IBM WebSphere Development Studio for iSeries V4R5: New Name, New Package, New Tools

Overview
WebSphere™ Development Studio for iSeries V4R5 gives customers and solution providers rapid and cost-effective ways to increase the number of Web-enabled, e-business applications for the iSeries server. The introduction of Development Studio marks a major shift in the packaging of IBM application development tools for the iSeries server. Rather than continuing to sell individual tools and compilers, this package consolidates all the key iSeries development tools, both host and workstation, traditional and new, into one attractively priced iSeries offering.

WebSphere Development Studio for iSeries Components

Host Components
- ILE RPG (RPG IV)
- ILE COBOL
- ILE C
- ILE C++ PRPQ
- Application Development ToolSet

Workstation Components
- WebFacing Tool (First Edition)
  - Helps build a Web interface to existing 5250 applications:
    - Helps convert at development time the display file source into JavaServer pages (JSPs) and Java™ data beans
    - Deploys JSPs and beans to the WebSphere Application Server (WAS)
  - Requires little change to the application’s business logic
  - Easy and cost-effective to convert — no separate tool costs or run-time charges
- WebSphere Studio for iSeries (Professional Edition)
  - Provides easy access to iSeries data and applications
- VisualAge® for Java for iSeries (Professional Edition)
  - Provides easy access to iSeries system functions
  - Generates code to access data and applications
- CoOperative Development Environment (CODE)
  - Windows™-based versions of the classic host tools SEU, SDA, RLU, PDM, and the system debugger
  - Provides seamless access to iSeries source and objects
  - More efficient development of OPM/ILE RPG, OPM/ILE COBOL, OPM/ILE CL, ILE C, ILE C++, DDS and Java
  - Helps attract, retain, and grow key iSeries development skills
- VisualAge RPG
  - Creates GUI applications for Windows or any Java, GUI-capable client, or browser
  - Provides seamless access to iSeries data and applications

Key Prerequisites
Refer to the Hardware Requirements and Software Requirements sections.

Planned Availability Date
May 25, 2001

At a Glance
WebSphere Development Studio for iSeries consolidates the traditional and e-business development tools into an attractively priced package that allows solution providers and customers to rapidly, easily, and cost-effectively increase the number of Web-enabled, e-business applications for the iSeries server. Customers can now purchase the consolidated package and not the individual iSeries application development products.

Host components:
- ILE RPG (RPG IV)
- ILE COBOL
- ILE C
- ILE C++ PRPQ
- Application Development ToolSet

Workstation components (via the entitlement of WebSphere Development Tools for iSeries; unlimited workstation licenses per server):
- WebFacing Tool (First Edition)
- WebSphere Studio for iSeries (Professional Edition)
- VisualAge for Java for iSeries (Professional Edition)
- CoOperative Development Environment (CODE)
- VisualAge RPG

For ordering, contact:
Your IBM representative, an IBM Business Partner, or IBM Americas Call Centers at 800-IBM-CALL
Reference: YE001

This announcement is provided for your information only. For additional information, contact your IBM representative, call 800-IBM-4YOU, or visit the IBM home page at: http://www.ibm.com.
WebSphere Development Studio for iSeries V4R5 consolidates the key tools for traditional and e-business development into one attractively low-priced iSeries product. This new tool suite helps customers and solution providers create e-business applications that leverage the capabilities of the iSeries server. Solution providers can use any of the tools in WebSphere Development Studio for iSeries and not be concerned about any solution stack impacts. WebSphere Development Studio for iSeries is the standard suite of tools for iSeries application development.

### WebSphere Development Studio for iSeries V4R5 Component Summary

#### Host Tools:
The following host tools in WebSphere Development Studio for iSeries V4R5 continues to be shipped at the V4R5 level.

