

IBM Enterprise COBOL for z/OS, V5.2 delivers support for the latest IBM z13 processor architecture

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At a glance

IBM® Enterprise COBOL for z/OS®, V5.2 exploits the capabilities of the z/Architecture® while adding a number of new features and enhancements:

- A new compiler option (ARCH) to exploit and tune your code to run on your choice of the z/Architecture levels of the z/OS platform
- The enhanced compiler option (OPTIMIZE) to select from multiple levels of increasing optimization for your code
- Improved capability to process large data items to the full AMODE(31) capability while continuing support for AMODE(24)
- Support for the latest middleware including CICS®, DB2®, and IMS™.
- Interoperability with Java™ 8 to help you incorporate web-based applications as part of your business processes
- New and enhanced options for greater flexibility
- Addition of ISO COBOL 2002 features for greater standards conformance
- Addition of IBM extensions to COBOL
- Enhancements to the XML GENERATE statement
- A new IMS SQL coprocessor
- Enhancements to the COBOL runtime

Overview

IBM Enterprise COBOL for z/OS is a leading-edge, z/OS-based compiler that helps you create and maintain mission-critical, line-of-business COBOL applications to execute on your z/OS systems. Enterprise COBOL for z/OS gives you access to CICS, DB2, IMS, and other transactional and data systems.

Over the course of multiple releases, Enterprise COBOL for z/OS offered new and enhanced functions to provide you with the tools needed to modernize and maintain applications to meet your critical business needs. The following are some of the new and improved features within Version 5.2:

- Support for the IBM z13™ through the additional ARCH(11) option
- New, restored, and enhanced options for more flexibility
- New features towards ISO COBOL 2002 standards conformance
- New IBM extensions to COBOL
- Enhancements to the XML GENERATE statement

- Restored support for AMODE24
- New IMS SQL coprocessor
- Enhancements to the COBOL runtime

In addition, for COBOL applications in mobile and web solutions, the z/OS Client Web Enablement Toolkit provides JSON document parsing and generation. Install the PTF for APAR OA46575 to enable z/OS Client Web Enablement Toolkit support on z/OS, V2.1,

Enterprise COBOL for z/OS, V5.2 continues the IBM commitment to the COBOL programming language on the z/OS platform through investment in new compiler technology and the delivery of new features, many of them client requested. With Enterprise COBOL for z/OS, V5.2, you gain the benefit of new investment combined with more than 50 years of IBM experience in compiler development.

Key prerequisites

Enterprise COBOL for z/OS, V5.2 requires:

- z/OS V1.13 (5694-A01), or later
- z/OS V2.1 (5650-ZOS), or later

For details, refer to the [Software requirements](#) section.

Planned availability date

February 27, 2015

Description

Harness the power of z/Architecture advancements

New technology was delivered in Enterprise COBOL for z/OS, V5.1 to improve delivery of z/Architecture exploitation, maximize hardware utilization, and help improve application performance. The ARCH option was introduced to allow you to select the optimization and processor architecture level that the compiler generates code for. A new ARCH(11) now produces your application code that uses the instructions available on the latest z13 servers. Specifying ARCH(11) will instruct the compiler to include exploitation of the new z13 instructions. Specifying ARCH(11) may improve the performance for INSPECT Tallying or INSPECT REPLACING and for performing COMP-3 arithmetic in decimal floating point (DFP) in your COBOL application.

With the ARCH option set to ARCH(11), you can harness the power of the latest advancement in z/Architecture.

New options

Enterprise COBOL for z/OS, V5.2 is introducing new, restored, and enhanced compiler options for more flexibility.

RULES option

The RULES option helps identify code that you might want to change to improve your programs, such as opportunities for improved runtime performance, improved use of memory, and conformance to standard COBOL coding practices.

- RULES suboption ENDPERIOD|NOENDPERIOD

Specifying NOENDPERIOD causes the compiler to issue warning messages for cases where a conditional statement is closed by a period instead of an explicit scope terminator such as end-if, end-perform, and end-evaluate, and so on.

Many COBOL programmers want help to avoid using periods in their source code, and want to be told about it when they accidentally use a period and leave out an END_xxx delimiter.

- RULES suboption EVENPACK|NOEVENPACK

Specifying NOEVENPACK causes the compiler to issue warning messages for any USAGE PACKED-DECIMAL (COMP-3) data items that have an even number of digits.

