What's New in IMS 10

and

Preview of IMS 11

Information Management software

What's New in IMS 10

- Message Level Transaction Expiration
- DFSMSCE0 Exit Enhancement
- SPOC Print Options
- HALDB Online Reorg QUERY and /DIS Commands
- Non-recoverable DEDBs with SDEPs
- Change Accumulation Enhancement
- DRD Commands and Utilities

Message Level Transaction Expiration

- Enhanced support only for OTMA
  - Expiration times may be specified for each message
    - Overrides transaction timeout specification
      - Message timeout may be
        - Elapsed time
        - Timestamp (STCK time)

- Benefits
  - Reduces unnecessary processing when unexpected delays in the network or IMS result in remote client timeout before the input message is processed
    - Response no longer required

DFSMSCE0 Exit Enhancement

- New entry point for GU IOPCB calls
  - Allows creation or modification of user prefix
  - Information, such as accounting data, may be added to prefix
  - Does not support message routing (done in CHNG and ISRT entry points)

- Benefits
  - Provides entry point for installations to add data to prefix
  - Prefix is logged as part of message
  - Prefix and entry point may be used by tools

IMS 10 APAR PK50292; PTF UK35086

SPOC Print Options

- Options for formatting the printed output from SPOC
  - TSO SPOC, Batch SPOC, and REXX SPOC API
  - OM audit trail CSLULALE print exit with DFSERA10
- Three styles of formatting
  - Wrap
  - By Column
  - By Resource

Examples follow

- Benefits
  - Improved readability
  - Improved usability

SPOC Print Option - Wrap

```
 Trancode MbrName    CC PSBname  LCls    LQCnt  LLCT LPLCT LPLCTTime LCPRI LNPRI LLPRI LSegSz LSegNo LParLim RegCnt
          LMaxRgn EditRtn  FP EMHBSz CmtMode MsgType SPATrunc SPASz SIDR SIDL DCLWA DirRoute EditUC Inq Recover Resp
          Remote Serial WFI AOCMD Conv TranStat LclStat ModelName ModelType MSName   TimeAccess
          TimeUpdate           TimeCreate           TimeImport           DefnType
-------------------------------------------------------------------------------------------------------------------
ADDINV    IMS1        0 DFSSAM04    4        0     2 65535   6553500     7     7    10      0      0   65535      0
               0          N       0 MULT    MULTSEG              0   10   10 Y     N        Y      N   Y       N
          N      N      N   N     N    N
                           2008.267 12:32:05.43                    MODBLKS
ADDPART   IMS1        0 DFSSAM04    4        0     2 65535   6553500     7     7    10      0      0   65535      0
               0          N       0 MULT    MULTSEG              0   10   10 Y     N        Y      N   Y       N
          N      N      N   N     N    N
                           2008.267 12:32:05.43                    MODBLKS
AOBMP     IMS1        0 TS2IAOB0   23        0 65535 65535   6553500     0     0     0      0      0   65535      0
               0          N       0 SNGL    MULTSEG              0   10   10 Y     N        Y      N   Y       N
          N      N      Y   N     N    N
                           2008.267 12:32:05.43                    MODBLKS
AOP       IMS1        0 TS1IAOP0    4        0     4     4       500    10    10    12      0    500   65535      0
               0          N       0 SNGL    SNGLSEG              0   10   10 Y     N        Y      N   Y       Y
          N      N      N   N     N    N
                           2008.267 12:32:05.43                    MODBLKS
```