- ILE RPG (5769-RG1)
- ILE COBOL (5769-CB1)
- ILE C (5769-CX2)
- ILE C++ PRPQ (5799-GDW)
- Application Development ToolSet (5769-PW1)

For more information on the host tools, refer to:

- Software Announcement 299-027, dated February 9, 1999 (V4R4 Programming Languages and Application Development Tools)
- PRPQ P10134 (ILE C++ PRPQ, 5799-GDW)

#### Workstation Tools (via the Entitlement of WebSphere Development Tools for iSeries):
When 5769-WDS is ordered, the workstation tools will be shipped in a CD media kit (LK3T-5267). The kit contains:

- IMPORTANT — Please Read booklet
- WebSphere Development Tools for iSeries product CDs/DVD. The workstation tools are:
  - WebFacing Tool (First Edition)
  - WebSphere Studio for iSeries (Professional Edition)
  - VisualAge for Java for iSeries (Professional Edition)
  - CODE
  - VisualAge RPG
- Macromedia Flash, Fireworks, Freehand, and Director trial CD

### WebFacing Tool (First Edition)

The new WebFacing Tool helps convert existing 5250 interfaces to Web interfaces with small changes to the host application. The conversion process is simple and cost-effective for many 5250 applications. This first edition of the WebFacing Tool supports the conversion of many common database description specifications (DDS) keywords.

Future enhancement of DDS keyword support are planned through additional editions of the WebFacing Tool. For more information on these enhancements and the time frame for the planned implementation of specific DDS keyword support, visit:


The ultimate IBM goal is to make the conversion process simple for all customers. At development time, the WebFacing Tool helps create industry-standard JSPs and JavaBeans based on the 5250 display file source code. At run time, there is a low-level switch in OS/400® that determines if the user is using a Web or a 5250 interface. If the input originated from a browser, then the output data from the application is directed through a data bean to the generated JSP.

This results in HTML forms being displayed in a browser. No 5250 data stream is ever created. If the input originates from a 5250 display, then the switch directs the 5250 data to be incorporated into a 5250 data stream and then shipped to a 5250 display. The same application can support both a 5250 and Web interface.

There is no separate development tool charge or run-time charges with WebFacing an application.

Web-enabling an existing 5250 application is typically a multistep process. The WebFacing Tool and its associated environment allow the customer to customize the Web interface in a preconversion step to ensure that the base application will support both the Web and 5250 interface. Since the conversion process generates JSPs and JavaBeans, these components can be further enhanced with standard, Java development tools like WebSphere Studio and VisualAge for Java. Caution should be taken in this postconversion customization to ensure that the connection to the base application is not severed. This would create a new application.

WebFacing is not a stop-gap exercise. The end user can leverage and extend the components created by the WebFacing Tool as part of the evolutionary strategy to sophisticated e-business solutions.

### WebSphere Studio for iSeries (Professional Edition)

These are Web development tools for creating and managing Web applications. With WebSphere Studio and its new iSeries enhancements, it is easy to create Web applications that access iSeries data and applications.

#### VisualAge for Java for iSeries (Professional Edition)

This is the best Java Integrated Development Environment (IDE) for creating applications for the iSeries server. VisualAge for Java, Professional Edition, V3.5, is a full Java IDE that includes:

- An editor
- A debugger
- Java Development Kit
- A WebSphere unit test environment
- A Visual Composition Editor

The Visual Composition Editor lets the customer visually connect GUI and non-GUI parts. It generates the code to enable the connections. The IDE supports incremental automatic compilation of source code and in this release IBM has introduced support for third-party Source Control Management Tools. Support for Java 2 is introduced in this release.

**CODE**

CODE is the Windows-based, IBM follow-on product set to PDM, SEU, SDA, RLU, and the system debugger. It is a modern, integrated, and comprehensive toolset optimized for creating and maintaining iSeries applications or application fragments written in OPM/ILE RPG, OPM/ILE COBOL, OPM/ILE CL, ILE C, ILE C++, DDS, or Java.

### VisualAge RPG

VisualAge RPG allows the customer to write or port RPG IV applications to a Windows client.
**Euro Currency**

These programs are EuroReady.

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**Product Positioning**

WebSphere Development Studio for iSeries is a comprehensive suite of tools that has no direct competition in the iSeries marketplace.

