Installation and Migration

Information Management software

Installation and Migration

- Packaging, Prerequisites and Coexistence

- IMS Publications Changes

- IMS Tools support

- IVP and Syntax Checker Enhancements

- Installation and Migration Tasks

Packaging, Prerequisites and Coexistence

IMS 12 Packaging

- IMS 12 product number: 5635-A03

FMID	Feature Description
HMK1200	System Services
JMK1201	Database Manager
JMK1202	Transaction Manager
JMK1203	Extended Terminal Option (ETO)
JMK1204	Recovery Level Tracking (RSR)
JMK1205	Database Level Tracking (RSR)
JMK1206	IMS Java and On Demand
HIR2220	IRLM 2.2
HIR2230	IRLM 2.3

IMS 12 Hardware Prerequisites

- **IMS 12 requires the following hardware:**

  - A 64-bit IBM zSeries® processor running in z/Architecture® mode (ESA mode is not supported by IMS 12)

  - Capable of running z/OS Version 1 Release 11 or later

  - A processor that supports the Long Displacement Facility of the z/Architecture

- **Sysplex data sharing**

  - Requires Coupling Facility (CF) level 9 or later

- **Shared Queues and Shared EMH**

  - Require Coupling Facility (CF) level 9 or later

  - System managed duplexing requires CF level 12 or later and bidirectional CF to CF links

IMS 12 Software Prerequisites

- **Minimum software level prerequisites**
  - z/OS V1R11 (5694-A01)
  - DFSMS APAR OA33409 for V1R11
  - High Level Assembler Toolkit (5696-234), Version 1 Release 5
  - SMP/E V3R5
  - RACF, or equivalent, if security is used
  - IRLM 2.2, if IRLM is used
- **Minimum software levels for optional functions:**
  - Parallel RECON Access requires Transactional VSAM
  - Java Dependent Regions require JDK 6.0
  - The IMS Universal Drivers require JDK 6.0
  - Greater than 16 VSAM pools requires DFSMS APAR OA32318
  - CA Reclaim requires z/OS V1R12
  - EAV support for non-VSAM data sets requires z/OS V1R12

IMS Enterprise Suite for z/OS, V2.1 (5655-T62)

- Available October 28, 2011

- The SOAP Gateway, Connect API for Java™, Java Message Services (JMS) API, and Base Services components for running in the z/OS environments are orderable

- IMS Explorer (NEW), DLIModel Utility, Connect API for C, SOAP Gateway, Connect API for Java components for running in Windows® or Linux® environments can be downloaded from the IMS website

- Details at: http://www.ibm.com/ims

Additional IMS 12 Prerequisites

- See the IMS 12 Release Planning (GC19-3019-01) for additional requirements
  - Available at: https://www-304.ibm.com/support/docview.wss?uid=swg27019860
  - Available in the Information Center at: http://publib.boulder.ibm.com/infocenter/dzichelp/v2r2/index.jsp

Prerequisite Maintenance

- **Fixes for Migration Download enhanced holddata**

  – Run SMPE: REPORT MISSINGFIX (FIXCAT)

The following are the categories that we have defined for IMS (the ones in red were set up for tools to use in their service):

Category: **IBM.Coexistence.IMS.V10**
  Keywords: IMSV10COEX/K
  Description: Fixes that allow IMS V8 and V9 to coexist with, and fallback from, IMS V10.
Category: **IBM.Coexistence.IMS.V11**
  Keywords: IMSV11COEX/K
  Description: Fixes that allow IMS V9 and V10 to coexist with, and fallback from, IMS V11.
Category: **IBM.Coexistence.IMS.V12**
  Keywords: IMSV12COEX/K
  Description: Fixes that allow IMS V10 and V11 to coexist with, and fallback from, IMS V12.

Category: **IBM.TargetSystem-RequiredService.IMS.V10**
  Keywords: IMSV10TGT/K
  Description: Fix required on other IBM products to allow them to run with IMS V10.
Category: **IBM.TargetSystem-RequiredService.IMS.V11**
  Keywords: IMSV11TGT/K
  Description: Fixes required on other IBM products to allow them to run with IMS V11.
Category: **IBM.TargetSystem-RequiredService.IMS.V12**
  Keywords: IMSV12TGT/K
  Description: Fixes required on other IBM products to allow them to run with IMS V12.

http://www-03.ibm.com/systems/z/os/zos/smpe/fixcategory.html

778

Support Status of IMS Versions

- **IMS Version 9**
  - End of service was November 7, 2010

- **IMS Version 10**
  - Generally available on October 26, 2007
  - End of service is November 5, 2012 - NEW

- **IMS Version 11**
  - Generally available on October 30, 2009
  - End of service has not been announced

