

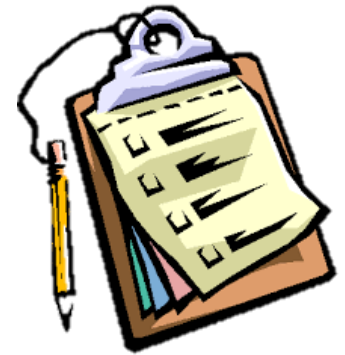
IMS Sysplex Manager Functional Overview

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Agenda

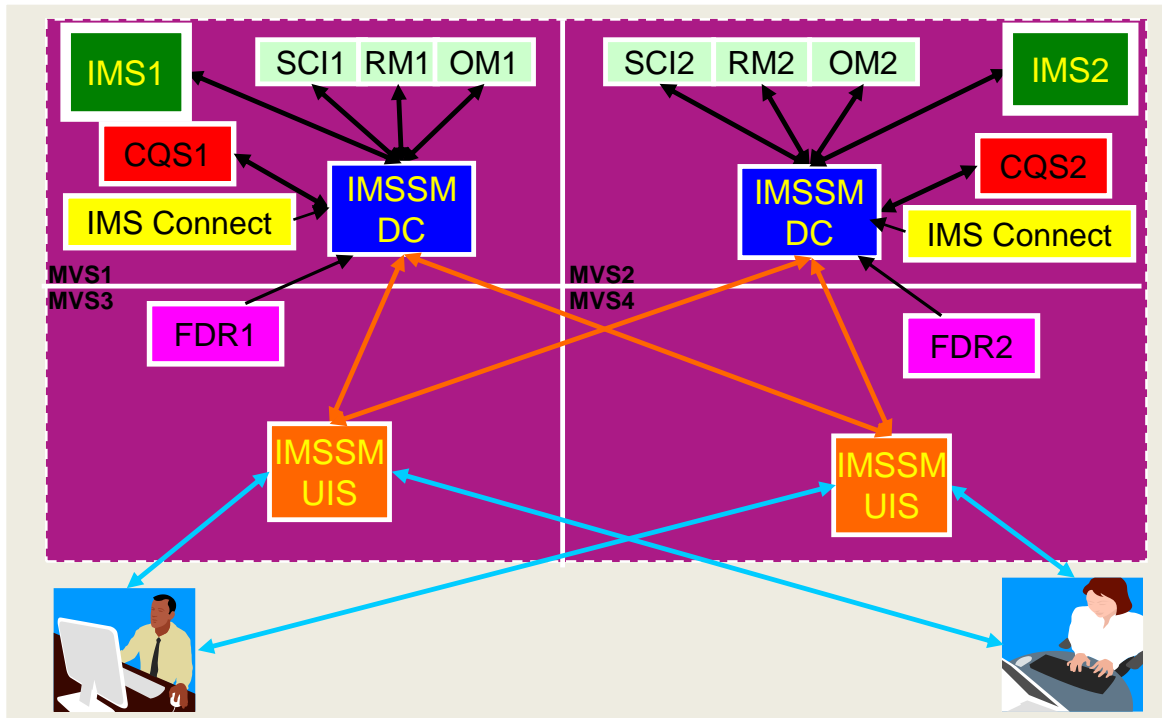
- Product Highlights
- Data Sharing Management
 - SQ transaction affinity routing
 - SQ buffer overflow protection
 - IRLM long lock report
 - CSL RM structure management
- Other Product Functions



IMS Sysplex Manager Highlights

- Real-time management of the IMS Sysplex Environment
 - Single system image thru local and aggregate view of data
 - Simplified User Interface (TSO/ISPF)
 - Structured displays of IMS resources and CF structures
 - Global Type-1 command, OM Type-2 and IMS SPOC
 - Basic z/OS performance information and SVC dump capture
 - Statistics for CSL (OM, RM and SCI), IRLM and CQS
 - Dashboard with key system indicators and threshold monitoring
 - Intercept System exceptions and generate Console alerts
 - Produce real-time IRLM Long Lock Report
 - Browse, delete and recover messages on Shared Queues
 - Delete RM resource structure entries
 - Assign affinity for transactions in Shared Queues environment
 - Protect against buffer overflow in Shared Queues environment
- Support IMS DB/TM, DBCTL, and DCCTL for IMS v13 and later

IMS Sysplex Manager Sample Configuration



IMS Data Sharing

- Shared Queues
 - SQ transaction affinity routing
 - SQ buffer overflow protection
- Shared Databases
 - IRLM real-time and long lock report
- Shared Resources
 - CSL RM structure management

Shared Queue Transaction Affinity Routing

Shared Message Queues Transaction Affinity

- IMS Shared Message Queues provides
 - Enhanced scalability, throughput, and response time
 - Enhanced availability through redundancy
- IMS Shared Message Queues creates
 - Additional components to manage (CQS, structures, logstreams...)
 - Additional operational complexity
 - Possible false scheduling
 - Possible resource contention



