CICS/RESPONSE TIME MONITOR



```
CICSPROD
                                                                 CICS RESPONSE DETAIL ANALYSIS
                                                                                                             RESPONSE GRAPH
                                     DATE
                                                  BEGIN
                                                              END
                                                                         RESP TERM TRAN OPID -1-2-3-4-5
                                                                                      **** ***
                                                                         ***
                                                                                 TOP
                                  08-24-95 10:59:59 11:00:00
                                                                          1.4 INSC ACT1 SLL
                                                                                                     =====>
                                  08-24-95 10:59:59 11:00:01
                                                                          1.9 CUSL DATA DMC
     MACKINNEY SYSTEMS
                                 HOURLY AVERAGE RESPONSE TIME FROM 06:00:00 TO 23:59:00, 02-13-95 THRU 02-13-96
                                                                                                                                        0
     5.8
     5.6
     5.4
     5.2
0
     4.0
                                                                                                                                        0
     4.6
     4.4
                                                                                                                                        0
     3.8
     3.6
     3.2
0
     2.8
     2.2
0
     1.6
     1.4
                                                  :::
0
                                                                                                                                        0
         0600 0700 0800 0900 1000 1100 1200 1300 1400 1500 1600 1700 1800 1900 2000 2100 2200 2300
         0.1 \quad 0.2 \quad 0.6 \quad 0.7 \quad 1.7 \quad 1.2 \quad 0.4 \quad 0.8 \quad 1.6 \quad 0.9 \quad 0.3 \quad 0.2 \quad 0.1 \quad 0.1 \quad 0.1 \quad 0.1 \quad 0.1
```

- Monitor all terminal response times and isolate those transactions which need attention.
- Virtually no overhead. CICS RTM uses its own data collection technique. CICS RTM does not use the CICS monitoring facility.
- Great as a stand-alone or as a complement to your existing CICS monitor.
- Online displays of terminal transactions showing time-of-day, response time, terminal ID, transaction ID, and operator ID.
- Online displays of average response time graphically displayed for user specified intervals.
- Online displays of terminal transactions that have exceeded user specified thresholds.
- Online or console notification when user specified exception events are detected.
- Automatically LOGS all CICS terminal transactions.
- Fully colored screens
- Menu and PF key driven with HELP screens throughout.

Comprehensive batch reports

- Detail Report listing individual response times by terminal, transaction, operator, start time and day, and end time and day. Sort the reports by terminal, transaction, operator, or response time.
- Summary Report listing the average response time and number of transactions for each terminal and/ or transaction and/or operator ID.
- Can be specified to sort in any order with multilevel control breaks.
- TOP 50 Report listing the TOP 50 terminals, TRANs or OPIDs with the highest average response time.
- *TOP 50 Report* listing the TOP 50 terminals, transactions, or operators with the highest number of transactions.
- Average Response Time graphically listing the average response time for your CICS for each hour, for each day, or for each month.



Online Displays

The **CICS/RESPONSE TIME MONITOR** *INITIAL MENU* serves as an entrance to all CICS RTM online functions.

```
MACKINNEY SYSTEMS
                         CICS/RESPONSE TIME MONITOR
                                INITIAL MENU
                    WELCOME TO CICS/RESPONSE TIME MONITOR
                - To install and review CICS/RESPONSE TIME MONITOR parameters.
   PF2 - PARMS
                  - To SETUP/ADD/CHANGE parameters.
                  - To START/STOP the monitor collection.
   PF3 - EXIT
                 - To exit to CICS.
   PF4 - RESP
                  - To graphically display transaction counts, percentage, and
                       average response time for user specified time intervals. 3 rolling graphs and 1 overall graph are displayed.
          GRAPH
   PF5 - SELECT - To display the selection menu allowing you to enter SEARCH
                       CRITERIA to display CICS terminal transactions in order of occurrence for specific times, dates, TERMIDs,
           MENU
          TRANS
                       TRANSIDS, OPERATOR IDS, and RESPONSE TIMES
          DETAIL - The SELECT MENU can also be used to display all CICS
                       terminal transactions that have exceeded user specified
        EXCEPTIONS
                        thresholds.
                                     Thresholds can be in any combination on
                       TERMID, TRANID, OPERATOR ID, and/or RESPONSE TIME.
```

