



IBM tools expanded and enhanced to help better manage DB2 and IMS environments

Table of contents

1 At a glance	13 Publications
1 Overview	14 Technical information
2 Key prerequisites	18 Software Services
2 Planned availability date	18 Ordering information
2 Description	24 Terms and conditions
12 Product identification number	29 Prices
13 Program number	31 Order now
13 Offering Information	32 Corrections

At a glance

New and enhanced DB2® and IMS™ tools deliver:

- Administration:
 - IMS Audit Management Expert for z/OS®, V1.2
- Application management:
 - IMS Connect Extensions for z/OS, V2.2
- Performance:
 - IMS Performance Analyzer for z/OS, V4.2
- Recovery:
 - DB2 Log Analysis Tool for z/OS, V3.2
 - DB2 Recovery Expert for z/OS, V2.2
- Utilities:
 - IMS Cloning Tool for z/OS, V1.1

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

Overview

New and enhanced DB2 and IMS tools help in the use and management of database environments.

DB2 Tools products

- DB2 Log Analysis Tool for z/OS, V3.2 (5655-T56) enables organizations to monitor changes to a database by creating reports indicating what was changed and by whom. It can help you reduce the time for a DB2 recovery by utilizing different approaches, enabling you to choose the most effective solution.
- DB2 Recovery Expert for z/OS, V2.2 (5697-N92) is a self-managing backup and recovery solution that protects mission-critical data. It can help you avoid accidental data loss or corruption by providing a faster, less costly method of recovery when time is of the essence.

IMS Tools products

- IMS Audit Management Expert for z/OS, V1.2 (5655-R23) provides the ability to collect and correlate data access information from a variety of IMS resources. It provides auditing capabilities to IT organizations to help identify potential liability associated with growing compliance demands.
- IMS Cloning Tool for z/OS, V1.1 (5655-U91) provides a faster, simpler cloning solution that can help improve productivity and supports efforts to reduce total cost. It automates the cloning process to provide usable IMS clones within minutes, helping to boost efficiency and to free up DBA time.
- IMS Connect Extensions for z/OS, V2.2 (5655-S56) can be used to help increase availability, reliability, performance, and auditability of TCP/IP transactions. It allows you to automate message routing and failover, and can help simplify the development of TCP/IP applications.
- IMS Performance Analyzer for z/OS, V4.2 (5655-R03) is a performance analysis and tuning aid for IMS Transaction Manager and Database Manager systems. It provides information on IMS system performance for monitoring, tuning, managing service levels, analyzing trends, and capacity planning.

Key prerequisites

Prerequisites are listed in the [Hardware requirements](#) and [Software requirements](#) sections.

Planned availability date

August 7, 2009

Description

DB2 Log Analysis Tool for z/OS, V3.2 (5655-T56) is a powerful tool used to support efforts to maintain high availability and complete control over data integrity. It allows you to monitor data changes by automatically building reports of changes that are made to database tables. Version 3.2 includes the following enhancements:

- Not materializing mass deletes: In previous releases of DB2 Log Analysis Tool, the product materialized all rows involved in a mass delete, regardless of the table space type. This enhancement gives you the choice to materialize the individual rows of a mass delete, as in the past, or to create just a mass deletion statement.
- New log reading modes: When using Log Analysis Tool, you have several options on how to materialize full row images from the partial row images contained in the DB2 log. This is called *Log reading mode*, and could be either forced to log-backward, log-forward, or allow the product to determine automatically which method was necessary or best. The new log reading modes are:
 - Combo mode: Running both log-backward and log-forward in the same run: In combo mode, you allow the Log Analysis Tool to determine if a combination of both modes is possible, and, if so, it will run as such.
 - Auto Default Log Backwards: In Auto Default Log Backwards mode, you allow Log Analysis Tool to determine if log-backward mode is possible. That is, no reasons exist that would force log-forward mode. If so, then Log Analysis Tool will choose log-backward mode.
- HSM recalls: Log Analysis Tool can now issue HSM recalls on certain data sets in an attempt to speed up elapsed times in long running jobs accessing many data sets. The affected data sets are archive logs and image copies. Using this new feature, the product will issue HSM recalls as soon as the data sets are known to be needed. These recalls may speed up elapsed times if the recalls are effective prior to data set usage.

- SQL flexibility: Sometimes you may find it necessary to run REDO and UNDO SQL on a different set of tables than those referenced in the original SQL. This can now be accomplished using Log Analysis Tool's Fast Apply SQL option.
- Detail report flexibility: You have the option to specify larger row lengths for the current, post-change, and pre-change data rows in the detail and impact reports. This allows very large rows to display all data on one line instead of spanning multiple lines. In most cases, it will also be possible to display all data for one table on one line. You can decide how long a data row can be, or you can continue using 80 characters per line.
- SQL order by complete UOW: This feature allows the SQL generated by Log Analysis Tool to be committed and executed in a different order than previously available with REDO and UNDO SQL. The terms REDO and UNDO still apply, but within those terms comes the concept of running SQL by unit of work.
- Parameters for changing MODEFILE fields: This feature allows you to change certain parameters in the JCL without having to step through the ISPF panels. There are certain parameters that still must be updated using the panels, but those mainly affect the generation of the JCL.
- Conversion of load file header data to proper CCSID: Log Analysis Tool now converts log record header data in its load file to the same CCSID of the source table in normal load mode. This was done to make all data consistent within the load file and to allow better use of WHERE clauses when querying the loaded table.
- CHAR data in hex option: Log Analysis Tool may generate SQL that cannot be properly executed because of DB2 translation issues. To avoid these issues, you can now opt to have the product generate character-type fields in hexadecimal format.
- Dynamic allocation error messages enhanced: Additional information has been added to the dynamic allocation error messages to help you understand what may be causing the error.
- Informational messages enhanced: Informational messages are often displayed throughout Log Analysis Tool to help the support process proceed more quickly. These messages are for support use only, but many have come to use them to help understand and plan their job schedules. Some of these messages have been changed to be more easily recognized. Most were changed by adding the compile date/time to help quickly identify the latest maintenance applied.

DB2 Recovery Expert for z/OS, V2.2 (5697-N92) provides a simple, self-managing recovery solution that enables database recovery operations with minimal disruption. DB2 Recovery Expert for z/OS enables intelligent analysis of altered, incorrect, or missing database assets, including table spaces, tables, indexes, and data. It automates the process of rebuilding these assets to a specified point in time, often without taking the database or the business operations offline.

DB2 Recovery Expert promotes high availability solutions that companies require for 24 x 7 operations and integrating with storage systems. It performs system-level backups instantaneously and without affecting running applications. Valuable host CPU and I/O time is saved by using the storage processor to make the copy instead of z/OS.

