



IBM InfoSphere Change Data Capture for z/OS , V6.5 delivers real-time data integration

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At a glance

InfoSphere™ Change Data Capture for z/OS®, V6.5 can help you:

- Load real-time information into a data warehouse or operational data store
- Eliminate the batch window by providing continuous extract, transform, and load of data into target systems
- Integrate real-time inventory and sales information with other commercial sites
- Integrate product and customer data across multiple branches, outlets, and offices
- Keep production systems running 24 x 7 for worldwide operations

Overview

IBM® InfoSphere Change Data Capture for z/OS, V6.5 supports a variety of enterprise architectures and replication configurations, including unidirectional, bidirectional, cascading, and data distribution environments. Key features include:

- One-to-one: Source and target have a similar structure.
- Live audit: An audit trail of source to target.
- Adaptive apply: Used when the source and target are currently not synchronized and you want to apply source data quickly to the target.
- Summarization: Used to accumulate or subtract numerical values on the target.
- One-to-one consolidation: Used to merge data scattered across different tables into a single row.
- One-to-many consolidation: Used to apply a source lookup table change to all target rows affected by the change.
- Conflict detection: Uses standard or customized methods to resolve conflicts to ensure data integrity.
- Ability to integrate high volumes of data with minimal impact to the production system.
- Support for continuous extract, transform, and load (ETL) functionality across systems. Changes are captured as they occur, allowing up-to-the-minute data to flow between systems to support real-time reporting, business intelligence, and synchronization of applications.

Custom business logic can be integrated at several points within the replication process. Transformations, custom expressions, and custom business logic add to the flexibility of InfoSphere Change Data Capture for z/OS, enabling you to customize

your data integration flow and configure your replication environment. The result can help lower your total cost of ownership.

IBM InfoSphere Change Data Capture for z/OS uses a robust log data cache that enables the DB2® logs to be accessed only once under normal operations, regardless of the number of integration processes running concurrently. This results in reduced demand on DB2 and the DB2 logs.

Monitoring is provided through the InfoSphere Change Data Capture Management Console. Throughput and latency statistics provide visibility into replication processes for monitoring and troubleshooting. Graphs are displayed for a visual representation of throughput and latency, enabling a quicker assessment of the health and status of the environment. A replication diagram displays the relationships between data stores in the replication environment, which can assist with monitoring as well as problem detection and diagnosis. As a result, the state of the replication environment is readily available, and the time and effort required to troubleshoot problems can be reduced.

InfoSphere Change Data Capture for z/OS enables deployment using a graphical user interface.

Key prerequisites

Refer to the [Hardware requirements](#) and [Software requirements](#) sections.

Planned availability date

November 26, 2010

Description

InfoSphere Change Data Capture for z/OS, V6.5 plays an essential role in capturing and delivering data across enterprise systems in real time. By distributing real-time data bi-directionally across disparate information silos and key systems, the business is able to gain immediate awareness of market landscape and operational statistics to streamline business processes, improve customer service, and capture time-sensitive opportunities.

InfoSphere Change Data Capture for z/OS, V6.5 delivers enhanced capabilities for customers replicating to and from IBM DB2 for z/OS environments. New features include:

- Quick, flexible access to the event log is essential to diagnosing replication problems. Error handling for derived expressions has been improved.
- Improved multibyte character set (MBCS) configuration, including automatic mapping of encoding, improvements to derived column behavior, and encoding conversion for all non-date, non-numeric columns.
- A new row-level user exit API provides support for MBCS and more efficient handling of data using call back functions to retrieve only the data required by the user exit.
- Enhanced performance capabilities while maintaining low impact on critical production systems to help handle customers' increasing volumes of data to provide data integration at the pace of business. InfoSphere Change Data Capture for z/OS includes selective refresh processing and a global memory manager for better control of system memory resource on target systems.
- Extended database support that includes tolerance for DB2 V10; RACF® support; support for Large Objects (LOB); XML support; support for BIGINT, BINARY, and VARBINARY data types; support for columns modified by FIELDPROC; and mapping of column to database default.

