IBM CICS Performance Analyzer for z/OS V2.1: Support for IBM CICS Transaction Server for z/OS V3.2 and Tivoli OMEGAMON XE for CICS on z/OS V4.1

At a glance

CICS PA V2.1 can help optimize system and application performance by:

- Providing comprehensive performance reporting for your CICS systems
- Helping tune, manage, and plan CICS systems effectively

New in CICS PA V2.1

- CICS TS V3.2 support
- OMEGAMON XE for CICS V4.1 support
- Transaction profiling
- Distribution reporting
- System logger reporting enhancements
- New and updated sample report forms
- Additional enhancements previously delivered through the service channel
- User requirements and minor enhancements

For ordering, contact:
Your IBM representative, an IBM Business Partner, or the Americas Call Centers at

800-IBM-CALL Reference: LE001

Overview

CICS® Performance Analyzer for z/OS® (CICS PA) V2.1 helps you to keep up to date with CICS Transaction Server for z/OS (CICS TS) migration. Key enhancements include support for CICS TS V3.2, integration with Tivoli® OMEGAMON® XE for CICS on z/OS (OMEGAMON XE for CICS), and new reporting capabilities such as Transaction Profiling.

New capabilities in CICS PA V2.1

Significant enhancements support new features in CICS TS V3.2.

Support includes compressed System Management Facilities (SMF) type 110 records, higher precision (12-byte) clock fields, plus new and updated statistics fields and records.

Simplified and extended integration with OMEGAMON XE for CICS allows CICS PA to process SMF type 112 records containing third-party database management systems, and OMEGAMON XE for CICS.
resource-limiting metrics can give you better insight into all of your CICS data resources.

- New transaction profiling reports enable you to identify changes in application performance behavior, over time, to help you understand the impact on transaction performance and manage your CICS system capacity.
- New distribution reports allow you to identify the transactions which met (or failed to meet) user-defined thresholds, which can support your service-level management.
- New and updated sample report forms can be used to help get you started quickly.

A range of additional enhancements previously delivered through the service channel, user requirements, and other minor enhancements have been incorporated.

CICS PA V2.1 is a powerful offline reporting tool that can produce a wide range of reports and extracts that can help you tune and manage your CICS systems.

### Key prerequisites

CICS PA V2.1 runs with:

- CICS TS V3.1 and V3.2 (5655-M15)
- CICS TS V2.2 and V2.3 (5697-E93)
- CICS TS V1.3 (5655-147)

### Planned availability date

June 15, 2007

### Description

CICS PA analyzes the SMF records created by the CMF, CICS Statistics, CICS Server Statistics, and related subsystems (including DB2® and WebSphere® MQ) to produce a wide range of reports and extracts that can help you tune and manage your CICS systems.

CICS PA provides system logger reports using the z/OS system logger data (SMF 88 records).

CICS PA also reports on SMF 112 records created by OMEGAMON XE for CICS.

CICS PA provides reports for all facets of your CICS systems, including:

- Transaction reports that detail all transactions processed and present the information in the format and order that you want.
- Transaction activity reports that can be tailored to produce a detailed analysis and comprehensive overview of transaction performance.
- CICS system and resource usage reports from the CICS statistics data that show the performance and utilization of your CICS systems and their resources, including reports for the CICS temporary storage, coupling facility data table, and named counter data sharing servers.
- Resource usage reports that show the performance and utilization of your CICS system resources by your CICS transactions, including:
  - Transactions and programs
  - Files
  - Temporary storage
  - Transient data
  - Journals and log streams
  - Virtual storage
  - Terminals
  - Basic Mapping Support (BMS) maps
  - Secure Sockets Layer (SSL)
– CICS Web support
– Program channel usage
– Channel container usage
– Java™ Virtual Machine (JVM) support

• Cross-system work reports that combine the CMF data from all of your CICS systems to help you evaluate the performance of Multi-Region Operation (MRO) and Advanced Program-to-Program Communication (APPC) transactions.

• Transaction resource usage reports that show, at a transaction-level, the individual file and temporary storage queue resources accessed by a transaction.

• Workload activity reports that show, at a glance, if the MVS™ Workload Management (WLM) goals, which you have set for your CICS transactions are being met.

• WebSphere MQ reports that use the WebSphere MQ Accounting (SMF 116 records) to provide a detailed performance analysis of the CICS transactions that access an WebSphere MQ external subsystem.