The compiler always reserves space for an odd number of digits for a packed decimal and therefore COBOL programmers want to be warned about cases where the memory for such items is not being fully utilized. A MOVE statement between two overpopulated packed decimal data items with even precision (for example a data item that is defined as PIC S99 but stores a value of 123) can produce unpredictable results. Using odd-precision packed decimals avoids this issue.

- RULES suboption LAXPERF|NOLAXPERF

NOLAXPERF causes the compiler to issue warning messages for the following instances of inefficient COBOL usage:

- Loop (Perform varying ix1 from 1 by 1 until ix1 > ix1-max) should be flagged if:
 - ix1 is coded as USAGE DISPLAY value (not packed or binary).
 - There are different data types used for different operands in the VARYING clause.
- Accessing a Table item with a subscript defined without binary/packed or a non-INDEX-NAME
- MOVEs (COMPUTEs, comparisons) with conversion of numbers because of different storage representation
- MOVE of character-string to another variable, but with lots of padding (100 bytes or more), like:
 - from-field pic x(10) to-field pic x(3200)
 - move from-field to to-field, which will move 10 bytes and then fill spaces into another 32KB of memory
- Slow or non-optimal compiler options: NOAWO, NOBLOCK0, NOFASTSRT, NUMPROC(NOPFD), OPT(0), SSRANGE, TRUNC(STD|BIN)

NOLAXPERF provides performance tips to COBOL programmers on a per-program basis.

- RULES suboption SLACKBYTES|NOSLACKBYTES

Specifying NOSLACKBYTES causes the compiler to issue warning messages whenever SLACK bytes are inserted before a group member declared with the SYNCHRONIZED clause and also for cases of SLACK bytes inserted between table elements for groups declared with the OCCURS clause.

This suboption provides a convenient way for users to determine if there is wasted space in a group caused by SLACK bytes inserted when the SYNCHRONIZED clause is specified. Currently they have to look at MAP output and add up bytes and compare to what they defined to determine this.

Qualify (EXTEND|COMPAT) option

The QUALIFY option allows users to control the behavior of name resolution and can enable references to data items that the COBOL would not allow, name references that the standard would describe as ambiguous.

The default of QUALIFY(COMPAT) indicates that normal COBOL name resolution rules apply.

QUALIFY(EXTEND) allows some references that would be considered ambiguous under the current name resolution rules to be considered unique and therefore legal. In particular, if a reference is ambiguous because there is more than one match of qualifiers to identifiers, and if the reference is complete (i.e. every parent is specified) and there is only one data item with exactly that complete set of qualifiers, then it will result in a valid reference with QUALIFY(EXTEND).

Varying Length Record (VRL) option

The VRL option allows COBOL programmers to indicate the desired behavior for 'wrong length read' conditions either File Status=4 or File Status=0. For ease of migration File Status=0 is compatible with previous IBM COBOL compilers.

For VRL(STANDARD), programs get status value 04 when READ statements encounter a record length conflict or when the record is shorter than the minimum length or larger than the maximum length indicated in the record description. This behavior is consistent with the COBOL 85 standard, as well as the behavior of COBOL VS II, COBOL/370 and COBOL for MVS™ and VM.

For VRL(COMPAT), programs get status value 00 when READ statements encounter a record length conflict, or 'wrong length record'. This is consistent with the behavior of Enterprise COBOL since Version 3.

VRL(COMPAT) is also available in the previous release through the Enterprise COBOL for z/OS, V5.1.1 PTF (APAR PI22094).

COPYRIGHT option

The COPYRIGHT option places a string in the object module, if generated. This string is loaded into memory with any load module into which this object is linked.

SERVICE option

The SERVICE option places a string in the object module, if generated. This string is loaded into memory with any program object into which this object is linked, and if the LE dump includes a traceback, this string will be included in that traceback.

Restored options

XMLPARSE(COMPAT)

The XMLPARSE option allows COBOL programmers to indicate which XML PARSE is used. For ease of migration, XMLPARSE(COMPAT) provides compatibility with the Enterprise COBOL V3 parser.

XMLPARSE selects the parser to be used for XML processing in your program.

XMLPARSE(XMLSS) option indicates use of the z/OS XML System Service parser with the following XML parsing capabilities:

- Validation of XML input documents against an XML schema (VALIDATING)
- Enhanced namespace processing (special registers XML-NAMESPACE, XML-NNAMESPACE, XML-NAMESPACE-PREFIX, and XML-NNAMESPACE-PREFIX)
- Automatic conversion of document fragments to Unicode UTF-16 (RETURNING NATIONAL)

- Specification of the encoding of the input document (ENCODING)
- Direct parsing of XML documents, a buffer of XML at a time
- Parsing of XML documents, a buffer of XML at a time
- Offloading of XML parsing to System z® Application Assist Processors (zAAPs)

XMLPARSE(COMPAT) option indicates use of the XML parser that is a built-in component of the COBOL runtime.

