



Agenda Key: 32MB

Session: Number: 410068

System i[®] Access for Web – Setup and Configuration

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

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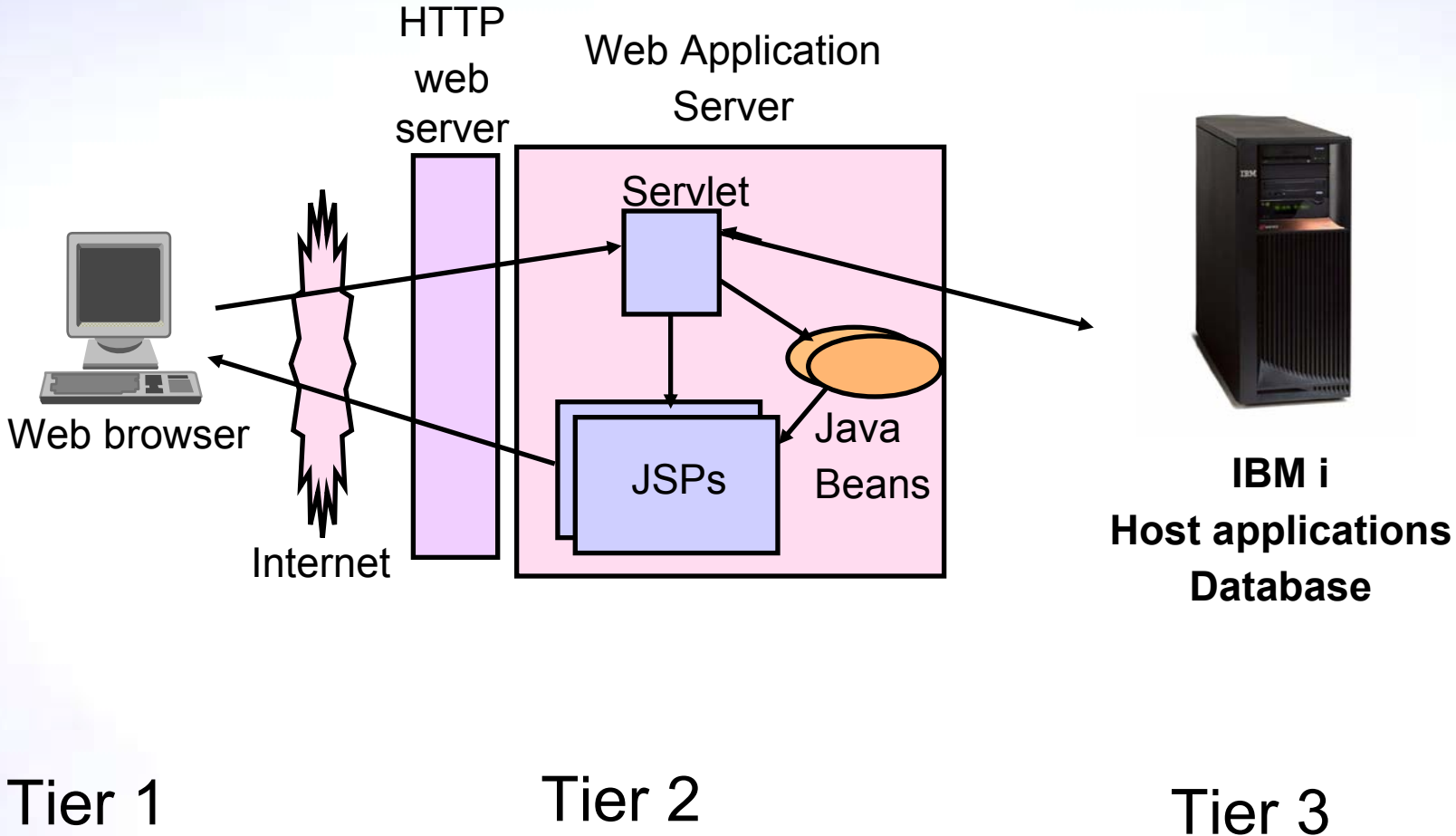
THE NEW POWER EQUATION

Introducing IBM Power Systems

System i Access for Web Sessions and Labs

23CE	409136	Get to the Web Fast with System i Access for Web
25LA & 26LA	450047	LAB: System i Access for Web: Configuration
 32MB	410068	System i Access for Web – Setup and Configuration
33MB	440281	Run 5250 Through a Browser Using System i Access for Web
37MI	409160	Database Access with System i Access for Web
43LA	520027	LAB: Administrators Get Started with System i Access for Web
45MF	420016	What an Administrator Needs to Know: Restricting Access and Other Security Considerations
55LA & 56LA	420063	LAB: Test Drive System i Access for Web

First you need a web-serving environment



Pieces of the web-serving environment

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

Supported Web Application Servers

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

V6R1 System i Access for Web

- Integrated Web application server
- WebSphere® Application Server **V7.0**, V6.1 and V6.0 – Express for i
- WebSphere Application Server **V7.0**, V6.1 and 6.0 Base and Network Deployment

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

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

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

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

Performance Considerations...

Does running System i Access for Web affect performance?

- Products like System i Access for Web don't put much load on IBM i...

Use the **IBM Systems Workload Estimator** at

<http://www-912.ibm.com/wle/EstimatorServlet>

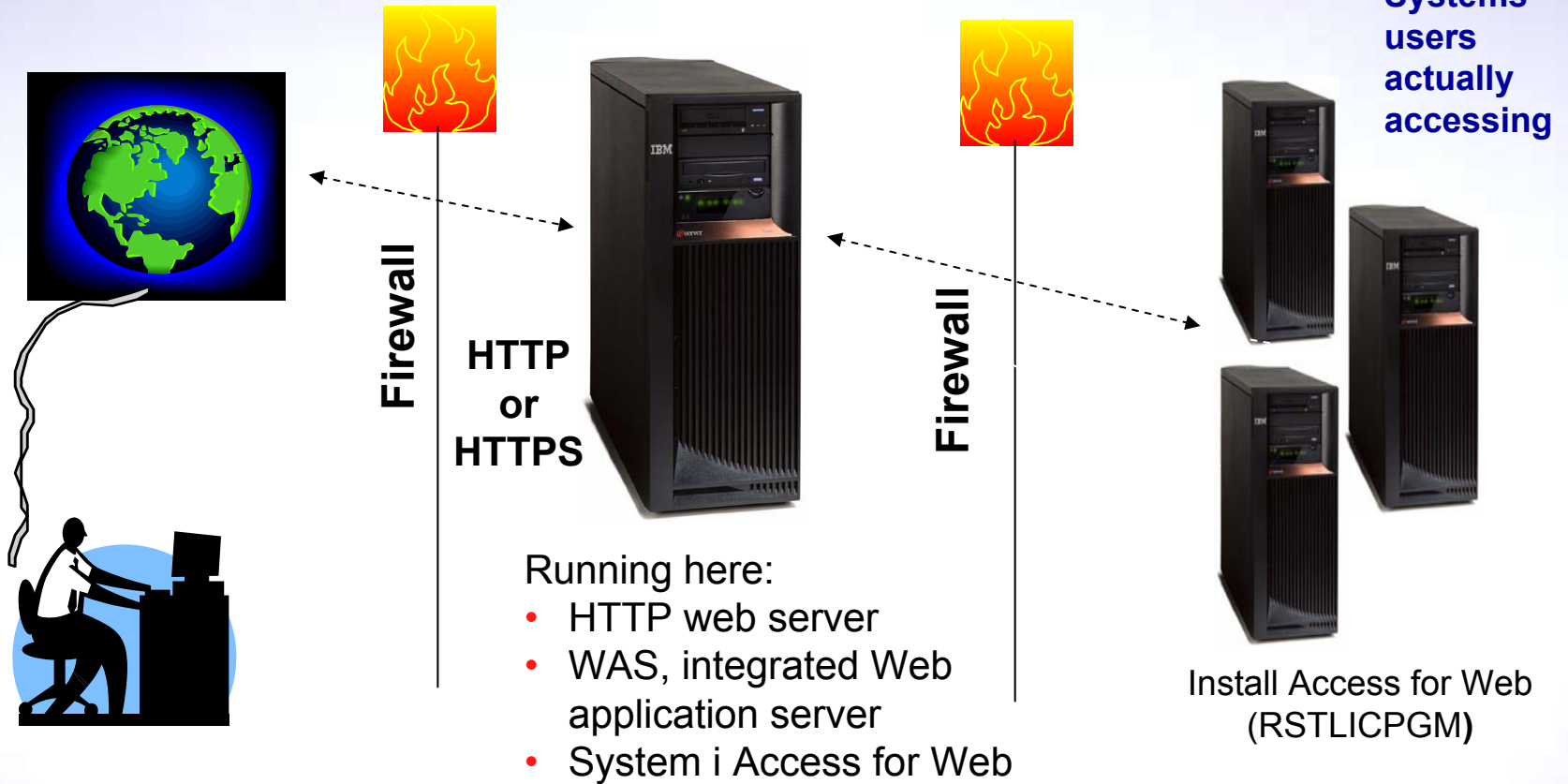
Version: 2005.4.fbc.1
14-Dec-05
www-912

Selected System

Model/Feature:	520-8950/7450	500/30
Number of Systems:	1	1
Processor CPW:	500	500
5250 OLTP CPW:	30 (24% utilized)	30 (35% utilized)

Setting up your web application server

DMZ = demilitarized zone



Only need to set up 1 web application server

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



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.**

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 their operating system to V6R1 but want the new V6R1 System i Access Family clients can order no-charge: Feature No. 2649 of Product No. 5722-XW1	

IBM i Software Requirements

Product Number	Product Name	Option	\$
5722-SS1 5761-SS1	V5R4 System i Access for Web: V5R3 or V5R4 IBM i V6R1 System i Access for Web: V5R4 or V6R1 IBM i	Base	w/HW
57xx-SS1	IBM i - Extended Base Directory Support	3	N/C
57xx-SS1	IBM i - AFP Compatibility Fonts	8	N/C
57xx-SS1	IBM i - Host Servers	12	N/C
57xx-SS1	IBM i QShell Interpreter	30	N/C
57xx-SS1	If you plan to use Secure Sockets Layer (SSL)... • IBM i Digital Certificate Manager • Cryptographic Service Provider	34 35	N/C N/C
57xx-DG1	IBM HTTP Server for i	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 i	Base	N/C



Note: "57xx" is "5722" for V5R4 and "5761" for V6R1

IBM i Software Requirements (continued)

Product Number	Product Name	Option	\$
57xx-XW1	System i Access Family	Base	\$
57xx-XH2	System i Access for Web <ul style="list-style-type: none"> • Ships with 57xx-XW1 System i Access Family • V5R4 System i Access for Web runs on IBM i V5R3 and V5R4 • V6R1 System i Access for Web runs on IBM i V5R4 and V6R1 	Base	part of XW1
5722-IP1	IBM Info Print Server (Optional -- enables best PDF output: - is not required to view PDF output - is required for V5R3 and later “PDF Printer” support)	Base	\$

Note: “57xx” is “5722” for V5R4 and “5761” for V6R1

IBM i Software Requirements (continued)

Product Number	Product Name	Option	\$
5733-W70 5733-W61 5733-W60 5722-E51 5733-W51 5722-IWE 5733-WS5 57xx-DG1 * * * *	<u>One, or more, of the following web servers</u> <ul style="list-style-type: none"> • WebSphere Application Server V7.0 for i (all three editions) • 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) <ul style="list-style-type: none"> • integrated Web application server • Apache Software Foundation Tomcat <ul style="list-style-type: none"> • WebSphere Portal for iSeries (Express and Express Plus) V5.0.2.2 • WebSphere Portal Enable for Multiplatforms V5.1.0.1 • WebSphere Portal V6.0 • IBM Workplace Services Express V2.5, V2.6 	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/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/>

IBM i Hardware Requirements

Models/Processor features/Memory

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

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

Server disk space

- 470MB
- 365MB

Software product

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

System i Access for Web



3 Options for setting up the Access for Web environment

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



1. Integrated Web Application Server

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



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

- What is the IBM i 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 IBM i will contain ASF Tomcat
- How is it packaged
 - With IBM i
 - 57xx-DG1 IBM HTTP Server for i
 - 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 (use V5R4 or V6R1 System i Access for Web with V5R3 or later IBM i)

1. Stop the Web Administration for i
 - ENDTCPSPVR 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 i
 - STRTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN)
6. Start preconfigured HTTP web server
 - STRTCPSVR SERVER(*HTTP) HTTPSVR(IWADFT)
7. Open a browser to System i Access for Web using preconfigured HTTP:port
 - http://<system_name>:2020/webaccess/iWAMain
8. Done!

To use System i Access for Web in this environment

User-created instance and HTTP web server (requires use of V6R1 System i Access for Web with V6R1 or V5R4 IBM i)

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 i
 - STRTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN)
4. Use the Web Administration for i 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 i 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

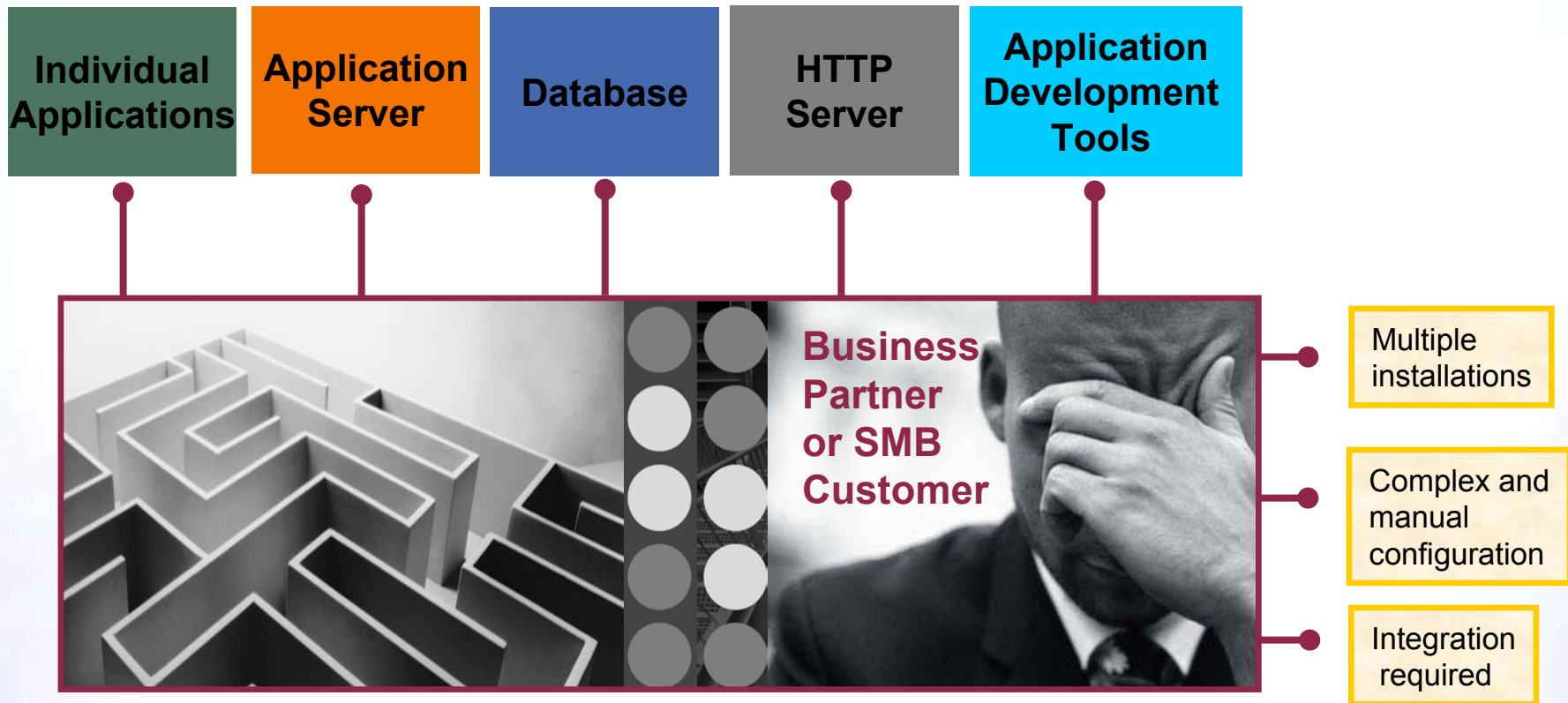


- All components provided in a single package
- Greatly simplifies the complexity of the environment
- Most automated
- Running web environment when installation completes
- Desktop icon linking to the deployed web environment

What is the problem?

