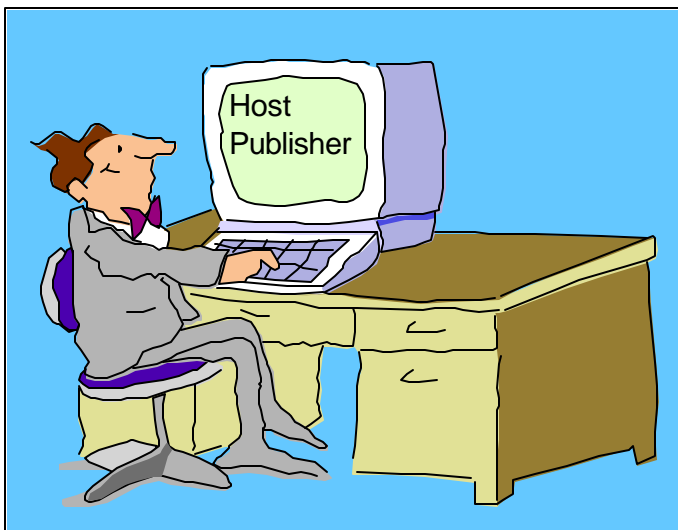


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IBM WebSphere Host Publisher V2R2 for OS/390 and z/OS



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Agenda

- IBM Host Publisher V2R2 for OS/390
 - Overview
 - Components
 - Product Packaging
 - Installation
 - Customization
 - Studio
 - Administration
- Bibliography
- Web Sites

Abstract

Title: IBM Host Publisher V2 for OS/390 Overview and Implementation Issues

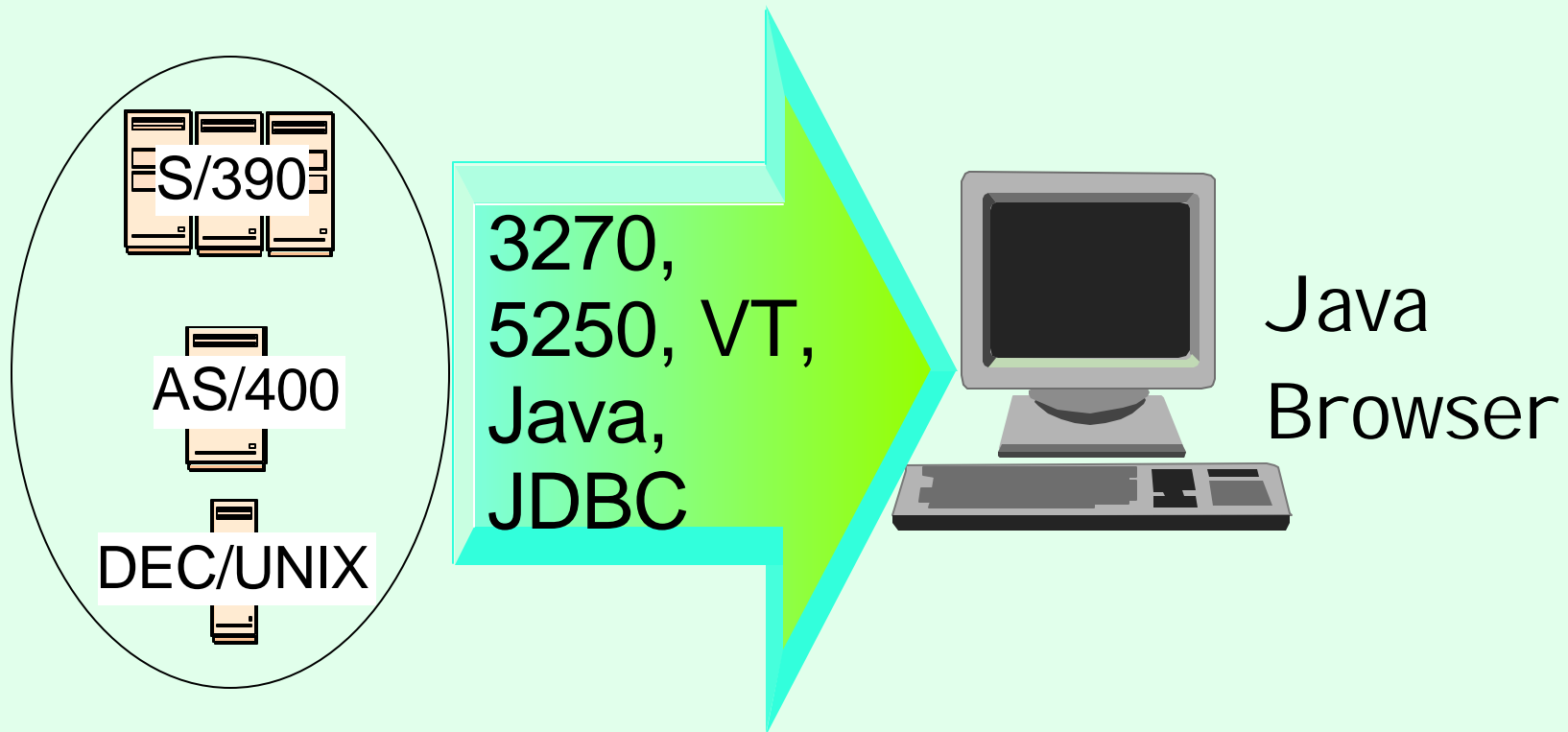
Presenter: Linda Harrison supports OS/390 Host Publisher in IBM Advanced Technical Support.

