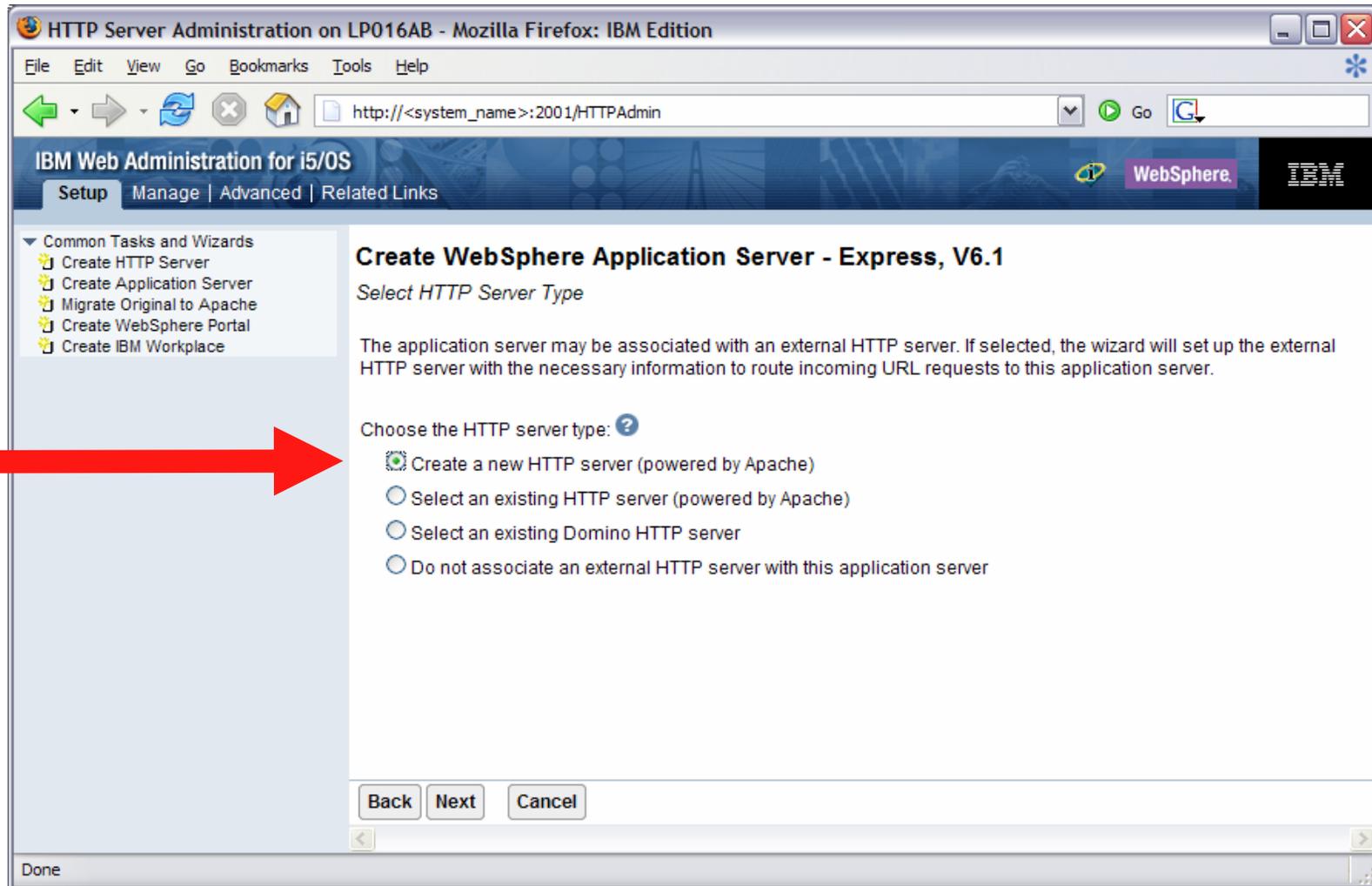
Server description:

Back Next Cancel

Done

Setup web-serving environment (continued)

Select Create a new HTTP server, click Next



Setup web-serving environment (continued)

Enter name for HTTP server, optional description, port for this HTTP web server, click Next

HTTP Server Administration on LP016AB - Mozilla Firefox: IBM Edition

File Edit View Go Bookmarks Tools Help

http://<system_name>:2001/HTTPAdmin

IBM Web Administration for i5/OS

Setup Manage Advanced Related Links

WebSphere IBM

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

Done

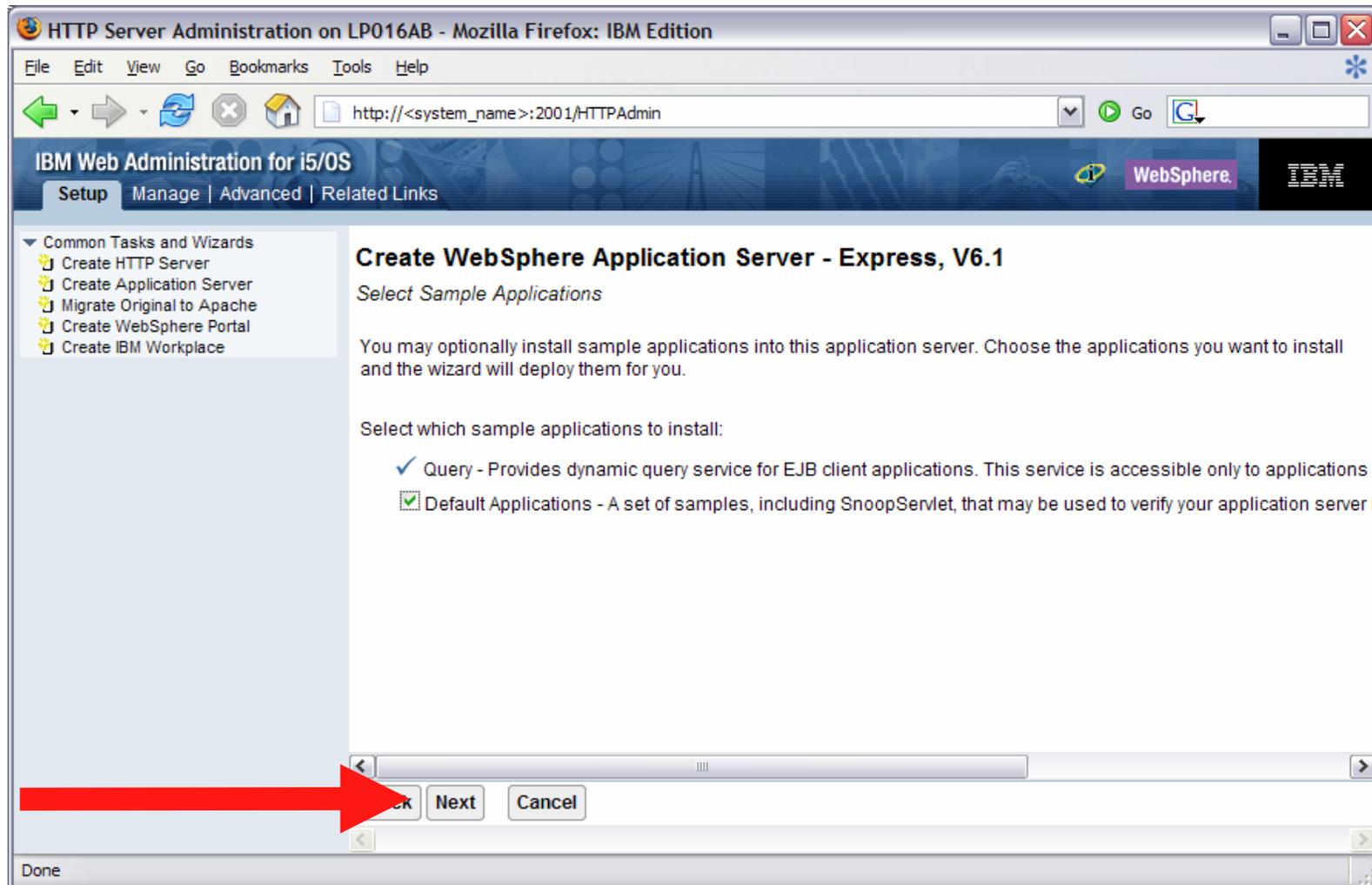
Setup web-serving environment (continued)

Enter first port in a range of available ports, click Next

The screenshot shows the 'Create WebSphere Application Server - Express, V6.1' wizard in the IBM Web Administration for i5/OS interface. The browser window title is 'HTTP Server Administration on LP016AB - Mozilla Firefox: IBM Edition'. The address bar shows 'http://<system_name>:2001/HTTPAdmin'. The interface includes a navigation menu on the left with options like 'Create HTTP Server', 'Create Application Server', 'Migrate Original to Apache', 'Create WebSphere Portal', and 'Create IBM Workplace'. The main content area displays the wizard title and a sub-heading 'Specify Internal Ports Used by the Application Server'. A paragraph explains that the application server uses several internal services and requires a block of 15 consecutive ports. Below this, the 'First port in range' field is set to '10101'. At the bottom, there are 'Back', 'Next', and 'Cancel' buttons. A red arrow points to the '10101' input field.

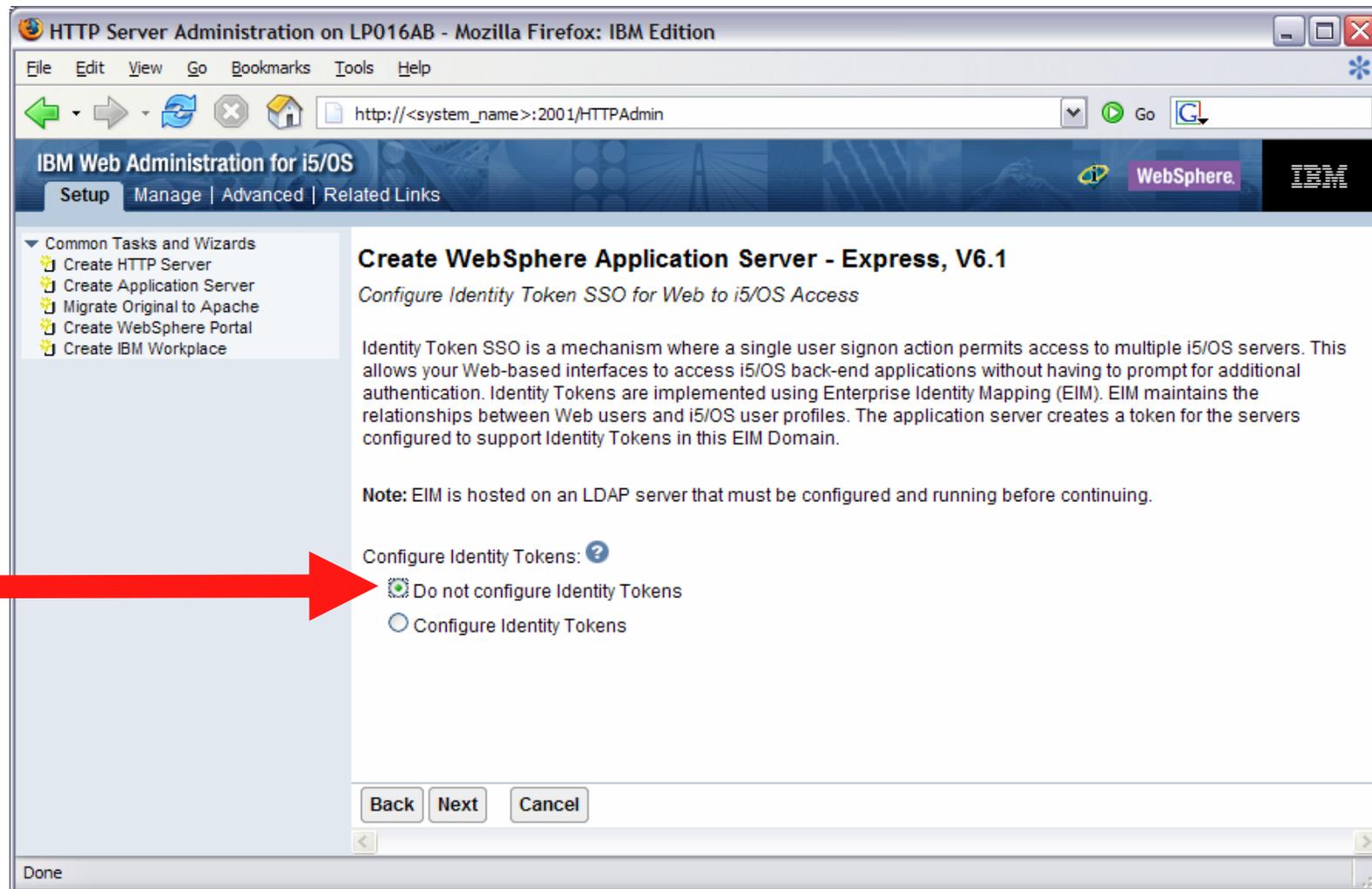
Setup web-serving environment (continued)

Click Next



Setup web-serving environment (continued)

Information Center has an example for configuring SSO environment



The screenshot shows a web browser window titled "HTTP Server Administration on LP016AB - Mozilla Firefox: IBM Edition". The address bar shows "http://<system_name>:2001/HTTPAdmin". The page content is titled "Create WebSphere Application Server - Express, V6.1" and includes the sub-heading "Configure Identity Token SSO for Web to i5/OS Access". The text explains that Identity Token SSO is a mechanism for single sign-on across multiple i5/OS servers. A note states: "Note: EIM is hosted on an LDAP server that must be configured and running before continuing." Below this, the "Configure Identity Tokens" section has two radio button options: "Do not configure Identity Tokens" (which is selected) and "Configure Identity Tokens". A red arrow points to the "Do not configure Identity Tokens" option. At the bottom of the wizard, there are "Back", "Next", and "Cancel" buttons.

