IBM

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V5R2 iSeries Access for Web and WebSphere Host Publisher v4.0 Setup and Configuration

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http://www.ibm.com/servers/eserver/iseries/access/web/

IBM

What is iSeries Access for Web?

- iSeries Access for Web (5722-XH2)
  - It is a an offering in the iSeries Access Family (5722-XW1)
  - It offers web browser-based access to iSeries servers.
  - iSeries Access for Web enables end users to leverage business information, applications, and resources across an enterprise by extending the iSeries resources to the client desktop through a web browser.

- iSeries Access for Web has the following advantages:
  - It is server based
  - It is implemented using Java Servlet technology
  - Supports...
    - WebSphere Application Server v5.0 - Express for iSeries
    - WebSphere Application Server v5.0 for iSeries ("Base Edition)
    - WebSphere Application Server Network Deployment v5.0 for iSeries ("Network Deployment Edition")
    - WebSphere Application Server v4.0 - Advanced Edition
    - WebSphere Application Server v4.0 - Advanced Single Server Edition
    - ASF Tomcat web application server
  - It uses industry standard protocols - HTTP, HTTPS and HTML
  - It is lightweight, requiring only a browser on the client
  - It provides access to 5250 user interface, database, integrated file system, print, batch commands, and messages.

What is WebSphere Host Publisher?

- WebSphere Host Publisher v4.0 (5724-B81)
  - It is a new offering in the iSeries Access Family (5722-XW1)
  - It is bundled with iSeries Access for Web
  - It supports WebSphere Application Server v4.0
  - It enables programmers to replace traditional green screens with a Web look and feel.
    - These 5250 applications can then be run directly from any standard Web browser.
    - Host Publisher allows you to integrate multiple sources of data, including host and database applications, into a single Web page with no change to the back end applications.
  - Host Publisher Studio provides the ability to:
    - Modernize existing 5250 applications--selected parts or entire application
    - Modernize existing host Java applications--selected parts or entire application
    - Create database applications
  - No need to touch (or have) source code
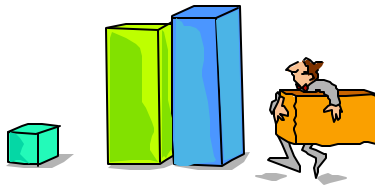
What about WebSphere v3.5?

- Is WebSphere v3.5 supported?
  - ► V5R2 iSeries Access for Web and WebSphere Host Publisher v4.0 do not support WebSphere v3.5.
  - ► V5R1 iSeries Access for Web and WebSphere Host Publisher v3.5 support WebSphere v3.5.

High level differences between V5R1 and V5R2

- V5R1 iSeries Access for Web
  - OS/400 versions
    - V4R5 & V5R1
  - 5722-XH1 licensed program product
  - QIWA library
  - IFS directories
    - /QIBM/ProdData/Access/Web/...
    - /QIBM/UserData/Access/Web/...
  - CL commands
    - CFGACCWEB
    - STRACCWEB
    - ENDACCWEB
    - RMVACCWEB
  - Web application server support
    - WebSphere Advanced Edition v3.5
    - WebSphere Standard Edition v3.5
    - Only one of the above is supported on a server

- V5R2 iSeries Access for Web
  - OS/400 versions
    - V5R1 & V5R2
  - 5722-XH2 licensed program product
  - QIWA2 library
  - IFS directories
    - /QIBM/ProdData/Access/Web2/...
    - /QIBM/UserData/Access/Web2/...
  - CL commands
    - CFGACCWEB2
    - STRACCWEB2
    - ENDACCWEB2
    - RMVACCWEB2
  - Web application server support
    - WebSphere App. Server v5.0 - Express for iSeries
    - WebSphere App. Server v5.0 for iSeries
    - WebSphere App. Server Network Deployment v5.0
      - WebSphere v5.0 Base edition must be installed
      - Only non federated instances are supported
    - WebSphere Advanced Edition v4.0
    - WebSphere Advanced Single Server Edition. v4.0
    - ASF Tomcat
    - All of above can configured/setup concurrently

High level differences between V5R1 and V5R2 (continued)

- V5R1 iSeries Access for Web
  - WebSphere specifics
    - Only one WebSphere edition can be configured
    - Only one specific administrative server can be configured
  - CL command logging
    - /QIBM/UserData/Access/Web/logs/install.log
  - Misc
    - English only
    - SC41-5518-00 contains a checklist of what to do

- V5R2 iSeries Access for Web
  - WebSphere specifics
    - The WebSphere editions can be configured and run concurrently
    - Multiple instances can be configured
  - CL command logging
    - /QIBM/UserData/Access/Web2/logs/cmds.log
    - /QIBM/UserData/Access/Web2/logs/cmdstrace.log
  - Misc
    - Translated
    - SC41-5518-01 contains a checklist of what to do
    - Coexists with V5R1 iSeries Access for Web on server
  - WAS v5.0 - PTF SI06967 (Service Pack 4)
    - QShell command scripts provided
      - Named the same as the CL commands
    - /QIBM/ProdData/Access/Web2/install

Ordering, Packaging & Setup

Ordering iSeries Access for Web/Host Publisher

- V5R2...

  If you order V5R2 iSeries Access Family (5722-XW1), you will receive...
  - ▶ V5R2 iSeries Access for Windows (5722-XE1)
    - Purchase of 5722-XW1 allows for use of PC5250 and Data Transfer function
    - Formerly "Express for Windows"
  - ▶ V5R2 iSeries Access for Web (5722-XH2)
  - ▶ WebSphere Host Publisher v4.0

- V5R1...

  If you order V5R1 Client Access Family (5722-XW1), you will receive...
  - ▶ V5R1 iSeries Access for Windows (5722-XE1)
    - Purchase of 5722-XW1 allows for use of PC5250 and Data Transfer function
  - ▶ V5R1 iSeries Access for Web (5722-XH1)
  - ▶ WebSphere Host Publisher v3.5
  - ▶ When ordering you can check the box to automatically get the V5R2 refresh (Feature 2645).

Ordering iSeries Access for Web/Host Publisher (continued)

- Already have V5R1...
  - You can order Feature 2645 to get the V5R2 refresh that includes the following...
    - V5R2 iSeries Access for Windows (5722-XE1)
      - Formerly "Express for Windows"
    - V5R2 iSeries Access for Web (5722-XH2)
    - WebSphere Host Publisher v4.0
    - V5R2 Client Encryption (5722-CE3)

What Comes in the Package

- V5R2 iSeries Access for Web (5722-XH2) - CD ROM
  - To be installed on iSeries server
  - Installation and Usage Guide (SC41-5518-01) available in the iSeries Info Center
    - Link to it from http://www.ibm.com/eserver/iseries/access/web
  - README is available at
    - http://www.ibm.com/servers/eserver/iseries/access/web/v5r2readme.htm
- WebSphere Host Publisher Server V4.0 (5724-B81) - CD ROM
  - To be installed on iSeries server
  - Host Publisher documentation included on CD
  - Planning and Installation Guide for iSeries
  - Administrator's and User's Guide.
- WebSphere Host Publisher Studio - CD ROM
  - To be installed on Windows 98, ME, XP, NT 4.0, or 2000

iSeries server Software Requirements

Product Number	Product Name	Option	$
5722-SS1	OS/400 V5R1 or V5R2 (Note: Host Publisher v4.0 will install to V4R5 OS/400 iSeries servers)	Base	w/HW
5722-SS1	OS/400 - Extended Base Directory Support	3	N/C
5722-SS1	OS/400 - AFP Compatibility Fonts	8	N/C
5722-SS1	OS/400 - Host Servers	12	N/C
5722-SS1	Operating System/400 Qshell Interpreter	30	N/C
5722-SS1 5722-AC2 5722-AC3	If you plan to use Secure Sockets Layer (SSL): ▬ OS/400 Digital Certificate Manager ▬ Cryptographic Access Provider (56-bit) ▬ Cryptographic Access Provider (128-bit)	34	N/C N/C N/C
5722-IP1	IBM Info Print Server (optional)	Base	$
5722-DG1	IBM HTTP Server for iSeries	Base	N/C
5722-JV1	Developer Kit for Java Developer Kit for Java Version 1.2 Developer Kit for Java Version 1.3	Base 3 5	N/C N/C N/C
5722-JC1	Toolbox for Java	Base	N/C
5722-TC1	TCP/IP Connectivity Utilities for iSeries	Base	N/C
5722-XW1	iSeries Access Family ▬ iSeries Access for Web (5722-XH2) ▬ WebSphere Host Publisher (5724-B81)	Base, 1 Base Base	$

iSeries server Software Requirements (continued)

Product Number	Product Name	Option	$
	One, or more, of the following web servers		
5722-IWE	WebSphere Application Server v5.0 - Express for iSeries		$
5733-WS5	WebSphere Application Server v5.0 (Base and Network Deployment editions)	See documentation	$
5733-WA4	WebSphere Application Server v4.0 Advanced Edition		$
5733-WS4	WebSphere Application Server v4.0 Advanced Single Server Edition		$
5722-DG1	Apache Software Foundation Tomcat (part of 5722-DG1 product)		N/C

- Refer to the documentation for the individual web servers for additional information on iSeries server software requirements and considerations.
- For the WebSphere Application Server Network Deployment v5.0 for iSeries environment
  - ▶ WebSphere v5.0 Base Edition must be installed
  - ▶ iSeries Access for Web does not support WebSphere instances that are federated to the WebSphere v5.0 Network Deployment environment

iSeries server Hardware Requirements

- **Server models/Processor features/Memory**
  - Refer to the web application server documentation to determine what server models, processor features, and the memory requirements are for the web application server that is to be used.
  - WebSphere   http://www.ibm.com/servers/eserver/iseries/software/websphere/wsappserver/
  - ASF Tomcat   http://www.ibm.com/servers/eserver/iseries/software/http/
  - Please note the following as the web server documentation is referenced...
    - iSeries Access for Web only consists of servlets.
    - Host Publisher can consist of servlets, JavaServer pages, and potentially enterprise beans

- **Server disk space**   **Software product**
  - 265MB   iSeries Access for Web
  - 200MB   Host Publisher

- **Additional resources**
  - IBM Workload Estimator for iSeries at   http://www.as400service.ibm.com/servlet/EstimatorServlet

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Client Browser Requirements

- These browsers have been tested with iSeries Access for Web:
  - Netscape 4.7 (AIX, Linux)
  - Netscape 6.2 (Windows)
  - Internet Explorer 6.0 (Windows)
  - Opera 6.0 (Windows)
  - Opera 5.0 (Linux)
  - Other browsers that support the current HTTP and HTML specifications should work, but have not been tested with iSeries Access for Web.

- Set browser to allow 'Cookies'
  - iSeries Access for Web requires that the web browser allow cookies. Set the cookie configuration option to allow cookies.

Notes: Client Browser Requirements - Cookies

<u>Netscape</u>
Cookies - iSeries Access for Web requires that the web browser allows cookies. The cookie configuration option should be set to one of the following options:
   Accept all cookies
   Accept only cookies that get sent back to the originating server

Note: If your version of the browser does not have these specific options, ensure that at a minimum the browser will allow/accept cookies.
To verify or modify your Cookie configuration, follow these steps:
   1.Open your browser
   2.Select the Edit pull down menu
   3.Select the Preferences menu option
   4.Select the Advanced menu item
   5.The Cookie options will be displayed

Netscape 6 users connecting to an OS/400 V4R5 server need PTF 5769DG1 SF65536 loaded and applied to the server when using iSeries Access for Web.

<u>Microsoft Internet Explorer</u>
Cookies - iSeries Access for Web requires that the web browser allows cookies. The cookie configuration option should be set to: Allow per-session cookies (not stored). Note: If your version of the browser does not have this specific option, ensure that the browser will allow/accept cookies.

To verify or modify your Cookie configuration, follow these steps:
   1.Open your browser
   2.Select the Tools pull down menu
   3.Select the Internet Options menu option
   4.Select the Security tab
   5.Verify the Web Content Zone is selected
   6.Select the Custom Level button
   7.The Allow per-session cookies (not stored) option should be set to enabled or prompt.

Notes: Client Browser Requirements - Cookies (continued)

<u>Opera</u>
Cookies - iSeries Access for Web requires that the web browser allow cookies. The cookie configuration option should be set to one of the following:
   Display received cookies
   Accept only cookies from selected servers
   Accept all cookies

To verify/modify your cookie configuration, follow these steps:
   1.Open your browser
   2.Select the File pull down menu
   3.Select the Preferences menu option
   4.Select the Privacy item
   5.The cookie options should be displayed

What needs to be done next?

- You need to do the following in this order:
    1. Decide what web application server environment to run within.
    2. Install iSeries Access for Web on your server
    3. Verify, load, apply any additional PTFs you may need
        - Cumulative PTF package
        - WebSphere, ASF Tomcat, HTTP Server for iSeries
        - iSeries Access for Web
    4. Set up HTTP for Websphere.
    5. Set up the web application server.
        - WebSphere
        - ASF Tomcat
    6. Configure and Start iSeries Access for Web.
    7. Install/configure/start WebSphere Host Publisher on your server.
    8. Verify the installation and configuration.

- These steps are detailed in
    1. SC41-5518-01 iSeries Access for Web (Installation and Usage Guide)
    2. Available in HTML and PDF at:
       http://www.ibm.com/servers/eserver/iseries/access/web/

IBM WebSphere

*Apache Software Foundation
Jakarta Tomcat*

Determining what web application server environment to use

WebSphere Application Server

- IBM WebSphere Application Server for IBM iSeries is an e-business application deployment environment built on open standards-based technology. It is the cornerstone of WebSphere application offerings and services.

- The available versions of WebSphere Application Server include
  - ► WebSphere Application Server v5.0 - Express for iSeries (5722-IWE)
  - ► WebSphere Application Server v5.0 (5733-WS5) for iSeries ("Base Edition")
  - ► WebSphere Application Server Network Deployment v5.0 for iSeries ("Network Deployment Edition")
    - – WebSphere v5.0 Base Edition must be installed
    - – iSeries Access for Web does not support WebSphere instances that are federated to the WebSphere v5.0 ND environment.
  - ► WebSphere Application Server Advanced Single Server Edition (5733-WS4)
  - ► WebSphere Server Advanced Edition (5733-WA4)

- IBM's strategic web application server is WebSphere Application Server.

- Customers who require a robust and scalable web application server will select WebSphere Application Server.

- For more information refer to http://www.ibm.com/servers/eserver/iseries/software/websphere/wsappserver/

WebSphere Application Server (continued)

WAS v5.0 - Express for iSeries (5722-IWE)

WebSphere Application Server - Express for iSeries is a premier Java and Web Services technology-based application platform integrating enterprise data and transactions with the dynamic e-business world.

The rich e-business application deployment environment of iSeries is merged with a set of application services and capabilities for transaction management, security, performance, availability, connectivity, and scalability. It manages and integrates enterprise-wide applications while leveraging open technologies and APIs.

These enhancements solidify the iSeries role as an integrator of a WebSphere software platform. Industry-leading integrated support for key Web services open standards enables the iSeries as a production-ready Web application server for the deployment of enterprise Web Services solutions for dynamic e-business. WebSphere Application Server - Express for iSeries offers:

- Support for servlets, based on the Java Servlet 2.3 specification

- Support for JavaServer pages, based on the JSP 1.2 specification

- Support for Web services standards like Simple Object Access Protocol (SOAP), WSDL, and UDDI offers companies the ability to create secure distributed applications that integrate software components developed with disparate tools and architectures over the Web.

- Support for JDBC 2.0, JNDI, JavaMail 1.2, JavaBean Activation Framework (JAF) 1.0, and Java API for XML parsing (JAXP)

WebSphere Application Server (continued)

WAS v5.0 - Express for iSeries (5722-IWE) (continued)

- Support for server-side JavaScripts using the Bean Scripting Framework (BSF)
- Browser-based administration with easy-to-use wizards for creating HTTP and application server instances, deploying J2EE applications, and management of HTTP and application servers and their applications
- Integration with WebSphere Studio, built on Eclipse, the open systems development environment
- Integration with HTTP Server for iSeries and Domino™ for iSeries HTTP servers
- Integration with OS/400® security for authentication of users
- HTTP session support
- Migration support for WebSphere Standard Edition (SE) and Apache Software Foundation (ASF) Jakarta Tomcat
- Migration support to more advanced WebSphere Application Serving configurations
- Based on the latest Java and Web services standards, WebSphere Application Server — Express for iSeries lets you convert static Web sites into dynamic Web sites by viewing and performing simple information updates in back-end databases. You also can consume Web services and resources to integrate with packaged applications.

WebSphere Application Server (continued)

WAS v5.0 Base Edition (5733-WS5)

WebSphere Application Server Version 5.0 for iSeries provides the foundation for serving dynamic content via servlets and JavaServer Pages (JSPs). WebSphere Application Server also offers Extensible Markup Language (XML) document services that implement server-side XML document processing. WebSphere Application Server also provides support to enable iSeries to run Enterprise JavaBeans (enterprise beans). Other features include:

- Support for an integrated Java Message Service(JMS) subsystem based on IBM WebSphere MQ technology®
- Integrated support for Web service open standards, with comprehensive infrastructure to support production-ready deployment of enterprise Web service solutions for dynamic e-business.
- Support for Java 2 Enterprise Edition (J2EE) platform with the richest set of enterprise Java open standard implementation on the market today as well as providing powerful interoperability between Web services and J2EE
- Improved performance via additional distributed workload and enhanced caching
- Integration with WebSphere Studio Application Developer and WebSphere Development Studio, both built on Eclipse, the open systems development environment
- Improved administration of WebSphere applications via browser-based GUI and XML configuration
- Enhanced security with improved systems management and integration with performance tools

WebSphere Application Server (continued)

WAS Network Deployment v5.0 (5733-WS5)

WebSphere Application Server Network Deployment Version 5.0, for iSeries <u>includes</u> the Base Application Server and a Network Deployment Manager which offers the following additional features:

- Integrated support for private UDDI Registry and Web Services Gateway.

