IBM CICS Performance Analyzer for z/OS V3.1 supports CICS Transaction Server V4.1 and the CICS Explorer

Table of contents

At a glance

CICS® Performance Analyzer (CICS PA) V3.1 will deliver important new function to help optimize system and application performance by:

- Providing comprehensive performance reporting for your CICS systems

- Helping tune, manage, and plan CICS systems effectively

New function in CICS PA V3.1 includes:

- Support for new and updated metrics from CICS Transaction Server (CICS TS) V4.1, including resource signatures

- Support for the CICS Explorer including an updated plug-in and report form

- Statistics alert reporting

- Significant functions delivered by PTF since CICS PA V2.1

Support for CICS TS V1.3 and V2.1 records is withdrawn.

The new version also introduces a wide range of other technical and operational capabilities, including requirements raised by individual customers and user communities

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

Overview

CICS Performance Analyzer (CICS PA) for z/OS® V3.1 will provide Day 1 support for all new and updated system management facilities (SMF) records produced by CICS Transaction Server (CICS TS) V4.1. Users can immediately benefit from the important enhancements in the latest version of CICS TS. For details, refer to Software Announcement 209-135, dated April 28, 2009.

CICS PA V3.1 will also deliver many new capabilities helping clients to control costs and complexity, and to comply with governance requirements.

- Support for the CICS Explorer will enable users with broader and less-specialized skills to access the power of CICS PA and deliver additional value when used in conjunction with other CICS tools.

1

- Additional sample reports, historical database (HDB), and the ISPF dialogs will be provided to support the new metrics and statistics provided by CICS TS V4.1.
- New statistics alert reporting automates the generation of batch reports that highlight occasions when key CICS statistics exceed specified thresholds.
- Support for resource signatures (new in CICS TS V4.1) can be used to indicate changes to resource definitions, for audit, tracking, or problem resolution purposes.

CICS PA is a CICS system and application performance reporting and analysis solution built to address the needs of CICS systems programmers, subject-matter experts, architects, application developers, and IT managers who will value its ability to improve CICS system performance, lower maintenance costs, and strategically plan IT investments.

Key prerequisites

CICS PA for z/OS V3.1 runs with:

- CICS TS for z/OS V4.1 (5655-S97), V3.1, and V3.2 (5655-M15)
- CICS TS for z/OS V2.2 and V2.3 (5697-E93)

Planned availability date

May 22, 2009

Description

CICS PA V3.1 helps businesses to meet the challenges of the current economic circumstances, increased regulation, and changing skill levels. At the same time it positions them to take advantage of opportunities for growth in challenging economic times. The new version provides support for two distinct themes that relate directly to many CICS customers' business priorities and initiatives. Firstly, by enabling IT staff with a broader mix of skill levels to perform CICS performance-related tasks, it can help to control the costs involved in building and deploying CICS applications and lead to increased return on investment. Secondly, by demonstrating effective management control over CICS service levels and resource changes, it supports customer initiatives to comply with corporate or regulatory requirements.

Key enhancements

Support for CICS TS V4.1: New sample report forms are provided to support the new performance data metrics provided by CICS TS V4.1 to enable improved reporting and understanding of CICS Web, Web service, and Web 2.0 applications. The new metrics and reports also support performance analysis of other key CICS TS V4.1 enhancements, including Event Processing, Atom feeds, Data Mapping Conversion, and Web Services Addressing.

Support for the CICS Explorer: The CICS Explorer - the new face of CICS - is the new Eclipse-based tool framework for CICS, providing an intuitive, easy-to-use way of developing, operating, and managing CICS systems. CICS PA customers can now analyze the performance of their CICS applications within the CICS Explorer, by importing performance extract files that are created using a standard CICS PA TSO job. A new supplied report form can be used to populate a relational database or produce comma-separated value (CSV) files with summary data. Whether the data is imported from CSV files, or using database queries, the resulting data can be visualized within the CICS Explorer in a number of ways, including spreadsheet views, with sortable and reorderable columns, bar chart views, and pie chart views.

A number of performance task scenarios are provided, including threadsafe, response time, storage, and file analysis. Customers who also have CICS Interdependency Analyzer (CICS IA) can link in context from CICS PA views to CICS IA views. For example, links from a CICS PA view showing transactions with large numbers of TCB switches, to a CICS IA view showing the programs that comprise the transaction, can help development teams to implement thread-safety for CICS applications.