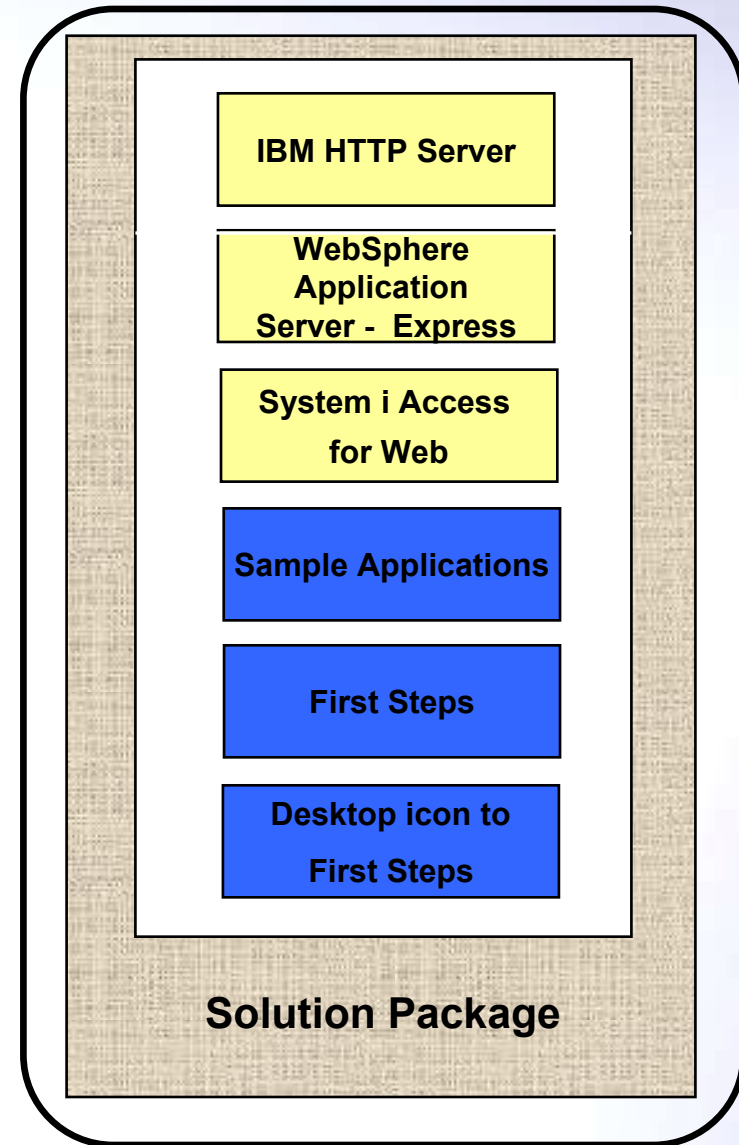
The complexity of the web-serving environment

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



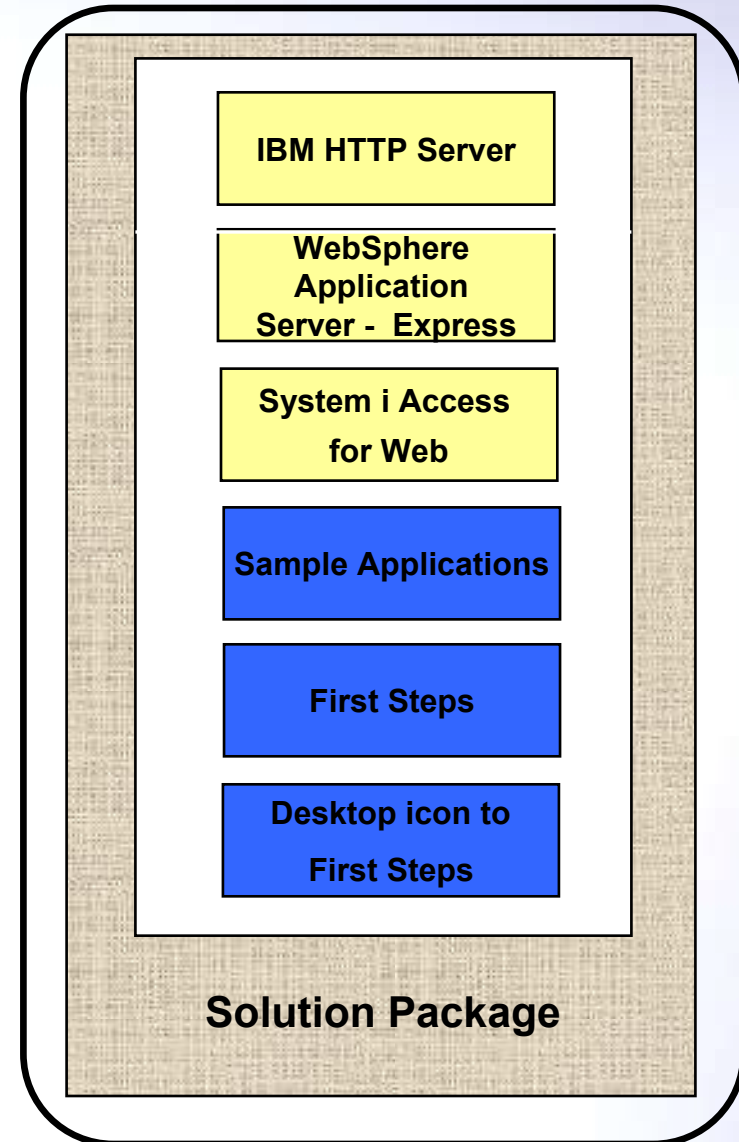
What is the solution?

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



What is the solution? (continued)

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



Target Audience

- IBM i customers and partners
 - Anyone wanting/needing a simple way to setup web-serving on their IBM i
- Users of the following:
 - System i Access for Web – end user web browser access to IBM i 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

- 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 IBM i
 - 5722-WE2 V1R1M0 = WAS 6.1.0.11 & V6R1 System i Access for Web

- Ships with all IBM i 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

Can also be ordered separately

- No-charge feature of 5722-WE2 Web Enablement for i
 - 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 IBM i system
- From a Windows workstation, launch the deployment wizard
 - Provide credentials
 - Specify IBM i system to deploy
 - Name the HTTP web server, WebSphere profile/application server, ports
 - Optionally a backend IBM i for System i Access for Web to connect
- Deployment wizard runs
 - Pushing middleware from workstation/media to the IBM i 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

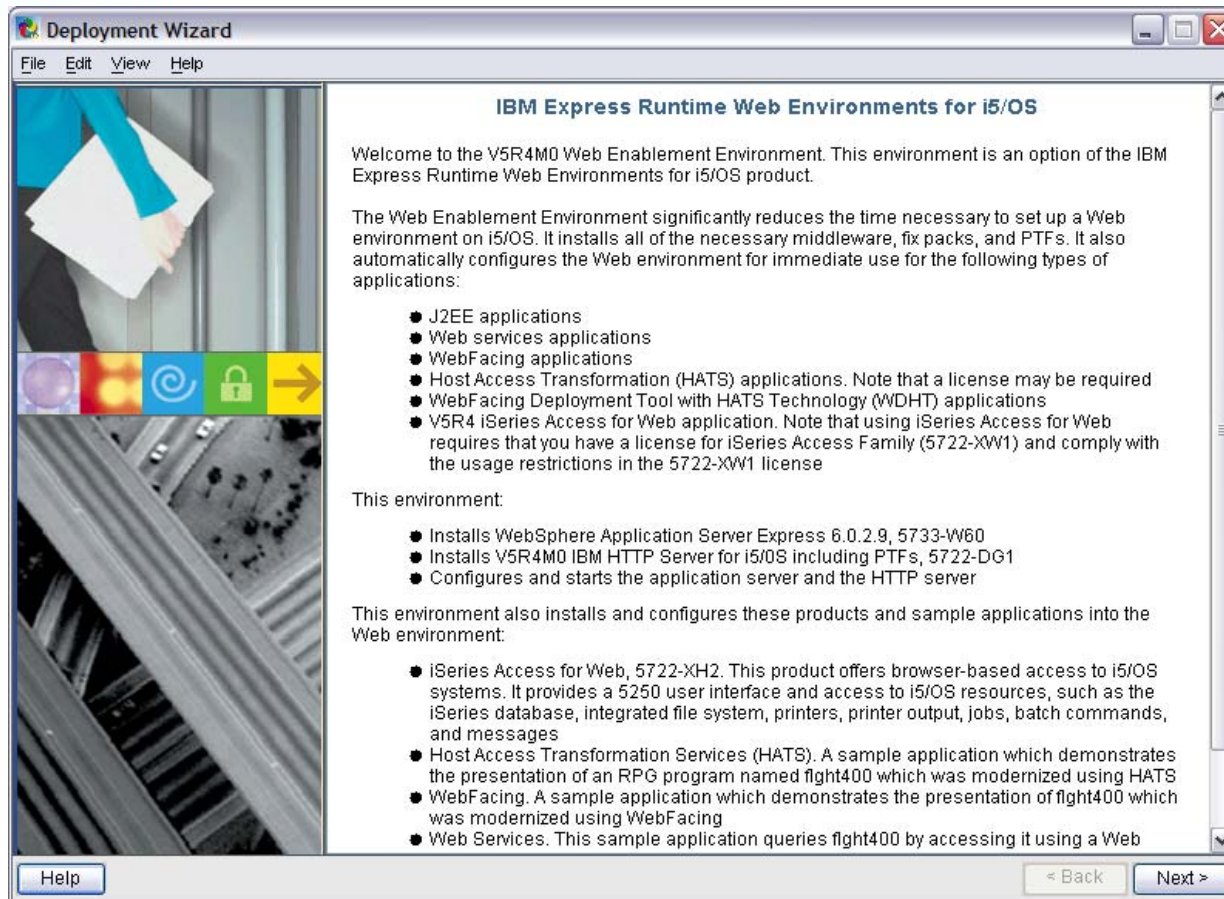
- Windows operating systems
 - Windows XP Professional SP2
 - Windows 2000 Server SP4
 - Windows 2000 Advanced Server SP4
 - Windows 2000 Professional SP3
 - Windows Server 2003, Standard Edition SP1
 - Windows Server 2003, Enterprise Edition SP1
- Web browser
 - Windows Internet Explorer 6 or later
 - 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

IBM i Software/Hardware Requirements

- IBM i 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
 - IBM i Cumulative PTF Group SF99540 Level 6066 or later
 - Java Group PTF SF99291 Level 2 or later
 - DB2 Universal Database for i Group PTF SF99504 Level 2 or later
 - V6R1
 - IBM i Cumulative PTF Group SF99610 Level 8064 or later
- IBM i hardware requirements:
 - It is recommended that you use the IBM Systems Workload Estimator to help estimate your hardware needs.

