IMS 13

Information Management software

IMS 13 - Technical Education on Enhancements and Migration Planning Class Agenda

▪ Day 1

- **Agenda and Introduction**

- **Transaction Manager Enhancements**:
  – OTMA Enhancements
  – Non-Discardable Message Exit (DFSNDMX0) Enhancement
  – ISC Over TCP/IP
- **Integration Enhancements**
  – IMS ES .NET Data Provider: ES 3.1
  – IMS ES Mobile Feature Pack (IMS Mobile)
    – IMS ES 3.1.1 Explorer for Development
  – IMS ES Soap Gateway Updates
  – IMS ES Connect API for Java Updates
  – IMS ES Explorer for Development Update

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▪ Day 1 (continued)

- **System Enhancements**
  - IMS Connect Enhancements
  - Repository Enhancements
  - User Exit Enhancements
  - Security
  - /DIAG Command Enhancements
  - Concurrent Application Threads
  - Reduced Total Cost of Ownership (TCO)

- **Application Enhancements**
  - Synchronous Program Switch
  - Qualify by Position
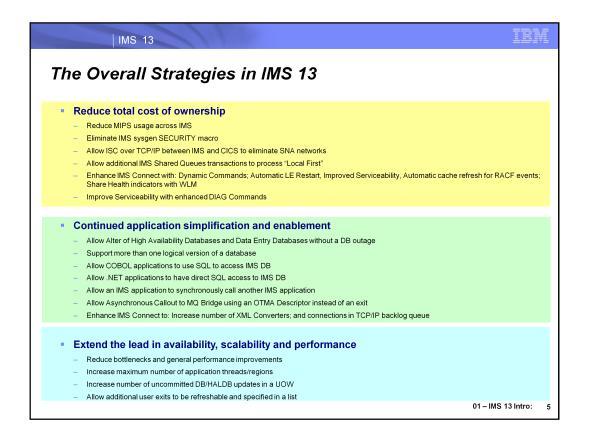 - IMS Native SQL Support for Cobol

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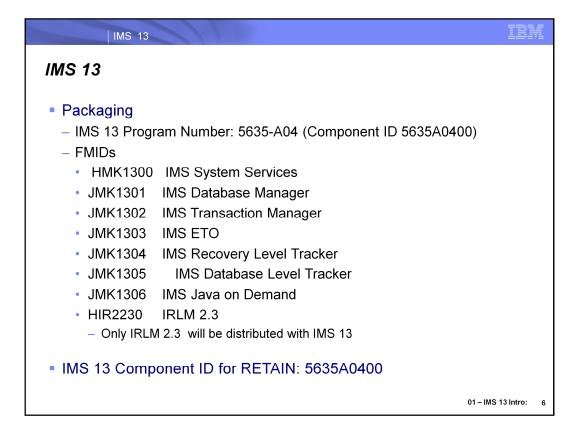
- Day 2
  - **IMS Tools**

  - **DB and DBRC Enhancements ...**
    - HALDB Alter
    - DB Versioning
    - DEDB Alter
    - DBRC Migration and Coexistence SPEs
    - IMS 12 SPEs FPSI Boolean and Command Support

  - **Installation and Migration**

The Overall Strategies in IMS 13

- **Reduce total cost of ownership**
  - Reduce MIPS usage across IMS
  - Eliminate IMS sysgen SECURITY macro
  - Allow ISC over TCP/IP between IMS and CICS to eliminate SNA networks
  - Allow additional IMS Shared Queues transactions to process "Local First"
  - Enhance IMS Connect with: Dynamic Commands; Automatic LE Restart, Improved Serviceability, Automatic cache refresh for RACF events; Share Health indicators with WLM
  - Improve Serviceability with enhanced DIAG Commands

- **Continued application simplification and enablement**
  - Allow Alter of High Availability Databases and Data Entry Databases without a DB outage
  - Support more than one logical version of a database
  - Allow COBOL applications to use SQL to access IMS DB
  - Allow .NET applications to have direct SQL access to IMS DB
  - Allow an IMS application to synchronously call another IMS application
  - Allow Asynchronous Callout to MQ Bridge using an OTMA Descriptor instead of an exit
  - Enhance IMS Connect to: Increase number of XML Converters; and connections in TCP/IP backlog queue

- **Extend the lead in availability, scalability and performance**
  - Reduce bottlenecks and general performance improvements
  - Increase maximum number of application threads/regions
  - Increase number of uncommitted DB/HALDB updates in a UOW
  - Allow additional user exits to be refreshable and specified in a list

IMS and IMS Tools continue to evolve to provide value and meet the needs of enterprise customers. IMS 13 has several enhancements that reduce the total cost of ownership, support the ongoing effort towards application simplification and enablement, and extend the lead in availability, scalability and performance. This visual details some of the capabilities in IMS that specifically address of each of these strategies.