This extends the capability provided by the CICS PA plug-in delivered in the Category 2 SupportPac^{tm} CS1N and the report form previously delivered for use with CICS PA V2.1 via PTF for APAR PK71846. Unlike the SupportPac, the plug-in delivered with CICS PA V3.1 will be fully supported by IBM® service.

At initial general availability, the CICS Explorer plug-in will not support the same wide range of reports and usage scenarios that are currently provided by the CICS PA batch and TSO interfaces. While the capabilities provided by the plug-in are preliminary, it does support of 75 key CICS metrics and provides highly flexible reporting and analysis. The plug-in will be enhanced on a regular basis, outside of the normal product release cycle and customers are requested to refer to the CICS PA Web site or the CICS Explorer forum for details of available updates.

The CSV support delivered in the SupportPac has been extended, enabling CICS PA report data to be stored in a relational database and retrieved directly by CICS Explorer. Full support is provided for the use of IBM DB2® for z/OS.

For more details on the CICS Explorer, refer to Software Announcement 209-135, dated April 28, 2009.

Statistics alert reporting: This new capability enables the definition of conditions, in terms of CICS statistics field values, which will generate alerts in batch reports. Conditions are defined with arithmetic formula using CICS statistics field names as variables, with up to three threshold values indicating the severity of the situation:

- Critical
- Information
- Warning

For example, a condition can trigger an alert when the number of CICS tasks exceeds a percentage of the maximum number of tasks allowed: over 50% (information), over 80% (warning), over 95% (critical). It is possible to limit he reporting to specific CICS resources: for example, for specific TCB modes.

The new statistics alert reporting can be used to assist users in highlighting potential tuning opportunities or identify trends that may lead to poor CICS performance. These new reports enable users to more easily identify the specific CICS regions, the time of day and the type of CICS resources that may require further specific in-depth performance analysis thereby allowing preventative tuning action to be taken. Failure to highlight potential tuning opportunities or to identify trends that may lead to CICS performance issues can result in poor customer satisfaction and even unnecessary CICS system outages.

Improvements in management of resource definitions: A new resource signature, which combines the installation and definition signatures, will provide specific information for resource definitions that were installed or changed in CICS TS V4.1. Users will be able to use these improved details to detect resource modifications for auditing, tracking, or problem resolution.

Improvements in CICS monitoring: New performance data will be provided for Web and Web service applications, which together with new monitoring classes, enable improved performance reporting and understanding of CICS applications. Additionally, the performance impact of using monitoring can be controlled via the new ability to set monitoring options dynamically only when needed, and by limiting the number of distributed program links, files, and temporary storage queues to be monitored. To further reduce the volume of monitoring output, CICS TS V4.1 will in future default to using record compression.

Withdrawing support for CICS TS V1.3 and V2.1: CICS PA V3.1 will drop support for SMF records created by CICS TS V1.3 and V2. CICS PA V3.1 will continue to process records created by CICS TS V2.2 and later.

New and updated function in CICS PA V2.1, delivered by PTF

New features introduced by APAR PK63876

- **Application grouping:** Enables the creation of reports and extracts that relate data to logical business units or functions known as Applications.
- **High-precision time stamp:** In LIST and LISTX Report Forms, the new presentation format TIMEP outputs the seconds parts of time stamp fields.
- **Support for user fields in LISTX Report Forms:** User fields can now be included in LISTX Report Forms.
- **Top 20 Work Change TCB Modes** The new sample LISTX Report Form BADCHMDS generates a report that, for each transaction identifier, shows the 20 transactions with the highest DSCHMDLY field.
- **Line action to copy a Personal Object List to a Shared Object List**

New features introduced by APAR PK53163

- **Support CICS TG for z/OS V7.1 statistics:** All CICS PA statistics functions now support CICS TG statistics (SMF type 111 records).
- **Exclude empty or inactive statistics reports from the statistics:** A new action bar choice View enables you to exclude these empty reports, displaying only those reports for which there is data.

New features introduced by APAR PK45644

- **Transaction Profiling report:** Compares two sets of CICS Monitoring Facility (CMF) performance data.
- **User fields in historical databases:** Historical databases now fully support user fields.
- **DBCTL clock fields now defined as type S, not type A:**CICS PA now defines the DBCTL fields POOLWAIT, INTCWAIT, and SCHTELAP as clock fields (type S) instead of count fields (type A).

User group requirements

MR0603057212 - Data Analysis reporting: Enhance the reporting to automatically provide the ability to detect abnormal or performance-robbing conditions. Allow users to set thresholds based on mean and standard deviation results. Implemented as Statistics Alerting Reporting.