- **WebFacing Tool** helps build a Web interface to existing 5250 application with ease.
- **WebSphere Studio** is a very competitive Web development tool. With iSeries unique enhancements, WebSphere Studio is easier and more productive to create Web applications that access iSeries data and applications than any other Web development tool.
- **VisualAge for Java** is the best Java development environment for developing Java applications for the iSeries server.
- **CODE** is a very productive development environment for developing iSeries host/server applications. The program verifier for RPG and COBOL provides the developer with a very productive edit/compile environment. The IBM Distributed Debugger that is shipped with CODE is a multilanguage, multitier, multiphase distributed e-business debugger — the best in the industry.
- **VARPG** is the premiere tool for developing e-business applications using RPG.

WebSphere Development Studio for iSeries includes many of the host tools, and also unlimited workstation licenses of the workstation tools, via the entitlement of WebSphere Development Tools for iSeries. The benefit varies with the usage of the workstation tools.

WebSphere Development Studio for iSeries is significantly discounted off the sum of the component prices. With software subscription, WebSphere Development Studio for iSeries is a no-additional-charge upgrade from the standard iSeries application development tools.

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**Demonstrations**

These demonstrations are available at V5R1 announcement time.

- **WebFacing Tool (First Edition)**
  - A screen cam to demonstrate how to use the WebFacing Tool to Web-enable a simple 5250 application. We will convert a 5250 application that uses subfiles and a customer inquiry display file.
  - A screen cam to demonstrate the capabilities of the WebFacing Tool. It will use APPCON's Enterprise Information System to show the results of their WebFacing efforts. The demonstration will review the pre- and post-conversion application interfaces.

- **WebSphere Studio for iSeries**
  - A screen cam to demonstrate how to use the iSeries Affinity functionalities in WebSphere Studio to access iSeries data and applications.

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**Education Plans**

A multichannel delivery strategy is planned to address the e-business education requirements in the iSeries marketplace. The following education delivery channels are in plan:

- IBM Learning Services (ILS) classroom education
- IBM-developed, partner-delivered classroom education
- Internet-based training, lecture, and lab education in a virtual classroom
- Published self-study courses
- College education coordinated through iSeries Partners in Education

The following ILS courses will be included in the e-business curriculum:

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Course Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Object Technology</td>
<td>OB05</td>
</tr>
<tr>
<td>Java for RPG Programmers</td>
<td>S6184</td>
</tr>
<tr>
<td>Java for COBOL Programmers</td>
<td>S6173</td>
</tr>
<tr>
<td>WebSphere Application Server for iSeries</td>
<td>S6164</td>
</tr>
<tr>
<td>WebSphere Studio for iSeries plus</td>
<td>S6185</td>
</tr>
<tr>
<td>WebFacing Tool</td>
<td></td>
</tr>
<tr>
<td>VisualAge for Java for iSeries</td>
<td>S6183</td>
</tr>
<tr>
<td>(plus ET/400)</td>
<td></td>
</tr>
<tr>
<td>Java Development using iSeries</td>
<td>S6191</td>
</tr>
<tr>
<td>Toolbox for Java</td>
<td></td>
</tr>
<tr>
<td>CODE — Basic</td>
<td>S6186</td>
</tr>
<tr>
<td>CODE — Advanced</td>
<td>S6205</td>
</tr>
<tr>
<td>VisualAge for RPG</td>
<td>S6187</td>
</tr>
</tbody>
</table>

Not every course will be offered in all delivery channels. We plan to deliver our first published self-study course on Web-enabling 5250 applications using the WebFacing Tool and WebSphere Studio. If this proves to be an effective delivery channel, we will expand the offerings in this channel.

The college education initiatives are being coordinated through the iSeries Partners in Education program.

For more education information, visit:  

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**Market Reaction of Key iSeries Analysts**

This is a summary of the reaction of key iSeries analysts.