- XML PARSE statement results and operational behaviors are then compatible with those obtained with Enterprise COBOL Version 3, but advanced features of XMLSS are not available.
- COBOL programmers can migrate programs with XML PARSE statements from V3 to V4 without having to change their source code.

XMLPARSE(COMPAT) is also available in the previous release through the Enterprise COBOL for z/OS, V5.1.1 PTF (APAR PI22094).

Modified options

ARCH

- ARCH(6) has been removed.
- The new default is ARCH(7).
- The new ARCH(11) option is introduced to support the latest z13 processor architecture.

MAP with new suboptions HEX and DEC

The MAP option causes the compiler to produce a listing of the items defined in the DATA DIVISION. New suboptions for the MAP compiler option allow users to choose hexadecimal or decimal offsets for MAP output in the compiler listing. For ease of migration, MAP(HEX) provides compatibility with earlier COBOL compilers.

New suboptions of MAP:

- HEX. Data items offsets within groups will be in hexadecimal notation.
- DEC. Data item offsets within groups will be in decimal notation.

If MAP is specified with no suboptions, MAP(HEX) is assumed. This restores the default behavior of the MAP option of the Enterprise COBOL Version 4 behavior.

The new suboptions of MAP are also available in the previous release through the Enterprise COBOL for z/OS, V5.1.1 PTF (APAR PI19678).

Deprecated options

SIZE option

The SIZE option affected the amount of virtual storage to be made available to the compiler during compilation. The Enterprise COBOL compiler front-end now acquires storage dynamically, as it needs it, from the Language Environment® (LE) heap. As a result, the SIZE option is no longer required to ensure that enough memory is available to compile large programs.

An informational message now appears in the listing whenever this option is used.

COBOL language enhancements

Conformance to ISO COBOL 2002

- Table SORT statement. The table SORT statement causes table elements to be arranged in a sequence that you specify.
- Exit statement enhancements includes;
 - EXIT SECTION leaves current section
 - EXIT PARAGRAPH leaves current paragraph
 - EXIT PERFORM leaves an inline PERFORM block (similar to LEAVE in PL/I and break in C)
 - EXIT PERFORM CYCLE skips the remainder of the current iteration of an inline PERFORM block (similar to ITERATE in PL/I and continue in C)
- LEADING/TRAILING support for the REPLACING phrase of the COPY statement
This feature provides support for LEADING/TRAILING keywords of the REPLACING phrase of the COPY statement (and also the REPLACE statement).

This feature allows users to do partial-word replacement on copy files or source code.

A new behavior allows for any COPY statement in a chain of nested COPY statements to have the REPLACING phrase, as long as there is only one such COPY statement in the chain.

When the REPLACING phrase is specified for a COPY statement that appears in a chain of nested COPY statements, the REPLACING phrase applies to all library text that is included by COPY statements nested under the COPY statement that has the REPLACING phrase.

- LEADING/TRAILING support for the REPLACE statement. Supports LEADING/TRAILING keywords of the REPLACE statement.

IBM extensions to COBOL

- >>CALLINTERFACE directive
- Support for nested COPY REPLACING

A new behavior allows for any COPY statement in a chain of nested COPY statements to have the REPLACING phrase, as long as there is only one such COPY statement in the chain.

When the REPLACING phrase is specified for a COPY statement that appears in a chain of nested COPY statements, the REPLACING phrase applies to all library text that is included by COPY statements nested under the COPY statement that has the REPLACING phrase.

- Support for the VOLATILE clause in a data description entry

The VOLATILE clause indicates that the memory associated with a data item can be read from or written to asynchronously by another process or thread and thus optimization is restricted for the data item. In particular:

- Loads and stores to the data item are never reordered or eliminated.
- A volatile data item is loaded from memory each time it is referenced.
- Storage of a volatile data item is always allocated even if the item is never referenced.

Additional compiler enhancements

XML GENERATE statement

The XML GENERATE statement is again improved, with more powerful SUPPRESS capabilities. The WHEN phrase of the XML GENERATE statement can be omitted to allow unconditional suppression of a named identifier when generating XML output.