Accessibility by people with disabilities

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

   http://www.ibm.com/able/product_accessibility/index.html

Section 508 of the U.S. Rehabilitation Act

CICS PA for z/OS V3.1 is capable as of May 22, 2009, when used in in accordance with IBM associated documentation, of satisfying the applicable requirements of Section 508 of the Rehabilitation Act, provided that any assistive technology used with the product properly interoperates with it.

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 Web site

   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.

Product positioning

An increasingly competitive economic environment is driving many businesses to transform their existing CICS applications using SOA and Web 2.0 strategies. The same pressures also force IT managers, CICS system programmers, application developers, and performance specialists to create and operate their systems at peak level while maintaining service level commitments and meeting regulatory and corporate governance requirements.

Such customers need tools to help them avoid outages and reduce downtime, while controlling costs. They need the ability to:

- Report on their CICS systems, applications, and services, assessing the impact of changes
- Anticipate and solve trends leading to poor CICS performance
- Take action rapidly when problems occur in order to minimize any downtime or performance degradation
- Plan carefully for growth to reduce the total million instructions per second (MIPS) cost
- Plan to support new application workloads and to meet ever more demanding service-level and compliance commitments

CICS PA for z/OS V3.1 is a CICS system and application performance reporting and analysis solution built to address the needs of everyone involved in CICS performance analysis, system tuning, and planning capacity for future use, including those who build, manage, and deploy complex mainframe CICS applications. CICS PA provides the level of detail and flexibility that easily helps find new ways to improve CICS system performance, lower maintenance costs, and strategically plan IT investments.

CICS PA complements OMEGAMON® XE for CICS, as it can help to respond quickly to online performance issues by drilling down deeply into CICS performance data to identify the cause of the problem.

CICS PA also complements the enterprise-wide historical performance capabilities of IBM Tivoli® Decision Support for z/OS with the additional deep and detailed CICS-related performance data, which can be used for focused CICS performance problem determination, bottleneck analysis, tuning, and capacity planning.

CICS PA is a member of the CICS Tools family, part of the zSeries® Enterprise tools portfolio supporting the CICS environment, which can help you maintain a high level of performance and availability of CICS, and help speed up the overall end-to-end development effort for new applications. CICS Tools such as CICS Interdependency Analyzer (CICS IA) and CICS Configuration Manager (CICS CM) can help you easily control your critical CICS applications and systems availability and performance, as well as extend your applications into the business On Demand world.

For more details of the CICS Tools family, visit

http://www.ibm.com/software/htp/cics/tools/

For more details on IBM System z software, visit

http://www.ibm.com/software/os/systemz/en_US/index.html

This high functionality and flexibility, as well as commitment to support the latest release of CICS TS, make CICS PA an outstanding solution for CICS performance management.

CICS PA is complementary to online monitors from other vendors which typically also include some offline analysis and reporting functionality. Even if you are not ready to replace your online monitor, for example, with OMEGAMON XE for CICS on z/OS, you can still benefit from using CICS PA, which offers superior functionality and greater flexibility than the off-line components of vendor products.

CICS PA is competitively priced and can help greatly improve the productivity of the CICS performance specialists. This productivity improvement, and subsequent performance management cost decrease, is achievable due to high functionality and scope of CICS PA.

CICS PA is available for download and free use for 60 days. Visit

http://ibm.com/software/os/zseries/trials/cicstools/

Tool integration with CICS Explorer

Support for the CICS Explorer, new in CICS PA V3.1, now enables a broader set of users, including application developers and service-level managers, to benefit from the information provided by CICS PA, without requiring the specialist skills needed to use the CICS PA ISPF interface.

CICS Explorer provides an integration point for development, management, and operational capabilities delivered by the CICS runtime and add-on tools. Some examples of integration are shown below. Others will be developed and delivered by PTF and SupportPac. Customer suggestions for future integration are invited.

CICS IA: Current® CICS IA customers not only have all of the capabilities delivered in the CICS IA Explorer (delivered with CICS IA V2.2), but are also able to link in context from many of the other views, for example, to show the transactions that may need to be disabled before a file can be closed.

Customers with both CICS IA and CICS PA can link in context from CICS PA views to CICS IA views. For example, links from a CICS PA view showing transactions with large numbers of TCB switches, to a CICS IA view showing the programs that comprise the transaction, can help development teams to implement thread-safety for CICS applications.