Setup web-serving environment (continued)

Click Finish to create the web-serving environment

The screenshot shows the 'Create WebSphere Application Server - Express, V6.1' wizard in the IBM Web Administration console. The 'HTTP Server' tab is selected, and the 'Finish' button is highlighted with a red arrow. The wizard displays the following configuration details:

Application Server | **HTTP Server**

WAS version: 6.1.0.3 Express
Application server name: iwa61express
Server description: System i Access for Web
Internal port range: 10101 - 10115
Virtual host: default_host
Profile root: /QIBM/UserData/WebSphere/AppServer/V61/Express/profiles
External HTTP server association: IWA61EXPRE
Server URL: http://LP016AB:10100
Business applications: None
Sample applications:

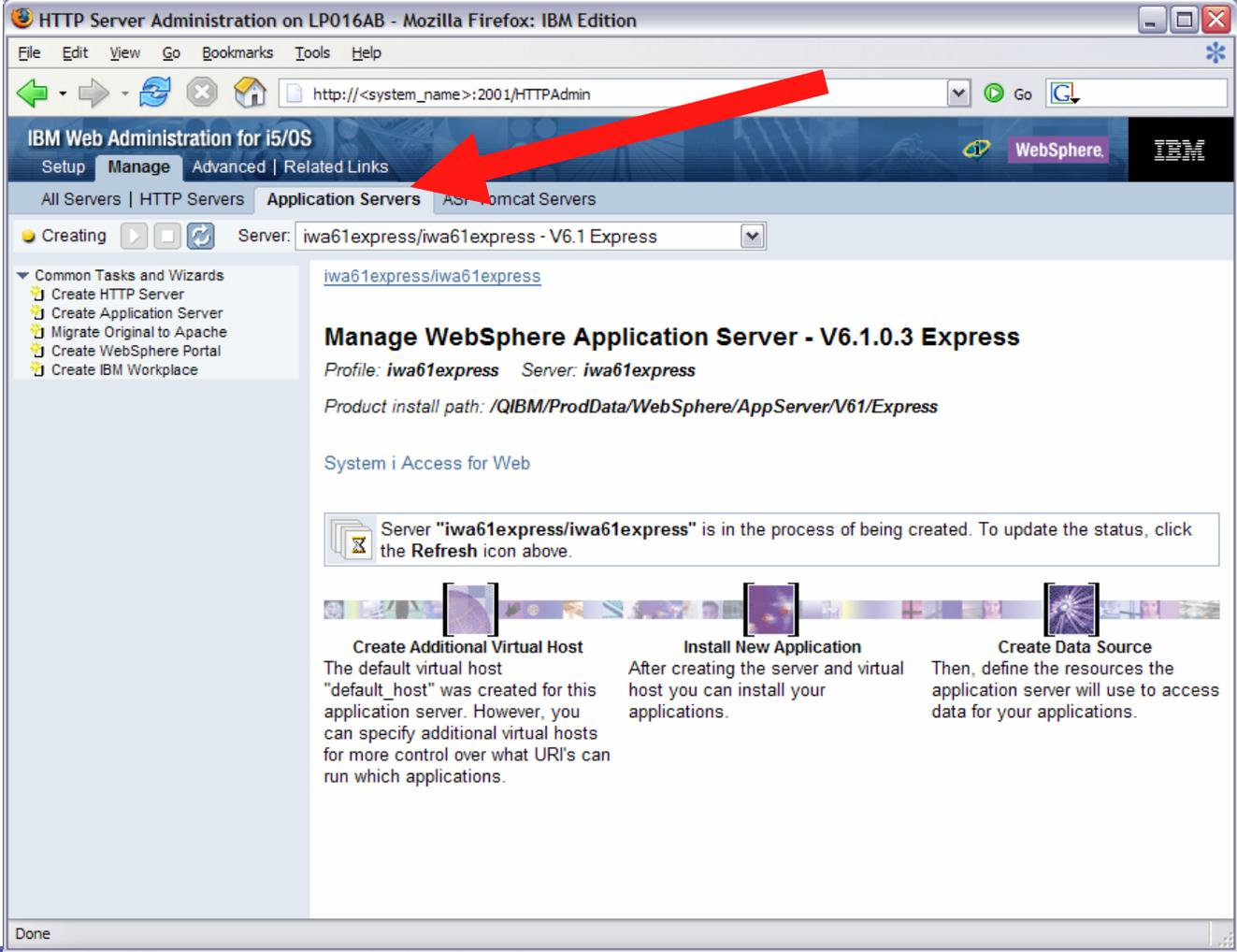
Application name	URL to access application
query	Used by EJB client applications
Default Applications	http://LP016AB:10100/snoop
	http://LP016AB:10100/hitcount
	http://LP016AB:10100/hello

Note: To access the application(s) you have chosen, start both the application server and HTTP server, then enter a URL from the table above.

Finish **Cancel** **Printable Summary**

Setup web-serving environment (continued)

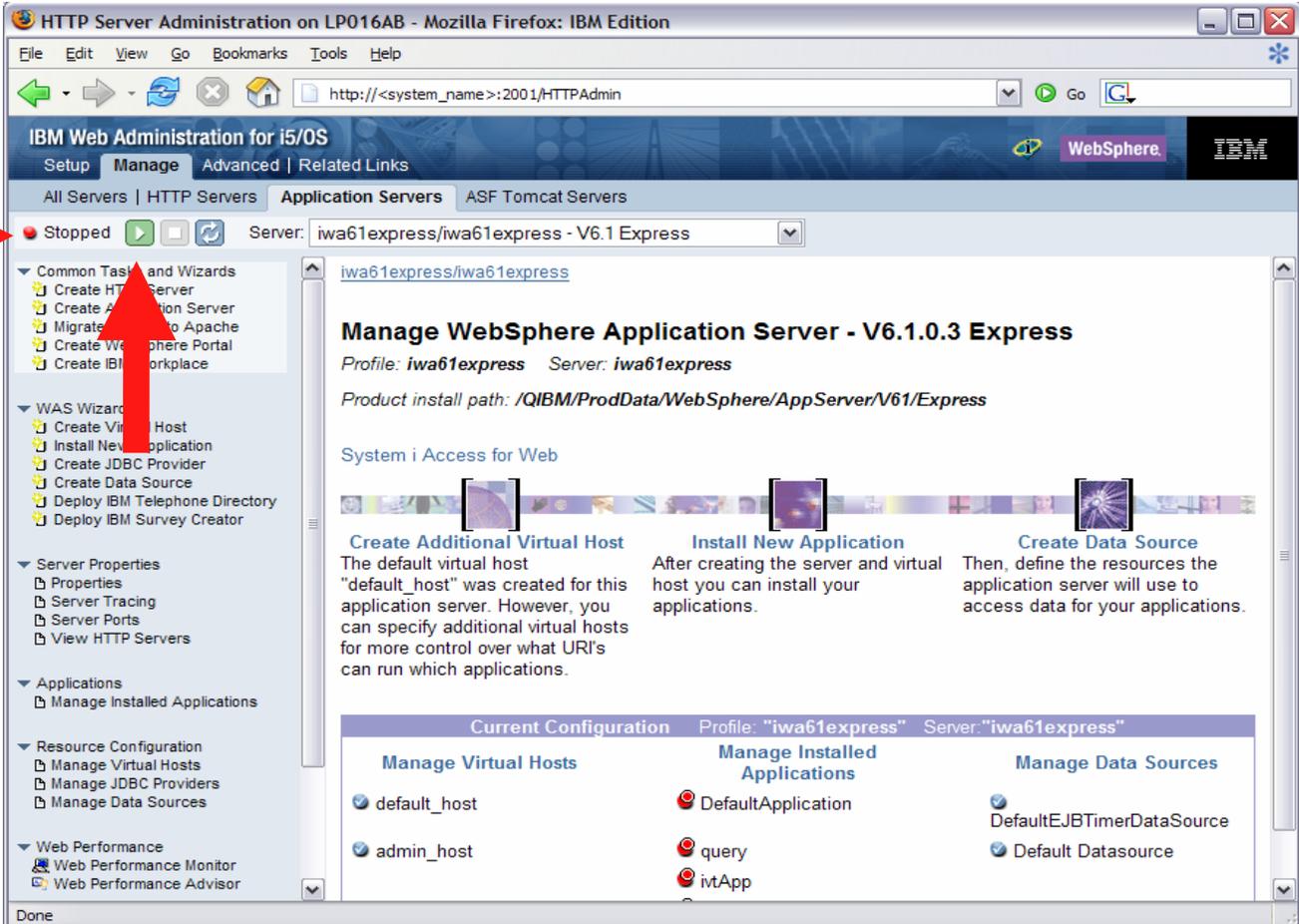
Page refreshes to Application Servers tab, status of Creating...



The screenshot shows the IBM Web Administration for i5/OS interface in Mozilla Firefox. The browser title is "HTTP Server Administration on LP016AB - Mozilla Firefox: IBM Edition". The address bar shows "http://<system_name>:2001/HTTPAdmin". The main navigation bar includes "Setup", "Manage", "Advanced", and "Related Links". Below this, there are tabs for "All Servers", "HTTP Servers", "Application Servers", and "AS400 Tomcat Servers". The "Application Servers" tab is active, and a red arrow points to it from the left. Underneath, there is a "Creating" status with a refresh icon, also highlighted by a red arrow. The server name is "iwa61express/iwa61express - V6.1 Express". The main content area displays "Manage WebSphere Application Server - V6.1.0.3 Express" with profile and server names. A message box states: "Server 'iwa61express/iwa61express' is in the process of being created. To update the status, click the Refresh icon above." Below this, there are three steps: "Create Additional Virtual Host", "Install New Application", and "Create Data Source".

Setup web-serving environment (continued)

Environment is created when status reaches Stopped,
Click start icon to start

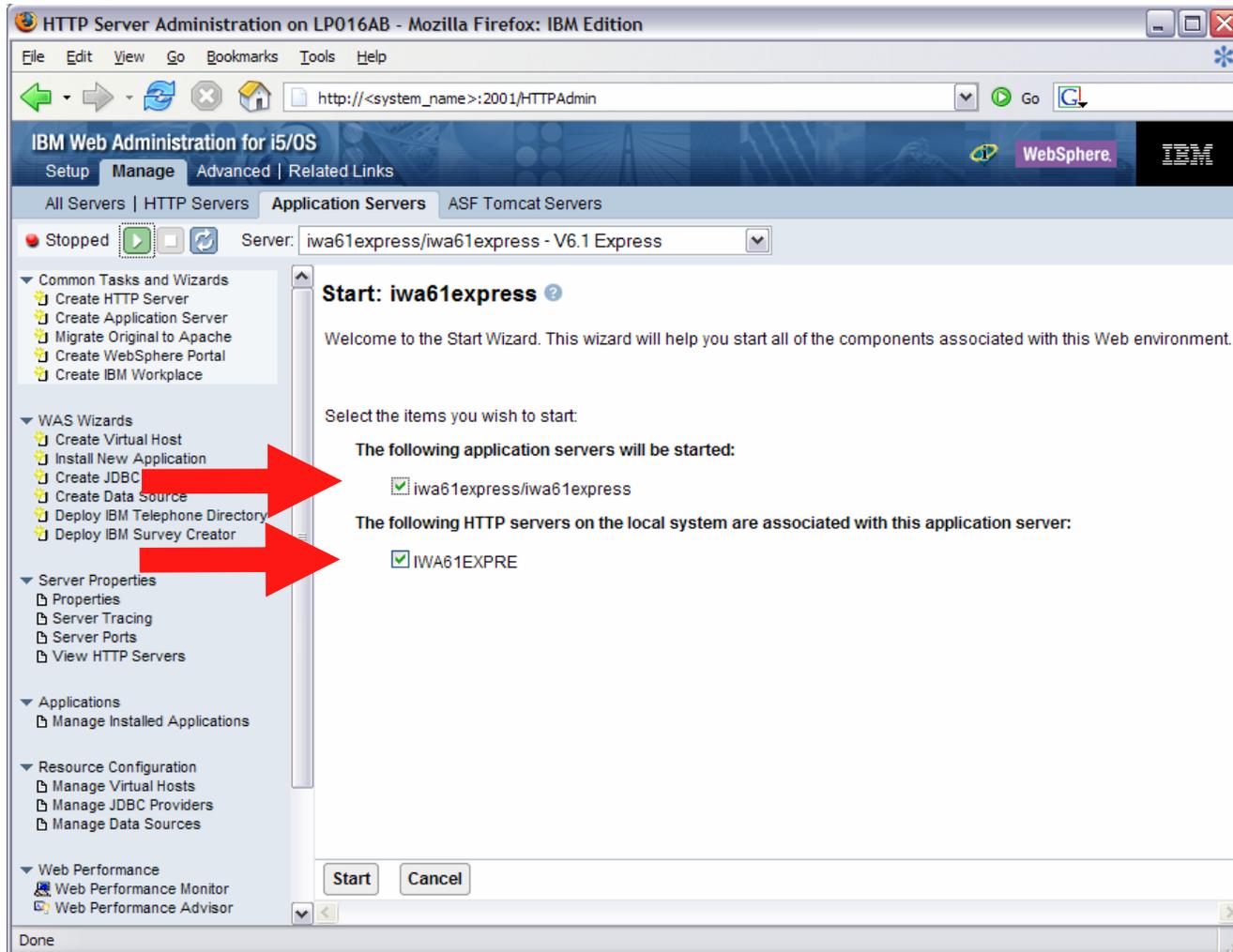


The screenshot shows the IBM Web Administration for i5/OS interface in Mozilla Firefox. The browser address bar shows `http://<system_name>:2001/HTTPAdmin`. The page title is "IBM Web Administration for i5/OS". The navigation tabs include "Setup", "Manage", "Advanced", and "Related Links". The main content area is titled "Manage WebSphere Application Server - V6.1.0.3 Express" and shows the server status as "Stopped". A red arrow points to the "Stopped" status, and another red arrow points to the start icon (a green play button) next to it. The left sidebar contains a tree view of navigation options, including "Common Tasks and Wizards", "WAS Wizards", "Server Properties", "Applications", "Resource Configuration", and "Web Performance". The main content area also includes a "System i Access for Web" section with three steps: "Create Additional Virtual Host", "Install New Application", and "Create Data Source". At the bottom, there is a "Current Configuration" table with three columns: "Manage Virtual Hosts", "Manage Installed Applications", and "Manage Data Sources".