SPOC Print Option - By Column … page 1

Trancode	MbrName	CC	PSBname	LCls	LQCnt	LLCT	LPLCT	LPLCTTime	LCPRI	LNPRI	LLPRI	LSegSz	LSegNo	LParLim	RegCnt
ADDINV	IMS1	0	DFSSAM04	4	0	2	65535	6553500	7	7	10	0	0	65535	0
ADDPART	IMS1	0	DFSSAM04	4	0	2	65535	6553500	7	7	10	0	0	65535	0
AOBMP	IMS1	0	TS2IAOB0	23	0	65535	65535	6553500	0	0	0	0	0	65535	0
AOP	IMS1	0	TS1IAOP0	4	0	4	4	500	10	10	12	0	500	65535	0
APOL11	IMS1	0	APOL1	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
APOL12	IMS1	0	APOL1	1	0	65535	65535	6553500	9	9	9	0	0	65535	0
APOL13	IMS1	0	APOL1	1	0	65535	65535	6553500	1	1	1	5	3	65535	0
APOL14	IMS1	0	APOL1	1	0	65535	65535	6553500	1	1	1	65535	65535	65535	0
APOL15	IMS1	0	APOL1	1	0	65535	65535	6553500	1	1	1	80	1	65535	0
APOL16	IMS1	0	APOL1	1	0	65535	65535	6553500	1	1	1	80	3	65535	0
APOL17	IMS1	0	APOL1	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
APOL18	IMS1	0	APOL1	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
APOL21	IMS1	0	APOL1	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
APOL22	IMS1	0	APOL1	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
AUTRAN1H	IMS1	0	AUTPSB1H	1	0	2	65535	6553500	7	7	10	0	0	65535	0
AUTRAN11	IMS1	0	AUTPSB11	1	0	2	65535	6553500	7	7	10	0	0	65535	0
AUTRAN12	IMS1	0	AUTPSB11	1	0	2	65535	6553500	7	7	10	0	0	65535	0
AUTRAN2H	IMS1	0	AUTPSB1H	1	0	2	65535	6553500	7	7	10	0	0	65535	0
A1111111	IMS1	0	A11APP	1	0	65535	65535	6553500	1	1	1	0	0	65535	0

SPOC Print Option - By Column … page 2

Trancode	MbrName	CC	PSBname	LCls	LQCnt	LLCT	LPLCT	LPLCTTime	LCPRI	LNPRI	LLPRI	LSegSz	LSegNo	LParLim	RegCnt
BHA1	IMS1	0	PMAPJK13	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
BHA2	IMS1	0	PMAPJK23	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
BHD1	IMS1	0	PMAPJK14	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
BHD2	IMS1	0	PMAPJK24	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
BHD3	IMS1	0	PMAPJK34	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
BHE1	IMS1	0	BMAPJK11	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
BHE2	IMS1	0	BMAPJK21	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
BHE4	IMS1	0	BMAPJK21	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
BHF1	IMS1	0	PMVAPZ12	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
BHF2	IMS1	0	PMVAPZ22	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
BHF3	IMS1	0	PMVAPZ32	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
BHF4	IMS1	0	PMVAAZ42	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
BHHA1	IMS1	0	PMHAJK13	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
BHHC1	IMS1	0	PMHCJK15	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
BHHD1	IMS1	0	PMHDJK14	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
BHHF1	IMS1	0	PMHFJK12	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
BHHX1	IMS1	0	PMHXJK19	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
BHI1	IMS1	0	PMAPJK15	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
BHI2	IMS1	0	PMAPJK25	1	0	65535	65535	6553500	1	1	1	0	0	65535	0

SPOC Print Option - By Column … page 6

Trancode	MbrName	LMaxRgn	EditRtn	FP	EMHBSz	CmtMode	MsgType	SPATrunc	SPASz	SIDR	SIDL	DCLWA	DirRoute	EditUC	Inq
ADDINV	IMS1	0		N	0	MULT	MULTSEG		0	10	10	Y	N	Y	N
ADDPART	IMS1	0		N	0	MULT	MULTSEG		0	10	10	Y	N	Y	N
AOBMP	IMS1	0		N	0	SNGL	MULTSEG		0	10	10	Y	N	Y	N
AOP	IMS1	0		N	0	SNGL	SNGLSEG		0	10	10	Y	N	Y	N
APOL11	IMS1	0		N	0	MULT	MULTSEG		0	10	10	Y	N	Y	Y
APOL12	IMS1	0		N	0	MULT	MULTSEG		0	10	10	Y	N	Y	N
APOL13	IMS1	0		N	0	MULT	MULTSEG		0	10	10	Y	N	Y	N
APOL14	IMS1	0		N	0	MULT	MULTSEG		0	10	10	Y	N	Y	Y
APOL15	IMS1	0		N	0	MULT	MULTSEG		0	10	10	Y	N	Y	N
APOL16	IMS1	0		N	0	MULT	MULTSEG		0	10	10	Y	N	Y	N
APOL17	IMS1	0		N	0	MULT	MULTSEG		0	10	10	Y	N	Y	Y
APOL18	IMS1	0		N	0	SNGL	MULTSEG		0	10	10	Y	N	Y	N
APOL21	IMS1	0		N	0	MULT	MULTSEG		0	10	10	Y	N	Y	Y
APOL22	IMS1	0		N	0	MULT	MULTSEG		0	10	10	Y	N	Y	N
AUTRAN1H	IMS1	0		N	0	SNGL	SNGLSEG		0	10	10	Y	N	Y	N
AUTRAN11	IMS1	0		N	0	SNGL	SNGLSEG		0	10	10	Y	N	Y	N
AUTRAN12	IMS1	0		N	0	SNGL	SNGLSEG		0	10	10	Y	N	Y	N
AUTRAN2H	IMS1	0		N	0	SNGL	SNGLSEG		0	10	10	Y	N	Y	N
A1111111	IMS1	0		N	0	SNGL	SNGLSEG	S	80	10	10	Y	N	Y	N

