IBM DB2 and IMS Tools for z/OS Improve System Usability and Productivity

Overview
Two new IMS™ products and two enhanced versions of DB2® and IMS Tools offer many innovative features to assist database administrators (DBAs) and system programmers in managing all aspects of DB2 and IMS database environments.

- IMS Multi-Dialog Manager for z/OS®
- IMS Problem Investigator for z/OS
- DB2 Archive Log Accelerator for z/OS, V2
- IMS Database Recovery Facility for z/OS, V2

The names of two products and their corresponding subscription and support offerings are changed to better reflect enhanced capabilities. Refer to New Product Names in the Description section.

The DB2 and IMS Tools business is a unique model in the industry. IBM continues to increase its investment in tools to deliver comprehensive solutions that meet requirements faster than ever before. Increased focus is on common interfaces, cross-tool integration, and testing with the same criteria used for the databases.

Key Prerequisites
Any hardware configuration that supports the required versions of DB2 and IMS. Details are listed in the Hardware Requirements and Software Requirements sections.

Planned Availability Dates
- June 27, 2003: DB2 Archive Log Accelerator for z/OS, V2
- July 11, 2003: IMS Multi-Dialog Manager for z/OS
- July 25, 2003: IMS Problem Investigator for z/OS and IMS Database Recovery Facility for z/OS, V2

At a Glance
Two new and two enhanced DB2 and IMS tools offer capabilities in key functional areas.

- Application Management
  - IBM IMS Multi-Dialog Manager for z/OS
- Replication and Recovery
  - IBM DB2 Archive Log Accelerator for z/OS, V2
  - IBM IMS Database Recovery Facility for z/OS, V2
- Performance Management
  - IBM IMS Problem Investigator for z/OS

For ordering, contact:
Your IBM representative, an IBM Business Partner, or the Americas Call Centers at 800-IBM-CALL

Reference: LE001

This announcement is provided for your information only. For additional information, contact your IBM representative, call 800-IBM-4YOU, or visit the IBM home page at: http://www.ibm.com.
IBM first announced its entry into the database tools business in September 2000, delivering a set of 34 tools for DB2 and IMS covering key system-management functions, and committing to expand this portfolio in response to customer requirements.

This announcement marks IBM’s eighth database tools announcement in three years, proof of our ability to offer a broad range of tools that support DB2 and IMS databases and to provide that support with rapid availability for each new version or release of the databases.

You can view the complete list of DB2 and IMS Tools’ announcements on our Web site at:

http://www.ibm.com/software/data/db2imstools/announce.html

IBM now offers more than 60 tools that feature common interfaces and cross-tool integration, tested under the same configurations and workloads as the databases they support. In addition, as we enter the era of autonomic computing, DB2 and IMS Tools will become increasingly self-managed in terms of dynamically monitoring and managing data, and taking responsibility for decision making and initiating action.

To view the list of IBM DB2 and IMS Tools, visit:

http://www.ibm.com/software/data/db2imstools

**New Product Names**

The names of the following products and their corresponding subscription and support offerings have been changed to better reflect their enhanced capabilities.

<table>
<thead>
<tr>
<th>New Name</th>
<th>Old Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM DB2 Archive Log Accelerator for z/OS, V2 (5697-I73)</td>
<td>IBM DB2 Archive Log Compression Tool for z/OS (5655-F54)</td>
</tr>
<tr>
<td>S&amp;S for IBM DB2 Archive Log Accelerator for z/OS and all prior versions (5655-E73)</td>
<td>IBM DB2 Archive Log Compression Tool for z/OS Subscription and Support (5655-E73)</td>
</tr>
<tr>
<td>IBM IMS Database Recovery Facility for z/OS, V2 (5655-I44)</td>
<td>IBM IMS Online Recovery Service for z/OS (5655-E50)</td>
</tr>
<tr>
<td>S&amp;S for IBM IMS Database Recovery Facility for z/OS and all prior versions (5655-E33)</td>
<td>IBM IMS Online Recovery Service for z/OS Subscription and Support (5655-E33)</td>
</tr>
</tbody>
</table>