Current Configuration	Profile: "iwa61express"	Server: "iwa61express"
Manage Virtual Hosts	Manage Installed Applications	Manage Data Sources
<input checked="" type="checkbox"/> default_host	<input type="checkbox"/> DefaultApplication	<input checked="" type="checkbox"/> DefaultEJBTimerDataSource
<input checked="" type="checkbox"/> admin_host	<input type="checkbox"/> query	<input checked="" type="checkbox"/> Default Datasource
	<input type="checkbox"/> ivtApp	

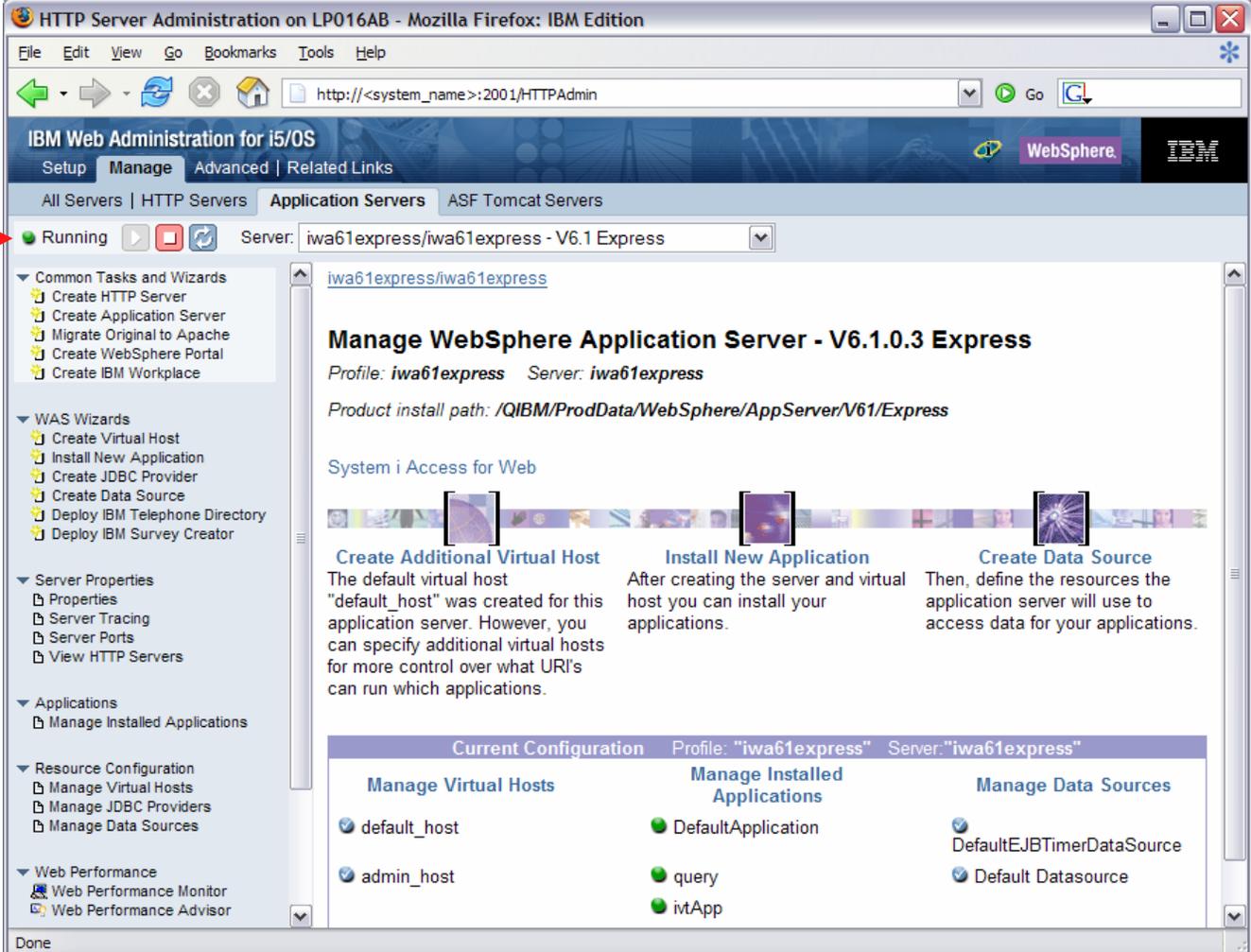
Setup web-serving environment (continued)

Page is refreshed listing the application servers and HTTP web server that will be started



Setup web-serving environment (continued)

Environment is ready for use when status reaches Running



The screenshot shows the IBM Web Administration for i5/OS interface in Mozilla Firefox. The browser address bar shows `http://<system_name>:2001/HTTPAdmin`. The main content area displays the status of the application server `iwa61express/iwa61express - V6.1 Express`, which is currently **Running**. A red arrow points to the **Running** status indicator. The interface includes a left-hand navigation pane with sections like **Common Tasks and Wizards**, **WAS Wizards**, **Server Properties**, **Applications**, **Resource Configuration**, and **Web Performance**. The main content area shows the **Manage WebSphere Application Server - V6.1.0.3 Express** page, which includes a progress bar and three steps: **Create Additional Virtual Host**, **Install New Application**, and **Create Data Source**. Below the progress bar, there are three panels: **Current Configuration** (listing `default_host` and `admin_host`), **Manage Installed Applications** (listing `DefaultApplication`, `query`, and `ivtApp`), and **Manage Data Sources** (listing `DefaultEJBTimerDataSource` and `Default Datasource`).

Setup web-serving environment (continued)

Tips for managing the Web Administration for i5/OS and HTTP web servers

- To start/stop the IBM Web Administration for i5/OS interface
 - STRTCPSVR *HTTP HTTPSVR(*ADMIN)
 - ENDTCPSSVR *HTTP HTTPSVR(ADMIN)

- To access the IBM Web Administration for i5/OS interface
 - http://<system_name>:2001/HTTPAdmin

- CL commands to start/stop the HTTP web servers
 - STRTCPSVR *HTTP HTTPSVR(<my_http_server_name>)
 - ENDTCPSSVR *HTTP HTTPSVR(<my_http_server_name>)

- **HTTP servers run within the QHTTPSVR subsystem**

Setup web-serving environment (continued)

WebSphere Application Server V6.1 information

- **Subsystem**
 - **Runs in QWAS61 subsystem**
 - **WRKACTJOB SBS(QWAS61)**
 - **Jobs (web application server) are named with the name of the web application server**
- **Instances vs. profiles**
 - **Previous WAS versions had “instances”. V6.1 has “profiles”.**
 - **A default profile is created named “default”. The web application server it contains is named “server1”.**
- **IFS**
 - **/QIBM/ProdData/WebSphere/App Server/V61/Base/...**
 - **/QIBM/UserData/WebSphere/App Server/V61/Base/...**
 - **/QIBM/ProdData/WebSphere/App Server/V61/Express/...**
 - **/QIBM/UserData/WebSphere/App Server/V61/Express/...**
 - **/QIBM/ProdData/WebSphere/App Server/V61/ND/...**
 - **/QIBM/UserData/WebSphere/App Server/V61/ND/...**
 - **These paths are defaults.**
 - **WAS 6.1 can be installed anywhere in the IFS**
 - **WAS 6.1 profiles can be created anywhere in the IFS.**

Note: If using WAS Network Deployment product, the profile cannot be federated/managed in the Network Deployment environment

Setup web-serving environment (continued)

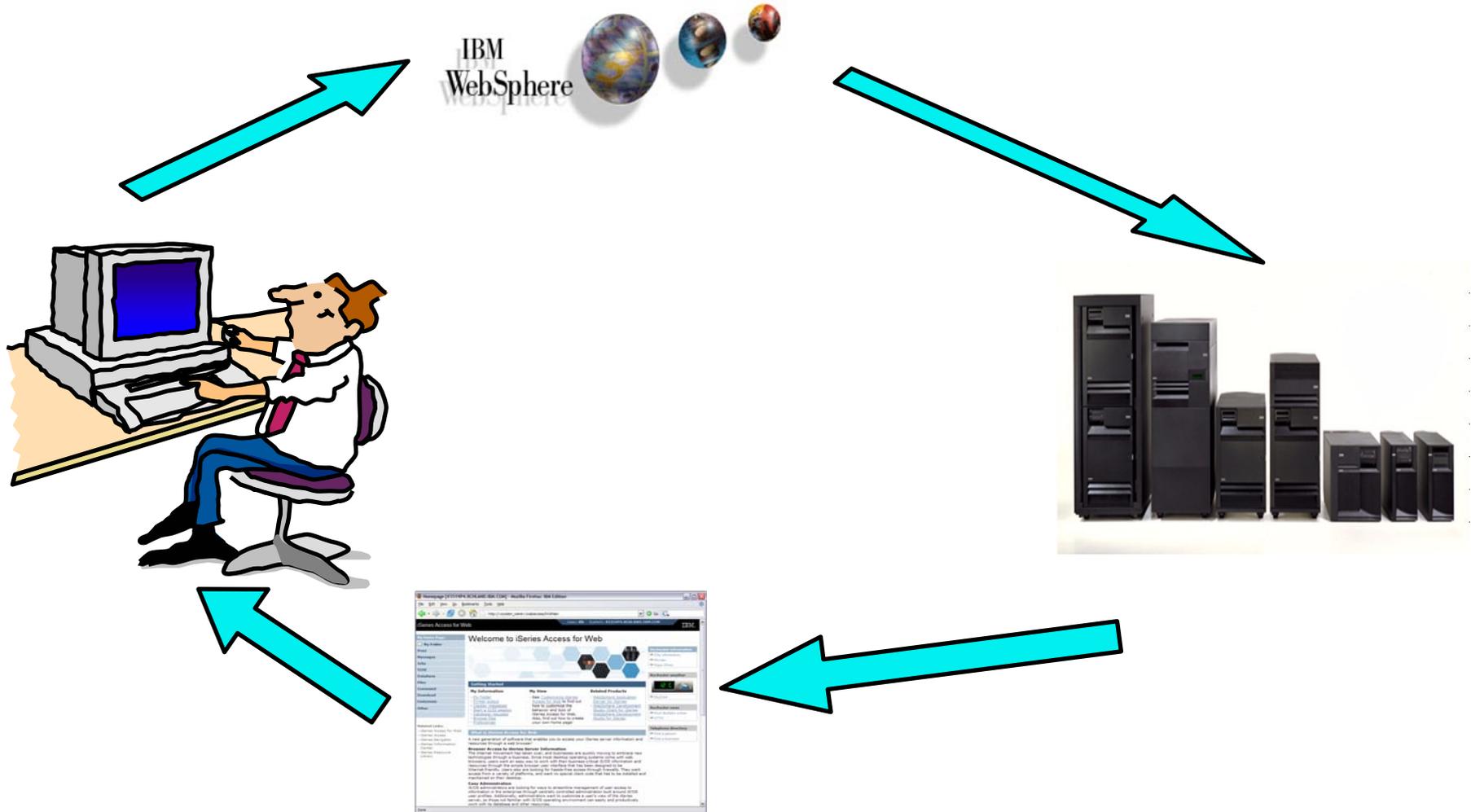
WebSphere Application Server V6.0 information

- Subsystem
 - **Runs in QWAS6 subsystem**
 - WRKACTJOB SBS(QWAS6)
 - Jobs (web application server) are named with the name of the web application server
- Instances vs. profiles
 - Previous WAS versions had “instances”. V6.0 has “profiles”.
 - A default profile is created named “default”. The web application server it contains is named “server1”.
- IFS
 - /QIBM/ProdData/WebSphere/AppServer/V6/Base/...
 - /QIBM/UserData/WebSphere/AppServer/V6/Base/...

Note: Profiles can be created to user specified paths, above is the default path.

