

Active User Information

This section covers the following topics:

- Functional Overview
 - Summary of Active Users Display
 - Lowest 20 Window
 - Highest 20 Window
 - Summary of Active User Window
 - Accessing the Natural Call Table Window
-

Functional Overview

The Summary of Active Users function displays the system resources used by all active users that have logged on to Natural since the initialization of CICS. An **active user** is one who is currently logged on to Natural under CICS.

The system resources used by each active user are captured in the following statistics:

- The total number of seconds that the user's task is waiting for the database;
- The amount of data sent back to the terminal;
- The average response time for the user's transactions.

The following display and windows are available within the Summary of Active Users function:

- **Summary of Active Users Display**
Presents a list of all active users and a line of information for each user that is four screens wide.
- **Lowest 20 Window**
Lists the 20 users who are associated with the smallest values of a system resource sort list.
- **Highest 20 Window**
Lists the 20 users who are associated with the largest values of a system resource sort list.
- **Summary of Active User Window**
Provides the same information as on the Summary of Active Users screen, but presents it in table form on a single screen for a single user.
- **Natural Call Table Window**
Lists all Natural programs accessed by the user's last or current transaction as well as detailed information about the database calls issued by these Natural programs.

Note:

Historical data is not available for the Summary of Active Users function.

Summary of Active Users Display

 **To access the Natural Monitor Summary of Active Users display**

- From any screen outside Natural Monitor, type the code NM SA on the command line and press Enter, or
- From any screen within Natural Monitor, type SA on the command line and press Enter.

The Summary of Active Users display comprises four screens, which are shown on the following pages. This is the first screen:

```

16:45:09                ***** REVIEW NM UTILITY *****                2000-08-08
                        - Summary of Active Users -

TP      Sess  Terminal  Trans      Trans  Session  Last Trans  Last Trans
Userid  Id   Name      Name      Number  Status   Date        Time
REVHIST  1   Subtask  NC22       20     Inactive  2000-08-08  16:45:00
GGS      12   0824     NC22      1928   Active   2000-08-08  16:44:44
REC      13   0838     N         1610   Inactive  2000-08-08  15:55:36
GGS      19   0773     NC22      1926   Inactive  2000-08-08  16:45:05
REC      16   0795     NR23      1576   Terminate 2000-08-08  15:51:29

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  STerm Exit  SUser SSid Low  High  +  Pick  ==> Menu
    
```

This is the second screen:

```

16:45:46                ***** REVIEW NM UTILITY *****                2000-08-08
                        - Summary of Active Users -

TP      _____ NATURAL _____ Last _____ Curr/Last
Userid  Userid  Appl   Program Stmt Lvl Thd Ver Cmd  DBID  FNR  DB  Duration
REVHIST REVHIST SYSREVM S-NMRTST 2570  2  1 2.2 RC   10   73   0.00032
GGS      GGS     SYSREVM N-NMSA10 3630  2  2 2.2 RC   10   0    0.00624
REC      REC     SYSREVM M-NMSA   0016  2  4 2.2 RC   10  45   0.00640
GGS      GGS     GGS     AHELLO   0000  0  3 2.2 RC   10   0    0.00656
REC      REC     REC     MAINMEM1 0016  2  0 2.3 RC   10  49   0.00032

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  STerm Exit  SUser SSid Low  High  +  Pick  <=== ==> Menu
    
```

This is the third screen:

```

16:46:10                ***** REVIEW NM UTILITY *****                2000-08-08
                        - Summary of Active Users -

TP      Database
-----
Userid  Curr Calls      Calls Call/Tran  ElpT/Call  CmdT/Call
REVHIST      701          747   747.00    0.020     0.00270
GGS          0          22,227  86.82    0.003     0.00051
REC          0           263    52.60    0.009     0.00084
GGS          0           113    113.00   0.014     0.00100
REC          0            31    31.00    0.005     0.00081
KKR          0            13    13.00    0.000     0.00046

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  STerm Exit  SUser SSid Low  High  +  Pick <=== ==> Menu