**IBM Tools for Application Management**

**IMS Multi-DIALOG Manager for z/OS (5697-H91)**

Enables faster writing and reading of archive logs
- Reduces storage and I/O requirements for managing large-volume DB2 archive logs
- Simplifies the creation and storage of multiple archive copies
- Allows archive logs to be striped, compressed, or both
- Offers more archive log management options in a single, affordable package

Enterprise data on demand requires innovative management of steadily escalating data volumes and the essential database archive logs they produce. Database archive logs present particular challenges due to the need for absolute reliability while containing their cost, size, and the time required to load and unload. While demand for availability rises, the growing volumes of log archives become harder to store and handle, resulting in performance gaps and data management budget stress.

DB2 Archive Log Accelerator V2, previously released as DB2 Archive Log Compression, is aimed at shrinking the overhead of managing archive logs and removing barriers to database growth and availability.

**DB2 Archive Log Accelerator for z/OS, V2 (5697-I73)**

- Makes DFSMS hardware compression available to DB2 archive logs
- Reduces storage and I/O requirements for managing large-volume DB2 archive logs
- Enables faster writing and reading of archive logs through data striping
- Simplifies the creation and storage of multiple archive copies
- Offers more archive log management options in a single, affordable package

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DB2 Archive Log Accelerator V2, previously released as DB2 Archive Log Compression, is aimed at shrinking the overhead of managing archive logs and removing barriers to database growth and availability.

**IBM Tools for Recovery and Replication**

**DB2 Archive Log Accelerator for z/OS, V2 (5697-I73)**

- Makes DFSMS hardware compression available to DB2 archive logs
- Reduces storage and I/O requirements for managing large-volume DB2 archive logs
- Enables faster writing and reading of archive logs through data striping
- Simplifies the creation and storage of multiple archive copies
- Offers more archive log management options in a single, affordable package

Enterprise data on demand requires innovative management of steadily escalating data volumes and the essential database archive logs they produce. Database archive logs present particular challenges due to the need for absolute reliability while containing their cost, size, and the time required to load and unload. While demand for availability rises, the growing volumes of log archives become harder to store and handle, resulting in performance gaps and data management budget stress.

DB2 Archive Log Accelerator V2, previously released as DB2 Archive Log Compression, is aimed at shrinking the overhead of managing archive logs and removing barriers to database growth and availability.

DB2 Archive Log Accelerator achieves five key capabilities not available with ordinary archive log management:
- Data striping, for faster throughput of log volumes
- DFSMS compression, providing hardware- or software-based compression log volumes
- Combined data striping and DFSMS compression
- Output of up to four copies of compressed archive logs to target media of choice
DB2 Archive Log Accelerator makes available to DB2 archive log operations the data access methods necessary to support extended format data sets created by compression and data striping. DBAs and system administrators can then transparently exploit advanced archive log processing techniques automatically, including:

- DFSMS/MVS® Dictionary Building Block (DBB) compression with sequential and VSAM KSDS compressed format data sets
- DFSMS/MVS tailored compression
- Compression of archive logs at the time DB2 creates them (CACHE mode), or after (PASSTHRU mode), or in batch
- Batch processing options allowing multiple off-peak jobs for compression/decompression of archive logs, rolling multistripe logs into a single stripe, and creation of multiple archive log copies
- Direct analysis of DFSMS compressed logs with DB2 Log Analysis Tool, eliminating the need to uncompressed logs before using analysis or the many other DB2 Log Analysis Tool functions
- Use of archive log compression for DB2 databases that are members of data sharing groups
- Leveraging DASD storage of compressed archive logs for maximum availability
- Defining an archive log with several stripes on creation for maximum throughput, then compressing it and rolling it back to one stripe after the archive log is written out
- Two available modes optimized for scenarios in which data striping is or is not being used

After installation, and defining archive logs as extended sequential data sets, the storage, throughput, and added redundancy capabilities of DB2 Archive Log Accelerator become a transparent part of archive log management operations. No operator intervention is required, with read/write operations simply succeeding for new formats where they would have failed previously without DB2 Archive Log Accelerator.

DB2 Archive Log Accelerator is an essential advancement in the management and storage of enterprise data. It adds additional security to existing DB2 backup and recovery assets at the core of data availability and reliability strategies.