• Performance wait analysis reports that deliver transaction activity by wait time. These reports summarize, by transaction ID, the resources that cause a transaction to be suspended, and highlight the CICS system resource bottlenecks that may be causing bad response times.

• Comprehensive extract capability reports that allow you to export transaction performance data to DB2 or your PC workstation for further analysis and graphical representation.

• External subsystem reports that show the performance and utilization of DB2, WebSphere MQ, and IMS™ Data Base Control (DBCTL) subsystems.

• List and summary reports that show application usage of third-party database management systems (DBMS) as monitored by OMEGAMON XE for CICS (SMF 112) records.

• Transaction group reports that combine the performance data of all transactions and produce a consolidated report for your Transaction Groups report.

• CICS Business Transaction Services (BTS) reports to help you evaluate your BTS application performance.

• Graphs that show, at a glance, transaction response time and the transaction processing rate.

• Exception reports that list and summarize CICS Exception Events that impact the performance of your CICS systems.

**Historical database:** The CICS PA historical database (HDB) provides a flexible and easy-to-use facility for collecting and managing historical performance data for your CICS system. The CICS PA HDB function provides:

• Short-term history data detailing individual transaction performance for use in performance problem analysis.

• Long-term history data, summarized over time, which can be used for trend analysis and capacity planning.

• A statistics-type HDB, which allows the collection of CICS statistics and CICS server statistics data.

• A powerful and flexible definition facility for the historical data repositories.

• Comprehensive reporting facilities.

• A facility to optionally load performance and statistics history data into DB2 for further analysis and reporting using DB2 reporting tools such as Query Management Facility (QMF™).

• A facility to optionally extract performance and statistics history data into comma-separated-variable (CSV) format data sets. This allows the user to analyze both performance and statistics data off-host using a PC spreadsheet or database tool. This facility can also be used to extract performance data that can be imported by products such as Tivoli Decision Support Accounting Workstation for z/OS for accounting and chargeback purposes.

• Definition and management of the HDBs from the CICS PA Interactive System Productivity Facility (ISPF) dialog.
Easy-to-read and use reports: The report formatting capability of CICS PA allows you to tailor the format and content of your reports to meet your individual requirements. It is a powerful record selection and sorting capability that lets you request the information that you want, in the order that you want it.

ISPF user interface

- Offers a menu-driven dialog to help you create, maintain, and submit reports and extract requests
- Uses your customized CICS, DB2, WebSphere MQ, and MVS Logger system definitions as a basis for the formatting of your report requests
- Supports, via batch commands, the request of reports and extracts for the experienced user
- Provides an easy-to-use form-based editor to help you design your own reports, extracts, and HDBs
- Offers instant access to detailed CMF field descriptions directly from the CICS Performance Guide
- Provides an online reporting facility for CICS statistics data either directly from an unloaded SMF data set or from a CICS PA HDB
- Provides an upgrade capability for quick migration to new releases of CICS TS
- Is CUA®-compliant

What's new in CICS PA V2.1

CICS TS V3.2 support: CICS PA V2.1 includes significant enhancements to support new features in CICS TS V3.2:

- Support for compressed SMF type 110 records created by the CICS Monitoring Facility (CMF). CICS PA can read compressed records, write compressed records to extract files, and also write uncompressed records to extract files from compressed records.
- Support for higher-precision (12-byte) clock fields. CICS PA reports and extracts can display the additional precision provided by these fields.
- Support for new and updated CMF exception and performance class data fields in report forms and selection criteria.
- Additional sample report forms that use the new performance data fields.
- Support for new and updated statistics fields and records, including IP connections, program libraries, WebSphere MQ connections, and document templates.

OMEGAMON XE for CICS support: OMEGAMON XE for CICS produces SMF type 112 records containing transaction data for the following database management systems (DBMS):

- Adabas
- CA-Datacom
- CA-IDMS
- Supra

For each DBMS, you can use CICS PA to produce the following new reports:

- A List report, showing database usage for each transaction.
- A Transaction Summary report, showing database usage summarized by transaction ID.
- A Database Summary report, showing database usage summarized by database.

The information in these reports depends on the type of DBMS, but typically includes elapsed times and counts for each of the methods that transactions use to access a database, such as read, write, add, update, and delete.