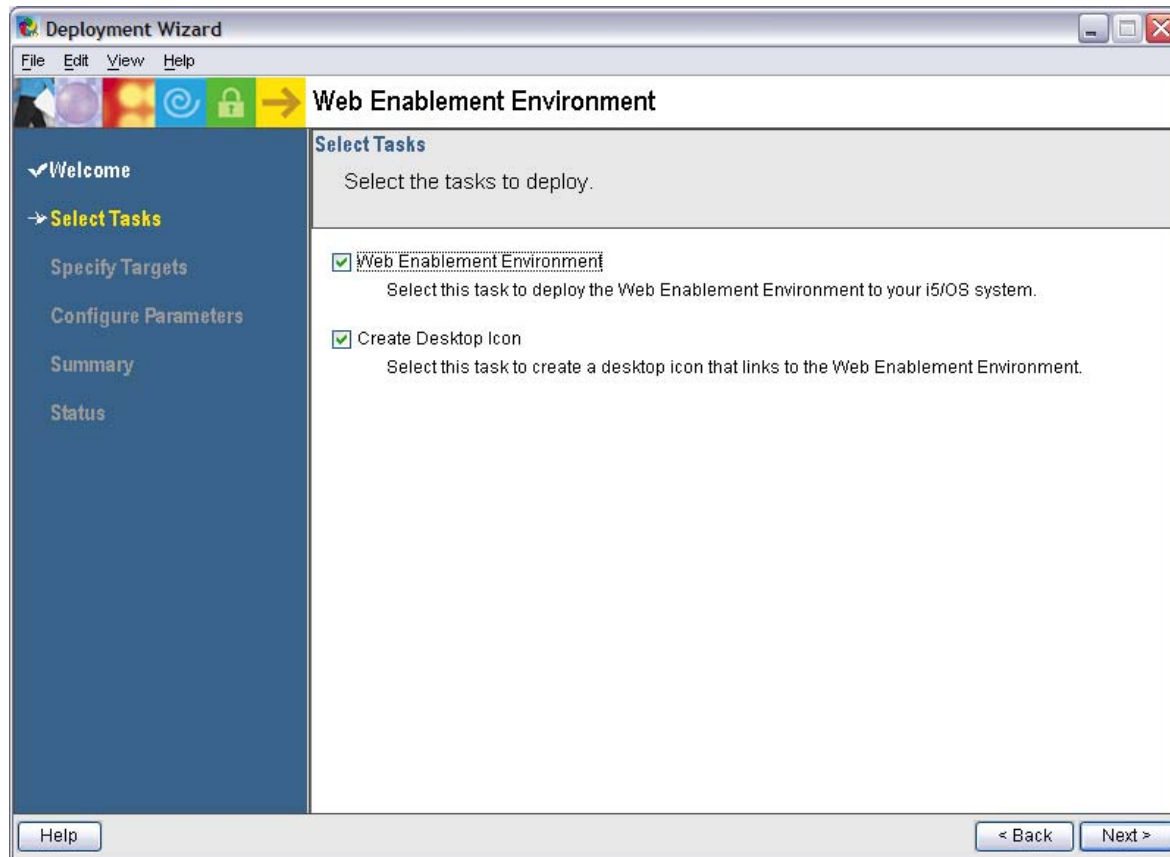
Demonstration

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 **IBM i system** to deploy the environment to

The screenshot shows a 'Deployment Wizard' window titled 'Web Enablement Environment'. The left sidebar contains a navigation tree with the following items: 'Welcome', 'Select Tasks', 'Specify Targets' (highlighted), 'Web Enablement Environment', 'Create Desktop Icon', 'Configure Parameters', 'Summary', and 'Status'. The main content area is titled 'Specify Target Computers - Web Enablement Environment' and contains the following text: 'Provide the host name or IP address for the target computer where you want to deploy Web Enablement Environment.' Below this, it says 'Operating system: OS/400 (i5/OS)'. The next instruction is 'Provide a user ID and password with administrative privileges for the target computer.' There are three input fields: 'Target Computer:' with the value 'MySystem.mycompany.com', 'User ID:' with the value 'DOUGB', and 'Password:' with the value '*****'. A checkbox labeled 'Save this login information' is unchecked. A 'Test connections' button is located below the password field. At the bottom of the window, there are 'Help', '< Back', and 'Next >' buttons.

Deployment Wizard

File Edit View Help

Web Enablement Environment

Specify Target Computers - Web Enablement Environment

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)

Provide a user ID and password with administrative privileges for the target computer.

Target Computer: MySystem.mycompany.com

User ID: DOUGB

Password: *****

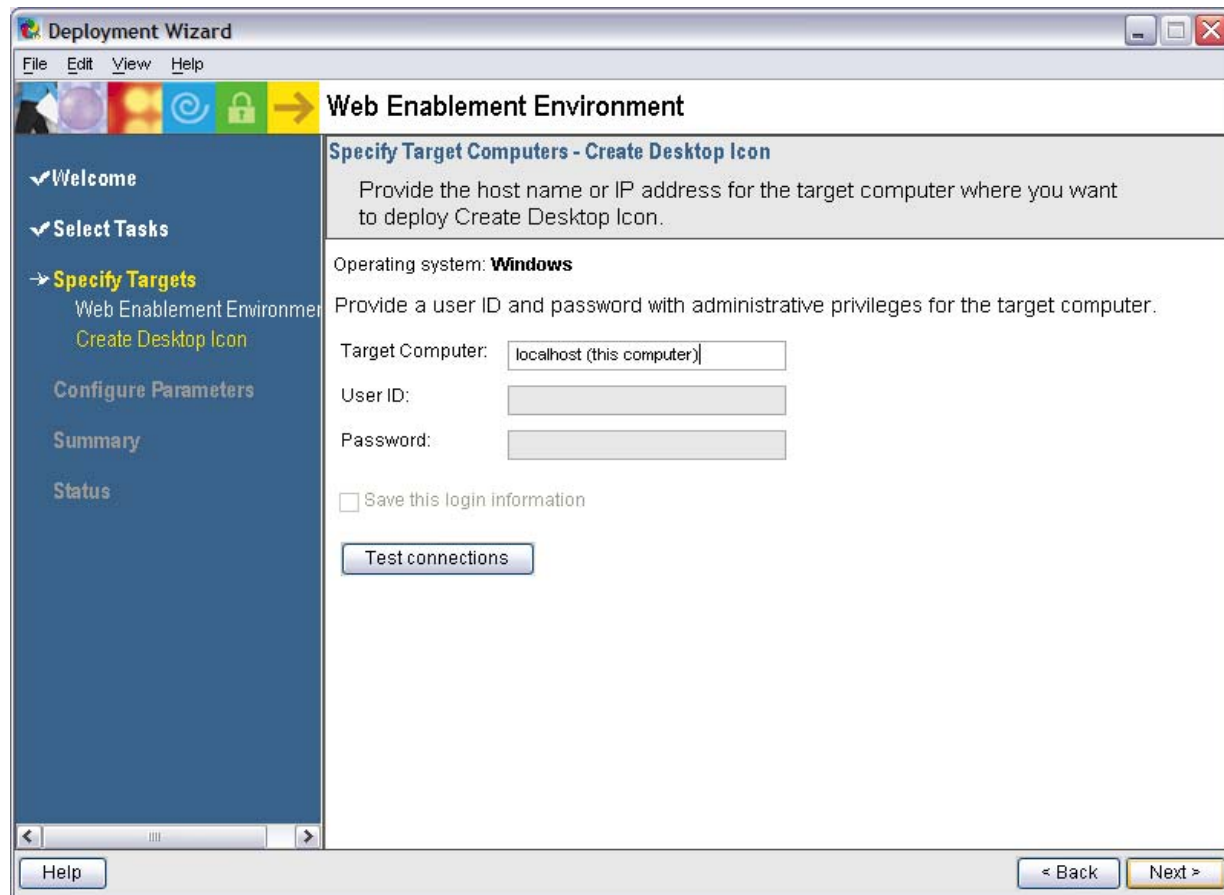
Save this login information

Test connections

Help < Back Next >

Demonstration (continued)

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



Demonstration (continued)

Name the **HTTP** web server and its port

Name the **WebSphere** profile/app server and its port range

The screenshot shows the 'Deployment Wizard' window for a 'Web Enablement Environment'. The left sidebar shows a navigation tree with 'Configure Parameters' selected. The main area is titled 'Configure Parameters - HTTP and application server names and ports' and contains a form with the following fields:

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

The form also includes 'Typical' and 'Advanced' tabs, a 'Help' button at the bottom left, and '< Back' and 'Next >' buttons at the bottom right.

Demonstration (continued)

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

The screenshot shows the 'Deployment Wizard' window for the 'Web Enablement Environment'. The window title is 'Deployment Wizard' and it has a menu bar with 'File', 'Edit', 'View', and 'Help'. Below the menu bar is a navigation bar with icons for back, forward, and a lock, followed by the text 'Web Enablement Environment'. The main area is titled 'Configure Parameters - Web Service application' and contains the instruction: 'Provide configuration information for Web Enablement Environment. Required parameters are marked with an asterisk.' There are two tabs: 'Typical' (selected) and 'Advanced'. The 'Typical' tab contains three required fields: '* User profile' with the value 'SECOFR', '* Password' with masked characters '*****', and '* Verify password:' with masked characters '*****'. At the bottom of the window are 'Help', '< Back', and 'Next >' buttons.

Deployment Wizard

File Edit View Help

Web Enablement Environment

Configure Parameters - Web Service application

Provide configuration information for Web Enablement Environment. Required parameters are marked with an asterisk.

Typical Advanced

* User profile

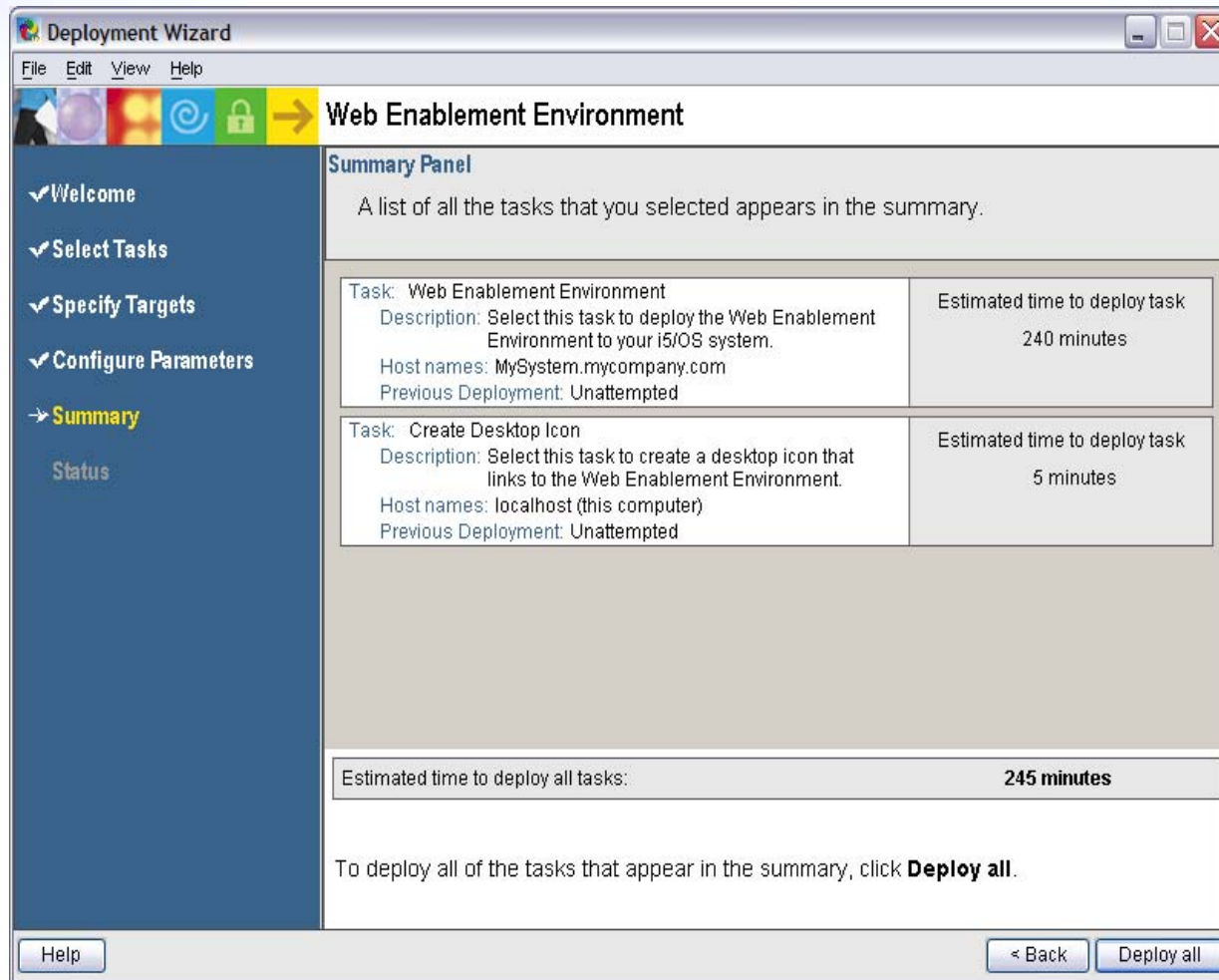
* Password

* Verify password:

Help < Back Next >

Demonstration (continued)

Summary page, click Deploy all



Demonstration (continued)

Progress of the deployment

Deployment Wizard

File Edit View Help

Web Enablement Environment

Deployment Status

The deployment status for all the tasks you selected to deploy appears in the deployment messages table.

1%

Estimated total time remaining: 4 hours ,5 minutes

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

Detailed messages Master log

Help < Back Stop Deployment

Demonstration (continued)

Successful completion

The screenshot shows the 'Deployment Wizard' window for the 'Web Enablement Environment'. The left sidebar contains a list of steps: Welcome, Select Tasks, Specify Targets, Configure Parameters, Summary, and Status (which is highlighted with a yellow arrow). The main area shows the 'Deployment Status' section with a progress bar at 100% and an estimated total time remaining of 0 minutes. Below this is a table of deployment messages.

Deployment Status

The deployment status for all the tasks you selected to deploy appears in the deployment messages table.

100%

Estimated total time remaining: 0 minutes

Deployment messages:

	Time	Message
✓	2007-03-23 10:09:46	Successfully deployed: Web Enablement Environment
✓	2007-03-23 10:10:06	Successfully deployed: Create Desktop Icon

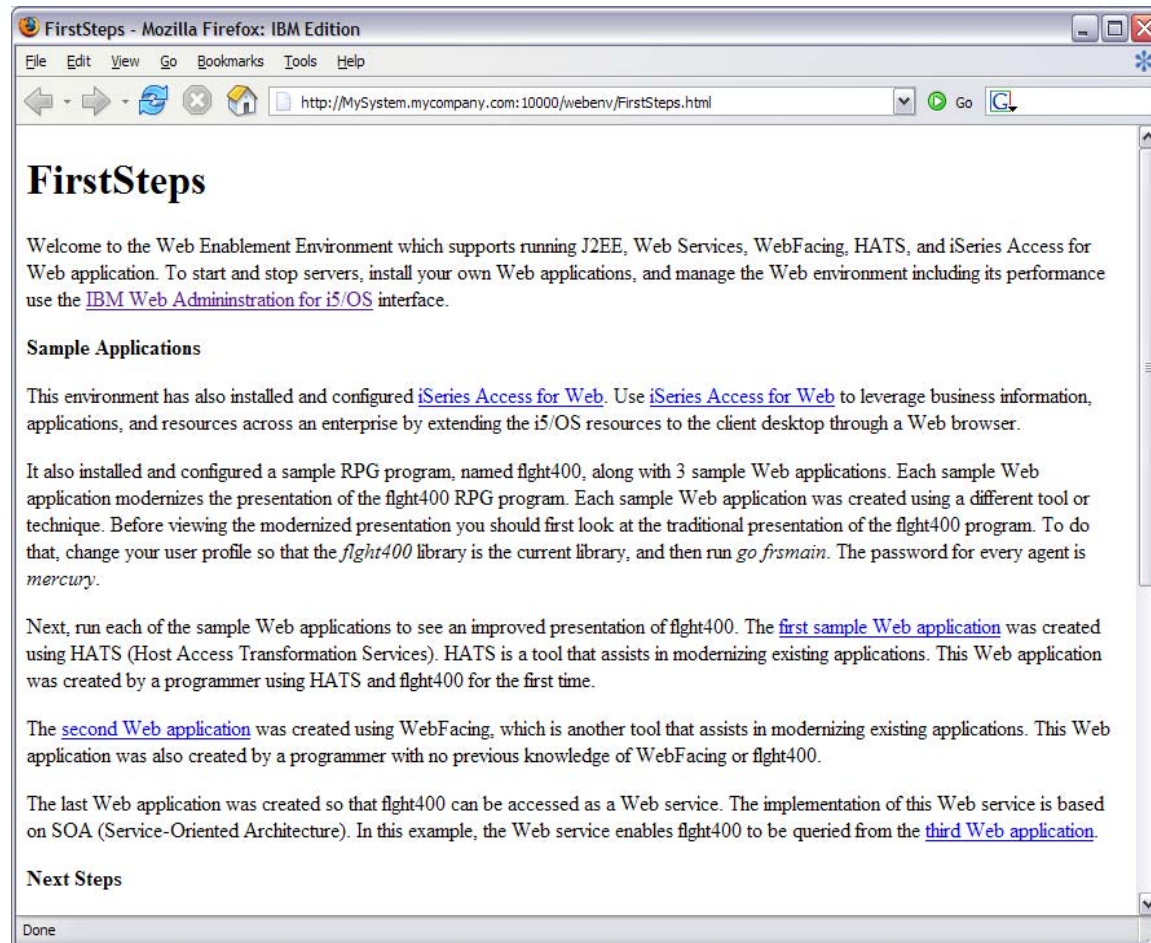
Buttons at the bottom: Help, Detailed messages, Master log, < Back, Close.