IMS Database Recovery Facility for z/OS, V2.1 (5655-I44) is a high-performance, state-of-the-art database recovery product supporting all recoverable IMS databases. It is the follow-on version of IMS Online Recovery Service for z/OS (5655-E50), contains all the features and functions of that product, and adds several key features.

IMS Database Recovery Facility for z/OS, V2.1 performs the following functions originally provided by IMS Online Recovery Service:

- Reading log and change accumulation data sets in parallel
- Initiation by issuing the /RECOVER command options through an active IMS DB/DC or DBCTL subsystem
- Acceptance of “incomplete” Change Accumulation data sets as input
- Recovery of shared database data sets directly from image copies and log data sets even if change accumulation data sets are not available
- Use of the facilities of DBRC to identify database, image copy, log, and change accumulation data set information from the RECON data set
- Support for database recovery in the online environment to be initiated via the IMS Automated Operator Interface and IMS Operations Manager
- Support for database recovery to any point in time as needed for many disaster recovery scenarios

IMS Database Recovery Facility for z/OS, V2.1 adds the following functions and features to those previously provided by IMS Online Recovery Service:

- IMS Database Recovery Facility initiation by submitting an MVS™ batch job
- Batch invocation of the IMS Database Recovery Facility that does not require an active IMS Region
- Online invocation of the IMS Database Recovery Facility that does not use IMS region resources to update the database
- Reading multiple image copy data sets and writing multiple database data sets in parallel
- Utilization of DFSORT™ to order the input log records in several concurrent processes and applies changes in a single pass of the database
- Analysis of recovery execution and provision of a formatted report summarizing inputs, outputs, and processing
- Generation of a setup report/list without running the recovery process
- Reporting of all open units of work that contain updates not applied in a point-in-time recovery
- Parallel and concurrent processing to provide dramatic gains in performance

IBM Tools for Performance Management

IMS Problem Investigator for z/OS (5655-K50) features an enhanced level of problem determination services for IMS Transaction Manager (IMS TM) and IMS Database Manager (IMS DB) systems. These services include navigation aids, formatted and personalized reporting, and investigative procedures for IMS log data. Powerful automated features reduce the time required to identify and analyze defects or other events of interest in the IMS log. Services can be accessed via an ISPF dialog or a batch reporting utility.

IMS Problem Investigator for z/OS offers:

- Similar function as the IMS File Select and Formatting Print utility (DFSERA10) but with advanced features that make Log analysis quicker and easier. It does not provide compatibility with this utility or its control statement.
- An intimate knowledge of the fields contained in all IMS Log records. The ISPF dialog and batch reporting utility uses this information to neatly format and display selected fields and their values so you can pinpoint information quickly, avoiding the tedious task of reviewing large volumes of hexadecimal record dumps. Log record analysis allows you to drill-down to the field level, including field-level descriptions, so you never need to refer to the IMS macros or manuals to get help.
• An ISPF Dialog utility with a powerful viewing facility that enables easy navigation and formatted or ISPF Browse log data presentation. You can drill-down to display information at the field level.

• A batch reporting utility that lets you produce formatted or personalized reports. The Extract function can be used to produce a reduced log file for easier online analysis.

• A Record Forms function that lets you design your own customized record reporting layout so you view required information only.

• A Filtering Criteria function that lets you select only the records you want to view. Selection by field name avoids field-offset calculations, and the conditional logic offers full flexibility.

• A DBRC Log Selection function that automatically selects the required log files for the specified reporting period. Sysplex support lets you merge log data from all systems participating in the sysplex to get a system-wide view of IMS events that require investigation.

New Products — Availability Dates Not Yet Established

IMS Online Reorganization Facility for z/OS, a participant in an early support program (ESP), features new technology for reorganizing databases with minimal impact on database availability.

The program operates as a batch message program (BMP) and copies the source database to the target database while the application program updates continue against the source database. As updates occur against the source database, update data elements are stored in a data space to be used once the copy process is completed.

Once the target database copy is completed, the update data elements are used to locate the changed data in the source database and carry it forward to the target database.