Audience: OS/390 Host Publisher Installers and Administrators

Abstract: Host Publisher is an open, industry-standard software that enables the integration of multiple sources of data into a single Web page. Host Publisher integrates data from both host and database applications with no change to back-end systems. Applications on host systems, such as 3270, 5250 and Virtual Terminal (VT) are supported. Connection to Java applications and databases with Java Database Connectivity (JDBC) interfaces, such as IBM DB2 Universal Database and databases from Oracle and Sybase are supported.

OS/390 Host Publisher: Overview

Single Web Page



Host Publisher Solution

- Open, industry-standard software
- Integrates data from multiple sources into a single Web page
- Host and database applications do not change on back-end systems

Overview

IBM Host Publisher V2R2 Announcement Letter 200-262:

- Quick and easy way to implement e-business applications.
- Extend the reach of mission-critical applications to new users across the intranet and Internet without changing the existing applications.
- Integrate multiple sources of host data into a single Web page.
- Support for applications written for 3270, 5250, VT, Java (TM), and databases that provide a Java Database Connectivity (JDBC) interface such as IBM DB2 Universal Database, Oracle, and Sybase.
- Supports any HTML-based browser and does not require any specific Java-enabled browser.

OS/390 Host Publisher: Components

Components

- There are two components of Host Publisher
 - Studio - Development Environment
 - Generates Integration Object (JavaBean).
 - Contains JavaBean Factories.
 - Creates Applications.
 - Generates Java Server Pages (JSP).
 - Server - Run Time Environment
 - Integrates multi-platform Web servers.
 - Provides JSP parsing.
 - Provides Servlet API support.
 - Contains Java classes for connection management.
 - Provides an administration capability.
- Only the Host Publisher "Server" is supported on OS/390.

Components (cont.)

- Host Publisher Studio is only supported on
 - Windows 95, 98, NT 4.0, and 2000
- Host Publisher Server is supported on
 - AI X
 - Windows NT 4.0
 - Solaris
 - AS/400
 - NetWare - not GA yet
 - **OS/390**

Components (cont.)