In addition, the generic-suppression-phrase of the XML GENERATE statement behavior is changed to be more flexible by deferring the decision about what gets excluded until runtime.

AMODE24

AMODE 24 execution of COBOL programs is restored into version 5. Many programs compiled by Enterprise COBOL V5 will now execute in either AMODE 24 or AMODE 31.

AMODE 24 is also available in the previous release through the Enterprise COBOL for z/OS, V5.1.1 PTF (APARs PM93583 and PI12151).

IMS SQL coprocessor

A new coprocessor, IMS SQL coprocessor (called SQL statement coprocessor by IMS), handles source programs that contain embedded SQLIMS statements. The new SQLIMS compiler option enables the IMS SQL coprocessor.

IMS SQL coprocessor is also available in the previous release through the Enterprise COBOL for z/OS, V5.1.1 PTF (APAR PM92523).

COBOL Runtime enhancements

COBOL support for Extended VSAM addressability

- With extended addressability the 4 GB VSAM architectural limit for a dataset size imposed by using the 4-byte field for the relative byte address (RBA) was eliminated.
- This feature adds support to COBOL for accessing VSAM datasets with the extended addressability attribute.

COBOL product-related enhancements

- Debug Tool enhancements include the ability to:
 - Show new compiler options in DESCRIBE CU output.
 - Support new QUALITY(EXTEND) name lookup rules in all commands that reference data items such as LIST.
- Improvements in the "Local variables" portion of the CEEDUMP.

Accessibility by people with disabilities

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

Product positioning

Enterprise COBOL is a premier enterprise class COBOL compiler for the z/OS system. It is a proven and reliable program. It delivers innovation for modernizing business-critical applications, programming features to increase programmer productivity, and bolsters the overall benefits of transactional and data systems such as CICS, IMS, and DB2.

New z Systems™ hardware is becoming increasingly complex. Enterprise COBOL for z/OS, V5.2 delivers advanced compiler support to allow you to fully benefit from hardware advancements. With the introduction of the new ARCH and enhanced OPTIMIZE compiler options, the Enterprise COBOL for z/OS compiler is now capable of unleashing the full power of IBM processors delivered in the various models of z Systems hardware. COBOL programmers no longer need a deep understanding of z architecture to exploit leading-edge performance of new z Systems hardware.

Developers only need to focus on the logic of the applications and let the compiler determine the best way to transform and optimize the code generation for the z Systems hardware on which the application will run. With Enterprise COBOL for z/OS, V5.2 you increase the return on your hardware and middleware investments. With the implementation of advanced code generation and optimization technology, Enterprise COBOL for z/OS, V5.2 establishes a foundation for delivery of additional optimization features and exploitation of future z/Architecture.

With its enhanced capabilities, simplified programming, and increased programmer productivity, you can continue to use Enterprise COBOL for z/OS to modernize existing business-critical applications. Modernization enables the reuse of your proven business logic. You can deliver new enhancements quicker and with less cost and lower risk. You can add modern graphical user interfaces to business-critical COBOL applications or extend them to work with web, cloud, or mobile infrastructures. Built on proven applications, there is no need for you to write from scratch.

With the investment in new compiler technology and the continued delivery of new features, many of them client requested, Enterprise COBOL for z/OS, V5.2 reaffirms the IBM commitment to COBOL on z/OS. You gain the benefit of new investment combined with more than 50 years of IBM experience in compiler development.

Hardware and software support services

SmoothStart/installation services

IBM SmoothStart Services and Installation Services are not provided.

Availability of national languages

Description	Program number	Availability date	Language
IBM Enterprise COBOL for z/OS, V5.2	5655-w32	February 27,2015	Japanese

Program number

Program name	Program number
IBM Enterprise COBOL for z/OS, V5.2	5655-w32

Technical information

Specified operating environment

Hardware requirements

Enterprise COBOL for z/OS, V5.2 will run on the following IBM z Systems servers:

- z13
- zEnterprise® EC12 and zEnterprise BC12
- zEnterprise 196 or zEnterprise 114
- z10™ Enterprise Class and z10 Business Class
- z9® Enterprise Class or z9 Business Class
- zSeries z990

- zSeries z890

Software requirements

Enterprise COBOL for z/OS, V5.2 runs under the control of, or in conjunction with, the currently supported releases of the following programs and their subsequent releases or their equivalents. For more information on the following programs listed that require program temporary fixes (PTFs), refer to the *Program Directory* and the preventive service planning (PSP) bucket.

