CA IDMS™ Performance and Tuning

Education

EC801EN

caWorld'08 | discoverability

Abstract

> As access to CA IDMS systems increases from the web and distributed environments, performance is more important than ever. This full-day session focuses on the process of monitoring and tuning CA IDMS/DB and CA IDMS/DC systems to meet SLAs and other performance goals. Multitasking, zIIP processing, Data Sharing, and operating system features that improve total cost of ownership are also discussed.

Agenda

> Applications, Database design

> Benchmarks, Goals, Monitoring Tools

> Performance results of an un-tuned system

> SYSGEN changes

- Performance results

> Buffer changes

- Performance results

Agenda

> zIIP enabled

- Performance results

> Multitasking enabled

- Performance results

> zIIP and Multitasking enabled

- Performance results

> Summary

- Performance results

Agenda

> Parallel Sysplex features

> Health Checks

Applications and Access

> Access from VTAM (CA IDMS™/DC) and CICS

> CA IDMS/DC
- CA ADS™
- COBOL DML

> CICS
- COBOL Dynamic SQL
- COBOL DML

Database Design

> Records

- Account, History, Branch, Teller
  - 100,000 Accounts
  - 1,000 Branches
  - 10,000 Tellers
  - 1 History record inserted for each successful transaction

> Areas

- "Account History"
- "Branch Teller"

Application Design

> CA ADS

- OBTAIN CALC ACCOUNT
- MODIFY ACCOUNT
- STORE HISTORY
- OBTAIN KEEP OWNER WITHIN BRANCH-ACCOUNT
- MODIFY BRANCH
- OBTAIN KEEP TELLER WITHIN BRANCH-TELLER USING TELLER-NUMBER
- MODIFY TELLER

Application Design continued

> DC COBOL

- OBTAIN CALC ACCOUNT
- MODIFY ACCOUNT
- STORE HISTORY
- OBTAIN KEEP OWNER WITHIN BRANCH-ACCOUNT
- MODIFY BRANCH
- OBTAIN KEEP TELLER WITHIN BRANCH-TELLER USING TELLER-NUMBER
- MODIFY TELLER

Application Design continued

> CICS DML COBOL

- OBTAIN CALC ACCOUNT
- MODIFY ACCOUNT
- STORE HISTORY
- OBTAIN KEEP OWNER WITHIN BRANCH-ACCOUNT
- MODIFY BRANCH
- OBTAIN KEEP TELLER WITHIN BRANCH-TELLER USING TELLER-NUMBER
- MODIFY TELLER

Application Design continued

> CICS Dynamic SQL COBOL

- SELECT ACCOUNT_BALANCE, ACCOUNT_BRANCH
- UPDATE ACCOUNT
- INSERT HISTORY
- SELECT BRANCH
- UPDATE BRANCH
- SELECT TELLER
- UPDATE TELLER

Benchmark Runs

> 80,000 Transactions

- Online
  - CA ADS (30,000 Transactions)
  - COBOL (30,000 Transactions)
- CICS
  - COBOL DML (10,000 Transactions)
  - COBOL Dynamic SQL (10,000 Transactions)

Benchmark Run

> TPNS used to drive transactions

- IBM product
  - Teleprocessing Network Simulator

Goals

> Best Performance

- CPU Usage
- Response Time
  - Sub Second
- Throughput

Monitoring and Reporting

> Interactive (Real Time)

> Post processing

Monitoring and Reporting continued

> Interactive (Real Time)

- CA IDMS Performance Monitor (PMRM)
- DCMT COMMANDS
- OPER

Monitoring and Reporting continued

> Post Process

- CA IDMS Performance Monitor Reports
  - Application Monitor
  - Interval Monitor
- SREPORTS
- Real Time monitoring tools can also be used for Post Process monitoring
  - PMRM
  - PMIM

Real Time Monitoring (PMRM)

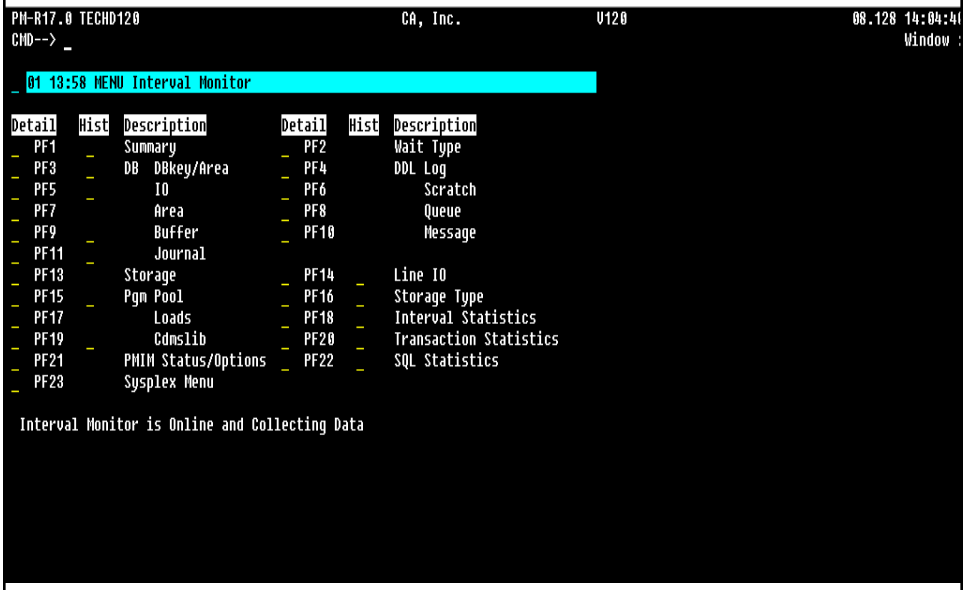
Real Time Monitoring (DCMT)

```
     HELP
 ** For COMMAND SYNTAX related to a keyword, enter 'DCMT HELP'   **
 **      and a KEYWORD selected from the following list:         **

ABORT                JOURNAL              (PREDEFINED) RUN UNITS
ABOUT                LIMITS               SCRATCH
ADSO                 LOADLIBS             SEGMENT
AREAS                LOADLISTS            SHARED CACHE
BUFFERS              LOCKS                SHUTDOWN
CHANGE TRACKING      LOG                  SNA
DATA BASE            LOG DRIVERS          SNAPS
DATA SHARING         LOGICAL UNITS        STATISTICS
DBGROUP              LUS                  STORAGE
DBNAME               MEMORY               SYSGEN
DBTABLE              MESSAGES             SYSTRACE
DDS                  MULTITASK            TASKS
DEADLOCKS            NODE                 TCP/IP
DESTINATIONS         NUCLEUS              TERMINALS
DICTIONARIES         PRINTERS             TIME
DMCL                 PROGRAMS             TRANSACTIONS
DYNAMIC              QUEUES               XA
FILES                REPORTS
ID                   RESOURCE TABLE

V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
 -
```

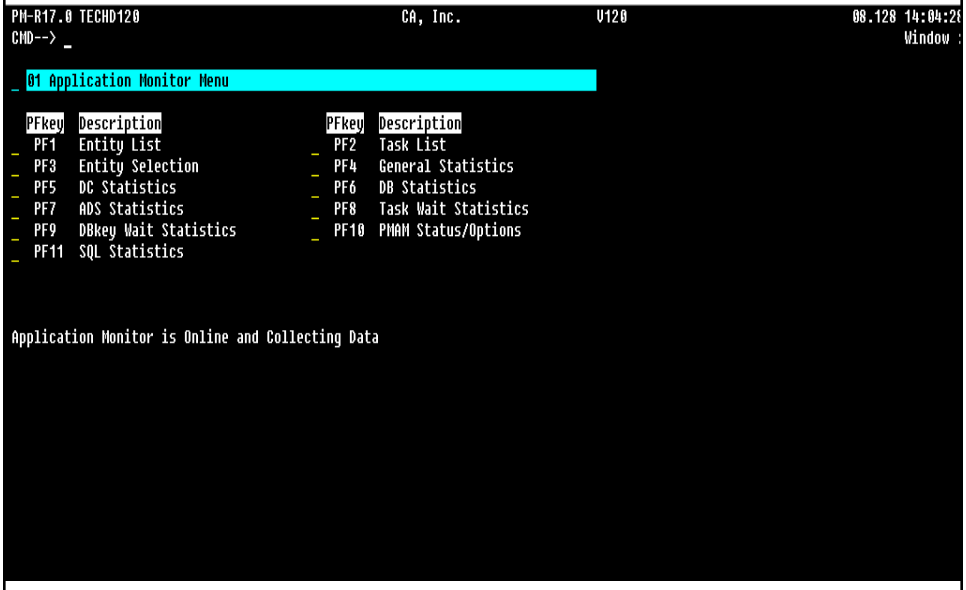

Real Time Monitoring (OPER)

```
 IDMS DB/DC Operator Display Program Release 1700                Tape GJH00B

Pool Displays
  W SP             -- Watch Storage Subpool Summary
  W ST <NN>        -- Watch Storage Pool Usage (<nn> for specific pool)
  W PR <PN>        -- Watch Program Pool Usage (PP | RP | XAPP | XARP)

Task Displays
  W USERS          -- Watch Active Users
  W AC TA          -- Watch Active Tasks
  W TI             -- Watch Active Task Time
  W DB             -- Watch DB Run Units
  W DB IO          -- Watch IO Database
  W DB IOD         -- Watch IO Database/Drivers

General Displays
  W CRIT           -- Watch Critical Resources (RCA | LOG)
  W LTERM          -- Watch LTERM Storage Utilization
Utility Commands
  V TI NN          -- Vary Update Time to nn Seconds
  C XX YY          -- Cancel task by TASKID YY or by LTERMID YY (DUMP)

 IDMS DB/DC V120      - Tasks active:110                  Time: 14:04:05
```


Analysis Online (PMIM)



Analysis Online (PMAM)



Analysis PMAM Reports

Report	Title/description
00	Extract and housekeeping routines (used internally)
01	Task Detail Report
02	Task Summary Report
03	Advantage CA-ADS Dialog Detail Report
04	Advantage CA-ADS Dialog Summary Report
05	User Detail Report
06	User Summary Report
07	Billing Group Detail Report
08	Billing Group Summary Report
09	Abnormal Termination Detail Report
10	Abnormal Termination Summary Report
11	LTERM Detail Report
12	LTERM Summary Report
13	PTERM Detail Report
14	PTERM Summary Report
15	System Detail Report
16	System Summary Report
17	Database Detail Report
18	Database Summary Report
19	DC Statistics Detail Report
20	DC Statistics Summary Report
31	Task Wait Summary Report
36	Task Wait Detail Report
80	Load Balancing Report (By Day and Central Version)
81	Load Balancing Report (By Central Version)
82	Load Balancing Report (By All Central Version)
90	Machine-readable output file containing the extracted statistics (in tape or disk format)
97	Summary Recap Report
99	Input Processing Summary Report

Analysis PMIM Reports

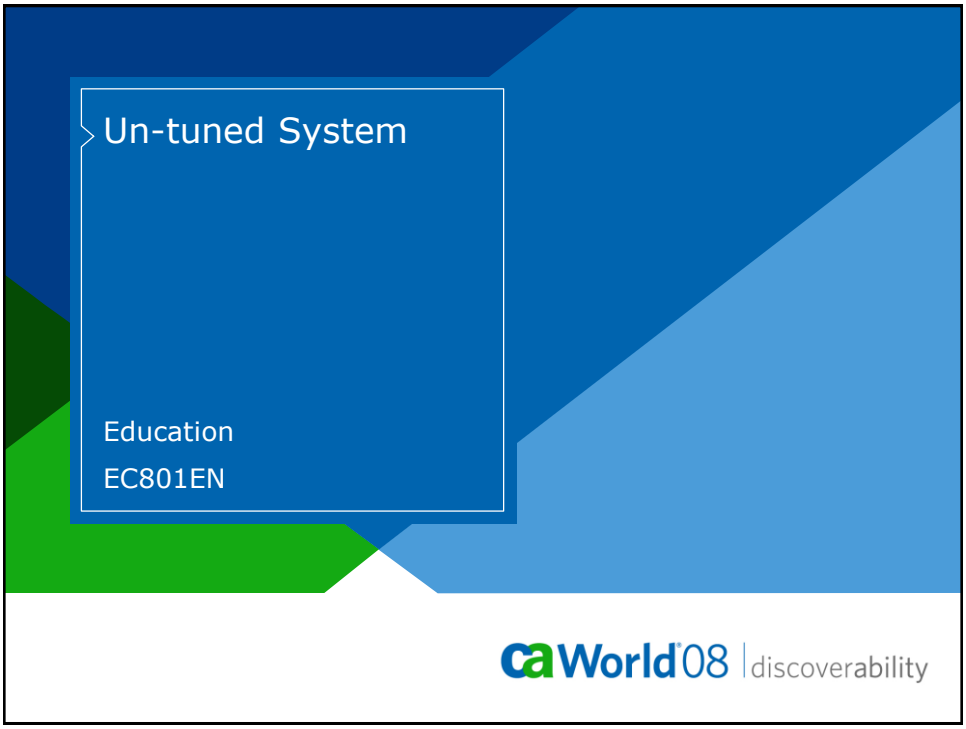
Report	Title/description
00	Extract and housekeeping routines (used internally)
01	Management Summary Report
02	Trend Analysis Report
04	Summary Wait Detail
05	DBkey/Area Detail
09	Shared Cache Summary
10	DBGroup Summary
11	I/O by Area Summary
12	I/O by File Summary
13	Buffer Summary
14	CDMSLIB Summary
15	Journal Summary
16	TP Line Summary
17	Program Pool Summary
18	Storage Pool Summary
19	Storage Wait Summary
21	I/O by Area Detail
22	I/O by File Detail
23	Buffer Detail
24	CDMSLIB Detail
25	Journal Detail
27	Program Pool Detail
29	Storage Type Detail
30	Interval Statistics Summary
32	Run Unit Statistics Summary
38	Journal Block Full Detail
40	Data Sharing SYSPLEX Detail Report
99	Input Processing Summary Report

Analysis SREPORTS

SREPORT Module	SREPORT Category	Statistics Report Title
000		Startup Records Read (required with remaining modules)
001	Histogram	IDMS Statistics Histogram Report (system
003	System	IDMS-DC System Statistics
005	Task	IDMS-DC Task Statistics by User Id
006	Task	IDMS-DC Task Statistics by Lterm Id
007	Task	IDMS-DC Task Statistics by Task Code
008	Task	IDMS-DC ERUS Task Statistics by Accounting Data
009	Task	IDMS-DC ERUS Task Statistics by Program
010	Transaction	IDMS-DC Transaction Statistics by User Id
011	Transaction	IDMS-DC Transaction Statistics by Lterm
012	System	IDMS-DC Task Summary
013	System	IDMS-DC Program Summary
014	System	IDMS-DC Queue Summary
015	System	IDMS-DC Line Summary
016	System	IDMS-DC Physical Terminal Summary
017	Record	Summary of Records Read
018	Advantage CA-ADS	ADS OnLine Statistics by User Id
019	Advantage CA-ADS	ADS OnLine Statistics by Dialog and Version Number
020	Advantage CA-ADS	ADS OnLine Statistics by Logical Terminal Id
021	Transaction	IDMS-DC Transaction Statistics by Dialog
099		No listing (creates an output file of archive statistics records)

Analysis Reports (UCFBATCH and DCMT)

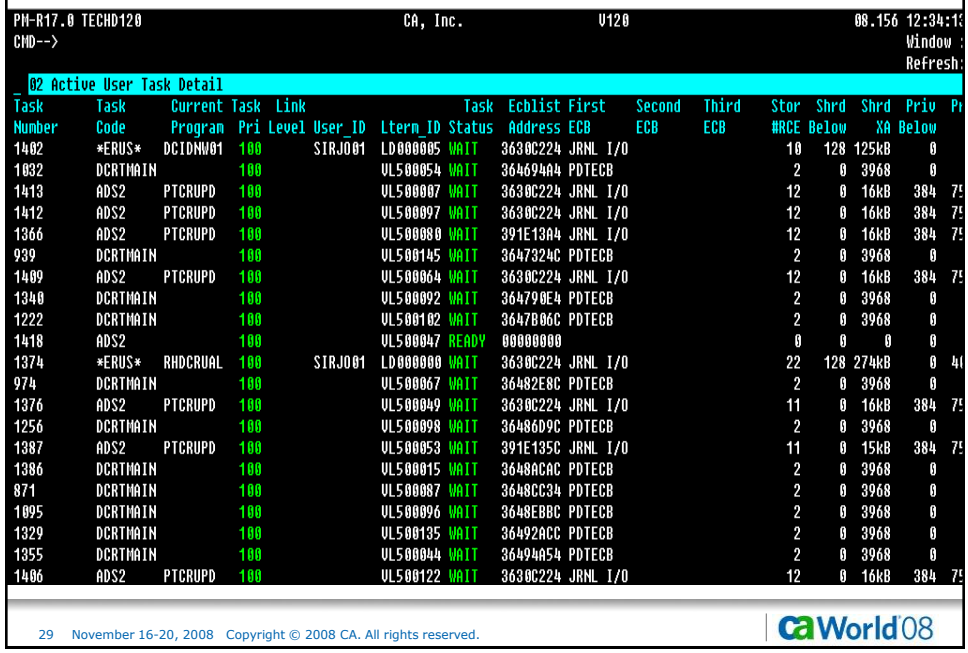
```
000013 //SYSIPT  DD *
000014 DCMT D SUBT 1
000015 DCMT D SUBT EFF
000016 DCMT D SUBT
000017 DCMT D STAT SYS
000018 DCMT D STAT BUFFERS
000019 DCMT D STAT FILE
000020 DCMT D STAT AREA
000021 DCMT D BUF
000022 DCMT D SHA CAC
000023 DCMT D DAT SHA
000024 DCMT D AC TAS
000025 DCMT D MP
000026 DCMT DME 27660 500
000027 DCMT D ALL STO
000028 DCMT D ALL PRO
000029 DCMT D RU
000030 DCPROFIL
000031 BYE
```

Un-Tuned System

> System has been intentionally un-tuned to cause bad performance
  - SYSGEN options
  - Buffers

Real Time Monitoring (PMRM)



PM-R17.0 TECHD120 CA, Inc. V120 08.156 12:34:13
CMD-->
Window
Refresh

02 Active User Task Detail

Task Number	Task Code	Current Program	Task Pri	Link Level	User_ID	Lterm_ID	Task Status	Ecblist First Address ECB	Second ECB	Third ECB	Stor #RCE	Shrd Below	Shrd XA	Priv Below	Pr
1402	*ERUS*	DCIDNW01	100		SIRJ001	LD000005	WAIT	3630C224 JRNL I/O			10	128	125kB	0	
1032	DCRTMAIN		100			VL500054	WAIT	364694A4 PDTECB			2	0	3968	0	
1413	ADS2	PTCRUPD	100			VL500007	WAIT	3630C224 JRNL I/O			12	0	16kB	384	75
1412	ADS2	PTCRUPD	100			VL500097	WAIT	3630C224 JRNL I/O			12	0	16kB	384	75
1366	ADS2	PTCRUPD	100			VL500080	WAIT	391E13A4 JRNL I/O			12	0	16kB	384	75
939	DCRTMAIN		100			VL500145	WAIT	3647324C PDTECB			2	0	3968	0	
1409	ADS2	PTCRUPD	100			VL500064	WAIT	3630C224 JRNL I/O			12	0	16kB	384	75
1340	DCRTMAIN		100			VL500092	WAIT	364790E4 PDTECB			2	0	3968	0	
1222	DCRTMAIN		100			VL500102	WAIT	3647B06C PDTECB			2	0	3968	0	
1418	ADS2		100			VL500047	READY	00000000			0	0	0	0	
1374	*ERUS*	RHDCRUAL	100		SIRJ001	LD000000	WAIT	3630C224 JRNL I/O			22	128	274kB	0	40
974	DCRTMAIN		100			VL500067	WAIT	36482E8C PDTECB			2	0	3968	0	
1376	ADS2	PTCRUPD	100			VL500049	WAIT	3630C224 JRNL I/O			11	0	16kB	384	75
1256	DCRTMAIN		100			VL500098	WAIT	36486D9C PDTECB			2	0	3968	0	
1387	ADS2	PTCRUPD	100			VL500053	WAIT	391E135C JRNL I/O			11	0	15kB	384	75
1386	DCRTMAIN		100			VL500015	WAIT	3648ACAC PDTECB			2	0	3968	0	
871	DCRTMAIN		100			VL500087	WAIT	3648CC34 PDTECB			2	0	3968	0	
1095	DCRTMAIN		100			VL500096	WAIT	3648EBBC PDTECB			2	0	3968	0	
1329	DCRTMAIN		100			VL500135	WAIT	36492ACC PDTECB			2	0	3968	0	
1355	DCRTMAIN		100			VL500044	WAIT	36494A54 PDTECB			2	0	3968	0	
1406	ADS2	PTCRUPD	100			VL500122	WAIT	3630C224 JRNL I/O			12	0	16kB	384	75

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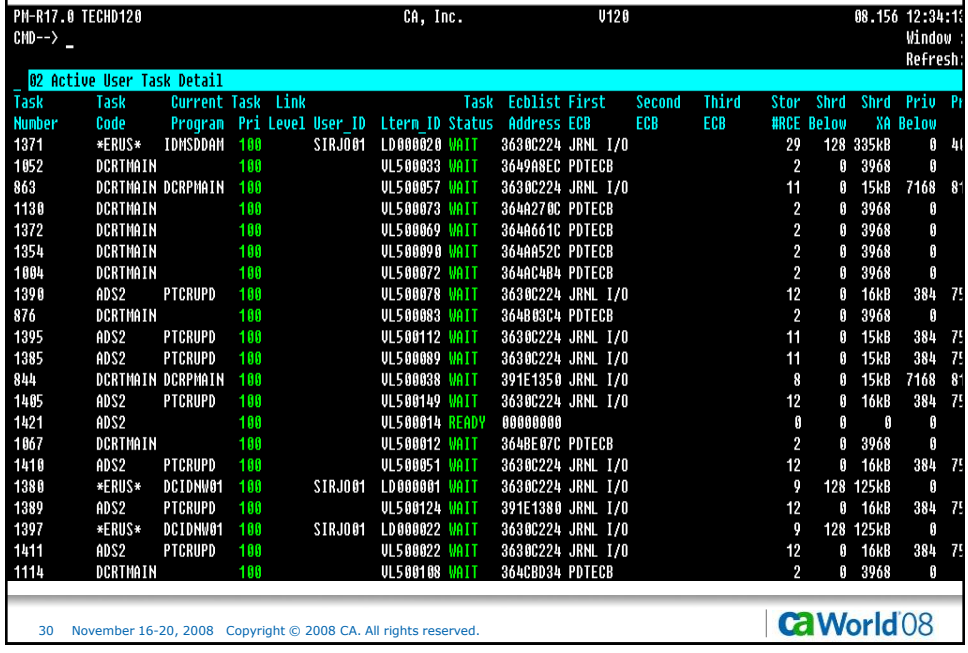
Real Time Monitoring (PMRM)



PM-R17.0 TECHD120 CA, Inc. V120 08.156 12:34:13
CMD-->
Window
Refresh

02 Active User Task Detail

Task Number	Task Code	Current Program	Task Pri	Link Level	User_ID	Lterm_ID	Task Status	Ecblist First Address ECB	Second ECB	Third ECB	Stor #RCE	Shrd Below	Shrd XA	Priv Below	Pr
1371	*ERUS*	IDMSDDAM	100		SIRJ001	LD000020	WAIT	3630C224 JRNL I/O			29	128	335kB	0	40
1052	DCRTMAIN		100			VL500033	WAIT	3649A8EC PDTECB			2	0	3968	0	
863	DCRTMAIN	DCRPMAIN	100			VL500057	WAIT	3630C224 JRNL I/O			11	0	15kB	7168	87
1130	DCRTMAIN		100			VL500073	WAIT	364A270C PDTECB			2	0	3968	0	
1372	DCRTMAIN		100			VL500069	WAIT	364A661C PDTECB			2	0	3968	0	
1354	DCRTMAIN		100			VL500090	WAIT	364AA52C PDTECB			2	0	3968	0	
1004	DCRTMAIN		100			VL500072	WAIT	364AC4B4 PDTECB			2	0	3968	0	
1390	ADS2	PTCRUPD	100			VL500078	WAIT	3630C224 JRNL I/O			12	0	16kB	384	75
876	DCRTMAIN		100			VL500083	WAIT	364B03C4 PDTECB			2	0	3968	0	
1395	ADS2	PTCRUPD	100			VL500112	WAIT	3630C224 JRNL I/O			11	0	15kB	384	75
1385	ADS2	PTCRUPD	100			VL500089	WAIT	3630C224 JRNL I/O			11	0	15kB	384	75
844	DCRTMAIN	DCRPMAIN	100			VL500038	WAIT	391E1350 JRNL I/O			8	0	15kB	7168	87
1405	ADS2	PTCRUPD	100			VL500149	WAIT	3630C224 JRNL I/O			12	0	16kB	384	75
1421	ADS2		100			VL500014	READY	00000000			0	0	0	0	
1067	DCRTMAIN		100			VL500012	WAIT	364BE07C PDTECB			2	0	3968	0	
1410	ADS2	PTCRUPD	100			VL500051	WAIT	3630C224 JRNL I/O			12	0	16kB	384	75
1380	*ERUS*	DCIDNW01	100		SIRJ001	LD000001	WAIT	3630C224 JRNL I/O			9	128	125kB	0	
1389	ADS2	PTCRUPD	100			VL500124	WAIT	391E1380 JRNL I/O			12	0	16kB	384	75
1397	*ERUS*	DCIDNW01	100		SIRJ001	LD000022	WAIT	3630C224 JRNL I/O			9	128	125kB	0	
1411	ADS2	PTCRUPD	100			VL500022	WAIT	3630C224 JRNL I/O			12	0	16kB	384	75
1114	DCRTMAIN		100			VL500108	WAIT	364CBD34 PDTECB			2	0	3968	0	

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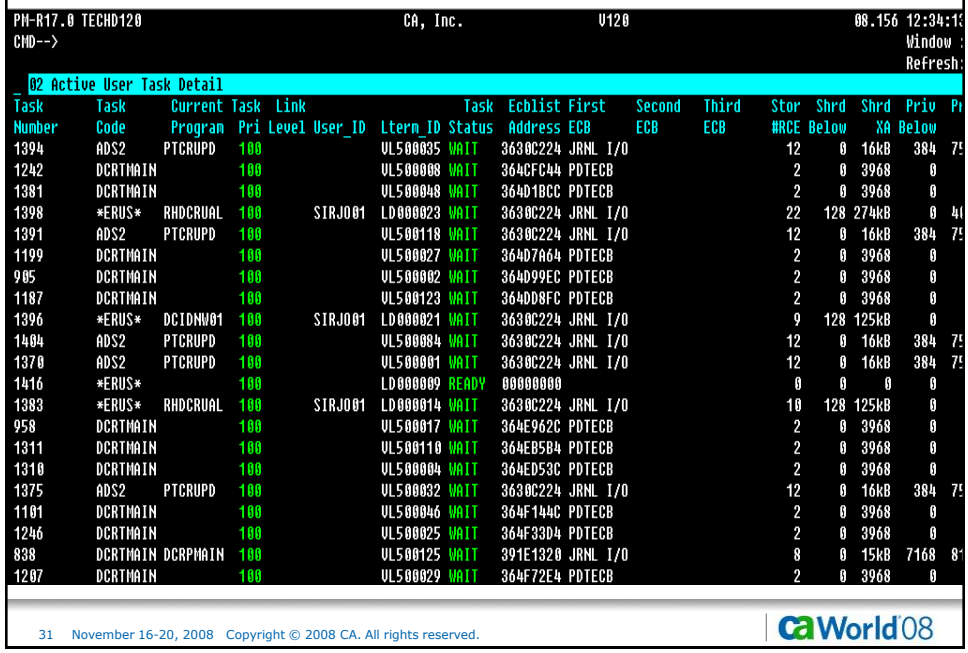
Transforming IT Management

Real Time Monitoring (PMRM)



PM-R17.0 TECHD120 CA, Inc. V120 08.156 12:34:13
CMD-->
Window
Refresh

02 Active User Task Detail

Task Number	Task Code	Current Program	Task Pri	Link Level	User_ID	Lterm_ID	Task Status	Ecblist First Address	Second ECB	Third ECB	Stor #RCE	Shrd Below	Shrd XA	Priv Below	Pr
1394	ADS2	PTCRUPD	100			VL500035	WAIT	3630C224 JRNL I/O			12	0	16kB	384	75
1242	DCRTMAIN		100			VL500008	WAIT	364CFC44 PDTECB			2	0	3968	0	
1381	DCRTMAIN		100			VL500048	WAIT	364D1BCC PDTECB			2	0	3968	0	
1398	*ERUS*	RHDCRUAL	100		SIRJ001	LD000023	WAIT	3630C224 JRNL I/O			22	128	274kB	0	40
1391	ADS2	PTCRUPD	100			VL500118	WAIT	3630C224 JRNL I/O			12	0	16kB	384	75
1199	DCRTMAIN		100			VL500027	WAIT	364D7A64 PDTECB			2	0	3968	0	
905	DCRTMAIN		100			VL500002	WAIT	364D99EC PDTECB			2	0	3968	0	
1187	DCRTMAIN		100			VL500123	WAIT	364DD8FC PDTECB			2	0	3968	0	
1396	*ERUS*	DCIDNW01	100		SIRJ001	LD000021	WAIT	3630C224 JRNL I/O			9	128	125kB	0	
1404	ADS2	PTCRUPD	100			VL500084	WAIT	3630C224 JRNL I/O			12	0	16kB	384	75
1370	ADS2	PTCRUPD	100			VL500001	WAIT	3630C224 JRNL I/O			12	0	16kB	384	75
1416	*ERUS*		100			LD000009	READY	00000000			0	0	0	0	
1383	*ERUS*	RHDCRUAL	100		SIRJ001	LD000014	WAIT	3630C224 JRNL I/O			10	128	125kB	0	
958	DCRTMAIN		100			VL500017	WAIT	364E962C PDTECB			2	0	3968	0	
1311	DCRTMAIN		100			VL500110	WAIT	364EB5B4 PDTECB			2	0	3968	0	
1310	DCRTMAIN		100			VL500004	WAIT	364ED53C PDTECB			2	0	3968	0	
1375	ADS2	PTCRUPD	100			VL500032	WAIT	3630C224 JRNL I/O			12	0	16kB	384	75
1101	DCRTMAIN		100			VL500046	WAIT	364F144C PDTECB			2	0	3968	0	
1246	DCRTMAIN		100			VL500025	WAIT	364F33D4 PDTECB			2	0	3968	0	
838	DCRTMAIN	DCRPMAIN	100			VL500125	WAIT	391E1320 JRNL I/O			8	0	15kB	7168	87
1207	DCRTMAIN		100			VL500029	WAIT	364F72E4 PDTECB			2	0	3968	0	

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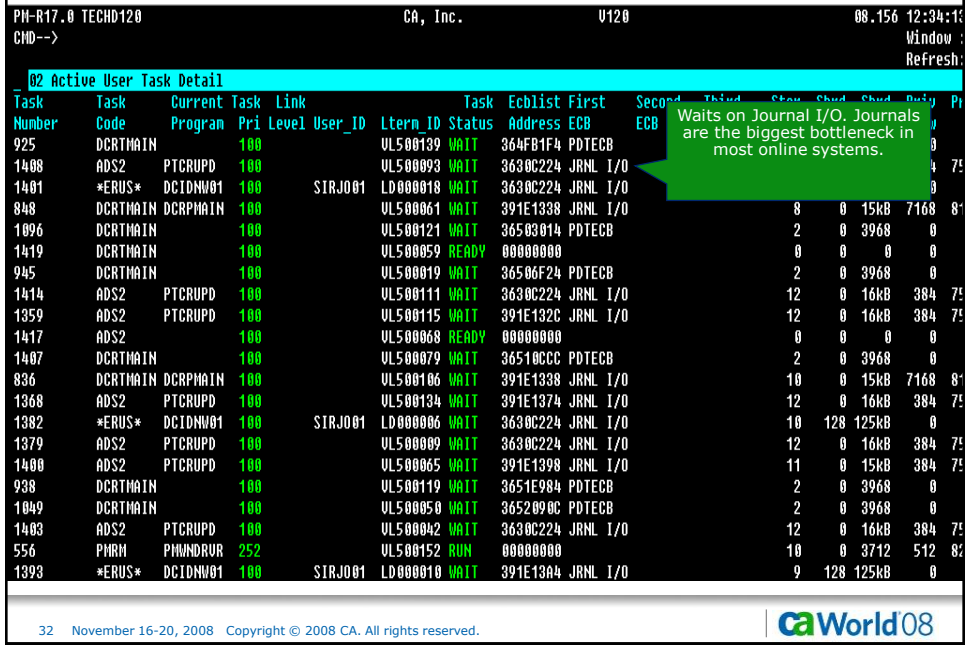
Real Time Monitoring (PMRM)



PM-R17.0 TECHD120 CA, Inc. V120 08.156 12:34:13
CMD-->
Window
Refresh

02 Active User Task Detail

Task Number	Task Code	Current Program	Task Pri	Link Level	User_ID	Lterm_ID	Task Status	Ecblist First Address	Second ECB	Third ECB	Stor #RCE	Shrd Below	Shrd XA	Priv Below	Pr
925	DCRTMAIN		100			VL500139	WAIT	364FB1F4 PDTECB						0	
1408	ADS2	PTCRUPD	100			VL500093	WAIT	3630C224 JRNL I/O						4	75
1401	*ERUS*	DCIDNW01	100		SIRJ001	LD000018	WAIT	3630C224 JRNL I/O						0	
848	DCRTMAIN	DCRPMAIN	100			VL500061	WAIT	391E1338 JRNL I/O			8	0	15kB	7168	87
1096	DCRTMAIN		100			VL500121	WAIT	36503014 PDTECB			2	0	3968	0	
1419	DCRTMAIN		100			VL500059	READY	00000000			0	0	0	0	
945	DCRTMAIN		100			VL500019	WAIT	36506F24 PDTECB			2	0	3968	0	
1414	ADS2	PTCRUPD	100			VL500111	WAIT	3630C224 JRNL I/O			12	0	16kB	384	75
1359	ADS2	PTCRUPD	100			VL500115	WAIT	391E132C JRNL I/O			12	0	16kB	384	75
1417	ADS2		100			VL500068	READY	00000000			0	0	0	0	
1407	DCRTMAIN		100			VL500079	WAIT	36510CCC PDTECB			2	0	3968	0	
836	DCRTMAIN	DCRPMAIN	100			VL500106	WAIT	391E1338 JRNL I/O			10	0	15kB	7168	87
1368	ADS2	PTCRUPD	100			VL500134	WAIT	391E1374 JRNL I/O			12	0	16kB	384	75
1382	*ERUS*	DCIDNW01	100		SIRJ001	LD000006	WAIT	3630C224 JRNL I/O			10	128	125kB	0	
1379	ADS2	PTCRUPD	100			VL500009	WAIT	3630C224 JRNL I/O			12	0	16kB	384	75
1400	ADS2	PTCRUPD	100			VL500065	WAIT	391E1398 JRNL I/O			11	0	15kB	384	75
938	DCRTMAIN		100			VL500119	WAIT	3651E984 PDTECB			2	0	3968	0	
1049	DCRTMAIN		100			VL500050	WAIT	3652090C PDTECB			2	0	3968	0	
1403	ADS2	PTCRUPD	100			VL500042	WAIT	3630C224 JRNL I/O			12	0	16kB	384	75
556	PMRM	PMWNDRVR	252			VL500152	RUN	00000000			10	0	3712	512	82
1393	*ERUS*	DCIDNW01	100		SIRJ001	LD000010	WAIT	391E13A4 JRNL I/O			9	128	125kB	0	

Waits on Journal I/O. Journals are the biggest bottleneck in most online systems.

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Real Time Monitoring (PMRM)

```
PM-R17.0 TECHD120                          CA, Inc.                  V120                          08.156 12:35:1
CMD-->                                                                                                 Window
                                                                                                       Refresh
_ 02 Active User Task Detail
Task      Task      Current Task  Link                    Task  Ecblist First    Second   Third    Stor  Shrd  Shrd  Priv  P
Number    Code      Program  Pri Level User_ID  Lterm_ID Status  Address ECB      ECB      ECB      #RCE Below   XA Below
3066      ADS2      PTCRUPD  100              VL500032 WAIT    3630C224 JRNL I/O                      12     0 16kB   384  7
2581      DCRTMAIN           100              VL500125 WAIT    36553CDC PDTECB                         2     0 3968     0
2745      DCRTMAIN           100              VL500063 WAIT    36555C64 PDTECB                         2     0 3968     0
3078      ADS2      PTCRUPD  100              VL500035 WAIT    391EB550 BCRECB                        11     0 15kB   384  7
3015      ADS2      PTCRUPD  100              VL500126 WAIT    391E1314 JRNL I/O                      12     0 16kB   384  7
2526      DCRTMAIN  DCRPMAIN 100              VL500079 WAIT    3B030D54 BMEXECB                       10     0 15kB  7168  8
2887      DCRTMAIN           100              VL500143 WAIT    3655DA84 PDTECB                         2     0 3968     0
3062      ADS2      PTCRUPD  100              VL500095 WAIT    391E1344 JRNL I/O                      12     0 16kB   384  7
2674      DCRTMAIN           100              VL500083 WAIT    36561994 PDTECB                         2     0 3968     0
2992      *ERUS*    RHDCRUAL 100       SIRJO01 LD000010 WAIT    33D56508 EREECB                        13   128 286kB    0  4
2830      DCRTMAIN           100              VL500129 WAIT    365658A4 PDTECB                         2     0 3968     0
3093      ADS2      PTCRUPD  100              VL500093 WAIT    3630C224 JRNL I/O                      12     0 16kB   384  7
3060      DCRTMAIN           100              VL500073 WAIT    365697B4 PDTECB                         2     0 3968     0
2811      DCRTMAIN           100              VL500072 WAIT    3656B73C PDTECB                         2     0 3968     0
3013      ADS2      PTCRUPD  100              VL500140 WAIT    391E1350 JRNL I/O                      12     0 16kB   384  7
3084      DCRTMAIN           100              VL500048 WAIT    3656F64C PDTECB                         2     0 3968     0
3068      ADS2      PTCRUPD  100              VL500101 WAIT    3630C224 JRNL I/O                      12     0 16kB   384  7
3092      ADS2      PTCRUPD  100              VL500146 WAIT    3630C224 JRNL I/O                      12     0 16kB   384  7
2621      DCRTMAIN           100              VL500013 WAIT    3657746C PDTECB                         2     0 3968     0
```

Waits on "PDTECB" is a red flag!

Real Time Monitoring (DCMT)

```
    D AC TAS
          Current max tasks       133
          Times at max tasks     3504
           Allocated DCE/TCE      241
      Number of tasks abended       2
    Number of tasks processed    4176
       Number of tasks active     137

  Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000000000 *SYSTEM* *MASTER*         255 WAIT NOST 00383BF0 TCAECB
                                                   00052D4C PLESECB
                                                   363227A0 LTTMSECB
                                                   00383C0C Service Task ECB
0000000001 *SYSTEM* *DBRC*           255 WAIT NOST 00086A08 DBRC WTOR ECB
                                                   3517F108 ESEECB
                                                   00027FA4 CCEECB
                                                   000280C4 CCEECB
                                                   00028188 CCEECB
                                                   00028214 CCEECB
                                                   000281E0 CCEECB
0000000009 *DRIVER* UCFLINE          254 WAIT NOST 0005284C PLESECB
0000000010 *DRIVER* VTAM             254 WAIT NOST 00052ACC PLESECB
                                                   006256D4 VTAM READ INIT ECB
                                                   00625854 VTAM RPL ECB
0000000011 *DRIVER* SYSOUTL          254 WAIT NOST 00052E4C PLESECB
0000000013 *DRIVER* VTAMLIN1         254 WAIT NOST 0005394C PLESECB
            PAGE 00001 - NEXT PAGE:
```

Real Time Monitoring (DCMT)

```
 Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
                                                   0063B434 VTAM READ INIT ECB
0000000002 *DRIVER* RHDCRUSD         253 WAIT NOST 3644B090 SERVICE DRIVER ECB
                                                   39235F8C TIMER ECB
0000000003 *DRIVER* RHDCLGSD         253 WAIT NOST 3644B610 SERVICE DRIVER ECB
0000000004 *DRIVER* RHDCLGSD         253 WAIT NOST 3644B690 SERVICE DRIVER ECB
0000000005 *DRIVER* RHDCLGSD         253 WAIT NOST 3644B710 SERVICE DRIVER ECB
0000000006 *DRIVER* PMONCIOD         253 WAIT NOST 3644B790 SERVICE DRIVER ECB
                                                   002AC14C PERFMON SERVICE DRV
                                                   002AC164 PERFMON SERVICE DRV
                                                   002AC158 PERFMON SERVICE DRV
0000000008 *DRIVER* RHDCDEAD         253 WAIT NOST 392396CC ICEECB
                                                   3644B890 SERVICE DRIVER ECB
0000000007 *DRIVER* PMONCROL         253 WAIT NOST 002AC11C ICEECB
                                                   002AC128 ICEECB
                                                   002AC134 PERFMON SERVICE DRV
0000000014 *DRIVER* RHDCPRNT         253 WAIT NOST 3927B72C PRTSECB
0000004176 DCMT     RHDCMT00 VL500152 225 ACTV
0000001805 ADS2     ADSOMAIN VL500016 100 WAIT NOST 003B87A4 LTXNLOCK
0000001823 ADS2     ADSOMAIN VL500005 100 WAIT NOST 0039DE1C LTXNLOCK
0000002596 ADS2     ADSOMAIN VL500118 100 WAIT NOST 003B1B2C LTXNLOCK
0000002597 RHDCNP3S ICD1     LD000013 100 WAIT NOST 0039694C LTXNLOCK
0000002751 DCRTMAIN DCRPMAIN VL500081 100 WAIT NOST 0039AC0C LTXNLOCK
0000003109 ADS2     ADSOMAIN VL500042 100 WAIT NOST 003A5B44 LTXNLOCK
0000003238 ADS2     ADSOMAIN VL500147 100 WAIT NOST 003CFF1C LTXNLOCK
0000003617 DCRTMAIN DCRPMAIN VL500015 100 WAIT NOST 391E1368 DBIO JRNL WRITE ECB
            PAGE 00002 - NEXT PAGE:
```


Real Time Monitoring (DCMT)

```
 Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000003650 DCRTMAIN DCRPMAIN VL500044 100 WAIT NOST 391E135C DBIO JRNL WRITE ECB
0000003661 DCRTMAIN DCRPMAIN VL500025 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000003665 DCRTMAIN          VL500002 100 WAIT NOST 36633994 PDTECB
0000003682 DCRTMAIN          VL500087 100 WAIT NOST 36633994 PDTECB
0000003689 DCRTMAIN          VL500131 100 WAIT NOST 36633994 PDTECB
0000003699 DCRTMAIN          VL500040 100 WAIT NOST 36633994 PDTECB
0000003706 DCRTMAIN          VL500142 100 WAIT NOST 36633994 PDTECB
0000003713 DCRTMAIN          VL500127 100 WAIT NOST 36633994 PDTECB
0000003725 DCRTMAIN          VL500079 100 WAIT NOST 36633994 PDTECB
0000003727 DCRTMAIN          VL500006 100 WAIT NOST 36633994 PDTECB
0000003730 DCRTMAIN          VL500023 100 WAIT NOST 36633994 PDTECB
0000003748 DCRTMAIN          VL500010 100 WAIT NOST 36633994 PDTECB
0000003753 DCRTMAIN          VL500061 100 WAIT NOST 36633994 PDTECB
0000003777 DCRTMAIN          VL500013 100 WAIT NOST 36633994 PDTECB
0000003788 DCRTMAIN          VL500029 100 WAIT NOST 36633994 PDTECB
0000003794 DCRTMAIN          VL500141 100 WAIT NOST 36633994 PDTECB
0000003800 DCRTMAIN          VL500106 100 WAIT NOST 36633994 PDTECB
0000003801 DCRTMAIN          VL500057 100 WAIT NOST 36633994 PDTECB
0000003810 DCRTMAIN          VL500021 100 WAIT NOST 36633994 PDTECB
0000003807 DCRTMAIN          VL500139 100 WAIT NOST 36633994 PDTECB
0000003827 DCRTMAIN          VL500036 100 WAIT NOST 36633994 PDTECB
0000003826 DCRTMAIN          VL500145 100 WAIT NOST 36633994 PDTECB
0000003828 DCRTMAIN          VL500117 100 WAIT NOST 36633994 PDTECB
0000003833 DCRTMAIN          VL500119 100 WAIT NOST 36633994 PDTECB
0000003850 DCRTMAIN          VL500067 100 WAIT NOST 36633994 PDTECB
            PAGE 00003 - NEXT PAGE: _
```


Real Time Monitoring (DCMT)

```
  Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000003854 DCRTMAIN          VL500041 100 WAIT NOST 36633994 PDTECB
0000003856 DCRTMAIN          VL500050 100 WAIT NOST 36633994 PDTECB
0000003878 DCRTMAIN          VL500125 100 WAIT NOST 36633994 PDTECB
0000003894 DCRTMAIN          VL500017 100 WAIT NOST 36633994 PDTECB
0000003897 DCRTMAIN          VL500083 100 WAIT NOST 36633994 PDTECB
0000003908 DCRTMAIN          VL500075 100 WAIT NOST 36633994 PDTECB
0000003912 DCRTMAIN          VL500019 100 WAIT NOST 36633994 PDTECB
0000003924 DCRTMAIN          VL500077 100 WAIT NOST 36633994 PDTECB
0000003922 DCRTMAIN          VL500033 100 WAIT NOST 36633994 PDTECB
0000003926 DCRTMAIN          VL500046 100 WAIT NOST 36633994 PDTECB
0000003936 DCRTMAIN          VL500063 100 WAIT NOST 36633994 PDTECB
0000003940 DCRTMAIN          VL500088 100 WAIT NOST 36633994 PDTECB
0000003949 DCRTMAIN          VL500038 100 WAIT NOST 36633994 PDTECB
0000003950 DCRTMAIN          VL500031 100 WAIT NOST 36633994 PDTECB
0000003953 DCRTMAIN          VL500094 100 WAIT NOST 36633994 PDTECB
0000003958 DCRTMAIN          VL500144 100 WAIT NOST 36633994 PDTECB
0000003969 DCRTMAIN          VL500121 100 WAIT NOST 36633994 PDTECB
0000003973 DCRTMAIN          VL500054 100 WAIT NOST 36633994 PDTECB
0000003982 DCRTMAIN          VL500052 100 WAIT NOST 36633994 PDTECB
0000004001 DCRTMAIN          VL500027 100 WAIT NOST 36633994 PDTECB
0000004009 DCRTMAIN          VL500072 100 WAIT NOST 36633994 PDTECB
0000004017 DCRTMAIN          VL500012 100 WAIT NOST 36633994 PDTECB
0000004033 DCRTMAIN          VL500104 100 WAIT NOST 36633994 PDTECB
0000004036 DCRTMAIN          VL500143 100 WAIT NOST 36633994 PDTECB
0000004053 DCRTMAIN          VL500085 100 WAIT NOST 36633994 PDTECB
           PAGE 00004 - NEXT PAGE: _
```

Waits on "PDTECB" is a red flag!

Real Time Monitoring (DCMT)

```
  Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000004057 DCRTMAIN          VL500096 100 WAIT NOST 36633994 PDTECB
0000004063 DCRTMAIN          VL500108 100 WAIT NOST 36633994 PDTECB
0000004078 DCRTMAIN          VL500129 100 WAIT NOST 36633994 PDTECB
0000004080 DCRTMAIN          VL500055 100 WAIT NOST 36633994 PDTECB
0000004096 DCRTMAIN          VL500098 100 WAIT NOST 36633994 PDTECB
0000004097 RHDCNP3S ICS2     LD000008 100 WAIT NOST 391E1338 DBIO JRNL WRITE ECB
0000004108 DCRTMAIN          VL500004 100 WAIT NOST 36633994 PDTECB
0000004109 RHDCNP3S ICD1     LD000011 100 WAIT NOST 391E1344 DBIO JRNL WRITE ECB
0000004111 DCRTMAIN          VL500123 100 WAIT NOST 36633994 PDTECB
0000004110 ADS2     ADSOMAIN VL500062 100 WAIT NOST 391E1350 DBIO JRNL WRITE ECB
0000004113 RHDCNP3S ICS2     LD000005 100 WAIT NOST 00054B10 DBIO READ ECB
0000004117 DCRTMAIN          VL500056 100 WAIT NOST 36633994 PDTECB
0000004124 ADS2     ADSOMAIN VL500120 100 WAIT NOST 391E1374 DBIO JRNL WRITE ECB
0000004123 DCRTMAIN          VL500110 100 WAIT NOST 36633994 PDTECB
0000004122 ADS2     ADSOMAIN VL500122 100 WAIT NOST 391E1338 DBIO JRNL WRITE ECB
0000004121 ADS2     ADSOMAIN VL500138 100 WAIT NOST 391E135C DBIO JRNL WRITE ECB
0000004120 RHDCNP3S ICS2     LD000016 100 WAIT NOST 000547E8 DBIO READ ECB
0000004119 RHDCNP3S ICS2     LD000018 100 WAIT NOST 3B01B124 BMESECB
0000004126 ADS2     ADSOMAIN VL500132 100 WAIT NOST 391E1314 DBIO JRNL WRITE ECB
0000004129 ADS2     ADSOMAIN VL500011 100 WAIT NOST 391E132C DBIO JRNL WRITE ECB
0000004128 ADS2     ADSOMAIN VL500084 100 WAIT NOST 391E132C DBIO JRNL WRITE ECB
0000004131 DCRTMAIN          VL500102 100 WAIT NOST 36633994 PDTECB
0000004130 RHDCNP3S ICS2     LD000009 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004134 DCRTMAIN          VL500135 100 WAIT NOST 36633994 PDTECB
0000004133 ADS2     ADSOMAIN VL500032 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
           PAGE 00005 - NEXT PAGE: _
```


Real Time Monitoring (DCMT)

```
 Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000004132 DCRTMAIN          VL500133 100 WAIT NOST 36633994 PDTECB
0000004137 ADS2     ADSOMAIN VL500148 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004136 ADS2     ADSOMAIN VL500020 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004135 DCRTMAIN          VL500100 100 WAIT NOST 36633994 PDTECB
0000004139 ADS2     ADSOMAIN VL500112 100 WAIT NOST 3B030854 BMEXECB
0000004143 ADS2     ADSOMAIN VL500043 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004142 ADS2     ADSOMAIN VL500007 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004141 ADS2     ADSOMAIN VL500014 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004140 ADS2     ADSOMAIN VL500022 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004145 ADS2     ADSOMAIN VL500105 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004146 ADS2     ADSOMAIN VL500003 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004147 ADS2     ADSOMAIN VL500149 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004150 ADS2     ADSOMAIN VL500066 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004149 ADS2     ADSOMAIN VL500060 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004148 ADS2     ADSOMAIN VL500150 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004152 ADS2     ADSOMAIN VL500146 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004151 DCRTMAIN          VL500113 100 WAIT NOST 36633994 PDTECB
0000004153 DCRTMAIN          VL500008 100 WAIT NOST 36633994 PDTECB
0000004155 ADS2     ADSOMAIN VL500099 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004154 ADS2     ADSOMAIN VL500051 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004159 ADS2     ADSOMAIN VL500111 100 WAIT NOST 391E1350 DBIO JRNL WRITE ECB
0000004158 DCRTMAIN          VL500114 100 WAIT NOST 36633994 PDTECB
0000004157 ADS2     ADSOMAIN VL500134 100 WAIT NOST 391E132C DBIO JRNL WRITE ECB
0000004160 ADS2     ADSOMAIN VL500095 100 WAIT NOST 00054E38 DBIO WRITE ECB
0000004163 ADS2     ADSOMAIN VL500097 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
            PAGE 00006 - NEXT PAGE: _
```


Real Time Monitoring (DCMT)

```
 Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000004162 ADS2     ADSOMAIN VL500009 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004161 ADS2     ADSOMAIN VL500116 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004167 ADS2     ADSOMAIN VL500091 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004166 ADS2     ADSOMAIN VL500039 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004165 ADS2     ADSOMAIN VL500103 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004164 ADS2     ADSOMAIN VL500001 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004168 ADS2     ADSOMAIN VL500109 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004169 ADS2     ADSOMAIN VL500107 100 WAIT NOST 391E1320 DBIO JRNL WRITE ECB
0000004170 ADS2     ADSOMAIN VL500080 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004171 ADS2     ADSOMAIN VL500068 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004173 ADS2     ADSOMAIN VL500074 100 WAIT NOST 3630C224 DBIO JRNL WRITE ECB
0000004172 DCRTMAIN DCRPMAIN VL500073 100 WAIT NOST 391E1320 DBIO JRNL WRITE ECB
0000004175 ADS2              VL500058 100 RDY
0000004174 ADS2              VL500086 100 RDY
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
-

            PAGE 00007 - NEXT PAGE:
```


Real Time Monitoring (OPER)

```
  TASK ID   ORIG IDMSPROG SUBSCHEM PRI STA V# PAGEREAD PAGEWRIT CALLIDMS LOCK-REQ
0000006691 CIJS IDMSDDAM IDMSCATZ 100 IBH 32 00000000 00000000 00000012 00000001
0000006689 DBDC PTCRUPD  DBCRSSC1 100 IPH 32 00000000 00000000 00000008 00000002
0000006690 DBDC PTCRUPD  DBCRSSC1 100 IPH 32 00000000 00000000 00000008 00000002
0000006686 CIJS DCIDSQ02 IDMSCATY 100 I H 32 00000009 00000000 00000056 00000068
0000006688 DBDC PTCRUPD  DBCRSSC1 100 IPH 31 00000001 00000001 00000011 00000015
0000006684 CIJS DCIDNW01 DBCRSSC1 100 IPH 35 00000001 00000000 00000005 00000006
0000006683 DBDC PTCRUPD  DBCRSSC1 100 I H 32 00000000 00000000 00000008 00000002
0000006685 DBDC PTCRUPD  DBCRSSC1 100 IPH 31 00000001 00000001 00000011 00000015
0000006682 CIJS IDMSDDAM IDMSCATZ 100 I H 18 00000005 00000000 00000028 00000030
0000006001 DBDC DCRPMAIN DBCRSSC1 100 IPH 31 00000001 00000001 00000010 00000006
0000005993 DBDC DCRPMAIN DBCRSSC1 100 IBH 11 00000002 00000002 00000015 00000016
0000006681 DBDC PTCRUPD  DBCRSSC1 100 I H 32 00000000 00000000 00000008 00000002
0000006680 DBDC PTCRUPD  DBCRSSC1 100 M H 35 00000001 00000000 00000009 00000008
0000006679 DBDC PTCRUPD  DBCRSSC1 100 IPH 31 00000001 00000001 00000011 00000014
0000006677 DBDC PTCRUPD  DBCRSSC1 100 MU  59 00000000 00000000 00000001 00000000
0000006678 DBDC PTCRUPD  DBCRSSC1 100 MU  59 00000000 00000000 00000001 00000000
0000006674 DBDC PTCRUPD  DBCRSSC1 100 MU  59 00000000 00000000 00000001 00000000
0000006675 DBDC PTCRUPD  DBCRSSC1 100 MU  59 00000000 00000000 00000001 00000000
0000006676 DBDC PTCRUPD  DBCRSSC1 100 MU  59 00000000 00000000 00000001 00000000
0000006673 DBDC PTCRUPD  DBCRSSC1 100 MU  59 00000000 00000000 00000001 00000000
0000006671 DBDC PTCRUPD  DBCRSSC1 100 MU  59 00000000 00000000 00000001 00000000
 IDMS DB/DC V120      - Tasks active:134                  Time: 12:37:25
```

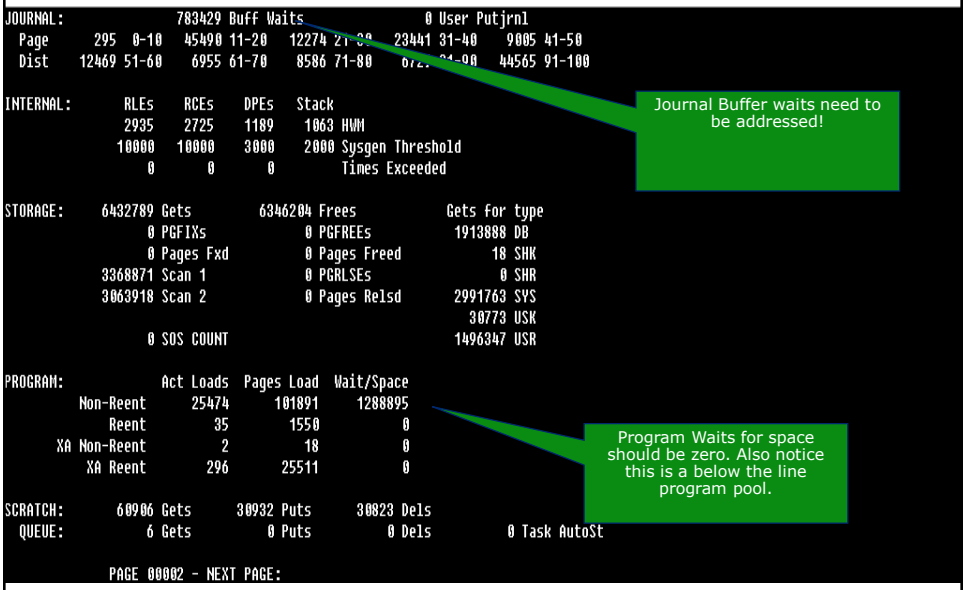

Post Process Monitoring (DCMT)

```
     D STAT SYS
  14:12:05.69 08/156 Current Time      00:05:32.28 Tot Sys Time
  12:33:11.49 08/156 Startup Time      00:01:25.13 Tot User Time

TASKS:        80189 Processed         37 Abended           133 Max Tasks
                794 System            36 Runaway         35703 Times At Max
                 53 Deadlocks         27 Dead Victims

TRANS:       237442 Processed     237355 Norm Cmp     83 Max Conc
              18577 Ext Proc       18577 Ext Norm     20 Ext Conc   160 Max L
                  0 Dist Proc          0 Dist Norm     0 Dist Conc

DATABASE:   5410923 Calls        3027695 Pages Rqst      5248403 Recs Rqst
             366975 Buff Wait     756108 Pages Read      2512811 Recs Cur R/U
             182231 Page Writ          0 Calc Noflo        78368 Via Noflo
            5957618 Tot Locks          0 Calc Ovflo          293 Via Ovflo
                                       0 Frag Storu            0 Recs Reloc
   INDEX:         0 SR8 Splits         0 SR8 Stores            0 SR7 Stores
                  0 SR8 Spawns         0 SR8 Erases            0 SR7 Erases
                  0 Orph Adopt     60105 Ix Searches           1 Min Level
                                   70740 Lvls Srchd            2 Max Level
     SQL:    103344 Commands       25856 Tupls Fetched      8617 Rows Inserted
                  0 AM Recomp      25815 Rows Updated          0 Rows Deleted
                                        0 Sorts                0 Sort Min
                                        0 Tuples Sorted        0 Sort Max

            PAGE 00001 - NEXT PAGE:
```

Abends, Deadlocks, and especially runaways are never a good thing.

