



IBM Problem Determination Tools helps modernize applications and optimize IT resources

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At a glance

IBM® Problem Determination Tools are enhanced in Version 13 to include:

- Support for the latest IBM products such as CICS® Transaction Server V5, IMS™ V13, DB2® V11, and Enterprise COBOL V5
- Enhancements to the existing GUI plug-ins, which include improved integration with platforms like CICS Explorer® and IBM Rational® Developer for System z®
- Functional, usability, and performance enhancements, which include new commands and new options

For ordering, contact your IBM representative or an IBM Business Partner. For more information contact the Americas Call Centers at 800-IBM-CALL (426-2255). Reference: LE001

Overview

Make the most out of your IBM System z platform investment with the Problem Determination Tools. These tools deliver support across the application development lifecycle, whether you are building new or enhancing existing applications. They can help you modernize and transform existing System z applications whether your goal is to:

- Optimize management of your IT environment and reduce cost and complexity while supporting your efforts to improve your ability to regulate and monitor your application development activities.
- Develop and deploy new workloads to leverage the unique performance, availability, security, and cost benefits of the System z platform.

Problem Determination Tools deliver cost-effective and highly functional application performance analysis, source code debugging, application abend analysis, and data management capabilities. This powerful family of tools helps to improve application delivery throughout the development lifecycle. You can use them in a variety of z/OS® environments, such as CICS , IMS , DB2 , and UNIX™ System Services.

Members of the family

- IBM Application Performance Analyzer for z/OS , V13.1 (5655-Q09) helps developers and systems personnel tune applications and resolve performance constraints.

- IBM Debug Tool for z/OS , V13.1 (5655-Q10) helps developers debug applications running in a variety of environments, such as batch, TSO, CICS , IMS , DB2 , DB2 Stored Procedures, and UNIX System Services.
- IBM Fault Analyzer for z/OS , V13.1 (5655-Q11) assists developers in analyzing and fixing application and system failures. It offers developers information to help determine the cause of a failure and assist in resolving the problem.
- IBM File Manager for z/OS , V13.1 (5655-Q12) delivers comprehensive, user-friendly tools for working with z/OS , CICS , DB2 , IMS , or WebSphere® MQ data. The developer can create, browse, copy, edit, print, and format or reformat data files in the most popular System z file formats.
- IBM Workload Simulator for z/OS , V1.1 (5655-I39) can simulate a network of terminals and its associated messages. It is ideal for stress, performance, regression, function, and capacity planning tests.

Key prerequisites

Application Performance Analyzer for z/OS , Debug Tool for z/OS , Fault Analyzer for z/OS , and File Manager for z/OS run on any hardware configuration supported by the specified licensed z/OS programs.

For details, refer to the [Hardware requirements](#) and [Software requirements](#) sections.

Planned availability date

Application Performance Analyzer V13.1, Debug Tool V13.1, Fault Analyzer V13.1, and File Manager V13.1:

- October 18, 2013: English version
- November 15, 2013: Japanese and Korean versions

Description

Application Performance Analyzer for z/OS , V13.1

- Enhancements to started tasks, sampling, exits and intercepts
 - Recognize Language Environment® mode switch for CPU attribution.
 - SMS classes for Application Performance Analyzer created files
 - Repeat observations of batch jobs
 - WebSphere measurements automatically measure servant regions and report Java™ and DB2 activity
 - Preloaded JVMTI agent
 - CICS+ recognizes CICS filtering criteria
 - IEFU84 SMF exit program supports DB2 V10 compressed records
 - Support of the DB2 V10 bind option for DB2 Explain
 - Clear Application Performance Analyzer exits when started task ends
 - Dynamic change of selected CONFIG settings
 - Export file name configuration setting
 - Export and Import a hierarchy of sample files
 - Import operation checks for duplicate sample file names
 - Compatibility support for Enterprise COBOL V5, CICS TS V5.1, DB2 V11, IMS V13, z/OS V2.1, and Adabas V8.2.4
- Enhancements to reporting capability
 - Observation List displays setup filters.
 - Observation List allows sort by owner.

- Observation List displays status of "ErrMsg" when a non-critical error occurs during sampling.
- JobId is added to observation details pop-up.
- Display separate counts for general and special processors in Measurement Profile report.
- Optionally attribute CPU usage to system modules in CPU Referred Attribution report.
- Report statistics for multi-volume datasets in DASD I/O Analysis reports.
- Identify CICS remote files in the DASD EXCP Summary report.
- New WebSphere report displays CICS distributed program link calls are initiated from the servant regions
- New WebSphere report correlates WebSphere Application Server activity with DB2 activity.
- Create XML report files as variable block by default.
- Support SYSDEBUG source files created by Enterprise PL/I for z/OS V4.
- Enhancements to the listener and plug-in
 - Replace report options view with a dialog.
 - Add report options and report download to individual reports toolbar.
 - Display procedure names in CPU Usage by Procedure report.
 - Allow the user to select the location of the local reports repository.
 - Allow access to local reports for inactive started tasks.
 - Support connection to Application Performance Analyzer instances operating on different z/OS systems.

Debug Tool for z/OS , V13.1

- A new method for gathering code coverage is added for the generation, viewing, and reporting of code coverage using the Debug Tool mainframe interface (MFI) as the engine. This support is provided for applications written in Enterprise COBOL and Enterprise PLI that are compiled with the TEST compile option and its suboption SEPARATE. This is enabled via the new EQAOPTS CCPROGSELECTDSN, CCOUPTUTDSN and CCOUPTUTDSNALLOC commands.
- Debug Tool is enhanced to provide the automatic start of IMS message processing program (MPP) regions and dynamic routing of transactions. This allows a developer to dynamically start an MPP region, route a transaction to that MPP region and at the end of the transaction shutdown the MPP region created for the developer thus reducing system resources.
- To help with the ease of use of the MFI mode of Debug Tool for some users, an option is added that enables breakpoints, the current line, and the line with found text to be identified by a character indicator. This feature is enabled via a new EQAOPTS ALTDISP command.
- Supports Enterprise COBOL for z/OS , V5.1; Enterprise PL/I for z/OS , V4.4; CICS TS V5.1; DB2 V11; IMS V13; z/OS , V2.1; and C/C++ V2.1.
- Debug Tool now supports JCL for Batch Debugging in the DTSP plug-in. This facility is used to instrument JCL to initiate a debug session from the DTSP plug-in.
- Support is added for an IMS transaction that is associated with a generic ID. A new feature is added to the consolidated Language Environment user exit (EQAD3CXT) to search a new cross-reference table for the user ID of a user who wants to debug a IMS transaction that is started from the web and is associated with a generic ID. This enables Debug Tool to debug these transactions that use a generic ID. The user ID from the cross-reference table is used to find the user's Debug Tool user exit data set (userid.DBGTOOL.EQUAOPTS), which specifies the TEST runtime parameters and the display device address. A new option is added to the Debug Tool Utilities ISPF panel, "C IMS Transaction and User ID Cross Reference Table" to allow each user to update the new cross reference table.
- Support is added for tracing load modules loaded by an application. New commands TRACE LOAD and LIST TRACE LOAD are added for Debug Tool's MFI mode. This set of commands allows the user to get a trace of load modules

