

Using Response Time Reports

Natural Monitor (NM) provides response time reports. This section discusses the types and components of these reports and how they are created, modified, and used.

This section covers the following topics:

- What is a Response Time Report?
 - Accessing the Response Time Subsystem
 - Starting or Restarting (Refreshing) a Report
 - Listing Reports
 - Accessing Natural Monitor Tables
 - Using Vertical and Horizontal Graphs
 - Purging Report Definitions and Started Reports
-

What is a Response Time Report?

The Response Time Subsystem enables you to retrieve information about the response times experienced by end users of Natural under the Customer Information Control System (CICS).

Response time is the amount of time, in seconds, required to process a user's transaction. A *transaction* is registered each time the Enter key or a PF key is pressed.

Response time information is collected by the Natural Monitor processor according to instructions in a *response time report definition* which consists of the following:

- A set of parameters specifying the data to be captured.
- A set of report and historical data parameter options for specifying conditions of report processing.
- A set of processing rules identifying the conditions under which that data is to be captured.

The **Edit Report** (ER) function provides a fill-in-the-blank screen to help you create or modify a response time report definition. Once you have entered all parameter values and processing rules on the **Edit Report Definition** screen, you can issue the *SAVE* command to write the report definition to the Natural Monitor repository file.

Data accumulation for a particular report begins when you *start* the report. Report results are automatically saved until the report is *refreshed* (restarted) or *purged*.

A report may be viewed online. Report results are displayed as tables and graphs.

Two response time report definitions are supplied with Natural Monitor. These reports may be used without change, or they may be customized to meet the requirements of your particular site. You may also create your own reports.

What are Report Processing Rules?

Report processing rules allow you to restrict the data that a report collects. Four fields are used to specify processing rules:

- TP User ID
- Transaction program name
- Natural application
- Natural program

Each field may contain one of the following processing rules:

- A blank (collect all data)
- A single value
- A wild card

For example, the user ID SAGAA is a single value, and SB* is a wild card created by placing an asterisk after at least one other character. This wild card will result in all user IDs beginning with the characters SB being selected for processing.

Alphanumeric or numeric characters may be entered, but a hexadecimal value is *not* permitted.

If data is entered in more than one field, Natural Monitor uses AND logic for data collection.

How are Reports Displayed?

The following displays are available for each report:

- Detailed Records providing information sorted by user
- Transaction Summary providing information sorted by transaction
- Vertical Graph
- Horizontal Graph

Detailed Records Display

The **Detailed Records** display provides detailed response time statistics for transactions *related to specific user IDs*. The Detail Record parameters in the report definition determine when, how many, and what kind of detail records are to be generated. Detailed records can be viewed online using the **Detailed Records** display.

Transaction Summary Display

The **Transaction Summary** display provides both detailed and summary response time statistics. The detailed statistics are specified for a particular transaction name and Natural application (library); the summary statistics are specified for a particular transaction name, regardless of the Natural application.

Transaction Summary reports are produced when the Transaction Summary parameter is set in the report definition; the report results are available online using the **Transaction Summary** display.

Graphic Display

Reports may be viewed as tables or graphs. Both vertical and horizontal graphic displays are available. The interval, in seconds, for which graphs are generated is set using the Graph parameter in the report definition.

What Reports are Supplied with Natural Monitor?

Natural Monitor supplies two reports which can be used without modification or can be customized to meet the requirements defined for your site:

- The **HIGHEST RESPONSE** report lists the transactions that have the highest response times, up to the maximum number of records allowed for the report (default = 50). This report allows the user to identify the transactions with the slowest response time of all monitored transactions.
- The **SYSTEM RESPONSE TIME** report lists the most recent transactions that exceed the response time threshold set for this report (default = 3.5 seconds).

The supplied reports can be viewed online in table or graphic form.

How are Reports Listed?

Three types of lists are used to manage reports:

- *Report definition lists* of report definitions and started reports.
- *Started report lists* of all reports that have been started and may be accumulating data.
- *History report lists* of all reports containing historical data.

How are Reports Named?

