IBM WebSphere Developer for System z V7.0 supports application development

At a glance

With WebSphere Developer for System z V7.0, developers can accelerate the development of:

- Service-oriented architecture (SOA) including services deployable to CICS, IMS, WebSphere Application Server, and DB2 Stored Procedure environments
- Dynamic Web applications and front ends including HTML, Java Server Faces (JSF), Java Server Pages (JSP), Java and J2EE including JCA
- COBOL and PL/I applications that can be deployed to z/OS®, Microsoft™ Windows™, CICS, IMS, batch, UNIX System Services, and DB2 Stored Procedure-based environments
- C, C++, and High-Level Assembler applications that can be deployed to z/OS, CICS, IMS, batch, UNIX System Services, and DB2 Stored Procedure-based environments
- Java applications that are created for and run under JZOS on z/OS
- Web service development using new or existing CICS applications, including:
  - Develop a Web service with a CICS application as the application component
  - Develop a comprehensive Web service that collects and processes data from terminal and nonterminal applications and Web services
  - Develop a CICS application that accesses a z/OS DB2 database, and invoke it from a comprehensive Web service

For ordering, contact:

Your IBM representative or the Americas Call Centers at

800-IBM-CALL Reference: SE001

Overview

WebSphere® Developer for System z™ V7.0 includes capabilities that can help make traditional mainframe development, Web development, and integrated SOA-based composite development fast and efficient. COBOL, PL/I, C, C++, High-Level Assembler, and Java™ developer communities can also be more productive when they take advantage of these functions.

WebSphere Developer for System z V7.0 is the follow-on replacement for WebSphere Studio Enterprise Developer V5 and WebSphere Developer for zSeries® V6.

WebSphere Developer for System z V7.0 supports industry standards that can simplify the development of rich client interfaces, Web user
interfaces, traditional terminal interfaces, and back-end, business logic deployable to CICS®, IMS™, DB2®, Batch, UNIX® System Services, and WebSphere transactional environments. It also includes high-productivity tools for business-oriented developers, new to Java 2 Enterprise Edition (J2EE) and Java, that integrate IBM eServer® System z processing via Web services with powerful Web User and Session management.

WebSphere Developer for System z is optimized for WebSphere software and System z deployment environments, and supports multivendor runtime environments. It is powered by the Eclipse open-source platform so developers can adapt and extend their development environment to match their needs and help increase their productivity.

When WebSphere Developer for System z is used with the IBM Software Development Platform, developers can extend its processing to meet a broad range of requirements, including change management and test functions, usable directly from the WebSphere Developer for System z desktop.

**Key prerequisites**

Refer to the Hardware requirements and Software requirements sections.

**Planned availability dates**

- December 15, 2006, electronic software delivery
- January 11, 2007, media and documentation
When WebSphere Developer for System z is used with the IBM Software Development Platform, developers can extend its processing to meet a broad range of requirements addressing SOA applications and integrated life cycle management directly from WebSphere Developer for System z.

Key capabilities of WebSphere Developer for System z help you perform:

Web development

- Integrate your existing z/OS business applications with interoperable Web services and SOA.
- Utilize easy-to-use wizards and tools to bring many aspects of Web development (HTML, JSP, JSF, and servlets) into a common interface. This enables developers with diverse technical backgrounds, and even those unfamiliar with Java, to build rich, data-driven applications.
  - Visually map and construct Web applications using Model-View-Controller design with Java Server Faces and Struts
  - Quickly build rich Web user interfaces and Web forms with reusable drag-and-drop Java Server Faces (JSF) components and generate code for event handling, user input validations, and data binding
  - Easily build rich-function Web pages in a visual or source editing mode using the advanced-function HTML and JSP editor
- Connect your Web applications to relational databases, Enterprise JavaBeans (EJB) components, and Web services using simple point-and-click tools that support Service Data Objects, an emerging industry standard for accessing heterogeneous data.
- Accelerate portal, SOA, and J2EE using Rational® Application Developer tools and wizards.
- Leverage existing skills and shorten the Java learning curve with drag-and-drop user interface (UI) components and point-and-click database connectivity.
- Improve code quality with automated tools for applying J2EE coding standard reviews, component and Web Service unit testing, and multitier runtime analysis.
- Visualize and graphically edit code through the UML Visual Editor for Java and EJB.

