



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^(R) Enterprise COBOL Developer Trial for z/OS^(R), V5, an evaluation edition of Enterprise COBOL for z/OS, is no charge and does not initiate a Single Version Charging (SVC) period.

Enterprise COBOL Developer Trial lets you assess the value that could be gained from migrating to Enterprise COBOL for z/OS, V5, before making a formal, upgrade decision. This trial enables the evaluation of the latest IBM COBOL capabilities, in a non production environment, without the prerequisite time and resources commitments required for a full, production migration project.

Enterprise COBOL for z/OS, V5.2 exploits the capabilities of the z/Architecture^(R) while it adds new features and enhancements:

- A new compiler option (ARCH) that exploits and tunes 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 and also support for AMODE(24)
- Support for the latest middleware including CICS^(R), DB2^(R), and IMSTM
- Interoperability with JavaTM 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 better 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

Enterprise COBOL Developer Trial for z/OS, V5 can be used to evaluate, in non production environments, the value that could be gained from migrating to the Enterprise COBOL for z/OS, V5 compiler. You can evaluate the latest compiler prior to committing additional time and resources to a full, production migration project to Enterprise COBOL for z/OS, V5.

Enterprise COBOL Developer Trial for z/OS contains the full set of Enterprise COBOL compiler features and functions. This includes the code generation and optimization technology in Version 5 that allows you to maximize the delivery of the z/Architecture exploitation and performance optimization within your applications. This developer trial is delivered with restricted licensing terms and an expiry date. The Enterprise COBOL Developer Trial is permitted only for use in a non production environment.

Enterprise COBOL Developer Trial for z/OS, V5 is available from IBM through ShopzSeries as a standard offering. In countries where Shopz is not available, contact your IBM representative (or IBM Business Partner) to handle your order by using the traditional IBM ordering process.

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

Planned availability date

March 27, 2015

Description

Harness the power of z/Architecture advancements

With Enterprise COBOL Developer Trial for z/OS, V5 you can evaluate the latest capabilities of IBM COBOL, in a non production environment, before committing time and resources to a production migration project. This developer trial is released so you can assess the value of moving to this new compiler, prior to making a decision to formally adopt it.

Enterprise COBOL Developer Trial for z/OS comes with a no-charge evaluation license. Ordering, installing, and using Enterprise COBOL Developer Trial in a non production environment does not initiate any SVC period.

Enterprise COBOL Developer Trial is a fully functional release that can be used to conduct Proof of Technology evaluations that cover the full set of Enterprise COBOL for z/OS, V5 capabilities.

Enterprise COBOL Developer Trial for z/OS is permitted to be used only for internal evaluation, testing, or demonstration purposes, and is not for productive purposes. Use of the trial compiler to develop production applications is not allowed. The license provides for a 90-day trial period.

Enterprise COBOL Developer Trial for z/OS is provided without formal program support. IBM may enable inquiries to be submitted via normal service channels using the Enterprise COBOL Developer Trial product ID and your customer number. If IBM accepts and/or responds to such inquiries, it is provided without warranties or conditions of any kind, as further described in the program's evaluation license agreement.

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) option now produces your application code that uses the instructions available on the latest IBM z13 servers. Specifying the ARCH(11) option will instruct the compiler to include exploitation of the new z13 instructions. Specifying the ARCH(11) option 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 delivers 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 EVENPACK|NOEVENPACK

- 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 codes as USAGE DISPLAY value (not packed or binary); if there are difference 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.

QUALITY(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 VLR(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 z Systems™ 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 option 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).

Option no longer required

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^(R) (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
 - EXIT SECTION leaves current section .
 - EXIT PARAGRAPH leaves current paragraph.
 - EXIST 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:

- 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.

Product positioning

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

z Systems hardware becomes 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 that are 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 GUIs to business-critical COBOL applications or extend them to work with web, cloud, or mobile infrastructures. Because it is built on proven applications, there is no need for you to write from scratch. This might be problematic for translation or international audiences.

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.

Program number

Program number	VRM	Program name
5655-TRY	5.2.0	Enterprise COBOL Developer Trial for z/OS
5655-BUY	1.1.0	Enterprise COBOL Developer Trial for z/OS S&S

Product identification number

Program PID number	
5655-TRY	
Program PID number	Subscription and Support PID number
5655-TRY	5655-BUY

Offering Information

Product information is available via the Offering Information website

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

Publications

The following publications can be ordered from the IBM Publications Center portal after planned availability. To order, use the Publications Center or contact your IBM representative.