You can also optionally include OMEGAMON XE for CICS SMF type 112 records in a Record.
Transaction Profiling: The new Transaction Profiling report enables you to compare transaction performance between two time periods. For example:

- CICS or DB2 release migration when you need to ensure transaction performance is not degraded
- Application changes when you need to determine the impact of change on transaction performance
- Benchmark from last month when performance was good compared to yesterday when performance was sub-standard

Distribution reporting: The new Range (RNG) function in summary report forms allows you to report the number or percentage of transactions that have a performance field whose value falls within a specified range. You can use this function to produce reports for service-level agreements and problem-alerts. For example, you can report the percentage of transactions that have a response time between one and two seconds; or the number of transactions that have a CPU time greater than three seconds.

System logger reporting enhancements

- System logger report: Filter records using selection criteria
  In previous releases of CICS PA, you could filter records from the system logger report by log stream and structure name. Now you can also filter records using selection criteria, allowing you to include or exclude records based on time interval or individual field values.

- System logger report: Summarize by reporting interval
  You can summarize logger records in multiples of the SMF reporting interval. For example, if the SMF reporting interval was five minutes at the time that the logger records were written, then you can generate a System Logger Summary report that summarizes the logger records at any multiple of 5 minutes: 5, 10, 15, and so on.

- Extract system logger SMF type 88 records
  You can now extract system logger SMF type 88, subtype 1 records to a data set that you can use to load a DB2 table, or to a comma-separated value (CSV) file that you can open in a spreadsheet application. (This extract does not include subtype 11 structure alter records.)

Other enhancements

- Cross-System Work and Workload Activity reports: Sort in reverse chronological order
  As an alternative to the default sort order of descending stop time, you can now sort these reports by ascending start time.

- New TOTCPU field for total task CPU time (USRCPUT + RLSCPUT)
  A new total task CPU time field appears on the following reports: Performance List, Performance List Extended, and Performance Summary. You can also specify this field in report forms, selection criteria, HDB templates, HDB reporting, and HDB extracts.

- Transaction Rate and Transaction Response Time graphs: Granularity of one second
  To allow for more detailed reporting for short periods, the granularity of these graphs has been increased from one minute to one second.

- Upgrade selected system definitions together
  Rather than editing system definitions individually, you can now upgrade a selection of them, or all of them, together. To upgrade system definitions, you specify "from" values (these can include wildcards) and "to" values for the following attributes:
  - VRM (version, release, modification number)
  - MVS image name, system definition description
– CICS message control table (MCT) suffix
– Data set names of the MCT library, the CICS load library, and dictionary record

Before applying the upgrade, you can view a report of the system definitions that would be affected. This is especially useful when you upgrade to a new release of CICS TS. For example, you can select all of the associated system definitions in CICS PA and update their VRM attribute to reflect the new CICS TS release number.

• Statistics reports enhancements
  – You can now filter SMF intervals on the statistics menu by CICS APPLID, MVS image, and time period before displaying the list panel of available SMF intervals.
  – Rather than selecting only a single SMF file for reporting, you can now select multiple SMF files, and then select from a combined list of all statistics intervals in those files.

Additional enhancements delivered via the service channel

• Precision added to HDB Extract panel
• Load HDB and export to DB2 in a single job
• Shared System Definition enhancements
• z/OS V1.7 System Logger enhancement
• CICS PA publications update

SupportPacs: SupportPac™ CP12 — Historical Database Reporting has also been created, which explains how to transfer data from CICS PA into a DB2 table or comma separated value (CSV) file and shows how to create reports and charts. CP12 is available from


Accessibility by people with disabilities

You can request a U.S. Section 508 Voluntary Product Accessibility Template (VAPT) with details on accessibility compliance at


Section 508 of the U.S. Rehabilitation Act

CICS PA V2.1 is capable as of March 27, 2007, when used 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 eServer® 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 complex and competitive business environment is driving our customers to transform their existing CICS applications using service-oriented architecture (SOA) and On Demand Business 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.

CICS customers need tools to help them avoid outages and reduce downtime, while keeping systems-management costs down. 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 commitments

CICS PA V2.1 is a CICS system and application performance reporting and analysis solution built to address the needs of everyone involved in CICS performance analysis and CICS 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 can easily help find new ways to improve CICS system performance, lower maintenance costs, and strategically plan IT investments.