```

This is the fourth screen:

```

16:46:34                ***** REVIEW NM UTILITY *****                2000-08-08
                        - Summary of Active Users -

TP      Avg Resp  Total  Term  Logon      Logon
Userid  Time      Trans  Data  Date      Time
REVHIST  1.999      1      0     2000-08-08 12:43:29
GGS      0.243     485   482K  2000-08-08 14:41:18
REC      0.126     33   12336 2000-08-08 15:47:34
GGS      2.267      1      0     2000-08-08 16:45:03
REC      0.211      1      0     2000-08-08 15:51:29
KKR      0.340      1      0     2000-08-08 16:45:54

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help  STerm Exit  SUser SSid Low  High  +  Pick <===      Menu

```

The following PF keys and commands are available from these screens:

PF Key	Command	Description
PF1	HELP	Invoke online help.
PF2	STERM SORTTERM	Sort users in ascending order by terminal name.
PF3	EXIT	Exit this function.
PF4	SUSER SORTUSER	Sort users in ascending order by user ID.
PF5	SSID SORSID	Sort users in ascending order by SID.
PF6	LOW	Show the lowest 20 values (or user IDs in an alphabetic sort) for the field column indicated by the cursor position.
PF7	HIGH	Show the highest 20 values (or user IDs in an alphabetic sort) for the field column indicated by the cursor position.
PF8	+	Scroll the display forward one page. Note: When the bottom of the list is reached, the use of the PF key or the command causes the list to wrap to the top of the list.
	TOP	Go to the top of the display.
PF9	PICK	Display all information for a user indicated by the cursor.
PF10	LEFT	Scroll the display left one screen.
PF11	RIGHT	Scroll the display right one screen.
PF12	MENU	Return to the Natural Monitor Main Menu.

Note:

No PF key is available for the TOP command.

Statistical Fields on the Summary of Active Users Display

The fields available on the four Summary of Active Users screens are described in the following table:

Field	Description
TP Userid	The CICS user id for the transaction. Corresponds to system variable *INIT-USER.
Sess Id	The unique Review Natural Monitor session identification number for the Natural session.
Terminal Name	The CICS terminal name. Corresponds to system variable *INIT-ID.
Trans Name	The CICS transaction ID.
Trans Number	The CICS transaction number.

Session Status	The current status of the Natural session. The following values are possible: Active Session actively processing. Inactive Terminal I/O or other wait. DB Call Database call processing. Logon Session initialization. Terminate Marked for termination.
Last Trans Date	The end date of the last transaction.
Last Trans Time	The end time of the last transaction.
Natural Userid	The Natural user ID for the transaction. Corresponds to system variable *USER.
Natural Appl	The Natural application for the transaction. Corresponds to system variable *LIBRARY-ID.
Natural Program	The name of the Natural program that is currently being executed.
Natural Stmt	The statement line number within the Natural program currently being executed.
Natural Lvl	The execution level of the Natural program currently being executed.
Natural Thd	The Natural storage thread number for the transaction. 0 indicates that a getmained storage thread or no thread was used.
Natural Ver	The Natural version for the session. Possible values are: 3.1 and 4.1.
Last Cmd	The last database command issued.
Last DBID	The last database ID accessed.
Last FNR	The last database file number accessed.
Curr/Last Duration	The duration of the current or the last database call in seconds.
Database Curr Calls	The number of database calls issued by the current or last transaction.
Database Calls	The total number of database calls that have been issued by the session.
Database Call/Tran	The average number of database calls per transaction for the session.
Database ElpT/Call	The average elapsed time per database call in seconds for the session.
Database CmdT/Cal	The average database command time for all database calls issued during the session.
Avg Resp Time	The average response time in seconds for all transactions of the session.
Total Trans	The total number of transactions that have been executed for the session.
Term Data	The number of bytes that have been written to the user's terminal screen.
Logon Date	The session start date in YYYY/MM/DD format.
Logon Time	The session start time in HH:MM:SS format.

