



# IBM COBOL for AIX , V4.1.1 delivers higher performing runtime environment

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## At a glance

COBOL for AIX®, V4.1.1 delivers the following:

- 64-bit application development
- Unicode support to develop COBOL programs that exclusively use Unicode for all application data
- Support for Extensible Markup Language to integrate COBOL with XML
- Object-oriented COBOL for interoperability with Java™
- Integration of the latest compiler back-end from XL C, XL C/C++, and XL Fortran for AIX to give better performance
- Inclusion of an improved IBM® Debugger for AIX that enables you to conveniently debug programs in 32-bit or 64-bit mode
- Support for the Rational® Developer for Power Systems Software™

## Overview

COBOL for AIX, V4.1.1 provides a productive and powerful development environment for building COBOL applications. It includes a COBOL compiler, a COBOL library, and a debugger for the AIX operating system.

COBOL for AIX allows you to use your existing code to upgrade your applications with the newest technologies. The goal of COBOL for AIX is to allow developers to leverage over three decades' worth of applications in new endeavors. It delivers needed COBOL function to continue integration of COBOL and web-oriented business processes.

New in Version 4.1.1

- Performance improvements in the COBOL library that can help your applications run faster
- Enhanced I/O functionality
- Miscellaneous productivity and usability enhancements

## Key prerequisites

- IBM Power Systems™ servers that are supported by AIX V5.3, AIX V6.1, and AIX V7.1
- 500 MB of disk space

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## Planned availability date

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October 28, 2011: Electronic software delivery

November 4, 2011: Physical software delivery on Passport Advantage® by part number

November 18, 2011: Physical software delivery on Advanced Administrative System by product id

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## Description

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### Performance Improvements

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- Faster Binary Coded Decimal library
  - The Binary Coded Decimal (BCD) library is enhanced to improve its performance. The performance of packed arithmetic and conversion to and from packed arithmetic is improved.
  - A new environment variable further improves the performance of code that you have already tested and is now being run in production. When set, COBOL\_BCD\_NOVALIDATE causes the digit and signed validations done prior to conversion and arithmetic operations to be skipped. In this way, performance of the runtime is increased.
- Line Sequential, RSD, STL, and SdU file system performance and functional improvements
  - I/O performance for Line Sequential, RSD (record sequential delimited) file system, STL (standard language) file system, and SdU (SMARTdata utilities) is improved. Also the following enhancements are made:
    - RSD files are no longer limited to being fixed record length.
    - The record length of Line Sequential is determined by the requested read length (short reads) or the location of the new line /n even when the line contains binary data.
    - Line Sequential and RSD support Linage/advancing
    - Line Sequential, RSD, STL (sequential) now use File Status 2 with a unified format with an error code and description for most errors.
    - COBRTOPT+FM=S|L is not honored by the new code. All newly created files will be large format. Small format continues to be supported for compatibility only.

### Library

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- The performance of the COBOL runtime has been improved benefiting applications built with both COBOL for AIX 4.1.1 and older versions of IBM COBOL for AIX
- Specific areas of the library are rewritten resulting in improved performance particularly for dynamic calls, external variables, external files as well as the module caching feature.
- The performance of the INSPECT statement support is improved.
- Unless you utilize some of the new functionality introduced in COBOL for AIX, in most cases, when using this enhanced library, your application code should benefit with increased performance without the need for any source code changes or recompilation.

### Productivity improvements

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- New File System (RAW) for use with QSAM sent from host
  - A new file system (RAW) is introduced to allow users to transfer both fixed and variable length QSAM files from the host zSeries® server to AIX without the need to compile with -ghost.

- RAW also supports QSAM Variable Spanned files.