PF5 displays the *TRANSACTION SELECTION MENU*. This menu allows the user to specify criteria for subsequent displays. The user can limit the monitor displays by specifying terminal id, transaction id, operator id, response time, start and end time, and date.

```
MACKINNEY SYSTEMS
                             CICS/RESPONSE TIME MONITOR
                             TRANSACTION SELECTION MENU
KEY any selection information you wish below and press ENTER for CICS
transactions or PF6 for CICS/RTM EXCEPTION transactions. Defaults are set to all transactions for the current date.
                                                         You can use an "*" as
         SELECT TRANSACTION INFORMATION
                                  TRANS-WITH-RESP
                                                         a generic character for
                            TIME > N SECS
                                                         TERMID, TRANID, and OPID
                     OPID
                                   00000
         INCLUSIVE DISPLAY TIMES
                                               Times and dates are
              START TIME 00 00 00
                                               inclusive and limit the
                   DATE 02 07 95
                                               display to those CICS
                                               transactions that ended
            END TIME==> 23 59 50
                                               within these times.
                 DATE==> 02 07 95
                                            *** TEMPORARY OVERRIDE ***
                                            * GRAPH RANGE FROM 0 TO 05
PF1-HELP ENTER-DISPLAY CICS TRANSACTIONS PF6-DISPLAY CICS/RTM EXCEPTIONS
```

By specifying a START TIME of 11 00 00 and END TIME of 12 00 00 and TIME > N SECS equal to 1 on the *TRANSACTION SELECTION MENU*, the **DETAIL ANALYSIS SCREEN** (below) will list all transactions with transaction ending times between 11:00 A.M. and 12:00 noon that have a response time of one second or greater. Pressing ENTER will result in a **DETAIL ANALYSIS SCREEN** similar to this screen.

```
CICSPROD
                      CICS RESPONSE DETAIL ANALYSIS
                                                      RESPONSE GRAPH
  DATE
           BEGIN
                            RESP TERM TRAN OPID
**** TOP **** ***
                                                  ----1----5
                                  TOP
08-24-9510:59:5911:00:00
                            1.4
                                 INSC ACT1
                                            SLL
                                                  =====>
08-24-9510:59:5911:00:01
                            1.9
                                 CUSL
                                      DATA
                                            DMC
                                                  ======>
08-24-9511:00:0011:00:02
                            1.5
                                 PURA
                                      CSPG
                                            DKR
08-24-9511:00:0011:00:01
                                 ACTD
                                      CSTP
                                            KJC
                                                  ====>
08-24-9511:00:0011:00:04
                                 SECA
                                            BML
                                                  ----->
08-24-9511:00:0111:00:11
                          10.2
                                 MEFA
                                      CSPG
                                            EEW
                                                  08-24-9511:00:0111:00:02
                            1.0
                                 ACTH
                                      NALA
                                            LBS
                                                  ====>
08-24-9511:00:0111:00:02
                                 INSA
                                      CSTP
                                            MPB
                                                  ====>
                            1.1
08-24-9511:00:0111:00:03
                            2.1
                                 ACTH
                                      NANL
                                            LBS
                                                  =======>
08-24-9511:00:0111:00:03
                            1.6
                                 \mathsf{ACTD}
                                      DONM
                                                  ======>
08-24-9511:00:0211:00:04
                                 AGSM
                                      CEMT
                                            PRM
                                                  ======>
08-24-9511:00:0211:00:04
                            1.5
                                 MEFA
                                      WMAI
                                            EEW
                                                  =====>
08-24-9511:00:0211:00:03
08-24-9511:00:0211:00:03
                            1.0
                                 SECA
                                      CSTP
                                            RMI
                                                  ====>
                                      WM70
                                            SKW
                                                  =====>
                            1.1
                                 DEPB
08-24-9511:00:0211:00:03
                                 PD02
                                      DATA
                                            LAB
                                                  =====>
                            1.1
08-24-9511:00:0311:00:05
                            2.1
                                 FM51
                                      NALA
                                            SDG
                                                  =======>
08-24-9511:00:0411:00:05
                            1.0
                                 HY1F
                                      CSTP
                                                  ====>
08-24-9511:00:0411:00:12
                            8.3
                                 MEFA CSPG
                                            EEW
                                                  08-24-9511:00:0411:00:05
                            1 1
                                 DEPB DATA
                                            SKW
                                                  ====>
              PF1-HELP
                         PF3-MENU
                                    PF7-BACKWARD
                                                   PF8-FORWARD
 CLEAR-EXIT
```