When the updates have nearly all been applied, for example 95%, the source database is quiesced, the remaining update data elements are processed, database names are swapped, index corrections are made, an Image Copy (IC2) is executed, and the newly reorganized database is released for processing.

IMS Online Reorganization Facility:

• Helps to improve database availability
• Offers online reorganization capability
• Supports Full Function and High Availability (HALDB) databases
• Provides Image Copy of reorganized database
• Operates as a BMP

Additional DASD is required to hold the reorganized database image.

Program limitations:

• The process cannot be restarted.
• XRF may not be active.

• The database may not:
  - Be tracked by RSR
  - Be involved in data sharing
  - Contain logical relationships external to the source database
• Non-unique key secondary indices are not supported.
• A HIDAM primary index may not be the target of IMS Online Reorganization Facility processing.
• HALDBs are supported at the partition level only; that is, only a single partition may be reorganized at a time using IMS Online Reorganization Facility.

IMS Performance Monitor for z/OS, a participant in an ESP, complements the existing IMS Performance Analyzer, a batch product for reporting IMS log and monitor data, by providing real-time status monitoring and alerts for an active IMS subsystem. IMS Performance Monitor will detect active IMS subsystems when it is started and any IMS subsystems that may become active subsequently. Multiple IMS subsystems may be viewed from a single monitoring station, and these subsystems may be logically grouped as desired, such as data sharing groups and shared queues groups.

IMS Performance Monitor reports as much information as possible to help isolate or point to problem areas that include sysplex functions such as data sharing and shared message queues.

IMS Performance Monitor features:

• General IMS information such as release levels, configurations, and system startup parameters
• An immediate sysplex view of IMS subsystem status
• User-specified thresholds for setting alerts
• Automatic detection of existing or new IMS subsystems
• Views of IMS overall performance
• Current IMS resource information to assist in tuning

Section 508 of the U.S. Rehabilitation Act

The products in this announcement are capable, when used in accordance with IBM’s 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-based pricing will help to align the prices of these products to the principle of the PSLC pricing curve, which provides for a lower price per MSU (millions of service units per hour) for larger capacities.

There is also a price benefit when customers grow. Additional capacity will be based on the number of Value Units (MSUs) the customer has already installed, for example, additional capacity will not be priced starting at the base with a higher price per unit but on the capacity already installed.

Note that Value Units of a given product cannot be exchanged/interchanged/aggregated with Value Units of another product.
IBM International Program License Agreement
(IPLA) and Subscription and Support Considerations

IPLA licenses can be transferred from one machine to another within, but not limited to, an enterprise. The customer may aggregate the capacity for all the processors that operate the program to achieve a lower price. This results in a single Proof of Entitlement. It is the customer’s responsibility to manage the distribution of Value Units within the limits of the entitlement of the program license.

Subscription and Support must cover the same capacity as the program license entitlement.

Subscription and Support will be available in the country in which the agreement is made.

Statement of Direction

IBM plans to offer the following new IMS programs.

- IMS Performance Monitor for z/OS
- IMS Online Reorganization Facility for z/OS

An ESP will be available for each program.

The programs will be shipped to customers already selected for the ESPs in the second half of this year.

The availability dates for the programs will be provided in an availability announcement. The programs cannot be ordered before the availability announcement.

All statements regarding IBM’s plans, directions, and intent are subject to change or withdrawal without notice.

Trademarks

IMS, MVS, and DFSORT are trademarks of International Business Machines Corporation in the United States or other countries or both.

DB2, z/OS, and DFSMS/MVS are registered trademarks of International Business Machines Corporation in the United States or other countries or both.

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

Product information is available through the Offering Information Web site at:
http://www.ibm.com/common/ssi

Publications

The IBM Publications Center 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.

The IBM Publications Notification System (PNS) portal is at:
http://service5.boulder.ibm.com/pnsrege.nsf/messages/welcome

The PNS enables subscribers to set up profiles of interest by order number/product number. PNS subscribers automatically receive notifications by e-mail of all new publications defined in their profiles. These may then be ordered/downloaded via the Publications Center.

