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## Highlights

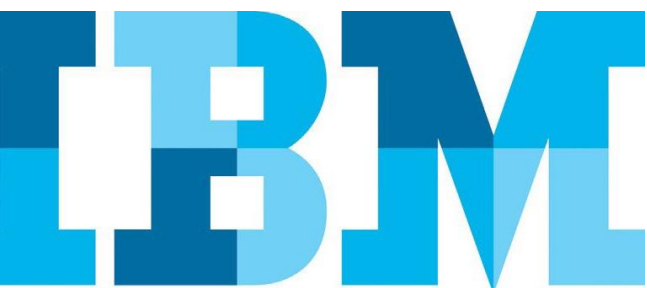
- Provides high speed data unloading of HDAM, PHDAM, HIDAM, PHIDAM, HISAM, and SHISAM database data
  - Uses the IMS High Speed Sequential Engine (HSSR) for high performance segment retrieval reducing CPU and unload elapsed time
  - Unloads compressed databases without having to decompress the database segments
  - Program Number: 5655-E06
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# IMS High Performance Unload

*Unloads IMS Full-Function and HALDB Databases*

IMS™ is IBM's premier transaction and hierarchical database management system. IMS was designed for high availability, superior performance, growth and capacity, and full database integrity. The ability to operate and manage this highly complex IMS system and database environment determines the Total Cost of Operation (TCO). The IBM® IMS Tools lowers TCO by equipping IMS system programmers and IMS database administrators (DBAs) with the facilities they need to effectively monitor and manage this mission-critical environment. The IBM IMS Tools provide automation, validation, and auditing of all database and transaction management activities.

The *IMS High Performance Unload* tool uses the High Speed Sequential Engine to unload Full-Function and HALDB databases faster than traditional IMS DL/I methods. This specialized engine utilizes a number of techniques to improve performance especially when it is seamlessly combined with the *IMS Online Reorganization Facility* and *IMS Database Reorganization Expert* tools.



## IMS High Performance Unload

When an IMS database is initially created, unloaded for maintenance, restructuring, or IMS database reorganization, the *IMS High Performance Unload* product is used to take the data out of the IMS database. The *IMS Database Reorganization Expert* tool and the *IMS Online Reorganization Facility* use the *IMS High Performance Unload* program as part of the IMS database reorganization process. The *IMS High Performance Unload* tool is a replacement for the *IMS HD Reorganization Unload* utility that is part of the IMS product.

## IMS Database Solution Key Component

The *IMS High Performance Unload* product is part of two IBM IMS Solutions. The first is the *IMS Database Solution Pack* as shown in Figure 1, and the second is the smaller *IMS Database Utility Solution* as shown in Figure 2.

IMS Database Solution Pack	
IMS High Performance Load	IMS High Performance Unload
IMS Database Reorganization Expert	IMS Online Reorganization Facility
IMS Index Builder	IMS High Performance Prefix Resolution
IMS High Performance Pointer Checker	IMS High Performance Image Copy
IMS HALDB Toolkit	IMS Library Integrity Utilities
IMS Database Repair Facility	IMS Database Sensor

Figure 1: *IMS High Performance Unload* in *IMS Database Solution*

If the data is in a compressed format, the *IMS High Performance Unload* product can unload the compressed data without needing to first decompress it. The *IMS High Performance Unload* tool is fully integrated with IMS DBRC. The tool also supports dynamic allocation making it unnecessary to include a JCL DD statement for each database that is being unloaded.

IMS Database Utility Solution	
IMS High Performance Load	IMS High Performance Unload
IMS HALDB Toolkit	IMS Index Builder
IMS High Performance Image Copy	IMS Database Reorganization Expert
IMS Database Sensor	

Figure 2: *IMS High Performance Unload* in *IMS Database Utility Solution*

## IMS Database Types Supported

The *IMS High Performance Unload* tool supports both IMS Full Function and IMS High Availability Large Database (HALDB) databases including HDAM, HIDAM, HISAM, SHISAM, PHDAM, and PHIDAM database types. It also supports IMS non-HALDB and HALDB databases with logical relationships and secondary indexes.

## IMS High Speed Sequential Retrieval (HSSR)

The *IMS High Performance Unload* tool uses a specialized high speed engine to sequential retrieve records from an IMS database. HSSR performs several functions to achieve high performance. For example, it analyzes database call prior to retrieving the segments from the database. HSSR can trace database calls, produce statistical reports, and provide diagnostics for errors found in the database. Optionally, HSSR can perform sequence-key checks for twin chains and it can continue the process of unloading the data even if sequence errors are found in the database. Similarly, it can unload a database that is corrupted with incorrect pointers.

## Generates Statistical Reports

The *IMS High Performance Unload* tool generates statistical reports that are used during IMS database reorganization to help determine when a reorganization is actually needed. The reports can be also be used to measure the quality of the HDAM and PHDAM randomizing routines. An example of the Segment Count Summary report is shown in Figure 3.

```

TMS_HTC01 PERFORMANCE UNLOAD                                PAGE 1
5055 - F08                                                    07/13/2016
"SEGMENT COUNT SUMMARY"
DBNAME - TIV3P1      DS GROUPS - 1      ORG - ITDAM      ACCESS METHOD -
OUTPUT - SYSUT2
*** SEGMENT COUNT IN WHOLE DB ***

```

SEGNAME	LVL	DSG	PARENT	RETRIEVED	UNLOADED	DELETED BY
ROOT	01			3	3	N/A
DEP1	02	01	ROOT	0	0	N/A
DEP1	02	01	ROOT	0	0	N/A
DEP/NK1	03	01	DEP1	0	0	N/A
DEP/NK2	03	01	DEP1	0	0	N/A
DEP2	03	01	DEP1	0	0	N/A
DEP3	03	01	DEP1	0	0	N/A
DEP4	03	01	DEP1	0	0	N/A
DEP5	03	01	DEP1	0	0	N/A
DEP6	03	01	DEP1	0	0	N/A
DEP7	03	01	DEP1	0	0	N/A
DEP/NK1	04	01	DEP5	0	0	N/A
DEP/NK2	04	01	DEP5	0	0	N/A
DEP8	04	01	DEP5	0	0	N/A
TOTAL				6	6	N/A
TOTAL ERRORS				0		

Figure 3: IMS High Performance Unload Segment Count Summary

## For more information

To learn more about the IBM IMS Tools product line, please contact your IBM representative or IBM Business Partner, or visit: [ibm.com/software/data/db2imstools/products/ims-tools.html](http://ibm.com/software/data/db2imstools/products/ims-tools.html)

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