CICS CM:CICS CM customers can now access many product capabilities using the CICS Explorer, including the ability to search and query all CICS resource definitions whether stored in CSDs or the CICSPlex® repository. Rich editors are provided allowing new definitions to be created or existing ones updated, while hiding much of the complexity previously experienced by users. The CICS CM capabilities are seamlessly integrated with the base CICS Explorer views to provide powerful editing and auditing capabilities transparent to the user.

Reference information

- Software Announcement 209-135, dated April 28, 2009
- Software Announcement 209-086, dated April 28, 2009

Product identification number

```
                    Subscription and
Program PID number  Support PID number

5655-U87            5655-G43
```

Program number

```
Program             Program
number      VRM     name

5655-U87    3.1     IBM CICS Performance Analyzer for z/OS
```

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=209-086

Education support

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

http://ibm.com/services/learning/

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

Offering Information

Product information is available via the Offering Information Web site

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

Publications

The publication *Program Directory: CICS Performance Analyzer for z/OS V3.1* (GI13-0540) is shipped with the product:

The following softcopy publications are available in .pdf format to download from the Publications Center.

- CICS Performance Analyzer for z/OS V3.1 - User's Guide (SC34-7046)
- CICS Performance Analyzer for z/OS V3.1 - Report Reference (SC34-7047)

The IBM Publications Center Portal:

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

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

Title	Order Number
IBM Tools: CICS Performance Analyzer Release 3	SG24-6063

Order from

   http://publib-b.boulder.ibm.com/Redbooks.nsf/RedbookAbstracts/sg246063 .html

Technical information

Specified operating environment

Hardware requirements

CICS PA V3.1 runs on any S/390® or IBM eServer[tm] zSeries machine on which the applicable operating and software will run.

Software requirements

CICS PA V3.1 requires System Modification Program/Extended (SMP/E) of the supported z/OS or OS/390® system (5655-G44) for installation and maintenance. It operates with the following CICS configurations:

- CICS TS for z/OS V4.1 (5655-S97), V3.1, and V3.2 (5655-M15)
- CICS TS for z/OS V2.2 and V2.3 (5697-E93)

Note: CICS TS for z/OS V4.1 requires APAR PK83926 to be applied.

The following products are also required:

- z/OS V1.6 or later (contains SMP/E) (5694-A01)
- z/OS V1.6 DFSORT[tm] feature or later, or an equivalent sort product

For the CICS PA OMEGAMON SMF 112 reports, IBM Tivoli OMEGAMON XE for CICS on z/OS V4.1 (5698-A58) is also required.

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.

User group requirements

This announcement satisfies or partially satisfies requirements from one or more of the worldwide user group communities. Groups include COMMON, COMMON Europe, Guide Share Europe (GSE), InterAction (Australia/New Zealand), Japan Guide Share (JGS), and SHARE Inc.

```
Requirement
Number          Description

MR0603057212    Enhance the reporting to automatically provide the
                ability to detect abnormal or performance-robbing
                conditions.  Allow users to set thresholds based
                on mean and standard deviation results.
```

Planning information

Packaging

The product package contains:

- The run-time component of the product on 3480 1/2-inch tape cartridge via Customized Offerings
- Program Directory (GI13-0540)
- CICS Tools Trial Flyer (GI13-0538)
- License Information (GC34-7052)

This program, when downloaded from a Web site, 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

IBM CICS PA for z/OS V3.1 uses the security and auditability features of the supported underlying operating systems. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Software Services

IBM 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

Charge metric

```
                          Part number or
Program name              PID number          Charge metric

IBM CICS Performance      5655-U87            Per Value Unit
 Analyzer for z/OS V3.1

IBM CICS Performance      5655-G43            Per Value Unit
 Analyzer for z/OS -
 SW Subscription and
 Support
```

CICS PA for z/OS V3.1 is an IPLA product with a single charge, based on Value Units.

The product has an associated orderable Software Subscription and Support, required in order to provide the same level of support as is delivered with standard IBM S/390 ICA offerings, including voice defect support, together with code updates. It has a single annual charge which, if ordering, must be purchased in the same quantity as CICS PA.

Value Unit

Value Unit (VU) is the unit of measure by which this program is licensed. VU entitlements are based on the quantity of a specific designated measurement, either users or resources, for the given program. A Proof of Entitlement (PoE) must be obtained for the appropriate number of VUs required for your environment as defined by the specific program terms. The VU entitlements are specific to the program and may not be exchanged, interchanged, or aggregated with VU entitlements of another program. To understand these benefits of VU licensing, and to determine how many VUs to obtain for the program, contact your IBM representative.