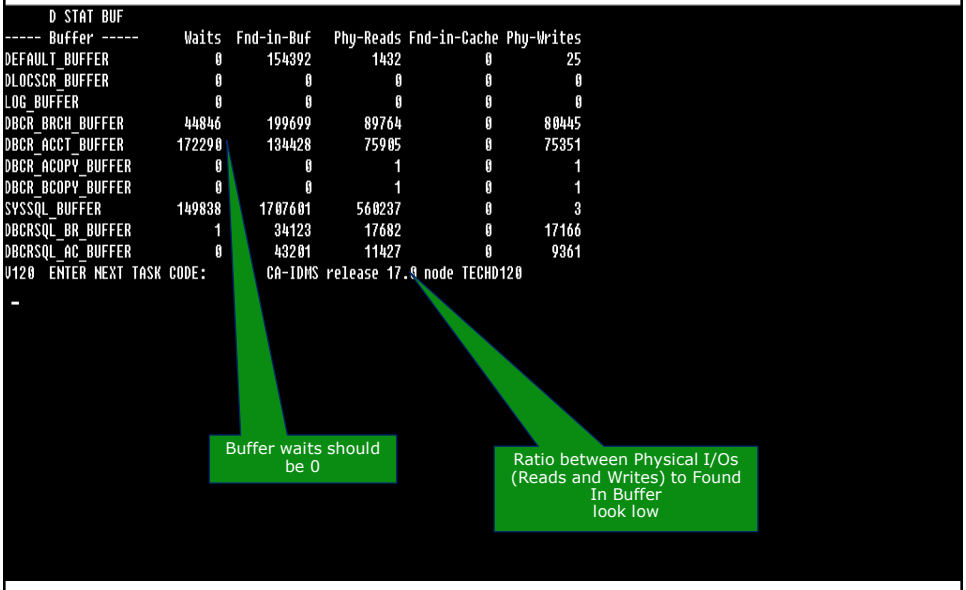
Buffer waits need to be addressed.

Post Process Monitoring (DCMT)



  CA World 08

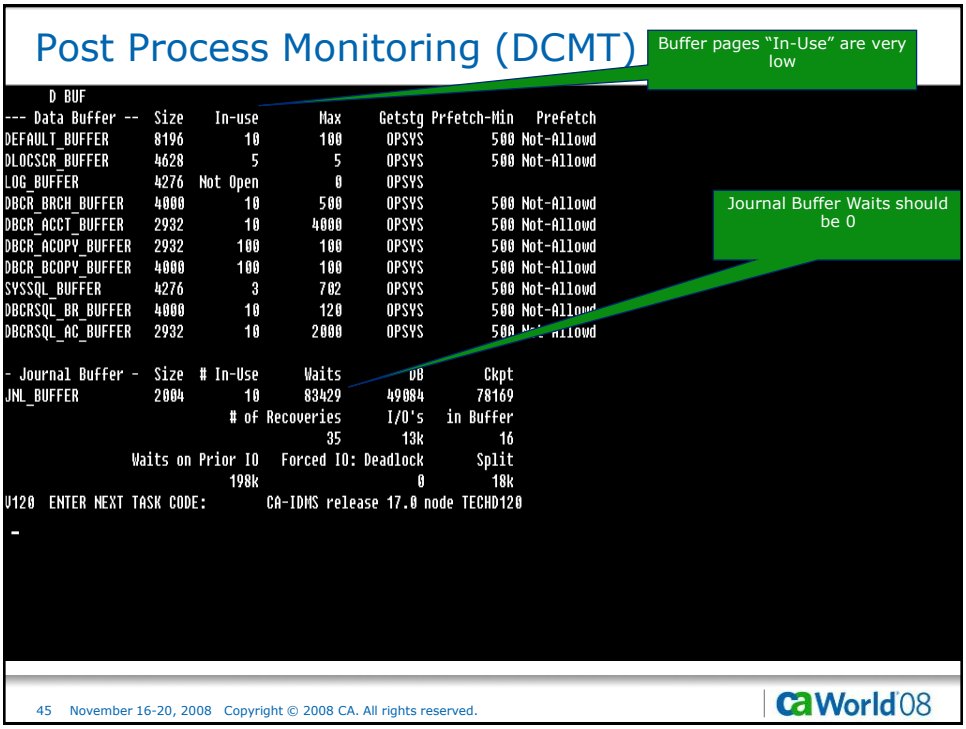
Post Process Monitoring (DCMT)



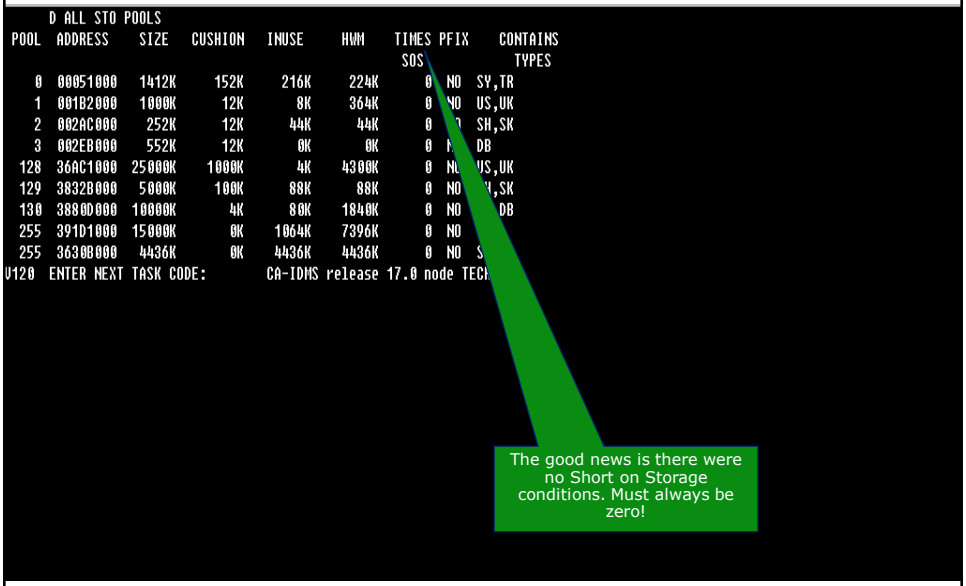
  CA World 08

Transforming IT Management

Post Process Monitoring (DCMT)



Post Process Monitoring (DCMT)



Post Process Monitoring (DCMT)

```
    D ALL PRO POOLS
   Pool      Address     Size     Space      HWM      Prog      Prog     Loads
                                  Alloc              in pool   in use   to pool
  PROGRAM    00406000     100K      92K       92K        7         0    25474
  REENT      0041F000    1068K     775K      775K       35         3       35
  XA PROG    3A077000    2500K      72K       72K        2         0        2
  XA REENT   3A2E8000   12252K   12155K    12252K      262         9      298
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
-
```

High number of loads to a below the line program pool doesn't seem right. Other than ADS we only have 1 other program we are using.

Post Process Monitoring (DCMT)

```
    D RU
                TYPE QUEUE
         DRIVER TASK ID OUT OF SERVICE
             SUBSCHEMA IDMSNWK7
                 NODE
          DICTNAME/DBNAME SYSTEM
            IDLE INTERVAL OFF
    PREDEFINED RUN UNITS        0
    RUN UNIT ALLOCATIONS        6
         RUN UNIT FREES         6
      OVERFLOW RUN UNITS        6
              AREA NAME DDLDCRUN
            USAGE MODE SHARED UPDATE

                TYPE LOADER
         DRIVER TASK ID 0000000002
             SUBSCHEMA IDMSNWKL
                 NODE
          DICTNAME/DBNAME
            IDLE INTERVAL OFF
    PREDEFINED RUN UNITS        0
    RUN UNIT ALLOCATIONS   150903
         RUN UNIT FREES    150903
      OVERFLOW RUN UNITS   150903
              AREA NAME DDLDCLOD
            USAGE MODE SHARED UPDATE
           PAGE 00001 - NEXT PAGE:
```

A very high number of Allocations, Frees, and Overflows for just 1 Cobol program and 1 ADS dialog.

Post Process Monitoring (DCMT)

```
                TYPE LOADER
         DRIVER TASK ID 0000000002
              SUBSCHEMA IDMSNWKL
                   NODE
         DICTNAME/DBNAME APPLDICT
           IDLE INTERVAL OFF
    PREDEFINED RUN UNITS        2
    RUN UNIT ALLOCATIONS        1
         RUN UNIT FREES         1
      OVERFLOW RUN UNITS        0
              AREA NAME DDLDCLOD
            USAGE MODE SHARED UPDATE
TYPE  BOUND  IN-USE    ALLOCS   OWNING TASK
PERM   YES    NO            1
PERM   YES    NO            0

                TYPE MSGDICT
         DRIVER TASK ID OUT OF SERVICE
              SUBSCHEMA IDMSNWK6
                   NODE
         DICTNAME/DBNAME SYSMSG
           IDLE INTERVAL OFF
    PREDEFINED RUN UNITS        0
    RUN UNIT ALLOCATIONS      190
         RUN UNIT FREES       190
            PAGE 00002 - NEXT PAGE:
```


Post Process Monitoring (DCMT)

```
      OVERFLOW RUN UNITS      190
              AREA NAME DDLDCMSG
            USAGE MODE SHARED RETRIEVAL

                TYPE SIGNON
         DRIVER TASK ID OUT OF SERVICE
              SUBSCHEMA IDMSSECU
                   NODE
         DICTNAME/DBNAME SYSUSER
           IDLE INTERVAL OFF
    PREDEFINED RUN UNITS        0
    RUN UNIT ALLOCATIONS      180
         RUN UNIT FREES       180
      OVERFLOW RUN UNITS      180
              AREA NAME DDLSEC
            USAGE MODE SHARED UPDATE

                TYPE SECURITY
         DRIVER TASK ID OUT OF SERVICE
              SUBSCHEMA IDMSSECS
                   NODE
         DICTNAME/DBNAME SYSTEM
           IDLE INTERVAL OFF
    PREDEFINED RUN UNITS        0
    RUN UNIT ALLOCATIONS      177
         RUN UNIT FREES       177
            PAGE 00003 - NEXT PAGE: _
```


Post Process Monitoring (DCMT)

```
      OVERFLOW RUN UNITS       177
              AREA NAME DDLDML
             USAGE MODE SHARED RETRIEVAL

                   TYPE SQL LOADER
          DRIVER TASK ID OUT OF SERVICE
              SUBSCHEMA IDMSCATL
                   NODE
         DICTNAME/DBNAME
           IDLE INTERVAL OFF
    PREDEFINED RUN UNITS         0
    RUN UNIT ALLOCATIONS      7136
         RUN UNIT FREES       7136
      OVERFLOW RUN UNITS      7136
              AREA NAME DDLCATLOD
             USAGE MODE SHARED UPDATE
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
-

           PAGE 00004 - NEXT PAGE:
```


Post Process Monitoring (DCMT)

```
     D SUBT EFF
 *** Subtask display ***
Subtask          Elapsed time                Total CPU time         % CPU  SRB
 Name         TCB            SRB           TCB            SRB       TCB SRB
-------- -------------- -------------- -------------- -------------- --- ---
MAINTASK  00:35:37.8095  00:00:00.0000  00:06:57.8850  00:00:00.0000  19 N/A  N
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
```

We are not using the zIIP feature. CPU effectiveness is low and is the first thing which needs to be addressed for a Production system.

Post Process Monitoring (DCMT)

```
     D SUBT
       ***  Display all subtasks ***
                Work            Task dispatch
 Name       Nr  type  Status        count       Wakeup count   Total CPU time
 ----       --  ----  ------    -------------    ------------   --------------
 MAINTASK   01  IDMS   BUSY         5,041,631          142,321    00:06:57.8857
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
```


Post Process Monitoring (DCMT)

```
     D SUBT 1
 *** Display Subtask details ***
                          Name  MAINTASK
                        Number  01
                        Status  BUSY
                     Work type  IDMS
                 Count wakeups  142,323
          Count task dispatches  5,041,641
             User mode CPU time  00:01:25.1340
           System mode CPU time  00:05:32.3181
          CPU effectiveness (%)  19
        Count times fast posted  670,915
          Count times OS posted  00
        Count found work pass 1  1,697,308
        Count found work pass 2  3,344,333
   Count times POSTEXIT resumed  142,046
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
```


Post Process Monitoring (DCMT)

```
     D STAT FILE
---------- File ----------    Fnd-in-Buf   Phy-Reads Fnd-in-Cache Phy-Writes
APPLDICT.DICTDB                      73           6           0           1
APPLDICT.DLODDB                      13           8           0           1
CATSYS.DCCAT                          0           1           0           1
CATSYS.DCCATL                         0           3           0           1
CATSYS.DCCATX                         0           1           0           1
DBCR.BRANCHA                      51108       23048           0       20634
DBCR.BRANCHB                      48860       21800           0       19548
DBCR.BRANCHC                      50144       22908           0       20423
DBCR.BRANCHD                      49587       22008           0       19840
DBCR.ACCOUNTA                     13398        7529           0        7480
DBCR.ACCOUNTB                     13067        7389           0        7338
DBCR.ACCOUNTC                     13152        7397           0        7346
DBCR.ACCOUNTD                     13441        7639           0        7584
DBCR.ACCOUNTE                     13876        7843           0        7765
DBCR.ACCOUNTF                     13517        7584           0        7542
DBCR.ACCOUNTG                     13405        7569           0        7510
DBCR.ACCOUNTH                     13730        7727           0        7668
DBCR.ACCOUNTI                     13349        7593           0        7534
DBCR.ACCOUNTJ                     13493        7635           0        7584
DBCRCOPY.BRCOPYA                      0           1           0           1
DBCRCOPY.BRCOPYB                      0           0           0           0
DBCRCOPY.BRCOPYC                      0           0           0           0
DBCRCOPY.BRCOPYD                      0           0           0           0
DBCRCOPY.ACCCOPYA                     0           1           0           1
           PAGE 00001 - NEXT PAGE: _
```


Post Process Monitoring (DCMT)

```
DBCRCOPY.ACCCOPYB                     0           0           0           0
DBCRCOPY.ACCCOPYC                     0           0           0           0
DBCRCOPY.ACCCOPYD                     0           0           0           0
DBCRCOPY.ACCCOPYE                     0           0           0           0
DBCRCOPY.ACCCOPYF                     0           0           0           0
DBCRCOPY.ACCCOPYG                     0           0           0           0
DBCRCOPY.ACCCOPYH                     0           0           0           0
DBCRCOPY.ACCCOPYI                     0           0           0           0
DBCRCOPY.ACCCOPYJ                     0           0           0           0
DBCRMAF.ACCTBRN                       0           2           0           2
DBCRSQL.BRCHSQL                   34123       17682           0       17166
DBCRSQL.ACCTSQL                   43201       11427           0        9361
EMPDEMO.EMPDEMO                       0           1           0           1
EMPDEMO.INSDEMO                       0           1           0           1
EMPDEMO.ORGDEMO                       0           1           0           1
PROJSEG.PROJDEMO                      0           1           0           1
SQLDEMO.EMPLDEMO                      0           1           0           1
SQLDEMO.INFODEMO                      0           1           0           1
SQLDEMO.INDXDEMO                      0           1           0           1
SYSDIRL.DIRLDB                        0           1           0           1
SYSDIRL.DIRLLOD                       0           3           0           1
SYSLOC.DCLSCR                         0           0           0           0
SYSMSG.DCMSG                        493          76           0
SYSSQL.SQLDD                    1707253      553447           0           1
SYSSQL.SQLXDD                         0           1           0           1
SYSSQL.SQLLOD                       348        6789           0           1
           PAGE 00002 - NEXT PAGE: _
```

These numbers look high based on the SQL workload we are pushing through. Needs to be investigated.

Post Process Monitoring (DCMT)

```
SYSTEM.DCDML                    1807        277          0          1
SYSTEM.DCLOD                       1          7          0          1
SYSTEM.DCLOG                       0          0          0          0
SYSTEM.DCRUN                      77       1006          0          1
SYSTEM.DCSCR                       0          1          0          1
SYSUSER.SECDD                   1080         19          0          1
TESTDICT.TESTDML                   0          1          0          1
TESTDICT.TESTLOD              150887         12          0          1
TESTSEG.TESTFILE                   0          1          0          1
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120

                PAGE 00003 - NEXT PAGE:
```

These numbers look high based on the workload we are pushing through. Needs to be investigated. We've got 1 ADS dialog, 1 Subschema, 1 Map.

Post Process Monitoring (DCMT)

```
     D STAT AREA
---------- Area ----------    Fnd-in-Buf   Phy-Reads Fnd-in-Cache Phy-Writes
APPLDICT.DDLDML                       73          6          0          1
APPLDICT.DDLDCLOD                     13          8          0          1
CATSYS.DDLCAT                          0          1          0          1
CATSYS.DDLCATX                         0          1          0          1
CATSYS.DDLCATLOD                       0          3          0          1
DBCR.BRNCHTEL                     199699      89764          0      80445
DBCR.ACCTHIST                     134428      75905          0      75351
DBCRCOPY.BRNCHTEL-COPY                 0          1          0          1
DBCRCOPY.ACCTHIST-COPY                 0          1          0          1
DBCRMAF.BRNTELMF                       0          1          0          1
DBCRMAF.ACTHSTMF                       0          1          0          1
DBCRSQL.BRCHSQL                    34123      17682          0      17166
DBCRSQL.ACCTSQL                    43201      11427          0       9361
EMPDEMO.EMP-DEMO-REGION                0          1          0          1
EMPDEMO.INS-DEMO-REGION                0          1          0          1
EMPDEMO.ORG-DEMO-REGION                0          1          0          1
PROJSEG.PROJAREA                       0          1          0          1
SQLDEMO.EMPLAREA                       0          1          0          1
SQLDEMO.INFOAREA                       0          1          0          1
SQLDEMO.INDXAREA                       0          1          0          1
SYSDIRL.DDLDCLOD                       0          3          0          1
SYSDIRL.DDLDML                         0          1          0          1
SYSLOC.DDLOCSCR                        0          0          0          0
SYSMSG.DDLDCMSG                      493         76          0          1
            PAGE 00001 - NEXT PAGE:
```


Post Process Monitoring (DCMT)

```
SYSSQL.DDLCAT                1707253      553447          0          1
SYSSQL.DDLCATLOD                348        6789          0          1
SYSSQL.DDLCATX                    0           1          0          1
SYSTEM.DDLDCLOD                   1           7          0          1
SYSTEM.DDLDCRUN                  77        1006          0          1
SYSTEM.DDLDCSCR                   0           1          0          1
SYSTEM.DDLDML                  1809         277          0          1
SYSTEM.DDLDCLOG                   0           0          0          0
SYSUSER.DDLSEC                 1091          19          0          1
TESTDICT.DDLDML                   0           1          0          1
TESTDICT.DDLDCLOD            150887          12          0          1
TESTSEG.TESTAREA                  0           1          0          1
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
-

           PAGE 00002 - NEXT PAGE:
```


Post Process Monitoring (DCMT)

```
     D MP
IDMS DC285903 V120 MULTITASKING IS NOT IN EFFECT
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
-
```

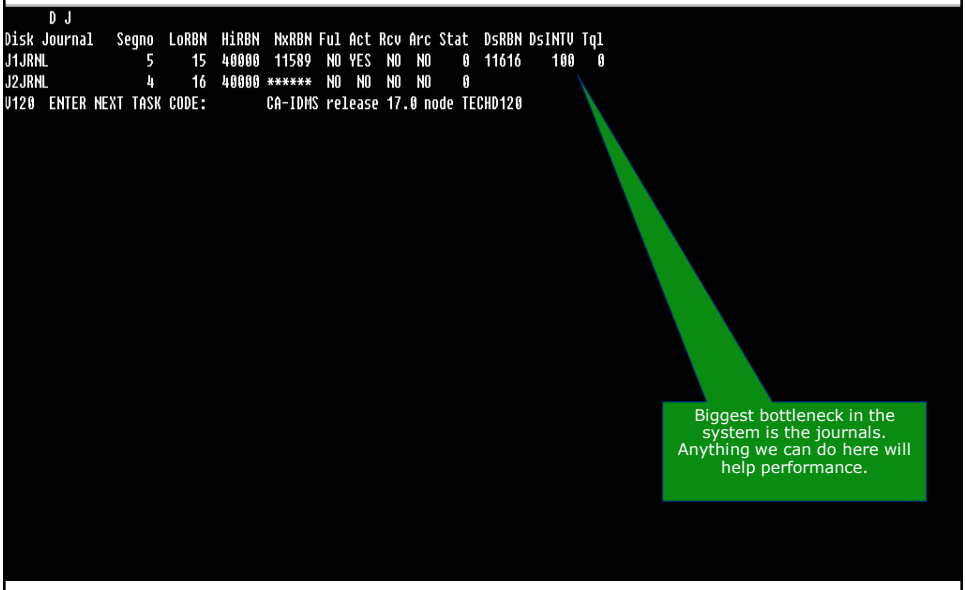

Post Process Monitoring (DCMT)

```
     D DAT SHA
Data sharing is not active.
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
```

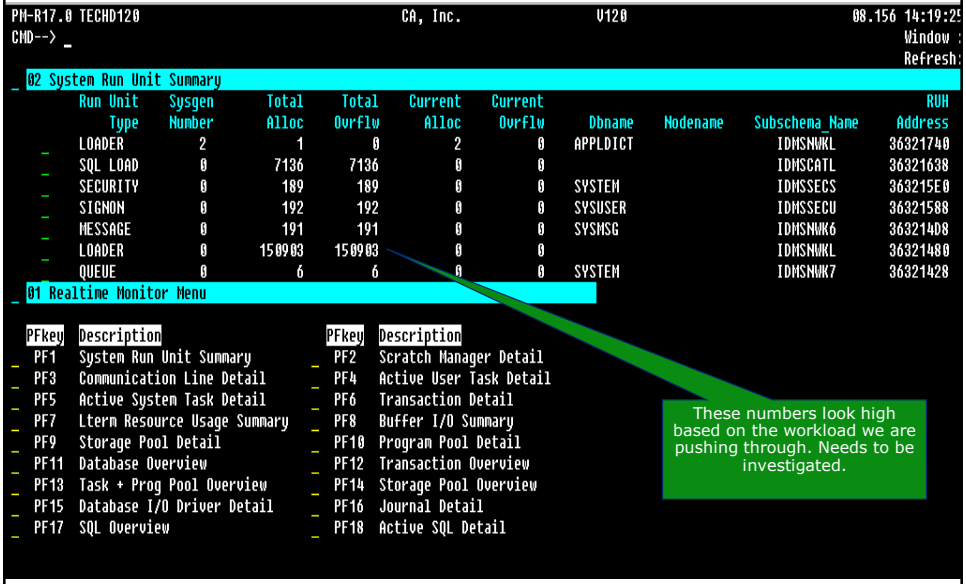

Post Process Monitoring (DCMT)

```
     D SHA CAC
***  Display SHAred CAche request  ***
Shared Cache not active
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
-
```

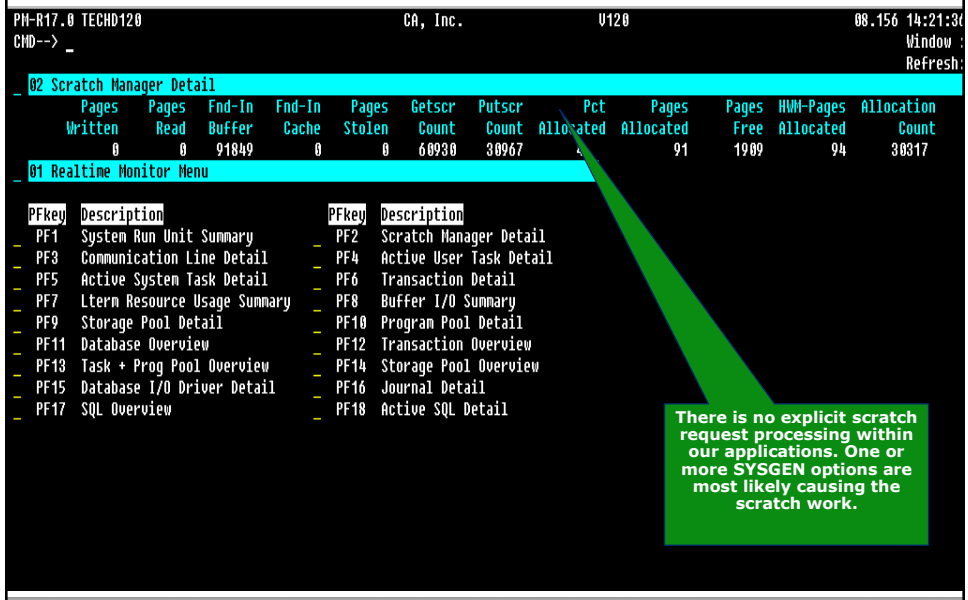

Post Process Monitoring (DCMT)



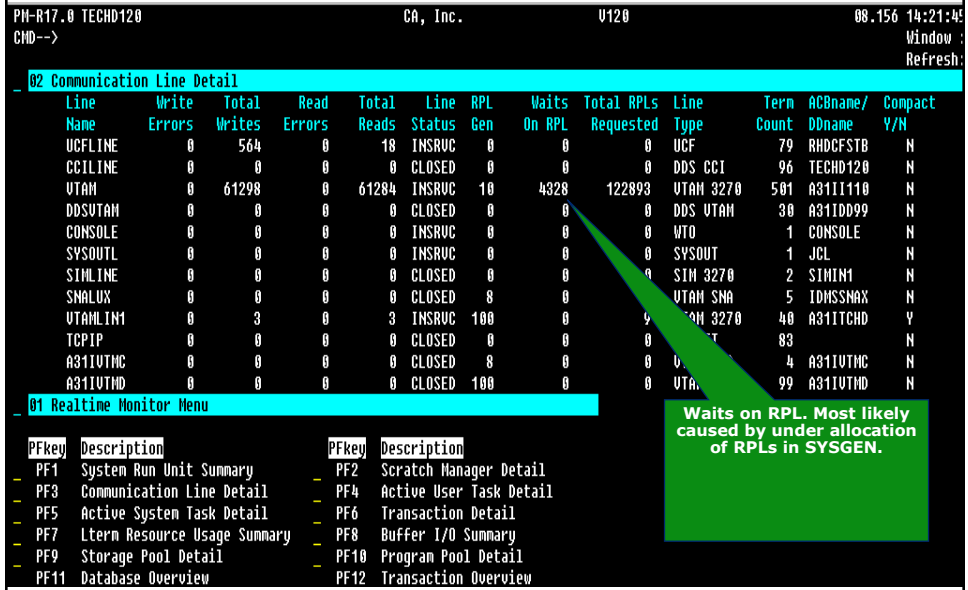
Post Process Monitoring (PMRM)



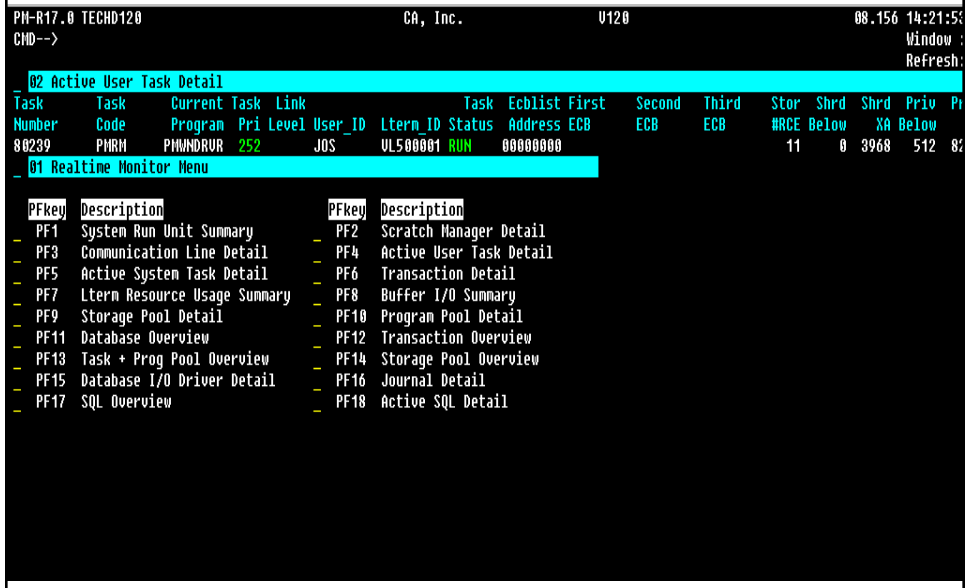
Post Process Monitoring (PMRM)



Post Process Monitoring (PMRM)

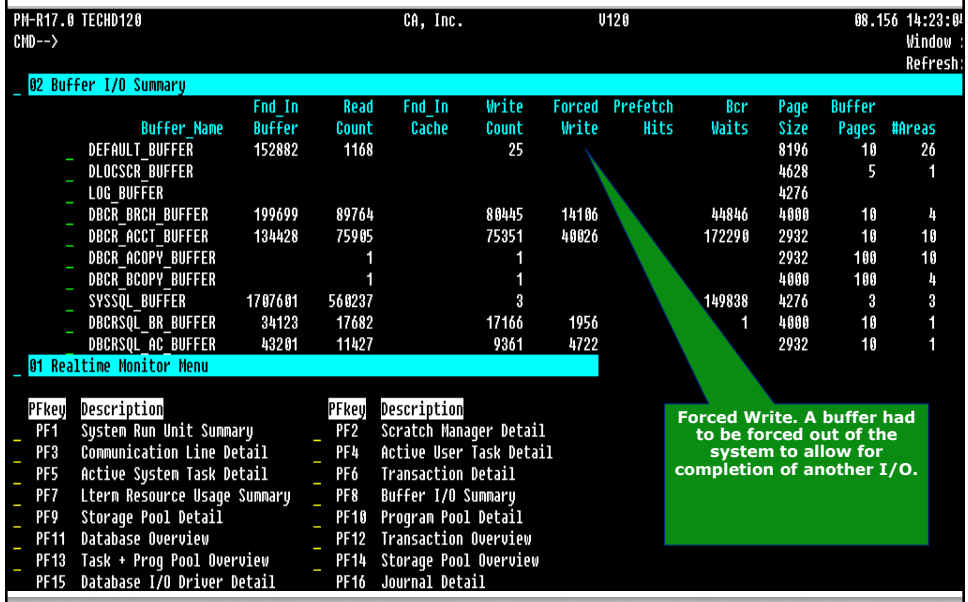


Post Process Monitoring (PMRM)



Post Process Monitoring (PMRM)

Post Process Monitoring (PMRM)



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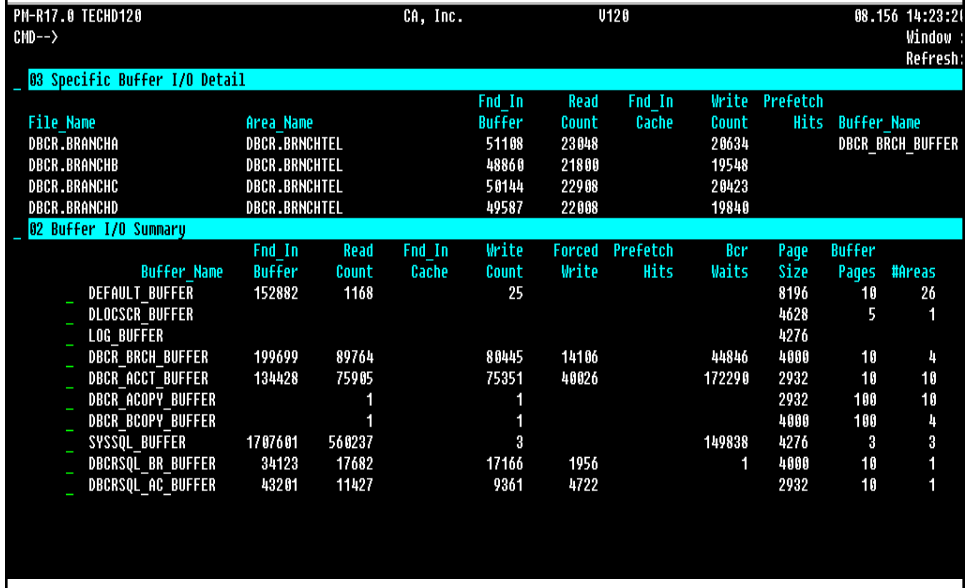
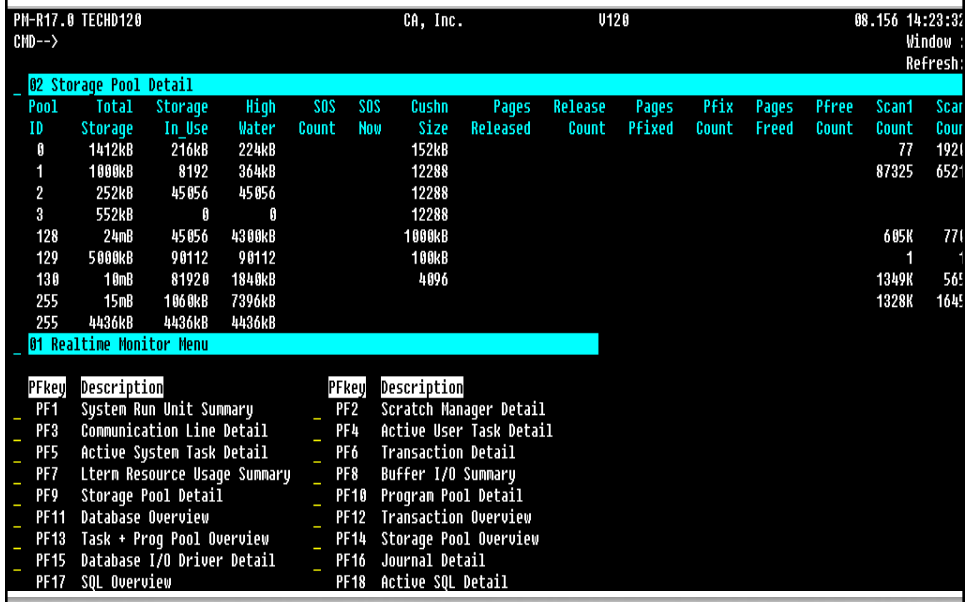
Post Process Monitoring (PMRM)

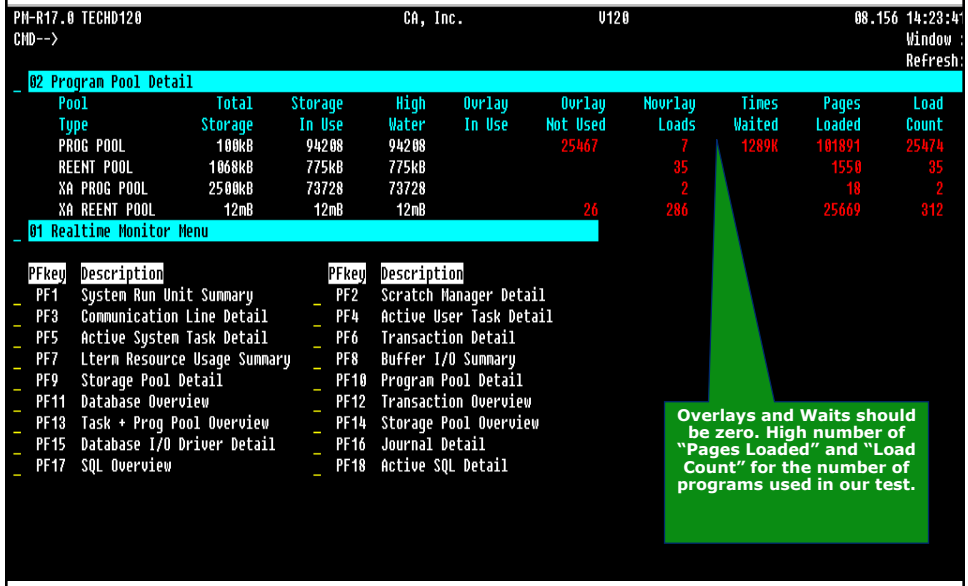


  caWorld'08

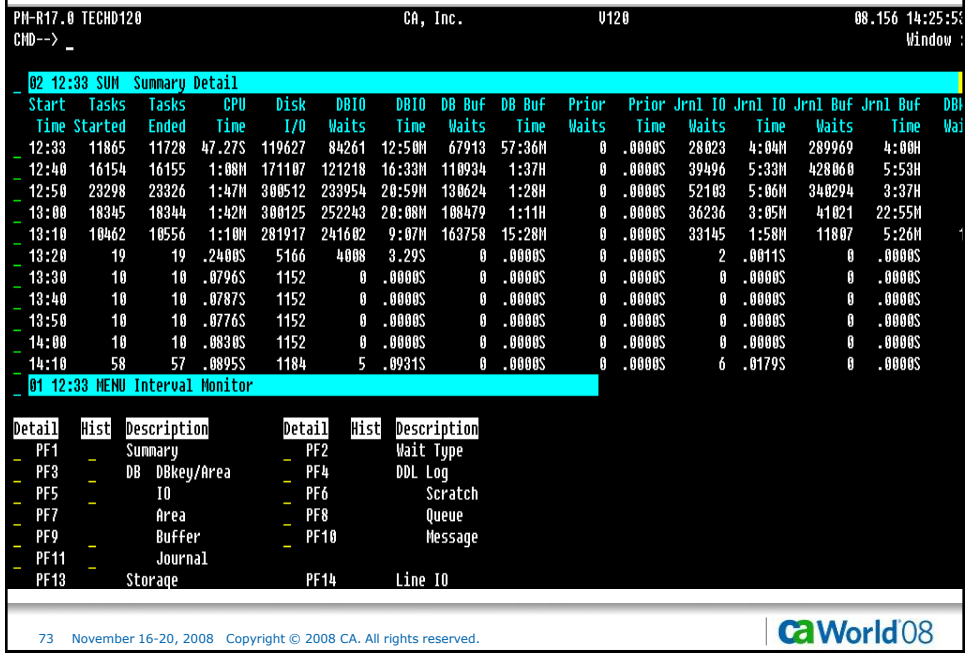
Post Process Monitoring (PMRM)



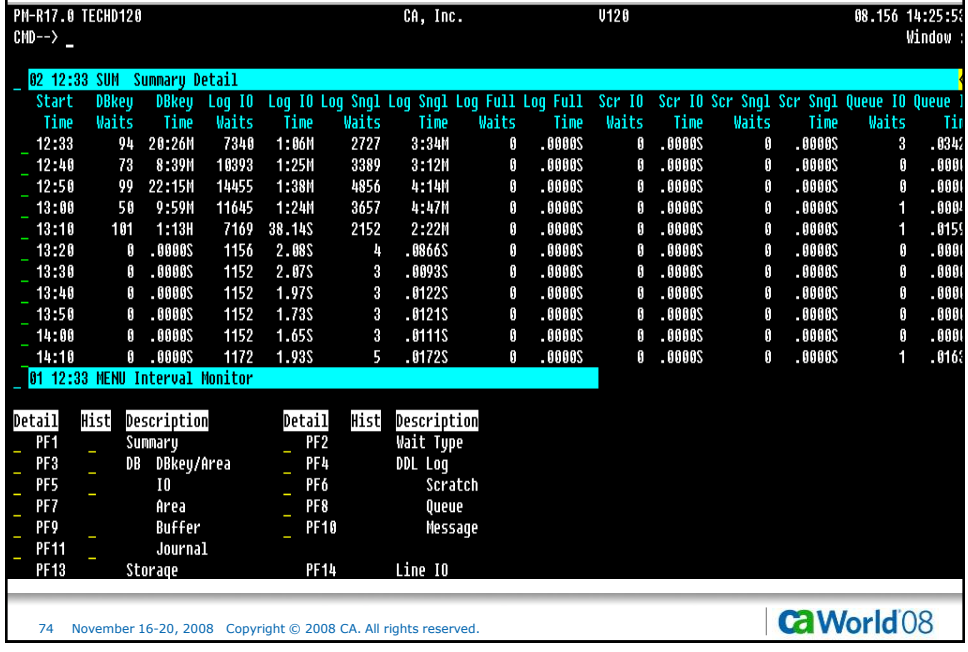
Post Process Monitoring (PMRM)



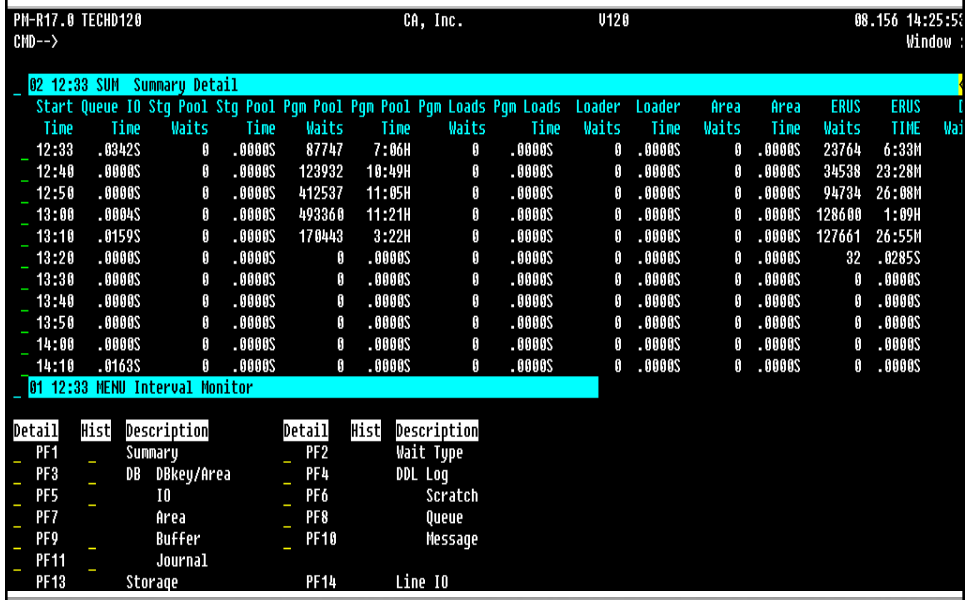
Post Process Monitoring (PMIM)



Post Process Monitoring (PMIM)

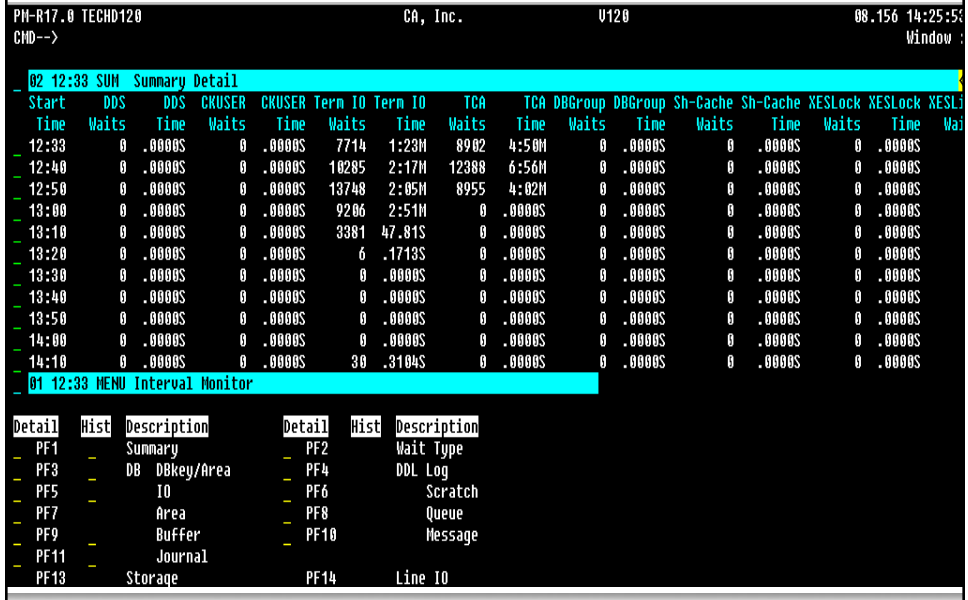


Post Process Monitoring (PMIM)



  CA World 08

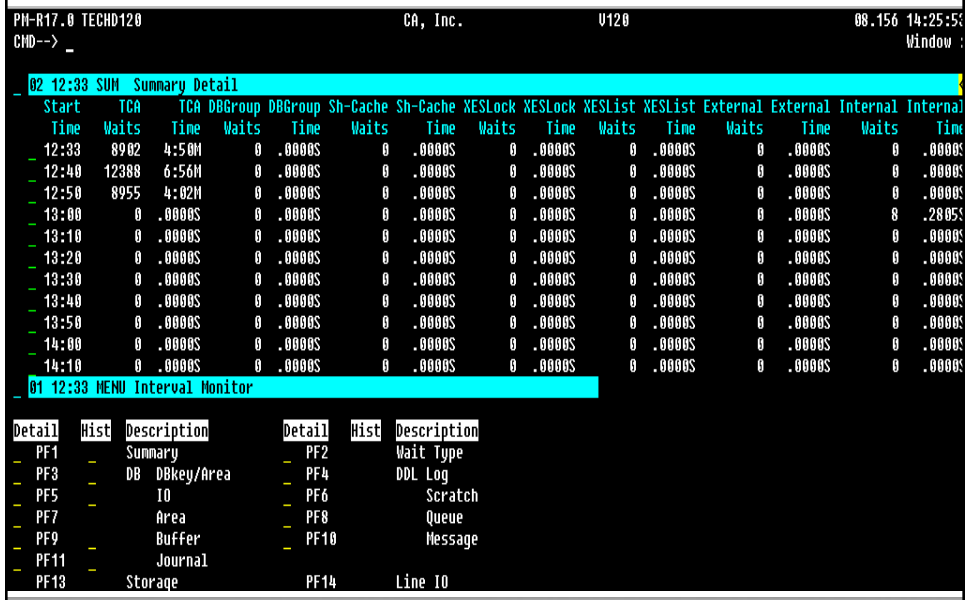
Post Process Monitoring (PMIM)



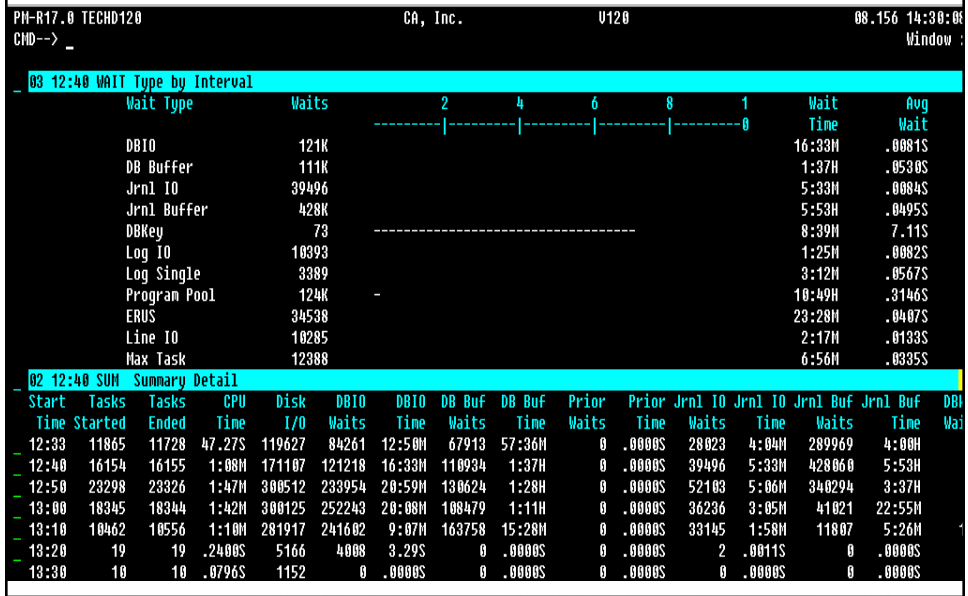
  CA World 08

  Transforming IT Management

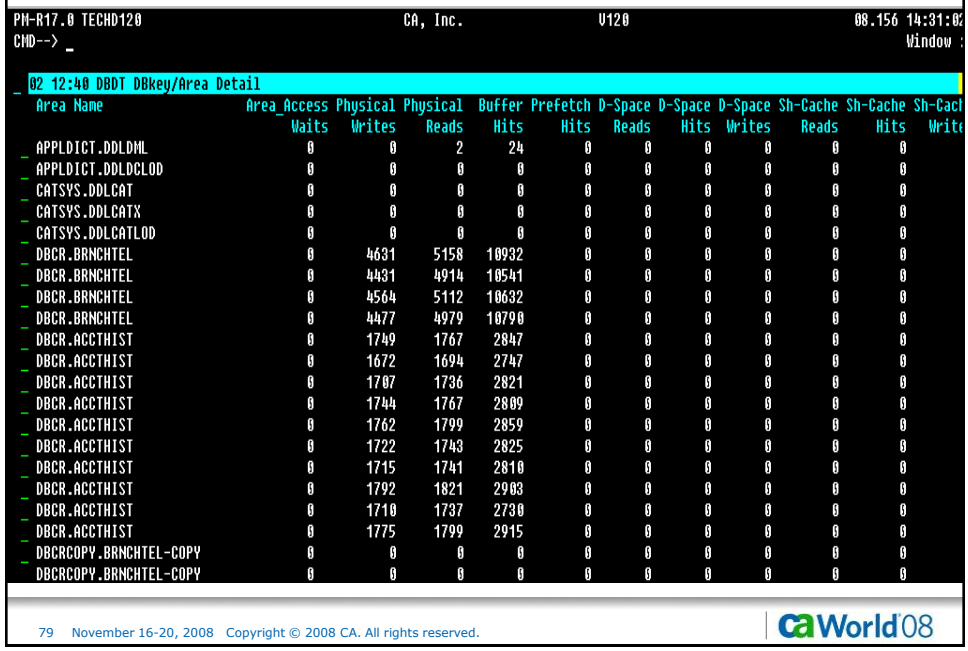
Post Process Monitoring (PMIM)



Post Process Monitoring (PMIM)



Post Process Monitoring (PMIM)



```
PM-R17.0 TECHD120                        CA, Inc.                    V120                    08.156 14:31:02
CMD--> _                                                                                     Window :

_ 02 12:40 DBDT DBKey/Area Detail
  Area Name                  Area_Access Physical Physical  Buffer Prefetch D-Space D-Space D-Space Sh-Cache Sh-Cache Sh-Cach
                                   Waits  Writes   Reads    Hits   Hits   Reads   Hits  Writes  Reads   Hits   Write
_ APPLDICT.DDLDML                      0       0       2      24      0       0      0       0      0      0
_ APPLDICT.DDLDCLOD                    0       0       0       0      0       0      0       0      0      0
_ CATSYS.DDLCAT                        0       0       0       0      0       0      0       0      0      0
_ CATSYS.DDLCATX                       0       0       0       0      0       0      0       0      0      0
_ CATSYS.DDLCATLOD                     0       0       0       0      0       0      0       0      0      0
_ DBCR.BRNCHTEL                        0    4631    5158   10932      0       0      0       0      0      0
_ DBCR.BRNCHTEL                        0    4431    4914   10541      0       0      0       0      0      0
_ DBCR.BRNCHTEL                        0    4564    5112   10632      0       0      0       0      0      0
_ DBCR.BRNCHTEL                        0    4477    4979   10790      0       0      0       0      0      0
_ DBCR.ACCTHIST                        0    1749    1767    2847      0       0      0       0      0      0
_ DBCR.ACCTHIST                        0    1672    1694    2747      0       0      0       0      0      0
_ DBCR.ACCTHIST                        0    1707    1736    2821      0       0      0       0      0      0
_ DBCR.ACCTHIST                        0    1744    1767    2809      0       0      0       0      0      0
_ DBCR.ACCTHIST                        0    1762    1799    2859      0       0      0       0      0      0
_ DBCR.ACCTHIST                        0    1722    1743    2825      0       0      0       0      0      0
_ DBCR.ACCTHIST                        0    1715    1741    2810      0       0      0       0      0      0
_ DBCR.ACCTHIST                        0    1792    1821    2903      0       0      0       0      0      0
_ DBCR.ACCTHIST                        0    1710    1737    2730      0       0      0       0      0      0
_ DBCR.ACCTHIST                        0    1775    1799    2915      0       0      0       0      0      0
_ DBCRCOPY.BRNCHTEL-COPY               0       0       0       0      0       0      0       0      0      0
_ DBCRCOPY.BRNCHTEL-COPY               0       0       0       0      0       0      0       0      0      0
```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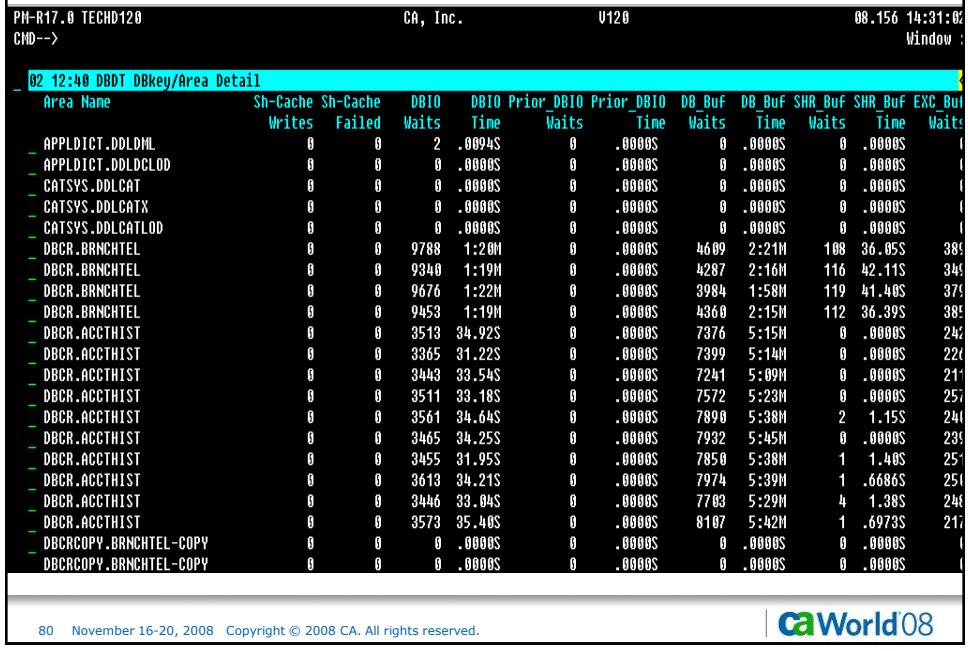
Post Process Monitoring (PMIM)



```
PM-R17.0 TECHD120                        CA, Inc.                    V120                    08.156 14:31:02
CMD-->                                                                                       Window :

_ 02 12:40 DBDT DBKey/Area Detail
  Area Name                  Sh-Cache Sh-Cache    DBIO    DBIO Prior_DBIO Prior_DBIO  DB_Buf  DB_Buf SHR_Buf SHR_Buf EXC_Bu
                                Writes   Failed   Waits    Time      Waits       Time   Waits    Time   Waits    Time   Wait
_ APPLDICT.DDLDML                    0        0       2  .0094S         0     .0000S       0  .0000S       0  .0000S
_ APPLDICT.DDLDCLOD                  0        0       0  .0000S         0     .0000S       0  .0000S       0  .0000S
_ CATSYS.DDLCAT                      0        0       0  .0000S         0     .0000S       0  .0000S       0  .0000S
_ CATSYS.DDLCATX                     0        0       0  .0000S         0     .0000S       0  .0000S       0  .0000S
_ CATSYS.DDLCATLOD                   0        0       0  .0000S         0     .0000S       0  .0000S       0  .0000S
_ DBCR.BRNCHTEL                      0        0    9788   1:20M         0     .0000S    4609  2:21M     108  36.05S    38
_ DBCR.BRNCHTEL                      0        0    9340   1:19M         0     .0000S    4287  2:16M     116  42.11S    34
_ DBCR.BRNCHTEL                      0        0    9676   1:22M         0     .0000S    3984  1:58M     119  41.40S    37
_ DBCR.BRNCHTEL                      0        0    9453   1:19M         0     .0000S    4360  2:15M     112  36.39S    38
_ DBCR.ACCTHIST                      0        0    3513  34.92S         0     .0000S    7376  5:15M       0  .0000S    24
_ DBCR.ACCTHIST                      0        0    3365  31.22S         0     .0000S    7399  5:14M       0  .0000S    22
_ DBCR.ACCTHIST                      0        0    3443  33.54S         0     .0000S    7241  5:09M       0  .0000S    21
_ DBCR.ACCTHIST                      0        0    3511  33.18S         0     .0000S    7572  5:23M       0  .0000S    25
_ DBCR.ACCTHIST                      0        0    3561  34.64S         0     .0000S    7890  5:38M       2  1.15S     24
_ DBCR.ACCTHIST                      0        0    3465  34.25S         0     .0000S    7932  5:45M       0  .0000S    23
_ DBCR.ACCTHIST                      0        0    3455  31.95S         0     .0000S    7850  5:38M       1  1.40S     25
_ DBCR.ACCTHIST                      0        0    3613  34.21S         0     .0000S    7974  5:39M       1  .6686S    25
_ DBCR.ACCTHIST                      0        0    3446  33.04S         0     .0000S    7703  5:29M       4  1.38S     24
_ DBCR.ACCTHIST                      0        0    3573  35.40S         0     .0000S    8107  5:42M       1  .6973S    21
_ DBCRCOPY.BRNCHTEL-COPY             0        0       0  .0000S         0     .0000S       0  .0000S       0  .0000S
_ DBCRCOPY.BRNCHTEL-COPY             0        0       0  .0000S         0     .0000S       0  .0000S       0  .0000S
```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Post Process Monitoring (PMIM)

```
PM-R17.0 TECHD120                        CA, Inc.                    V120                          08.156 14:31:02
CMD-->                                                                                                 Window :

_ 02 12:40 DBDT DBKey/Area Detail
    Area Name                  Prior_DBIO  DB_Buf  DB_Buf SHR_Buf SHR_Buf EXC_Buf EXC_Buf   DBkey   DBkey Sh-Cache Sh-Cache
                                     Time   Waits    Time   Waits    Time   Waits    Time   Waits    Time   Waits    Time
    _ APPLDICT.DDLDML              .0000S       0  .0000S       0  .0000S       0  .0000S       0  .0000S       0  .0000S
    _ APPLDICT.DDLDCLOD            .0000S       0  .0000S       0  .0000S       0  .0000S       0  .0000S       0  .0000S
    _ CATSYS.DDLCAT                .0000S       0  .0000S       0  .0000S       0  .0000S       0  .0000S       0  .0000S
    _ CATSYS.DDLCATX               .0000S       0  .0000S       0  .0000S       0  .0000S       0  .0000S       0  .0000S
    _ CATSYS.DDLCATLOD             .0000S       0  .0000S       0  .0000S       0  .0000S       0  .0000S       0  .0000S
    _ DBCR.BRNCHTEL                .0000S    4609  2:21M     108  36.05S     389  1:58M      29  18.46S       0  .0000S
    _ DBCR.BRNCHTEL                .0000S    4287  2:16M     116  42.11S     349  1:55M       6  3:43M        0  .0000S
    _ DBCR.BRNCHTEL                .0000S    3984  1:58M     119  41.40S     379  2:01M       4  .4845S       0  .0000S
    _ DBCR.BRNCHTEL                .0000S    4360  2:15M     112  36.39S     385  2:17M       6  2:23M        0  .0000S
    _ DBCR.ACCTHIST                .0000S    7376  5:15M       0  .0000S     242  1:39M       2  .8162S       0  .0000S
    _ DBCR.ACCTHIST                .0000S    7399  5:14M       0  .0000S     226  1:24M       1  .1465S       0  .0000S
    _ DBCR.ACCTHIST                .0000S    7241  5:09M       0  .0000S     211  1:23M       3  .7648S       0  .0000S
    _ DBCR.ACCTHIST                .0000S    7572  5:23M       0  .0000S     257  1:48M       5  4.48S        0  .0000S
    _ DBCR.ACCTHIST                .0000S    7890  5:38M       2  1.15S      240  1:31M       3  1.11S        0  .0000S
    _ DBCR.ACCTHIST                .0000S    7932  5:45M       0  .0000S     239  1:39M       0  .0000S       0  .0000S
    _ DBCR.ACCTHIST                .0000S    7850  5:38M       1  1.40S      251  1:28M       3  1.79S        0  .0000S
    _ DBCR.ACCTHIST                .0000S    7974  5:39M       1  .6686S     250  1:34M       3  1.81S        0  .0000S
    _ DBCR.ACCTHIST                .0000S    7703  5:29M       4  1.38S      248  1:55M       2  .5443S       0  .0000S
    _ DBCR.ACCTHIST                .0000S    8107  5:42M       1  .6973S     217  1:19M       2  .4097S       0  .0000S
    _ DBCRCOPY.BRNCHTEL-COPY       .0000S       0  .0000S       0  .0000S       0  .0000S       0  .0000S       0  .0000S
    _ DBCRCOPY.BRNCHTEL-COPY       .0000S       0  .0000S       0  .0000S       0  .0000S       0  .0000S       0  .0000S
```