- Additional automation of distributed system management via centralized deployment manager and dynamic clustering capability for simplified administration of all clustered environments

- Enhanced application availability and elimination of single points of failure between dispersed data centers with Advanced Multi-Domain Availability/Failover

- Support for multiple machine topologies

- Workload management (WLM) facilitates application server load balancing and failover.

- Network Dispatcher and Caching Proxy components of IBM Edge server enhance load balancing, failover and performance capabilities.

WebSphere Application Server (continued)

WAS v4.0 Advanced Single Server Edition (5733-WS4)

WebSphere Application Server Version 4.0, Advanced Single Server Edition for iSeries enables IBM HTTP Server for iSeries to serve servlets and JavaServer Pages (JSPs). WebSphere Application Server also offers Extensible Markup Language (XML) document services that implement server-side XML document processing. WebSphere Application Server also provides support to enable iSeries to run Enterprise JavaBeans (enterprise beans). Other features include:

- Integrated support for Web service open standards, positioning WebSphere Application Server as the industry's first production-ready Web application server for the deployment of enterprise Web service solutions for dynamic e-business

- Support for Java 2 Enterprise Edition (J2EE) platform with the richest set of enterprise Java open standard implementation on the market today

- Powerful interoperability between Web services and J2EE

WebSphere Application Server (continued)

WAS v4.0 Advanced Edition (5733-WA4)

WebSphere Application Server Version 4.0, Advanced Edition for iSeries enables IBM HTTP Server for iSeries to serve servlets and JavaServer Pages (JSPs). WebSphere Application Server also offers Extensible Markup Language (XML) document services that implement server-side XML document processing. WebSphere Application Server also provides support to enable iSeries to run Enterprise JavaBeans (enterprise beans). Other features include:

- Integrated support for Web service open standards, positioning WebSphere Application Server as the industry's first production-ready Web application server for the deployment of enterprise Web service solutions for dynamic e-business
- Support for Java 2 Enterprise Edition (J2EE) platform with the richest set of enterprise Java open standard implementation on the market today
- Powerful interoperability between Web services and J2EE
- Support for multiple machine topologies
- Support for distributed transactions and transaction processing

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ASF Jakarta Tomcat

- The IBM HTTP Server (powered by Apache) (5722-DG1) has been updated to include an industry standard Java Servlet and JavaServer Pages engine based on technology from the Apache Software Foundation's Jakarta Tomcat project.

- ASF Jakarta Tomcat is offered as a way for iSeries customers to "get started" with Java server-side components and web application serving. Customers should select WebSphere Application Server when they need to deploy e-business solutions that are J2EE compliant, provide the most function and deliver the highest levels of reliability, scalability and security.

- Also note that IBM's strategic web application server is WebSphere Application Server.

- ASF Jakarta Tomcat provides less function and capabilities compared to IBM's WebSphere Application Server. For example, Jakarta Tomcat does not support Enterprise JavaBeans, it is not J2EE compliant, it doesn't provide Domino integration and more.

- This update has been made available via Group PTFs for both V4R5 and V5R1.
  - ► Please note V5R2 iSeries Access for Web (5722-XH2) only supports V5R1 and later OS/400 releases.

ASF Jakarta Tomcat (continued)

- Some iSeries customers want a basic web application server that supports Servlets and JavaServer Pages.

- Relying on IBM's HTTP Server (Powered by Apache) as its web server, the Apache Software Foundation's Jakarta Tomcat provides a basic short term web application server for some iSeries customers.

- For more information refer to http://www.ibm.com/servers/eserver/iseries/software/http/services/tomcat.html

- If ASF Tomcat will meet your short term web application deployment environment needs, the 5722-DG1 product should be installed at this time on your iSeries server.


What needs to be done next?

- You need to do the following in this order:
  - ✔ Decide what web application server environment to run within.
  - ❑ Install iSeries Access for Web on your server
  - ❑ Verify, load, apply any additional PTFs you may need
    - **Cumulative PTF package**
    - **WebSphere, ASF Tomcat, HTTP Server for iSeries**
    - **iSeries Access for Web**
  - ❑ Set up HTTP for Websphere.
  - ❑ Set up the web application server.
    - **WebSphere**
    - **ASF Tomcat**
  - ❑ Configure and Start iSeries Access for Web.
  - ❑ Install/configure/start WebSphere Host Publisher on your server.
  - ❑ Verify the installation and configuration.

Install iSeries Access for Web on your server
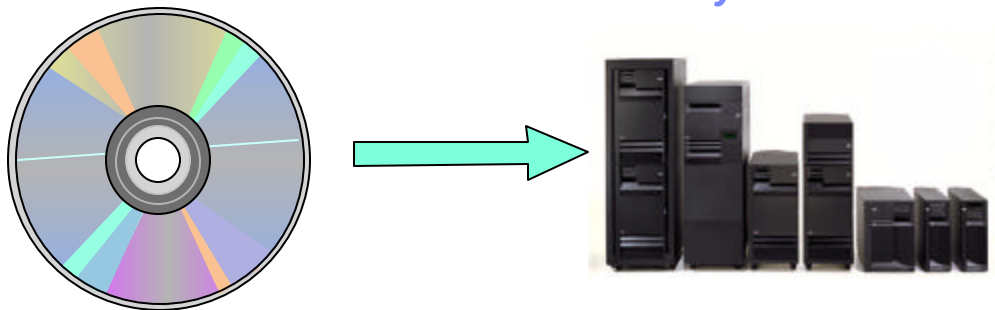
Installing iSeries Access for Web

- V5R2 iSeries Access for Web (5722-XH2) can be installed to the same server as V5R1 iSeries Access for Web (5722-XH1).

- Use the RSTLICPGM command to restore 5722-XH2 to the server.
  - ► RSTLICPGM LICPGM(5722XH2) DEV(OPT01) OPTION(*BASE)

- The restore will...
  - ► Create library QIWA2 and objects in QIWA2
  - ► Create IFS directories
    - – /QIBM/ProdData/Access/Web2/...
    - – /QIBM/UserData/Access/Web2/...
  - ► Set basic authorities to IFS objects.

- The restore will not...
  - ► Make any changes to HTTP server configurations.
  - ► Make any changes to web application server configurations.
  - ► Install Host Publisher.
  - ► Alter/change the V5R1 iSeries Access for Web installation/configuration

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  - ❑ Install/configure/start WebSphere Host Publisher on your server.
  - ❑ Verify the installation and configuration.
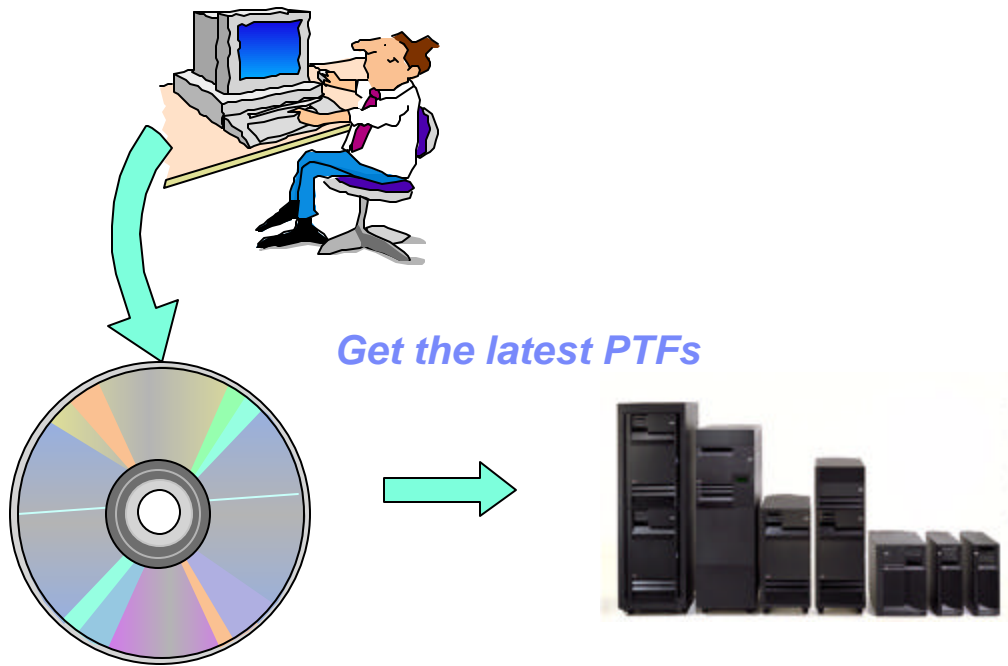
Get the latest PTFs

The latest PTFs

- Verify your server has the latest available PTFs
  - Each web appliation server has a group PTF.
  - The group PTFs include PTFs for the product as well as other group PTFs (database, HTTP server, Java, etc.).

- Latest server Cumulative PTF package
  - The WebSphere group PTFs identify what level of OS/400 cumulative PTF package is required.

- WebSphere
  - http://www.ibm.com/servers/eserver/iseries/software/websphere/wsappserver/
    - Click PTFs link, click link for release/WAS version
  - V5R1 servers
    - DSPDTAARA QIWE/SF99270   v5.0 Express for iSeries
    - DSPDTAARA QEJBAS5/SF99243   v5.0 Base Edition
    - DSPDTAARA QEJBASND5/SF99244   v5.0 Network Deployment Edition
    - DSPDTAARA QEJBADV4/SF99241   v4.0 Advanced Edition
    - DSPDTAARA QEJBAES4/SF99242   v4.0 Advanced Single Server Edition
  - V5R2 servers
    - WRKPTFGRP SF99271   v5.0 Express for iSeries
    - WRKPTFGRP SF99245   v5.0 Base Edition
    - WRKPTFGRP SF99246   v5.0 Network Deployment Edition
    - WRKPTFGRP SF99148   v4.0 Advanced Edition
    - WRKPTFGRP SF99149   v4.0 Advanced Single Server Edition

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The latest PTFs (continued)

- HTTP Server/ASF Tomcat server
  - http://www.ibm.com/servers/eserver/iseries/software/http --> PTFs
  - V5R1 servers
    - DSPDTAARA QHTTPSVR/SF99156
  - V5R2 servers
    - WRKPTFGRP SF99098

- iSeries Access for Web
  - http://www.ibm.com/servers/eserver/iseries/access/web
  - As of 2/24/2003, current PTF is **SI06967** (Service Pack 4)

- WebSphere Host Publisher v4.0
  - http://www.ibm.com/software/webservers/hostpublisher/support.html

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    - **WebSphere, ASF Tomcat, HTTP Server for iSeries**
    - **iSeries Access for Web**
  - ❑ Set up HTTP for Websphere.
  - ❑ Set up the web application server.
    - **WebSphere**
    - **ASF Tomcat**
  - ❑ Configure and Start iSeries Access for Web.
  - ❑ Install/configure/start WebSphere Host Publisher on your server.
  - ❑ Verify the installation and configuration.
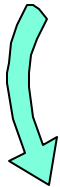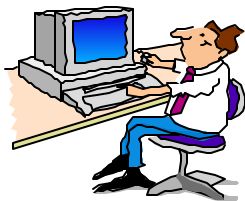
HTTP server and it's setup for WebSphere
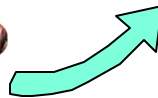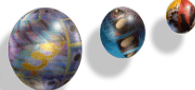
IBM HTTP Server for iSeries

- The IBM HTTP Server for iSeries is product 5722-DG1
  - ▶ HTTP servers powered by Apache run within the QHTTPSVR subsystem
  - ▶ HTTP servers are created/managed by the ADMIN HTTP server
  - ▶ WAS v5.0 - Express for iSeries is also managed by the ADMIN HTTP server
  - ▶ ADMIN HTTP server is started and accessed...
    - STRTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN)
    - http://<server_name>:2001/
- Where to find information
  - ▶ http://www.ibm.com/servers/eserver/iseries/http/
  - ▶ PTF information for 5722-DG1 at this site
    - V5R1 servers
      - DSPDTAARA QHTTPSVR/SF99156
    - V5R1 servers
      - WRKPTFGRP SF99098

IBM HTTP Server for iSeries (continued)

- When an HTTP server is created/configured, the following is specified...
  - ▶ A name for the HTTP server
  - ▶ A port for the HTTP server to listen for requests
  - ▶ A version of WebSphere and a specific instance (additional info below) of that WebSphere version that the HTTP server is to "talk" to
  - ▶ The following CL commands can be used to start/end HTTP servers
    - STRTCPSVR SERVER(*HTTP) HTTPSVR(<http_server_name>)
    - ENDTCPSVR SERVER(*HTTP) HTTPSVR(<http_server_name>)
- When WebSphere is installed on the iSeries server...
  - ▶ v5.0 Express for iSeries
    - A default instance is not created. An instance must be created.
    - Each instance contains an application server.
    - All web applications run in the same application server, in the same process.
  - ▶ v5.0 (Base and Network Deployment Editions)
    - A default instance is created when the Base Edition is installed. It is named "default".
    - Each instance contains an application server. For the default instance, the application server name is "server1".
    - Each instance can contain more than one application server, but it is recommended to only have one application server per instance.
    - All web applications run in the same application server, in the same process.

IBM HTTP Server for iSeries (continued)

- ► Advanced Edition v4.0
  - – A default instance is created. It is named "default".
  - – Each instance is a WebSphere domain, which contains an administrative server. You can have many application servers in a single domain.
  - – Each application server runs in its own process. A single domain is sufficient for most scalability and isolation needs.
- ► Advanced Single Server Edition v4.0
  - – A default instance is created. It is named "default".
  - – Each instance contains an application server.
  - – All web applications run in the same application server, in the same process.

- ▪ Additional instances
  - ► The default WebSphere server instance will handle most scability and isolation needs.
  - ► WebSphere administration tools allow you to create additional instances.
  - ► WAS v5.0 - Express for iSeries server instances can be created using the http://<server_name>:2001/ user interface.
  - ► Since all application servers in an instance share the same name space, you could create multiple instances on a single iSeries server 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.

IBM HTTP Server for iSeries - QHTTPSVR subsystem

STRTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN) **to start HTTP administration**

WRKACTJOB SBS(QHTTPSVR)   **to display the subsystem**

IBM HTTP Server for iSeries - Administration

IBM HTTP Server for iSeries - Administration

IBM HTTP Server for iSeries

- Use a unique IBM HTTP Server instance if you...
  - ▶ Want to isolate where iSeries Access for Web plugs into your web environment
  - ▶ Have a conflict with ports used by other web applications
  - ▶ Are not familiar with IBM HTTP Server and just want to try iSeries Access for Web.

- To create HTTP Server instances, the following documentation contains detailed steps to help you create and configure them to run with WebSphere.
  - ▶ iSeries Access for Web Installation and Usage Guide (SC41-5518-01)
    - – http://www.ibm.com/eserver/iseries/clientaccess/web/guide.htm
  - ▶ WebSphere installation and initial configuration information
    - – http://www.ibm.com/servers/eserver/iseries/software/websphere/wsappserver/
    - – Follow the documentation links

- Items to note
  - ▶ If a default port other than 80 is specified, that port value must be updated in the WebSphere alias table.
  - ▶ If using an Original HTTP Server instance, you must specify the -nolastmod directive when starting the HTTP Server instance.
    - – STRTCPSVR SERVER(*HTTP) HTTPSVR(<http_server_name> '-nolastmod')

What needs to be done next?

- You need to do the following in this order:
  - ✔ Decide what web application server environment to run within.
  - ✔ Install iSeries Access for Web on your server
  - ✔ Verify, load, apply any additional PTFs you may need
    - • **Cumulative PTF package**
    - • **WebSphere, ASF Tomcat, HTTP Server for iSeries**
    - • **iSeries Access for Web**
  - ✔ Set up HTTP for Websphere.
  - ❑ Set up the web application server.
    - • **WebSphere**
    - • **ASF Tomcat**
  - ❑ Configure and Start iSeries Access for Web.
  - ❑ Install/configure/start WebSphere Host Publisher on your server.
  - ❑ Verify the installation and configuration.

Web application server Setup

General Information

- The web application server provides an environment that allows for the deployment and management of web based applications such as iSeries Access for Web and Host Publisher.

- WebSphere provides an environment that allows for the deployment and management of web based applications such as iSeries Access for Web and Host Publisher. All of the web application servers can be installed and coexist on the iSeries server
  - WebSphere v5.0 - Express for iSeries
  - WebSphere v5.0 (Base Edition)
  - WebSphere Network Deployment v5.0
  - WebSphere v4.0 Advanced Edition
  - WebSphere v4.0 Avanced Single Server Edition
  - ASF Tomcat
  - WebSphere 3.5 (Advanced or Standard Edition)

- WebSphere coexistence does require that each WebSphere installation use a different set of ports.
  - The WebSphere documentation does discuss how to set up the ports.

Notes: Port Usage

- Port usage is a consideration for...
  - WebSphere Advanced Edition users
  - ASF Tomcat users
  - HTTP servers that will use a port other than the default of 80
  - The ports for the above functions are unique and mutually exclusive from each other

- To find available ports...
  - Run server command: CFGTCP
    - Select option to Configure Related Links
    - Select option to Work with Service Table Entries
    - Page through the list of ports already being used to determine what ports you can use
  - Run server command: NETSTAT *CNN
    - Page through the list of ports already being used to determine what ports you can use

- Apache powered and Original HTTP servers listen for requests on a port that is specified when they are created/configured.
  - This port value must be specified and must not already be in use by some other application on the server.