- **IMS Version 12**
  - Generally availability on October 28, 2011
  - End of service has not been announced

Withdrawn Support

- IMS 11 is the last release to support the SMU-to-RACF utilities

  - IMS 9 was the last version of IMS to support SMU

  - Migration from SMU to RACF or an equivalent product should be done on IMS 9 or earlier

- IMS 10 is the last release to support z/OS-based batch DLIModel utility

  - IMS Enterprise Suite V1.1 DLI Model Utility plug-in should be used with IMS 12

- IMS 12 is the last release to support the SECURITY macro in system definition

  - Use the initialization parameters

  - RCLASS and SECCNT for V12 and V11

    - PM48204/UK74051 V12 SPE, PM48203/UK74050 V11 SPE

Withdrawn Support

- **IMS 11 is the last release to support the Knowledge Based Log Analysis (KBLA) facility**
  - Customers using this function should migrate to use other IMS-provided analysis utilities and reports, such as
    - Fast Path Log Analysis utility (DBFULTA0)
    - File Select and Formatting Print utility (DFSERA10)
    - IMS Monitor Report Print utility (DFSUTR20)
    - Log Transaction Analysis utility (DFSILTA0)
    - Offline Dump Formatter utility (DFSOFMD0)
    - Statistical Analysis utility (DFSISTS0),
    - Other complementary products, such as IMS Problem Investigator, IMS Performance Analyzer, or similar products.

IMS 12 Supported Connections

- **DB2 connections are supported with**

  – DB2 for z/OS 10, 9 and 8

- **DBCTL connections are supported with**

  – CICS Transaction Server V 4.2, V4.1, V3.2 and V3.1

- **Java application programs using JDBC access to IMS DB from WebSphere Application Server for z/OS require**

  – WebSphere Application Server for z/OS 7.0.1 or later

- **IRLM 2.3 and IRLM 2.2 are supported**

  – IMS 12, IMS 11 and IMS 10 may use either IRLM 2.2 or IRLM 2.3

  – IRLM 2.3 and IRLM 2.2 may participate in the same data sharing group and connect to the same lock structure

IMS 12 Supported Connections

- **ISC is supported with**
  - IMS 12, IMS 11, and IMS 10
  - CICS Transaction Server V 4.2, V4.1, V3.2 and V3.1
  - User-written software

- **MSC is supported with**
  - IMS 12
  - IMS 11
  - IMS 10

- **Shared Queues is supported with**
  - IMS 12
  - IMS 11
  - IMS 10

Supported Migrations and Coexistence - DBRC

- **IMS 11 to IMS 12**

  - Upgrade RECONs from IMS 11 to IMS 12

    - IMS 11 SPE PM05244 / UK62971 allows IMS 11 to use IMS 12 RECONs

  - Databases are compatible

  - Application programs are compatible

- **IMS 10 to IMS 12**

  - Upgrade RECONs from IMS 10 to IMS 12

    - IMS 10 SPE PM05243 / UK62970 allows IMS 10 to use IMS 12 RECONs

  - Databases are compatible

  - Application programs are compatible

IRLM 2.3

- IRLM 2.3 and IRLM 2.2 are both shipped with IMS 12

- IRLM 2.3 and IRLM 2.2 may be used with any supported version of IMS
  - IRLM 2.3 is required by DB2 Version 10
    - IRLM 2.3 has 64-bit caller interface
      - IMS continues to use the 31-bit caller interface
  - IRLM 2.3 requires z/OS 1.10 or higher

- IRLM 2.3 provides improved performance for some requests
  - We do not expect a substantial performance improvement with IRLM 2.3 with IMS

DBCTL, ODBA and ODBM Migration

- The DRA interface modules must be at the same version as IMS
  - Copy DFSPRRC0 and DFSPZPxx load modules to the address spaces which communicate with IMS
    - Include these modules from IMS 12 in the CICS, ODBM and ODBA (DB2 Stored Procedures, WebSphere Application Server, etc.) address spaces

Migration with DRD

- IMS 12 system may be cold started with RDDS from IMS 11 or IMS 10
  - IMSID must remain the same

- IMS 11 or IMS 10 system may be cold started with RDDS from IMS 12 for fall back
  - IMSID must remain the same

CSL Coexistence

- **IMS 12, IMS 11 and IMS 10**

  - CSL address spaces and IMS may be at mixed levels

    - SCI, OM, RM, ODBM and IMS subsystems may be at IMS 12, IMS 11 and IMS 10

  - IMS 12 is recommended for the CSL address spaces

- **IMS Repository requires IMS 12 RM**

  - Migration SPEs for IMS Repository:

    - Ensure that all RMs are at IMS 12 level for users of Repository

Coexistence Maintenance

- See Chapter 4 of IMS 12 Release Planning (GC19-3019-01) for coexistence maintenance requirements
  - Available at: https://www-304.ibm.com/support/docview.wss?uid=swg27019860
  - Available in the Information Center at: http://publib.boulder.ibm.com/infocenter/dzichelp/v2r2/index.jsp

Coexistence - IMS Utilities

- **Batch Backout, Log Archive, and Log Recovery**
  - Use the utility from the IMS release that created the log

- **IMS 12 Database Recovery utility**
  - Accepts Image Copies produced by IMS 12, IMS 11 and IMS 10
  - Accepts HISAM Unloads produced by IMS 12, IMS 11 and IMS 10
  - Accepts Change Accum data sets produced by IMS 12, IMS 11 and IMS 10
  - Accepts logs produced by IMS 12, IMS 11 and IMS 10

- **IMS 12 Change Accumulation utility**
  - Accepts logs produced by IMS 12, IMS 11 and IMS 10
  - Accepts Change Accum data sets produced by IMS 12, IMS 11 and IMS 10

Remote Site Recovery (RSR) Migration/Coexistence

- IMS 12 RSR tracking system can process logs created by IMS 12, IMS 11, or IMS 10

- IMS 12 RSR Isolated Log Sender can send logs created by IMS 12, IMS 11, or IMS 10

- Logs created by IMS 12 cannot be processed by IMS 11 or IMS 10 tracking system or Isolated Log Sender

- Migration steps
  - Upgrade the RSR tracking system RECONs to IMS 12
  - Migrate RSR tracking system to IMS 12
  - Upgrade the active system RECONs to IMS 12
  - Migrate active system Transport Manager Subsystem (TMS) running Isolated Log Sender to IMS 12
  - Migrate active IMS to IMS 12

Log Records

- **Change in log suffix**
  - Timestamp in log record suffix is no longer necessarily unique
    - Previous versions produced unique timestamps

- **Some log records have changed**

- **New log records have been added**

- **DSECTS for most IMS log records may be generated by assembling:**
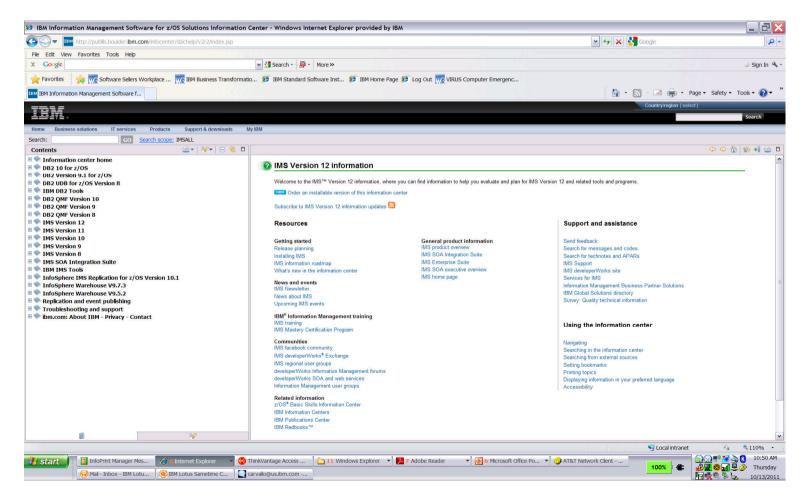 - ILOGREC RECID=ALL

IMS Publications

- IMS publications structure and titles remain the same as in IMS 11

  - PDF master index and glossary are not available

  - Master index and glossary are included in the information center

  - Bookmanager format publications will <u>not</u> be published (same as IMS 11)

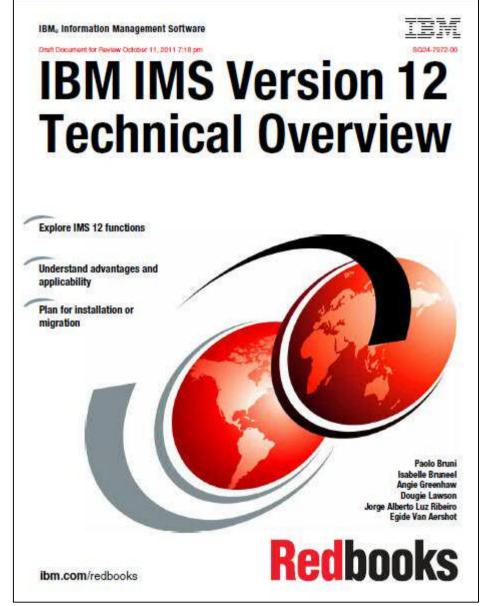- All publications will be available in hardcopy for an additional charge

IMS Library

- The Information Center contains information on IMS 12

- http://publib.boulder.ibm.com/infocenter/dzichelp/v2r2/index.jsp

IMS 12 Redbook Announcement

IBM. Information Management Software

Draft Document for Review October 11, 2011 7:18 pm   SG24-7972-00

IBM IMS Version 12 Technical Overview

Explore IMS 12 functions

Understand advantages and applicability

Plan for installation or migration

Paolo Bruni
Isabelle Bruneel
Angie Greenhaw
Dougie Lawson
Jorge Alberto Luz Ribeiro
Egide Van Aershot

Redbooks

ibm.com/redbooks

- Just released!