- Host Publisher supports the following browsers
 - Netscape Navigator 4.08 or 4.5
on Windows 95, 98, NT, and Unix
 - Netscape Navigator 4.04
on OS/2
 - Microsoft Internet Explorer 4.01 (with SP1), and 5.0
on Windows 95, 98, and NT

OS/390 Host Publisher:
Product Packaging

Product Packaging

➤ OS/390 Host Publisher (5655-D70) V2R2 Features

VOLSER	Description	Medium	Feature Number
PUB22S	DES (128-bit encryption)	6250 tape	5801
		3480 cart	5802
		4mm cart	6094

- The following CDs are also delivered with the order:
 - Host Publisher Studio for Windows NT, 95, and 98
 - WebSphere Network Dispatcher 3.0 for Windows NT and 2000, AIX, Solaris, and Linux
 - Host Publisher V2.1 Tutorial
 - WebSphere Studio Professional Edition 3.5

Software Requirements

➤ OS/390 Software Requirements

Program Number	Product Name/Service Level	Install Requirement
5647-A01	OS/390 Version 2 Release 7+	Yes
5655-A46	Java Development Kit (JDK) 1.1.8 or 1.3	No
5655-A01	IBM HTTP Server for OS/390	Yes
5697-D43	Host Publisher V2R20 on OS/390 V2R7+ supports WebSphere Application Server (JDK 1.1.8) V1R2 at PTF level PQ31414,PQ33160,PQ29944 or V3R02 Host Publisher V2R21 on OS/390 V2R7+ supports WebSphere Application Server V3R02 (JDK 1.1.8) or V3R5 (JDK 1.3) or V4.0 (JDK 1.3)	Yes

➤ Note: The OS/390 Communications Server TCP/IP Services and Unix Systems Services, both included with OS/390, are required by IBM Host Publisher V2 for OS/390 at run time.

Software Requirements (cont.)

- Program Temporary Fix (PTF)
- See Informational APAR II12792 for PTFs to support WebSphere Application Server V3.02 (JDK 1.1.8) and V3.5 (JDK 1.3).
- Host Publisher V2.2.1 Studio APAR may be required for use with WebSphere Application Server 3.5. Please select Support downloads "Service Updates" on the Support page off of the Host Publisher home page. Then select Recommended maintenance "PTFs and CSDs". Look to see if there are any fixes listed for the V2.2.1 Studio.

Software Requirements (cont.)

- Host Publisher V2.2 WebSphere Application Server V3.5 Compatibility Under WebSphere Application Server V4.0
 - WebSphere Application Server V4.0 PTF8 is required.
 - "New Host Publisher V2.2 Installation with WebSphere Application Server V3.5 Compatibility Under WebSphere V4.0", or "Migrate Host Publisher V2.2 with WebSphere Application Server V3.5 to Compatibility Under WebSphere V4.0":
 1. <http://www.ibm.com/software/webservers/hostpublisher/>
 2. Select "Support" on left side of page.
 3. Select "Hints & Tips" in center of page.
 4. Enter search string "Migrating WebSphere Application Server 4.0"

OS/390 Host Publisher: Installation

Installation

- SMP/E install with mainframe media provides RAS Support.
 - Follow directions in Program Directory, GI 10-3158-01.
 - 84 MB HFS space is required.
 - Before install if you don't already have a /var directory you might want to create mount point /var and mount a dataset for Host Publisher use.
- The Host Publisher directories
 - /usr/lpp/HostPublisher - default install directory
 - /usr/lpp/HostPublisher/common/doc - documentation
 - /var/HostPublisher - default install directory 2
 - /var/HostPublisher/Server/staging - staging area
 - /var/HostPublisher/Server/production - production area
 - /beans - contains .jar files
 - /documents - contains application subdirectories with .jsp files
 - /usr/lpp/HostPublisher/SDK/XLGW - XML Legacy Gateway directory

Note: The install creates the above directories with permission (7,5,5).

Install (cont.)

- WebSphere Application Server
- Verify a working WebSphere Application Server:
`http://$http_server$/webapp/examples`
- Note: Items inside \$\$ are installation dependent.

