Active User Information Active User Information

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
 - 1. From any screen outside Natural Monitor, type the code $\mathtt{NM}\ \mathtt{SA}$ on the command line and press Enter, or
 - 2. 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					UTILITY *** tive Users		2006-03-0
TP	Sess	Terminal	Trans	Trans	Session	Last Trans	Last Trans
Userid	Id	Name	Name	Number	Status	Date	Time
REVHIST	1	Subtask	NC22	20	Inactive	2006-03-02	16:45:00
GGS	12	0824	NC22	1928	Active	2006-03-02	16:44:44
REC	13	0838	N	1610	Inactive	2006-03-02	15:55:36
GGS	19	0773	NC22	1926	Inactive	2006-03-02	16:45:05
REC	16	0795	NR23	1576	Terminate	2006-03-02	15:51:29
Command Enter-PF		2PF3	-PF4PF5-	PF6	-PF7PF8-	PF9PF10	PF11PF12-
	- FF	_ FI:J	T T T T T T T T T T T T T T T T T T T	F T. O	TT / FIO-		. TRTT ERTQ

This is the second screen:

TP			NATURAL						Last		Curr/La
Userid	Userid	Appl	Program	Stmt	Lvl	Thd	Ver	Cmd	DBID		DB Duration
REVHIST	REVHIST		S-NMRTST		2		2.2		10	73	0.0003
GGS	GGS	SYSREVNM	N-NMSA10	3630	2	2	2.2	RC	10	0	0.0062
REC	REC	SYSREVNM	M-NMSA	0016	2	4	2.2	RC	10	45	0.0064
GGS	GGS	GGS	AHELLO	0000	0	3	2.2	RC	10	0	0.0065
REC	REC	REC	MAINMEM1	0016	2	0	2.3	RC	10	49	0.0003

This is the third screen:

16:46:10	0	***** REVIEW NM UTILITY ***** - Summary of Active Users -						
		50	mmary or r	100110 0001	- 5			
TP		D	atabase					
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			
						.PF10PF11PF12 <=== ==> Men		

This is the fourth screen:

```
2006-03-02
16:46:34
                       ***** REVIEW NM UTILITY *****
                        - Summary of Active Users -
       Avg Resp Total Term Logon
                                          Logon
Userid
          Time
                   Trans Data Date
                                          Time
REVHIST
          1.999
                   1 0 2006-03-02 12:43:29
GGS
          0.243
                   485 482K 2006-03-02 14:41:18
                   33 12336 2006-03-02 15:47:34
REC
          0.126
          2.267 1 0 2006-03-02 16:45:03
0.211 1 0 2006-03-02 15:51:29
0.340 1 0 2006-03-02 16:45:54
GGS
REC
                          0 2006-03-02 16:45:54
KKR
Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
     Help STerm Exit SUser SSid Low High + Pick <===
```

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

Field	Description						
Session Status	The current status of the possible:	Natural session. The following values are					
	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 tra	ansaction.					
Last Trans Time	The end time of the last tr	ansaction.					
Natural Userid	The Natural user ID for th	te transaction. Corresponds to system variable					
Natural Appl	The Natural application for the transaction. Corresponds to system variable *LIBRARY-ID.						
Natural Program	The name of the Natural p	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 getmained storage thread	d number for the transaction. 0 indicates that a or no thread was used.					
Natural Ver		ne session. Possible value: vr ; that is, the version e currently supported Natural versions.					
Last Cmd	The last database commar	nd issued.					
Last DBID	The last database ID acces	ssed.					
Last FNR	The last database file num	iber accessed.					
Curr/Last Duration	The duration of the curren	at or the last database call in seconds.					
Database Curr Calls	The number of database c	alls issued by the current or last transaction.					
Database Calls	The total number of datab	ase calls that have been issued by the session.					
Database Call/Tran	The average number of da	atabase 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 comsession.	nmand time for all database calls issued during the					

Field	Description
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		_	ated abnormally. A session may be cancelled name (tttt) or session ID (nnn), see below.
		Format	Example
		CANCEL U=uuuuuuu	CANCEL U=ABC
		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		affect the Natural session. A sess	nitoring for the specified session. It does not sion may be forced by TP user ID, terminal and format is the same as for the CANCEL
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 to	for the field marked by the cursor.
PICK	PF9		the information available for the desired session ID <i>nnn</i> or position the cursor on the 9.
RIGHT	PF11	Scroll the display right one scree	n.
STERM	PF2	Sort the display by terminal nam	e.
SSID	PF5	Sort the display by session ID.	
SUSER	PF4	Sort the display by TP user ID.	
TERMNAT		_	ed normally. A session may be terminated by sion ID. The command format is the same as
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.

Lowest 20 Window Active User Information

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:

Active User Information Highest 20 Window

```
**** REVIEW NM UTILITY ****
16:53:30
                                                                              2006-03-02
                            - Summary of Active Users -
   -----+
                                 - The Lowest 20 -
      Userid SID Response Time Userid SID Response Time !

REC 13 0.126 11. !

REC 16 0.211 12. !

GGS 12 0.235 13. !

KKR 20 0.340 14. !

REVHIST 1 1.999 15. !

GGS 19 2.267 16. !
! Oserid SID Response Time
! 01. REC 13 0.126
! 02. REC 16 0.211
! 03. GGS 12 0.235
! 04. KKR 20 0.340
! 05. REVHIST 1 1.999
! 06. GGS 19 2.267
! 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:

```
**** REVIEW NM UTILITY ****
16:54:14
                                                       2006-03-02
                   - Summary of Active Users -
  -----+
                       - The Highest 20 -
     Userid SID Response Time
                                Userid SID Response Time !
!
                               11.
! 01. GGS
            19 2.267
! 02. REVHIST 1 1.999
! 03. KKR 20 0.340
! 04. GGS 12 0.234
! 05. REC 16 0.211
! 06. REC 13 0.126
                               12.
13.
                               14.
                               15.
                               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
```

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 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 ****
                                                 2006-03-02
                   - Summary of Active Users -
 +----+
                   - Summary of User GGS -
 ! Current Status Inactive
!
                      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---- !
                               Next Nct Menu
     Help Exit
 +----+
```

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

- 1. Type in the command NCT and press Enter, or
- 2. 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:

5:5	4:47			****	REVII	EW NM U	JTILITY	7 ****	2	00	6-03-02	
+-		!			TAN	JRAL Ca	all Tak	ole -		 !		_
!		!	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		69		0.04556	!	4	
!	Last FN	!	SYSTEM	SECUC	2	1	3	0.282	0.00777	!	100	
!	Last/Cu	!	SYSTEM	SECUH			2		0.00633	!		
!		!								!		
!	Command	!	Command	===>						!		
!	Enter-P	!	Enter-PF	1PF3	-PF7-	PF8-	PF9-	PF10PF1	1PF12	!	2	
!	Н	!	He	lp Exit	_ `	+	Refr	: ===	> Menu	!	u	

This is the second window:

16:5	54:47			***	** F	REVIEW	NM U	TILIT	· ****	:	200	6-03-02	
+-		!	! - NATURAL Call Table -										-+
!		!	NATURAL	NAT				Rsp	High	High	!		!
!		!	Prog	Stmt	Cmc	d DBID	FNR		Elps 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	3 – – –	PF7	-PF8	PF9-	PF10PF1	L1PF12	!	2	!
!	Н	!	Hel	p Ex:	Ĺt	_	+	Refi	<u> </u>	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 Natural Monitor Main Menu.