SPOC Print Option - By Resource … page 1

Trancode	MbrName	CC	PSBname	LCls	LQCnt	LLCT	LPLCT	LPLCTTime	LCPRI	LNPRI	LLPRI	LSegSz	LSegNo	LParLim	RegCnt
ADDINV	IMS1	0	DFSSAM04	4	0	2	65535	6553500	7	7	10	0	0	65535	0
ADDPART	IMS1	0	DFSSAM04	4	0	2	65535	6553500	7	7	10	0	0	65535	0
AOBMP	IMS1	0	TS2IAOB0	23	0	65535	65535	6553500	0	0	0	0	0	65535	0
AOP	IMS1	0	TS1IAOP0	4	0	4	4	500	10	10	12	0	500	65535	0

Trancode	MbrName	LMaxRgn	EditRtn	FP	EMHBSz	CmtMode	MsgType	SPATrunc	SPASz	SIDR	SIDL	DCLWA	DirRoute	EditUC	Inq
ADDINV	IMS1	0	N		0	MULT	MULTSEG		0	10	10	Y	N	Y	N
ADDPART	IMS1	0	N		0	MULT	MULTSEG		0	10	10	Y	N	Y	N
AOBMP	IMS1	0	N		0	SNGL	MULTSEG		0	10	10	Y	N	Y	N
AOP	IMS1	0	N		0	SNGL	SNGLSEG		0	10	10	Y	N	Y	N

Trancode	MbrName	Recover	Resp	Remote	Serial	WFI	AOCMD	Conv	TranStat	LclStat	ModelName	ModelType	MSName
ADDINV	IMS1	Y	N	N	N	N	N	N	N				
ADDPART	IMS1	Y	N	N	N	N	N	N	N				
AOBMP	IMS1	Y	N	N	N	Y	N	N	N				
AOP	IMS1	Y	Y	N	N	N	N	N	N				

Trancode	MbrName	TimeAccess	TimeUpdate	TimeCreate	TimeImport	DefnType
ADDINV	IMS1			2008.267 12:32:05.43		MODBLKS
ADDPART	IMS1			2008.267 12:32:05.43		MODBLKS
AOBMP	IMS1			2008.267 12:32:05.43		MODBLKS
AOP	IMS1			2008.267 12:32:05.43		MODBLKS

SPOC Print Option - By Resource … page 2

Trancode	MbrName	CC	PSBname	LCls	LQCnt	LLCT	LPLCT	LPLCTTime	LCPRI	LNPRI	LLPRI	LSegSz	LSegNo	LParLim	RegCnt
APOL11	IMS1	0	APOL1	1	0	65535	65535	6553500	1	1	1	0	0	65535	0
APOL12	IMS1	0	APOL1	1	0	65535	65535	6553500	9	9	9	0	0	65535	0
APOL13	IMS1	0	APOL1	1	0	65535	65535	6553500	1	1	1	5	3	65535	0
APOL14	IMS1	0	APOL1	1	0	65535	65535	6553500	1	1	1	65535	65535	65535	0

Trancode	MbrName	LMaxRgn	EditRtn	FP	EMHBSz	CmtMode	MsgType	SPATrunc	SPASz	SIDR	SIDL	DCLWA	DirRoute	EditUC	Inq
APOL11	IMS1	0	N		0	MULT	MULTSEG		0	10	10	Y	N	Y	Y
APOL12	IMS1	0	N		0	MULT	MULTSEG		0	10	10	Y	N	Y	N
APOL13	IMS1	0	N		0	MULT	MULTSEG		0	10	10	Y	N	Y	N
APOL14	IMS1	0	N		0	MULT	MULTSEG		0	10	10	Y	N	Y	Y