Host Publisher Customization

Customization

- "hpcfgserver.sh" and "hpuninstall.sh" (in /usr/lpp/HostPublisher/HPAdmin) assume that the HTTP Server configuration file is "httpd.conf". When issuing the "hpcfgserver.sh" shell script you can enter the path where the "httpd.conf" file is but you cannot indicate a different file name. If your configuration file has a different name you will need to update the shell script before execution or copy the configuration file to "httpd.conf" before executing the shell script and then copy it back afterwards.

- ie.

```
hpcfgserver.sh /usr/lpp/was35 / en_US /u/harris1/stackb  
hpuninstall.sh /usr/lpp/was35 / /u/harris1/stackb
```

(Where /usr/lpp/was35 is the WebSphere install directory and /u/harris1/stackb is the directory with the httpd.conf file in it.)

Customization

- "hpcfgserver.sh" adds the following to "httpd.conf":

```
Service /_IBM_HP_WebAdmin_/*
    /usr/lpp/was35/AppServer/bin/was350plugin.so:service_exit
Service /HostPublisher/showCfg
    /usr/lpp/was35/AppServer/bin/was350plugin.so:service_exit
Service /HostPublisher/ErrorReporter
    /usr/lpp/was35/AppServer/bin/was350plugin.so:service_exit
Service /servlet/*
    /usr/lpp/was35/AppServer/bin/was350plugin.so:service_exit
Service /*.jsp
    /usr/lpp/was35/AppServer/bin/was350plugin.so:service_exit
pass /HostPublisher/doc/*
    /usr/lpp/HostPublisher/common/doc/*
pass /_IBM_HP_WebAdmin_/doc/*
    /usr/lpp/HostPublisher/common/doc/*
pass /_IBM_HP_WebAdmin_/HPAdmin/help/*
    /var/HostPublisher/Server/production/documents/HPAdmin/help/*
pass /HostPublisher/*
    /var/HostPublisher/Server/production/documents/*
```

Note: The above lines wrapped to a second line but must appear in the file as one line each with a space between the two appearing here.

Customization

- "hpcfgserver.sh" adds the following to "httpd.conf":
- ```
deployedwebapp.hostpublisher.rooturi=/HostPublisher
deployedwebapp.hostpublisher.classpath=/var/HostPublisher/Server/production/beans
deployedwebapp.hostpublisher.documentroot=/var/HostPublisher/Server/production/documents
Uncomment following line to use timeout interval
#deployedwebapp.hostpublisher.autoreloadinterval=10000
webapp.hostpublisher.description="Host Publisher Application"
webapp.hostpublisher.jspmapping=*.jsp
webapp.hostpublisher.jsplevel=.91
webapp.hostpublisher.filemapping=/
webapp.hostpublisher.errorpagemapping=/ErrorReporter
webapp.hostpublisher.servlet.showCfg.servletmapping=/showCfg
webapp.hostpublisher.servlet.showCfg.code=com.ibm.HostPublisher.Server.ServletEngineConfigDumper
webapp.hostpublisher.servlet.showCfg.autostart=true
webapp.hostpublisher.servlet.ErrorReporter.servletmapping=/ErrorReporter
webapp.hostpublisher.servlet.ErrorReporter.code=com.ibm.servlet.engine.webapp.DefaultErrorReporter
```