DB2 Recovery Expert:

- Provides backup and recovery solutions that automate and integrate sophisticated storage processor capabilities to:
 - Back up data instantaneously to a consistent copy of production data without sacrificing availability
 - Reduce CPU and I/O costs by using the storage processor to copy the data instead of z/OS
 - Execute fast replication in a safer and more transparent manner on behalf of the DBA
 - Provide the restore of a database or database objects in parallel with the restoration process to help reduce recovery time and reduce application down time
- Can be used for:

- Fast DB2 subsystem recovery from system backups.
- DB2 subsystem disaster restart. Disaster recovery becomes as simple as restarting from a power failure. This saves CPU, I/O, image copy restoration, and log apply time.
- Object data recovery from system backups.
- Supports recovery of dropped objects, including data to a point in time before the drop.
- Reads and analyzes the DB2 log to find quiet times or points of consistency for single or groups of objects.
- Can generate SQL-based recoveries to roll forward or back out changes to individual tables or groups of objects. This type of recovery is not supported by standard DB2 recovery tools.
- Supports recovering an object or application set of objects to a prior version, even if the object's DDL has changed. A recovery can be performed back to a prior version of an application if the need arises.
- Enables recovery to a point in time, given the object to be recovered, including rolling data changes backward or forward to provide for more efficient recovery.
- Analyzes all recovery assets and presents several recovery "plans" or methods with an estimated cost for each method, allowing the user to choose an appropriate and cost-efficient method.
- Performs a partial backup by excluding or including volumes from a backup profile using line commands. In addition, the Restore System display now contains a field that indicates when a backup is a partial backup, and Backup Summary reports also show whether a backup is partial. Partial backups cannot be used for system restores but can be used for restoring objects.

DB2 Recovery Expert V2.2 includes the following enhancements:

- Provides support through a GUI to restore an entire subsystem to a prior point in time from system-level backups created within DB2 Recovery Expert.
- Allows for parallel processing of recovery tasks using multiple jobs to help reduce elapsed time when performing a recovery.
- Coordinates tape usage of recovery jobs to reduce repeated tape mounts and help speed recovery jobs.
- Leverages a new cost calculation method that uses estimated metrics to help identify more efficient recovery plans.
- Identifies the primary reason that a recovery method is not supported for a particular object.
- Provides the option to restore indexes defined as COPY YES from their associated image copies. Restoring an index from an image copy is generally faster than rebuilding it.
- Optionally creates image copies of COPY YES indexes after the recovery takes place.
- Allows enhanced control of image copy processing by allowing you to specify up to four image copy dataset masks. Includes additional file attributes such as device type, unit type, quantities, SMS information, tape information, expiration date, and retention period.
- Includes enhancements to the Log Analysis advisor to filter on additional object types, including object patterns. This can help improve the usability of log-based quiet time analysis, allowing users to find quiet times and points of consistency.
- Includes a new recoverability health check report that can be run against a system-level backup before doing a System Restore. This report will show objects that will need to be recovered after a System Restore because of a LOG NO utility that was run. It will also show objects that are unrecoverable after a System Restore because a LOG NO utility was run and no valid image copy exists.
- Automatically determines objects that are not restored properly after a System Restore and produces the JCL necessary to recover/rebuild those objects using image copies.
- Supports incremental flash copy when executing the DB2 system backup utility. This system backup replaces the prior backup, but only the changed pages are

recopied from the source to the target volumes, improving the performance of the backup.

- Performs mapping of DB2 source volumes to ranges of target volumes automatically (AUTOMAP) to eliminate the need to manually map the source volumes to target volumes during the initial profile creation. It also eliminates the need to update backup profiles when DB2 grows and occupies new volumes. The AUTOMAP feature can be used in conjunction with excluding volumes to create "easy to manage" partial system backups that reduce the amount of disks needed for a system backup.
- Optionally drives the encryption process provided by either DFSMSdss™ or FDR to encrypt a system backup that is being off-loaded to tape.
- Automatically includes table spaces that have any RI relationship to the selected table spaces when building recovery JCL from an object profile using the ISPF interface.
- Takes advantage of the DFSMSdss backup method to create a DB2 system backup. This method offers the following benefits:
 - Creates DB2 system backups without requiring Fast Replication hardware
 - Creates system backups with Fast Replication hardware that does not support FlashCopy® but can be driven by DFSMSdss
- Includes a new report that shows all the DB2 table spaces and index spaces included in the system backup.
- Creates image copies for a group of DB2 objects using a system level backup as input. These image copies can be registered in the DB2 system catalog table SYSIBM.SYSCOPY, therefore allowing the copies to be used by any utility that can process DB2 image copies.
- Provides support for Database Relationship Analyzer (DRA). This replaces support for DB2 Grouper in prior DB2 Recovery Expert releases. DRA allows grouping of DB2 tables based on the following types of relationships:
 - Relationships defined in the DB2 Catalog (such as DB2-defined RI, packages, and triggers)
 - Trace analysis (SQL Trace relationships)
 - Non-enforced RI (user-specified relationships)

DB2 Recovery Expert V2.2 can generate and execute recovery JCL that includes all members of predefined DRA groups.

- Creates system backups using EMC virtual devices and Hitachi storage systems. EMC Virtual devices create a system backup without the need for a full backup volume for each DB2 volume. Hitachi support allows users of Hitachi storage arrays to perform system backups and restores using native Hitachi fast replication commands.
- Generates UNDO or REDO SQL to recover objects that contain XML or LOB columns to selected points in time.
- Runs an installation verification process (IVP) to validate the DB2 Recovery Expert configuration before the product is used for the first time. You can select the IVP for a GUI only, an ISPF only, or a GUI and ISPF installation.

The DB2 Recovery Expert Help system is built on Eclipse, an award-winning, open source platform for the construction of powerful software development tools and rich desktop applications. Leveraging the Eclipse plug-in framework to integrate technology on the desktop can help save technology providers time and money and allows them to focus their efforts on delivering differentiation and value for their offerings. For more information about Eclipse, visit

<http://www.eclipse.org>

IMS Audit Management Expert for z/OS, V1.2 (5655-R23) is designed to address the needs involved in auditing IMS environments. Auditors use IMS Audit Management Expert for z/OS to view, analyze, and report on data.

This tool is a centralized IMS auditing tool that collects and correlates data access information from a variety of IMS resources. The information is collected from the

system logger, IMS logs, and SMF and is stored in a DB2 repository, which can be viewed through a GUI.