Post Process Monitoring (PMIM)

```
PM-R17.0 TECHD120                        CA, Inc.                    V120                          08.156 14:31:47
CMD--> _                                                                                               Window :

_ 03 12:40 ARDT Area Detail
  Area Name                File Name                  Physical Physical   Read    Read   Write   Write Buffer Name
                                                         Reads   Writes  Waits    Time   Waits    Time
  DBCR.BRNCHTEL            DBCR.BRANCHA                  5158     4631   5158  38.24S    4630  42.40S DBCR_BRCH_BUFFER
                           DBCR.BRANCHB                  4914     4431   4911  38.08S    4429  41.70S
                           DBCR.BRANCHC                  5112     4564   5112  38.40S    4564  43.64S
                           DBCR.BRANCHD                  4979     4477   4976  38.29S    4477  41.38S
_ 02 12:40 DBDT DBKey/Area Detail
  Area Name                Area_Access Physical Physical  Buffer Prefetch D-Space D-Space D-Space Sh-Cache Sh-Cache Sh-Cach
                                Waits  Writes   Reads    Hits    Hits   Reads    Hits  Writes   Reads    Hits  Write
  _ APPLDICT.DDLDML                0       0       2      24       0       0       0       0       0       0
  _ APPLDICT.DDLDCLOD              0       0       0       0       0       0       0       0       0       0
  _ CATSYS.DDLCAT                  0       0       0       0       0       0       0       0       0       0
  _ CATSYS.DDLCATX                 0       0       0       0       0       0       0       0       0       0
  _ CATSYS.DDLCATLOD               0       0       0       0       0       0       0       0       0       0
  _ DBCR.BRNCHTEL                  0    4631    5158   10932       0       0       0       0       0       0
  _ DBCR.BRNCHTEL                  0    4431    4914   10541       0       0       0       0       0       0
  _ DBCR.BRNCHTEL                  0    4564    5112   10632       0       0       0       0       0       0
  _ DBCR.BRNCHTEL                  0    4477    4979   10790       0       0       0       0       0       0
  _ DBCR.ACCTHIST                  0    1749    1767    2847       0       0       0       0       0       0
  _ DBCR.ACCTHIST                  0    1672    1694    2747       0       0       0       0       0       0
  _ DBCR.ACCTHIST                  0    1707    1736    2821       0       0       0       0       0       0
  _ DBCR.ACCTHIST                  0    1744    1767    2809       0       0       0       0       0       0
  _ DBCR.ACCTHIST                  0    1762    1799    2859       0       0       0       0       0       0
```


Post Process Monitoring (PMIM)

```
PM-R17.0 TECHD120                        CA, Inc.                  V120                        08.156 14:31:47
CMD--> _                                                                                              Window :

_ 03 12:40 ARDT Area Detail
 Area Name                Buffer Name        Buffer Prefetch  DB_Buf  DB_Buf SHR_Buf SHR_Buf EXC_Buf EXC_Buf   DBkey   DBke
                                              Hits     Hits   Waits    Time   Waits    Time   Waits    Time   Waits    Tir
 DBCR.BRNCHTEL            DBCR_BRCH_BUFFER   10932        0    4609   2:21M     108  36.05S     389   1:58M      29  18.4
                                             10541        0    4287   2:16M     116  42.11S     349   1:55M       6  3:43
                                             10632        0    3984   1:58M     119  41.40S     379   2:01M       4  .484
                                             10790        0    4360   2:15M     112  36.39S     385   2:17M       6  2:23
_ 02 12:40 DBDT DBkey/Area Detail
  Area Name               Area_Access Physical Physical  Buffer Prefetch D-Space D-Space D-Space Sh-Cache Sh-Cache Sh-Cach
                               Waits   Writes   Reads     Hits     Hits   Reads    Hits  Writes   Reads    Hits   Write
_ APPLDICT.DDLDML                  0        0       2       24        0       0       0       0       0       0
_ APPLDICT.DDLDCLOD                0        0       0        0        0       0       0       0       0       0
_ CATSYS.DDLCAT                    0        0       0        0        0       0       0       0       0       0
_ CATSYS.DDLCATX                   0        0       0        0        0       0       0       0       0       0
_ CATSYS.DDLCATLOD                 0        0       0        0        0       0       0       0       0       0
_ DBCR.BRNCHTEL                    0     4631    5158    10932        0       0       0       0       0       0
_ DBCR.BRNCHTEL                    0     4431    4914    10541        0       0       0       0       0       0
_ DBCR.BRNCHTEL                    0     4564    5112    10632        0       0       0       0       0       0
_ DBCR.BRNCHTEL                    0     4477    4979    10790        0       0       0       0       0       0
_ DBCR.ACCTHIST                    0     1749    1767     2847        0       0       0       0       0       0
_ DBCR.ACCTHIST                    0     1672    1694     2747        0       0       0       0       0       0
_ DBCR.ACCTHIST                    0     1707    1736     2821        0       0       0       0       0       0
_ DBCR.ACCTHIST                    0     1744    1767     2809        0       0       0       0       0       0
  DBCR.ACCTHIST                    0     1762    1799     2859        0       0       0       0       0       0
```


caWorld'08

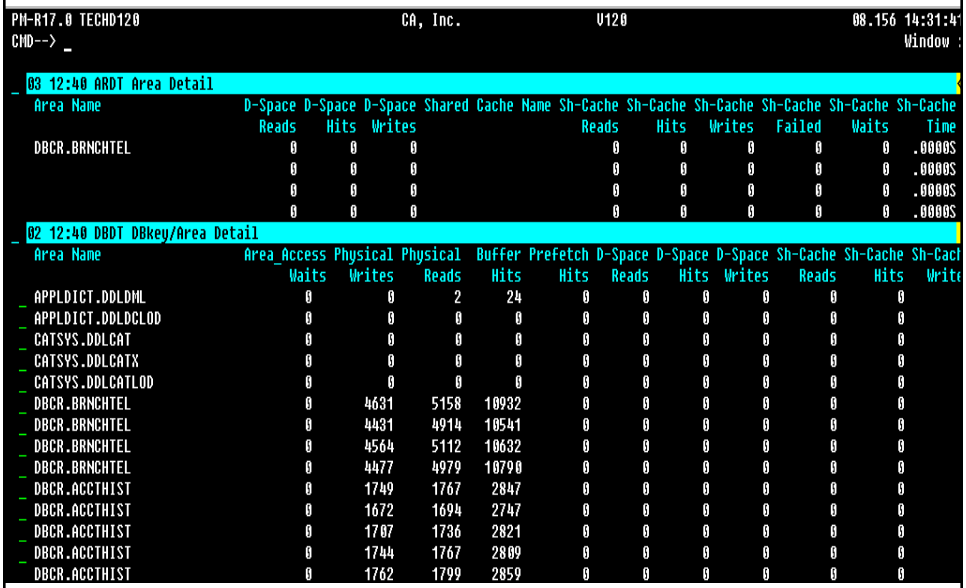
Post Process Monitoring (PMIM)

```
PM-R17.0 TECHD120                        CA, Inc.                  V120                        08.156 14:31:47
CMD--> _                                                                                              Window :

_ 03 12:40 ARDT Area Detail
  Area Name                DBkey D-Space D-Space D-Space Shared Cache Name Sh-Cache Sh-Cache Sh-Cache Sh-Cache Sh-Cache
                             Time   Reads   Hits  Writes                    Reads    Hits  Writes  Failed   Waits
  DBCR.BRNCHTEL            18.46S       0      0       0                        0       0       0       0       0
                            3:43M       0      0       0                        0       0       0       0       0
                            .4845S      0      0       0                        0       0       0       0       0
                            2:23M       0      0       0                        0       0       0       0       0
_ 02 12:40 DBDT DBkey/Area Detail
  Area Name               Area_Access Physical Physical  Buffer Prefetch D-Space D-Space D-Space Sh-Cache Sh-Cache Sh-Cach
                               Waits   Writes   Reads     Hits     Hits   Reads    Hits  Writes   Reads    Hits   Write
_ APPLDICT.DDLDML                  0        0       2       24        0       0       0       0       0       0
_ APPLDICT.DDLDCLOD                0        0       0        0        0       0       0       0       0       0
_ CATSYS.DDLCAT                    0        0       0        0        0       0       0       0       0       0
_ CATSYS.DDLCATX                   0        0       0        0        0       0       0       0       0       0
_ CATSYS.DDLCATLOD                 0        0       0        0        0       0       0       0       0       0
_ DBCR.BRNCHTEL                    0     4631    5158    10932        0       0       0       0       0       0
_ DBCR.BRNCHTEL                    0     4431    4914    10541        0       0       0       0       0       0
_ DBCR.BRNCHTEL                    0     4564    5112    10632        0       0       0       0       0       0
_ DBCR.BRNCHTEL                    0     4477    4979    10790        0       0       0       0       0       0
_ DBCR.ACCTHIST                    0     1749    1767     2847        0       0       0       0       0       0
_ DBCR.ACCTHIST                    0     1672    1694     2747        0       0       0       0       0       0
_ DBCR.ACCTHIST                    0     1707    1736     2821        0       0       0       0       0       0
_ DBCR.ACCTHIST                    0     1744    1767     2809        0       0       0       0       0       0
  DBCR.ACCTHIST                    0     1762    1799     2859        0       0       0       0       0       0
```


caWorld'08

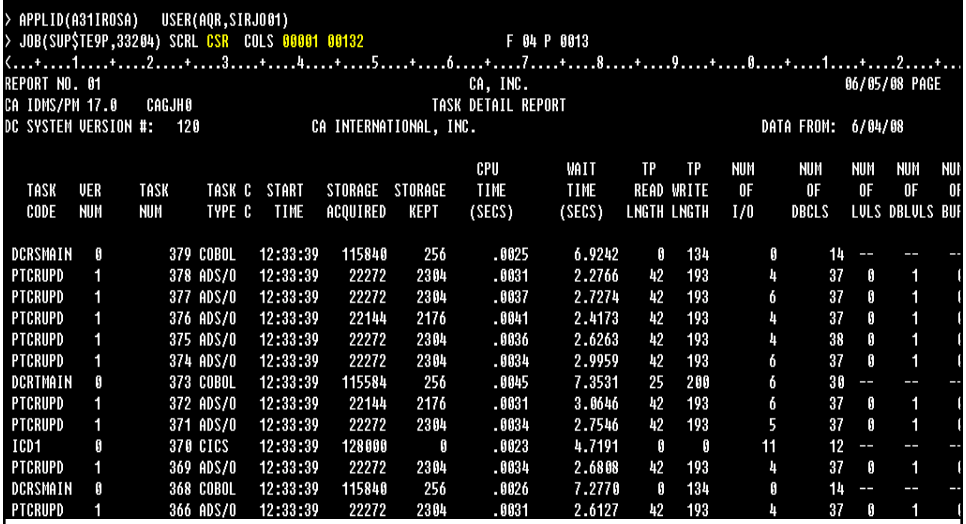
Transforming IT Management

Post Process Monitoring (PMIM)



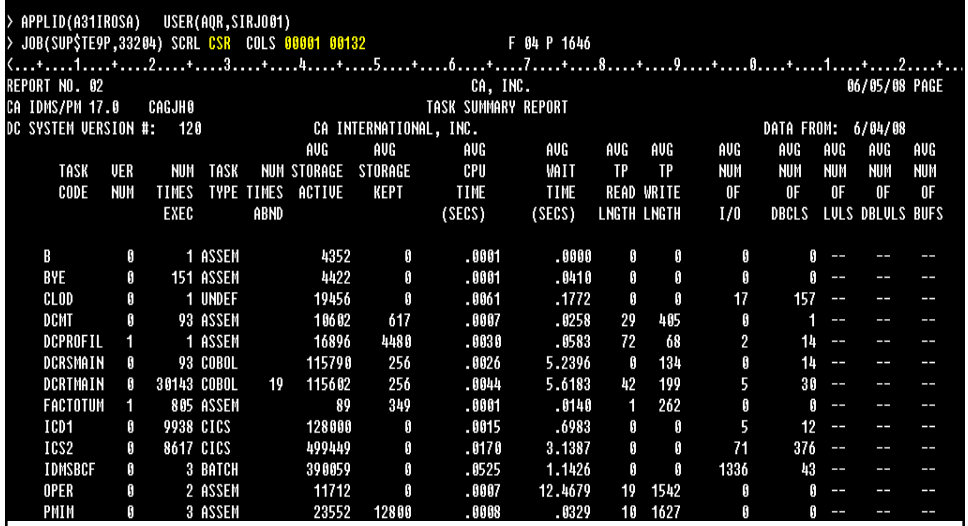
```
PM-R17.0 TECHD120                          CA, Inc.                    V120                          08.156 14:31:4
CMD--> _                                                                                                 Window :

_ 03 12:40 ARDT Area Detail
  Area Name                D-Space D-Space D-Space Shared Cache Name Sh-Cache Sh-Cache Sh-Cache Sh-Cache Sh-Cache Sh-Cache
                             Reads    Hits  Writes                     Reads     Hits   Writes   Failed    Waits     Time
  DBCR.BRNCHTEL                0       0       0                         0        0        0        0        0   .0000S
                               0       0       0                         0        0        0        0        0   .0000S
                               0       0       0                         0        0        0        0        0   .0000S
                               0       0       0                         0        0        0        0        0   .0000S
_ 02 12:40 DBDT DBkey/Area Detail
  Area Name                Area_Access Physical Physical  Buffer Prefetch D-Space D-Space D-Space Sh-Cache Sh-Cache Sh-Cacl
                              Waits    Writes    Reads     Hits     Hits    Reads     Hits   Writes    Reads     Hits   Writ
_ APPLDICT.DDLDML              0          0        2       24        0       0        0        0        0        0
_ APPLDICT.DDLDCLOD            0          0        0        0        0       0        0        0        0        0
_ CATSYS.DDLCAT                0          0        0        0        0       0        0        0        0        0
_ CATSYS.DDLCATX               0          0        0        0        0       0        0        0        0        0
_ CATSYS.DDLCATLOD             0          0        0        0        0       0        0        0        0        0
_ DBCR.BRNCHTEL                0       4631     5158    10932        0       0        0        0        0        0
_ DBCR.BRNCHTEL                0       4431     4914    10541        0       0        0        0        0        0
_ DBCR.BRNCHTEL                0       4564     5112    10632        0       0        0        0        0        0
_ DBCR.BRNCHTEL                0       4477     4979    10790        0       0        0        0        0        0
_ DBCR.ACCTHIST                0       1749     1767     2847        0       0        0        0        0        0
_ DBCR.ACCTHIST                0       1672     1694     2747        0       0        0        0        0        0
_ DBCR.ACCTHIST                0       1707     1736     2821        0       0        0        0        0        0
_ DBCR.ACCTHIST                0       1744     1767     2809        0       0        0        0        0        0
  DBCR.ACCTHIST                0       1762     1799     2859        0       0        0        0        0        0
```


Post Process Monitoring (PMA Report 1)



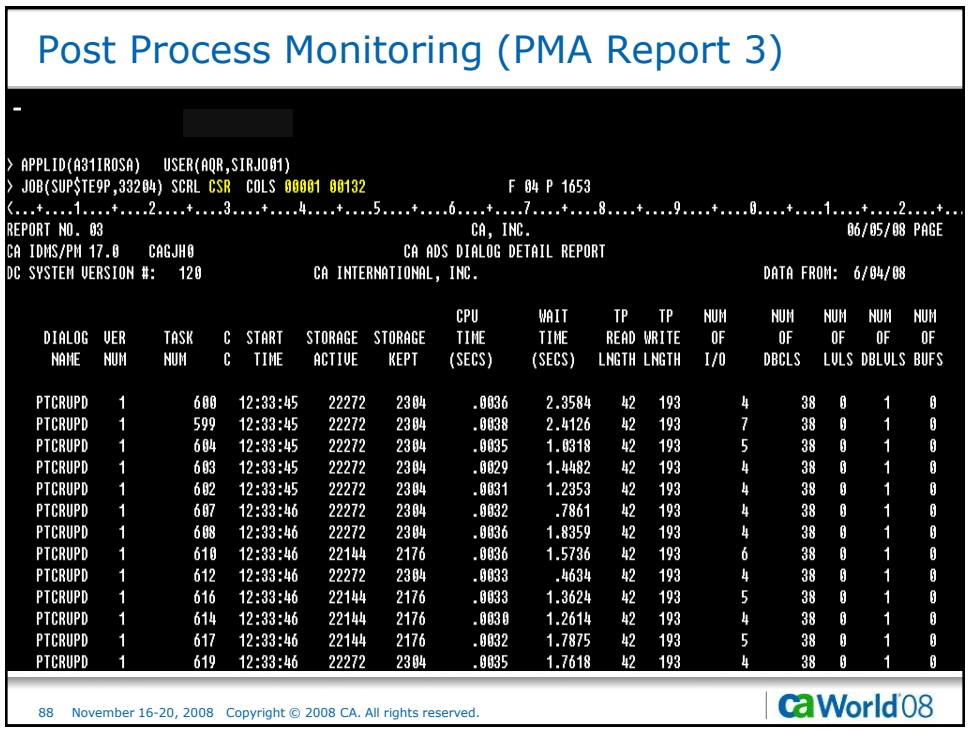
```
> APPLID(A31IROSA)   USER(AQR,SIRJ001)
> JOB(SUP$TE9P,33204) SCRL CSR  COLS 00001 00132              F 04 P 0013
<...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+....0....+....1....+....2....+..
REPORT NO. 01                                  CA, INC.                                        06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                          TASK DETAIL REPORT
DC SYSTEM VERSION #:   120            CA INTERNATIONAL, INC.                                DATA FROM:  6/04/08

                                                          CPU        WAIT      TP    TP     NUM      NUM     NUM     NUM     NUI
  TASK   VER     TASK     TASK C  START    STORAGE  STORAGE  TIME       TIME     READ  WRITE   OF       OF      OF      OF      OI
  CODE   NUM     NUM      TYPE C  TIME     ACQUIRED   KEPT   (SECS)     (SECS)   LNGTH LNGTH   I/O      DBCLS   LVLS DBLVLS BUF

DCRSMAIN   0        379 COBOL    12:33:39   115840     256     .0025     6.9242     0    134       0        14   --      --      --
PTCRUPD    1        378 ADS/O    12:33:39    22272    2304     .0031     2.2766    42    193       4        37    0       1      (
PTCRUPD    1        377 ADS/O    12:33:39    22272    2304     .0037     2.7274    42    193       6        37    0       1      (
PTCRUPD    1        376 ADS/O    12:33:39    22144    2176     .0041     2.4173    42    193       4        37    0       1      (
PTCRUPD    1        375 ADS/O    12:33:39    22272    2304     .0036     2.6263    42    193       4        38    0       1      (
PTCRUPD    1        374 ADS/O    12:33:39    22272    2304     .0034     2.9959    42    193       6        37    0       1      (
DCRTMAIN   0        373 COBOL    12:33:39   115584     256     .0045     7.3531    25    200       6        30   --      --      --
PTCRUPD    1        372 ADS/O    12:33:39    22144    2176     .0031     3.0646    42    193       6        37    0       1      (
PTCRUPD    1        371 ADS/O    12:33:39    22272    2304     .0034     2.7546    42    193       5        37    0       1      (
ICD1       0        370 CICS     12:33:39   128000       0     .0023     4.7191     0      0      11        12   --      --      --
PTCRUPD    1        369 ADS/O    12:33:39    22272    2304     .0034     2.6808    42    193       4        37    0       1      (
DCRSMAIN   0        368 COBOL    12:33:39   115840     256     .0026     7.2770     0    134       0        14   --      --      --
PTCRUPD    1        366 ADS/O    12:33:39    22272    2304     .0031     2.6127    42    193       4        37    0       1      (
```


Post Process Monitoring (PMA Report 2)



```
> APPLID(A31IROSA)   USER(AQR,SIRJ001)
> JOB(SUP$TE9P,33204) SCRL CSR  COLS 00001 00132              F 04 P 1646
<...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+....0....+....1....+....2....+...
REPORT NO. 02                                        CA, INC.                                        06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                          TASK SUMMARY REPORT
DC SYSTEM VERSION #:   120            CA INTERNATIONAL, INC.                                  DATA FROM:  6/04/08
                                     AVG      AVG       AVG       AVG    AVG    AVG     AVG    AVG   AVG   AVG   AVG
      TASK   VER     NUM  TASK   NUM STORAGE  STORAGE     CPU      WAIT    TP     TP      NUM    NUM   NUM   NUM   NUM
      CODE   NUM   TIMES  TYPE TIMES  ACTIVE    KEPT      TIME      TIME  READ  WRITE     OF     OF    OF    OF    OF
                   EXEC        ABND                     (SECS)    (SECS) LNGTH LNGTH    I/O   DBCLS LVLS DBLVLS BUFS

    B          0      1 ASSEM          4352       0      .0001     .0000     0      0       0      0 --     --    --
    BYE        0    151 ASSEM          4422       0      .0001     .0410     0      0       0      0 --     --    --
    CLOD       0      1 UNDEF         19456       0      .0061     .1772     0      0      17    157 --     --    --
    DCMT       0     93 ASSEM         10602     617      .0007     .0258    29    405       0      1 --     --    --
    DCPROFIL   1      1 ASSEM         16896    4480      .0030     .0583    72     68       2     14 --     --    --
    DCRSMAIN   0     93 COBOL        115790     256      .0026    5.2396     0    134       0     14 --     --    --
    DCRTMAIN   0  30143 COBOL    19  115602     256      .0044    5.6183    42    199       5     30 --     --    --
    FACTOTUM   1    805 ASSEM            89     349      .0001     .0140     1    262       0      0 --     --    --
    ICD1       0   9938 CICS         128000       0      .0015     .6983     0      0       5     12 --     --    --
    ICS2       0   8617 CICS         499449       0      .0170    3.1387     0      0      71    376 --     --    --
    IDMSBCF    0      3 BATCH        390059       0      .0525    1.1426     0      0    1336     43 --     --    --
    OPER       0      2 ASSEM         11712       0      .0007   12.4679    19   1542       0      0 --     --    --
    PMIN       0      3 ASSEM         23552   12800      .0008     .0329    10   1627       0      0 --     --    --
```


Post Process Monitoring (PMA Report 3)



```
-

> APPLID(A31IROSA)   USER(AQR,SIRJ001)
> JOB(SUP$TE9P,33204) SCRL CSR  COLS 00001 00132              F 04 P 1653
<...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+....0....+....1....+....2....+...
REPORT NO. 03                                        CA, INC.                                        06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                       CA ADS DIALOG DETAIL REPORT
DC SYSTEM VERSION #:   120            CA INTERNATIONAL, INC.                                  DATA FROM:  6/04/08

                                                    CPU       WAIT     TP     TP     NUM     NUM   NUM   NUM   NUM
    DIALOG  VER     TASK   C  START   STORAGE  STORAGE   TIME      TIME   READ  WRITE    OF      OF    OF    OF    OF
     NAME   NUM      NUM   C  TIME    ACTIVE    KEPT    (SECS)    (SECS) LNGTH LNGTH   I/O    DBCLS LVLS DBLVLS BUFS

    PTCRUPD    1      600  12:33:45    22272    2304     .0036    2.3584    42    193       4      38    0      1    0
    PTCRUPD    1      599  12:33:45    22272    2304     .0038    2.4126    42    193       7      38    0      1    0
    PTCRUPD    1      604  12:33:45    22272    2304     .0035    1.0318    42    193       5      38    0      1    0
    PTCRUPD    1      603  12:33:45    22272    2304     .0029    1.4482    42    193       4      38    0      1    0
    PTCRUPD    1      602  12:33:45    22272    2304     .0031    1.2353    42    193       4      38    0      1    0
    PTCRUPD    1      607  12:33:46    22272    2304     .0032     .7861    42    193       4      38    0      1    0
    PTCRUPD    1      608  12:33:46    22272    2304     .0036    1.8359    42    193       4      38    0      1    0
    PTCRUPD    1      610  12:33:46    22144    2176     .0036    1.5736    42    193       6      38    0      1    0
    PTCRUPD    1      612  12:33:46    22272    2304     .0033     .4634    42    193       4      38    0      1    0
    PTCRUPD    1      616  12:33:46    22144    2176     .0033    1.3624    42    193       5      38    0      1    0
    PTCRUPD    1      614  12:33:46    22144    2176     .0030    1.2614    42    193       4      38    0      1    0
    PTCRUPD    1      617  12:33:46    22144    2176     .0032    1.7875    42    193       5      38    0      1    0
    PTCRUPD    1      619  12:33:46    22272    2304     .0035    1.7618    42    193       4      38    0      1    0
```

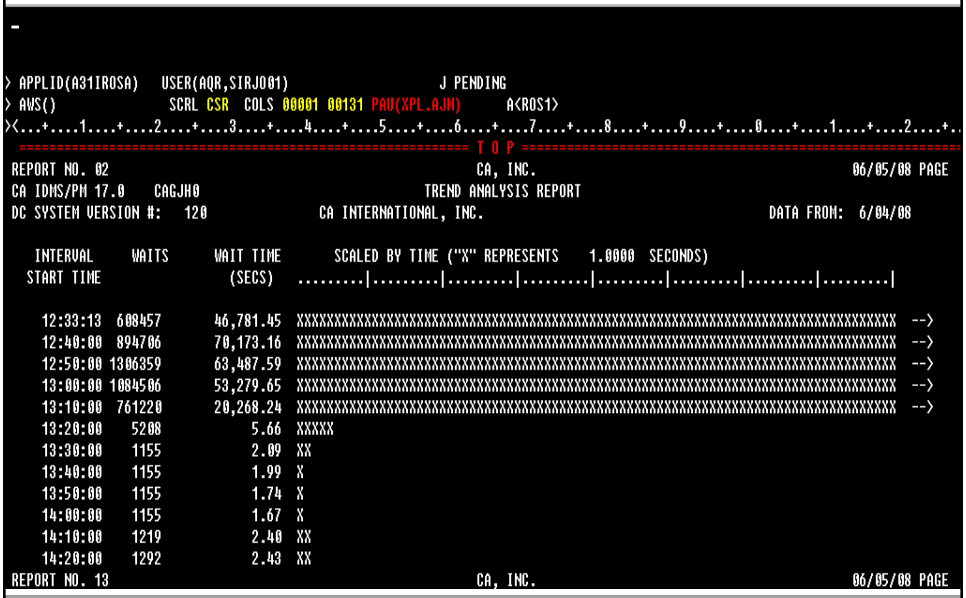

Post Process Monitoring (PMA Report 4)

```
> APPLID(A31IROSA)   USER(AQR,SIRJ001)
> JOB(SUP$TE9P,33204) SCRL CSR  COLS 00001 00132               F 04 P 2267
<...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+....0....+....1....+....2....+...
REPORT NO. 04                                        CA, INC.                                        06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                      CA ADS DIALOG SUMMARY REPORT
DC SYSTEM VERSION #:   120            CA INTERNATIONAL, INC.                          DATA FROM:  6/04/08

                  NUM    NUM    AVG      AVG       AVG       AVG      AVG    AVG      AVG      AVG    AVG    AVG    AVG
  DIALOG   VER    TIMES  TIMES  STORAGE  STORAGE    CPU       WAIT      TP     TP      NUM      NUM    NUM    NUM    NUM
   NAME    NUM    EXEC   ABND   ACTIVE   KEPT      TIME      TIME     READ  WRITE     OF       OF     OF     OF     OF
                                                   (SECS)    (SECS)   LNGTH  LNGTH    I/O      DBCLS  LVLS  DBLVLS  BUFS

 PTCRUPD     1   30235     24    22308    2264      .0034     1.8274    42    193       4        38    0      1      0
 C750009 RECORDS WRITTEN FOR REPORT 04 --          10
 ========================================================= B O T T O M ==========================================================
```


Post Process Monitoring (PMA Report 81)

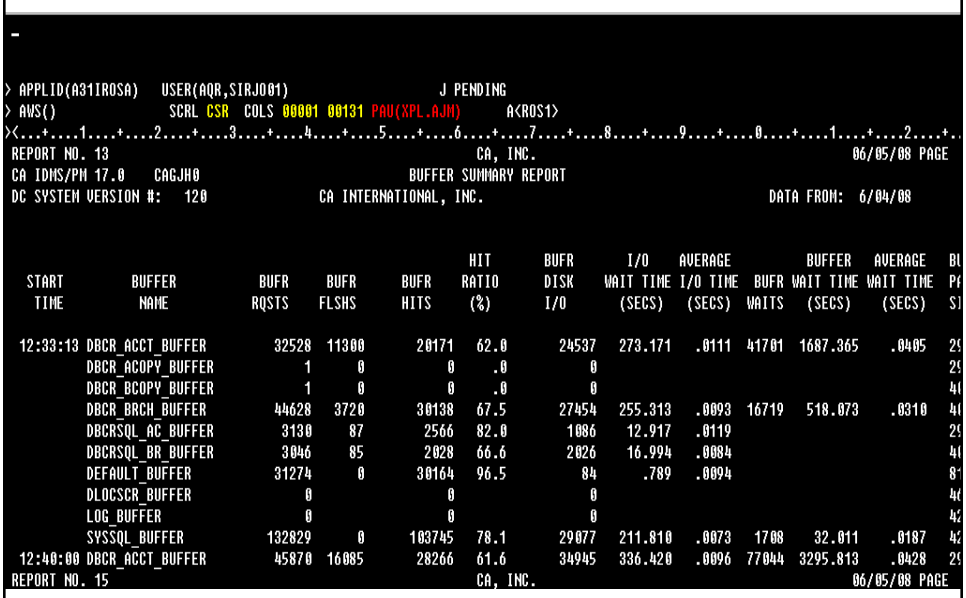
```
> APPLID(A31IROSA)   USER(AQR,SIRJ001)
> JOB(SUP$TE9P,33360) SCRL CSR  COLS 00001 00132               F 04 P 0008
<...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+....0....+....1....+....2....+...
REPORT NO. 81                                        CA, INC.                                        06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                      LOAD BALANCING REPORT - BY CV        DATA FROM:  6/04/08  DATA TO:  6/0
CENTRAL VERSION#:    120             CA INTERNATIONAL, INC.

         TIME     RESOURCE      VALUE
 BATCH   12:00    TASKS             0   .                                                .
                  CPU             .0000 .                                                .
                  I/O               0   .                                                .
 ONLINE  12:00    TASKS        51,178   .TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT  .
                  CPU         223.4476  .CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC  .
                  I/O         438,230   .IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII  .
 BATCH   13:00    TASKS             3   .                                                .
                  CPU             .1575 .                                                .
                  I/O           4,008   .                                                .
 ONLINE  13:00    TASKS        28,973   .TTTTTTTTTTTTTTTTTTTTTTTTTTTTTT                  .
                  CPU         173.3453  .CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC  .
                  I/O         495,105   .IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII  .
 BATCH   14:00    TASKS             0   .                                                .
                  CPU             .0000 .                                                .
                  I/O               0   .                                                .
 ONLINE  14:00    TASKS           156   .                                                .
```


Post Process Monitoring (PMI Report 2)



```
-


> APPLID(A31IROSA)   USER(AQR,SIRJ001)                J PENDING
> AWS()              SCRL CSR  COLS 00001 00131 PAU(XPL.AJM)      A<ROS1>
>...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+....0....+....1....+....2....+..
  ================================================== T O P ==========================================================
REPORT NO. 02                                        CA, INC.                                        06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                          TREND ANALYSIS REPORT
DC SYSTEM VERSION #:   120             CA INTERNATIONAL, INC.                                DATA FROM:  6/04/08

   INTERVAL     WAITS      WAIT TIME       SCALED BY TIME ("X" REPRESENTS    1.0000  SECONDS)
  START TIME                 (SECS)   .........|.........|.........|.........|.........|.........|.........|

    12:33:13  608457       46,781.45  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  -->
    12:40:00  894706       70,173.16  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  -->
    12:50:00 1306359       63,487.59  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  -->
    13:00:00 1084506       53,279.65  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  -->
    13:10:00  761220       20,268.24  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  -->
    13:20:00    5208            5.66  XXXXX
    13:30:00    1155            2.09  XX
    13:40:00    1155            1.99  X
    13:50:00    1155            1.74  X
    14:00:00    1155            1.67  X
    14:10:00    1219            2.40  XX
    14:20:00    1292            2.43  XX
REPORT NO. 13                                        CA, INC.                                        06/05/08 PAGE
```


Post Process Monitoring (PMI Report 13)



```
-


> APPLID(A31IROSA)   USER(AQR,SIRJ001)                J PENDING
> AWS()              SCRL CSR  COLS 00001 00131 PAU(XPL.AJM)      A<ROS1>
>...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+....0....+....1....+....2....+..
REPORT NO. 13                                        CA, INC.                                        06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                          BUFFER SUMMARY REPORT
DC SYSTEM VERSION #:   120             CA INTERNATIONAL, INC.                                DATA FROM:  6/04/08


                                                      HIT       BUFR      I/O    AVERAGE          BUFFER   AVERAGE   BU
  START         BUFFER          BUFR     BUFR      BUFR    RATIO      DISK    WAIT TIME I/O TIME  BUFR WAIT TIME WAIT TIME  PA
   TIME          NAME           RQSTS    FLSHS     HITS     (%)       I/O      (SECS)   (SECS)  WAITS   (SECS)    (SECS)   SI

 12:33:13 DBCR_ACCT_BUFFER       32528   11300     20171   62.0      24537   273.171   .0111   41701  1687.365    .0405   29
          DBCR_ACOPY_BUFFER          1       0         0    .0          0                                                  29
          DBCR_BCOPY_BUFFER          1       0         0    .0          0                                                  40
          DBCR_BRCH_BUFFER       44628    3720     30138   67.5      27454   255.313   .0093   16719   518.073    .0310   40
          DBCRSQL_AC_BUFFER       3130      87      2566   82.0       1086    12.917   .0119                              29
          DBCRSQL_BR_BUFFER       3046      85      2028   66.6       2026    16.994   .0084                              40
          DEFAULT_BUFFER         31274       0     30164   96.5         84      .789   .0094                              8
          DLOCSCR_BUFFER             0               0                 0                                                  40
          LOG_BUFFER                 0               0                 0                                                  42
          SYSSQL_BUFFER         132829       0    103745   78.1      29077   211.810   .0073    1708    32.011    .0187   42
 12:40:00 DBCR_ACCT_BUFFER       45870   16085     28266   61.6      34945   336.420   .0096   77044  3295.813    .0428   29
REPORT NO. 15                                        CA, INC.                                        06/05/08 PAGE
```


Post Process Monitoring (PMI Report 15)

```
-

> APPLID(A31IROSA)   USER(AQR,SIRJ001)                J PENDING
> AWS()              SCRL CSR  COLS 00001 00131 PAU(XPL.AJM)      A<ROS1>
>...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+....0....+....1....+....2....+..
 REPORT NO. 15                                        CA, INC.                                                  06/05/08 PAGE
 CA IDMS/PM 17.0    CAGJH0                          JOURNAL SUMMARY REPORT
 DC SYSTEM VERSION #:   120            CA INTERNATIONAL, INC.                                  DATA FROM:  6/04/08


                                        READ    AVG READ        WRITE   AVG WRITE JOURNAL JRNL BUFR  AVG BUFR BEGIN  END
   START      JOURNAL       BLOCKS  READ WAIT TIME WAIT TIME WRITE WAIT TIME WAIT TIME  BUFFER WAIT TIME WAIT TIME  JRNL   JRN
    TIME       NAME        WRITTEN WAITS   (SECS)    (SECS) WAITS   (SECS)    (SECS)   WAITS   (SECS)    (SECS)   RBN    RBN

 12:33:13 J1JRNL            27589   428     3.725    .0087  27589   240.807    .0087    2589   125.481    .0485      9 2732
          J2JRNL                      6      .022    .0036
 12:40:00 J1JRNL            12807   164     1.428    .0087  12807   108.811    .0085    1128    57.052    .0506  27322  36
          J2JRNL            26129   394     2.346    .0060  26129   221.230    .0085    2168    96.608    .0446  39999 258
 12:50:00 J1JRNL            35889  1751     6.131    .0035  35889   201.861    .0056    1704    58.683    .0344  39999 355
          J2JRNL            14268   183     1.051    .0057  14268    97.414    .0068    1317    45.344    .0344  25873 399
 13:00:00 J1JRNL             4499   287     1.430    .0050   4499    25.655    .0057      78     2.099    .0269  35545 399
          J2JRNL            30834   612     1.526    .0025  30834   156.385    .0051     604    15.325    .0254  39999 305
 13:10:00 J1JRNL            11690  3324     3.035    .0009  11690    23.722    .0020      70     1.386    .0198  39999 115
          J2JRNL             9563  8548    33.418    .0039   9563    58.644    .0061     139     3.943    .0284  30535 399
 13:20:00 J1JRNL                2                             2      .001    .0006                             11586 115
 REPORT NO. 30                                        CA, INC.                                                  06/05/08 PAGE
```

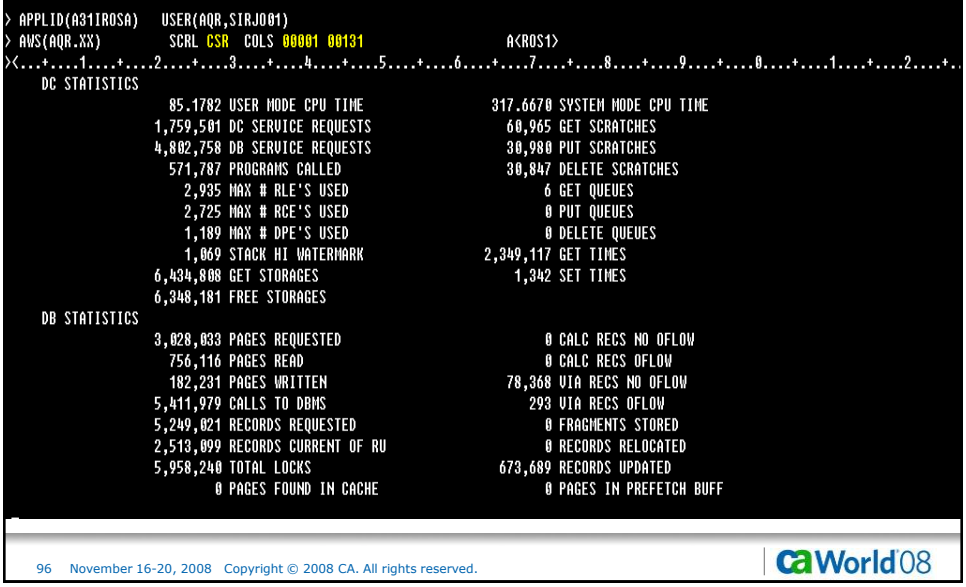

Post Process Monitoring (PMI Report 30)

```
-

> APPLID(A31IROSA)   USER(AQR,SIRJ001)                J PENDING
> AWS()              SCRL CSR  COLS 00001 00131 PAU(XPL.AJM)      A<ROS1>
>...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+....0....+....1....+....2....+..
 REPORT NO. 30                                        CA, INC.                                                  06/05/08 PAGE
 CA IDMS/PM 17.0    CAGJH0                    INTERVAL STATISTICS SUMMARY REPORT
 DC SYSTEM VERSION #:   120            CA INTERNATIONAL, INC.                                  DATA FROM:  6/04/08


          TASKS  TASKS  TASKS  TASKS  TASK   TASK  TIMES   SYSTEM     USER     PGMS   PGMS    GET    FREE     DC       DB
   START    AT     AT  STARTD ENDED ABENDS STALLS   MAX     MODE      MODE   CALLED LOADED   STG    STG    SRVCE    SRVCE
    TIME  START   END                             TASK     CPU       CPU                    RQSTS  RQSTS   RQSTS    RQSTS

   12:33:13    0   137  11865  11728    11        10581   37.9903    9.2815  89600   1682 572288 567102   332209   495356
   12:40:00  137   136  16154  16155    11        14546   55.6957   13.2105 124837   1998 821716 816330   462637   710005
   12:50:00  136   108  23298  23326     9        10576   81.1382   26.3603 162560   8100 587006 559336   537074  1220014
   13:00:00  108   109  18345  18344     9                76.6671   26.0614 116619  10016 725990 690942   306756  1213613
   13:10:00  109    15  10462  10556     3                59.8671   10.2193  76906   4004 724035 710863   117959  1160813
   13:20:00   15    15     19     19                         .2400             110      6    543    520       69      468
   13:30:00   15    15     10     10                         .0796              90           271    251       50      360
   13:40:00   15    15     10     10                         .0787              90           271    251       50      360
   13:50:00   15    15     10     10                         .0775      .0001   90           272    252       50      360
   14:00:00   15    15     10     10                         .0829      .0001   90           272    251       50      360
   14:10:00   15    16     58     57                         .0886      .0009  142      8    695    656      510      410
   14:20:00   16    15     29     30                         .1070      .0340  241     15    687    658     1075      360
```


Post Process Monitoring (SREPORT 3)

```
-


> APPLID(A31IROSA)   USER(AQR,SIRJ001)
> AWS(AQR.XX)        SCRL CSR  COLS 00001 00131               A<ROS1>
>...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+....0....+....1....+....2....+..
  ========================================================= T O P ========================================================
    SYSTEM STATISTICS
                    80,329 TOTAL TASKS                      25,474 STD PGMPOOL LOADS
                       825 TOTAL SYSTEM TASKS            1,288,895 STD PGMPOOL WAITS
                        37 TASKS ABENDED                   101,891 STD PGM PAGES LOADED
                        36 RUNAWAY TASKS ABORTED                35 RENTPOOL LOADS
                    35,703 TIMES AT MAX TASK                     0 RENTPOOL WAITS
                         0 SHORT ON STORAGE                  1,550 RENT PGM PGS LOADED
                         0 OVER RLE THRESH                       2 XA PGMPOOL LOADS
                         0 OVER RCE THRESH                       0 XA PGMPOOL WAITS
                         0 OVER DPE THRESH                      18 XA PGM PGS LOADED
                         0 OVER ILE THRESH                     324 XA RENTPOOL LOADS
                         0 STORAGE POOL WAITS                    0 XA RENTPOOL WAITS
                 3,370,184 STG REQS - PASS 1                25,727 XA RENT PGS LOADED
                 3,064,624 STG REQS - PASS 2                     0 PAGE RELEASE RQSTS
                         0 PUT JOURNALS                          0 PAGES RELEASED
                         0 SET TIME WAITS                        0 PAGE FIX RQSTS
                       547 SET TIME POSTS                        0 PAGES PFIXED
                       124 SET TIME STRTTASKS                    0 PAGE FREE RQSTS
                       670 SET TIME CANCELS                      0 PAGES PGFREED
                         0 AUTOSTART TASKS
```


Post Process Monitoring (SREPORT 3)



```
> APPLID(A31IROSA)   USER(AQR,SIRJ001)
> AWS(AQR.XX)        SCRL CSR  COLS 00001 00131               A<ROS1>
>...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+....0....+....1....+....2....+..
    DC STATISTICS
                    85.1782 USER MODE CPU TIME              317.6670 SYSTEM MODE CPU TIME
                 1,759,501 DC SERVICE REQUESTS                60,965 GET SCRATCHES
                 4,802,758 DB SERVICE REQUESTS                30,980 PUT SCRATCHES
                   571,787 PROGRAMS CALLED                    30,847 DELETE SCRATCHES
                     2,935 MAX # RLE'S USED                        6 GET QUEUES
                     2,725 MAX # RCE'S USED                        0 PUT QUEUES
                     1,189 MAX # DPE'S USED                        0 DELETE QUEUES
                     1,069 STACK HI WATERMARK              2,349,117 GET TIMES
                 6,434,808 GET STORAGES                        1,342 SET TIMES
                 6,348,181 FREE STORAGES
    DB STATISTICS
                 3,028,033 PAGES REQUESTED                       0 CALC RECS NO OFLOW
                   756,116 PAGES READ                            0 CALC RECS OFLOW
                   182,231 PAGES WRITTEN                    78,368 VIA RECS NO OFLOW
                 5,411,979 CALLS TO DBMS                       293 VIA RECS OFLOW
                 5,249,021 RECORDS REQUESTED                     0 FRAGMENTS STORED
                 2,513,099 RECORDS CURRENT OF RU                 0 RECORDS RELOCATED
                 5,958,240 TOTAL LOCKS                     673,689 RECORDS UPDATED
                         0 PAGES FOUND IN CACHE                  0 PAGES IN PREFETCH BUFF
```


Post Process Monitoring (SREPORT 3)

```
> APPLID(A31IROSA)   USER(AQR,SIRJ001)                L PENDING
> AWS(AQR.XX)        SCRL CSR  COLS 00001 00131              A<ROS1>
>...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+....0....+....1....+....2....+..
    INDEX STATISTICS
                        0 SR8 SPLITS                          0 SR8 STORES
                        0 SR8 SPAWNS                          0 SR8 ERASES
                        0 ORPHANS ADOPTED                     0 SR7 STORES
                   60,105 BTREE SEARCHES                      0 SR7 ERASES
                        1 MIN LEVELS SEARCHED            70,740 TOTAL LEVELS SEARCHED
                        2 MAX LEVELS SEARCHED
    SQL STATISTICS
                  103,344 SQL COMMANDS                    25,856 TUPLES FETCHED
                        0 SORTS                            8,617 ROWS INSERTED
                        0 TUPLES SORTED                   25,815 ROWS UPDATED
                        0 MIN SORT                             0 ROWS DELETED
                        0 MAX SORT                             0 AM RECOMPILES
```


Post Process Monitoring (SREPORT 7)

```
> APPLID(A31IROSA)   USER(AQR,SIRJ001)                L PENDING
> AWS(AQR.XX)        SCRL CSR  COLS 00001 00131              A<ROS1>
>...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+....0....+....1....+....2....+..
 TASK CODE:  ADS2

                  30,136       NUMBER TASK EXECUTIONS

                 241,055       NUMBER PROGRAMS CALLED                 3       NUMBER PROGRAMS LOADED
                       0       NUMBER TERMINAL READS             30,050       NUMBER TERMINAL WRITES
                       0       NUMBER TERMINAL ERRORS           813,415       NUMBER GETSTG REQUESTS
                  60,262       NUMBER GETSCR REQUESTS            30,037       NUMBER PUTSCR REQUESTS
                  30,131       NUMBER DELSCR REQUESTS                 0       NUMBER GETQUE REQUESTS
                       0       NUMBER PUTQUE REQUESTS                 0       NUMBER DELQUE REQUESTS
                 680,939       NUMBER GETTIME REQUESTS                0       NUMBER SETTIME REQUESTS
                 933,201       NUMBER DB SERVICE RQSTS           69,207       NUMBER PAGES READ
                 20.2709       TASK USER MODE TIME               81.7083      TASK SYSTEM MODE TIME
              55,244.2271      TASK WAIT TIME
                  65,562       NUMBER PAGES WRITTEN             304,657       NUMBER PAGES REQUESTED
                       0       NUMBER CALC RECS NO OFLOW              0       NUMBER CALC RECS OFLOW
                  30,051       NUMBER VIA RECS NO OFLOW               0       NUMBER VIA RECS OFLOW
                 435,014       NUMBER RECORDS REQUESTED         120,493       NUMBER RECS CURRENT OF RU
                       0       NUMBER FRAGMENTS STORED                0       NUMBER RECORDS RELOCATED
                1,143,721      NUMBER CALLS TO DBMS             825,462       TOTAL LOCKS ACQUIRED
                       0       NUMBER SR8 SPLITS                      0       NUMBER SR8 STORES
```


Post Process Monitoring (SREPORT 7)

```
> APPLID(A31IROSA)   USER(AQR,SIRJ001)                L PENDING
> AWS(AQR.XX)         SCRL CSR  COLS 00001 00131              A<ROS1>
>...+....1....+....2....+....3....+....4....+....5....+....6....+....7....+....8....+....9....+....0....+....1....+....2....+..

                     0       NUMBER SR8 SPAWNS                          0       NUMBER SR8 ERASES
                     0       NUMBER ORPHAN ADOPT                        0       NUMBER SR7 STORES
                30,045       NUMBER BTREE SEARCHES                      0       NUMBER SR7 ERASES
                     0       NUMBER SQL COMMANDS                        0       NUMBER SQL SORTS
                     0       NUMBER TUPLES FETCHED                      0       NUMBER TUPLES SORTED
                     0       NUMBER ROWS INSERTED                       0       NUMBER AM RECOMPILES
                     0       NUMBER ROWS UPDATED
                     0       NUMBER ROWS DELETED
```


TPNS Response Times

> Mean Response Time
- 8.00 Seconds (All Applications)
  - CA ADS 3.29
  - CICS DML 17.62
  - CICS SQL 18.38
  - DC COBOL 5.85

> Number of Responses
- 81,501

> Responses Per Minute
- 2,047

Agenda

- > Guidelines and Recommendations
- > System Statement
- > ADSO Statement
- > Program Definition Statement
- > Task Definition Statement
- > Line Definition Statement
- > Special Considerations
- > Operating System Considerations

Guidelines and Recommendations

> The values for parameters throughout this presentation fall into three categories:

- Best Setting
- Set then Tune
- Site specific Set then Tune

Guidelines and Recommendations continued

> Best setting

- These have been found to be the best setting for all sites and should not be changed

> Set then tune

- The values for these are initially set larger than needed. You should use these values and tune them down after running through a complete business cycle or through the busiest processing period

Guidelines and Recommendations continued

> Site specific Set then Tune

- These values when related to Storage and Program Pools should be set at a minimum to the values specified in the previous release. When upgrading you should set the values 10 to 20 percent higher then tune down after running through your busiest processing period
- These values when related to Maximum number of tasks and Maximum ERUS can only be determined by following a process of setting a value, monitoring response time, and adjusting up or down until the best values are found

System Statement

> Storage Cushion is

- 10 Percent of Storage pool is
- Best Setting

> Deadlock Detection Interval is 1

- Best Setting

> DPE Count is 1500

- Set then Tune

System Statement

> CHKuser task is
- Site specific
  - Set to anticipated Maximum number of concurrent external run unit connections

System Statement

> External wait is
- Site Specific
- Application Specific

System Statement

> No Journal Retrieval
- Best Setting

> Journal Fragment Interval is 0
- Best Setting

> Journal Transaction Level is 5
- Best Setting

System Statement

> Internal wait is
- Site specific
- Application Specific

System Statement

> Limits for Online/External are Off
  - Best Setting

System Statement

> Loadlist is SYSLOAD
  - Best Setting

System Statement

> Multiple enclave is
- Site Specific
- Application Dependent
  - See complete documentation in section x of the Programmers reference manual

System Statement

> Page Release is No
- No longer used in z/OS
- Dropped in Release 12.1 of CA IDMS

System Statement

> Protect

- Best Setting
- Several options available
  - Traditional Storage Protect
  - HPSP

System Statement

> Queue Journal Before

- Best Setting

System Statement

> RCE Count is 15000
  - Set then Tune

System Statement

> Recovery wait is
  - Site Specific

System Statement

> Relocatable Threshold is No
  - Best Setting

System Statement

> RESource timeout
  - Site specific

System Statement

> Retrieval Nolock
  - Best Setting

System Statement

> RLE Count is 15000
  - Set then Tune

System Statement

> Runaway interval is 5

- Best Setting

System Statement

> Rununits for 5

- Set and Tune

System Statement

> Scratch in XA Storage is Yes
  - Best Setting

System Statement

> Stacksize is 2000
  - Set then Tune

System Statement

> Statistics Interval Off
- Site specific

System Statement

> Statistics Interval Off
- Site specific

System Statement

> Statistics Interval Off
  - Site specific

System Statement

> Storage Key is
  - Specify "9" as the Storage key

System Statement

> Storage Key is

- Specify "9" as the Storage key

System Statement

> Storage Pool is 1200

- Set then Tune

System Statement

> Syslocks is 100000

- Set then tune

System Statement

> Systrace Off

- Best Setting
- Can be dynamically varied on and off
  - # of entries can also be changed
  - Maximum # entries can be higher than SYSGEN limit of 9999.
    - Higher number of entries does not affect performance

System Statement

> Ticker Interval is 1

- Best Setting
- Affects all other timer related functions
  - These other timer related functions will not execute lower than the ticker interval
    - Timer Tasks, Deadlock Detection Internal

System Statement

> Update Nolock

- Best Setting

System Statement

> Program Pool is
- Site specific Set then Tune

> Reentrant Pool is
- Site specific Set then Tune

> XA Program Pool is
- Site specific Set then Tune

> XA Reentrant Pool is
- Site specific Set then Tune

  When upgrading releases the size should be set to the size used in the older release.