Trancode	MbrName	Recover	Resp	Remote	Serial	WFI	AOCMD	Conv	TranStat	LclStat	ModelName	ModelType	MSName
APOL11	IMS1	Y	Y	N	N	N	N	N	N				
APOL12	IMS1	Y	N	N	N	N	N	N	N				
APOL13	IMS1	Y	N	N	N	N	N	N	N				
APOL14	IMS1	N	N	N	N	N	N	N	N				

Trancode	MbrName	TimeAccess	TimeUpdate	TimeCreate	TimeImport	DefnType
APOL11	IMS1			2008.267 12:32:05.43		MODBLKS
APOL12	IMS1			2008.267 12:32:05.43		MODBLKS
APOL13	IMS1			2008.267 12:32:05.43		MODBLKS
APOL14	IMS1			2008.267 12:32:05.43		MODBLKS

IMS 10 APARs PK54615 PK54616; IMS 9 PK36909, PK43203

HALDB Online Reorg QUERY and /DIS Commands

- New statistics are shown by QRY OLREORG and /DIS DB OLR
  - Segments moved, roots moved, option, status, and start time

Examples follow

- Statistics are retained across a termination and restart of OLR
  - QRY OLREORG and /DIS DB OLR after a restart of OLR will show the total bytes, roots, and segments moved by the OLR
- Statistics are available in RECON for suspended OLR
  - OLR is suspended by TERM or /TERM command
  - LIST.DB for partition database record returns the statistics

- Benefits
  - Easier to track the progress of OLR

HALDB Online Reorg QUERY and /DIS Commands

QRY OLREORG example:

```
QRY OLREORG NAME(POHIDKA) SHOW(ALL)
```

```
Partition MbrName    CC LclStat  Rate  Bytes-Moved Segs-Moved
POHIDKA   IMS1        0 WAITRATE   50       334720       2310

Roots-Moved Option  Start
        250 NODEL   2009.027 11:50:41.35
```

/DIS DB OLR example:

```
/DIS DB OLR

DATABASE PART     RATE       BYTES       SEGS    ROOTS STARTTIM
DBHDOJ01 PDHDOJD    50    72156778     423551    72686 08107/115049

STATUS
WAITRATE, OPTNODEL
```

Non-recoverable DEDBs with SDEPs

- DEDBs with sequential dependents may be made non-recoverable
  - Eliminates logging for these DEDBs
    - Previously, only DEDBs without SDEPs could be made non-recoverable
  - DBRC command:
    - INIT.DB …NONRECOV
    - CHANGE.DB … NONRECOV

