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25A
System i Access for Web:
Setup and Configuration

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

System i Access Sessions
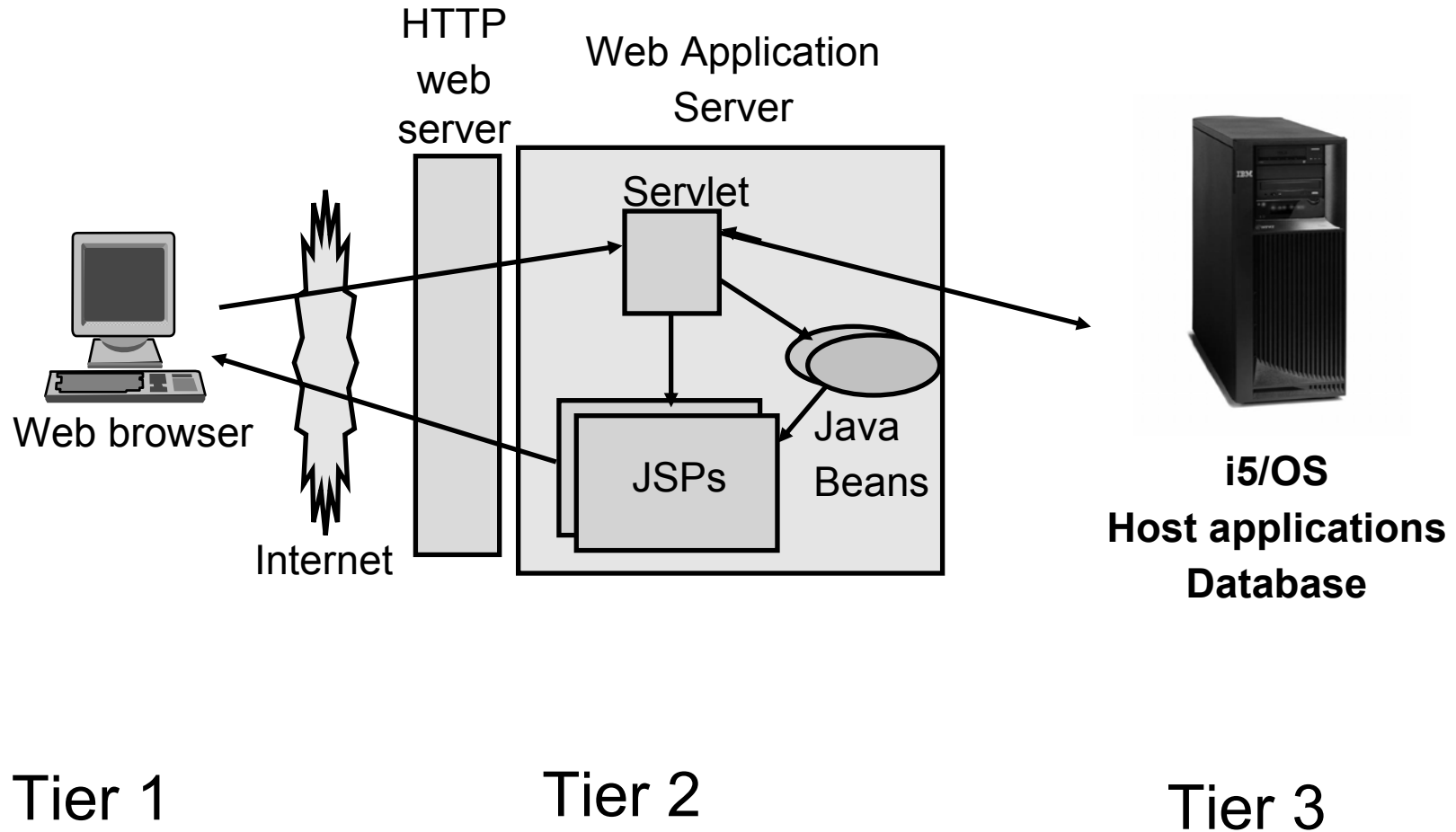
Windows:

- System i Access for Windows: What's New?

Web:

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

Functional enhancements can be submitted via the FITS system. The url is:
http://www.ibm.com/systems/i/software/access/

And click on link "Request for Design Change"

First you need a web-serving environment

HTTP
web
server

Web Application
Server

Servlet

Web browser

JSPs

Java
Beans

Internet

**i5/OS
Host applications
Database**

Tier 1

Tier 2

Tier 3

Pieces of the web-serving environment

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

Supported Web Application Servers

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

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

V6R1 System i Access for Web
- Integrated Web application server
- WebSphere® Application Server V6.1 and V6.0 – Express for i5/OS
- WebSphere Application Server V6.1 and 6.0 Base and Network Deployment

V6R1 System i Access for Web
- WebSphere Portal for Multiplatforms V6.0
- WebSphere Portal for Multiplatforms V5.1.0.1

V5R4 System i Access for Web
- Integrated Web application server
- WebSphere® Application Server V6.1 and V6.0 – Express for i5/OS
- WebSphere Application Server V6.1 and 6.0 Base and Network Deployment
- WebSphere Application Server V5.1 - Express for iSeries
- WebSphere Application Server V5.0 - Express
- WebSphere Application Server V5.1 and 5.0 Base and Network Deployment Editions
- ASF Tomcat

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

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

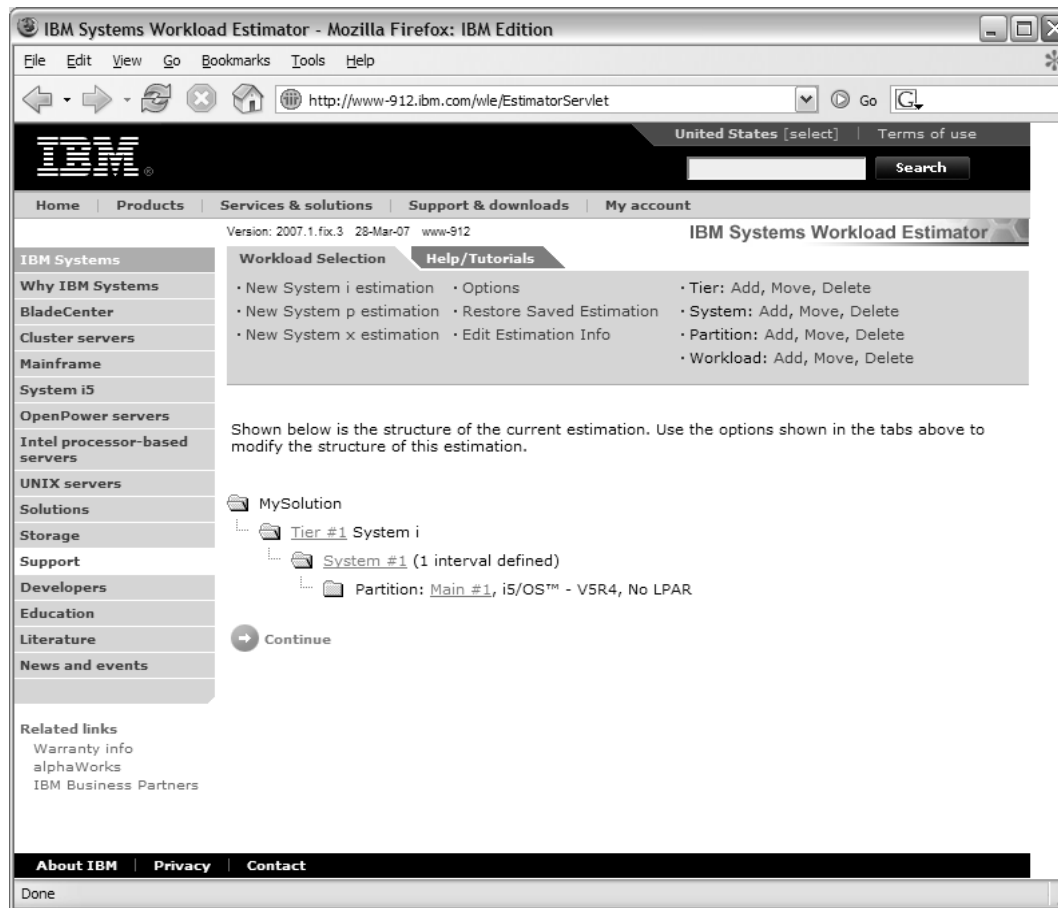**Complex web applications with many concurrent users**

http://www-1.ibm.com/servers/eserver/iseries/software/websphere/lay_foundation.html

Performance...???

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

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

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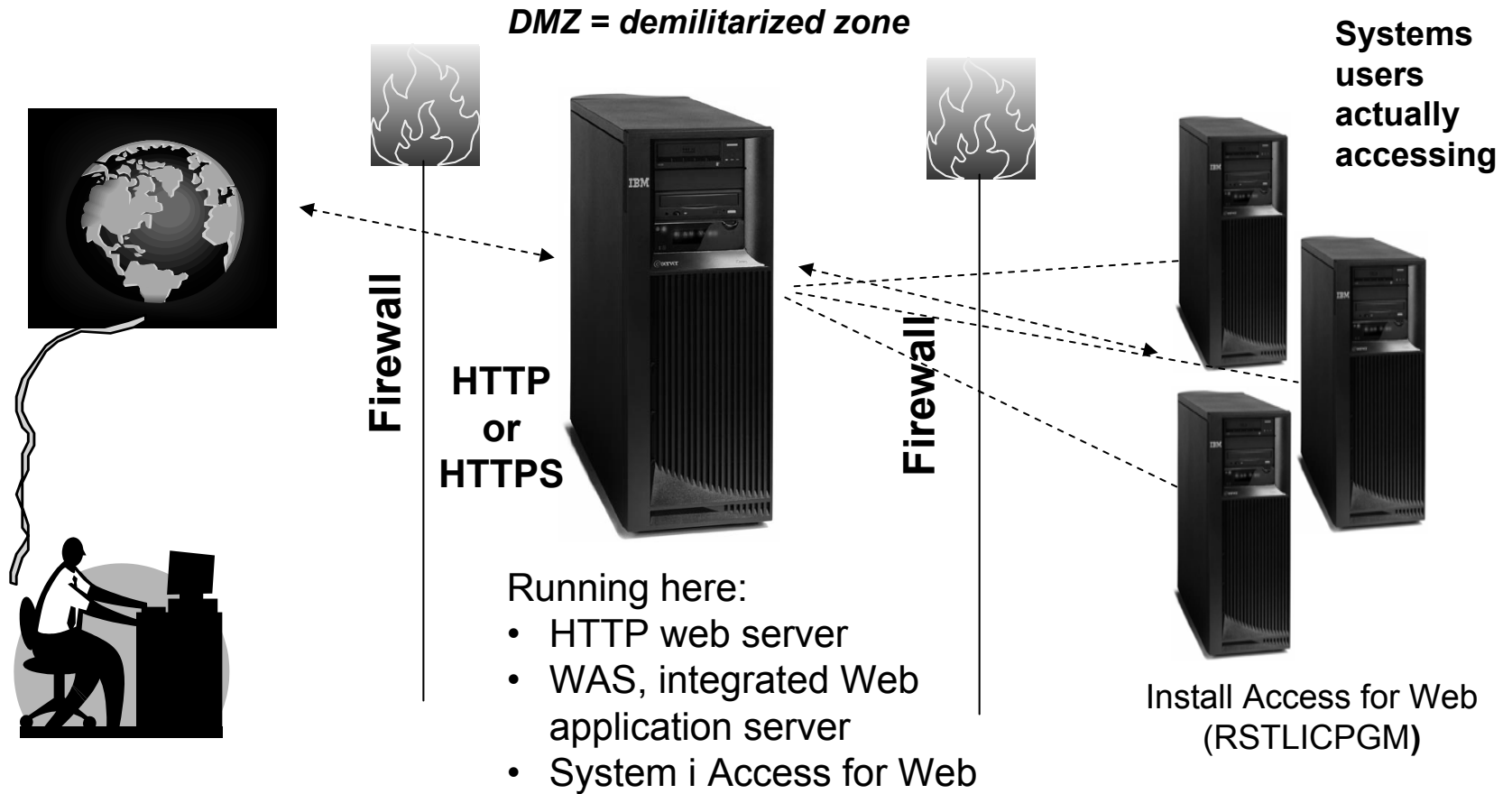
Performance Considerations…

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

Setting up your web application server

DMZ = demilitarized zone

Systems users actually accessing

Firewall

Firewall

HTTP or HTTPS

Running here:
- HTTP web server
- WAS, integrated Web application server
- System i Access for Web

Install Access for Web (RSTLICPGM**)**

Only need to set up 1 web application server

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Port Requirements Comparison

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

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

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

*See Information APAR II12227 for detailed information

Hardware/Software Requirements

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Client Browser Requirements

- These browsers have been tested with V6R1 System i Access for Web:

  - Firefox 2.0 (Windows® and Linux®)

  - Internet Explorer 6.0 with Service Pack 1 (Windows)

  - Internet Explorer 7.0 Windows)

  - Mozilla 1.7 (Windows, Linux, and AIX®)

  - Opera 9.2 (Windows and Linux)

- These browsers have been tested with V5R4 System i Access for Web:

  - Firefox 1.0.2 (Windows, Linux)

  - Internet Explorer 6.0 with Service Pack 1 (Windows)

  - Opera 7.54 (Windows, Linux)

  - Mozilla 1.7 (Windows, Linux, AIX)

  - Other browsers that support the current HTTP and HTML specifications should work, but have not been tested with System i Access for Web.