System Statement

> Maximum ERUS and Maximum Tasks
- This number will represent the sum of:
  - System Tasks
  - Drivers Tasks
  - Max ERUS
  - Max tasks
- Values can be set high then dynamically changed using DCMT commands.
  - Total is highest value which can be set
  - Can vary lower (DCMT)

System Statement

> Maximum ERUS and Maximum Tasks

- Then monitor Response time and Throughput
- Adjust Max Tasks and Max ERUS
  - DCMT V AC TAS MAX TASK nnn
- Repeat until optimum number is found

System Statement

> XA Storage Pool is

- Site specific Set and Tune
- Best to over-allocate initially then tune using Statistics

ADSO Statement

> Dialog Statistics Off

- Site specific

ADSO Statement

> Fast Mode Threshold Off

- Best Setting

ADSO Statement

> Record Compression Off

- Best Setting

ADSO Statement

> Resources are Fixed

- Best Setting

ADSO Statement

> Storage Mode is Calculated
  - Best Setting

Program Definition Statement

> Nodynamic
  - Best Setting
  - Incorrect specification depending on the "LOADLIST" in use can have a major impact on performance

Program Definition Statement

> MP Mode is Any

- Best Setting
- Only applies when using the Multiasking option of CA IDMS

Program Definition Statement

> Noprotect

- Best Setting for production systems when traditional storage protection is being used.
- Traditional Storage protect is used if Protect is on at the System Level and the Storage Key parameter (of the System Statement) specifies a key in the range of 10 to 15
- Should only be turned on in a production system if Storage Overlays are suspected
- "Protect" on with traditional storage protection will result in significant increases of CPU usage

Program Definition Statement

> If High Performance Storage Protection is being used:

> Protect

- Best Setting for production systems
- Prevents User mode programs and dialogs from over-writing System programs and System storage
- No increase in CPU usage
- Non-Production systems should use Traditional Storage protection

Task Definition Statement

> Protocol is EXPresp

- Best Setting

Line Definition Statement

> Compact
  - Best Setting

Line Definition Statement

> Protocol is EXPresp
  - Best Setting

Line Definition Statement

> PermReadBuf
  - Best Setting

Line Definition Statement

> RPL Count is
  - 20 Percent of number of terminals
  - Set and Tune

Special Considerations

> Storage Pools

- XA Storage pool nnn
  - Split by types
    - TERMINAL, DATABASE
    - SHARED, SHARED KEPT
    - USER, USER KEPT
  - Pools must be split if High Performance Storage protection is being used
- Optional Apar bit 193 can be used to reduce CPU usage

Operating System Considerations

> CPU effectiveness

- Reported via:
  - DCMT D SUBT EFF
  - DCMT D SUBT n
  - IDMS Health Check - r17 with RO12080
- Reasons for low effectiveness
  - Paging, Swapping, Higher Priority Work

SYSGEN Changes

caWorld'08 | discoverability

SYSGEN

  caWorld'08

Transforming IT Management

SYSGEN

> SYSTEM statement changes
  - Current options
  - New Options

SYSGEN
Current Options

```
SYSTEM 120
      DEADLOCK DETECTION INTERVAL IS 60
      EXTERNAL WAIT IS OFF
      INACTIVE INTERVAL IS OFF
      INTERNAL WAIT IS OFF
      JOURNAL FRAGMENT INTERVAL IS 100
      JOURNAL TRANSACTION LEVEL IS 0
      JOURNAL RETRIEVAL
      STORAGE LIMIT FOR ONLINE   TASKS IS 5000
      STORAGE LIMIT FOR EXTERNAL TASKS IS 5000
      LOCK LIMIT FOR ONLINE   TASKS IS 500000
      LOCK LIMIT FOR EXTERNAL TASKS IS 500000
      CALL LIMIT FOR ONLINE   TASKS IS 500000
      CALL LIMIT FOR EXTERNAL TASKS IS 500000
      DBIO LIMIT FOR ONLINE   TASKS IS 500000
      DBIO LIMIT FOR EXTERNAL TASKS IS 500000
      LIMITS FOR ONLINE ARE ENABLED
      LIMITS FOR EXTERNAL ARE ENABLED
      LOADLIST IS JOSLOAD
      MAXIMUM   ERUS IS 160
      MAXIMUM TASKS IS 50
      PROGRAM POOL IS 100
      PROTECT
      QUEUE JOURNAL ALL
      RELOCATABLE THRESHOLD IS YES
```


SYSGEN
Current Options continued

```
RETRIEVAL LOCK
RUNAWAY INTERVAL IS 60
RUNUNITS FOR LOADER      = 0
RUNUNITS FOR SECURITY    = 0
RUNUNITS FOR SIGNON      = 0
RUNUNITS FOR MSGDICT     = 0
RUNUNITS FOR QUEUE       = 0
RUNUNITS FOR SYSTEM/DEST = 0
SCRATCH IN STORAGE IS NO
SNAP SYSTEM IS ON
SNAP SYSTEM PHOTO IS ON
SNAP TASK IS ON
SNAP TASK PHOTO IS ON
STATISTICS INTERVAL 60 LINE TASK
WRITE USER TRANSACTION
STORAGE KEY IS 11
SYSLOCKS IS 5000
SYSTRACE ON ENTRIES 9999
TICKER INTERVAL IS 60
UPDATE LOCK
```


SYSGEN
New Options

```
SYSTEM 120
      DEADLOCK DETECTION INTERVAL IS 1
      EXTERNAL WAIT IS 60
      INACTIVE INTERVAL IS 180
      INTERNAL WAIT IS 30
      JOURNAL FRAGMENT INTERVAL IS 0
      JOURNAL TRANSACTION LEVEL IS 5
      NOJOURNAL RETRIEVAL
      STORAGE LIMIT FOR ONLINE   TASKS IS 5000
      STORAGE LIMIT FOR EXTERNAL TASKS IS 5000
      LOCK LIMIT FOR ONLINE   TASKS IS 500000
      LOCK LIMIT FOR EXTERNAL TASKS IS 500000
      CALL LIMIT FOR ONLINE   TASKS IS 500000
      CALL LIMIT FOR EXTERNAL TASKS IS 500000
      DBIO LIMIT FOR ONLINE   TASKS IS 500000
      DBIO LIMIT FOR EXTERNAL TASKS IS 500000
      LIMITS FOR ONLINE ARE DISABLED
      LIMITS FOR EXTERNAL ARE DISABLED
      LOADLIST IS SYSLOAD
      MAXIMUM   ERUS IS 160
      MAXIMUM TASKS IS 50
      PROGRAM POOL IS 100
      PROTECT
      QUEUE JOURNAL BEFORE
      RELOCATABLE THRESHOLD IS NO
```


SYSGEN
New Options continued

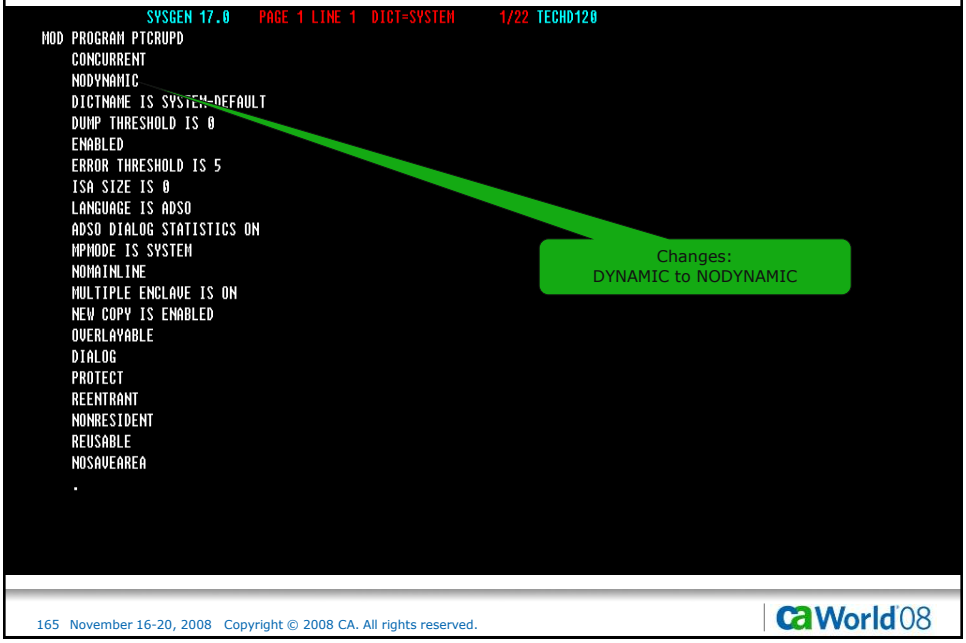
```
SYSTEM 120
     RETRIEVAL NOLOCK
      RUNAWAY INTERVAL IS 10
      RUNUNITS FOR LOADER     = 5
      RUNUNITS FOR SECURITY   = 5
      RUNUNITS FOR SIGNON     = 5
      RUNUNITS FOR MSGDICT    = 5
      RUNUNITS FOR QUEUE      = 5
      RUNUNITS FOR SYSTEM/DEST = 5
      SCRATCH IN STORAGE IS YES
      SNAP SYSTEM IS OFF
      SNAP SYSTEM PHOTO IS OFF
      SNAP TASK IS OFF
      SNAP TASK PHOTO IS OFF
      STATISTICS INTERVAL OFF NOLINE TASK
      COLLECT USER TRANSACTION
      STORAGE KEY IS 9
      SYSLOCKS IS 100000
      SYSTRACE OFF
      TICKER INTERVAL IS 1
      UPDATE NOLOCK
```


SYSGEN

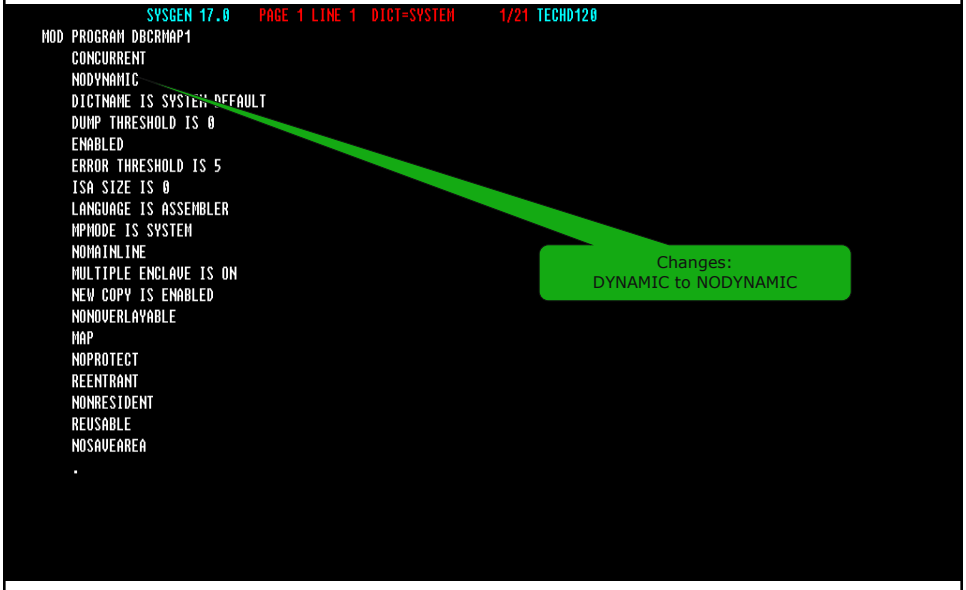
```
            SYSGEN 17.0    PAGE 1 LINE 1  DICT=SYSTEM      1/20 TECHD120
MOD PROGRAM DBCRSSC1
    CONCURRENT
    NODYNAMIC
    DUMP THRESHOLD IS 0
    ENABLED
    ERROR THRESHOLD IS 5
    ISA SIZE IS 0
    LANGUAGE IS ASSEMBLER
    MPMODE IS SYSTEM
    NOMAINLINE
    MULTIPLE ENCLAVE IS ON
    NEW COPY IS ENABLED
    NONOVERLAYABLE
    SUBSCHEMA
    PROTECT
    REENTRANT
    NONRESIDENT
    REUSABLE
    NOSAVEAREA
    .
```

Changes:
DYNAMIC to NODYNAMIC

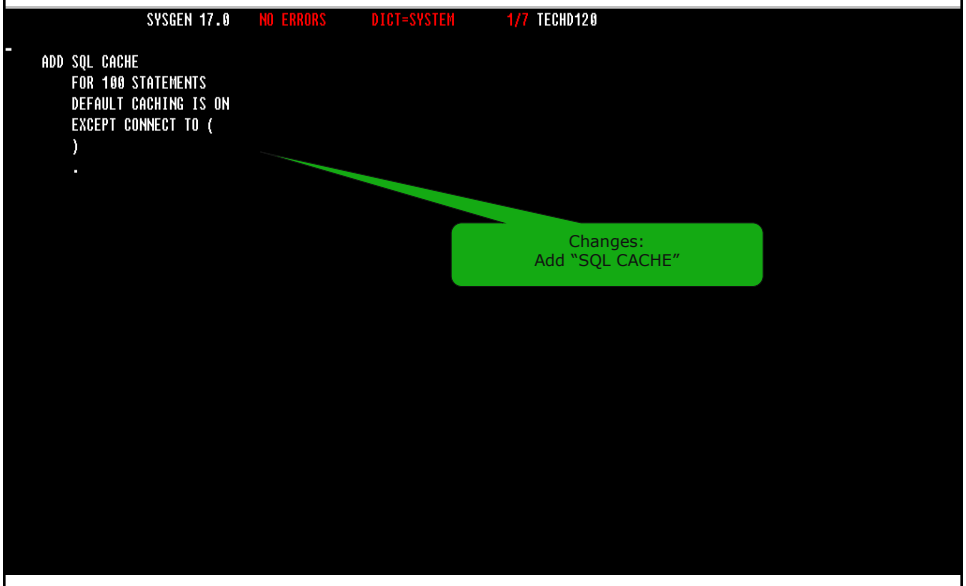
SYSGEN



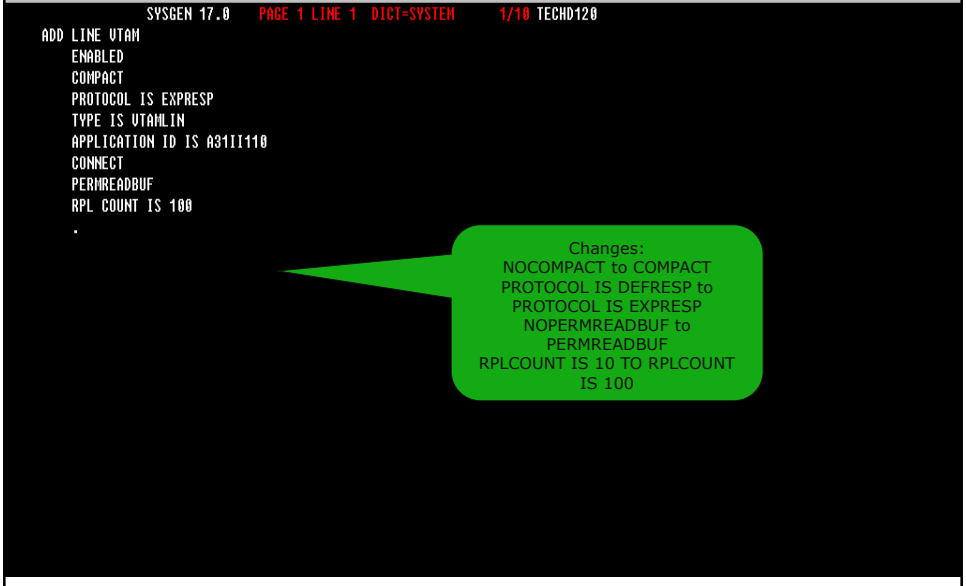
SYSGEN



SYSGEN



SYSGEN



SYSGEN

```
              SYSGEN 17.0    NO ERRORS      DICT=SYSTEM      1/25 TECHD120
MOD TASK PTCRUPD
    ENABLED
    EXTERNAL
    EXTERNAL WAIT IS SYSTEM
    INACTIVE INTERVAL IS OFF
    INVOKES PROGRAM ADSORUN1
    INPUT
    NOMAP
    ON COMMIT SYSTEM
    ON ROLLBACK CONTINUE SYSTEM
    PRINT KEY IS SYSTEM
    PRIORITY IS 225
    RESOURCE TIMEOUT INTERVAL IS SYSTEM PROGRAM IS SYSTEM
    SAVE
    LOCATION IS ANY
    STORAGE LIMIT IS SYSTEM
    LOCK LIMIT IS SYSTEM
    CALL LIMIT IS SYSTEM
    DBIO LIMIT IS SYSTEM
    MAXIMUM CONCURRENT THREADS IS OFF
    AREA ACQUISITION THRESHOLD IS DEFAULT
    PROTOCOL IS EXPRESP
    QUIESCE WAIT IS SYSTEM
    TRANSACTION SHARING IS SYSTEM
    .
```

Changes:
PROTOCOL IS DEFRESP to
PROTOCOL IS EXPRESP

SYSGEN

```
              SYSGEN 17.0    NO ERRORS      DICT=SYSTEM      1/25 TECHD120
MOD TASK DCRSMAIN
    ENABLED
    EXTERNAL
    EXTERNAL WAIT IS SYSTEM
    INACTIVE INTERVAL IS SYSTEM
    INVOKES PROGRAM DCRPMAIN
    INPUT
    NOMAP
    ON COMMIT SYSTEM
    ON ROLLBACK CONTINUE SYSTEM
    PRINT KEY IS SYSTEM
    PRIORITY IS 100
    RESOURCE TIMEOUT INTERVAL IS SYSTEM PROGRAM IS SYSTEM
    NOSAVE
    LOCATION IS ANY
    STORAGE LIMIT IS SYSTEM
    LOCK LIMIT IS SYSTEM
    CALL LIMIT IS SYSTEM
    DBIO LIMIT IS SYSTEM
    MAXIMUM CONCURRENT THREADS IS OFF
    AREA ACQUISITION THRESHOLD IS DEFAULT
    PROTOCOL IS EXPRESP
    QUIESCE WAIT IS SYSTEM
    TRANSACTION SHARING IS SYSTEM
    .
```

Changes:
PROTOCOL IS DEFRESP to
PROTOCOL IS EXPRESP

SYSGEN

```
              SYSGEN 17.0    NO ERRORS      DICT=SYSTEM      1/25 TECHD120
MOD TASK DCRTMAIN
    ENABLED
    EXTERNAL
    EXTERNAL WAIT IS SYSTEM
    INACTIVE INTERVAL IS SYSTEM
    INVOKES PROGRAM DCRPMAIN
    INPUT
    NOMAP
    ON COMMIT SYSTEM
    ON ROLLBACK CONTINUE SYSTEM
    PRINT KEY IS SYSTEM
    PRIORITY IS 100
    RESOURCE TIMEOUT INTERVAL IS SYSTEM PROGRAM IS SYSTEM
    NOSAVE
    LOCATION IS ANY
    STORAGE LIMIT IS SYSTEM
    LOCK LIMIT IS SYSTEM
    CALL LIMIT IS SYSTEM
    DBIO LIMIT IS SYSTEM
    MAXIMUM CONCURRENT THREADS IS OFF
    AREA ACQUISITION THRESHOLD IS DEFAULT
    PROTOCOL IS EXPRESP
    QUIESCE WAIT IS SYSTEM
    TRANSACTION SHARING IS SYSTEM
    .
```

Changes:
PROTOCOL IS DEFRESP to
PROTOCOL IS EXPRESP

caWorld'08

Re-Run after SYSGEN changes

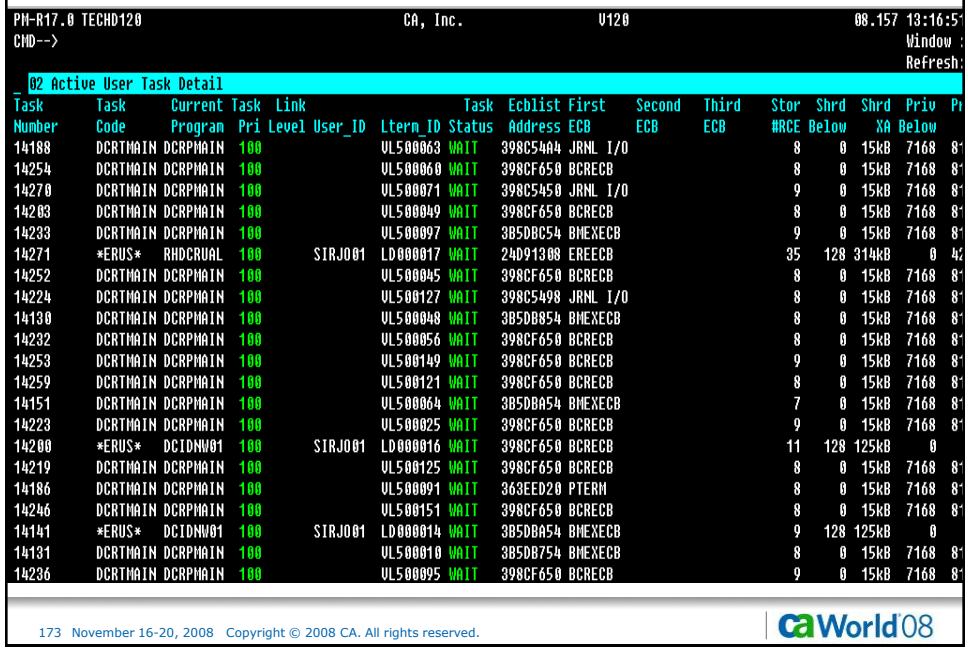
Education

EC801EN

caWorld'08 discoverability

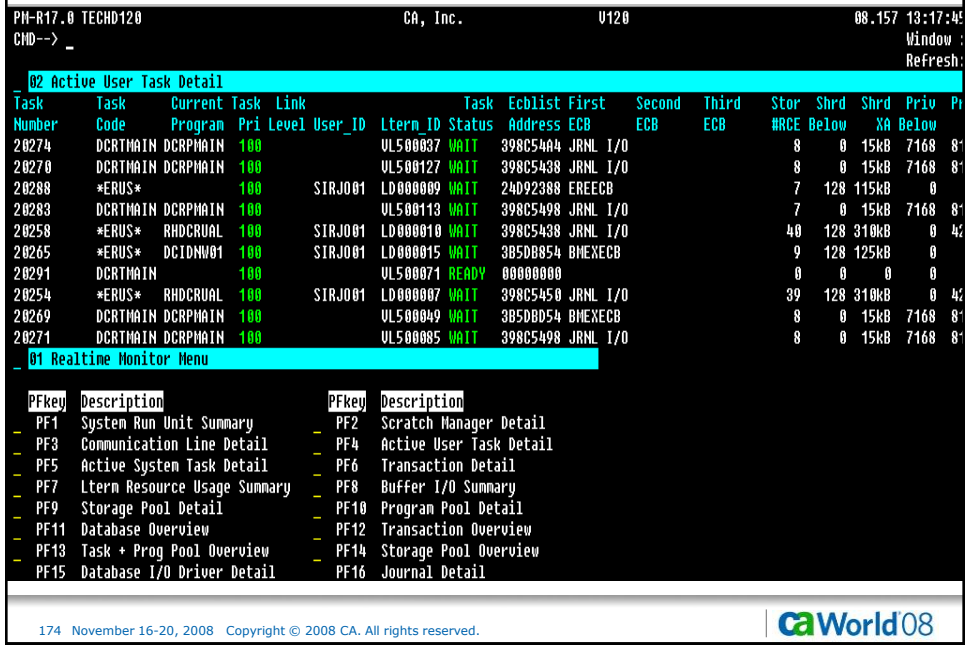
Transforming IT Management

Re-Run after SYSGEN Changes



```
PM-R17.0 TECHD120                          CA, Inc.                    V120                          08.157 13:16:5
CMD-->                                                                                                Window
                                                                                                      Refresh:
_ 02 Active User Task Detail
Task      Task      Current Task  Link                    Task  Ecblist First    Second   Third    Stor  Shrd  Shrd  Priv  Pr
Number    Code      Program  Pri Level User_ID  Lterm_ID Status Address ECB      ECB      ECB      #RCE Below    XA Below
14188     DCRTMAIN  DCRPMAIN 100              VL500063 WAIT   398C54A4 JRNL I/O                      8     0 15kB  7168  8
14254     DCRTMAIN  DCRPMAIN 100              VL500060 WAIT   398CF650 BCRECB                        8     0 15kB  7168  8
14270     DCRTMAIN  DCRPMAIN 100              VL500071 WAIT   398C5450 JRNL I/O                      9     0 15kB  7168  8
14203     DCRTMAIN  DCRPMAIN 100              VL500049 WAIT   398CF650 BCRECB                        8     0 15kB  7168  8
14233     DCRTMAIN  DCRPMAIN 100              VL500097 WAIT   3B5DBC54 BMEXECB                       9     0 15kB  7168  8
14271     *ERUS*    RHDCRUAL 100       SIRJO01 LD000017 WAIT   24D91308 EREECB                       35  128 314kB     0  4
14252     DCRTMAIN  DCRPMAIN 100              VL500045 WAIT   398CF650 BCRECB                        8     0 15kB  7168  8
14224     DCRTMAIN  DCRPMAIN 100              VL500127 WAIT   398C5498 JRNL I/O                      8     0 15kB  7168  8
14130     DCRTMAIN  DCRPMAIN 100              VL500048 WAIT   3B5DB854 BMEXECB                       8     0 15kB  7168  8
14232     DCRTMAIN  DCRPMAIN 100              VL500056 WAIT   398CF650 BCRECB                        8     0 15kB  7168  8
14253     DCRTMAIN  DCRPMAIN 100              VL500149 WAIT   398CF650 BCRECB                        9     0 15kB  7168  8
14259     DCRTMAIN  DCRPMAIN 100              VL500121 WAIT   398CF650 BCRECB                        8     0 15kB  7168  8
14151     DCRTMAIN  DCRPMAIN 100              VL500064 WAIT   3B5DBA54 BMEXECB                       7     0 15kB  7168  8
14223     DCRTMAIN  DCRPMAIN 100              VL500025 WAIT   398CF650 BCRECB                        9     0 15kB  7168  8
14200     *ERUS*    DCIDNW01 100       SIRJO01 LD000016 WAIT   398CF650 BCRECB                        11  128 125kB     0
14219     DCRTMAIN  DCRPMAIN 100              VL500125 WAIT   398CF650 BCRECB                        8     0 15kB  7168  8
14186     DCRTMAIN  DCRPMAIN 100              VL500091 WAIT   363EED20 PTERM                         8     0 15kB  7168  8
14246     DCRTMAIN  DCRPMAIN 100              VL500151 WAIT   398CF650 BCRECB                        8     0 15kB  7168  8
14141     *ERUS*    DCIDNW01 100       SIRJO01 LD000014 WAIT   3B5DBA54 BMEXECB                       9  128 125kB     0
14131     DCRTMAIN  DCRPMAIN 100              VL500010 WAIT   3B5DB754 BMEXECB                       8     0 15kB  7168  8
14236     DCRTMAIN  DCRPMAIN 100              VL500095 WAIT   398CF650 BCRECB                        9     0 15kB  7168  8
```


Re-Run after SYSGEN Changes



```
PM-R17.0 TECHD120                          CA, Inc.                    V120                          08.157 13:17:45
CMD--> _                                                                                              Window
                                                                                                      Refresh:
_ 02 Active User Task Detail
Task      Task      Current Task  Link                    Task  Ecblist First    Second   Third    Stor  Shrd  Shrd  Priv  Pr
Number    Code      Program  Pri Level User_ID  Lterm_ID Status Address ECB      ECB      ECB      #RCE Below    XA Below
20274     DCRTMAIN  DCRPMAIN 100              VL500037 WAIT   398C54A4 JRNL I/O                      8     0 15kB  7168  8
20270     DCRTMAIN  DCRPMAIN 100              VL500127 WAIT   398C5438 JRNL I/O                      8     0 15kB  7168  8
20288     *ERUS*             100       SIRJO01 LD000009 WAIT   24D92388 EREECB                       7  128 115kB     0
20283     DCRTMAIN  DCRPMAIN 100              VL500113 WAIT   398C5498 JRNL I/O                      7     0 15kB  7168  8
20258     *ERUS*    RHDCRUAL 100       SIRJO01 LD000010 WAIT   398C5438 JRNL I/O                      40  128 310kB     0  4
20265     *ERUS*    DCIDNW01 100       SIRJO01 LD000015 WAIT   3B5DB854 BMEXECB                       9  128 125kB     0
20291     DCRTMAIN           100              VL500071 READY  00000000                               0     0     0     0
20254     *ERUS*    RHDCRUAL 100       SIRJO01 LD000007 WAIT   398C5450 JRNL I/O                      39  128 310kB     0  4
20269     DCRTMAIN  DCRPMAIN 100              VL500049 WAIT   3B5DBD54 BMEXECB                       8     0 15kB  7168  8
20271     DCRTMAIN  DCRPMAIN 100              VL500085 WAIT   398C5498 JRNL I/O                      8     0 15kB  7168  8
_ 01 Realtime Monitor Menu

  PFkey  Description                    PFkey  Description
_  PF1   System Run Unit Summary      _  PF2   Scratch Manager Detail
_  PF3   Communication Line Detail    _  PF4   Active User Task Detail
_  PF5   Active System Task Detail    _  PF6   Transaction Detail
_  PF7   Lterm Resource Usage Summary _  PF8   Buffer I/O Summary
_  PF9   Storage Pool Detail          _  PF10  Program Pool Detail
_  PF11  Database Overview            _  PF12  Transaction Overview
_  PF13  Task + Prog Pool Overview    _  PF14  Storage Pool Overview
   PF15  Database I/O Driver Detail      PF16  Journal Detail
```


Re-Run after SYSGEN Changes

```
     D AC TAS
           Current max tasks       133
          Times at max tasks     14942
           Allocated DCE/TCE       241
       Number of tasks abended       4
     Number of tasks processed   49794
        Number of tasks active     133

  Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000000000 *SYSTEM* *MASTER*         255 WAIT NOST 00384190 TCAECB
                                                   00052D4C PLESECB
                                                   36325020 LTTMSECB
                                                   003841AC Service Task ECB
0000000001 *SYSTEM* *DBRC*           255 WAIT NOST 00086A08 DBRC WTOR ECB
                                                   3517F5C8 ESEECB
                                                   00027FA4 CCEECB
                                                   000280C4 CCEECB
                                                   00028188 CCEECB
                                                   00028214 CCEECB
                                                   000281E0 CCEECB
0000000014 *DRIVER* UCFLINE          254 WAIT NOST 0005284C PLESECB
0000000015 *DRIVER* VTAM             254 WAIT NOST 00052ACC PLESECB
                                                   00636434 VTAM READ INIT ECB
0000000016 *DRIVER* SYSOUTL          254 WAIT NOST 00052E4C PLESECB
0000000018 *DRIVER* VTAMLIN1         254 WAIT NOST 0005394C PLESECB
                                                   0063F434 VTAM READ INIT ECB
            PAGE 00001 - NEXT PAGE:
```


Re-Run after SYSGEN Changes

```
  Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000000002 *DRIVER* RHDCRUSD         253 WAIT NOST 3644D890 SERVICE DRIVER ECB
                                                   398D7B8C TIMER ECB
0000000003 *DRIVER* RHDCRUSD         253 WAIT NOST 3644D910 SERVICE DRIVER ECB
                                                   398DA00C TIMER ECB
0000000004 *DRIVER* RHDCRUSD         253 WAIT NOST 3644D990 SERVICE DRIVER ECB
                                                   398DCF8C TIMER ECB
0000000005 *DRIVER* RHDCRUSD         253 WAIT NOST 3644DA10 SERVICE DRIVER ECB
                                                   398DED0C TIMER ECB
0000000006 *DRIVER* RHDCRUSD         253 WAIT NOST 3644DA90 SERVICE DRIVER ECB
                                                   398E0A8C TIMER ECB
0000000007 *DRIVER* RHDCRUSD         253 WAIT NOST 3644DC10 SERVICE DRIVER ECB
                                                   398E280C TIMER ECB
0000000008 *DRIVER* RHDCLGSD         253 WAIT NOST 000557B0 DBIO WRITE ECB
0000000009 *DRIVER* RHDCLGSD         253 WAIT NOST 3644DF10 SERVICE DRIVER ECB
0000000010 *DRIVER* RHDCLGSD         253 WAIT NOST 3644DF90 SERVICE DRIVER ECB
0000000011 *DRIVER* PMONCIOD         253 WAIT NOST 00054E38 DBIO READ ECB
0000000013 *DRIVER* RHDCDEAD         253 WAIT NOST 398E854C ICEECB
                                                   3644E110 SERVICE DRIVER ECB
0000000012 *DRIVER* PMONCROL         253 WAIT NOST 002AC11C ICEECB
                                                   002AC128 ICEECB
                                                   002AC134 PERFMON SERVICE DRV
0000000019 *DRIVER* RHDCPRNT         253 WAIT NOST 398D64AC PRTSECB
0000049794 DCMT     RHDCMT00 VL500152 225 ACTV
0000049345 DCRTMAIN DCRPMAIN VL500147 100 WAIT 0179 003D0D14 LTXNLOCK
0000049508 ADS2     ADSOMAIN VL500146 100 WAIT 0179 003D477C LTXNLOCK
            PAGE 00002 - NEXT PAGE: _
```


Re-Run after SYSGEN Changes

```
 Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000049581 DCRTMAIN DCRPMAIN VL500123 100 WAIT 0180 3B5DBB54 BMEXECB
0000049609 DCRTMAIN DCRPMAIN VL500071 100 WAIT 0180 3B5DB854 BMEXECB
0000049615 DCRTMAIN DCRPMAIN VL500079 100 WAIT 0180 3B5DBB54 BMEXECB
0000049633 DCRTMAIN DCRPMAIN VL500097 100 WAIT 0180 3B5DB754 BMEXECB
0000049630 DCRTMAIN DCRPMAIN VL500139 100 WAIT 0180 3B5DB754 BMEXECB
0000049629 DCRTMAIN DCRPMAIN VL500145 100 WAIT 0180 3B5DBE54 BMEXECB
0000049639 ADS2     ADSOMAIN VL500036 100 WAIT 0180 3B5DBB54 BMEXECB
0000049638 DCRTMAIN DCRPMAIN VL500069 100 WAIT 0180 3B5DB954 BMEXECB
0000049641 DCRTMAIN DCRPMAIN VL500087 100 WAIT 0180 0039F46C LTXNLOCK
0000049646 DCRTMAIN DCRPMAIN VL500133 100 WAIT 0180 3B5DB554 BMEXECB
0000049648 DCRTMAIN DCRPMAIN VL500046 100 WAIT 0180 398C545C DBIO JRNL WRITE ECB
0000049652 ADS2     ADSOMAIN VL500011 100 WAIT 0180 398C545C DBIO JRNL WRITE ECB
0000049654 ADS2     ADSOMAIN VL500078 100 WAIT 0180 398C54BC DBIO JRNL WRITE ECB
0000049659 ADS2     ADSOMAIN VL500118 100 WAIT 0180 398C5414 DBIO JRNL WRITE ECB
0000049658 DCRTMAIN DCRPMAIN VL500143 100 WAIT 0180 3B5DB754 BMEXECB
0000049660 DCRTMAIN DCRPMAIN VL500099 100 WAIT 0180 3B5DBC54 BMEXECB
0000049663 ADS2     ADSOMAIN VL500120 100 WAIT 0180 398C548C DBIO JRNL WRITE ECB
0000049662 ADS2     ADSOMAIN VL500003 100 WAIT 0180 398C548C DBIO JRNL WRITE ECB
0000049664 ADS2     ADSOMAIN VL500090 100 WAIT 0180 398C5450 DBIO JRNL WRITE ECB
0000049667 DCRTMAIN DCRPMAIN VL500093 100 WAIT 0180 398C5414 DBIO JRNL WRITE ECB
0000049669 RHDCNP3S ICD1     LD000018 100 WAIT NOST 3B5DB754 BMEXECB
0000049668 RHDCNP3S ICD1     LD000006 100 WAIT NOST 398C545C DBIO JRNL WRITE ECB
0000049671 ADS2     ADSOMAIN VL500070 100 WAIT 0180 398CF650 BCRECB
0000049674 ADS2     ADSOMAIN VL500130 100 WAIT 0180 398CF650 BCRECB
0000049673 ADS2     ADSOMAIN VL500088 100 WAIT 0180 398CF650 BCRECB
            PAGE 00003 - NEXT PAGE: _
```


Re-Run after SYSGEN Changes

```
 Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000049675 ADS2     ADSOMAIN VL500114 100 WAIT 0180 398CF650 BCRECB
0000049682 DCRTMAIN DCRPMAIN VL500051 100 WAIT 0180 398CF650 BCRECB
0000049680 DCRTMAIN DCRPMAIN VL500135 100 WAIT 0180 398CF650 BCRECB
0000049679 DCRTMAIN DCRPMAIN VL500031 100 WAIT 0180 398CF650 BCRECB
0000049678 DCRTMAIN DCRPMAIN VL500065 100 WAIT 0180 398CF650 BCRECB
0000049677 ADS2     ADSOMAIN VL500080 100 WAIT 0180 398CF650 BCRECB
0000049676 ADS2     ADSOMAIN VL500024 100 WAIT 0180 398CF650 BCRECB
0000049686 DCRTMAIN DCRPMAIN VL500010 100 WAIT 0180 398CF650 BCRECB
0000049687 ADS2     ADSOMAIN VL500061 100 WAIT 0180 398CF650 BCRECB
0000049688 DCRTMAIN DCRPMAIN VL500091 100 WAIT 0180 398CF650 BCRECB
0000049692 ADS2     ADSOMAIN VL500042 100 WAIT 0180 398CF650 BCRECB
0000049691 ADS2     ADSOMAIN VL500028 100 WAIT 0180 398CF650 BCRECB
0000049690 ADS2     ADSOMAIN VL500100 100 WAIT 0180 398CF650 BCRECB
0000049689 ADS2     ADSOMAIN VL500004 100 WAIT 0180 398CF650 BCRECB
0000049693 ADS2     ADSOMAIN VL500124 100 WAIT 0180 398CF650 BCRECB
0000049698 ADS2     ADSOMAIN VL500076 100 WAIT 0180 398CF650 BCRECB
0000049697 ADS2     ADSOMAIN VL500066 100 WAIT 0180 398CF650 BCRECB
0000049695 DCRTMAIN DCRPMAIN VL500035 100 WAIT 0180 398CF650 BCRECB
0000049694 DCRTMAIN DCRPMAIN VL500062 100 WAIT 0180 398CF650 BCRECB
0000049700 DCRTMAIN DCRPMAIN VL500107 100 WAIT 0180 398CF650 BCRECB
0000049701 ADS2     ADSOMAIN VL500055 100 WAIT 0180 398CF650 BCRECB
0000049702 DCRTMAIN DCRPMAIN VL500077 100 WAIT 0180 398CF650 BCRECB
0000049707 DCRTMAIN DCRPMAIN VL500029 100 WAIT 0180 398CF650 BCRECB
0000049717 ADS2     ADSOMAIN VL500059 100 WAIT 0180 398CF650 BCRECB
0000049713 DCRTMAIN DCRPMAIN VL500009 100 WAIT 0180 398CF650 BCRECB
            PAGE 00004 - NEXT PAGE:
```


Re-Run after SYSGEN Changes

```
 Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000049712 DCRTMAIN DCRPMAIN VL500053 100 WAIT 0180 398CF650 BCRECB
0000049709 DCRTMAIN DCRPMAIN VL500020 100 WAIT 0180 3B5DBB54 BMEXECB
0000049708 DCRTMAIN DCRPMAIN VL500032 100 WAIT 0180 398CF650 BCRECB
0000049719 ADS2     ADSOMAIN VL500102 100 WAIT 0180 398CF650 BCRECB
0000049718 ADS2     ADSOMAIN VL500050 100 WAIT 0180 398CF650 BCRECB
0000049721 DCRTMAIN DCRPMAIN VL500054 100 WAIT 0180 398CF650 BCRECB
0000049720 DCRTMAIN DCRPMAIN VL500137 100 WAIT 0180 398CF650 BCRECB
0000049731 ADS2     ADSOMAIN VL500136 100 WAIT 0180 398CF650 BCRECB
0000049730 ADS2     ADSOMAIN VL500138 100 WAIT 0180 398CF650 BCRECB
0000049729 ADS2     ADSOMAIN VL500040 100 WAIT 0180 398CF650 BCRECB
0000049728 ADS2     ADSOMAIN VL500074 100 WAIT 0180 398CF650 BCRECB
0000049735 ADS2     ADSOMAIN VL500148 100 WAIT 0180 00055160 DBIO READ ECB
0000049734 ADS2     ADSOMAIN VL500068 100 WAIT 0180 398C5450 DBIO JRNL WRITE ECB
0000049733 DCRTMAIN DCRPMAIN VL500047 100 WAIT 0180 398CF650 BCRECB
0000049742 ADS2     ADSOMAIN VL500140 100 WAIT 0180 398CF650 BCRECB
0000049740 DCRTMAIN DCRPMAIN VL500089 100 WAIT 0180 3B5DB554 BMEXECB
0000049737 ADS2     ADSOMAIN VL500052 100 WAIT 0180 398CF650 BCRECB
0000049736 ADS2     ADSOMAIN VL500039 100 WAIT 0180 398CF650 BCRECB
0000049744 ADS2     ADSOMAIN VL500016 100 WAIT 0180 398CF650 BCRECB
0000049747 DCRTMAIN DCRPMAIN VL500075 100 WAIT 0180 398CF650 BCRECB
0000049745 ADS2     ADSOMAIN VL500038 100 WAIT 0180 00054B10 DBIO WRITE ECB
0000049749 ADS2     ADSOMAIN VL500012 100 WAIT 0180 398CF650 BCRECB
0000049752 ADS2     ADSOMAIN VL500044 100 WAIT 0180 398CF650 BCRECB
0000049751 DCRTMAIN DCRPMAIN VL500115 100 WAIT 0180 398CF650 BCRECB
0000049750 DCRTMAIN DCRPMAIN VL500064 100 WAIT 0180 3B5DB554 BMEXECB
           PAGE 00005 - NEXT PAGE: _
```


Re-Run after SYSGEN Changes

```
 Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000049754 ADS2     ADSOMAIN VL500072 100 WAIT 0180 00055488 DBIO WRITE ECB
0000049755 DCRTMAIN DCRPMAIN VL500022 100 WAIT 0180 3B5DBC54 BMEXECB
0000049761 DCRTMAIN DCRPMAIN VL500083 100 WAIT 0180 398C5444 DBIO JRNL WRITE ECB
0000049760 ADS2     ADSOMAIN VL500132 100 WAIT 0180 398CF650 BCRECB
0000049759 ADS2     ADSOMAIN VL500094 100 WAIT 0180 398CF650 BCRECB
0000049758 ADS2     ADSOMAIN VL500043 100 WAIT 0180 398CF650 BCRECB
0000049765 DCRTMAIN DCRPMAIN VL500113 100 WAIT 0180 398CF650 BCRECB
0000049764 DCRTMAIN DCRPMAIN VL500045 100 WAIT 0180 398CF650 BCRECB
0000049763 DCRTMAIN DCRPMAIN VL500081 100 WAIT 0180 398CF650 BCRECB
0000049766 ADS2     ADSOMAIN VL500057 100 WAIT 0180 398CF650 BCRECB
0000049769 DCRTMAIN DCRPMAIN VL500109 100 WAIT 0180 3B5DBA54 BMEXECB
0000049768 DCRTMAIN DCRPMAIN VL500067 100 WAIT 0180 398CF650 BCRECB
0000049767 DCRTMAIN DCRPMAIN VL500048 100 WAIT 0180 398CF650 BCRECB
0000049771 RHDCNP3S ICD1     LD000004 100 WAIT NOST 398CF650 BCRECB
0000049775 DCRTMAIN DCRPMAIN VL500150 100 WAIT 0180 3B5DBB54 BMEXECB
0000049774 ADS2     ADSOMAIN VL500006 100 WAIT 0180 398CF650 BCRECB
0000049773 DCRTMAIN DCRPMAIN VL500017 100 WAIT 0180 398CF650 BCRECB
0000049772 DCRTMAIN DCRPMAIN VL500131 100 WAIT 0180 398CF650 BCRECB
0000049776 ADS2     ADSOMAIN VL500014 100 WAIT 0180 398CF650 BCRECB
0000049777 DCRTMAIN DCRPMAIN VL500095 100 WAIT 0180 398CF650 BCRECB
0000049780 DCRTMAIN DCRPMAIN VL500149 100 WAIT 0180 398CF650 BCRECB
0000049779 RHDCNP3S ICS2     LD000020 100 WAIT NOST 398C5444 DBIO JRNL WRITE ECB
0000049778 RHDCNP3S ICD1     LD000013 100 WAIT NOST 398CF650 BCRECB
0000049785 ADS2     ADSOMAIN VL500104 100 WAIT 0180 398CF650 BCRECB
0000049784 ADS2     ADSOMAIN VL500126 100 WAIT 0180 398CF650 BCRECB
           PAGE 00006 - NEXT PAGE:
```


Re-Run after SYSGEN Changes

```
 Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000049783 DCRTMAIN DCRPMAIN VL500027 100 WAIT 0180 398CF650 BCRECB
0000049782 DCRTMAIN DCRPMAIN VL500060 100 WAIT 0180 398C5414 DBIO JRNL WRITE ECB
0000049781 RHDCNP3S ICD1     LD000003 100 WAIT NOST 398CF650 BCRECB
0000049789 ADS2     ADSOMAIN VL500058 100 WAIT 0180 398C5450 DBIO JRNL WRITE ECB
0000049788 DCRTMAIN DCRPMAIN VL500049 100 WAIT 0180 398CF650 BCRECB
0000049787 ADS2     ADSOMAIN VL500030 100 WAIT 0180 398CF650 BCRECB
0000049786 RHDCNP3S ICS2     LD000017 100 WAIT NOST 000547E8 DBIO READ ECB
0000049791 ADS2     ADSOMAIN VL500013 100 WAIT 0180 398CF650 BCRECB
0000049790 RHDCNP3S ICD1     LD000015 100 WAIT NOST 24D91308 EREECB
0000049793 RHDCNP3S ICD1     LD000008 100 RDY
0000049792 DCRTMAIN          VL500117 100 RDY
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
-


           PAGE 00007 - NEXT PAGE:
```


Re-Run after SYSGEN Changes

```
     D BUF
--- Data Buffer --  Size    In-use       Max    Getstg Prfetch-Min   Prefetch
DEFAULT_BUFFER      8196        10       100     OPSYS         500 Not-Allowd
DLOCSCR_BUFFER      4628         5         5     OPSYS         500 Not-Allowd
LOG_BUFFER          4276  Not Open         0     OPSYS
DBCR_BRCH_BUFFER    4000        10       500     OPSYS         500 Not-Allowd
DBCR_ACCT_BUFFER    2932        10      4000     OPSYS         500 Not-Allowd
DBCR_ACOPY_BUFFER   2932       100       100     OPSYS         500 Not-Allowd
DBCR_BCOPY_BUFFER   4000       100       100     OPSYS         500 Not-Allowd
SYSSQL_BUFFER       4276         3       702     OPSYS         500 Not-Allowd
DBCRSQL_BR_BUFFER   4000        10       120     OPSYS         500 Not-Allowd
DBCRSQL_AC_BUFFER   2932        10      2000     OPSYS         500 Not-Allowd

- Journal Buffer -  Size  # In-Use      Waits        DB       Ckpt
JNL_BUFFER          2004        10        418      1361       2090
                              # of Recoveries     I/O's   in Buffer
                                            12        24          0
                    Waits on Prior IO   Forced IO: Deadlock      Split
                                  138k                   1        44k
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
```


Re-Run after SYSGEN Changes

```
      D STAT BUF
----- Buffer -----      Waits  Fnd-in-Buf   Phy-Reads Fnd-in-Cache Phy-Writes
DEFAULT_BUFFER              0       2161        1343           0         24
DLOCSCR_BUFFER              0          0           0           0          0
LOG_BUFFER                  0          0           0           0          0
DBCR_BRCH_BUFFER        26976     197712       91675           0      81686
DBCR_ACCT_BUFFER      1421390     110410       99847           0      96351
DBCR_ACOPY_BUFFER           0          0           1           0          1
DBCR_BCOPY_BUFFER           0          0           1           0          1
SYSSQL_BUFFER             215     179571       70346           0          3
DBCRSQL_BR_BUFFER           8      40437       19852           0      19985
DBCRSQL_AC_BUFFER           0      51609       11728           0      10752
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
-
```


CA World'08

Re-Run after SYSGEN Changes

```
      D RU LOADER
                    TYPE LOADER
            DRIVER TASK ID 0000000003
                SUBSCHEMA IDMSNWKL
                     NODE
            DICTNAME/DBNAME
              IDLE INTERVAL OFF
       PREDEFINED RUN UNITS        5
       RUN UNIT ALLOCATIONS       20
            RUN UNIT FREES        20
         OVERFLOW RUN UNITS        3
                  AREA NAME DDLDCLOD
                USAGE MODE SHARED UPDATE
TYPE  BOUND  IN-USE    ALLOCS   OWNING TASK
PERM  YES    NO            17
PERM  YES    NO             0
PERM  YES    NO             0
PERM  YES    NO             0
PERM  YES    NO             0

                    TYPE LOADER
            DRIVER TASK ID 0000000003
                SUBSCHEMA IDMSNWKL
                     NODE
            DICTNAME/DBNAME APPLDICT
              IDLE INTERVAL OFF
                PAGE 00001 - NEXT PAGE:
```

```
                    TYPE LOADER
            DRIVER TASK ID 0000000002
                SUBSCHEMA IDMSNWKL
                     NODE
            DICTNAME/DBNAME
              IDLE INTERVAL OFF
       PREDEFINED RUN UNITS        0
       RUN UNIT ALLOCATIONS   150903
            RUN UNIT FREES    150903
         OVERFLOW RUN UNITS   150903
                  AREA NAME DDLDCLOD
                USAGE MODE SHARED UPDATE
              PAGE 00001 - NEXT PAGE:
```

Prior Run

CA World'08

Transforming IT Management

Re-Run after SYSGEN Changes

```
    PREDEFINED RUN UNITS        2
    RUN UNIT ALLOCATIONS        1
         RUN UNIT FREES         1
      OVERFLOW RUN UNITS        0
             AREA NAME DDLDCLOD
            USAGE MODE SHARED UPDATE
TYPE  BOUND  IN-USE    ALLOCS   OWNING TASK
PERM   YES    NO            1
PERM   YES    NO            0
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
```

PAGE 00002 - NEXT PAGE:

Re-Run after SYSGEN Changes

```
      D STAT SYS
  14:34:18.35 08/231 Current Time       00:01:55.84 Tot Sys Time
  14:18:06.18 08/231 Startup Time       00:00:07.56 Tot User Time

TASKS:          81158 Processed             8 Abended             133 Max Tasks
                  766 System                0 Runaway           23913 Times At Max
                   34 Deadlocks            17 Dead Victims

TRANS:          89166 Processed         89114 Norm Cmp    154 Max Conc
                19988 Ext Proc          19988 Ext Norm     21 Ext Conc    160 Max Erus
                    0 Dist Proc             0 Dist Norm      0 Dist Conc

DATABASE:     1757051 Calls            874720 Pages Rqst       1758293 Recs Rqst
              1448589 Buff Wait        294508 Pages Read        571600 Recs Cur R/U
               208716 Page Writ             0 Calc Noflo         79700 Via Noflo
              2336902 Tot Locks             0 Calc Ovflo           344 Via Ovflo
                                            0 Frag Stord             0 Recs Reloc
    INDEX:          0 SR8 Splits            0 SR8 Stores             0 SR7 Stores
                    0 SR8 Spawns            0 SR8 Erases             0 SR7 Erases
                    0 Orph Adopt        60082 Ix Searches            1 Min Level
                                        70719 Lvls Srchd             2 Max Level
       SQL:     120160 Commands         30040 Tupls Fetched      10014 Rows Inserted
                    0 AN Recomp         30038 Rows Updated           0 Rows Deleted
                                            0 Sorts                  0 Sort Min
                                            0 Tuples Sorted          0 Sort Max

              PAGE 00001 - NEXT PAGE:
```

```
      D STAT SYS
  14:12:05.69 08/156 Current Time       00:05:02.20 Tot Sys Time
  12:33:11.49 08/156 Startup Time       00:01:25.13 Tot User Time

TASKS:          80189 Processed            37 Abended             133 Max Tasks
                  794 System               36 Runaway           35703 Times At Max
                   53 Deadlocks            27 Dead Victims

TRANS:         237442 Processed        237355 Norm Cmp     83 Max Conc
                18577 Ext Proc          18577 Ext Norm     20 Ext Conc    160 Max Erus
                    0 Dist Proc             0 Dist Norm      0 Dist Conc

DATABASE:     5410923 Calls           3027695 Pages Rqst       5248403 Recs Rqst
               366975 Buff Wait        756108 Pages Read       2512811 Recs Cur R/U
               102231 Page Writ             0 Calc Noflo         78308 Via Noflo
              5957618 Tot Locks             0 Calc Ovflo           293 Via Ovflo
                                            0 Frag Stord             0 Recs Reloc
    INDEX:          0 SR8 Splits            0 SR8 Stores             0 SR7 Stores
                    0 SR8 Spawns            0 SR8 Erases             0 SR7 Erases
                    0 Orph Adopt        60105 Ix Searches            1 Min Level
                                        70740 Lvls Srchd             2 Max Level
       SQL:     103344 Commands         25856 Tupls Fetched       8617 Rows Inserted
                    0 AN Recomp         25815 Rows Updated           0 Rows Deleted
                                            0 Sorts                  0 Sort Min
                                            0 Tuples Sorted          0 Sort Max
```

Prior Run

Re-Run after SYSGEN Changes

```
JOURNAL:                 274 Buff Waits                0 User Putjrnl
  Page      54  0-10     3795 11-20      224 21-30      250 31-40      414 41-50
  Dist     245 51-60      366 61-70      252 71-80     2523 81-90    87434 91-100

INTERNAL:       RLEs     RCEs     DPEs   Stack
                2656     2306     1321     995 NUM
               10000    10000     3000    2000 Sysgen Threshold
                   0        0        0         Times Exceeded

STORAGE:     5892563 Gets          5799510 Frees              Gets For type
                   0 PGFIXs              0 PGFREEs           1570699 DB
                   0 Pages Fxd           0 Pages Freed            18 SHR
             2931661 Scan 1              0 PGRLSEs                0 SHR
             2960902 Scan 2              0 Pages Relsd      2907725 SYS
                                                               235 USK
                   0 SOS COUNT                              1413886 USR

PROGRAM:                Act Loads  Pages Load  Wait/Space
          Non-Reent             2           3           0
              Reent            35        1710           0
       XA Non-Reent             2          18           0
          XA Reent            262       24435           0

SCRATCH:        596 Gets        621 Puts        596 Dels
  QUEUE:          4 Gets          0 Puts          0 Dels          0 Task AutoSt

             PAGE 00002 - NEXT PAGE:
```

Prior Run

```
JOURNAL:                 783429 Buff Waits                0 User Putjrnl
  Page     295  0-10     45490 11-20     12274 21-30     23441 31-40     9005 41-50
  Dist   12469 51-60      6955 61-70      8586 71-80      6729 81-90    44565 91-100

INTERNAL:       RLEs     RCEs     DPEs   Stack
                2935     2725     1109     1063 NUM
               10000    10000     3000    2000 Sysgen Threshold
                   0        0        0         Times Exceeded

STORAGE:     6432789 Gets          6346204 Frees              Gets For type
                   0 PGFIXs              0 PGFREEs           1913888 DB
                   0 Pages Fxd           0 Pages Freed            18 SHR
             3368871 Scan 1              0 PGRLSEs                0 SHR
             3063918 Scan 2              0 Pages Relsd      2991763 SYS
                                                             30773 USK
                   0 SOS COUNT                              1496347 USR

PROGRAM:                Act Loads  Pages Load  Wait/Space
          Non-Reent         25474     101891     1288895
              Reent            35       1550           0
       XA Non-Reent             2         18           0
          XA Reent            296      25511           0

SCRATCH:      60906 Gets      30932 Puts      30823 Dels
  QUEUE:          6 Gets          0 Puts          0 Dels          0 Task AutoSt
```


Post Process Monitoring (PMA Report 1)

```
REPORT NO. 01                                  CA, INC.                                  06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                    TASK DETAIL REPORT
DC SYSTEM VERSION #:   120                CA INTERNATIONAL, INC.                  DATA FROM:  6/05/08

                                                          CPU        WAIT    TP    TP   NUM      NUM   NUM   NUM   NUM
  TASK   VER     TASK     TASK C  START    STORAGE  STORAGE  TIME       TIME  READ WRITE    OF       OF    OF    OF    OF
  CODE   NUM      NUM     TYPE C   TIME   ACQUIRED    KEPT  (SECS)     (SECS) LNGTH LNGTH   I/O     DBCLS  LVLS DBLVLS BUF

 PTCRUPD    1        514 ADS/O  13:15:14      11520     2176   .0003     .0006    13    96     0         0     0      0     0
 DCRSMAIN   0        515 COBOL  13:15:14     104832      256   .0007     .0000     0    58     0         7    --     --    --
 PTCRUPD    1        516 ADS/O  13:15:14      11520     2176   .0002     .0000    13    96     0         0     0      0     0
 DCRSMAIN   0        517 COBOL  13:15:14     104832      256   .0002     .0001     0    58     0         7    --     --    --
 PTCRUPD    1        518 ADS/O  13:15:14      11520     2176   .0002     .0000    13    96     0         0     0      0     0
 DCRSMAIN   0        519 COBOL  13:15:14     104832      256   .0006     .0008     0    58     0         7    --     --    --
 PTCRUPD    1        520 ADS/O  13:15:14      20864     3584   .0005     .1546    42   108     5        18     0      1     0
 PTCRUPD    1        521 ADS/O  13:15:14      11520     2176   .0003     .0000    13    96     0         0     0      0     0
 PTCRUPD    1        522 ADS/O  13:15:14      11520     2176   .0002     .0001    13    96     0         0     0      0     0
 PTCRUPD    1        523 ADS/O  13:15:14      11520     2176   .0002     .0000    13    96     0         0     0      0     0
 PTCRUPD    1        524 ADS/O  13:15:14      11520     2176   .0001     .0001    13    96     0         0     0      0     0
 DCRSMAIN   0        525 COBOL  13:15:14     104832      256   .0006     .0010     0    58     0         7    --     --    --
 DCRSMAIN   0        526 COBOL  13:15:14     104832      256   .0003     .0007     0    58     0         7    --     --    --
```

Prior Run

```
  TASK   VER     TASK     TASK C  START    STORAGE  STORAGE  CPU        WAIT    TP    TP   NUM      NUM   NUM   NUM   NUM
  CODE   NUM      NUM     TYPE C   TIME   ACQUIRED    KEPT  TIME       TIME  READ WRITE    OF       OF    OF    OF    OF
                                                            (SECS)     (SECS) LNGTH LNGTH   I/O     DBCLS  LVLS DBLVLS BUF

 DCRSMAIN   0        379 COBOL  12:33:39     115840      256   .0025    6.9242     0   134     0        14    --     --    --
 PTCRUPD    1        378 ADS/O  12:33:39      22272     2304   .0031    2.2766    42   193     4        37     0      1     0
 PTCRUPD    1        377 ADS/O  12:33:39      22272     2304   .0037    2.7274    42   193     6        37     0      1     0
 PTCRUPD    1        376 ADS/O  12:33:39      22144     2176   .0041    2.4173    42   193     4        37     0      1     0
 PTCRUPD    1        375 ADS/O  12:33:39      22272     2304   .0036    2.6263    42   193     4        38     0      1     0
 PTCRUPD    1        374 ADS/O  12:33:39      22272     2304   .0034    2.9959    42   193     6        37     0      1     0
 DCRTMAIN   0        373 COBOL  12:33:39     115584      256   .0045    7.3531    25   200     6        30    --     --    --
 PTCRUPD    1        372 ADS/O  12:33:39      22144     2176   .0031    3.0646    42   193     6        37     0      1     0
 PTCRUPD    1        371 ADS/O  12:33:39      22272     2304   .0034    2.7546    42   193     5        37     0      1     0
 ICD1       0        370 CICS   12:33:39     128000        0   .0023    4.7191     0     0    11        12    --     --    --
 PTCRUPD    1        369 ADS/O  12:33:39      22272     2304   .0034    2.6808    42   193     4        37     0      1     0
 DCRSMAIN   0        368 COBOL  12:33:39     115840      256   .0026    7.2770     0   134     0        14    --     --    --
 PTCRUPD    1        366 ADS/O  12:33:39      22272     2304   .0031    2.6127    42   193     4        37     0      1     0
```