Demonstration (continued)

Click the desktop icon named:

“Web_Enablement_Environment_V5R4M0”

“Web_Enablement_Environment_V6R1M0”

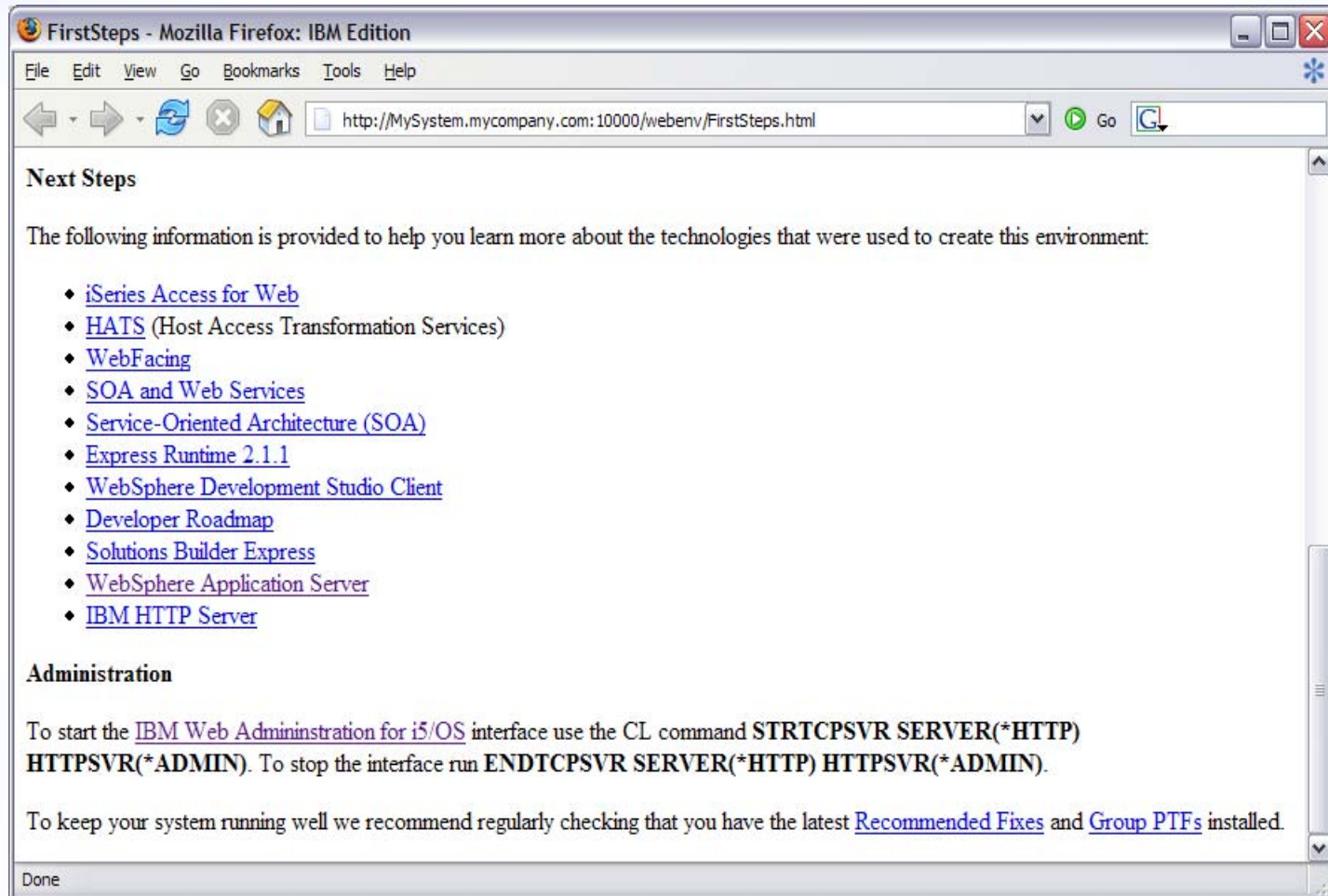


Demonstration (continued)

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 IBM i system**
- 3. Verify, load, apply any additional PTFs**
 - Cumulative PTF package
 - WebSphere, HTTP web server for i, 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
WebSphere



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 V7.0, V6.1, V6.0 for i (Express, Base, Network Deployment)
- WebSphere Application Server V5.1 - Express for iSeries
- WebSphere Application Server V5.1 for iSeries (Base and Network Deployment)
- WebSphere Application Server V5.0 - Express for iSeries
- WebSphere Application Server V5.0 for iSeries (Base and Network Deployment)
- ASF Tomcat
 - ASF Tomcat is delivered within the IBM HTTP Server for i5/OS product (5722-DG1)
 - V5R4 i5/OS is last release for ASF Tomcat on i5/OS

– Portlets

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

Install System i Access for Web on your IBM i system



Install System i Access for Web on your IBM i 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 IBM i system (continued)

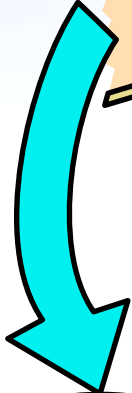
No coexistence between V5R3, V5R4, V6R1 System i Access for Web

If System i Access for Web is already installed on the IBM i system...

- Installing/upgrading to a later release will replace the installed version.
-  – Configure command, 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



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. IBM i 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. IBM i Cumulative PTF package

- The WebSphere Application Server group PTF identifies an IBM i Cumulative PTF package.
- The IBM i 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>

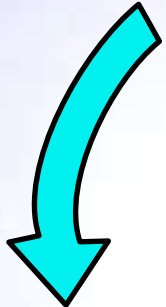
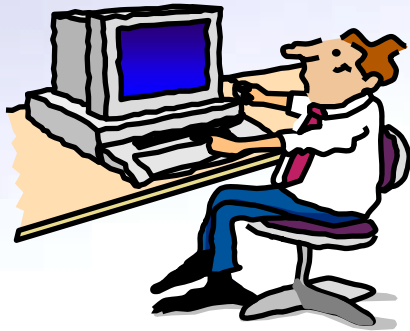
- IBM Workplace Services Express V2.5
 - <http://publib.boulder.ibm.com/infocenter/wseic/v2r5/index.jsp>

- IBM Workplace Services Express V2.6
 - <http://publib.boulder.ibm.com/infocenter/wseic/v2r6/index.jsp>


Verify, load, apply any additional PTFs (continued)

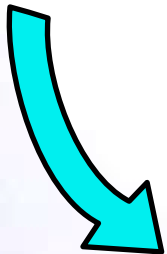
6. System i Access for Web

- <http://www.ibm.com/systems/i/software/access/web/servicepacks.html>
- V6R1 - SI33318 – available Feb 2009, supports WAS 7.0!
 - V6R1 Access for Web contains support for integrated Web application server Admin and user-created instances
- V5R4 - SI33310
 - V5R4 Access for Web contains support for WAS V6.1, Workplace Services Express V2.6, Portal V6.0, integrated web application server Administrative instance
- Always check the cover letter special instructions, may have to run CFGACCWEB2 to enable changes.
- Always check the website for latest PTF numbers

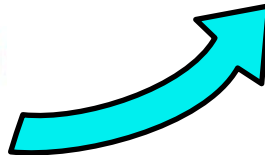


Setup up web-serving environment

 HTTP Server for iSeries



IBM
WebSphere 



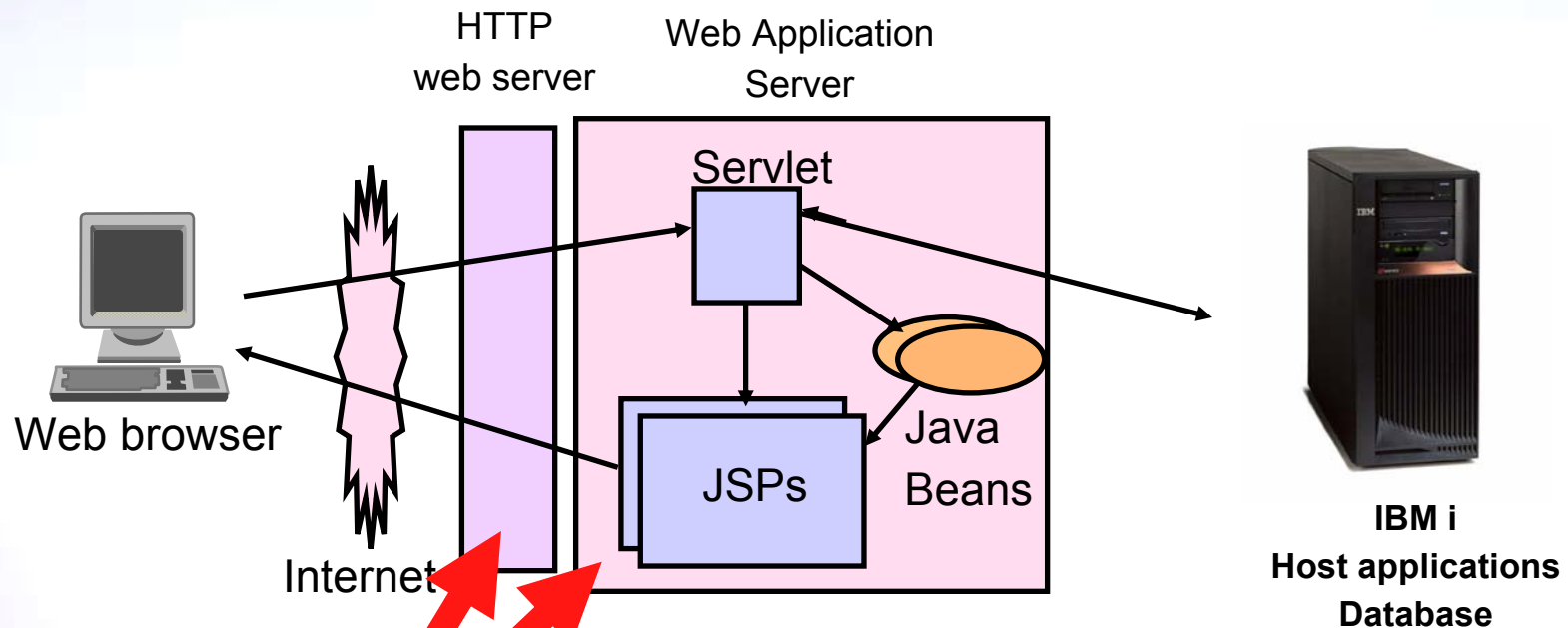
Step by Step

Setup web-serving environment

Tier 1

Tier 2

Tier 3



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 IBM i system
 - All web applications running within a web application server share the same name space.
 - You could create multiple profiles (instances) on a single IBM i 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 i

- Easy-to-use wizard that prompts for required information and does the rest of the work
- STRTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN)
- `http://<system_name>:2001/HTTPAdmin`

Setup web-serving environment (continued)

Setup → Create Application Server

HTTP Server Administration on X1519P4 - Mozilla Firefox: IBM Edition

File Edit View Go Bookmarks Tools Help

http://<system_name>:2001/HTTPAdmin

IBM Web Administration for iSeries

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

IBM Web Administration for iSeries

Getting started - Create and learn about the servers needed to run your Web content.

- 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.

Done

Setup web-serving environment (continued)

Click Next

The screenshot shows a web browser window titled "HTTP Server Administration on X1519P4 - Mozilla Firefox: IBM Edition". The address bar shows "http://<system_name>:2001/HTTPAdmin". The page content is titled "Create Application Server" and includes a navigation menu on the left with options like "Create HTTP Server" and "Create Application Server". The main content area contains introductory text and three sections: "Virtual Hosts", "Install Application", and "Data Sources and JDBC Providers". At the bottom, there are "Next" and "Cancel" buttons. A large red arrow points to the "Next" button.

HTTP Server Administration on X1519P4 - Mozilla Firefox: IBM Edition

File Edit View Go Bookmarks Tools Help

http://<system_name>:2001/HTTPAdmin

IBM Web Administration for iSeries

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 Application Server

Welcome to the Create Application Server wizard. This wizard creates a new application server to run Web applications with dynamic content, updates virtual host information and Web server plugin configuration for an external HTTP server of your choice, and creates all necessary JDBC providers and datasources required for the Web applications you choose to install.