Additional Commands for the Summary of Active Users Function

There are several additional commands and PF keys that are available for use on the summary of all users and individual summary screens within this function. They are:

Command	PF Key	Description								
CANCEL		The specified session is terminated abnormally. A session may be cancelled by TP user ID (uuu), terminal name (tttt) or session ID (nnn), see below. <table border="0"> <tr> <td>Format</td> <td>Example</td> </tr> <tr> <td>CANCEL U=uuuuuuu</td> <td>CANCEL U=GGS</td> </tr> <tr> <td>CANCEL T=tttt</td> <td>CANCEL T=T031</td> </tr> <tr> <td>CANCEL nnn</td> <td>CANCEL 37</td> </tr> </table>	Format	Example	CANCEL U=uuuuuuu	CANCEL U=GGS	CANCEL T=tttt	CANCEL T=T031	CANCEL nnn	CANCEL 37
Format	Example									
CANCEL U=uuuuuuu	CANCEL U=GGS									
CANCEL T=tttt	CANCEL T=T031									
CANCEL nnn	CANCEL 37									
DISPLAY ACT DI ACT		Display all sessions except such with status Inactive or Terminate.								
DI ALL		Display all sessions.								
EXIT	PF3	Exit from the display.								
FORCE		Deactivates Natural Monitor monitoring for the specified session. It does not affect the Natural session. A session may be forced by TP user ID, terminal name or session ID. The command format is the same as for the CANCEL command.								
HELP	PF1	Access the help system.								
HIGH	PF7	Display the Highest 20 window for the field marked by the cursor.								
LEFT	PF10	Scroll left one screen.								
LOW	PF6	Display the Lowest 20 window for the field marked by the cursor.								
PICK	PF9	Access a one page window of all the information available for the desired session. Enter PICK nnn with session ID nnn or position the cursor on the desired session line and press PF9.								
RIGHT	PF11	Scroll the display right one screen.								
STERM	PF2	Sort the display by terminal name.								
SSID	PF5	Sort the display by session ID.								
SUSER	PF4	Sort the display by TP user ID.								
TERMNAT		The specified session is terminated normally. A session may be terminated by TP user ID, terminal name or session ID. The command format is the same as for the CANCEL command.								
TOP		Scroll to the top of the display.								
+	PF8	Scroll forward one screen.								

The TERMNAT command causes Natural Monitor to issue an internal Natural cancel against a user. When Natural detects that the user session has been cancelled, the user's Natural session terminates normally.

The CANCEL command functions just like the TERMNAT command, except that an RNMA ABEND is received by the user who is forced and his Natural session is terminated abnormally, causing the ABEND.

The FORCE command deactivates Natural Monitor monitoring for the specified session. It does not affect the Natural session. The forced Natural session continues to run without monitoring.

Additionally, a write-to-operator (WTO) command is issued to the console indicating the user ID of the user who is cancelled, and the user ID and terminal name of the person who issued the CANCEL, TERMNAT or FORCE command.

Using the commands TERMNAT and CANCEL, a running session may be marked to terminate normally or abnormally. This will be honored the next time Natural Monitor gets control within the desired session.

The CANCEL, FORCE and TERMNAT commands may be used from within the individual user summary window as well; however, here there is no need to include the U=user ID, SID, or T=terminalname parameters on either of these commands, since the CANCEL, FORCE or TERMNAT command is issued against the user whose session was displayed in this window.

Lowest 20 Window

The Lowest 20 window displays one of the following:

- the first 20 users sorted alphabetically from A; or
- the 20 users who are using the least amount of a particular system resource along with the individual usage statistics for that resource for each of the 20 users.

The order of users is by intensity of use. User 01 on the Lowest 20 window represents the least intensive user of the resource.

To access the Lowest 20 window

Perform one of the following procedures from the Summary of Active Users display:

- position the cursor at any row under the column header that represents the particular resource being monitored and press PF6 (Low); or
- type the command LOW on the command line. Position the cursor at any row under the column header that represents the particular resource being monitored and press Enter.