- Benefits
  - More efficient way to write data that is not critical

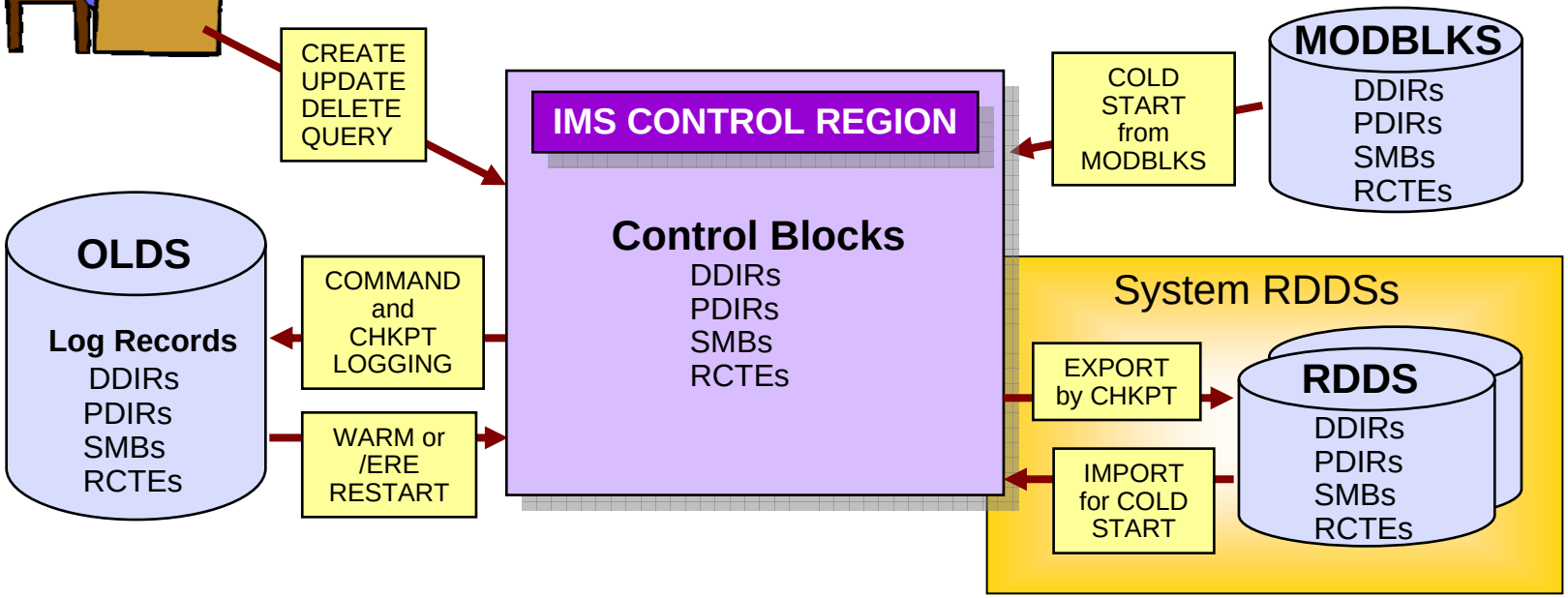
Change Accumulation Enhancement

- Allow changes in RECON contents between the time the CA JCL is generated and executed
  - Changes allowed by IMS 10 SPE:
    - New Image Copy
    - OLDS archived which changes the purge time
    - HALDB Online Reorganization
    - Offline Reorganization
  - Previously, theses changes would cause a utility execution failure
  - DBRC will allow the JCL generated for Change Accumulation to execute using the purge time in the JCL as long as input logs verify

- Benefit
  - Image copies, archives, and reorgs will not cause Change Accum failures

DRD RDDS Review

- System Resource Definition Data Sets (RDDS)
  - Set of data sets used in round-robin fashion
  - Hold information on DRD definitions
    - Programs, databases, transactions, routing codes, and descriptors
  - Written at system checkpoints
    - Used to carry definitions across cold starts



Non-System RDDSs and EXPORT Command

- Non-system RDDSs
  - May be shared between IMSs
  - May contain a subset of IMS resource and descriptor definitions

- EXPORT DEFN command
  - Used to export definitions to system or non-system RDDS
  - System RDDS is the default target
    - All resource and descriptor definitions are exported to system RDDS
  - Non-system RDDS may be the target
    - Subset of resource and descriptor definitions may be exported

IMPORT Command

- IMPORT DEFN command
  - Used to import definitions from system or non-system RDDS
  - System RDDS is the default source
    - All resource and descriptor definitions are imported from system RDDS
  - Non-system RDDS may be the source
    - System RDDS of another IMS system could be used as a non-system RDDS
    - Subset of resource and descriptor definitions may be imported

- Benefits of EXPORT and IMPORT
  - Migrate definitions from an IMS system which is not DRD enabled using EXPORT
  - Clone systems
  - Migrate definitions for applications

DRD Extract Utility Enhancement

- Extract Utility
  - Offline batch utility which reads an RDDS
  - Writes either
    - IMS Stage 1 macros
      - DATABASE, APPLCTN, TRANSACT, and RTCODE

    or
    - CREATE commands
      - Database, application, transaction, and routing code resources and descriptors
- Enhancement
  - Query capability added to the Extract utility
    - Reports all resources and descriptors with their attribute values
- Benefit
  - Simplifies administration of definitions

New DRD Utilities

- New utilities to
  - Generate RDDS from checkpoint and command log records
  - Generate RDDS from MODBLKS data set
  - Generate RDDS from Stage 1 macros
  - Generate CREATE commands from MODBLKS data set
  - Generate CREATE commands from Stage 1 macros
  - Display RDDS contents
- Benefit
  - Facilitates implementation of DRD
  - Provides facility to recreate a "lost" RDDS

IMS 11 Preview

- Announcement, Availability, and Prerequisites
- IMS 11 Highlights
  - Open Database
  - Universal Drivers