- Virtual Hosts**

Virtual hosts are the mechanism that route the URL request from the browser to the applications. Many application servers use one virtual host to control the routing of requests. If you wish for more granular control, you can create more virtual hosts to route a particular URL to a specific application. A single virtual host can receive requests from one or more HTTP servers.
- Install Application**

Applications must be installed onto the application server to be accessed by your customers. The Install Application wizard will take your Enterprise Archive (EAR) or Web Archive (WAR) file that contains the application and deploy the application on the server.
- Data Sources and JDBC Providers**

Most applications need to access databases to retrieve and store data. JDBC providers and data sources are

Next Cancel

Done

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

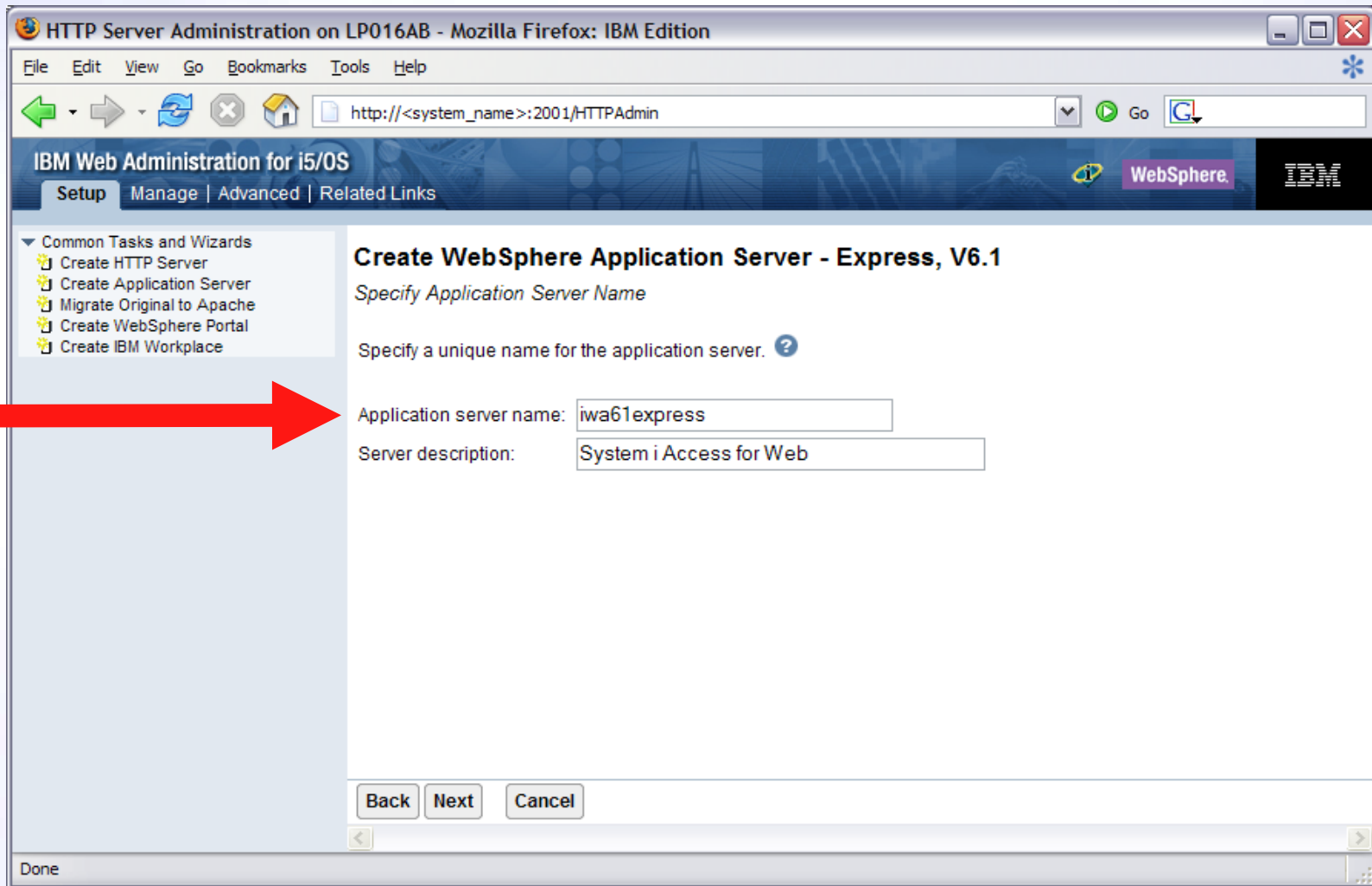
- V6.1 Express *WebSphere Application Server V6.1 Express, allows you to add dynamic function to static HTML Web pages and is intended for less complex Web applications.*
- V6.1 ND
- V6.1 Base *WebSphere Application Server Version V6.1 Express can be installed in multiple locations on this system. Multiple 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

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

Specify Application Server Name

Specify a unique name for the application server. ?

Application server name:

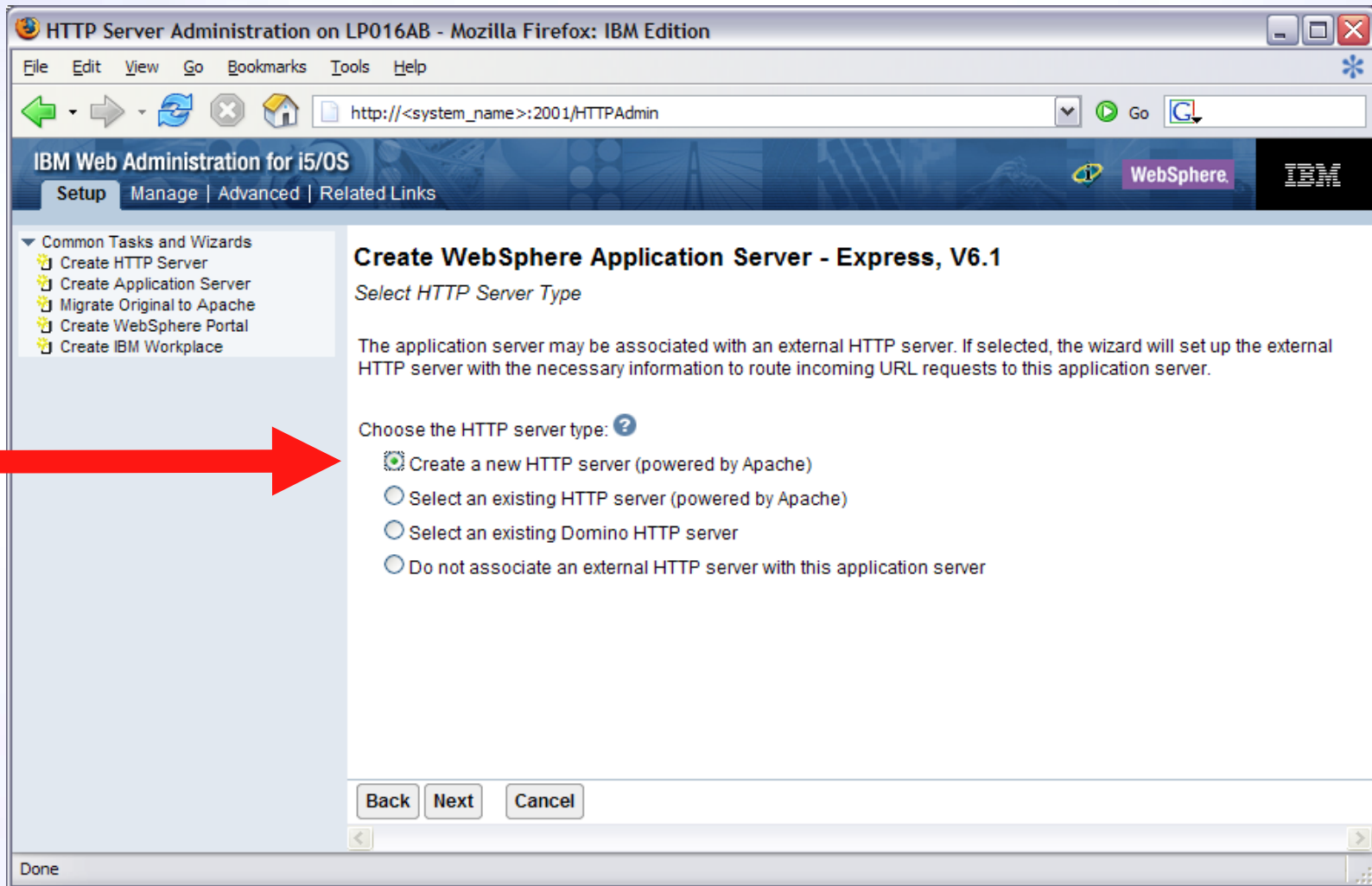
Server description:

Back Next Cancel

Done

Setup web-serving environment (continued)

Select Create a new HTTP server, click Next



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

Select HTTP Server Type

The application server may be associated with an external HTTP server. If selected, the wizard will set up the external HTTP server with the necessary information to route incoming URL requests to this application server.

Choose the HTTP server type: ?

- Create a new HTTP server (powered by Apache)
- Select an existing HTTP server (powered by Apache)
- Select an existing Domino HTTP server
- Do not associate an external HTTP server with this application server

Back Next Cancel

Done

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 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 header includes "IBM Web Administration for i5/OS" and "WebSphere". The main content area is titled "Create WebSphere Application Server - Express, V6.1" and contains the following text:

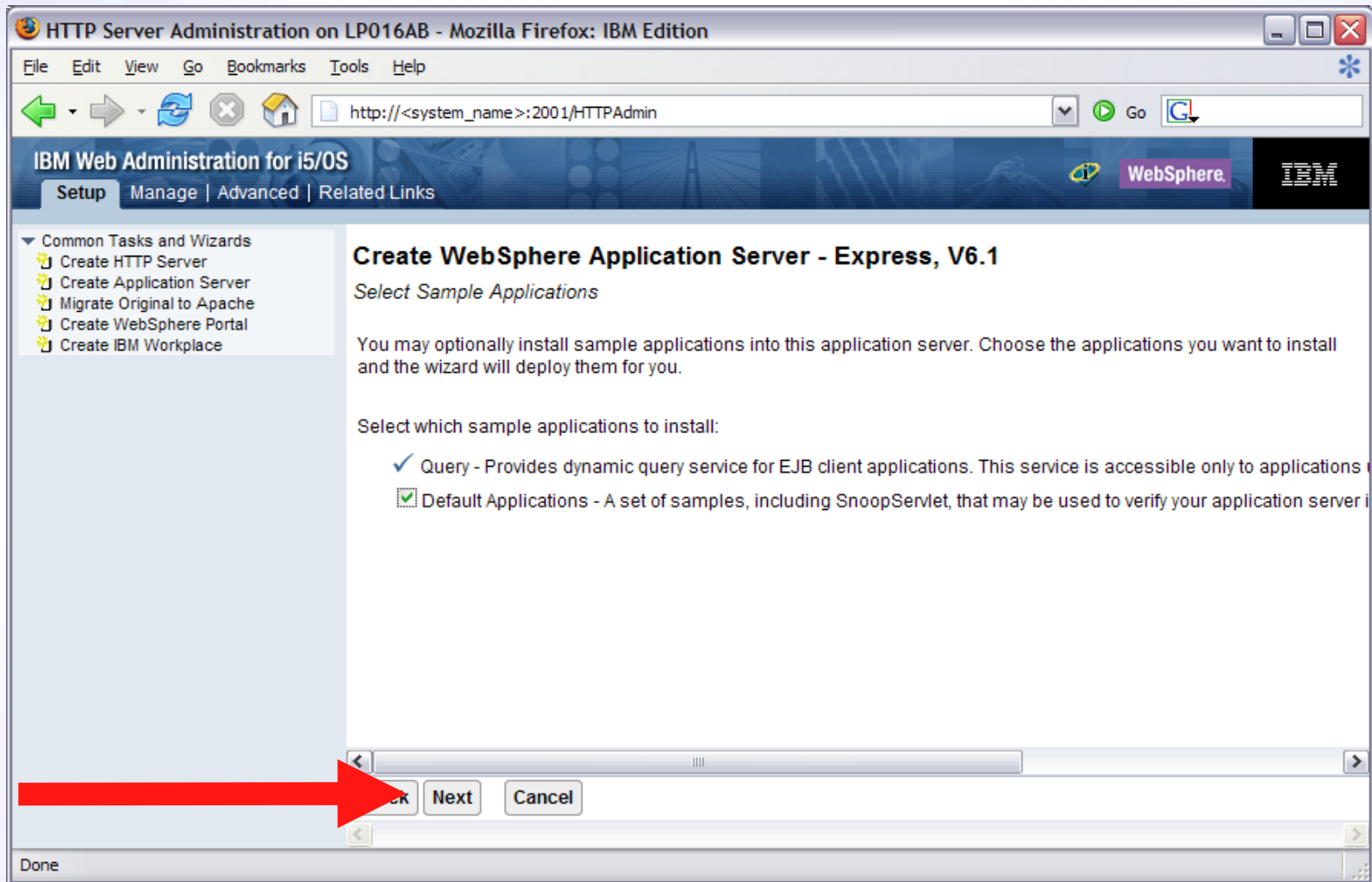
Specify Internal Ports Used by the Application Server

The application server uses several internal services such as internal HTTP transport service, Simple Object Access Protocol (SOAP) service, name service, and several other services to perform its processing. In order for these services to be configured, you must provide a block of 15 consecutive ports that are currently not in use on your system. Specify the first TCP port number in the range and the wizard will assign the ports that are to be used by each internal service. For example, if 10101 is entered as the first port in the range, then ports 10101 to 10115 will be configured.

Below the text, there is a form field labeled "First port in range:" with the value "10101" entered. A red arrow points to this field. At the bottom of the wizard, there are three buttons: "Back", "Next", and "Cancel".