IMS Audit Management Expert for z/OS, V1.2 offers the following key features and enhancements:

- Microsoft® Vista support added
- Ability to report READ accesses to databases
- Display of concatenated key
- UPDATEs, INSERTs, DELETEs, and READs collected at the segment level
 - Segments within a database can be selected for auditing.
 - Changed data can be captured and collected by request.
- Reports data set names of IMS logs that are named in the DBRC RECON data sets but no longer exist in the system catalog
- DEDB Multiple Area data set and HALDB partition data set support added
- Batch reports that can be automated through the scheduler added
- New Zealand daylight savings time changes implemented
- Package versioning available
- Automated audit notification provided by e-mail / WTO to the console
- Updated Administration User Interface. New features include:
 - The ability to set auditing rules for different levels of IMS Audit Management Expert auditing through the Administration User Interface
 - The ability to filter auditing at the database level as well as segment level
 - The inclusion of PSBs within a rule
 - New agent configurations that now allow specification of Stream Names and Spill Data Sets
 - Additional IMS subsystem settings such as Control Blocks and Spill Data Sets
- Updated Reporting User Interface. New features include:
 - Menus to allow navigation between reports
 - Updated reporting filters to provide greater flexibility
 - Cancel button for Display Setting Reports (set colors for graphs) so that changes can be reversed
 - Ability to cancel reports when the queries populating the reports are still running
 - Improved logging. The following are now written to the log:
 - All error messages
 - JVM version and location
 - Export data grid values directly to Microsoft Excel
 - Zoom data grid cells to view data more easily
 - Search capability for data grid cells

IMS Cloning Tool for z/OS, V1.1 (5655-U91) makes it easier to more quickly clone IMS subsystems and refresh databases in order to increase availability and allow you to concentrate on business-critical work. By employing fast copy technology combined with automation and by eliminating manual efforts, this new IMS tool can help support your efforts to increase productivity and reduce production online downtime and the costs associated with cloning an IMS subsystem or refreshing databases.

Modern storage processing systems provide fast data replication and copying services that allow database data to be replicated instantly. IMS Cloning Tool takes advantage of storage processor functions to replicate data on behalf of the database system more quickly. Valuable host CPU and I/O is saved by using the storage processor to make the copy instead of z/OS. IMS Cloning Tool then performs

both the volume metadata and IMS metadata management to allow entire IMS subsystems to be cloned or specific IMS databases to be refreshed in just minutes.

The tool automates the cloning process to provide usable IMS clones within minutes, thus boosting efficiency and freeing DBAs from performing time-consuming multi-step tasks.

Using clones with current data helps provide faster resolution of problems encountered with production data. IMS Cloning Tools for z/OS, V1.1 can reduce the time required to create a clone from hours or even days to just minutes.

You can use IMS Cloning Tool for z/OS to perform the following tasks:

- Clone entire IMS subsystems or select databases, including HALDBs, more quickly and easily
- Create read-only IMS environments for reporting or staging for data warehouse loading
- Create IMS environments to help in implementing application or system maintenance or migrating to new IMS releases
- Copy production data to create IMS application testing and quality assurance environments
- Offload IMS Pointer Checker executions to a copy of the production environment

IMS Cloning Tool for z/OS, V1.1 offers the following key features:

Subsystem Cloning Solution

- Uses fast copy technology
- Automates all processes
- Stops an IMS subsystem with the requested mode and starts it using a given command only for the duration of the fast replication copy
- Stops and starts required ancillary address spaces
- Starts the internal resource lock manager (IRLM)
- Clones IMS subsystems quickly
- Clones a complete data sharing environment or just individual members
- Provides access from the same LPAR:
 - Can rename target VOLSERS if they are the same as the source VOLSER names
 - Renames VTOC, VVDS, VTOCIX to target VOLSER
 - Renames data sets to target name
- Renames IMS internals to point to target names (VOLSERS, SSID, and data set names)
 - RECON Data Sets: Data set names, IMS subsystem IDs, and VOLSERS are updated in the following RECON records: header record, database data set records, online log records, and back-out records.
 - Optionally, the following RECON records are updated: image copy records, change accumulation records, System Log Data Set (SLDS) records, and Recovery Log Data Set (RLDS) records if they were on volumes that were cloned.
 - IMS.PROCLIB, IMS.JOBS, and user JCL library members are updated with the new values for IMSID, VOLSERS, and data set names.
 - MVS™ Dynamic Allocation (MDA) members for databases or system data sets such as the RECON, Online Log Data Sets (OLDS), or Write-Ahead Data Sets (WADS) are updated to reflect the new data set names.
 - If IMS data sharing is involved, each additional IMS data sharing member is updated.

Database Cloning Solution

- Leverages fast copy technology

- Automates the process
- Refreshes IMS databases quickly
- Refreshes a group of databases at a consistent recovery point
- Refreshes to the same or a different subsystem
- Stops and starts an IMS database or provides fuzzy copy capability
- Automatically finds data set names from specified databases
- Extracts data set names, indexes, and database characteristics at time of execution to ensure current list
- Verifies database compatibility
- Updates DBRC
- Makes the database look new, prevents invalid recovery processes, and turns off Image Copy Needed

IBM IMS Connect Extensions for z/OS, V2.2 (5655-S56) is a tool that enhances the manageability of TCP/IP access to IMS through IMS Connect (an integrated function of IMS Version 9, or later). IMS Connect Extensions for z/OS provides the following features:

- **Monitoring and recording of IMS Connect activity:** IMS Connect Extensions offers a detailed audit of activity, providing you with information to help you analyze performance, throughput, resource availability, and security. You can also use this information to debug clients and new applications.
- **Single point of control for multiple IMS Connect systems:** Centralized management and control of all your IMS Connect systems from an ISPF dialog or from a distributed workstation.
- **Enhanced transaction management:** Dynamic management of TCP/IP transactions, allowing you to define rules to automatically distribute workloads and reroute messages when network failures or IMS flood states occur.
- **Improved client services:** Additional features for IMS Connect clients such as enhanced information in error messages, password change facility, and extended message translation.

These features help you to:

- Improve the availability, reliability, and performance of IMS Connect
- Speed and simplify problem determination
- Make your systems more transparent so that they are easier to audit and manage

IMS Connect Extensions consists of:

- Components that run with IMS Connect
- Journal data sets that record IMS Connect activity
- An ISPF dialog-based client to manage IMS Connect systems and their IMS Connect Extensions features
- IMS Connect Extensions Operations Console, a GUI client

IMS Connect Extensions for z/OS, V2.2 provides the following significant enhancements that improve the functionality and usability of the product:

- **IMS Connect Extensions Operations Console:** This new, innovative GUI is an alternative to the ISPF operations dialog. It provides a graphical interface to perform IMS Connect Extensions operations and allows you to monitor and control IMS Connect systems and their components and active sessions from a distributed workstation.
- **Rules-based routing:** Enables messages to be routed based on the datastore ID specified in the message. This ID can be any string, not just a datastore defined in IMS Connect. Rules-based routing is simple to configure, supports almost all message types, and allows you to specify both workload balancing and fallback provisions.

- Support for Open Database Management (ODBM) functions within IMS Connect: These functions provide the ability for a remote client to access an IMS database without executing a transaction within IMS. IMS Connect Extensions for z/OS:
 - Supports the collection of new ODBM event records
 - Offers updated IMS Connect Extensions command processing to support the new ODBM commands
 - Is enhanced to produce additional trace records for ODBM
- Support for IMS Synchronous Call-out feature: This IMS capability allows IMS to act as both a client and a server in a service-oriented architecture (SOA) environment. An IMS application can send a data request and wait for a response from a remote server. IMS Connect Extensions for z/OS now provides event collection and routing for the Send Only and Resume TPIPE request types used for providing synchronous communications.
- Support for the new IMS Connect Port exit provides control of messages that do not contain the standard IRM header. IMS Connect Extensions for z/OS provides support for the collection of new event records.
- Dynamic routing based on flood control information: IMS Connect Extensions can automatically reroute messages to alternate IMS systems when the original target IMS system is in flood.
- Central configuration of transaction timeout values, transaction timer values, and cancel client values based on the transaction code of the message.
- Active session information now includes extended data from both the local and remote TCP/IP stack.
- Support for IMS V11.