# Customization

```
webapp.hostpublisher.servlet.ErrorReporter.autostart=true
deployedwebapp._IBM_HP_WebAdmin_.host=default_host
deployedwebapp._IBM_HP_WebAdmin_.rooturi=/_IBM_HP_WebAdmin_
deployedwebapp._IBM_HP_WebAdmin_.classpath=/var/HostPublish
er/Server/production/beans
deployedwebapp._IBM_HP_WebAdmin_.documentroot=/var/HostPublish
er/Server/production/documents
Uncomment following line to use timeout interval
#deployedwebapp._IBM_HP_WebAdmin_.autoreloadinterval=10000
webapp._IBM_HP_WebAdmin_.description="Host Publisher Application"
webapp._IBM_HP_WebAdmin_.jspmapping=*.jsp
webapp._IBM_HP_WebAdmin_.jsplevel=.91
webapp._IBM_HP_WebAdmin_.filemapping=/
webapp._IBM_HP_WebAdmin_.errorpagemapping=/ErrorReporter
webapp._IBM_HP_WebAdmin_.servlet.HPAdminServlet.servletmapping=/HPAd
minServlet
webapp._IBM_HP_WebAdmin_.servlet.HPAdminServlet.code=com.ibm.Hos
tPublisher.Server.HPAdminServlet
webapp._IBM_HP_WebAdmin_.servlet.HPAdminServlet.initargs=insta
ll_dir=/var/HostPublisher
webapp._IBM_HP_WebAdmin_.servlet.HPAdminServlet.autostart=true
```

# Customization

```
webapp._IBM_HP_WebAdmin_.servlet.ErrorReporter.servletmapping=/ErrorReporter
webapp._IBM_HP_WebAdmin_.servlet.ErrorReporter.code=com.ibm.servlet.engine.webapp.DefaultErrorReporter
webapp._IBM_HP_WebAdmin_.servlet.ErrorReporter.autostart=true
webapp._IBM_HP_WebAdmin_.servlet.xmlLegacyGateway.servletmapping=/xmlLegacyGW
webapp._IBM_HP_WebAdmin_.servlet.xmlLegacyGateway.code=xmlLegacyGatewayServlet.xmlLegacyGW
webapp._IBM_HP_WebAdmin_.servlet.xmlLegacyGateway.autostart=false
webapp._IBM_HP_WebAdmin_.servlet.hPubPortalAdmin.servletmapping=/hPubPortalAdmin
webapp._IBM_HP_WebAdmin_.servlet.hPubPortalAdmin.code=xmlLegacyPortal.hPubPortalAdmin
webapp._IBM_HP_WebAdmin_.servlet.hPubPortalAdmin.autostart=false
webapp._IBM_HP_WebAdmin_.servlet.hPubPortal.servletmapping=/hPubPortal
webapp._IBM_HP_WebAdmin_.servlet.hPubPortal.code=xmlLegacyPortal.hPubPortal
webapp._IBM_HP_WebAdmin_.servlet.hPubPortal.autostart=false
webapp._IBM_HP_WebAdmin_.servlet.RIOServlet.servletmapping=/RIOServlet
```



# Customization

```
webapp._IBM_HP_WebAdmin_.servlet.RIOServlet.code=com.ibm.HostPu
 blisher.RIO.RIOServlet
webapp._IBM_HP_WebAdmin_.servlet.RIOServlet.autostart=false
```

Note: The indented lines above wrapped to a second line but must appear in the file as one line each with no space between the two appearing here.

# Customization

- I created a userid, hpadmin, with UID 0, to be used to Administer Host Publisher. I configured RACF so that the server is permitted to access BPX.SERVER and BPX.DAEMON. Then I added the following to my HTTP Server configuration file, /etc/httpd.conf, so that someone may access the Host Publisher Admin page by logging onto the HTTP server with RACF userid WEBADM, HARRISL, or JW:

```
Protection Host_Pub {
 ServerId Host_Pub_User
 AuthType Basic
 PasswdFile %%SAF%%
 Mask WEBADM,HARRISL,JW
}
Protect /HPAdmin/* Host_Pub HPADMIN
Protect /_IBM_HP_WebAdmin_/* Host_Pub HPADMIN
```

## Custom (cont.)

- The ASCII to EBCDIC translation must be set on the FTP server or the Studio FTP client:
  - Set translation on the server.
    - Add the SBDATACONN statement to the FTP Data file:  
**SBDATACONN (IBM-1047,ISO8859-1)**
  - Set translation on the client.
    - Add connect\_command to the c:\HostPub\Studio\Studio.ini file so that the FTP server definition has the last two lines:  
**xSERVER\_TYPE=3**  
**xCONNECT\_COMMAND=SITE SBD=(IBM-1047,ISO8859-1)**  
(where x is the order the server was defined in the studio)
- Otherwise "Error 500" will appear on the browser and "Message: Unable to successfully parse the data macro" appears in the log.