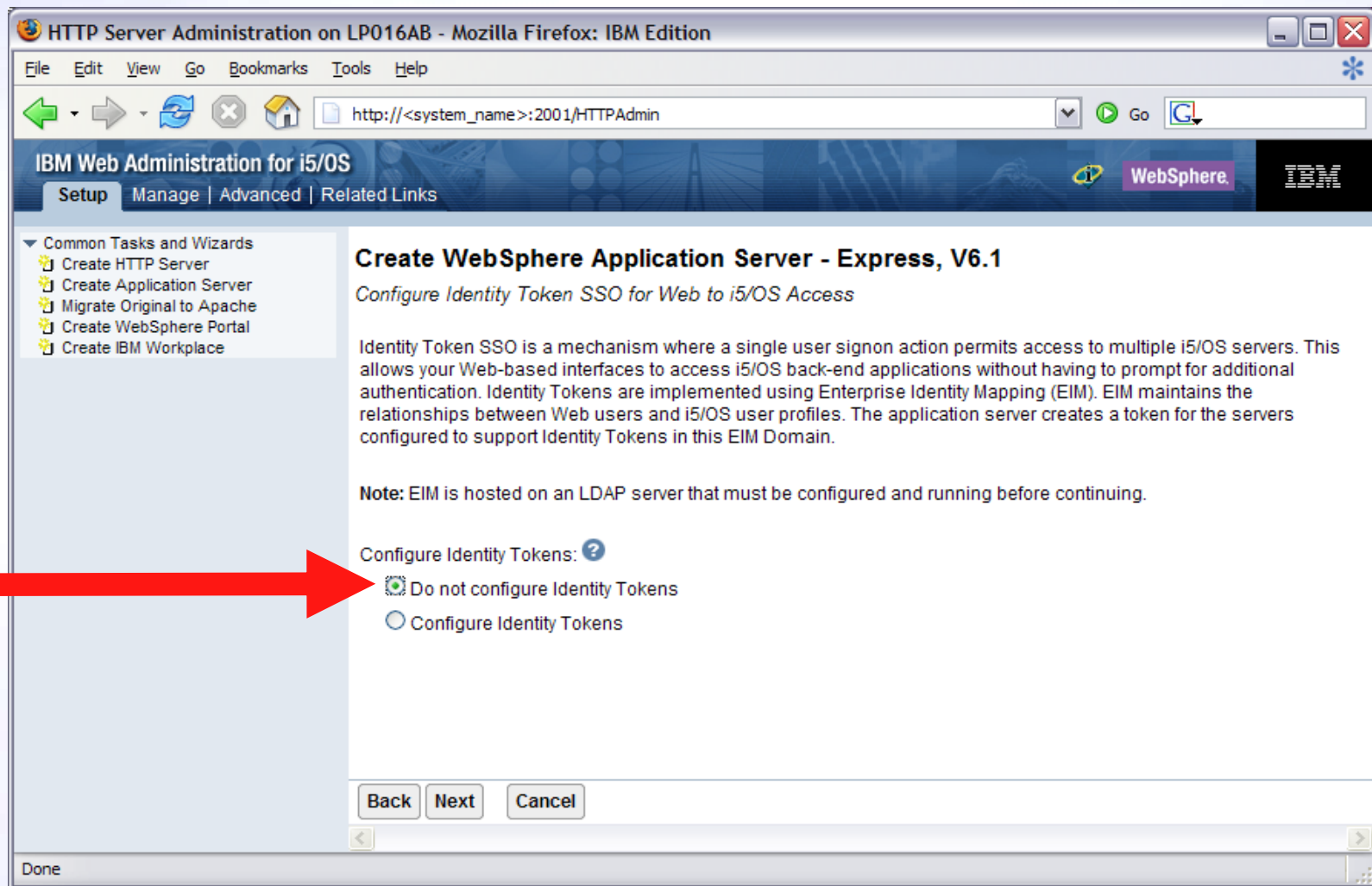
Setup web-serving environment (continued)

Click Next



Setup web-serving environment (continued)

Information Center has information for configuring SSO environment



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

Configure Identity Token SSO for Web to i5/OS Access

Identity Token SSO is a mechanism where a single user signon action permits access to multiple i5/OS servers. This allows your Web-based interfaces to access i5/OS back-end applications without having to prompt for additional authentication. Identity Tokens are implemented using Enterprise Identity Mapping (EIM). EIM maintains the relationships between Web users and i5/OS user profiles. The application server creates a token for the servers configured to support Identity Tokens in this EIM Domain.

Note: EIM is hosted on an LDAP server that must be configured and running before continuing.

Configure Identity Tokens: ?

Do not configure Identity Tokens

Configure Identity Tokens

Back Next Cancel

Done

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 'Finish' button is highlighted with a red arrow.

Summary

When you click **Finish** this WebSphere application server will be created.

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 Manage → Application Servers tab, status of Creating...

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 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 indicator 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 details for the profile and product install path. A message box states: 'Server "iwa61express/iwa61express" is in the process of being created. To update the status, click the Refresh icon above.' At the bottom, 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 a Mozilla Firefox browser. The browser address bar shows `http://<system_name>:2001/HTTPAdmin`. The page title is "IBM Web Administration for i5/OS" with tabs for "Setup", "Manage", "Advanced", and "Related Links". The main navigation bar includes "All Servers", "HTTP Servers", "Application Servers", and "ASF Tomcat Servers".

The "Application Servers" section is active, showing a list of servers. The selected server is "iwa61express/iwa61express - V6.1 Express", which has a status of "Stopped". A red arrow points to the green "Start" icon (a play button) next to the "Stopped" status. Another red arrow points to the "Start" icon in the left-hand navigation menu under "Common Tasks and Wizards".

The main content area displays the configuration for the selected server:

- Manage WebSphere Application Server - V6.1.0.3 Express**
- Profile: *iwa61express* Server: *iwa61express*
- Product install path: `/QIBM/ProdData/WebSphere/AppServer/V61/Express`

 Below this, there are three sections for "System i Access for Web":

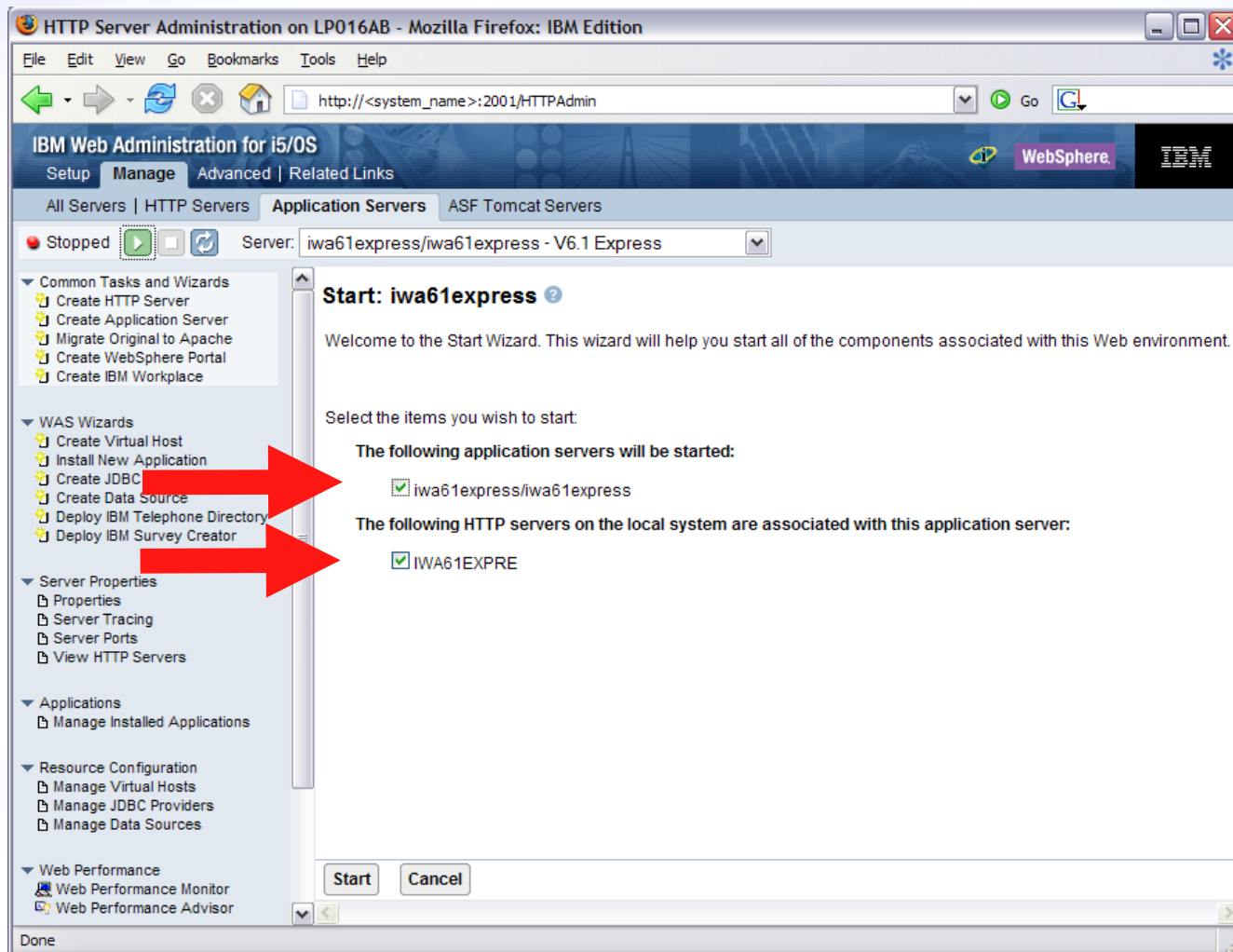
- Create Additional Virtual Host**: The default virtual host "default_host" was created for this application server. However, you can specify additional virtual hosts for more control over what URI's can run which applications.
- Install New Application**: After creating the server and virtual host you can install your applications.
- Create Data Source**: Then, define the resources the application server will use to access data for your applications.

 At the bottom, there is a "Current Configuration" table for Profile: "iwa61express" and 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 console for i5/OS. 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 "ASF Tomcat Servers".

The "Application Servers" tab is active, showing a list of servers. The first server, "iwa61express/iwa61express - V6.1 Express", is highlighted with a green dot and the status "Running". A red arrow points to this status indicator. Below the server list, there are sections for "Common Tasks and Wizards", "WAS Wizards", "Server Properties", "Applications", "Resource Configuration", and "Web Performance".

The main content area displays the configuration for the selected server: "Manage WebSphere Application Server - V6.1.0.3 Express". It shows the profile "iwa61express" and server "iwa61express". Below this, there are three main sections: "Create Additional Virtual Host", "Install New Application", and "Create Data Source". Each section has a brief description and a "Manage" link. At the bottom, there are three tables showing the current configuration for the selected server:

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

Setup web-serving environment (continued)

Tips for managing the Web Administration for i and HTTP web servers

- To start/stop the IBM Web Administration for i interface
 - STRTCPSVR *HTTP HTTPSVR(*ADMIN)
 - ENDTCPSPVR *HTTP HTTPSVR(ADMIN)

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

- CL commands to start/stop the HTTP web servers
 - STRTCPSVR *HTTP HTTPSVR(<my_http_server_name>)
 - ENDTCPSPVR *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”.
- IBM i 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

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 IBM i PTF tools

Configure System i Access for Web (continued)

Use available documentation →

Start here:

<http://www-1.ibm.com/systems/i/software/access/web/doc.html>

- Leads to System i Access for Web – Information Center

Notes:

- 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)

<p>To configure the web-serving environment created above using the CL command</p>	<pre>QIWA2/CFGACCWEB2 APPSVRTYPE(*WAS61EXP) WASPRF(iwa61express) APPSVR(iwa61express)</pre>
<p>To configure the web-serving environment created above using the QSH command</p>	<ul style="list-style-type: none"> • 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)

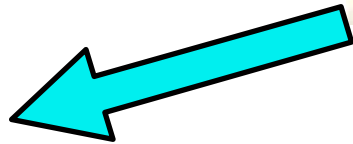
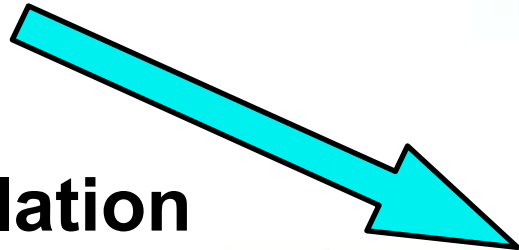
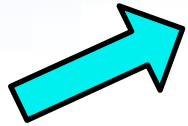
CFGACCWEB2/cfgaccweb2 commands accept other parameters

<p>Tells Access for Web to connect and serve data to another IBM i system</p> <ul style="list-style-type: none"> – If not specified, the local IBM i 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, *KERBEROS]
<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, ...] • 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.

IBM
WebSphere



Verify the installation and configuration



Verify the installation and configuration

IBM Web Administration for i → Applications → Manage Installed Applications

The screenshot shows the IBM Web Administration for i5/OS interface. The main content area displays the 'Manage Installed Applications' page for the server 'iwa61express/iwa61express - V6.1 Express'. The page shows a table of installed applications with columns for Application name, Status, and Enablement. 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)

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. E.g.:
 - 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 i 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

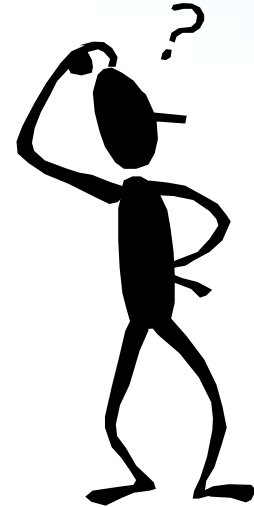
WAS V6.1 (base edition)

- /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

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?



Appendix:

- Additional setup considerations:
Accessing multiple IBM i systems
- Tips:
 - Integrating with your network mail server
 - Auto-start Web environment after an IPL?



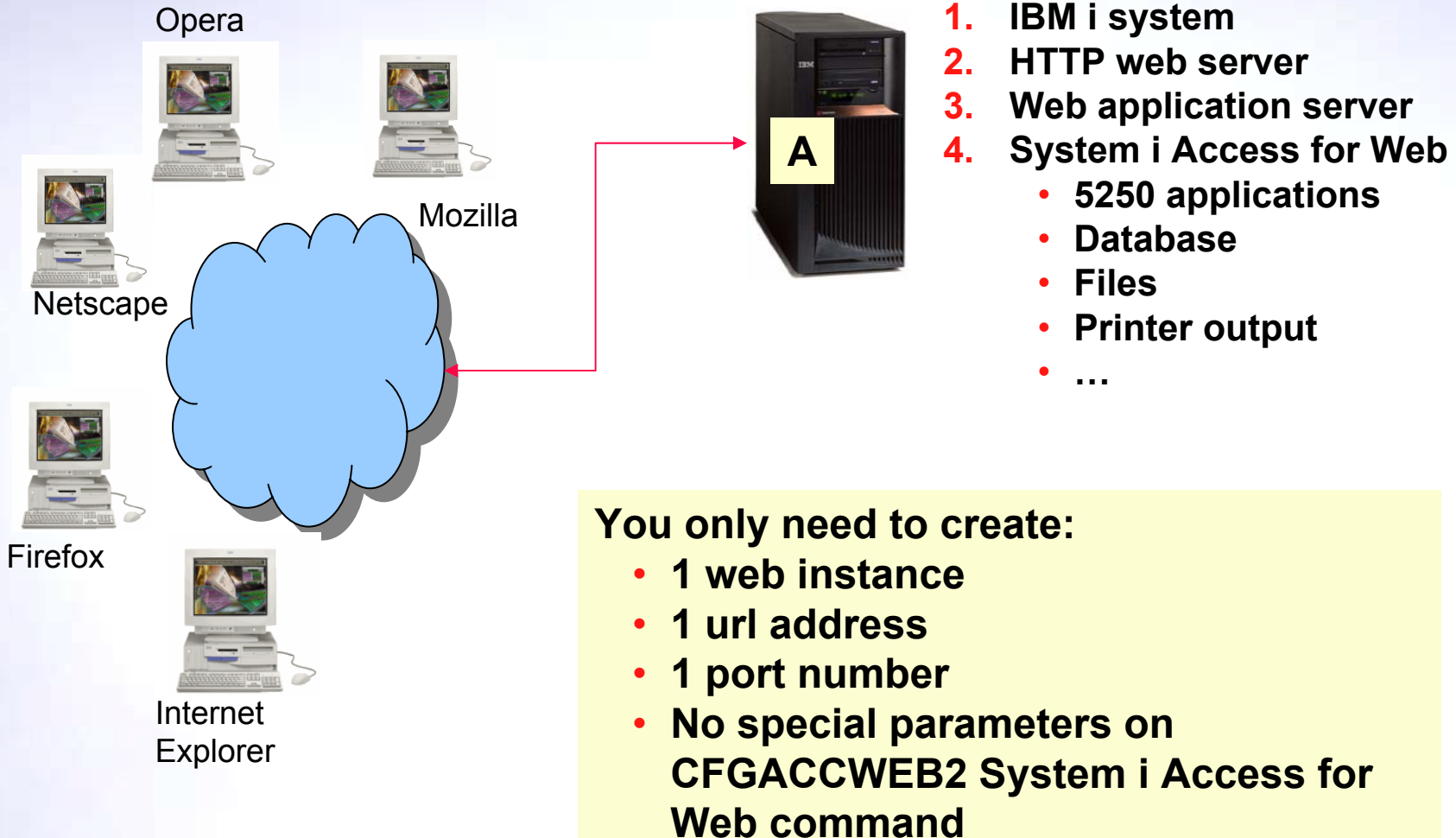
Additional setup considerations – Accessing multiple IBM i systems

- 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?