Entering PF4 on the initial menu will display the **RESPONSE TIME RANGES SCREEN**. This screen will give an overview of response times for this CICS. It shows four graphic displays summarizing response times for all transactions. The first three graphs summarize response times for the three most recent time intervals (the time interval is user specified). The fourth graph summarizes response times for all transactions from the time the response time monitor was last enabled. Following is an example of the **RESPONSE TIME RANGES SCREEN**.

| CICSPROD CICS/RESPONSE TIME RANGES AUTO REFRESH 5.0 S | ECS |
|---|-------|
| 08/24/95 11:30 15 MINS AVG-RSP 0.6 08/24/95 11:15 15 MINS AVG-RS | P 0.5 |
| | 4 5 |
| SECS TRANS % +-0-0-0-0-0 SECS TRANS % +-0-0-0-0 | |
| 0-1 6270 88 ======= 88 ======> 0-1 6570 89 ======= 89 ==== | ====> |
| 1-2 585 8 => 1-2 591 8 => | |
| 2-3 222 3 => 2-3 153 2 => | |
| 3-4 12 0 3-4 30 0 | |
| 4-5 9 0 4-5 3 0 5-6 0 0 5-6 3 0 | |
| 5-6 0 0 5-6 3 0 6-> 18 0 6-> 21 0 | |
| 7,116 TOTAL TRANS 7,371 TOTAL TRANS | |
| 08/24/95 11:00 15 MINS AVG-RSP 0.4 08/24/95 05:00 COMBINED AVG-RS | P 0 1 |
| | 4 5 |
| SECS TRANS % +-0-0-0-0 SECS TRANS % +-0-0-0-0 | |
| 0-1 5862 91 ======= 91 ======> 0-1 90,006 90 ======== 90 ==== | ====> |
| 1-2 393 6 ==> 1-2 7,041 7 ===> | |
| 2-3 132 2 > 2-3 2,337 2 > | |
| 3-4 72 0 4-5 6 0 3-4 72 0 5-6 6 0 5-6 15 0 | |
| 4-5 6 0 4-5 21 0 | |
| 5-6 6 0 5-6 15 0 | |
| 6-> 15 0 6-> 135 0 | |
| 6,435 TOTAL TRANS 99,627 TOTAL TRANS CLEAR->EXIT PF1->HELP PF2->START/STOP REFRESH OTHER KEYS->MENU | |
| CLEAR->EXIT PF1->HELP PF2->START/STOP REFRESH OTHER KEYS->MENU | |
| | |
| | |

In this example the summary interval is 15 minutes. That is, every 15 minutes each of the three time interval graphs is replaced with the next more current graph. The oldest is rolled off and a new 15 minute interval graph is started.

The COMBINED graph shows the combined response times for all transactions since the monitor was last enabled (05:00 A.M. in this example).

Please note in this example AUTO REFRESH is ON. This means that every x seconds (or minutes) the data on the screen will automatically be updated. The refresh interval is specified by the user.

Online Displays (continued)



CICS/RESPONSE TIME MONITOR gives you the capability to specify transaction related criteria for which you can automatically be notified should any of the exception conditions be detected.