  } *Discussed in later sessions*
  - ACBLIB Dynamic Allocation
  - 64-bit ACB Storage Pool
  - Type-2 QUERY Commands for TM Resources
  - TM Transaction Expiration
  - OTMA Commit-then-Send (CM0) ACK Timeout
  - OTMA Resource Monitoring
  - IMS Connect TCP/IP Auto Reconnect
  - Port Input/Output Edit Exit
  - IMS Connect Recorder Trace Enhancements
  - IMS Connect API
  - Database Quiesce
  - Fast Path 64-bit Buffer Manager
  - BPE Based DBRC Region

Announcement, Availability, and Prerequisites

- IMS 11 was announced on September 16, 2008
  - Currently in a QPP program
- General availability not announced
  - Expected in late 2009
- Prerequisites:
  - z/OS V1R9 (5694-A01)
    - High Level Assembler Toolkit Release 5 (5696-234)
  - IRLM 2.2, if IRLM is used
  - Java requires SDK 6.0
  - See the *IMS 11 Release Planning Guide* for details

ACBLIB Dynamic Allocation

- DFSMDA members are allowed for IMSACBA and IMSACBB
  - DFSMDA members are used if DD statements are not present
    - Active ACBLIB allocated
    - Inactive ACBLIB is not allocated until needed
    - After online change inactive ACBLIB is deallocated
- Benefits
  - Restart of IMS is not required for:
    - Increasing the size of an ACBLIB
    - Correcting errors in the inactive ACBLIB
    - Adding data sets to the ACBLIB concatenation

64-bit ACB Storage Pool

- Optional storage pool to cache ACB members in 64-bit storage
  - Size specified in gigabytes on ACBIN64= parameter in DFSDFxxx member
  - Non-resident DMBs and PSBs are placed in storage pool when first read into 31-bit pools
  - Later requests for these DMBs and PSBs are satisfied from the storage pool
    - Eliminates reads from DASD
  - Resident DMBs and PSBs and Fast Path DEDBs do not use the 64-bit pool

- Benefits
  - Improved performance for users currently doing ACBLIB I/Os
    - Reduced I/Os to ACBLIB
    - Improved performance from managing smaller PSB pool
      - Smaller pool may be used without causing more I/Os

Type-2 QUERY Commands for TM Resources

- IMS 8, 9, and 10 have QUERY TRAN command
- IMS 10 has QUERY command for MSC resources

- QUERY commands added for
  - LTERMs
    - Includes support for filtering by message age and queue counts
  - NODEs
  - USERs
    - ETO Users and ISC Subpools
  - USERIDs
    - Security User IDs
  - Includes support for wildcards
- Benefits
  - Improved ease of use in managing resources
  - Consolidation of output of several type-1 commands into one type-2 command response

TM Transaction Expiration

- Transaction Expiration (Input Message Timeout)
  - Input messages expire and are deleted prior to processing
    - Value checked at application program GU for input message
      - If time exceeded, the message is not returned
        - U0243 abend and information message is sent to terminal
  - Specified with EXPRTIME attribute for transactions
    - TRANSACT macro
    - CREATE and UPDATE commands for TRAN and TRANDESC
    - DFSINSX0 - Output Creation Exit
- Benefit
  - Reduces unnecessary processing when unexpected delays in the network or IMS result in remote client timeout before the input message is processed
    - Response no longer required

OTMA Commit-then-Send (CM0) ACK Timeout

- OTMA CM0 message ACK timeout
  - Without timeout, TPIPE is hung until ACK occurs
  - Enhancement moves message to timeout message queue
    - Other messages on output message queue may be sent
  - Timeout value
    - Set by OTMA descriptor, IMS command, or OTMA member

- Benefit
  - Allows delivery of other messages when problem occurs with a message

OTMA Resource Monitoring

- Client-server protocol that allows early detection and warning of possible OTMA problems

  - OTMA:
    - Monitors resources - control blocks associated with unprocessed messages
      - Possible flood condition and incomplete Send-then-Commit CM1 messages
    - Detects possible degraded levels
    - Sends messages to clients (OTMA members) about the resources

  - OTMA members, such as IMS Connect
    - Stay informed of the status of OTMA resources and problem conditions
    - Support corrective actions such as rerouting the request to another IMS

OTMA Resource Monitoring

- Benefits
  - Allows OTMA member clients to take advantage of early flood detection and failure notification
    - Detect and address a problem when it is starting
      - Reject remote clients from sending in new messages
      - Reroute the messages to another IMS that can process the transactions
    - Each member can choose how to take advantage of the capability
      - IMS Connect provides the information to user message exits and vendor products