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

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

i5/OS Software Requirements

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

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

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i5/OS Software Requirements (continued)

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

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

i5/OS Software Requirements (continued)

Product Number	Product Name	Option	$
	<u>One, or more, of the following web servers</u>		
5733-W61	• WebSphere Application Server V6.1 for i5/OS (all three editions)		
5733-W60	• WebSphere Application Server V6.0 for OS/400 (all three editions)	See documentation	
5722-E51	• WebSphere Application Server V5.1 - Express for iSeries		
5733-W51	• WebSphere Application Server V5.1 for iSeries (Base and ND)		
5722-IWE	• WebSphere Application Server V5.0 - Express for iSeries		
5733-WS5	• WebSphere Application Server V5.0 for iSeries (Base and ND)		
57xx-DG1	• 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		

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

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

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

System i Access Family - Packaging

V6R1 5761-XW1 System i Access Family	V5R4 5722-XW1 iSeries Access Family
System i Access for Windows, 5761-XE1, V6R1	iSeries Access for Windows, 5722-XE1, V5R4
System i Access for Web, 5761-XH2, V6R1	iSeries Access for Web, 5722-XH2, V5R4
System i Access for Linux, 5761-XL1, Vx.x (V6R1)	iSeries Access for Linux, 5722-XL1, V1.10 (V5R4)
System i Access for Wireless, 5722-XP1, **V5R3**	iSeries Access for Wireless, 5722-XP1, **V5R3**
V5R4 i5/OS customers not wanting to upgrade to V6R1 i5/OS but want the new V6R1 System i Access Family clients you can order no-charge Feature No. 2649 of Product No. 5722-XW1	V5R3 i5/OS customers not wanting to upgrade to V5R4 i5/OS but want the V5R4 iSeries Access Family clients you can order no-charge Feature No. 2648 of Product No. 5722-XW1

System i Hardware Requirements

Models/Processor features/Memory

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

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

Server disk space   Software product
- 470MB   V5R4 System i Access for Web
- 365MB   V6R1 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
   - User created instances

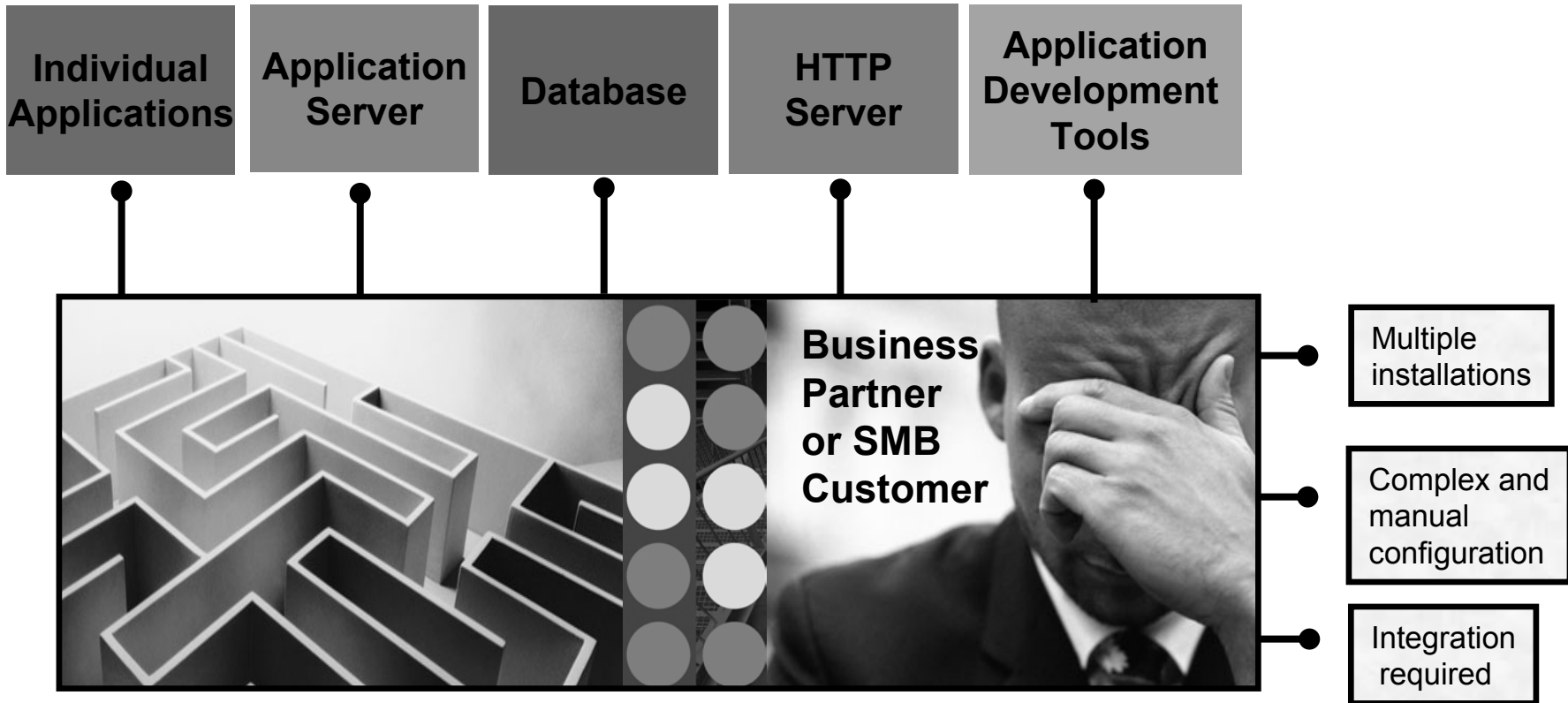2. Express Runtime Web Environments
   - All components provided in a single package
   - Greatly simplifies the complexity of the environment
   - Most automated
   - Running web environment when installation completes
   - Desktop icon linking to the deployed web environment

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

1. Integrated Web Application Server

– Simplest to set up

– Preconfigured HTTP web server

– User created instances

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

- What is the i5/OS integrated Web application server
  - A web application engine much like ASF Tomcat
  - Uses minimal system resources, similar to ASF Tomcat
  - Minimal effort by an Administrator to maintain
  - Administrative instance with preconfigured HTTP web server
  - User created instances
  - V5R4 is the last release i5/OS will contain ASF Tomcat

- How is it packaged
  - With i5/OS
  - 57xx-DG1 IBM HTTP Server for i5/OS
  - Available in PTF package/group
    - V6R1 GA Cumulative PTF package
    - V5R4 SF99114 latest available level
    - V5R3 SF99099 latest available level

- System i Access for Web support
  - V5R4 System i Access for Web supports only the Administrative instance
  - V6R1 System i Access for Web supports
    - Administrative instance
    - User created instances

To use System i Access for Web in this environment

Administrative instance and preconfigured HTTP web server

1. Stop the Web Administration for i5/OS
   - ENDTCPSVR SERVER(*HTTP) HTTPSVR(ADMIN)

2. Load/apply latest PTFs (review cover letters for any additional information)
   - V6R1 GA cumulative PTF package
   - V5R4 SF99114 group for product 5722-DG1
   - V5R3 SF99099 group for product 5722-DG1

3. Load/apply latest System i Access for Web PTF
   - V6R1 SI29664 or later
   - V5R4 SI29607 or later

4. Configure System i Access for Web
   - QSH
   - cd /QIBM/ProdData/Access/Web2/install
   - cfgaccweb2 –appsvrtype *INTAPPSVR

5. Start the Web Administration for i5/OS
   - STRTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN)

6. Start preconfigured HTTP web server
   - STRTCPSVR SERVER(*HTTP) HTTPSVR(IWADFT)

7. Open a browser to System i Access for Web using preconfigured HTTP:port
   - http://<system_name>:2020/webaccess/iWAMain

8. Done!

To use System i Access for Web in this environment

<u>User created instance and HTTP web server</u>   (requires use of V6R1 System i Access for Web)

1. Load/apply latest PTFs (review cover letters for any additional information)
    *   V6R1 GA cumulative PTF package
    *   V5R4 SF99114 group for product 5722-DG1

2. Load/apply latest V6R1 System i Access for Web PTF
    *   V6R1 SI29664 or later

3. Start the Web Administration for i5/OS
    *   STRTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN)

4. Use the Web Administration for i5/OS wizard to create an instance of the integrated Web application server and an HTTP web server.
    *   http://<system_name>:2001/HTTPAdmin

5. Configure System i Access for Web
    *   QSH
    *   cd /QIBM/ProdData/Access/Web2/install
    *   cfgaccweb2 –appsvrtype *INTAPPSVR –instance <instance_name>

6. Start integrated Web application server and HTTP web server using the Web Administration for i5/OS interface.
    *   http://<system_name>:2001/HTTPAdmin

7. Open a browser to System i Access for Web using preconfigured HTTP:port
    *   http://<system_name>:<port>/webaccess/iWAMain

8. Done!

Integrated Web application server

Questions regarding the integrated
Web application server option?

2. Web Enable Feature – Express Runtime Environment

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

What is the problem?

The complexity of the web-serving environment
- – Several parts/pieces to install
- – Can be challenging to configure all the parts/pieces

Individual Applications	**Application Server**	**Database**	**HTTP Server**	**Application Development Tools**

Business Partner or SMB Customer

Multiple installations

Complex and manual configuration

Integration required

What is the solution?

- Put all the parts/pieces into a single package
  - Middleware components
    - HTTP web server
    - WAS Express 6.x
    - System i Access for Web
    - PTFs are included

  - Sample applications – modernizing an RPG application (flight400) using the following technologies:
    - HATS, WebFacing, Web Services

  - First Steps
    - Web page with links to System i Access for Web, Samples, web administration, Information

  - Getting Started Document
  - Deployment help text
  - Product licenses

| IBM HTTP Server |
| WebSphere Application Server - Express |
| System i Access for Web |
| Sample Applications |
| First Steps |
| Desktop icon to First Steps |
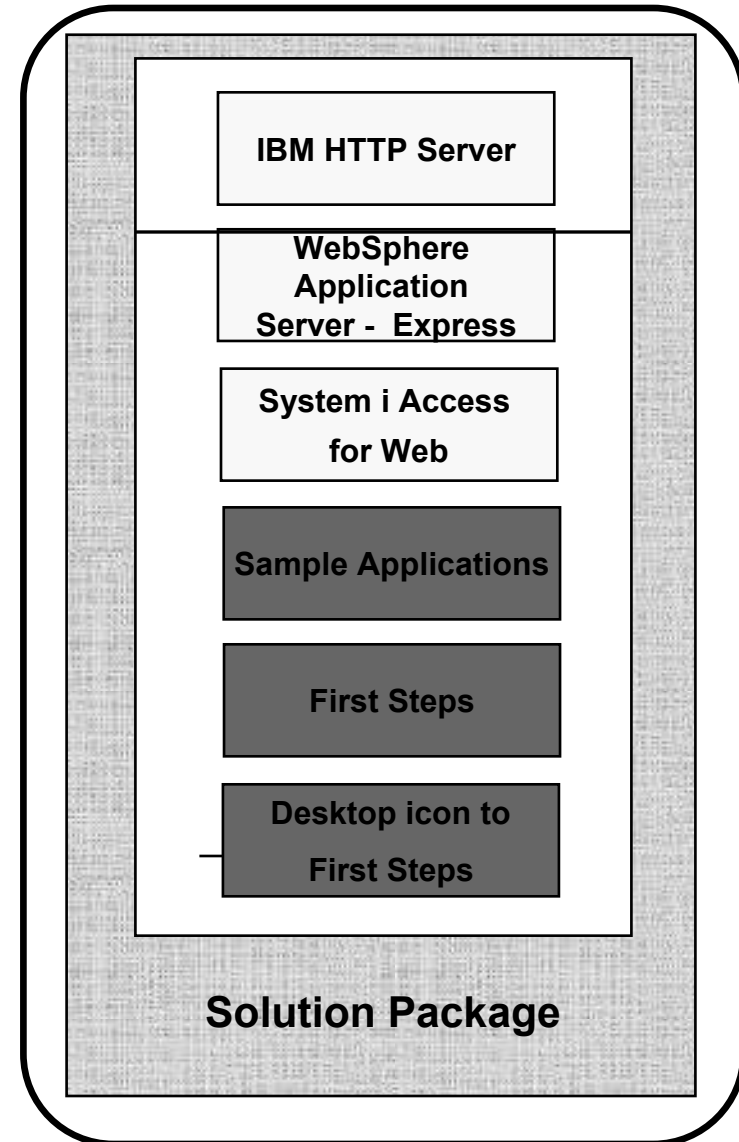
Solution Package

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

Solution Package
IBM HTTP Server
WebSphere Application Server - Express
System i Access for Web
Sample Applications
First Steps
Desktop icon to First Steps

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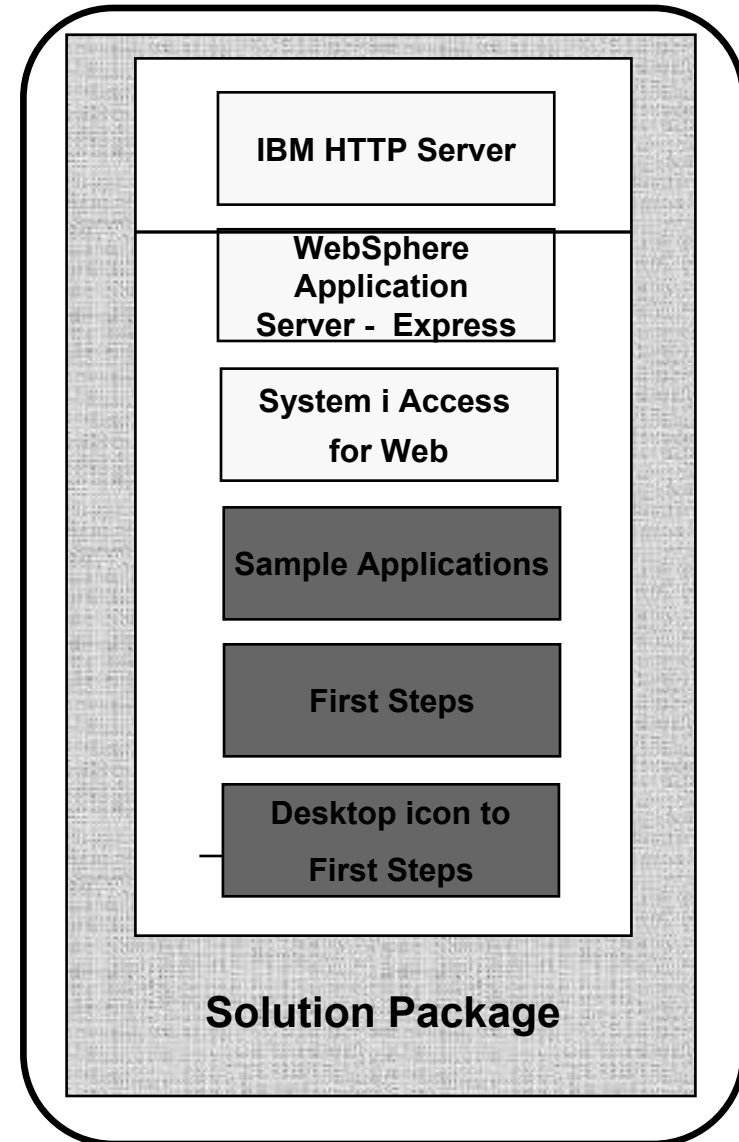
Target Audience

- i5/OS customers and partners
    - Anyone wanting/needing a simple way to setup web-serving on their i5/OS

- Users of the following:
    - System i Access for Web – end user web browser access to i5/OS resources
    - WDHT / HATS / WebFacing applications
    - J2EE web applications (JSF, JSP, servlets, EJBs, etc)
    - SOA applications (web services, including RPG/COBOL integration)
    - Demo of an application modernized using SOA, HATs and WebFacing

- Partners
    - Modify a similar solution to include their applications
        - Obtain SAT and source from PartnerWorld
        - Rebuild solution to include their application

Packaging/Ordering

Express Runtime Web Environments
  5722-WE2
  5761-WE2

Can also be ordered separately

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

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

– V5R4 i5/OS
  • 5722-WE2 V1R1M0 = WAS 6.0.2.9 & V5R4 System i Access for Web
  • 5722-WE2 V1R2M0 = WAS 6.1.0.11 & V5R4 System i Access for Web

– V6R1 i5/OS
  • 5761-WE2 V1R1M0 = WAS 6.1.0.11 & V6R1 System i Access for Web

– Ships with all i5/OS orders
  • V5R4 – ships CDs, DVD is orderable
  • V6R1 – ships DVDs
  • All media contained in a single shrink wrapped package

– Packaged along with WebSphere Application Server - Express product CDs
  • Label on package identifies the two products and their purposes
  • Products identified on media labels
  • Look for DVD labeled: Express Runtime Web Environments V1R1, contains everything you need

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Installation/Setup Process

- Read the ReadMe packaged with the product
  - Verify requirements for Windows workstation and i5/OS system
- From a Windows workstation, launch the deployment wizard
  - Provide credentials
  - Specify i5/OS system to deploy
  - Name the HTTP web server, WebSphere profile/application server, ports
  - Optionally a backend i5/OS for System i Access for Web to connect
- Deployment wizard runs
  - Pushing middleware from workstation/media to the i5/OS system
  - Installs/configures middleware
  - Install/configures System i Access for Web, sample applications, FirstSteps web page
  - Creates desktop icon on Windows workstation