Post Process Monitoring (PMA Report 2)

```
REPORT NO. 02                                    CA, INC.                                    06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                        TASK SUMMARY REPORT
DC SYSTEM VERSION #:   120                       CA INTERNATIONAL, INC.                      DATA FROM:  6/05/08

                                          AVG          AVG          AVG          AVG    AVG    AVG    AVG    AVG    AVG    AVG
      TASK   VER      NUM  TASK    NUM STORAGE  STORAGE      CPU         WAIT         TP     TP     NUM    NUM    NUM    NUM
      CODE   NUM    TIMES  TYPE  TIMES ACTIVE   KEPT         TIME         TIME  READ  WRITE     OF     OF     OF     OF
                     EXEC        ABND                     (SECS)       (SECS)  LNGTH  LNGTH    I/O  DBCLS  LVLS DBLVLS BUFS

    BYE          0      148 ASSEM            4357         0      .0000      .0020      0      0      0      0     --     --     --
    CLOD         0        1 ASSEM           15744         0      .0051      .2797      0      0     17    127     --     --     --
    DCMT         0       31 ASSEM           11074      1429      .0009      .0398     48    253      0      1     --     --     --
    DCPROFIL     1        1 ASSEM            8704      4480      .0022      .0388     72     68      1      4     --     --     --
    DCRSMAIN     0       79 COBOL          104816       256      .0004      .0123      0     58      0      7     --     --     --
    DCRTMAIN     0    30147 COBOL       5  104577       256      .0010      .3825     42    113      6     16     --     --     --
    FACTOTUM     1      818 ASSEM             65       211      .0000      .0037      0    171      0      0     --     --     --
    ICD1         0     9924 CICS           128000         0      .0013      .2605      0      0      6     12     --     --     --
    ICS2         0    10073 CICS           488192         0      .0073      .2294      0      0     13     64     --     --     --
    PMIM         0        1 ASSEM           23552     12800      .0018      .0239     10   1463      2      8     --     --     --
    PMRM         0        2 ASSEM           88704       256      .1381    88.5871    154   2007      3     16     --     --     --
    PMUNDRUR     1       15 ASSEM           19354      5854      .0005      .0025      9   2169      0      7     --     --     --
    PTCRUPD      1    30218 ADS/O       5   20790      3542      .0007      .2622     42    108      4     17      0      1      0
```

Prior Run

```
REPORT NO. 02                                    CA, INC.                                    06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                        TASK SUMMARY REPORT
DC SYSTEM VERSION #:   120                       CA INTERNATIONAL, INC.                      DATA FROM:  6/04/08

                                          AVG          AVG          AVG          AVG    AVG    AVG    AVG    AVG    AVG    AVG
      TASK   VER      NUM  TASK    NUM STORAGE  STORAGE      CPU         WAIT         TP     TP     NUM    NUM    NUM    NUM
      CODE   NUM    TIMES  TYPE  TIMES ACTIVE   KEPT         TIME         TIME  READ  WRITE     OF     OF     OF     OF
                     EXEC        ABND                     (SECS)       (SECS)  LNGTH  LNGTH    I/O  DBCLS  LVLS DBLVLS BUFS

    B            0        1 ASSEM            4352         0      .0001      .0000      0      0      0      0     --     --     --
    BYE          0      151 ASSEM            4422         0      .0001      .0410      0      0      0      0     --     --     --
    CLOD         0        1 UNDEF           19456         0      .0061      .1772      0      0     17    157     --     --     --
    DCMT         0       93 ASSEM           10602       617      .0007      .0258     29    485      0      1     --     --     --
    DCPROFIL     1        1 ASSEM           16896      4480      .0030      .0583     72     68      2     14     --     --     --
    DCRSMAIN     0       93 COBOL          115790       256      .0026     5.2396      0    134      0     14     --     --     --
    DCRTMAIN     0    30143 COBOL      19  115602       256      .0044     5.6183     42    199      5     30     --     --     --
    FACTOTUM     1      805 ASSEM             89       349      .0001      .0140      1    262      0      0     --     --     --
    ICD1         0     9938 CICS           128000         0      .0015      .6983      0      0      5     12     --     --     --
    ICS2         0     8617 CICS           499449         0      .0170     3.1387      0      0     71    376     --     --     --
    IDMSBCF      0        3 BATCH          39059         0      .0525     1.1426      0      0   1336     43     --     --     --
    OPER         0        2 ASSEM           11712         0      .0007    12.4679     19   1542      0      0     --     --     --
    PMIM         0        3 ASSEM           23552     12800      .0008      .0329     10   1627      0      0     --     --     --
```


caWorld'08

Post Process Monitoring (PMA Report 3)

```
REPORT NO. 03                                    CA, INC.                                    06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                        CA ADS DIALOG DETAIL REPORT
DC SYSTEM VERSION #:   120                       CA INTERNATIONAL, INC.                      DATA FROM:  6/05/08

                                                                CPU          WAIT     TP     TP     NUM    NUM    NUM    NUM    NUM
    DIALOG   VER      TASK   C  START    STORAGE  STORAGE      TIME         TIME  READ  WRITE     OF     OF     OF     OF     OF
     NAME    NUM       NUM   C   TIME     ACTIVE   KEPT        (SECS)       (SECS)  LNGTH  LNGTH    I/O  DBCLS  LVLS DBLVLS BUFS

    PTCRUPD      1       111    13:15:13    11776      2432      .0009      .0244     13     96      4     32      0      0      0
    PTCRUPD      1       347    13:15:13    11520      2176      .0002      .0045     13     96      0      0      0      0      0
    PTCRUPD      1       351    13:15:13    20864      3584      .0007      .3636     42    108      2     16      0      1      0
    PTCRUPD      1       411    13:15:14    21120      3584      .0010      .0085     42    108      3     16      0      1      0
    PTCRUPD      1       416    13:15:14    11520      2176      .0003      .0000     13     96      0      0      0      0      0
    PTCRUPD      1       418    13:15:14    11520      2176      .0001      .0001     13     96      0      0      0      0      0
    PTCRUPD      1       419    13:15:14    11520      2176      .0002      .0000     13     96      0      0      0      0      0
    PTCRUPD      1       422    13:15:14    11520      2176      .0001      .0000     13     96      0      0      0      0      0
    PTCRUPD      1       423    13:15:14    11520      2176      .0001      .0001     13     96      0      0      0      0      0
    PTCRUPD      1       425    13:15:14    11520      2176      .0001      .0000     13     96      0      0      0      0      0
    PTCRUPD      1       426    13:15:14    11520      2176      .0002      .0000     13     96      0      0      0      0      0
    PTCRUPD      1       429    13:15:14    11520      2176      .0001      .0001     13     96      0      0      0      0      0
    PTCRUPD      1       433    13:15:14    11520      2176      .0002      .0031     13     96      0      0      0      0      0
```

Prior Run

```
REPORT NO. 03                                    CA, INC.                                    06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                        CA ADS DIALOG DETAIL REPOR
DC SYSTEM VERSION #:   120                       CA INTERNATIONAL, INC.                      DATA FROM:  6/04/08

                                                                CPU          WAIT     TP     TP     NUM    NUM    NUM    NUM    NUM
    DIALOG   VER      TASK   C  START    STORAGE  STORAGE      TIME         TIME  READ  WRITE     OF     OF     OF     OF     OF
     NAME    NUM       NUM   C   TIME     ACTIVE   KEPT        (SECS)       (SECS)  LNGTH  LNGTH    I/O  DBCLS  LVLS DBLVLS BUFS

    PTCRUPD      1       600    12:33:45    22272      2304      .0036     2.3584     42    193      4     38      0      1      0
    PTCRUPD      1       599    12:33:45    22272      2304      .0038     2.4126     42    193      7     38      0      1      0
    PTCRUPD      1       604    12:33:45    22272      2304      .0035     1.8318     42    193      5     38      0      1      0
    PTCRUPD      1       603    12:33:45    22272      2304      .0029     1.4482     42    193      4     38      0      1      0
    PTCRUPD      1       602    12:33:45    22272      2304      .0031     1.2353     42    193      4     38      0      1      0
    PTCRUPD      1       607    12:33:46    22272      2304      .0032      .7861     42    193      4     38      0      1      0
    PTCRUPD      1       608    12:33:46    22272      2304      .0036     1.8359     42    193      4     38      0      1      0
    PTCRUPD      1       610    12:33:46    22144      2176      .0036     1.5736     42    193      6     38      0      1      0
    PTCRUPD      1       612    12:33:46    22272      2304      .0033      .4634     42    193      4     38      0      1      0
    PTCRUPD      1       616    12:33:46    22144      2176      .0033     1.3624     42    193      5     38      0      1      0
    PTCRUPD      1       614    12:33:46    22144      2176      .0030     1.2614     42    193      4     38      0      1      0
    PTCRUPD      1       617    12:33:46    22144      2176      .0032     1.7875     42    193      5     38      0      1      0
    PTCRUPD      1       619    12:33:46    22272      2304      .0035     1.7618     42    193      4     38      0      1      0
```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Transforming IT Management

Post Process Monitoring (PMA Report 4)

```
REPORT NO. 04                                          CA, INC.                                      06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                    CA ADS DIALOG SUMMARY REPORT
DC SYSTEM VERSION #:   120             CA INTERNATIONAL, INC.                                 DATA FROM:  6/05/08

                     NUM   NUM    AVG      AVG        AVG        AVG     AVG   AVG       AVG     AVG   AVG   AVG    AVG
  DIALOG     VER   TIMES TIMES  STORAGE  STORAGE      CPU       WAIT     TP    TP        NUM     NUM   NUM   NUM    NUM
   NAME      NUM    EXEC  ABND   ACTIVE   KEPT        TIME       TIME    READ  WRITE     OF      OF    OF    OF     OF
                                                     (SECS)     (SECS)   LNGTH LNGTH     I/O    DBCLS  LVLS DBLVLS  BUF

  PTCRUPD      1   30218     5    20790    3542       .0007      .2622     42   108        4      17     0     1     0
```

Prior Run

```
REPORT NO. 04                                          CA, INC.                                      06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                    CA ADS DIALOG SUMMARY REPORT
DC SYSTEM VERSION #:   120             CA INTERNATIONAL, INC.                                 DATA FROM:  6/04/08

                     NUM   NUM    AVG      AVG        AVG        AVG     AVG   AVG       AVG     AVG   AVG   AVG    AVG
  DIALOG     VER   TIMES TIMES  STORAGE  STORAGE      CPU       WAIT     TP    TP        NUM     NUM   NUM   NUM    NUM
   NAME      NUM    EXEC  ABND   ACTIVE   KEPT        TIME       TIME    READ  WRITE     OF      OF    OF    OF     OF
                                                     (SECS)     (SECS)   LNGTH LNGTH     I/O    DBCLS  LVLS DBLVLS  BUFS

  PTCRUPD      1   30235    24    22308    2264       .0034     1.8274     42   193        4      38     0     1     0
```


Post Process Monitoring (PMA Report 81)

```
REPORT NO. 81                                          CA, INC.                                      06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                        LOAD BALANCING REPORT - BY CV          DATA FROM:  6/05/08  DATA TO:  6/0
CENTRAL VERSION#:   120                CA INTERNATIONAL, INC.

           TIME     RESOURCE       VALUE
 BATCH     12:00    TASKS              0    .                                                    .
                    CPU            .0000    .                                                    .
                    I/O                0    .                                                    .
 ONLINE    12:00    TASKS              0    .                                                    .
                    CPU            .0000    .                                                    .
                    I/O                0    .                                                    .
 BATCH     13:00    TASKS              0    .                                                    .
                    CPU            .0000    .                                                    .
                    I/O                0    .                                                    .
 ONLINE    13:00    TASKS         81,459    .TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT  .
                    CPU         137.5935    .CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC  .
                    I/O          507,091    .IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII  .
 BATCH     14:00    TASKS              0    .                                                    .
                    CPU            .0000    .                                                    .
                    I/O                0    .                                                    .
 ONLINE    14:00    TASKS              0    .                                                    .
```

Prior Run

```
REPORT NO. 81                                          CA, INC.                                      06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                        LOAD BALANCING REPORT - BY C           DATA FROM:  6/04/08  DATA TO:  6/04
CENTRAL VERSION#:   120                CA INTERNATIONAL, INC.

           TIME     RESOURCE       VALUE
 BATCH     12:00    TASKS              0    .                                                    .
                    CPU            .0000    .                                                    .
                    I/O                0    .                                                    .
 ONLINE    12:00    TASKS         51,178    .TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT  .
                    CPU         223.4476    .CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC  .
                    I/O          438,230    .IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII       .
 BATCH     13:00    TASKS              3    .                                                    .
                    CPU            .1575    .                                                    .
                    I/O            4,008    .                                                    .
 ONLINE    13:00    TASKS         28,973    .TTTTTTTTTTTTTTTTTTTTTTTTTTTT                        .
                    CPU         173.3453    .CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC             .
                    I/O          495,105    .IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII  .
 BATCH     14:00    TASKS              0    .                                                    .
                    CPU            .0000    .                                                    .
```


Post Process Monitoring (PMI Report 2)

```
REPORT NO. 02                                        CA, INC.                                        06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                        TREND ANALYSIS REPORT
DC SYSTEM VERSION #:   120                 CA INTERNATIONAL, INC.                          DATA FROM:  6/05/08

   INTERVAL      WAITS      WAIT TIME       SCALED BY TIME ("X" REPRESENTS    1.0000  SECONDS)
  START TIME                  (SECS)    .........|.........|.........|.........|.........|.........|.........|.........|

    13:14:46 2256927       17,816.98  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  -->
    13:20:00 1109241        5,604.58  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  -->
    13:30:00     146            1.02  X
C750009 RECORDS WRITTEN FOR REPORT 02 --          10
```

Prior Run

```
REPORT NO. 02                                        CA, INC.                                        06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                        TREND ANALYSIS REPORT
DC SYSTEM VERSION #:   120                 CA INTERNATIONAL, INC.                          DATA FROM:  6/04/08

   INTERVAL      WAITS      WAIT TIME       SCALED BY TIME ("X" REPRESENTS    1.0000  SECONDS)
  START TIME                  (SECS)    .........|.........|.........|.........|.........|.........|.........|.........|

    12:33:13  608457       46,781.45  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  -->
    12:40:00  894706       70,173.16  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  -->
    12:50:00 1306359       63,487.59  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  -->
    13:00:00 1084506       53,279.65  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  -->
    13:10:00  761220       20,268.24  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  -->
    13:20:00    5208            5.66  XXXXX
    13:30:00    1155            2.09  XX
    13:40:00    1155            1.99  X
    13:50:00    1155            1.74  X
```


Post Process Monitoring (PMI Report 13)

```
REPORT NO. 13                                        CA, INC.                                        06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                      BUFFER SUMMARY REPORT
DC SYSTEM VERSION #:   120                 CA INTERNATIONAL, INC.                          DATA FROM:  6/05/08

                                                    HIT      BUFR      I/O    AVERAGE                BUFFER   AVERAGE   B
  START         BUFFER          BUFR      BUFR      BUFR      RATIO     DISK    WAIT TIME I/O TIME  BUFR WAIT TIME WAIT TIME  P
  TIME           NAME          RQSTS     FLSHS     HITS       (%)      I/O       (SECS)    (SECS)  WAITS   (SECS)    (SECS)  S

 13:14:46 DBCR_ACCT_BUFFER     140115     58049     70897     50.6    136692      381.212   .0028   39486  9733.331    .0085  2
          DBCR_ACOPY_BUFFER         1         0         0       .0         0                                                 2
          DBCR_BCOPY_BUFFER         1         0         0       .0         0                                                 4
          DBCR_BRCH_BUFFER     192253     25218    133093     69.2    112055      270.744   .0024    8563    86.817    .0101  4
          DBCRSQL_AC_BUFFER     53554      3117     42762     79.8     20691       79.906   .0039                       .     2
          DBCRSQL_BR_BUFFER     51075      1974     34198     67.0     33801      100.894   .0030       6     .067    .0111  4
          DEFAULT_BUFFER         1500         0       408     27.2        67         .633   .0095                       .     8
          DLOCSCR_BUFFER            0                   0                  0                                                 4
          LOG_BUFFER                0                   0                  0                                                 4
          SYSSQL_BUFFER        211496         0    152355     72.0     59122      145.581   .0025     671   11.721    .0175  4
 13:20:00 DBCR_ACCT_BUFFER      71044     30866     38036     53.5     65715      121.966   .0019   47198  3568.753    .0048  2
```

Prior Run

```
REPORT NO. 13                                        CA, INC.                                        06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                      BUFFER SUMMARY REPORT
DC SYSTEM VERSION #:   120                 CA INTERNATIONAL, INC.                          DATA FROM:  6/04/08

                                                    HIT      BUFR      I/O    AVERAGE                BUFFER   AVERAGE   BU
  START         BUFFER          BUFR      BUFR      BUFR      RATIO     DISK    WAIT TIME I/O TIME  BUFR WAIT TIME WAIT TIME  PA
  TIME           NAME          RQSTS     FLSHS     HITS       (%)      I/O       (SECS)    (SECS)  WAITS   (SECS)    (SECS)  SI

 12:33:13 DBCR_ACCT_BUFFER      32528     11300     20171     62.0     24537      273.171   .0111   41701 1687.365    .0405  29
          DBCR_ACOPY_BUFFER         1         0         0       .0         0                                                 29
          DBCR_BCOPY_BUFFER         1         0         0       .0         0                                                 40
          DBCR_BRCH_BUFFER      44628      3720     30138     67.5     27454      255.313   .0093   16719   518.073    .0310  40
          DBCRSQL_AC_BUFFER      3130        87      2566     82.0      1086       12.917   .0119                       .     29
          DBCRSQL_BR_BUFFER      3046        85      2028     66.6      2026       16.994   .0084                       .     40
          DEFAULT_BUFFER        31274         0     30164     96.5        84         .789   .0094                       .     81
          DLOCSCR_BUFFER            0                   0                  0                                                 46
          LOG_BUFFER                0                   0                  0                                                 42
          SYSSQL_BUFFER        132829         0    103745     78.1     29077      211.810   .0073    1708   32.011    .0187  42
 12:40:00 DBCR_ACCT_BUFFER      45870     16085     28266     61.6     34945      336.420   .0096   77044  3295.813    .0428  29
REPORT NO. 15                                        CA, INC.                                        06/05/08 PAGE
```


Post Process Monitoring (PMI Report 15)

```
REPORT NO. 15                                  CA, INC.                                  06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                  JOURNAL SUMMARY REPORT
DC SYSTEM VERSION #:   120              CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

                                        READ    AVG READ          WRITE   AVG WRITE JOURNAL JRNL BUFR  AVG BUFR BEGIN  EN
  START       JOURNAL        BLOCKS  READ WAIT TIME WAIT TIME WRITE WAIT TIME WAIT TIME  BUFFER WAIT TIME WAIT TIME  JRNL  JR
   TIME        NAME        WRITTEN WAITS   (SECS)     (SECS)  WAITS   (SECS)     (SECS)   WAITS    (SECS)     (SECS)   RBN   RB

 13:14:46 J1JRNL             39992    39      .150      .0038  39992  102.517     .0026      12      .675      .0562     8 399
          J2JRNL             23403    54      .045      .0008  23403   39.079     .0017                                39999 233
 13:20:00 J1JRNL             13714    16      .008      .0005  13714   21.135     .0015                                39999 137
          J2JRNL             16601    25      .032      .0013  16601   28.681     .0017      11      .816      .0742  23396 399
 13:30:00 J1JRNL
          J2JRNL
```

Prior Run

```
REPORT NO. 15                                  CA, INC.                                  06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                  JOURNAL SUMMARY REPORT
DC SYSTEM VERSION #:   120              CA INTERNATIONAL, INC.                    DATA FROM:  6/04/08

                                        READ    AVG READ          WRITE   AVG WRITE JOURNAL JRNL BUFR  AVG BUFR BEGIN  END
  START       JOURNAL        BLOCKS  READ WAIT TIME WAIT TIME WRITE WAIT TIME WAIT TIME  BUFFER WAIT TIME WAIT TIME  JRNL  JRN
   TIME        NAME        WRITTEN WAITS   (SECS)     (SECS)  WAITS   (SECS)     (SECS)   WAITS    (SECS)     (SECS)   RBN   RBN

 12:33:13 J1JRNL             27589    428     3.725      .0087  27589  240.807     .0087     2589     125.481      .0485     9 2732
          J2JRNL                 6      .022      .0036
 12:40:00 J1JRNL             12807    164     1.428      .0087  12807  108.811     .0085     1128      57.052      .0506 27322  361
          J2JRNL             26129    394     2.346      .0060  26129  221.230     .0085     2168      96.608      .0446 39999 2587
 12:50:00 J1JRNL             35889   1751     6.131      .0035  35889  201.861     .0056     1704      58.683      .0344 39999 3554
          J2JRNL             14268    183     1.051      .0057  14268   97.414     .0068     1317      45.344      .0344 25873 3999
 13:00:00 J1JRNL              4499    287     1.430      .0050   4499   25.655     .0057       78       2.099      .0269 35545 3999
          J2JRNL             30834    612     1.526      .0025  30834  156.385     .0051      604      15.325      .0254 39999 3053
 13:10:00 J1JRNL             11690   3324     3.035      .0009  11690   23.722     .0020       70       1.386      .0198 39999 1158
          J2JRNL              9563   8548    33.418      .0039   9563   58.644     .0061      139       3.943      .0284 30535 3999
 13:20:00 J1JRNL                 2                                 2     .001     .0006                                11586 1158
REPORT NO. 30                                  CA, INC.                                  06/05/08 PAGE
```


CA World'08

Post Process Monitoring (PMI Report 30)

```
REPORT NO. 30                                  CA, INC.                                  06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                INTERVAL STATISTICS SUMMARY REPORT
DC SYSTEM VERSION #:   120              CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

  START     TASKS AT   TASKS AT  TASKS  TASKS  TASK   TASK  TIMES   SYSTEM     USER      PGMS   PGMS   GET   FREE    DC      DB
   TIME     START      END       STARTD ENDED ABENDS STALLS  MAX     MODE       MODE      CALLED LOADED STG   STG   SRVCE   SRVCE
                                                            TASK    CPU        CPU                     RQSTS RQSTS RQSTS   RQSTS

 13:14:46      0        136      55672  55536     9          19982   101.3983    5.8336   215620    298 835751 773742 919382  873502
 13:20:00    136         19      25807  25924     1          11888    27.1697    3.1956   115438      9 126591 096249 593046  395638
 13:30:00     19          7          4     16                          2.4139     .0015       12      1     81    199     43      75
```

Prior Run

```
REPORT NO. 30                                  CA, INC.                                  06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                INTERVAL STATISTICS SUMMARY RE
DC SYSTEM VERSION #:   120              CA INTERNATIONAL, INC.                    DATA FROM:  6/04/08

  START     TASKS AT   TASKS AT  TASKS  TASKS  TASK   TASK  TIMES   SYSTEM     USER      PGMS   PGMS   GET   FREE    DC      DB
   TIME     START      END       STARTD ENDED ABENDS STALLS  MAX     MODE       MODE      CALLED LOADED STG   STG   SRVCE   SRVCE
                                                            TASK    CPU        CPU                     RQSTS RQSTS RQSTS   RQSTS

 12:33:13      0        137      11865  11728    11          10581   37.9903    9.2815    89600   1682 572288 567102 332209  495356
 12:40:00    137        136      16154  16155    11          14546   55.6957   13.2105   124837   1998 821716 816330 462637  710005
 12:50:00    136        108      23298  23326     9          10576   81.1382   26.3603   162560   8100 587006 559336 537074 1220014
 13:00:00    108        109      18345  18344     9                  76.6671   26.0614   116619  10016 725998 690942 386756 1213613
 13:10:00    109         15      10462  10556     3                  59.8671   10.2193    76906   4004 724035 710863 117959 1160813
 13:20:00     15         15         19     19                          .2400               110      6    543    520     69     468
 13:30:00     15         15         10     10                          .0796                90           271    251     50     360
 13:40:00     15         15         10     10                          .0787                90           271    251     50     360
 13:50:00     15         15         10     10                          .0775     .0001      90           272    252     50     360
 14:00:00     15         15         10     10                          .0829     .0001      90           272    251     50     360
 14:10:00     15         16         58     57                          .0886     .0009     142      8    695    656    510     410
 14:20:00     16         15         29     30                          .1070     .0340     241     15    687    658   1075     360
```


CA World'08

Transforming IT Management

TPNS Response Times

Prior Run

> Mean Response Time
- .35 Seconds (All Applications)
  - CA ADS .18
  - CICS DML .96
  - CICS SQL .94
  - DC COBOL .10

> Mean Response Time
- 8.00 Seconds (All Applications)
  - CA ADS 3.29
  - CICS DML 17.62
  - CICS SQL 18.38
  - DC COBOL 5.85

> Number of Responses
- 81,255

> Number of Responses
- 81,501

> Responses Per Minute
- 32,142

> Responses Per Minute
- 2,047

Buffer Changes

Buffer changes

> DBCRSQL_AC_BUFFER increased from 10 pages to 2000 pages.

> DBCRSQL_BR_BUFFER increased from 5 pages to 120 pages.

> SYSSQL_BUFFER increased from 3 pages to 700 pages.

> DBCR_BRCH_BUFFER increased from 10 pages to 500 pages.

Buffer Changes

```
      D BUF
--- Data Buffer --  Size    In-use        Max     Getstg Prfetch-Min   Prefetch
DBCRSQL_AC_BUFFER   2932      2000       2000      OPSYS          500 Not-Allowd
DBCRSQL_BR_BUFFER   4000       120        120      OPSYS          500 Not-Allowd
SYSSQL_BUFFER       4276       700        700      OPSYS          500 Not-Allowd
DBCR_BCOPY_BUFFER   4000       100        100      OPSYS          500 Not-Allowd
DBCR_ACOPY_BUFFER   2932       100        100      OPSYS          500 Not-Allowd
DBCR_ACCT_BUFFER    2932      4000       4000      OPSYS          500 Not-Allowd
DBCR_BRCH_BUFFER    4000       500        500      OPSYS          500 Not-Allowd
LOG_BUFFER          4276  Not Open          0      OPSYS
DLOCSCR_BUFFER      4628         5          5      OPSYS          500 Not-Allowd
DEFAULT_BUFFER      8196       100        100      OPSYS          500 Not-Allowd

- Journal Buffer -  Size  # In-Use      Waits         DB        Ckpt
JNL_BUFFER          2004       133          0        574        1377
                             # of Recoveries      I/O's   in Buffer
                                  153k                74           0
                    Waits on Prior IO    Forced IO: Deadlock       Split
                                  153k                 0           45k
V120  ENTER NEXT TASK CODE:          CA-IDMS release 17.0 node TECHD120
 -
```

Prior Run

```
      D BUF
--- Data Buffer --  Size    In-use        Max     Getstg Prfetch-Min   Prefetch
DEFAULT_BUFFER      8196        10        100      OPSYS          500 Not-Allowd
DLOCSCR_BUFFER      4628         5          5      OPSYS          500 Not-Allowd
LOG_BUFFER          4276  Not Open          0      OPSYS
DBCR_BRCH_BUFFER    4000        10        500      OPSYS          500 Not-Allowd
DBCR_ACCT_BUFFER    2932        10       4000      OPSYS          500 Not-Allowd
DBCR_ACOPY_BUFFER   2932       100        100      OPSYS          500 Not-Allowd
DBCR_BCOPY_BUFFER   4000       100        100      OPSYS          500 Not-Allowd
SYSSQL_BUFFER       4276         3        700      OPSYS          500 Not-Allowd
DBCRSQL_BR_BUFFER   4000        10        120      OPSYS          500 Not-Allowd
DBCRSQL_AC_BUFFER   2932        10       2000      OPSYS          500 Not-Allowd

- Journal Buffer -  Size  # In-Use      Waits         DB        Ckpt
JNL_BUFFER          2004        10      83429      49084       78169
                             # of Recoveries      I/O's   in Buffer
                                    35                13k         16
                    Waits on Prior IO    Forced IO: Deadlock       Split
                                  198k                 0           18k
```

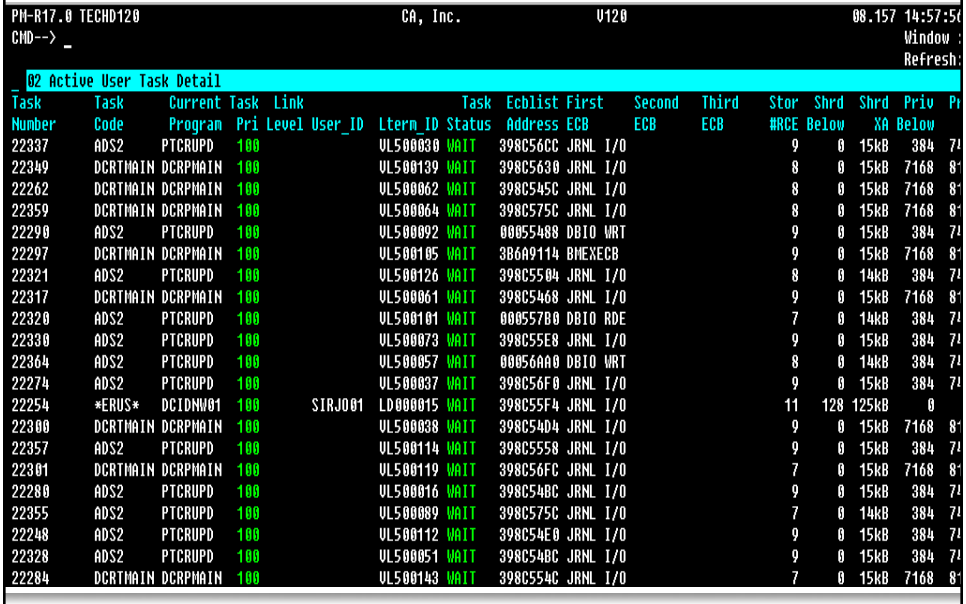

Re-Run after Buffer Changes

Education

EC801EN

CAWorld'08 | discoverability

Re-Run after Buffer Changes



```
PM-R17.0 TECHD120                          CA, Inc.                    V120                          08.157 14:57:5(
CMD--> _                                                                                                 Window :
                                                                                                         Refresh:

_ 02 Active User Task Detail
Task      Task      Current Task  Link                      Task  Ecblist First    Second   Third    Stor  Shrd  Shrd  Priv  Pr
Number    Code      Program  Pri Level User_ID  Lterm_ID Status  Address ECB      ECB      ECB      #RCE Below   XA Below
22337     ADS2      PTCRUPD  100             VL500030 WAIT   398C56CC JRNL I/O                       9     0 15kB   384  7!
22349     DCRTMAIN  DCRPMAIN 100             VL500139 WAIT   398C5630 JRNL I/O                       8     0 15kB  7168  8!
22262     DCRTMAIN  DCRPMAIN 100             VL500062 WAIT   398C545C JRNL I/O                       8     0 15kB  7168  8!
22359     DCRTMAIN  DCRPMAIN 100             VL500064 WAIT   398C575C JRNL I/O                       8     0 15kB  7168  8!
22290     ADS2      PTCRUPD  100             VL500092 WAIT   00055488 DBIO WRT                       9     0 15kB   384  7!
22297     DCRTMAIN  DCRPMAIN 100             VL500105 WAIT   3B6A9114 BMEXECB                        9     0 15kB  7168  8!
22321     ADS2      PTCRUPD  100             VL500126 WAIT   398C5504 JRNL I/O                       8     0 14kB   384  7!
22317     DCRTMAIN  DCRPMAIN 100             VL500061 WAIT   398C5468 JRNL I/O                       9     0 15kB  7168  8!
22320     ADS2      PTCRUPD  100             VL500101 WAIT   000557B0 DBIO RDE                       7     0 14kB   384  7!
22330     ADS2      PTCRUPD  100             VL500073 WAIT   398C55E8 JRNL I/O                       9     0 15kB   384  7!
22364     ADS2      PTCRUPD  100             VL500057 WAIT   00056AA0 DBIO WRT                       8     0 14kB   384  7!
22274     ADS2      PTCRUPD  100             VL500037 WAIT   398C56F0 JRNL I/O                       9     0 15kB   384  7!
22254     *ERUS*    DCIDNW01 100      SIRJ001  LD000015 WAIT   398C55F4 JRNL I/O                      11   128 125kB     0
22300     DCRTMAIN  DCRPMAIN 100             VL500038 WAIT   398C54D4 JRNL I/O                       9     0 15kB  7168  8!
22357     ADS2      PTCRUPD  100             VL500114 WAIT   398C5558 JRNL I/O                       9     0 15kB   384  7!
22301     DCRTMAIN  DCRPMAIN 100             VL500119 WAIT   398C56FC JRNL I/O                       7     0 15kB  7168  8!
22280     ADS2      PTCRUPD  100             VL500016 WAIT   398C54BC JRNL I/O                       9     0 15kB   384  7!
22355     ADS2      PTCRUPD  100             VL500089 WAIT   398C575C JRNL I/O                       7     0 14kB   384  7!
22248     ADS2      PTCRUPD  100             VL500112 WAIT   398C54E0 JRNL I/O                       9     0 15kB   384  7!
22328     ADS2      PTCRUPD  100             VL500051 WAIT   398C54BC JRNL I/O                       9     0 15kB   384  7!
22284     DCRTMAIN  DCRPMAIN 100             VL500143 WAIT   398C554C JRNL I/O                       7     0 15kB  7168  8!
```

  CAWorld'08

Transforming IT Management

Re-Run after Buffer Changes

```
     D AC TAS
           Current max tasks       133
          Times at max tasks     56161
           Allocated DCE/TCE       241
       Number of tasks abended       9
     Number of tasks processed   67387
        Number of tasks active      37

  Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000000000 *SYSTEM* *MASTER*         255 WAIT NOST 00052D4C PLESECB
                                                   36325020 LTTMSECB
                                                   003841AC Service Task ECB
0000000001 *SYSTEM* *DBRC*           255 WAIT NOST 00086A08 DBRC WTOR ECB
                                                   3517F5C8 ESEECB
                                                   00027FA4 CCEECB
                                                   000280C4 CCEECB
                                                   00028188 CCEECB
                                                   00028214 CCEECB
                                                   000281E0 CCEECB
0000000014 *DRIVER* UCFLINE          254 WAIT NOST 0005284C PLESECB
0000000015 *DRIVER* VTAM             254 WAIT NOST 00052ACC PLESECB
                                                   00636434 VTAM READ INIT ECB
0000000016 *DRIVER* SYSOUTL          254 WAIT NOST 00052E4C PLESECB
0000000018 *DRIVER* VTAMLIN1         254 WAIT NOST 0005394C PLESECB
                                                   0063F434 VTAM READ INIT ECB
0000000002 *DRIVER* RHDCRUSD         253 WAIT NOST 3644D890 SERVICE DRIVER ECB
            PAGE 00001 - NEXT PAGE:
```


Re-Run after Buffer Changes

```
  Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
                                                   3991A08C TIMER ECB
0000000003 *DRIVER* RHDCRUSD         253 WAIT NOST 3644D910 SERVICE DRIVER ECB
                                                   3991C50C TIMER ECB
0000000004 *DRIVER* RHDCRUSD         253 WAIT NOST 3644D990 SERVICE DRIVER ECB
                                                   3991F48C TIMER ECB
0000000005 *DRIVER* RHDCRUSD         253 WAIT NOST 3644DA10 SERVICE DRIVER ECB
                                                   3992120C TIMER ECB
0000000006 *DRIVER* RHDCRUSD         253 WAIT NOST 3644DA90 SERVICE DRIVER ECB
                                                   39922F8C TIMER ECB
0000000007 *DRIVER* RHDCRUSD         253 WAIT NOST 3644DC10 SERVICE DRIVER ECB
                                                   39924D0C TIMER ECB
0000000008 *DRIVER* RHDCLGSD         253 WAIT NOST 000547E8 DBIO WRITE ECB
0000000009 *DRIVER* RHDCLGSD         253 WAIT NOST 3644DF10 SERVICE DRIVER ECB
0000000010 *DRIVER* RHDCLGSD         253 WAIT NOST 3644DF90 SERVICE DRIVER ECB
0000000011 *DRIVER* PMONCIOD         253 WAIT NOST 3644E010 SERVICE DRIVER ECB
                                                   002AC14C PERFMON SERVICE DRV
                                                   002AC164 PERFMON SERVICE DRV
                                                   002AC158 PERFMON SERVICE DRV
0000000013 *DRIVER* RHDCDEAD         253 WAIT NOST 3992AA4C ICEECB
                                                   3644E110 SERVICE DRIVER ECB
0000000012 *DRIVER* PMONCROL         253 WAIT NOST 002AC11C ICEECB
                                                   002AC128 ICEECB
                                                   002AC134 PERFMON SERVICE DRV
0000000019 *DRIVER* RHDCPRNT         253 WAIT NOST 399189AC PRTSECB
0000067383 DCMT     RHDCMT00 VL500152 225 ACTV
            PAGE 00002 - NEXT PAGE: _
```


Re-Run after Buffer Changes

```
 Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000067365 RHDCNP3S ICS2     LD000018 100 WAIT NOST 398C5624 DBIO JRNL WRITE ECB
0000067362 RHDCNP3S ICD1     LD000012 100 WAIT NOST 163D6908 EREECB
0000067361 RHDCNP3S ICS2     LD000007 100 WAIT NOST 003A8244 LTXNLOCK
0000067371 RHDCNP3S ICS2     LD000000 100 WAIT NOST 003A60E4 LTXNLOCK
0000067370 RHDCNP3S ICD1     LD000009 100 WAIT NOST 163D6A88 EREECB
0000067373 RHDCNP3S ICS2     LD000010 100 WAIT NOST 163D6D88 EREECB
0000067380 RHDCNP3S ICD1     LD000011 100 WAIT NOST 163D7B08 EREECB
0000067379 RHDCNP3S ICS2     LD000003 100 WAIT NOST 163D7088 EREECB
0000067378 RHDCNP3S ICS2     LD000005 100 WAIT NOST 163D7988 EREECB
0000067377 RHDCNP3S ICS2     LD000004 100 WAIT NOST 163D6308 EREECB
0000067376 RHDCNP3S ICS2     LD000002 100 WAIT NOST 163D6188 EREECB
0000067375 RHDCNP3S ICD1     LD000014 100 WAIT NOST 398C5624 DBIO JRNL WRITE ECB
0000067374 RHDCNP3S ICS2     LD000008 100 WAIT NOST 163D6C08 EREECB
0000067385 RHDCNP3S ICD1     LD000020 100 RDY
0000067384 RHDCNP3S ICD1     LD000019 100 RDY
0000067382 RHDCNP3S ICS2     LD000017 100 RDY
0000067381 RHDCNP3S ICS2     LD000015 100 RDY
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120

           PAGE 00003 - NEXT PAGE:
```


Re-Run after Buffer Changes

```
    D STAT SYS
  13:57:36.60 08/241 Current Time       00:01:46.83 Tot Sys Time
  13:54:23.00 08/241 Startup Time       00:00:07.67 Tot User Time

TASKS:          80752 Processed             3 Abended             133 Max Tasks
                  600 System                0 Runaway               1 Times At Max
                   18 Deadlocks             9 Dead Victims

TRANS:          89841 Processed         89797 Norm Cmp    140 Max Conc
                19812 Ext Proc          19812 Ext Norm     20 Ext Conc    160 Max Erus
                    0 Dist Proc             0 Dist Norm      0 Dist Conc

DATABASE:     1781601 Calls            869309 Pages Rqst       1760034 Recs Rqst
                    0 Buff Wait       156694 Pages Read        566126 Recs Cur R/U
               177629 Page Writ            0 Calc No-Flo        79548 Via No-Flo
              2338094 Tot Locks            0 Calc Ov-Flo          341 Via Ov-Flo
                                           0 Frag Stord             0 Recs Reloc
    INDEX:          0 SR8 Splits           0 SR8 Stores             0 SR7 Stores
                    0 SR8 Spawns           0 SR8 Erases             0 SR7 Erases
                    0 Orph Adopt       60084 Ix Searches            1 Min Level
                                       70720 Lvls Srchd             2 Max Level
      SQL:      117956 Commands        29489 Tupls Fetched       9831 Rows Inserted
                    0 AM Recomp        29485 Rows Updated           0 Rows Deleted
                                           0 Sorts                  0 Sort Min
                                           0 Tuples Sorted          0 Sort Max

           PAGE 00001 - NEXT PAGE: _
```

```
    D STAT SYS
  14:34:10.35 08/231 Current Time       00:01:55.84 Tot Sys Time
  14:18:06.18 08/231 Startup Time       00:00:07.56 Tot User Time

TASKS:          81158 Processed             8 Abended             133 Max Tasks
                  766 System                0 Runaway           23913 Times At Max
                   34 Deadlocks            17 Dead Victims

TRANS:          89166 Processed         89114 Norm Cmp    154 Max Conc
                19908 Ext Proc          19908 Ext Norm     21 Ext Conc    160 Max Erus
                    0 Dist Proc             0 Dist Norm      0 Dist Conc

DATABASE:     1757051 Calls            874720 Pages Rqst       1758293 Recs Rqst
              1448589 Buff Wait        294508 Pages Read        571600 Recs Cur R/U
               208716 Page Writ            0 Calc No-Flo        79700 Via No-Flo
              2336902 Tot Locks            0 Calc Ov-Flo          344 Via Ov-Flo
                                           0 Frag Stord             0 Recs Reloc
    INDEX:          0 SR8 Splits           0 SR8 Stores             0 SR7 Stores
                    0 SR8 Spawns           0 SR8 Erases             0 SR7 Erases
                    0 Orph Adopt       60082 Ix Searches            1 Min Level
                                       70719 Lvls Srchd             2 Max Level
      SQL:      120160 Commands        30040 Tupls Fetched      10014 Rows Inserted
                    0 AM Recomp        30038 Rows Updated           0 Rows Deleted
                                           0 Sorts                  0 Sort Min
                                           0 Tuples Sorted          0 Sort Max

           PAGE 00001 - NEXT PAGE:
```

Prior Run

Re-Run after Buffer Changes

```
JOURNAL:                0 Buff Waits                0 User Putjrnl
  Page      54  0-10      455 11-20       87 21-30      116 31-40      107 41-50
  Dist      88 51-60       89 61-70       67 71-80     2189 81-90    89311 91-100

INTERNAL:        RLEs    RCEs    DPEs   Stack
                 2512    2284    1226     995 HWM
                10000   10000    3000    2000 Sysgen Threshold
                    0       0       0         Times Exceeded

STORAGE:      5804164 Gets          5712139 Frees            Gets for type
                    0 PGFIXs            0 PGFREEs           1546460 DB
                    0 Pages Fxd         0 Pages Freed            10 SHR
              3559612 Scan 1            0 PGRLSEs                 0 SHR
              2244552 Scan 2            0 Pages Relsd       2863998 SYS
                                                                150 USK
                    0 SOS COUNT                             1393530 USR

PROGRAM:                Act Loads  Pages Load  Wait/Space
          Non-Reent             2           3           0
              Reent            35        1550           0
       XA Non-Reent             2          18           0
          XA Reent            255       24439           0

SCRATCH:          0 Gets          1 Puts          0 Dels
  QUEUE:          3 Gets          0 Puts          0 Dels          0 Task AutoSt

             PAGE 00002 - NEXT PAGE:
```

```
JOURNAL:              274 Buff Waits              0 User Putjrnl
  Page      54  0-10     3795 11-20      224 21-30      250 31-40      414 41-50
  Dist     245 51-60      366 61-70      252 71-80     2523 81-90    87434 91-100

INTERNAL:        RLEs    RCEs    DPEs   Stack
                 2656    2306    1321     995 HWM
                10000   10000    3000    2000 Sysgen Threshold
                    0       0       0         Times Exceeded

STORAGE:      5892563 Gets          5799510 Frees            Gets for type
                    0 PGFIXs            0 PGFREEs           1570699 DB
                    0 Pages Fxd         0 Pages Freed            10 SHR
              2931661 Scan 1            0 PGRLSEs                 0 SHR
              2960902 Scan 2            0 Pages Relsd       2907725 SYS
                                                                235 USK
                    0 SOS COUNT                             1413886 USR

PROGRAM:                Act Loads  Pages Load  Wait/Space
          Non-Reent             2           3           0
              Reent            35        1710           0
       XA Non-Reent             2          18           0
          XA Reent           262       24435           0

SCRATCH:        596 Gets        621 Puts        596 Dels
  QUEUE:          4 Gets          0 Puts          0 Dels          0 Task AutoSt

             PAGE 00002 - NEXT PAGE:
```

Prior Run

caWorld'08

Re-Run after Buffer Changes

```
     D STAT BUF
----- Buffer -----      Waits  Fnd-in-Buf   Phy-Reads Fnd-in-Cache Phy-Writes
DEFAULT_BUFFER               0        3970        2579           0          24
DLOCSCR_BUFFER               0           0           0           0           0
LOG_BUFFER                   0           0           0           0           0
DBCR_BRCH_BUFFER             0      213516       74621           0       77385
DBCR_ACCT_BUFFER             0      175355       34922           0       69747
DBCR_ACOPY_BUFFER            0           0           1           0           1
DBCR_BCOPY_BUFFER            0           0           1           0           1
SYSSQL_BUFFER                0      244742          16           0           3
DBCRSQL_BR_BUFFER            0       42049       16824           0       19499
DBCRSQL_AC_BUFFER            0       52630        9189           0       10177
V120  ENTER NEXT TASK CODE:        CA-IDMS release 17.0 node TECHD120
```

```
     D STAT BUF
----- Buffer -----      Waits  Fnd-in-Buf   Phy-Reads Fnd-in-Cache Phy-Writes
DEFAULT_BUFFER               0        2161        1343           0          24
DLOCSCR_BUFFER               0           0           0           0           0
LOG_BUFFER                   0           0           0           0           0
DBCR_BRCH_BUFFER         26976      197712       91675           0       81686
DBCR_ACCT_BUFFER       1421390      110410       99847           0       96351
DBCR_ACOPY_BUFFER            0           0           1           0           1
DBCR_BCOPY_BUFFER            0           0           1           0           1
SYSSQL_BUFFER              215      179571       70346           0           3
DBCRSQL_BR_BUFFER            8       40437       19852           0       19985
DBCRSQL_AC_BUFFER            0       51609       11728           0       10752
V120  ENTER NEXT TASK CODE:        CA-IDMS release 17.0 node TECHD120
 _
```

Prior Run

caWorld'08

Transforming IT Management

Post Process Monitoring (PMA Report 1)

```
REPORT NO. 01                                    CA, INC.                                    06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                        TASK DETAIL REPORT
DC SYSTEM VERSION #:   120                  CA INTERNATIONAL, INC.                  DATA FROM:  6/05/08

                                                        CPU          WAIT       TP    TP     NUM       NUM     NUM     NUM     NUM
   TASK    VER      TASK      TASK C  START    STORAGE  STORAGE      TIME         TIME   READ  WRITE    OF        OF      OF      OF      OF
   CODE    NUM      NUM       TYPE C   TIME    ACQUIRED   KEPT      (SECS)       (SECS) LNGTH LNGTH   I/O       DBCLS   LVLS  DBLVLS  BUF

 ICS2       0          367 CICS     14:57:14    488192       0       .0070       .2538     0     0       6         65     --      --     --
 PTCRUPD    1          368 ADS/O    14:57:14     11776    2432       .0008       .0231    13    96       3         22      0       0      0
 PTCRUPD    1          370 ADS/O    14:57:14     11520    2176       .0002       .0166    13    96       0          0      0       0      0
 DCRSMAIN   0          372 COBOL    14:57:14    104832     256       .0005       .0009     0    58       0          7     --      --     --
 DCRSMAIN   0          371 COBOL    14:57:14    104832     256       .0003       .0012     0    58       0          7     --      --     --
 DCRSMAIN   0          369 COBOL    14:57:14    104832     256       .0002       .0013     0    58       0          7     --      --     --
 ICD1       0          373 CICS     14:57:14    128000       0       .0015       .1420     0     0       5         12     --      --     --
 DCRSMAIN   0          374 COBOL    14:57:14    104832     256       .0005       .0003     0    58       0          7     --      --     --
 DCRSMAIN   0          375 COBOL    14:57:14    104832     256       .0004       .0005     0    58       0          7     --      --     --
 DCRSMAIN   0          376 COBOL    14:57:14    104832     256       .0002       .0006     0    58       0          7     --      --     --
 DCRSMAIN   0          377 COBOL    14:57:14    104832     256       .0007       .0002     0    58       0          7     --      --     --
 PTCRUPD    1          378 ADS/O    14:57:14     11520    2176       .0002       .0000    13    96       0          0      0       0      0
 PTCRUPD    1          379 ADS/O    14:57:14     11520    2176       .0001       .0001    13    96       0          0      0       0      0
```

Prior Run

```
REPORT NO. 01                                    CA, INC.                                    06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                        TASK DETAIL REPORT
DC SYSTEM VERSION #:   120                  CA INTERNATIONAL, INC.                  DATA FROM:  6/05/08

                                                        CPU          WAIT       TP    TP     NUM       NUM     NUM     NUM     NUM
   TASK    VER      TASK      TASK C  START    STORAGE  STORAGE      TIME         TIME   READ  WRITE    OF        OF      OF      OF      OF
   CODE    NUM      NUM       TYPE C   TIME    ACQUIRED   KEPT      (SECS)       (SECS) LNGTH LNGTH   I/O       DBCLS   LVLS  DBLVLS  BUF

 PTCRUPD    1          514 ADS/O    13:15:14     11520    2176       .0003       .0006    13    96       0          0      0       0      0
 DCRSMAIN   0          515 COBOL    13:15:14    104832     256       .0007       .0000     0    58       0          7     --      --     --
 PTCRUPD    1          516 ADS/O    13:15:14     11520    2176       .0002       .0000    13    96       0          0      0       0      0
 DCRSMAIN   0          517 COBOL    13:15:14    104832     256       .0002       .0001     0    58       0          7     --      --     --
 PTCRUPD    1          518 ADS/O    13:15:14     11520    2176       .0002       .0000    13    96       0          0      0       0      0
 DCRSMAIN   0          519 COBOL    13:15:14    104832     256       .0006       .0008     0    58       0          7     --      --     --
 PTCRUPD    1          520 ADS/O    13:15:14     20864    3584       .0005       .1546    42   108       5         18      0       1      0
 PTCRUPD    1          521 ADS/O    13:15:14     11520    2176       .0003       .0000    13    96       0          0      0       0      0
 PTCRUPD    1          522 ADS/O    13:15:14     11520    2176       .0002       .0001    13    96       0          0      0       0      0
 PTCRUPD    1          523 ADS/O    13:15:14     11520    2176       .0002       .0000    13    96       0          0      0       0      0
 PTCRUPD    1          524 ADS/O    13:15:14     11520    2176       .0001       .0001    13    96       0          0      0       0      0
 DCRSMAIN   0          525 COBOL    13:15:14    104832     256       .0006       .0010     0    58       0          7     --      --     --
 DCRSMAIN   0          526 COBOL    13:15:14    104832     256       .0003       .0007     0    58       0          7     --      --     --
```


Post Process Monitoring (PMA Report 2)

```
REPORT NO. 02                                    CA, INC.                                    06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                        TASK SUMMARY REPORT
DC SYSTEM VERSION #:   120                  CA INTERNATIONAL, INC.                  DATA FROM:  6/05/08

                                                AVG        AVG        AVG        AVG        AVG   AVG   AVG   AVG       AVG     AVG     AVG     AVG
      TASK    VER      NUM   TASK    NUM STORAGE  STORAGE      CPU        WAIT        TP    TP    NUM       NUM     NUM     NUM     NUM
      CODE    NUM    TIMES   TYPE  TIMES ACTIVE   KEPT         TIME       TIME   READ  WRITE    OF        OF      OF      OF      OF
                      EXEC          ABND                      (SECS)     (SECS) LNGTH LNGTH   I/O       DBCLS   LVLS  DBLVLS  BUFS

   BYE        0        144 ASSEM                 4357       0       .0000      .0169     0     0       0         0     --      --     --
   CLOD       0          1 ASSEM                15744       0       .0030      .1074     0     0      17       127     --      --     --
   DCMT       0         27 ASSEM                11866    1550       .0010      .0256    52   311       0         1     --      --     --
   DCPROFIL   1          1 ASSEM                 8704    4480       .0019      .0305    72    68       1         4     --      --     --
   DCRSMAIN   0         80 COBOL               104803     256       .0004      .0188     0    58       0         7     --      --     --
   DCRTMAIN   0      30141 COBOL     9         104577     256       .0008      .1970    42   113       4        16     --      --     --
   FACTOTUM   1        732 ASSEM                  141     248       .0000      .0049     0   186       0         0     --      --     --
   ICD1       0       9624 CICS                128001       0       .0011      .1452     0     0       4        12     --      --     --
   ICS2       0       9774 CICS                488192       0       .0063      .1910     0     0       6        65     --      --     --
   PHRM       0          2 ASSEM                 8704     256       .1402    65.9265   163  8033       2        30     --      --     --
   PTCRUPD    1      30215 ADS/O     13         20797    3541       .0006      .1995    42   108       3        17      0       1      0
   SHUTMON    0          1 ASSEM                 4608     128       .0006      .0258     0     0       0        18     --      --     --
   SYSGEN     0         27 ASSEM                48735   84523       .0090      .1370     7   886      46        99     --      --     --
```

Prior Run

```
REPORT NO. 02                                    CA, INC.                                    06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                        TASK SUMMARY REPORT
DC SYSTEM VERSION #:   120                  CA INTERNATIONAL, INC.                  DATA FROM:  6/05/08

                                                AVG        AVG        AVG        AVG        AVG   AVG   AVG   AVG       AVG     AVG     AVG     AVG
      TASK    VER      NUM   TASK    NUM STORAGE  STORAGE      CPU        WAIT        TP    TP    NUM       NUM     NUM     NUM     NUM
      CODE    NUM    TIMES   TYPE  TIMES ACTIVE   KEPT         TIME       TIME   READ  WRITE    OF        OF      OF      OF      OF
                      EXEC          ABND                      (SECS)     (SECS) LNGTH LNGTH   I/O       DBCLS   LVLS  DBLVLS  BUFS

   BYE        0        148 ASSEM                 4357       0       .0000      .0020     0     0       0         0     --      --     --
   CLOD       0          1 ASSEM                15744       0       .0051      .2797     0     0      17       127     --      --     --
   DCMT       0         31 ASSEM                11074    1429       .0009      .0398    48   253       0         1     --      --     --
   DCPROFIL   1          1 ASSEM                 8704    4480       .0022      .0388    72    68       1         4     --      --     --
   DCRSMAIN   0         79 COBOL               104816     256       .0004      .0123     0    58       0         7     --      --     --
   DCRTMAIN   0      30147 COBOL     5         104577     256       .0010      .3825    42   113       6        16     --      --     --
   FACTOTUM   1        818 ASSEM                   65     211       .0000      .0037     0   171       0         0     --      --     --
   ICD1       0       9924 CICS                128000       0       .0013      .2605     0     0       6        12     --      --     --
   ICS2       0      10073 CICS                488192       0       .0073      .2294     0     0      13        64     --      --     --
   PHIM       0          1 ASSEM                 23552   12800       .0018      .0239    10  1463       2         8     --      --     --
   PHRM       0          2 ASSEM                 88704     256       .1381    88.5871   154  2007       3        16     --      --     --
   PMWNDRVR   1         15 ASSEM                 19354    5854       .0005      .0025     3  2169       0         7     --      --     --
   PTCRUPD    1      30218 ADS/O     5          20790    3542       .0007      .2622    42   108       4        17      0       1      0
```


Post Process Monitoring (PMA Report 3)

```
REPORT NO. 03                                   CA, INC.                                    06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                  CA ADS DIALOG DETAIL REPORT
DC SYSTEM VERSION #:   120                 CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

                                                    CPU        WAIT      TP    TP     NUM      NUM     NUM     NUM     NUM
   DIALOG   VER      TASK     C  START    STORAGE  STORAGE     TIME      TIME    READ  WRITE    OF       OF      OF      OF      OF
    NAME    NUM      NUM      C   TIME    ACTIVE    KEPT     (SECS)    (SECS)  LNGTH LNGTH    I/O      DBCLS   LVLS   DBLVLS  BUFS

  PTCRUPD     1         368   14:57:14    11776    2432      .0008     .0231     13    96        3        22      0       0       0
  PTCRUPD     1         370   14:57:14    11520    2176      .0002     .0166     13    96        0         0      0       0       0
  PTCRUPD     1         378   14:57:14    11520    2176      .0003     .0000     13    96        0         0      0       0       0
  PTCRUPD     1         379   14:57:14    11520    2176      .0001     .0001     13    96        0         0      0       0       0
  PTCRUPD     1         380   14:57:14    11520    2176      .0002     .0000     13    96        0         0      0       0       0
  PTCRUPD     1         381   14:57:14    11520    2176      .0001     .0001     13    96        0         0      0       0       0
  PTCRUPD     1         382   14:57:14    11520    2176      .0002     .0001     13    96        0         0      0       0       0
  PTCRUPD     1         384   14:57:14    11520    2176      .0001     .0001     13    96        0         0      0       0       0
  PTCRUPD     1         386   14:57:14    11520    2176      .0002     .0000     13    96        0         0      0       0       0
  PTCRUPD     1         388   14:57:14    11520    2176      .0001     .0000     13    96        0         0      0       0       0
  PTCRUPD     1         390   14:57:14    11520    2176      .0001     .0000     13    96        0         0      0       0       0
  PTCRUPD     1         391   14:57:14    11520    2176      .0002     .0000     13    96        0         0      0       0       0
  PTCRUPD     1         405   14:57:14    11520    2176      .0002     .0034     13    96        0         0      0       0       0
```

Prior Run

```
REPORT NO. 03                                   CA, INC.
CA IDMS/PM 17.0    CAGJH0                  CA ADS DIALOG DETAIL REPORT
DC SYSTEM VERSION #:   120                 CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

                                                    CPU        WAIT      TP    TP     NUM      NUM     NUM     NUM     NUM
   DIALOG   VER      TASK     C  START    STORAGE  STORAGE     TIME      TIME    READ  WRITE    OF       OF      OF      OF      OF
    NAME    NUM      NUM      C   TIME    ACTIVE    KEPT     (SECS)    (SECS)  LNGTH LNGTH    I/O      DBCLS   LVLS   DBLVLS  BUFS

  PTCRUPD     1         111   13:15:13    11776    2432      .0009     .0244     13    96        4        32      0       0       0
  PTCRUPD     1         347   13:15:13    11520    2176      .0002     .0045     13    96        0         0      0       0       0
  PTCRUPD     1         351   13:15:13    20864    3584      .0007     .3636     42   108        2        16      0       1       0
  PTCRUPD     1         411   13:15:14    21120    3584      .0010     .0085     42   108        3        16      0       1       0
  PTCRUPD     1         416   13:15:14    11520    2176      .0003     .0000     13    96        0         0      0       0       0
  PTCRUPD     1         418   13:15:14    11520    2176      .0001     .0001     13    96        0         0      0       0       0
  PTCRUPD     1         419   13:15:14    11520    2176      .0002     .0000     13    96        0         0      0       0       0
  PTCRUPD     1         422   13:15:14    11520    2176      .0001     .0000     13    96        0         0      0       0       0
  PTCRUPD     1         423   13:15:14    11520    2176      .0001     .0001     13    96        0         0      0       0       0
  PTCRUPD     1         425   13:15:14    11520    2176      .0001     .0000     13    96        0         0      0       0       0
  PTCRUPD     1         426   13:15:14    11520    2176      .0002     .0000     13    96        0         0      0       0       0
  PTCRUPD     1         429   13:15:14    11520    2176      .0001     .0001     13    96        0         0      0       0       0
  PTCRUPD     1         433   13:15:14    11520    2176      .0002     .0031     13    96        0         0      0       0       0
```