Exception conditions can be specified by terminal id, transaction id, operator id, and response time or any combination of these criteria. Ranges of exception conditions (i.e. terminals L200 through L299, transactions AC00 through AC99, RESPONSE TIME > 2, etc.) can also be specified.

If you wish, you can have your current transaction interrupted for <u>immediate</u> notification when any exception criteria is detected. This can be used to warn tech support when response times exceed desired maximums, and it can be a security tool for monitoring sensitive transactions.

All exceptions detected can be reviewed at any time by pressing PF6 on the TRANSACTION SELECTION MENU to obtain an **EXCEPTION ANALYSIS SCREEN** similar to the below.

The above screen was generated by specifying 2 sets of exception criteria. The first was for all transactions from AC00 through AC99 with response times of 2 seconds or greater. The second criteria set was for all transactions from CEAA through CE99.

Batch Reports

```
MACKINNEY SYSTEMS
                                          CICS RESPONSE TIME MONITOR
                                               TRANSACTION DETAIL
                                  RESP TERM TRAN OPID ----1----2----3----4----5
    08-30-95 13:34:08 13:34:20
                                  11.9 LC01 RHON
                                                     $.1190
08-30-95 13:31:15 13:31:16
                                   1.1 LC01 RHON
                                                                                $.0110
    08-30-95 13:35:03 13:35:04
                                   1.1 LC01
                                            RHON
                                                                                $.0110
    08-30-95 12:44:39 12:44:39
                                   .5 LC01
                                            PROB EBR ==>
    08-30-95 12:44:34 12:44:34
                                    .4 LC01
                                                      =>
                                                                                                           08-30-95 13:33:34 13:33:35
                                    .4 LC01
                                            RHON
                                                      =>
                                                                                $.0040
    08-30-95 12:44:37 12:44:37
                                    .2 LC01
                                           PROB FBR
                                                     >
                                                                                $.0020
                                                     08-30-95 13:00:16 13:00:24
                                   8.3 I 205 WMRN RWK
                                                                                $.0830
    08-30-95 10:56:03 10:56:05
                                   2.0 L205
                                           IMFU RWK
                                                     =======>
                                                                                $.0200
                                                      ======>
    08-30-95 08:06:11 08:06:12
                                       L205
                                                RWK
                                                                                $.0170
                                                                                                           08-30-95 10:23:32 10:23:33
                                   1.3 L205 DUMP
                                                      =====>
                                                                                $.0130
    08-30-95 08:10:38 08:10:39
                                   1.1 L205
                                            PRES RWK
                                                     =====>
                                                                                $.0110
    08-30-95 08:10:38 08:10:39
                                   1.1 L205 PRES RWK
                                                      =====>
                                                                                $.0110
                                   .8 L205 WMRN RWK
                                                      ===>
    08-30-95 08:57:55 08:57:56
                                                                                $.0080
    08-30-95 09:01:21 09:01:22
                                    .8 L205 WMSE
                                                                                $.0080
                                                RWK
                                                                                                           $.0080
    08-30-95 10:48:59 10:49:00
                                    .8 L205
                                           TMFU
                                                RWK
    08-30-95 13:00:26 13:00:27
                                    .8 L205
                                                      ===>
    08-30-95 12:59:20 12:59:20
                                    .7 L205 WMDN RWK
                                                      ===>
                                                                                $.0070
    08-30-95 13:01:07 13:01:08
                                    .7 L205 DUMP
                                                RWK
                                                      ===>
                                                                                $.0070
    08-30-95 09:01:10 09:01:11
                                    .6 L205 WMSE
                                                RWK
                                                      ==>
                                                                                $.0060
                                                                                                           08-30-95 10:58:26 10:58:27
                                    .6 L205 IMFU
                                                RWK
                                                                                $.0060
    08-30-95 13:09:19 13:09:19
                                    .6 L205 WMD0
                                                                                $.0060
                                                RWK
    08-30-95 13:47:22 13:47:22
                                    .6 L205 DUMP
    08-30-95 14:12:55 14:12:56
                                    .6 L205 DUMP
                                                RWK
                                                      ==>
                                                                                $.0060
    08-30-95 15:06:42 15:06:43
                                    .6 L205 DUMP
                                                RWK
                                                      ==>
                                                                                $.0060
                                                                                                           08-30-95 08:56:31 08:56:32
                                    .5 L205 WMDN RWK
                                                      ==>
                                                                                $.0050
                                                     ==>
    08-30-95 08:56:31 08:56:32
                                    .5 I 205 WMDN RWK
                                                                                $.0050
    08-30-95 09:04:54 09:04:54
                                    .5 L205 WMRN
                                                RWK
                                                                                $.0050
    08-30-95 10:41:11 10:41:12
                                    .5 L205 DUMP
```