loaded by the application. Start the trace by issuing TRACE LOAD START. Use LIST TRACE LOAD to display the trace. The trace includes load modules known to Debug Tool at the time the TRACE LOAD START command is entered and all that are loaded while the trace is active. End the trace by issuing TRACE LOAD END. Note that when the trace is ended, all trace information is deleted.

- Support is added for terminating an idle Debug Tool session that uses the Terminal Interface Manager. Debug Tool supports a time-out option (via the new EQAOPTS SESSIONTIMEOUT command), which allows the system programmer to establish a maximum wait time for debug sessions using a dedicated terminal or the Terminal Interface Manager. If the debug session exceeds the specified time limit without any user interaction, the session will be terminated with either a QUIT or QUIT DEBUG.
- Enhanced Debug Tool Coverage Utility 'Create HTML Targeted Coverage Report' allows the user to select from a list of COBOL Program-IDs, ignore changes to non-executable code, and produce a summary of the targeted lines with selectable HTML links.
- Adds IMS information to start and stop messages generated by the EQAOPTS STARTSTOPMSG command.
- Adds EQAOPTS STARTSTOPMSGDSN command and a new Debug Tool Utilities option 'Non-CICS Debug Session Start and Stop Message Viewer' to collect and view Debug Tool debugger session start and stop information.
- Enhanced delay debug mode with a new EQAOPTS DLAYDBGEND command to control CONDITION trapping. In addition, a new EQAOPTS DLAYDBGXRF command is added so that delay debug mode can use the 'IMS Transaction and User ID Cross Reference Table'. Further, NOTEST is now handled in delay debug mode.
- A confirmation message is added to Debug Tool Utilities option 6 'Debug Tool User Exit Data Set' to indicate that the updates have been saved into the EQAUOPTS data set.
- The ON and AT OCCURRENCE commands are enhanced for Enterprise PL/I to support qualifying data.
- Commands are added, LIST LDD and CLEAR LDD, that display and remove LDD commands known to Debug Tool, and LIST CC and CC (START and STOP) that tell the Debug Tool debugger to gather and display code coverage data.
- Two new EQAOPTS commands are added for remote debug mode. The EQAOPTS HOSTPORTS command specifies the specific host port number or range of host port numbers to use on the host for a TCP/IP connection from the host to a workstation when using remote debug mode. The EQAOPTS TCPIPDATA command provides the data set name for TCPIP.DATA (via the SYSTCPD DD NAME) when no GLOBALTCPIPDATA statement is configured.
- A timestamp is added to the EQAY999* messages that the Terminal Interface Manager issues if the +T trace flag is on
- Debug Tool now allows for GOTO or JUMPTO for programs compiled with OPT and the NOEJPD suboption of the Enterprise COBOL TEST compile option when SET WARNING setting is OFF.
- An updated DTST transaction is included to write messages to the operator log when a user changes storage. These messages are intended to provide an audit trail of DTST storage changes.
- Support is added for remote Playback through the Playback Toolbar in the Debug View.

Fault Analyzer for z/OS , V13.1

- Reporting of a mismatch sidefile is now more consistent with precise details on which sidefile matching tests have passed and failed.
- Users can now provide a list of programs, which include a generic suffix, of those programs for which sidefile processing should be skipped/excluded.
- The new IDIXSFOR exit is added that allows the automatic forced usage of a sidefile where the only failing sidefile test is the last 12 instructions check.
- Storage usage improvements are made where a single Fault Entry is selected for interactive reanalysis from the ISPF Fault Entry display.

- At the time of a CICS transaction abend analysis, additional information is now gathered about concurrently running CICS tasks and their storage allocations. This information may be useful during storage overlay analysis.
- The Fault Analyzer web interface is redesigned to have a similar look and feel and functionality as the Eclipse plug-in.
- Users can now provide their own abend code and module descriptions which will be automatically included in the Fault Analyzer report.
- To facilitate easier management of fault entries, the MATCH command now supports a TODAY keyword.
- The option to exclude CICS trace entries as well as the existing include option is provided.
- The SHOWFREE command is added to allow users to determine Fault Analyzer's TSO/ISPF storage usage.
- Enhancements are made to allow improved, more consistent sharing of history file data sets across LPARs in a PDSESHARING(NORMAL) environment.
- Changes are made to allow transaction abend analysis on CICS OPEN TCBs.
- Sidefile processing is enhanced to support DWARF information produced by the Enterprise COBOL V5.1 compiler.
- Currency support is added for Enterprise COBOL V5.1, CICS/TS V5.1, IMS V13, and DB2 V11.
- Analysis of abends, which include Java , is improved.
- The new FAISPF option is delivered as consolidation of ISPF specific options - HistCols, InteractiveExitPromptSeconds and InitHist.
- A new utility, IDIDATST, is added that allows for bulk program and sidefile matching. This is particularly useful during initial installation to determine which programs do not have a matching sidefile and hence may require a recompilation in order to generate a matching sidefile.
- Updated and expanded LOOKUP messages now include JES2 and JES3 messages.