- Deployment wizard complete
  - Click desktop icon named Web_Enablement_Environment_V5R4M0 or Web_Enablement_Environment_V6R1M0

  - FirstSteps webpage provides links to web environment, System i Access for Web, sample applications

  - Administrator can then distribute web browser URL to users

  - GO LICPGM will list
    - 5733-SO1 Base Express Runtime Web Environments
    - 5733-SO1 1 Web Enablement Environment

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

- i5/OS V5R4 (5722-SS1)
  or   V6R1 (5761-SS1)
  - option 3 - Extended Base Directory Support
  - option 8 - AFP(TM) Compatibility Fonts
  - option 12 - Host Servers
  - option 30 - QShell

- Software products
  - 57xx-JV1 Java Developer Kit - see Readme for specific options
  - 57xx-JC1 Toolbox for Java
  - 57xx-TC1 TCP/IP Connectivity Utilities
  - 57xx-XW1 System i Access Family
  - 57xx-QU1 Query - if you want to run reports using the HATS or WebFacing sample applications

- Recommended PTFs:
  - V5R4
    - 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

  - V6R1
    - i5/OS Cumulative PTF Group SF99610 Level 8064 or later

- 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
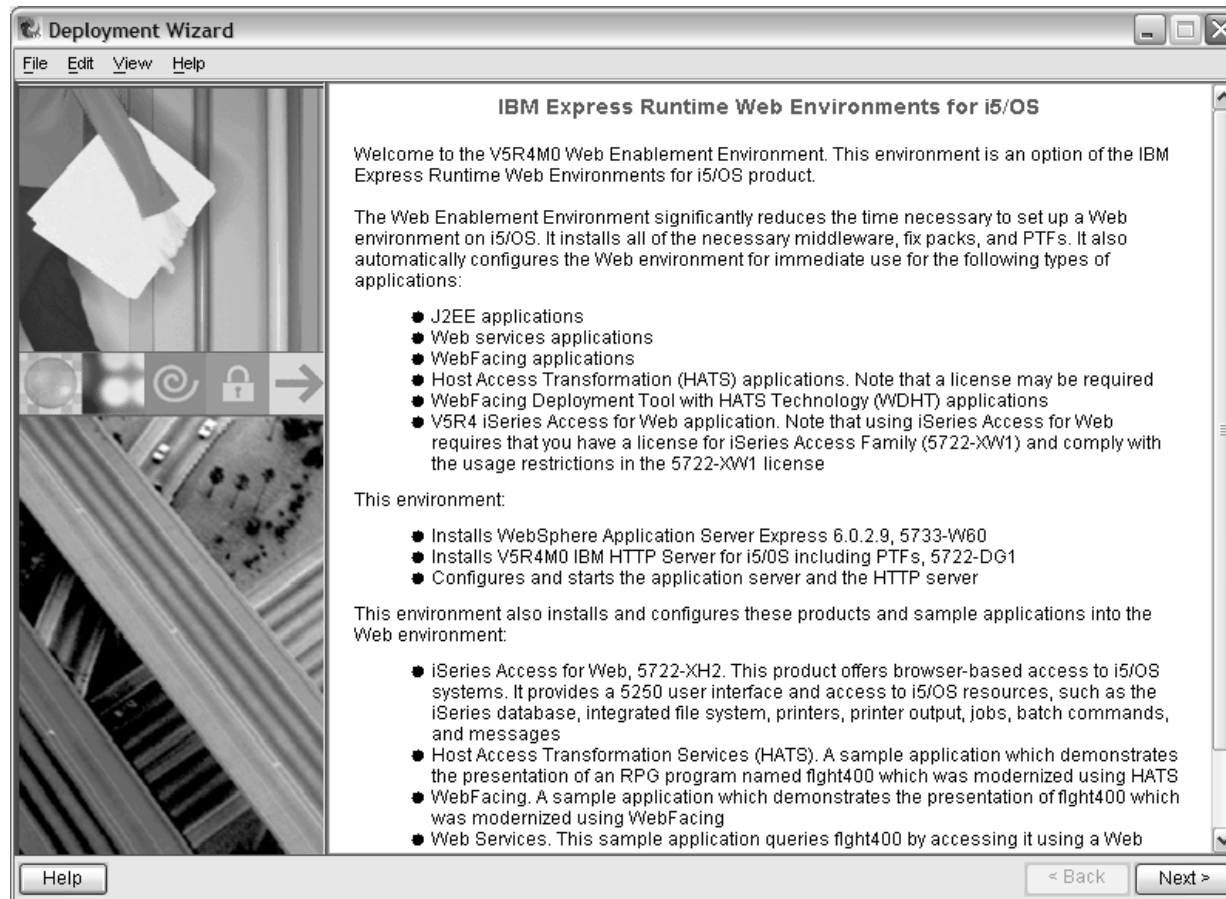
Demonstration (continued)

Deploy the web environment and create the desktop icon to the
FirstSteps webpage

25A: System I Access for Web: Setup and Configuration - **2008 System i Connection Conference**
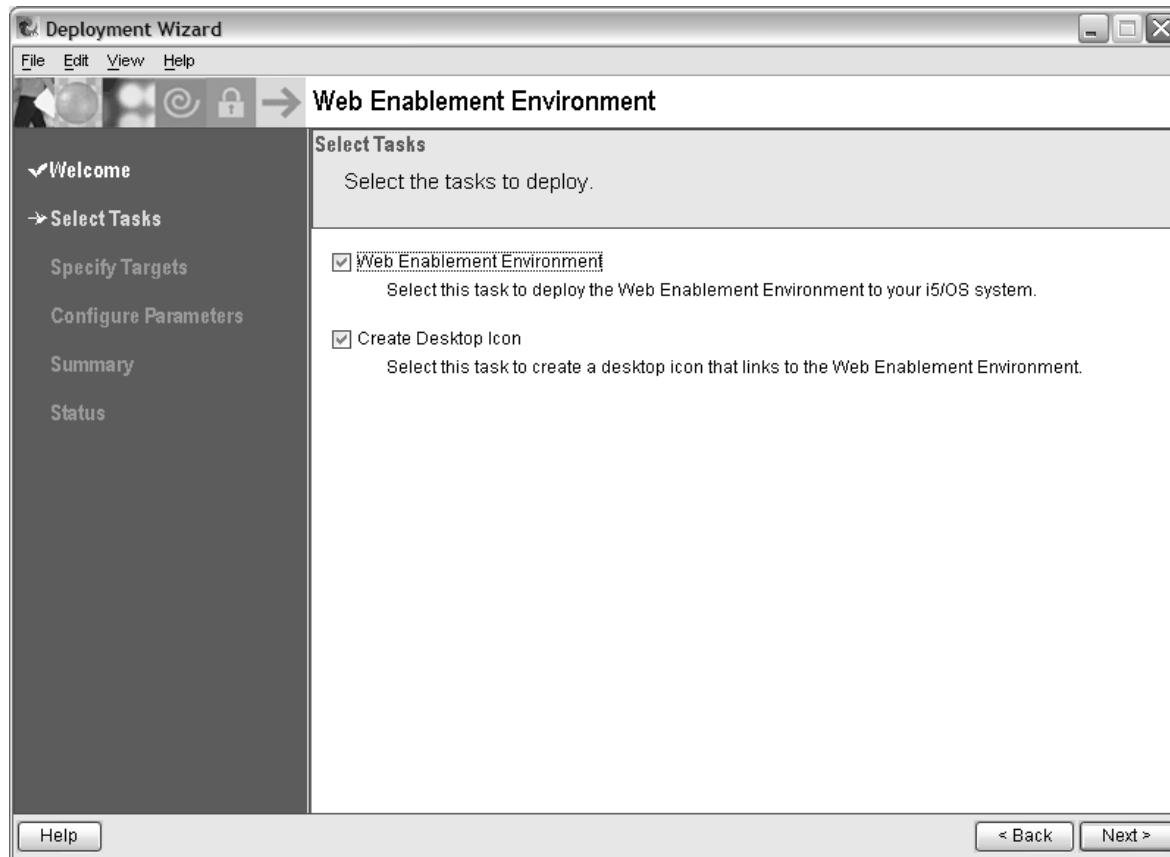
Demonstration (continued)

Name of i5/OS system to deploy the environment to
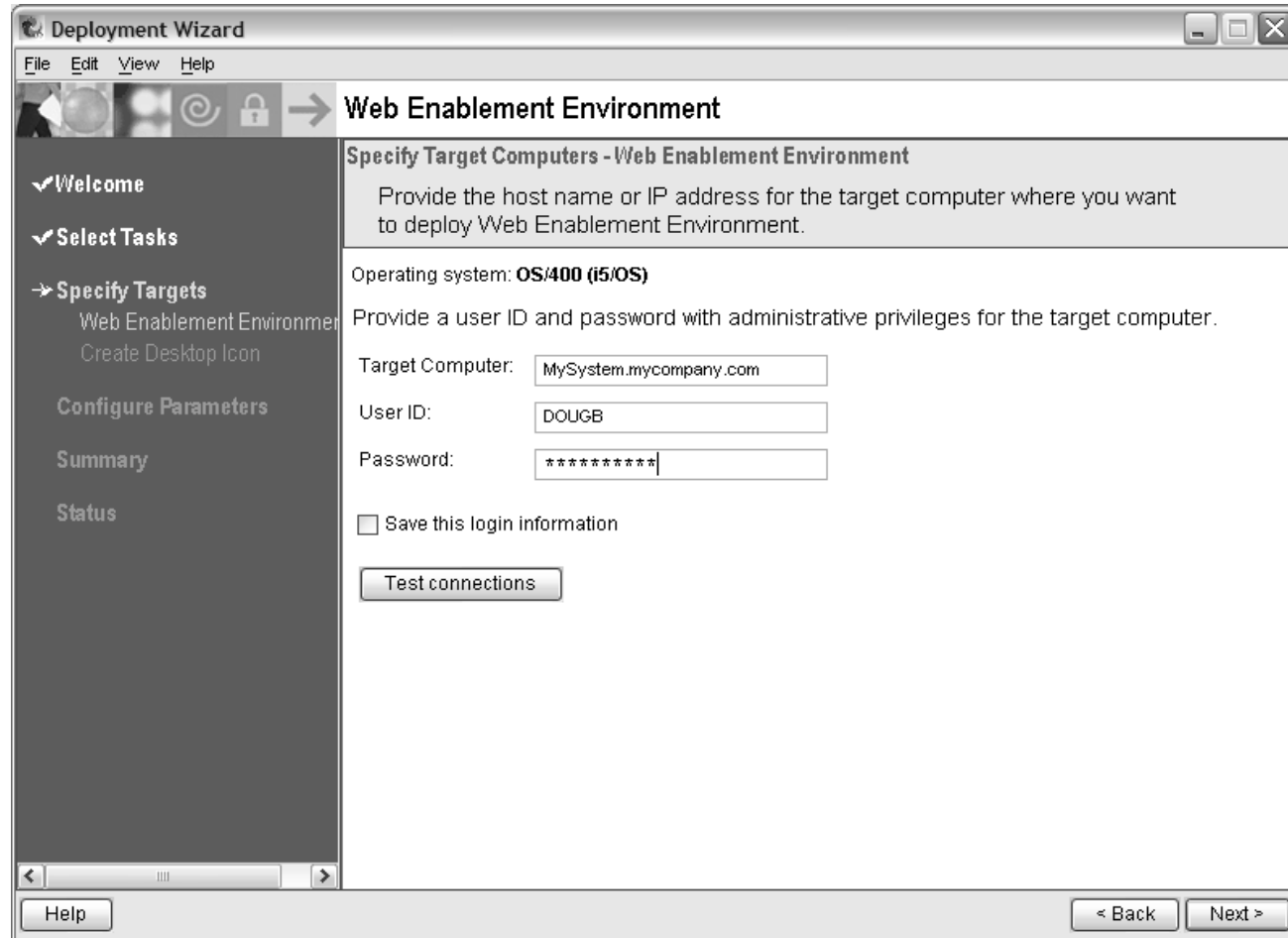
Demonstration (continued)

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

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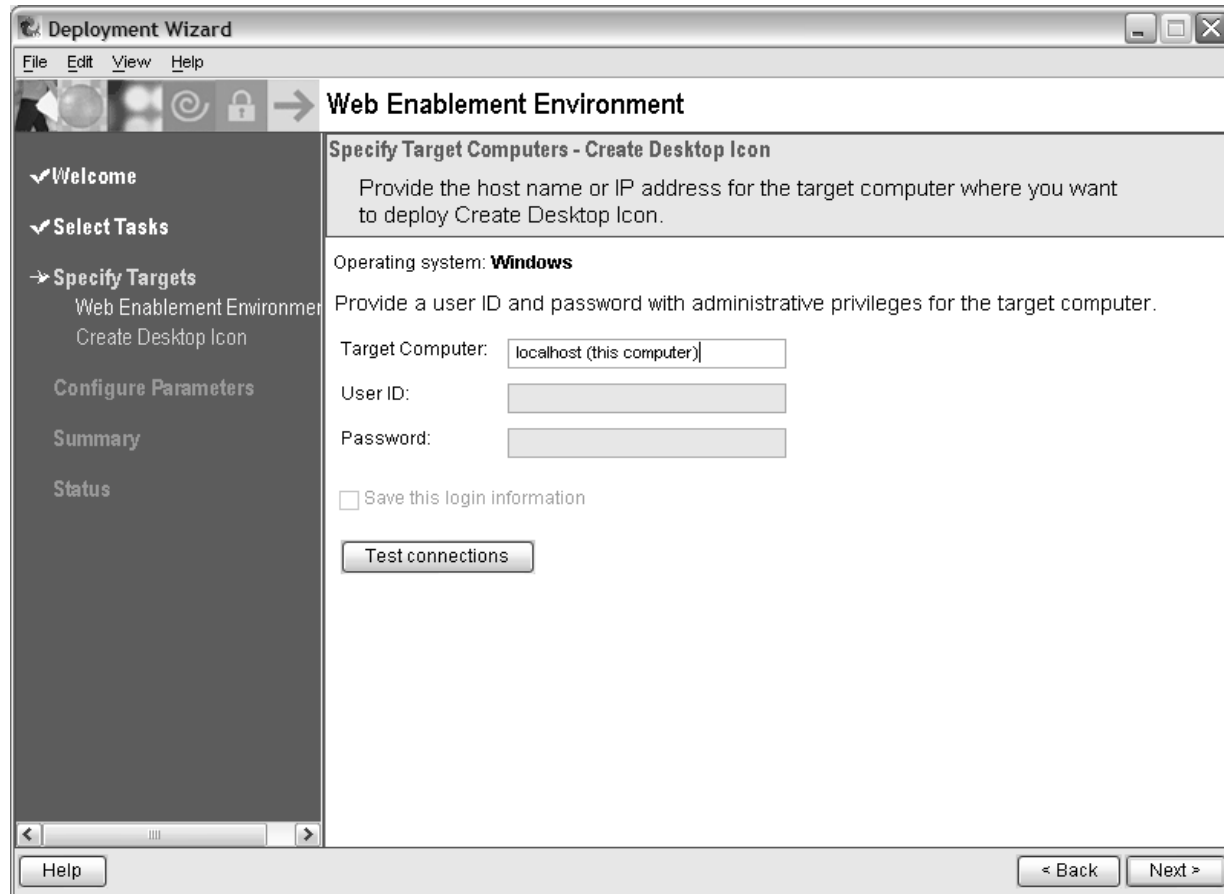
Demonstration (continued)