A window appears similar to the Lowest 20 window shown below:

```

16:53:30          ***** REVIEW NM UTILITY *****          2000-08-08
                    - Summary of Active Users -

+-----+-----+-----+-----+-----+-----+-----+-----+
!                                     - The Lowest 20 -                                     !
!                                     !                                     !
!   Userid   SID  Response Time   Userid   SID  Response Time   !
! 01. REC    13    0.126          11.         !                                     !
! 02. REC    16    0.211          12.         !                                     !
! 03. GGS    12    0.235          13.         !                                     !
! 04. KKR    20    0.340          14.         !                                     !
! 05. REVHIST 1    1.999          15.         !                                     !
! 06. GGS    19    2.267          16.         !                                     !
! 07.                                     17.         !                                     !
! 08.                                     18.         !                                     !
! 09.                                     19.         !                                     !
! 10.                                     20.         !                                     !
!                                     !                                     !
! Command ==>                                     !                                     !
! Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF12- !
!           Help           Exit           Pick           Menu !
+-----+-----+-----+-----+-----+-----+-----+-----+
Help  STerm Exit  SUser SSid Low  High  +  Pick  <===  Menu

```

Note:

Use of the PICK command/PF9 to access the summary screen for a single user on the Lowest 20 screen is discussed under the heading Summary of Active User Window below.

Highest 20 Window

The Highest 20 window displays one of the following:

- the last 20 users sorted alphabetically from Z: or
- the 20 users who are using the greatest amount of a particular system resource along with the individual usage statistics for that resource for each of the 20 users.

The order of users is by intensity of use. User 01 on the Highest 20 window represents the most intensive user of the resource.

To access the Highest 20 window

Perform one of the following procedures from the Summary of Active Users display:

- position the cursor at any row under the column header that represents the particular resource being monitored and press PF7 (High); or
- type the command HIGH on the command line. Position the cursor at any row under the column header that represents the particular resource being monitored and press Enter.

A window appears similar to the Highest 20 window shown below:

```

16:54:14                ***** REVIEW NM UTILITY *****                2000-08-08
                        - Summary of Active Users -

+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
!                                     - The Highest 20 -                                     !
!                                     !                                     !                                     !
!      Userid      SID  Response Time      Userid      SID  Response Time      !
! 01. GGS          19      2.267          11.          !
! 02. REVHIST      1       1.999          12.          !
! 03. KKR          20      0.340          13.          !
! 04. GGS          12      0.234          14.          !
! 05. REC          16      0.211          15.          !
! 06. REC          13      0.126          16.          !
! 07.              !
! 08.              !
! 09.              !
! 10.              !
!                                     !
!                                     !
! Command ==>
! Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10---PF12- !
!      Help      Exit                                Pick      Menu      !
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
                        Help  STerm Exit  SUser SSid Low  High  +  Pick  <===      Menu

```

Use of the PICK command/PF9 to access the summary screen for a single user on the Highest 20 screen is discussed under the heading Summary of Active User Window below.

Summary of Active User Window

The summary screen for a single user can be accessed from any of the Summary of Active Users display screens by using the Pick function.

To access the Summary of Active Users display screens

Use either the PF9 key or the PICK command:

- To use the PF9 key, position the cursor on the row that corresponds to the user ID for which you want an individual summary display and press the PF9 key.
- To use one of the PICK commands (PICK U=userid, PICK sid, or PICK T=terminalname), type the command on the command line and press Enter.

This command may be Entered from any Review Natural Monitor screen by preceding it with the code NM SA. If you are already in Natural Monitor but are outside the Summary of Active Users function, type in the command preceded by the value SA.