- WAS AE
  - When iSeries Access for Web is configured for WebSphere Advanced Edition, an available port must be input to the QIWA2/CFGACCWEB2 command.
  - The port is used by the web container within the WebSphere configuration for iSeries Access for Web.
  - This port value must be specified and must not already be in use by some other application on the server.

- ASF Tomcat
  - For the ASF Tomcat environment...
    - An Apache powered HTTP server has to be created/configured.
    - An ASF Tomcat server has to be created/configured.
  - The Apache HTTP server and ASF Tomcat server will use a port to communicate to each other.
    - This port value must not already be in use by some other application on the server.

IBM
WebSphere
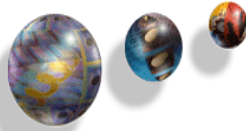
Web application server Setup

WebSphere v5.0 - Express for iSeries

WebSphere v5.0 - Express for iSeries

- WebSphere runs within the QASE5 subsystem
  - Start using server command: STRSBS QASE5/QASE5

- Instance
  - No default instances are created
  - Contains one application server
    - Use mulitple instances if more than one application server environment is required
  - Use the http://<server_name>:2001/ (iSeries Tasks) interface to create server instances
  - Can also use crtwasinst script to create instances
    - QSH
    - /QIBM/ProdData/WebASE/ASE5/bin/crtwasinst -instance iwa -server iwa -portblock 9100 -exthttp 9120
      - Note: instance name and application server name <u>must</u> be the same if you want to manage the instance using the http://<server_name>:2001/ interface
  - IFS paths
    - /QIBM/ProdData/WebASE/ASE5/...
    - /QIBM/UserData/WebASE/ASE5/<instance_name>/...

- Application server
  - An instance contains an application server which provides the JVM environment in which web applications can be deployed and executed
    - The application server may not automatically start when the QAES5 subsystem starts.
  - All web applications deployed within an application server share the same JVM configuration properties/environment
  - Changes to an application server (such as deploying a web application) usually require that the application server be restarted

WebSphere v5.0 - Express for iSeries (continued)

- Management of the WebSphere v5.0 - Express for iSeries
  - http://<server_name>:2001/ (iSeries Tasks)
    - This interface is the recommended way to manage WebSphere - Express for iSeries
    - Create, delete, start, stop, install web applications, change instance/app. server settings, manage installed applications, manage virtual hosts
    - Only a subset of the WebSphere Administrative Console
  - WebSphere Administrative Console
    - Available for those that need to access Advanced settings
    - Disabled by default
    - Enable by working with Installed Applications in http://<server_name>:2001/
  - Scripts
    - QShell scripts - /QIBM/ProdData/WebASE/ASE5/bin/...
    - crtwasinst -instance iwa -server iwa -portblock 9100 -exthttp 9120
    - dspwasinst -instance iwa
    - startServer -instance iwa iwa
    - stopServer -instance iwa iwa
    - chgwassvr -instance iwa -server iwa -portblock 9200
    - dltwasinst -instance iwa

WebSphere v5.0 - Express for iSeries (continued)

- Management of iSeries Access for Web
  - ▶ <u>Do not</u> configure or remove the iSeries Access for Web configuration using the http://<server_name>:2001/ interface or WebSphere Administrative Console.
    - – Command scripts are provided to configure and remove iSeries Access for Web (discussed later)
  - ▶ You can start or stop (end) the iSeries Access for Web configuration using the Admininstrative Console
  - ▶ JVM (java virtual machine) consideration
    - – When iSeries Access for Web is configured, a property is set for the JVM of the application server that iSeries Access for Web is configured to. The property is
      - • client.encoding.override
    - – This property could conflict with other deployed web applications.
    - – The resolution to a conflict is to run the conflicting applications in different instances of WebSphere.

WebSphere v5.0 - Express for iSeries - Subsystem

STRSBS QASE5/QASE5   to start WebSphere
WRKACTJOB SBS(QASE5)   to display the subsystem

WebSphere v5.0 - Express Subsystem Ready status

Option #5 on job to work with the job
Option #10 to display the joblog, F10 for detailed messages
The Ready message is displayed
F1 on Ready message will identify what port the WebSphere Administrative console uses

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WebSphere v5.0 - Express for iSeries - iSeries Tasks

http://<server_name>:2001/

WebSphere v5.0 - Express for iSeries - iSeries Tasks

http://<server_name>:2001/   ---> select "iwa" server ---> Manage Details button
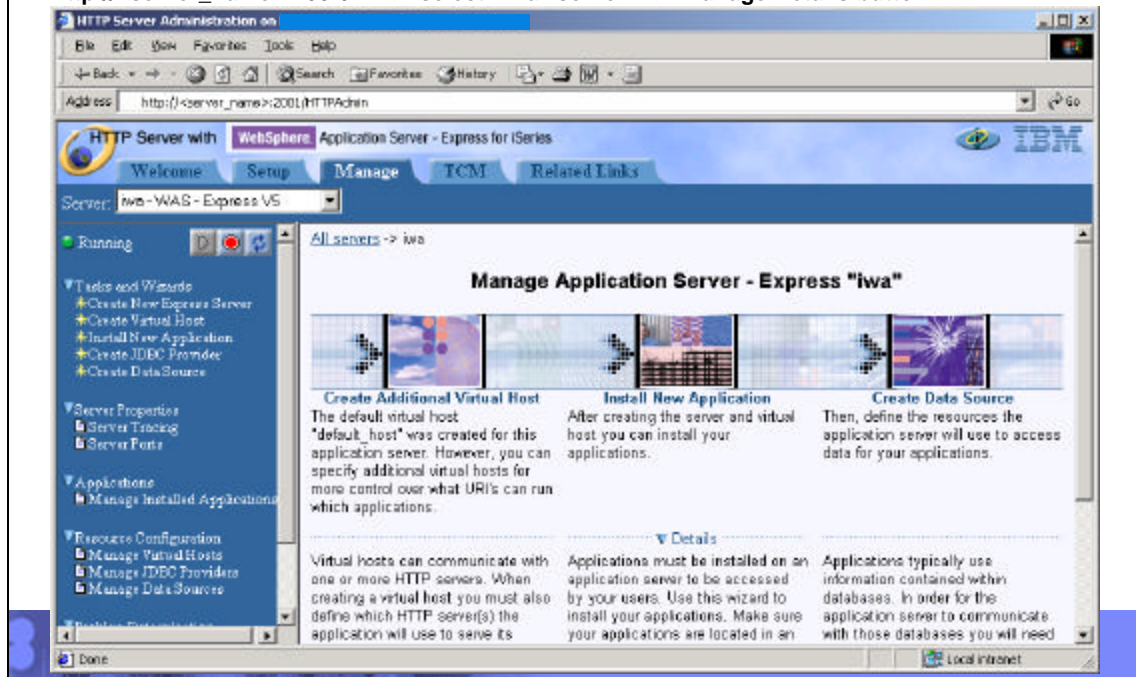
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WebSphere v5.0 - Express - HTTP port other than default

- For HTTP servers listening on a port other than the default, the port number must be added to the WebSphere server Host Aliases table.
  - ► If the HTTP server is created when the WAS instance is created and the port is specified, the interface will handle updating the port in the host alias table.
  - ► If the -exthttp parameter is specified on the crtwasinst command, the command will handle updating the port in the host alias table.

  - ► To update the host alias table...
    - Open iSeries Tasks in your browser (http://<server_name>:2001/).
    - Select either link...
      - IBM HTTP Server for AS/400
      - IBM WebSphere Application Server - Express for iSeries
    - Click the Manage tab at the top
    - Select the WAS - Express server in the Server drop down dialog
    - Click Manage Virtual Hosts
    - Select the radio button for default host, click Properties button
    - Click Add button
    - Type "*" for the IP address/host name, type the port number of your HTTP server in the Port field
    - Click Continue button
    - Click OK button
    - Restart the WebSphere Express server if it is already running

WebSphere v5.0 - Express - HTTP port other than default

http://<server_name>:2001/ ---> IBM WebSphere Application Server - Express for iSeries ---> Click the Manage tab at the top ---> Select the WAS - Express server in the Server drop down dialog
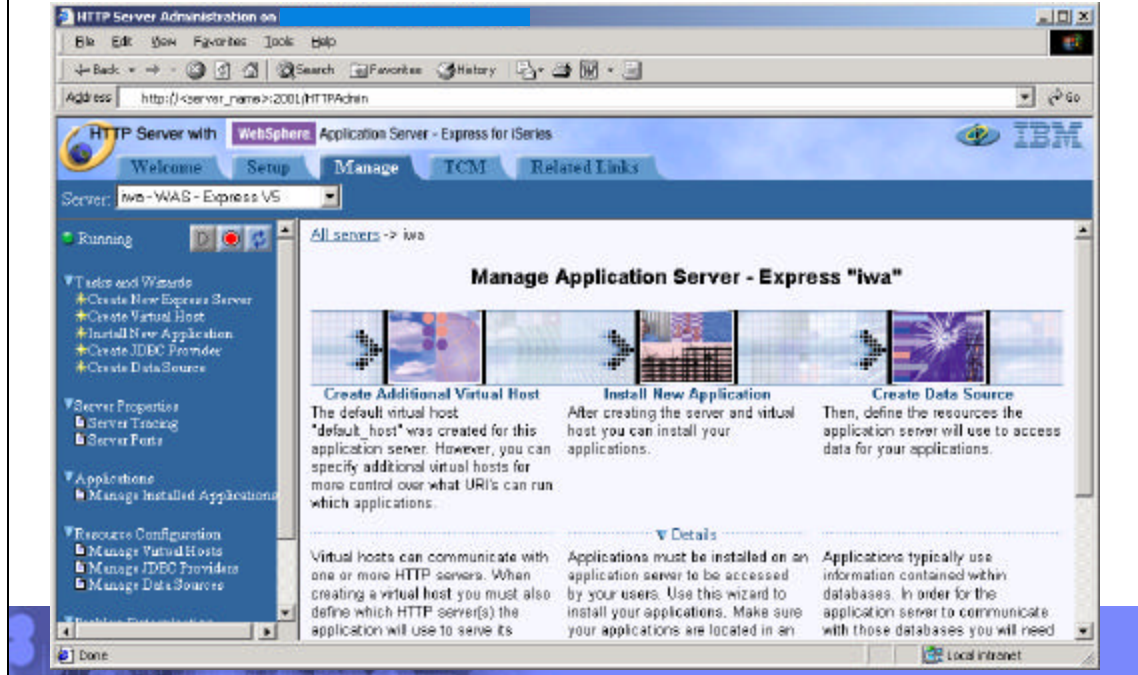
WebSphere v5.0 - Express - HTTP port other than default

Click Manage Virtual Hosts ---> Select the radio button for default host
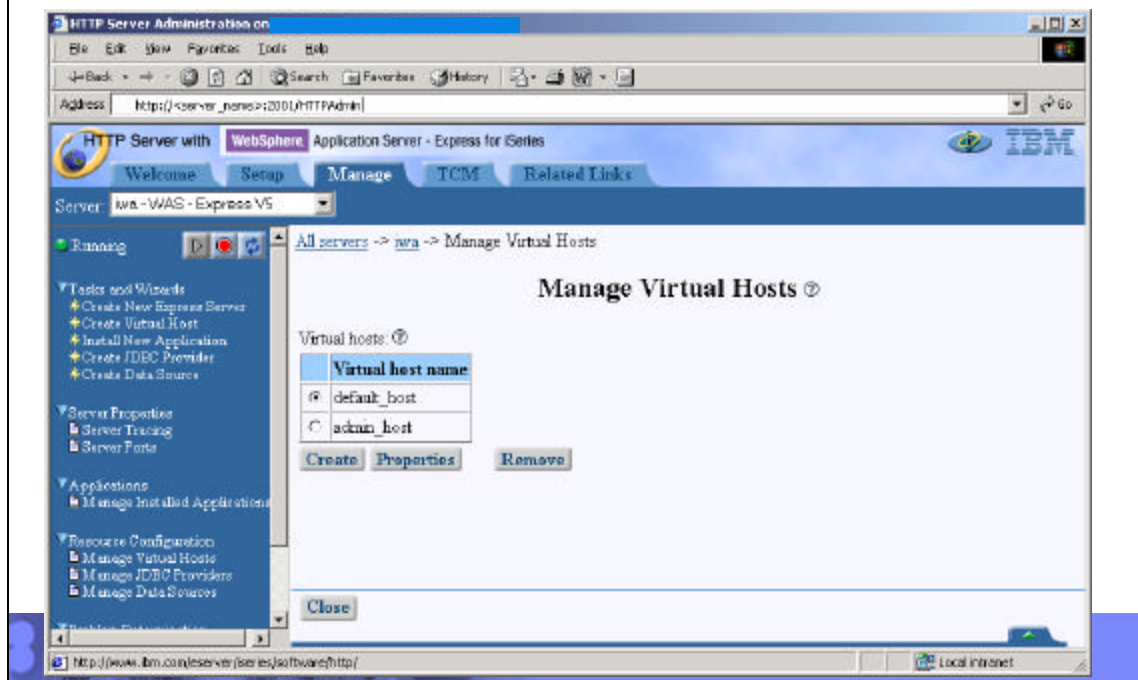
WebSphere v5.0 - Express - HTTP port other than default

Click Properties button ---> Click Add button ---> Type "*" for the IP address/host name, type the port number of your HTTP server in the Port field ---> Click Continue button --->Click OK button ---> Restart WAS server

---
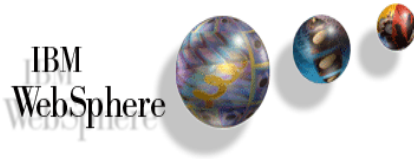
Web application server Setup

WebSphere v5.0 (Base and Network Deployment Editions)

WebSphere v5.0 (Base and Network Deployment)

- WebSphere runs within the QEJBAS5 subsystem
  - Start using server command: STRSBS QEJBAS5/QEJBAS5

- Instance
  - Contains one or more application servers
    - <u>Recommend</u> only one application server per instance, use multiple instances
  - A default instance named "default" is created
  - If using WAS Network Deployment v5.0 product, the instance **cannot** be federated/managed to the Network Deployment environment
  - Can use crtwasinst script to create additional instances
    - QSH
    - /QIBM/ProdData/WebAS5/Base/bin/crtwasinst -instance iwainst -server iwaserver -portblock 9200 -exthttp 9220
      - Note: instance name and application server do not have to be the same
  - IFS paths
    - /QIBM/ProdData/WebAS5/Base/...
    - /QIBM/UserData/WebAS5/Base/<instance_name>/...

WebSphere v5.0 (Base and Network Deployment) (continued)

- Application server
  - The default instance's application server is named "server1"
    - The application server name does not have to match the name of the instance
  - An instance contains an application server which provides the JVM environment in which web applications can be deployed and executed
  - All web applications deployed within an application server share the same JVM configuration properties/environment
  - Changes to an application server (such as deploying a web application) usually require that the application server be restarted

- Management of the WebSphere v5.0
  - WebSphere Administrative Console
    - http://<server_name>:9090/admin/
    - Check the Ready message to see what port the console is listening on or use dspwasinst script
  - Scripts
    - QShell scripts - /QIBM/ProdData/WebAS5/Base/bin/...
    - crtwasinst -instance iwainst -server iwaserver -portblock 9200 -exthttp 9220
    - dspwasinst -instance iwainst
    - startServer -instance iwainst iwaserver
    - stopServer -instance iwainst iwaserver
    - chgwassvr -instance iwainst -server iwaserver -portblock 9300
    - dltwasinst -instance iwainst

WebSphere v5.0 (Base and Network Deployment) (continued)

- Management of iSeries Access for Web
  - ▶ <u>Do not</u> configure or remove the iSeries Access for Web configuration using the WebSphere Administrative Console.
    - – Command scripts are provided to configure and remove iSeries Access for Web (discussed later)
  - ▶ You can start or stop (end) the iSeries Access for Web configuration using the Admininstrative Console
  - ▶ JVM (java virtual machine) consideration
    - – When iSeries Access for Web is configured, a property is set for the JVM of the application server that iSeries Access for Web is configured to. The property is
      - • client.encoding.override
    - – This property could conflict with other deployed web applications.
    - – The resolution to a conflict is to run the conflicting applications in different instances of WebSphere.