OS/390 Host Publisher:  
Studio

# Studio

- There are three parts of Host Publisher Studio
  - Host Publisher Studio
    - Create Applications using JSP's to invoke Integration Objects.
  - Host Access
    - Create 3270, 5250, and VT Integration Objects.
  - Database Access
    - Create JDBC Integration Objects.

## Studio (cont.)

- Host Publisher Studio Wizards
  - New Application Wizard
  - New Integration Object Wizard
  - New Page Wizard
  - Insert Output Control Wizard
  - Insert an Input Wizard
  - New Error Page Wizard
  - Transfer to Server Wizard

## Studio (cont.)

- Initial steps to be performed in Studio
  - Create Integration Objects (Java Beans).
  - Create Applications.
  - Transfer applications to a Host Publisher Server.

## Studio (cont.)

- Create Host Access Integration Objects and/or Database Access Integration Objects
- Host Access Integration Object
  - Click on Start, Programs, Host Publisher Studio, Host Publisher Studio
    - then click Create, Host Access Integration Object
  - Or Click on Start, Programs, Host Publisher Studio, Host Access
- Database Access Integration Object
  - Click on Start, Programs, Host Publisher Studio, Host Publisher Studio
    - then click Create, Database Access Integration Object
  - Or Click on Start, Programs, Host Publisher Studio, Database Access



## Studio (cont.)

- Create Applications
  - Use Host Publisher Studio to create applications.
  - Applications include Java Server Pages (JSPs) for publishing data.
- Transfer Applications to a Host Publisher Server
  - Use Host Publisher Studio to transfer applications.
  - Uses TCP/IP FTP.

## Studio (cont.)

- Advanced Function
  - Remote Integration Objects (RIO)
    - Provides a standard XML interface to access data from Integration Objects.
    - Enables Java applications or applets running on remote systems to execute Integration Objects as if they were local.

# OS/390 Host Publisher: Administration

# Administration

- Administration essentially the same as for all other Host Publisher server platforms.
- Connect to the Host Publisher server Admin page:  
[http://hp\\_server\\_name/HostPublisher/HPAdmin/main.jsp](http://hp_server_name/HostPublisher/HPAdmin/main.jsp)  
(Where hp\_server\_name is the host name or IP address of the HP server.)

# Admin (cont.)

- Application Administration
  - Click Administration, Application Administration
    - List Applications
    - Deploy Applications
    - Remove Applications
    - Delete Unused Files

## Admin (cont.)

- Applications are transferred from Studio to staging area on Server.
- Deploy Applications to move them from staging to production.
  - Log onto the Admin page and select "Deploy Applications".
  - Select Applications and Deploy.
  - Prior to WebSphere Application Server V3.02 each Integration Object JAR file name must be manually added to the `java.classpath` statement within WebSphere Application Server's config file.

## Admin (cont.)

- Starting with WAS 3.02 the HTTP Server does not need to be recycled to reload applications (pick up application changes when changed applications are redeployed). However the default is to require a recycle because an automatic reload of the application is disruptive to active applications so it is not recommended in a production environment. With or without automatic reload the Studio presents a warning when deploying applications just in case the automatic reload is set. The default, no automatic reload, is configured in the was.conf when Host Publisher is installed:  

```
Uncomment following line to use timeout interval
#deployedwebapp._IBM_HP_WebAdmin_.autoreloadinterval=10000
```

Uncomment the second line above to cause automatic application reload after 10000 milliseconds.

## Admin (cont.)

➤ After deploying an application it can be accessed.