Transaction Affinity Highlights

- Finer control of transaction scheduling
- Non-invasive to existing definition and operation
 - **No** omission of transaction definitions in sysgen
 - **No** stopping of transactions
 - **No** re-classing of dependent regions
 - **No** operational impact for loss of a system
- User defined affinity to route transaction messages
 - Any IMS in the shared queues group
 - Any subset of IMS systems
 - Equal or weighted distribution

Transaction Affinity Implementation

- User affinity definitions created in IMS Proclib
- Definitions “copied” to CQS list structure
 - IMS initialization
 - Shared by all IMS systems
 - Persistent across IMS restarts
 - Synchronized affinity definitions across Sysplex
- Seamless operations
 - Local informs/registration issued for transactions with affinity
 - Backup IMS system destination for planned and unplanned outages
 - Option to reject transaction if destination IMS systems not available
- Ability to tweaking affinity definitions dynamically

Transaction Affinity Implementation

Sample Proclib Definitions

```
OPTIONS(STRUCTURE(GJESMAFN),STATUS(ENABLED),  
PGMREJECT(ABEND(U3303)),NETREJECT(2175))  
SYSTEM(TARG(IMSGRP01),IMS(IMS1),STATUS(ENABLED))  
SYSTEM(TARG(IMSGRP02),IMS(IMS2),STATUS(ENABLED))  
SYSTEM(TARG(IMSGRP03),IMS(IMS3),STATUS(DISABLED))  
SYSTEM(TARG(IMSGRP1A),IMS(IMS1,IMSA,IMS1),STATUS(ENABLED))  
AFFINITY(TYPE(TRANSACTION),TARG(IMSGRP1A,IMSGRP02),DISP(REJECT), DEST(NAME(APOL12)),STATUS(ENABLED))  
AFFINITY(TYPE(TRANSACTION),TARG(IMSGRP02,IMSGRP01),DISP(REJECT), DEST(NAME(JAVC%NV*)),STATUS(ENABLED))  
AFFINITY(TYPE(TRANSACTION),TARG(IMSGRP1A),DISP(Queue), DEST(NAME(TRAN%%C,TRANAB*)),STATUS(DISABLED))  
AFFINITY(TYPE(TRANSACTION),TARG(IMSGRP01), DEST(NAME(%%F3,%%F4)))  
AFFINITY(TYPE(TRANSACTION),TARG(IMSGRP1A),DEST(CLASS(1,2,3)))
```

Reducing False Scheduling Overhead

Example

- Three systems in group IMSA, IMSB, and IMSC
- Transaction TRAN1 causes false scheduling
- Balanced affinity definition
 - Arriving TRAN1 messages rotated to each

```
SYSTEM(TARG(SYSTEM1),IMS(IMSA,IMSB,IMSC))
```

```
AFFINITY(DEST(TRAN1),TARG(SYSTEM1))
```

- Weighted affinity definition
 - 50% of TRAN1 messages routed to IMSA

```
SYSTEM(TARG(SYSTEM1),IMS(IMSA,IMSA,IMSB,IMSC))
```

```
AFFINITY(DEST(TRAN1),TARG(SYSTEM1))
```

Reducing Database Lock Contention

Example

- Three systems in data sharing group IMSA, IMSB, and IMSC
- Transaction TRAN2 causes contention
- Affinity definition
 - Arriving TRAN2 messages limited rotation to subset
 - IMSC only used if IMSA and IMSB are unavailable

```
SYSTEM(TARG(SYS1),IMS(IMSA,IMSB))
```

```
SYSTEM(TARG(SYS2),IMS(IMSC))
```

```
AFFINITY(DEST(TRAN2),TARG(SYS1,SYS2))
```

SQ buffer overflow protection

SQ overflow protection

■ What does it do?

- Protect IMS control region from x78 abends (out of storage) caused by run-away/looping applications

■ Features

- Inactive mode – turn off overflow protection feature (default)
- Report mode – help customers study local buffer usage
- Enforce mode – automatic actions against incoming messages to avoid local buffer out of storage condition

■ What does it NOT do?

- Overflow protection against SQ *structure* overflow

Implementation Details

- **Exploit Queue Space Notification Exit DFSQSSP0**
 - SM exit does not interfere with dynamic buffer expansion/compressions by IMS
 - Terminates unit of work as follows:
 - 'A7' status code if message is from application
 - DFS0777I if message from LU 6.2 conversation
 - DFS1289I if message is from OTMA

- **Requirements**
 - IMS QBUFMAX parameter must be set for Enforce mode
 - Require IMS Tools Generic Exits common code to allow co-existence of multiple DFSQSSP0 exits

Implementation Details (Continued)

