

Administrative Functions

Natural Monitor administrative functions are discussed in two sections:

- the **User Profile System**, which is used to generate profiles that define access rules for Natural Monitor users; and
- functions that pertain specifically to Natural Monitor.

This section covers the following topics:

- User Profile System
 - Using NATURAL User Exits
 - Using the Natural Monitor User Exit: Response Time Detail Record
 - Accessing Historical Data in the NM Repository File
 - Setting Configuration Parameter Values
-

User Profile System

Note:

See *Installing Natural Review, Storage Requirements*, for an explanation of the effect of many users on CICS SHARED storage requirements.

The User Profile system provides a series of menus to help you generate profiles that define access rules for Natural Monitor users. You may create profiles for new users, change access rules for existing users, and purge user profiles that are no longer required.

Natural Monitor provides a default profile to allow access for users who do not have a profile defined for them. When a user logs on, Natural Monitor checks the Natural library SYSRNM for the user's profile. If one is not found, the default profile is used.

The default profile is also used as a basis for creating user profiles. When a profile for a new user is generated, the default profile is copied. The new profile may then be customized to suit the needs of the user.

Note:

The default profile provides unrestricted access to Natural Monitor systems and functions. It is recommended that you first create a user profile for the system administrator and other privileged users; then modify the default profile so that it conforms to the needs of the majority of users.

Accessing the User Profile System

To access the User Profile System

- Enter the UP code on the command line of the Natural Monitor **Main Menu** and press Enter.

The **User Profile System** menu appears as shown below:

```

16:59:08                *****  R E V I E W  *****                2006-03-02
                          User Profile System

                          Code          Description
                          EU           Edit User Profile
                          LU           List User Profiles

Command ===>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit                                  Menu

```

The following commands enable you to create and edit profiles, and display lists of existing profiles:

Command	Description
EU	Edits a profile for a new or existing user.
LU	Displays a list of existing user profiles, including the default profile.

From the list of existing user profiles, you can select a particular profile to be edited or purged.

Customizing the Default Profile

You do not need to create a user profile for each user of Natural Review. By customizing the default profile so that the access rules meet the needs of the majority of Natural Monitor users, you eliminate the need for individual user profiles.

You can access the **Edit User** function to edit the default profile in two ways.

To access the Edit User screen

1. From any screen within Natural Review, type `UP EU DEFAULT` on the command line and press Enter.
2. From any screen within the **User Profile** system, type `EU DEFAULT` on the command line and press Enter.

The following **Edit User** screen is displayed:

```

16:59:54          ***** R E V I E W *****          2006-03-02
                        Edit User

                        User Profile: DEFAULT_

Please Mark Categories to Select

General ..... _

NATURAL MONITOR ..... _

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit           Save  Accept                               Menu
    
```

The User Profile field usually refers to the user ID corresponding to the profile; in this case it contains the word DEFAULT. The categories on the screen refer to types of access rules as described in the following table:

Category	Description
General	Access rules that affect all of the systems within Natural Review. Valid values are Y/N.
NATURAL MONITOR	Access rules pertaining to the Natural Monitor system. Valid values are Y/N.

For the user’s default profile, you need to modify the general access rules in addition to those pertaining to Natural Monitor.

Displaying General Access Rules

When you select the general access rules, the **General** window appears as shown in the following screen:

```

                        General

Name: _____

Access NATURAL MONITOR System ..... Y
Access User Profile System ..... Y
Default Menu ..... MM
Confirm Purge/Save Requests ..... Y

PF3=Exit  PF6=Accept
    
```

The Name field may be used for the user’s name or any other appropriate identifier.

The following table describes the general access rules that appear in the **General** window.

General Access Rule	Value	Description
Access NATURAL MONITOR System	Y	The user may access the Natural Monitor system. This is the default value.
	N	The user may <i>not</i> access the Natural Monitor system.
Access User Profile System	Y	The user may access the User Profile system. This is the default value.
	N	The user may <i>not</i> access the User Profile system. Note: Before setting this access rule to N in the default profile, you must first create a user profile that allows you to access the User Profile system. Otherwise, you will not be able to maintain user profiles.
Default Menu	Determines which menu screen appears on the user's terminal when the user logs on to Natural Review.	
	MM	Natural Monitor Main Menu This is the default value.
	NM	Natural Monitor Main Menu
	UP	User Profile System Main Menu
Confirm Purge/Save Requests	Y	Natural Monitor will prompt the user to confirm the request before the command is executed. This is the default value.
	N	Natural Monitor will <i>not</i> prompt the user to confirm the request before the command is executed.

