IBM Information Management System (IMS) 14
Quality Partnership Program (QPP)

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At a glance

IBM® Information Management System (IMS™) is IBM's hierarchical database management and transaction processing system, offering industry-leading performance, scalability, usability, and availability at low cost. IMS 14 supports business growth and delivers value to the enterprise through the following benefits:

- Easier application deployment and management
- Support for ever-growing transaction and data volumes
- Greater agility by enabling broader dynamic change of IMS configuration and resources
- More robust integration and increased scalability in OLTP for IMS with IBM DB2® environments
- IMS infrastructure enhancements that help improve overall capability, usability, and resiliency of IMS and lower total cost of ownership

Selected features that deliver these benefits are summarized below.

Database manager

- Support for DDL to effect schema change in the IMS catalog, with capability to load application control blocks directly from the catalog
- Improved recovery of in-doubt work resulting from failures in IMS Fast Database Recovery (FDBR) environments
- Increased scalability for full-function OSAM HALDB databases
- Storage relief for OSAM data extent blocks (DEBs)
- Improved buffer management for sequential dependent parts (SDEPs) in Fast Path databases
- Easier recovery of inconsistencies in the Database Recovery Control (DBRC) RECON data set

Transaction manager

- Increased application availability through dynamic refresh of certain applications
- Improved throughput and failover protection for output messages on Open Transaction Manager Access (OTMA) transaction pipes (TPIPEs)
- Capability to fully define and manage IMS Multiple Systems Coupling (MSC) physical links using IMS commands
- Improved control over how IMS handles ISC sessions when an error recovery procedure (ERP) message is received
• Increased flexibility in IMS configuration across LPARs for users who are using IMS Transaction Manager Resource Adapter with extended architecture (XA) global transactions via IMS Connect
• Improved storage management for OTMA descriptors
• Improved flexibility and security through DL/I IMS callout enhancements that allow IMS applications to pass any type of outbound control data

Systems and infrastructure

• A new user exit that can capture data available to the IMS Monitor
• Ability to show changes that have not yet been hardened to the IMS repository
• IMS Connect command enhancements
• Improved usability in defining to the External Subsystem Attach Facility (ESAF) WebSphere® MQ or WebSphere Optimized Local Adapter (WOLA) environments
• Improvements that help reduce total cost of ownership of the IMS product

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

Overview

Large corporations worldwide across many different industries continue to depend on IBM IMS for mission-critical data processing. Transaction and data volumes have grown exponentially in recent years and so has IMS performance, offering an industry-leading benchmark of over 117,000 transactions per second in IMS 13. IMS 14 continues this commitment to support business growth in highly complex IT environments by delivering key enhancements in performance, scalability, usability, and availability across all areas of the product.

Easier application deployment and management

Connecting systems of engagement to systems of record is a critical success factor for many enterprise organizations today. With the explosion in the volume of mobile data being processed, the need for seamless application deployment and management and 24x7 availability exists more than ever before. IMS 14 helps you adapt to this growing need by enhancing the application capabilities of IMS while at the same time reducing the business impact of application deployment and management. It includes the following benefits:

• IMS 14 offers a standard DDL interface for schema change, broadening the available skill base for managing IMS. Also included is the capability to load application control blocks from the IMS catalog instead of ACBLIB, removing the need for the database description generation (DBDGEN), program specification block generation (PSBGEN), and application control block generation (ACBGEN) processes.
• Rolling out changes to applications that run as Wait for Input (WFI) or Pseudo Wait for Input (PWFI) is simpler in IMS 14 with a command enhancement that enables you to refresh PWFI or WFI programs in dependent regions without having to recycle the region.
• Users of extended architecture (XA) global transactions who are using the IMS TM Resource Adapter can now put IMS Connect and IMS on separate LPARs, offering greater flexibility and failover options.
• Users who use synchronous callout with the ICAL DL/I call can now specify and pass any type of control data to IMS Connect and its clients.

Support for growing transaction and data volumes

Increased deployment and usage of web-based, cloud, and mobile applications has led to an explosion in the volume of data that must be managed by core transactional systems within the enterprise. IMS 14 offers the following enhancements to meet the ever-burgeoning demands placed on these systems.
• For full-function OSAM database users, IMS 14 supports the growth of databases within a single IMS by reducing the amount of 24-bit private storage used for each open data set. This release also offers full-function users the capability to allow OSAM HALDB partition data sets to grow to 8 GB if not using the integrated HALDB Online Reorganization (OLR) function of IMS.
• A single IMS OTMA TPIPE can now support multiple active RESUME TPIPE requests. This new parallel threading capability can significantly improve failover protection as well as increase the throughput and efficiency for IMS callout applications as well as commit mode zero output.
• Buffer management is improved for sequential dependent parts (SDEPs) in Fast Path Data Entry Databases (DEDBs) when processing is asymmetric across LPARs.