Note: If using WAS Network Deployment product, the profile cannot be federated/managed in the Network Deployment environment

Configure System i Access for Web



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 – V5R4 Information Center**
 - Place to start to get V5R4 System i Access for Web installed and running
 - Examples included for each web application server environment at <http://www.ibm.com/systems/i/software/access/web/doc.html>

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

Configure System i Access for Web (continued)

To configure the web-serving environment created above using the CL command	QIWA2/CFGACCWEB2 APPSVRTYPE(*WAS61EXP) WASPRF(iwa61express) APPSVR(iwa61express)
To configure the web-serving environment created above using the QSH command	<ul style="list-style-type: none">• QSH• cd /QIBM/ProdData/Access/Web2/install• cfgaccweb2 –appsvrtype *WAS61EXP –wasprf iwa61express –appsvr iwa61express

- Now the web-serving environment must be stop/restarted to load the configuration changes that were made for System i Access for Web
- Note
 - Use the help text for the commands to learn more about the command and individual parameters
 - Some help is available for the for the QSH commands
 - cfgaccweb2 -? -help

CFGACCWEB2/cfgaccweb2 commands accept other parameters

<p>Tells Access for Web to connect and serve data to another i5/OS system</p> <ul style="list-style-type: none"> - If not specified, the local i5/OS running the web environment will be used 	<ul style="list-style-type: none"> • TGTSVR - *DEFAULT, fully qualified system name
<p>Specifies whether the web application (System i Access for Web) or the web application server (WebSphere) will authenticate the user</p>	<ul style="list-style-type: none"> • AUTHTYPE - *APP, *APPSVR • AUTHMETHOD - *FORM, *BASIC
<p>Input a WAS user ID/password for WAS profiles where WAS security has been enabled</p>	<ul style="list-style-type: none"> • WASUSRID • WASPWD
<p>Configure new web application servers based on existing web application where Access for Web is configured</p>	<ul style="list-style-type: none"> • SRCSVRTYPE - *ASFTOMCAT, *WAS50, *WAS50EXP, *WAS51, *WAS51EXP, *WAS60, etc. • SRCSVRINST – Name of the WAS instance/profile or Tomcat server • SRCAPPSVR – Name of WAS application server within the instance/profile • SRCINSDIR – Install path of WAS V6.1 profile • SHRUSRDTA – Copy the user data to the new configuration or share the user data between the old and new configurations.

Configure System i Access for Web (continued)

Note

- When upgrading from one WAS version to another where Access for Web is configured, **do not** migrate the WAS instance/profile where Access for Web is configured.
- To migrate System i Access for Web from WAS 5.1 Express to WAS 6.1 Express
 - Install WAS 6.1 Express
 - Create a WAS 6.1 Express profile
 - Configure Access for Web to WAS 6.1 Express based on the WAS 5.1 Express configuration.

```
cfgaccweb2      -appsvrtype *WAS61EXP
                 -wasprf iwa61express
                 -appsvr iwa61express
                 -wasinsdir /QIBM/ProdData/WebSphere/AppServer/V61/Express
                 -srcsvrtype *WAS51EXP
                 -srcsvrinst iwa51exp
                 -srcappsvr iwa51exp
                 -shrusrda *NO
```

- Remove the WAS 5.1 Express configuration if it's no longer needed.

```
rmvaccweb2      -appsvrtype *WAS51EXP
                 -wasprf iwa51exp
                 -appsvr iwa51exp
```

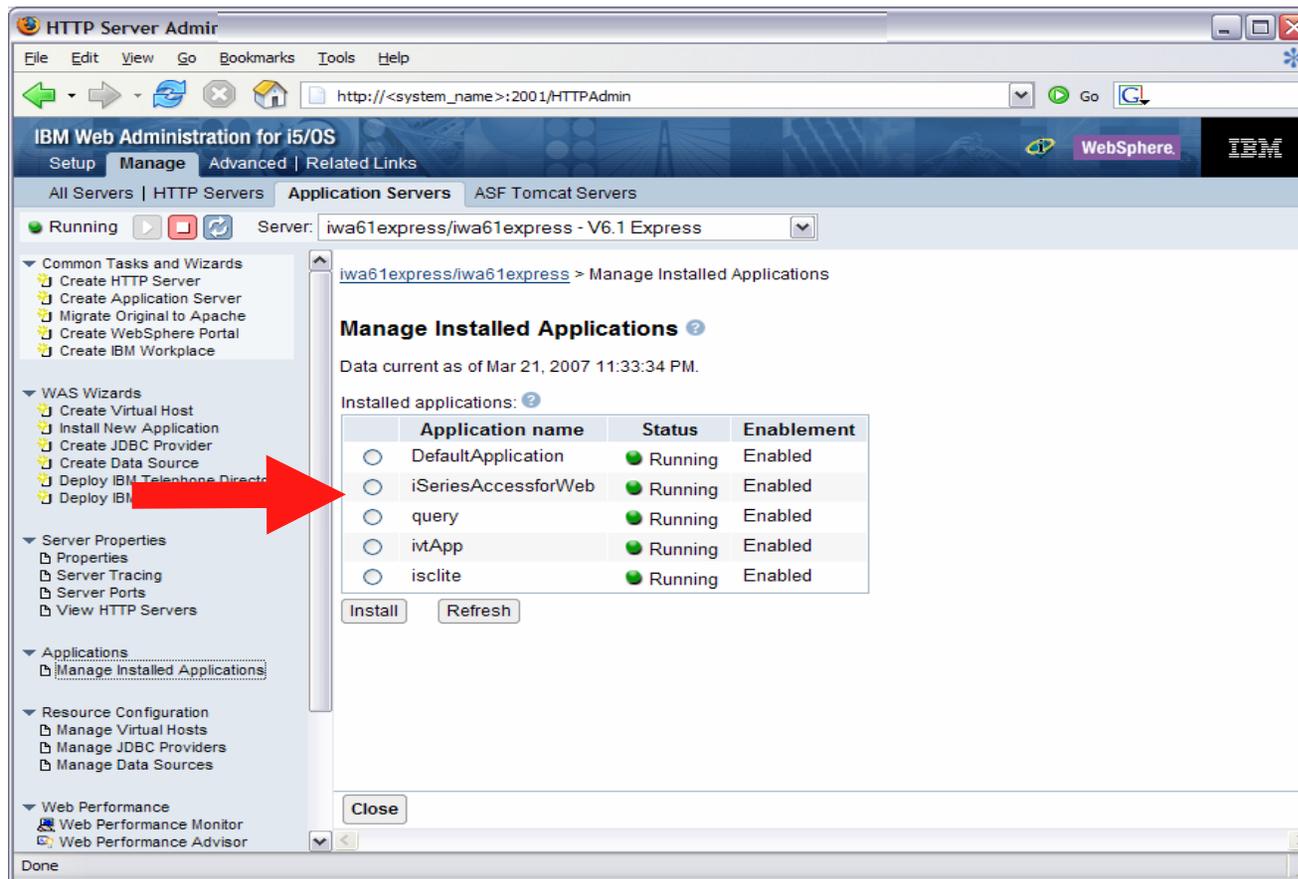


**Verify the installation
and configuration**



Verify the installation and configuration

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



The screenshot displays the HTTP Server Administration interface. The main content area shows the 'Manage Installed Applications' page for the server 'iwa61express/iwa61express - V6.1 Express'. The page lists several installed applications, all of which are running and enabled. A red arrow points to the 'Manage Installed Applications' link in the left-hand navigation pane.

Application name	Status	Enablement
DefaultApplication	Running	Enabled
iSeriesAccessforWeb	Running	Enabled
query	Running	Enabled
ivtApp	Running	Enabled
isclite	Running	Enabled

Verify the installation and configuration (continued)

WebSphere Portal → My iSeries page + subpages with portlets

The screenshot shows the IBM WebSphere Portal interface in Microsoft Internet Explorer. The browser title is "IBM WebSphere Portal - Microsoft Internet Explorer". The address bar shows "5250 IFrame Portlets". The page has a navigation bar with tabs: "Welcome", "Documents", "My Work", "My Finances", "My Newsroom", "My iSeries", and "My Favorites". The "My iSeries" tab is selected. Below the navigation bar, there are links for "New Page", "Edit Page", and "Assign Permissions".

The main content area is divided into two columns. The left column contains a "Start Session" form with the following fields:

- Server:** myiSeries.mydomain.com
- Port:** 23
- Code page:** 37
- Workstation ID:** Use user ID, Specify workstation ID
- Avoid duplicates for this user
- Avoid duplicates with other users
- Start Session** button

The right column contains a "Welcome" message and a list of iSeries Access portlets:

Welcome to the iSeries Access portlets - specifically developed for iSeries Access customers. These portlets allow you to access information on your iSeries servers through a Web browser.

iSeries Access portlets include the following:

- 5250 portlet
 - Run commands and access full-screen 5250 character-based applications.
- IFrame portlet
 - Access any of the iSeries Access for Web servlets using the IFrame portlet.
- Integrated file system (IFS) browsing portlets
 - Browse the iSeries integrated file system.
 - View, edit, upload and download files.
- Printers, printer output, and output queues portlets
 - View printer status, start and stop the writer job associated with a printer.
 - Hold, release, print, delete and view printer output files.
 - Move printer output files to another output queue or printer.
 - Hold and release output queues.
- Database tables and SQL portlets
 - View database tables, add and update records.
 - View query results, customize format of results.
 - Run SQL statements dynamically.
- Commands portlets
 - Run CL commands.

Verify the installation and configuration (continued)

HTTP Server

- Verify several jobs are running with the name of your HTTP server
 - WRKACTJOB SBS(QHTTPSVR)

WebSphere Application Server

- Verify the application server is running
 - WRKACTJOB SBS(QWAS61) →V6.1 - WAS for i5/OS
 - WRKACTJOB SBS(QWAS6) →V6.0 - WAS for OS/400

System i Access for Web

- Open browser to http://<system_name>:<port>/webaccess/iWAHome
- Open browser to http://<system_name>:<port>/webaccess/iWAMain

When things do not work

- Verify the HTTP server is running
- Verify the WebSphere application server was restarted after running CFGACCWEB2
- Verify the WebSphere application server running
- Verify you have the latest group PTFs for the HTTP 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/*

When things do not work (continued)

WAS V6.0

- /QIBM/UserData/WebSphere/AppServer/V6/Base/profiles/<profile_name>/logs/wsadmin.traceout
- /QIBM/UserData/WebSphere/AppServer/V6/Base/profiles/<profile_name>/logs/activity.log
- /QIBM/UserData/WebSphere/AppServer/V6/Base/profiles/<profile_name>/logs/<app_server_name>/SystemOut.log
- /QIBM/UserData/WebSphere/AppServer/V6/Base/profiles/<profile_name>/logs/<app_server_name>/SystemErr.log

WAS Network Deployment V6.0

- /QIBM/UserData/WebSphere/AppServer/V6/ND/profiles/<profile_name>/logs/wsadmin.traceout
- /QIBM/UserData/WebSphere/AppServer/V6/ND/profiles/<profile_name>/logs/activity.log
- /QIBM/UserData/WebSphere/AppServer/V6/ND/profiles/<profile_name>/logs/<app_server_name>/SystemOut.log
- /QIBM/UserData/WebSphere/AppServer/V6/ND/profiles/<profile_name>/logs/<app_server_name>/SystemErr.log

When things do not work (continued)

WAS V6.1 (base edition)

- /QIBM/UserData/WebSphere/AppServer/V61/Base/profiles/<profile_name>/logs/wsadmin.traceout
- /QIBM/UserData/WebSphere/AppServer/V61/Base/profiles/<profile_name>/logs/activity.log
- /QIBM/UserData/WebSphere/AppServer/V61/Base/profiles/<profile_name>/logs/<app_server_name>/SystemOut.log
- /QIBM/UserData/WebSphere/AppServer/V61/Base/profiles/<profile_name>/logs/<app_server_name>/SystemErr.log

When things do not work (continued)

WAS V6.1 - Express

- /QIBM/UserData/WebSphere/AppServer/V61/Express/profiles/<profile_name>/logs/wsadmin.traceout
- /QIBM/UserData/WebSphere/AppServer/V61/Express/profiles/<profile_name>/logs/activity.log
- /QIBM/UserData/WebSphere/AppServer/V61/Express/profiles/<profile_name>/logs/<app_server_name>/SystemOut.log
- /QIBM/UserData/WebSphere/AppServer/V61/Express/profiles/<profile_name>/logs/<app_server_name>/SystemErr.log

WAS V6.1 Network Deployment

- /QIBM/UserData/WebSphere/AppServer/V61/ND/profiles/<profile_name>/logs/wsadmin.traceout
- /QIBM/UserData/WebSphere/AppServer/V61/ND/profiles/<profile_name>/logs/activity.log
- /QIBM/UserData/WebSphere/AppServer/V61/ND/profiles/<profile_name>/logs/<app_server_name>/SystemOut.log
- /QIBM/UserData/WebSphere/AppServer/V61/ND/profiles/<profile_name>/logs/<app_server_name>/SystemErr.log