CICS PA complements OMEGAMON XE for CICS and 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 Tivoli Decision Support for z/OS with additional deep and detailed CICS-related performance data. This data can be used for focused CICS performance problem determination, bottleneck analysis, tuning, and capacity planning.

CICS PA, a member of the CICS Tools family and part of the zSeries® Enterprise tools portfolio supporting the CICS environment, can help you maintain a high level of performance and availability of CICS. It can help speed up the overall end-to-end development effort for new applications. CICS Tools such as CICS Interdependency Analyzer for z/OS and CICS Configuration Manager for z/OS 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


For more details on IBM's System z software, visit


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, you can still benefit from using CICS PA, which offers superior functionality and greater flexibility than the offline 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/

Reference information

IBM product announcements can be found at

http://www.ibm.com

For additional information or assistance, contact your IBM representative or authorized Business Partner.

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).

BP Attachment for Announcement Letter 207-053


Trademarks

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Java is a trademark of Sun Microsystems, Inc.

Other company, product, and service names may be trademarks or service marks of others.

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


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 following publication is shipped with the product:

<table>
<thead>
<tr>
<th>Title</th>
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<tr>
<td>Program Directory: CICS(R) Performance Analyzer V2.1</td>
<td>GI 13-0517</td>
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The following publications are available in .pdf format and can be downloaded from the Web:

<table>
<thead>
<tr>
<th>Title</th>
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<tr>
<td>CICS Performance Analyzer — User’s Guide</td>
<td>SC34-6799</td>
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<tr>
<td>CICS Performance Analyzer — Report Reference</td>
<td>SC34-6800</td>
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The IBM Publications Center Portal

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

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<tbody>
<tr>
<td>IBM Tools: CICS Performance Analyzer</td>
<td>SG24-6063</td>
</tr>
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</table>

Order from


Technical information

Hardware requirements: CICS PA V2.1 can run on any IBM eServer® zSeries® machine on which a required operating system and other required software are installed and running.

Software requirements: CICS PA V2.1 requires System Modification Program/Extended (SMP/E) of the supported z/OS® system for installation and maintenance. It operates with the following CICS configurations:

- CICS TS V3.1 and V3.2 (5655-M15)
- CICS TS V2.2 and V2.3 (5697-E93)
- CICS TS V1.3 (5655-147)

The following products are also required:

- IBM ISPF V5.2 (5694-A01), or later
- Data Facility Sort (DFSORT™) V1.13 (5740-SM1) or later, or an equivalent sort product

For the CICS PA OMEGAMON® XE for CICS SMF 112 reports, OMEGAMON XE for CICS V4.1 (5698-A58) is also required.

Compatibility: The ability to analyze CICS SMF 110 data from CICS/ESA® V4.1, CICS TS V1.1 and V1.2 has been removed in this release of CICS PA.
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.

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<th>Requirement number</th>
<th>Description</th>
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<tr>
<td>MR0122012821</td>
<td>Allow reporting on response time distribution within CICS PA</td>
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<tr>
<td>MR0517056417</td>
<td>Enhance the CICS PA GRAPH reports for transaction rate and transaction response time</td>
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<tr>
<td>MR1129066527</td>
<td>Enhance Peak Percentile Summary reports to allow user specified options</td>
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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 (GI13-0517)
- License Information (GC34-6859)
- IBM International Program License Agreement (IPLA) Booklet (Z125-3301)
- Proof of Entitlement (PoE)

Security, auditability, and control

CICS PA uses the security and auditability features of the supported underlying operating system. 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 unmatched portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support any critical business need.

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

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<th>Program name</th>
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<th>Charge metric</th>
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<td>IBM CICS Performance Analyzer for z/OS</td>
<td>5697-N40</td>
<td>Per Value Unit</td>
</tr>
<tr>
<td>IBM CICS Performance Analyzer for z/OS — SW Subscription and</td>
<td>5655-G43</td>
<td>Per Value Unit</td>
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</table>
The program in this announcement has Value Unit-based pricing.

Program number  Program name  Value Unit exhibit

5697-N40  CICS Performance Analyzer for z/OS  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 VUE007**

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<th>MSUs min</th>
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<tr>
<td>Tier D</td>
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</table>

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:

\[
\text{Translation from MSUs to Value Units} = \text{MSUs} \times \text{Value Units/MSU}
\]

<table>
<thead>
<tr>
<th>MSUs</th>
<th>Value Units/MSU</th>
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<td>Tier D</td>
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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


Basic license: On/Off Capacity on Demand (On/Off CoD)

CICS Performance Analyzer for z/OS V2.1 is eligible for On/Off CoD with a temporary use charge calculated based on MSUs per-day usage.