An individual summary window appears similar to the one shown below:

```

16:54:47                ***** REVIEW NM UTILITY *****                2000-08-08
                        - Summary of Active Users -
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+
!                                     - Summary of User GGS -                                     !
!                                     !                                     !
! Current Status  Inactive                                             !
!                                     !                                     !
! NAT Userid .... GGS           Trans Name .. NC22           Logon Date .. 2000-08-08 !
! NAT Appl ..... GGS           Term Name ... 0773           Logon Time .. 16:45:03  !
! NAT Prog ..... AHELLO        Session ID .. 19            Trans Date .. 2000-08-08 !
! NAT Stmt ..... 0000          Trans Nr .... 1926          Trans Time .. 16:45:05  !
! NAT Version ... 2.2           Thread Nr ... 3            Num Trans ... 1         !
! NAT Pg Level .. 0             Resp Time ... 2.267       Term Data ... 0         !
!                                     !                                     !
!                                     Database Statistics                                     !
! Last Cmd ..... RC              Calls/Tran .. 113.00      !
! Last DBID ..... 10            Curr Calls .. 0          ETime/Call .. 0.014    !
! Last FNR ..... 0              Tot Calls ... 113       CmdT/Call ... 0.00100  !
! Last/Cur Dur .. 0.00656                                             !
!                                     !                                     !
! Command ==>
! Enter-PF1---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---- !
!           Help  Exit                               Next  Nct                               Menu          !
+-----+-----+-----+-----+-----+-----+-----+-----+-----+-----+

```

The Summary of Active User window presents the same information provided on the Summary of Active Users display, but in a different format. Refer to Statistical Fields on the Summary of Active Users Display for an explanation of the relevant fields.

The following commands and PF keys are available from this screen:

PF Key	Command	Description
	CANCEL	Terminate the specified session abnormally.
	FORCE	Deactivate monitoring for the specified session.
	TERMNAT	Terminate the specified session normally.
PF1	HELP	Invoke online help.
PF3	EXIT	Exit this function.
PF8	NEXT	Display the next user from a list of users on the Summary of Active Users screen.
PF9	NCT	Display the Natural call table which contains the programs accessed by the user's last or current transaction.
PF12	MENU	Return to the Natural Monitor Main Menu.

Note:

No PF keys are available for the CANCEL, FORCE and TERMNAT commands.

Accessing the Natural Call Table Window

The Natural Call Table (NCT) contains a list of the Natural programs accessed by the user's last or current transaction and statistics about the database calls issued from these programs.

The NCT is accessible from the individual summary window.

 **To access the Natural Call Table window**

- Type in the command NCT and press Enter, or
- Press the PF9 key.

The NCT display spans two windows; the PF keys PF11 and PF10 can be used to toggle between the two.

An example of these windows is shown below. Columns contain asterisks (*) only if no database information is available because the program issued no database calls. This is the first window:

```

16:54:47          ***** REVIEW NM UTILITY *****          2000-08-08
+-----+-----+-----+-----+-----+-----+-----+-----+
!          !          !          !          !          !          !          !
!          ! NATURAL NATURAL NAT  Num  DB      Total      Total  !          !
!          ! Appl   Prog    Lvl Execs Calls  Elps Time  Cmd Time  !          !
! Current ! SYSTEM          0   1    11      0.300    0.01745  !          !
!          ! SYSTEM LOGON    1   1    ***** ***** ***** ***** !          !
! NAT Use ! SYSTEM LOGONUS  1   1     7      0.010    0.00865  ! /08/08 !
! NAT App ! SYSTEM NAT00008  2   1    ***** ***** ***** ***** ! 5:03  !
! NAT Pro ! SYSTEM SECUF    2   3     7      0.359    0.01547  ! /08/08 !
! NAT Stm ! SYSTEM NAT00038  3  10    ***** ***** ***** ***** ! 5:05  !
! NAT Ver ! SYSTEM SECUE    2   1    ***** ***** ***** ***** !          !
! NAT Pg  ! SYSTEM NAT00041  3   2    ***** ***** ***** ***** !          !
!          ! SYSTEM LOGONEX1 2   1    ***** ***** ***** ***** !          !
!          ! SYSTEM LOGONM1  3   1    ***** ***** ***** ***** !          !
! Last Cm ! SYSTEM SECPGM   2   1     1      0.001    0.00054  ! 00    !
! Last DB ! SYSTEM NAT00062  3   4    69      0.643    0.04556  ! 4     !
! Last FN ! SYSTEM SECUC    2   1     3      0.282    0.00777  ! 100   !
! Last/Cu ! SYSTEM SECUH    2   1     2      0.006    0.00633  !          !
!          !          !          !          !          !          !          !
! Command ! Command ==>
! Enter-P ! Enter-PF1---PF3---PF7---PF8---PF9---PF10---PF11---PF12--- ! 2----- !
!          H !          Help Exit - + Refr      ==> Menu ! u     !
+-----+-----+-----+-----+-----+-----+-----+-----+
    
```