- Discusses all IMS 12 capabilities from a user perspective

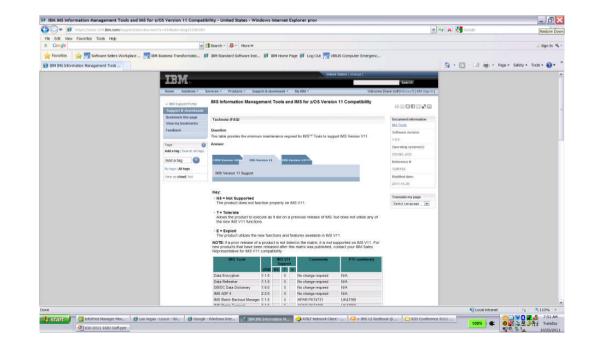- Draft available for free download at http://www.redbooks.ibm.com

IMS Tools Migration/Coexistence

- **Some products may require updates**

  – Contact your vendors for information on requirements

  – IBM has a web site with consolidated information about requirements for IBM IMS tools with IMS 12

    • https://www-304.ibm.com/support/docview.wss?rs=434&uid=swg21296180

IBM IMS Tools - Highlights

- **New IMS Tools Solution Packs**
  - In general, IBM will support the latest stand-alone version of every tool as well as their Solution Pack counterpart if one exists
    - Special circumstances not withstanding
  - Latest versions of TOSI, Generic Exits, IMS Tools Knowledge Base, and HD Compression Extended are only supported in the IMS Tools Base Pack for z/OS.
  - Fast Path Secondary Index creation tool is included in the IMS Fast Path Solution Pack for z/OS, V1.2

IVP Enhancements

- **Repository usage for DRD is added to IVP**
  - IVP provides sample JCL to create repository catalog data sets and the IMS repository
  - IVP provides sample repository server PROC and its configuration file
  - Sample JCL is provided to:
    - Add an IMS repository into the repository catalog
    - Rename a repository in the repository catalog
    - Delete a repository in the repository catalog
    - List the status information for all repositories
    - List the detailed information for a single repository

Syntax Checker Enhancements

- Syntax Checker supports PROCLIB members for IMS 12, IMS 11 and IMS 10

  – IMS 9 PROCLIB members are not supported

- All previously supported members are supported

  – Newly added parameters of these members are supported

- Support added for Repository Server configuration member

- Support added for dynamic full-function database buffer pools

- Support added to view and save parameters of members in a custom order

  – Formerly, only alphabetical order was used

  – Delivered through the IMS service process (PM30599/UK74973)

Installation and Migration Tasks

Installation and Migration Tasks

- ■ Migration Tasks
  - – Review the IMS 12 *Release Planning* publication
  - – Check PSP bucket
    - • PSP upgrade name is IMS1200
    - • Use SMP FIXCAT HOLDDATA to simplify identifying required service from PSP buckets
  - – Review the Program Directory
    - • Available through the Info Center
  - – Review the installation information in Chapter 1 of the *Installation* publication
  - – Install prerequisite software and maintenance
    - • Check your IMS tools and related products
  - – Apply coexistence maintenance to other IMS systems

Installation and Migration Tasks

- **Migration Tasks (continued)**
  - Evaluate and update IMS exit routines
    - RECON I/O Exit Routine (DSPCEXT0)
    - If migrating from IMS 10
      - DFSMSCE0 must be reassembled
      - All IMS Connect exits must be reassembled when migrating IMS Connect
      - HWSIMSO0 and HWSIMSO1 are not shipped with IMS 12
    - Recommendation
      - Reassemble all exit routines which use IMS macros
  - Install IMS 12 using SMP/E installation process
    - CBPDO or ServerPac may be used
  - System definition
    - "ALL" sysgen

Installation and Migration Tasks

- **Migration Tasks (continued)**
  - Install the Type 2 and Type 4 SVCs

  - Upgrade RECONs

  - ACBGEN

  - Run the IVP

  - Include DFSPRRC0 and DFSPZPxx modules in CICS, ODBM and ODBA address spaces

Installation and Migration Summary

- Packaging, Prerequisites and Coexistence

- IMS Publications Changes

- IMS Tools support

- IVP and Syntax Checker Enhancements

- Installation and Migration Tasks