- The most significant change in AS/400® AD ever! — Al Barsa, Barsa Consulting
- A new era of AD for the iSeries community — Salim Kanji, CEO Logisil
- On WebFacing, "5250 to Web GUI — NO SWEAT" — Garry Reinhard, APPCON Pres.
- I’m betting my company’s future on WebFacing — PATHIX
- The new IBM Tool Strategy for the AS/400 rocks! — Carson Soule
- An affordable e-business strategy. The tools are free! — Jim Mason, President of Cape Cod Bay Systems
- IBM has definitely got it right this time — Charlie Massoglia, COMMON President
This program contains both host and workstation tools. If customers and solution providers are interested in workstation components only, they should consider WebSphere Development Tools for iSeries V5.1, available through new channels, including IBM Business Partners, retail channels, and the IBM Passport Advantage program.


Via the entitlement of WebSphere Development Tools for iSeries; unlimited workstation licenses per server

Refer to:

- Software Announcement 201-113, dated April 23, 2001 (V5R1 LPs and LPOs)
- Software Announcement 201-114, dated April 23, 2001 (V5R1 Terms and Conditions/Ordering Information/Prices)
- Software Announcement 201-116, dated April 23, 2001 (WebSphere Development Tools for iSeries V5.1)
- Software Withdrawal Announcement 901-101, dated April 23, 2001 (Withdrawal of selected AS/400 software programs)

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Java is a trademark of Sun Microsystems, Inc.
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WebSphere Development Studio

WebFacing Tool (First Edition)

The WebFacing Tool is a compelling, Web-enabling strategy because:

- “WebFaced” applications can support both 5250 and Web interfaces with no dual maintenance.
- There are no separate development or run-time charges.
- The development time conversion and thin client implementation avoid typical performance penalties associated with Web-enabled 5250 applications.
- There are no proprietary interfaces with the WebFacing Tool. It generates standard Java components that can be leveraged and extended.

The major difference of the WebFacing Tool from the competition is that the WebFacing Tool is a development-time conversion tool while most of the other tools are run-time, conversion tools.

5250 Intercept products are preferred when:

- The application is stabilized.
- Zero change to application is desired.
- Can’t change the application source.
- Preference is to enhance runtime output versus development time source.

WebFacing Tool is preferred when:

- The business is still actively evolving the application.
- The developer is able to change the code to improve Web rendering.
- Preference is to enhance source versus 5250 data stream.
- Web application is performance sensitive.
- Web application is cost sensitive.

The WebFacing Tool supports display file DDS and does not support:

- UIM help or panels
- Office help
- OS/400® operating system screens or panels

WebFaced applications continue to run in interactive mode.

WebSphere Studio for iSeries (Professional Edition)

IDE Environment: WebSphere Studio, Professional Edition comes with a fully integrated development environment for creating and managing Web development projects. The IDE groups all of the files related to a Web site into a project and provides check-in and check-out capabilities for the files. The IDE also provides a wizard to publish a project to a Web server. The IDE can register any tool for any particular file type.

What-You-See-Is-What-You-Get (WYSIWYG) Editing: The Page Designer provides WYSIWYG editing of HTML pages and JSP. The IDE provides wizards for creating SQL statements, JSPs, and servlets from SQL statements and JSPs and servlets from JavaBeans.

Improved Integration: WebSphere Studio has improved its integration with VisualAge® for Java. Now the customer can read classes, beans, and servlets from VisualAge for Java and write classes, beans, and servlets to VisualAge for Java. The customer can publish a Web site to VisualAge for Java for testing purposes. Both WebSphere Studio and VisualAge for Java support the Java 2 standard.

iSeries Affinity Enhancements: We added an iSeries affinity enhancement to WebSphere Studio to make it easier to access iSeries data and applications than any other Web development tool. To generate JSP code to set attributes, we included:

- Display-file-like palette parts in Page Designer
- HTML and JavaScript controls
- Smart entry fields
- Labels, buttons, subfiles, and wizards

SmartGuide Framework: We added a program-call SmartGuide framework for putting program and service program APIs on the Web. Get to the Web easily by describing the program and service program inputs and outputs and then generating the outputs. An HTML form is provided for prompting for the inputs and a JSP is used to display the output. We use a JavaBean to call a program or service program using the Common Connector Framework, the new standard for Java-to-existing connections. Then a servlet is used to glue all of the components together. The Page Designer is used to iterate the generated output.