Greater agility through dynamic change

Business needs can change quickly, and data resources and applications that power the enterprise must therefore adapt quickly as well. IMS 14 enables more dynamic change than ever before in the configuration of your IMS system and resources, reducing the need for planned outages. For example:

• Enhancements to IMS Connect commands make it easier to modify the IMS Connect configuration dynamically.
• You can now fully manage Multiple Systems Coupling (MSC) physical links dynamically without an outage.
• Storage management is improved for OTMA descriptors with changes in the way storage is allocated and higher limits on the number of descriptors.

Improved integration of IMS and DB2

IMS 14 enhances and extends the capabilities of IMS for more robust integration and scalable OLTP with DB2 for z/OS®. For example:

• IMS 14 includes a new sample user exit that makes it more straightforward to resolve in-doubt threads and potentially reduce the time that DB2 holds locks. The exit applies to IMS Fast Database Recovery (FDBR) users who use the IMS External Subsystem Attach Facility (ESAF) to communicate with DB2. The exit identifies and issues a message for each in-doubt unit of recovery in an IMS abend situation.
• For ESAF users who use IBM WebSphere MQ or WebSphere Optimized Local Adapter (WOLA), new subsystem types are added for these systems so that they are distinguishable from IBM DB2.

Infrastructure enhancements

IMS 14 continues to improve the overall capability, usability, and resiliency of IMS.

• Improved algorithms and more efficient instruction usage as well as a reduction in path length, contention, and elapsed CPU time all contribute to continued reduced total cost of ownership of the IMS product.
• Improved usability of the IMS repository with the ability to show which IMS resources have been changed but have not yet been hardened to the repository.
• Easier repair of inconsistencies in the DBRC RECON data set.
• Improved availability of ISC sessions on VTAM® connections through a new option that keeps the ISC VTAM session active after receiving an error recovery procedure (ERP) message.
• Ability to upgrade an IMS 12 or IMS 13 DBRC RECON data set to an IMS 14 RECON data set format, as well as coexistence capability that enables IMS 12 and IMS 13 to use an IMS 14 RECON data set.

Key prerequisites

IMS V14 requires:
- IBM z/OS V2.1 (5650-zOS), or later
- IBM z9® series or newer processors
- Java™ Dependent Regions require Java Development Kit (JDK) 7, or later
- IRLM 2.3
- IBM DB2 10, or later
- IBM CICS® 4.1, or newer (ISC using TCP/IP requires CICS 5.1)
- WebSphere MQ V7.0.1, or later
- WebSphere Application Server 8.5
- COBOL 5.1, or later (if using native SQL functions)

Refer to the Technical information section for details on required microcode levels and to the Hardware requirements and Software requirements sections for all prerequisites.

Planned availability date

IMS 14 (5635-A05) QPP start date: December 12, 2014

Description

Easier application deployment and management

IMS DDL support with load from catalog

IMS 14 users can now optionally use DDL to effect schema change, enabling customers to capitalize on DDL skills and tools in the marketplace. With IMS 14 you can also configure IMS to load application control blocks from the catalog instead of ACBLIB. These enhancements eliminate the need for PSBGEN, DBDGEN, and ACBGEN processes and managing the libraries associated with these processes.

Note: Use of the IMS catalog is still optional in IMS 14; the system generation processes and the PSBLIB, DBDLIB, and ACBLIB will continue to function as before.

Cascaded transaction support

IMS 14 now enables a global transaction using the IMS Transaction Manager Resource Adapter to be spread across IMS Connect and an IMS Control region that reside on different LPARs, increasing flexibility in IMS configuration across LPARs and enabling additional options for workload balancing. IMS Connect can route transactions to an IMS on another LPAR, enhancing availability and reliability. This is useful when the IMS on the same LPAR is unavailable.

The enhanced support is available for distributed configurations (where TMRA leverages TCP/IP to connect to IMS Connect); support is not enhanced for TMRA running on z/OS and connecting to IMS Connect using the local port.