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IMS 13

- **Packaging**
  - IMS 13 Program Number: 5635-A04 (Component ID 5635A0400)
  - FMIDs
    - HMK1300   IMS System Services
    - JMK1301   IMS Database Manager
    - JMK1302   IMS Transaction Manager
    - JMK1303   IMS ETO
    - JMK1304   IMS Recovery Level Tracker
    - JMK1305   IMS Database Level Tracker
    - JMK1306   IMS Java on Demand
    - HIR2230   IRLM 2.3
      - Only IRLM 2.3 will be distributed with IMS 13

- **IMS 13 Component ID for RETAIN: 5635A0400**

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IMS 13 Program number 5635-A04 includes the FMID's that are documented on this visual.

Note that the IMS 13 component ID for RETAIN is 5635A0400.

Software Prerequisites

- Minimum software level prerequisites
  - **z/OS V1R13 (5694-A01)**
    - RACF (included in separately orderable SecureWay Security Server), or equivalent, if security is used
    - High Level Assembler Toolkit Release 5 (5696-234)
    - APARs/PTFs: OA39392/UA66823, OA36172/UA61786
    - If zIIP offload is used; OA39392/UA66823

  - IRLM 2.3 if the IRLM is used

    - •*Note:*
      January 17, 2014 : Recommended last date for processing orders for z/OS V1.13 via ServerPac and CBPDO
      January 31, 2014: End of Marketing for z/OS V1.13 (5694-A01) (See Software withdrawal **913-103**, dated June 04, 2013)
      z/OS V2.1 is orderable and available via ServerPac, CBPDO, and SystemPac 1

z/OS 1.13 is the base operating system level for IMS 13.

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Software Prerequisites ...

- Minimum software levels for optional functions
  - Java Dependent Regions requires JDK 6.0.1
  - ISC TCP/IP requires CICS 5.1
  - Native SQL for COBOL requires **COBOL 5.1** +PM92523/UK98481 which adds the IMS co-processor function
    - IMS 13 requires UK98028, UK98418
  - Depending on the environment, the IMS Universal Drivers require:
    - IBM JDK 6.0.1 or later
    - DB2 V9.1 or later
    - WAS V7 or later
    - CICS V4.1 or later
  - .net Data Provider in IMS Enterprise Suite 3.1 requires
    - DRDA Support for Native SQL flows in IMS 13
    - Implementation of CSL, IMS Connect, ODBM, Catalog
  - DB Versioning requires implementation of the IMS Catalog

Software Prerequisites ...

- Minimum software levels for optional functions ...
    - IMS 13 supports interactions with
        - DB2: Versions 9, 10, 11

        - CICS: Versions 3.2, 4.1, 4.2, 5.1
            - CICS 5.1 is required for ISC TCP/IP support
                - Requires z/OS 1.13

        - MQ for z/OS: Versions V7.0.1, V7.1
            - Note V6 EOS was September 2012
            - 7.01 introduced MQ message expiry interfacing with IMS transaction expiration
            - 7.1 enhanced the expiry support and support for OTMA resource monitoring protocol messages

Note the software levels for interaction with DB2, CICS, or MQ.

Hardware Prerequisites

- IMS 13 runs only on 64 bit processors running in z/Architecture mode
  - Processors must also support the Long-Displacement Facility of the z/Architecture
  - ESA mode is not supported
  - For a list of z/Series machines see: www.ibm.com/systems/z/hardware/
  - ➔ z900 machines must be at GA2 level (microcode level 3G or later)

- Sysplex Data Sharing (including Data Caching and VSO Data Sharing)
  - Coupling Facility (CF) level 9, or later

The hardware prerequisite for a 64 bit processor running in z/Architecture mode is not new for IMS.

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Hardware Prerequisites ...

- Shared Queues and Shared EMH support
  - Coupling Facility level 9 or later
  - System-managed CF Duplexing
    - CF level 12, or later and bidirectional CF to CF links

- EAV support for non-VSAM data sets
  - EAVs are supported on DS8000 at microcode level R4.0 via bundle 64.0.175.0 (Sept 2008) or higher

Supported Migrations and Coexistence

- **Migration from previous releases:**

  - DBRC Migration/Coexistence SPEs
    - IMS 11: APAR PM53134/UK80026
    - IMS 12: APAR PM53139/UK80027

  - Security Migration/Coexistence SPEs
    - Eliminates RCLASS and SECCNT support in Security macro
      - SPEs to support removal of the SECURITY macro in previous releases
    - IMS 11: PM48203/UK74050, PM72199
    - IMS 12: PM48204/UK74051, PM73558

  - IMS 13 supports RSR migration/coexistence from/with V11 and V12

Migration from previous releases, e.g., IMS 11 or IMS 12 is supported.

As always, DBRC migration/coexistence SPEs are provided.

In IMS 13, the SECURITY macro has been removed. SPEs are provided to support coexistence/migration.

Supported Migrations and Coexistence …

- In a shared queues environment with mixed-release IMS systems, IMS 12 APAR PM75791 / PTF UK83421 addresses downward compatibility issue and 0C4

  – AOS extended header obtained only when

  – DBRC minvers=12.1 or greater

  • Applies to environments where XCF= is set to something other than 'N'

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