CICS/RESPONSE TIME MONITOR contains useful batch reporting facilities. Above is a *DETAIL REPORT* listing individual response times by user specified terminals, transactions, operators, start time and day, and end time and day. This report is in roster format and can be sorted by terminal id, transaction id, operator id, response time, or any combination of these.

Note that this report contains only terminals beginning with 'L' and it is sorted in terminal id order first and response time order second. The SORT ORDER is designated by TERM first and by RESP second (RESP within TERM). Response time is always sorted largest to smallest. An optional user designated cost of \$.010 has been calculated for each second used. The user can specify alternative sort orders to meet his specific needs.



Batch Reports (continued)

The Summary Report lists the average response time and number of transactions for each terminal, transaction and/or operator id. It can be sorted in any order based on the user's needs. Control breaks are done on each indicated level of sorting. Following is a sample.

| MACKINNEY SYSTEMS | | | | | SE TIME MONITOR ON SUMMARY | 17:15:35: 02-14-96 PAGE 1 | | | |
|-------------------|--------------------------------------|--------------------------------|---------------------------------|--|--|---|---|--|--|
| | TERM T T01A I T01A I | [\$\$P | TRANS 25 421 | | PONSE GRAPH 35 COST \$.4900 \$.6640 | FROM 00:00:00 TO 23:59:00 08-10-95 THRU 08-10-95 | | | |
| 0 | T01A I T01A I | IĖ\$L IE\$1 IESI IESL | 50 75 4 9 | .0 2.3 ======> .1 .9 ==> 1.1 ===> | \$.0190 \$1.7290 \$.0070 \$.0880 \$.0330 | | 0 | | |
| | T01A I T01A I T01A I | I E S Q I E S R | 15 10 4 616 | .0 2.3 ======> 1.4 =====> .5 => | \$.0090 \$.2320 \$.0580 \$3.3290 | | 0 | | |
| | T01B I T01B I | [\$\$3 [E\$1 | 74 2 | .7 ==> 3.8 ========= | \$.5200 \$.0770 | | | | |
| 0 | T03A I T03A I T03A I | [\$\$P [\$\$1 | 76 19 244 25 36 | .7 ==> 1.6 ======> .2 > .0 2.8 ========== | \$.6500 \$.0110 | | 0 | | |
| | T03A - | ETA | 324 2 | .6 ==> | \$1.9880 ' ======> \$.1550 | | | | |
| 0 | T03C I T03C I T03C I T03C I | | 2 13 186 14 8 16 | 7.7 ====== 7.7 2.2 ======> .4 => .7 ==> 1.6 =======> .6 ==> | \$.1550 \$.2960 \$.9570 \$.1050 \$.1110 | | 0 | | |
| 0 | T03D I T03D I T03D I | [\$\$P [\$\$1 [E\$L | 237 5 44 4 | .6 ==> 5.4 ====== 5. .3 > | \$.1480 \$.0030 | | 0 | | |
| 0 | | \$\$1 | 10 63 1 3 1 | 2.3 =======> 1.0 ===> 6.1 ====== 6. .0 .2 > | \$.2370 \$.6600 1 =====> \$.0610 \$.0020 \$.0020 | | 0 | | |

This example is sorted by terminal id with a control break and summary with each terminal id change.