Name the HTTP web server and it's port

Name the WebSphere profile/app server and it's port range
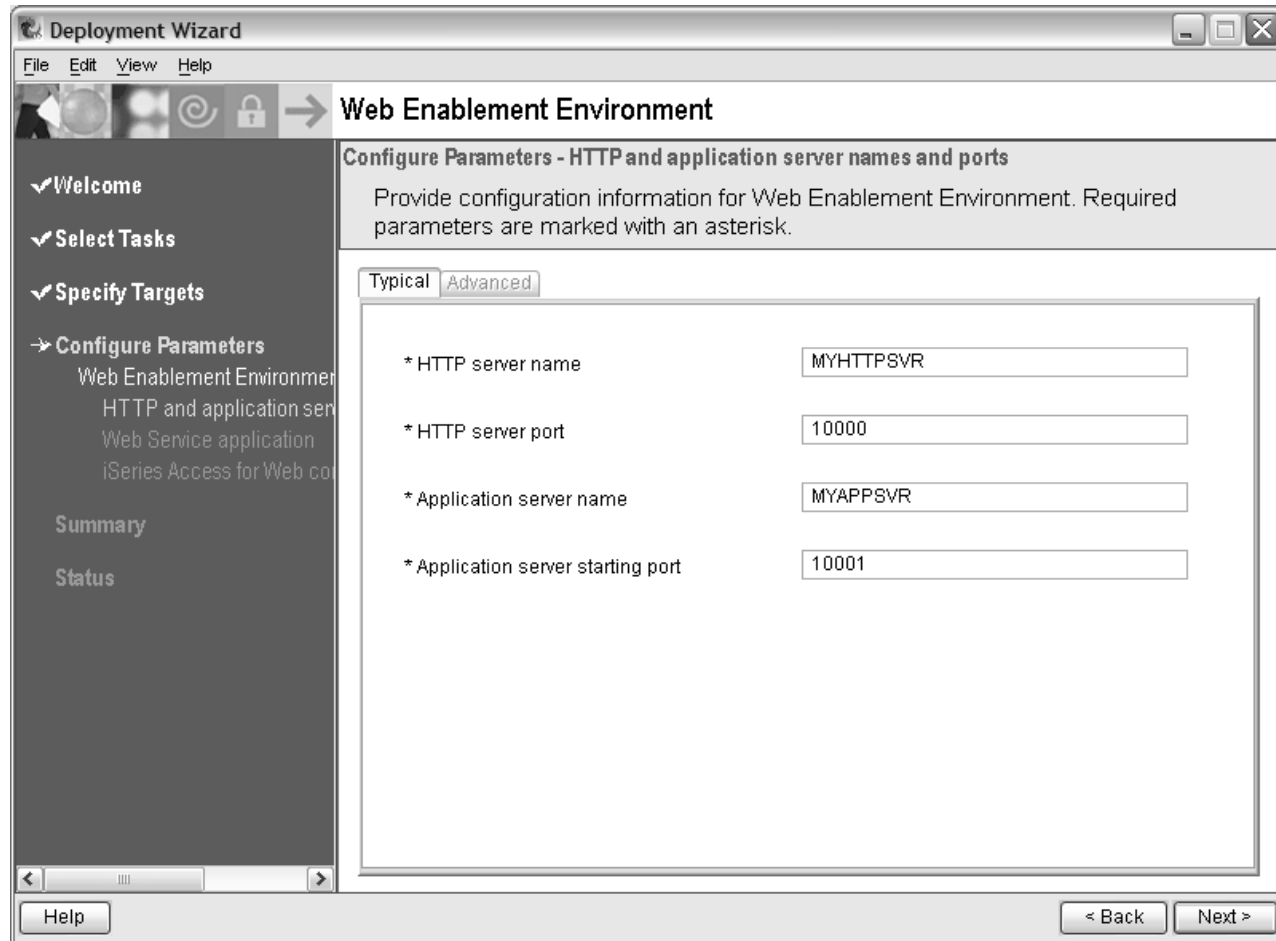
Demonstration (continued)

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

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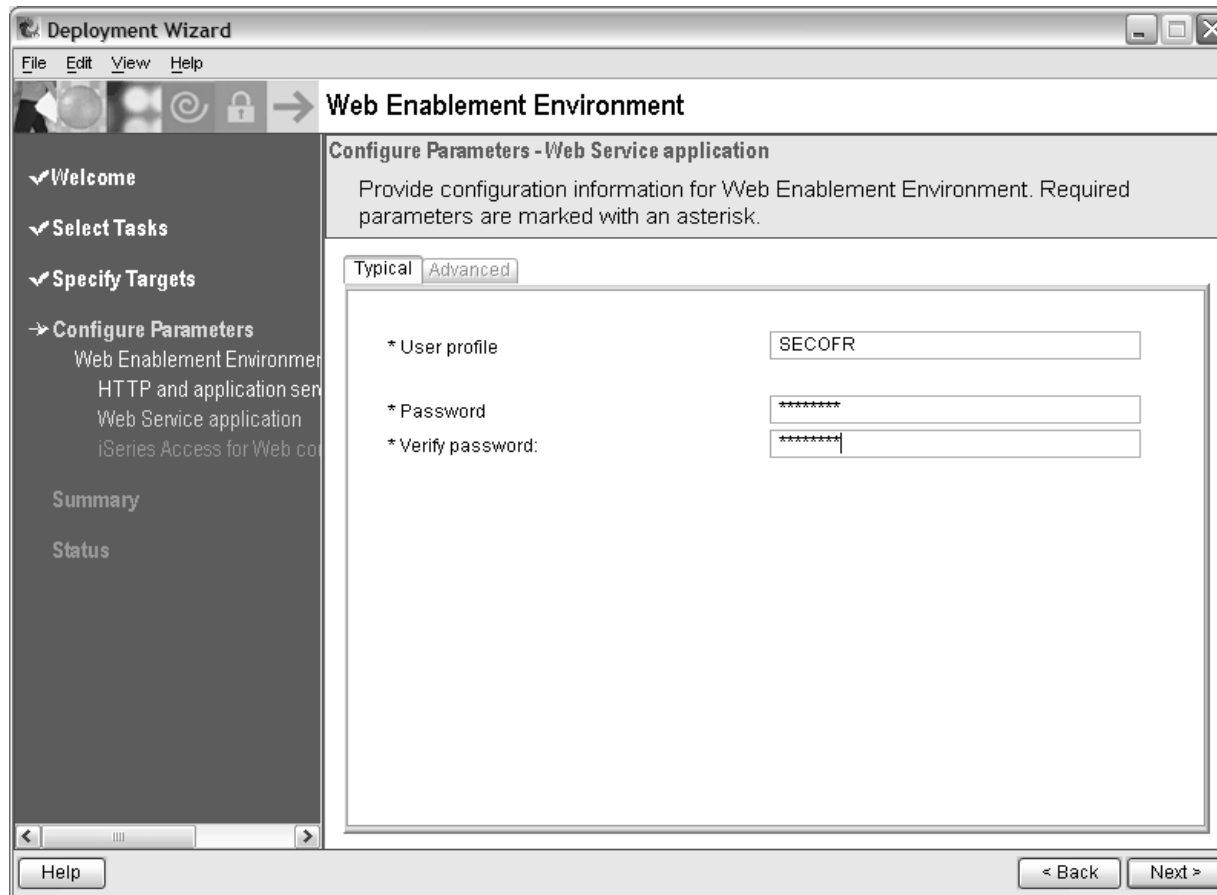
Demonstration (continued)

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

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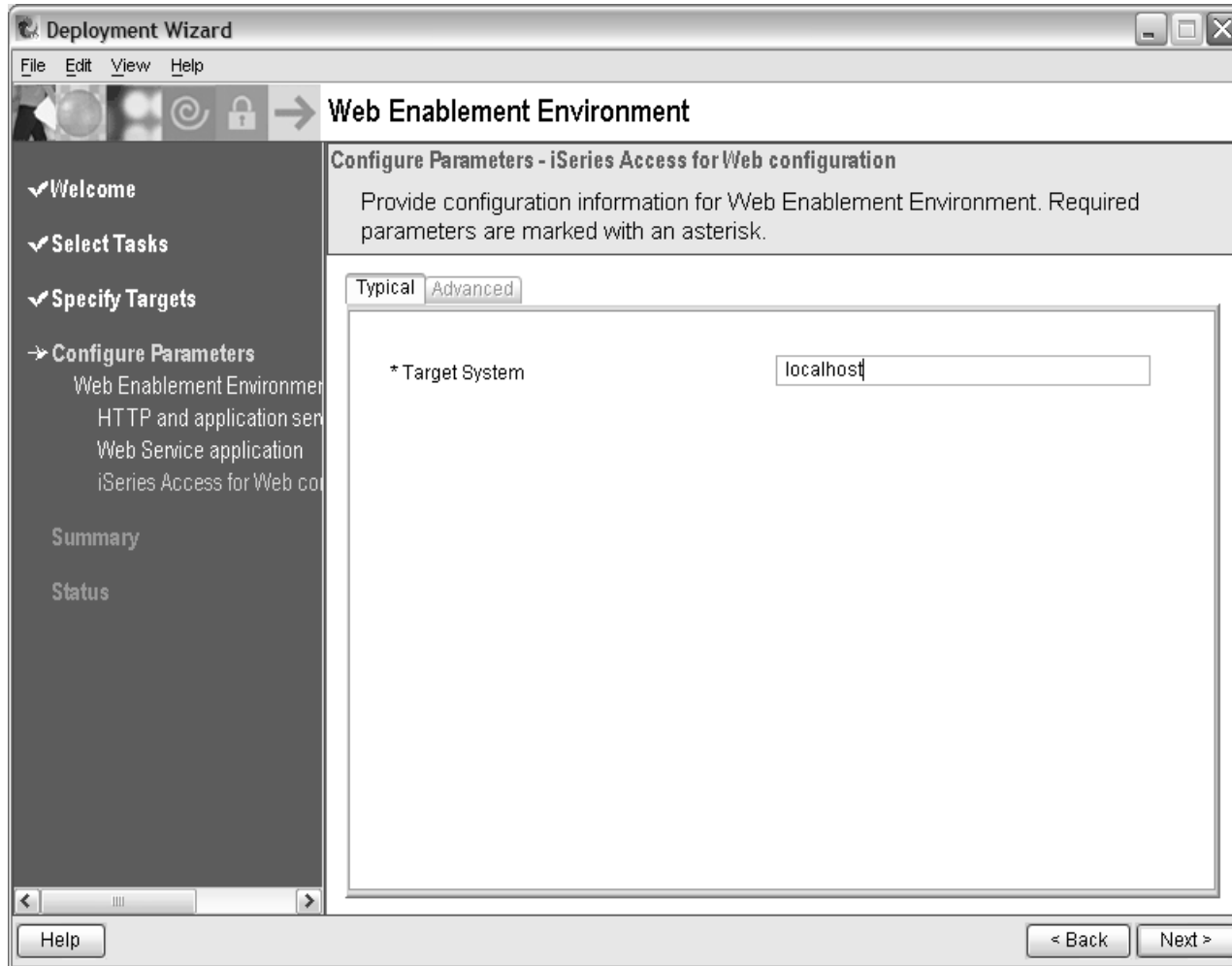
Demonstration (continued)

Summary page, click Deploy all

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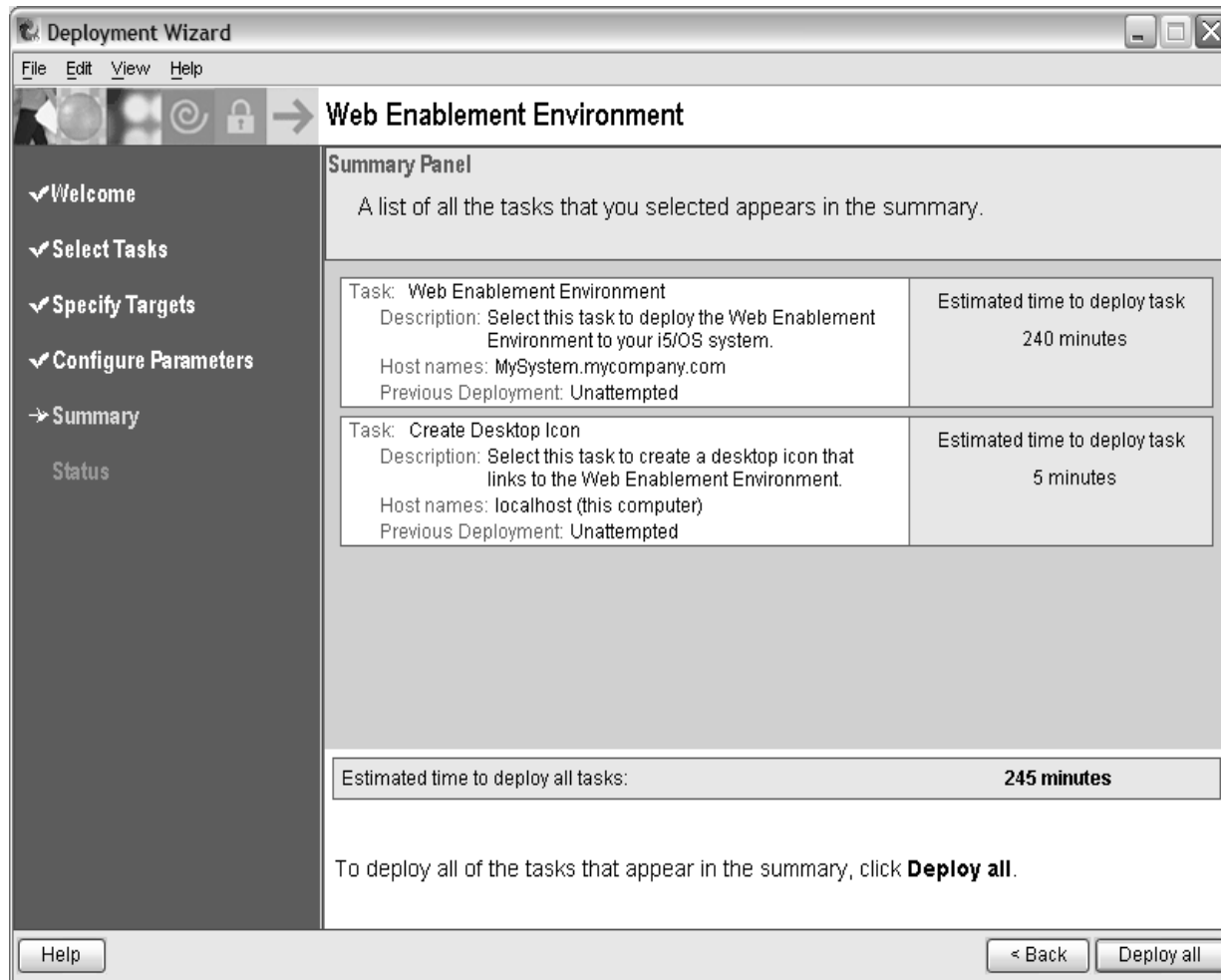
Demonstration (continued)

Progress of the deployment

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Demonstration (continued)

Successful completion

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Demonstration (continued)

Click the desktop icon named:

"Web_Enablement_ Environment_V5R4M0"

"Web_Enablement_ Environment_V6R1M0"

FirstSteps - Mozilla Firefox: IBM Edition

File Edit View Go Bookmarks Tools Help

http://MySystem.mycompany.com:10000/webenv/FirstSteps.html   Go G

FirstSteps

Welcome to the Web Enablement Environment which supports running J2EE, Web Services, WebFacing, HATS, and iSeries Access for Web application. To start and stop servers, install your own Web applications, and manage the Web environment including its performance use the IBM Web Admininstration for i5/OS interface.