CICS, IMS, DB2, Batch, and UNIX System Services development

- Improve the productivity of your developers with development and maintenance tools for z/OS (COBOL, PL/I, C, C++, Java, High-Level Assembler) applications and Microsoft Windows (COBOL, PL/I) applications, as well as access to AIX® file systems, z/OS and UNIX System Services file systems, submitting z/OS jobs, monitoring z/OS Job execution queues, and debugging artifacts after access
- Speed coding by using the visual configurable editor and statement assisted creation, and verify syntax of COBOL, PL/I, C, C++, High-Level Assembler, and Java languages
- Provide open access by developing, testing, and deploying Web Services to WebSphere, CICS, and IMS environments

Integrated life-cycle development

- Collaborate and share assets across the team using built-in IBM Rational ClearCase® LT version control or IBM SCLM Toolkit
- Adapt and extend your development environment with Eclipse-based plug-ins to match your needs
- Quickly build and deploy interactive reports using drag-and-drop UI components and Crystal Reports

Enterprise Service Tools deploying to CICS Service Flow Feature

Enterprise Service Tools
Enterprise Service Tools is an integrated perspective that assists a CICS developer in the following tasks:

- Creating a CICS Web service that uses a new or existing CICS application as its application component
- Creating an IMS SOAP Gateway Web service that uses a new or existing IMS application as its application component
- Creating a Web service that is not runtime-specific from a new or existing application
- Using the System z Database Application Generator to create a COBOL CICS application that accesses a z/OS DB2 database
- Developing a comprehensive Web service that collects and processes data from multiple sources, including CICS nonterminal applications, CICS terminal applications, and Web services

Enterprise Service Tools combines capabilities that were formerly available in the XML Services for the Enterprise plug-in and in the Service Flow Modeler plug-in. Enterprise Service Tools features an enhanced user interface that increases usability and simplifies the overall service flow development process.

**CICS Service Flow Feature**

The Enterprise Service Tools provide six types of projects that allow you to transform an existing CICS application to a Web service or to integrate an existing CICS application into a Web service. The service flow specific project can also be driven by MQ Messages and CICS Transaction Gateway.

The service flow project view is one of the six project views provided in Enterprise Service Tools. It allows you to develop a comprehensive Web service that collects and processes data from multiple sources, such as programs, screens, databases, and Web service invocable processing.

The CICS Service Flow Feature must be installed to run the Service Flow project. The CICS Service Flow Feature requires CICS Transaction Server (CICS TS) V3.1.

The CICS Service Flow feature provides components that extend CICS TS by providing adapters that exploit CICS interfaces to invoke the CICS terminal-oriented transactions and COMMAREA programs required by the Web service generated from the service flow project.

In support of the latest capabilities of the Service Flow Modeler in WebSphere Developer for System z V7.0, the CICS Service Flow Feature is enhanced as follows:

- Integration with Web services and MQ environments is more easily enabled by providing for the use of CICS TS channels and containers as input and output interfaces to a service flow.
- Support for invoking Web services as part of a service flow is introduced
- Additional management and configuration capability have been introduced together with improved tracing.

The CICS Service Flow Runtime delivers adapters for access to existing CICS transaction and application interfaces using non-invasive techniques, so that the CICS application assets orchestrated by the service flow do not have to be altered to support the CICS business service flow. This helps enable the fast reuse of existing assets while helping to minimize the risk of the new implementation. If required, the CICS business service can persist state data related to the business service between multiple invocations of the CICS application interfaces.

Where there is a requirement to integrate information from non-CICS applications into the CICS business service, the Service Flow Runtime delivers a Web services adapter and a WebSphere MQ adapter that enable the CICS business service flow to access any application supporting these interfaces, wherever the application may reside in the enterprise solution architecture.

The base capabilities provided by CICS TS to access CICS application interfaces extend to capabilities such as:

- Web services
- Link3270 Bridge
- Distributed Program Link (DPL)
- WebSphere MQ Adapter
• Front End Programming Interface (FEPI)

The CICS Service Flow Runtime exploits these capabilities when generating the CICS business service function to provide the implementation needed to reuse the existing CICS applications as components in the CICS business service flow.

For more information on the CICS Service Flow Feature, refer to 205-303, dated November 22, 2005.