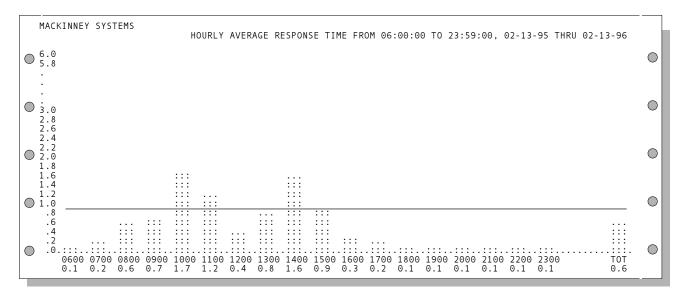
An associated TOP 50 Report indicates the 50 terminals (transaction or operator id) with the highest average response time.

| MACKINNEY SYSTEMS | | | CICS RESPONSE TIME MONITOR TOP 50 SUMMARY | | | | | 17:15 | 17:15:35 02-14-96 | | | 3 | |
|-------------------|-------------------------------------|---------------------------------|--|---------|----------|------|--------------------------------------|--|-------------------|----------------------|------------|------------------|---|
| 0 | TRAN PAYR PROB | RESP 8.3 6.1 | SUMMARY OF TRANS 26,811 18,671 | AVERAGE | RESPONSE | TIME | TRAN DATA PUR | TRANS 33,550 32,780 | RESP .4 5.9 | 00:00:00 08-10-95 | TO THRU | 23:59: 09-10- | |
| 0 | PUR IMFU DUMP TRNI ACTI | 5.9 3.6 3.4 2.8 2.4 | 32,780 540 10 23,620 19,101 | | | | ACCT INVI PERS TRAN SHIP | 32,120 31,983 30,287 29,122 27,660 | .6 .7 .6 | | | | |
| 0 | FMSI SEC CSSN | 1.9 1.9 1.8 | 10,027 12,222 8,041 | | | | PUR2 PAYR INV2 | 27,444 26,811 26,323 | .4 8.3 .8 | | | | 0 |

This report shows a TOP 50 summary by transaction. This is two reports. The left most three columns are sorted in response time order while the right most three columns are sorted in transaction volume order.

Batch Reports (continued)

The **AVERAGE RESPONSE TIME REPORT** graphically displays average response time for your CICS for each hour, for each day, or for each month. The following report depicts the average response time for each hour of a particular day. The solid horizontal line is a user specified threshold. In this report it was set at 1 second.