File Manager for z/OS , V13.1

- Added ability to create File Manager templates in XML format
- Added support to specify character encoding (CCSID) of text fields in a template
- Support to map SMF record types
- Enhanced File Manager plug-in to work with IMS databases
- Enhanced IMS extract and print utility functions with performance improvements and additional parameters
- Added support for DB2 LOB columns, which includes XML type
- Enabled File Manager DB2 export utility function to accept user-specified SELECT statement
- Added additional DB2 installation options to control uncommitted read
- Added support for DB2 V11, IMS V13, and Enterprise COBOL V5.1

Problem Determination Tools Studio V13.1

Problem Determination Tools Studio V13.1 is updated to include IBM Explorer for z/OS (z/OS Explorer), V2.1, which utilizes Eclipse 4.2.2, and Java 7. z/OS Explorer is an Eclipse-based integration platform for z/OS users which delivers extensible workstation connectivity to key z/OS functions, by providing simple and secure access to z/OS datasets, IBM zSeries File System (zFS) files, and Job Entry Subsystem (JES) jobs, and output.

A host connections framework is part of z/OS Explorer, which is used to manage connections and user credentials. z/OS Explorer provides an extensible platform where additional tools can be integrated easily to provide a single portal to the management of z/OS-based resources and subsystems. This provides a helpful one-stop shop for operators, systems programmers, and developers, which provides a common and unified approach to their daily tasks, from resource management to determining the cause of problems.

For further information on IBM Explorer for z/OS , V2.1, refer to Software Announcement [213-141](#), dated April 23, 2013.

Other z/OS Problem Determination Tools

IBM HourGlass provides support for time simulation in the z/OS environment. With HourGlass, you can simulate any date and time that can be represented by the underlying computer hardware - past, present, or future - without changing application code or requiring a separate computing environment.

IBM Data Set Commander for z/OS provides an integrated front end to Interactive System Productivity Facility (ISPF). This extends batch and online capabilities for PDS and PDSE data sets. New versions of IBM Data Set Commander for z/OS and Migration Utility for z/OS are also announced today.

For further information on Data Set Commander for z/OS , V8.1, refer to Software Announcement [213-440](#), dated October 1, 2013.

For further information on HourGlass V7.1, refer to Software Announcement [213-428](#), dated October 1, 2013.

Section 508 of the US Rehabilitation Act

The products in this announcement are capable as of its general availability, when used in accordance with 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.

Value Unit-based pricing

Value Unit pricing for eligible IBM System z IBM International Program License Agreement (IPLA) programs enables a lower cost of incremental growth and enterprise aggregation. Each System z IPLA product with Value Unit pricing has a single price per Value Unit and a conversion matrix, called Value Unit Exhibit, for converting from some designated measurement to Value Units. Most commonly, Millions of Service Units (MSUs) is the measurement designated by IBM to be converted to Value Units. Some other measurements are engines or messages. Since MSUs are the most common measurement, that measurement will be used for the remainder of this description.

Value Unit pricing offers price benefits for you. For each System z IPLA program with Value Unit pricing, the quantity of that program needed to satisfy applicable IBM terms and conditions is referred to as the **required license capacity**. Each of the various Value Unit Exhibits stipulate that the larger your required license capacity, the fewer Value Units per MSU you will need. Value Unit Exhibits are uniquely identified by a three digit code and referred to using the nomenclature VUExxx, where xxx is the three digit code.

Subsequent acquisitions of Value Unit priced programs offer additional price benefits. The quantity of each System z IPLA program that you have acquired is referred to as **entitled license capacity**. If you wish to grow your entitled license capacity for a System z IPLA program, the calculation to determine additional needed Value Units is based upon the number of Value Units already acquired.

For each System z IPLA program with Value Unit pricing, you should:

- Determine the required license capacity, in MSUs
- Aggregate the MSUs across the enterprise
- Convert the total MSUs to Value Units, using the applicable Value Unit Exhibit
- Multiply the price per Value Unit by the total number of Value Units to determine the total cost

To simplify conversion from the designated measurement to Value Units or vice-versa, use the Value Unit Converter Tool. For additional information or to obtain a copy of the Value Unit Converter Tool, visit the Value Unit Converter Tool website

<http://ibm.com/zseries/swprice/vuctool>

Note that Value Units of a given product cannot be exchanged, interchanged, or aggregated with Value Units of another product.

To determine the required license capacity for the System z IPLA program you selected, refer to the [Terms and conditions](#) section.

Program number

Program number	VRM	Program name
5655-Q09	V13.1	IBM Application Performance Analyzer for z/OS
5655-Q10	V13.1	IBM Debug Tool for z/OS
5655-Q11	V13.1	IBM Fault Analyzer for z/OS
5655-Q12	V13.1	IBM File Manager for z/OS

Product identification number - PID number

Program PID Number	Subscription and Support PID Number
5655-Q09	5697-N38
5655-Q10	5655-J19
5655-Q11	5697-G59
5655-Q12	5697-G60

Education support

For information on Web-based training, classroom-based training, on-site workshops and other educational resources available for the problem determination tools, refer to the IBM Education Assistant website

<http://publib.boulder.ibm.com/infocenter/ieduasst/stgv1r0/index.jsp>

Offering Information

Product information is available via the Offering Information website

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

Publications

For Application Performance Analyzer for z/OS , V13.1 (5655-Q09), the *Program Directory* (GI13-3002), the *Problem Determination Tools Common Component Program Directory* (GI10-8969), and *Agreements and License Information* (LC27-5975) are supplied automatically with the basic machine-readable material. No other hardcopy publications are shipped with the product.

The following optional publications are available at product availability:

- Application Performance Analyzer for z/OS Messages Guide (SC14-7599)
- Application Performance Analyzer for z/OS Customization Guide (SC14-7598)
- Application Performance Analyzer for z/OS User's Guide (SC14-7597)

For Debug Tool for z/OS , V13.1 (5655-Q10), the *Debug Tool Program Directory* (GI13-3004), the *Problem Determination Tools Common Component Program Directory* (GI10-8969), the *CCCA Program Directory* (GI10-5080) and *Agreements and License Information* (LC27-5976) are supplied automatically with the basic machine-readable material. For the Japanese version, the *CCCA Japanese Program Directory* (GI10-6976) is also supplied automatically with the other three publications and the basic machine-readable material. No other hardcopy publications are shipped with the product.