**Questions regarding
the Step by Step
option?**



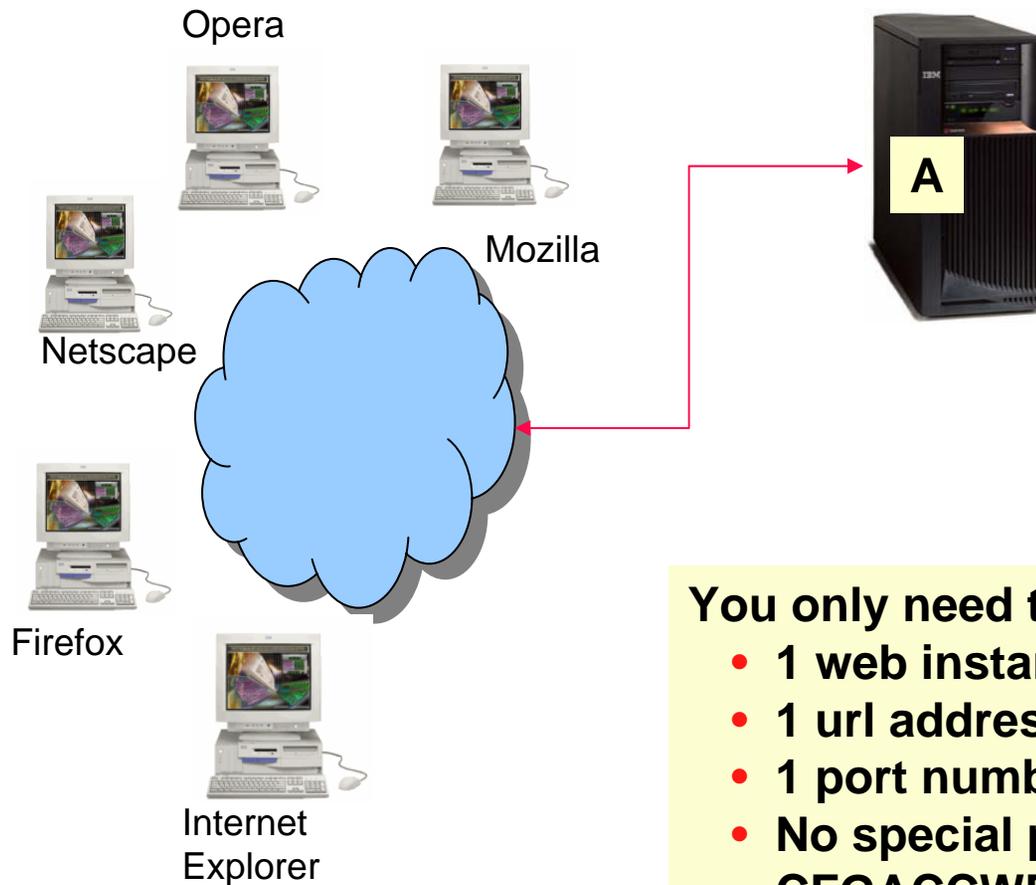
Additional Setup Considerations

- **Would it be possible for my users to access their data from home over the internet?**
- **What would the setup/environment look like?**
- **How would security be enabled to protect the network?**
- **Could the web environment be isolated from the servers containing data?**



Let's look at some examples...

Only need a single configuration

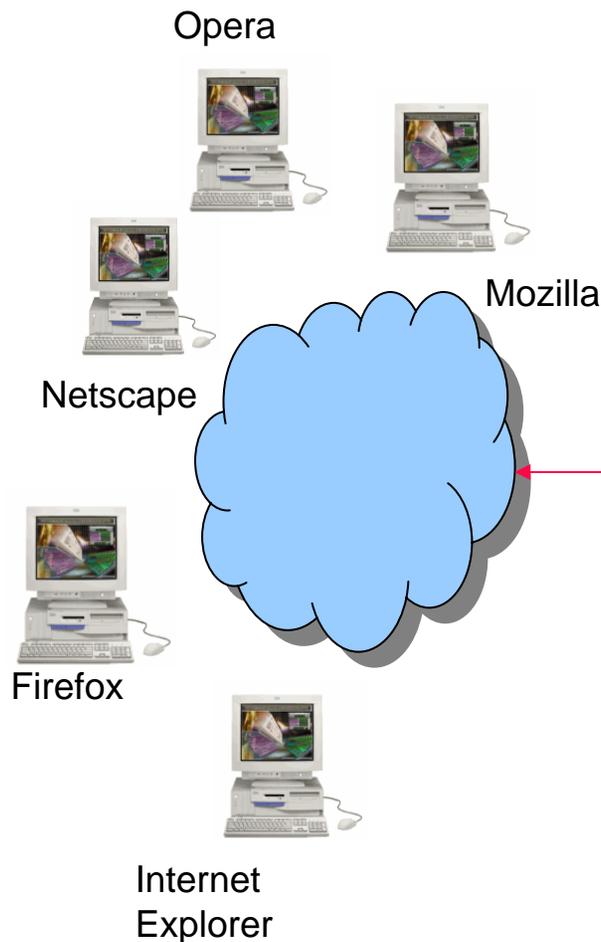


1. System i
2. HTTP Web server
3. Web Application server
4. System i Access for Web
 - 5250 applications
 - Database
 - Files
 - Printer output
 - ...

You only need to create:

- 1 web instance
- 1 url address
- 1 port number
- No special parameters on CFGACCWEB2 System i Access for Web command

Only need a single configuration

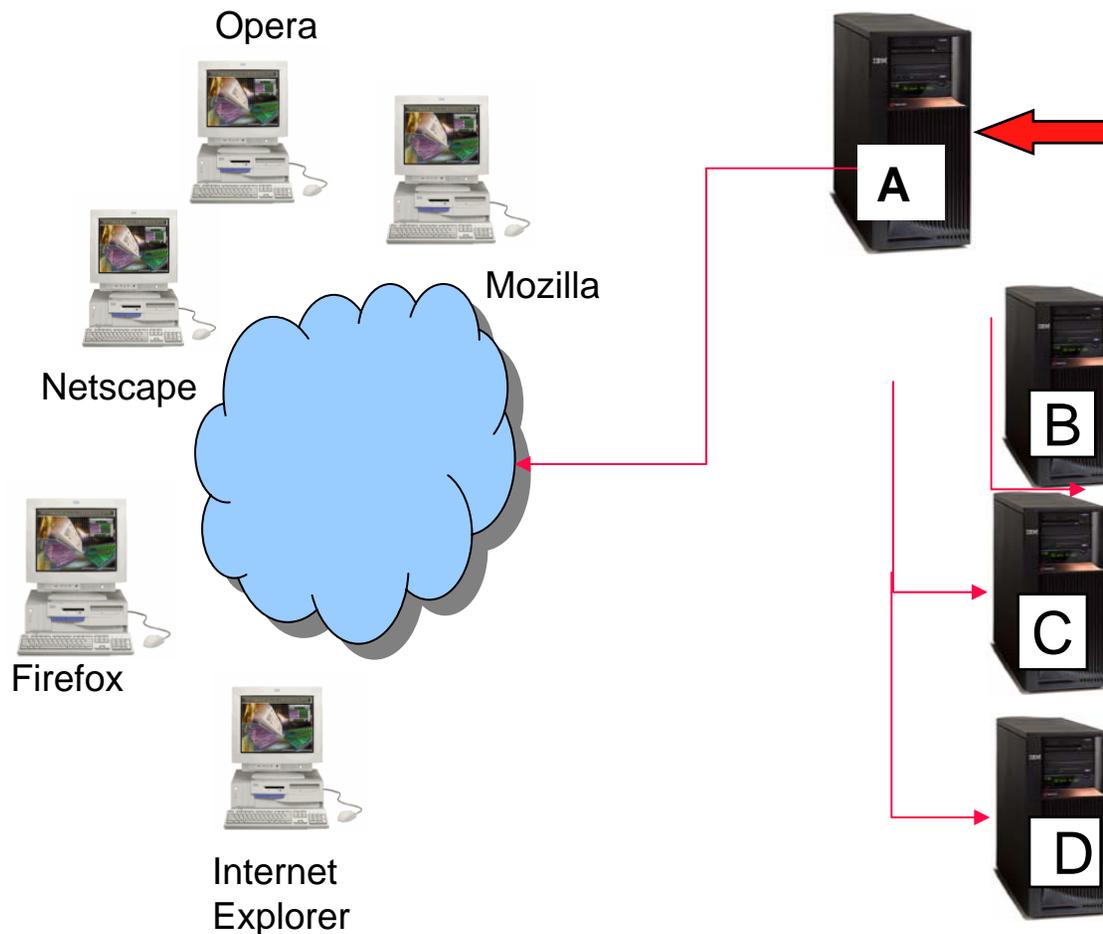


1. System i
2. HTTP Web server
3. Web Application server
4. System i Access for Web
 - 5250 applications
 - Database
 - Files
 - Printer output
 - ...

You only need to create:

- 1 web instance
- 1 url address
- 1 port number
- Add **TGTSVR** parameter on CFGACCWEB2 System i Access for Web command

Only need a single configuration



1. Multiple System i's
2. HTTP Web server installed
3. Web application server installed
4. System i Access for Web → needing only to access Systems B, C, and D using
 - 5250
 - Database

You only need to create:

- 1 web instance
- 1 url address
- 1 port number
- No special parameters on CFGACCWEB2 System i Access for Web command

Use 5250 and Database to any system in the network

Can connect to any System i in the network and run 5250 emulation and Database (upload, download, work with tables, etc)

- **5250 Emulation**

- Provides a panel to start a 5250 session and save this session configuration

iSeries Access for Web

Start Session

Server: MYISERIES.RCHLAND.IBM.COM

Port: 23

Code page: 37

Workstation ID

Use user ID

Specify workstation ID

Avoid duplicates for this user

Avoid duplicates with other users

General

Initial macro: [v]

Bypass signon

Display HTML data in fields

Start Session

Active sessions: Work with your active sessions.

Configured sessions: Work with your configured sessions.

- **Database**

- You can add additional connections via Policy → Database Connections
- These additional connections are then available to users on the Database screens.

iSeries Access for Web

Edit Policies - Database Connections

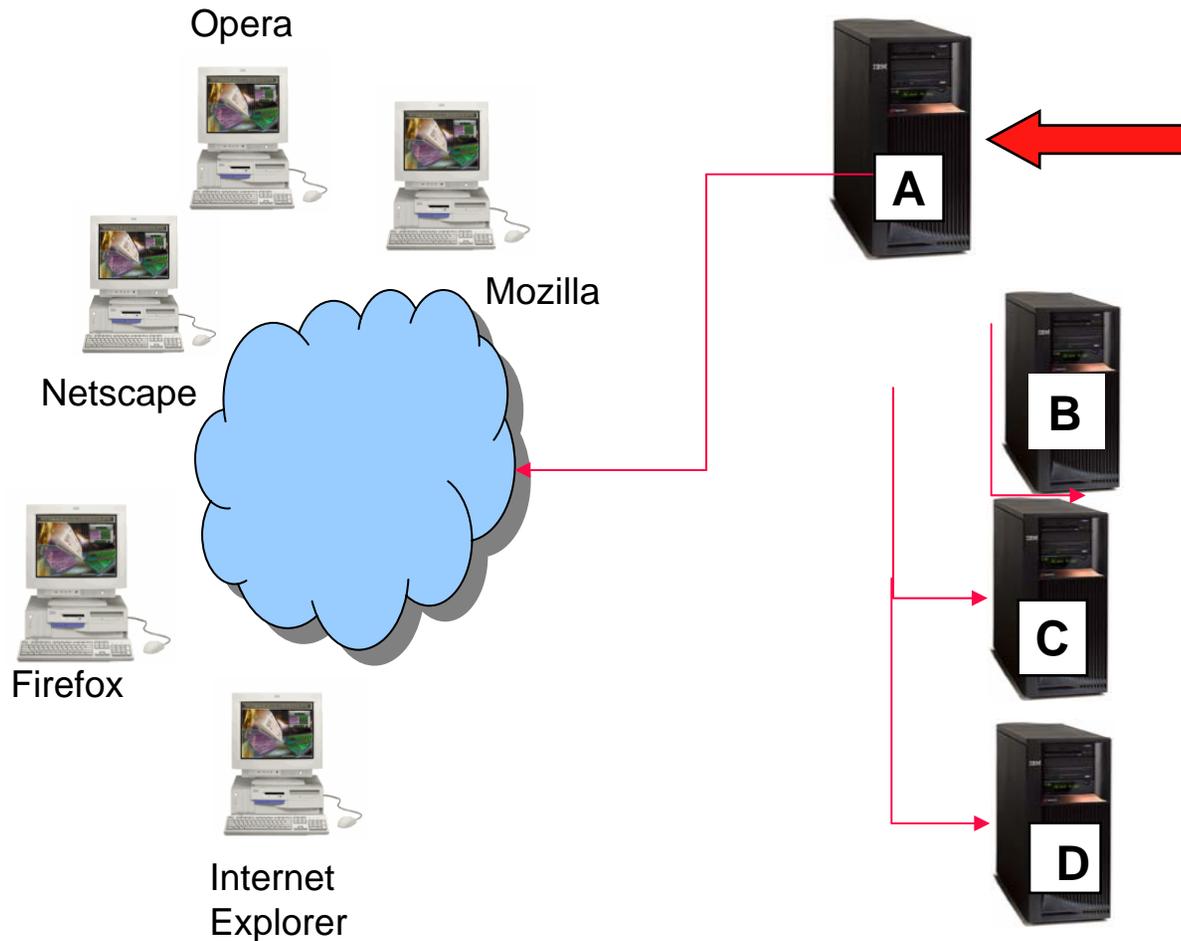
Profile: CMINER

Default connection: IBM Toolbox for Java - RCHLAND.IBM.COM

Default derived from: Shipped default

Action	Connection	Derived From
Connection: IBM Toolbox for Java - Driver class: com.ibm.as400.access.AS400JDBCdriver JDBC URL: jdbc:as400://ISERIES .RCHLAND.IBM.COM;prompt=false;	RCHLAND.IBM.COM	Shipped default