WebSphere v5.0 Subsystem

STRSBS QEJBAS5/QEJBAS5   to start WebSphere
WRKACTJOB SBS(QEJBAS5) to display the subsystem

WebSphere v5.0 - Subsystem Ready status

Option #5 on job to work with the job

Option #10 to display the joblog, F10 for detailed messages

The Ready message is displayed

F1 on Ready message will identify what port the WebSphere Administrative console uses

---

WebSphere v5.0 - HTTP port other than default

- For HTTP servers listening on a port other than the default, the port number must be added to the WebSphere server Host Aliases table.
  - ▶ If the -exthttp parameter is specified on the crtwasinst command, the command will handle updating the port in the host alias table.
  - ▶ To update the host alias table...
    - Open the WebSphere administrative console in your browser (http://<server_name>:<port_number>/admin/).
    - Expand Environment
    - Click Virtual Hosts
    - Click default_host
    - Click Host Aliases
    - Click New button
    - Type "*" in the Host Name field, type the port number the HTTP server listens on in the Port field
    - Click OK
    - At the top should be a message indicating the configuration change needs to be saved, click the link
    - Click the Save button
    - Under Environment, click Update Web Server Plugin
    - Click OK
    - Click Logout
    - Restart the WebSpere Express server if it is already running

WebSphere v5.0 - HTTP port other than default

http://<server_name>:<port_number>/admin/ ---> Expand Environment ---> Click Virtual Hosts
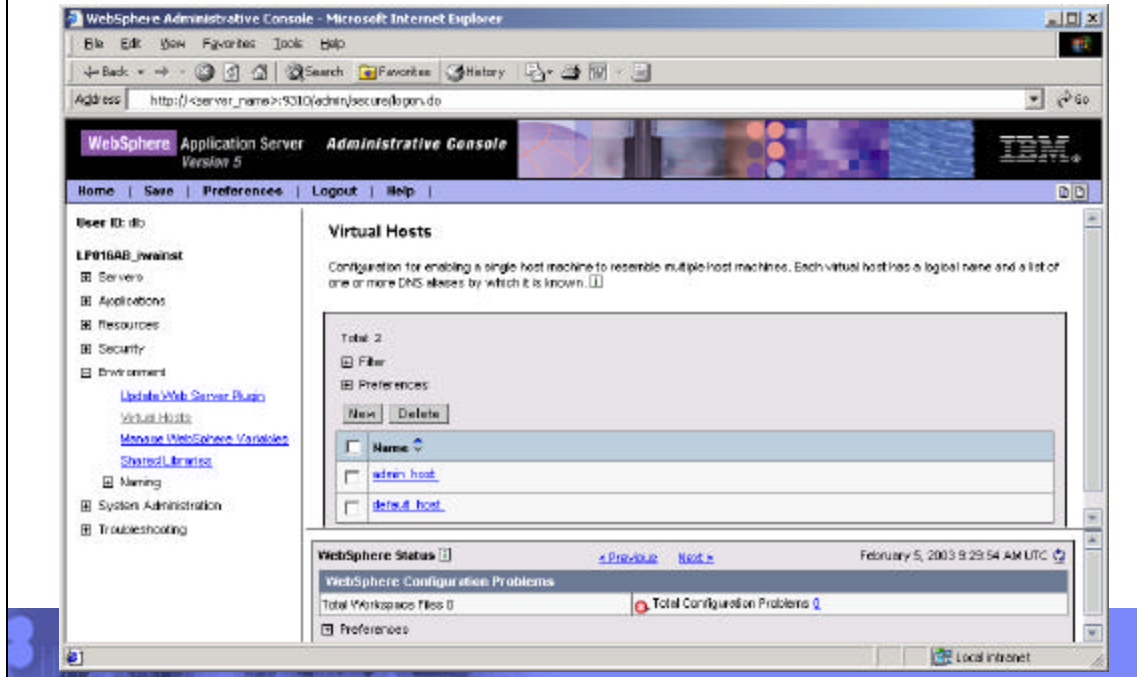
WebSphere v5.0 - HTTP port other than default

Click default_host ---> scroll down
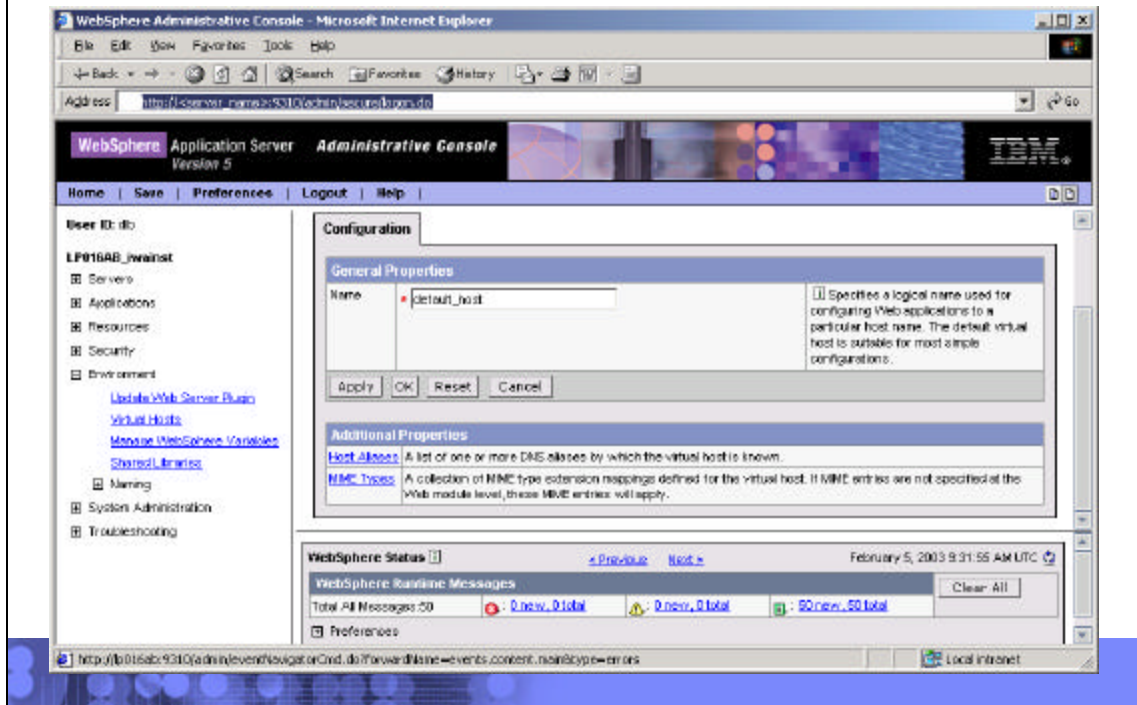
WebSphere v5.0 - HTTP port other than default

Click Host Aliases   --->   Click New button

IBM
WebSphere
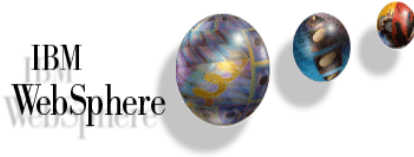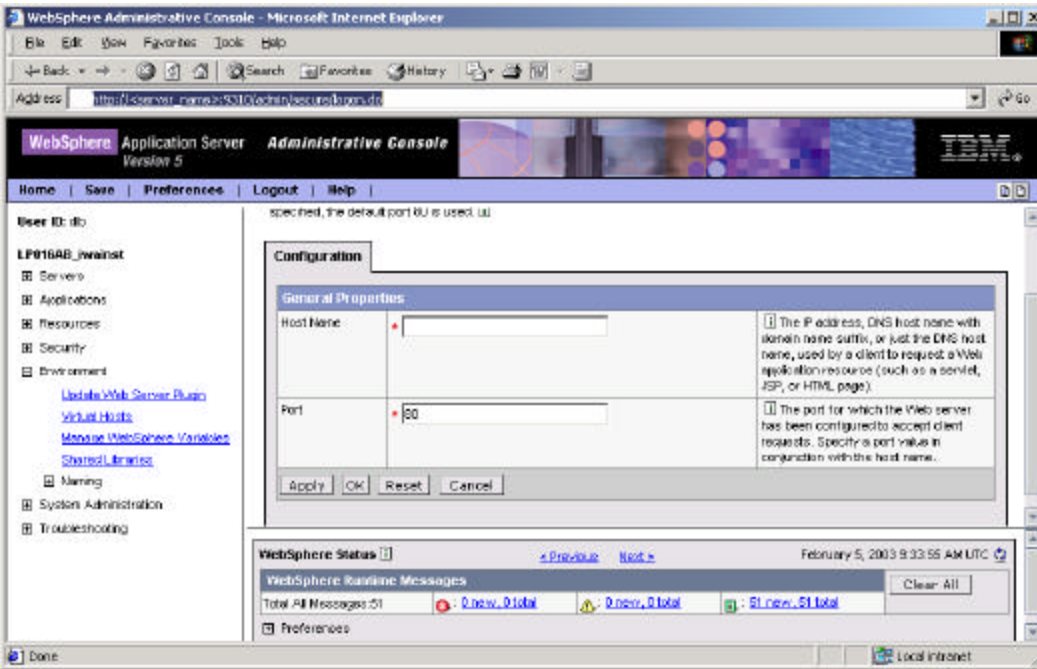
Web application server Setup

WebSphere v4.0 Advanced Edition (AE)

WebSphere AE

- WebSphere runs within the QEJBADV4 subsystem
  - Start using server command: STRSBS QEJBADV4/QEJBADV4
  - A monitor job, QEJBMNTR, starts an administrative server job
  - An administrative server job, QEJBADMIN, which completes administrative requests such as creating, removing, starting, stopping, and modifying WebSphere resources such as application servers, servlet engines, and enterprise beans
  - Do Not end the QEJBADV4 system using ENDSBS QEJBADV4. You must use the WebSphere Administrative console, or other WebSphere tools, to end the subsystem.
  - Changes to WebSphere AE configuration require that it is running and in a Ready state.

WebSphere AE (continued)

- Management of the WebSphere AE environment
  - The WebSphere Administrative Console can be used to view and modify the WebSphere configuration.
  - A Windows application that runs on Windows NT or 2000.
  - You should not configure or remove the iSeries Access for Web configuration using the Administrative Console.
  - You can start or stop (end) the iSeries Access for Web configuration using the Admininstrative Console
  - CL commands are provided to configure and remove iSeries Access for Web (discussed later).

WebSphere AE - Subsystem

STRSBS QEJBADV4/QEJBADV4   to start WebSphere

WRKACTJOB SBS(QEJBADV4)   to display the subsystem
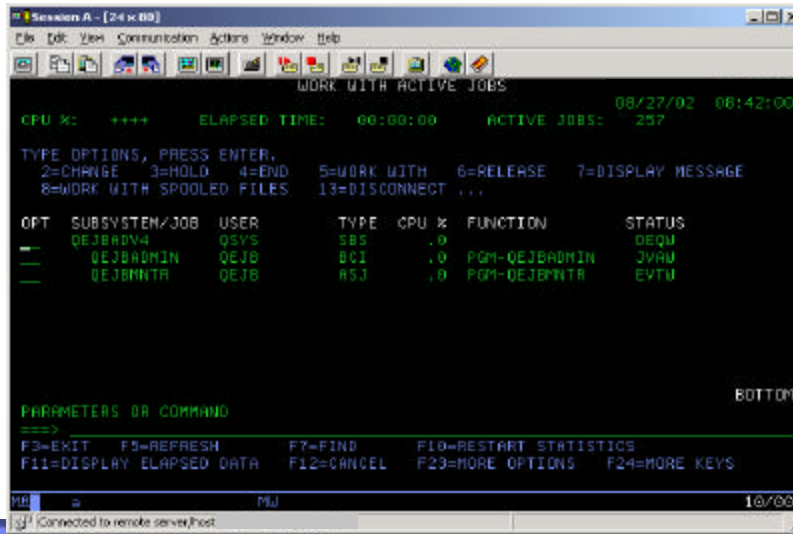
WebSphere AE - Subsystem Ready status

Option #5 on QEJBADMIN job to work with the job

Option #10 to display the joblog

The Ready message is displayed
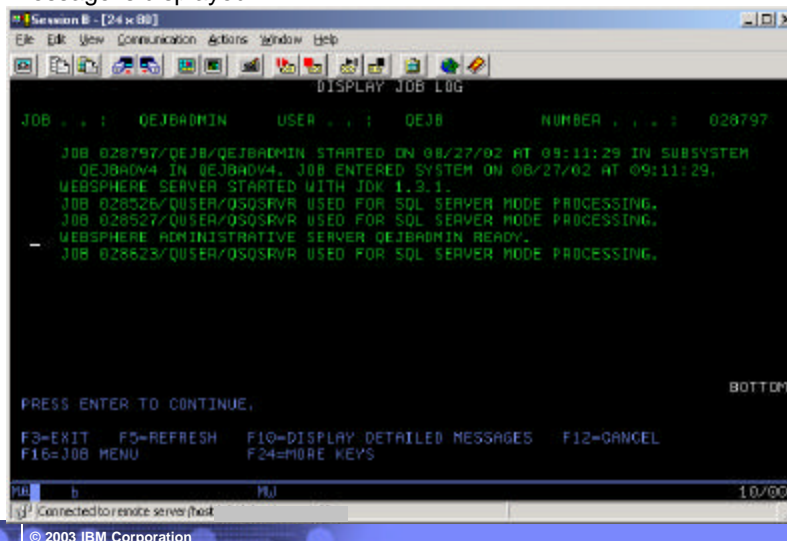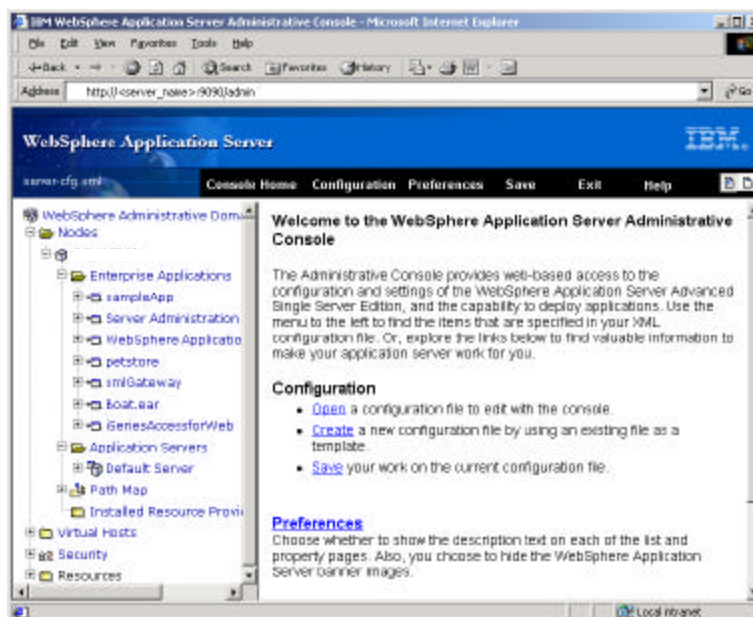
WebSphere AE - Administrative Console
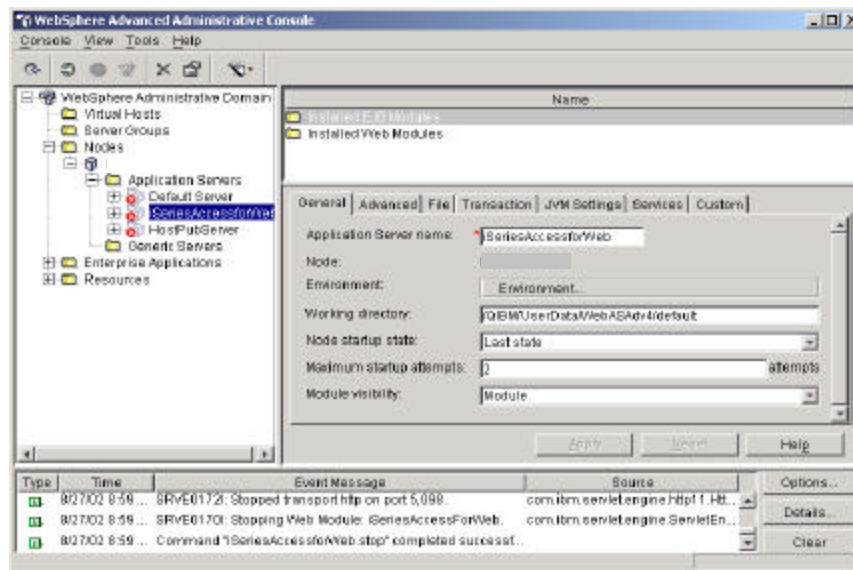
WebSphere AE - HTTP port other than default

- For HTTP servers listening on a port other than the default, the port number must be added to the WebSphere Host Aliases table.
  - ▶ Open the WebSphere Administrative console on your Windows workstation.
  - ▶ Expand the WebSphere Administrative Domain.
  - ▶ Select Virtual Hosts.
  - ▶ Click the Add button.
  - ▶ Enter *:<port_number>
  - ▶ Click Apply button.
  - ▶ Expand Nodes, right click on your node name, select Regen Webserver Plugin
  - ▶ Right click on your node name, select Stop to stop the administrative server
  - ▶ Start WebSphere administrative server
    - ▬ Option 1
      - • Run server command: QSH
      - • Run server command: cd /QIBM/ProdData/WebASAdv4/bin
      - • Run server command: strwasinst -instance <instance_name>   <---- which is usually "default"
    - ▬ Option 2
      - • Run server command: ENDSBS QEJBADV4   (assuming the Stop above ended all jobs under QEJBADV4 subsystem)
      - • Run server command: STRSBS QEJBADV4/QEJBADV4

WebSphere AE - HTTP port other than default (continued)
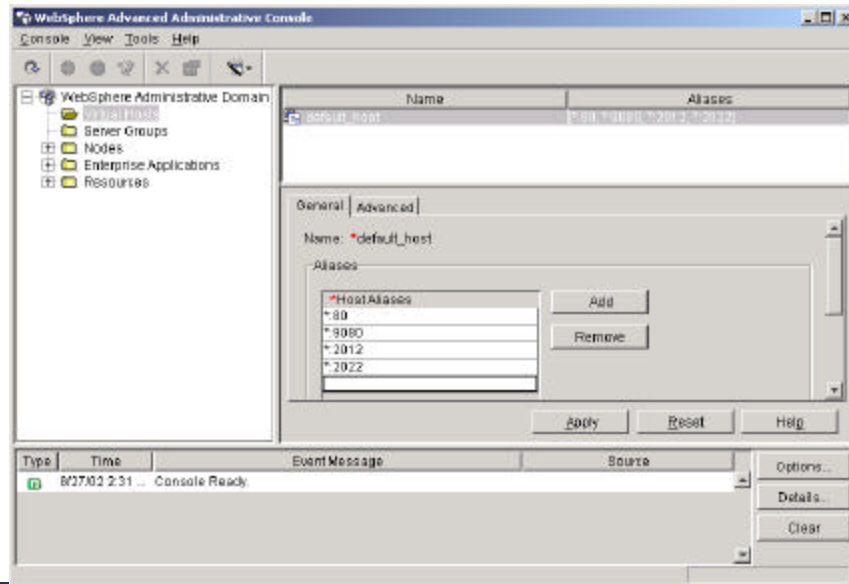
WebSphere AE - HTTP port other than default (continued)