Displaying the Natural Monitor Access Rules

When the Natural Monitor category is selected, the **NATURAL MONITOR** window appears displaying access rules as shown below:

```

                                NATURAL MONITOR

CANCEL/FORCE/TERMNAT/START/STOP Cmd .. Y
Edit Report Definitions ..... Y
Purge Historical Data ..... Y
Purge Report Definitions ..... Y
Purge Started Reports ..... Y
Start Reports ..... Y
View Reports ..... Y

PF3=Exit  PF6=Accept
    
```

The following table describes the Natural Monitor access rules that appear in the **NATURAL MONITOR** window.

Natural Monitor Access Rule	Value/Description
CANCEL / FORCE / TERMNAT / START / STOP Cmd	<p>Y The user may issue a CANCEL, FORCE, TERMNAT, START or STOP command.</p> <p>This is the default value.</p> <p>N The user may <i>not</i> issue a CANCEL, FORCE, TERMNAT, START or STOP command.</p>
Edit Report Definitions	<p>Y The user may edit response time reports (RT function).</p> <p>This is the default value.</p> <p>N The user may <i>not</i> edit response time reports.</p>
Purge Historical Data	<p>Y The user may delete historical data.</p> <p>This is the default value.</p> <p>N The user may <i>not</i> delete historical data.</p>
Purge Report Definitions	<p>Y The user may delete response time report definitions.</p> <p>This is the default value.</p> <p>N The user may <i>not</i> delete response time report definitions.</p>
Purge Started Reports	<p>Y The user may delete the data accumulated by response time reports that have been started.</p> <p>This is the default value.</p> <p>N The user may <i>not</i> delete the data.</p>

Natural Monitor Access Rule	Value/Description
Start Reports	<p>Y The user may initiate data accumulation by starting response time reports.</p> <p>This is the default value.</p> <p>N The user may <i>not</i> start response time reports.</p>
View Reports	<p>Y The user may view the results of started response time reports online.</p> <p>This is the default value.</p> <p>N The user may <i>not</i> review the results of started response time reports online.</p>

Modifying Access Rules

You may modify access rules by typing over the settings displayed on the screen. When you have made all of the changes to a particular group of access rules, you have the following options:

- To exit without saving the changes, press PF3 or enter the EXIT command.
- To save the changes temporarily while you edit the next access rules screen, press PF6 or enter the ACCPT command.
- To save the changes to the Natural library, press PF5 or enter the SAVE command.

If you selected more than one category, pressing PF3 or PF6 displays the next access rules screen instead of returning you to the previous screen.

Creating a User Profile

To create a user profile

1. From any screen within Natural Review, type the following string on the command line and press Enter:

```
UP EU userid
```

2. From any screen within the **User Profile System**, type the following string on the command line and press Enter:

```
EU userid
```

The **User Profile System** creates a profile for the user by copying the default profile. It then displays the user profile for editing, and the following message appears at the bottom of the screen:

REV00101 - NEW USER PROFILE

If you wish to customize the user's profile, mark the appropriate categories by typing a character on the line following your selection:

- To change access to two Natural Monitor systems, mark the **General** category.
- If you wish to modify access to certain Natural Monitor system functions, mark the **Natural Monitor** category.

When the profile provides appropriate access privileges for the user, press PF5 to save the profile to the Natural library.

Refer to *Customizing the Default Profile* for information regarding access rules for the various categories.

Using the List User Profiles Function

The **List User Profiles** (LU) function displays a list of user profiles that are stored in the Natural library SYSRNM.

▶ To access the list of user profiles

- Enter the code LU on the command line of the **User Profile System** menu and press Enter.

The **User Profiles** screen, similar to the one shown below, is displayed:

```

11:15:14          *****  R E V I E W  N M  U T I L I T Y  *****                2000-09-01
                                User Profiles

   Sel  Userid      Name                               Sel  Userid      Name
!  ___  DEFAULT
!  ___  GGS

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit                               +                               Menu

```

From this screen, you may edit or purge a particular user profile.

▶ To access the Available Functions window that displays the available commands

- Enter a question mark (?) on the selection line preceding a profile name as shown below and press Enter.

The **Available Functions** window, similar to the one shown below, is displayed:

```
Available Functions

EU  Edit User Profile
PU  Purge User Profile
.   EXIT
__  Enter Function
```

Editing a User Profile

▶ To edit an existing user profile

- Enter the command `EU` on the selection line preceding the profile name.

The profile is displayed and can be edited. Refer to *Customizing the Default Profile* for additional information.

If you are editing your own user profile, the changes you make take effect as soon as you save your profile. If you are editing a profile other than your own, the changes do not take effect until the user next logs on to Natural Review.

You may also use this command to copy an existing profile to create a profile for a new user. If you have several users who require access privileges that are different from those specified in your default profile, you may use an existing profile as a model for the other profiles.