A report name may be up to 32 alphanumeric characters in length. It may contain blanks and any special characters *except* the following:

(')	Apostrophe or single quote
(¢)	Cent sign
(:)	Colon
(,)	Comma
(\$)	Dollar sign
(=)	Equal sign
(%)	Percent sign
(.)	Period
(/)	Slash

Accessing the Response Time Subsystem

You can access the Natural Monitor **Response Time** subsystem in two ways.

▶ To access the Response Time subsystem

1. From any screen *outside* the Natural Monitor System, type the code NM RT on the command line and press Enter; or
2. From any screen *within* the Natural Monitor System, type RT on the command line and press Enter.

The **Response Time Subsystem** menu appears as shown below:

```

10:13:23                ***** REVIEW NM UTILITY *****                2006-03-02
                        - Response Time Subsystem -

                                Code Description

                                ER  Edit Report Definition
                                LH  List History Reports
                                LR  List Report Definitions
                                LS  List Started Reports

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

```

The functions available from this menu are described in the following table:

Code	Function	Description
ER	Edit Report Definitions	Allows you to specify the parameters used to collect information for a response time report.
LH	List History Reports	Lists the historical snapshots which contain previously accumulated data.
LR	List Report Definitions	Lists the report definitions and started reports currently available. A report definition is created or modified with the ER function.
LS	List Started Reports	Lists the reports that are currently accumulating data.

▶ To display a list of available commands

- From a list screen, enter a question mark (?) in the selection column preceding a particular report name and press Enter.

A window appears containing a list of available commands.

▶ **To invoke a command from the list**

- Enter the desired function code in the data entry field and pressing Enter.

See *Function Codes and Commands* for a description of all function codes, PF keys, and commands available within Natural Monitor.

Accessing the Edit Report Definition Screen

There are three ways to access the **Edit Report Definition** screen.

▶ **To access the Edit Report Definition screen**

1. Type ER on the command line and press Enter; or
2. Type the following string on the command line and press Enter:

ER *reportname*

where *reportname* is either the name of an existing report definition or the name for a new report definition; or

3. Type ER in the Sel column preceding the name of a report on the list of report definitions and press Enter.

See *How are Reports Named* for information about naming reports.

In all three cases, the **Edit Report Definition** screen appears as shown below:

```

10:14:22                ***** REVIEW NM UTILITY *****                2006-03-02
                        - Edit Report Definition -

Report Name .. SAMPLE REPORT_____

Graph Parameter                Report Options
Response Time Interval ... 0.5_   Auto Start (Y/N) ..... N
                                   History Interval (min) .... 5__
                                   History Refresh (Y/N) ..... Y

Detail Record Parameters
Response Time Threshold .. 3.5_
Number of Records ..... 20__
Wrapping Options ..... NONE
                                   (None/Std/High)

Transaction Summary Parameter   Processing Rules
Summary Option ..... NONE      Field Value
                                   TP Userid ..... _____
                                   Transaction Id ..... _____
                                   NATURAL Application .. _____
                                   NATURAL Program ..... _____

REV00125 - Report definition has been saved
Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help      Exit      Save Start                                Canc
    
```

If the report name is blank, or if the report name you have entered is new to Natural Monitor, the following message is displayed on the **Edit Report Definition** screen:

```
REV00275 - NEW REPORT DEFINITION
```

If this message does not appear, Natural Monitor has recognized the report name you entered as an existing report. Any changes you make on the **Edit Report Definition** screen will modify the existing report.

You may change the report name from the **Edit Report Definition** screen by overtyping the name in the Report Name field with a new name and pressing Enter.

The following PF keys are provided to help process report definitions:

PF Key	Command	Description
PF5	Save	Save the current report definition.
PF6	ST	Save the report defined on the screen and start it.

Modifying Report Parameters

When you access the **Edit Report Definition** screen, parameter values are already entered for the report:

- If you accessed an *existing* report definition, the parameter values reflect the current definition for that report.
- If you are creating a *new* report definition, the values represent the default values set in P-NMCONF by your Natural Monitor system administrator.

You may change the parameter values on the **Edit Report Definition** screen, and you may add, modify, or delete processing rules for the report definition.