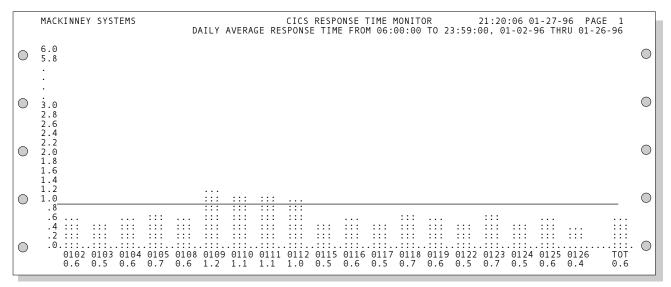


| MAC | KINNEY SYSTEMS | | | CICS RE | SPONSE TIME | MONITOR | 21: | 20:06 02-13- | -96 PAGE 2 | |
|--|--|---|---|---|--|---|---|---|--|---|
| | | HOURI | _Y AVERAGE R | ESPONSE TIME | FROM 06:00:0 | 00 TO 23:59: | 00, 02-13-96 | THRU 02-13-9 | | |
| SEC 0-1 | | 0700 TRANS % 2357 97 | 0800 TRANS % 10842 96 | 0900 TRANS % 12451 97 | 1000 TRANS % 14932 81 | 1100 TRANS % 13264 82 | 1200 TRANS % 4178 96 | 1300 TRANS % 10794 90 | 1400 TRANS % 19854 84 | |
| 1-2 2-3 3-4 4-5 5-6 6-X | 0 0 0 0 0 0 | 48 1 1 0 0 0 0 0 0 0 13 0 2419 | 231 2 78 0 18 0 0 0 2 0 105 1 11276 | 207 1 49 0 13 0 0 0 4 0 101 0 12825 | 2579 14 403 2 95 0 0 0 19 0 227 1 18255 | 2207 13 267 1 56 0 0 0 9 0 209 1 16012 | 96 2 19 0 8 0 0 0 0 0 37 1 4338 | 998 8 88 0 23 0 0 0 2 0 52 0 11957 | 2809 11 559 2 77 0 0 0 13 0 211 0 23523 | |
| 0 | | | | | | | | | | |
| SEC 0-1 1-2 2-3 3-4 4-5 5-6 6-X | 11234 98 145 1 54 0 12 0 0 0 | 1600 TRANS % 7357 97 123 1 11 0 5 0 0 0 0 0 13 0 7509 | 1700 TRANS % 1842 96 31 1 0 0 0 0 0 0 0 0 27 1 1900 | 1800 TRANS % 751 97 12 1 0 0 0 0 0 0 0 5 0 768 | 1900 TRANS % 176 98 2 1 0 0 0 0 0 0 0 1 1 179 | 2000 TRANS % 64 98 1 1 0 0 0 0 0 0 0 0 65 | 2100 TRANS % 51 98 0 0 0 0 0 0 0 0 1 1 52 | 2200 TRANS % 54 98 1 1 0 0 0 0 0 0 0 0 55 | 2300 TRANS % 27 100 0 0 0 0 0 0 0 0 0 0 27 | 0 |
| SEC 0-1 1-2 2-3 3-4 4-5 5-6 6-X | | | | | TOTAL % 110348 95 9495 7 1529 1 307 0 0 0 49 0 1016 0 122744 0 | | | | | |

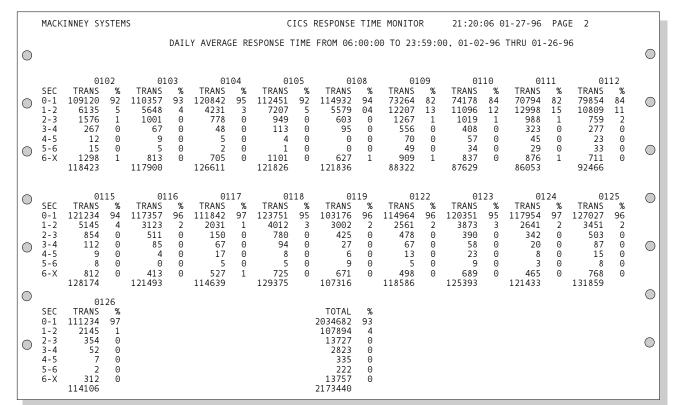
This report is a chart indicating the number of transactions and their related percentage for the time period specified.

Batch Reports (continued)

The following report indicates the average response time on a daily basis. Looking at it we can tell that response time was poor 1-9-96 through 1-12-96 probably due to a change made on that date (installation of new application, changed tuning parm, etc.), but was corrected and back to normal 1-15-96.



The associated report indicates the number of transactions in 1 to 6 second increments on each day reported on the graph.





- Included in CICS/RESPONSE TIME MONITOR are functions to PURGE, MERGE, BACKUP, and COPY records from the Response Time file. This gives you the ability to accumulate Response Time history as long as you like. Batch reports can use the history tape or the current VSAM file as input.
- **CICS/RESPONSE TIME MONITOR** is designed to be as efficient as possible. It contains high performance VSAM logic for fast access and disk space savings.
- There are NO HOOKS into your system. All code uses standard IBM interfaces.
- It is easy to install.
- It is a proven product, installed in over 100 sites.
- It runs on VSE and MVS and supports CICS 1.5 and up.

A current user at a major health care institution says,

"CICS/RESPONSE TIME MONITOR is one of the best CICS monitors for the money and it does the job."

When asked about overhead he says,

"We average 315,000 transactions per day and we have noticed NO degradation whatsoever to our CICS with CICS/RESPONSE TIME MONITOR."

For more information or a 30 day free trial, call or write:

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