IMS Performance Analyzer for z/OS, V4.2 (5655-R03) provides comprehensive transaction performance and system resource usage reporting for your Information Management System Database (IMS DB) and Transaction Manager (IMS TM) systems and has become the standard for IMS resource and performance management. This database management tool provides a wide variety of performance, usage, and availability reports that can help you:

- Analyze transaction response time
- Measure usage and availability of important resources, including databases, programs, regions, buffers (including database) and queues (message and other internal queues)
- Plan for IMS operational management, including scheduling database reorganizations, monitoring service-level adherence, charge-back accounting, and capacity planning
- Monitor significant system events that can adversely affect system performance and availability
- Boost system and application programmer productivity
- Report critical performance information -- from high-level management summaries to detailed traces for in-depth analysis
- Analyze the impact of IMS Connect on transaction performance

Integrated tools solution for IMS management

IMS Performance Analyzer for z/OS is an out-of-the-box solution that is part of a reasonably priced, comprehensive portfolio of IBM database performance management tools. It complements IBM IMS Problem Investigator for z/OS to provide enhanced log analysis and reporting. The result is improved productivity for problem analysts, more efficient IMS application performance, and higher system availability.

New features and enhancements offered with IMS Performance Analyzer for z/OS, V4.2:

- OMEGAMON® Transaction Recording Facility (TRF): OMEGAMON for IMS TRF collects detailed transaction accounting, performance, and resource utilization information for IMS transactions.

IMS Performance Analyzer provides comprehensive (form-based) reporting of all the TRF record types, including:

- Transaction transit analysis and resource usage
- DLI database and DB2 call analysis, including elapsed time per call
- IMS Connect enhancements: Form-based transit reporting for the IMS Connect Extensions for z/OS journal is enhanced with the following new features:
 - Send Only with Resume TPIPE end-to-end transaction response time analysis: The two asynchronous components of the transaction are resolved to provide true client response time analysis.
 - Commit mode 0 and 1 client ACK delay: The delays in IMS processing caused by waiting for the client to acknowledge the response.
 - Detailed analysis of Synchronous call-out and ODBM events.
 - Additional client information, including override LTERM, Tmember, and TPIPE names.
 - A new MATCH option for combined IMS log and Connect journal reporting ensures that transactions are only reported when the IMS log and Connect journal overlap to provide complete information.
 - New INFLIGHT option to ensure that transaction information is not lost across an active journal switch.
- Improved form-based reporting: Form-based transit reporting is enhanced with the following new features:
 - Distributions: Reports the percentage of transactions with a response time less than the required service level.
 - Fast Path transaction support: All types of workloads now integrated into a single report.
 - Database update activity by transaction.
 - External subsystem usage by transaction.
 - Support for the new performance metrics in the type 56FA transaction accounting record: Includes DLI database and DB2 call activity.
 - New information fields, including:
 - Transaction rate per second or minute.
 - Log file DDname provides a "before and after" comparison of performance.
 - Transaction index: Can be used as input for reporting (rather than the original SLDS files), significantly reducing the time to generate reports.
 - Transaction substitution exit: View transaction performance by the application name.
 - Export performance data to DB2: Automatically create and load the tables.
 - More sample forms for common performance analysis tasks.
- Transaction Index: The Transaction Index, created by IMS Performance Analyzer, contains a record for each IMS transaction, and includes all the cumulative information from the IMS log about that transaction.

The index can replace the IMS log (SLDS) files as input for form-based reporting, significantly reducing the time and overhead of running IMS Performance Analyzer form-based transit reports. IMS Problem Investigator for z/OS uses the index to perform intelligent problem detection, either on its own or merged with the associated IMS log files, to provide improved levels of problem detection. For example, "Locate all transactions with response time greater than 1 second," then use tracking to drill down.
- IMS Version 9, 10, and 11 support: Exploits all the new features and instrumentation in the IMS log and monitor:
 - IMS Version 10 - Type 56FA transaction accounting record provides accurate transaction CPU time, DLI call, database I/O, and ESAF usage.
 - IMS Version 11 - Connect synchronous call-out and ODBM.
- New specialized reporting:

- Cold start analysis provides a point-in-time snapshot of the in-train activity, answering the following questions in the event of a cold start:
 - What input messages (transactions) are lost?
 - What are the incomplete units-of-work, and what database changes did they make?
- Gap analysis: Look for periods of time where log records are not being cut, potentially highlighting an external system event that may have caused IMS to slow down.
- Transit reporting enhancements: The standard Transaction Transit reporting is enhanced to provide:
 - Improved accuracy, by using the form-based log record processing
 - New Analysis report option to report all transactions, not just those that respond back to their originating LTERM
- Monitor reporting enhancements: Monitor reporting is enhanced to provide Synchronous call-out elapsed time analysis and to measure the impact of sync call-out requests on transaction performance.
- Internal resource usage enhancements: The internal resource usage report (IRUR) is enhanced to support the new statistics provided by IMS Version 10 and 11:
 - General storage: CSA and SQA usage, IMS region virtual storage usage
 - IMODULE get storage, load, locate, delete request statistics
 - EWLM
 - 64-bit cache storage manager
 - Fast Path 64-bit buffer manager

In addition, the new MSC link report provides "send and receive" message activity and I/O time analysis.

- IMS Tools Knowledge Base: Log Report Sets can now offload to the IMS Tools Knowledge Base repository for historical collection and viewing from the IMS Tools KB dialog.
- Usability enhancements: The following improvements will help make IMS Performance Analyzer for z/OS easier and more reliable to use:
 - System definition process:
 - Can be shared and accessed by multiple concurrent users
 - Can be shared with the IMS Problem Investigator for z/OS dialog
 - Define Connect systems independently of IMS Connect Extensions for z/OS definitions data set
 - Automatic log file selection:
 - Uses the IMS V10 READONLY API option -- users now require only read access to the RECON data sets
 - IMSPLEX authorization exit to prevent accidental disabling of the RECON data sets
 - Optionally use secondary SLDS files to relieve availability constraint on primary copies
 - Support for the DBRCGRP parameter
 - Connect file selection supports active journals, for when a report request needs recent data not yet archived

Accessibility by people with disabilities

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

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

Section 508 of the U.S. Rehabilitation Act

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

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

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

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

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

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

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

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

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

Product identification number

Program PID Number	Subscription & Support (S&S) PID Number
5655-T56	5655-E86
5697-N92	5697-N47
5655-R23	5655-R24
5655-S56	5655-K49
5655-U91	5655-U92

Program number

Program number	VRM	Program name
5655-T56	3.2.0	DB2 Log Analysis Tool for z/OS
5697-N92	2.2.0	DB2 Recovery Expert for z/OS
5655-R23	1.2.0	IMS Audit Management Expert for z/OS
5655-U91	1.1.0	IMS Cloning Tool for z/OS
5655-S56	2.2.0	IMS Connect Extensions for z/OS
5655-R03	4.2.0	IMS Performance Analyzer for z/OS

Offering Information

Product information is available via the Offering Information Web site

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

Business Partner information

If you are a Direct Reseller - System Reseller acquiring products from IBM, you may link directly to Business Partner information for this announcement. A PartnerWorld® ID and password are required (use IBM ID).