The parameters shown on the **Edit Report Definition** screen are described in the following sections.

Graph Parameter

The following field contains one of the parameters used to graph reports:

Parameter	Description
Response Time Interval	Specifies the reporting interval, in seconds, used to graph a report horizontally and vertically. Valid values are 0 . 1 to 99 . 9.

Detail Records Parameters

The following fields contain values which specify when and if detailed records are to be generated for a report:

Parameter	Description
Response Time Threshold	Specifies the transaction response time value, in seconds, above which Natural Monitor creates detailed records for the Detailed Records table. This value is also used to control the color and noncolor attributes of the vertical and horizontal graphs. Response times that exceed the response time threshold are the highest response times experienced. Valid values are 0 to 99.9.
Number of Records	Indicates the <i>maximum</i> number of detailed response time records to be retained. Valid values are 0 to 9999.
Wrapping Options	Specifies the wrap option and has the following possible values: NONE Detailed response time records are retained to the limit specified by the Number of Records value. STD (standard) The most current response time records are retained once the Number of Records value is reached. HIGH The response time records with the highest value are retained once the Number of Records value is reached.

Transaction Summary Parameter

The following field is used to set the summary option:

Parameter	Description
Summary Option	Specifies whether a Transaction Summary table is to be generated and, if so, what kind. Valid values are: NONE None created. SUM A transaction summary is created for the root transaction program; for example <i>Nvrs</i> for Natural. DET A detailed transaction summary is created that includes Natural application information.

Report Options

The following fields control whether a report is to be autostarted, the interval at which historical data is to be written to the Natural Monitor repository file, and whether the report data collection is to be refreshed after this data has been written:

Parameter	Description
Autostart	Indicates whether this report is to be started automatically when Natural Monitor initializes. Valid values are Y (yes) or N (no).
History Interval	Specifies the interval, in minutes, at which the Natural Monitor history task writes historical data to the Natural Monitor repository file. Valid values are 0 to 999. If this value is left at 0, <i>no</i> history report data will be saved.
History Refresh	Indicates whether the response time report should be refreshed (restarted) when the history interval has expired if it is a history response time report. Valid values are Y (yes) or N (no).

Note:

The `Report Options` are processed by the Natural Monitor History subsystem. This subsystem must be installed for these options to take effect.

Controlling Color and Monochrome Attributes

The `Response Time Interval` and `Response Time Threshold` parameters are used to control the color and monochrome attributes of response time graphs that display totals. Response times which exceed the `Response Time Threshold` are shown on color graphs in red and on monochrome graphs as asterisks (*).

Adding, Modifying, or Deleting Processing Rules

Also shown on the **Edit Report Definition** screen are several fields which control processing rules within Natural Monitor.

Processing rules are used to restrict the accumulation of response time data to specific TP users, programs, Natural applications, or Natural programs, or to a specific set of these values.

When entering data, alphanumeric and numeric values are permitted; hexadecimal values are *not* permitted.

Each field may contain one of the following processing rules:

Field Input	Processing Rule
Blank	If a field remains blank, all data pertaining to that field is generated.
Single value	If a single value is entered in a field, data accumulation is restricted to the value entered.
Wild card	If a wild card is entered in a field, data accumulation is restricted by the value entered in that field. Example: P* generates data related to all and only those Natural programs that have names beginning with the value P.

Saving a Report Definition

When you have made all necessary changes on the **Edit Report Definition** screen, you can save the report definition two ways.

To save the report definition

1. Press PF5 (Save); or
2. Enter SAVE on the command line and press Enter.

A new report definition does not become active until you *start* it. If you change parameters for an existing report, the new parameter settings do not become active until the report is *refreshed*.

Starting or Restarting (Refreshing) a Report

A report does not begin accumulating data until it is started. Once a report is started, tables and graphs of response time data are generated based on the parameters in the report definition.

New reports are *started*; started reports that have been modified and saved are *refreshed*. A report can be refreshed as often as necessary.