New in V7.0

A host of significant new features and feature enhancements in V7 build on an already comprehensive set of features. They include new functions supporting:

Core z/OS development

• C, C++ support for development, editing, content assist, remote syntax checking, builds
• Ability to create z/OS projects containing UNIX System Services files and folders
• z/OS project restructure that helps improve granularity of artifact and property management, simplifies compile and build processing, and provides management of project definitions centrally from the host
• Local syntax check upgrades
  – Supporting remote z/OS artifacts; also including dependency identification of copybooks with added capability to manage copybooks across projects
  – CICS V3 API support
• Visual IMS MFS Editor
• Terminal Emulator keyboard mapping

SOA and Web services

• System z Application Pattern Generator enables:
  – COBOL data access (CRUD) back end processing generated from UML and DB Schemas
  – Transformations can be defined and customized, popular transformations packaged include CRUD
• Upgraded XML and Web Services support improves SOA access to CICS TS V3.1 and IMS V9:
  Enterprise Service Tools combines capabilities that were formerly available in the XML Services for the Enterprise plugin and in the Service Flow Modeler plugin. The Enterprise Service Tools also offers the following new features for V7.0:
  – Ability to import source programs from a remote project or a remote system
  – Ability to incorporate z/OS DB2 support through the z/OS Database Application Generator
  – For Enterprise Service Tools single-service projects
    -- A new COBOL to WSDL and XSD mapping editor with enhanced wiring features
    -- Complete integration with CICS Web Services Assistant features
    -- Enhanced support for the unattended Web Services creation tool ("Batch processor")
    -- Ability to automatically create "Batch processor input files" (scripts for unattended service creation) from a GUI wizard
    -- Ability to reload the script into a GUI wizard COBOL to XML Mapping data integrated into the script
    -- Ability to generate CICS native top-down and bottom-up services in unattended mode
    -- Support for creating multiple operation services in unattended mode
    -- Integration into the Enterprise Service Tools perspective
    -- XML enhancements
    -- For service flow projects
-- Ability for a service flow to invoke an external Web service
-- Ability to use the channel and container features of CICS for data objects greater than 32K in size
-- PL/I support in the New Project wizard, and an importer for PL/I modules
-- Ability to view System z Database Application Generator applications in the Enterprise Service Tools Project Explorer
-- Remote browse support for file or PDS selection
-- Improvements in references to ESQL modules and mapping routines
-- Improvements in default screen recognition criteria, and project level preferences for screen recognition defaults
-- Improvements in deployment and management of files and artifacts
-- Enhanced BIDI and DBCS support
-- Ease-of-use and performance enhancements
  – Enterprise Service support preview for PL/I includes and generates WSDL and PL/I adapter programs for CICS, IMS, and Batch processing

Windows and AIX Development

• Upgraded PL/I and COBOL Windows compilers
• Customized version of TXSeries™ on the Windows platforms, to support local Windows based development of CICS applications
• Support for AIX file system access in Remote System Explorer (RSE)

Integrated application life cycle

• Common Access Repository Manager (CARMA)-enabled integrated remote artifact access to user customizable Source Code Management systems.
  – CARMA client development provides connection to configured repositories.
  – Updates include additional command support
• Enhanced SCLM Developer Plugin provides new capability including:
  – Long name support
  – Remote System Explorer integration
  – Same function as IBM SCLM Developer Toolkit
• Provides Host Access Transformation function that:
  – Supports Host Access Transformation Services (HATS) development. Customers must purchase independent HATS licenses for deployment.
  – Provides integrated, rich client access enabling WebSphere Developer for System z licensed developers with Time Sharing Option (TSO)/Interactive System Productivity Facility (ISPF) access through a powerful GUI front end.
• File Manager Integration Technology Preview enabling access to Keyed Sequence Data Set (KSDS) files from the WebSphere Developer for System z workbench
• Asset Analyzer Technology Preview speeds application understand from the WebSphere Developer for System z workbench

Other capabilities include:

• Eclipse V3.2 support for a responsive, attractive, and customizable user interface that helps increase developer productivity
• Web modeling improvements (Web Diagram Editor)
• Improved Web services tooling
• Improved Java Server Faces (JSF) tools
• Improved portlet development tools
• Enhanced J2EE Connector (J2C) tools
• Latest software leveraged
  – Eclipse 3.2
  – Java 5
  – Java 2 Standard Edition (J2SE) 5.0
  – Sun Java Runtime Environment (JRE) support
  – New runtimes (WebSphere Application Server V6.1, WebSphere Portal V6)

Technology previews
Technology previews provide insight into IBM plans and directions and information is provided "as-is" and without warranty or condition of any kind. Customers who want to participate in the technology preview to gain early experience with this support should visit the WebSphere Developer for System z Web site at

http://www.ibm.com/software/awdtools/devzseries/support/

This Web site provides you with detailed information about availability dates and terms and conditions.

File Manager integration technology preview
This technology preview provides eclipse-based integration and access to File Manager VSAM KSDS processing. This component requires IBM File Manager for z/OS.