DL/I ICAL support for control data

The DL/I ICAL call is enhanced in IMS 14 to allow an additional parameter in the application call list to pass control data items to IMS Connect, IMS Connect clients (for example, IMS SOAP gateway), and external servers. Multiple control data areas can be specified on a single ICAL. The control data area contains user- and IMS-defined tags that encapsulate data. Any type of data can be passed. Because multiple PORT and OPERATION keywords can be specified in a WSDL file, an application can specify the operation and the destination in the ICAL control data. In addition, user-provided information (SOAP headers, for example) can be passed to external servers via IMS SOAP Gateway, WebSphere DataPower®, or WebSphere Application Server.
The enhancement delivers the following benefits:

- Easing callout endpoint processing for IMS SOAP Gateway messages
- Strengthening callout security
- Reducing the number of destination descriptors in the system due to unique converter names

**Dynamic refresh of applications in WFI or PWFI regions**

A new command enables you to terminate all instances of an application running as wait for input (WFI) or pseudo wait for input (PWFI). The command can be issued to post programs scheduled in MPP PWFI regions, message-driven BMP regions or JMP regions, or programs scheduled in MPP regions with WFI=YES transactions. A new copy of the program is loaded the next time the program is scheduled. This function eliminates time-consuming effort to find all instances of the application and recycle the dependent regions in which the application is running, facilitating the rollout of application changes. The command is not supported for IFP regions, JBP regions, or MPP regions where the programs are preloaded in the DFSMPLxx member.

**Enhancements in synchronous callout**

IMS Synchronous Callout activity is recorded in the IMS logs by 6701 log records. These have been improved to offer a clearer understanding of the callout flows. Additionally, IMS 14 will include a COBOL sample for Synchronous Program Switch that illustrates the use of the ICAL to synchronously invoke other IMS transactions.

**Support for growing transaction and data volumes**

**Reduced usage of 24-bit storage for OSAM DEB control blocks**

This change moves the storage used for the OSAM DEB extension to a separate 31-bit storage area, allowing growth of IMS databases in a single IMS by reducing the amount of 24-bit private storage used for each open data set. The amount of 24-bit storage that is saved is dependent on the number of extents and the size of the sector table. The DEB as defined by DFSMS continues to be allocated in 24-bit storage.

**Up to 8 GB OSAM data set capacity for full-function HALDB databases**

This change enables you to increase OSAM HALDB partition data sets to 8 GB, increasing scalability for full-function databases. A new DBRC keyword is used to enable the 8 GB option and is supported by the DBRC API. **Note:** When an OSAM HALDB database is 8 GB-capable, the IMS HALDB online reorganization process cannot be run against that database.

**Automatic SDEP buffer management**

Currently, in Fast Path Data Entry Databases (DEDBs) when processing is asymmetric across LPARs, SDEP buffers are consumed and written at different rates, resulting in the inconsistent releasing of SDEP CIs after SDEP scan/delete processing. This can cause insufficient space for SDEPs, resulting in an outage for the application or database. IMS 14 relieves this condition through a new option to automatically perform QUITCI processing for SDEPs.

**OTMA TPIPE parallelism**

IMS 14 enables a single OTMA TPIPE to support multiple active RESUME TPIPEs. This architecture improves throughput and workload balancing and offers failover protection for both IMS callout applications and commit mode zero output. If the processing for any one RESUME TPIPE request becomes impaired, this parallel threading design enables OTMA to continue to deliver the output messages on the TPIPE through the other active RESUME TPIPE requests. The RESUME TPIPE
request, or the TPIPE itself, is thus prevented from becoming a bottleneck for output
messages from IMS.

Greater agility through dynamic change

**User exit enhancements**

A new IMS Monitor exit (IMSMON) in IMS 14 provides a clearly differentiated
programming interface (CDPI) for IMS customers and vendors to capture the same
data that is available to the IMS Monitor. This exit can be dynamically refreshed
without restarting the IMS control region. Additionally, new Type-2 commands
enable you to reload the Automated Operator Interface user exit without restarting
the IMS control region as well as query the Type-2 AOI exit routine.

**IMS Connect command enhancements**

In IMS 14, new Type-2 IMS Connect commands are added and existing IMS Connect
Type-2 commands are enhanced so that users can modify certain IMS Connect
configuration definitions dynamically, including creating and deleting IMSPlax
definitions as well as deleting port and data store definitions. These enhancements
improve overall IMS availability. Additionally, some existing commands are enhanced
to process synchronously so that the command response contains the complete
command result, improving usability.

**OTMA descriptor enhancements**

In IMS 14, IMS allocates storage for only those OTMA descriptors that are defined
rather than taking a fixed storage allocation at initialization time. Installations that
require more descriptors than were allowed in previous versions of IMS can now
increase the maximum allowed number of descriptors that can be defined, while
installations that use fewer descriptors than the maximum allowable number will find
that the OTMA descriptors use less ECSA storage. IMS 14 allows more descriptors
than prior releases: a maximum of 4095 member descriptors and 4095 destination
descriptors.

**Dynamic definition of Multiple Systems Coupling (MSC) resources**

IMS 14 enables Multiple Systems Coupling (MSC) physical links to be fully defined
and managed using IMS commands, eliminating the need to define the links through
system generation. Previously, the UPDATE and QUERY commands were added to
modify MSC definitions that were already defined in the system definition. This item
adds CREATE and DELETE commands to fully manage the links dynamically without
an IMS outage.