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

<table>
<thead>
<tr>
<th>Title</th>
<th>Order Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>DB2 Archive Log Accelerator for z/OS, V2 (5697-I73) User’s Guide</td>
<td>SC18-7405</td>
</tr>
<tr>
<td>IMS Database Recovery Facility for z/OS, V2 (5655-I44) User’s Guide</td>
<td>SC18-7016</td>
</tr>
<tr>
<td>IMS Multi-Dialog Manager for z/OS (5697-H91) User’s Guide</td>
<td>SC18-7338</td>
</tr>
<tr>
<td>IMS Problem Investigator for z/OS (5655-K50) User’s Guide</td>
<td>SC18-7253</td>
</tr>
</tbody>
</table>

The following publications cannot be ordered in hardcopy. The publications are made available on the Web at:
http://www.ibm.com/software/data/db2imstools

Technical Information

Hardware Requirements: The products in this announcement will operate on any hardware configuration that supports the required versions of DB2 and IMS.

This announcement is provided for your information only. For additional information, contact your IBM representative, call 800-IBM-4YOU, or visit the IBM home page at: http://www.ibm.com.
Software Requirements: DB2 Archive Log Accelerator for z/OS, V2 requires DB2 V6, or later.

- DB2 V6 (5645-DB2)
- DB2 V7 (5675-DB2)

IMS Multi-Dialog Manager for z/OS and IMS Problem Investigator for z/OS require IMS V6, or later.

- IMS V6 (5655-158)
- IMS V7 (5655-B01)
- IMS V8 (5655-C56)

IMS Database Recovery Facility for z/OS requires:

- IMS V7, or later
- DFSORT™, an optional feature of OS/390 V2.10 (5647-A01) or of z/OS V1.1 (5694-A01), or a functionally equivalent sort program

Planning Information

Packaging: The programs in this announcement are distributed with the following content:

- Basic machine-readable material on a 3480 tape cartridge
- Program Directory
- Proof of Entitlement (PoE)
- IBM International Program License Agreement (IPLA)
- License Information

Security, Auditability, and Control

The announced programs use the security and auditability features of the host operating system software.

The customer is responsible for evaluation, selection, and implementation of security features, administrative procedures, and appropriate controls in application systems and communication facilities.

Ordering Information

The products in this announcement have one charge unit: Value Unit.

Value Unit-based pricing will help to align the prices of these products to the principle of the PSLC pricing curve, which delivers a lower price per MSU (millions of service units per hour) for larger capacities.

There is also a price benefit when customers grow their capacity. Additional capacity will be based on the number of Value Units (MSUs) the customer has already installed, for example, additional capacity will not be priced starting at the base with a higher price per unit but on the capacity that is already installed.

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

Value Unit Exhibit VUE007

<table>
<thead>
<tr>
<th>MSUs</th>
<th>MSUs</th>
<th>Value Units/MSU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>Maximum</td>
<td>Base</td>
</tr>
<tr>
<td>1</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Tier A</td>
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<tr>
<td>Tier B</td>
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<td>Tier C</td>
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<td>Tier D</td>
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</table>

Value Units for non-MSU-based S/390® processors:

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Value Units/Machine</th>
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<tbody>
<tr>
<td>MP3000 H30</td>
<td>6</td>
</tr>
<tr>
<td>MP3000 H50</td>
<td>8</td>
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<tr>
<td>MP3000 H70</td>
<td>12</td>
</tr>
<tr>
<td>ESL Models</td>
<td>2</td>
</tr>
</tbody>
</table>

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

If the customer has installed 1,500 MSUs, the applicable value would be:

Translation from MSUs to Value Units

<table>
<thead>
<tr>
<th>MSUs</th>
<th>Value Units/MSU</th>
<th>Value Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>3</td>
<td>3.00</td>
</tr>
<tr>
<td>Tier A</td>
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<td>18.90</td>
</tr>
<tr>
<td>Tier B</td>
<td>130</td>
<td>46.80</td>
</tr>
<tr>
<td>Tier C</td>
<td>140</td>
<td>37.80</td>
</tr>
<tr>
<td>Tier D</td>
<td>1,185</td>
<td>237.00</td>
</tr>
<tr>
<td>Total</td>
<td>1,500</td>
<td>343.50</td>
</tr>
</tbody>
</table>

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

Example: In the above ordering example, for the product running on a machine with 1,500 MSUs requiring 344 Value Units, order feature number 0001, quantity 94, and feature number 0002, quantity 1.