Sample Applications

This environment has also installed and configured iSeries Access for Web. Use iSeries Access for Web to leverage business information, applications, and resources across an enterprise by extending the i5/OS resources to the client desktop through a Web browser.

It also installed and configured a sample RPG program, named flght400, along with 3 sample Web applications. Each sample Web application modernizes the presentation of the flght400 RPG program. Each sample Web application was created using a different tool or technique. Before viewing the modernized presentation you should first look at the traditional presentation of the flght400 program. To do that, change your user profile so that the *flght400* library is the current library, and then run *go frsmain*. The password for every agent is *mercury*.

Next, run each of the sample Web applications to see an improved presentation of flght400. The first sample Web application was created using HATS (Host Access Transformation Services). HATS is a tool that assists in modernizing existing applications. This Web application was created by a programmer using HATS and flght400 for the first time.

The second Web application was created using WebFacing, which is another tool that assists in modernizing existing applications. This Web application was also created by a programmer with no previous knowledge of WebFacing or flght400.

The last Web application was created so that flght400 can be accessed as a Web service. The implementation of this Web service is based on SOA (Service-Oriented Architecture). In this example, the Web service enables flght400 to be queried from the third Web application.

Next Steps

Done

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Demonstration (continued)

Click the desktop icon named:

"Web_Enablement_ Environment_V5R4M0"

"Web_Enablement_ Environment_V6R1M0"

Questions regarding the
Express Runtime Web Environments option?

3. Step by Step

- **Greatest flexibility**

- **Choice of WebSphere Application Server version**

- **May already have components on your system**

Formula for successful setup and configuration

You need to do the following in this order:

1. **Decide what web application server environment to run**

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

3. **Verify, load, apply any additional PTFs**
   - **Cumulative PTF package**
   - **WebSphere, HTTP web server for i5/OS, integrated Web application server**
   - **System i Access for Web**

4. **Setup web-serving environment**

5. **Configure System i Access for Web**

6. **Verify the installation and configuration**

Information resources:

- **These steps are detailed in System i Access for Web InfoCenter information**

- **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

IBM

Which web application server environment?

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

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

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

WebSphere Application Server

http://www.ibm.com/systems/i/software/websphere/index.html

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

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

Installing System i Access for Web
- – Use the RSTLICPGM command to restore (install) the licensed program
- – RSTLICPGM LICPGM(5722XH2) DEV(OPT01) OPTION(*BASE) - V5R4 version
- – RSTLICPGM LICPGM(5761XH2) DEV(OPT01) OPTION(*BASE) - V6R1 version

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

The restore will not...
- – Make any changes to HTTP web server configurations
- – Make any changes to web application server configurations
- – Enable use of System i Access for Web

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

No coexistence between V5R3, V5R4, V6R1 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 on upgrading from a previous release to the latest release of System i Access for Web.

Verify, load, apply any additional PTFs

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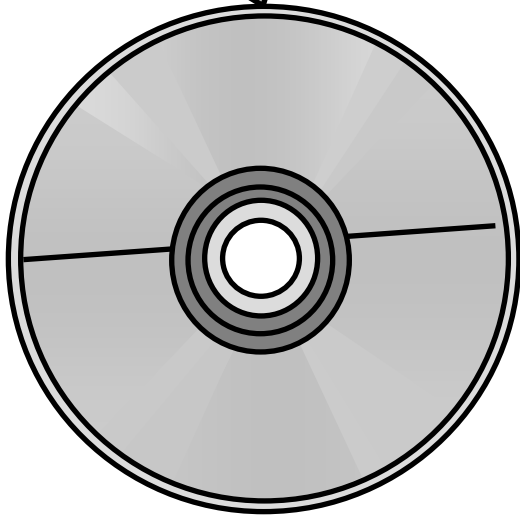
Verify, load, apply any additional PTFs

- Each component of the web application serving environment has PTFs

  1. WebSphere Application Server
  2. Integrated Web application server
  3. i5/OS Cumulative PTF package
  4. HTTP web server
  5. WebSphere Portal/Workplace Services Express
  6. 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/systems/i/software/websphere/index.html
   - Click the version of WAS, click the PTFs version link, check the latest version available
   - V6R1 i5/OS
     - WRKPTFGRP SF99353   v6.1 for i5/OS
     - WRKPTFGRP SF99352   v6.0 for OS/400
   - 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. Integrated Web application server

- http://www.ibm.com/systems/i/software/http/index.html

- Click the Support tab, review the group PTF information

- V6R1 i5/OS
  - GA Cumulative PTF package

- V5R4 i5/OS
  - WRKPTFGRP SF99114

- V5R3 i5/OS
  - WRKPTFGRP SF99099

Verify, load, apply any additional PTFs (continued)

3. 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)

4. HTTP web server

- http://www.ibm.com/systems/i/software/http/index.html

- Click the Support tab, review the group PTF information

- V6R1 i5/OS
  - GA Cumulative PTF package

- V5R4 i5/OS
  - WRKPTFGRP SF99114

- V5R3 i5/OS
  - WRKPTFGRP SF99099

Verify, load, apply any additional PTFs (continued)

5. 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)

6. System i Access for Web

– http://www.ibm.com/systems/i/software/access/web/servicepacks.html

– V6R1 - SI29664
  – Contains support for integrated Web application server Admin and user created instances

– V5R4 - SI29607
  – Contains support for WAS V6.1, Workplace Services Express V2.6, Portal V6.0, integrated web application server Administrative instance
  – Linux i386.rpm   - SI24993
  – Linux ppc.rpm   - SI24994
  – Linux ppc64.rpm   - SI24995
  – Linux x86-64.rpm   - SI24996
  – AFP Plugin Viewer   - SI22919

– Always check the cover letter special instructions, may 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

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Step by Step
Setup web-serving environment

Tier 1   Tier 2   Tier 3

HTTP web server

Web Application Server

Servlet

Web browser

JSPs

Java Beans

Internet

i5/OS Host applications Database

Need to create…

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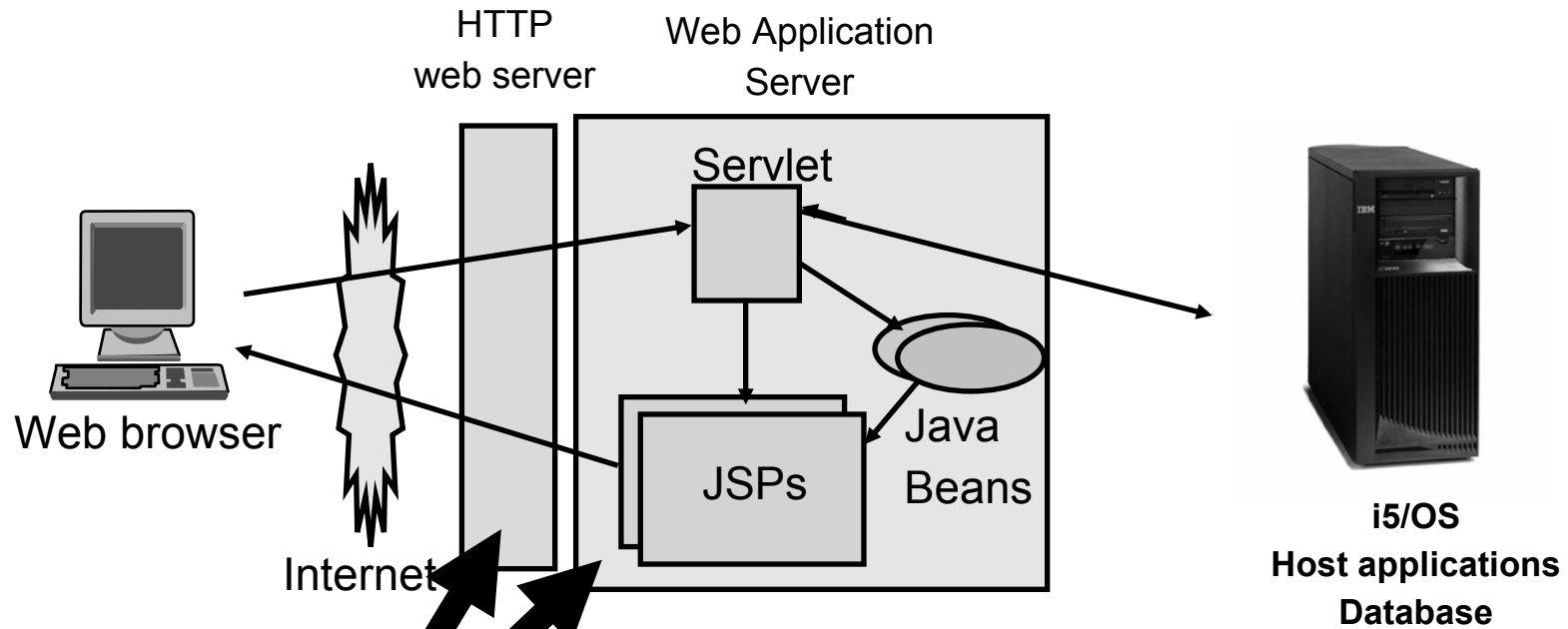
Setup web-serving environment (continued)

- 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 and 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 Application Server

Setup web-serving environment (continued)

Click Next

25A: System I Access for Web: Setup and Configuration - **2008 System i Connection Conference**

Setup web-serving environment (continued)

Select version of WebSphere Application Server, click Next
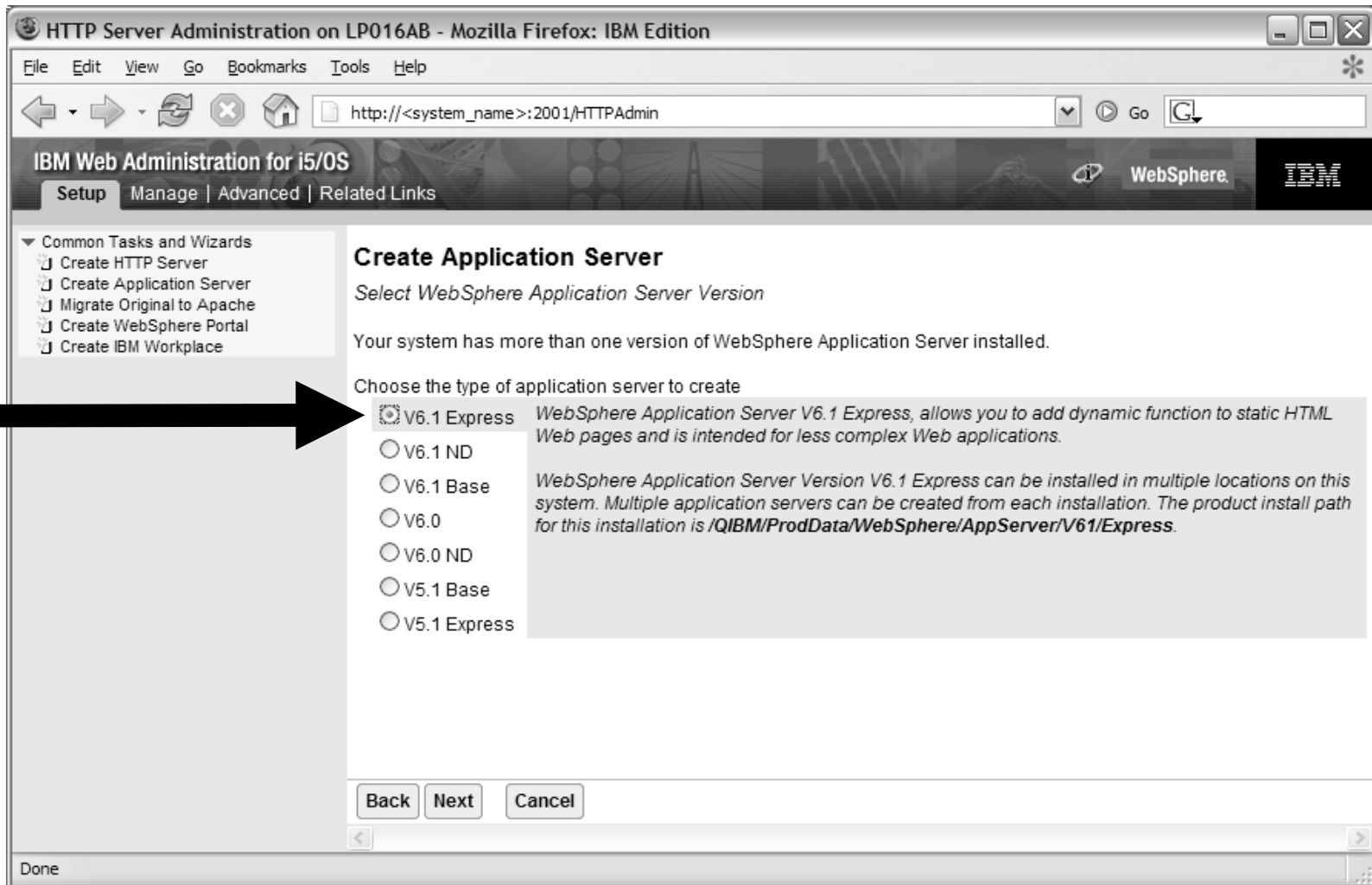
Setup web-serving environment (continued)

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

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Setup web-serving environment (continued)

Select Create a new HTTP server, click Next

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Setup web-serving environment (continued)

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

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Setup web-serving environment (continued)

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

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Setup web-serving environment (continued)

Click Next

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Setup web-serving environment (continued)

Information Center has information for configuring SSO environment

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Setup web-serving environment (continued)

Click Finish to create the web-serving environment

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Setup web-serving environment (continued)

Page refreshes to Manage→Application Servers tab, status of Creating…

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Setup web-serving environment (continued)

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

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Setup web-serving environment (continued)