z/OS V1.13 (5694-A01), or later

z/OS V2.1 (5650-ZOS), or later

Optional licensed programs

Depending on the functions used, one or more of the following programs may be required:

- CICS Transaction Server (CICS TS) for z/OS, V5 (5655-Y04)
- CICS TS for z/OS Value Unit Edition V5 (5722-DFJ)
- CICS TS for z/OS, V4 (5655-S97)
- CICS TS for z/OS, V3 (5655-M15)
- IBM DB2 11 for z/OS (5615-DB2)
- DB2 11 for z/OS Value Unit Edition (5697-P43)
- DB2 10 for z/OS (5605-DB2)
- DB2 10 for z/OS Value Unit Edition (5697-P31)
- IBM IMS V13 (5635-A04)
- IMS Transaction Manager Value Unit Edition V13 (5655-TM2)
- IBM Database Value Unit Edition V13 (5655-DSM)
- IMS V12 (5635-A03)
- IMS Transaction Manager Value Unit Edition V12 (5655-TM1)
- Database Value Unit Edition V12 (5655-DSQ)
- IBM DFSORT element of z/OS (5694-A01)
- IBM High Level Assembler/MVS and VM and VSE (5696-234)
- IBM 31-bit SDK for z/OS, Java Technology Edition V8.0 (5655-DGG)
- IBM 31-bit SDK for z/OS, Java Technology Edition V7.0 (5655-W44)
- IBM 31-bit SDK for z/OS, Java Technology Edition V6.0 (5655-R31)
- IBM 31-bit SDK for z/OS, Java 2 Technology Edition V5.0 (5655-N98)
- z/OS V2.1 Client Web Enablement Toolkit (5650-ZOS - APAR Number OA46575)
- IBM Debug Tool for z/OS, V13.1 (5655-Q10)
- Debug Tool for z/OS, V12.1 (5655-W70)
- IBM Fault Analyzer for z/OS, V13.1 (5655-Q11)
- Fault Analyzer for z/OS, V12.1 (5655-W69)
- IBM File Manager for z/OS, V13.1 (5655-Q12)
- File Manager for z/OS, V12.1 (5655-W68)
- IBM Application Performance Analyzer for z/OS, V13.1 (5655-Q09)
- Application Performance Analyzer for z/OS, V12.1 (5655-W71)
- IBM Rational® Developer for System z, V9 (5724-T07)
- Rational Developer for System z, V8 (5724-T07)
- COBOL Report Writer Release 4 (5798-DYR, 5798-DZX)
- Enterprise COBOL for z/OS, V4 (5655-S71)
- Enterprise COBOL for z/OS and OS/390®, V3 (5655-G53)

- Enterprise PL/I for z/OS, V4 (5655-W67)
- Enterprise PL/I for z/OS, V3 (5655-H31)
- For XL C/C++ with Enterprise COBOL -- You must use the XL C/C++ feature of z/OS, V1.13 (5694-A01), z/OS V2.1 (5650-ZOS), or later
- IBM VS FORTRAN V2 (5668-806, 5688-087)

Enterprise COBOL for z/OS, V5.2 in this announcement is supported for use only with the announced and currently supported levels of IBM software listed above. Enterprise COBOL for z/OS, V5.2 should continue to work with certain earlier, unsupported IBM software products.

IBM will undertake to fix problems found by using Enterprise COBOL for z/OS, V5.2 in this announcement with the above mentioned earlier, unsupported product levels. IBM must be able to reproduce the problem using a supported level of the same product. If the problem can be reproduced and fixed, the fix will be developed and tested using supported levels of IBM software. If a fix is made available, it is likely to work on the unsupported product level; however, IBM can not guarantee that the fix will work with the unsupported product.

Compatibility

Enterprise COBOL for z/OS, V5 provides a high level of source compatibility, object compatibility, and runtime compatibility with prior versions of IBM COBOL.

Enterprise COBOL V5 is source compatible with earlier versions of IBM COBOL, in that the compiler will compile correct COBOL source programs that were developed using Enterprise COBOL V4 or earlier, with the exception of obsolete functions that were removed and the addition of new reserved words. The removed functions include obsolete COBOL language syntax and obsolete compiler options. Complete details on removed obsolete functions are documented in the Enterprise COBOL for z/OS, V5 Migration Guide. IBM does not expect that many applications will be affected by the removed functions, which in practice are no longer heavily used. To assist in migration, a new compiler option FLAGMIG is added to Enterprise COBOL V4.2 through the service stream. This option provides warning diagnostics to flag use of obsolete syntax and options in existing COBOL programs.