Ordering z/OS through the Internet

ShopzSeries (formerly SHOPS390) offers 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 yet available, contact your IBM representative (or 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: To order, specify the program number, feature number 9001 for asset registration, and the one-time charge (OTC) feature number. Also specify the feature number of the desired distribution medium. To suppress shipment of media, select the license-only option in CFSW.

When ordering DB2 or IMS tools for use in a Parallel Sysplex® environment specify the number of Value Units to cover the MSU capacity of the machines in the Parallel Sysplex to which DB2, IMS, or both are licensed. The following examples illustrate how this rule applies to different situations.

- DB2, IMS, or both licensed on a single server

In a single IBM @server zSeries® server with a capacity of 140 MSUs with DB2, IMS or both are licensed to it, data management tool licenses are based on the 140 MSU capacity of the machine.
• DB2, IMS, or both licensed under PSLC in a sysplex

In a four-way sysplex with DB2, IMS, or both on all four machines in the sysplex, data management tool licenses are based on the total capacity in MSUs of all four machines or the total number of MSUs in the sysplex.

• DB2, IMS, or both licensed under PSLC in a sysplex under CEC level pricing

In a four-way sysplex with DB2, IMS, or both licensed to two machines in the sysplex, data management tool licenses are based on the total capacity in MSUs of the two machines where DB2, IMS, or both are licensed.

The ordering information for the products in this announcement follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Program Number</th>
<th>OTC Feature Number</th>
<th>Medium Feature Number</th>
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<tbody>
<tr>
<td><strong>Medium: Tape</strong></td>
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<tr>
<td>DB2 Archive Log Accelerator for z/OS, V2</td>
<td>5697-I73</td>
<td>0001</td>
<td>0002</td>
</tr>
<tr>
<td>One Value Unit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>250 Value Units</td>
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</tr>
<tr>
<td>IMS Database Recovery Facility for z/OS, V2</td>
<td>5655-I44</td>
<td>0001</td>
<td>0002</td>
</tr>
<tr>
<td>One Value Unit</td>
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<tr>
<td>250 Value Units</td>
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<td></td>
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</table>

**Subscription and Support:** To receive voice technical support via telephone during normal business hours, and future releases and versions at no additional charge. Subcription 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 support program number and feature number 9001 for asset registration. 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 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 customers are not entitled to new products.

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

**Medium: Paper**

<table>
<thead>
<tr>
<th>Description</th>
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<th>ASC Feature Number</th>
<th>Medium Feature Number</th>
</tr>
</thead>
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<td>1001</td>
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<tr>
<td>One Value Unit</td>
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<td>250 Value Units</td>
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<td>5655-E33</td>
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<td>1001</td>
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<td>250 Value Units</td>
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</table>

**Single Version Charging:** To elect single version charging, the customer must notify and identify to IBM the prior program and replacement program and the machine the programs are operating on.

**Customized Offerings:** Product media is shipped only via Customized Offerings (for example, CBPDO, ServerPac, SystemPac®). Non-customized items (CDs, diskettes, source media, media kits) will continue to be shipped via the stand-alone product.

**Terms and Conditions**

**Sub-Capacity Charges Terms and Conditions**

zSeries software charges at less than full machine capacity for eligible DB2 and IMS Tools apply when z/OS is running in z/Architecture™ (64-bit) mode on a zSeries 900. No other MVS™-based operating system is licensed to that server and the required information is provided by the customer in accordance with the applicable terms.

Sub-capacity charges for an eligible tool are based on the z/OS product-defined capacity. To obtain charges at less than full machine capacity for eligible DB2 and IBM Tools, the customer is required to:

• Determine the MSUs needed for each machine on which the tools will run. Only machines on which the customer has implemented sub-capacity Workstation License Charges (WLC) according to the above terms and conditions, are eligible for charges at less than full machine capacity for the tools.
• Use the product-defined capacity for z/OS (as specified on the Sub-Capacity Reports submitted to IBM for sub-capacity WLC) as the sub-capacity (MSUs) for each tool.
• Submit any additional MSUs and Value Units required for each product along with the current entitlement in Value Units for each product.