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

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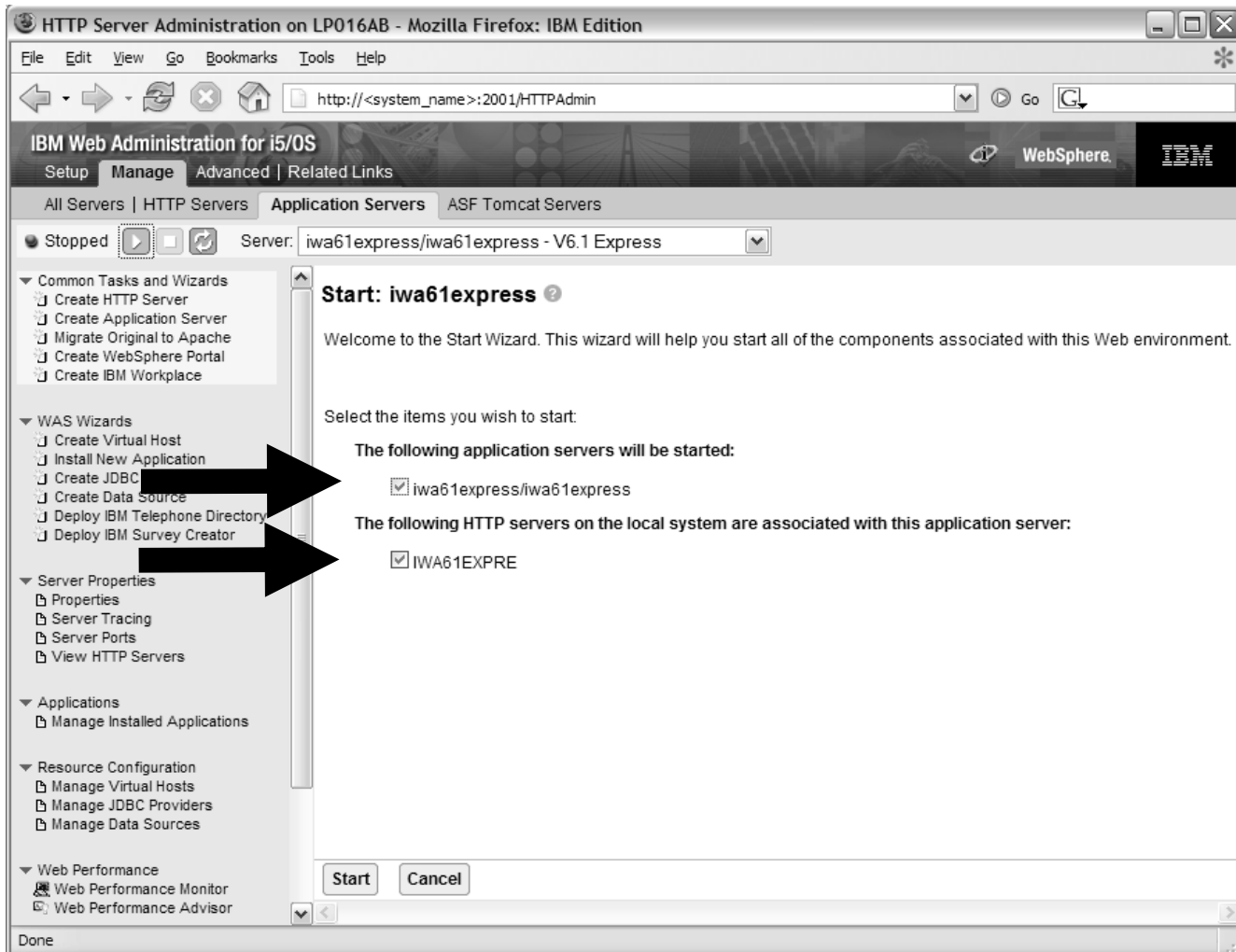
Setup web-serving environment (continued)

Environment is ready for use when status reaches Running

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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)
  - ENDTCPSVR *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>)
  - ENDTCPSVR *HTTP HTTPSVR(<my_http_server_name>)

- HTTP web 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".

- i5/OS integrated file system
  - /QIBM/ProdData/WebSphere/AppServer/V61/Base/...
  - /QIBM/UserData/WebSphere/AppServer/V61/Base/...
  - /QIBM/ProdData/WebSphere/AppServer/V61/Express/...
  - /QIBM/UserData/WebSphere/AppServer/V61/Express/...
  - /QIBM/ProdData/WebSphere/AppServer/V61/ND/...
  - /QIBM/UserData/WebSphere/AppServer/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

- i5/OS integrated file system
    - /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.

- 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".

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

Configure System i Access for Web
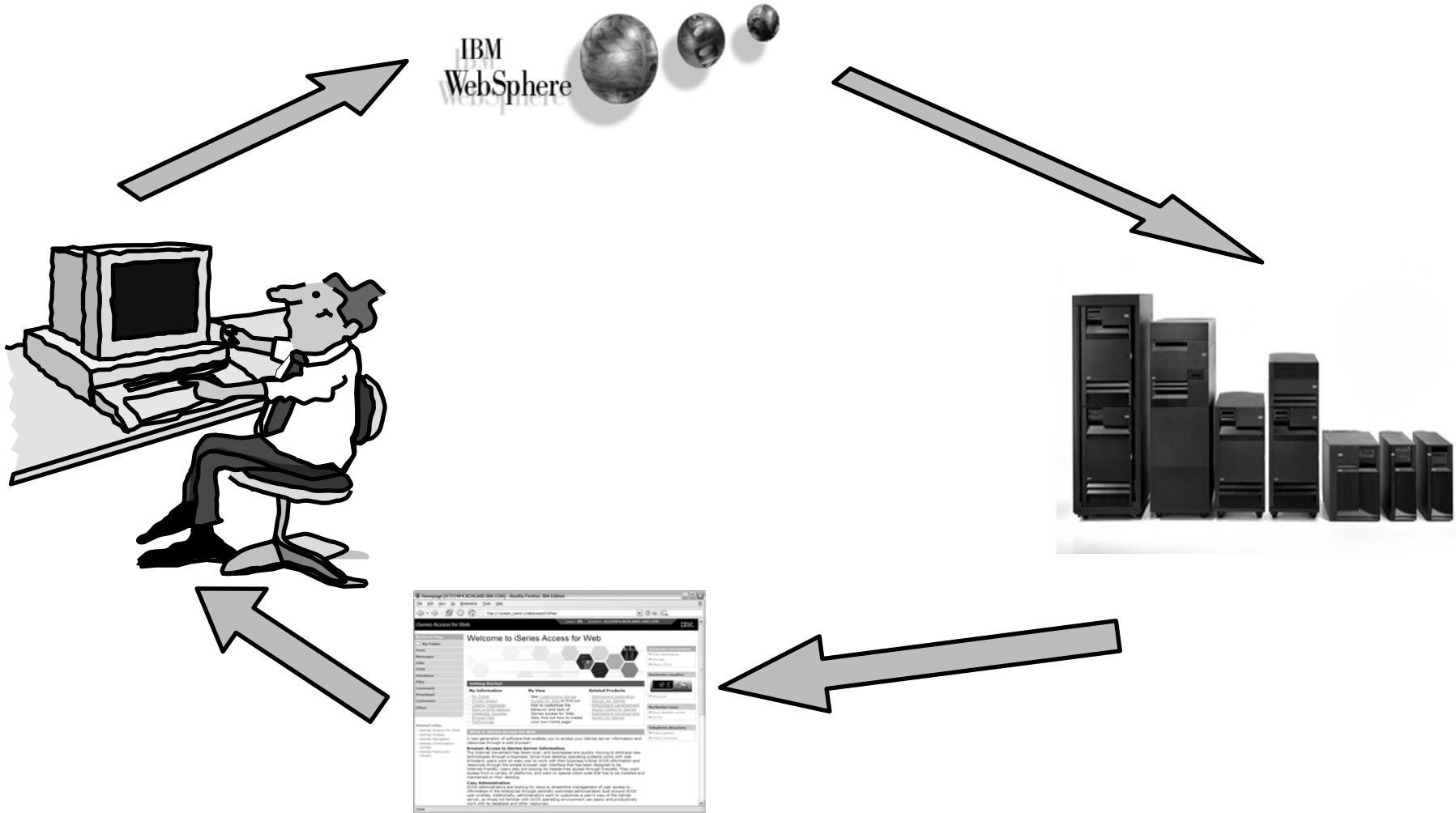
Configure System i Access for Web

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

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Configure System i Access for Web (continued)

Use available documentation →

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

When the commands are run →

- The WebSphere web application server must be running before running the CFGACCWEB2 or RMVACCWEB2 commands

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

Notes

- **Do not use the web administration interface or WebSphere Admin console to configure (deploy) or remove System i Access for Web**

- **Do not attempt to migrate a WebSphere environment to another WebSphere environment when System i Access for Web is configured**

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	• QSH • cd /QIBM/ProdData/Access/Web2/install • cfgaccweb2 –appsvrtype *WAS61EXP –wasprf iwa61express –appsvr iwa61express

- Now the web application server 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

Configure System i Access for Web (continued)

CFGACCWEB2/cfgaccweb2 commands accept other parameters

Tells Access for Web to connect and serve data to another i5/OS system – If not specified, the local i5/OS running the web environment will be used	• TGTSVR [*DEFAULT, fully qualified system name]
Specifies whether the web application (System i Access for Web) or the web application server (WebSphere) will authenticate the user	• AUTHTYPE [*APP, *APPSVR] • AUTHMETHOD [*FORM, *BASIC, *KERBEROS]
Input a WAS user ID/password for WAS profiles where WAS security has been enabled	• WASUSRID • WASPWD
Configure new web application servers based on existing web application where Access for Web is configured	• SRCSVRTYPE [*ASFTOMCAT, *WAS50, *WAS50EXP, *WAS51, *WAS51EXP, *WAS60, …] • 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.

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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

    -shrusrdta *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

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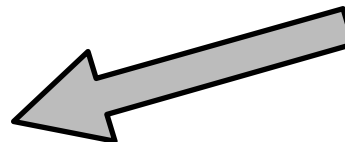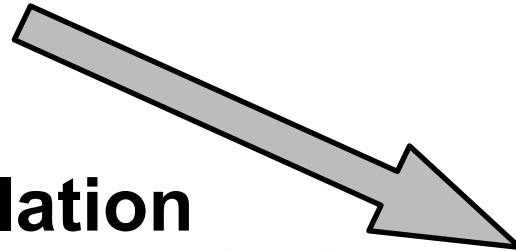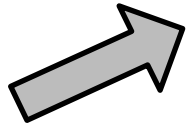
Verify the installation and configuration

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

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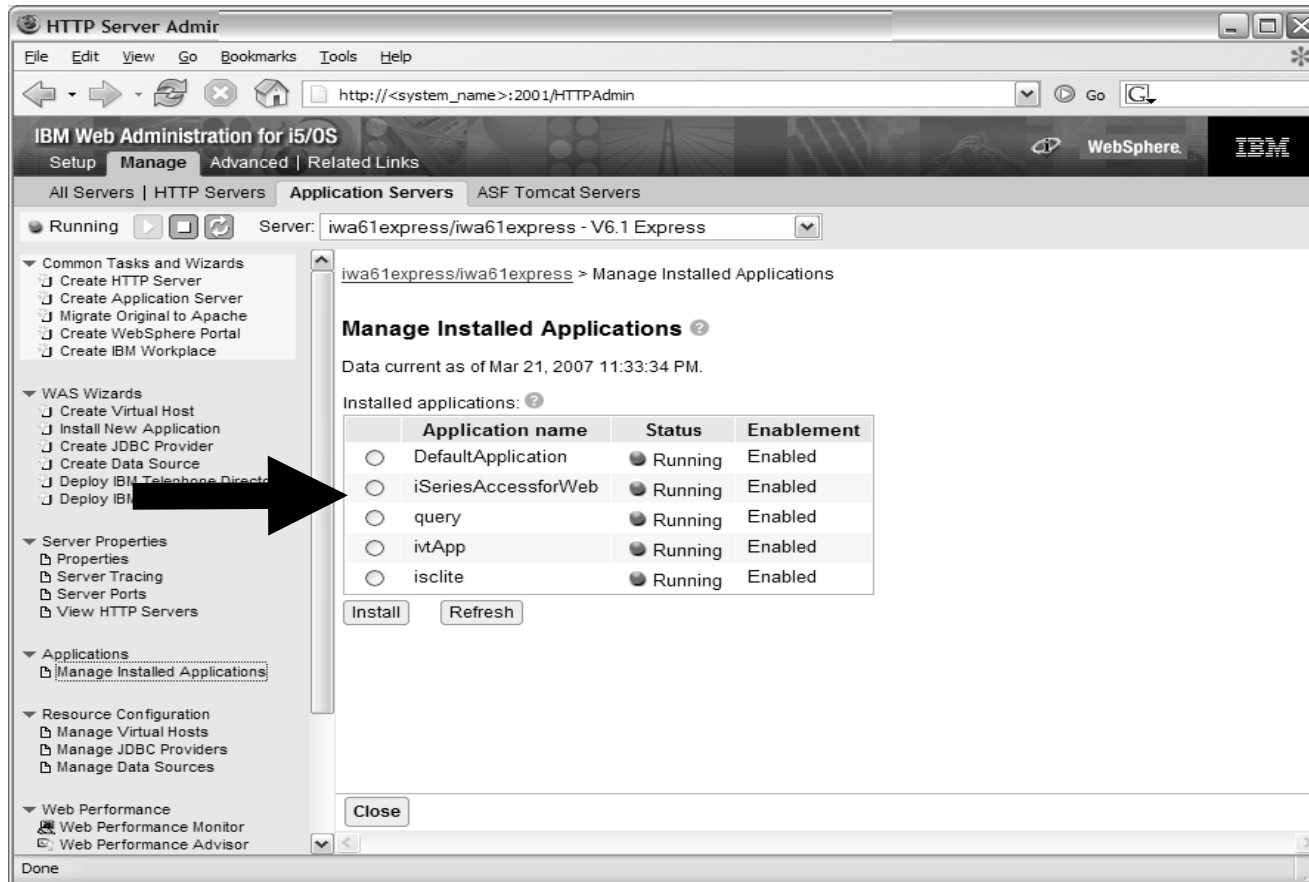
Verify the installation and configuration (continued)

WebSphere Portal → My iSeries page + subpages with portlets

Verify the installation and configuration (continued)

HTTP web server

– Verify several jobs are running with the name of your HTTP web server

- WRKACTJOB SBS(QHTTPSVR)

WebSphere Application Server

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

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

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

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

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

Questions regarding the Step by Step option?