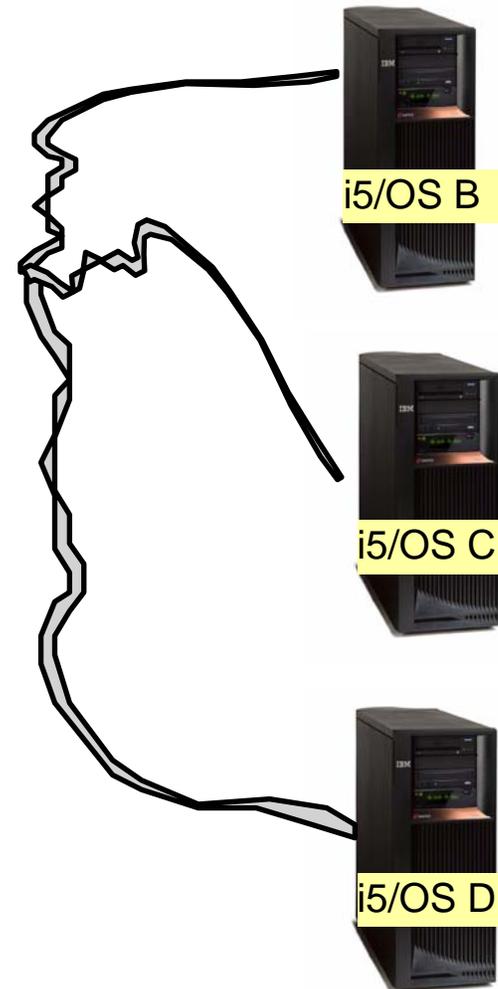
Need multiple configurations



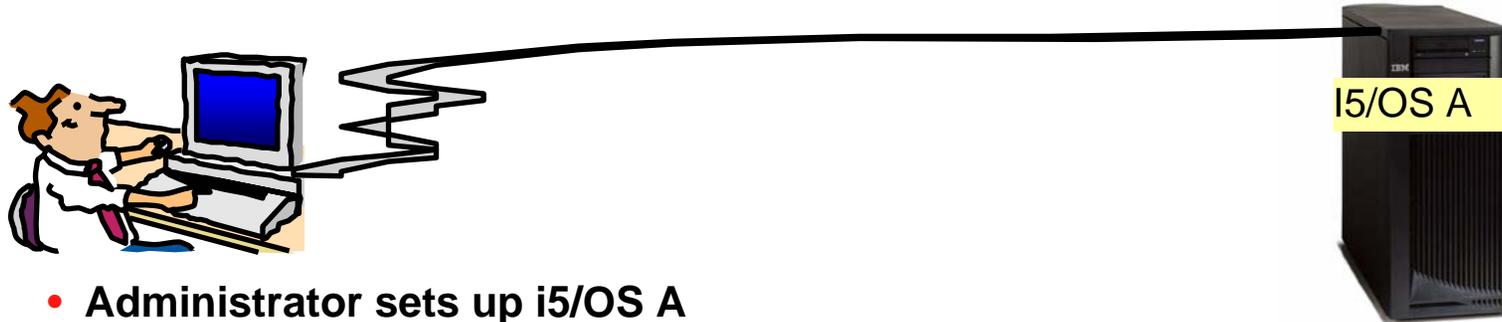
1. Multiple System i's
 2. Single Web server
 3. Single Web Application server
 4. Single System i Access for Web application
- Use all System i Access for Web functions on other System i's
- 5250 applications
 - Database
 - Files
 - Printer output
 - ...

Backend i5/OS

- The backend i5/OS B, C, D contain data.
- They are inside the company network.
- i5/OS B, C, D do not have web serving software installed, let's assume they don't.
- Want some users to be able to always connect to i5/OS B, some others to i5/OS C, and some others to i5/OS D



Setting up i5/OS A



- Administrator sets up i5/OS A
- i5/OS A has HTTP/HTTPS, WebSphere Application Server, System i Access for Web installed.
 - Configures 3 HTTP servers using 3 different port numbers (ie, ports 5001, 5002, 5003) → one for i5/OS B, one for i5/OS C, and one for i5/OS D
 - Configures 3 WAS instances (one for each server)
 - Configures System i Access for Web in each instance (uses TGTSVR parameter on CFGACCWEB2 command)

Setting up Systems B, C, and D



i5/OS B, C, and D...

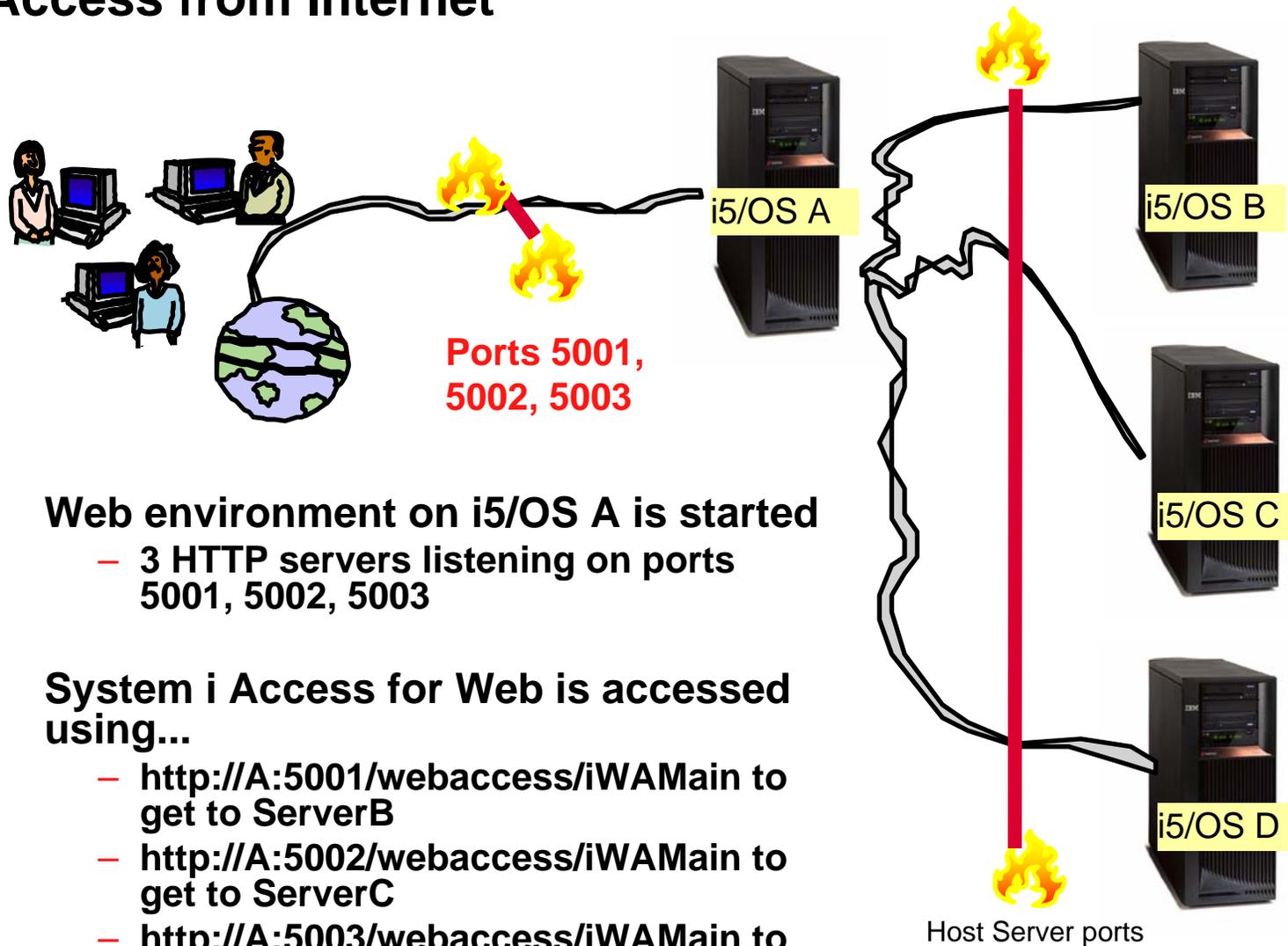
- Must have 5722-XW1 System i Access Family installed for licensing purposes
- 5722-XH2 System i Access for Web installed (RSTLICPGM) but not configured

Firewalls → a firewall can be set up between the web server (A) and the data servers (B, C, D)

- System i Access for Web requires you to open the Host Server ports because it is running on A and only connecting to B, C, D.

Host Server ports

Access from Internet



Web environment on i5/OS A is started

- 3 HTTP servers listening on ports 5001, 5002, 5003

System i Access for Web is accessed using...

- `http://A:5001/webaccess/iWAMain` to get to ServerB
- `http://A:5002/webaccess/iWAMain` to get to ServerC
- `http://A:5003/webaccess/iWAMain` to get to ServerD

Please note:

This is only one example of how to configure this environment.

User starts browser and keys in url address...

System i Access for Web user is providing a different address to get to each i5/OS server...

- <http://A:5001/webaccess/iWAMain> to get to ServerB
- <http://A:5002/webaccess/iWAMain> to get to ServerC
- <http://A:5003/webaccess/iWAMain> to get to ServerD

The user must provide the correct i5/OS user ID and password for the backend data server to gain access.



Enter Network Password

Please type your user name and password.

Site: iseriesd.dfw.ibm.com

Realm: ISeriesD.DFW.IBM.COM

User Name:

Password:

Save this password in your password list

OK Cancel



Enter Network Password

Please type your user name and password.

Site: iseriesd.dfw.ibm.com

Realm: ISeriesD.DFW.IBM.COM

User Name:

Password:

Save this password in your password list

OK Cancel



Enter Network Password

Please type your user name and password.

Site: iseriesd.dfw.ibm.com

Realm: ISeriesD.DFW.IBM.COM

User Name:

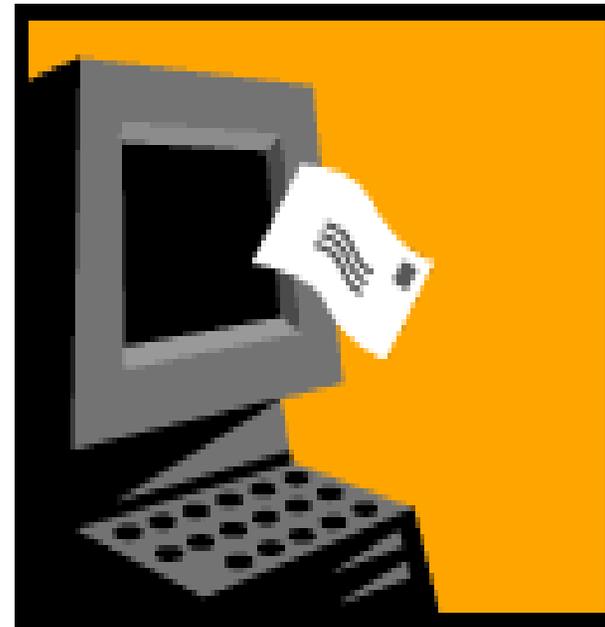
Password:

Save this password in your password list

OK Cancel

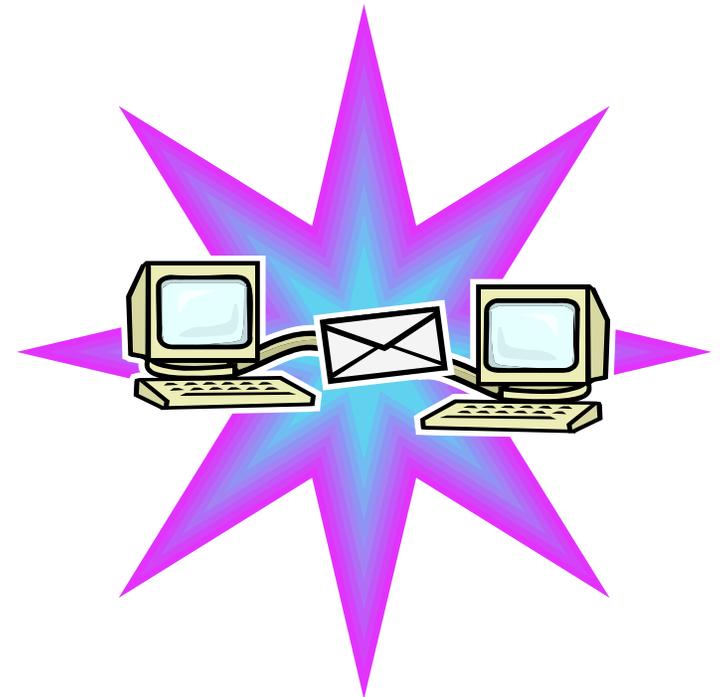


Integrating with your network mail server



Integrate User's email with System i Access for Web

- Can send results of the following System i Access for Web functions:
 - PDF view of print information
 - Database (SQL) results
 - Information stored in the IFS
 - CL command
- Sent as an attachment to 'email'
- One-step way to distribute information across the network, and particularly useful when recipient is:
 - Not a System i user
 - Does not have access to a web browser



Users can easily email results

'Mail' option displays for function of Access for Web that supports 'Mail'

Mail output

Name ^	Size (bytes)	Type	Modified	Action ?
../ (Parent Directory)				
ODBC_V5R4.zip	15133129	File	12/22/05 3:21:39 PM	[Icons]
sqlOutput.html	816	File	12/12/05 5:35:42 PM	[Icons]
sqlOutput.pdf	2543	File	12/12/05 5:38:59 PM	[Icons]

Send your e-mail

The screenshot shows the 'iSeries Access for Web' interface. At the top, it displays 'User: cminer System: RCHLAND.IBM.COM'. The main heading is 'Convert Printer Output to PDF'. On the left is a navigation menu with sections: 'My Home Page' (containing 'My Folder'), 'Print' (containing 'Printer output', 'PDF printer output', 'Printers', 'PDF printers', 'Internet printers', 'Internet printer shares', 'Printer shares', 'Output queues'), 'Messages', 'Jobs', '5250', 'Database', 'Files', 'Command', 'Download', 'Customize', and 'Other'. The email form fields are: 'From: cminer@us.ibm.com', 'To:', 'cc:', 'bcc:', and 'Subject:'. Below these is a large empty text area. At the bottom of the form, there is an attachment listed as 'Attachment: QSYSVRT.502274.CMINER.CMINER0.1.PDF' and two buttons: 'Send' and 'Cancel'. A red oval highlights the attachment and the 'Send' button.