**Improved integration of IMS and DB2**

**FDBR in-doubt thread support for ESAF**

The External Subsystem Attach Facility (ESAF) supports the resolution of in-doubt
work on an external subsystem by a Fast Database Recovery (FDBR) region. IMS
14 supplies a sample exit routine (DFSFIDN0) that provides an example of how
to issue messages that can be used by automation to resolve the in-doubt units
of work. When FDBR begins recovering a failed IMS system, the DFSFIDN0 exit
is given control for each in-doubt unit of work that needs to be resolved. FDBR
passes information to the exit to indicate whether the work should be committed or
aborted. The exit can then use automation to take the appropriate action, which can
reduce the time that DB2 holds locks.

**ESAF subsystem definition enhancement**

In IMS 14, ESAF users who use WebSphere MQ or WebSphere Optimized Local
Adapter (WOLA) now have a way to declare these subsystems on the subsystem
type (SST) keyword in the SSM PROCLIB member. Commands and log records have
also been updated to reflect the SST keyword values for these external subsystems.
If the SSM PROCLIB member uses positional format instead of keyword format to specify parameters, the subsystem type defaults to DB2.

Infrastructure enhancements

**DBRC REPAIR command for the RECON data set**
IMS 14 offers an easy way to fix errors and inconsistencies in the RECON data set, which simplifies upgrading this data set between versions of IMS. Inconsistencies in the RECON DMB table record can occur and, in prior releases, could be fixed only during the RECON upgrade process. In IMS 14, a new DBRC REPAIR.RECON command is introduced to fix the RECON data set records, making migration to new IMS versions faster and making it possible to fix problems in the RECON data set records that occur after the upgrade process has been completed.

**ISC VTAM enhancement for ERP messages**
Before IMS 14, when an error recovery procedure (ERP) message was received by an IMS system via an ISC VTAM session, IMS kept the original message on the queue, closed the ISC session, and passed the ERP message to the master terminal operator (MTO). IMS 14 introduces a new parameter on the DFSDCxxx PROCLIB member that provides greater control over what IMS does with ISC sessions, improving the availability of ISC sessions on VTAM connections and aiding the diagnosis of ISC message errors by routing the error messages to wherever it is most convenient for IMS operators to receive them.

**IMS repository enhancements**
The IMS 14 repository function includes enhancements that improve usability of the repository. For example, a new EXPORTNEEDED parameter has been added to the DFSURCLE0 utility, enabling users to create a nonsystem resource definition data set (RDDS) from the IMS log with only the resource definitions that have not been exported to the IMSRSC repository. Support for this parameter has been added on the SHOW keyword of certain QUERY commands to display all of the runtime resources that have been created or updated but have not been exported to the repository.

**OTMA enhancements**
IMS 14 offers several other OTMA enhancements in addition to those already mentioned. Selected examples include:

- IMS OTMA support for RACF® ENF provides for the automatic refreshing of cached user IDs when they are changed in RACF. This removes the requirement to issue the /SECURE OTMA REFRESH command.
- IMS OTMA users can now increase the initial save area prefix (SAP) allocation for OTMA clients. This will aid in alleviating selective dispatching during busy periods.
- IMS conversations can currently be orphaned in OTMA if not properly terminated. The addition of the conversation identifier (CONVID) to the OTMATI command provides the information required to release the conversations with the /EXIT CONV command.
- IMS OTMA can now provide connection authorization for OTMA clients using RACF without having to enable transaction and command security. This enables users to dictate which clients can access OTMA, even when they do not require authorization for the individual requests.

**Improved monitoring of CQS usage**
This enhancement provides monitoring tools with additional information about utilization of the IMS Common Queue Server (CQS) coupling facility. This information can be used to take actions to avoid structure overflow and structure full conditions to improve IMS and CQS availability in a Sysplex environment.
Reduced total cost of ownership (TCO)

IMS 14 continues efforts to optimize IMS to run more efficiently, thereby reducing total cost of ownership. Examples of functions delivered in this area include:

- Removal of the BMP restriction for shared queues/local first processing
- Code that lowers the CPU time spent in the cancel timer request path in IMS Connect
- Logger enhancements, including streamlining register use, reducing path length, and increasing the CP log interval to 2 GB

Additional IMS 14 items from the IMS service process

PL/I API in IMS runtime

IMS SOAP Gateway and RD/z Enterprise Service Tools deliver support for top-down development of IMS Web service providers with IMS transactional applications written in PL/I. The runtime APIs enable seamless transmission of SOAP structures and the SOAP message context between IMS Connect and the IMS PL/I transactional application. The runtime APIs are used by both the compiled SOAP converters in IMS Connect and the template program of the IMS PL/I transactional application. The PL/I API in the past has resided in RDz runtime and, via the IMS 12 service process, will now reside in IMS runtime for IMS 12 and later. Use of the PL/I runtime APIs requires RDz V9.0.1.1 and IMS Enterprise Suite V3.1.