IMS Connect TCP/IP Auto Reconnect

- Automatic reconnection to TCP/IP when network becomes available after a failure
  - IMS Connect internally issues OPENPORT with loop and timer logic
- Benefit
  - Eliminates need for operator intervention (OPENPORT command)
  - Minimizes recovery time for connections after network outage

Port Input/Output Edit Exit

- New Port Input/Output Edit Exit routine
  - Specified on HWSCFGx PORT statement
  - Allows modification of
    - Input message received from TCP/IP before IMS Connect processing
      - For example, IRM header may be added
    - Output message after IMS Connect formatting before being sent to TCP/IP
      - For example, IRM header may be deleted
  - Similar to IMS's physical terminal edit exit routine functionality

- Benefit
  - Allows IMS Connect to work with remote programs which cannot conform to IMS Connect standard message requirements (e.g. IRM header)

IMS Connect Recorder Trace Enhancements

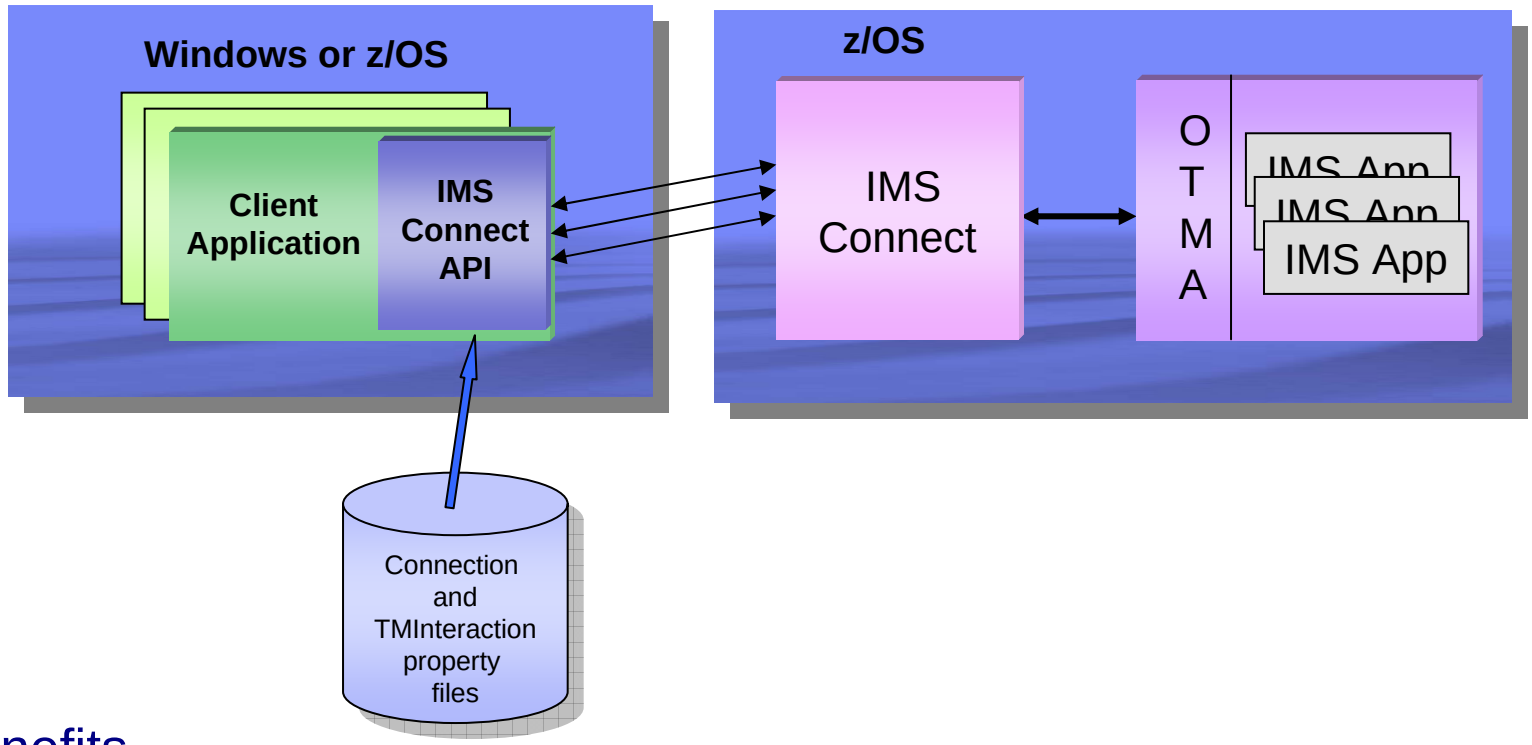
- IMS Connect Recorder Trace written to BPE External Trace
  - Optional, but highly recommended
  - Eliminates trace data set full conditions
  - Provides greater flexibility in the amount of data recorded