The following optional publications are available at product availability:

- Debug Tool for z/OS User's Guide (SC14-7600)
- Debug Tool for z/OS Coverage Utility User's Guide and Messages (SC27-4651)
- Debug Tool for z/OS Reference and Messages (SC27-4652)
- Debug Tool for z/OS Reference Summary (SC14-7602)
- Debug Tool for z/OS API User's Guide and Reference (SC27-4654)
- Debug Tool for z/OS Customization Guide (SC14-7601)
- CCCA User's Guide (SC26-9400)
- IBM Problem Determination Tools for z/OS Common Component Customization Guide and User Guide (SC19-3690)

For Fault Analyzer for z/OS , V13.1 (5655-Q11), the *Program Directory* (GI10-8967), the *Problem Determination Tools Common Component Program Directory* (GI10-8969) and *Agreements and License Information* (LC27-5977) are supplied automatically with the basic machine-readable material. No other hardcopy publications are shipped with the product.

The following optional publications are available at product availability:

- Fault Analyzer for z/OS User's Guide and Reference (SC19-4116)
- IBM Problem Determination Tools for z/OS Common Component Customization Guide and User Guide (SC19-3690)

For File Manager for z/OS , V13.1 (5655-Q12), the *Program Directory* (GI10-8968), the *Problem Determination Tools Common Component Program Directory* (GI10-8969) and *Agreements and License Information* (LC27-5978) are supplied automatically with the basic machine-readable material. No other hardcopy publications are shipped with the product.

The following optional publications are available at product availability:

- File Manager for z/OS Customization Guide (SC19-4118)
- File Manager for z/OS User's Guide and Reference (SC19-4119)
- File Manager for z/OS User's Guide and Reference for DB2 Data (SC19-4120)
- File Manager for z/OS User's Guide and Reference for IMS Data (SC19-4121)
- File Manager for z/OS User's Guide and Reference for CICS (SC19-4122)
- IBM Problem Determination Tools for z/OS Common Component Customization Guide and User Guide (SC19-3690)

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 US) 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.

Business Partner information

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=213-378>

Technical information

Specified operating environment

Hardware requirements

Application Performance Analyzer for z/OS , Debug Tool for z/OS , Fault Analyzer for z/OS , and File Manager for z/OS run on any hardware configuration supported by the following specified licensed z/OS programs.

The following minimum hardware levels are required to run the optional Problem Determination Tools Studio or product plug-ins:

- CPU: Intel™ Pentium™ 4 or equivalent
- RAM: At least 768 MB in addition to the operating system requirements
- Hard disk: At least 500 MB available space

Software requirements

Problem Determination Tools (Application Performance Analyzer for z/OS , V13.1, Debug Tool for z/OS , V13.1, Fault Analyzer for z/OS , V13.1, and File Manager for z/OS , V13.1) run under the control of, or in conjunction with, the following programs. For more information on the following programs that may require program temporary fixes (PTFs), refer to the program directory and Preventative Service Planning (PSP) bucket for the respective problem determination tool.

Required software

One of the following:

- z/OS V2.1, or later (5650-ZOS)
- z/OS V1.12 or V1.13 (5694-A01)

Optional software

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

- AD/Cycle C/370™ V1.2 (5688-216)
- C/C++ for MVS/ESA V3 (5655-121)
- C/C++ Element in z/OS V1.13, or later (5694-A01)
- C/C++ Element in z/OS V2.1, or later (5650-ZOS)
- CICS TS for z/OS , V3 (5655-M15)
- CICS TS for z/OS , V4 (5655-S97)
- CICS TS for z/OS , V5.1 (5655-Y04)
- CICS TS for z/OS Value Unit Edition V5.1 (5722-DFJ)

- DB2 V9 for z/OS (5635-DB2)
- DB2 10 for z/OS (5605-DB2)
- DB2 11 for z/OS (5615-DB2)
- DB2 9 for z/OS Value Unit Edition (5697-P12)
- DB2 10 for z/OS Value Unit Edition (5697-P31)
- DB2 11 for z/OS Value Unit Edition (5697-P43)
- Enterprise COBOL for z/OS , V3.4 (5655-G53)
- Enterprise COBOL for z/OS , V4 (5655-S71)
- Enterprise COBOL for z/OS , V5.1 (5655-W32)
- Enterprise PL/I for z/OS , V3.9 (5655-H31)
- Enterprise PL/I for z/OS , V4.1 through V4.4 (5655-W67)
- High Level Assembler/MVS & VM & VSE V1.6 (5696-234)
- IBM 31-bit SDK for z/OS , Java 2 Technology Edition V6 with SR6, or later (5655-R31)
- IMS V11 (5635-A02)
- IMS V12 (5635-A03)
- IMS V13 (5635-A04)
- IMS Database Value Unit Edition, V12 (5655-DSQ)
- IMS Database Value Unit Edition, V13 (5655-DSM)
- Rational Developer for System z V8.5.x or V9.0.x (5724-T07)
- WebSphere Application Server for z/OS , V6.1 (5655-N01)
- WebSphere Application Server for z/OS , V7.0 (5655-N02)
- WebSphere Application Server for z/OS , V8.0 or V8.5 (5655-W65)
- WebSphere MQ for z/OS , V7.0.x or V7.1.x (5655-R36)

The problem determination tools in this announcement are tested and supported for use only with the announced and currently supported levels of IBM software and hardware listed above. IBM knows of no reason the problem determination tools in this announcement will not work with certain earlier, unsupported IBM software products, specifically:

- z/OS V1.11 (5694-A01)
- C/C++ Element in OS/390® V2.10 (5647-A01)
- C/C++ Element in z/OS V1.11 or V1.12 (5694-A01)
- CICS TS for OS/390 , V1.3 (5655-147)
- CICS TS for z/OS , V2.2 or V2.3 (5697-E93)
- OS/VS COBOL V1.2.4 (5740-CB1), with limitations
 - Not supported by File Manager for z/OS
- VS COBOL II V1.3.1, V1.3.2, or V1.4 (5668-958, 5688-023), with limitations
 - Not supported by File Manager for z/OS
- COBOL for MVS™ and VM V1 (5688-197)
 - Not supported by File Manager for z/OS
- COBOL for OS/390 and VM V2.2 (5648-A25)
- Enterprise COBOL for z/OS , V3.1 through V3.3 (5655-G53)
- DB2 UDB for z/OS , and OS/390 , V7 (5675-DB2)
- DB2 UDB for z/OS , V8 (5625-DB2)
- High Level Assembler/MVS & VM & VSE, V1.5 (5696-234)
- IBM SDK for z/OS , Java 2 Technology Edition V1.4.2 with SR13, or later (5655-M30)
- IBM 31-bit SDK for z/OS , Java 2 Technology Edition V5 with SR10, or later (5655-N98)

- IMS V9 (5655-J38)
- IMS V10 (5635-A01)
- OS PL/I V2.1, V2.2, or V2.3 (5668-909, 5668-910), with limitations
- PL/I for MVS and VM V1.1.1 (5688-235)
- VisualAge® PL/I for OS/390 V2 (5655-B22)
- Enterprise PL/I for z/OS , V3.1 through V3.8 (5655-H31)
- WebSphere Application Server for z/OS , V6.0.1 (5655-N01)
- WebSphere MQ for z/OS , V6 (5655-L82)

IBM will undertake to fix problems found running the problem determination tools 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.