Asset Analyzer technology preview
This technology preview provides integrated application understanding via a Windows-based Asset Analyzer component. This component is for workstation and single user usage only.

XML Enterprise Services PL/I technology preview
This technology preview provides support for generating WSDL and PL/I adapters from PL/I source and includes supporting SOA based Web services integration to CICS and IMS-based PL/I processing.

Citrix support technology preview
For a geographically distributed development team, or teams working with sensitive data, WebSphere Developer for System z will have a technology preview of installing on a Citrix server to provide more secure remote access to better protect your data with a single installation of the product.

Section 508 of the U.S. Rehabilitation Act
WebSphere Developer for System z V7.0 is capable as of December 15, 2006, when used in accordance with IBM's associated documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it. A U.S. Section 508 Voluntary Product Accessibility Template (VPAT), containing details on the products accessibility compliance, can be requested at


IPLA and subscription and support considerations
IPLA licenses can be transferred from one machine to another within, but not limited to an enterprise. You may aggregate the capacity for all the processors the product is operated on to achieve a more economic price. This will result in a single proof of entitlement (PoE). It is your responsibility to manage the distribution of Value Units within the limits of the entitlement of the product license.

Subscription and Support must cover the same capacity as the product license entitlement. Subscription and Support will be available in the country in which the agreement is made.
Enterprise Generation Language

To increase the flexibility of IBM's Software Development Platform, IBM is introducing a new modular approach to packaging selected components. The first step in this modularization is to decouple the Enterprise Generation Language (EGL) development environment from the Eclipse-based Software Development Platform products in which it has been hosted (for example, Rational Application Developer, WebSphere Developer for System z) and to make it available as an EGL extension, a separately orderable and installable product feature. WebSphere Developer for System z V7.0 therefore does not contain any EGL development tools.

IBM is currently updating and enhancing the EGL development tools and plans to make them available in early 2007 maintaining full upward compatibility with previous versions of EGL.

WebSphere Developer for zSeries V6 customers who currently use EGL should continue to develop EGL applications using WebSphere Developer for zSeries V6 until the equivalent EGL functionality becomes available as a product extension to WebSphere Developer for System z V7.0 and the other Software Development Platform products. These customers will be entitled to obtain the EGL Extension product.

VisualAge® Generator Customers should consider converting their applications to EGL and migrating to WebSphere Developer for zSeries V6 or Rational Application Developer V6. These converted applications will be upwardly compatible to the EGL Extension product, when available.

All statements regarding IBM's plans, directions, and intent are subject to change or withdrawal without notice.

Trademarks

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Microsoft and Windows are trademarks of Microsoft Corporation.

Java is a trademark of Sun Microsystems, Inc.

UNIX is a registered trademark of the Open Company in the United States and other countries.

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Additional information

Summary of WebSphere® Developer for System z™

WebSphere Developer for System z consists of a common workbench and an integrated set of tools that support end-to-end, model-based application development, run-time testing, and rapid deployment of on demand applications. It offers integrated development environments (IDE) with advanced, easy-to-use tools and features to help WebSphere, CICS®, and IMS™ developers rapidly design, code, and deploy complex applications.

Web, J2EE, and Java™ development

Web development

• Helps develop creative and data-rich Web-based applications
• Provides visual layout tools to help you write Java Server Faces (JSF), JavaServer Pages (JSP), and HTML
• Includes a wizard to develop servlet code
• Lets you create Web applications from database queries and beans
• Includes graphic-design software for producing static and animated output
• Supports J2EE coding and deployment
Java development

- Helps create Java code
- Helps enable incremental compilation and provides a common local and remote debugger benefit
- Includes Java source file tools to search, compare, and merge code and refactoring tools to help reorganize Java applications

J2EE platform support

- Features full Enterprise JavaBeans (EJB) support, Web Archive (WAR) and Enterprise Application Archive (EAR) deployment support
- Includes an updated EJB test client and an enhanced unit-test environment to create multiple projects with different unit-test configurations

Analysis and performance profiling

- Collects and presents Java run-time data in graphical and non-graphical views
- Helps detect application performance issues early in the development cycle and improves overall system efficiency

z/OS® and UNIX® System Services development

- Provides an interactive, workstation-based environment with quick access to IBM z/OS datasets and UNIX System Services Hierarchical File System (HFS) / zSeries® File System (zFS) files
- Creates Assembler, COBOL, PL/I, C, C++, and Java code
- Creates, maintains, and debugs CICS and IMS system-based code, IMS and Structured Query Language (SQL) statements

Windows™ development

IBM COBOL for Windows compiler supports development of IBM COBOL applications including compiling, testing, debugging, and deploying to Windows platforms.