We also simplified iSeries deployment by providing a SmartGuide to easily publish a Web site to the WebSphere Application Server on the iSeries and we provided auto-configuration support for the WebSphere Application Server. We also provided lots of documentation and testing to ensure that WebSphere Studio and WebSphere Application Server are the preferred choices for Web development and deployment for iSeries customers.
Web interfaces can be used for in-house applications as well as Internet applications. WebSphere Studio may become the de facto standard tool for creating end-user interfaces for all iSeries applications.

There are four possible reasons that developers may want to use WebSphere Studio. Advanced Edition from the version that is shipped with WebSphere Development Studio for iSeries. The Advanced Edition provides the following enhancements:

- Version Control Support for third-party Source Control Management tools
- Distributed debugger support for adding breakpoints to JSPs running on Windows NT™
- Tooling to support the WebSphere Personalization Server
- Page Detailer — a performance analyzer in a browser that details the performance characteristics of all of the components that are downloaded

We designed WebSphere Studio for iSeries so that WebSphere Studio, Advanced Edition could be installed over our version of WebSphere Studio. Take advantage of the extra capabilities offered by the Advanced Edition and yet still maintain the iSeries Affinity enhancements that were shipped with WebSphere Studio for iSeries.

**VisualAge for Java for iSeries (Professional Edition)**

In our version of VisualAge for Java, we also included the Enterprise Toolkit for iSeries. This toolkit includes:

- Toolbox for Java to provide access to iSeries data, applications, and system functions.
- Remote export, compile, run, and debug support to make it easier to deploy Java applications on the iSeries server.
- Display file to Swing import tool to make it easier to create a Java, GUI front-end to an existing 5250 application.
- A program call SmartGuide or wizard to generate the JavaBean for calling an existing iSeries program.
- Formatting beans that have capabilities similar to those in a display file for entry fields, labels, comboBoxes, and Jtable columns.
- iSeries attributes such as edit codes and error checking are provided.
- DFU-like Beans — These beans with SmartGuides or wizards provide direct record level access to DB2® UDB for iSeries via the classes in the Toolbox for Java. The wizard connects to servlets for the HTML output or to Java’s Jtable widget for GUI output. This wizard replaces the Subfile SmartGuide.
- PDM-like beans to retrieve lists of iSeries object information and information from the integrated file system. The beans support PDM’s subsetting capabilities.

VisualAge for Java, Professional Edition plus iSeries Enterprise Toolkit addresses most of the tool requirements for building portable, cross-platform, object-oriented (OO), e-business applications.

The version of VisualAge for Java that is shipped with WebSphere Development Studio for iSeries may not address all the Java development environments. There are two key reasons that you may want to use VisualAge for Java Enterprise Edition.

The customer may want to build Java applications that access IMS™, Encina®, MQSeries®, CICS®, HOD, or SAP and therefore use the connectors that are part of the Enterprise Edition.

Support for Enterprise JavaBean development is not supported by the version of VisualAge for Java that is included in WebSphere Development Studio for iSeries, V5R1.

Developers require VisualAge for Java, Enterprise Edition for EJB development. However, our solution has been designed so that VisualAge for Java, Enterprise Edition, can be installed over top of our version of VisualAge for Java. VisualAge for Java, Enterprise Edition can be purchased and installed for any developers who need to do EJB development.