This is the second window:

```

16:54:47          ***** REVIEW NM UTILITY *****          2000-08-08
+-----+-----+-----+-----+-----+-----+-----+-----+
!          !          !          !          !          !          !          !
!          ! NATURAL NAT      Rsp      High      High  !          !
!          ! Prog    Stmt Cmd DBID  FNR Code  Elps Time  Cmd Time  !          !
! Current !          0000 S1   10   50   0      0.147    0.01041  !          !
!          ! ***** ***** ** ***** ***** ** ***** ***** ***** ***** !          !
! NAT Use ! LOGONUS 6228 CL   10   0   0      0.006    0.00628  ! /08/08 !
! NAT App ! ***** ***** ** ***** ***** ** ***** ***** ***** ***** ! 5:03  !
! NAT Pro ! SECUF   4220 L3   10  33   0      0.015    0.00584  ! /08/08 !
! NAT Stm ! ***** ***** ** ***** ***** ** ***** ***** ***** ***** ! 5:05  !
! NAT Ver ! ***** ***** ** ***** ***** ** ***** ***** ***** ***** !          !
! NAT Pg  ! ***** ***** ** ***** ***** ** ***** ***** ***** ***** !          !
!          ! ***** ***** ** ***** ***** ** ***** ***** ***** ***** !          !
!          ! ***** ***** ** ***** ***** ** ***** ***** ***** ***** !          !
!          ! ***** ***** ** ***** ***** ** ***** ***** ***** ***** !          !
! Last Cm ! SECPGM  4980 OP   10  45   0      0.001    0.00054  ! 00    !
! Last DB ! NAT00062 2630 L3   10  45   0      0.093    0.00758  ! 4     !
! Last FN ! SECUC   6820 N1   10  33   0      0.220    0.00577  ! 100   !
! Last/Cu ! SECUH   3670 CL   10   0   0      0.005    0.00593  !          !
!          !          !          !          !          !          !          !
! Command ! Command ==>
! Enter-P ! Enter-PF1---PF3---PF7---PF8---PF9---PF10---PF11---PF12--- ! 2----- !
!          H !          Help Exit - + Refr <=== Menu ! u     !
+-----+-----+-----+-----+-----+-----+-----+-----+
    
```

The following fields are shown on these screens:

Field	Description
Natural Appl	The Natural application of the program.
Natural Prog	The name of the Natural program.
NAT Lvl	The call level of the Natural program.
Num Execs	The number of times the Natural program was called during the last transaction.
DB Calls	The total number of database calls issued by the program during the last transaction.
Total Elps Time	The total amount of elapsed time (seconds) to process all of the database calls issued by the program during the last transaction.
Total Cmd Time	The total amount of time (seconds) required by the database to process all DB calls of the program during the last transaction.
NAT Stmt	The statement line number in the Natural program that generated the database call with the highest database command time.
Cmd	The database command issued by the program that resulted in the highest database command time.
DBID	The database ID accessed by the database call that resulted in the highest database command time during the program..
FNR	The database FNR accessed by the database call that resulted in the highest database command time during the program.
Rsp Code	The database response code of the database call that resulted in the highest database command time during the program.
High Elps Time	The database elapsed time (seconds) of the database call that resulted in the highest database command time during the program.
High Cmd Time	The highest database command time (seconds) for a database call during the execution of the Natural program.

The following commands and PF keys are available from these windows:

PF Key	Command	Description
PF1	HELP	Invoke online help.
PF3	EXIT	Exit this function.
PF7	-	Scroll backward one display.
PF8	+	Scroll forward one display.
PF9	REFRESH	Refresh the Natural Call Table display with updated information.
PF10	LEFT	Scroll left one screen.
PF11	RIGHT	Scroll right one screen.
PF12	MENU	Return to the Review Natural Monitor Main Menu.