IBM PL/I for Windows compiler supports development of IBM PL/I applications including compiling, testing, debugging, and deploying to Windows platforms.

IBM TXSeries™ provides CICS support for development of IBM PL/I and COBOL for Windows applications including translating, compiling, testing, and debugging. For deployment, IBM TXSeries for Multiplatforms must be purchased.

Composite development

Web services and XML development

- Offers the ability to create, view, edit and validate WSDL, document-type definitions (DTD) and XML schemas, transforms XML documents into text, HTML, or other XML document types
- Integrates relational databases and XML
- Generates COBOL adapters and CICS TS V3 WSBind and COBOL artifacts for converting between Web Service Definition Language (WSDL), XML and COBOL data in a Web services environment

Testing and deployment

Allows cross-platform interactive testing, debugging, and deployment of JSP, servlets, EJB, and HTML files on local and remote Web application servers as well as z/OS CICS, IMS/DC, batch, DB2®, and UNIX System Services debugging of COBOL, PL/I, C, C++ and assembler applications.

Web services deployment

- Helps build and deploy Web services-enabled applications across a broad range of platforms
• Offers tools to help ensure conformance to standards such as UDDI for Java, Simple Object Access Protocol (SOAP), and Web Services Description Language (WSDL)

Relational database

• Helps create and manipulate project data design as relational database (RDB) schemas
• Writes queries against local and remote data.

Globalization support

A multilingual version of this product is available in English, French, German, Japanese, Korean, Portuguese, Spanish, Simplified Chinese, and Traditional Chinese.

Bundled product offerings

The WebSphere Developer for System z V7.0 media package contains complimentary bundled offerings. Usage of and service support for these bundled offerings is subject to restrictions. These restrictions are described in the License Information documents. In order to use any of the bundled offerings outside of the usage restrictions and to receive full service support, you must obtain a separate license for the offering. The bundled offerings included are:

• IBM Rational® Application Developer for WebSphere Software V7.0
  Helps developers quickly design, develop, analyze, test, profile, and deploy high-quality Web, SOA, Java, J2EE, and portal applications. Optimized for WebSphere software, this tool provides capabilities for deploying to other runtime platforms, helping customers increase productivity, minimize the learning curve, and shorten development and test cycles.
  For more information on this product, refer to 206-311, dated December 5, 2006.

• IBM WebSphere Application Server for Developers V6.1
  For more information on this product, refer to 206-076, dated April 11, 2006.

• IBM WebSphere Portal Enable for Multiplatforms V6.0
  For more information on this product, refer to 206-163, dated July 11, 2006.

• IBM CICS Transaction Gateway for Multiplatforms V6.0.2
  For more information on this product, refer to 206-147, dated June 14, 2005.

• IBM TXSeries for Developers V6.1
  This is a special edition of IBM TXSeries for Multiplatforms V6.1 made for WebSphere Developer for System z V7.0. For more information on this product, refer to 206-267, dated October 24, 2006.

• IBM DB2 Enterprise Server Edition V9.1
  For more information on this product, refer to 206-128, dated June 7, 2006.

• IBM DB2 Enterprise Server Edition V8.2
  For more information on this product, refer to 204-185, dated August 17, 2004.

• Rational ClearCase® LT
  For more information on this product, refer to 206-131, dated June 6, 2006.

• Business Objects Crystal Reports

Education support

IBM delivers a comprehensive portfolio of education services to help you successfully deploy and integrate IBM's WebSphere Application and Integration middleware products to their maximum potential.
Education is a key component to ensuring software success. The IBM education team is committed to providing the highest quality education available to help your company prosper in today's competitive marketplace. We take pride in our ability to deliver successful education programs that provide your people with the skills necessary to make your business profitable using IBM software.

The IBM education team works closely with IBM product developers and IBM services organizations to ensure that the courses we offer provide the most up-to-the-minute technical and product information. Our courses place an emphasis on the advanced knowledge and insight that only these sources can provide. We draw from a deep pool of IBM technical experience in the development of our courses, and pass that knowledge on to our students.

The following educational offerings are available as listed below:

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IBM training provides education to support many IBM offerings. Descriptions of courses for IT professionals and managers are on the IBM training Web site


Refer to the IBM training Web site for information on course locations and availability dates.

Call IBM training at 800-IBM-TEACH (426-8322) for catalogs, schedules, and enrollments.