Exit for PSBNAME and DATA STORE name in an ACCRDB

Open Database Manager (ODBM) enables distributed and local access to IMS databases that are managed by IMS DB systems configured for either the DBCTL or the DB/TM environments in an IMSPlex. ODBM runs in a Common Service Layer (CSL) address space that ODBM uses for both communications and command processing. This APAR adds an exit that allows the PSBNAME and DATASTORE name in an ACCRDB command (a distributed data management architecture command) to be modified before IMS member CSLDCxxx is processed. This enhancement is being made through the IMS service process for IMS 11, and later.

Data capture enhancement for replication

This enhancement adds options to capture DEDB subset pointer update information and unkeyed twin insert positioning information. The subset pointer support enables replication products to replicate subset pointer information in DEDBs so that this information can be used by applications on the replicated database to improve access performance. The twin insert information enables a replication product to position properly before inserting a non-unique keyed segment or unkeyed segment when inserted into the middle of a twin chain (and when unique data exists for all twins in the chain). The replication product can then keep the twins in the same order as the production database. This enhancement is being made through the IMS service process for IMS 13, and later.

FLD Call support for replication

This enhancement adds an option to capture DEDB updates made by the DL/I FLD call and log the updates in a change capture log record. This change enables these updates to be leveraged by data replication solutions. This enhancement is being made through the IMS service process for IMS 13, and later.

Accessibility by people with disabilities

A US Section 508 Voluntary Product Accessibility Template (VPAT) containing details on the product’s accessibility compliance can be requested via IBM’s website:

**Product positioning**

IMS is IBM's premier transaction and hierarchical database management system. Exclusive to the z/OS platform, IMS 14 complements DB2, CICS, and WebSphere servers for database and transaction management. Ongoing integration efforts mean that IMS can continue to add significant value to a multi-tier enterprise architecture.

IMS Database Manager is a hierarchical model; DB2, Oracle, and desktop systems use a relational model. Each database model continues to evolve with unique roles to play. Mission-critical processing that requires unparalleled performance is best served by a hierarchical model. Analytics and business intelligence are best served by a relational model. Most Fortune 100 companies use both.

Operational data is stored in hierarchical form and can be accessed easily by BI and analytics tools. IMS data can be accessed directly or propagated and replicated with relational data in support of BI. IBM includes standard application interfaces and drivers to access IMS as well as other data. Both relational data and hierarchical IMS data can be efficiently accessed, together or independently, using the IMS Transaction Manager, CICS, and WebSphere servers.

IMS Transaction Manager (IMS TM) is one of three strategic IBM application managers (along with CICS and WebSphere Application Server). Each provides unique capabilities. IMS TM excels in application management, data storage, and data access and applies strict rules for this access. WebSphere applies simplified access rules, serving the web and integrating data that may be less defined. Enterprise customers use both application managers for specific purposes: IMS TM for mission-critical high-performance processing and WebSphere for web-based applications.

IMS, IBM Rational®, and WebSphere products continue to deliver new levels of tooling and integration. Enterprise customers can take advantage of Rational Developer for System z® to maintain and enhance trusted IMS applications and develop web applications. Using the IMS Universal database drivers, WebSphere applications can access IMS database data directly using industry standard JDBC and SQL.

IBM continues to invest in new IMS features to help customers improve business efficiency and lower costs. Improvements in IMS 14 for database and systems administrators can drive additional operational efficiencies and cost savings. Synergy with System z platform components can reduce CPU use by leveraging the latest processor improvements, larger amounts of memory, solid-state disk, and z/OS enhancements. IMS 14 delivers savings you can count on and is a great fit for your IT future.

**Hardware and software support services**

**SmoothStart/installation services**

IBM Installation Services are provided for IMS by IBM Global Services or your IBM Business Partner at an additional cost. For additional information, contact your IBM representative and ask for Installation Services for IMS.

Additional technical services (planning and migration assistance, performance tuning, and other services) can be obtained through the Worldwide IMS Product Affinity Services team. For more information, contact the team at dmservices@us.ibm.com
Program number

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<td>14.1.0</td>
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Technical information

Specified operating environment

Hardware requirements

Processors:

IMS 14 operates on processors capable of running z/OS V2.1, or later.

Additional line-item requirement information is provided in the IMS 14 Release Planning publication, which will be made available to program participants.