The following commands may be used to start or refresh a report:

```
ST reportname           to START a new report;
RF reportname           to REFRESH a modified, started report.
```

If you attempt to start a report that has already been started, the following message appears:

```
The report listed below is already started. Do you want to REFRESH it?
```

Type Y at the cursor and press Enter to REFRESH the report; type N and press Enter to retain the started report without any of its current modifications.

Starting a Report

A report is started by issuing a start (ST) command. The ST command is issued for an existing report definition that you select. How you start a report depends on your location.

▶ To start a report

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

```
RT ST reportname
```

2. From any screen within the **Response Time** subsystem, type the following string on the command line and press Enter:

```
ST reportname
```

3. From the list of report definitions, type ST on the selection line preceding the name of the report to be started and press Enter.

Note:

On the list of report definitions, a started report is identified by a greater than symbol (>) preceding the report name.

After you have saved a report definition, you may start a report directly from the **Edit Report Definition** screen.

▶ To start a report directly

1. Press PF6 (Start); or
2. Type ST on the command line and press Enter.

Once a report is started, the following message appears:

```
REV00092 - REPORT HAS BEEN STARTED
```

Natural Monitor then begins to accumulate data based on the parameters in the report definition that you chose.

Other than the ST command, the START command starts the Natural Monitor history session.

Refreshing a Report

▶ To restart a report

- Enter the REFRESH (RF) command.

The REFRESH command is issued for the started report you select. When you refresh a report, all tables and graphs for the report are deleted, and new data is generated based on the current parameters in the report definition. There are three ways to perform a refresh.

▶ To refresh a report

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

```
RT RF reportname
```

2. From any screen within the Response Time subsystem, type the following string on the command line and press Enter:

```
RF reportname
```

3. From the list of started reports or the list of report definitions, type RF on the selection line preceding the name of the report to be refreshed and press Enter.

On the list of report definitions, a started report is identified by a greater than symbol (>) preceding the report name. If you issue the RF command for a report that is *not* started, Natural Monitor automatically starts the report.

Once a report is refreshed, Natural Monitor begins to accumulate new data based on the parameters in the report definition that you chose.

Listing Reports

Three different lists of report names are available from the **Response Time Subsystem** menu:

- Report definitions
- Started reports
- History reports

In addition, a list of historical snapshots is available for any report listed on the **History Reports** screen.

The following screen-positioning PF keys and commands are available from the report lists:

PF Key	Command	Description
PF7	-	Scroll backward one screen (on list of report definitions only).
PF8	+	Scroll forward one screen.
	TOP	Go to the top of the display.

Note:

There is no PF key available for the TOP command.

Listing Report Definitions

The **List Report Definitions** function (LR) lists the names of the response time report definitions. There are two ways to access the screen.

▶ To access the List Report Definitions screen

1. From any screen within Natural Review, type RT LR on the command line and press Enter.
2. From any screen within the **Response Time** subsystem, type LR on the command line and press Enter.

The **List Report Definitions** screen appears as shown in the example below:

```

10:15:57                ***** REVIEW NM UTILITY *****                2006-03-02
                        - List Report Definitions -

Sel  Report Name                Auto Int  HInt  Rf  Thresh  Recs  Wrap  Tran
___ > HIGHEST RESPONSE          Y   0.5   60  Y   3.5    50  HIGH  NONE
___ > SAMPLE REPORT              N   0.5    5  Y   3.5    20  NONE  NONE
___  SPECIAL REPORT             N   0.5    2  Y   3.5    20  NONE  NONE
___ > SYSTEM RESPONSE TIME      Y   0.5   60  Y   3.5    50  STD   SUM

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

```

Started reports are indicated by a greater than symbol (>) preceding the name of the report. The Sel column provides a command input field for each report name.