<https://www.ibm.com/partnerworld/mem/sla.jsp?num=209-219>

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.

Title	Order number
DB2 Log Analysis Tool for z/OS, v3.2 (5655-T56)	
License Information	GC19-1301
Program Directory	GI10-8772
DB2 Recovery Expert for z/OS v2.2 (5697-N92)	
License Information	GC19-1221
Program Directory	GI10-8764
IMS Audit Management Expert for z/OS v1.2 (5655-R23)	
License Information	GC18-9866
Program Directory	GI10-8709
IMS Cloning Tool for z/OS, v1.1 (5655-U91)	
License Information	GC19-2474
Program Directory	GI10-8797
IMS Connect Extensions for z/OS, v2.2 (5655-S56)	
License Information	GC19-1164
Program Directory	GI10-8758

IMS Performance Analyzer z/OS, V4.2 (5655-R03)
License Information
Program Directory

GC18-9777
GI10-8703

The publications for products in this announcement cannot be ordered in hardcopy. All the publications in this announcement are available at

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

Publications are available in PDF and BookManager® formats on CD-ROM and on DVD on the next release of the software product libraries:

- z/OS Software Products CD Collection Kit (SK3T-4270)
- z/OS and Software Products DVD Collection (SK3T-4271) -- requires a DVD drive in DVD-9 (single-sided, dual-layer) format

Title	Order number
DB2 Log Analysis for z/OS, V3.2 (5655-T56) User's Guide	SC19-2742
DB2 Recovery Expert for z/OS, V2.2 (5697-N92) User's Guide	SC19-2548
IMS Audit Management Expert for z/OS, V1.2 (5655-R23) User's Guide	SC19-2476
IMS Cloning Tool for z/OS, V1.1 (5655-U91) User's Guide	SC19-2475
IMS Connect Extensions for z/OS, V2.2 (5655-S56) User's Guide	SC19-2817
IMS Performance Analyzer z/OS, V4.2 (5655-R03) User's Guide	SC19-2732
Report Reference	SC19-2734

The following material is available at

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

- Overview brochure: IBM DB2 and IMS Tools Overview (IMD11760-USEN)

Specification sheets, user's guides, and white papers are also available on CD-ROM (GK3T-7099). This CD-ROM can be ordered from the IBM Publications Center Portal at

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

Technical information

Specified operating environment

Hardware requirements

The products in this announcement will operate on any S/390® hardware configuration that supports the required versions of DB2 and IMS.

Additional hardware requirements per product are described below.

DB2 Recovery Expert for z/OS, V2.2 (5697-N92) operates on any hardware configuration that supports the following:

- Client:
Any hardware that is capable of running Windows® XP Professional (32-bit) or Windows Vista (32-bit) with a minimum of:

- 150 MB free disk space
- 128 MB memory

IMS Audit Management Expert for z/OS, V1.2 (5655-R23) operates on any hardware configuration that supports the following:

- Client:
 - Any hardware that is capable of running Windows XP Professional (32-bit) or Windows Vista (32-bit) with a minimum of:
 - 150 MB free disk space
 - 512 MB memory
- Server:
 - Any hardware that is capable of running IMS V9.1, or later
 - Any hardware that is capable of running DB2 V8.1, or later
 - Any hardware that is capable of running DB2 Value Unit Edition V8.1, or later
- Auxiliary storage:
 - DASD storage is required for the repository DB2 table spaces

IMS Connection Extensions for z/OS, V2.2 (5655-S56) operates on any hardware configuration that supports the following:

- Client:
 - Any hardware that is capable of running Windows XP Professional (32-bit) or Windows Vista (32-bit) with a minimum of:
 - 1 GB memory (Windows XP Professional)
 - 1.5 GB memory (Windows Vista)
 - A minimum of 350 MB free disk space
- Server:
 - Any hardware that is capable of running IMS V9.1, or later

Software requirements

The DB2 Tools for z/OS products in this announcement require one of these:

- z/OS V1.8 (5694-A01), or later
- z/OS.e V1.8 (5655-G52)

The DB2 Tools for z/OS products in this announcement are designed to operate with:

- DB2 V8.1 (5625-DB2)
- DB2 Value Unit Edition V8.1 (5697-N29)
- DB2 V9.1 (5635-DB2)
- DB2 Value Unit Edition V9.1 (5697-P12)

Additional software requirements per product are described below:

DB2 Recovery Expert for z/OS, V2.2 requires one of the following:

- z/OS V1.8 (5694-A01), or later
- z/OS.e V1.8 (5655-G52), or later

DB2 Recovery Expert for z/OS, V2.2 is designed to operate with:

- DB2 for z/OS, V8.1 (5625-DB2) and DB2 Utilities Suite for z/OS, V8.1 (5655-K61)

- DB2 for z/OS Value Unit Edition, V8.1 (5697-N29) and DB2 Utilities Suite for z/OS, V8.1 (5655-K61)
- DB2 for z/OS, V9.1 (5635-DB2) and DB2 Utilities Suite for z/OS, V9.1 (5655-N97)
- DB2 for z/OS Value Unit Edition, V9.1 (5697-P12) and DB2 Utilities Suite for z/OS, V8.1 (5655-N97)

BCV and SNAP backups require:

- EMC Symmetrix 6, or later, running with Microcode 5x67, or later.
- Microcode 5x67 with patch 14882, 5x68 with patch 18954, or 5x69, or later, for use of Engenuity Consistence Assist (ECA).
- The EMC SNAP library must be level 5.5, or later, to use ECA with SNAP VOLUME technology.

Note: System Backup and Restore Services performs a "Protected BCV restore" in order to preserve the BCV backup point to Microcode 5x70. If any Symmetrix array is at a microcode level lower than 5x70, then a SNAP type restore will be performed instead.