The programs in this announcement all have VU-based pricing.

```
Program
number       Program name                    Value Unit exhibit

5655-U87     CICS Performance                VUE007
              Analyzer for z/OS V3.1
```

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 VUE007

```
         MSUs      MSUs
         minimum   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
```

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.

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 U.S. 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 Web site at

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

Basic license

On/Off CoD

CICS Performance Analyzer for z/OS V3.1 is eligible for On/Off CoD with a temporary use charge calculated based on MSUs per-day usage.

```
Program name   CICS Performance Analyzer for z/OS V3.1
Program PID    5655-U87

Entitlement
identifier     Description              License option/Pricing metric

S015H3L        CICS Performance         Basic OTC, Per MSU-day TUC
               Analyzer for z/OS
               V3.1

Translation from MSUs to Value Units

                  MSUs        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
```

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: IBM CICS Performance Analyzer for z/OS V3.1
Program PID:  5655-U87

Entitlement
identifier    Description              License option/Pricing metric

 S015H3L      CICS Performance         Basic OTC, Value Units
               Analyzer for z/OS
               V3.1

Orderable supply ID    Language     Distribution medium

 S015H3F               English      3480 tape


Note: additional media type selections (3480 compressed, 3490E, 3590,
3592) are offered during Custom Build Offering ordering.
Subscription and Support PID: 5655-G43

Entitlement
identifier    Description              License option/Pricing metric

 S00VH52      CICS Performance         Basic ASC, per Value Unit SW S&S
               Analyzer                No charge, decline SW S&S
              Subscription and Support Per MSU SW S&S Registration


Orderable supply ID    Language     Distribution medium

S00VHK6                English      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 (IAASM). 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 Customized Offerings (for example, CBPDO, ServerPac, SystemPac®).

CBPDO and ServerPac are offered for Internet delivery, where ShopzSeries product ordering is available. Internet delivery of ServerPac may help improve automation and software delivery time. For more details on Internet delivery, refer to the ShopzSeries help information at

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

Media type for this software product is chosen during the Customized Offerings ordering process. Based on your customer environment, it is recommended that the highest possible density tape media is selected. Currently offered media types are:

- CBPDOs - 3480, 3480 Compressed, 3490E, 3590, and 3592*
- ServerPacs - 3480, 3480 Compressed, 3490E, 3590, and 3592*
- SystemPacs - 3480, 3480 Compressed, 3490E, 3590, and 3592*

*3592 is highest density media. Selecting 3592 will ship the fewest number of media.

Once a product becomes generally available, it will be included in the next ServerPac and SystemPac monthly update.

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 inclusion in ServerPac.
- SystemPac shipments will begin four weeks after inclusion in SystemPac due to additional customization, and data input verification.

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

CICS Performance Analyzer for z/OS V3.1

- License -- L-APIG-7PMHCA
- Form number -- GC34-7052

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

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

Limited warranty applies

Yes

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.

Authorization for use on home/Portable computer

You may not copy and use this program on another computer without paying additional license fees.

Volume orders (IVO)

No

Passport Advantage applies

No

Software Subscription and Support (Software Maintenance) 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

System i Software Maintenance applies

No

Variable charges apply

No

Educational allowance available

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

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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 section.

```
Program                                    Parent,
number      Program name      Terms        if applicable

5655-U87    CICS Performance  reference-based  5655-147
            Analyzer for z/OS                  5697-E93
            V3.1                               5655-M15
```

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 Web site

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

For more information on sub-capacity System z IPLA terms and conditions, refer to Software Announcement 204-184, dated August 10, 2004.

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:

- That meets the criteria defined in Hardware Announcement 198-001, dated January 13, 1998
- 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 Web site

  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.

On/Off 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 Customer Initiated Upgrade and IBM eServer On/Off Capacity on Demand - Software (Z125-6611) must be signed prior to use.

Prices

Information on charges is available at

Choose the option entitled Purchase/upgrade tools.

```
Program name: CICS Performance Analyzer for z/OS V3.1
Program PID:  5655-U87

Entitlement
identifier    Description                    License option/Pricing metric

 S015H3L      CICS Performance Analyzer      Basic OTC, Value Units
               for z/OS V3.1

 S015H3L      CICS Performance Analyzer      Basic OTC, per MSU-day TUC
               for z/OS V3.1

Subscription and Support PID:  5655-G43

Entitlement
identifier    Description                    License option/Pricing metric

 S00VH52      CICS Performance Analyzer      Basic ASC, Value Units SW S&S
               Subscription and Support      Decline SW S&S (no charge)
                                             Per MSU SW S&S Registration
```

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