- Proclib member control parameters:
 - *LBUFMODE= INACTIVE| REPORT| ENFORCE*
 - specifies requested run mode
 - *LBUFREPT=(InitialValue, BufferPctIncrement, BufferNoIncrement, TimeInterval)*
 - specifies REPORT mode parameters
 - *LBUFWARN=(InitialValue, BufferPctIncrement, BufferNoIncrement, TimeInterval)*
 - specifies ENFORCE mode parameters for WARNING mode
 - *LBUFACTN=(InitialValue, BufferPctIncrement, BufferNoIncrement, TimeInterval)*
 - specifies ENFORCE mode parameters for ACTION mode
 - *LBUFCRIT=(InitialValue, BufferPctIncrement, BufferNoIncrement, TimeInterval)*
 - specifies ENFORCE mode parameters for CRITICAL mode
 - *LBUFLBUA= ###*
 - specifies no of buffers a caller must hold to be considered a large user in action mode. The exit will take actions against large user's only.
 - *LBUFLBUC= ####*
 - specifies no of buffers a caller must hold to be considered a large user in critical mode. The exit will take actions against large user's only.

Sample Messages

- **Report Mode (2 minutes interval reporting)**
 - 07.45.10 JOB00123 GJE9010I DFSQSSP0 REPORT MODE: 22 BUF 11 PCT IMS1
 - 07.47.10 JOB00123 GJE9010I DFSQSSP0 REPORT MODE: 29 BUF 15 PCT IMS1
 - 07.49.10 JOB00123 GJE9010I DFSQSSP0 REPORT MODE: 36 BUF 18 PCT IMS1
- **Large buffer users (periodic messages):**
 - 08.22.08 JOB00191 GJE9050I DFSQSSP0 LARGE USER: 17 BUF FOR BMP255 IMS1
 - 08.22.08 JOB00191 GJE9050I DFSQSSP0 LARGE USER: 12 BUF FOR BMP255 IMS1
- **Warning Level**
 - 08.31.20 JOB00191 GJE9020I DFSQSSP0 WARNING MODE: 26 BUF 13 PCT IMS1
 - 08.34.20 JOB00191 GJE9020I DFSQSSP0 WARNING MODE: 27 BUF 14 PCT IMS1
 - 08.37.21 JOB00191 GJE9020I DFSQSSP0 WARNING MODE: 28 BUF 14 PCT IMS1
- **Action Level**
 - 08.22.48 JOB00191 GJE9030I DFSQSSP0 ACTION MODE: 151 BUF 76 PCT IMS1
 - 08.24.48 JOB00191 GJE9030I DFSQSSP0 ACTION MODE: 158 BUF 79 PCT IMS1
- **Critical Level**
 - 23.01.19 JOB00173 GJE9040I DFSQSSP0 CRITICAL MODE: 179 BUF 90 PCT IMS1
 - 23.02.19 JOB00173 GJE9040I DFSQSSP0 CRITICAL MODE: 180 BUF 90 PCT IMS1

Managing IRLM locks

Data Sharing Long Locks

- DB Lockouts by applications holding IRLM locks for an inordinate amount of time
 - Could go unrecognized until it becomes critical
 - Lack of supported tools to assist in recognition and identification of problem
 - Manual intervention required to resolve

- Exception processing for Long Locks
 - Automatic real-time recognition when IRLM detects
 - Information consolidated, analyzed for top blocker, and presented
 - Information recorded in exceptions file and sent to z/OS console
 - Messages can be sent to z/OS console using user exit so that automated operations can resolve
 - Problem quickly resolved without manual intervention

Data Sharing Long Lock Exceptions

```
STLMVS1 - [24 x 80]
File Edit View Communication Actions Window Help
-----
Display Filter View Print Options Help
-----
SDSF SYSLOG      4.102 STL1 STL1 01/23/2006 3W      4367      COLUMNS 51 130
COMMAND INPUT ==> _                               SCROLL ==> HALF
0090 GJE0361I  LOCKNAME = 090000040C800501D700000000000000 STRUCTURE = LT01
0090 GJE0361I  Top Blocker-Message to IMS1
0090 GJE0361I  PSTNumber=0001 PSBName=HPC$BA00 IMSID=IMS2
0090 GJE0361I  Type=BMP Batch/Trans Name=BMP21 CICS Task=
0090 GJE0361I  TranElapsedTime=00:07:00
0090 GJE0361I  RecoveryToken=IMS2 4040404000000001
0090 GJE0361I  Waiter -Message to IMS1
0090 GJE0361I  PSTNumber=0002 PSBName=SMQPSB6 IMSID=IMS1
0090 GJE0361I  Type=MPP Batch/Trans Name=SMQ6 CICS Task=
0090 GJE0361I  TranElapsedTime=00:07:01
MA b 04/021
Connected to remote server/host stlmvs1.svl.ibm.com using lu/pool ST11TG44 and port 23 HP PSC 750xi on DOT4_001
```