FlashCopy requirements for backup and restore:

- Use of FlashCopy for full system backup and restore requires the storage subsystem to be FlashCopy V1 capable.
- Object-level restore from DASD requires the storage subsystem to be FlashCopy V2 capable and the operating system to be z/OS V1.8, or later

DFSMSdss requirements:

- DFSMSdss V1.8, or later
- To perform encryption during offloads:
 - Encryption Facility DFSMSdss Encryption Feature (FMID HCF773D)
 - IBM Cryptographic Services Facility (ICSF) (HCR770B, or later)

Client requires one of the following Windows operating environments:

- Windows 2000 Professional
- Windows XP Professional (32-bit)
- Windows Server 2003 (32-bit)
- Windows Vista (32-bit)

IBM DB2 Log Analysis Tool for z/OS, V3.2.0 requires the following Authorized Program Analysis Reports (APARs) for H25F132 DB2 Change Accumulation Tool for z/OS - FEC Common Code:

- FEC APAR PK43912
- FEC APAR PK76167 (also requires FEC APAR PK79684)

The IMS Tools products in this announcement are designed to operate with IMS V9.1 (5655-J38), or later.

Additional software requirements per product are described below:

IMS Audit Management Expert for z/OS, V1.2 (5655-R23) requires:

- Server:
 - z/OS V1.9 (5694-A01), or later
 - DB2 V8.1 (5625-DB2), or later
 - DB2 V8.1 Value Unit Edition (5697-N29), or later
 - IMS V9.1 (5655-J38), or later

- Client:
 - Windows XP Professional (32-bit) or Windows Vista (32-bit)

Note: Windows Vista Business and Enterprise are supported, without Aero enabled. If Aero graphics are enabled when the clients run, Vista will deactivate the Aero graphics for the duration that the clients are running.
- DB2 UDB for Windows:

IMS Audit Management Expert for z/OS, V1.2 Reporting Client operates on either:

 - To connect to DB2 V8 CM, DB2 UDB for Windows V8: Fixpack 7, or later
 - For the JCC driver, DB2 V9 DB2 UDB for Windows V9: Fixpack 3, or later
 - Specifically, this includes platforms that support Windows XP Professional (32-bit) or Windows Vista (32-bit).

IMS Connect Extensions for z/OS, V2.2 (5655-S56) requires:

- Server:
 - IMS V9.1 (5655-J38), or later
- Client:
 - IMS Connect Extensions Operations Console is designed to operate with Windows XP Professional (32-bit) or Windows Vista (32-bit).

IMS Performance Analyzer for z/OS, V4.2 has the following functional requirements:

- IMS Connect Extensions for z/OS, V2.1 (5655-S56), or later, for running IMS Connect reports
- IMS Tools Knowledge Base for z/OS, V1.1 (5655-R34) for offloading IMS Log reports to the IMS Tools Knowledge Base repository

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.

Customer requirements

Customer requirements are used extensively to determine how database tools evolve.

DB2 Log Analysis Tool for z/OS, V3.2 satisfies the following customer requirements:

MR0925071832	MR0731086231	MR0826076933
MR0831061632	MR0826076053	MR122305689
MR0826076054	MR0905075432	MR0826072619
MR0731083016		

DB2 Recovery Expert for z/OS, V2.2 satisfies the following customer requirements:

MR0622054518	MR0419061745	MR0925085515
MR0228056032		

IMS Audit Management Expert for z/OS, V1.2 satisfies the following customer requirements:

MR0312076013	MR0201076818
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IMS Connect Extensions for z/OS, V2.2 satisfies the following customer requirements:

MR0623081947 MR0402084745 MR0408083655
MR0619082710 MR0914072718 MR0814067046

IMS Performance Analyzer for z/OS, V4.2 satisfies the following customer requirements:

MR020609819 MR1104086948 MR1215086153

Planning information

Packaging

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

- Basic machine-readable material on tape
- Program Directory
- IBM International Program License Agreement (IPLA)

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

Security, auditability, and control

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.

Software Services

IBM Software Services has the breadth, depth, and reach to manage your services needs. You can leverage the deep technical skills of our lab-based, software services team and the business consulting, project management, and infrastructure expertise of our IBM Global Services team. Also, we extend our IBM Software Services reach through IBM Business Partners to provide an extensive portfolio of capabilities. Together, we provide the global reach, intellectual capital, industry insight, and technology leadership to support a wide range of critical business needs.

To learn more about IBM Software Services or to contact a Software Services sales specialist, visit

<http://www.ibm.com/software/sw-services/>

Ordering information

Charge metric

Program name	PID number	Charge metric
DB2 Log Analysis Tool for z/OS, V3.2	5655-T56	Value Unit
DB2 Recovery Expert for z/OS, V2.2	5697-N92	Value Unit
IMS Audit Management Expert for z/OS, V1.2	5655-R23	Value Unit
IMS Cloning Tool for z/OS, V1.1	5655-U91	Value Unit
IMS Connect Extensions for z/OS, V2.2	5655-S56	Value Unit
IMS Performance Analyzer for z/OS, V4.2	5655-R03	Value Unit

VU Value Unit

VU Value Unit is the unit of measure by which this program is licensed. VU Value Unit entitlements are based on the quantity of a specific designated measurement, either users or resources, for the given program. A Proof of Entitlement (PoE)

must be obtained for the appropriate number of VU Value Units required for your environment as defined by the specific program terms. The VU Value Unit entitlements are specific to the program and may not be exchanged, interchanged, or aggregated with VU Value Unit entitlements of another program. To understand these benefits of VU Value Unit licensing, and to determine how many VU Value Units to obtain for the program, contact your IBM representative.

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

Program number	Program name	Value Unit Exhibit
5655-T56	DB2 Log Analysis Tool for z/OS, V3.2	VUE007
5697-N92	DB2 Recovery Expert for z/OS, V2.2	VUE007
5655-R23	IMS Audit Management Expert for z/OS, V1.2	VUE007
5655-U91	IMS Cloning Tool for z/OS, V1.1	VUE007
5655-S56	IMS Connect Extensions for z/OS, V2.2	VUE007
5655-R03	IMS Performance Analyzer for z/OS, V4.2	VUE007

For each IBM eServer™ zSeries® 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 zSeries 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 Web site at

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

Basic license

On/Off CoD

The products in this announcement are eligible for On/Off CoD with a temporary use charge calculated based on MSUs per-day usage.