25A: System I Access for Web: Setup and Configuration - **2008 System i Connection Conference**
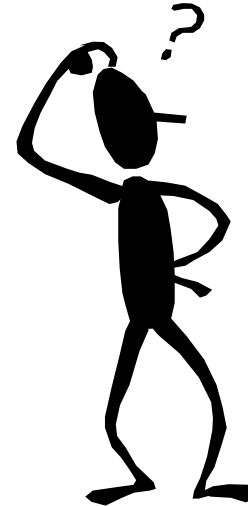
Additional Setup Considerations

- 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
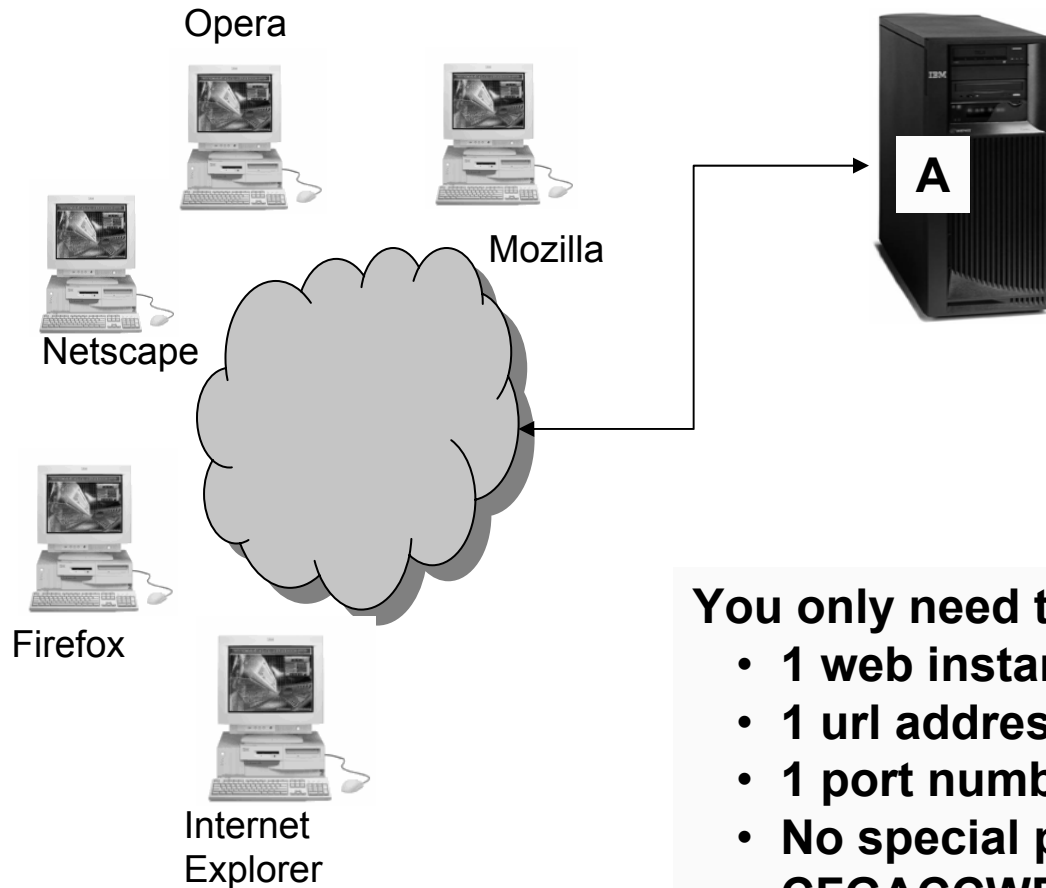
Opera

Mozilla

Netscape

Firefox

Internet
Explorer

A

1. **i5/OS system**
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

Opera

Mozilla

Netscape

Firefox

Internet Explorer

1. **i5/OS system**
2. **HTTP web server**
3. **Web application server**
4. **System i Access for Web**
   - **5250 applications**
   - **Database**
   - **Files**
   - **Printer output**
   - **…**

A

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

Opera

Mozilla

Netscape

Firefox

Internet
Explorer

A

B

C

D
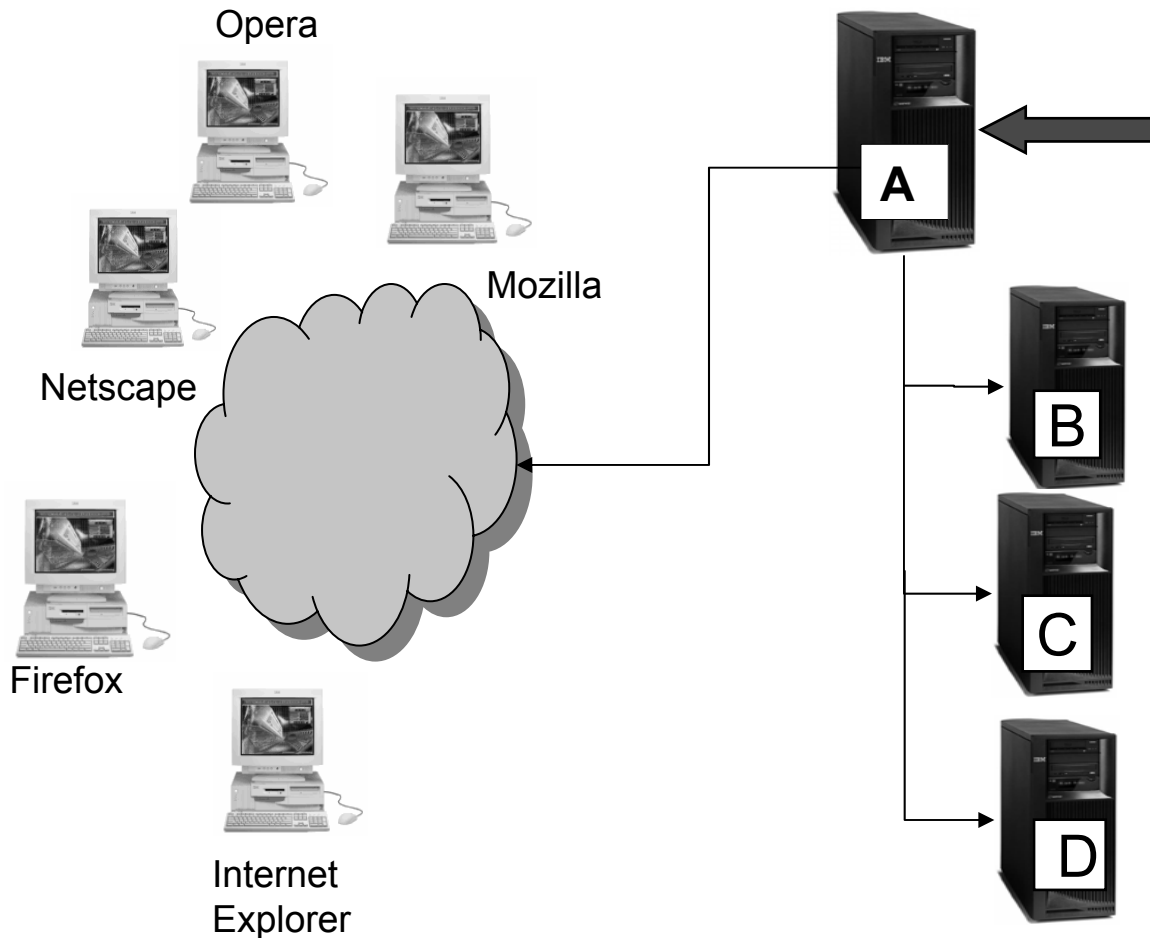
1. **Multiple i5/OS system's**
2. **HTTP web server installed**
3. **Web application server installed**
4. **System i Access for Web → needing only to access i5/OS systems B, C, D using only**
   - **5250**
   - **Database**

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**

25A: System I Access for Web: Setup and Configuration - **2008 System i Connection Conference**

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

- Database

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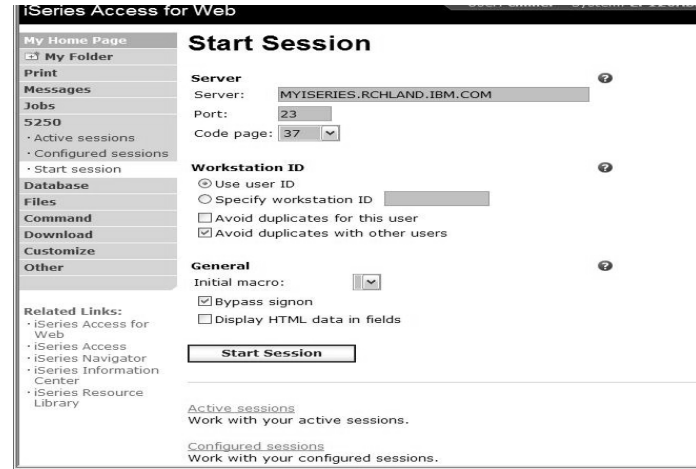
Need multiple configurations

Opera

Mozilla

Netscape

Firefox

Internet
Explorer

A

B

C

D
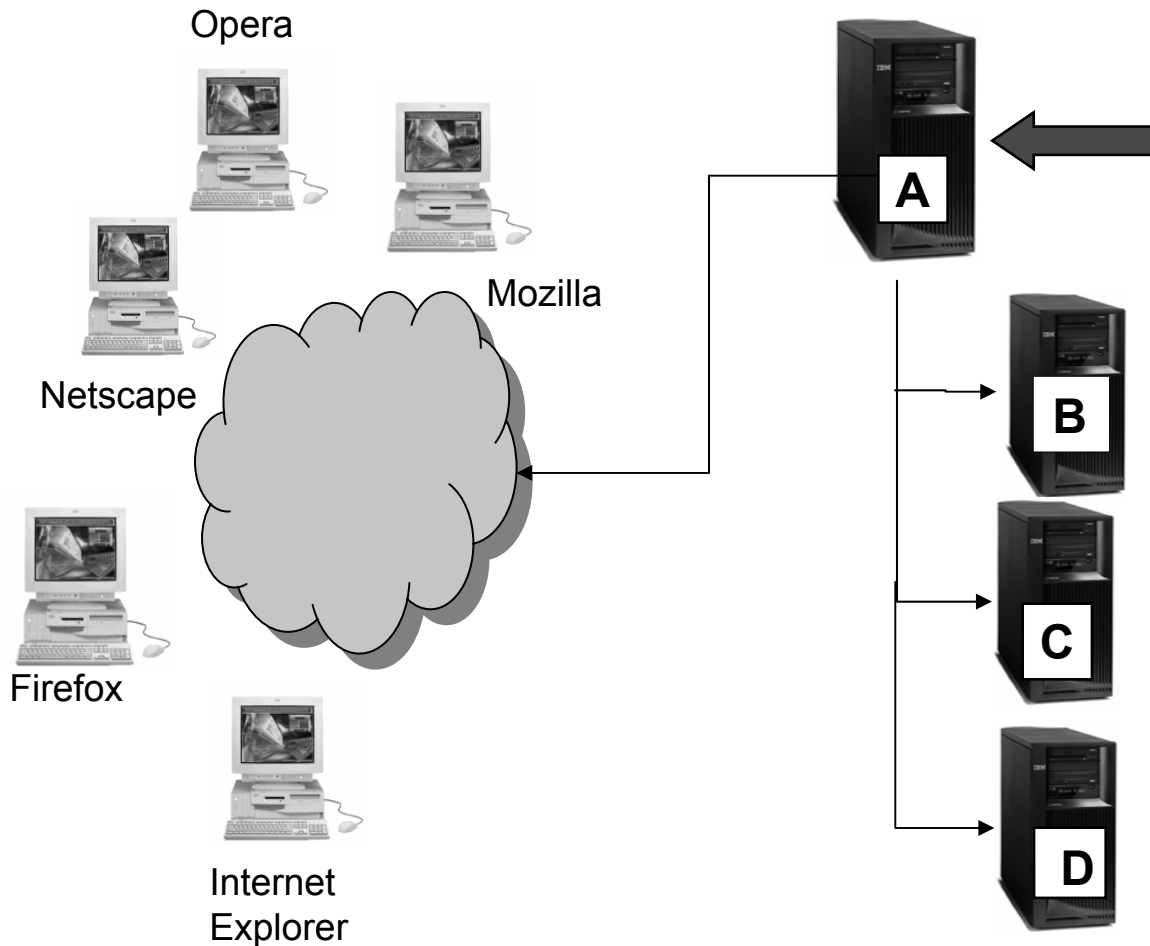
1. **Multiple i5/OS system's**
2. **Multiple HTTP web servers**
3. **Multiple web application servers**
4. **Single System i Access for Web application**

Use all System i Access for Web functions on backend i5/OS systems

- **5250 applications**
- **Database**
- **Files**
- **Printer output**
- **…**

Backend i5/OS

- The backend i5/OS systems B, C, D contain data.

- They are inside the company network.

- i5/OS systems 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

i5/OS B

i5/OS C

i5/OS D
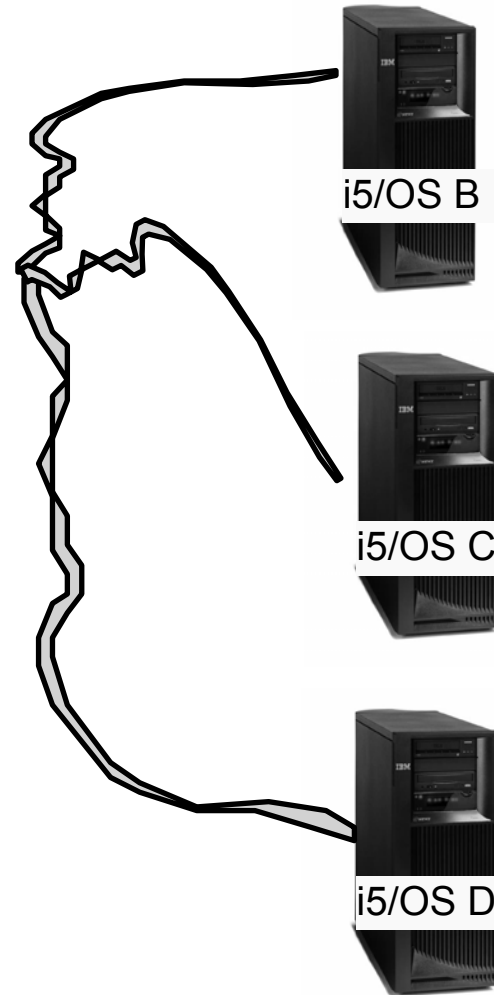
Setting up i5/OS A

I5/OS A

- Administrator sets up i5/OS A

- i5/OS A has HTTP/HTTPS, WebSphere Application Server or integrated Web application server, System i Access for Web installed.

  – Configures 3 HTTP web 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 web application server instances (one for each backend i5/OS system)

  – Configures System i Access for Web in each web application server instance (uses TGTSVR parameter on CFGACCWEB2 command)

Setting up Systems B, C, and D

i5/OS A

i5/OS B

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

- **Must have 57xx-XW1 System i Access Family installed for licensing purposes**
- **57xx-XH2 System i Access for Web installed (RSTLICPGM) but not configured**

i5/OS C

Firewalls → a firewall can be set up between the web serving system (A) and the data systems (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.**

i5/OS D

Host Server ports

25A: System I Access for Web: Setup and Configuration - **2008 System i Connection Conference**