### Usability enhancements

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- Improved NLS support for messages (use of LC\_Message)

### Accessibility by people with disabilities

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A US Section 508 Voluntary Product Accessibility Template (VPAT) containing details on accessibility compliance can be requested at

[http://www.ibm.com/able/product\\_accessibility/index.html](http://www.ibm.com/able/product_accessibility/index.html)

### Section 508 of the US Rehabilitation Act

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COBOL for AIX, V4.1.1 is capable as of October 28, 2011, when used in accordance with associated IBM 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 US Section 508 Voluntary Product Accessibility Template (VPAT) can be requested on the following website

[http://www.ibm.com/able/product\\_accessibility/index.html](http://www.ibm.com/able/product_accessibility/index.html)

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## Product positioning

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### COBOL across platforms

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COBOL for AIX, V4.1.1 is part of a family of compatible compilers, application development tools, and maintenance tools. The IBM COBOL family consists of COBOL for AIX, Enterprise COBOL for z/OS®, ILE COBOL for System i®, and COBOL for Windows™ (packaged as a component of IBM Rational Developer for System z®).

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## Program number

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Program number	VRM	Program name
5724-Z87	4.1.1	IBM COBOL for AIX

### Product identification number

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Program name	Program number
COBOL for AIX, V4.1.1	5724-Z87
COBOL for AIX SW S&S 1 year after License	5648-F78
COBOL for AIX SW S&S No-charge Registration/ 1-year Renewal	5648-F81
COBOL for AIX SW S&S 3-year Registration	5648-F80
COBOL for AIX SW S&S 3-year Renewal	5648-F79
COBOL for AIX SW S&S 3 years after Licence	5648-F77

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## Offering Information

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Product information is available via the Offering Information website

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

Also, visit the Passport Advantage website

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

### **Business Partner information**

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If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld® ID and password are required (use IBM ID).

<https://www.ibm.com/partnerworld/mem/sla.jsp?num=211-349>

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## Publications

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The following publications can be ordered from the Publications Center:

Title	Order number
COBOL for AIX Installation Guide	GC27-3604
COBOL for AIX Language Reference	SC27-3602
COBOL for AIX Programming Guide	SC27-3601
COBOL for AIX VSAM File System Reply Messages	SC27-3603

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, free of charge.

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## Technical information

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### **Specified operating environment**

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#### **Hardware requirements**

For COBOL for AIX, V4.1.1

- System: IBM Power Systems servers supported by AIX V5.3, AIX V6.1, or AIX V7.1
- 256 MB of memory (512 MB, or higher, recommended)
- Disk space: 210 MB for COBOL compiler, tools, and product information

#### **Software requirements**

For COBOL for AIX, V4.1.1

- AIX V5.3 TL 5300-09 (or higher), AIX V6.1 TL 6100-02 (or higher), or AIX V7.1
- Viewers to access and display the documentation such as:
  - Frames-capable browser to access HTML documentation

- Portable Document Format (PDF) viewer to view PDF files

## **Optional programs**

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To use COBOL for AIX with optional programs, additional products are required:

- COBOL 32-bit applications that embed EXEC SQL statements require DB2 V9.1 for Linux™, UNIX™, and Windows, DB2® V9.5 for Linux, UNIX, and Windows with fix pack 3, or DB2 V9.7 for Linux, UNIX, and Windows
- COBOL 64-bit applications that embed EXEC SQL statements require DB2 V9.1 for Linux, UNIX, and Windows, DB2 V9.5 for Linux, UNIX, and Windows with fix pack 3, or DB2 V9.7 for Linux, UNIX, and Windows
- COBOL applications that embed EXEC CICS® statements require TXSeries for Multiplatforms
  - When you use the integrated translator: TXSeries for Multiplatforms, V6.2 with PTF 1 or TXSeries for Multiplatforms, V7.1
  - When you use both the integrated translator and the precompiler: TXSeries for Multiplatforms, V6.2 with PTF1 or TXSeries for Multiplatforms, V7.1.
- When using object-oriented COBOL syntax for Java interoperability
  - Java 2 Platform, Standard Edition, v1.4.2.275, or Java 2 Platform, Standard Edition, v5, or Java 2 Platform, Standard Edition, v6.
  - 64-bit applications require the 64-bit version of the Java SDK.
  - 32-bit applications require the 32-bit version of the Java SDK

The program's specifications and specified operating environment information may be found in documentation accompanying the program, if available, such as a README file, or other information published by IBM, such as an announcement letter. Documentation and other program content may be supplied only in the English language.