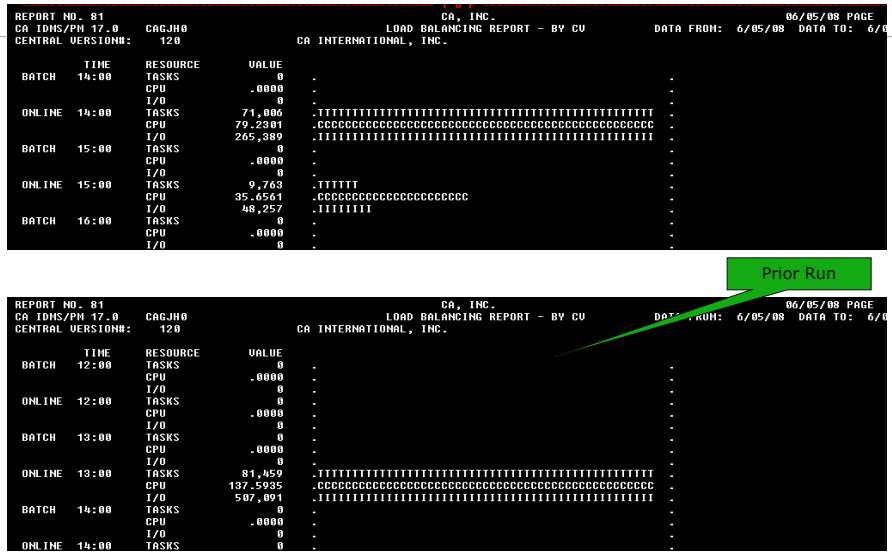

Post Process Monitoring (PMA Report 4)

```
REPORT NO. 04                                   CA, INC.                                    06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                  CA ADS DIALOG SUMMARY REPORT
DC SYSTEM VERSION #:   120                 CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

                        NUM      NUM      AVG      AVG       AVG       AVG      AVG     AVG      AVG      AVG     AVG     AVG     AVG
   DIALOG   VER       TIMES    TIMES   STORAGE  STORAGE     CPU       WAIT      TP      TP      NUM      NUM     NUM     NUM     NUM
    NAME    NUM       EXEC     ABND    ACTIVE    KEPT      TIME      TIME    READ   WRITE     OF       OF      OF      OF      OF
                                                            (SECS)    (SECS)  LNGTH  LNGTH     I/O      DBCLS   LVLS   DBLVLS  BUF

  PTCRUPD     1      30215       13     20797    3541      .0006     .1995     42    108        3        17      0       1       0
```

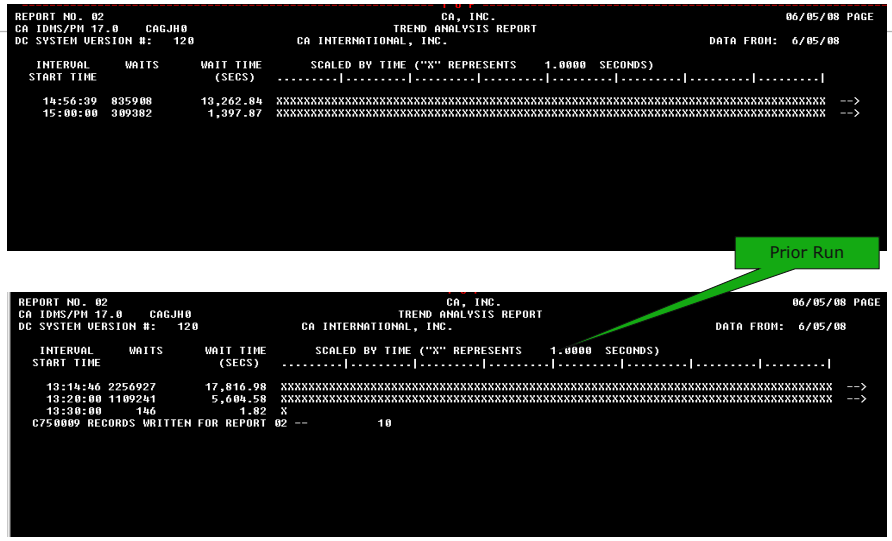
Prior Run

```
REPORT NO. 04                                   CA, INC.                                    06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                  CA ADS DIALOG SUMMARY REPORT
DC SYSTEM VERSION #:   120                 CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

                        NUM      NUM      AVG      AVG       AVG       AVG      AVG     AVG      AVG      AVG     AVG     AVG     AVG
   DIALOG   VER       TIMES    TIMES   STORAGE  STORAGE     CPU       WAIT      TP      TP      NUM      NUM     NUM     NUM     NUM
    NAME    NUM       EXEC     ABND    ACTIVE    KEPT      TIME      TIME    READ   WRITE     OF       OF      OF      OF      OF
                                                            (SECS)    (SECS)  LNGTH  LNGTH     I/O      DBCLS   LVLS   DBLVLS  BUF

  PTCRUPD     1      30218        5     20790    3542      .0007     .2622     42    108        4        17      0       1       0
```

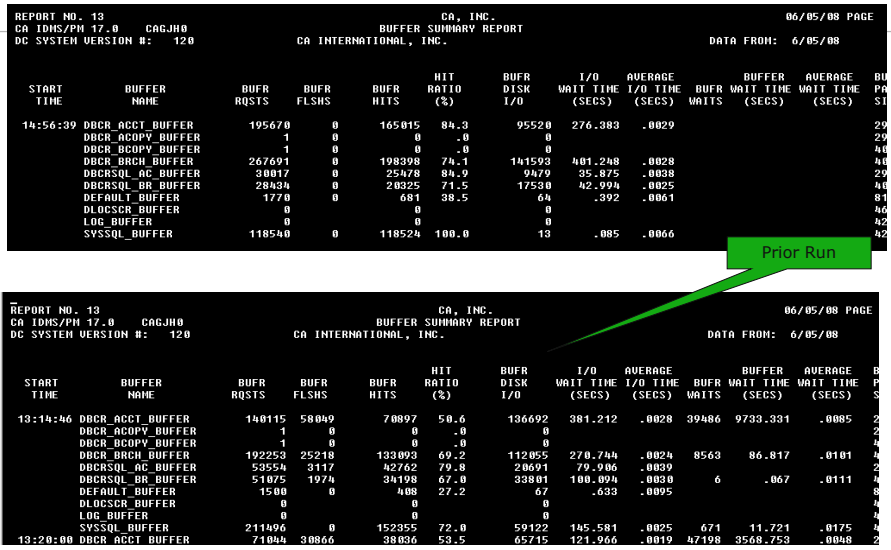

Post Process Monitoring (PMA Report 81)



Post Process Monitoring (PMI Report 2)



Post Process Monitoring (PMI Report 13)

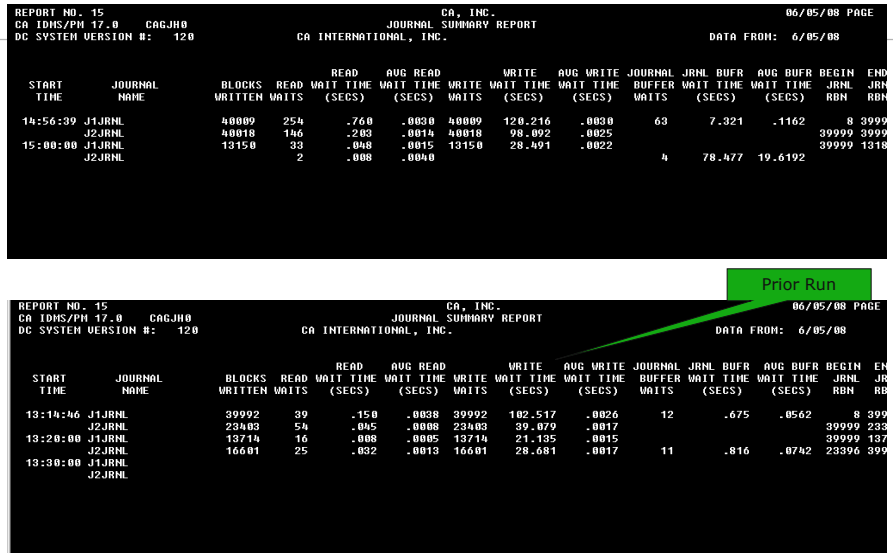


```
REPORT NO. 13                                  CA, INC.                                  06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                  BUFFER SUMMARY REPORT
DC SYSTEM VERSION #:   120              CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

                                                        HIT       BUFR      I/O     AVERAGE          BUFFER   AVERAGE   BU
  START          BUFFER            BUFR     BUFR      BUFR     RATIO     DISK    WAIT TIME I/O TIME  BUFR WAIT TIME WAIT TIME  PA
   TIME           NAME            RQSTS    FLSHS      HITS      (%)      I/O       (SECS)   (SECS)  WAITS   (SECS)    (SECS)   SI

 14:56:39 DBCR_ACCT_BUFFER        195670        0    165015    84.3      95520     276.383   .0029                              29
          DBCR_ACOPY_BUFFER            1        0         0     .0          0                                                  29
          DBCR_BCOPY_BUFFER            1        0         0     .0          0                                                  40
          DBCR_BRCH_BUFFER        267691        0    198398    74.1     141593     401.248   .0028                              40
          DBCRSQL_AC_BUFFER        30017        0     25478    84.9       9479      35.875   .0038                              29
          DBCRSQL_BR_BUFFER        28434        0     20325    71.5      17530      42.994   .0025                              40
          DEFAULT_BUFFER            1770        0       681    38.5         64        .392   .0061                              81
          DLOCSCR_BUFFER               0                 0                  0                                                  46
          LOG_BUFFER                   0                 0                  0                                                  42
          SYSSQL_BUFFER           118540        0    118524   100.0         13        .085   .0066                              42
```

Prior Run

```
REPORT NO. 13                                  CA, INC.                                  06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                  BUFFER SUMMARY REPORT
DC SYSTEM VERSION #:   120              CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

                                                        HIT       BUFR      I/O     AVERAGE          BUFFER   AVERAGE   B
  START          BUFFER            BUFR     BUFR      BUFR     RATIO     DISK    WAIT TIME I/O TIME  BUFR WAIT TIME WAIT TIME  P
   TIME           NAME            RQSTS    FLSHS      HITS      (%)      I/O       (SECS)   (SECS)  WAITS   (SECS)    (SECS)   S

 13:14:46 DBCR_ACCT_BUFFER        140115    58049     70897    50.6     136692     381.212   .0028   39486  9733.331     .0085   2
          DBCR_ACOPY_BUFFER            1        0         0     .0          0                                                  2
          DBCR_BCOPY_BUFFER            1        0         0     .0          0                                                  4
          DBCR_BRCH_BUFFER        192253    25218    133093    69.2     112055     270.744   .0024    8563    86.817     .0101   4
          DBCRSQL_AC_BUFFER        53554     3117     42762    79.8      20691      79.906   .0039                              2
          DBCRSQL_BR_BUFFER        51075     1974     34198    67.0      33801     100.894   .0030       6      .067     .0111   4
          DEFAULT_BUFFER            1500        0       408    27.2         67        .633   .0095                              8
          DLOCSCR_BUFFER               0                 0                  0                                                  4
          LOG_BUFFER                   0                 0                  0                                                  4
          SYSSQL_BUFFER           211496        0    152355    72.0      59122     145.581   .0025     671   11.721     .0175   4
 13:20:00 DBCR_ACCT_BUFFER         71044    30866     38036    53.5      65715     121.966   .0019   47198  3568.753     .0048   2
```


Post Process Monitoring (PMI Report 15)



```
REPORT NO. 15                                  CA, INC.                                  06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                  JOURNAL SUMMARY REPORT
DC SYSTEM VERSION #:   120              CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

                                    READ     AVG READ          WRITE    AVG WRITE JOURNAL JRNL BUFR  AVG BUFR BEGIN   END
  START       JOURNAL     BLOCKS  READ WAIT TIME WAIT TIME WRITE WAIT TIME WAIT TIME  BUFFER WAIT TIME WAIT TIME  JRNL   JRN
   TIME        NAME      WRITTEN WAITS   (SECS)     (SECS) WAITS   (SECS)    (SECS)   WAITS    (SECS)    (SECS)   RBN    RBN

 14:56:39 J1JRNL          40009    254     .760     .0030  40009  120.216    .0030      63     7.321     .1162      8 3999
          J2JRNL          40018    146     .203     .0014  40018   98.092    .0025                                39999 3999
 15:00:00 J1JRNL          13150     33     .048     .0015  13150   28.491    .0022                                39999 1318
          J2JRNL                    2     .008     .0040                                4    78.477   19.6192
```

Prior Run

```
REPORT NO. 15                                  CA, INC.                                  06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                  JOURNAL SUMMARY REPORT
DC SYSTEM VERSION #:   120              CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

                                    READ     AVG READ          WRITE    AVG WRITE JOURNAL JRNL BUFR  AVG BUFR BEGIN   EN
  START       JOURNAL     BLOCKS  READ WAIT TIME WAIT TIME WRITE WAIT TIME WAIT TIME  BUFFER WAIT TIME WAIT TIME  JRNL   JR
   TIME        NAME      WRITTEN WAITS   (SECS)     (SECS) WAITS   (SECS)    (SECS)   WAITS    (SECS)    (SECS)   RBN    RB

 13:14:46 J1JRNL          39992     39     .150     .0038  39992  102.517    .0026      12      .675     .0562      8 399
          J2JRNL          23403     54     .045     .0008  23403   39.079    .0017                                39999 233
 13:20:00 J1JRNL          13714     16     .008     .0005  13714   21.135    .0015                                39999 137
          J2JRNL          16601     25     .032     .0013  16601   28.681    .0017      11      .816     .0742  23396 399
 13:30:00 J1JRNL
          J2JRNL
```


TPNS Response Times

Prior Run

> Mean Response Time
- .32 Seconds (All Applications)
  - CA ADS .14
  - CICS DML .84
  - CICS SQL .84
  - DC COBOL .14

> Number of Responses
- 81,516

> Responses Per Minute
- 70,893

> Mean Response Time
- .35 Seconds (All Applications)
  - CA ADS .18
  - CICS DML .96
  - CICS SQL .94
  - DC COBOL .10

> Number of Responses
- 81,255

> Responses Per Minute
- 32,142

zIIP Exploitation

Education

EC801EN

zIIP Exploitation

> Progress to this point

Agenda

> Terms and Definitions
> Eligibility and Requirements
> Impact on existing dialogs and programs
> Implementing via IDMS Startup Parameters
> CPs, zIIPs, and Enclaves
> Benefits
> Monitoring
> Evaluating

Terms and Definitions

> zIIP
- IBM System z Integrated Information Processor
- z/OS software feature HBB7709 is required to use the zIIP feature

> CP
- General Purpose Processor

> TCB
- Operating System Task Control Block

> SRB
- Operating System Service Control Block

Terms and Definitions (cont.)

> Enclave
- An enclave is a representation of a business transaction or unit of work

> TCO
- Total cost of ownership

Eligibility and Requirements

> Loading of Nucleus Module, Line Drivers, Service Drivers, RHDCUXIT from Authorized Libraries

> Additional Authorized Libraries

Eligibility and Requirements (cont.)

> Rules for load module residence for zIIP

> Default activation

Eligibility and Requirements (cont.)

> Rules for load module residence for zIIP

> Default activation

Eligibility and Requirements (cont.)

> Rules for load module residence for zIIP

> Default activation

Eligibility and Requirements (cont.)

> Rules for load module residence for zIIP

> Default activation

Eligibility and Requirements (cont.)

> Rules for load module residence for zIIP

> Default activation

Eligibility and Requirements (cont.)

> Rules for load module residence for zIIP

> Default activation

Impact on existing dialogs and programs

> None

- All existing dialogs, programs of any language, will run in an environment containing zIIP processors without change or impact
  - Other than an overall reduction in CP CPU usage

Implementing via IDMS Startup Parameters

> Startup Parameters
- zIIP=Y (Default if zIIP parameter is omitted)
- zIIP=N
  - Do not use the zIIP feature

CPs, zIIPs, and Enclaves

> zIIP feature works with both Unitasking and Multitasking

> Unitasking
- 1 Enclave started for the single TCB (SCA) to be used

> Multitasking
- 1 Enclave started for each TCB (SCA) to be used
  - Doesn't depend upon the number of zIIPs installed
  - If six subtasks are started for multitasking
    - and only 1 zIIP is available on the machine
      - 6 enclaves are started

Benefits

> Reducing CP CPU usage
- Cycles offloaded to zIIP
- zIIPs are low cost engines

> Testing has shown benefits for all IDMS configurations and environments
- CICS DML, CICS SQL, DC ADS, DC COBOL, SERVER, etc
- As well as varying mixtures of the above configurations and environments

DCMT D SUBTASK n

```
    D SUBT 1
*** Display Subtask details ***
                        Name  MAINTASK
                      Number  01
                      Status  BUSY
                   Work type  IDMS
               Count wakeups  1,421
        Count task dispatches  1,551
           User mode CPU time  00:00:00.0009
         System mode CPU time  00:00:01.0992
        CPU effectiveness (%)  13
      Count times fast posted  16
        Count times OS posted  00
      Count found work pass 1  1,297
      Count found work pass 2  254
  Count times POSTEXIT resumed  1,421
                     *** Enclave Info ***
                   zIIP time  00:00:00.0438
             zIIP on CP time  00:00:00.0002
        CPU effectiveness (%)  136
          Count swap attempts  3,753
           Count actual swaps  3,746
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
```


DCMT D SUBTASK n (Multitasking)

```
     D SUBT 3
 *** Display Subtask details ***
                        Name  SUBT0002
                      Number  03
                      Status  BUSY
                   Work type  IDMS
                Count wakeups  63
         Count task dispatches  160
            User mode CPU time  00:00:00.0000
          System mode CPU time  00:00:00.0338
         CPU effectiveness (%)  20
       Count times fast posted  09
         Count times OS posted  00
       Count found work pass 1  65
       Count found work pass 2  95
  Count times POSTEXIT resumed  63
                     *** Enclave Info ***
                   zIIP time  00:00:00.0054
              zIIP on CP time  00:00:00.0000
         CPU effectiveness (%)  118
           Count swap attempts  260
            Count actual swaps  256
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
```


DCMT D SUBTASK Eff

```
     D SUBT EFF
 *** Subtask display ***
Subtask         Elapsed time                Total CPU time        % CPU  SRB
 Name        TCB           SRB           TCB           SRB       TCB SRB
-------- ------------ ------------ ------------ ------------ --- ---
MAINTASK  00:00:07.0205  00:00:00.0269  00:00:00.8518  00:00:00.0365  12 135  Y
SUBT0001  00:00:00.0003  00:00:00.0000  00:00:00.0000  00:00:00.0000  00 N/A  Y
SUBT0002  00:00:00.1186  00:00:00.0224  00:00:00.0248  00:00:00.0193  20  86  Y
-------- ------------ ------------ ------------ ------------ --- ---
Totals    00:00:07.1394  00:00:00.0493  00:00:00.8766  00:00:00.0558  12 113
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
```


DCPROFIL

```
TAPE:              GJH00B          NUMBER OF SCTS:       0009

TOOLS TAPE:        -NONE-

SYSTEM TRACE:        NO            OPERATING SYSTEM:     z/OS   ZIIP=Y

CWA SIZE:       0000032767         DMCL TABLE:       TE99DMPT

                                   PRIMARY STORAGE
SCRATCH HWM     0000000188         PROTECT KEY:            08

SIZE OF XA                         ACTIVE TRANSACTION
STORAGE AREA:   0092434432         COUNT:                0035

QUEUE AREA
LOW PAGE:       0000040001
HIGH PAGE:      0000041000

DC VERSION ID:       0120          SVC NUMBER:            176

NUMBER OF USER                     GETMAIN SUBPOOL:       001
TRACE BUFFERS:       0253

          PAGE 00001 - NEXT PAGE:
```


Evaluating the zIIP feature

> Evaluation of the zIIP feature

- Requires neither zIIP processors nor even hardware that is capable of supporting zIIP processors
- Procedure

Evaluating the zIIP feature (cont.)

> Procedure

Evaluating the zIIP feature (cont.)

> Procedure

Evaluating the zIIP feature (cont.)

> Procedure

Evaluating the zIIP feature (cont.)

> Procedure

Re-Run with zIIP enabled

Education

EC801EN

CA World 08 | discoverability

Re-Run zIIP Enabled

```
PM-R17.0 TECHD120                          CA, Inc.                    V120                          08.162 06:38:37
CMD--> _                                                                                                 Window
                                                                                                         Refresh:
 02 Active User Task Detail
Task      Task      Current Task  Link                    Task  Ecblist First    Second   Third    Stor  Shrd  Shrd  Priv  Pr
Number    Code      Program  Pri Level User_ID  Lterm_ID Status Address ECB      ECB      ECB      #RCE Below    XA Below
59544     *ERUS*    RHDCRUAL 100       SIRJ001 LD000015 WAIT   398C7824 JRNL I/O                   15   128 287kB     0  4
59589     *ERUS*    RHDCRUAL 100       SIRJ001 LD000004 WAIT   00057A68 DBIO RDE                   28   128 307kB     0  4
59581     DCRTMAIN  DCRPMAIN 100               VL500068 WAIT   00054B10 DBIO RDE                    8     0  15kB  7168  8
59567     *ERUS*    DCIDNW01 100       SIRJ001 LD000007 WAIT   00055E00 DBIO WRT                    9   128 125kB     0
59572     *ERUS*    DCIDNW01 100       SIRJ001 LD000017 WAIT   00054E38 DBIO WRT                    9   128 125kB     0
59590     *ERUS*    RHDCRUAL 100       SIRJ001 LD000008 WAIT   00056450 DBIO RDE                   28   128 307kB     0  4
59579     DCRTMAIN  DCRPMAIN 100               VL500073 WAIT   398C7944 JRNL I/O                    8     0  15kB  7168  8
59593     *ERUS*    DCIDNW01 100       SIRJ001 LD000013 WAIT   0005A048 DBIO RDE                   11   128 125kB     0
59564     DCRTMAIN  DCRPMAIN 100               VL500066 WAIT   00056128 DBIO WRT                    9     0  15kB  7168  8
51662     PMRM      PMWNDRVR 252               VL500152 RUN    00000000                            12     0  3968   512  8
59575     *ERUS*    RHDCRUAL 100       SIRJ001 LD000011 WAIT   000596D0 DBIO WRT                   38   128 310kB     0  4
59586     *ERUS*    RHDCRUAL 100       SIRJ001 LD000003 WAIT   00057418 DBIO RDE                   28   128 307kB     0  4
59559     *ERUS*    RHDCRUAL 100       SIRJ001 LD000010 WAIT   398C79D4 JRNL I/O                   13   128 287kB     0  4
59591     *ERUS*    DCIDNW01 100       SIRJ001 LD000020 WAIT   00055160 DBIO RDE                   11   128 125kB     0
59580     DCRTMAIN  DCRPMAIN 100               VL500075 WAIT   398C78D8 JRNL I/O                    8     0  15kB  7168  8
59587     *ERUS*    RHDCRUAL 100       SIRJ001 LD000018 WAIT   00056778 DBIO RDE                   25   128 307kB     0  4
59574     DCRTMAIN  DCRPMAIN 100               VL500056 WAIT   00056AA0 DBIO RDE                    8     0  15kB  7168  8
59565     DCRTMAIN  DCRPMAIN 100               VL500061 WAIT   000547E8 DBIO WRT                    8     0  15kB  7168  8
59585     DCRTMAIN  DCRPMAIN 100               VL500074 WAIT   000557B0 DBIO RDE                    8     0  15kB  7168  8
59583     *ERUS*    RHDCRUAL 100       SIRJ001 LD000006 WAIT   00057740 DBIO WRT                   41   128 317kB     0  4
59597     DCRTMAIN  DCRPMAIN 100               VL500065 WAIT   00059D20 DBIO RDE                    8     0  15kB  7168  8
```

  CA World 08

  Transforming IT Management

Re-Run zIIP Enabled

```
     D AC TAS
           Current max tasks       133
          Times at max tasks         0
           Allocated DCE/TCE       241
       Number of tasks abended       3
     Number of tasks processed     72945
        Number of tasks active        35

  Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000000000 *SYSTEM* *MASTER*         255 WAIT NOST 00052D4C PLESECB
                                                   36325020 LTTMSECB
                                                   003EAA4C Service Task ECB
0000000001 *SYSTEM* *DBRC*           255 WAIT NOST 00086A08 DBRC WTOR ECB
                                                   355CE368 ESEECB
                                                   00027FA4 CCEECB
                                                   000280C4 CCEECB
                                                   00028188 CCEECB
                                                   00028214 CCEECB
                                                   000281E0 CCEECB
0000000014 *DRIVER* UCFLINE          254 WAIT NOST 0005284C PLESECB
0000000015 *DRIVER* VTAM             254 WAIT NOST 00052ACC PLESECB
                                                   00635434 VTAM READ INIT ECB
0000000016 *DRIVER* SYSOUTL          254 WAIT NOST 00052E4C PLESECB
0000000018 *DRIVER* VTAMLIM1         254 WAIT NOST 0005394C PLESECB
                                                   0063E434 VTAM READ INIT ECB
0000000002 *DRIVER* RHDCRUSD         253 WAIT NOST 3644D890 SERVICE DRIVER ECB
            PAGE 00001 - NEXT PAGE: _
```


Re-Run zIIP Enabled

```
  Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
                                                   3991BD0C TIMER ECB
0000000003 *DRIVER* RHDCRUSD         253 WAIT NOST 3644D910 SERVICE DRIVER ECB
                                                   3991E18C TIMER ECB
0000000004 *DRIVER* RHDCRUSD         253 WAIT NOST 3644D990 SERVICE DRIVER ECB
                                                   3992110C TIMER ECB
0000000005 *DRIVER* RHDCRUSD         253 WAIT NOST 3644DA10 SERVICE DRIVER ECB
                                                   39922E8C TIMER ECB
0000000006 *DRIVER* RHDCRUSD         253 WAIT NOST 3644DA90 SERVICE DRIVER ECB
                                                   39924C0C TIMER ECB
0000000007 *DRIVER* RHDCRUSD         253 WAIT NOST 3644DC10 SERVICE DRIVER ECB
                                                   3992698C TIMER ECB
0000000008 *DRIVER* RHDCLGSD         253 WAIT NOST 3644DE90 SERVICE DRIVER ECB
0000000009 *DRIVER* RHDCLGSD         253 WAIT NOST 3644DF10 SERVICE DRIVER ECB
0000000010 *DRIVER* RHDCLGSD         253 WAIT NOST 3644DF90 SERVICE DRIVER ECB
0000000011 *DRIVER* PMONCIOD         253 WAIT NOST 3644E010 SERVICE DRIVER ECB
                                                   0031014C PERFMON SERVICE DRV
                                                   00310164 PERFMON SERVICE DRV
                                                   00310158 PERFMON SERVICE DRV
0000000013 *DRIVER* RHDCDEAD         253 WAIT NOST 3992C6CC ICEECB
                                                   3644E110 SERVICE DRIVER ECB
0000000012 *DRIVER* PMONCROL         253 WAIT NOST 0031011C ICEECB
                                                   00310128 ICEECB
                                                   00310134 PERFMON SERVICE DRV
0000000019 *DRIVER* RHDCPRNT         253 WAIT NOST 3996DAAC PRTSECB
0000072945 DCMT     RHDCMT00 VL500152 225 ACTV
            PAGE 00002 - NEXT PAGE: _
```


Re-Run zIIP Enabled

```
 Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000072537 DCRTMAIN DCRPMAIN VL500061 100 WAIT 0180 00413E54 LTXNLOCK
0000072535 DCRTMAIN DCRPMAIN VL500067 100 WAIT 0180 0040B8D4 LTXNLOCK
0000072932 DCRTMAIN                   100 WAIT
0000072933 DCRTMAIN                   100 WAIT
0000072938 DCRTMAIN DCRPMAIN VL500074 100 WAIT 0180 00054E38 DBIO WRITE ECB
0000072937 DCRTMAIN DCRPMAIN VL500075 100 WAIT 0180 398C79BC DBIO JRNL WRITE ECB
0000072936 DCRTMAIN DCRPMAIN VL500052 100 WAIT 0180 398C7974 DBIO JRNL WRITE ECB
0000072935 DCRTMAIN DCRPMAIN VL500068 100 WAIT 0180 398C79BC DBIO JRNL WRITE ECB
0000072934 DCRTMAIN DCRPMAIN VL500073 100 WAIT 0180 363EC920 PTERECB
0000072940 DCRTMAIN DCRPMAIN VL500041 100 WAIT 0180 000547E8 DBIO WRITE ECB
0000072939 DCRTMAIN DCRPMAIN VL500062 100 WAIT 0180 00055160 DBIO WRITE ECB
0000072944 DCRTMAIN DCRPMAIN VL500069 100 WAIT 0180 398C79BC DBIO JRNL WRITE ECB
0000072943 DCRTMAIN DCRPMAIN VL500063 100 WAIT 0180 398C798C DBIO JRNL WRITE ECB
0000072942 DCRTMAIN DCRPMAIN VL500076 100 WAIT 0180 398C7974 DBIO JRNL WRITE ECB
0000072941 DCRTMAIN DCRPMAIN VL500064 100 WAIT 0180 00054B10 DBIO READ ECB
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
-

           PAGE 00003 - NEXT PAGE:
```


Re-Run zIIP Enabled

```
     D STAT SYS
  13:46:39.79 08/241 Current Time       00:01:59.08 Tot Sys Time
  13:42:58.94 08/241 Startup Time       00:00:06.80 Tot User Time

TASKS:          80438 Processed             9 Abended              133 Max Tasks
                  843 System                0 Runaway            53034 Times At Max
                   53 Deadlocks            27 Dead Victims

TRANS:          88500 Processed         88438 Norm Cmp    168 Max Conc
                19053 Ext Proc          19053 Ext Norm     20 Ext Conc    160 Max Erus
                    0 Dist Proc             0 Dist Norm     0 Dist Conc

DATABASE:     1733948 Calls            842640 Pages Rqst       1679859 Recs Rqst
                    0 Buff Wait       749001 Pages Read        545346 Recs Cur R/U
               175158 Page Writ            0 Calc Noflo          78056 Via Noflo
              2249357 Tot Locks            0 Calc Ovflo            315 Via Ovflo
                                           0 Frag Stord              0 Recs Reloc
    INDEX:          0 SR8 Splits           0 SR8 Stores              0 SR7 Stores
                    0 SR8 Spawns           0 SR8 Erases              0 SR7 Erases
                    0 Orph Adopt       60120 Ix Searches             1 Min Level
                                       70756 Lvls Srchd              2 Max Level
       SQL:     109388 Commands        27347 Tupls Fetched        9120 Rows Inserted
                    0 AM Recomp        27333 Rows Updated            0 Rows Deleted
                                           0 Sorts                   0 Sort Min
                                           0 Tuples Sorted           0 Sort Max

               PAGE 00001 - NEXT PAGE:
```

```
     D STAT SYS
  13:57:36.60 08/241 Current Time       00:01:46.83 Tot Sys Time
  13:54:23.00 08/241 Startup Time       00:00:07.67 Tot User Time

TASKS:          80752 Processed             3 Abended              133 Max Tasks
                  688 System                0 Runaway                1 Times At Max
                   18 Deadlocks             9 Dead Victims

TRANS:          89841 Processed         89797 Norm Cmp    140 Max Conc
                19812 Ext Proc          19812 Ext Norm     20 Ext Conc    160 Max Erus
                    0 Dist Proc             0 Dist Norm     0 Dist Conc

DATABASE:     1781601 Calls            869309 Pages Rqst       1760034 Recs Rqst
                    0 Buff Wait       156694 Pages Read        566126 Recs Cur R/U
               177629 Page Writ            0 Calc Noflo          79548 Via Noflo
              2338094 Tot Locks            0 Calc Ovflo            341 Via Ovflo
                                           0 Frag Stord              0 Recs Reloc
    INDEX:          0 SR8 Splits           0 SR8 Stores              0 SR7 Stores
                    0 SR8 Spawns           0 SR8 Erases              0 SR7 Erases
                    0 Orph Adopt       60084 Ix Searches             1 Min Level
                                       70720 Lvls Srchd              2 Max Level
       SQL:     117956 Commands        29489 Tupls Fetched        9831 Rows Inserted
                    0 AM Recomp        29485 Rows Updated            0 Rows Deleted
                                           0 Sorts                   0 Sort Min
                                           0 Tuples Sorted           0 Sort Max

               PAGE 00001 - NEXT PAGE: _
```


Re-Run zIIP Enabled

```
JOURNAL:                0 Buff Waits                0 User Putjrnl
  Page       10  0-10      775 11-20      178 21-30      249 31-40      266 41-50
  Dist      171 51-60      195 61-70      154 71-80     4279 81-90    85471 91-100

INTERNAL:         RLEs     RCEs     DPEs   Stack
                  2959     2601     1320     995 HVM
                 10000    10000     3000    2000 Sysgen Threshold
                     0        0        0         Times Exceeded

STORAGE:       5457676 Gets          5361567 Frees          Gets for type
                     0 PGFIXs              0 PGFREEs          1444621 DB
                     0 Pages Fxd           0 Pages Freed           18 SHR
                3371292 Scan 1             0 PGRLSEs                0 SHR
                2086384 Scan 2             0 Pages Relsd      2695027 SYS
                                                                  196 USR
                     0 SOS COUNT                             1317814 USR

PROGRAM:                Act Loads  Pages Load  Wait/Space
          Non-Reent             2           3           0
              Reent            35        1550           0
        XA Non-Reent            2          18           0
             XA Reent         255       24439           0

SCRATCH:               0 Gets          1 Puts          0 Dels
  QUEUE:               3 Gets          0 Puts          0 Dels          0 Task AutoSt

                PAGE 00002 - NEXT PAGE: _
```

```
JOURNAL:                0 Buff Waits                0 User Putjrnl
  Page       54  0-10      455 11-20       87 21-30      116 31-40      137 41-50
  Dist       88 51-60       89 61-70       67 71-80     2189 81-90    89311 91-100

INTERNAL:         RLEs     RCEs     DPEs   Stack
                  2512     2204     1226     995 HVM
                 10000    10000     3000    2000 Sysgen Threshold
                     0        0        0         Times Exceeded

STORAGE:       5804104 Gets          5712139 Frees          Gets for type
                     0 PGFIXs              0 PGFREEs          1546460 DB
                     0 Pages Fxd           0 Pages Freed           18 SHR
                3559612 Scan 1             0 PGRLSEs                0 SHR
                2244552 Scan 2             0 Pages Relsd      2863998 SYS
                                                                  150 USR
                     0 SOS COUNT                             1393538 USR

PROGRAM:                Act Loads  Pages Load  Wait/Space
          Non-Reent             2           3           0
              Reent            35        1550           0
        XA Non-Reent            2          18           0
             XA Reent         255       24439           0

SCRATCH:               0 Gets          1 Puts          0 Dels
  QUEUE:               3 Gets          0 Puts          0 Dels          0 Task AutoSt

                PAGE 00002 - NEXT PAGE:
```

Prior Run

CA World '08

Re-Run zIIP Enabled

```
    D SUBT 1
*** Display Subtask details ***
                      Name  MAINTASK
                    Number  01
                    Status  BUSY
                 Work type  IDMS
              Count wakeups  32,331
       Count task dispatches  1,397,592
          User mode CPU time  00:00:06.8068
        System mode CPU time  00:01:59.0990
        CPU effectiveness (%)  86
      Count times fast posted  398,758
        Count times OS posted  00
      Count found work pass 1  914,790
      Count found work pass 2  482,802
  Count times POSTEXIT resumed  32,277
                  *** Enclave Info ***
                 zIIP time  00:00:30.0936
           zIIP on CP time  00:00:00.0269
        CPU effectiveness (%)  103
          Count swap attempts  7,337,024
           Count actual swaps  5,801,778
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
```

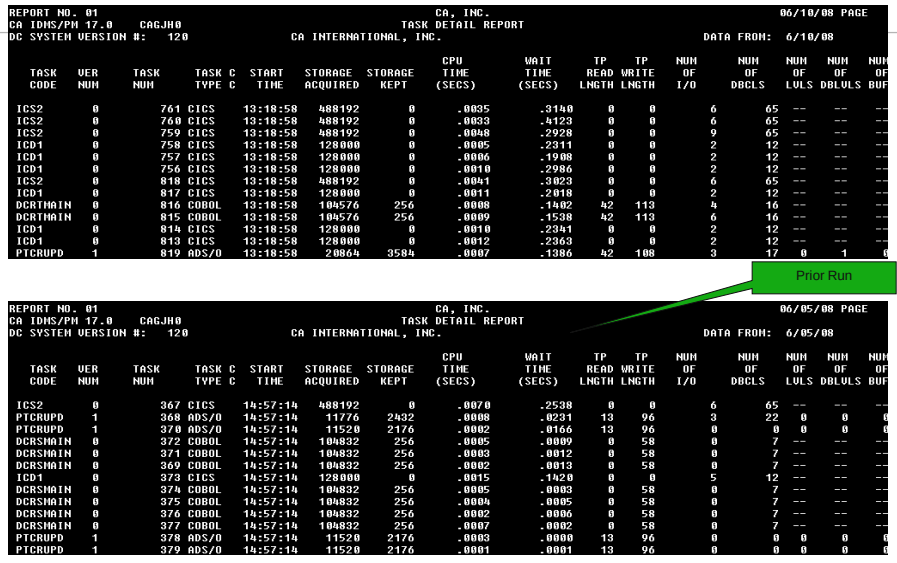
Total System Mode CPU used is 119 Seconds

30 Seconds of the System Mode CPU time used ran on the zIIP engine. Approximately 25% of the CPU usage was moved from the CP to the zIIP

CA World '08

Transforming IT Management

Post Process Monitoring (PMA Report 1)

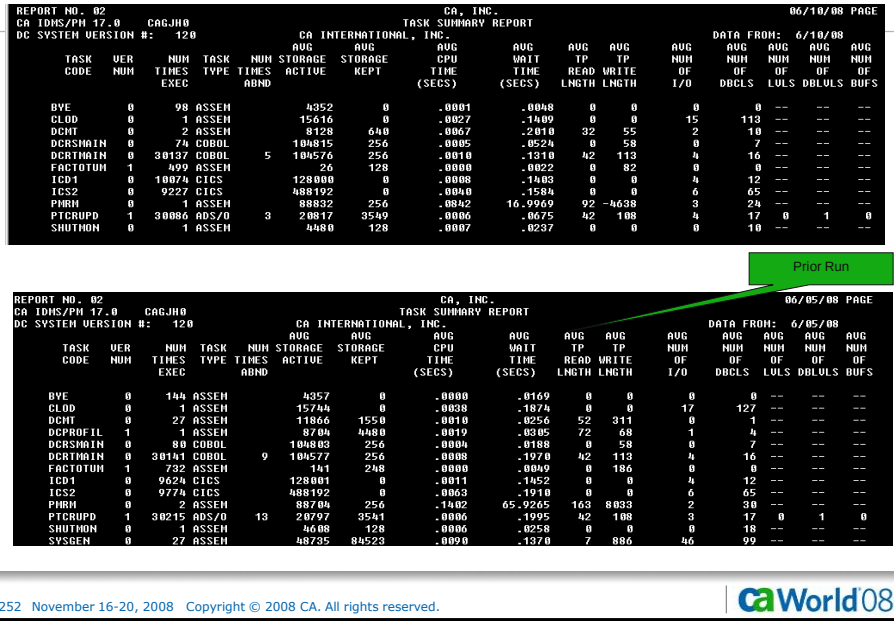


```
REPORT NO. 01                                   CA, INC.                                   06/10/08 PAGE
CA IDMS/PM 17.0    CAGJH0                     TASK DETAIL REPORT
DC SYSTEM VERSION #:   120                CA INTERNATIONAL, INC.                    DATA FROM:  6/10/08

   TASK    VER     TASK     TASK C  START    STORAGE  STORAGE     CPU      WAIT     TP     TP    NUM      NUM     NUM    NUM    NUM
   CODE    NUM     NUM      TYPE C   TIME    ACQUIRED   KEPT    TIME     TIME   READ  WRITE   OF       OF      OF     OF     OF
                                                                (SECS)   (SECS)  LNGTH  LNGTH  I/O      DBCLS   LVLS  DBLVLS BUF

 ICS2       0        761 CICS    13:18:58    488192       0     .0035    .3140      0      0      6       65   --     --     --
 ICS2       0        760 CICS    13:18:58    488192       0     .0033    .4123      0      0      6       65   --     --     --
 ICS2       0        759 CICS    13:18:58    488192       0     .0048    .2928      0      0      9       65   --     --     --
 ICD1       0        758 CICS    13:18:58    128000       0     .0005    .2311      0      0      2       12   --     --     --
 ICD1       0        757 CICS    13:18:58    128000       0     .0006    .1908      0      0      2       12   --     --     --
 ICD1       0        756 CICS    13:18:58    128000       0     .0010    .2986      0      0      2       12   --     --     --
 ICS2       0        818 CICS    13:18:58    488192       0     .0041    .3023      0      0      6       65   --     --     --
 ICD1       0        817 CICS    13:18:58    128000       0     .0011    .2018      0      0      2       12   --     --     --
 DCRTMAIN   0        816 COBOL   13:18:58    104576     256     .0008    .1402     42    113      4       16   --     --     --
 DCRTMAIN   0        815 COBOL   13:18:58    104576     256     .0009    .1538     42    113      6       16   --     --     --
 ICD1       0        814 CICS    13:18:58    128000       0     .0010    .2341      0      0      2       12   --     --     --
 ICD1       0        813 CICS    13:18:58    128000       0     .0012    .2363      0      0      2       12   --     --     --
 PTCRUPD    1        819 ADS/O   13:18:58     20864    3584     .0007    .1386     42    108      3       17    0      1      0
```

Prior Run

```
REPORT NO. 01                                   CA, INC.                                   06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                     TASK DETAIL REPORT
DC SYSTEM VERSION #:   120                CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

   TASK    VER     TASK     TASK C  START    STORAGE  STORAGE     CPU      WAIT     TP     TP    NUM      NUM     NUM    NUM    NUM
   CODE    NUM     NUM      TYPE C   TIME    ACQUIRED   KEPT    TIME     TIME   READ  WRITE   OF       OF      OF     OF     OF
                                                                (SECS)   (SECS)  LNGTH  LNGTH  I/O      DBCLS   LVLS  DBLVLS BUF

 ICS2       0        367 CICS    14:57:14    488192       0     .0070    .2538      0      0      6       65   --     --     --
 PTCRUPD    1        368 ADS/O   14:57:14     11776    2432     .0008    .0231     13     96      3       22    0      0      0
 PTCRUPD    1        370 ADS/O   14:57:14     11520    2176     .0002    .0166     13     96      0        0    0      0      0
 DCRSMAIN   0        372 COBOL   14:57:14    104832     256     .0005    .0009      0     58      0        7   --     --     --
 DCRSMAIN   0        371 COBOL   14:57:14    104832     256     .0003    .0012      0     58      0        7   --     --     --
 DCRSMAIN   0        369 COBOL   14:57:14    104832     256     .0002    .0013      0     58      0        7   --     --     --
 ICD1       0        373 CICS    14:57:14    128000       0     .0015    .1420      0      0      5       12   --     --     --
 DCRSMAIN   0        374 COBOL   14:57:14    104832     256     .0005    .0003      0     58      0        7   --     --     --
 DCRSMAIN   0        375 COBOL   14:57:14    104832     256     .0004    .0005      0     58      0        7   --     --     --
 DCRSMAIN   0        376 COBOL   14:57:14    104832     256     .0002    .0006      0     58      0        7   --     --     --
 DCRSMAIN   0        377 COBOL   14:57:14    104832     256     .0007    .0002      0     58      0        7   --     --     --
 PTCRUPD    1        378 ADS/O   14:57:14     11520    2176     .0003    .0000     13     96      0        0    0      0      0
 PTCRUPD    1        379 ADS/O   14:57:14     11520    2176     .0001    .0001     13     96      0        0    0      0      0
```


Post Process Monitoring (PMA Report 2)

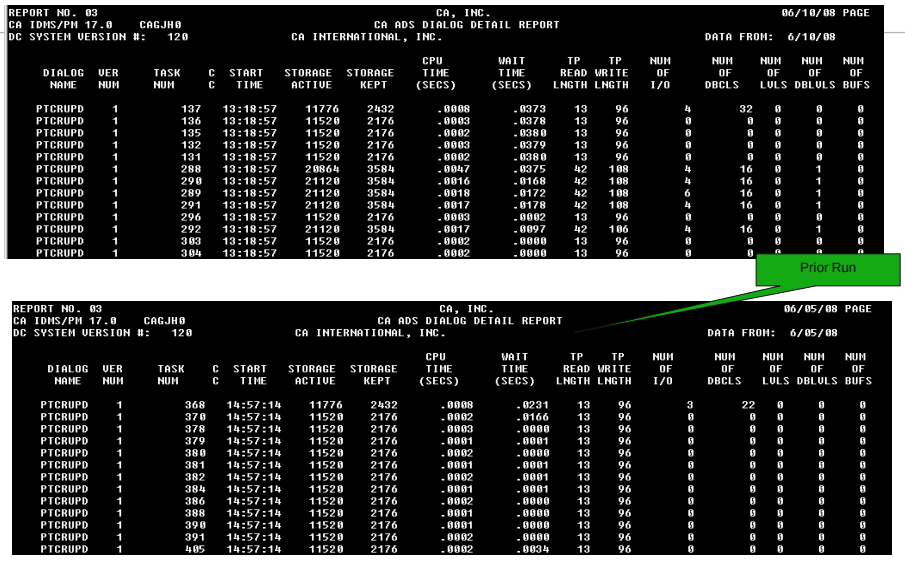


```
REPORT NO. 02                                   CA, INC.                                   06/10/08 PAGE
CA IDMS/PM 17.0    CAGJH0                     TASK SUMMARY REPORT
DC SYSTEM VERSION #:   120                CA INTERNATIONAL, INC.                    DATA FROM:  6/10/08

                                          AVG      AVG      AVG      AVG      AVG      AVG      AVG      AVG      AVG      AVG      AVG
      TASK    VER      NUM  TASK    NUM STORAGE  STORAGE    CPU      WAIT      TP       TP      NUM      NUM      NUM      NUM      NUM
      CODE    NUM    TIMES  TYPE  TIMES  ACTIVE    KEPT     TIME     TIME    READ    WRITE    OF       OF       OF       OF       OF
                     EXEC         ABND                     (SECS)   (SECS)  LNGTH   LNGTH   I/O      DBCLS    LVLS   DBLVLS   BUFS

    BYE         0       98 ASSEM          4352        0     .0001    .0048      0       0       0        0   --     --     --
    CLOD        0        1 ASSEM         15616        0     .0027    .1400      0       0      15      113   --     --     --
    DCMT        0        2 ASSEM          8128      640     .0067    .2010     32      55       2       10   --     --     --
    DCRSMAIN    0       74 COBOL        104815      256     .0005    .0524      0      58       0        7   --     --     --
    DCRTMAIN    0    30137 COBOL     5  104576      256     .0010    .1310     42     113       4       16   --     --     --
    FACTOTUN    1      499 ASSEM           26      128     .0000    .0022      0      82       0        0   --     --     --
    ICD1        0    10074 CICS          128000        0     .0008    .1403      0       0       4       12   --     --     --
    ICS2        0     9227 CICS          488192        0     .0040    .1584      0       0       6       65   --     --     --
    PMRM        0        1 ASSEM          88832      256     .0042   16.9969     92   -4638       3       29   --     --     --
    PTCRUPD     1    30086 ADS/O     3    20817     3549     .0006    .0675     42     108       4       17    0      1      0
    SHUTMON     0        1 ASSEM           4480      128     .0007    .0237      0       0       0       10   --     --     --
```

Prior Run

```
REPORT NO. 02                                   CA, INC.                                   06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                     TASK SUMMARY REPORT
DC SYSTEM VERSION #:   120                CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

                                          AVG      AVG      AVG      AVG      AVG      AVG      AVG      AVG      AVG      AVG      AVG
      TASK    VER      NUM  TASK    NUM STORAGE  STORAGE    CPU      WAIT      TP       TP      NUM      NUM      NUM      NUM      NUM
      CODE    NUM    TIMES  TYPE  TIMES  ACTIVE    KEPT     TIME     TIME    READ    WRITE    OF       OF       OF       OF       OF
                     EXEC         ABND                     (SECS)   (SECS)  LNGTH   LNGTH   I/O      DBCLS    LVLS   DBLVLS   BUFS

    BYE         0      144 ASSEM          4357        0     .0000    .0169      0       0       0        0   --     --     --
    CLOD        0        1 ASSEM         15744        0     .0038    .1874      0       0      17      127   --     --     --
    DCMT        0       27 ASSEM         11866     1550     .0010    .0256     52     311       0        1   --     --     --
    DCPROFIL    1        1 ASSEM          8704     4480     .0019    .0305     72      68       1        4   --     --     --
    DCRSMAIN    0       80 COBOL        104803      256     .0004    .0188      0      58       0        7   --     --     --
    DCRTMAIN    0    30141 COBOL     9  104577      256     .0008    .1970     42     113       4       16   --     --     --
    FACTOTUN    1      732 ASSEM          141      248     .0000    .0049      0     186       0        0   --     --     --
    ICD1        0     9624 CICS          128001        0     .0011    .1452      0       0       4       12   --     --     --
    ICS2        0     9774 CICS          488192        0     .0063    .1910      0       0       6       65   --     --     --
    PMRM        0        2 ASSEM          88704      256     .1402   65.9265    163    8033       2       30   --     --     --
    PTCRUPD     1    30215 ADS/O    13    20797     3541     .0006    .1995     42     108       3       17    0      1      0
    SHUTMON     0        1 ASSEM           4608      128     .0006    .0258      0       0       0       18   --     --     --
    SYSGEN      0       27 ASSEM          48735    84523     .0090    .1370      7     886      46       99   --     --     --
```


Post Process Monitoring (PMA Report 3)

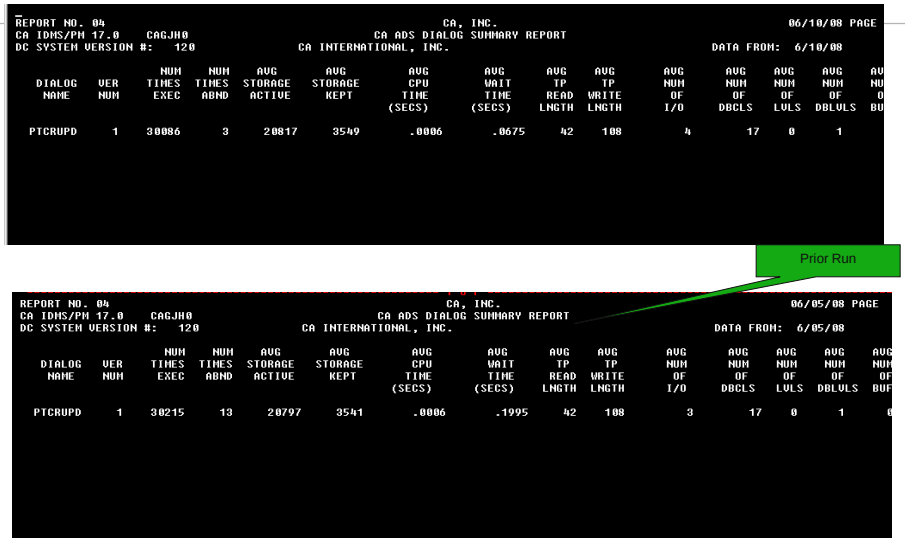


```
REPORT NO. 03                                CA, INC.                                06/10/08 PAGE
CA IDMS/PM 17.0    CAGJH0                CA ADS DIALOG DETAIL REPORT
DC SYSTEM VERSION #:   120             CA INTERNATIONAL, INC.                  DATA FROM:  6/10/08

                                                  CPU        WAIT      TP      TP     NUM      NUM     NUM     NUM     NUM
   DIALOG   VER      TASK     C  START    STORAGE  STORAGE    TIME      TIME    READ   WRITE    OF       OF      OF      OF      OF
    NAME    NUM      NUM      C   TIME     ACTIVE    KEPT    (SECS)    (SECS)  LNGTH  LNGTH    I/O      DBCLS   LVLS    DBLVLS  BUFS

  PTCRUPD     1        137   13:18:57      11776    2432      .0008     .0373     13     96       4        32      0       0       0
  PTCRUPD     1        136   13:18:57      11520    2176      .0003     .0378     13     96       0         0      0       0       0
  PTCRUPD     1        135   13:18:57      11520    2176      .0002     .0380     13     96       0         0      0       0       0
  PTCRUPD     1        132   13:18:57      11520    2176      .0003     .0379     13     96       0         0      0       0       0
  PTCRUPD     1        131   13:18:57      11520    2176      .0002     .0380     13     96       0         0      0       0       0
  PTCRUPD     1        288   13:18:57      20864    3584      .0047     .0375     42    108       4        16      0       1       0
  PTCRUPD     1        290   13:18:57      21120    3584      .0016     .0168     42    108       4        16      0       1       0
  PTCRUPD     1        289   13:18:57      21120    3584      .0018     .0172     42    108       6        16      0       1       0
  PTCRUPD     1        291   13:18:57      21120    3584      .0017     .0178     42    108       4        16      0       1       0
  PTCRUPD     1        296   13:18:57      11520    2176      .0003     .0002     13     96       0         0      0       0       0
  PTCRUPD     1        292   13:18:57      21120    3584      .0017     .0097     42    106       4        16      0       1       0
  PTCRUPD     1        303   13:18:57      11520    2176      .0002     .0000     13     96       0         0      0       0       0
  PTCRUPD     1        304   13:18:57      11520    2176      .0002     .0000     13     96       0         0      0       0       0
```

Prior Run

```
REPORT NO. 03                                CA, INC.                                06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                CA ADS DIALOG DETAIL REPORT
DC SYSTEM VERSION #:   120             CA INTERNATIONAL, INC.                  DATA FROM:  6/05/08

                                                  CPU        WAIT      TP      TP     NUM      NUM     NUM     NUM     NUM
   DIALOG   VER      TASK     C  START    STORAGE  STORAGE    TIME      TIME    READ   WRITE    OF       OF      OF      OF      OF
    NAME    NUM      NUM      C   TIME     ACTIVE    KEPT    (SECS)    (SECS)  LNGTH  LNGTH    I/O      DBCLS   LVLS    DBLVLS  BUFS

  PTCRUPD     1        368   14:57:14      11776    2432      .0008     .0231     13     96       3        22      0       0       0
  PTCRUPD     1        370   14:57:14      11520    2176      .0002     .0166     13     96       0         0      0       0       0
  PTCRUPD     1        378   14:57:14      11520    2176      .0003     .0000     13     96       0         0      0       0       0
  PTCRUPD     1        379   14:57:14      11520    2176      .0001     .0001     13     96       0         0      0       0       0
  PTCRUPD     1        380   14:57:14      11520    2176      .0002     .0000     13     96       0         0      0       0       0
  PTCRUPD     1        381   14:57:14      11520    2176      .0001     .0001     13     96       0         0      0       0       0
  PTCRUPD     1        382   14:57:14      11520    2176      .0002     .0001     13     96       0         0      0       0       0
  PTCRUPD     1        384   14:57:14      11520    2176      .0001     .0001     13     96       0         0      0       0       0
  PTCRUPD     1        386   14:57:14      11520    2176      .0002     .0000     13     96       0         0      0       0       0
  PTCRUPD     1        388   14:57:14      11520    2176      .0001     .0000     13     96       0         0      0       0       0
  PTCRUPD     1        390   14:57:14      11520    2176      .0001     .0000     13     96       0         0      0       0       0
  PTCRUPD     1        391   14:57:14      11520    2176      .0002     .0000     13     96       0         0      0       0       0
  PTCRUPD     1        405   14:57:14      11520    2176      .0002     .0034     13     96       0         0      0       0       0
```


Post Process Monitoring (PMA Report 4)

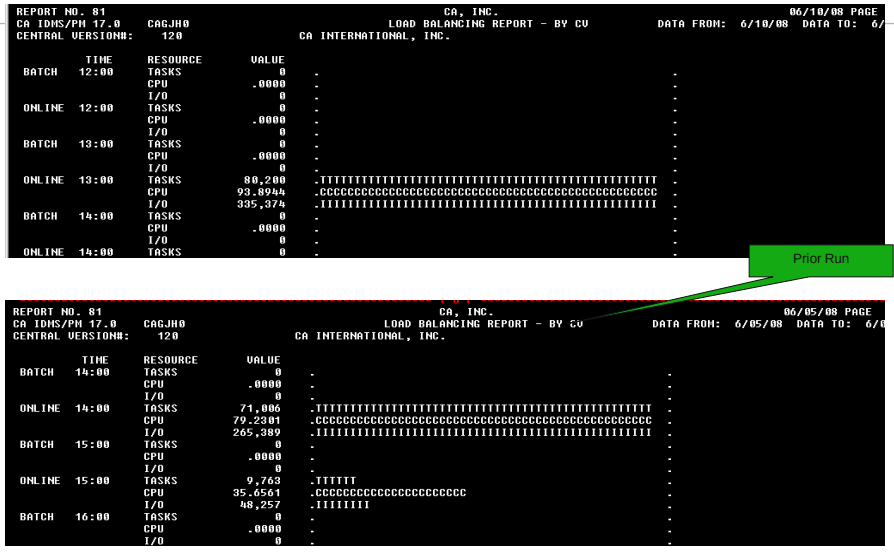


```
REPORT NO. 04                                CA, INC.                                06/10/08 PAGE
CA IDMS/PM 17.0    CAGJH0                CA ADS DIALOG SUMMARY REPORT
DC SYSTEM VERSION #:   120             CA INTERNATIONAL, INC.                  DATA FROM:  6/10/08

                    NUM      NUM      AVG      AVG      AVG      AVG      AVG      AVG      AVG      AVG      AVG      AVG      AV
   DIALOG   VER     TIMES    TIMES    STORAGE  STORAGE  CPU      WAIT     TP       TP       NUM      NUM      NUM      NUM      NU
    NAME    NUM     EXEC     ABND     ACTIVE   KEPT     TIME     TIME     READ     WRITE    OF       OF       OF       OF       O
                                                         (SECS)   (SECS)   LNGTH    LNGTH    I/O      DBCLS    LVLS     DBLVLS   BU

  PTCRUPD     1    30086        3     20817    3549      .0006     .0675       42      108        4       17        0        1
```