In addition, this release also features:

- Expanded support for multibyte character sets in column mapping, derived expressions, and user exits. This includes support for multibyte DB2 metadata (for example, column names and table names).
- Scaling to high-volume replication environments for high performance. Using native log-based change data capture, increasing volumes of data can be handled to provide data integration at the pace of business.
- Log-based change data capture. Whether data is integrated periodically or in real time, only changed data is captured and transferred from publisher to subscriber systems. Instead of performing queries directly against the database, InfoSphere Change Data Capture for z/OS captures changed data directly from the database logs.

Change data capture can help improve operational efficiency and help save time and resources by eliminating redundant data transfer and saving network bandwidth. By accessing data from the logs, InfoSphere Change Data Capture for z/OS helps ensure minimal performance impact on mission-critical applications.

- Data integrity: InfoSphere Change Data Capture for z/OS is designed to achieve guaranteed delivery of data by synchronizing positional information between the source and target. Transactional integrity is achieved by applying transactions in the same order on the target as on the source.
- Ease of use: An intuitive user interface that consolidates configuration and monitoring of the replication environment helps lower total cost of ownership.
- Multiplatform support: Allows out-of-the-box, programming-free data integration among DB2 for Linux®, UNIX®, Microsoft® Windows®, Microsoft SQL Server, Oracle, Sybase, Teradata, HP-UX Itanium®, HP-UX PA-RISC, Sun Solaris, IBM System i®, IBM System p®, and IBM z/OS. Flat file integration is also supported.

With zero programming required, you can invest your effort in higher-value IT projects. Your company can leverage its legacy systems and integrate data across all supported platforms without making significant changes to the existing environment. Future changes in the computing environment can also be easily accommodated to protect your company's investment.

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

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.

Product positioning

InfoSphere Change Data Capture for z/OS is integrated into the IBM Information Management software portfolio. This product is intended for:

- Customers who need accurate and frequent sales and customer reports to make good operational decisions regarding pricing, merchandising, and inventory management. This is enabled through consolidation of key business data from diverse operational systems into a centralized data warehouse in real time.
- Companies that want more business agility through real-time change data capture.
- Enterprises that require more business visibility through granular data changes in real-time business intelligence.
- Organizations that want increased responsiveness to business events and the ability to capitalize on upcoming business opportunities through event detection.
- Retailers who want to sell in stores, over the web, and by phone, and who need consistent up-to-date information accessible to all three channels. An example is ensuring that wedding registry purchases are not duplicated and that customers can inquire over the phone or on the web about product availability and the status of orders completed through other channels.
- Public companies that need to do consolidated financial reporting across a range of transactional systems in different regions, departments, or business units.
- Companies that need to migrate data from an incompatible enterprise resource planning (ERP) application of an acquired company into their own ERP application (or between incompatible versions of an ERP application).
- Shipping companies that want customers to be able to access real-time shipment information on their websites while minimizing the impact on their mission-critical logistics systems they use to ensure efficient, continuous operations.
- Government agencies that want to provide public access to up-to-date information on criminal proceedings on the Internet but cannot risk letting users directly access sensitive information on offenders.
- Financial services companies that need to flow data from legacy financial systems on mainframes into systems on open platforms to support Internet-based communications, statement processing, and other applications more efficiently with minimal impact to key legacy systems.

- Health insurers that need to offload queries, reports, and backups to avoid impacting performance and user response times on their claims processing systems that are essential for operations.

Program number

Program number	VRM	Program name
5655-U96	6.5	IBM InfoSphere Change Data Capture for z/OS

Product identification number

Program PID number	Subscription and Support PID number
5655-U96	5655-U77

Offering Information

Product information is available via the Offering Information website

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

Publications

The IBM Publications Center portal is at

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

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

One copy of the following publications is supplied automatically with the basic machine-readable material:

- License Information GI11-8705
- Program Directory GI11-7880

Technical information

Specified operating environment

Hardware requirements

- IBM InfoSphere Change Data Capture for z/OS, V6.5 requires a z/Architecture® processor to execute.
- Installation and execution data sets take approximately 50 cylinders of a 3390 DASD device. If the Log Caching feature is enabled, a minimum of another 140 cylinders is used.
- A single instance of InfoSphere Change Data Capture for z/OS runs in a single address space but requires extended CSA (ECSA) during its execution. The amount of ECSA varies, depending on the number of active subscriptions. Each subscription absorbs 72,000 bytes of ECSA in a single DB2 subsystem environment and 288,000 bytes of ECSA in a DB2 Data Sharing Group environment.