IBM
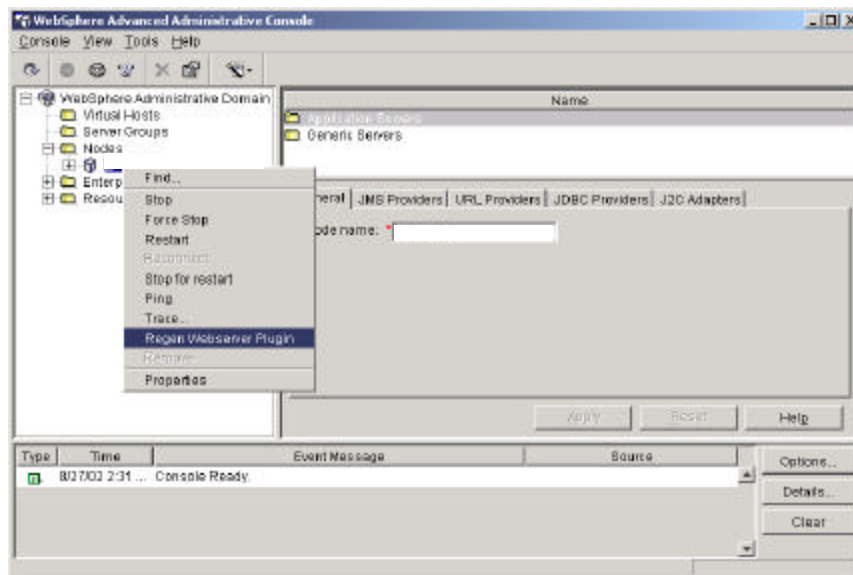
Web application server Setup

WebSphere v4.0 Advanced Single Server Edition (AEs)

IBM

WebSphere AEs

- WebSphere runs within the QEJBAES4 subsystem
  - ► Start using server command: STRSBS QEJBAES4/QEJBAES4
  - ► Each administrative instance contains an application server.
    - The default application server will run as a job called DEFAULT_SE under the QEJBAES4 subsystem.
  - ► All applications run in the same application server, in the same process.
  - ► The subsystem can be ended using server command: ENDSBS QEJBAES4
  - ► When WebSphere AEs starts, the configuration is read and loaded. Changes to the configuration require that WebSphere AEs be restarted.

WebSphere AEs (continued)

- Management of the WebSphere AEs environment
  - ▶ The WebSphere Administrative Console can be used to view and modify the WebSphere configuration.
  - ▶ The console is a web application invoked using URL: http://<server_name>:9090/admin/
  - ▶ You should not configure or remove the iSeries Access for Web configuration using the Administrative Console.
  - ▶ You can start or stop (or end) the iSeries Access for Web application using the Administrative Console.
  - ▶ CL commands are provided to configure and remove iSeries Access for Web (discussed later).

WebSphere AEs - Subsystem

STRSBS QEJBAES4/QEJBAES4   to start WebSphere

WRKACTJOB SBS(QEJBAES4)   to display the subsystem

WebSphere AEs - Subsystem Ready status

Option #5 on DEFAULT_SE job to work with the
job
Option #10 to display the joblog
The Ready

WebSphere AEs - Administrative Console

WebSphere AEs - JVM Settings update

- For iSeries Access for Web to function properly, an update must be made to the "Default Server" application server.
  - Open a web browser to URL: http://<server_name>:9090/admin/
  - Expand...   Nodes--->Your server name--->Application Servers--->Default Server--->Process Definition.
  - Select JVM Settings.
  - Scroll down to Advanced Settings, select System Properties.
  - Click the New button.
  - Enter
    - Name field: client.encoding.override
    - Value field: iso-8859-1
  - Click OK, Click OK again
  - At the top, click Save, click OK to save the changes.

WebSphere AEs - JVM Settings update (continued)

  - Stop the WebSphere administrative server
    - Option 1
      - On the left, select Application Servers
      - Default Server should be listed, click Stop, click OK
    - Option 2
      - Run server command: ENDSBS QEJBAES4
  - Start WebSphere administrative server
    - Option 1
      - Run server command: QSH
      - Run server command: cd /QIBM/ProdData/WebASAEs4/bin
      - Run server command: strwasinst -instance <instance_name>   <---- which is usually "default"
    - Option 2
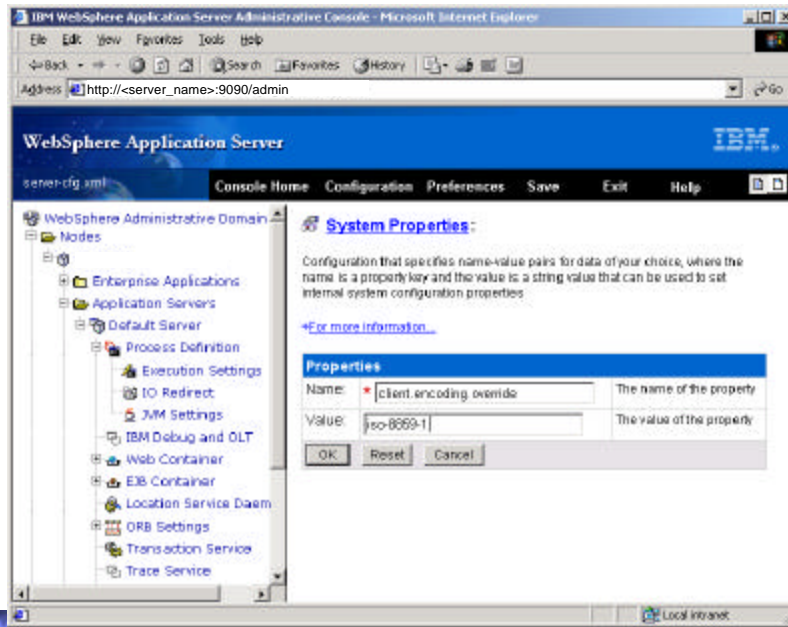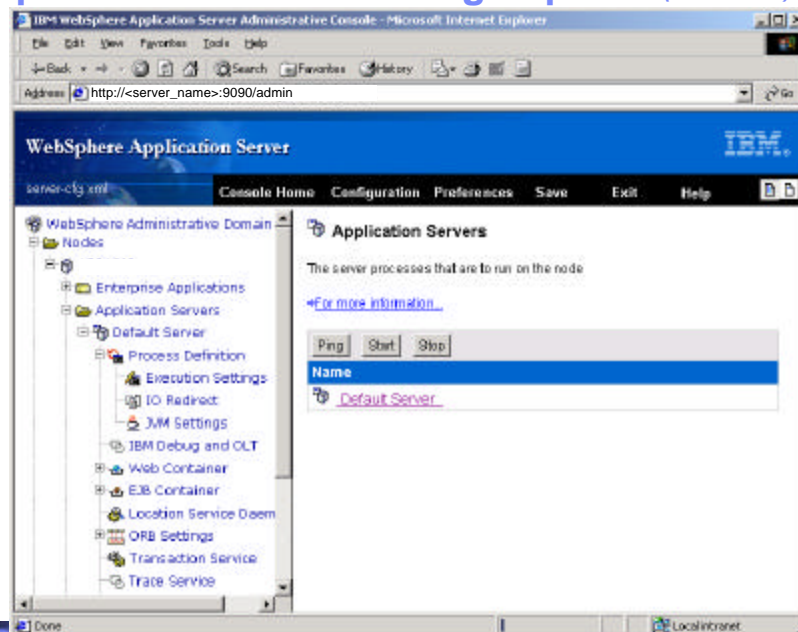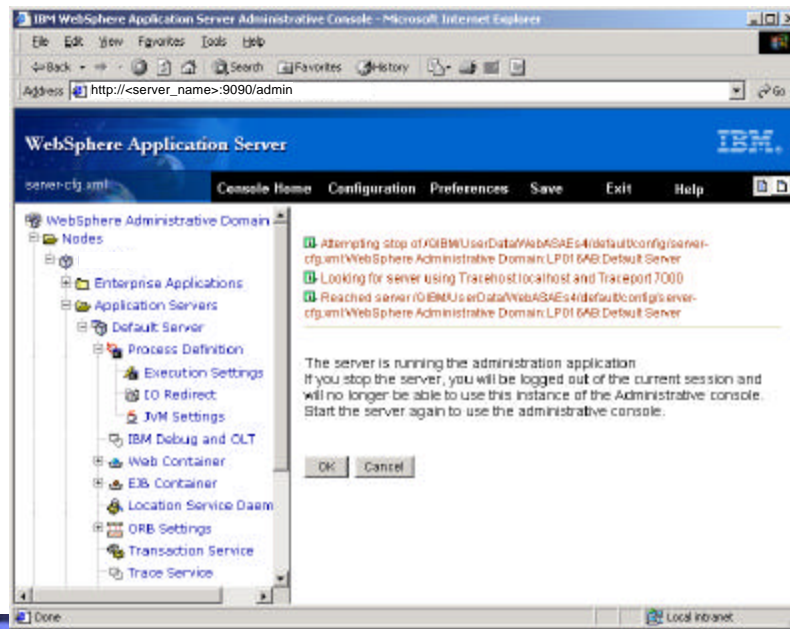   - Run server command: STRSBS QEJBAES4/QEJBAES4

WebSphere AEs - JVM Settings Update *(continued)*
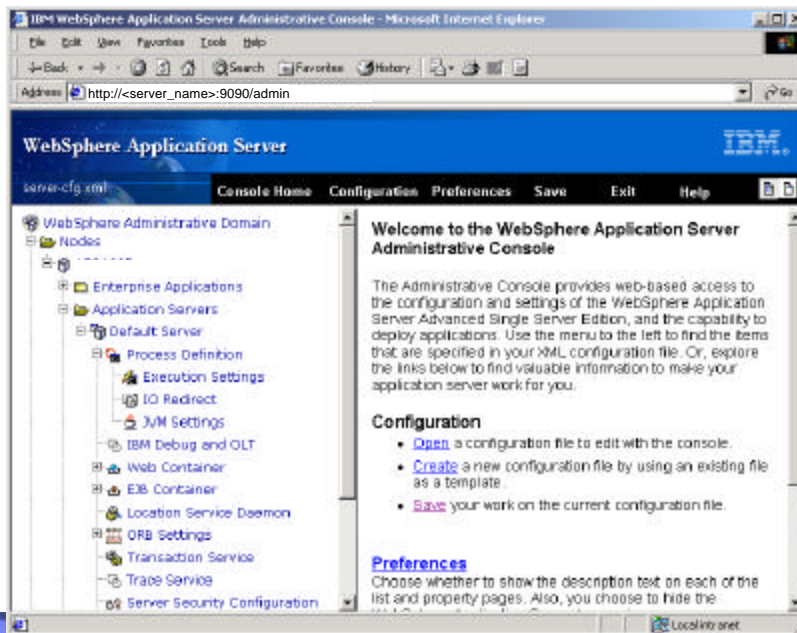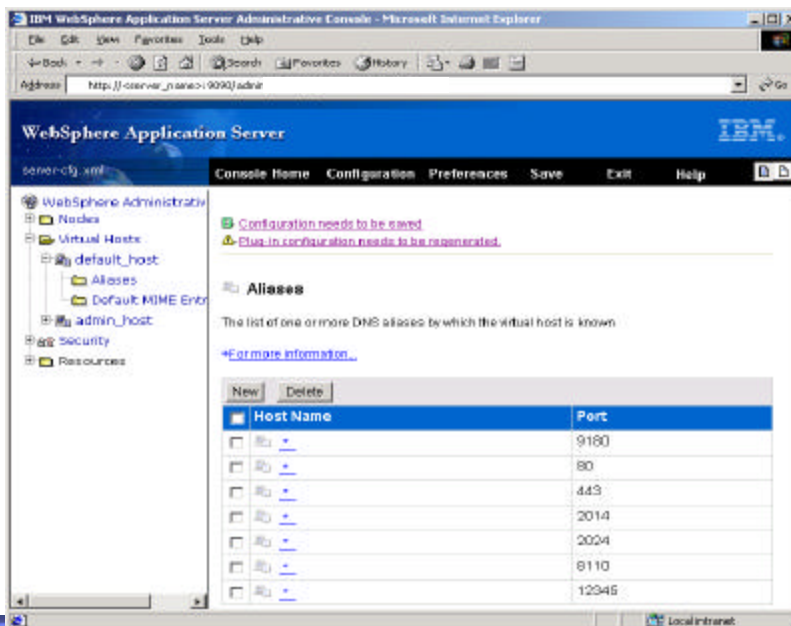
WebSphere AEs - JVM Settings update *(continued)*
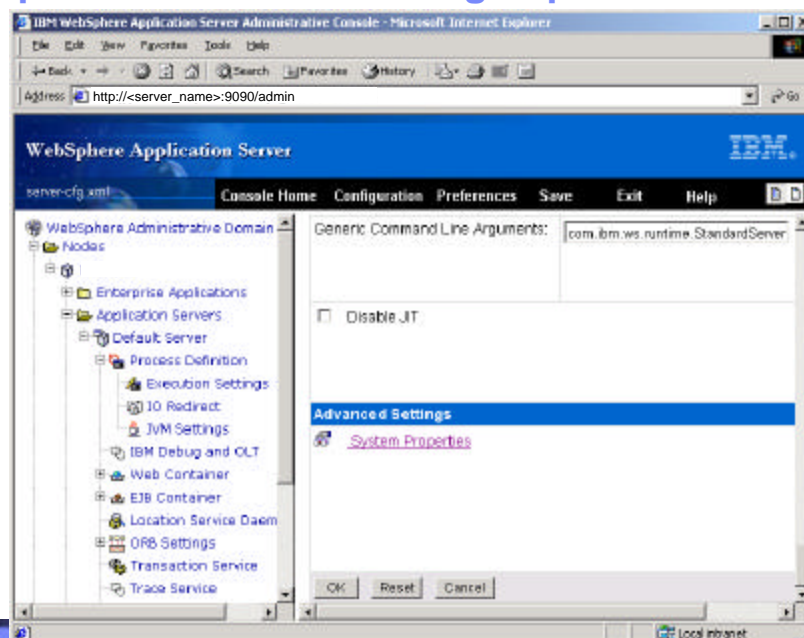
WebSphere AEs - JVM Settings update *(continued)*

WebSphere AEs - JVM Settings update *(continued)*

WebSphere AEs - JVM Settings update *(continued)*

WebSphere AEs - HTTP port other than default

- For HTTP servers listening on a port other than the default, the port number must be added to the WebSphere Host Aliases table.
  - Open the WebSphere Administrative console in a browser.
    - http://<server_name>:9090/admin
  - Expand Virtual Hosts, expand default_host, select Aliases.
  - Click the New button.
  - Enter * in the Host Name field
  - Enter <port number> in the Port field.
  - Click OK button.
  - At the top, select the link that says "Plug-in configuration needs to be regenerated".
  - Click Generate button.
  - When frame turns blank, select Save at the top, select OK button.