Note: In AP, this is for Japan only.

Program name: CICS Performance Analyzer for z/OS V2.1
Program PID: 5697-N40

Entitlement Identifier  Description         License option/ Pricing metric
S013T64       CICS Performance Analyzer for z/OS V2.1 Basic OTC, Per MSU-day TUC

Value Unit Pricing

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

Note: In AP, this is for Japan only.

Program Name: IBM CICS Performance Analyzer for z/OS
Program PID: 5697-N40

Entitlement Identifier  Description         License option/ Pricing metric
S013T64       CICS PA Basic OTC, Value Units

Orderable Supply ID Language Distribution Medium
S013RWG       English 3480 tape

Subscription and Support PID: 5655-G43

Entitlement Identifier  Description         License option/ Pricing metric
S00VH52       CICS PA S&S Basic ALC, Value Units SW S&S

Basic MLC, Value Units SW S&S
(EMEA only)
Decline SW S&S (no charge)
Per MSU SW S&S Registration

Orderable Supply ID Language Distribution Medium
S00VHK6       English Paper

Subscription and Support

To receive voice technical support via telephone during normal business hours 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 Support (IAAS).

This offering:

- Includes and extends the support services provided in the base support to include technical support via telephone during normal business hours.
- Entitles customers to future releases and versions at no additional charge. Note that the customer is not entitled to new products.

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

**Customized offerings**

Product deliverables are shipped only via Customized Offerings (for example, CBPDO, ServerPac, SystemPac®).

CBPDO and ServerPac are offered for electronic delivery, where ShopzSeries product ordering is available. For more details on electronic delivery, refer to the ShopzSeries help information at [http://www.software.ibm.com/ShopzSeries](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, 3592
- ServerPacs — 3480, 3480 Compressed, 3490E, 3590, 3592
- SystemPacs — 3480, 3480 Compressed, 3490E, 3590, 3592

3592 is highest density media, which 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.

**Agreement:** IBM International Program License Agreement including the License Information (LI) 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 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 provides for support with ongoing access to releases and versions of the program. IBM includes one year of Software Maintenance with the initial license acquisition of each program acquired. The initial period of Software Maintenance can be extended by the purchase of a renewal option, if available. These programs have a one-time license charge for use of the program and an annual renewable charge for the enhanced support that includes telephone assistance (voice support for defects...
during normal business hours), as well as access to updates, releases, and versions of the program as long as support is in effect.

S/390® and System z IBM Operational Support Services — SoftwareXcel is an option if you want added services.

**Limited warranty:** Yes

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. Consult the IBM Software Support Guide for further information at http://www.ibm.com/software/support

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 (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. 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.

**Authorization for use on home/portable computer:** You may not copy and use this program on another computer without paying additional license fees.

**Other terms**

**Volume orders (IVO):** No

**Passport Advantage applies:** No

**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 newly announced 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 SoftwareXcel offering, visit http://www.ibm.com/services/sl/products

For additional information on the revised IBM Operational Support Services, refer to 601-023, dated July 10, 2001.

**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...
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 select, refer to the Ordering information section.

Program Parent(s), number Program name Terms if applicable
5697-N40 CICS Performance Reference-based 5655-147
Analyzer for 5697-E93
z/OS V2.1 5655-M15

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

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.

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.

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

System z IPLA sub-capacity programs with reference-based terms add value to the parent program across the environment, regardless of where in environment the System z IPLA program executes.

An environment is defined as either a single or standalone 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 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 (or z/OS.e) operating systems
- Any licenses for the OS/390 operating system must be discontinued
- All instances of the z/OS operating (or z/OS.e) systems must be running in z/Architecture™
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 eServer zSeries 890, z800 and IBM System z9™ BC (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 eServer zSeries 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 utilization of a sub-capacity eligible reference product and machine.

On/Off Capacity on Demand

To be eligible for On/Off Capacity on Demand 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

http://www.ibm.com/support

Choose the option entitled Purchase/upgrade tools. Contact your IBM representative or authorized Business Partner for assistance.

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