- While replicating, InfoSphere Change Data Capture for z/OS collects DB2 Log records into groups based on logical units of work. These log records are staged in virtual storage that is backed either by hiperspaces or by storage "above the bar." In the case of excessive numbers or size of the logical units of work outstanding, this virtual storage is paged by the operating system to auxiliary storage.

Software requirements

Supported platforms:

IBM z/OS V1.10, or later

Supported database servers:

- DB2 for z/OS V8.1 (new function mode only), V9.1, and V10.1
- DB2 for z/OS Value Unit Edition V8 (new function mode only), V9, and V10

InfoSphere Change Data Capture for z/OS executes in either a single DB2 subsystem environment or in a DB2 Data Sharing Group environment.

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

IBM InfoSphere Change Data Capture for z/OS, V6.5 is distributed in one package with the following:

- IBM International Program License Agreement
- One 3590 tape uncompressed
- Program Directory
- One DVD with documentation and management console software

This program, when downloaded from a website, contains the applicable IBM license agreement and License Information, if appropriate. This program, when downloaded from a website, contains the applicable IBM license agreement and License Information, if appropriate, and will be presented for acceptance at the time of installation of the program. For future reference, the license and License Information will be stored in a directory such as LICENSE.TXT.

Security, auditability, and control

InfoSphere Change Data Capture for z/OS uses the security and auditability features of the host hardware or software. The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Global Technology Services

Contact your IBM representative for the list of selected services available in your country, either as standard or customized offerings for the efficient installation, implementation, or integration of this product.

Ordering information

Consult your IBM representative.

Charge metric

Program name	Part number or PID number	Charge metric
InfoSphere Change Data Capture for z/OS, v6.5	5655-U96	Value units

Resource Value Unit

Resource Value Unit (RVU) is a unit of measure by which the program can be licensed. RVU Proofs of Entitlement are based on the number of units of a specific resource used or managed by the program. Licensee must obtain sufficient entitlements for the number of RVUs required for Licensee's environment for the specific resources as specified in the table below. RVU entitlements are specific to the program and the type of resource and may not be exchanged, interchanged, or aggregated with RVU entitlements of another program or resource. Refer to the program-specific Resource Value Unit table.

Notes:

- Some programs may require licenses for the resources available to and the resources being managed by the program. In that case, the following applies: In addition to the entitlements required for the resources used by the program directly, Licensee must obtain entitlements for this program sufficient to cover the resources managed by the program.
- Some programs may be licensed on a managed basis only. In that case, the following applies: Instead of the entitlements required for the resources used by the program directly, Licensee must obtain entitlements for this program sufficient to cover the resources managed by the program.

The program in this announcement has Value Unit-Based pricing.

Program number	Program name	Value Unit exhibit
5655-U96	InfoSphere Change Data Capture for z/OS, v6.5	VUE007

For each z/OS 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 z/OS 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 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

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 website at

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

Basic license

On/Off CoD

InfoSphere Change Data Capture for z/OS, V6.5 is eligible for On/Off CoD with a temporary use charge calculated based on MSUs per-day usage.

Program name: InfoSphere Change Data Capture for z/OS, V6.5
Program PID: 5655-U96

Entitlement identifier	Description	License option/ Pricing metric
S01521H	InfoSphere Change Data Capture for z/OS	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: InfoSphere Change Data Capture for z/OS, V6.5
Program PID: 5655-U96

Entitlement identifier	Description	License option/ Pricing metric
S01521H	InfoSphere Change Data Capture for z/OS	Basic OTC, per value unit

Orderable supply ID	Language	Distribution medium
S01521J	English	3590 tape

Subscription and Support PID: 5655-U77

Entitlement identifier	Description	License option/ Pricing metric
S014T8G	InfoSphere Change Data Capture for z/OS S&S	Basic MSC, per value unit SW S&S No charge, decline SW S&S Per MSU SW S&S registration

Orderable supply ID	Language	Distribution medium
S014TD1	English	Hardcopy pub

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 z/OS 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.