WebSphere AEs - HTTP port other than default *(continued)*

► Stop the WebSphere administrative server
- Option 1
  • Expand Nodes, expand your server name, select Application Servers.
  • Default Server should be listed, select Stop button, select OK button.
- Option 2
  • Run server command: ENDSBS QEJBAES4 OPTION(*IMMED)

► Start WebSphere administrative server
- Option 1
  • Run server command: QSH
  • Run server command: cd /QIBM/ProdData/WebAEs4/bin
  • Run server command: strwasinst -instance <instance_name>   <----
    which is usually "default"
- Option 2
  • Run server command: STRSBS QEJBAES4/QEJBAES4

WebSphere AEs - HTTP port other than default *(continued)*

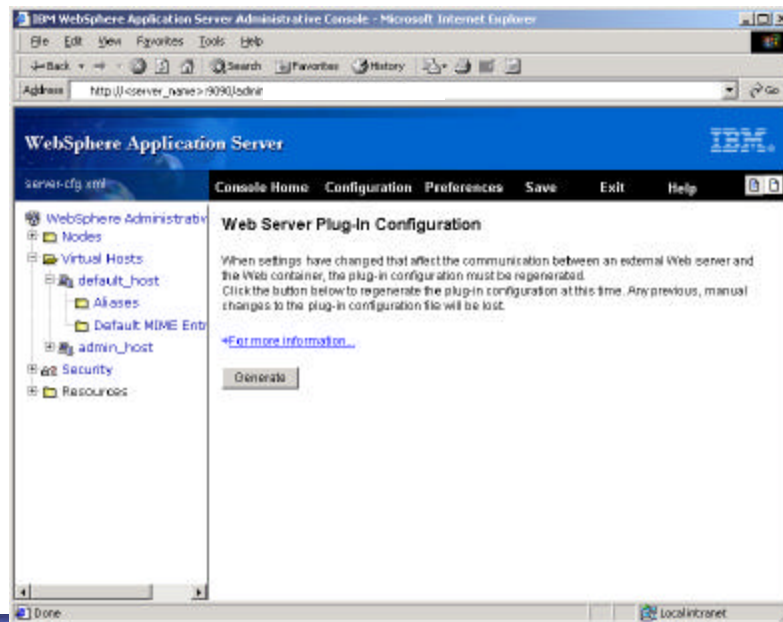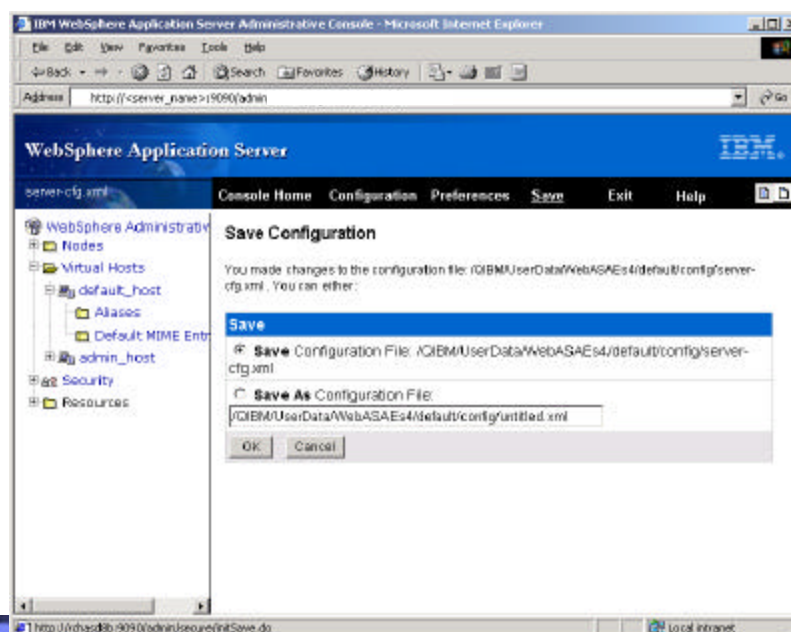## WebSphere AEs - HTTP port other than default *(continued)*
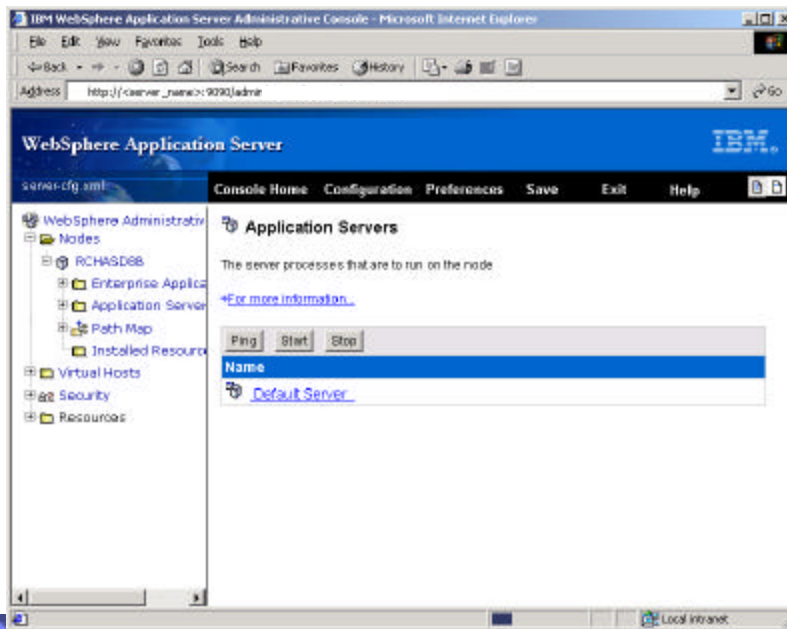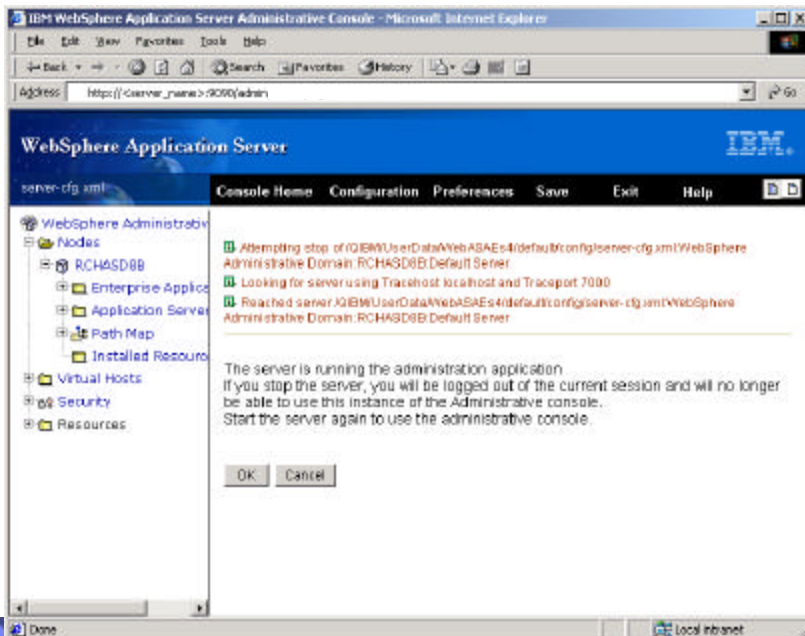

WebSphere AEs - HTTP port other than default *(continued)*

WebSphere AEs - HTTP port other than default *(continued)*

WebSphere AEs - HTTP port other than default *(continued)*

WebSphere AEs - HTTP port other than default *(continued)*

WebSphere AEs - HTTP port other than default *(continued)*

HTTP Server for iSeries

Web application server Setup
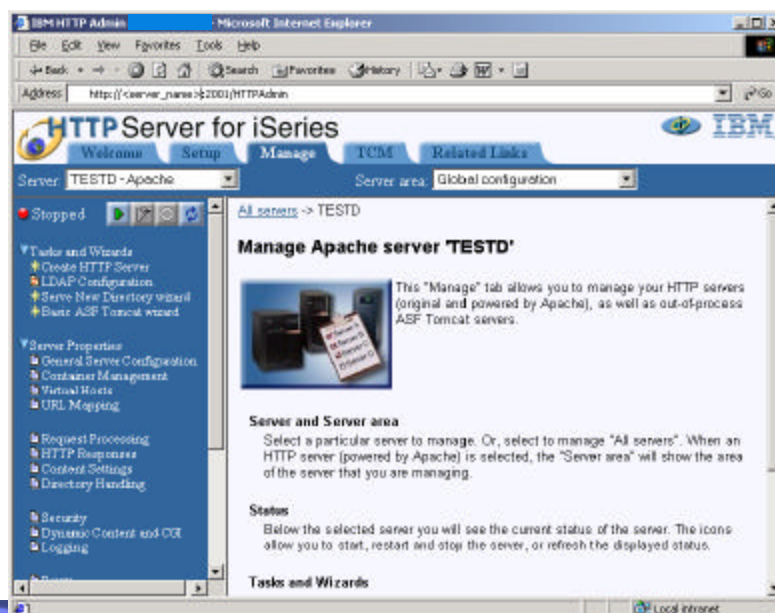
ASF Tomcat

ASF Tomcat

- ASF Tomcat runs within the QSYSWRK subsystem.

- ASF Tomcat is delivered as a part of the 5722-DG1 IBM HTTP Server product.

- The run time environment consists of creating and configuring...
  - ► An Apache HTTP server
  - ► An ASF Tomcat server

- Management of the ASF Tomcat environment
  - ► The Apache HTTP server and ASF Tomcat server are both managed using the IBM HTTP Server administration interface at   http://<server_name>:2001
 - ► In V5R2, ASF Tomcat servers can now be started and ended using the STRTCPSVR and ENDTCPSVR commands.

ASF Tomcat - Apache HTTP server setup

- Create an Apache HTTP server using the Create HTTP server wizard
  - ▶ Run server command: STRTCPSVR *HTTP HTTPSVR(*ADMIN)
  - ▶ Open browser to http://<server_name>:2001
  - ▶ Select the Create HTTP Server link and step through the wizard.

- Configure the Apache HTTP server to run ASF Tomcat
  - ▶ Using the HTTP server administration interface, Manage the settings for the Apache HTTP server.
  - ▶ Select the ASF Tomcat Settings link.
  - ▶ Select the Enable servlets for this HTTP Server checkbox.
  - ▶ Unselect the Enable an "in-process" servlet engine checkbox.
  - ▶ Select the Enable "out-of-process" servlet engine connections checkbox.
  - ▶ Select the Add button under the "out-of-process workers".
  - ▶ Within the Hostname:Port field, change the 8009 port to a port that is unused.
  - ▶ Within the URLs (Mount points) field, enter /webaccess/*
  - ▶ Select the Continue button, ignore any error message that is displayed, select OK.

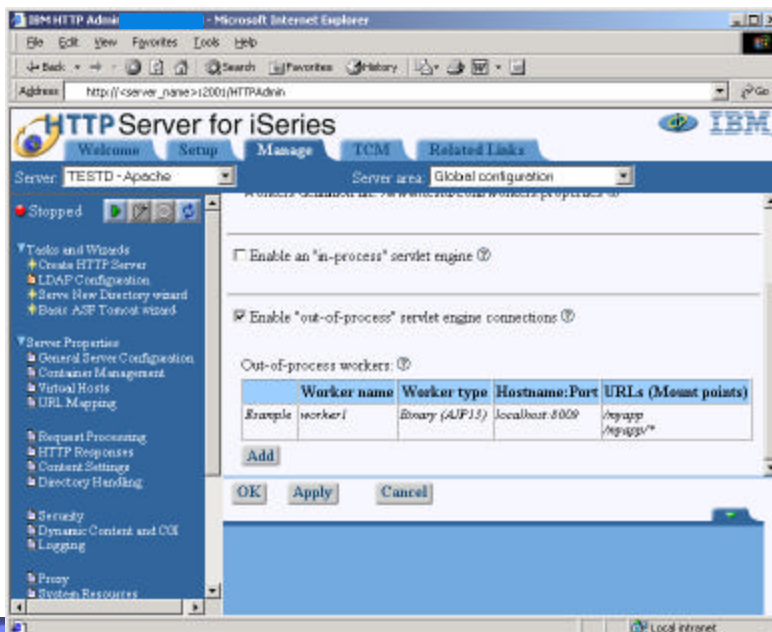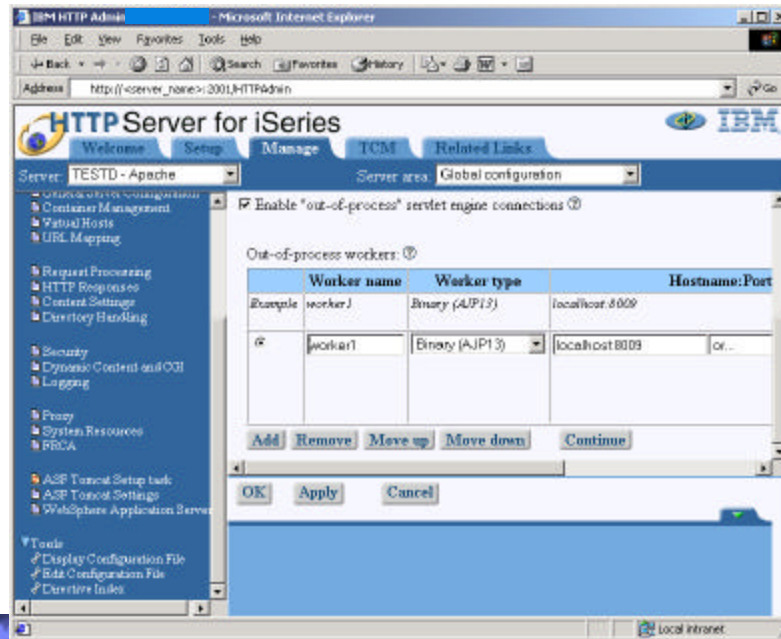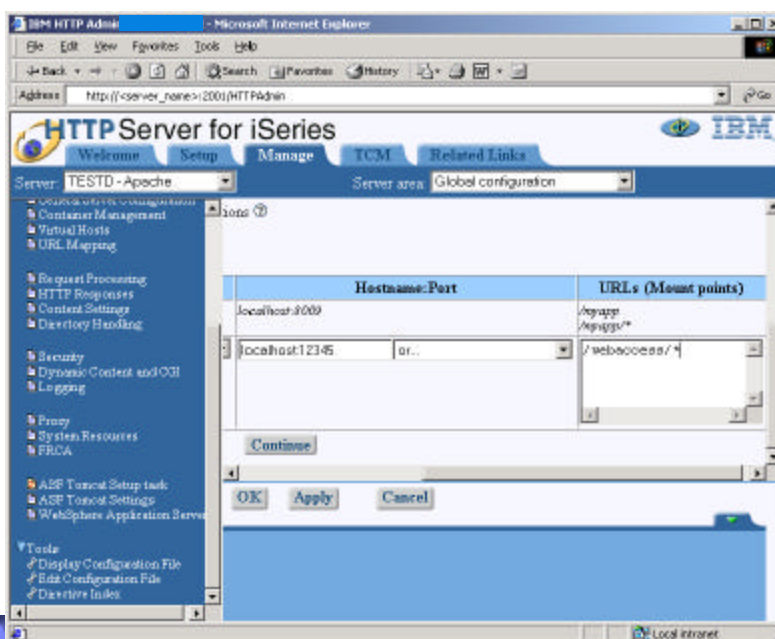# ASF Tomcat - Apache HTTP server setup *(continued)*

ASF Tomcat - Apache HTTP server setup *(continued)*
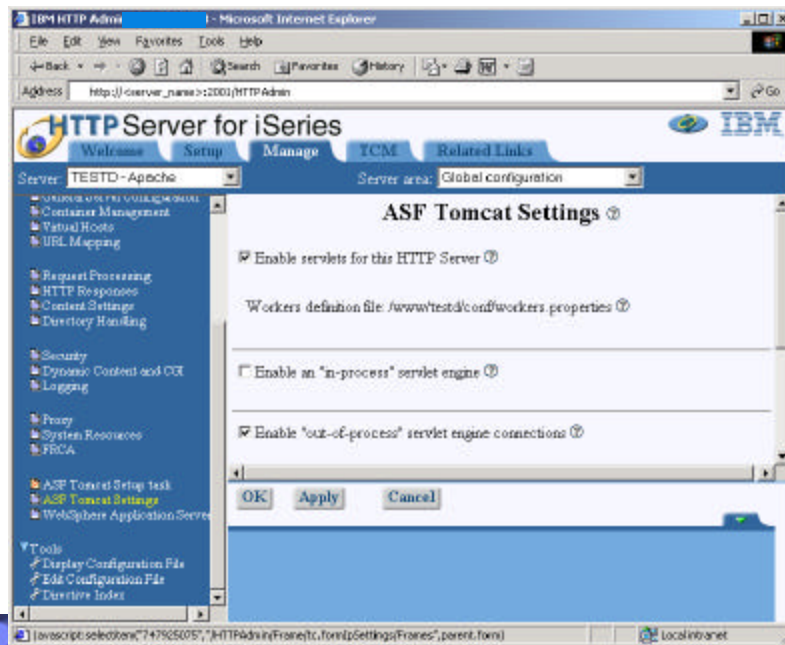
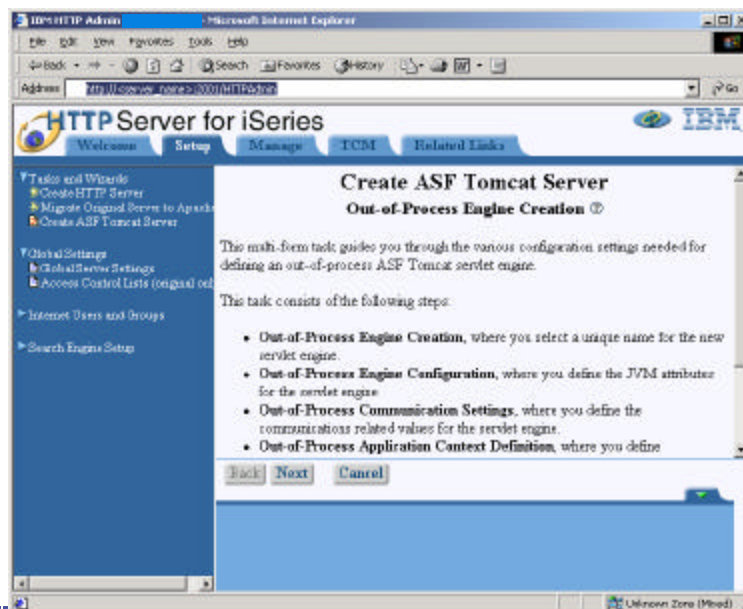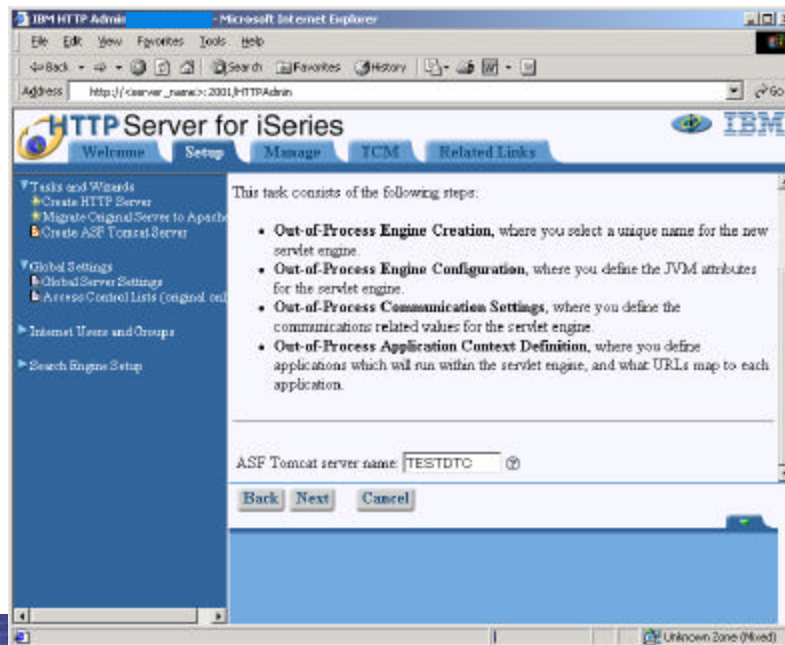## ASF Tomcat - Apache HTTP server setup *(continued)*