Access from Internet

Ports 5001, 5002, 5003

i5/OS A

i5/OS B

i5/OS C

i5/OS D

Host Server ports
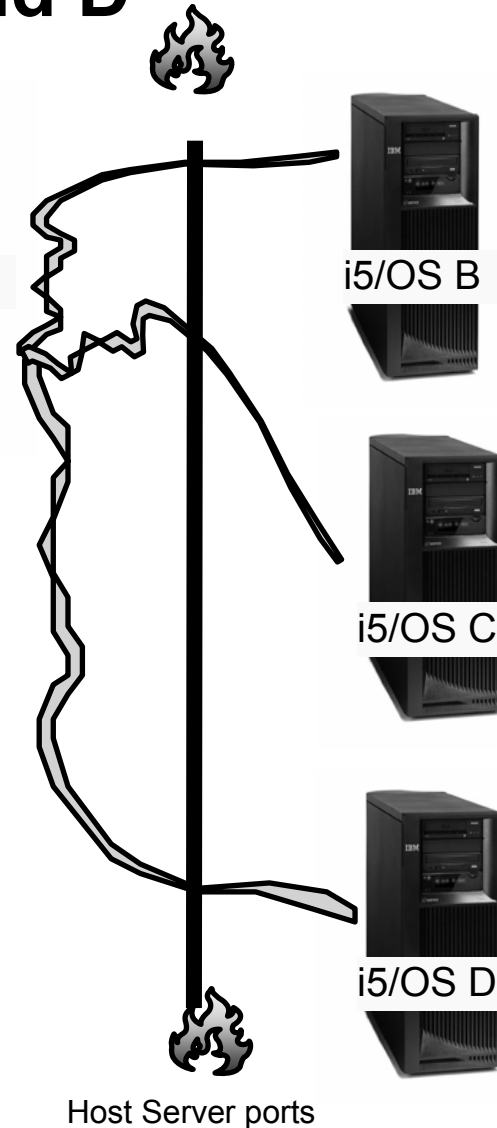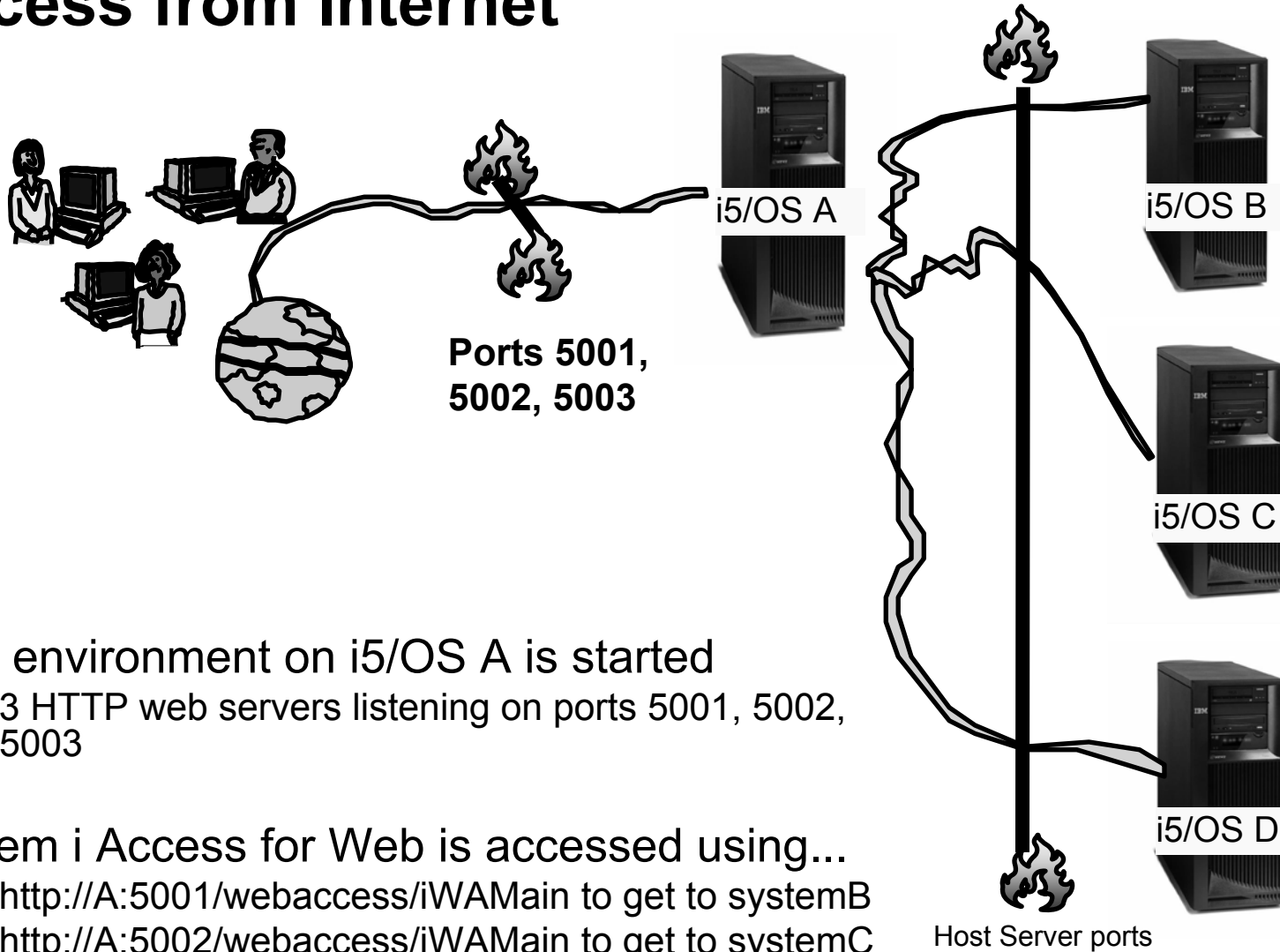
Web environment on i5/OS A is started
– 3 HTTP web servers listening on ports 5001, 5002, 5003

System i Access for Web is accessed using...
– http://A:5001/webaccess/iWAMain to get to systemB
– http://A:5002/webaccess/iWAMain to get to systemC
– http://A:5003/webaccess/iWAMain to get to systemD

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

25A: System I Access for Web: Setup and Configuration - **2008 System i Connection Conference**

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 system...

- http://A:5001/webaccess/iWAMain to get to systemB
- http://A:5002/webaccess/iWAMain to get to systemC
- http://A:5003/webaccess/iWAMain to get to systemD

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

i5/OS B

i5/OS C

i5/OS D

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Integrating with your network mail server
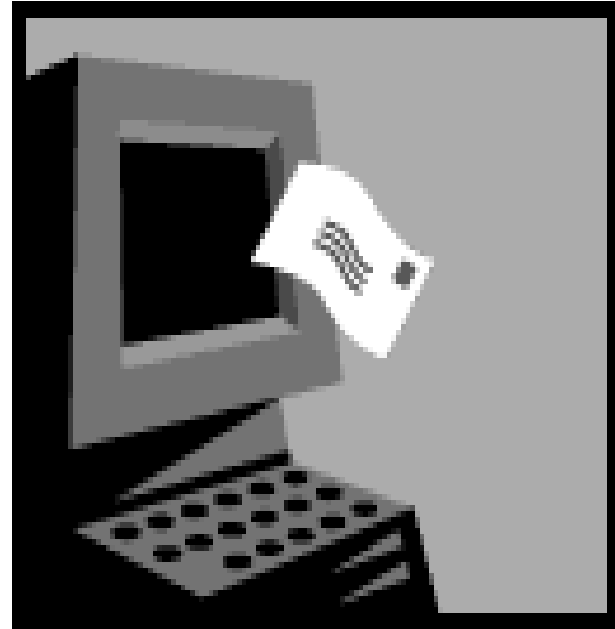
Integrate User's email with System i Access for Web

- 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 an i5/OS 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

IFS File System

25A: System I Access for Web: Setup and Configuration - **2008 System i Connection Conference**

Send your e-mail

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

My Home Page

☐ My Folder

Print

· 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

Other

Convert Printer Output to PDF

From: cminer@us.ibm.com

To:

cc:

bcc:

Subject:

Attachment: QSYSPRT.502274.CMINER.CMINER0.1.PDF

Send   Cancel

Your email address plugged in for you…

...see PDF attachment there...

25A: System I Access for Web: Setup and Configuration - **2008 System i Connection Conference**

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 'Import Policy Settings' function 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

Edit Policies - Mail 1

Profile: ***PUBLIC**

My Home Page
My Folder
Print
Messages
Jobs
5250
Database
Files
Command
Download
Customize
· Preferences
· Policies
· Settings

Policy	Derived From ❓	Action ❓	
Mail access	Shipped default	Use current setting	Allow
Send mail	Shipped default	Use current setting	Allow
SMTP mail server	Shipped default	Use current setting	us.ibm.com
E-mail address is user preference	Shipped default	Use current setting	Allow

Save   Cancel   Apply

Note:
If the SMTP server address is blank, Access for Web will query the system distribution 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

Edit Policies - Mail

Profile: **CMINER**

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

Policy	Derived From	Action	Settin
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

Save   Cancel   Apply

2

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

Edit Preferences - Mail

My Home Page
My Folder
Print
Messages
Jobs
5250
Database
Files
Command
Download
Customize
· Preferences
· Policies

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

Save   Cancel   Apply

Preferences help
View help for editing preferences.

2

25A: System I Access for Web: Setup and Configuration - **2008 System i Connection Conference**

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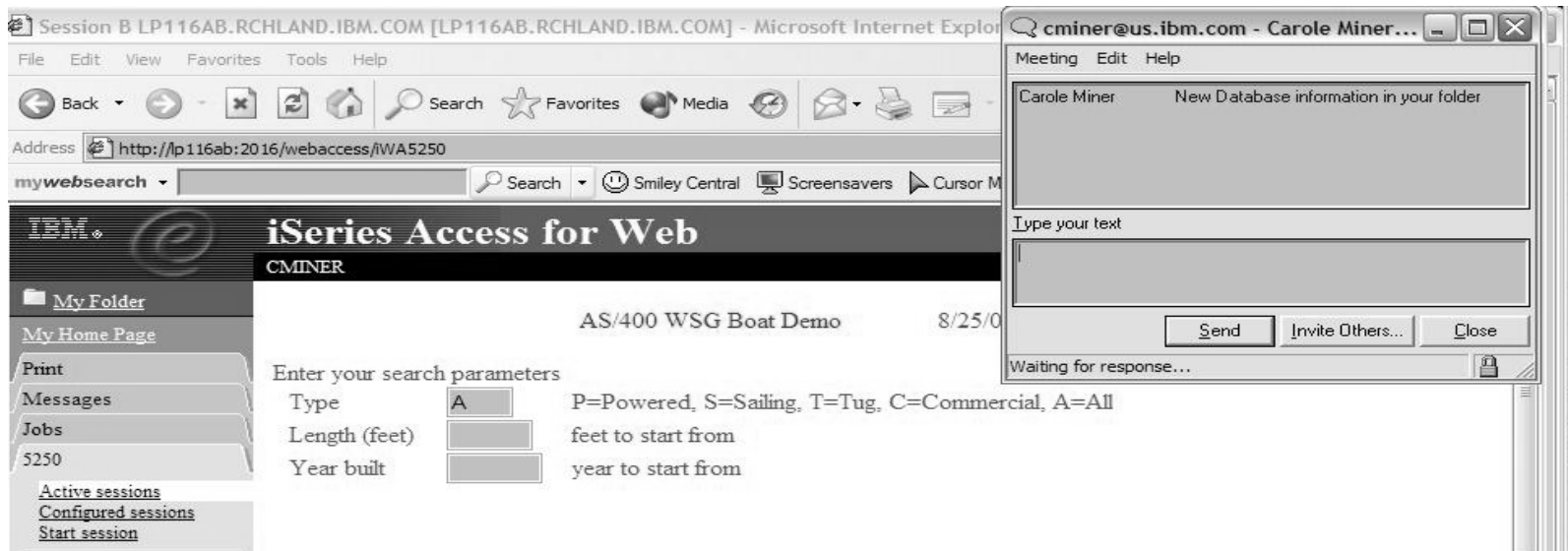
You must have a Sametime Server installed in your network and accessible from your System i. Sametime is an add-on product to Lotus Notes.

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

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

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.

[Save] [Cancel] [Apply] [Shipped Defaults]

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

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	

2

[Save] [Cancel] [Apply]

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

Edit Preferences - Sametime

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

[Save] [Cancel] [Apply]

Preferences help
View help for editing preferences.

2

25A: System I Access for Web: Setup and Configuration - **2008 System i Connection Conference**

![IBM logo]

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

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

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

```xml
<?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
<?xml version="1.0" encoding="utf-8" standalone="yes"?>
<QiwaPolicies>
  <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>
 </QiwaPolicies>
```

Auto-start Web environment after an IPL?

- **You can configure the HTTP web server to automatically start the WebSphere application server when it starts**

- **Use the following command to start the HTTP web 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)

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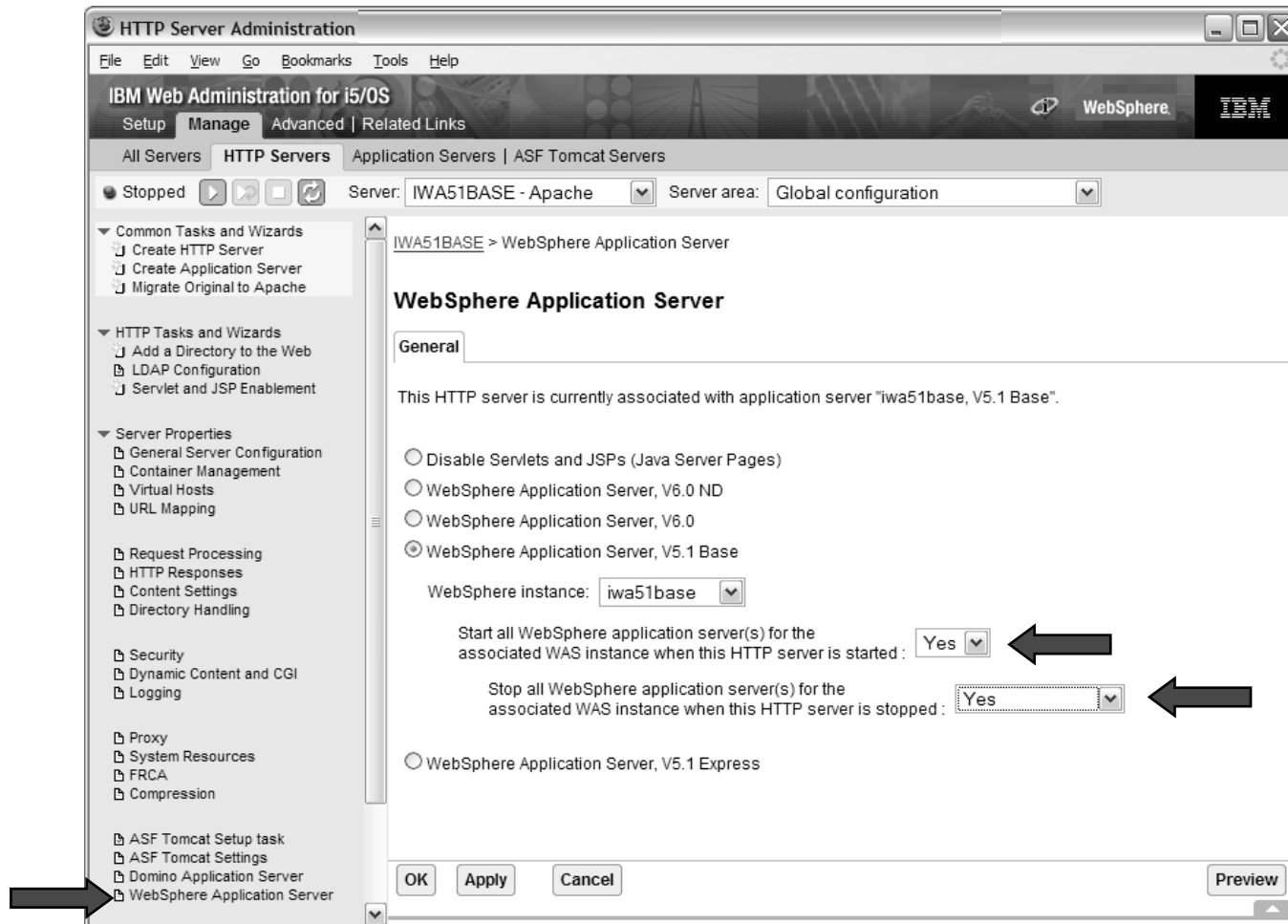
If using WAS Network Deployment

- For the WebSphere Application Server Network Deployment environment

  - WebSphere v5.0/5.1 Base Edition must be installed

  - WebSphere v6.0 Base/Express Edition must be installed

  - System i Access for Web does not support WebSphere instances/profiles that are federated to the WebSphere Network Deployment environment
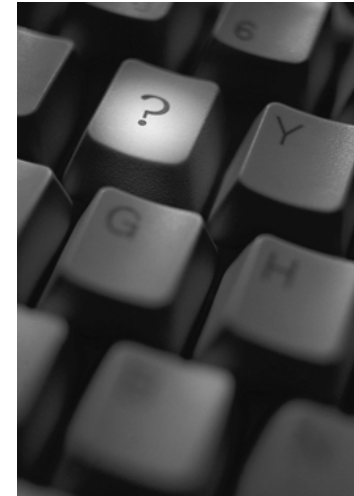
System i & WebSphere Resources & Deliverables

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

System i & WebSphere Resources & Deliverables

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

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

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

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

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

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

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

iSeries & WebSphere Documentation

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

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

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