Data Sharing Long Lock Exceptions

```

STLMVS1 - [24 x 80]
File Edit View Communication Actions Window Help
-----
Display Filter View Print Options Help
-----
SDSF SYSLOG      4.103 STL2 STL2 01/24/2006 2W      5721      COLUMNS 51 130
COMMAND INPUT ==>
0290 R 15,/STO REGION JOBNAME BMP21      ABDUMP.
0090 IEE600I REPLY TO 15 IS;/STO REGION JOBNAME BMP21      ABDUMP.
0090 DFS058I 10:09:46 STOP COMMAND IN PROGRESS  IMS2
0090 *16 DFS996I *IMS READY*  IMS2
0090 DFS554A BMP21      00001 BMP      HPC$BA00(2)      000,0474 PSB
      2006/024 10:09:47 IMS2
0090 DFS552I BATCH      REGION BMP21      STOPPED ID=00001 TIME=1009  IMS2
0090 WTSC      |S WTSC      THIS |W (AUTOMASTER |DFS970I 9:09:|GJE220I DATA
      |GJE2200I IMS S|DFS554A BMP21 |DFS552I BATCH |
0090 IEA995I SYMPTOM DUMP OUTPUT 520
0090 USER COMPLETION CODE=0474
0090 TIME=10.09.46 SEQ=00065 CPU=0000 ASID=002D
0090 PSW AT TIME OF ERROR 078D1000 9130664A ILC 2 INTC 01
0090 ACTIVE LOAD MODULE      ADDRESS=113058B0 OFFSET=00000D9A
0090 NAME=DFSREXX1
0090 DATA AT PSW 11306644 - 5410AEF8 0A015850 92695860
0090 AR/GR 0: 80C62A4A/00000001 1: 00000000/1130C518
0090 2: 00000000/000069B0 3: 00000000/000000FF
0090 4: 00000000/1130C518 5: 00000000/113252D8
0090 6: 00000000/000000FF 7: 00000000/00000000
-----
MA c 04/021
Connected to remote server/host stlmvs1.svl.ibm.com using lu/pool ST11TJ76 and port 23 HP PSC 750xi on DOT4_001

```

Aggregated IRLM Statistics

- Managing the well being of IRLM(s)
 - Deadlocks, false contentions, storage utilization?
 - Multiple IRLMs to check
- Information gathered from IRLMs across Sysplex
 - Aggregated into single system image
 - Drill down for information from individual IRLMs

Aggregated IRLM Statistics

```

Menu  View  Options  Help
-----
GJEP140                      Aggregated IRLM Statistics
COMMAND ==> _____
Realtime snapshot
Row 1 to 31 of 51
SCROLL ==> PAGE

IMSpLex. . . PLEX1           Date. . . : 04/10/08
SM server. : UIS1           Time. . . : 09:47:26
Route. . . . *

Enter 's' to view detailed IRLM statistics. s

GLOBAL ACTIVITY COUNTERS:
Total global LOCK request. . . . .: 4
Child locks propagated . . . . .: 0
IRLM to IRLM notify request. . . . .: 0

REQUESTS
Lock . . . . .: 4
Unlock . . . . .: 0
Change . . . . .: 0
Synchronous notify . . . . .: 0
Asynchronous notify. . . . .: 0
Verify . . . . .: 0
Purge. . . . .: 2
Query. . . . .: 0
Takeover . . . . .: 0

EXIT COUNTERS
Suspend. . . . .: 6
Resume . . . . .: 6
Status . . . . .: 0
Notify . . . . .: 0
Deadlock . . . . .: 0
Timeout. . . . .: 0

EXIT EXTENSION REQUESTS:
Synchronously propagated locks . . . . .: 4
Synchronously propagated change. . . . .: 0
Synchronously propagated unlocks . . . . .: 0
Asynchronously propagated locks . . . . .: 0
Visits to contention exits . . . . .: 0

```

Aggregated IRLM Statistics

```

Menu  View  Options  Help
-----
GJEP141                                Realtime snapshot
                                IRLM Statistics                Row 34 to 62 of 146
COMMAND ==> _____ SCROLL ==> PAGE

IMSplex. . . PLEX1                      Date. . . : 04/10/08
SM server. : UIS1                       Time. . . : 09:47:26
Route. . . . *

IMSId  Description                                     Value
IMS1   RESOURCE CONTENTIONS:
IMS1   Local. . . . .                               0
IMS1   Global. . . . .                              0
IMS1   False. . . . .                               0
IMS1
IMS1   SYSTEM ACTIVITY COUNTERS:
IMS1   Identify requests. . . . .                   2
IMS1   Quit requests. . . . .                       0
IMS1   Local deadlocks. . . . .                     0
IMS1   Global deadlocks . . . . .                   0
IMS1   Timeouts RLBS purged . . . . .               0
IMS1

```


Managing CSL RM Structure

Managing CSL RM Structure

■ Common Service Layer RM Structure Content

- Holds global status of IMS Resources in IMSplex
- Determines IMSplex wide status of Trans, LTERMs, Users
- No capability to view content
- No capability to alter/delete inconsistently defined resources

■ Resource Management Structure display

- Real-time display of structure content
- Selectable via resource type and name filtering
- Global status info to aid delete decision
- Capability to delete selected resource definitions (multiple delete, delete by resource type or by owner)
- Eliminates need to scratch and reallocate resource structure