Required software for the optional Problem Determination Tools Studio or plug-ins

The following software is required to run the optional Problem Determination Tools Studio V13 or product plug-ins:

- One of the following levels of the Microsoft™ Windows™ operating system:
 - Microsoft Windows XP (Professional), 32-bit
 - Microsoft Windows Vista (Business or Enterprise), 32-bit or 64-bit
 - Microsoft Windows 7 (Professional, Enterprise, or Ultimate), 32-bit or 64-bit
 - Microsoft Windows Server 2008 (Standard, Web, Enterprise, or DataCenter), 32-bit or 64-bit
 - Microsoft Windows Server 2008 R2 (Standard, Web, Enterprise, or DataCenter), 64-bit
- One of the following Eclipse-based platforms:
 - IBM Explorer for z/OS , V2.1, or later
 - IBM CICS Explorer (for Windows) V5.1, or later
 - IBM IMS Enterprise Suite Explorer (for Windows) V2.2.0.2, or later
 - Rational Developer for System z , V9.0 (5724-T07)
- If using the IBM Application Performance Analyzer plug-in: Application Performance Analyzer for z/OS V13.1, or later
- If using the Debug Tool plug-in: Debug Tool for z/OS , V13.1, or later
- If using the Fault Analyzer plug-in: Fault Analyzer for z/OS , V13.1, or later
- If using the File Manager plug-in: IBM File Manager for z/OS , V13.1, or later
- If using the Workload Simulator plug-in: Workload Simulator for z/OS and OS/390 , V1.1, or later

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

Packaging

The Application Performance Analyzer for z/OS , V13.1 (5655-Q09) package includes:

- Basic machine-readable material on the customer-selected distribution medium
- Program Directory (GI13-3002)
- Problem Determination Tools Common Component Program Directory (GI10-8969)
- Agreements and License Information (LC27-5975)

The Debug Tool for z/OS , V13.1 (5655-Q10) package includes:

- Basic machine-readable material on the customer-selected distribution medium
- Debug Tool Program Directory (GI13-3004)
- Problem Determination Tools Common Component Program Directory (GI10-8969)
- CCCA Program Directory (GI10-5080)
- The CCCA Japanese Program Directory (GI10-6976), that is also included in the Japanese version
- Agreements and License Information (LC27-5976)

The Fault Analyzer for z/OS , V13.1 (5655-Q11) package includes:

- Basic machine-readable material on the customer-selected distribution medium
- Fault Analyzer Program Directory (GI10-8967)
- Problem Determination Tools Common Component Program Directory (GI10-8969)
- Agreements and License Information (LC27-5977)

The File Manager for z/OS , V13.1 (5655-Q12) package includes:

- Basic machine-readable material on the customer-selected distribution medium
- File Manager Program Directory (GI10-8968)
- Problem Determination Tools Common Component Program Directory (GI10-8969)
- Agreements and License Information (LC27-5978)

Software Services

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/>

Ordering information

Ordering z/OS through the Internet

ShopzSeries provides an easy way to plan and order your z/OS ServerPac or CBPDO. It will analyze your current installation, determine the correct product migration, and present your new configuration based on z/OS . Additional products can also be added to your order (including determination of whether all product requisites are satisfied). ShopzSeries is available in the US and several countries in Europe. In countries where ShopzSeries is not available yet, contact your IBM representative (or IBM Business Partner) to handle your order via the traditional IBM ordering process. For more details and availability, visit the ShopzSeries website at

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

The products in this announcement have one charge unit - Value Units.

Charge metric

Program name	Program number	Charge metric
Application Performance Analyzer for z/OS, V13	5655-Q09	Value Units
Application Performance Analyzer for z/OS Subscription & Support	5697-N38	Value Units
Debug Tool for z/OS, V13	5655-Q10	Value Units
Debug Tool for z/OS Subscription & Support	5655-J19	Value Units
Fault Analyzer for z/OS, V13	5655-Q11	Value Units
Fault Analyzer for z/OS Subscription & Support	5697-G59	Value Units
File Manager for z/OS, V13	5655-Q12	Value Units
File Manager for z/OS Subscription & Support	5697-G60	Value Units

The programs in this announcement all have Value Unit-based pricing.

Program number	Program name	Value Unit Exhibit
5655-Q09	Application Performance Analyzer for z/OS, V13	VUE001
5697-N38	Application Performance Analyzer for z/OS Subscription & Support	VUE001
5655-Q10	Debug Tool for z/OS, V13	VUE007
5655-J19	Debug Tool for z/OS Subscription & Support	VUE007
5655-Q11	Fault Analyzer for z/OS, V13	VUE007
5697-G59	Fault Analyzer for z/OS Subscription & Support	VUE007

5655-Q12	File Manager for z/OS, V13	VUE007
5697-G60	File Manager for z/OS Subscription & Support	VUE007

For each System z IPLA program with Value Unit pricing, the quantity of that program needed to satisfy applicable IBM terms and conditions is referred to as the 'required license capacity'. Your required license capacity is based upon the following factors:

- The System z IPLA program you select.
- The applicable Value Unit Exhibit.
- The applicable terms.
- Whether your current mainframes are full capacity or sub-capacity.

Value Unit exhibit VUE001

Level	Minimum	Maximum	Value Units/MSU
Base	1	3	5.25
Tier A	4	45	0.83
Tier B	46	175	0.35
Tier C	176	315	0.26
Tier D	316	+	0.20

Value Units for mainframes without MSU ratings:

Hardware	Value Units/machine
MP3000 H30	21
MP3000 H50	22
MP3000 H70	26
ESL models	9

VUE001 Ordering example

The total number of Value Units is calculated according to the following example.