➤ Connect to the initial application page:

`http://hp_server_name/HostPublisher/appname/inputpage.jsp`

(Where `hp_server_name` is the host name or IP address of the HP server, `appname` is the name of the application found in

`/var/HostPublisher/Server/production/documents/`, and `inputpage.jsp` is the name of the first jsp page of the application found in

`/var/HostPublisher/Server/production/documents/appname/`.)



# Admin (cont.)

## ➤ Advanced Function

### ➤ XML Legacy Gateway (XLGW)

- Converts a 3270 or 5250 data stream into an XML format
- XML format available to Java applications or can be automatically displayed as HTML in a browser

### ➤ Access XLGW Administrative Servlet

- [http://hpserv\\_ipaddr/servlet/xmlLegacyPortal.hPubPortalAdmin](http://hpserv_ipaddr/servlet/xmlLegacyPortal.hPubPortalAdmin)

- or the following all on one line:

  - [http://hpserv\\_ipaddr/\\_IBM\\_HP\\_WebAdmin\\_  
/xmlLegacyPortal.hPubPortalAdmin](http://hpserv_ipaddr/_IBM_HP_WebAdmin_/xmlLegacyPortal.hPubPortalAdmin)

### ➤ Access XLGW Portal Page

- [http://hpserv\\_ipaddr/servlet/xmlLegacyPortal.hPubPortal](http://hpserv_ipaddr/servlet/xmlLegacyPortal.hPubPortal)

- or the following all on one line:

  - [http://hpserv\\_ipaddr/\\_IBM\\_HP\\_WebAdmin\\_  
/xmlLegacyPortal.hPubPortal](http://hpserv_ipaddr/_IBM_HP_WebAdmin_/xmlLegacyPortal.hPubPortal)

# Bibliography

# Bibliography

- Program Directory for IBM Host Publisher V2R2 for System/390:
  - GI 10-3158-01
- The following Redbook is available at <http://www.redbooks.ibm.com>:
  - Building Integration Objects with IBM SecureWay Host Publisher Version 2.1, SG24-5385-00

## Bibliography (cont.)

- The following documents are available after installation (where 9.82.1.100 is the IP address of the OS/390 system where Host Publisher is installed) and they are also available on the Host Publisher Library page off of the Host Publisher Home page:
  - Readme
    - <http://9.82.1.100/HostPublisher/doc/readme.htm> or
    - [http://9.82.1.100/HostPublisher/doc/en\\_US/readme.htm](http://9.82.1.100/HostPublisher/doc/en_US/readme.htm)
  - Administrator's and User's Guide, orderable as number GC31-8728-01 or
    - <http://9.82.1.100/HostPublisher/doc/guide/guide.htm> or
    - [http://9.82.1.100/HostPublisher/doc/en\\_US/guide/guide.htm](http://9.82.1.100/HostPublisher/doc/en_US/guide/guide.htm)
    - (also [guide.pdf](#) in subdirectory `/usr/lpp/HostPublisher/common/doc/guide` or `/usr/lpp/HostPublisher/common/doc/en_US/guide`)
  - Planning and Installation Guide
    - <http://9.82.1.100/HostPublisher/doc/install/instgd.htm> or
    - [http://9.82.1.100/HostPublisher/doc/en\\_US/install/instgd.htm](http://9.82.1.100/HostPublisher/doc/en_US/install/instgd.htm)
  - Programmer's Guide and Reference
    - <http://9.82.1.100/HostPublisher/doc/proggd/proggd.htm> or
    - [http://9.82.1.100/HostPublisher/doc/en\\_US/proggd/proggd.htm](http://9.82.1.100/HostPublisher/doc/en_US/proggd/proggd.htm)

# Web Sites

# Web Sites

➤ Host Publisher Information site:

<http://www.ibm.com/software/webservers/hostpublisher> or

<http://www.ibm.com/software/network/hostpublisher>

Select Support from the above Home Page to get to the Support Page.

Select Library from the above Home Page to get to the Library page.

➤ This presentation is available as presentation PRS352 on web site:

<http://www.ibm.com/support/techdocs>