Your email address plugged in for you...

...see PDF attachment there...

How to set up Access for Web to use e-mail

- **Do nothing**
 - If you currently use OS/400 System Distribution Directory (SDD) to store your e-mail addresses, then do nothing to Access for Web.
 - If no SMTP address has been provided, Access for Web will look in SDD for e-mail address for signed-on user

- **Use Access for Web 'Customize' function to set up SMTP mail server address and each user's e-mail address**
 - Use Policies (*PUBLIC) to set SMTP mail server address for everyone
 - Use Policies for each user to add unique e-mail address, or
 - Let each user use Preferences to set up their own e-mail address

- **Use V5R3 'Import Policy Settings' to provide all e-mail addresses to Access for Web**

You must 'Customize' to use Email function

- You need to identify your SMTP Server address
- Use *PUBLIC to set up SMTP Server address
- You probably have same SMTP server address for all users

iSeries Access for Web User: cminer System: RCHLAND.IBM.COM

My Home Page

- My Folder
- Print
- Messages
- Jobs
- 5250
- Database
- Files
- Command
- Download
- Customize
 - Preferences
 - Policies
 - Settings

Edit Policies - Mail 1

Profile: *PUBLIC

Policy	Derived From [?]	Action [?]	
Mail access	Shipped default	Use current setting <input type="button" value="v"/>	Allow <input type="button" value="v"/>
Send mail	Shipped default	Use current setting <input type="button" value="v"/>	Allow <input type="button" value="v"/>
SMTP mail server	Shipped default	Use current setting <input type="button" value="v"/>	us.ibm.com
E-mail address is user preference	Shipped default	Use current setting <input type="button" value="v"/>	Allow <input type="button" value="v"/>

Note:

If the SMTP server address is blank, Access for Web will query the system directory (SDD) for email config info for your profile

All Users' Email addresses must be set up

- e-Mail address must be set for each user
 - Administrator could go into each user's profile and set email address
 - Each user could do this themselves through 'Preferences'

iSeries Access for Web User: cminer System: RCHLAND.IBM.COM

My Home Page

- My Folder
- Print
- Messages
- Jobs
- 5250
- Database
- Files
- Command
- Download
- Customize
 - Preferences
 - Policies
 - Settings
 - Transfer configuration
- Other

Edit Policies - Mail

Profile: CMINER

Policy	Derived From ?	Action ?	Setting
Mail access	Shipped default	Use current setting ▼	Allow ▼
Send mail	Shipped default	Use current setting ▼	Allow ▼
SMTP mail server	Profile setting	Use current setting ▼	us.ibm.com
E-mail address	Profile setting	Use current setting ▼	cminer@us.ibm.com
E-mail address is user preference	Shipped default	Use current setting ▼	Allow ▼

2

iSeries Access for Web User: cminer System: RCHLAND.IBM.COM

My Home Page

- My Folder
- Print
- Messages
- Jobs
- 5250
- Database
- Files
- Command
- Download
- Customize
 - Preferences
 - Policies

Edit Preferences - Mail

Preference	Derived From ?	Action ?	Setting
E-mail address	Profile setting	Use current setting ▼	cminer@us.ibm.com

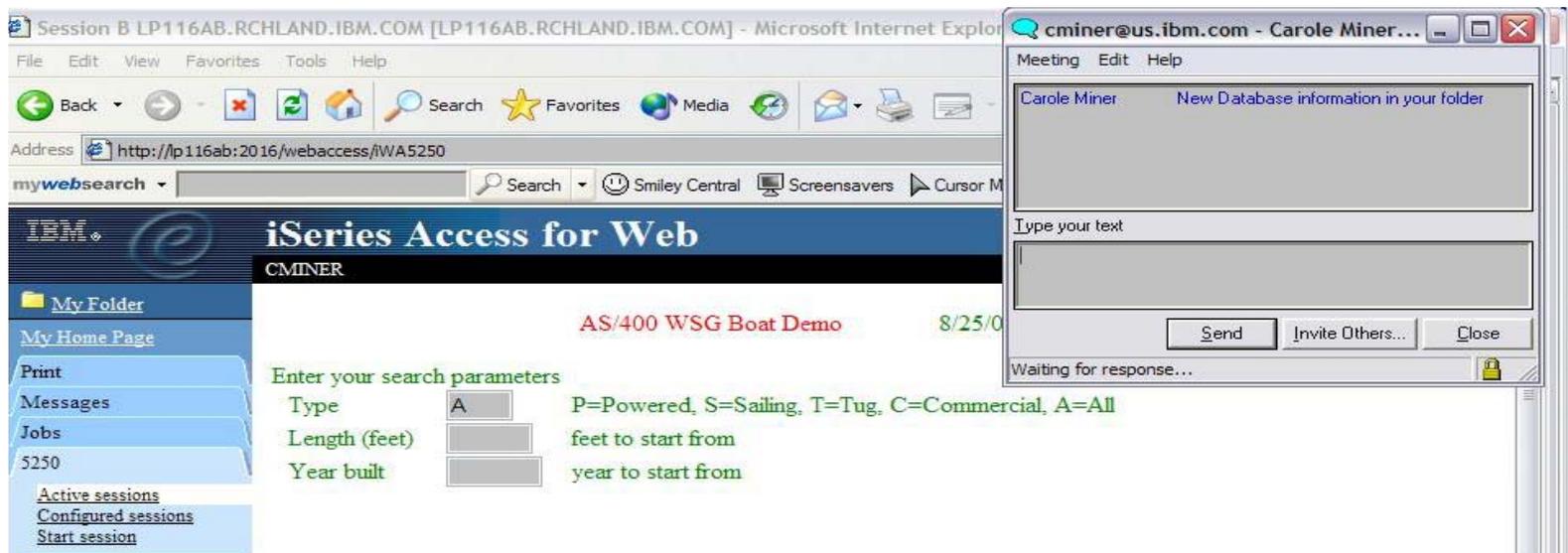
[Preferences help](#)
 View help for editing preferences.

2

Integration with Lotus Sametime

You can receive Sametime messages:

- When something is added to 'My Folder' -- this could be someone has put something new in my folder or a database or CL command request that I previously submitted has completed
- The administrator/system operator has sent a break message



You must have a Sametime Server installed in your network and accessible from your System i. Sametime is an add-on product to Lotus Notes.

Setup needed to integrate use of Sametime

- Use **Settings** to globally set up Sametime server address and port number
- Use **Policies** to individually include each user's Sametime address
-- or --
- Let each user use **Preferences** to set up their own Sametime address

1

Edit Settings - Sametime

Setting	Value	Description
Community server	RCHLAND.IBM.COM	Specify the host name of the Sametime community server.
Server port	1516	Specify the port number of the Sametime community server.
Connect timeout	30 seconds	Specify the maximum time to wait when attempting to connect to the Sametime community server.

Buttons: Save, Cancel, Apply, Shipped Defaults

2

Edit Policies - Sametime

Profile: CMINER

Policy	Derived From	Action	Setting
Sametime access	Shipped default	Use current setting	Allow
Send Sametime content	Shipped default	Use current setting	Allow
Sametime user	Shipped default	Use current setting	cminer@us.ibm.com
Sametime user is user preference	Shipped default	Use current setting	Allow

Buttons: Save, Cancel, Apply

2

Edit Preferences - Sametime

Preference	Derived From	Action	Setting
Sametime user	Profile setting	Use current setting	cminer@us.ibm.com

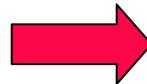
Buttons: Save, Cancel, Apply

[Preferences help](#)
View help for editing preferences.

Import Policies from existing mail server directory

The policy settings for multiple user profiles can be updated by using the **Import Policies** (one request)

- This eliminates need for each profile to be individually updated
- Email addresses and SAMETIME addresses



The screenshot shows the 'iSeries Access for Web' interface. At the top, it displays 'User: cminer System: .RCH' and a yellow box with the number '3'. The main content area is titled 'Import Policies' and contains the instruction 'Specify the file containing policies you want to import.' Below this is a 'File:' input field with a 'Browse...' button. A blue 'Import Policies' button is positioned below the input field. At the bottom, there is a 'Policies help' link and the text 'View help for importing policies.' On the left side, a navigation menu lists various options: 'My Home Page', 'My Folder', 'Print', 'Messages', 'Jobs', '5250', 'Database', 'Files', 'Command', 'Download', 'Customize' (with sub-items 'Preferences', 'Policies', 'Settings', 'Transfer configuration'), and 'Other'. A red arrow points from the text on the left to the 'Policies' sub-item in this menu.

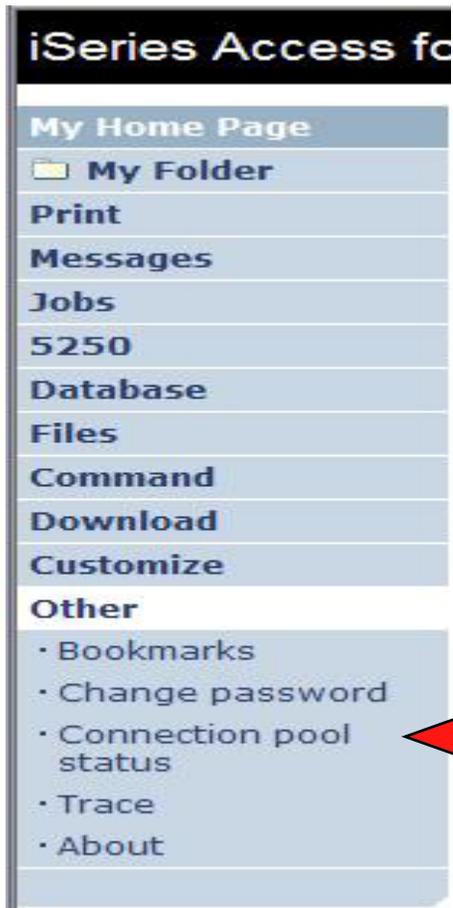
Administrators are only able to import policy settings to user and group profiles for which they have at least *CHANGE object authority

Import Policies requires a file type of .XML (example)

```
<?xml version="1.0" encoding="utf-8" standalone="yes"?>
<QiwaPolicies>
  <profile name="TSMITH">
    <mail>
      <fromEmailAddress>tsmith@myMailServer.com</fromEmailAddress>
    </mail>
  </profile>
  <profile name="CJONES">
    <mail>
      <fromEmailAddress>cjones@myMailServer.com</fromEmailAddress>
    </mail>
  </profile>
</QiwaPolicies>
```

Import Policies with Sametime as well (example)

```
<?xml version="1.0" encoding="utf-8" standalone="yes"?>
<QIWA_Policies>
  <profile name="TSMITH">
    <mail>
      <fromEmailAddress>tsmith@myMailServer.com</fromEmailAddress>
    </mail>
    <sametime>
      <userName>tsmith@mySametime.com</userName>
    </sametime>
  </profile>
  <profile name="CJONES">
    <mail>
      <fromEmailAddress>cjones@myMailServer.com</fromEmailAddress>
    </mail>
    <sametime>
      <userName>cjones@mySametime.com</userName>
    </sametime>
  </profile>
</QIWA_Policies>
```



Network Connection Information

Connection Pool Status

How many Access for Web users have been connected?

- How many on now?
- Who are they?



Connection Pool Status [X1519P4.RCHLAND.IBM.COM] - Mozilla Firefox

iSeries Access for Web User: dlb System: X1519P4.RCHLAND.IBM.COM

Connection Pool Status

Connection Summary

Setting	Value	Description
Active connections	0	Total number of active connections for all users.
Available connections	6	Total number of available connections for all users.
Total connections	6	Total number of active and available connections for all users.
Total users	11	Total number of users that have connected since iSeries Access for Web started.
Active users	3	Total number of users that have active or available connections.

Connection Details

System	User	Active	Available	Action
X1519P4.RCHLAND.IBM.COM	BOB	0	2	Clear
X1519P4.RCHLAND.IBM.COM	DLB	0	2	Clear
X1519P4.RCHLAND.IBM.COM	DOUGB	0	2	Clear

Related Links:

- iSeries Access for Web
- iSeries Access
- iSeries Navigator

Good information for Load Balancing

Connection Pool Settings

Set limits for
System i Access
for Web use...

Can get to this via:

- Link on
Connection
Pool Status
screen
- Customize ->
Settings

iSeries Access for Web User: dlb System: X1519P4.RCHLAND.IBM.COM

My Home Page
My Folder
Print
Messages
Jobs
5250
Database
Files
Command
Download
Customize
• Preferences
• Policies
• Settings
• Transfer configuration
Other

Edit Settings - Connection Pool

Setting	Value	
Cleanup interval	5 minutes	Specify how often to clean up connections.
Connections per user	No maximum	Specify the maximum number of concurrent connections allowed per user.
Maximum inactivity	1 hour	Specify the maximum time a connection can be inactive before it is cleaned up.
Maximum lifetime	12 hours	Specify the maximum time a connection can exist before it is cleaned up.
Maximum use count	No maximum	Specify the maximum number of times a connection can be used before it is cleaned up.
Maximum use time	10 hours	Specify the maximum time a connection can be active before it is cleaned up.