ASF Tomcat - Apache HTTP server setup *(continued)*

ASF Tomcat - Apache HTTP server setup *(continued)*

ASF Tomcat - Tomcat server setup

- Create an ASF Tomcat server
  - ► Run server command: STRTCPSVR *HTTP HTTPSVR(*ADMIN)
  - ► Open browser to http://<server_name>:2001
  - ► On the Setup tab, select Create ASF Tomcat Server
  - ► Enter an ASF Tomcat server name, select Next.
  - ► No changes on Out-of-Process Engine Configuration page, select Next.
    - – Make note of values in "Server userid" and "ASF Tomcat home" fields
  - ► On Out-of-Process Communication Settings page change port field to that specified when the Apache HTTP server was created, select Next.
  - ► On Out-of-Process Application Context Definition page, select Add button
    - – Enter /webaccess in URL path field.
    - – Enter webapps/webaccess in Application base directory field.
    - – Select Continue and ignore any error messages
    - – Select Next
  - ► Select Finish to complete the creation/configuration of the ASF Tomcat server.
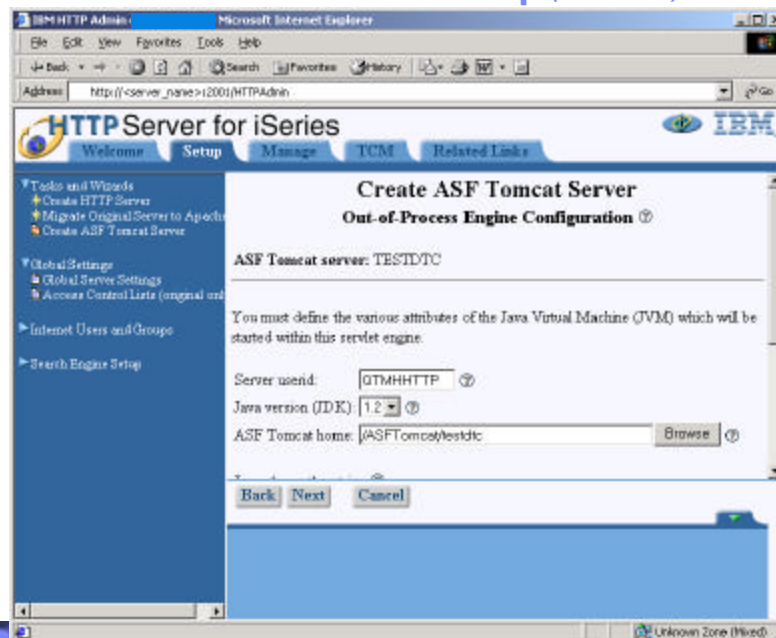
ASF Tomcat - Tomat server setup *(continued)*

ASF Tomcat - Tomat server setup *(continued)*
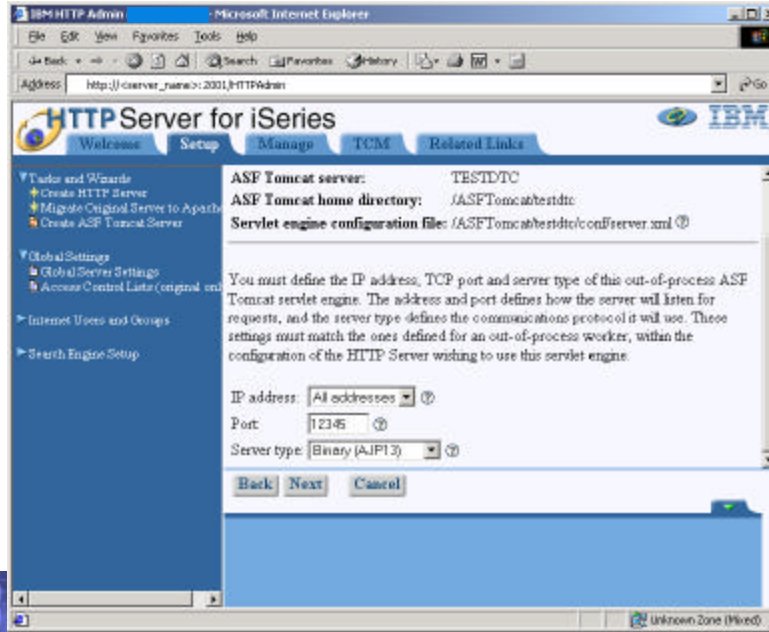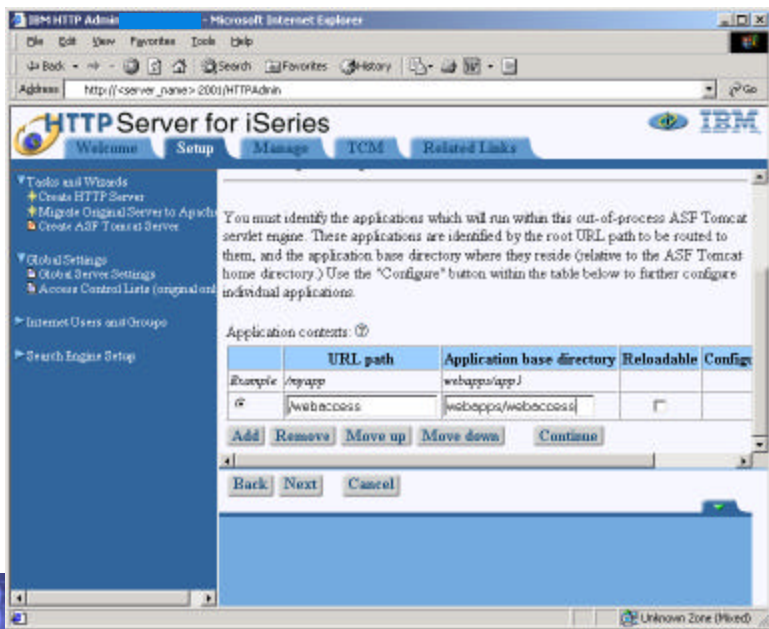
ASF Tomcat - Tomat server setup *(continued)*

ASF Tomcat - Tomat server setup *(continued)*
Out-of-Process Communication Settings

ASF Tomcat - Tomat server setup *(continued)*
Out-of-Process Application Context Definition

What needs to be done next?

- You need to do the following in this order:
  - ✔ Decide what web application server environment to run within.
  - ✔ Install iSeries Access for Web on your server
  - ✔ Verify, load, apply any additional PTFs you may need
    - **Cumulative PTF package**
    - **WebSphere, ASF Tomcat, HTTP Server for iSeries**
    - **iSeries Access for Web**
  - ✔ Set up HTTP for Websphere.
  - ✔ Set up the web application server.
    - **WebSphere**
    - **ASF Tomcat**
  - ❑ Configure and Start iSeries Access for Web.
  - ❑ Install/configure/start WebSphere Host Publisher on your server.
  - ❑ Verify the installation and configuration.

Configuring & Starting iSeries Access for Web

iSeries Access for Web

- Commands are provided to deploy and manage iSeries Access for Web
  - ► Ease the complexity of deploying a web application
  - ► Check dependencies
  - ► Invoke appropriate WebSphere tool to deploy an application
  - ► Perform additional setup
  - ► Setup UserData structure

- WebSphere 4.0 AE & AEs/ASF Tomcat
  - ► CL commands found in library QIWA2
    - CFGACCWEB2   Configure iSeries Access for Web into the web application server
    - STRACCWEB2   Start the iSeries Access for Web configuration*
    - ENDACCWEB2   End a running iSeries Access for Web configuration*
    - RMVACCWEB2   Remove the iSeries Access for Web configuration

- WebSphere v5.0 (Base and ND)/WebSphere v5.0 - Express for iSeries
  - ► iSeries Access for Web support added in PTF SI06967
  - ► CL commands could not be updated
  - ► QShell scripts provided in /QIBM/ProdData/Access/Web2/install
    - cfgaccweb2 Configure iSeries Access for Web into the web application server
    - straccweb2   Start the iSeries Access for Web configuration
    - endaccweb2   End a running iSeries Access for Web configuration
    - rmvaccweb2   Remove the iSeries Access for Web configuration   * only used for WebSphere v4.0 Advanced Edition

iSeries Access for Web - Configuring

- Run the CFGACCWEB2 command to configure iSeries Access for Web
  - ► Before iSeries Access for Web can be used, it must be configured using this command.
  - ► This command uses input configuration parameters to add application server and servlet configuration information to the web application server.
  - ► No updates will be made to the HTTP server instance configuration.

- WebSphere v5.0 - Express for iSeries specifics
  - ► The QAES5 subsystem must be running before running cfgaccweb2
  - ► The application server must be running before running cfgaccweb2
  - ► The application server (or subsystem) will need to be restarted after cfgaccweb2

- WebSphere v5.0 (Base and ND) specifics
  - ► The QEJBAS5 subsystem must be running before running cfgaccweb2
  - ► For Network Deployment environment
    - WebSphere v5.0 Base edition must be installed
    - Websphere instance **cannot** be federated/managed to the Network Deployment environment
  - ► The application server must be running before running cfgaccweb2
  - ► The application server (or subsystem) will need to be restarted after cfgaccweb2

- WebSphere v4.0 Advanced Edition specifics
  - ► The QEJBADV4 subsystem must be running before running CFGACCWEB2

iSeries Access for Web - Configuring (continued)

- WebSphere v4.0 Advanced Single Server Edition specifics
  - ► If the QEJBAES4 subsystem is running when CFGACCWEB2 is run, the subsystem must be restarted to pick up the changes CFGACCWEB2 makes.

- ASF Tomcat specifics
  - ► If the Tomcat server is running when CFGACCWEB2 is run, it must be restarted to pick up the changes CFGACCWEB2 makes.

---

iSeries Access for Web - Configuring Examples

- WebSphere v5.0 - Express for iSeries
  - ► This command configures iSeries Access for Web in an instance called myinst that contains an application server called myserver
    - – QSH
    - – cd /QIBM/ProdData/Access/Web2/install
    - – cfgaccweb2 -appsvrtype *WAS50EXP -wasinst myinst -appsvr myinst
      - Note: The *WAS50EXP value is case sensitive
      - Note: The instance name and application server name should be the same

- WebSphere v5.0 (Base and ND)
  - ► This command configures iSeries Access for Web in the default instance and application server
    - – QSH
    - – cd /QIBM/ProdData/Access/Web2/install
    - – cfgaccweb2 -appsvrtype *WAS50 -wasinst default -appsvr server1
      - Note: The *WAS50 value is case sensitive

- WebSphere v4.0 Advanced Edition
  - ► This command configures iSeries Access for Web for the default WebSphere administrative instance. The servlet engine uses port 5098.

    QIWA2/CFGACCWEB2 APPSVRTYPE(*WAS40ADV) PORT(5098) WASINST(*DEFAULT)

iSeries Access for Web - Config. Examples (continued)

- WebSphere v4.0 Advanced Single Server Edition
  - ► This command configures iSeries Access for Web for the default WebSphere administrative instance.

    QIWA2/CFGACCWEB2 APPSVRTYPE(*WAS40SNG) WASINST(*DEFAULT)

- ASF Tomcat
  - ► This command configures iSeries Access for Web for the TESTTC Tomcat server and inputs the path that the Tomcat server was installed to and the user ID it runs under.

    - QIWA2/CFGACCWEB2 APPSVRTYPE(*ASFTOMCAT) TCSVRNAME(TESTTC) TCHOMEDIR('/asftomcat/testtc') TCUSRPRF(QTMHHTTP)

iSeries Access for Web - Verify configuration
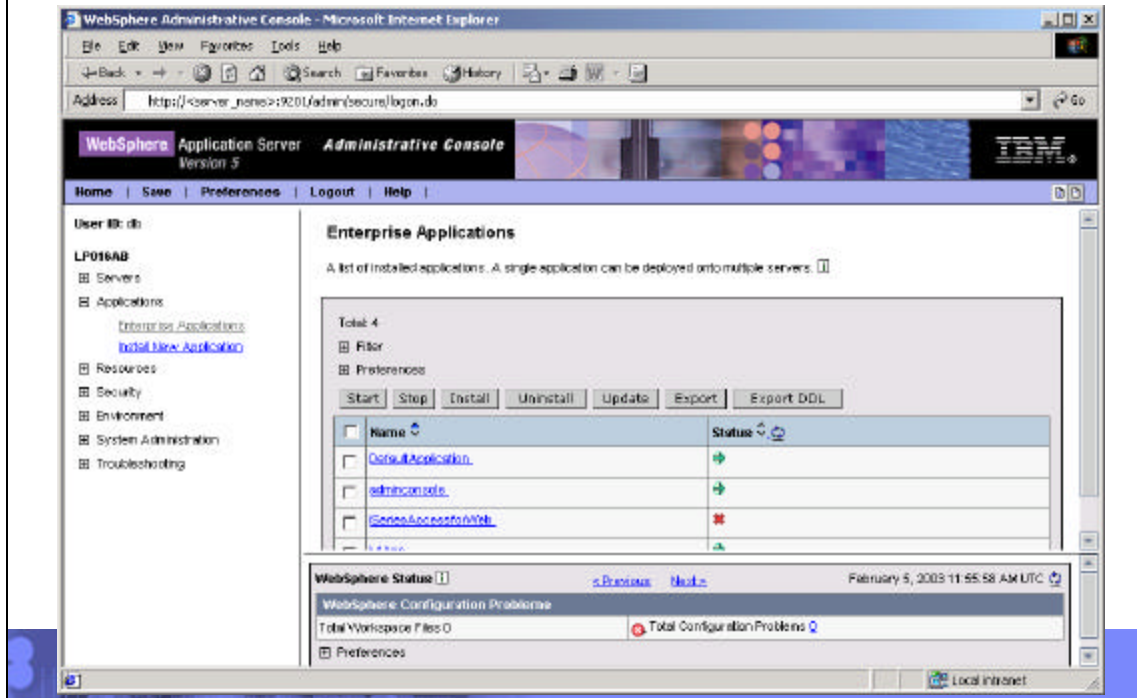### WebSphere v5.0 - Express for iSeries configuration verification using iSeries Tasks interface
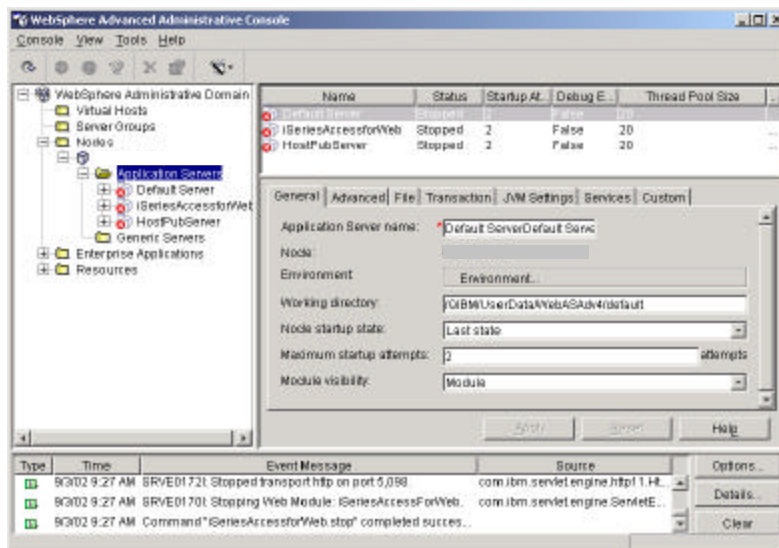
iSeries Access for Web - Verify configuration (continued)

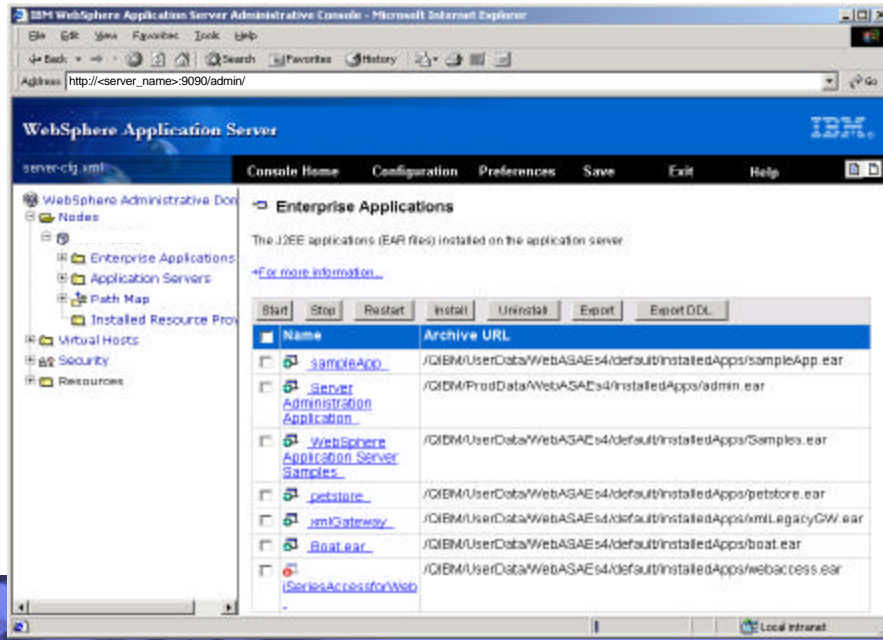## WebSphere v5.0 configuration verification using administrative console