Translation from MSUs to value Units

	MSUs	value Units/MSU
Base	1-3	1.00
Tier A	4-45	.45
Tier B	46-175	.36
Tier C	176-315	.27
Tier D	316+	.20

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: DB2 Log Analysis Tool for z/OS, V3.2
Program PID: 5655-T56

Entitlement Identifier	Description	License Option / Pricing Metric
S014J6K	DB2 Log Analysis Tool V3	Basic OTC, Value Units Basic OTC, Per MSU-day TUC

Orderable Supply ID	Language	Distribution medium
S014J6L	US English	3480 Tape Cartridge

Program name: DB2 Recovery Expert for z/OS, V2.2
Program PID: 5697-N92

Entitlement Identifier	Description	License Option / Pricing Metric
S01454M	DB2 Recovery Expert V2	Basic OTC, Value Units Basic OTC, Per MSU-day TUC

Orderable Supply ID	Language	Distribution medium
S01454N	US English	3480 Tape Cartridge

Program name: IMS Audit Management Expert for z/OS, V1.2

Program PID: 5655-R23

Entitlement Identifier	Description	License Option / Pricing Metric
S012HDX	IMS Audit Management Expert	Basic OTC, Value Units Basic OTC, Per MSU-day TUC
Orderable Supply ID	Language	Distribution medium
S012HDZ	US English	3480 Tape Cartridge

Program name: IMS Cloning Tool for z/OS, V1.1

Program PID: 5655-U91

Entitlement Identifier	Description	License Option / Pricing Metric
S015LPS	IMS Cloning Tool	Basic OTC, Value Units Basic OTC, PER MSU-day TUC
Orderable Supply ID	Language	Distribution medium
S015LPR	US English	3480 Tape Cartridge

Program name: IMS Connect Extensions for z/OS, V2.2

Program PID: 5655-S56

Entitlement Identifier	Description	License Option / Pricing Metric
S013T37	IMS Connect Extensions V2	Basic OTC, Value Units Basic OTC, Per MSU-day TUC
Orderable Supply ID	Language	Distribution medium
S013T38	US English	3480 Tape Cartridge

Program name: IMS Performance Analyzer for z/OS, V4.2

Program PID: 5655-R03

Entitlement Identifier	Description	License Option / Pricing Metric
S012H7K	IMS Performance Analyzer V4	Basic OTC, Value Units Basic OTC, Per MSU-day TUC
Orderable Supply ID	Language	Distribution medium
S012H7L	US English	3480 Tape Cartridge

Subscription and Support PID: 5655-E86

Entitlement Identifier	Description	License Options/Pricing Metrics
S00V748	DB2 Log Analysis Tool S&S	Basic ASC, per Value Unit SW S&S No charge, decline SW S&S Per MSU SW S&S registration
Orderable Supply ID	Language	Distribution medium
S00TH8N	English	Hardcopy publication

Subscription and Support PID: 5697-N47

Entitlement Identifier	Description	License Options/Pricing Metrics
S012CMZ	DB2 Recovery Expert S&S	Basic ASC, per Value Unit SW S&S No charge, decline SW S&S Per MSU SW S&S registration
Orderable Supply ID	Language	Distribution medium
S012CNO	English	Hardcopy publication

Subscription and Support PID: 5655-R24

Entitlement Identifier	Description	License Options/Pricing Metrics
S012HF3	IMS Audit Mgmt Expert S&S	Basic ASC, per Value Unit SW S&S No charge, decline SW S&S Per MSU SW S&S registration
Orderable Supply ID	Language	Distribution medium
S012HF4	English	Hardcopy publication

Subscription and Support PID: 5655-U92

Entitlement Identifier	Description	License Options/Pricing Metrics
S0151SN	IMS Cloning Tool S&S	Basic ASC, per Value Unit SW S&S No charge, decline SW S&S Per MSU SW S&S registration
Orderable Supply ID	Language	Distribution medium
S0151SK	English	Hardcopy publication

Subscription and Support PID: 5655-K49

Entitlement Identifier	Description	License Options/Pricing Metrics
S00XT3K	IMS Connect Extensions S&S	Basic ASC, per Value Unit SW S&S No charge, decline SW S&S Per MSU SW S&S registration
Orderable Supply ID	Language	Distribution medium
S00XT3L	English	Hardcopy publication

Subscription and Support PID: 5655-E18

Entitlement Identifier	Description	License Options/Pricing Metrics
S00V79W	IMS Performance Analyzer S&S	Basic ASC, per Value Unit SW S&S No charge, decline SW S&S Per MSU SW S&S registration

Orderable Supply ID	Language	Distribution medium
S00TH75	English	Hardcopy publication

Subscription and Support

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

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

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

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

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

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

Single version charging

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

Customized Offerings

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

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

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

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

- CBPDOs - 3480, 3480 Compressed, 3490E, 3590, 3592¹
- ServerPacs - 3480, 3480 Compressed, 3490E, 3590, 3592¹
- SystemPacs - 3480, 3480 Compressed, 3490E, 3590, 3592¹

¹ 3592 is the highest density media. Selecting 3592 will ship the fewest number of media.

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

Production of software product orders will begin on the planned general availability date.

- CBPDO shipments will begin one week after general availability.
- ServerPac shipments will begin two weeks after inclusion in ServerPac.
- SystemPac shipments will begin four weeks after inclusion in SystemPac due to additional customization, and data input verification.

Terms and conditions

The information provided in this announcement letter is for reference and convenience purposes only. The terms and conditions that govern any transaction with IBM are contained in the applicable contract documents such as the IBM International Program License Agreement, IBM International Passport Advantage® Agreement, and the IBM Agreement for Acquisition of Software Maintenance.

Licensing

IBM International Program License Agreement including the License Information document and Proof of Entitlement (PoE) govern your use of the program. PoEs are required for all authorized use.

Agreement for Acquisition of Software Maintenance

The 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

Program name	Program number	License Information
DB2 Log Analysis Tool for z/OS, V3.2	5655-T56	GC19-1301
DB2 Recovery Expert for z/OS, V2.2	5697-N92	GC19-1221
IMS Audit Management Expert for z/OS, V1.2	5655-R23	GC18-9866
IMS Cloning Tool for z/OS, V1.1	5655-U91	GC19-2474
IMS Connect Extensions for z/OS, V2.2	5655-S56	GC19-1164
IMS Performance Analyzer for z/OS, V4.2	5655-R03	GC18-9777

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

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

Limited warranty applies

Yes

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.

Authorization for use on home/portable computer

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

Volume orders (IVO)

No

Passport Advantage applies

No

Software Subscription and Support applies

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

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

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

IBM Operational Support Services - SoftwareXcel

Yes

System i Software Maintenance applies

No

Variable charges apply

No

Educational allowance available

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

Products eligible for single version charging

Replaced program		Replacement program	
Program number	Program name	Program number	Program name
5798-CHJ	IMS Monitor Summary and Systems Analysis Program (IMSPARS)	5655-R03	IMS Performance Analyzer for z/OS V4.2
5798-CQP	IMS Performance Analysis and Reporting (IMSPARS)	5655-R03	IMS Performance Analyzer for z/OS V4.2
5697-B89	IMS Performance Analyzer V1	5655-R03	IMS Performance Analyzer for z/OS V4.2
5697-F02	IMS Performance Analyzer V2	5655-R03	IMS Performance Analyzer for z/OS V4.2