IMS Resource Structure Content

```
Menu View Options Help
----- Realtime snapshot
GJEPRML          IMS RM Management
Option ==> 14
-----
IMSplex. . . PLEX1
SM server. : UIS1
Route. . . : *
Filter . . . *
-----

Select one of the following resource types:

1. Transactions          9. Userids
2. Lterms                10. Static node users
3. Remote MSnames       11. Databases
4. Dynamic users         12. Scheduled Serial Programs
5. Remote Nodes          13. Areas
6. IMSplex               14. All of the above
7. CPIC transactions
8. APPC descriptors
```

IMS Resource Structure Content

```

Menu View Options Help
----- Realtime snapshot
GJEP7611          RM Resource Information      Row 1 to 27 of 392
COMMAND ==>      SCROLL ==> PAGE

IMSpdex. . . : PLEX1          Date. . . : 04/08/08
SM server. . . : UIS1        Time. . . : 12:57:54
Route. . . . : *
Filter . . . . : *

Resource type. . : TRANSACT
Enter 'd' to delete the resource
      'dxx' to delete multiple resources (xx = 1-99)

Cmd Resource      Prompt  Version      Owner      Glbl-stat  Cmd-timestamp
---- APOL21          Prompt  0000000000000001  NONE      NONE
---- BHA2           Prompt  0000000000000001  NONE      NONE
---- BHF1           Prompt  0000000000000001  NONE      NONE
---- BHG3           Prompt  0000000000000001  NONE      NONE
---- CONV12M0       Prompt  0000000000000001  NONE      NONE
---- CONV21C0       Prompt  0000000000000001  NONE      NONE
---- CONV21M1       Prompt  0000000000000001  NONE      NONE
d|  CONV21U0       Prompt  0000000000000001  NONE      NONE
---- DSPINV         Prompt  0000000000000001  NONE      NONE
---- ETRAN29        Prompt  0000000000000001  NONE      NONE
---- GMC            Prompt  0000000000000001  NONE      NONE
---- NQG1           Prompt  0000000000000001  NONE      NONE
---- NQHC1          Prompt  0000000000000001  NONE      NONE
---- NQH3           Prompt  0000000000000001  NONE      NONE

```

IMS Resource Structure Content

```

Menu View Options Help
-----
GJEP7611          RM Resource Information          Realtime snapshot
COMMAND ==>                                           Row 1 to 27 of 392
                                                    SCROLL ==> PAGE

IMSplex. .
SM server.
Route. . .
Filter . . .

Resource ty
Enter 'd'
'dxx'

Cmd Resource                                     t Cmd-timestamp
APOL21
BHA2
BHF1
BHG3
CONV12M
CONV21C
CONV21M1          0000000000000001      NONE      NONE
D CONV21U0        0000000000000001      NONE      NONE
DSPINV          0000000000000001      NONE      NONE
ETRAN29        0000000000000001      NONE      NONE
GMC            0000000000000001      NONE      NONE
NQG1          0000000000000001      NONE      NONE
NQHC1        0000000000000001      NONE      NONE
NQH3        0000000000000001      NONE      NONE

GJEP76V Confirm RM Resource Delete
COMMAND ==>
Resource name . . : CONV21U0
Resource type . . : TRANSACT
Resource version. : 0000000000000001

_ Abort delete ALL request
_ Set resource delete confirmation off

Press ENTER to confirm delete.
Press PF3 (END) to cancel delete.

F1=HELP      F2=SPLIT      F3=END
F4=RETURN    F5=RFIND      F6=RCHANGE
    
```

IMS Resource Structure Content

```

Menu View Options Help
-----
GJEP7611          RM Resource Information          Realtime snapshot
COMMAND ==>      Row 8 to 34 of 392
                  SCROLL ==> PAGE

IMSplex. . : PLEX1          Date. . : 04/08/08
SM server. : UIS1          Time. . : 12:57:54
Route. . . : *
Filter . . . : *

Resource type. . : TRANSACT
Enter 'd' to delete the resource
      'dxx' to delete multiple resources (xx = 1-99)

Cmd Resource      Prompt Version      Owner      Glbl-stat  Cmd-timestamp
___ CONY21U0      Deleted 0000000000000001  NONE      NONE
___ DSPINY        0000000000000001  NONE      NONE
___ ETRAN29       0000000000000001  NONE      NONE
___ GMC           0000000000000001  NONE      NONE
___ NQG1          0000000000000001  NONE      NONE
___ NQHC1         0000000000000001  NONE      NONE
___ NQH3          0000000000000001  NONE      NONE
___ NRCY11B0      0000000000000001  NONE      NONE
___ ODSAGRC2      0000000000000001  NONE      NONE
___ RCK1MM        0000000000000001  NONE      NONE

```

Other Product Use Scenarios

Scenario 1 – Taking Inventory and Capture Diagnostics

- Many address spaces – IMS Control Region, IMS DLI/SAS, IMS DBRC, IRLM, CQS, RM, OM, SCI, etc..
 - How do you identify related IMS components across the Sysplex?
 - What is the status of these components?
 - What version of IMS components are involved?
 - How much resource are they using from z/OS perspective?
 - How do you collect diagnostic data to debug sysplex problem?