If your required license capacity is 1,000 MSUs for your selected System z IPLA product, the applicable Value Units would be:

Translation from MSUs to value units

	MSUs	*	Value Units/MSU	=	Value Units
Base	3	*	5.25	=	15.75
Tier A	42	*	.83	=	34.86
Tier B	130	*	.35	=	45.50
Tier C	140	*	.26	=	36.40
Tier D	685	*	.20	=	137.00
Total	1,000				269.51

When calculating the total number of Value Units, the sum is to be rounded up to the next integer.

Value Unit exhibit VUE007

	MSUS minimum	MSUS maximum	Value Units/MSU
Base	1	3	1
Tier A	4	45	0.45
Tier B	46	175	0.36
Tier C	176	315	0.27
Tier D	316	+	0.2

Value Units for mainframes without MSU ratings:

Hardware	Value Units/machine
MP3000 H30	6
MP3000 H50	8
MP3000 H70	12
ESL models	2

VUE007 Ordering example

The total number of Value Units is calculated according to the following example.

If your required license capacity is 1,500 MSUs for your selected System z IPLA product, the applicable Value Units would be:

Translation from MSUs to Value Units

	MSUs	*	Value Units/MSU	=	Value Units
Base	3	*	1.00	=	3.00
Tier A	42	*	.45	=	18.90
Tier B	130	*	.36	=	46.80
Tier C	140	*	.27	=	37.80
Tier D	1,185	*	.20	=	237.00
Total	1,500				343.50

When calculating the total number of Value Units, the sum is to be rounded up to the next integer.

Basic license

On/Off Capacity on Demand

Application Performance Analyzer for z/OS , V13.1, Debug Tool for z/OS , V13.1, Fault Analyzer for z/OS , V13.1, and File Manager for z/OS , V13.1 are eligible for On/Off Capacity on Demand (On/Off CoD) with a Temporary Use Charge calculated based on MSUs-per day usage.

Program Name Application Performance Analyzer for z/OS, V13.1
 Program PID 5655-Q09

Entitlement identifier	Description	License option/Pricing metric
S017BL1	Application Performance Analyzer V13.1	Basic OTC, Per MSU-day TUC

Program name Debug Tool for z/OS, V13.1
 Program PID 5655-Q10

Entitlement identifier	Description	License option/Pricing metric
S017BLJ	Debug Tool V13.1	Basic OTC, Per MSU-day TUC

Program name Fault Analyzer for z/OS, V13.1
 Program PID 5655-Q11

Entitlement identifier	Description	License option/Pricing metric
S017BLW	Fault Analyzer V13.1	Basic OTC, Per MSU-day TUC

Program Name File Manager for z/OS, V13.1
 Program PID 5655-Q12

Entitlement identifier	Description	License option/Pricing metric
S017BLC	File Manager V13.1	Basic OTC, Per MSU-day TUC

To order, specify the program product number and the appropriate license or charge option. Also, specify the desired distribution medium. To suppress shipment of media, select the license-only option in CFSW.

Program name Application Performance Analyzer for z/OS, V13.1
 Program PID 5655-Q09

Entitlement identifier	Description	License option/Pricing metric
S017BL1	Application Performance Analyzer V13.1	Basic OTC, Per Value Unit
Orderable supply ID:	Language	Distribution medium
S017BKZ	English	3590 Tape
S017BKX	Japanese	3590 Tape
S017BL0	Korean	3590 Tape

Note: Additional media type selections are offered during Custom Build Offering ordering.

Subscription and Support PID 5697-N38

Entitlement identifier	Description	License option/Pricing metric
S011W5F	Application Performance Analyzer S&S	Basic ASC, per Value Unit SW S&S No Charge, decline SW S&S Per MSU SW S&S Registration
Orderable supply ID:	Language	Distribution medium
S011W5H	English	Hardcopy publication
S011W5G	Japanese	Hardcopy publication
S01331K	Korean	Hardcopy publication

Program name Debug Tool for z/OS, V13.1
 Program PID 5655-Q10

Entitlement identifier	Description	License option/Pricing metric
S017BLJ	Debug Tool V13.1	Basic OTC, Per Value Unit
Orderable supply ID:	Language	Distribution medium
S017BLF	English	3590 Tape
S017BLG	Japanese	3590 Tape
S017BLH	Korean	3590 Tape

Note: Additional media type selections are offered during Custom Build Offering ordering.

Subscription and Support PID 5655-J19

Entitlement identifier	Description	License option/Pricing metric
S00X82R	Debug Tool S&S	Basic ASC, per Value Unit SW S&S No Charge, decline SW S&S Per MSU SW S&S Registration

Orderable supply ID:	Language	Distribution medium
S00X82S	English	Hardcopy publication
S00X82T	Japanese	Hardcopy publication
S01331F	Korean	Hardcopy publication

Program name Fault Analyzer for z/OS, V13.1
Program PID 5655-Q11

Entitlement identifier	Description	License option/Pricing metric
S017BLW	Fault Analyzer V13.1	Basic OTC, Per Value Unit

Orderable supply ID:	Language	Distribution medium
S017BLV	English	3590 Tape
S017BLS	Japanese	3590 Tape
S017BLT	Korean	3590 Tape

Note: Additional media type selections are offered during Custom Build Offering ordering.

Subscription and Support PID 5697-G59

Entitlement identifier	Description	License option/Pricing metric
S00V7ZL	Fault Analyzer S&S	Basic ASC, per Value Unit SW S&S No Charge, decline SW S&S Per MSU SW S&S Registration

Orderable supply ID:	Language	Distribution medium
S00TZD4	English	Hardcopy publication
S00VP6X	Japanese	Hardcopy publication
S01331H	Korean	Hardcopy publication

Program name File Manager for z/OS, V13.1
Program PID 5655-Q12

Entitlement identifier	Description	License option/Pricing metric
S017BLC	File Manager V13.1	Basic OTC, Per Value Unit

Orderable supply ID:	Language	Distribution medium
S017BLB	English	3590 Tape
S017BL8	Japanese	3590 Tape
S017BL9	Korean	3590 Tape

Note: Additional media type selections are offered during Custom Build Offering ordering.