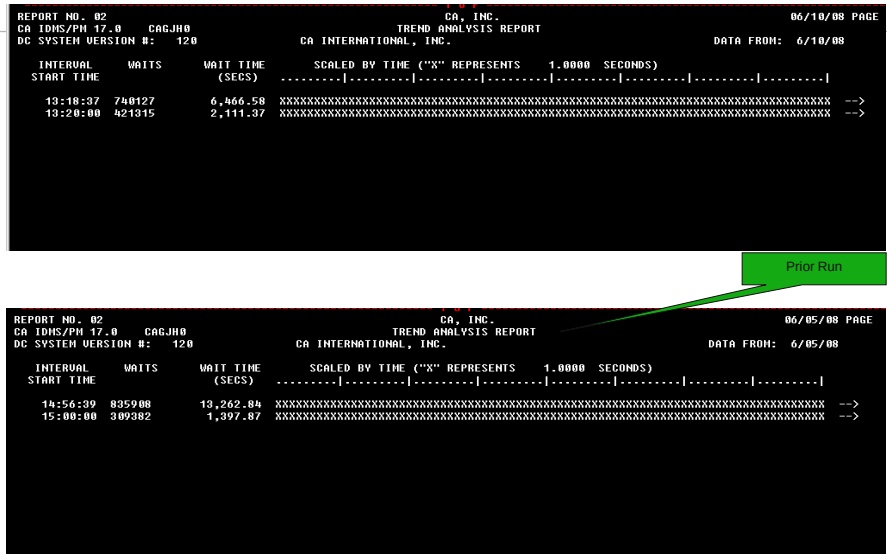
Prior Run

```
REPORT NO. 04                                CA, INC.                                06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                CA ADS DIALOG SUMMARY REPORT
DC SYSTEM VERSION #:   120             CA INTERNATIONAL, INC.                  DATA FROM:  6/05/08

                    NUM      NUM      AVG      AVG      AVG      AVG      AVG      AVG      AVG      AVG      AVG      AVG      AV
   DIALOG   VER     TIMES    TIMES    STORAGE  STORAGE  CPU      WAIT     TP       TP       NUM      NUM      NUM      NUM      NU
    NAME    NUM     EXEC     ABND     ACTIVE   KEPT     TIME     TIME     READ     WRITE    OF       OF       OF       OF       O
                                                         (SECS)   (SECS)   LNGTH    LNGTH    I/O      DBCLS    LVLS     DBLVLS   BU

  PTCRUPD     1    30215       13     20797    3541      .0006     .1995       42      108        3       17        0        1        0
```


Post Process Monitoring (PMA Report 81)



Post Process Monitoring (PMI Report 2)



Post Process Monitoring (PMI Report 13)

```
REPORT NO. 13                                CA, INC.                                    06/10/08 PAGE
CA IDMS/PM 17.0    CAGJH0                BUFFER SUMMARY REPORT
DC SYSTEM VERSION #:   120            CA INTERNATIONAL, INC.                    DATA FROM:  6/10/08

                                                    HIT       BUFR      I/O    AVERAGE          BUFFER   AVERAGE   B
  START        BUFFER          BUFR     BUFR      BUFR     RATIO      DISK    WAIT TIME I/O TIME  BUFR WAIT TIME WAIT TIME  P
   TIME         NAME          RQSTS    FLSHS     HITS       (%)       I/O      (SECS)   (SECS)  WAITS   (SECS)    (SECS)   S

 13:18:37 DBCR_ACCT_BUFFER     126667        0    92423     73.0     76332     100.632   .0013                              2
          DBCR_ACOPY_BUFFER         1        0        0       .0         0                                                  2
          DBCR_BCOPY_BUFFER         1        0        0       .0         0                                                  4
          DBCR_BRCH_BUFFER     174160        0   128544     73.8     92805     104.177   .0011                              4
          DBCRSQL_AC_BUFFER     39014        0    33160     85.0     12264      14.168   .0012                              2
          DBCRSQL_BR_BUFFER     37071        0    26541     71.6     22728      25.780   .0011                              4
          DEFAULT_BUFFER         1342        0      262     19.5        55        .525   .0095                              8
          DLOCSCR_BUFFER            0                0                0                                                          4
          LOG_BUFFER                0                0                0                                                          4
          SYSSQL_BUFFER        154051        0   154035    100.0        13        .053   .0040                              4
 13:20:00 DBCR_ACCT_BUFFER      84117        0    59390     70.6     52786     70.277   .0013                              2
```

Prior Run

```
REPORT NO. 13                                CA, INC.                                    06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                BUFFER SUMMARY REPORT
DC SYSTEM VERSION #:   120            CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

                                                    HIT       BUFR      I/O    AVERAGE          BUFFER   AVERAGE   BU
  START        BUFFER          BUFR     BUFR      BUFR     RATIO      DISK    WAIT TIME I/O TIME  BUFR WAIT TIME WAIT TIME  PA
   TIME         NAME          RQSTS    FLSHS     HITS       (%)       I/O      (SECS)   (SECS)  WAITS   (SECS)    (SECS)   SI

 14:56:39 DBCR_ACCT_BUFFER     195670        0   165015     84.3     95520     276.383   .0029                              29
          DBCR_ACOPY_BUFFER         1        0        0       .0         0                                                  29
          DBCR_BCOPY_BUFFER         1        0        0       .0         0                                                  40
          DBCR_BRCH_BUFFER     267691        0   198398     74.1    141593     481.248   .0028                              40
          DBCRSQL_AC_BUFFER     30017        0    25478     84.9      9479      35.875   .0038                              29
          DBCRSQL_BR_BUFFER     28434        0    20325     71.5     17530      42.994   .0025                              40
          DEFAULT_BUFFER         1770        0      681     38.5        64        .392   .0061                              81
          DLOCSCR_BUFFER            0                0                0                                                          46
          LOG_BUFFER                0                0                0                                                          42
          SYSSQL_BUFFER        118540        0   118524    100.0        13        .085   .0066                              42
```


Post Process Monitoring (PMI Report 15)

```
REPORT NO. 15                                CA, INC.                                    06/10/08 PAGE
CA IDMS/PM 17.0    CAGJH0                JOURNAL SUMMARY REPORT
DC SYSTEM VERSION #:   120            CA INTERNATIONAL, INC.                    DATA FROM:  6/10/08

                                        READ     AVG READ          WRITE    AVG WRITE JOURNAL JRNL BUFR  AVG BUFR BEGIN  EN
  START       JOURNAL       BLOCKS  READ WAIT TIME WAIT TIME WRITE WAIT TIME WAIT TIME  BUFFER WAIT TIME WAIT TIME  JRNL  JR
   TIME        NAME        WRITTEN WAITS   (SECS)    (SECS)  WAITS   (SECS)    (SECS)   WAITS    (SECS)    (SECS)   RBN   RB

 13:18:37 J1JRNL            54482   105      .115      .0011  54482   70.517    .0013       1      .001     .0006     8 544
          J2JRNL
 13:20:00 J1JRNL            25512   138      .295      .0021  25512   67.662    .0027       5      .238     .0476 54492 799
          J2JRNL            13572    27      .014      .0005  13572   13.094    .0010                                79999 135
```

Prior Run

```
REPORT NO. 15                                CA, INC.                                    06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                JOURNAL SUMMARY REPORT
DC SYSTEM VERSION #:   120            CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

                                        READ     AVG READ          WRITE    AVG WRITE JOURNAL JRNL BUFR  AVG BUFR BEGIN  END
  START       JOURNAL       BLOCKS  READ WAIT TIME WAIT TIME WRITE WAIT TIME WAIT TIME  BUFFER WAIT TIME WAIT TIME  JRNL  JRN
   TIME        NAME        WRITTEN WAITS   (SECS)    (SECS)  WAITS   (SECS)    (SECS)   WAITS    (SECS)    (SECS)   RBN   RBN

 14:56:39 J1JRNL            40009   254      .760      .0030  40009  120.216    .0030      63      7.321     .1162     8 3999
          J2JRNL            40018   146      .203      .0014  40018   98.092    .0025                                39999 3999
 15:00:00 J1JRNL            13150    33      .048      .0015  13150   28.491    .0022                                39999 1318
          J2JRNL                     2      .008      .0040                                4     78.477   19.6192
```


TPNS Response Times

Prior Run

> Mean Response Time
- .32 Seconds (All Applications)
  - ADS .10
  - CICS DML .93
  - CICS SQL .94
  - DC Cobol .12

> Number of Respo nses
- 81,226

> Responses Per Minute
- 81,226+

> Mean Response Time
- .32 Seconds (All Applications)
  - ADS .14
  - CICS DML .84
  - CICS SQL .84
  - DC Cobol .14

> Number of Responses
- 81,516

> Responses Per Minute
- 70,893

Multitasking in CA IDMS

Agenda

> What is Multitasking?
> Considerations
> Monitoring
> Benefits and costs

CA World '08

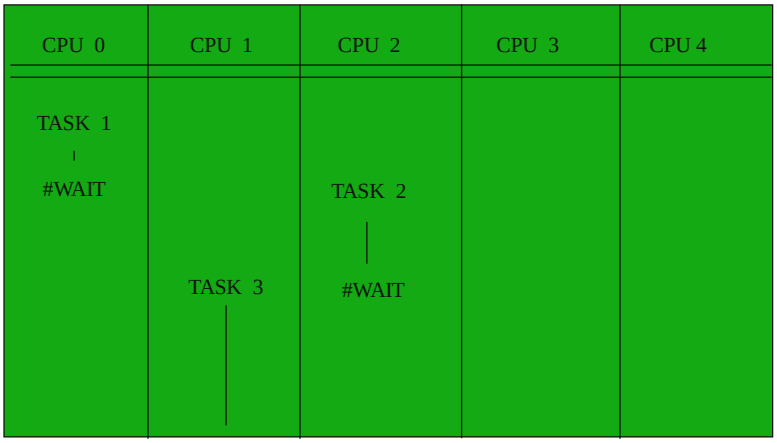
What is Multitasking

> Dispatching in a Unitasking system
> Dispatching in a Multitasking system
> Subtasks
> Modes
> RHDCMODE
> CA IDMS components in MPMODE ANY

CA World '08

What is Multitasking continued

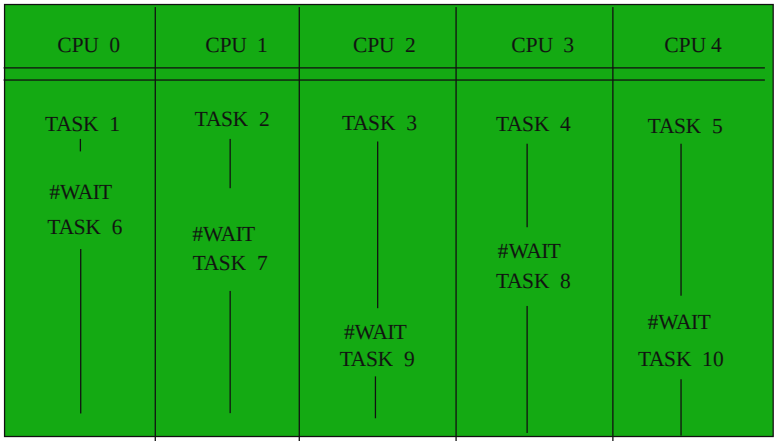
> Dispatching in a Unitasking system



caWorld'08

What is Multitasking continued

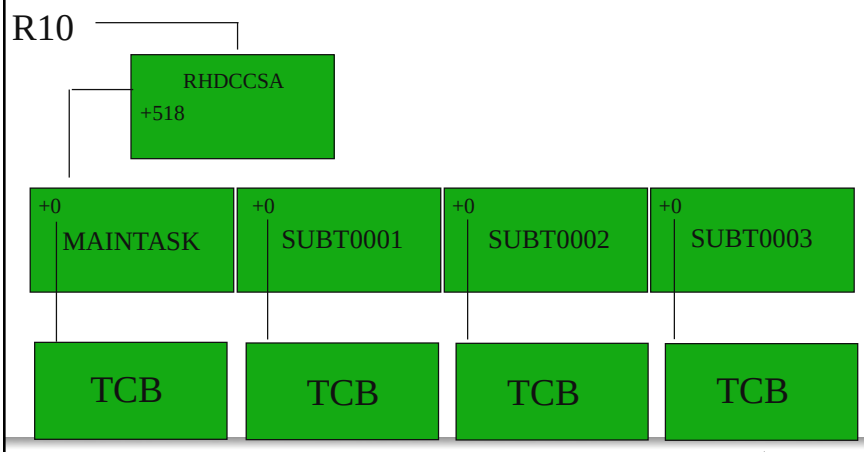
> Dispatching in a Multitasking system



caWorld'08

What is Multitasking continued

> Subtasks



CA World 08

What is Multitasking continued

> Modes

- ANY
- DC
- DB
- USER
- LOADER
- DRIVER
- CALLER

CA World 08

Transforming IT Management

What is Multitasking continued

> RHDCMODE (Mode Manager)

> Multitasking is:

- Not CPU driven
- Driven by number of tasks queued for System Services (Queue Depth)

What is Multitasking continued

> CA IDMS system components running in MPMODE=ANY

- Dispatcher
- Task-local functions
- Storage manager
- Scratch manager
- Database engine
- Security engine

Considerations

> Application Programming concerns
  - Shared Storage

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Considerations continued

> System Exits (RHDCUXIT)

> Database Procedures

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Considerations continued

> Considerations for the DBA

- Program definition statement
  - MPMODE is (ANY or SYSTEM)
  - Protect vs. NoProtect
  - Program pool sizes

Considerations continued

> Considerations for the DBA

- Affinity (Subtask)

Considerations continued

> Considerations for the DBA

- Invoking
  - Freeform parameter (recommended)
    - MT=Y,SUBT=n
  - Positional parameter
    - The letter "M" in the 21st position of the PARM statement following the System number

caWorld'08

Monitoring

> DCMT commands

- DCMT DISPLAY SUBTASK
- DCMT DISPLAY MPMODE
- DCMT DISPLAY MT Q DEPTH
- DCMT VARY MT Q DEPTH
- DCMT D SUBT EFF

> CA IDMS Performance Monitor

caWorld'08

Benefits and Costs

> Increased throughput and a reduction in response time

> The cost is a CPU increase that will vary from site to site

- Higher level of concurrence
- Handling of Multiple subtasks
- RHDCMODE

CA World 08

Re-Run with Multitasking option

Education

EC801EN

CA World 08 | discoverability

Re-Run Turning on Multitasking

```
PM-R17.0 TECHD120                          CA, Inc.                V120                          08.158 11:06:3
CMD-->                                                                                                 Window
                                                                                                       Refresh
_ 02 Active User Task Detail
Task      Task      Current Task  Link                  Task  Ecblist First    Second   Third    Stor  Shrd  Shrd  Priv  P
Number    Code      Program  Pri Level User_ID  Lterm_ID Status  Address ECB      ECB      ECB      #RCE Below    XA Below
18184     DCRTMAIN  DCRPMAIN 100              VL500056 WAIT    0005BD58 DBIO WRT                     11     0  15kB  7168  8
18149     ADS2      PTCRUPD  100              VL500138 WAIT    0005B3E0 DBIO WRT                      7     0  14kB   384  7
18157     DCRTMAIN  DCRPMAIN 100              VL500076 WAIT    0005A0F0 DBIO WRT                      9     0  15kB  7168  8
18152     ADS2      PTCRUPD  100              VL500112 WAIT    398C5414 JRNL I/O                      8     0  15kB   384  7
18178     ADS2      PTCRUPD  100              VL500091 WAIT    398C5450 JRNL I/O                      9     0  15kB   384  7
18206     DCRTMAIN  DCRPMAIN 100              VL500018 WAIT    0005C9F8 DBIO RDE                     10     0  15kB  7168  8
17640     DCRTMAIN  DCRPMAIN 100              VL500071 WAIT    003A45EC DBKEY                        10     0  15kB  7168  8
18168     ADS2      PTCRUPD  100              VL500133 WAIT    398C5468 JRNL I/O                      9     0  15kB   384  7
18179     DCRTMAIN  DCRPMAIN 100              VL500020 WAIT    0005C080 DBIO WRT                      8     0  15kB  7168  8
18153     ADS2      PTCRUPD  100              VL500115 WAIT    398C54F8 JRNL I/O                      8     0  15kB   384  7
18212     *ERUS*             100      SIRJO01  LD000009 WAIT    28B3D688 EREECB                        8   128 115kB     0
18138     *ERUS*    RHDCRUAL 100      SIRJO01  LD000004 WAIT    00058160 DBIO WRT                     38   128 316kB     0  4
18161     DCRTMAIN  DCRPMAIN 100              VL500062 WAIT    398C5534 JRNL I/O                      9     0  15kB  7168  8
16961     *ERUS*    RHDCRUAL 100      SIRJO01  LD000003 WAIT    003A8054 DBKEY                        41   128 316kB     0  4
18201     DCRTMAIN  DCRPMAIN 100              VL500014 WTMODE  366D01B8 DB MODE                       9     0  15kB  7168  8
18182     DCRTMAIN  DCRPMAIN 100              VL500066 WAIT    398C5438 JRNL I/O                     10     0  15kB  7168  8
18185     DCRTMAIN  DCRPMAIN 100              VL500075 WAIT    398C5438 JRNL I/O                     11     0  15kB  7168  8
18155     DCRTMAIN  DCRPMAIN 100              VL500069 WAIT    398C5528 JRNL I/O                      9     0  15kB  7168  8
18113     *ERUS*    RHDCRUAL 100      SIRJO01  LD000008 WAIT    0005AD90 DBIO WRT                     38   128 310kB     0  4
18141     DCRTMAIN  DCRPMAIN 100              VL500022 WAIT    398C54B0 JRNL I/O                      8     0  15kB  7168  8
18166     *ERUS*    DCIDNW01 100      SIRJO01  LD000001 WAIT    398C54F8 JRNL I/O                     11   128 125kB     0
```


Re-Run Turning on Multitasking

```
     D AC TAS
          Current max tasks       133
          Times at max tasks        0
          Allocated DCE/TCE       241
       Number of tasks abended      4
     Number of tasks processed   38571
        Number of tasks active      44

  Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000000000 *SYSTEM* *MASTER*         255 WAIT NOST 00055D4C PLESECB
                                                   363255A0 LTTMSECB
                                                   003871CC Service Task ECB
0000000001 *SYSTEM* *DBRC*           255 WAIT NOST 00089A08 DBRC WTOR ECB
                                                   3517F368 ESEECB
                                                   0002AD84 CCEECB
                                                   0002AEA4 CCEECB
                                                   0002AF68 CCEECB
                                                   0002AFF4 CCEECB
                                                   0002AFC0 CCEECB
0000000014 *DRIVER* UCFLINE          254 WAIT NOST 000584C PLESECB
0000000015 *DRIVER* VTAM             254 WAIT NOST 00055ACC PLESECB
                                                   00635434 VTAM READ INIT ECB
0000000016 *DRIVER* SYSOUTL          254 WAIT NOST 00055E4C PLESECB
0000000018 *DRIVER* VTAMLIN1         254 WAIT NOST 0005694C PLESECB
                                                   0063E434 VTAM READ INIT ECB
0000000002 *DRIVER* RHDCRUSD         253 WAIT NOST 3644DE10 SERVICE DRIVER ECB
```


Re-Run Turning on Multitasking

```
  Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
                                                    3991A08C TIMER ECB
0000000003 *DRIVER* RHDCRUSD          253 WAIT NOST 3644DE90 SERVICE DRIVER ECB
                                                    3991C50C TIMER ECB
0000000004 *DRIVER* RHDCRUSD          253 WAIT NOST 3644DF10 SERVICE DRIVER ECB
                                                    3991F48C TIMER ECB
0000000005 *DRIVER* RHDCRUSD          253 WAIT NOST 3644DF90 SERVICE DRIVER ECB
                                                    3992120C TIMER ECB
0000000006 *DRIVER* RHDCRUSD          253 WAIT NOST 3644E010 SERVICE DRIVER ECB
                                                    39922F8C TIMER ECB
0000000007 *DRIVER* RHDCRUSD          253 WAIT NOST 3644E190 SERVICE DRIVER ECB
                                                    39924D0C TIMER ECB
0000000008 *DRIVER* RHDCLGSD          253 WAIT NOST 3644E410 SERVICE DRIVER ECB
0000000009 *DRIVER* RHDCLGSD          253 WAIT NOST 3644E490 SERVICE DRIVER ECB
0000000010 *DRIVER* RHDCLGSD          253 WAIT NOST 00057E38 DBIO WRITE ECB
0000000011 *DRIVER* PMONCIOD          253 WAIT NOST 366CFD30 MP MODE WAIT ECB
0000000013 *DRIVER* RHDCDEAD          253 WAIT NOST 3992AA4C ICEECB
                                                    3644E690 SERVICE DRIVER ECB
0000000012 *DRIVER* PMONCROL          253 WAIT NOST 002AF11C ICEECB
                                                    002AF128 ICEECB
                                                    002AF134 PERFMON SERVICE DRV
0000000019 *DRIVER* RHDCPRNT          253 WAIT NOST 399189AC PRTSECB
0000038567 DCMT     RHDCMT00 VL500152 225 ACTV
0000038436 RHDCNP3S ICS2     LD000013 100 WAIT
0000038491 RHDCNP3S ICS2     LD000011 100 WAIT NOST 28B3D208 EREECB
0000038514 RHDCNP3S ICS2     LD000003 100 WAIT NOST 28B3C488 EREECB
            PAGE 00002 - NEXT PAGE:
```


Re-Run Turning on Multitasking

```
  Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000038518 RHDCNP3S ICS2     LD000014 100 WAIT NOST 28B3D388 EREECB
0000038542 RHDCNP3S ICS2     LD000000 100 WAIT NOST 28B3C008 EREECB
0000038550 RHDCNP3S ICD1     LD000001 100 WAIT NOST 28B3C188 EREECB
0000038551 RHDCNP3S ICD1     LD000002 100 WAIT NOST 28B3C308 EREECB
0000038553 RHDCNP3S ICD1     LD000004 100 WAIT NOST 28B3C608 EREECB
0000038554 RHDCNP3S ICS2     LD000005 100 WAIT NOST 28B3C788 EREECB
0000038556 ADS2     ADSOMAIN VL500092 100 ACTV
0000038558 ADS2     ADSOMAIN VL500112 100 WAIT 0180 366D0380 MP MODE WAIT ECB
0000038557 ADS2     ADSOMAIN VL500115 100 WAIT 0180 366D0384 MP MODE WAIT ECB
0000038559 ADS2     ADSOMAIN VL500086 100 WAIT 0180 366CFD2C MP MODE WAIT ECB
0000038560 RHDCNP3S ICD1     LD000006 100 WAIT NOST 28B3C908 EREECB
0000038561 RHDCNP3S ICD1     LD000007 100 WAIT NOST 28B3CA88 EREECB
0000038562 RHDCNP3S ICS2     LD000008 100 WAIT NOST 28B3CC08 EREECB
0000038563 RHDCNP3S ICD1     LD000009 100 WAIT NOST 28B3CD88 EREECB
0000038564 RHDCNP3S ICD1     LD000010 100 WAIT NOST 28B3CF08 EREECB
0000038565 RHDCNP3S ICD1     LD000012 100 WAIT NOST 28B3D088 EREECB
0000038566 RHDCNP3S ICD1     LD000015 100 WAIT NOST 28B3D688 EREECB
0000038568 ADS2     ADSOMAIN VL500113 100 WAIT 0180 366D0378 MP MODE WAIT ECB
0000038571 ADS2     ADSOMAIN VL500118 100 ACTV
0000038570 RHDCNP3S ICD1     LD000017 100 WAIT NOST 366CFD34 MP MODE WAIT ECB
0000038569 RHDCNP3S ICD1     LD000016 100 WAIT NOST 366CFD38 MP MODE WAIT ECB
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120



            PAGE 00003 - NEXT PAGE:
```


Re-Run Turning on Multitasking

```
     D STAT SYS
  16:21:53.74 08/231 Current Time       00:02:04.66 Tot Sys Time
  16:10:43.16 08/231 Startup Time       00:00:07.56 Tot User Time

TASKS:          79293 Processed          42 Abended              133 Max Tasks
                  849 System              0 Runaway               0 Times At Max
                  167 Deadlocks          84 Dead Victims

TRANS:          85680 Processed       85560 Norm Cmp    142 Max Conc
                18058 Ext Proc        18057 Ext Norm     21 Ext Conc    160 Max Erus
                    0 Dist Proc           0 Dist Norm     0 Dist Conc

DATABASE:     1646764 Calls          815583 Pages Rqst       1601369 Recs Rqst
                    0 Buff Wait      111511 Pages Read        520612 Recs Cur R/U
               172041 Page Writ           0 Calc Moflo         77748 Via Moflo
              2157437 Tot Locks           0 Calc Ovflo           286 Via Ovflo
                                          0 Frag Stord             0 Recs Reloc
    INDEX:          0 SR8 Splits          0 SR8 Stores             0 SR7 Stores
                    0 SR8 Spawns          0 SR8 Erases             0 SR7 Erases
                    0 Orph Adopt      60002 Ix Searches            1 Min Level
                                      70622 Lvls Srchd             2 Max Level
      SQL:      96920 Commands        24230 Tupls Fetched       8083 Rows Inserted
                    0 AM Recomp       24210 Rows Updated           0 Rows Deleted
                                          0 Sorts                  0 Sort Min
                                          0 Tuples Sorted          0 Sort Max

            PAGE 00001 - NEXT PAGE:
```

```
     D STAT SYS
  13:57:36.60 08/241 Current Time       00:01:46.83 Tot Sys Time
  13:54:23.00 08/241 Startup Time       00:00:07.67 Tot User Time

TASKS:          80752 Processed          3 Abended               133 Max Tasks
                  600 System             0 Runaway                 1 Times At Max
                   18 Deadlocks          9 Dead Victims

TRANS:          89841 Processed       89797 Norm Cmp    140 Max Conc
                19812 Ext Proc        19812 Ext Norm     20 Ext Conc    160 Max Erus
                    0 Dist Proc           0 Dist Norm     0 Dist Conc

DATABASE:     1781601 Calls          869309 Pages Rqst       1760034 Recs Rqst
                    0 Buff Wait      156694 Pages Read        566126 Recs Cur R/U
               177629 Page Writ           0 Calc Moflo         79548 Via Moflo
              2338094 Tot Locks           0 Calc Ovflo           341 Via Ovflo
                                          0 Frag Stord             0 Recs Reloc
    INDEX:          0 SR8 Splits          0 SR8 Stores             0 SR7 Stores
                    0 SR8 Spawns          0 SR8 Erases             0 SR7 Erases
                    0 Orph Adopt      60084 Ix Searches            1 Min Level
                                      70720 Lvls Srchd             2 Max Level
      SQL:     117956 Commands        29489 Tupls Fetched       9831 Rows Inserted
                    0 AM Recomp       29485 Rows Updated           0 Rows Deleted
                                          0 Sorts                  0 Sort Min
                                          0 Tuples Sorted          0 Sort Max

            PAGE 00001 - NEXT PAGE: _
```


Re-Run Turning on Multitasking

```
JOURNAL:                0 Buff Waits              0 User Putjrnl
  Page       91  0-10     1797 11-20      421 21-30      458 31-40      514 41-50
  Dist      334 51-60      387 61-70      303 71-80     2612 81-90    84737 91-100

INTERNAL:       RLEs     RCEs     DPEs    Stack
                3278     2957     1238     1011 HWM
               10000    10000     3000     2000 Sysgen Threshold
                   0        0        0          Times Exceeded

STORAGE:     4953631 Gets           4878404 Frees            Gets for type
                   0 PGFIXs               0 PGFREEs          1296149 DB
                   0 Pages Fxd            0 Pages Freed           18 SHK
             3101493 Scan 1               0 PGRLSEs                0 SHR
             1852138 Scan 2               0 Pages Relsd      2450986 SYS
                                                                 180 USK
                   0 SOS COUNT                                1206378 USR

PROGRAM:             Act Loads  Pages Load  Wait/Space
        Non-Reent            2          3           0
            Reent           35       1710           0
   XA Non-Reent             2         18           0
      XA Reent            262      24435           0

SCRATCH:        639 Gets        655 Puts        642 Dels
  QUEUE:          4 Gets          0 Puts          0 Dels          0 Task AutoSt

            PAGE 00002 - NEXT PAGE:
```

```
JOURNAL:                0 Buff Waits              0 User Putjrnl
  Page       54  0-10      455 11-20       87 21-30      116 31-40      137 41-50
  Dist       88 51-60       89 61-70       67 71-80     2189 81-90    89311 91-100

INTERNAL:       RLEs     RCEs     DPEs    Stack
                2512     2204     1226      995 HWM
               10000    10000     3000     2000 Sysgen Threshold
                   0        0        0          Times Exceeded

STORAGE:     5804164 Gets           5712139 Frees            Gets for type
                   0 PGFIXs               0 PGFREEs          1546460 DB
                   0 Pages Fxd            0 Pages Freed           18 SHK
             3559412 Scan 1               0 PGRLSEs                0 SHR
             2244552 Scan 2               0 Pages Relsd      2863998 SYS
                                                                 150 USK
                   0 SOS COUNT                                1393538 USR

PROGRAM:             Act Loads  Pages Load  Wait/Space
        Non-Reent            2          3           0
            Reent           35       1550           0
   XA Non-Reent             2         18           0
      XA Reent            255      24439           0

SCRATCH:          0 Gets          1 Puts          0 Dels
  QUEUE:          3 Gets          0 Puts          0 Dels          0 Task AutoSt

            PAGE 00002 - NEXT PAGE:
```

Prior Run

Re-Run Turning on Multitasking

```
     D SUBT 1
*** Display Subtask details ***
                        Name  MAINTASK
                      Number  01
                      Status  IDLE
                   Work type  IDMS
                Count wakeups  41,784
        Count task dispatches  1,585,202
           User mode CPU time  00:00:02.0537
         System mode CPU time  00:00:39.1764
        CPU effectiveness (%)  64
      Count times fast posted  514,476
        Count times OS posted  00
      Count found work pass 1  1,452,708
      Count found work pass 2  132,494
  Count times POSTEXIT resumed  42,359
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
```


Re-Run Turning on Multitasking

```
     D SUBT 2
*** Display Subtask details ***
                        Name  SUBT0001
                      Number  02
                      Status  IDLE
                   Work type  IDMS
                Count wakeups  58,209
        Count task dispatches  1,949,200
           User mode CPU time  00:00:02.5448
         System mode CPU time  00:00:39.1459
        CPU effectiveness (%)  66
      Count times fast posted  21,485
        Count times OS posted  00
      Count found work pass 1  1,782,988
      Count found work pass 2  166,212
  Count times POSTEXIT resumed  58,750
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
```


Re-Run Turning on Multitasking

```
     D SUBT 3
*** Display Subtask details ***
                        Name  SUBT0002
                      Number  03
                      Status  BUSY
                   Work type  IDMS
               Count wakeups  88,130
       Count task dispatches  2,136,992
          User mode CPU time  00:00:02.9626
        System mode CPU time  00:00:46.4016
       CPU effectiveness (%)  66
     Count times fast posted  484,709
       Count times OS posted  00
     Count found work pass 1  1,933,932
     Count found work pass 2  203,060
  Count times POSTEXIT resumed  87,645
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
```


Re-Run Turning on Multitasking

```
     D SUBT
       ***  Display all subtasks ***
              Work            Task dispatch
Name       Nr  type  Status        count       Wakeup count   Total CPU time
----       --  ----  ------    -------------    ------------  --------------
MAINTASK   01  IDMS   IDLE         1,585,202          41,784    00:00:41.5459
SUBT0001   02  IDMS   IDLE         1,949,200          58,209    00:00:41.6907
SUBT0002   03  IDMS   BUSY         2,137,019          88,148    00:00:49.3674
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
```


Re-Run Turning on Multitasking

```
D MP
     *** MULTITASK ENVIRONMENT, MPMODE TABLE ***
     NAME         REQUEST COUNT        WAIT COUNT
     ----         -------------        ----------
     ANY              5,458,870                00
     DC               1,842,492           634,127
     DB               3,522,213         2,009,140
     USER                    00                00
     LOADER                 340                00
     DRIVER             465,103            35,876
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
```


Post Process Monitoring (PMA Report 1)

```
REPORT NO. 01                                    CA, INC.                                    06/06/08 PAGE
CA IDMS/PM 17.0    CAGJH0                    TASK DETAIL REPORT
DC SYSTEM VERSION #:   120              CA INTERNATIONAL, INC.                    DATA FROM:  6/06/08

   TASK   VER     TASK     TASK C  START   STORAGE  STORAGE    CPU TIME    WAIT TIME   TP READ  TP WRITE  NUM OF   NUM OF   NUM OF   NUM OF   N
   CODE   NUM      NUM     TYPE C   TIME   ACQUIRED   KEPT     (SECS)      (SECS)    LNGTH    LNGTH    I/O      DBCLS    LVLS     DBLVLS   B

 DCRSMAIN   0        611 COBOL   11:06:13   104832     256      .0002       .0003       0        58        0        7       --       --
 PTCRUPD    1        612 ADS/O   11:06:13    20864    3584      .0006       .0238      42       108        6       17        0        1
 ICD1       0        613 CICS    11:06:13   128000       0      .0007       .0039       0         0        2       12       --       --
 PTCRUPD    1        614 ADS/O   11:06:13    20864    3584      .0005       .0241      42       108        4       17        0        1
 DCRSMAIN   0        616 COBOL   11:06:13   104832     256      .0004       .0003       0        58        0        7       --       --
 DCRSMAIN   0        615 COBOL   11:06:13   104832     256      .0004       .0003       0        58        0        7       --       --
 ICD1       0        617 CICS    11:06:13   128000       0      .0010       .0168       0         0        2       12       --       --
 PTCRUPD    1        618 ADS/O   11:06:13    20864    3584      .0006       .0258      42       106        4       17        0        1
 ICD1       0        619 CICS    11:06:13   128000       0      .0007       .0157       0         0        2       12       --       --
 ICD1       0        620 CICS    11:06:13   128000       0      .0007       .0164       0         0        2       12       --       --
 DCRSMAIN   0        621 COBOL   11:06:13   104832     256      .0002       .0001       0        58        0        7       --       --
 ICD1       0        622 CICS    11:06:13   128000       0      .0007       .0162       0         0        2       12       --       --
 DCRSMAIN   0        623 COBOL   11:06:13   104832     256      .0002       .0003       0        58
```

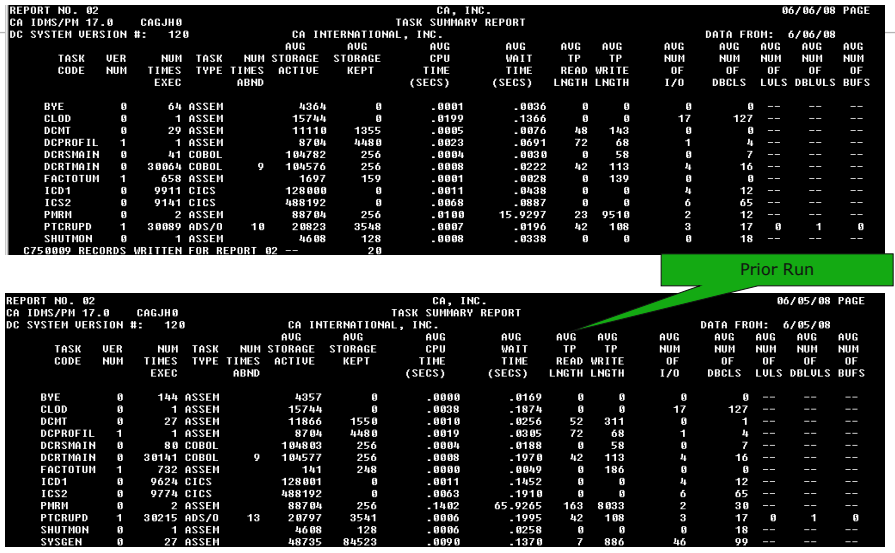
Prior Run

```
REPORT NO. 01                                    CA, INC.                                    06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                    TASK DETAIL REPORT
DC SYSTEM VERSION #:   120              CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

   TASK   VER     TASK     TASK C  START   STORAGE  STORAGE    CPU TIME    WAIT TIME   TP READ  TP WRITE  NUM OF   NUM OF   NUM OF   NUM OF   NUM
   CODE   NUM      NUM     TYPE C   TIME   ACQUIRED   KEPT     (SECS)      (SECS)    LNGTH    LNGTH    I/O      DBCLS    LVLS     DBLVLS   BUF

 ICS2       0        367 CICS    14:57:14   488192       0      .0070       .2538       0         0        6       65       --       --       --
 PTCRUPD    1        368 ADS/O   14:57:14    11776    2432      .0008       .0231      13        96        3       22        0        0        0
 PTCRUPD    1        370 ADS/O   14:57:14    11520    2176      .0002       .0166      13        96        0        0        0        0        0
 DCRSMAIN   0        372 COBOL   14:57:14   104832     256      .0005       .0009       0        58        0        7       --       --       --
 DCRSMAIN   0        371 COBOL   14:57:14   104832     256      .0003       .0012       0        58        0        7       --       --       --
 DCRSMAIN   0        369 COBOL   14:57:14   104832     256      .0002       .0013       0        58        0        7       --       --       --
 ICD1       0        373 CICS    14:57:14   128000       0      .0015       .1420       0         0        5       12       --       --       --
 DCRSMAIN   0        374 COBOL   14:57:14   104832     256      .0005       .0003       0        58        0        7       --       --       --
 DCRSMAIN   0        375 COBOL   14:57:14   104832     256      .0004       .0005       0        58        0        7       --       --       --
 DCRSMAIN   0        376 COBOL   14:57:14   104832     256      .0002       .0006       0        58        0        7       --       --       --
 DCRSMAIN   0        377 COBOL   14:57:14   104832     256      .0007       .0002       0        58        0        7       --       --       --
 PTCRUPD    1        378 ADS/O   14:57:14    11520    2176      .0003       .0000      13        96        0        0        0        0        0
 PTCRUPD    1        379 ADS/O   14:57:14    11520    2176      .0001       .0001      13        96        0        0        0        0        0
```

Post Process Monitoring (PMA Report 2)



```
REPORT NO. 02                                   CA, INC.                                   06/06/08 PAGE
CA IDMS/PM 17.0    CAGJH0                    TASK SUMMARY REPORT
DC SYSTEM VERSION #:   120                CA INTERNATIONAL, INC.                  DATA FROM:  6/06/08

      TASK   VER      NUM  TASK    NUM STORAGE  STORAGE      CPU      WAIT   TP   TP      NUM      NUM  NUM  NUM  NUM
      CODE   NUM    TIMES  TYPE  TIMES  ACTIVE     KEPT     TIME      TIME READ WRITE       OF       OF   OF   OF   OF
                     EXEC        ABND                    (SECS)    (SECS) LNGTH LNGTH      I/O    DBCLS LVLS DBLVLS BUFS

    BYE        0       64 ASSEM             4364        0    .0001    .0036    0     0        0        0   --     --   --
    CLOD       0        1 ASSEM            15744        0    .0199    .1366    0     0       17      127   --     --   --
    DCMT       0       29 ASSEM            11110     1355    .0005    .0076   48   143        0        0   --     --   --
    DCPROFIL   1        1 ASSEM             8704     4480    .0023    .0691   72    68        1        4   --     --   --
    DCRSMAIN   0       41 COBOL           104782      256    .0004    .0030    0    58        0        7   --     --   --
    DCRTMAIN   0    30064 COBOL     9     104576      256    .0008    .0222   42   113        4       16   --     --   --
    FACTOTUM   1      658 ASSEM             1697      159    .0001    .0028    0   139        0        0   --     --   --
    ICD1       0     9911 CICS            128000        0    .0011    .0438    0     0        4       12   --     --   --
    ICS2       0     9141 CICS            488192        0    .0068    .0887    0     0        6       65   --     --   --
    PMRM       0        2 ASSEM             8704      256    .0100  15.9297   23  9510        2       12   --     --   --
    PTCRUPD    1    30089 ADS/O     10      20823     3548    .0007    .0196   42   108        3       17    0      1    0
    SHUTMON    0        1 ASSEM             4608      128    .0008    .0338    0     0        0       18   --     --   --
  C750009 RECORDS WRITTEN FOR REPORT 02 --              20
```

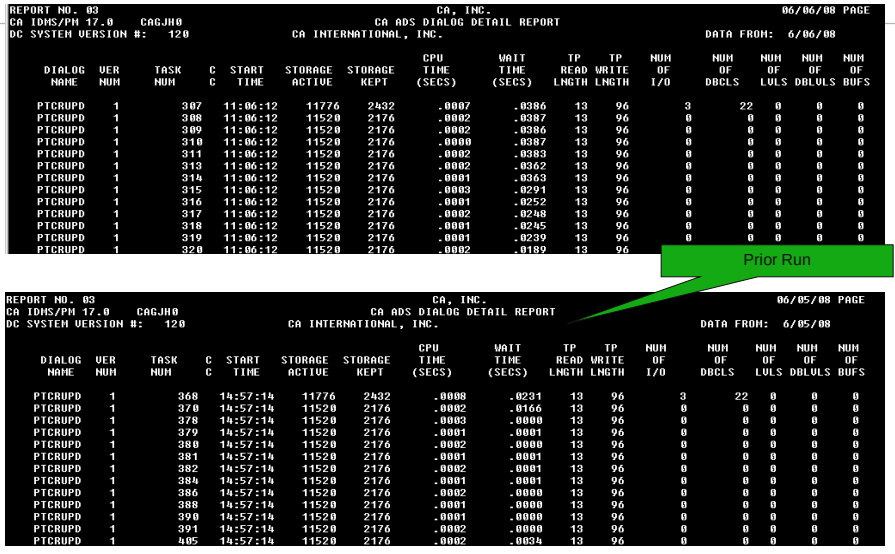
Prior Run

```
REPORT NO. 02                                   CA, INC.                                   06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                    TASK SUMMARY REPORT
DC SYSTEM VERSION #:   120                CA INTERNATIONAL, INC.                  DATA FROM:  6/05/08

      TASK   VER      NUM  TASK    NUM STORAGE  STORAGE      CPU      WAIT   TP   TP      NUM      NUM  NUM  NUM  NUM
      CODE   NUM    TIMES  TYPE  TIMES  ACTIVE     KEPT     TIME      TIME READ WRITE       OF       OF   OF   OF   OF
                     EXEC        ABND                    (SECS)    (SECS) LNGTH LNGTH      I/O    DBCLS LVLS DBLVLS BUFS

    BYE        0      144 ASSEM             4357        0    .0000    .0169    0     0        0        0   --     --   --
    CLOD       0        1 ASSEM            15744        0    .0038    .1874    0     0       17      127   --     --   --
    DCMT       0       27 ASSEM            11866     1550    .0010    .0256   52   311        0        1   --     --   --
    DCPROFIL   1        1 ASSEM             8704     4480    .0019    .0305   72    68        1        4   --     --   --
    DCRSMAIN   0       80 COBOL           104803      256    .0004    .0188    0    58        0        7   --     --   --
    DCRTMAIN   0    30141 COBOL     9     104577      256    .0008    .1970   42   113        4       16   --     --   --
    FACTOTUM   1      732 ASSEM             1741      248    .0000    .0049    0   186        0        0   --     --   --
    ICD1       0     9624 CICS            128001        0    .0011    .1452    0     0        4       12   --     --   --
    ICS2       0     9774 CICS            488192        0    .0063    .1910    0     0        6       65   --     --   --
    PMRM       0        2 ASSEM             8704      256    .1402  65.9265  163  8033        2       30   --     --   --
    PTCRUPD    1    30215 ADS/O     13      20797     3541    .0006    .1995   42   108        3       17    0      1    0
    SHUTMON    0        1 ASSEM             4608      128    .0006    .0258    0     0        0       18   --     --   --
    SYSGEN     0       27 ASSEM            48735    84523    .0090    .1370    7   886       46       99   --     --   --
```


Post Process Monitoring (PMA Report 3)



```
REPORT NO. 03                                   CA, INC.                                   06/06/08 PAGE
CA IDMS/PM 17.0    CAGJH0                 CA ADS DIALOG DETAIL REPORT
DC SYSTEM VERSION #:   120                CA INTERNATIONAL, INC.                  DATA FROM:  6/06/08

    DIALOG   VER      TASK   C  START   STORAGE  STORAGE      CPU      WAIT   TP   TP      NUM      NUM  NUM  NUM  NUM
     NAME    NUM       NUM   C   TIME    ACTIVE     KEPT     TIME      TIME READ WRITE       OF       OF   OF   OF   OF
                                                            (SECS)    (SECS) LNGTH LNGTH      I/O    DBCLS LVLS DBLVLS BUFS

    PTCRUPD    1       307   11:06:12     11776     2432    .0007    .0386   13    96        3       22    0      0    0
    PTCRUPD    1       308   11:06:12     11520     2176    .0002    .0387   13    96        0        0    0      0    0
    PTCRUPD    1       309   11:06:12     11520     2176    .0002    .0386   13    96        0        0    0      0    0
    PTCRUPD    1       310   11:06:12     11520     2176    .0000    .0387   13    96        0        0    0      0    0
    PTCRUPD    1       311   11:06:12     11520     2176    .0002    .0383   13    96        0        0    0      0    0
    PTCRUPD    1       313   11:06:12     11520     2176    .0002    .0362   13    96        0        0    0      0    0
    PTCRUPD    1       314   11:06:12     11520     2176    .0001    .0363   13    96        0        0    0      0    0
    PTCRUPD    1       315   11:06:12     11520     2176    .0003    .0291   13    96        0        0    0      0    0
    PTCRUPD    1       316   11:06:12     11520     2176    .0001    .0252   13    96        0        0    0      0    0
    PTCRUPD    1       317   11:06:12     11520     2176    .0002    .0248   13    96        0        0    0      0    0
    PTCRUPD    1       318   11:06:12     11520     2176    .0001    .0245   13    96        0        0    0      0    0
    PTCRUPD    1       319   11:06:12     11520     2176    .0001    .0239   13    96        0        0    0      0    0
    PTCRUPD    1       320   11:06:12     11520     2176    .0002    .0189   13    96
```

Prior Run

```
REPORT NO. 03                                   CA, INC.                                   06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                 CA ADS DIALOG DETAIL REPORT
DC SYSTEM VERSION #:   120                CA INTERNATIONAL, INC.                  DATA FROM:  6/05/08

    DIALOG   VER      TASK   C  START   STORAGE  STORAGE      CPU      WAIT   TP   TP      NUM      NUM  NUM  NUM  NUM
     NAME    NUM       NUM   C   TIME    ACTIVE     KEPT     TIME      TIME READ WRITE       OF       OF   OF   OF   OF
                                                            (SECS)    (SECS) LNGTH LNGTH      I/O    DBCLS LVLS DBLVLS BUFS

    PTCRUPD    1       368   14:57:14     11776     2432    .0008    .0231   13    96        3       22    0      0    0
    PTCRUPD    1       370   14:57:14     11520     2176    .0002    .0166   13    96        0        0    0      0    0
    PTCRUPD    1       378   14:57:14     11520     2176    .0003    .0000   13    96        0        0    0      0    0
    PTCRUPD    1       379   14:57:14     11520     2176    .0001    .0001   13    96        0        0    0      0    0
    PTCRUPD    1       380   14:57:14     11520     2176    .0002    .0000   13    96        0        0    0      0    0
    PTCRUPD    1       381   14:57:14     11520     2176    .0001    .0001   13    96        0        0    0      0    0
    PTCRUPD    1       382   14:57:14     11520     2176    .0002    .0001   13    96        0        0    0      0    0
    PTCRUPD    1       384   14:57:14     11520     2176    .0001    .0001   13    96        0        0    0      0    0
    PTCRUPD    1       386   14:57:14     11520     2176    .0002    .0000   13    96        0        0    0      0    0
    PTCRUPD    1       388   14:57:14     11520     2176    .0001    .0000   13    96        0        0    0      0    0
    PTCRUPD    1       390   14:57:14     11520     2176    .0001    .0000   13    96        0        0    0      0    0
    PTCRUPD    1       391   14:57:14     11520     2176    .0002    .0000   13    96        0        0    0      0    0
    PTCRUPD    1       405   14:57:14     11520     2176    .0002    .0034   13    96        0        0    0      0    0
```

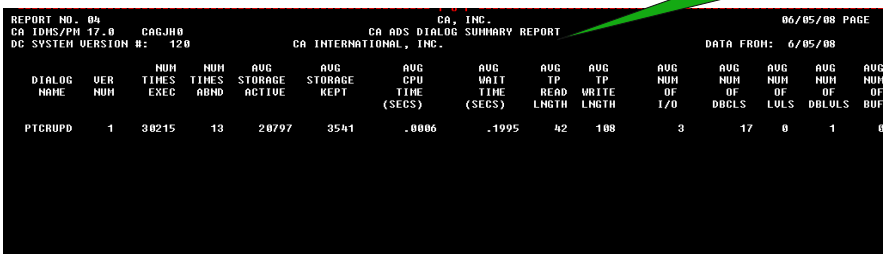

Post Process Monitoring (PMA Report 4)

```
REPORT NO. 04                                  CA, INC.                                  06/06/08 PAGE
CA IDMS/PM 17.0    CAGJH0                  CA ADS DIALOG SUMMARY REPORT
DC SYSTEM VERSION #:   120                 CA INTERNATIONAL, INC.                    DATA FROM:  6/06/08

                    NUM      NUM     AVG      AVG      AVG       AVG      AVG      AVG      AVG      AVG      AVG      AVG      AV
  DIALOG    VER   TIMES    TIMES   STORAGE  STORAGE    CPU      WAIT      TP       TP      NUM      NUM      NUM      NUM      NU
  NAME      NUM    EXEC    ABND    ACTIVE    KEPT     TIME     TIME     READ    WRITE     OF       OF       OF       OF       O
                                                     (SECS)   (SECS)   LNGTH    LNGTH     I/O      DBCLS    LVLS     DBLVLS   BU

PTCRUPD     1    30089      10     20823     3548     .0007    .0196       42      108       3         17       0        1
```

Prior Run

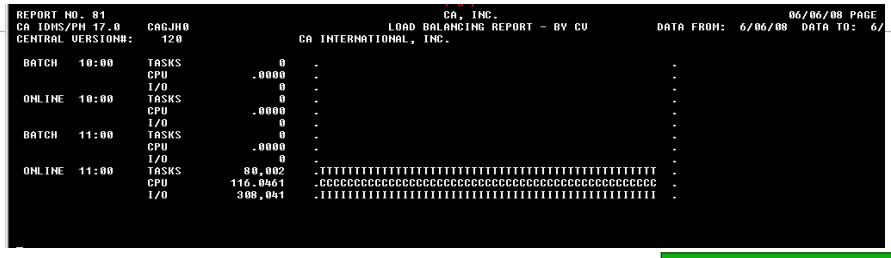


```
REPORT NO. 04                                  CA, INC.                                  06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                  CA ADS DIALOG SUMMARY REPORT
DC SYSTEM VERSION #:   120                 CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

                    NUM      NUM     AVG      AVG      AVG       AVG      AVG      AVG      AVG      AVG      AVG      AVG      AVG
  DIALOG    VER   TIMES    TIMES   STORAGE  STORAGE    CPU      WAIT      TP       TP      NUM      NUM      NUM      NUM      NUM
  NAME      NUM    EXEC    ABND    ACTIVE    KEPT     TIME     TIME     READ    WRITE     OF       OF       OF       OF       OF
                                                     (SECS)   (SECS)   LNGTH    LNGTH     I/O      DBCLS    LVLS     DBLVLS   BUF

PTCRUPD     1    30215      13     20797     3541     .0006    .1995       42      108       3         17       0        1        0
```

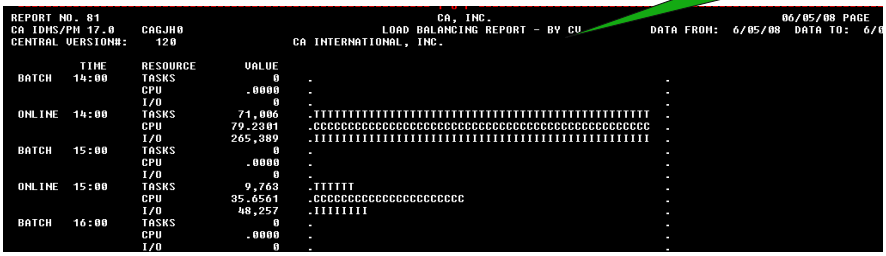

Post Process Monitoring (PMA Report 81)



```
REPORT NO. 81                                  CA, INC.                                  06/06/08 PAGE
CA IDMS/PM 17.0    CAGJH0                  LOAD BALANCING REPORT - BY CV          DATA FROM:  6/06/08  DATA TO:  6/
CENTRAL VERSION#:    120                 CA INTERNATIONAL, INC.

 BATCH    10:00    TASKS              0   .                                                                    .
                   CPU           .0000   .                                                                    .
                   I/O                0   .                                                                    .
 ONLINE   10:00    TASKS              0   .                                                                    .
                   CPU           .0000   .                                                                    .
                   I/O                0   .                                                                    .
 BATCH    11:00    TASKS              0   .                                                                    .
                   CPU           .0000   .                                                                    .
                   I/O                0   .                                                                    .
 ONLINE   11:00    TASKS         80,002   .TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT   .
                   CPU          116.0461  .CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC   .
                   I/O           308,041  .IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII   .
```

Prior Run



```
REPORT NO. 81                                  CA, INC.                                  06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                  LOAD BALANCING REPORT - BY CV          DATA FROM:  6/05/08  DATA TO:  6/0
CENTRAL VERSION#:    120                 CA INTERNATIONAL, INC.

         TIME      RESOURCE        VALUE
 BATCH    14:00    TASKS              0   .                                                                    .
                   CPU           .0000   .                                                                    .
                   I/O                0   .                                                                    .
 ONLINE   14:00    TASKS         71,006   .TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT   .
                   CPU           79.2301  .CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC   .
                   I/O           265,389  .IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII   .
 BATCH    15:00    TASKS              0   .                                                                    .
                   CPU           .0000   .                                                                    .
                   I/O                0   .                                                                    .
 ONLINE   15:00    TASKS          9,763   .TTTTTT                                                              .
                   CPU           35.6561  .CCCCCCCCCCCCCCCCCCCC                                                .
                   I/O           48,257   .IIIIIIII                                                            .
 BATCH    16:00    TASKS              0   .                                                                    .
                   CPU           .0000   .                                                                    .
                   I/O                0   .                                                                    .
```


Post Process Monitoring (PMI Report 2)

```
REPORT NO. 02                                    CA, INC.                                    06/06/08 PAGE
CA IDMS/PM 17.0    CAGJH0                    TREND ANALYSIS REPORT
DC SYSTEM VERSION #:   120              CA INTERNATIONAL, INC.                    DATA FROM:  6/06/08

   INTERVAL      WAITS      WAIT TIME       SCALED BY TIME ("X" REPRESENTS    1.0000  SECONDS)
  START TIME                  (SECS)    .........|.........|.........|.........|.........|.........|.........|.........|

   11:05:46 1011883        2,035.68  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  -->
   11:10:00      48              .06
```

Prior Run

```
REPORT NO. 02                                    CA, INC.                                    06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                    TREND ANALYSIS REPORT
DC SYSTEM VERSION #:   120              CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

   INTERVAL      WAITS      WAIT TIME       SCALED BY TIME ("X" REPRESENTS    1.0000  SECONDS)
  START TIME                  (SECS)    .........|.........|.........|.........|.........|.........|.........|.........|

   14:56:39  835908       13,262.84  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  -->
   15:00:00  309382        1,397.87  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  -->
```


Post Process Monitoring (PMI Report 13)

```
REPORT NO. 13                                    CA, INC.                                    06/06/08 PAGE
CA IDMS/PM 17.0    CAGJH0                    BUFFER SUMMARY REPORT
DC SYSTEM VERSION #:   120              CA INTERNATIONAL, INC.                    DATA FROM:  6/06/08

                                                    HIT      BUFR      I/O    AVERAGE          BUFFER   AVERAGE   B
  START         BUFFER          BUFR     BUFR     BUFR     RATIO     DISK    WAIT TIME I/O TIME  BUFR WAIT TIME WAIT TIME  P
  TIME          NAME           RQSTS    FLSHS    HITS      (%)      I/O      (SECS)   (SECS)   WAITS   (SECS)    (SECS)   S

11:05:46 DBCR_ACCT_BUFFER      210391        0   170859    81.2    109463   180.441    .0016                                2
         DBCR_ACOPY_BUFFER          1        0        0      .0         0                                                   2
         DBCR_BCOPY_BUFFER          1        0        0      .0         0                                                   4
         DBCR_BRCH_BUFFER      289038        0   220291    76.2    146399   157.152    .0011                                4
         DBCRSQL_AC_BUFFER      57883        0    49282    85.1     18129    43.508    .0024                                2
         DBCRSQL_BR_BUFFER      54970        4    39282    71.3     33983    32.020    .0009                                4
         DEFAULT_BUFFER          1777        0      686    38.6        66      .275    .0042                                8
         DLOCSCR_BUFFER             0                0               0                                                     4
         LOG_BUFFER                 0                0               0                                                     4
         SYSSQL_BUFFER         231742        0   231726   100.0        13      .094    .0073                                4
11:10:00 DBCR_ACCT_BUFFER           0                0               0                                                     2
```