- Benefits
  - Improved reliability of trace data
  - Improved efficiency of trace writing

IMS Connect API

- A simplified callable interface for interaction with IMS Connect
  - Windows or z/OS environments
    - Java and C provided in initial release
  - Architected on top of the sockets layer
  - API capabilities
    - Generates IMS Connect input message headers
    - Manages interaction according to the IMS Connect message protocols
    - Deals with socket connections made on behalf of the client applications
    - Supports IMS Connect user message exits HWSSMPL0/HWSSMPL1
  - Application issues *execute()*
    - API does *connect(), send(), receive(), disconnect()*
      - Uses connection and interaction property files created by programmers

IMS Connect API



- Benefits
  - Reduces the complexity of writing applications using the IMS Connect protocol
  - Simplifies design, development and test of IMS Connect client applications

Database Quiesce

- DB Quiesce
  - Provides UPDATE command to create a Recovery Point
    - Command specifies databases, partitions or areas
    - Recovery point is recorded in RECONs
    - May be used for timestamp recoveries
  - Databases are not taken offline
    - Database data sets are not closed
  - Transaction programs and BMPs are not terminated
    - Internally quiesced at their next sync point
  - Recovery point is coordinated across IMSplex
    - CSL is used

Database Quiesce

- Two types of database quiesce
  - Quiesce and HOLD
    - Database activity is quiesced until specifically released by command
    - Allows for a clean image copy
  - Quiesce and NOHOLD
    - Database activity is quiesced only for the recovery point
    - Allows for timestamp recovery to the recovery point
- OLDS is switched at the recovery point
- All databases have the same recovery point time

Database Quiesce

- Benefits
  - Minimal disruption to create recovery points
    - Databases data sets not deallocated or closed
    - Transactions and BMPs are not terminated
  - Coordinated across the IMSplex

Fast Path 64-bit Buffer Manager

- Fast Path buffers above the bar in control region address space
  - Optional
    - Specified in DFSDFxxx PROCLIB member
  - Autonomically allocates and manages buffers
    - Multiple subpools with different buffer sizes
    - User does not specify buffers
  - I/O is done directly to and from the 64-bit buffers
  - OBA is not serialized
    - Each dependent region or thread may have OBA buffers at the same time

Fast Path 64-bit Buffer Manager

- Benefits
  - ECSA constraint relief
    - Eliminates U1011 abends due to ECSA fragmentation
  - Supports multiple buffer sizes
    - Better use of buffers for areas with different CI sizes
  - Self tuning
    - User does not specify number of buffers
    - System dynamically adjusts the numbers of buffers on demand
  - Eliminates need for IMS restart to add more Fast Path buffers
    - New dependent regions or threads may be added

BPE Based DBRC Region

- BPE for online system DBRC region
  - Only applies to online DBRC region
- Optional
- BPE provides improved tracing
  - Four DBRC traces
    - Errors, requests, module flow, and group services and notifications
  - BPE external trace may be used
- BPE provides improved user exit management
  - RECON I/O, Security (command authorization), and Statistics exits
  - Multiple exits of each type
  - Refreshable exits without terminating IMS
- LSR buffers defined in PROCLIB member

BPE Based DBRC Region

- Benefits
  - Improved tracing capabilities
  - Improved user exit management
    - New statistics exit
  - Simplified definition of LSR buffers for the RECONs

More Information on IMS 11

- We have seen only a sampling of IMS 11
  - There's lots more!

- IMS 11 Fact Sheet, GC19-2451
- IMS 11 Release Planning Guide, GC19-2442
  - The Fact Sheet and the Release Planning Guide are both available from the Information Management Software for z/OS® Solutions Information Center
    publib.boulder.ibm.com/infocenter/imzic
    Look under IMS Version 11
- IMS 11 Announcement Letter
  www.ibm.com/common/ssi/index.wss
  Use keyword: 208-258
- IMS Family Web site:
  www.ibm.com/ims