**Note:** VisualAge for Java, Enterprise Edition, a workstation-based offering, is priced per workstation.

**CODE**

CODE consists of:

- CODE Designer: a compelling WYSIWYG designer for screens, reports, and database files.
- CODE Editor: A flexible editor for editing any Windows™ or iSeries source, but with extraordinary support for RPG, COBOL, CL, C, C++, Java, and DDS. This includes built-in:
  - Language reference help
  - Syntax checking
  - Prompting for RPG and DDS
  - Program verifier for RPG, COBOL, and DDS

This verifier is effectively the host compiler ported and built-in to the editor, for the purpose of error checking. CODE guarantees a clean compile every time, if the verify is used first to find and fix all errors. The editor also supports a command shell for issuing Windows or iSeries commands. Further, the editor has single button launch of the host compiler and of the distributed debugger.

- CODE Project Organizer®: A tool for organizing Windows and iSeries objects into projects for easy and productive access. From the list of objects, all of the CODE tools can be launched from the context menu, as well as user-defined actions.
- IBM Distributed Debugger: A debugger for iSeries OPM/ILE RPG/COBOL/CL, ILE C/C++ and Java. This debugger runs on Windows while debugging your application running on iSeries. Supports source and listing views, interactive and batch programs, and all flavors of server Java including applications, servlets, and EJBs.

There are other miscellaneous tools inside CODE as well, all of which add up to significant productivity and morale gains over the classic set of tools. CODE offers a great first step in the necessary migration of skills to new e-business world — starting with the use of modern tools for traditional work. It also offers a more attractive environment for exciting and retaining new staff.

**VisualAge RPG**

VisualAge RPG provides a GUI builder to visually lay out the client’s GUI application. The event logic is then written in RPG IV. VisualAge RPG uses the CODE editor for writing applications. The VisualAge RPG debugger, used to debug the RPG IV client applications, is also...
similar to the CODE debugger. The customer can also write non-visual projects and portable business logic in RPG IV with VisualAge RPG. Furthermore, the customer can generate Java applications or applets from VisualAge RPG source.

**Installation Information**

The host products are included in the keyed media set, which is shipped with each OS/400 order. The host products install as individual products (5769-RG1, 5769-CX2, 5769-CB1, and 5799-GDW) on the iSeries server. The workstation tools are shipped in a media kit, (LK3T-5267) with each order of 5769-WDS. The workstation tools are installed directly onto the workstation or LAN.

**Offering Information**

Product information is available through Offering Information (OITOOL) at:

http://www.ibm.com/wwoi

**Publications**

The following hardcopy publication and media are shipped:

- SC09-2716-01 ILE C++ PRPQ, 5799-GDW, Read Me First
- LCD4-3018-01 ILE C++ PRPQ, product CD

**Displayable Softcopy Publications**: Documentation, which is shipped with the OS/400 licensed program, to support this program is provided on the AS/400® Information Center:

- Supplemental Manuals CD (SK3T-4033)
- AS/400 Programming Languages and Development Tools Supplemental Manuals CD (SK3T-5256)

The Information Center is also available on the Internet at:

http://www.ibm.com/eserver/iseries/infocenter

**Technical Information**

**Hardware Requirements**

System

- iSeries and AS/400 RISC models.
- If WebSphere Application Server on iSeries is used for applications built with WebSphere Studio for iSeries or WebFacing Tool, refer to the WAS documentation for minimum iSeries hardware requirements.

**Software Requirements**

System

- WebSphere Development Studio for iSeries requires V4R5M0 OS/400 (5769-SS1).
- The C and C++ compilers require “Openness Includes” (option 13 of 5769-SS1). Installing “Openness Includes” is optional for RPG and COBOL.

**Memory and disk space** — refer to the following table:

<table>
<thead>
<tr>
<th>Product/Feature</th>
<th>Auxiliary Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>65 MB</td>
</tr>
<tr>
<td>ADM</td>
<td>30 MB</td>
</tr>
<tr>
<td>ADS</td>
<td>64 MB</td>
</tr>
<tr>
<td>ILE RPG</td>
<td>23 MB</td>
</tr>
<tr>
<td>ILE COBOL</td>
<td>35 MB</td>
</tr>
<tr>
<td>ILE C</td>
<td>10 MB</td>
</tr>
<tr>
<td>For openness, includes option of OS/400</td>
<td>60 MB</td>
</tr>
<tr>
<td>ILE C++</td>
<td>54 MB</td>
</tr>
</tbody>
</table>