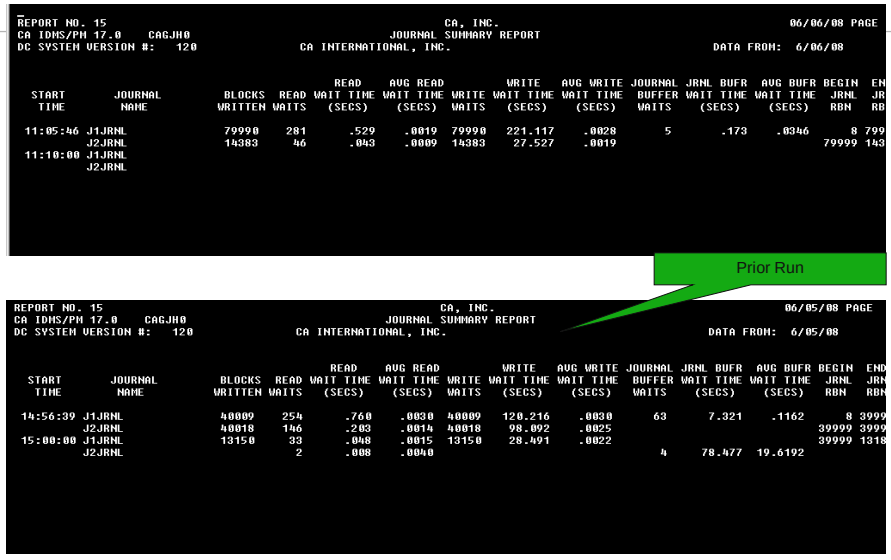
Prior Run

```
REPORT NO. 13                                    CA, INC.                                    06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                    BUFFER SUMMARY REPORT
DC SYSTEM VERSION #:   120              CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

                                                    HIT      BUFR      I/O    AVERAGE          BUFFER   AVERAGE   BU
  START         BUFFER          BUFR     BUFR     BUFR     RATIO     DISK    WAIT TIME I/O TIME  BUFR WAIT TIME WAIT TIME  PA
  TIME          NAME           RQSTS    FLSHS    HITS      (%)      I/O      (SECS)   (SECS)   WAITS   (SECS)    (SECS)   SI

14:56:39 DBCR_ACCT_BUFFER      195670        0   165015    84.3     95520   276.383    .0029                                29
         DBCR_ACOPY_BUFFER          1        0        0      .0         0                                                   29
         DBCR_BCOPY_BUFFER          1        0        0      .0         0                                                   40
         DBCR_BRCH_BUFFER      267691        0   198398    74.1    141593   401.248    .0028                                40
         DBCRSQL_AC_BUFFER      30017        0    25478    84.9      9479    35.875    .0038                                29
         DBCRSQL_BR_BUFFER      28434        0    20325    71.5     17530    42.994    .0025                                40
         DEFAULT_BUFFER          1770        0      681    38.5        64      .392    .0061                                81
         DLOCSCR_BUFFER             0                0               0                                                     46
         LOG_BUFFER                 0                0               0                                                     42
         SYSSQL_BUFFER         118540        0   118524   100.0        13      .085    .0066                                42
```


Post Process Monitoring (PMI Report 15)



```
REPORT NO. 15                                  CA, INC.                                  06/06/08 PAGE
CA IDMS/PM 17.0    CAGJH0                  JOURNAL SUMMARY REPORT
DC SYSTEM VERSION #:   120            CA INTERNATIONAL, INC.                    DATA FROM:  6/06/08

                                        READ    AVG READ         WRITE   AVG WRITE JOURNAL JRNL BUFR  AVG BUFR BEGIN  EN
  START       JOURNAL        BLOCKS  READ WAIT TIME WAIT TIME WRITE WAIT TIME WAIT TIME  BUFFER WAIT TIME WAIT TIME  JRNL  JR
   TIME        NAME         WRITTEN WAITS   (SECS)    (SECS)  WAITS   (SECS)    (SECS)   WAITS    (SECS)    (SECS)   RBN   RB

 11:05:46 J1JRNL             79990    281     .529     .0019  79990  221.117    .0028       5      .173     .0346     8 799
          J2JRNL             14383     46     .043     .0009  14383   27.527    .0019                                79999 143
 11:10:00 J1JRNL
          J2JRNL
```

Prior Run


```
REPORT NO. 15                                  CA, INC.                                  06/05/08 PAGE
CA IDMS/PM 17.0    CAGJH0                  JOURNAL SUMMARY REPORT
DC SYSTEM VERSION #:   120            CA INTERNATIONAL, INC.                    DATA FROM:  6/05/08

                                        READ    AVG READ         WRITE   AVG WRITE JOURNAL JRNL BUFR  AVG BUFR BEGIN  END
  START       JOURNAL        BLOCKS  READ WAIT TIME WAIT TIME WRITE WAIT TIME WAIT TIME  BUFFER WAIT TIME WAIT TIME  JRNL  JRN
   TIME        NAME         WRITTEN WAITS   (SECS)    (SECS)  WAITS   (SECS)    (SECS)   WAITS    (SECS)    (SECS)   RBN   RBN

 14:56:39 J1JRNL             40009    254     .760     .0030  40009  120.216    .0030      63      7.321     .1162     8 3999
          J2JRNL             40018    146     .203     .0014  40018   98.092    .0025                                39999 3999
 15:00:00 J1JRNL             13150     33     .048     .0015  13150   28.491    .0022                                39999 1318
          J2JRNL                 2      .008     .0040                                      4     78.477  19.6192
```


CA World '08

TPNS Response Times

> Mean Response Time
- .22 Seconds (All Applications)
  - CA ADS .09
  - CICS DML .60
  - CICS SQL .61
  - DC COBOL .07

> Number of Responses
- 81,413

> Responses Per Minute
- 81,413+

> Mean Response Time
- .32 Seconds (All Applications)
  - CA ADS .10
  - CICS DML .93
  - CICS SQL .94
  - DC COBOL .12

> Number of Responses
- 81,226

> Responses Per Minute
- 81,226+

CA World '08

Transforming IT Management

Re-Run using both zIIP and Multitasking options

Education

EC801EN

CA World 08 | discoverability

zIIP and MT

```
  Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000019701 RHDCNP3S ICS2     LD000019 100 ACTV
0000019700 DCRTMAIN DCRPMAIN VL500072 100 WAIT 0180 398C8878 DBIO JRNL WRITE ECB
0000019703 DCRTMAIN DCRPMAIN VL500022 100 WAIT 0180 398C87C4 DBIO JRNL WRITE ECB
0000019705 DCRTMAIN          VL500014 100 WAIT 0180 366D25D4 MP MODE WAIT ECB
0000019720 ADS2     ADSOMAIN VL500105 100 WAIT 0180 398C8854 DBIO JRNL WRITE ECB
0000019719 RHDCNP3S ICD1     LD000001 100 WAIT NOST 25CCC908 EREECB
0000019713 RHDCNP3S ICS2     LD000015 100 WAIT NOST 366D25EC MP MODE WAIT ECB
0000019712 ADS2     ADSOMAIN VL500098 100 WAIT 0180 398C8854 DBIO JRNL WRITE ECB
0000019728 RHDCNP3S          LD000005 100 WAIT NOST 366D25C8 MP MODE WAIT ECB
0000019731 RHDCNP3S ICD1     LD000002 100 WAIT NOST 398C8878 DBIO JRNL WRITE ECB
0000019729 ADS2     ADSOMAIN VL500106 100 WAIT 0180 366D2910 MP MODE WAIT ECB
0000019736 DCRTMAIN DCRPMAIN VL500015 100 WAIT 0180 398C87C4 DBIO JRNL WRITE ECB
0000019739 RHDCNP3S ICS2     LD000008 100 WAIT NOST 000577E8 DBIO WRITE ECB
0000019741 RHDCNP3S ICS2     LD000012 100 WAIT NOST 366D2CBC MP MODE WAIT ECB
0000019742 RHDCNP3S ICS2     LD000013 100 WAIT NOST 398C8794 DBIO JRNL WRITE ECB
0000019743 DCRTMAIN          VL500028 100 WAIT 0180 366D25D8 MP MODE WAIT ECB
0000019744 DCRTMAIN DCRPMAIN VL500077 100 WAIT 0180 398C889C DBIO JRNL WRITE ECB
0000019745 RHDCNP3S ICS2     LD000006 100 WAIT NOST 366D2CB8 MP MODE WAIT ECB
0000019746 DCRTMAIN DCRPMAIN VL500013 100 WAIT 0180 398C8854 DBIO JRNL WRITE ECB
0000019747 DCRTMAIN DCRPMAIN VL500073 100 WAIT 0180 366D2918 MP MODE WAIT ECB
0000019748 DCRTMAIN DCRPMAIN VL500020 100 WAIT 0180 398C88E4 DBIO JRNL WRITE ECB
0000019750 DCRTMAIN DCRPMAIN VL500010 100 WAIT 0180 398C8878 DBIO JRNL WRITE ECB
0000019752 DCRTMAIN DCRPMAIN VL500029 100 WAIT 0180 366D2924 MP MODE WAIT ECB
0000019751 DCRTMAIN DCRPMAIN VL500042 100 WAIT 0180 398C8794 DBIO JRNL WRITE ECB
0000019753 DCRTMAIN DCRPMAIN VL500024 100 WAIT 0180 366D2C80 MP MODE WAIT ECB
            PAGE 00003 - NEXT PAGE:
```

  CA World 08

  Transforming IT Management

zIIP and MT

```
  Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000019754 RHDCNP3S ICS2     LD000017 100 WAIT NOST 366D2940 MP MODE WAIT ECB
0000019755 DCRTMAIN DCRPMAIN VL500043 100 WAIT 0180 366D2934 MP MODE WAIT ECB
0000019757 DCRTMAIN DCRPMAIN VL500074 100 WAIT 0180 398C8884 DBIO JRNL WRITE ECB
0000019756 DCRTMAIN DCRPMAIN VL500044 100 WAIT 0180 398C8824 DBIO JRNL WRITE ECB
0000019758 DCRTMAIN DCRPMAIN VL500071 100 WAIT 0180 366D2C90 MP MODE WAIT ECB
0000019759 DCRTMAIN DCRPMAIN VL500045 100 WAIT 0180 398C87DC DBIO JRNL WRITE ECB
0000019760 DCRTMAIN DCRPMAIN VL500021 100 WAIT 0180 00058780 DBIO WRITE ECB
0000019761 DCRTMAIN DCRPMAIN VL500031 100 WAIT 0180 366D2CCC MP MODE WAIT ECB
0000019762 ADS2     ADSOMAIN VL500130 100 WAIT 0180 398C8824 DBIO JRNL WRITE ECB
0000019763 ADS2     ADSOMAIN VL500148 100 WAIT 0180 366D2928 MP MODE WAIT ECB
0000019764 RHDCNP3S ICD1     LD000000 100 WAIT NOST 366D2CA4 MP MODE WAIT ECB
0000019765 RHDCNP3S ICS2     LD000003 100 WAIT NOST 366D2CC4 MP MODE WAIT ECB
0000019766 DCRTMAIN DCRPMAIN VL500023 100 WAIT 0180 366D292C MP MODE WAIT ECB
0000019767 RHDCNP3S ICS2     LD000018 100 WAIT NOST 366D2CC0 MP MODE WAIT ECB
0000019768 DCRTMAIN DCRPMAIN VL500011 100 WAIT 0180 398C8884 DBIO JRNL WRITE ECB
0000019769 ADS2     ADSOMAIN VL500117 100 WAIT 0180 398C8884 DBIO JRNL WRITE ECB
0000019770 ADS2     ADSOMAIN VL500150 100 WAIT 0180 398C87C4 DBIO JRNL WRITE ECB
0000019772 ADS2     ADSOMAIN VL500107 100 WAIT 0180 366D2CAC MP MODE WAIT ECB
0000019771 RHDCNP3S ICS2     LD000011 100 WAIT NOST 398C8794 DBIO JRNL WRITE ECB
0000019773 RHDCNP3S ICS2     LD000020 100 WAIT NOST 366D2CA8 MP MODE WAIT ECB
0000019774 DCRTMAIN DCRPMAIN VL500039 100 WAIT 0180 366D2CC8 MP MODE WAIT ECB
0000019775 DCRTMAIN DCRPMAIN VL500019 100 WAIT 0180 366D2C70 MP MODE WAIT ECB
0000019776 ADS2     ADSOMAIN VL500122 100 WAIT 0180 366D2938 MP MODE WAIT ECB
0000019778 DCRTMAIN DCRPMAIN VL500040 100 WAIT 0180 366D2CB0 MP MODE WAIT ECB
0000019777 DCRTMAIN DCRPMAIN VL500041 100 WAIT 0180 366D2C6C MP MODE WAIT ECB
           PAGE 00004 - NEXT PAGE:
```


zIIP and MT

```
  Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000019781 ADS2     ADSOMAIN VL500101 100 WAIT 0180 366D2914 MP MODE WAIT ECB
0000019780 ADS2     ADSOMAIN VL500147 100 WAIT 0180 366D2930 MP MODE WAIT ECB
0000019779 ADS2     ADSOMAIN VL500116 100 WAIT 0180 398C8854 DBIO JRNL WRITE ECB
0000019786 DCRTMAIN DCRPMAIN VL500009 100 WAIT 0180 366D2C84 MP MODE WAIT ECB
0000019785 DCRTMAIN DCRPMAIN VL500026 100 WAIT 0180 366D2C8C MP MODE WAIT ECB
0000019784 DCRTMAIN DCRPMAIN VL500025 100 WAIT 0180 398C88FC DBIO JRNL WRITE ECB
0000019783 DCRTMAIN DCRPMAIN VL500027 100 WAIT 0180 366D293C MP MODE WAIT ECB
0000019782 DCRTMAIN DCRPMAIN VL500012 100 WAIT 0180 00058AD8 DBIO READ ECB
0000019787 RHDCNP3S ICS2     LD000010 100 WAIT NOST 366D25E0 MP MODE WAIT ECB
0000019788 DCRTMAIN DCRPMAIN VL500038 100 WAIT 0180 366D2C88 MP MODE WAIT ECB
0000019791 RHDCNP3S ICD1     LD000022 100 WAIT NOST 366D2C9C MP MODE WAIT ECB
0000019790 RHDCNP3S ICD1     LD000021 100 WAIT NOST 366D2CB4 MP MODE WAIT ECB
0000019789 ADS2     ADSOMAIN VL500099 100 WAIT 0180 366D2C98 MP MODE WAIT ECB
0000019792 DCRTMAIN DCRPMAIN VL500046 100 WAIT 0180 366D2CA0 MP MODE WAIT ECB
0000019798 DCRTMAIN DCRPMAIN VL500016 100 WAIT 0180 366D2C78 MP MODE WAIT ECB
0000019797 DCRTMAIN DCRPMAIN VL500017 100 WAIT 0180 366D2C74 MP MODE WAIT ECB
0000019796 DCRTMAIN DCRPMAIN VL500002 100 WAIT 0180 366D290C MP MODE WAIT ECB
0000019795 DCRTMAIN DCRPMAIN VL500018 100 WAIT 0180 366D2C7C MP MODE WAIT ECB
0000019794 DCRTMAIN DCRPMAIN VL500076 100 WAIT 0180 366D2C68 MP MODE WAIT ECB
0000019793 DCRTMAIN DCRPMAIN VL500048 100 WAIT 0180 366D2C64 MP MODE WAIT ECB
0000019807 ADS2     ADSOMAIN VL500139 100 WAIT NOST 366D291C MP MODE WAIT ECB
0000019806 ADS2     ADSOMAIN VL500123 100 WAIT NOST 366D2920 MP MODE WAIT ECB
0000019805 ADS2     ADSOMAIN VL500102 100 WAIT NOST 366D25E4 MP MODE WAIT ECB
0000019804 ADS2     ADSOMAIN VL500109 100 WAIT NOST 366D25E8 MP MODE WAIT ECB
0000019803 ADS2     ADSOMAIN VL500100 100 WAIT NOST 366D25F0 MP MODE WAIT ECB
           PAGE 00005 - NEXT PAGE:
```

zIIP and MT

```
  Taskid   Taskcd   Prog     LTERM    Pri Stat Stim  A(ECB)  ECB Type
0000019801 ADS2     ADSOMAIN VL500124 100 ACTV
0000019800 ADS2     ADSOMAIN VL500152 100 WAIT NOST 366D25CC MP MODE WAIT ECB
0000019799 ADS2     ADSOMAIN VL500146 100 WAIT NOST 366D25D0 MP MODE WAIT ECB
0000019808 DCRTMAIN DCRPMAIN VL500075 100 ACTV
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120

            PAGE 00006 - NEXT PAGE:
```


zIIP and MT

```
     D STAT SYS
  14:33:27.81 08/241 Current Time      00:02:19.04 Tot Sys Time
  14:29:48.54 08/241 Startup Time      00:00:07.14 Tot User Time

TASKS:        80107 Processed         3 Abended            133 Max Tasks
                455 System            0 Runaway              0 Times At Max
                 48 Deadlocks        24 Dead Victims

TRANS:        88060 Processed     88001 Norm Cmp   120 Max Conc
              19392 Ext Proc      19392 Ext Norm    22 Ext Conc   160 Max Erus
                  0 Dist Proc         0 Dist Norm    0 Dist Conc

DATABASE:   1747377 Calls        853855 Pages Rqst      1705384 Recs Rqst
                  0 Buff Wait    161223 Pages Read       555716 Recs Cur R/U
             176138 Page Writ         0 Calc Noflo         79114 Via Noflo
            2275909 Tot Locks         0 Calc Ovflo           324 Via Ovflo
                                      0 Frag Stord             0 Recs Reloc
   INDEX:         0 SR8 Splits        0 SR8 Stores             0 SR7 Stores
                  0 SR8 Spawns        0 SR8 Erases             0 SR7 Erases
                  0 Orph Adopt    60043 Ix Searches            1 Min Level
                                  70667 Lvls Srchd             2 Max Level
    SQL:     111768 Commands      27945 Tupls Fetched       9318 Rows Inserted
                  0 AM Recomp     27934 Rows Updated           0 Rows Deleted
                                      0 Sorts                  0 Sort Min
                                      0 Tuples Sorted          0 Sort Max

            PAGE 00001 - NEXT PAGE: _
```


zIIP and MT

```
JOURNAL:                  0 Buff Waits              0 User Putjrnl
  Page      163  0-10    2158 11-20     289 21-30     212 31-40     488 41-50
  Dist      196 51-60     321 61-70     247 71-80    2318 81-90   86989 91-100

INTERNAL:       RLEs    RCEs    DPEs   Stack
                2680    2412    1170    1011 HWM
               10000   10000    3000    2000 Sysgen Threshold
                   0       0       0         Times Exceeded

STORAGE:     5553745 Gets         5468065 Frees           Gets for type
                   0 PGFIXs             0 PGFREEs          1472654 DB
                   0 Pages Fxd          0 Pages Freed           18 SHK
             2848902 Scan 1             0 PGRLSEs                0 SHR
             2704843 Scan 2             0 Pages Relsd      2742912 SYS
                                                             174 USK
                   0 SOS COUNT                             1337987 USR

PROGRAM:             Act Loads  Pages Load  Wait/Space
          Non-Reent          2           3           0
              Reent         35        1550           0
       XA Non-Reent          2          18           0
           XA Reent        255       24439           0

SCRATCH:           0 Gets         1 Puts         0 Dels
  QUEUE:           3 Gets         0 Puts         0 Dels         0 Task AutoSt

             PAGE 00002 - NEXT PAGE:
```


zIIP and MT

```
     D SUBT 1
 *** Display Subtask details ***
                         Name  MAINTASK
                       Number  01
                       Status  IDLE
                    Work type  IDMS
                Count wakeups  2,710
          Count task dispatches  372,091
             User mode CPU time  00:00:00.5277
           System mode CPU time  00:00:13.3823
          CPU effectiveness (%)  48
        Count times fast posted  6,083
          Count times OS posted  00
        Count found work pass 1  343,541
        Count found work pass 2  28,550
    Count times POSTEXIT resumed  2,710
                      *** Enclave Info ***
                     zIIP time  00:00:02.1136
               zIIP on CP time  00:00:00.1437
          CPU effectiveness (%)  89
            Count swap attempts  478,550
             Count actual swaps  396,781
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
 -
```


zIIP and MT

```
     D SUBT 2
 *** Display Subtask details ***
                         Name  SUBT0001
                       Number  02
                       Status  IDLE
                    Work type  IDMS
                Count wakeups  2,581
         Count task dispatches  884,697
            User mode CPU time  00:00:01.2661
          System mode CPU time  00:00:21.9672
         CPU effectiveness (%)  76
       Count times fast posted  121
         Count times OS posted  00
       Count found work pass 1  813,916
       Count found work pass 2  70,781
  Count times POSTEXIT resumed  2,581
                     *** Enclave Info ***
                    zIIP time  00:00:05.4180
               zIIP on CP time  00:00:00.3295
         CPU effectiveness (%)  89
           Count swap attempts  1,151,714
            Count actual swaps  937,999
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
```


zIIP and MT

```
     D SUBT 3
 *** Display Subtask details ***
                         Name  SUBT0002
                       Number  03
                       Status  BUSY
                    Work type  IDMS
                Count wakeups  25,830
         Count task dispatches  2,190,854
            User mode CPU time  00:00:05.3540
          System mode CPU time  00:01:43.6985
         CPU effectiveness (%)  84
       Count times fast posted  754,355
         Count times OS posted  00
       Count found work pass 1  1,816,535
       Count found work pass 2  374,319
  Count times POSTEXIT resumed  25,793
                     *** Enclave Info ***
                    zIIP time  00:00:28.4539
               zIIP on CP time  00:00:00.4419
         CPU effectiveness (%)  92
           Count swap attempts  5,743,060
            Count actual swaps  4,509,054
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
```


zIIP and MT

```
     D MP
          *** MULTITASK ENVIRONMENT, MPMODE TABLE ***
          NAME         REQUEST COUNT        WAIT COUNT
          ----         -------------        ----------
          ANY              5,678,472                 00
          DC               1,866,357             81,939
          DB               3,758,124            296,427
          USER                    00                 00
          LOADER                 342                 00
          DRIVER             426,721              2,184
V120  ENTER NEXT TASK CODE:       CA-IDMS release 17.0 node TECHD120
-
```


TPNS Response Times

> Mean Response Time
- .32 Seconds (All Applications)
  - ADS .10
  - CICS DML .89
  - CICS SQL .91
  - DC Cobol .15

> Number of Responses
- 81,620

> Responses Per Minute
- 81,620+

Conclusion of Testing and Benchmarking

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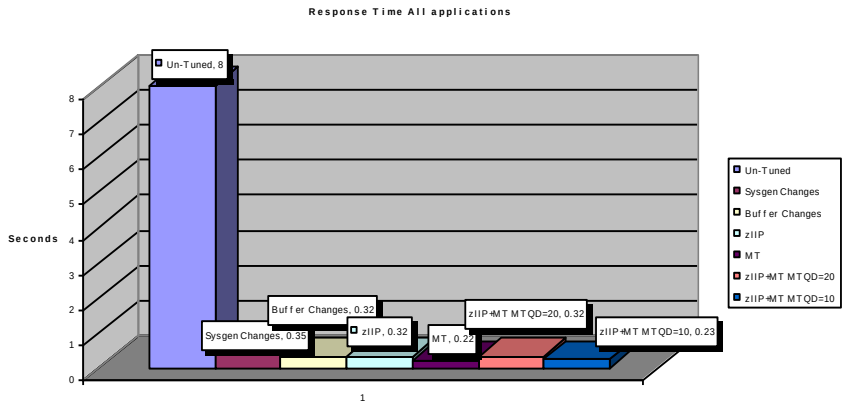
Summary



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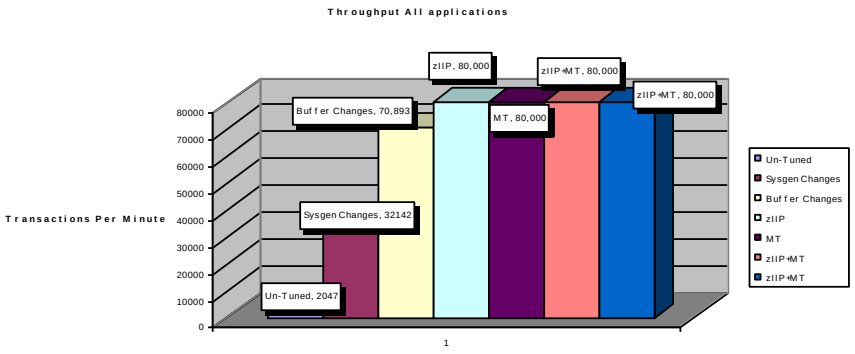
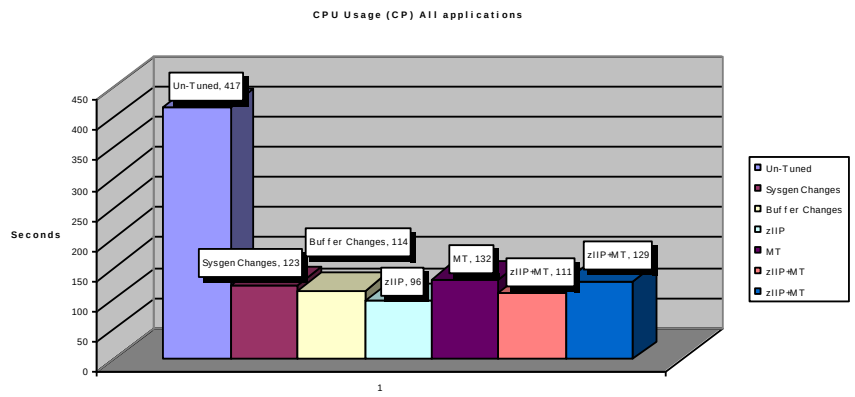
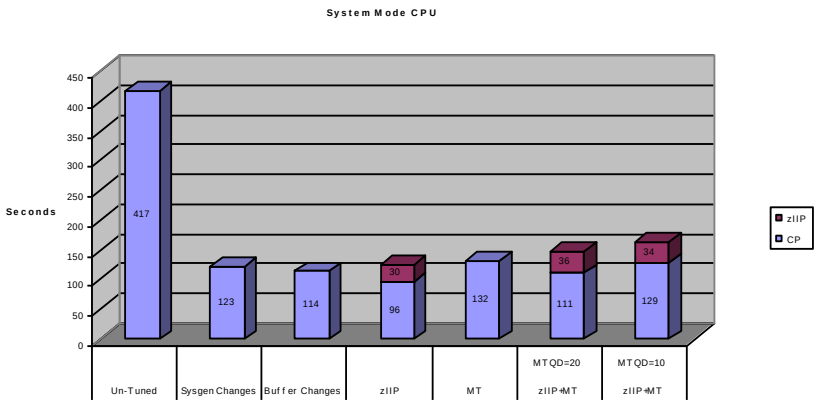
Summary



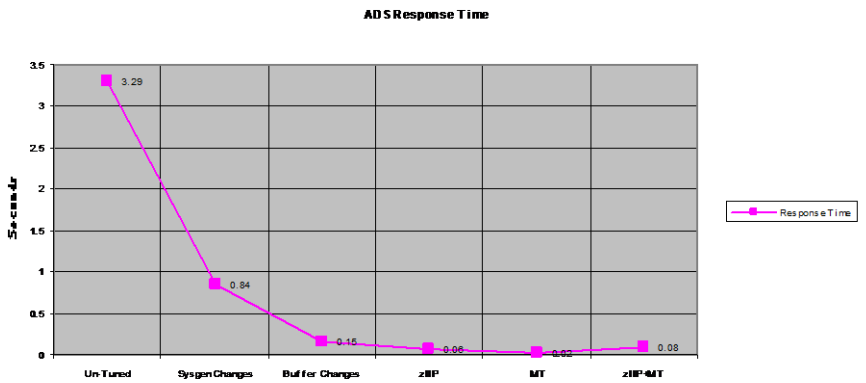
Summary



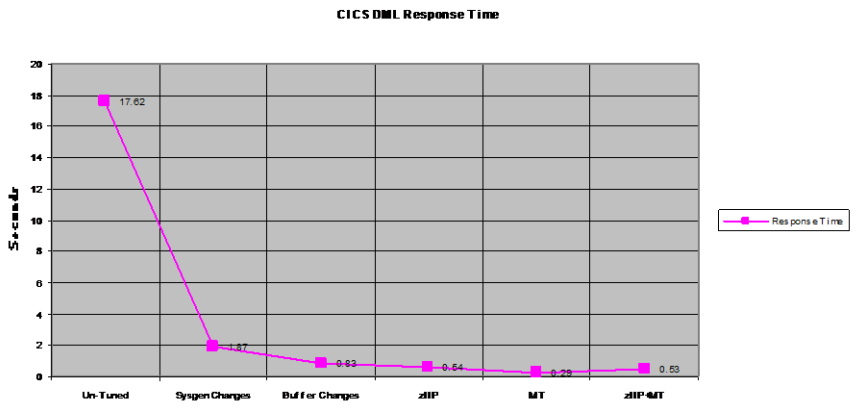
Summary



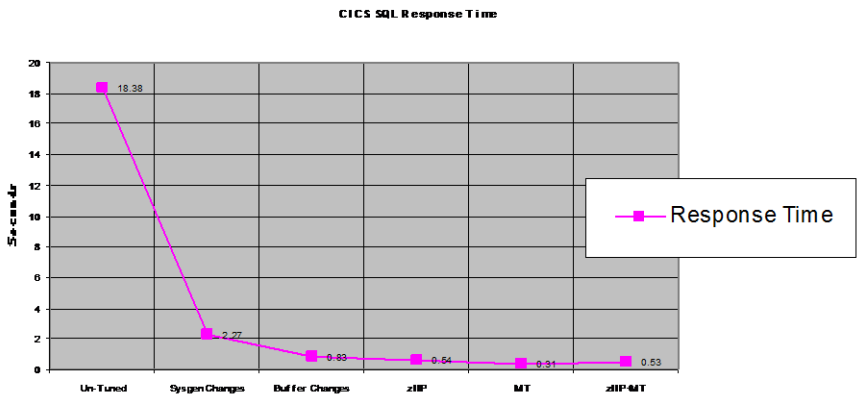
Summary



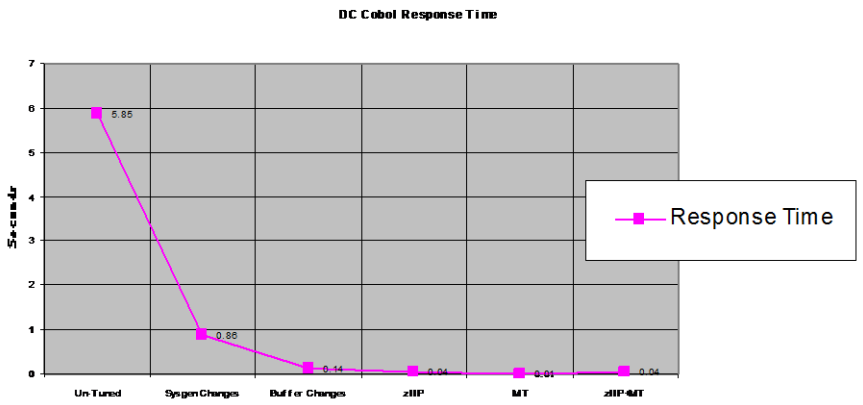
Summary



Summary



Summary



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Parallel Sysplex feature of CA IDMS

Education

EC801EN

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Abstract

This section discusses the Parallel Sysplex features available with IDMS. These features include Shared Cache, Data Sharing, Dynamic Run unit routing, and CV cloning.

Agenda

> Shared Cache

> Data Sharing

> Dynamic Database Session Routing

> CV Cloning

Shared Cache Definition

> Large, high-speed buffer in a Coupling Facility

> Contains database pages from files assigned to the cache and accessed by the CVs running in a Sysplex

> Cornerstone of the Coupling Facility features

> Used by ™ CA IDMS®/DB Data Sharing to allow multiple central versions to simultaneously update the same physical database

Shared Cache Implementation

> Define shared cache to the Coupling Facility

```
STRUCTURE NAME(IDMSSUPPCACHE002)        SIZE(5120)
PREFLIST(COUPLET1)
```


Shared Cache Implementation (cont.)

> DMCL Definition:

ALTER
DMCL R170DMCL

INCLUDE SEGMENT DBCR

DEFAULT SHARED CACHE IDMSSUPPCACHE002

Shared Cache Implementation (cont.)

> **DCMT VARY commands**

DCMT VARY SEGMENT NAME SHARED CACHE NAME/NO
DCMT VARY FILE NAME SHARED CACHE NAME/NO
DCMT VARY AREA NAME SHARED CACHE NAME/NO

DCMT Vary SHAred CAche cache-name ON/OFf

Shared Cache Tuning and Monitoring

> Tuning
- Increase shared cache size
- Define additional shared cache

> Monitoring
- DCMT
- CA IDMS Database Performance Monitor Option
- SREPORTS

Data Sharing Definition

> A data sharing group
- Named collection of CA IDMS/DB systems within a sysplex.
- Each CA IDMS/DB system associated with a data sharing group is referred to as a member of that group

> Data sharing and data sharing groups are the mechanisms that allow files to be open in update mode by all designated central versions

> Actual file data is maintained in the shared cache discussed earlier

Data Sharing Implementation

> Each data sharing group requires the definition of a list structure and a lock structure in the Coupling Facility

> One or more cache structures must be defined to share update access to data

> Definition in DMCL
- Default data sharing attribute
- Segment or file data sharing attribute

Data Sharing Implementation (cont.)

> Actual list and lock structure definitions:
- STRUCTURE NAME(CAIDMSSUPPGRP1LI) SIZE(4096) PREFLIST(COUPLET1)
- STRUCTURE NAME(CAIDMSSUPPGRP1LK) SIZE(5120) PREFLIST(COUPLET1)
- Sizes are in K bytes

Data Sharing Implementation (cont.)

> DMCL definition:

```
ALTER
DMCL R170DMCL
DATA SHARING DEFAULT SHARED CACHE
   IDMSSUPPCACHE002
        LOCK ENTRIES 100000 MEMBERS 5
        ON CONNECTIVITY LOSS NOABEND

INCLUDE SEGMENT DBCR
   DATA SHARING YES
   DEFAULT SHARED CACHE IDMSSUPPCACHE002
```


Data Sharing Implementation (cont.)

> Each member of the data sharing group requires SYSIDMS definition with

- DSGROUP
- DCNAME

```
//SYSIDMS  DD *
 DSGROUP=SUPPGRP1
 DCNAME=TECHD120
```


Data Sharing

> System Managed Rebuild
- For planned reconfigurations of the Coupling Facility

> System Managed Duplex Rebuild
- Provides Coupling Facility failure recovery capability

> Monitoring
- DCMT commands
- CA IDMS Performance Monitor
- JREPORTS

Coupling Facility Structures

> CA IDMS Visual DBA
- Modeling tool
- Uses CV's DMCL definition
- Generates Coupling Facility-ready syntax for:
  - Cache, List, and Lock structures

Data Sharing Benefits

> 24X7 processing
  - Fault Tolerance
  - System Maintenance
> Scalability
  - Additional CVs have update access to files
> Workload balancing
  - Additional update CVs can be started and stopped as needs change; work may be processed by any CV defined in the data sharing group
> Easy to implement and use

Dynamic Database Session Routing Definition

> Provides Workload balancing between CA IDMS/DB systems running in the Sysplex.

> Workload balancing is dynamic and based on actual system load

Dynamic Database Session Routing Implementation

DBGROUPs

> Backend Definitions

- Add DBGROUP statement(s) to Database Name Table
- Use "CREATE DBGROUP" statements to assign the Backend(s) to a DBGROUP(S)

```
CREATE DBGROUP R170DBTB.SPGROUP1 ENABLED
```

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Dynamic Database Session Routing Implementation (cont'd)

DBGROUPs

> Front-end Definitions

- You must define the DBGROUP as a node within the SYSGEN

```
ADD NODE SPGROUP1 GROUP DEFAULT NODE     TECHD120
```

- You can optionally map a DBNAME to a group by using the VIA "GROUP NAME" parameter of the Resource Table statement within SYSGEN

```
MODIFY RESOURCE TABLE
DBNAME IS DBCR VIA SPGROUP1.
```

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Dynamic Database Session Routing Implementation (cont'd)

> Coupling Facility considerations

- Define a Coupling Facility structure for each DBGroup defined to CA IDMS/DB
- Prefix DBGroup name with "CAIDMS"
- Size is in K bytes
- Example:

```
STRUCTURE NAME(CAIDMSSPGROUP1) SIZE(512)
PREFLIST(COUPLET1)
```


Dynamic Database Session Routing Implementation (cont'd)

> Work will be dynamically routed when one or both of the following are true:

- The DBNODE used is defined as a group via the NODE statement of SYSGEN
- The DBNAME used is defined in the Resource Table as a Group

> The DBNAME and/or the DBNODE are set by

- The application
- Via a DCUF SET command
- Via EXIT23

Dynamic Database Session Routing Implementation (cont'd)

```
TITLE 'EXIT 23 - PRE BIND EXIT'
XIT23      #MOPT ENV=SYS,AMODE=31,RMODE=ANY
XIT23      CSECT
XIT23EP1  #START MPMODE=ANY
           USING CSA,R10
           L    R2,4(,R1)                          40 BYTE DATA AREA
           USING PARMAREA,R2
           CLC   PSSCNAME(4),=CL4'DBCR'     IS THIS FOR DBCR
           BNE   RETURN                       NO! JUST EXIT
           MVC   PDBNODE,=CL8'SPGROUP1'   OVERRIDE DBNODE
***        MVC   PDBNAME,=CL8'DBCR    '      or  OVERRIDE DBNAME
RETURN    #RTN                                  RETURN TO CALLER
           LTORG
```


Dynamic Database Session Routing Implementation (cont'd)

```
      COPY         #CSADS
      PARMAREA DSECT
      PSSCNAME DS   CL8              SSC NAME
      PDBNODE   DS   CL8             DATABASE NODE
      PDBNAME   DS   CL8             DATABASE NAME
      PDICNOD    DS   CL8            DICTIONARY NODE
      PDICNAM    DS   CL8            DICTIONARY NAME
                 END
```

Dynamic Database Session Routing Implementation (cont'd)

> Monitoring
- DCMT commands
- LOOK
- CA IDMS Performance Monitor's Interval Component (online and Batch)

Dynamic Database Session Routing Benefits

> 24X7 processing
- Fault Tolerance
- System Maintenance

> Scalability
- Additional CVs have update access to files when used with data sharing

> Dynamic workload balancing
- Additional CVs can be started and stopped as needs change; work is routed to other CVs defined in the DBGroup

> Easy to implement and use

CV Cloning Definition

> Allows you to start multiple CVs that are copies (clones) of an existing CA IDMS/DB system

> System definition and files

- Same physical entities as the system being cloned with a few exceptions

CV Cloning Naming Conventions

> CV Number, DC System Number, VTAM APPLID, and System Node Name for a CV must conform to specific naming conventions

> By adhering to these naming conventions, CA IDMS/DB can implement clones without generating multiple physical copies of a system definition

CV Cloning Naming Conventions (cont'd)

> DC system number must match CV number

> Must be in range of 0 through 255

> All VTAM Applids must follow the convention of xxxxxnnn
  - xxxxx can be any five characters
  - nnn is the sysgen'd CV number and is overlaid at runtime with the number determined during start up of the cloned CV

CV Cloning Naming Conventions (cont'd)

> CA IDMS/DB system node names must follow the convention of *yyyyynnn*
  - where the first five characters (i.e., *yyyyy*) can be any characters you need to make the name unique within your environment
  - *nnn* is the number specified for the CV at system generation

```
SYSGEN 17.0 ONLINE   PAGE 1 LINE 1  DICT=SYSTEM
  ADD SYSTEM 120
    SYSTEM ID IS TECHD120
    CVNUMBER IS 120
    ADD LINE VTAM
    APPLICATION ID IS A31II120
```


CV Cloning

> Special File Requirements

- Each cloned CV requires its own copy of the following files:

DDLDCLOG, DDLDCSCR, DDLDCQUE, All Journals

CV Cloning (cont'd)

> Use the "CLON=" and "CLONES= " parameter in the JCL parm for the IDMS system startup.

```
//R170DC99 EXEC PGM=IDMSDC99,REGION=0K,TIME=1440,
//          PARM='S=110,CLON=Y,CLONES=9"
```

> When used in a data sharing group, a clone may have update access to all database files

CV Cloning Benefits

- 24X7 processing
  - Fault Tolerance
  - System Maintenance
- Scalability
  - Additional CVs have update access to files when used with data sharing
- Dynamic workload balancing
  - Additional CVs can be started and stopped as needs change; work is routed to other CVs defined in the DBGroup
- Easy way to add additional CVs
- No additional system definitions for the DBA to maintain

Agenda

> What are Health Checks?

> Why is CA implementing Health Checks?

> How can you activate CA IDMS Health Checks?

> Summary and Q & A

What are Health Checks?

> Detailed z/OS operating system messages which identify potential problems and what action to take

- Customers use information in messages to solve component or product configuration problems

> IBM Health Checker for z/OS

- Framework that allows you to run and manage Health Checks in your z/OS operating system
- Individual Health Checks are owned by a component or product
- Detailed messages
  - Can be viewed SDSF, HZSPRINT Utility, Health Check log stream, or CA SYSVIEW
  - Exceptions produce WTO messages

Why is CA Implementing Health Checks?

> The IBM Health Checker for z/OS is an important component of CA's Mainframe 2.0 strategy

- Reduce or eliminate operational problems and outages
- Ensure "best practices" are being followed
- Maximize product value
- Over 100 CA product health checks have been delivered since May 2009

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How to Activate CA IDMS Health Checks

> Setup and run IBM Health Checker for z/OS

- Provides the z/OS framework to run Health Checks
- Details in IBM Health Checker for z/OS Users Guide

> Setup and run CA Common Services Health Checker

- Provides shared infrastructure to register and run CA product health checks
- CA Common Services r11 PTF RI05071

> Download and install CA IDMS r17 SP1 Health Checks

- CA IDMS r17 PTF RO12080

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CA IDMS r17 Health Checks

> IDMS_SCRATCH_IN_MEMORY

- Medium level performance exception
- Run once at startup
- SCRATCH option is a best practice that can significantly improve performance.

CA IDMS Health Checks

Support.ca.com->IDMS home page-> Product News

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CA IDMS r17 Health Checks

> IDMS_CHANGE_TRACKING

- Medium level performance exception
- Run once at startup
- Use of SYSTRAK file for change tracking ensures that files are updated during WARMSTART

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CA IDMS r17 Health Checks

> IDMS_ZIIP_USAGE

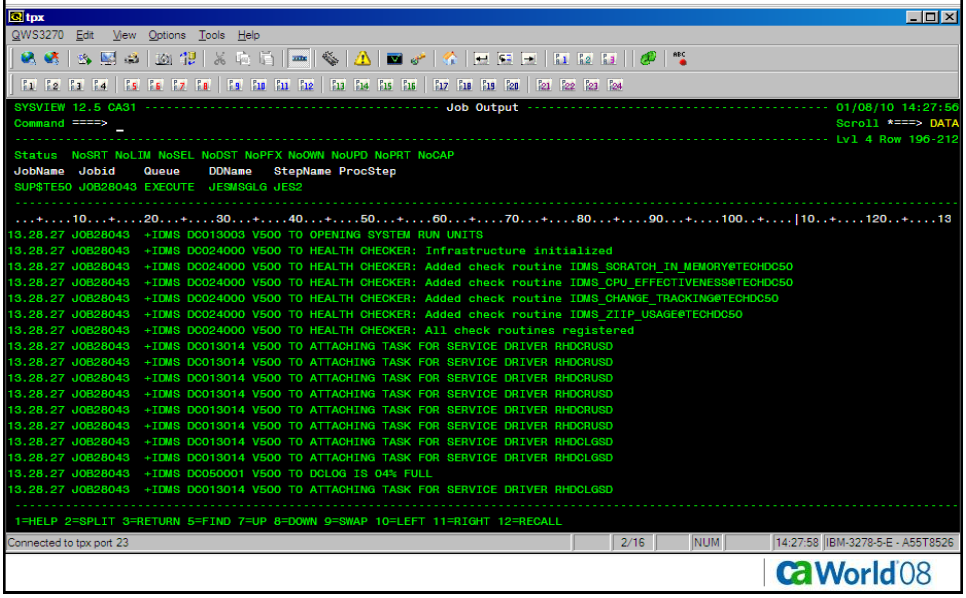
- Medium level performance exception
- Run once every 24 hours
- Exploitation of zIIP processors is recommended to increase overall CPU throughput and operational costs

CA IDMS r17 Health Checks

> IDMS_CPU_EFFECTIVENESS

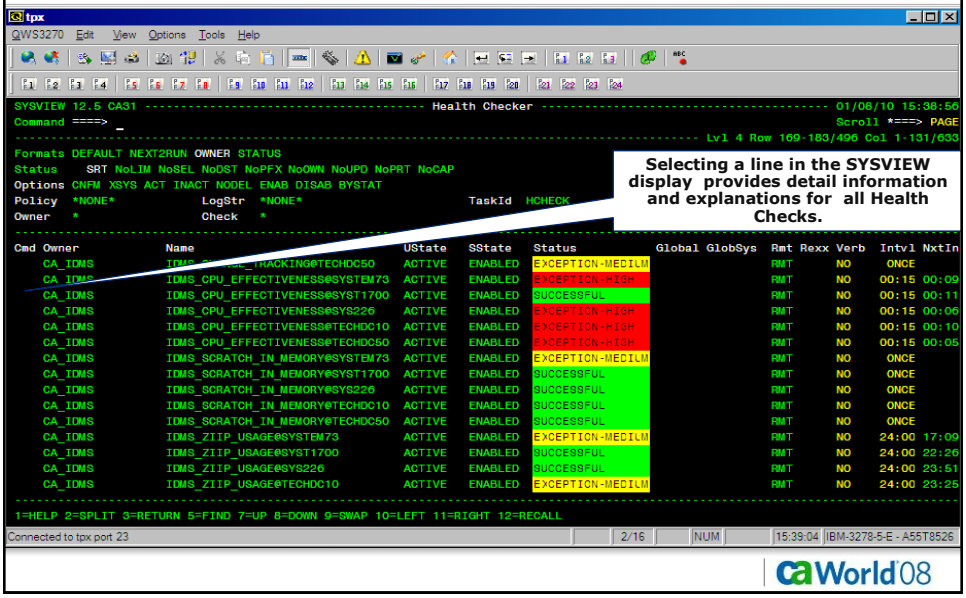
- High level performance exception
- Run at customer specified intervals. Default is 15 minutes
- CA IDMS is spending too much time waiting for CPU which could impact response time

Examples of CA IDMS Health Check Messages (Startup)



```
SYSVIEW 12.5 CA31 ------------------------------------------ Job Output ------------------------------------------ 01/08/10 14:27:56
Command ====> _                                                                                                  Scroll *===> DATA
---------------------------------------------------------------------------------------------------------------- Lvl 4 Row 196-212
Status   NoSRT NoLIM NoSEL NoDST NoPFX NoOWN NoUPD NoPRT NoCAP
JobName  Jobid    Queue    DDName   StepName ProcStep
SUP$TE50 JOB28043 EXECUTE  JESMSGLG JES2
-----------------------------------------------------------------------------------------------------------------------------------
...+....10...+....20...+....30...+....40...+....50...+....60...+....70...+....80...+....90...+....100..+....|10..+....120..+....13
13.28.27 JOB28043  +IDMS DC013003 V500 TO OPENING SYSTEM RUN UNITS
13.28.27 JOB28043  +IDMS DC024000 V500 TO HEALTH CHECKER: Infrastructure initialized
13.28.27 JOB28043  +IDMS DC024000 V500 TO HEALTH CHECKER: Added check routine IDMS_SCRATCH_IN_MEMORY@TECHDC50
13.28.27 JOB28043  +IDMS DC024000 V500 TO HEALTH CHECKER: Added check routine IDMS_CPU_EFFECTIVENESS@TECHDC50
13.28.27 JOB28043  +IDMS DC024000 V500 TO HEALTH CHECKER: Added check routine IDMS_CHANGE_TRACKING@TECHDC50
13.28.27 JOB28043  +IDMS DC024000 V500 TO HEALTH CHECKER: Added check routine IDMS_ZIIP_USAGE@TECHDC50
13.28.27 JOB28043  +IDMS DC024000 V500 TO HEALTH CHECKER: All check routines registered
13.28.27 JOB28043  +IDMS DC013014 V500 TO ATTACHING TASK FOR SERVICE DRIVER RHDCRUSD
13.28.27 JOB28043  +IDMS DC013014 V500 TO ATTACHING TASK FOR SERVICE DRIVER RHDCRUSD
13.28.27 JOB28043  +IDMS DC013014 V500 TO ATTACHING TASK FOR SERVICE DRIVER RHDCRUSD
13.28.27 JOB28043  +IDMS DC013014 V500 TO ATTACHING TASK FOR SERVICE DRIVER RHDCRUSD
13.28.27 JOB28043  +IDMS DC013014 V500 TO ATTACHING TASK FOR SERVICE DRIVER RHDCRUSD
13.28.27 JOB28043  +IDMS DC013014 V500 TO ATTACHING TASK FOR SERVICE DRIVER RHDCRUSD
13.28.27 JOB28043  +IDMS DC013014 V500 TO ATTACHING TASK FOR SERVICE DRIVER RHDCLGSD
13.28.27 JOB28043  +IDMS DC013014 V500 TO ATTACHING TASK FOR SERVICE DRIVER RHDCLGSD
13.28.27 JOB28043  +IDMS DC050001 V500 TO DCLOG IS 04% FULL
13.28.27 JOB28043  +IDMS DC013014 V500 TO ATTACHING TASK FOR SERVICE DRIVER RHDCLGSD
-----------------------------------------------------------------------------------------------------------------------------------
1=HELP 2=SPLIT 3=RETURN 5=FIND 7=UP 8=DOWN 9=SWAP 10=LEFT 11=RIGHT 12=RECALL
```

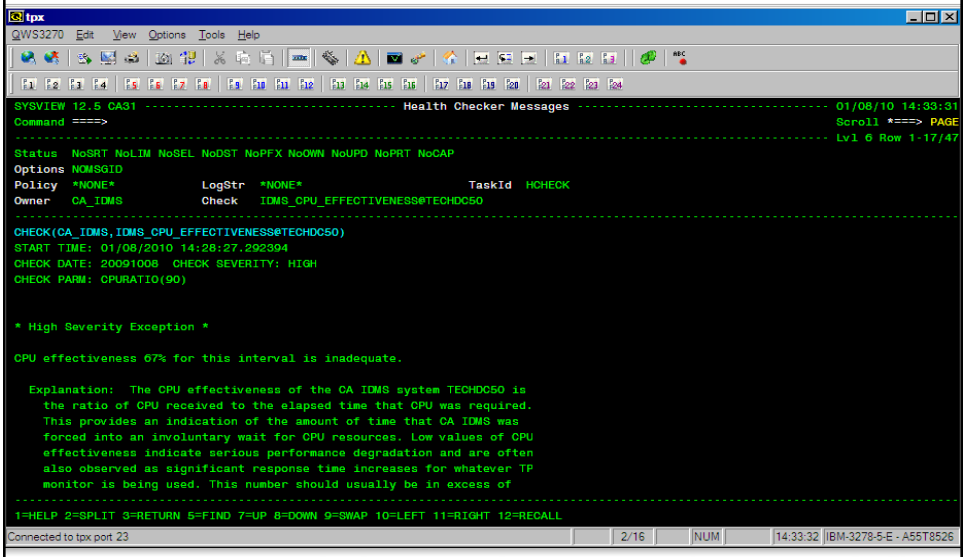
Examples of CA IDMS Health Check Messages (Reported via SYSVIEW)



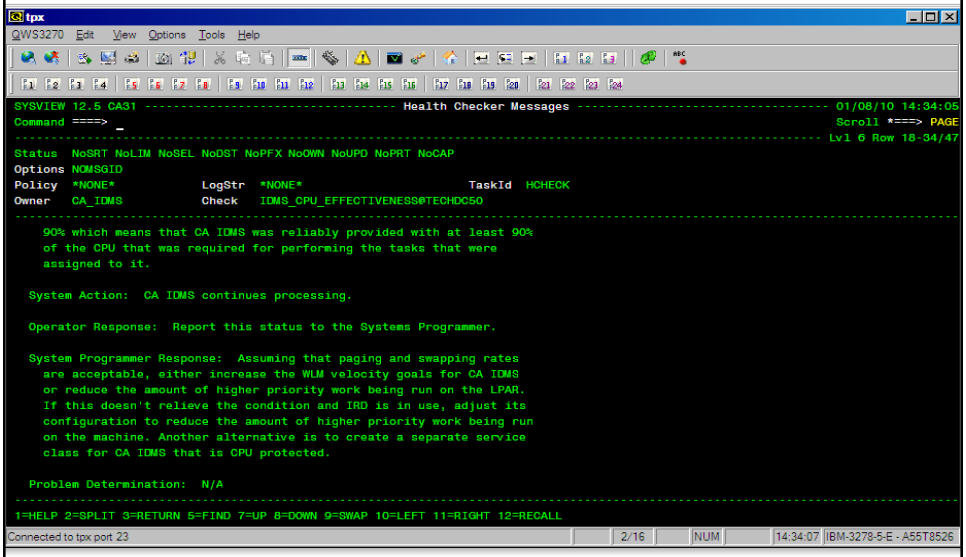
```
SYSVIEW 12.5 CA31 ---------------------------------------- Health Checker ---------------------------------------- 01/08/10 15:38:56
Command ====> _                                                                                                  Scroll *===> PAGE
------------------------------------------------------------------------------------------ Lvl 4 Row 169-183/496 Col 1-131/633
Formats DEFAULT NEXT2RUN OWNER STATUS
Status    SRT NoLIM NoSEL NoDST NoPFX NoOWN NoUPD NoPRT NoCAP
Options CNFM XSYS ACT INACT NODEL ENAB DISAB BYSTAT
Policy  *NONE*               LogStr  *NONE*                    TaskId  HCHECK
Owner   *                    Check   *
-----------------------------------------------------------------------------------------------------------------------------------
Cmd Owner            Name                         UState   SState    Status           Global GlobSys  Rmt Rexx Verb  Intvl NxtIn
    CA_IDMS          IDMS_        TRACKING@TECHDC50  ACTIVE   ENABLED   EXCEPTION-MEDIUM                 RMT      NO     ONCE
    CA_IDMS          IDMS_CPU_EFFECTIVENESS@SYSTEM73 ACTIVE   ENABLED   EXCEPTION-HIGH                   RMT      NO    00:15 00:09
    CA_IDMS          IDMS_CPU_EFFECTIVENESS@SYST1700 ACTIVE   ENABLED   SUCCESSFUL                       RMT      NO    00:15 00:11
    CA_IDMS          IDMS_CPU_EFFECTIVENESS@SYS226   ACTIVE   ENABLED   EXCEPTION-HIGH                   RMT      NO    00:15 00:06
    CA_IDMS          IDMS_CPU_EFFECTIVENESS@TECHDC10 ACTIVE   ENABLED   EXCEPTION-HIGH                   RMT      NO    00:15 00:10
    CA_IDMS          IDMS_CPU_EFFECTIVENESS@TECHDC50 ACTIVE   ENABLED   EXCEPTION-HIGH                   RMT      NO    00:15 00:05
    CA_IDMS          IDMS_SCRATCH_IN_MEMORY@SYSTEM73 ACTIVE   ENABLED   EXCEPTION-MEDIUM                 RMT      NO     ONCE
    CA_IDMS          IDMS_SCRATCH_IN_MEMORY@SYST1700 ACTIVE   ENABLED   SUCCESSFUL                       RMT      NO     ONCE
    CA_IDMS          IDMS_SCRATCH_IN_MEMORY@SYS226   ACTIVE   ENABLED   SUCCESSFUL                       RMT      NO     ONCE
    CA_IDMS          IDMS_SCRATCH_IN_MEMORY@TECHDC10 ACTIVE   ENABLED   SUCCESSFUL                       RMT      NO     ONCE
    CA_IDMS          IDMS_SCRATCH_IN_MEMORY@TECHDC50 ACTIVE   ENABLED   SUCCESSFUL                       RMT      NO     ONCE
    CA_IDMS          IDMS_ZIIP_USAGE@SYSTEM73        ACTIVE   ENABLED   EXCEPTION-MEDIUM                 RMT      NO    24:00 17:09
    CA_IDMS          IDMS_ZIIP_USAGE@SYST1700        ACTIVE   ENABLED   SUCCESSFUL                       RMT      NO    24:00 22:26
    CA_IDMS          IDMS_ZIIP_USAGE@SYS226          ACTIVE   ENABLED   SUCCESSFUL                       RMT      NO    24:00 23:51
    CA_IDMS          IDMS_ZIIP_USAGE@TECHDC10        ACTIVE   ENABLED   EXCEPTION-MEDIUM                 RMT      NO    24:00 23:25
-----------------------------------------------------------------------------------------------------------------------------------
1=HELP 2=SPLIT 3=RETURN 5=FIND 7=UP 8=DOWN 9=SWAP 10=LEFT 11=RIGHT 12=RECALL
```

Selecting a line in the SYSVIEW display provides detail information and explanations for all Health Checks.

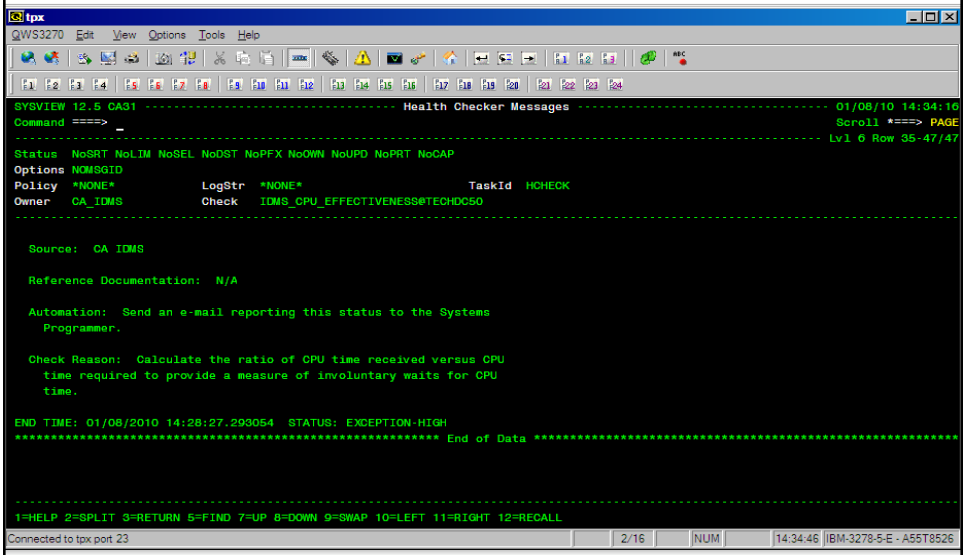
Examples of CA IDMS Health Check Messages (Reported via SYSVIEW)



Examples of CA IDMS Health Check Messages (Reported via SYSVIEW)



Examples of CA IDMS Health Check Messages (Reported via SYSVIEW)



caWorld'08