**Sub-Capacity Charges for DB2 and IMS Tools**

To be eligible for sub-capacity charges for these tools, the machine on which the tools are running must be eligible for WLC sub-capacity charges terms and conditions. The customer must have signed the Attachment for zSeries WLC-Pre-ILM, Z125-6516, and submitted at least one Sub-Capacity Report to IBM as defined in the attachment.

With sub-capacity charges, the charge for an eligible DB2 or IMS tool is based on the z/OS product-defined capacity. To obtain charges at less than full machine capacity for each eligible tool for each machine, the customer should:

• Determine the MSUs needed for the machine on which the tools will run. In a data sharing environment, determine the aggregate MSUs needed on the machine where DB2, IMS, or both are installed. Use the product-defined capacity (MSUs) for z/OS (as specified on the Sub-Capacity Reports submitted to IBM for sub-capacity WLC) as the sub-capacity (MSUs) for each tool.

• Submit any additional MSUs and Value Units required for each product along with the current entitlement in Value Units for each product.

• If the use of sub-capacity pricing terms for DB2 and IMS Tools results in a reduced requirement for Value Units, thus freeing up entitlements, customers can reallocate the entitlement difference by distributing the Value Units across a larger or different set of systems, or reserve them for future growth. There will be no refunds for these freed up Value Units. Subscription and Support volumes and entitlements for existing contracts will continue to be at the same levels as the acquired licenses.

Management of the Value Unit entitlements continues to be a customer responsibility. If one of the following occur on a machine to which DB2 and IMS Tools are licensed, the customer must determine if additional Value Units and Subscription and Support need to be ordered for those tools to cover the increase:

• The z/OS-defined capacity is increased.

• The requirements for WLC sub-capacity charges are no longer met.

**Licensing:** IPLA. PoEs are required for all authorized use.

These products are licensed under the IPLA, the associated Agreement for Acquisition of Support, and the Addendum for Support (Z125-6336), which offer 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 ongoing recurring charge for the enhanced support that includes telephone assistance (voice support for defects during normal business hours) and access to updates, releases, and versions of the program as long as support is in effect. S/390 and zSeries IBM Operational Support Services — Support Line is an option for customers who want added services.

**Limited Warranty Applies:** Yes

**Warranty:** This program has warranty for a minimum of one year from acquisition from IBM or authorized Business Partner. The warranty provided to the customer, for at least one year from acquisition, is access to databases (read Web sites) for program information, FAQs, including any known fixes to defects, which the customer can download or obtain otherwise and install at their leisure.

**Program Support:** Enhanced support, called Subscription and Support, includes telephone assistance (voice support for defects during normal business hours) and access to updates, releases, and versions of the program as long as support is in effect. The customer will be notified of discontinuance of support with 12 months’ notice.

**Money-Back Guarantee:** If for any reason you are dissatisfied with the program, return it within 30 days from the invoice date, to the party (either IBM or its reseller) from whom you acquired it, for a refund. This applies only to your first acquisition of the program.

**Copy and Use on Home/Portable Computer:** No

**Volume Orders (IVO):** No

**Passport Advantage® Applies:** No

**Software Maintenance Applies:** No

For operating system software, the revised IBM Operational Support Services — Support Line 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 Support Line offering, visit:

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

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

**IBM Operational Support Services — Support Line:** Yes

**AIX®/UNIX® Upgrade Protection Applies:** No

**Entitled Upgrade for Current AIX/UNIX Upgrade Licensees:** No

**iSeries™ Software Subscription Applies:** No

**Variable Charges Apply:** No

**Educational Allowance Available:** Yes, 15% education allowance applies to qualified education institution customers.

**Replaced Program**

**Replacement Program**

IMS/ESA® Recovery Saver (5655-A68)  IMS Database Recovery Facility for z/OS, V2 (5655-144)
Charges

Contact your IBM representative for prices information for this announcement.

Order Now

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Reference: LE001

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Note: Shipments will begin after the planned availability date.

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