## **Planning information**

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### **Web information**

For information regarding COBOL for AIX, visit

<http://www.ibm.com/software/awdtools/cobol>

For information regarding IBM application development, visit

<http://www.ibm.com/software/awdtools/>

### **Packaging**

The COBOL for AIX, V4.1.1 package contains:

- One CD-ROM containing the COBOL for AIX, V4.1.1 product
- Quick Start Guide
- Passport Advantage customer letter
- Passport Advantage media pack pointer sheet

This program, when downloaded from a website, contains the applicable IBM license agreement and License Information, if appropriate, and will be presented for acceptance at the time of installation of the program. For future reference, the license and License Information will be stored in a directory such as LICENSE.TXT.

## **Security, auditability, and control**

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COBOL for AIX, V4.1.1 uses the security and auditability features of the host hardware or software. The customer is responsible for evaluation, selection, and

implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

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## Software Services

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IBM Software 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 extensive portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support a wide range of critical business needs.

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

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

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## Ordering information

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Product Group: IBM COBOL

Product Identifier Description: IBM COBOL for AIX

PID: 5724-Z87

Product Category: COBOL

### **Charge metric**

Program name	Part number or PID number	Charge metric
COBOL for AIX, V4.1.1	5724-Z87	Authorized User Concurrent User
COBOL for AIX, V4.1.1	BA12NML	Authorized User Concurrent User

This program is licensed and charged based upon either the Authorized User or Concurrent User charge metric.

### **Authorized User**

Authorized User is a unit of measure by which the program can be licensed. An Authorized User is a unique person who is given access to the program. The program may be installed on any number of computers or servers and each Authorized User may have simultaneous access to any number of instances of the program at one time. Licensee must obtain separate, dedicated entitlements for each Authorized User accessing the program in any manner directly or indirectly (for example, via a multiplexing program, device, or application server) through any means. An entitlement for an Authorized User is unique to that Authorized User and may not be shared, nor may it be reassigned other than for the permanent transfer of the Authorized User entitlement to another person.

**Note:** Some programs may be licensed where devices are considered users. In that case, the following applies. Any computing device that requests the execution of or receives for execution a set of commands, procedures, or applications from the program or that is otherwise managed by the program is considered a separate user of the program and requires an entitlement as if that device were a person.

### **Concurrent User**

Concurrent User is a unit of measure by which the program can be licensed. A Concurrent User is a person who is accessing the program at any particular point in time. Regardless of whether the person is simultaneously accessing the program multiple times, the person counts only as a single Concurrent User. The

program may be installed on any number of computers or servers, but licensee must obtain entitlements for the maximum number of Concurrent Users simultaneously accessing the program. Licensee must obtain an entitlement for each simultaneous Concurrent User accessing the program in any manner directly or indirectly (for example, via a multiplexing program, device, or application server) through any means.

**Note:** Some programs may be licensed where devices are considered users. In that case, the following applies. Any computing device that requests the execution of or receives for execution a set of commands, procedures, or applications from the program or that is otherwise managed by the program is considered a separate user of the program and requires an entitlement as if that device were a person.

For ordering information on COBOL for AIX, V4.1.1 refer to Software Announcement [210-249](#), dated August 17, 2010.

### Passport Advantage

Program name/Description	Part number
COBOL for AIX, V4.1.1 Media Package Multilingual	BA12NML

### Passport Advantage Customer: Media Pack Entitlement Details

Customers with active Maintenance or Subscription for the products listed below are entitled to receive the corresponding media pack.

Entitled Maintenance Offerings  
description

COBOL for AIX

Media Pack description	Part number
COBOL for AIX, V4.1 Media Pk Multilingual	BA12NML

For ordering information on COBOL for AIX, V4.1.1, refer to Software Announcement [210-249](#), dated August 17, 2010.

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

Extending coverage for a total of three years from the date of acquisition may be elected. Order the program number, feature number, and quantity to extend coverage for your software licenses. If maintenance has expired, specify the after license feature number.