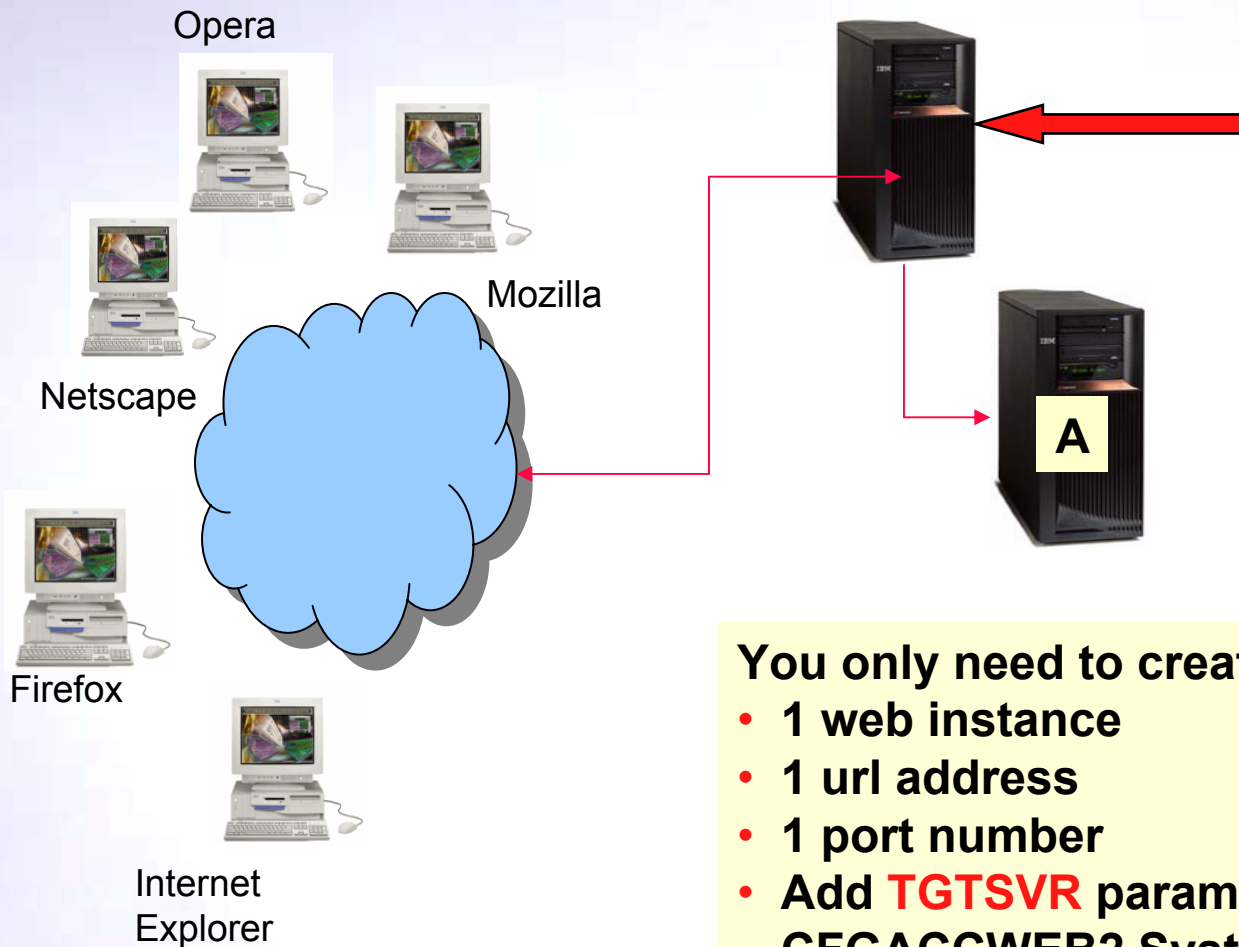


Let's look at some examples...

Only need a single configuration



Only need a single configuration

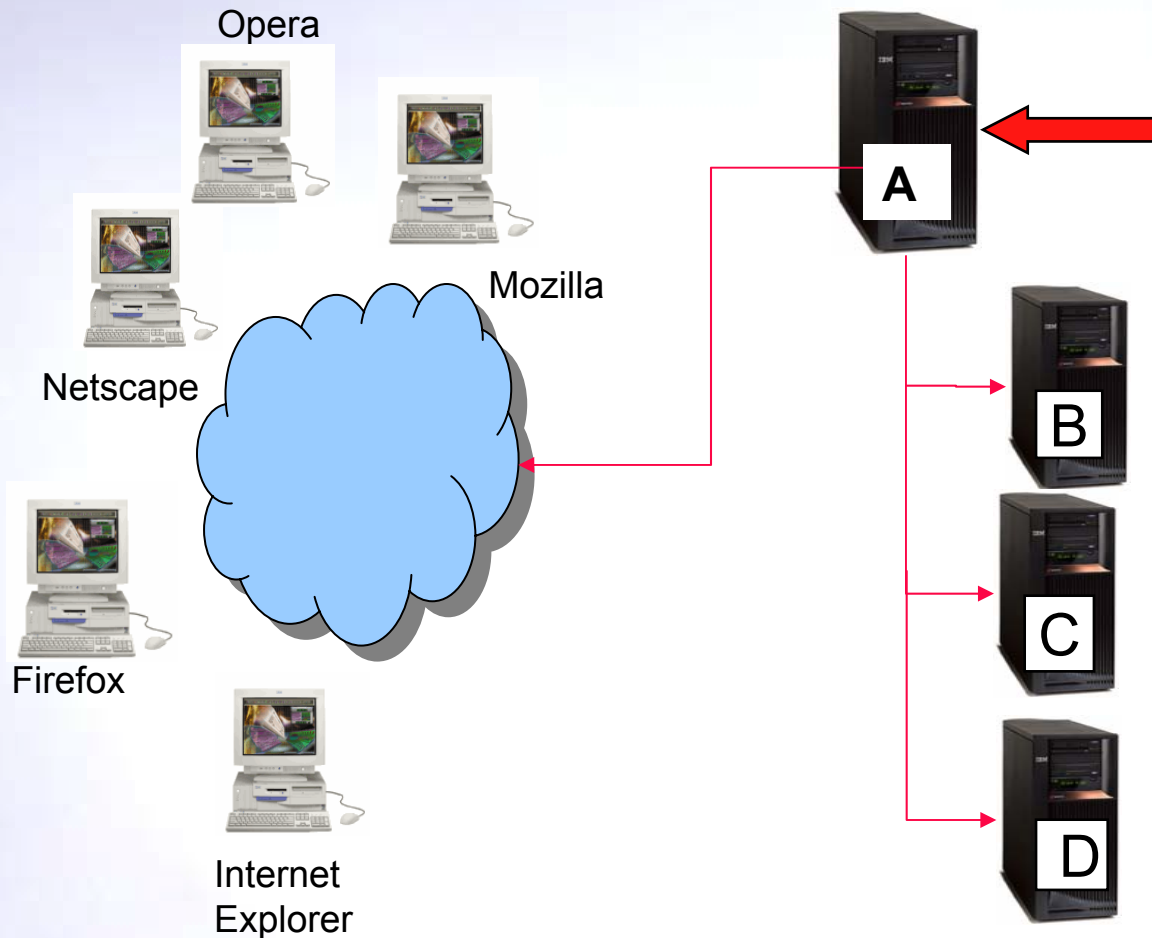


1. IBM i system
2. HTTP web server
3. Web application server
4. System i Access for Web
 - 5250 applications
 - Database
 - Files
 - Printer output
 - ...

You only need to create:

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

Only need a single configuration if only using 5250 and Database...



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

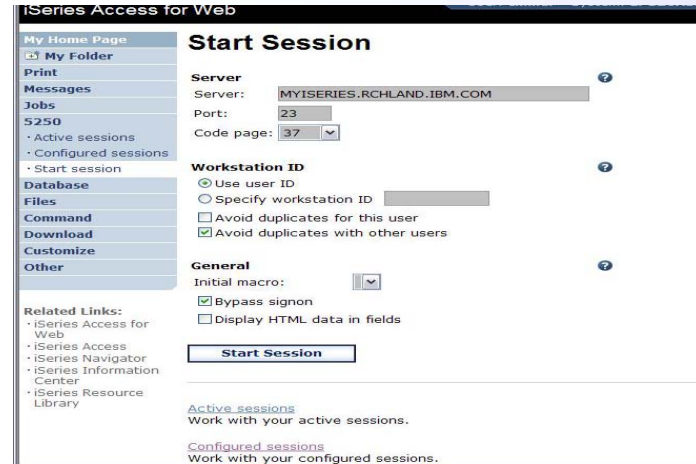
You only need to create:

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

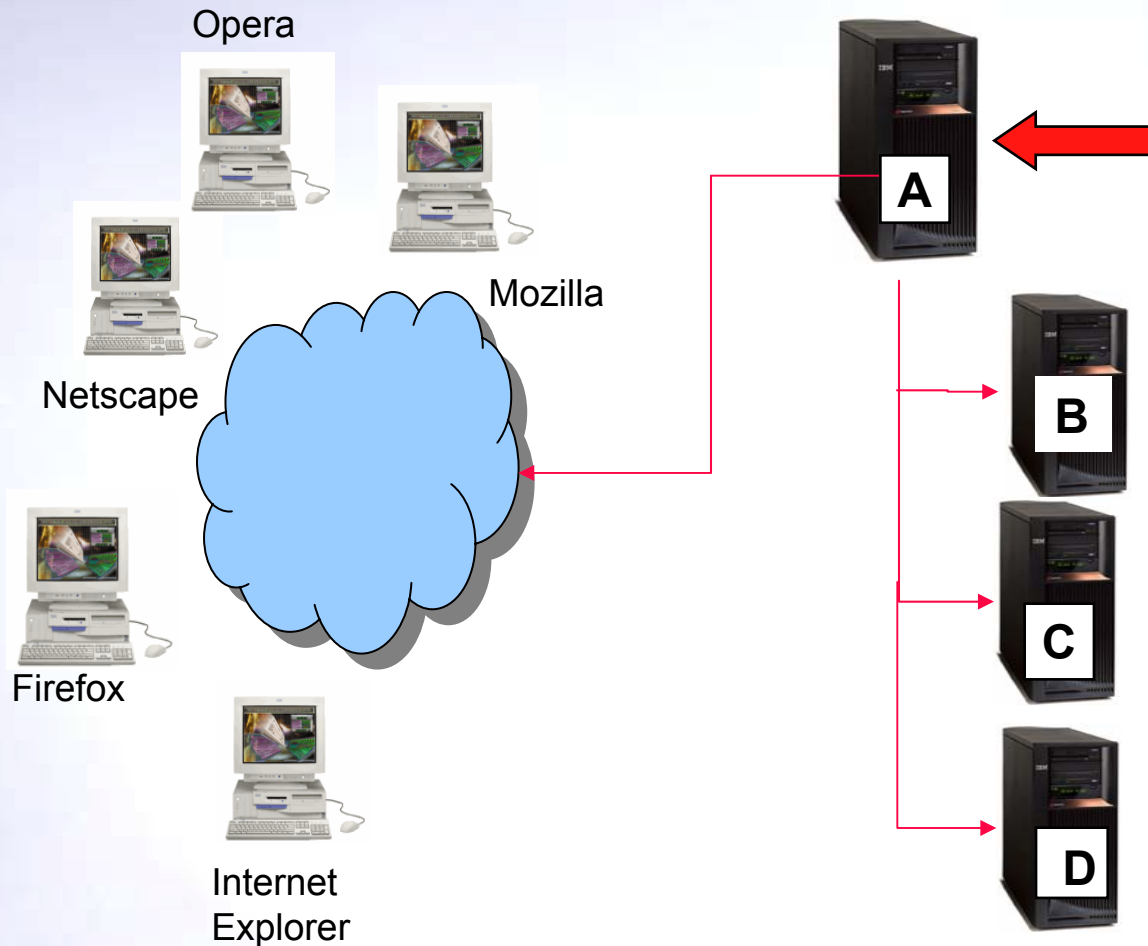
Use 5250 and Database to any system in the network

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 to use functions other than 5250 and Database



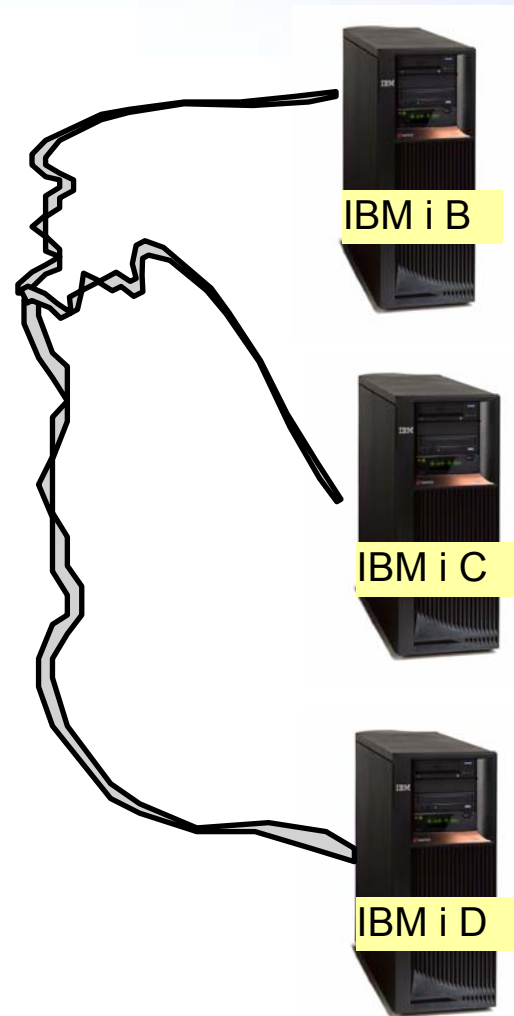
1. Multiple IBM i systems
2. Multiple HTTP web servers
3. Multiple web application servers
4. Single System i Access for Web application

Use all System i Access for Web functions on backend IBM i systems

- 5250 applications
- Database
- Files
- Printer output
- ...