Enterprise COBOL V5 is object compatible with prior versions of IBM COBOL, in that applications can be constructed using a mixture of object modules compiled with Version 5 and those compiled with prior versions. Both static calls (calls within a link-edited module) and dynamic calls (calls between programs link-edited as separate modules) can be used. The following are exceptions:

- Interoperation with object modules compiled with OS/VS COBOL (5740-CB1) is no longer supported.
- Interoperation with object modules compiled with VS COBOL II (5688-958) is limited to programs compiled with the RES compiler option. Interoperation with VS COBOL II programs that are compiled with the NORES option is no longer supported.

Enterprise COBOL V5 is run time compatible with prior versions of IBM COBOL in that correct COBOL programs will continue to produce the same run time results after being recompiled with Version 5. A small number of exception cases are documented in the *Enterprise COBOL for z/OS, V5 Migration Guide*.

Planning information

Packaging

The Enterprise COBOL for z/OS, V5.2 package includes:

- Basic machine-readable material on the customer-selected distribution medium
- Program Directory (GI11-9180)
- Licensed Program Specifications (GI11-9181)

Security, auditability, and control

The announced program uses the security and auditability features of the host operating system software. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Ordering information

Current licensees

Current licensees of IBM Enterprise COBOL for z/OS, V5.2 must order this release via MES.

New licensees

Orders for new licenses can be placed now.

Customers whose orders ship before the planned availability will receive Enterprise COBOL for z/OS, V5.1.

Customers whose orders ship after the planned availability date will receive Enterprise COBOL for z/OS, V5.2.

New users of Enterprise COBOL for z/OS, V5 should specify Type: 5655 Model: W32. New Users will receive Enterprise COBOL for z/OS, V5.2.

The previous release, Enterprise COBOL for z/OS, V5.1, is therefore withdrawn from marketing and replaced with Enterprise COBOL for z/OS, V5.2.

For ordering information on Enterprise COBOL for z/OS, V5, refer to Software Announcement [AP13-0141](#), dated April 23, 2013.

Customized offerings

Product deliverables are shipped only via CBPDO and ServerPac. These customized offerings are offered for Internet delivery in countries where ShopzSeries product ordering is available. Internet delivery reduces software delivery time and allows you to install software without the need to handle tapes. For more details on Internet delivery, refer to the Shopz help information at

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

You choose the delivery method when you order the software. IBM recommends Internet delivery. In addition to Internet and DVD, the supported tape delivery options include:

- 3590
- 3592

Most products can be ordered in ServerPac the month following their availability in CBPDO. z/OS can be ordered via CBPDO and ServerPac at general availability. Many products will also be orderable in a Product ServerPac without also having to order the z/OS operating system or subsystem.

Shopz and CFSW will determine the eligibility based on product requisite checking. For more details on the product ServerPac, visit the Help section on the Shopz website at

<http://www14.software.ibm.com/webapp/ShopzSeries/ShopzSeries.jsp>

For additional information on the Product ServerPac option, refer to Software Announcement [AP12-0255](#), dated July 31, 2012.

Production of software product orders will begin on the planned general availability date.

- CBPDO shipments will begin one week after general availability.
- ServerPac shipments will begin two weeks after general availability.

Terms and conditions

The terms for Enterprise COBOL for z/OS, V5, as previously announced in Software Announcement [AP13-0141](#), dated April 23, 2013, licensed under the IBM Agreement Terms, are unaffected by this announcement.

Prices

The pricing information for Enterprise COBOL for z/OS, V5, as previously announced in Software Announcement [AP13-0141](#), dated April 23, 2013, remains unaffected by this announcement.

Contact your IBM representative for information on the current prices for this program.

Program upgrade charge

For all charges, contact your IBM representative.

AP distribution

Country/Region	Announced
AP IOT	
ASEAN*	Yes
India/South Asia**	Yes
Australia	Yes
People's Republic of China	Yes
Hong Kong S.A.R of the PRC	Yes
Macao S.A.R of the PRC	Yes
Taiwan	Yes
South Korea	Yes
New Zealand	Yes
Japan IOT	
Japan	Yes

* Brunei Darussalam, Indonesia, Cambodia, Lao People's Democratic Republic, Malaysia, Philippines, Singapore, Thailand, and Vietnam

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