Delivery services -- Custom QuickShip Program

This product is eligible for the IBM Custom QuickShip Program.

Custom QuickShip combines flexible configurations with fast delivery. Customers and Business Partners are able to create product configuration of their choice by using a combination or stand-alone selection of hardware, software, and a menu of additional features, including the option for software preload. The inclusion of feature number 1748 will ensure Custom QuickShip delivery of the complete product configuration or stand-alone order.

The committed response time under Custom QuickShip is six business days from order acceptance by IBM to customer delivery.

Customized Offerings

Product deliverables are shipped only via CBPDO, ServerPac, and SystemPac®.

CBPDO and ServerPac 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 ShopzSeries 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 for CBPDO, ServerPac, and SystemPac, include:

- 3590
- 3592

Most products can be ordered in ServerPac and SystemPac the month following their availability on CBPDO. z/OS can be ordered via all three offerings at general availability. 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
- SystemPac shipments will begin four weeks after general availability 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 following agreement applies for Software Subscription and Support (Software Maintenance) and does not require customer signatures:

- IBM Agreement for Acquisition of Software Maintenance (Z125-6011)

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.

License Information form number

License information form number: L-GMET-88MQ6M

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

Usage restrictions

Yes

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>

System i Software Maintenance applies

No

Variable charges apply

Yes

Educational allowance available

Yes. When ordering through the program number process, a 15% education allowance applies to qualified education institution customers.

Education Software Allowance Program applies when ordering through the program number process.

ESAP available

Yes, to qualified customers.

Sub-capacity terms and conditions

For each z/OS 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 z/OS 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 z/OS IPLA program you selected, refer to the [Ordering information](#) section.

Program number	Program name	Terms	Parent, if applicable
5655-U96	InfoSphere Change Data	Reference-based sub-capacity	DB2 V8, V8 VUE, DB2 V9, V9 VUE, DB2 V10, and V10 VUE

Sub-capacity mainframes

The following terms apply.

Reference based: The required license capacity of a z/OS 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 mainframe MSU-rated capacities, refer to *The IBM z/OS Machines Exhibit, Z125-3901*, or visit the Mainframes section of the z/OS Exhibits website

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

For more information on sub-capacity z/OS IPLA terms and conditions, refer to Software Announcement [ZA04-0227](#), dated August 10, 2004

For additional information for products with reference-based terms, z/OS IPLA sub-capacity programs with reference-based terms adds value to the parent program across the environment, regardless of where in the environment the z/OS 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 z/OS IPLA program with referenced-based terms, each environment should be assessed separately.

When a z/OS IPLA sub-capacity program with reference-based terms is used in a qualified Parallel Sysplex environment, the required license capacity of the z/OS 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 U.S. 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 z/OS 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 z/OS (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 (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 z/OS 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 z/OS 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™ z/OS 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 z/OS and eServer zSeries® Programs Sub-Capacity Pricing* (Z125-6929). Once the amendment is signed, the terms in the amendment replace any and all previous z/OS 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 (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.

IBM Electronic Services

IBM has transformed its delivery of hardware and software support services to help you achieve higher system availability. Electronic Services is a Web-enabled solution that offers an exclusive, no-additional-charge enhancement to the service and support available for IBM servers. These services are designed to provide the opportunity for greater system availability with faster problem resolution and preemptive monitoring. Electronic Services comprises two separate, but complementary, elements: Electronic Services news page and Electronic Services Agent.

The Electronic Services news page is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. The news page enables you to gain easier access to IBM resources for assistance in resolving technical problems.

The Electronic Service Agent™ is no-additional-charge software that resides on your server. It monitors events and transmits system inventory information to IBM on a periodic, client-defined timetable. The Electronic Service Agent automatically reports hardware problems to IBM. Early knowledge about potential problems enables IBM to deliver proactive service that may result in higher system availability and performance. In addition, information collected through the Service Agent is made available to IBM service support representatives when they help answer your questions or diagnose problems. Installation and use of IBM Electronic Service Agent for problem reporting enables IBM to provide better support and service for your IBM server.

To learn how Electronic Services can work for you, visit

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

Prices

For all local charges, contact your IBM representative.

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.

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