Software requirements

IMS 14 operates under z/OS V2.1 configurations, or subsequent versions, releases, and modification levels, unless otherwise stated, and requires the following minimum version, release, or modification levels:

- z/OS V2.1 (5650-zOS) with DFSMSdfp (a base element of z/OS V2.1)
- RACF (included in a separately orderable Security Server feature of z/OS V2.1), or equivalent, if security is used
- IBM High-Level Assembler Toolkit, a separately orderable feature of z/OS V2.1

IMS 14 also operates in a virtual machine under control of z/OS V2.1 and is intended for use in a customer program development, testing, and non-XRF production environment, with some restrictions.

Additional line-item requirement information is provided in the IMS 14 Release Planning publication, which will be made available to program participants.

IMS 14 DB can be connected using the appropriate interface to IMS 14 TM (5635-A05), CICS Transaction Server for z/OS V4.1, or later, WebSphere Application Server V8.5, or later, DB2 for z/OS V10, or later, and user-written software.

IMS 14 TM can be connected using the appropriate interface to IMS 14 TM (5635-A05), or later, IMS 14 DB (5635-A05), or later, CICS Transaction Server for z/OS V4.1, or later, WebSphere Application Server V8.5, or later, DB2 for z/OS V10, or later, and user-written software.

The IMS ETO feature requires the IMS TM feature.

The IMS Remote Site Recovery (RSR) Record Level Tracking (RLT) feature requires either the IMS TM or the IMS DB feature.

The IMS RSR Database Level Tracking (DLT) feature requires the IMS RSR RLT and IMS DB features.

Compatibility

- IMS 14 is upwardly compatible from previous versions, allowing existing applications and data to be used without change. Migration and coexistence support is provided for IMS 12 and 13. For the latest details review the Preventive Service Planning (PSP) information at http://www14.software.ibm.com/webapp/set2/psearch/search?domain=psp
- IMS 12 is the last release to support the Multiple Area Data Sets I/O Timing function.
- IMS 13 is the last release to support Full Function XRF with Data Sharing.

Performance considerations

IMS 14 continues to deliver the highest performance at the lowest cost per transaction in the industry.

User group requirements

This announcement satisfies or partially satisfies requirements from one or more of the worldwide user group communities.

- RFE 29712 - OTMA TPIPE queue depth monitoring
- RFE 30895 - Provide 8 GB OSAM for IMS HALDB databases
- RFE 32068 - Parameter for initial number of OIM TCB SAPs
- RFE 32757 - List of definitions not yet exported to repository at shutdown
- RFE 32866 - Support for RACF ENF notifications
- RFE 33312 - OIM selective dispatching
- RFE 34353 - Provide a pointer to IMS internal prefix in OTMA exit DFSYIOE0
- RFE 35607- Lack of DEDB FLD call data capturing for InfoSphere® IMS Replication
- RFE 35707 - Allow a Global Transaction to be spread across multiple IMS Connect and IMS Control region on different LPARs
- RFE 36117 - DEDB SSP (subset pointer) should be supported by IMS replication
- RFE 36266 - Alternate ISC logic
- RFE 36274 (partial) - Ability to refresh all IMS user exits
- RFE 36294 - Command for programs on PWFI regions to be refreshed
- RFE 36298 - Provide ability to activate OTMA client bid security independently from transaction/command security
- RFE 36301 - Add a command to force refresh of user programs copy in a region
- RFE 38557 - An exit that allows the PSBNAME and DATA STORE name in a ACCRDB command to be modified before CSDLCKER processing
- RFE 53398 - Raise the limit of OTMA descriptors
- RFE 54598 - OTMA reroute wastes CPU
- MR062512687 (partial) - IMS sync callout: Need to be able to support a control data area on ICAL
- MR0817095222 - More autonomic management of SDEP buffers in the subsystems sharing in an IMS Sysplex
- MR0927046132 - Add/Delete datastore with IMS Connect extensions
- zBLC # PLAC0707-1082 - FDBR for DB2 or similar: Need to solve in-doubt locks quickly
Planning information

Direct customer support

Direct customer support is provided by IBM Operational Support Services - SoftwareXcel Enterprise Edition or SoftwareXcel Basic Edition. These fee services can enhance your productivity by providing voice and electronic access into the IBM support organization. IBM Operational Support Services - SoftwareXcel Enterprise Edition or SoftwareXcel Basic Edition will help answer questions pertaining to usage, how-to, and suspected software defects for eligible products.

Installation and technical support is provided by IBM Global Services. For more information on services, call 888-426-4343.

Security, auditability, and control

The announced program uses the security and auditability features of the host hardware or 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 following softcopy publication is available from the IBM Publications Center at

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

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<tr>
<th>Title</th>
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<tr>
<td>IMS Version 14 Program Directory</td>
<td>GI10-8988</td>
<td>December 2014</td>
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IMS product information for the QPP program will be made available to QPP customers in PDF and XHTML format.