Offering Information

Product information is available via the Offering Information Web site

http://www.ibm.com/common/ssi

Also, visit the Passport Advantage® Web site

http://www.ibm.com/software/passportadvantage

Publications

No publications are shipped with this product.

The IBM Publications Center

http://www.ibm.com/shop/publications/order

The Publications Center is a worldwide central repository for IBM product publications and marketing material with a catalog of 70,000 items. Extensive search facilities are provided. Payment options for orders are via credit card (in the U.S.) or customer number for 20 countries. A large number of publications are available online in various file formats, and they can all be downloaded by all countries.

Technical information

Specified operating environment

Hardware requirements

- Intel® Pentium® III 800 MHz processor minimum is required. Higher is recommended.
- 1 GB RAM minimum is required.
- A VGA display of 1024x768 minimum is required.
- 2.0 GB of disk space minimum (based on NT File System) is required depending on the optional features selected for installation. This is in addition to space for the resources you develop. Refer to the Installation Guide for an account of space requirements according to each aspect of the installation process.

Software requirements: The following are the software requirements for using WebSphere Developer for System z V7.0 and its optional features. For more details, such as the required components and program temporary fixes (PTFs) for the programs listed below, refer to the
softcopy publication for WebSphere Developer for System z Prerequisites (SC31-6352).

**Workstation Prerequisites for WebSphere Developer for System z**

- One of the following workstation operating systems:
  - Microsoft™ Windows XP Professional with Service Pack 2, or later
  - Microsoft Windows 2000 Professional or Server or Advanced Server with Service Pack 4, or later
  - Microsoft Server 2003 Standard or Enterprise with Service Pack 1, or later
- TCP/IP installed and configured.
- To view readme files and the installation guide, one of the following Web browsers:
  - Microsoft Internet Explorer V6.0 with Service Pack 1.
  - Firefox 1.5 or 2.0.
- To view multimedia user assistance, such as Tours, Tutorials, and Show me viewlets, you must install Adobe Flash Player V6.0 r65, or later.
- Examples that use DB2 UDB — To review the Trade Sample Application and to review a subset of other examples, you must install a recent version of DB2 UDB (at least DB2 UDB V8.1 with fixpack 3), which is shipped for optional installation with WebSphere Developer for System z.

**Host Prerequisites for WebSphere Developer for System z**

- z/OS V1.5, or later (5694-A01) plus PTFs
- One of the following levels of REXX must be installed on the host:
  - REXX/370 Library V1.3 (5695-014)
  - REXX/370 Alternate Library (FMID HWJ9143) (5695-014)

**Corequisites**

The following products and other stated software are required to support specific features of WebSphere Developer. The workstation client can be successfully installed without these prerequisites. However, a stated Requisite® must be installed and operational at run time for the corresponding feature to work as designed.

**Applications Using RSE server** — IBM Software Developer Kit (SDK) for z/OS Java 2 Technology Edition, V1.4 or V1.5 (5655-I56) must be installed on the host to support applications using RSE server.

**C and C++ compiler** — One of the following must be installed on the host to compile C and C++ programs developed or edited within WebSphere Developer:

- IBM z/OS C/C++ V1.4 or V1.5 or V1.6 (5694-A01) plus PTFs
- IBM z/OS XL C/C++ V1.7 (5694-A01) plus PTFs

**COBOL compiler** — One of the following must be installed on the host to compile COBOL programs developed or edited within WebSphere Developer:

- IBM Enterprise COBOL for z/OS V3.1 (5655-G53) plus PTFs
- IBM Enterprise COBOL for z/OS V3.2 (5655-G53), or later

**COBOL Runtime Support for z/OS** — IBM Enterprise Developer Server for z/OS V5.0 (5655-I57) plus PTFs must be installed on the host to support the COBOL Runtime Support for z/OS.

**PL/I compiler** — One of the following must be installed on the host to compile PL/I programs developed or edited within WebSphere Developer:

- IBM PL/I for MVS™ and VM V1.1 (5688-235)
- IBM VisualAge® PL/I for OS/390® V2.2 (5655-B22)
• IBM Enterprise PL/I for z/OS V3.1, or later (5655-H31) plus PTFs

High-Level Assembler — IBM High-Level Assembler/MVS and VM and VSE V1.5 (5696-234) must be installed on the host to compile High-Level Assembler programs developed or edited within WebSphere Developer:

Debug Tool — One of the following must be installed on the host to support remote debugging of COBOL, PL/I, C, C++, and High-Level Assembler programs from WebSphere Developer:

• IBM Debug Tool for z/OS V7.1 (5655-R44), or later, plus PTFs
• IBM Debug Tool Utilities and Advanced Functions for z/OS V7.1 (5655-R45), or later, plus PTFs

IBM Debug Tool Utilities and Advanced Functions for z/OS V7.1, or later, plus PTFs, is required for assembler support, loading and clearing of specific load modules, describing load module contents, automonitor support and displaying the source for a compile unit prior to the application’s loading of the load module containing the compile unit and/or prior to execution of the compile unit for COBOL.