**Workstation**

- Processor — Intel Pentium™ II, 300 MHz, or faster, compatible processor recommended
- Display — SVGA, 800 x 600 (1024 x 768 recommended)
- CD or DVD drive
- Mouse or pointing device
- Memory and disk space — refer to the following table:

<table>
<thead>
<tr>
<th>Component</th>
<th>Memory</th>
<th>Disk</th>
</tr>
</thead>
<tbody>
<tr>
<td>WebFacing Tool</td>
<td>128 MB</td>
<td>200 MB</td>
</tr>
<tr>
<td>WebSphere Studio for iSeries</td>
<td>96 MB minimum</td>
<td>385 MB minimum</td>
</tr>
<tr>
<td>WebSphere Studio for iSeries</td>
<td>128 MB recommended</td>
<td>500 MB recommended</td>
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<tr>
<td>VisualAge for Java for iSeries</td>
<td>128 MB minimum</td>
<td>495 MB minimum</td>
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<tr>
<td>VisualAge for Java for iSeries</td>
<td>192 MB recommended</td>
<td>550 MB recommended</td>
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<tr>
<td>CODE</td>
<td>64 MB minimum</td>
<td>235 MB</td>
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<tr>
<td>CODE</td>
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<tr>
<td>VisualAge RPG</td>
<td>64 MB minimum</td>
<td>285 MB</td>
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<td>VisualAge RPG</td>
<td>96 MB recommended</td>
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<tr>
<td>Total product</td>
<td>128 MB minimum</td>
<td>1.2 GB minimum</td>
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<tr>
<td>Total product</td>
<td>256 MB recommended</td>
<td>1.5 GB recommended</td>
</tr>
<tr>
<td>Workstation</td>
<td>Component</td>
<td>Development time</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------</td>
<td>------------------</td>
</tr>
<tr>
<td>WebFacing Tool (First Edition)</td>
<td>Windows 98/NT/2000/ME later, to access HTML based help and Web documents</td>
<td>OS/400 V4R5, or later</td>
</tr>
<tr>
<td>WebSphere Studio for iSeries (V3.5)</td>
<td>Windows 98/NT/2000/ME later (1) WebSphere Application Server V3.5.2, or later</td>
<td>OS/400 V4R5, or later (3) NS 4.7, or later, or IE 4.0, or later IE 5.0 for Page Detailer WebSphere Application Server V3.5.2 (2)</td>
</tr>
<tr>
<td>VisualAge for iSeries</td>
<td>Windows 98/NT/2000 OS/400 V4R5, or later (3)</td>
<td>JRE V1.2.2, or later</td>
</tr>
<tr>
<td>CODE</td>
<td>Windows 98/NT/2000/ME OS/400 V4R5, or later (1) NS 4.7/IE 5.0, or later, to access HTML based help and Web documents</td>
<td>NA</td>
</tr>
<tr>
<td>VisualAge RPG</td>
<td>Windows 98/NT/2000/ME or any JRE V1.2.2, or later, including a browser OS/400 V4R5, or later</td>
<td></td>
</tr>
</tbody>
</table>

(1) OS/400 at development time is only needed if program source is located on the iSeries or the application contains back end code on the iSeries.

(2) Refer to WebSphere Application Server documentation for WebSphere Application Server specific hardware requirements.

(3) OS/400 at run time is only needed if application contains back end code on the iSeries.

### Terms and Conditions

**Licensing:** The following existing V4 iSeries host application development tools are combined into a single product, WebSphere Development Studio for iSeries (5769-WDS).