Save Cancel Apply Shipped Defaults

Any settings you make apply to **all users**

- Set number of sessions a user can start
- How much inactivity before we clean up a session

Auto-start Web environment after an IPL?

- You can configure the HTTP server to automatically start the WebSphere application server when it starts
- Use the following command to start the HTTP server as part of your IPL procedures and it will start your WebSphere application server.
 - **STRTCPSVR SERVER(*HTTP)
HTTPSVR(<http_server_name>)**



Auto start web environment after an IPL (continued)

STRTCPSVR SERVER(*HTTP) HTTPSVR(IWA51BASE)

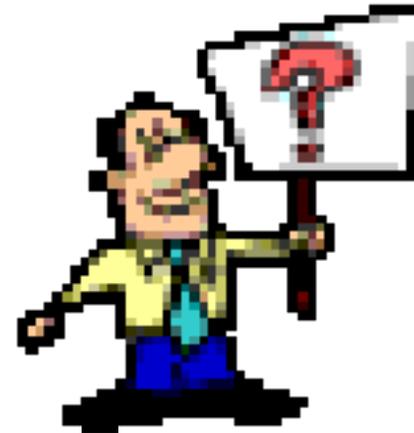
The screenshot displays the 'HTTP Server Administration' window for 'IWA51BASE - Apache'. The 'General' tab is active, showing the configuration for the 'WebSphere Application Server'. The 'WebSphere instance' is set to 'iwa51base'. Two red arrows point to the dropdown menus for 'Start all WebSphere application server(s) for the associated WAS instance when this HTTP server is started' and 'Stop all WebSphere application server(s) for the associated WAS instance when this HTTP server is stopped', both of which are set to 'Yes'. A third red arrow points to the 'WebSphere Application Server' option in the left-hand navigation pane.

If using WAS Network Deployment for iSeries/i5/OS

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



Additional Documentation



Additional information

- The following resources are available
 - HTTP Server redbook
 - <http://www.redbooks.ibm.com/redpieces/pdfs/sg246716.pdf>
 - Section 6.3 Encrypting your data with SSL and TLS
 - Section 6.4 Proxy server: Protecting direct access
 - Information Center - Setting up a reverse proxy for HTTP server
 - <http://publib.boulder.ibm.com/series/v5r2/ic2924/index.htm?info/rzaiere/rzaiereverseproxy.htm>

Notes: HTTP/HTTPS - SSL

The Internet was designed to be an open system and it allows any computer on the network to see the messages passing through. To consider an information transaction secure, it has to have the following characteristics:

Confidentiality

Use encryption if you want to ensure that the contents of the message remain private as they pass through the network.

Integrity

Use encryption and digital signatures if you want to ensure integrity. Messages are not altered while being transmitted.

Accountability

Use digital signatures when both the sender and the receiver agree that the exchange took place to ensure accountability.

Authenticity

OS/400 SSL provides server authentication so you can authenticate with whom you are talking.

You can configure the iSeries server to use a security protocol, called Secure Sockets Layer (SSL), for data encryption and client/server authentication. A client establishes an SSL session by sending an HTTPS request to the server on the SSL port. If SSL client authentication is enabled on the server, a client certificate is requested for any HTTPS request. SSL uses a handshake protocol where the server authenticates and the client authenticates if enabled. When authenticated, they agree on the security keys to use for the session, and the algorithms to be used for encryption and message digests or hashes. When a session has been established, all data exchanged on that session is encrypted.

Below is a highlevel list of steps involved with enabling HTTPS. The steps may not address all issues relative to your environment. It is recommended that the iSeries information center and HTTP server documentation be referenced to enable HTTPS.

1. If you are new to SSL, HTTPS, or digital certificates, review the following information before configuring SSL.
 - Security concepts information in the iSeries Information Center (<http://www.ibm.com/eserver/series/infocenter>). Look for information under the topics Networking-->Networking Security.
 - Security and SSL information in the HTTP server documentation at <http://www.ibm.com/servers/eserver/series/software/http>
2. Configure your HTTP server instance to allow SSL connections. You must already have created an HTTP server that you want to enable to run SSL.
3. Configure digital certificates through the Digital Certificate Manager on the iSeries server.
4. Configure the web application server to use the SSL port. The SSL port must be listed within the WebSphere virtual host alias table.
5. Open a browser to one of the following URLs:
 - If using the default SSL port of 443
`https://<server_name>/webaccess/iWAHome`
 - If using any other port number, replace the <port> with the port number configured with the HTTP server.
`https://<server_name>:<port>/webaccess/iWAHome`

Notes: Firewalls

A firewall is a blockade between a secure internal network and an untrusted network such as the Internet. Most companies use a firewall to connect an internal network safely to the Internet, although you can use a firewall to secure one internal network from another also.

A firewall provides a controlled single point of contact (called a chokepoint) between your secure internal network and the untrusted network. The firewall:

- Lets users in your internal network use authorized resources that are located on the outside network.
- Prevents unauthorized users on the outside network from using resources on your internal network.

When you use a firewall as your gateway to the Internet (or other network), you reduce the risk to your internal network considerably. Using a firewall also makes administering network security easier because firewall functions carry out many of your security policy directives.

How a firewall works

To understand how a firewall works, imagine that your network is a building to which you want to control access. Your building has a lobby as the only entry point. In this lobby, you have receptionists to welcome visitors, security guards to watch visitors, video cameras to record visitor actions, and badge readers to authenticate visitors who enter the building.

These measures may work well to control access to your building. But, if an unauthorized person succeeds in entering your building, you have no way to protect the building against this intruder's actions. If you monitor the intruder's movements, however, you have a chance to detect any suspicious activity from the intruder.

Firewall components

A firewall is a collection of hardware and software that, when used together, prevent unauthorized access to a portion of a network. A firewall consists of the following components:

- Hardware. Firewall hardware usually consists of a separate computer or device dedicated to running the firewall software functions.
- Software. Firewall software provides a variety of applications. In terms of network security, a firewall provides these security controls through a variety of technologies:
 - Internet Protocol (IP) packet filtering
 - Network address translation (NAT) services
 - SOCKS server
 - Proxy servers for a variety of services such as HTTP, Telnet, FTP, and so forth
 - Mail relay services
 - Split Domain name services (DNS)

Notes: Firewalls (continued)

- Logging
- Real-time monitoring

Note: Some firewalls provide virtual private networking (VPN) services so that you can set up encrypted sessions between your firewall and other compatible firewalls.

Using firewall technologies

You can use the firewall proxy servers, SOCKS server, or NAT rules to provide internal users with safe access to services on the Internet. The proxy and SOCKS servers break TCP/IP connections at the firewall to hide internal network information from the untrusted network. The servers also provide additional logging capabilities.

You can use NAT to provide Internet users with easy access to a public server behind the firewall. The firewall still protects your network because NAT hides your internal IP addresses.

A firewall also can protect internal information by providing a DNS server for use by the firewall. In effect, you have two DNS servers: one that you use for data about the internal network, and one on the firewall for data about external networks and the firewall itself. This allows you to control outside access to information about your internal systems

When you define your firewall strategy, you may think it is sufficient to prohibit everything that presents a risk for the organization and allow everything else. However, because computer criminals constantly create new attack methods, you must anticipate ways to prevent these attacks. As in the example of the building, you also need to monitor for signs that, somehow, someone has breached your defenses. Generally, it is much more damaging and costly to recover from a break-in than to prevent one.

In the case of a firewall, your best strategy is to permit only those applications that you have tested and have confidence in. If you follow this strategy, you must exhaustively define the list of services you must run on your firewall. You can characterize each service by the direction of the connection (from inside to outside, or outside to inside). You should also list users who you will authorize to use each service and the machines that can issue a connection for it.

What a firewall can do to protect your network

You install a firewall between your network and your connection point to the Internet (or other untrusted network). The firewall then allows you to limit the points of entry into your network. A firewall provides a single point of contact (called a chokepoint) between your network and the Internet . Because you have a single point of contact, you have more control over which traffic to allow into and out of your network.

Notes: Firewalls (continued)

A firewall appears as a single address to the public. The firewall provides access to the untrusted network through proxy or SOCKS servers or network address translation (NAT) while hiding your internal network addresses. Consequently, the firewall maintains the privacy of your internal network. Keeping information about your network private is one way in which the firewall makes an impersonation attack (spoofing) less likely.

A firewall allows you to control traffic into and out of your network to minimize the risk of attack to your network. A firewall securely filters all traffic that enters your network so that only specific types of traffic for specific destinations can enter. This minimizes the risk that someone could use TELNET or file transfer protocol (FTP) to gain access to your internal systems.

What a firewall cannot do to protect your network

While a firewall provides a tremendous amount of protection from certain kinds of attack, a firewall is only part of your total security solution. For instance, a firewall cannot necessarily protect data that you send over the Internet through applications such as SMTP mail, FTP, and TELNET. Unless you choose to encrypt this data, anyone on the Internet can access it as it travels to its destination.

iSeries & WebSphere Resources & Deliverables

iSeries Information Center

<http://www.ibm.com/iseries/infocenter>

iSeries site

www.iseries.ibm.com/

iSeries WebSphere Application Server

<http://www-1.ibm.com/servers/eserver/iseries/software/websphere/wsappserver/>

PartnerWorld for Developers, iSeries & WebSphere

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

IBM eServer Solutions

<http://www-1.ibm.com/servers/eserver/iseries/solutions/>

iSeries e-business Solutions

<http://www-1.ibm.com/servers/eserver/iseries/ebusiness/>

iSeries B2B Solutions

<http://www-1.ibm.com/servers/eserver/iseries/btob/>

Connect for iSeries

<http://www-1.ibm.com/servers/eserver/iseries/btob/connect/v11high.html>

WebSphere Commerce Suite for iSeries

<http://www-1.ibm.com/servers/eserver/iseries/ebusiness/wcs51.html>

iSeries and e-commerce

<http://www-1.ibm.com/servers/eserver/iseries/ebusiness/ecommerce.htm>

iSeries HTTP Server

<http://www-1.ibm.com/servers/eserver/iseries/software/http/index.html>

WebSphere Development Studio for iSeries

<http://www-3.ibm.com/software/ad/wds400/>

iSeries and WebSphere References

<http://www.as400.ibm.com/developer/java/solutions/jjem.html>

<http://www2.software.ibm.com/casestudies/swcsweb.nsf/platform>

iSeries Solution Finder

<http://www.iseries.ibm.com/btobpartner/>

iSeries & Domino

<http://www-1.ibm.com/servers/eserver/iseries/domino/>

Dedicated Server for Domino

<http://www-1.ibm.com/servers/eserver/iseries/domino/dsd.htm>

Workload Estimator for iSeries, WAS, WCS & Domino, HTTP Server, Java, etc.

<http://as400service.ibm.com/estimator/>

iSeries Custom Technology Center

<http://www-1.ibm.com/servers/eserver/iseries/service/ctc/>

iSeries Technical Support

<http://as400service.ibm.com/>

iSeries Technical Studio

<http://www.as400.ibm.com/tstudio/>

1st Install for iSeries & WebSphere Application Server

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

iSeries ToolsNet (Tools & Middleware)

<http://www.iseries.ibm.com/developer/tools/>

iSeries & Services Network

<http://as400service.ibm.com/supporthome.nsf/document/19251245>

iSeries e-business Handbook (SG24-5694-01)

<http://www.redbooks.ibm.com/abstracts/sg245694.html>

iSeries & WebSphere Resources & Deliverables

WebSphere Commerce Suite With Back-End Order Mgmt.
<http://ibm.com/redbooks>

iSeries Technology Center
<http://www.iseries.ibm.com/service/itc/ebiz.htm>

iSeries University
<http://www-3.ibm.com/services/learning/community/as400/>

WebSphere Application Server Overview
<http://www-4.ibm.com/software/webservers/appserv/>

iSeries & WebSphere Documentation

Redbooks & Red Pieces

	Form Numbers/Web Sites	
	Building iSeries Applications for WebSphere Advanced Edition	SG24-
5691	Building Java Applications for the iSeries with VisualAge for Java	SG24-6245
.	Integrating WCS with Domino Back-End Applications	
.	http://ibm.com/redbooks (search for REDP0141)	

Java & WebSphere Performance on iSeries

- <http://publib-b.boulder.ibm.com/Redbooks.nsf/RedpieceAbstracts/sg246256.html?Open>
- iSeries Application Development Directions white paper is now available
- <http://www.iseries.ibm.com/developer/tools/documents/addir/index.html>
- Connect for iSeries with WebSphere Commerce Suite Red Paper
- <http://www.redbooks.ibm.com/redpapers/pdfs/redp0127.pdf>

Tools for Application Reface and Redesign

.	http://www.as400.ibm.com/developer/comm/pidtechpapers.html?Tools	
	Introduction to Enterprise JavaBeans for AS/400	SG24-
5192-00		
	Web enabling AS/400 Applications with WebSphere Studio	SG24-
5634-00		
	Building AS/400 Applications with WebSphere Standard Edition 2.0	SG24-5635-00
	Building AS/400 C/S Apps with Java	
	SG24-2152-02	
	Building AS/400 Internet-based applications with Java	
	SG24-5337-00	

WebSphere Commerce Suite
www-4.ibm.com/software/webservers/commerce/

WebSphere Payment Manager
www-4.ibm.com/software/webservers/paymgr/

MQSeries
www.ibm.com/software/ts/mqseries
 IBM Redbooks
<http://www.redbooks.ibm.com/>

iSeries Nation
<http://www-1.ibm.com/servers/eserver/iseries/announce/form.html>