- IMS Sysplex Manager structured TSO/ISPF interface
 - Guided display of IMS components
 - Provides component id, task or job name, version, status and basic z/OS information such as CPU time and EXCP counts
 - Drill-down to detailed component information
 - Easily capture console dumps for IMS components across the plex
 - Check DBRC RECON datasets placement and VSAM stats

Component List

```

Menu View Options Help
-----
GJEP600                      IMSplex/SMplex Component List      Realtime snapshot
COMMAND ==>                   Row 1 to 19 of 19
                               SCROLL ==> PAGE

IMSplex. . . PLEX1           Date:          04/08/08           More:  >
SM server. : UIS1           Time:          14:50:23

Enter 's' to display statistics for the selected component
      'i' to display z/OS information for the selected component
      'd' to produce an SVC dump for the selected component
      'dt' to produce SVC dumps for the selected component type across the plex

Cmd ID      Type Version z/OSname Jobname  DBRCname DLIname  IRLMname Status
---
  IMS2      IMS  9.1.0  ECTST22  IMS2    DBREASAJ DLIEASAJ  IRLME2N  READY
  DBRC      DBRC 9.1.0  ECTST22  DBREASAJ
  DSAS      DSAS 9.1.0  ECTST22  DLIEASAJ
  IRLM      IRLM 2.1.0  ECTST22  IRLME2N
  CQS2      CQS  1.4.0  ECTST22  CQSEJ2
  OM20M     OM   1.2.0  ECTST22  OM2
  RM2RM     RM   1.2.0  ECTST22  RM2
  SCI2SC    SCI  1.2.0  ECTST22  SCI2
  IMSA      IMS  9.1.0  ECTST21  IMSA    DBREASBJ DLIEASBJ  IRLME2N  READY
  DBRC      DBRC 9.1.0  ECTST21  DBREASBJ
  DSAS      DSAS 9.1.0  ECTST21  DLIEASBJ
  IRLM      IRLM 2.1.0  ECTST21  IRLME2N
  IMS1      IMS  9.1.0  ECTST21  IMS1    DBREASAJ DLIEASAJ  IRLME2N  READY
  DBRC      DBRC 9.1.0  ECTST21  DBREASAJ
  DSAS      DSAS 9.1.0  ECTST21  DLIEASAJ
  CQS1      CQS  1.4.0  ECTST21  CQSEJ1
  OM10M     OM   1.2.0  ECTST21  OM1
  RM1RM     RM   1.2.0  ECTST21  RM1
  SCI1SC    SCI  1.2.0  ECTST21  SCI1
***** Bottom of data *****

```

Component List (cont)

```

Menu View Options Help
-----
GJEP601                      IMSplex/SMplex Component List      Realtime snapshot
COMMAND ==>                   Row 1 to 19 of 19
                               SCROLL ==> PAGE

IMSplex. . . PLEX1           Date:      04/08/08           More: <
SM server. : UIS1           Time:      10:34:27

Enter 's' to display statistics for the selected component
Enter 'i' to display z/OS information for the selected component
Enter 'd' to produce an SVC dump for the selected component
Enter 'dt' to produce SVC dumps for the selected component type across the plex

Cmd ID      Type IMS/Datasharing CQS/SMQ-Structures CPUtime(hs)  EXCPs
-----
IMS2       IMS          Y
          DBRC          .05          357
          DSAS          .17          1,230
          IRLM          4.51          319
CQS2       CQS          Y
OM20M     OM           .34          1,085
RM2RM     RM           .36          1,194
SCI2SC    SCI          .45          1,399
IMS3       IMS          Y
          DBRC          .05          357
          DSAS          .17          1,208
          IRLM          4.49          319
IMS1       IMS          Y
          DBRC          .05          385
          DSAS          .18          1,255
CQS1       CQS          Y
OM10M     OM           .31          1,088
RM1RM     RM           .30          1,197
SCI1SC    SCI          .41          1,402
***** Bottom of data *****

```

Capture Console Dumps

```
GJEPSVC                                SDUMPX Options
COMMAND ==> _____

Title . . . IMSSM SDUMPX on 04/08/08 11:14:13
_____

Jobname . . . . . : IMS1
Address space type. : IMS
z/OS name . . . . . : ECTST21

Enter Y to include or N to exclude the SDUMPX option.

ALLNUC (All nucleus areas) . . . _      ALLPSA (All PSAs in system). . _
COUPLE (Couple). . . . . _             CSA. . . . . _
GRSQ . . . . . _                       IO (I/O areas) . . . . . _
LSQA . . . . . _                       LPA (Active LPAs for region) . _
NUC (Nucleus). . . . . _              PSA (Current PSA). . . . . _
RGN (Region private area). . . _      SQA. . . . . _
SUMDUMP (Summary dump) . . . . . _    SWA (SWA for region) . . . . . _
TRT (Trace tables/GTF buffers) . _    XESDATA. . . . . _

_ Set SDUMPX option display off
```