# iSeries Access for Web - Verify configuration (continued)

WebSphere AE configuration verification using administrative console

iSeries Access for Web - Verify configuration *(continued)*

WebSphere AEs configuration verification using administrative console

iSeries Access for Web - Verify configuration *(continued)*

ASF Tomcat configuration verification using WRKLNK command
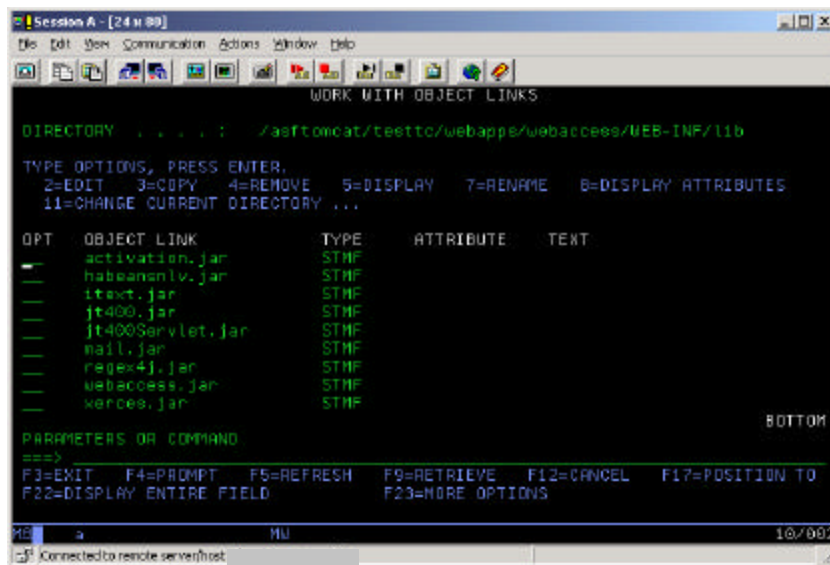
iSeries Access for Web - Starting

- iSeries Access for Web must be started before it can be accessed in a browser.

- WebSphere v5.0 - Express for iSeries
  - ▶ When the application server is started/restarted, the deployed applications should autostart.
  - ▶ Should iSeries Access for Web not start, use the script to start the application
    - QSH
    - cd /QIBM/ProdData/Access/Web2/install
    - straccweb2 -appsvrtype *WAS50EXP -wasinst myinst -appsvr myinst
      - Note: The *WAS50EXP value is case sensitive

- WebSphere v5.0 (Base and ND)
  - ▶ When the application server is started/restarted, the deployed applications should autostart.
  - ▶ Should iSeries Access for Web not start, use the script to start the application
    - QSH
    - cd /QIBM/ProdData/Access/Web2/install
    - straccweb2 -appsvrtype *WAS50 -wasinst default -appsvr server1
      - Note: The *WAS50 value is case sensitive

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iSeries Access for Web - Starting (continued)

- WebSphere v4.0 Advanced Edition specifics
  - ▶ Use the STRACCWEB2 command to start iSeries Access for Web.
    - QIWA2/STRACCWEB2 APPSVRTYPE(*WAS40ADV) WASINST(*DEFAULT)
  - ▶ Use the WebSphere administrative console to start iSeries Access for Web.

- WebSphere v4.0 Advanced Single Server Edition specifics
  - ▶ iSeries Access for Web starts when Websphere starts.
  - ▶ Use the STRSBS QEJBAES4/QEJBAES4 command
  - ▶ Use /QIBM/ProdData/WebASAEs4/bin/strwasinst -instance <instance_name>

- ASF Tomcat specifics
  - ▶ Use the V5R2 command STRTCPSVR SERVER(*ASFTOMCAT) TOMCATSVR(testtc)
  - ▶ Use the HTTP Server administrative interface in your browser at URL
    http://<server_name>:2001

iSeries Access for Web - Other commands

- Other iSeries Access for Web commands
  - ► To end or stop the running iSeries Access for Web web application
    - QIWA2/ENDACCWEB2
    - /QIBM/ProdData/Access/Web2/install/endaccweb2 -appsvrtype -wasinst -appsvr
  - ► To remove the iSeries Access for Web configuration
    - QIWA2/RMVACCWEB2
    - /QIBM/ProdData/Access/Web2/install/rmvaccweb2 -appsvrtype -wasinst -appsvr

- Refer to the documentation available on the iSeries Access for Web website for detail
  - ► http://www.ibm.com/servers/eserver/iseries/access/web/

What needs to be done next?

- You need to do the following in this order:
  - ✔ Decide what web application server environment to run within.
  - ✔ Install iSeries Access for Web on your server
  - ✔ Verify, load, apply any additional PTFs you may need
    - **Cumulative PTF package**
    - **WebSphere, ASF Tomcat, HTTP Server for iSeries**
    - **iSeries Access for Web**
  - ✔ Set up HTTP for Websphere.
  - ✔ Set up the web application server.
    - **WebSphere**
    - **ASF Tomcat**
  - ✔ Configure and Start iSeries Access for Web.
  - ❑ Install/configure/start WebSphere Host Publisher on your server.
  - ❑ Verify the installation and configuration.

IBM

Installing, Configuring & Starting
WebSphere Host Publisher V4.0

IBM

What is WebSphere Host Publisher V4.0?

- WebSphere Host Publisher v4.0 (5724-B81)
  - ▶ 5648-E25 is Host Publisher v3.5 --->   WebSphere 3.5

- It enables programmers to replace traditional green screens with a Web look and feel.
  - ▶ These 5250 applications can then be run directly from any standard Web browser.
  - ▶ Host Publisher allows you to integrate multiple sources of data, including host and database applications, into a single Web page with no change to the back end applications. Host Publisher Studio provides the ability to:
    - – Modernize existing 5250 applications--selected parts or entire application
    - – Modernize existing host Java applications--selected parts or entire application
    - – Create database applications
  - ▶ No need to touch (or have) source code

- iSeries Access for Web and Host Publisher are not dependent on each other

What is WebSphere Host Publisher V4.0? (continued)

- It is bundled with iSeries Access for Web
  - ► Host Publisher   - installs to iSeries server
  - ► Host Publisher Studio   - installs to Windows workstation
- It supports WebSphere Application Server v4.0
- It does not support WebSphere v5.0 (any edition)
- It does not support WebSphere Application Server v3.5.
- It does not coexist with Host Publisher v3.5 on the same iSeries server.

Example: Porter County Indiana - Tax Details Screen

Run your 5250 applications with this kind of look-and-feel...

```
                Date: 11/05/99                      Time: 12:09:21
Dup No.  02 000251303  SHINGLER RAY C & SUSAN L/H&W        RIDGEWOOD CREEK
Parcel                                                    UNIT 1 LOT 16
Stat A Cls 510    Mtg 3604 CHIMNEY HILL CT                DR467 P61 VLACD DITCH
By/Sl 4/16/96    355 VALPARAISO        IN46383
Drain 30    Consv 2  Bk/Pg 000 000 Inst #          Tx Sale N BANKRUPT
Property Address --> NO ADDRESS FOUND                     Pre.Dupl.      278560
                                                          New.Dupl.           0
        Land-Res   Impr-Res   Land N-R   Impr.N-R    Exempt  Net Value  C.of E.#
96        3430      20230         0          0        3000     20660          0
97           0          0       3430      20230          0     23660          0
98           0          0       3430      20230          0     23660          0
99           0          0       3430      20230          0     23660          0
Mtg    Y N N N Hmstd Y N N N Age      N N N N DisVet   N N N N Solar N N N N
Rehab  N N N N WW1    N N N N Blnd/dsabl N N N N Tx Exmpt N N N N
        Tax Due   Tax Paid    Date     Penalty   Pen.Paid    Date   Date Appld
96  A    793.42    793.42   5/12/97      .00       .00     0/00/00  6/03  0/00
  Y B    793.42    793.42  11/10/97      .00       .00     0/00/00 11/13  0/00
97  A    965.59    965.59   5/11/98      .00       .00     0/00/00  5/12  0/00
  Y B    965.59    965.59  11/10/98      .00       .00     0/00/00 11/18  0/00
98  A    909.92    909.92   5/10/99      .00       .00     0/00/00  5/24  0/00
  Y B    909.92       .00   0/00/00      .00       .00     0/00/00  0/00  0/00
                                               F14-CO F16-D1        F20-SW
ENTER DUP NO  _            F5-NAME F7-ADDR F9-NOTES F10-PADDR F11-BK/PG F12-RTRN
```

Tax Application Search Form

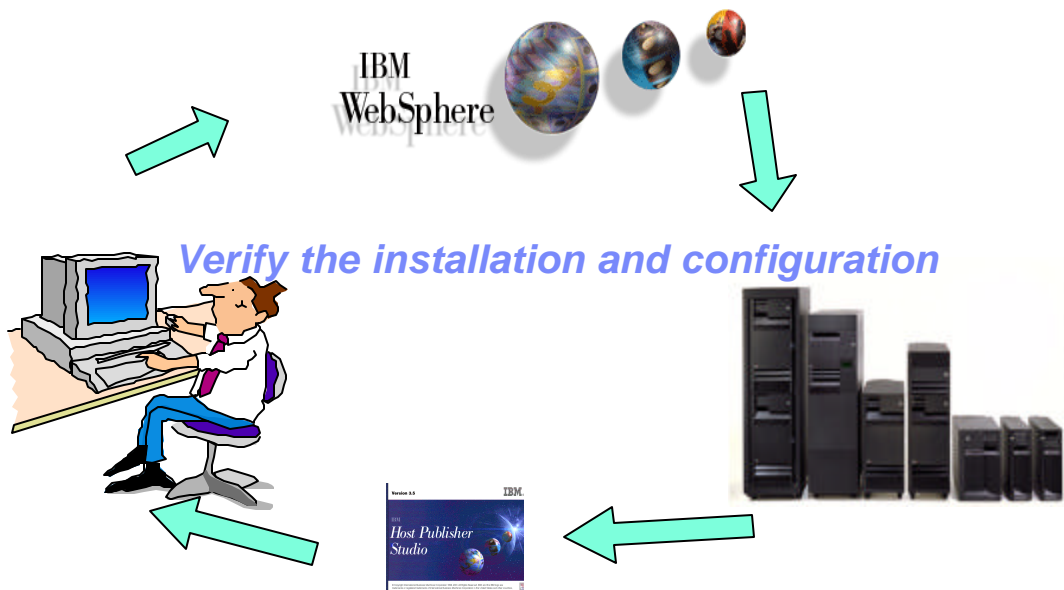**Or moderize your application to look like this using WebSphere Host Publisher!**

Host Publisher V4.0 Installation

- Host Publisher installation and configuration is completed using two commands that run under QShell.
  - ► The planning and installation guide is on the CD-ROM media in PDF and HTML formats and can be viewed using your workstation computer.
  - ► The documentation tells you how to handle the migration from Host Publisher v3.5 to v4.0 and preserve existing Host Publisher applications.
    - – install <--- from the CD-ROM media
    - – /QIBM/ProdData/HostPublisher/cfghpsvr   <-- from the IFS after "install" completes.
- Host Publisher will be displayed as 5724-B81 under GO LICPGM.
- Updates are made to the WebSphere configuration.
- Updates will not be made to the HTTP server instance configuration.

What needs to be done next?

- You need to do the following in this order:
  - ✔ Decide what web application server environment to run within.
  - ✔ Install iSeries Access for Web on your server
  - ✔ Verify, load, apply any additional PTFs you may need
    - **Cumulative PTF package**
    - **WebSphere, ASF Tomcat, HTTP Server for iSeries**
    - **iSeries Access for Web**
  - ✔ Set up HTTP for Websphere.
  - ✔ Set up the web application server.
    - **WebSphere**
    - **ASF Tomcat**
  - ✔ Configure and Start iSeries Access for Web.
  - ✔ Install/configure/start WebSphere Host Publisher on your server.
  - ❑ Verify the installation and configuration.

Verify the installation and configuration

Verify the installation and configuration

- HTTP Server
  - ► WRKACTJOB SBS(QHTTPSVR)
  - ► Several jobs should be listed with the name of your server
- WebSphere v5.0 - Express for iSeries
  - ► WRKACTJOB SBS(QASE5)
  - ► Open the admin. console to view the configured enterprise applications.
- WebSphere v5.0 (Base and ND)
  - ► WRKACTJOB SBS(QEJBAS5)
  - ► Open the admin. console to view the configured enterprise applications.
- WebSphere v4.0 Advanced Edition
  - ► WRKACTJOB SBS(QEJBADV4)
  - ► ISERIESACC job should be running
  - ► Open the admin. console to view the configured enterprise applications.

Verify the installation and configuration (continued)

- WebSphere v4.0 Advanced Single Server Edition
  - ► WRKACTJOB SBS(QEJBAES4)
  - ► Open the admin console to view the configured enterprise applications.
- ASF Tomcat
  - ► WRKACTJOB SBS(QSYSWRK)
  - ► Tomcat server should be listed as a running job.
- iSeries Access for Web
  - ► Open browser to http://<server_name>:<port>/webaccess/iWAHome

When things don't work?

- Check the log files first
  - /QIBM/UserData/Access/Web2/logs/cmds.log
  - WAS v5.0 - Express for iSeries/WAS v5.0
    - /QIBM/UserData/Access/Web2/logs/<appsvrtype>/<wasinst>/<appsvr>/logs/*
  - WAS v4.0 AE & AEs/ASF Tomcat
    - /QIBM/UserData/Access/Web2/logs/<appsvrtype>/<wasinst>/logs/*
  - WebSphere logs in the UserData side of the WebSphere directory hierarchy
  - /QIBM/ProdData/HostPublisher/Install/HPInstall.log

- If the HTTP server is using a port other than 80, verify the alias information was added to the WebSphere default_host alias table.

- Verify WebSphere subsystem is running.

- Verify jobs are running under QEJBADV4 subsystem for WebSphere v4.0 AE
  - ISERIESACC   iSeries Access for Web
  - HOSTPUBSER   Host Publisher

- Use verification information in the iSeries Access for Web Install and Usage guide to verify configuration information
  - http://www.ibm.com/servers/eserver/iseries/clientaccess/web/

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iSeries & WebSphere Resources & Deliverables

iSeries Information Center
http://www.ibm.com/iseries/infocenter

iSeries site
www.iseries.ibm.com/

iSeries WebSphere Application Server
http://www-1.ibm.com/servers/eserver/iseries/software/websphere/wsappserver/

PartnerWorld for Developers, iSeries & WebSphere
http://www.iseries.ibm.com/developer/websphere/

IBM eServer Solutions
http://www-1.ibm.com/servers/eserver/iseries/solutions/

iSeries e-business Solutions
http://www-1.ibm.com/servers/eserver/iseries/ebusiness/

iSeries B2B Solutions
http://www-1.ibm.com/servers/eserver/iseries/btob/

Connect for iSeries
http://www-1.ibm.com/servers/eserver/iseries/btob/connect/v11high.html

WebSphere Commerce Suite for iSeries
http://www-1.ibm.com/servers/eserver/iseries/ebusiness/wcs51.html

iSeries and e-commerce
http://www-1.ibm.com/servers/eserver/iseries/ebusiness/ecommerce.htm

iSeries HTTP Server
http://www-1.ibm.com/servers/eserver/iseries/software/http/index.html

WebSphere Development Studio for iSeries
http://www-3.ibm.com/software/ad/wds400/

iSeries and WebSphere References
http://www.as400.ibm.com/developer/java/solutions/jjem.html
http://www2.software.ibm.com/casestudies/swcsweb.nsf/platform

iSeries Solution Finder
http://www.iseries.ibm.com/btobpartner/

iSeries & Domino
http://www-1.ibm.com/servers/eserver/iseries/domino/

Dedicated Server for Domino
http://www-1.ibm.com/servers/eserver/iseries/domino/dsd.htm

Workload Estimator for iSeries, WAS, WCS & Domino, HTTP Server, Java, etc.
http://as400service.ibm.com/estimator/

iSeries Custom Technology Center
http://www-1.ibm.com/servers/eserver/iseries/service/ctc/

iSeries Technical Support
http://as400service.ibm.com/

iSeries Technical Studio
http://www.as400.ibm.com/tstudio/

1st Install for iSeries & WebSphere Application Server
http://www.iseries.ibm.com/developer/websphere/assistance.html

iSeries ToolsNet (Tools & Middleware)
http://www.iseries.ibm.com/developer/tools/

iSeries & Services Network
http://as400service.ibm.com/supporthome.nsf/document/19251245

iSeries e-business Handbook (SG24-5694-01)
http://www.redbooks.ibm.com/abstracts/sg245694.html

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iSeries & WebSphere Resources & Deliverables

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

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

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

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

iSeries & WebSphere Documentation

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

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

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

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

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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