For ordering information on COBOL for AIX, V4.1 refer to Software Announcement [210-249](#), dated August 17, 2010.

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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.

### Licensing

IBM International Program License Agreement including the License Information document and Proof of Entitlement (PoE) govern your use of the program. PoEs are required for all authorized use. Part number products only, offered outside of

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These programs are licensed under the IBM Program License Agreement (IPLA) and the associated Agreement for Acquisition of Software Maintenance, which provide for support with ongoing access to releases and versions of the program. IBM includes one year of Software Subscription and Support (also referred to as Software Maintenance) with the initial license acquisition of each program acquired. The initial period of Software Subscription and Support (also referred to as Software Maintenance) can be extended by the purchase of a renewal option, if available. These programs have a one-time license charge for use of the program and an annual renewable charge for the enhanced support that includes telephone assistance (voice support for defects during normal business hours), as well as access to updates, releases, and versions of the program as long as support is in effect.

### ***License Information form number***

L-JYIP-8KNR5C

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

<http://www.ibm.com/software/sla/sladb.nsf>

### ***Limited warranty applies***

Yes

### ***Limited 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.

IBM provides you with access to IBM databases containing information on known program defects, defect corrections, restrictions, and bypasses at no additional charge. For further information, consult the IBM Software Support Handbook found at

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### ***Program technical support***

Technical support of a program product version or release will be available for a minimum of five years from the general availability date, as long as your Software Subscription and Support (also referred to as Software Maintenance) is in effect. This technical support allows you to obtain assistance (via telephone or electronic means) from IBM for product-specific, task-oriented questions regarding the installation and operation of the program product. Software Subscription and Support (Software Maintenance) also provides you with access to updates (modifications or fixes), releases, and versions of the program. You will be notified,



via announcement letter, of discontinuance of support with 12 months' notice. If you require additional technical support from IBM, including an extension of support beyond the discontinuance date, contact your IBM representative or IBM Business Partner. This extension may be available for a fee.

### ***Money-back guarantee***

If for any reason you are dissatisfied with the program and you are the original licensee, you may obtain a refund of the amount you paid for it, if within 30 days of your invoice date you return the program and its PoE to the party from whom you obtained it. If you downloaded the program, you may contact the party from whom you acquired it for instructions on how to obtain the refund.

For clarification, note that (1) for programs acquired under the IBM International Passport Advantage offering, this term applies only to your first acquisition of the program and (2) for programs acquired under any of IBM's On/Off Capacity on Demand (On/Off CoD) software offerings, this term does not apply since these offerings apply to programs already acquired and in use by you.

### ***Volume orders (IVO)***

Yes. Contact your IBM representative.

### ***Passport Advantage applies***

Yes, and through the Passport Advantage website at

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

### ***Usage restriction***

Yes

For additional information, refer to the License Information document that is available on the IBM Software License Agreement Web site

<http://www.ibm.com/software/sla/sladb.nsf>

### ***Software Subscription and Support applies***

Yes. Software Subscription and Support (also referred to as Software Maintenance), is now included in the Passport Advantage Agreement. Installation and technical support for the products announced in this announcement is provided by the Software Subscription and Support offering of the IBM International Passport Advantage Agreement. This fee service enhances customer productivity by providing voice or electronic access into the IBM support organizations.

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***Variable charges apply***

No

***Educational allowance available***

Yes. A 15% education allowance applies to qualified education institution customers.

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## **Prices**

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**Business Partner information**

If you are an IBM Business Partner -- Distributor for Workstation Software acquiring products from IBM, you may link to Passport Advantage Online for resellers where you can obtain Business Partner pricing information. An IBM ID and password are required.

<https://www.ibm.com/software/howtobuy/passportadvantage/paoreseller>

Information on charges is available at

<http://www.ibm.link.ibm.com/>

Select "United States" and then click on "IBMLink 2000".

The pricing information for COBOL for AIX, V4.1, as previously announced remains unaffected by this announcement.

For more information on COBOL for AIX, V4.1.1, refer to Software Announcement [210-249](#), dated August 17, 2010.

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