CICS TS — One of the following must be installed on the host to support applications with embedded CICS statements:

• IBM CICS TS for z/OS V2.2, or later (5697-E93)
• IBM CICS TS for z/OS V3.1 (5655-M15) plus PTFs

Enterprise Service Tools — The following list shows, for each type of project in the Enterprise Service Tools, the runtime required to run the Web service or other program that you can create using that Enterprise Service Tools project:

• Web services for CICS project — CICS TS for z/OS V3.1 (5655-M15)
• SOAP for CICS project — CICS TS for z/OS V3.1 (5655-M15)
• IMS SOAP Gateway project — IMS V9 (5655-J38)
• Batch, TSO, Unix System Services project — Batch, TSO, and Unix System Services environments for z/OS (5694-A01)
• Database application project — CICS TS for z/OS V3.1 (5655-M15)
• Service flow project
  – Web service
    -- CICS TS for z/OS V3.1 (5655-M15)
    -- The CICS Service Flow Feature of IBM CICS TS for z/OS V3.1 (5655-M15) must be installed
  – Host Access Transformation Services (HATS) macro
    -- WebSphere HATS V6.0.3 or higher
    -- HATS requires WebSphere Application Server V5.1 or V6.0

IMS/ESA® — The following must be installed on the host to support applications using IMS database and data communications:

• IMS/ESA V7.1, or later (5655-B01)
• IMS/ESA V8.1, or later (5655-C56)
• IMS/ESA V9.1, or later (5655-J38)

DB2 UDB — One of the following must be installed on the host to support DB2 UDB for z/OS or OS/390:

• DB2 UDB V7.1, or later (5675-DB2) plus PTFs
• DB2 UDB V8.2, or later (5625-DB2)
• DB2 UDB V9.1, or later (5635-DB2)
Software Configuration and Library Manager (SCLM) — REXX/370 Library, or Alternate Library, V1.3 (5695-014) must be installed on the host to support access to SCLM

Prerequisites for bundled product offerings

Also included in the WebSphere Developer for System z media package are a number of bundled product offerings. For a list of the included offerings, refer to the Bundled product offerings section. For software requirements for the bundled product offerings, refer to the separate product offerings’ announcement letters listed in the Bundled product offerings section.

Planning information

Customer responsibilities: Software Maintenance is included with licenses purchased through Passport Advantage and Passport Advantage Express. Installation and technical support is provided by the Software Maintenance offering of the IBM International Passport Advantage Agreement. This fee service enhances your productivity, with voice and electronic access into IBM support organizations.

Packaging: The WebSphere Developer for zSeries Passport Advantage media package is distributed with the basic machine-readable material on CDs for WebSphere Developer for System z V7.0 and the other bundled product offerings.

Security, auditability, and control

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Software Services

IBM Services has the breadth, depth, and reach to manage your services needs. You can leverage the deep technical skills of our lab-based, software services team and the business consulting, project management, and infrastructure expertise of our IBM Global Services team. Also, we extend our IBM Software Services reach through IBM Business Partners to provide an unmatched portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support any critical business need.

To learn more about IBM Software Services or to contact a software services sales specialist, visit

http://www.ibm.com/software/sw-services/

To locate an IBM Business Partner, visit

http://www.ibm.com/software/solutions/isv

IBM Software Services for WebSphere (ISSW)

Consulting and services are available for WebSphere Developer for System z from ISSW. ISSW is a global team of highly skilled consultants with broad architectural knowledge, deep technical skills, and best practices expertise. ISSW provides worldwide support for WebSphere products through a set of fee-based professional services that make it easy to design, develop, and deploy on demand solutions using IBM's WebSphere software products.

ISSW supports WebSphere Developer for system z with services customized to your needs. In addition to customized offerings, ISSW also extends the Enterprise Generation Language Migration for VisualAge Generator Applications offering. Beginning with mentored lectures, complemented with hands on labs, and finishing with guided migrations of your applications to EGL, this offering equips you to complete your migrations to EGL.