Copying a User Profile

▶ To copy a profile

1. Enter the command `EU` on the selection line preceding the profile name to be copied.
2. Type the new user ID on the line labeled `User Profile`.
3. Press `PF5` to save the new user profile.

Purging a User Profile

▶ To delete a user profile

- Enter the command `PU` on the selection line preceding the profile name.

Depending on the setting in your profile, you may or may not be prompted for confirmation of the purge command as shown in the following screen:


```

11:17:35          ***** R E V I E W  N M  U T I L I T Y  *****          2000-09-01
                        User Profiles

Sel  Userid      Name                               Sel  Userid      Name
___  DEFAULT
PU   GGS

                                     +-----+
                                     !           !
                                     ! Please confirm PURGE request for: !
                                     !           !
                                     !           GGS           !
                                     !           !
                                     !           (Y or N) Y       !
                                     !           !
                                     +-----+

Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit                               +                               Menu

```

Using NATURAL User Exits

Natural Monitor has two Natural user exits which are applicable to the Natural Monitor components:

- P-UEXIT1
- P-UEXIT2

These exits are located in SYSRNM, the Natural Monitor system library in Natural. They can be modified using the Natural editor.

P-UEXIT1

This program is invoked when the online portion of Natural Monitor is *entered*. You may insert code into this program to satisfy site-specific needs.

Possible uses for this exit include:

- Setting colors on (SET CONTROL 'T3279').
- Turning the PC mode on or off.

Note:

This program *must not* alter the Natural stack, and it *must end* with a STOP command.

P-UEXIT2

This program is invoked when the online portion of Natural Monitor is *terminated*. You may insert code in this program to alter the processing that occurs when terminating Natural Review.

Possible uses for this exit include:

- Terminating your Natural session.
- Logging on to another Natural application.
- Returning to a previous Natural application (using `SETUP/RETURN`).

Using the Natural Monitor User Exit: Response Time Detail Record

Each time a transaction finishes (a terminal write is performed), Natural Monitor creates a record that contains information about the resources consumed by that transaction:

- the response time for the transaction;
- the number of database calls issued for the transaction;
- the total database elapsed time and command time for all calls issued; and
- information about the user who performed the transaction.

A user exit (`RNMRTUEX`) is provided with Natural Monitor to allow the user to handle this information as follows:

- examine the record;
- process the record; and
- accept or reject the record's inclusion into any active Natural Monitor response time reports.

The user can also write this record to a sequential data set or to SMF (System Management Facility) for later processing or as input to a chargeback system.

A sample `RNMRTUEX` user exit is supplied in the Natural Monitor source library. A copy book containing a `DSECT` mapping the detailed record is also provided.

This user exit can be modified to suit the needs of a user site and must be linked into the Natural nucleus with the rest of the Natural Monitor code in the step that links the Natural nucleus with Natural Monitor (see *Step 8: Modify, Assemble and Link the Natural Review System Control Block of the Installation Procedure*).

Calling Conventions to Invoke the User Exit

The following calling conventions are used to invoke the `RNMRTUEX` user exit:

- Register contents when entering the user exit:

Register 1: Address of the parameter list

Register 13: Address of an 18-fullword save area

Register 14: Return address in the calling module

Register 15: Entry address within RNMRTUEX

- Register contents returned by the user exit:

Register 1: Address of the parameter list

Registers 2 through 13: *Must be unchanged.*

- Content of parameters passed:

Word 1: For record type 1: Response time report detail record

Word 2: Address of the response time report detail record

- Return codes passed using Register 15:

Zero(0): Process the record for all active response time reports

Non-zero(0): Reject the record for response time report processing

Accessing Historical Data in the NM Repository File

The Natural Monitor repository file contains Natural Monitor response time report definitions and historical data for response time reports that have a history interval. The historical data can be accessed by user-written applications and used as input for other processing (for example, trend analysis).

The view for this file is called REVIEW-NM-FILE.

The file can be read using the following key definition against the view field NM-KEY:

```

1 REPORT-KEY                (A50)
1 REDEFINE REPORT-KEY
2 REPORT-SUBSYSTEM          (A02)
2 REPORT-DATE                (N08)
2 REPORT-TIME                (N06)
2 REPORT-NAME                (A32)
2 REPORT-SEQ                 (B02)

```

where:

Field	Description
REPORT-SUBSYSTEM	RT for the Response Time subsystem.
REPORT-DATE	Date (in YYYYMMDD format) that the historical data record was written.
REPORT-TIME	Time (in HHMMSS 24-hour format) that the historical data record was written.
REPORT-NAME	Response time report name for which the historical data record was written.
REPORT-SEQ	Record type for the historical data record. Record type 1 is used for response time interval data (corresponding to the VW or VH display in the Response Time subsystem). Record types 2 through n are used for response time detail records (corresponding to the VD display in the Response Time subsystem). The first detail record written for a given history interval will have a REPORT-SEQ = 2, and for each additional detail record written, the REPORT-SEQ field will increment by 1.