Backend IBM i

- The backend IBM i systems B, C, D contain data.
- They are inside the company network.
- IBM i 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 IBM i B, some others to IBM i C, and some others to IBM i D

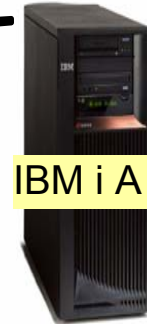


Setting up IBM i A

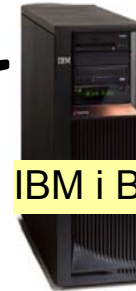


- Administrator sets up IBM i A
- IBM i A has HTTP/HTTPS, WebSphere Application Server or integrated Web application server, System i Access for Web installed.
 - Configures 3 HTTP web servers using 3 different port numbers (ie, ports 5001, 5002, 5003) → one for IBM i B, one for IBM i C, and one for IBM i D
 - Configures 3 web application server instances (one for each backend IBM i 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



IBM i A



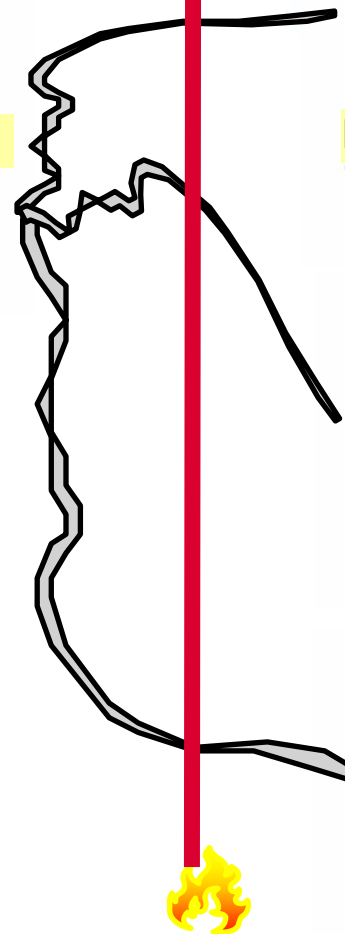
IBM i B



IBM i C



IBM i D



Host Server ports

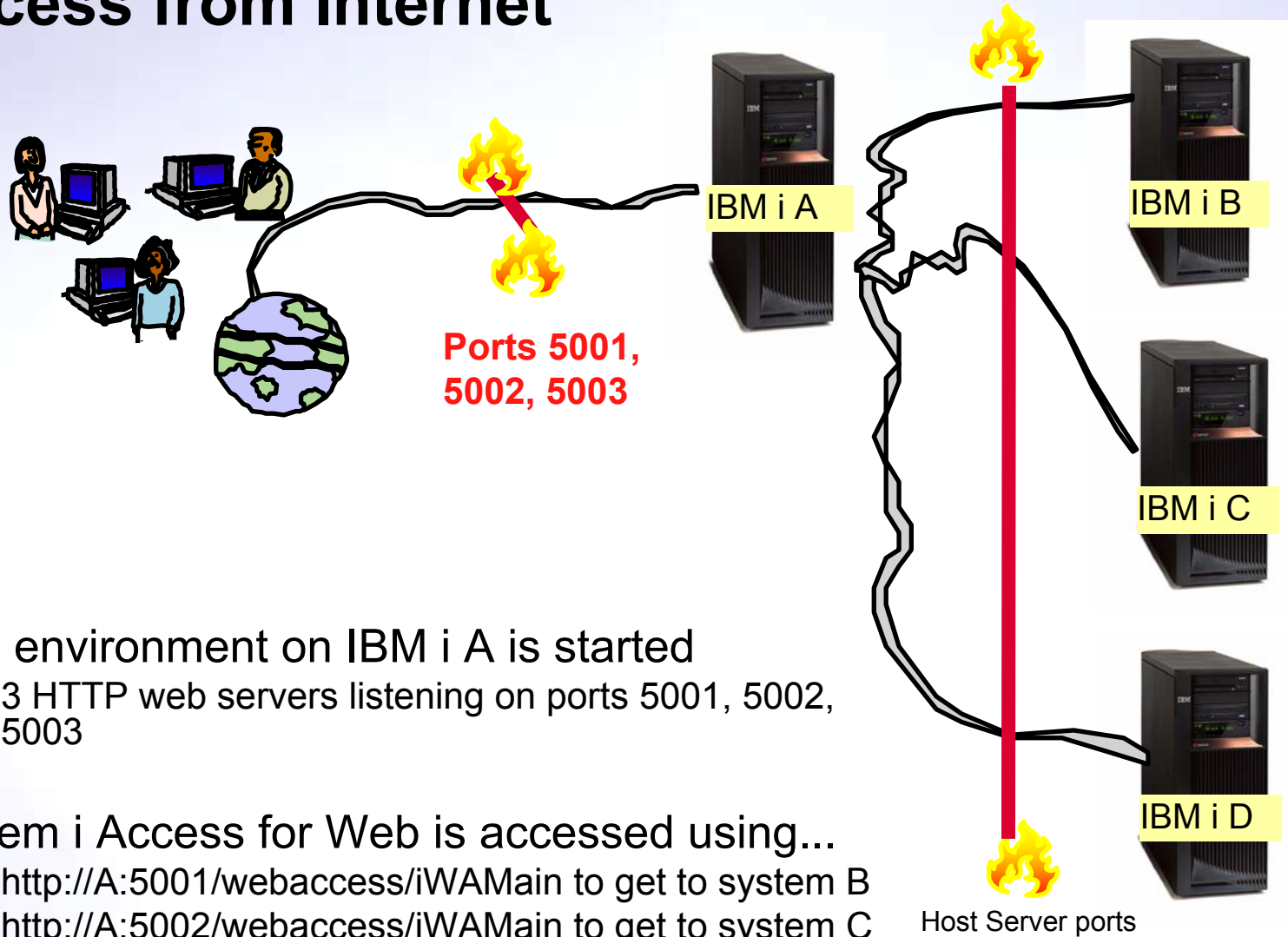
IBM i B, C, and D...

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

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.**

Access from Internet



Web environment on IBM i 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 system B
- `http://A:5002/webaccess/iWAMain` to get to system C
- `http://A:5003/webaccess/iWAMain` to get to system D

Please note:

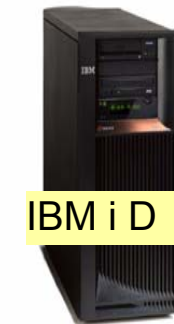
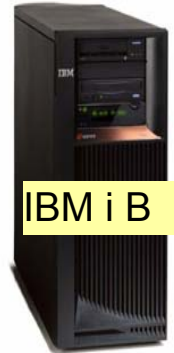
This is only one example of how to configure this environment.

User starts browser and keys in url address...

System i Access for Web user is providing a different address to get to each IBM i 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 IBM i user ID and password for the backend data server to gain access.

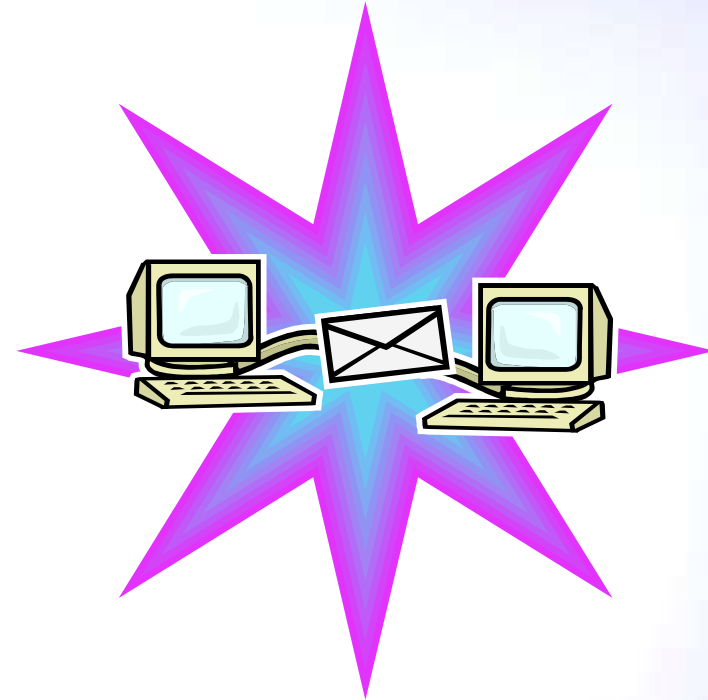


**Tip:
Integrating with your
network mail server**



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 IBM 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'

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

Run SQL

SQL Statement

```
SELECT
*
FROM
"QGPL"."QSALEREC"
```

SQL Wizard

SQL Output

Type: Preview

Destination: **Mail as attachment**

Format: Personal folder

Date: 1/20/06

Time: 3:08:57 PM

Mail output

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

PDF Output Settings

Destination: **Mail as attachment**

Advanced

Run

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

Directory Contents / CMINER

Copy Files to Server
Create Directory

Found 0 directories. Found 3 files with a total size of 15,136,488 bytes.

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

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

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 '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

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 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

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

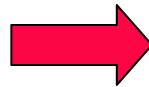
[Preferences help](#)
 View help for editing preferences.

2

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



iSeries Access for Web User: cminer System: RCH

3

My Home Page

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

Import Policies

Specify the file containing policies you want to import.

File: Browse...

Import Policies

[Policies help](#)
View help for importing policies.

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"?>
<QywaPolicies>
  <profile name="TSMITH">
    <mail>
      <fromEmailAddress>tsmith@myMailServer.com</fromEmailAddress>
    </mail>
  </profile>
  <profile name="CJONES">
    <mail>
      <fromEmailAddress>cjones@myMailServer.com</fromEmailAddress>
    </mail>
  </profile>
</QywaPolicies>
```

Tip:
Auto-start Web environment after an IPL?

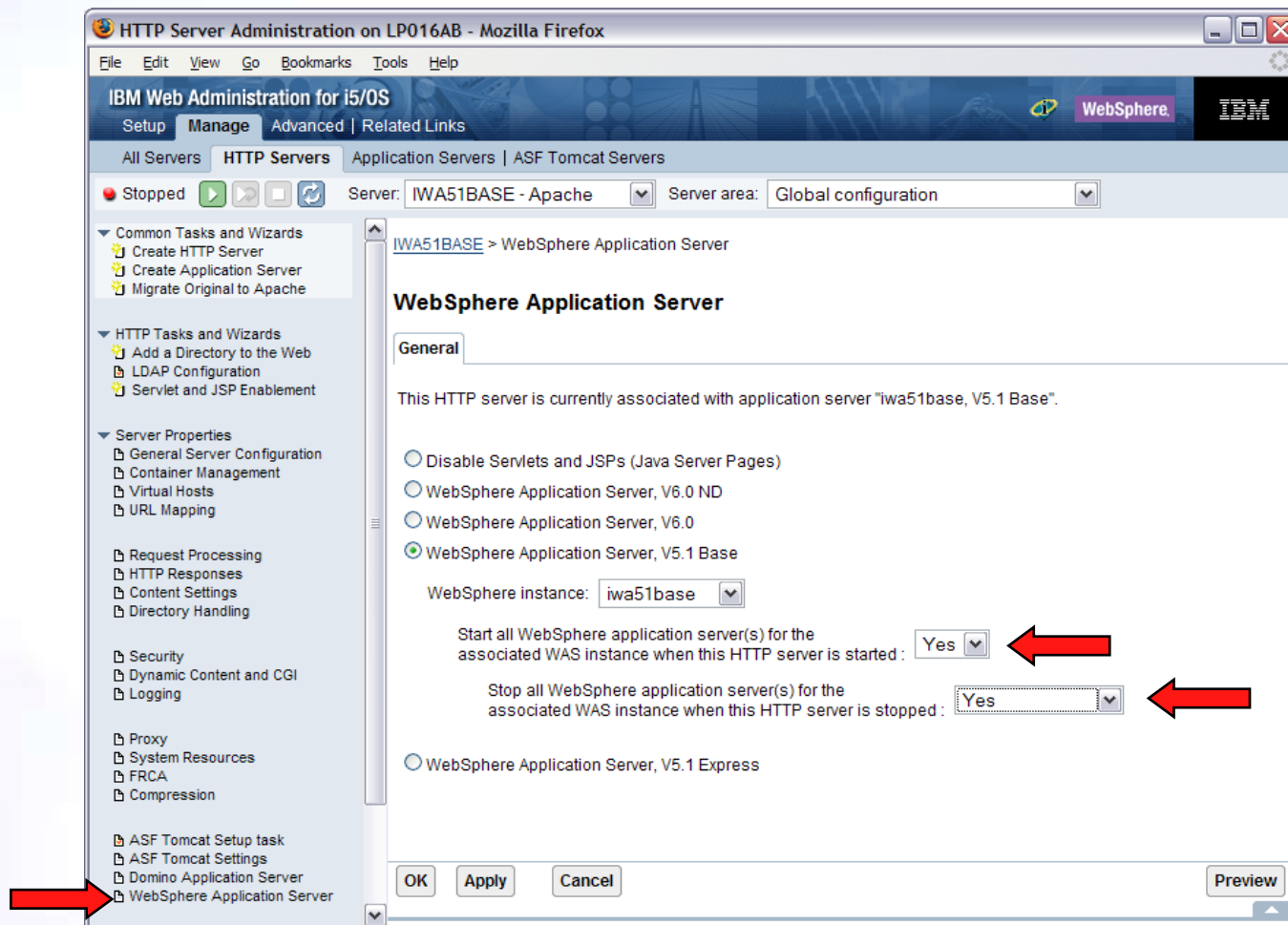


Two Steps, as follows ...

Auto start web environment after an IPL?

Step 1: Configure the HTTP web server to automatically start the WebSphere application server when it starts

- Go into WAS configuration and set WAS to start when the HTTP server is started, as follows:





Step 2:

- 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>)**

Note: If using WAS Network Deployment

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



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