Capture IMS CF structures Dump

```

GJEP90D                               SDUMPX Options
COMMAND
Title GJEP90D          Coupling Facility Structu Row 1 to 4 of 4
COMMAND ==>          SCROLL ==> PAGE
Jobn
Addr
z/OS
Enter
ALLN
COUPL
GRSQ
LSQA
NUC
RGN
SUMD
TRT

Menu View Options Help
-----
Enter Y to include the Structure in the SDUMPX command

  Cmd Structure name      Type Status
  ---
  --- IMSMSGQ01           MSGQ ALLOCATED
  --- IMSRSRC01           RSRC ALLOCATED
  --- GJESMAFN           AFFN ALLOCATED
  --- OSAMSEXI           OSAM ALLOCATED
***** Bottom of data *****

F1=HELP      F2=SPLIT      F3=END      F4=RETURN
F5=RFIND     F6=RCHANGE     F7=UP      F8=DOWN

_ Set SDUMPx option display off

```

z/OS perspective for IMS address spaces

```

Menu View Options Help
-----
GJEPIAS          z/OS Information For IMS Address Spaces
COMMAND ==>
Realtime snapshot
Row 1 to 25 of 25
SCROLL ==> PAGE

IMSplex. . . PLEX1          Date. . : 04/08/08
SM server. : UIS1          Time. . : 11:23:40          More: >

'd' to produce an SVC dump for the selected address space
'dt' to produce SVC dumps for the selected address space type plex-wide

Cmd Jobname Type z/OSname Prty ASID TCB time SRB time CPU time EXCPs
---
___ IMS2     IMS  ECTST22  C9  0091  3.04   .70   3.74   9,540
___ DBREASAJ DBRC ECTST22  FE  0088  .05    .00   .05    357
___ DLIEASAJ DSAS ECTST22  FE  0097  .06    .15   .21   1,230
___ IRLME2N IRLM ECTST22  FE  008C  .06    5.93  5.99   319
___ CQSEJ2  CQS  ECTST22  C2  002A  1.59   2.43  4.02   2,609
___ OM2     OM   ECTST22  C9  0031  .34    .11   .45   1,085
___ RM2     RM   ECTST22  C9  0095  .33    .11   .44   1,194
___ SCI2    SCI  ECTST22  C8  0028  .50    .08   .58   1,399
___ IMSA    IMS  ECTST21  C9  0032  2.16   .63   2.79   9,590
___ DBREASBJ DBRC ECTST21  FE  001A  .05    .00   .05    357
___ DLIEASBJ DSAS ECTST21  FE  0094  .06    .14   .20   1,208
___ IRLME2N IRLM ECTST21  FE  008C  .06    5.89  5.95   319
___ IMS1    IMS  ECTST21  C9  0091  1.90   .55   2.45   9,608
___ DBREASAJ DBRC ECTST21  FE  008D  .05    .00   .05    385
___ DLIEASAJ DSAS ECTST21  FE  0093  .06    .15   .21   1,255
___ CQSEJ1  CQS  ECTST21  C5  002A  .61    2.38  2.99   2,727
___ OM1     OM   ECTST21  C9  0031  .30    .08   .38   1,088
___ RM1     RM   ECTST21  C9  0028  .30    .08   .38   1,197
___ SCI1    SCI  ECTST21  C8  0090  .51    .07   .58   1,402
___ MPP23   TP   ECTST22  C9  0030  .01    .00   .01    153
___ MPP22   TP   ECTST22  C9  0025  .01    .00   .01    153
___ MPP21   TP   ECTST22  C9  0032  .01    .00   .01    153
___ MPP13   TP   ECTST21  C9  002F  .01    .00   .01    153
___ MPP12   TP   ECTST21  C9  0030  .01    .00   .01    153
___ MPP11   TP   ECTST21  C9  002E  .01    .00   .01    153
***** Bottom of data *****

```

Scenario 2 – Managing IMS System Parameters

- Many system run-time parameters
 - Sources: DFSPBxxx, overrides via Control Region PARM=
 - Which ones are being used?
 - Are the parameters the same across the Sysplex?
- System parameter display
 - Real-time scrollable display of “resolved” values
 - Parameter values across all IMS systems for easy comparison
 - New – System Parameter Tutor for instant description