Subscription and Support PID 5697-G60

Entitlement identifier	Description	License option/Pricing metric
S00V7ZM	File Manager S&S	Basic ASC, per Value Unit SW S&S No Charge, decline SW S&S Per MSU SW S&S Registration
Orderable supply ID:	Language	Distribution medium
S00TZD5	English	Hardcopy publication
S00VLRJ	Japanese	Hardcopy publication
S01331J	Korean	Hardcopy publication

Subscription and Support

To receive voice technical support via telephone and future releases and versions at no additional charge, Subscription and Support must be ordered. The capacity of Subscription and Support (Value Units) must be the same as the capacity ordered for the product licenses.

To order, specify the Subscription and Support program number (PID) referenced above and the appropriate license or charge option.

IBM is also providing Subscription and Support for these products via a separately purchased offering under the terms of the IBM International Agreement for Acquisition of Software Maintenance. This offering:

- Includes and extends the support services provided in the base support to include technical support via telephone.
- Entitles you to future releases and versions, at no additional charge. Note that you are not entitled to new products.

When Subscription and Support is ordered, the charges will automatically renew annually unless cancelled by you.

The combined effect of the IPLA license and the Agreement for Acquisition of Software Maintenance gives you rights and support services comparable to those under the traditional ICA S/390® and System z license or its equivalent. To ensure that you continue to enjoy the level of support you are used to in the ICA business model, you must order **both** the license for the program **and** the support for the selected programs at the same Value Unit quantities.

Single version charging

To elect single version charging, you must notify and identify to IBM the prior program and replacement program, and the machine the programs are operating on.

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>

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 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.

Agreement for Acquisition of Software Maintenance

The IBM Agreement for Acquisition of Software Maintenance (Z125-6011) applies for Software Subscription and Support (Software Maintenance) and does not require customer signatures.

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. 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.

IBM System z Operational Support Services - SoftwareXcel is an option if you desire added services.

License Information form number

Following are the License Information documents for the Problem Determination Tools:

- GI13-3001: Application Performance Analyzer for z/OS , V13 (5655-Q09)
- GI13-3003: Debug Tool for z/OS , V13 (5655-Q10)

- GC19-4114: Fault Analyzer for z/OS , V13 (5655-Q11)
- GC19-4117: File Manager for z/OS , V13 (5655-Q12)

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

<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

<http://www.ibm.com/support/handbook>

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

Program support

Enhanced support, called Subscription and Support, includes telephone assistance, as well as access to updates, releases, and versions of the program as long as support is in effect. You will be notified of discontinuance of support with 12 months' notice.

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

Software Subscription and Support applies

No. For operating system software, the revised IBM Operational Support Services - SoftwareXcel offering will provide support for those operating systems and associated products that are not available with the Software Subscription and Support (Software Maintenance) offering.

This will ensure total support coverage for your enterprise needs, including IBM and selected non-IBM products. For complete lists of products supported under both the current and revised offering, visit

<http://www.ibm.com/services/sl/products>

IBM Operational Support Services - SoftwareXcel

Yes

System i® Software Maintenance applies

No

Variable charges apply

No

Educational allowance available

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

Products eligible for single version charging

Replaced program number	Replaced program name	Replacement program number	Replacement program name
5734-CB4	COBOL Interactive Debug	5655-Q10	IBM Debug Tool for z/OS, V13
5658-995	Inspect for C/370 and PL/I V1	5655-Q10	IBM Debug Tool for z/OS, V13
5688-194	CODE/370 V1	5655-Q10	IBM Debug Tool for z/OS, V13
5688-194	IBM Debug Tool for z/OS and OS/390, V1	5655-Q10	IBM Debug Tool for z/OS, V13
5655-H32	IBM Debug Tool for z/OS and OS/390, V3	5655-Q10	IBM Debug Tool for z/OS, V13
5655-L24	IBM Debug Tool for z/OS, V4	5655-Q10	IBM Debug Tool for z/OS, V13
5655-M18	IBM Debug Tool for z/OS, V5	5655-Q10	IBM Debug Tool for z/OS, V13
5655-P14	IBM Debug Tool for z/OS, V6	5655-Q10	IBM Debug Tool for z/OS, V13
5655-R44	IBM Debug Tool for z/OS, V7	5655-Q10	IBM Debug Tool for z/OS, V13
5655-S17	IBM Debug Tool for z/OS, V8	5655-Q10	IBM Debug Tool for z/OS, V13
5655-103	IBM DITTO/ESA for MVS	5655-Q12	IBM File Manager for z/OS, V13
5665-370	MVS/DITTO V1	5655-Q12	IBM File Manager for z/OS, V13
5695-100	MVS/DITTO V2	5655-Q12	IBM File Manager for z/OS, V13
5798-ARD	OS/DITTO	5655-Q12	IBM File Manager for z/OS, V13

Note: Only certain function in DITTO is replaced by File Manager. This should not imply that all of the function in other programs is replaced completely by their replacement programs.

Sub-capacity terms and conditions

For each System z IPLA program with Value Unit pricing, the quantity of that program needed to satisfy applicable IBM terms and conditions is referred to as the required license capacity. Your required license capacity is based upon the following factors:

- The System z IPLA program you select
- The applicable Value Unit Exhibit
- The applicable terms
- Whether your current mainframes are full capacity or sub-capacity

For more information on the Value Unit Exhibit for the System z IPLA program you selected, refer to the [Ordering information](#) section.

Program number	Program name	Terms
5655-Q09	Application Performance Analyzer for z/OS, V13	Execution-based
5655-Q10	Debug Tool for z/OS, V13	Execution-based
5655-Q11	Fault Analyzer for z/OS, V13	Execution-based
5655-Q12	File Manager for z/OS, V13	Execution-based

Full-capacity mainframes

In cases where full capacity is applicable, the following terms apply.

Execution-based, z/OS-based, full-machine-based: The required capacity of a System z IPLA program with these terms equals the MSU-rated capacity of the machines where the System z IPLA program executes.

For more information on mainframe MSU-rated capacities, visit

<http://www-1.ibm.com/servers/eserver/zseries/library/swpriceinfo/>

Reference-based: The required license capacity of a System z IPLA program with these terms equals the license capacity of the applicable monthly license charge (MLC) program. This MLC program is called the parent program.

Sub-capacity mainframes

In cases where sub-capacity is applicable, the following terms apply.

Execution-based: The required capacity of a System z IPLA sub-capacity program with these terms equals the capacity of the LPARs where the System z IPLA program executes.

z/OS-based: The required license capacity of a System z IPLA program with these terms equals the license capacity of z/OS on the machines where the System z IPLA program executes.