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 US, Canada, and several countries in Europe. In countries where ShopzSeries is not available yet, contact your IBM representative (or IBM Business Partner) to handle your order via the traditional IBM ordering process. For more details and availability, visit the ShopzSeries website at


New licensees

Orders for new licenses can be placed now.

Registered customers can access IBMLink for ordering information and charges.

Shipment will not occur before the availability date.

Unless a later date is specified, orders entered before the planned availability date will be assigned a schedule date of one week following availability.

Unless a later date is specified, an order is scheduled for the week following order entry.

New users of IMS 14 should specify:
Type: 5635 Model: A05

CFSW configuration and order entry capability are available.

**Parallel sysplex license charge (PSLC) basic license**

To order a basic license, specify the program number and quantity of MSU.

If there is more than one program copy in a Parallel Sysplex®, the charge for all copies is associated to one license by specifying the applicable PSLC license options and quantity represented by the sum of the MSUs in your Parallel Sysplex. For all other program copies, specify the System Usage Registration No-Charge (SYSUSGREG NC) Identifier on the licenses.

Program name: Information Management System Version 14

Program PID: 5635-A05

<table>
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**Advanced Workload License Charges (AWLC) basic license**

The AWLC pricing metric leverages the reporting mechanisms and existing MSU per hour tiers of the Variable Workload License Charges (VWLC) pricing model while extending the software price/performance provided by the VWLC tiers. For details, refer to Software Announcement 210-238, dated July 22, 2010.

Program name: Information Management System Version 14

Program PID: 5635-A05

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**Advanced Entry Workload License Charges (AEWLC) basic license**

The AEWLC pricing metric leverages the reporting mechanisms and existing Millions of Service Units per hour (MSU) tiers of the Entry Workload License Charges (EWLC) pricing metric while extending the software price/performance provided by EWLC and MWLC. For details, refer to Software Announcement 211-250, dated July 12, 2011.

Program name: Information Management System Version 14

Program PID: 5635-A05

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Workload License Charge (WLC) Basic License

If there is more than one program copy in a Parallel Sysplex, the charge for all copies is associated to one license by specifying the applicable WLC license options and quantity represented by the sum of the Service Units in Millions (MSUs) in your Parallel Sysplex. For all other program copies, specify the Workload Registration Variable WLC Identifier on the licenses.

Program name: Information Management System Version 14

Program PID: 5635-A05

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Entry Workload License Charge (EWLC) Basic License

To order a basic license, specify the program number and the quantity of MSUs.

To order EWLC software, specify the program number and the EWLC monthly charge feature number from the following table. Also, specify the feature number for the desired distribution medium.

Program name: Information Management System Version 14

Program PID: 5635-A05

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S/390® and System z Usage License Charge, basic license

Specify the applicable S/390 and System z Usage License Charge option.

Charges will be based upon the Peak MSUs. Usage reported between thresholds of features 1, 2, or 3, will be rounded up to the next MSU level. Above 1.0 MSU, usage will be rounded to the nearest whole MSU. For example, 2.4 MSUs would round to 2.0 MSUs for pricing, and 2.5 MSUs would round to 3.0 MSUs for pricing.

Program name: Information Management System Version 14

Program PID: 5635-A05

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**Growth opportunity license charge (GOLC)**

To order a basic license, specify the program number and the correct level. Specify the GOLC monthly charge feature number from the following table.

Program name: Information Management System Version 14
Program PID: 5635-A05

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Also, specify the feature number for the desired distribution medium.

**System z entry license charge (zELC)**

To order zELC software, specify the program number and the zELC Processor Group. Specify the zELC monthly charge feature number. Also, specify the feature number for the desired distribution medium.

Specify the zELC monthly license option.

Program name: Information Management System Version 14
Program PID: 5635-A05

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**Single version charging**

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

**Basic machine-readable material**

Orderable Language Distribution Description
--- | --- | --- | ---
S017K85 | English | CST3590-128T | IMS V14 Extended Terminal Op QPP, ENU
S017K87 | English | CST3590-128T | IMS V14 DB-Level Tracking QPP, ENU
S017K83 | English | CST3590-128T | IMS V14 Database Manager QPP, ENU
S017K84 | English | CST3590-128T | IMS V14 TM QPP, ENU
S017K86 | English | CST3590-128T | IMS V14 RLT QPP, ENU

The following softcopy publication is available from the IBM Publications Center at
 IMS Version 14 Program Directory  GI10-8988  December 2014

IMS product information for the QPP program will be made available to QPP customers in PDF and XHTML format.