For additional information on services in your region, contact ISSW via


Ordering information
This product is only available via Passport Advantage. It is not available as shrinkwrap.

Product information

<table>
<thead>
<tr>
<th>Product information</th>
<th>Group</th>
<th>Category</th>
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<tr>
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<td>Tools</td>
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Charge metrics definitions

**Authorized user**

An authorized user is one and only one individual (named or unnamed) within or outside Your enterprise. A PoE must be obtained for each individual user accessing the program in any manner. A program licensed under an authorized user PoE may be installed on a single computer or server, and accessed by multiple users, provided that a PoE has been obtained for each individual user accessing the program either directly or indirectly (via a multiplexing program, device, or application server) through any means on behalf of the user.

**Floating User**

A Floating User, also known as a concurrent user, is one individual, machine, program, or device within or outside of the customer's enterprise. A PoE is required for the highest number of floating users simultaneously accessing the program or any program component either directly or indirectly through any means on behalf of the user. An example of indirect access would be through a multiplexing program, device, or application server. A floating user can establish one or more connections and count as a single user.

Passport Advantage program licenses

**WebSphere Developer for System z**

<table>
<thead>
<tr>
<th>Part description</th>
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Passport Advantage supply

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<td>BA0MAML</td>
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<td>WebSphere Developer for System z V7.0 Media Pack Multilingual</td>
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Passport Advantage customer: Media pack entitlement details
Customers with active maintenance or subscription for the products listed are entitled to receive the corresponding media pack.

- WebSphere Developer for System z V7 (all releases)
- WebSphere Developer for zSeries V6 (all releases)
- WebSphere Studio Enterprise Developer V5 (all releases)
- VisualAge Generator Developer V4.5

### WebSphere Developer V7.0.0

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<th>Entitled maintenance offerings description</th>
<th>Media packs description</th>
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<td>WebSphere Developer Authorized User</td>
<td>WebSphere Developer Multilingual (French, Korean, Chinese Simplified, Spanish, Portuguese-Brazilian, German, Japanese, Chinese Traditional, English U.S., Italian) Intel other CD ROM Digital Disk -- ISO 9660 Standard</td>
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<td>WebSphere Developer Multilingual (French, Korean, Chinese Simplified, Spanish, Portuguese-Brazilian, German, Japanese, Chinese Traditional, English U.S., Italian) Intel other CD ROM Digital Disk -- ISO 9660 Standard</td>
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<tr>
<td>WebSphere Developer Floating User</td>
<td>WebSphere Developer Multilingual (French, Korean, Chinese Simplified, Spanish, Portuguese-Brazilian, German, Japanese, Chinese Traditional, English U.S., Italian) Intel other CD ROM Digital Disk -- ISO 9660 Standard</td>
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### Cross-Platform Product for Use on zSeries

Order the part numbers that follow when there is an intention to acquire this cross-platform product for deployment on the zSeries or S/390® platform. This set of part numbers provides the identical supply and authorization as the other set in this announcement. The distinction is to identify the planned deployment platform.

<table>
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<td>WebSphere Authorized zSer User FM</td>
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Terms and conditions

The information provided in this announcement letter is for reference and convenience purposes only. The terms and conditions that govern any transaction with IBM are contained in the applicable contract documents such as the IBM International Program License Agreement, IBM International Passport Advantage Agreement and the IBM Agreement for Acquisition of Software Maintenance.

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This software license includes Software Maintenance, previously referred to as Software Subscription and Technical Support.

**LI form number**

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<td>WebSphere Developer for System z</td>
<td>5724-L44</td>
<td>L-JW N 6V4KZ4</td>
</tr>
</tbody>
</table>

The Program's LI will be available for review on the IBM Software License Agreement Web site


**Limited warranty applies:** Yes

**Warranty:** IBM warrants that when the program is used in the specified operating environment it will conform to its specifications. The warranty applies only to the unmodified portion of the program. IBM does not warrant uninterrupted or error-free operation of the program or that IBM will correct all program defects. You are responsible for the results obtained from the use of the program.

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Copy and use on home/portable computer: Yes

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The WebSphere Developer for System z V7.0 media package contains complimentary bundled offerings. Usage of and service support for these bundled offerings is subject to restrictions. These restrictions are described in the License Information documents. In order to use any of the bundled offerings outside of the usage restrictions and to receive full service support, you must obtain a separate license for the offering.

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Yes

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iSeries™ Software Maintenance applies: No

Educational allowance available: Not applicable.

Prices

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