Reference-based: The required license capacity of a System z IPLA program with these terms equals the license capacity of the applicable monthly license charge (MLC) program. This MLC program is called the parent program.

Full-machine-based: The required license capacity of a System z IPLA program with full-machine-based terms equals the MSU-rated capacity of the machines where the System z IPLA program executes.

For more information on mainframe MSU-rated capacities, refer to *The IBM System z Machines Exhibit*, (Z125-3901), or visit the Mainframes section of the System z Exhibits website.

<http://ibm.com/zseries/library/swpriceinfo/>

For additional information for products with reference-based terms, System z IPLA sub-capacity programs with reference-based terms adds value to the parent program across the environment, regardless of where in the environment the System z IPLA program executes.

An environment is defined as either a single or stand-alone machine or a qualified Parallel Sysplex®. You may have one or more different environments across the enterprise. To determine the required license capacity for each System z IPLA program with referenced-based terms, each environment should be assessed separately.

When a System z IPLA sub-capacity program with reference-based terms is used in a qualified Parallel Sysplex environment, the required license capacity of the System z IPLA program must equal with the license capacity of the parent program across the Parallel Sysplex. Qualified Parallel Sysplex refers to one where MLC pricing is aggregated across the sysplex.

Sub-capacity eligibility

To be eligible for sub-capacity charging on select System z IPLA programs, you must first implement and comply with all terms of either sub-capacity Workload License Charges (WLC) or sub-capacity Entry Workload License Charges (EWLC). To implement sub-capacity WLC or EWLC, a machine must be System z (or equivalent). On that machine:

- All instances of the OS/390 operating system must be migrated to the z/OS operating systems.
- Any licenses for the OS/390 operating system must be discontinued.
- All instances of the z/OS operating systems must be running in z/Architecture® (64-bit) mode.

For that machine, you must create and submit a Sub-Capacity Report to IBM each month. Sub-Capacity Reports must be generated using the Sub-Capacity Reporting Tool (SCRT). For additional information or to obtain a copy of SCRT, visit the System z Software Pricing website

<http://ibm.com/zseries/swprice>

You must comply with all of the terms of the WLC or EWLC offering, whichever is applicable:

- The complete terms and conditions of sub-capacity WLC are defined in the IBM Customer Agreement - Attachment for System z Workload License Charges (Z125-6516).
- The complete terms and conditions for sub-capacity EWLC are defined in the IBM Customer Agreement - Attachment for IBM System z 890 and 800 License Charges (Z125-6587).

Additionally, you must sign and comply with the terms and conditions specified in the amendment to the IPLA contract - *Amendment for IBM System z9® and System z Programs Sub-Capacity Pricing* (Z125-6929). Once the amendment is signed, the

terms in the amendment replace any and all previous System z IPLA sub-capacity terms and conditions.

Sub-capacity utilization determination

Sub-capacity utilization is determined based on the product's own execution as reported to IBM in accordance with the requirements for reporting sub-capacity utilization for products.

On/Off Capacity on Demand (CoD)

To be eligible for On/Off CoD pricing, you must be enabled for temporary capacity on the corresponding hardware, and the required contract, Attachment for IBM System z On/Off Capacity on Demand (Z125-7883) must be signed prior to use.

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.

Prices

Information on charges is available at

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

Choose the option entitled Purchase / upgrade tools.

Program Name Application Performance Analyzer for z/OS, v13.1
Program PID 5655-Q09

Entitlement identifier	Description	License option/Pricing metric
S017BL1	Application Performance Analyzer v13.1	Basic OTC, Per Value Unit Basic OTC, Per MSU-day TUC

Program name Debug Tool for z/OS, v13.1
Program PID 5655-Q10

Entitlement identifier	Description	License option/Pricing metric
S017BLJ	Debug Tool v13.1	Basic OTC, Per Value Unit Basic OTC, Per MSU-day TUC

Program name Fault Analyzer for z/OS, V13.1
Program PID 5655-Q11

Entitlement identifier	Description	License option/Pricing metric
S017BLW	Fault Analyzer V13.1	Basic OTC, Per Value Unit Basic OTC, Per MSU-day TUC

Program name File Manager for z/OS, V13.1
Program PID 5655-Q12

Entitlement identifier	Description	License option/Pricing metric
S017BLC	File Manager V13.1	Basic OTC, Per Value Unit Basic OTC, Per MSU-day TUC

The pricing for the following products has not changed.

Description	Program number
Application Performance Analyzer for z/OS Subscription & Support	5697-N38
Debug Tool for z/OS Subscription & Support	5655-J19
Fault Analyzer for z/OS Subscription & Support	5697-G59
File Manager for z/OS Subscription & Support	5697-G60

Passport Advantage

For Passport Advantage information and charges, contact your IBM representative or authorized IBM Business Partner for Software Value Plus. Additional information is also available at

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

IBM Global Financing

IBM Global Financing offers competitive financing to credit-qualified customers to assist them in acquiring IT solutions. Offerings include financing for IT acquisition, including hardware, software, and services, from both IBM and other manufacturers or vendors. Offerings (for all customer segments: small, medium, and large enterprise), rates, terms, and availability can vary by country. Contact your local IBM Global Financing organization or visit

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

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For more financing information, visit

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

Order now

To order, contact the Americas Call Centers or your local IBM representative, or your IBM Business Partner.

To identify your local IBM representative or IBM Business Partner, call 800-IBM-4YOU (426-4968).

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For IBM Business Partner: pwcs@us.ibm.com
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Reference: LE001

The Americas Call Centers, our national direct marketing organization, can add your name to the mailing list for catalogs of IBM products.

Note: Shipments will begin after the planned availability date.

IBM Software Value Plus

These products are available under IBM Software Value Plus, either directly from IBM or through authorized Business Partners who invest in skills and high-value solutions. IBM customers may benefit from the industry-specific or horizontal solutions, skills, and expertise provided by these Business Partners.

Additions to Software Value Plus will be communicated through standard product announcements. For a current list of IBM software available under Software Value Plus, visit

http://www.ibm.com/partnerworld/page/svp_authorized_portfolio_criteria

For questions regarding Software Value Plus, visit

http://www.ibm.com/partnerworld/page/svp_authorized_portfolio_contacts

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