**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).


**Customized offerings**

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

CBPDO and ServerPac are offered for Internet delivery in countries where ShopzSeries product ordering is available. Internet delivery reduces software delivery time and allows you to install software without the need to handle tapes. For more details on Internet delivery, refer to the ShopzSeries help information at [http://www.software.ibm.com/ShopzSeries](http://www.software.ibm.com/ShopzSeries)

You choose the delivery method when you order the software. IBM recommends Internet delivery. In addition to Internet and DVD, the supported tape delivery options for CBPDO, ServerPac, SystemPac include:

- 3590
- 3592

Most products can be ordered in ServerPac and SystemPac the month following their availability on CBPDO. z/OS can be ordered via all three offerings at general availability. Production of software product orders will begin on the planned general availability date.

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

**Terms and conditions**

**Agreement**
IBM Customer Agreement

**Variable charges apply**
No

**Indexed monthly license charge (IMLC) applies**
No

**Location license applies**
No
**Use limitation applies**

No

**Educational allowance available**

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

**Volume orders**

Not applicable

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</table>

**Warranty applies**

Yes

**Licensed program materials availability**

Restricted Materials of IBM: None
Non-Restricted Source Materials: Some
Object Code Only (OCO): Some

**Program services**

Support Center applies: Yes
Access is available through the IBM Support Center
Available until discontinued: 12 months’ written notice
APAR Mailing Address: IBM Corporation
555 Bailey Avenue
San Jose, CA 95141

**IBM Operational Support Services - SupportLine**

Yes

**Statement of good security practices**

IT system security involves protecting systems and information through prevention, detection, and response to improper access from within and outside your enterprise. Improper access can result in information being altered, destroyed, or misappropriated or can result in misuse of your systems to attack others. Without a comprehensive approach to security, no IT system or product should be considered completely secure and no single product or security measure can be completely effective in preventing improper access. IBM systems and products are designed to be part of a comprehensive security approach, which will necessarily involve additional operational procedures, and may require other systems, products, or services to be most effective. IBM does not warrant that systems and products are immune from the malicious or illegal conduct of any party.
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Now integrated into the base operating system of AIX® V5.3, AIX V6.1, and AIX V7.1, Electronic Service Agent is designed to automatically and electronically report system failures and utilization issues to IBM, which can result in faster problem resolution and increased availability. System configuration and inventory information collected by the Electronic Service Agent tool can also be viewed on the secure Electronic Support web portal, and used to improve problem determination and resolution by you and the IBM support team. To access the tool main menu, simply type smitty esa_main, and select Configure Electronic Service Agent. In addition, ESA now includes a powerful web user interface, giving the administrator easy access to status, tool settings, problem information, and filters. For more information and documentation on how to configure and use Electronic Service Agent, refer to http://www.ibm.com/support/electronic

The IBM Electronic Support portal is a single Internet entry point that replaces the multiple entry points traditionally used to access IBM Internet services and support. This portal enables you to gain easier access to IBM resources for assistance in resolving technical problems. The My Systems and Premium Search functions make it even easier for Electronic Service Agent tool-enabled customers to track system inventory and find pertinent fixes.

Benefits

Increased uptime: The Electronic Service Agent tool is designed to enhance the Warranty or Maintenance Agreement by providing faster hardware error reporting and uploading system information to IBM Support. This can translate to less wasted time monitoring the symptoms, diagnosing the error, and manually calling IBM Support to open a problem record. Its 24x7 monitoring and reporting mean no more dependence on human intervention or off-hours customer personnel when errors are encountered in the middle of the night.

Security: The Electronic Service Agent tool is designed to be secure in monitoring, reporting, and storing the data at IBM. The Electronic Service Agent tool securely transmits via either the Internet (HTTPS or VPN) or modem, and can be configured to communicate securely through gateways to provide you a single point of exit from your site. Communication is one way. Activating Electronic Service Agent does not enable IBM to call into your system. System inventory information is stored in a secure database, which is protected behind IBM firewalls. It is viewable only by you and IBM. Your business applications or business data is never transmitted to IBM.

More accurate reporting: Because system information and error logs are automatically uploaded to the IBM Support Center in conjunction with the service request, you are not required to find and send system information, decreasing the risk of misreported or misdiagnosed errors. Once inside IBM, problem error data is run through a data knowledge management system and knowledge articles are appended to the problem record.

Customized support: Using the IBM ID entered during activation, you can view system and support information in the My Systems and Premium Search sections of the Electronic Support website at
My Systems provides valuable reports of installed hardware and software using information collected from the systems by Electronic Service Agent. Reports are available for any system associated with your IBM ID. Premium Search combines the function of search and the value of Electronic Service Agent information, providing advanced search of the technical support knowledgebase. Using Premium search and the Electronic Service Agent information that has been collected from your system, you are able to see search results that apply specifically to your systems.

For more information on how to utilize the power of IBM Electronic Services, contact your IBM Systems Services Representative, or visit

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

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**Prices**

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