- ILE RPG for AS/400 (5769-RG1)
- ILE C for AS/400 (5769-CX2)
- ILE COBOL for AS/400 (5769-CB1)
- Application Development ToolSet for AS/400 (5769-PW1)
- ILE C++ for AS/400 (5799-GDW)

These individual V4 products, as well as VisualAge for C++ for AS/400 (5769-CX5), are being withdrawn for new sales and replaced with 5769-WDS. WebSphere Development Studio for iSeries also includes the workstation-based application development tools (media kit LK37-5267). The workstation-based application development tools are:

- WebFacing Tool (First Edition)
- WebSphere Studio for iSeries (Professional Edition)
- VisualAge for Java for iSeries (Professional Edition)
- CODE
- VisualAge RPG

Customers may install the WebSphere Development Tools for iSeries V5.1 onto an unlimited number of workstations that are connected to the iSeries server to which 5769-WDS is licensed, without paying additional license fees.

### Software License Keys

In 5769-WDS, there is a unique software license key for each of these host products:

- 5769-RG1
- 5769-CX2
- 5769-CB1
- 5769-PW1

The four unique keys for these V4 products will ship with each order of 5769-WDS. All customers who transfer 5769-WDS must transfer all four license key sheets. The V4 host-based products that make up WebSphere Development Studio for iSeries are ordered under 5769-WDS, but continue to install as individual products (5769-RG1, 5769-CX2, 5769-CB1, 5769-PW1, and 5799-GDW) on the iSeries server. The workstation AD tools will be installed directly onto the workstation or LAN.

### Media

These host products, 5769-RG1, 5769-CX2, 5769-CB1, and 5769-PW1 in 5769-WDS are included in the keyed media set, which is shipped with each OS/400 order. The WebSphere Development Tools for iSeries, which contain the workstation-based, application development tools, and 5799-GDW, will be shipped when 5769-WDS is ordered.
Application Development Manager and Application Dictionary Services are offered as optionally orderable priced features of 5769-WDS.

**V3 Upgrade**

The following V3 products have a reduced price upgrade to 5769-WDS: 5763-CB1, 5763-CD1, 5763-CL1, 5763-CX1, 5763-CX2, 5763-PW1, 5763-RG1, 5763-VR1, 5716-CB1, 5716-CL1, 5716-CL3, 5716-CX2, 5716-CX5, 5716-PW1, and 5716-RG1.

**V4 Upgrade**

Customers who have a V4 license to one or more of these products (5769-CB1, 5769-CL3, 5769-CX2, 5769-CX5, 5769-PW1, 5769-RG1) are entitled to a no additional charge upgrade to 5769-WDS, if they have a current software subscription contract. Customers purchase iSeries software subscription at the server level. The above V4 AS/400 or iSeries licensed programs are licensed to run on only one machine at a time. Although there multiple upgrade paths to 5769-WDS, customers are only entitled to one upgrade to 5769-WDS per server with software subscription and having a license for one or more of the V4 products listed above. Once a customer upgrades from one of these V4 products to 5769-WDS, they are no longer licensed to the individual V4 products listed above.

All customers who acquire 5769-WDS (via an initial purchase or an upgrade) will receive a Proof of Entitlement (PoE). Customers who purchased V4 products listed above under IPLA terms also received a PoE for the products which they purchased. In an upgrade transaction, the new PoE fully replaces the old PoE. Therefore, customers who upgrade to 5769-WDS must destroy the V4 PoE for each product which is listed above.

V4 customers who have a license to one of the individual products, which are now a part of 5769-WDS, who do not want to acquire the new package, and are doing a hardware upgrade that results in a higher processor group, can continue to do a processor group upgrade for the individual products. V4 customers also have the option of upgrading to the new package (if they have one or more of the V4 products listed above and a current software subscription contract) and do a processor group upgrade for the entire package (5769-WDS).

**Usage Restriction**

The complimentary Macromedia Flash, Fireworks, Freehand, and Director trial CD contains a time-limited version of the software which expires after 60 days.

For the general terms information, refer to Software Announcement 201-114, dated April 23, 2001 (V5R1 Terms and Conditions/Ordering Information/Prices).

**Program Services:** Available until July 31, 2002

**Prices**

Refer to Software Announcement 201-114, dated April 23, 2001 (V5R1 Terms and Conditions/Ordering Information/Prices).