IMS System Parameters

```

Menu  Edit  Option
-----
GJEP200  System configuration options and parameters  Realtime snapshot
COMMAND ===>  Row 1 to 30 of 262
SCROLL ===> PAGE

IMSplex: PLEX1      Date:      08/23/06
SM server: UIS      Time:      11:55:16
Route: *

Keyword
IMSId Parameter  Description  Value
-----
IMS1 ALOT      User auto logoff time, minutes  1440
IMS2 ALOT      User auto logoff time, minutes  1440
IMS1 AOIP      AOI pool upper limit, bytes    2147483647
IMS2 AOIP      AOI pool upper limit, bytes    2147483647
IMS1 AOIS      Cmd auth exit security option, A/C/N/R/S  N
IMS2 AOIS      Cmd auth exit security option, A/C/N/R/S  N
IMS1 AOI1      Type 1 AOI cmd auth option, A/C/N/R/S    N
IMS2 AOI1      Type 1 AOI cmd auth option, A/C/N/R/S    N
IMS1 APPC      Activate APPC/IMS LU 6.2 support, Y/N    N
IMS2 APPC      Activate APPC/IMS LU 6.2 support, Y/N    N
IMS1 APPCSE    APPC RACF security option, Check/Full/None  F
IMS2 APPCSE    APPC RACF security option, Check/Full/None  F
IMS1 APPLID1   VTAM Applid for IMS subsys
IMS2 APPLID1   VTAM Applid for IMS subsys
IMS1 APPLID2   VTAM Applid for XRF alternate subsys
IMS2 APPLID2   VTAM Applid for XRF alternate subsys
IMS1 APPLID3   VTAM Applid for RSR tracking subsys      APPL7
IMS2 APPLID3   VTAM Applid for RSR tracking subsys      APPL7
IMS1 ARC      OLDS automatic archiving interval      01
IMS2 ARC      OLDS automatic archiving interval      01
IMS1 ARMRST    MYS ARM to restart IMS after failure, Y/N  N
IMS2 ARMRST    MYS ARM to restart IMS after failure, Y/N  N

```

IMS System Parameters

```

Menu Edit Option
-----
GJEP200      4 1. Autorefresh
COMMAND ===  2. Preferences...
              3. Enter IMS commands
              4. Display unequal values
IMSplex:    08/30/06
SM server:  10:46:18
Route: *

-----
Keyword
IMSId Parameter Description Value
-----
IMS1 ALOT User auto logoff time, minutes 1440
IMS1 AOIP AOI pool upper limit, bytes 2147483647
IMS1 AOIS Cmd auth exit security option, A/C/N/R/S N
IMS1 AOI1 Type 1 AOI cmd auth option, A/C/N/R/S
    
```


IMS System Parameters – Showing Unequal Parm

```

Menu Edit Option
-----
GJEP201 System configuration options and parameters
COMMAND ==>

IMSplex: PLEX1 Date: 08/23/06
SM server: UIS Time: 11:55:16
Route: *

Keyword
IMSId Parameter Description Value
-----
IMS1 DC DC proclib member suffix C01
IMS2 DC DC proclib member suffix C02
IMS1 IMSID IMS subsystem identifier IMS1
IMS2 IMSID IMS subsystem identifier IMS2
IMS1 SHAREDQ DFSSQxxx shared queues member suffix EI1
IMS2 SHAREDQ DFSSQxxx shared queues member suffix EI2
***** Bottom of data *****

```

IMS System Parameters – Tutor

```

Menu View Options Help
-----
GJEP200      System Configuration Options and Parameters      Realtime snapshot
COMMAND ==> HELP                                     Row 1 to 30 of 131
                                                    SCROLL ==> PAGE

SMplex . . .
SM server.
Route. . .

      Keyw
      IMSid Para
SYS3  ALOT
SYS3  AOIP
SYS3  AOIS
SYS3  AOI1
SYS3  APPC
SYS3  APPC
SYS3  APPL
SYS3  APPL
SYS3  APPL
SYS3  ARC
SYS3  ARMR
SYS3  ASOT
SYS3  AUTO
SYS3  BSIZ
SYS3  CCTC
SYS3  CIOP
SYS3  CMDMCS
SYS3  CPLOG
SYS3  CRC
SYS3  CRTYPE

      GJEPFLDH      IMS Startup Parameter Tutor Row 1 to 13 of 37
      COMMAND ==>
      Keyword. : CMDMCS

      N: Commands cannot be entered from an MCS console.
      N is the default.
      Y: Commands can be entered from an MCS or E-MSC
      console by entering the command recognition
      character (CRC) followed by the command text.
      R: Commands can be entered from an MCS console in
      the form CRC followed by the command text. The
      calls RACF (or equivalent) to verify that the
      user ID of the console is authorized to issue
      the command.
      C: Commands can be entered from an MCS console in
      the form CRC followed by the command text.
      DFSCCMDO is called to verify that the user ID of

      F1=Help      F2=Split      F3=Exit      F7=Backward
      F8=Forward   F9=Swap      F10=Actions   F12=Cancel

      Communication I/O pool upper limit, bytes      2147483647
      Command security option . . . . . N
      System log checkpoint frequency . . . . . 0000032767
      IMS command recognition character . . . . . /
      IMS Cntl Rgn type (DB/DC, DBCTL,DCCTL,FDR) DB/DC
  
```



Thank
You