Title	Order number
Licence Agreement / License Information	GC19-4124
Program Directory	GI10-8965

The IBM Publications Center portal is located at

<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. 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

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

- IBM z13
- zEnterprise^(R) EC12 or zEnterprise BC12
- zEnterprise 196 or zEnterprise 114
- z10TM Enterprise Class or z10 Business Class
- z9^(R) 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)
- IBM 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^(R) Developer for System z^(R), 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^(R), 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)

For XL C/C++ with Enterprise COBOL, you must use the XL C/C++ feature of z/OS V1.13 (5694-A01), or the XL C/C++ feature of z/OS, V2.1 (5650-ZOS), or later.

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.

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.

Companion products

None.

Compatibility

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

The Enterprise COBOL Developer Trial V5 source is compatible with earlier versions of IBM COBOL, in that the compiler will compile correct COBOL source programs that were developed by using Enterprise COBOL V4 or earlier, with the exception of obsolete functions that are 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 Version 5 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 Developer Trial V5 is compatible with earlier versions of IBM COBOL, in that applications can be constructed by using a mixture of object modules compiled with Version 5 and those compiled with earlier 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 that were compiled with OS/VS COBOL (5740-CB1) is no longer supported.
- Interoperation with object modules that were compiled with VS COBOL II (5688-958) is limited to programs compiled with the RES compiler option. Interoperation with VS COBOL II programs compiled with the NORES option is no longer supported.

Enterprise COBOL Developer Trial V5 is run time compatible with earlier 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 Version 5 Migration Guide*.

Planning information

Web information

For information regarding Enterprise COBOL for z/OS, visit

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

For information regarding IBM application development, visit

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

Packaging

For information on the functional capabilities of Enterprise COBOL for z/OS, V5.2, refer to Software Announcement [AP15-0007](#), dated January 14, 2015.

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

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

Enterprise COBOL Developer Trial for z/OS, V5 (5655-TRY)

Basic license one-time charge

Feature description	Feature number
Program package	S0179TM
Per concurrent users	Unlimited
Per concurrent users, including 250 concurrent users	N/A
Orderable Supply ID - English	S0179TP - 3590 Tape

Enterprise COBOL Developer Trial for z/OS, S&S (5655-BUY)

Basic license one-time charge

Feature description	Feature number
Program Package	S0179TT
Per concurrent users	Unlimited
Per concurrent users, including 250 concurrent users	N/A
Orderable Supply ID - English	S0179TS - Hardcopy publication

Charge metric

Program name	Part number or PID number	Charge metric
Enterprise COBOL Developer Trial for z/OS, V5	5655-TRY	No Charge, Unlimited Installs
Enterprise COBOL Developer Trial for z/OS S&S V1	5655-BUY	No Charge

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 given access to 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.

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.

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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^(R) Agreement, and the IBM Agreement for Acquisition of Software Maintenance.

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License Information number

Enterprise COBOL Developer Trial for z/OS, V5.2

LI number: L-JYIP-9RTQ3E

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.

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IBM will maintain this information for at least one year after the original licensee acquires the program (warranty period).

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 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)

No

Passport Advantage applies

No

Usage restriction

Yes. For additional information, refer to the License Information document that is available on the IBM Software License Agreement website

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

System i Software Maintenance applies

No

Variable charges apply

No

Educational allowance available

15%, to qualified educational institution customers.

Statement of good security practices

IT system security involves protecting systems and information through prevention, detection, and response to improper access from within and outside your enterprise. Improper access can result in information being altered, destroyed, or misappropriated or can result in misuse of your systems to attack others. Without a comprehensive approach to security, no IT system or product should be considered completely secure and no single product or security measure can be completely effective in preventing improper access. IBM systems and products are designed to be part of a comprehensive security approach, which will necessarily involve additional operational procedures, and may require other systems, products, or services to be most effective. IBM does not warrant that systems and products are immune from the malicious or illegal conduct of any party.

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For all charges, contact your IBM representative.

AP distribution

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

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