Sub-capacity terms and conditions

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

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

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

Program Number	Program name	Terms	Parents - any of the following
5655-T56	DB2 Log Analysis Tool for z/OS, V3.2	Reference-based	DB2 V8 (5625-DB2) DB2 V9 (5635-DB2) DB2 VUE V8 (5697-N29) DB2 VUE V9 (5697-P12)
5697-N92	DB2 Recovery Expert for z/OS, V2.2	Reference-based	DB2 V8 (5625-DB2) DB2 V9 (5635-DB2) DB2 VUE V8 (5697-N29) DB2 VUE V9 (5697-P12)
5655-R23	IMS Audit Management Expert for z/OS, V1.2	Reference-based	IMS V9 (5655-J38) IMS V10 (5635-A01) IMS V11 (5635-A02)
5655-U91	IMS Cloning Tool for z/OS, V1.1	Reference-based	IMS V9 (5655-J38) IMS V10 (5635-A01)
5655-S56	IMS Connect Extensions	Reference-	IMS V9 (5655-J38)

	for z/OS, v2.2	based	IMS V10 (5635-A01) IMS V11 (5635-A02)
5655-R03	IMS Performance Analyzer for z/OS, v4.2	Reference-based	IMS V9 (5655-J38) IMS V10 (5635-A01) IMS V11 (5635-A02)

Full-capacity mainframes

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

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

For more information on mainframe MSU-rated capacities, visit

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

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

Sub-capacity mainframes

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

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

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

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

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

For more information on mainframe MSU-rated capacities, refer to *The System/370™, System/390®, and System z Machine Exhibit (Z125-3901)*, or visit the Mainframes section of the System z Exhibits Web site

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

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

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

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

When a System z IPLA sub-capacity program with reference-based terms is used in a qualified Parallel Sysplex environment, the required license capacity of the System

z IPLA program must equal with the license capacity of the parent program across the Parallel Sysplex. Qualified Parallel Sysplex refers to one:

- That meets the criteria defined in Hardware Announcement [198-001](#), dated January 13, 1998
- Where MLC pricing is aggregated across the Sysplex

Sub-capacity eligibility

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

- All instances of the OS/390® operating system must be migrated to the z/OS (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 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 System z 890 and 800 License Charges (Z125-6587).

Additionally, you must sign and comply with the terms and conditions specified in the amendment to the IPLA contract - *Amendment for IBM System z9® and 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 CoD

To be eligible for On/Off CoD pricing, you must be enabled for temporary capacity on the corresponding hardware, and the required contract, Attachment for Customer Initiated Upgrade and IBM eServer On/Off Capacity on Demand - Software (Z125-6611) must be signed prior to use.

Prices

For additional information and current prices, contact your local IBM representative.

Program name: DB2 Log Analysis Tool for z/OS, V3.2
Program PID: 5655-T56

Entitlement Identifier	Description	License Option / Pricing Metric
S014J6K	DB2 Log Analysis Tool V3	Basic OTC, Value Units Basic OTC, per MSU-day TUC

Orderable Supply ID	Language	Distribution medium
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S014J6L	US English	3480 Tape Cartridge
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Subscription and Support PID: 5655-E86

Entitlement Identifier	Description	License Options/Pricing Metrics
S00V748	DB2 Log Analysis Tool S&S	Basic ASC, per Value Unit SW S& No charge, decline SW S&S Per MSU SW S&S registration

Orderable Supply ID	Language	Distribution medium
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S00TH8N	English	Hardcopy publication
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Program name: DB2 Recovery Expert for z/OS, V2.2
Program PID: 5697-N92

Entitlement Identifier	Description	License Option / Pricing Metric
S01454M	DB2 Recovery Expert V2	Basic OTC, Value Units Basic OTC, per MSU-day TUC

Orderable Supply ID	Language	Distribution medium
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S01454N	US English	3480 Tape Cartridge
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Subscription and Support PID: 5697-N47

Entitlement Identifier	Description	License Options/Pricing Metrics
S012CMZ	DB2 Recovery Expert	Basic ASC, per Value Unit SW S& No charge, decline SW S&S Per MSU SW S&S registration

Orderable supply ID	Language	Distribution medium
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S012CN0	English	Hardcopy publication
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Program name: IMS Audit Management Expert for z/OS, V1.2
Program PID: 5655-R23

Entitlement Identifier	Description	License Option / Pricing Metric
S012HDX	IMS Audit Management Expert	Basic OTC, Value Units Basic OTC, per MSU-day TUC

Orderable supply ID	Language	Distribution medium
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S012HDZ US English 3480 Tape Cartridge

Subscription and Support PID: 5655-R24

Entitlement Identifier	Description	License Options/Pricing Metrics
S012HF3	IMS Audit Mgmt Expert S&S	Basic ASC, per Value Unit SW S& No charge, decline SW S&S Per MSU SW S&S registration

Orderable Supply ID	Language	Distribution medium
S012HF4	English	Hardcopy publication

Program name: IMS Cloning Tool for z/OS, V1.1
Program PID: 5655-U91

Entitlement Identifier	Description	License Option / Pricing Metric
S015LPS	IMS Cloning Tool	Basic OTC, Value Units Basic OTC, per MSU-day TUC

Orderable Supply ID	Language	Distribution medium
S015LPR	US English	3480 Tape Cartridge

Subscription and Support PID: 5655-U92

Entitlement Identifier	Description	License Options/Pricing Metrics
S0151SN	IMS Cloning Tool S&S	Basic ASC, per Value Unit SW S& No charge, decline SW S&S Per MSU SW S&S registration

Orderable Supply ID	Language	Distribution medium
S0151SK	English	Hardcopy publication

Program name: IMS Connect Extensions for z/OS, V2.2
Program PID: 5655-S56

Entitlement Identifier	Description	License Option / Pricing Metric
S013T37	IMS Connect Extensions V2	Basic OTC, Value Units Basic OTC, per MSU-day TUC

Orderable Supply ID	Language	Distribution medium
S013T38	US English	3480 Tape Cartridge

Subscription and Support PID: 5655-K49

Entitlement Identifier	Description	License Options/Pricing Metrics
S00XT3K	IMS Connect Extensions S&S	Basic ASC, per Value Unit SW S& No charge, decline SW S&S Per MSU SW S&S registration

Orderable Supply ID	Language	Distribution medium
S00XT3L	English	Hardcopy publication

Program name: IMS Performance Analyzer for z/OS, V4.2
Program PID: 5655-R03

Entitlement Identifier	Description	License Option / Pricing Metric
S012H7K	IMS Performance Analyzer V4	Basic OTC, Value Units Basic OTC, per MSU-day TUC

Orderable Supply ID	Language	Distribution medium
S012H7L	US English	3480 Tape Cartridge

Subscription and Support PID: 5655-E18

Entitlement Identifier	Description	License Options/Pricing Metrics
S00V79W	IMS Perform TM Analyzer S&S	Basic ASC, per Value Unit SW S& No charge, decline SW S&S Per MSU SW S&S registration

Orderable Supply ID	Language	Distribution medium
S00TH75	English	Hardcopy publication

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Corrections

(Corrected on January 11, 2011)

In the Publications section, the PID number for IMS Connect Extensions for z/OS, V2.2 and the form number for the IMS Connect Extensions for z/OS, V2.2 Users Guide were corrected.

(Corrected on August 10, 2009)

In the Publications section, the form number for IMS Connect Extensions for z/OS, V2.2 was corrected.