Two sample Natural programs are provided in the Natural Monitor library (SYSRNM) which read **Response Time** subsystem historical data. These two programs are called HISTORY1 and HISTORY2.

HISTORY1 is an example of how to read the response time interval history data (corresponding to the VW or VH command in the response time subsystem). For a specific response time report within a specified date and time range, HISTORY1 reads all associated response time interval history records and performs some summary statistical evaluation.

HISTORY2 is an example of how to read the response time detail history records (corresponding to the VD command in the response time subsystem). For a specific response time report within a specified date and time range, HISTORY2 reads all associated response time detail history records and displays summary information of the 20 detail records had the highest response time.

In addition to the two sample Natural programs, a Natural local data area (LDA) called L-NMHIST is provided which incorporates fields from the Natural Monitor DDM. This LDA may be used by user-written programs to read the Natural Monitor repository file. See *Local Data Area View Description* for the contents of this LDA.

Setting Configuration Parameter Values

See *Installing Natural Review*, *Storage Requirements*, for an explanation of the effect of many response time reports on CICS SHARED storage requirements.

Within Natural Monitor, the Natural Monitor administrator modifies the configuration program for the following reasons:

- to control the generation of historical data for response time reports;
- to control the intervals used for collection; and
- to set other response time report parameters.

The administrator uses parameters in the program P-NMCONF in library SYSRNM to control historical data and other response time report options.

The P-NMCONF program contains default configuration values for new response time report definitions. Parameter values set in the distributed P-NMCONF program are normally not changed until the default values have been in use for a test period. P-NMCONF program parameter values generally depend on the site's workload, application use, and response time.

The P-NMCONF program is a Natural program called from Natural Monitor code to set defaults in the Natural Monitor global data area. It can be edited just as any Natural program can be edited.

 **To access and edit the P-NMCONF configuration program**

1. Type LOGON SYSRNM at the Natural NEXT prompt and press Enter.
2. Type EDIT P-NMCONF and press Enter.
3. Modify the P-NMCONF program by typing over the existing values.

Note:

P-NMCONF parameters and values are discussed in the following sections.

4. Type STOW and press Enter to save and catalog the changes.
5. Type MENU at the prompt to return to Natural Review.

The changes you make to P-NMCONF take effect immediately.

P-NMCONF Response Time Parameters

The +RT-INTERVAL and +RT-THRESHOLD parameters are used in conjunction with one another to control the color and monochrome attributes of response time reports.

Parameter	Description
+RT-INTERVAL	Specifies the reporting interval (in seconds) used to graph a report horizontally and vertically. Valid values are 0 . 1 to 99 . 9 (default is 0 . 5).
+RT-THRESHOLD	Specifies the transaction response time value (in seconds) above which Natural Monitor creates detailed records for the Detailed Records table. Valid values are 0 to 99 . 9 (default is 3 . 5).
+RT-MAX-DETAIL-RECS	Specifies the maximum number of detailed response time records to be retained. Valid values are 0 to 999 (default is 20).
+RT-WRAP-OPTION	<p>Specifies the wrap option. Valid values are:</p> <p>NONE Detailed response time records are retained to the limit specified by the RT-MAX-DETAIL-RECS parameter. This is the default value.</p> <p>STD (standard) The most current response time records are retained.</p> <p>HIGH The response time records with the highest value are retained.</p>
+RT-TS-OPTION	<p>Specifies the transaction summary option. Valid values are:</p> <p>NONE No transaction summary is created. This is the default value.</p> <p>SUM A transaction summary is created for the root transaction program; for example, <i>Nvrs</i> for Natural, where <i>vrs</i> is the product version number.</p> <p>DET A detailed transaction summary is created that includes Natural application information.</p>

P-NMCONF Report Parameter

Parameter	Description
+RT-AUTOSTART	<p>Specifies the autostart option. Valid values are:</p> <p>Y Report is autostarted by the Natural Monitor history task when it initializes.</p> <p>This is the default value.</p> <p>N Report is <i>not</i> autostarted.</p>

P-NMCONF Historical Data Parameters

Parameter	Description
+RT-HISTORY-INTERVAL	<p>Specifies the interval (in minutes) at which response time historical data is written to the Natural Monitor repository. Valid values are 0 to 999 minutes (default is 0).</p> <p>Note: A value of zero (0) prevents historical data from being written.</p>
+RT-HISTORY-REFRESH	<p>Specifies whether the response time report that has a history interval should be refreshed after the history interval has expired.</p> <p>Y The history report is refreshed.</p> <p>This is the default value.</p> <p>N The report is <i>not</i> refreshed.</p>