Reports are listed in alphabetical order by name. The remaining columns on the screen indicate the values of the report definition parameters for this report. The fields shown on this screen correspond to the parameters on the **Edit Report Definition** screen as follows:

Field	Description
Auto	Autostart option. Valid values are: Y Response time report is autostarted. N Response time report is not autostarted.
Int .	Response time interval. Valid values are 0 . 1 to 99 . 9 seconds.
HInt	History interval (in minutes) where 0 indicates that the report is <i>not</i> a history report.
Rf	History refresh indicator. Valid values are: Y Response time report is to be refreshed after historical data is written if the report is a history report. N Response time report is not to be refreshed.
Thresh	Response time threshold (in seconds).
Recs	Number of detailed records (maximum) to be retained.
Wrap	Wrapping option retention indicator. Valid values are: NONE The report stops at the number of records defined. STD The most current records are kept if the number of records exceeds the number of records defined. HIGH The records with the highest response times are retained if the number of records exceeds the number of records defined.
Tran	Transaction summary option indicator. Valid values are: NONE No Transaction Summary report is created. SUM A Transaction Summary report is created for the root program. DET A Transaction Summary report is created that includes Natural application information.

See *Modifying Report Parameters* for a description of these parameters.

For any report listed on the **List Report Definitions** screen, type in one of the following commands in the Sel column and press Enter to perform the associated task:

Command	Task
CL	Close started report.
ER	Edit the report definition.
EX	Display a list of historical snapshots for the report.
PH	Purge history reports.
PR	Purge the report definition.
PS	Purge the started report.
RF	Refresh (restart) the started report.
ST	Start a report.
VD	Display detailed records for the report.
VH	Display a horizontal graph for the report.
VT	Display a transaction summary for the report.
VW	Display a vertical graph for the report.

► **To view details of a historical report**

- Type EX on the selection line preceding the report listed.

An expanded list of historical snapshots (that is, pictures of data stored at previous times for the report) is displayed.

Listing Started Reports

The **List Started Reports** function lists the name of response time reports that have been started and are currently accumulating data. There are two ways to access the screen:

► **To access the List Started Reports screen**

1. From any screen within Natural Monitor, type RT LS on the command line and press Enter.
2. From any screen within the **Response Time** subsystem, type LS on the command line and press Enter.

The **List Started Reports** screen appears as shown in the example below:

```

10:15:57                ***** REVIEW NM UTILITY *****                2006-03-02
                        - List Started Reports -

Sel  Report Name                Auto Int. HInt Rf Thresh Recs Wrap Tran
___  HIGHEST RESPONSE            Y  0.5  60 Y  3.5    0 HIGH NONE
___  SAMPLE REPORT               N  0.5   5 Y  3.5    0 NONE NONE
___  SYSTEM RESPONSE TIME        Y  0.5  60 Y  3.5    0 STD  SUM

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

```

The Sel column provides a command input field for each report name.

Reports are listed in alphabetical order by name. The remaining columns on the screen indicate the values of the report definition parameters for this report. The fields displayed on this screen correspond to the parameters on the **Edit Report Definition** screen as follows:

Field	Description
Auto	Autostart option indicator. Valid values are: Y Response time report is autostarted. N Response time report is not autostarted.
Int .	Response time interval. Valid values are 0 . 1 to 99 . 9 seconds.
HInt	History interval (in minutes) where 0 indicates that the report is <i>not</i> a history report.
Rf	History refresh indicator. Valid values are: Y Response time report is to be refreshed after historical data is written if the report is a history report. N Response time report is not to be refreshed.
Thresh	Response time threshold (in seconds).
Recs	Number of detailed records currently retained.
Wrap	Wrapping option retention indicator. Valid values are: NONE The report stops at the number of records defined. STD The most current records are kept if the number of records exceeds the number of records defined. HIGH The records with the highest response times are retained if the number of records exceeds the number of records defined.
Tran	Transaction summary option indicator. Valid values are: NONE No Transaction Summary report is created. SUM A Transaction Summary report is created for the root program. DET A Transaction Summary report is created that includes Natural application information.

See *Modifying Report Parameters* for a description of these parameters.

For any report listed on the **List Started Reports** screen, type in one of the following commands in the Sel column and press Enter to perform the associated task:

Command	Task
CL	Close started report.
ER	Edit the report definition.
EX	Display a list of historical snapshots for the report.
PH	Purge history reports.
PR	Purge the report definition.
PS	Purge the started report.
RF	Refresh (restart) the started report.
ST	Start a report.
VD	Display detailed records for the report.
VH	Display a horizontal graph for the report.
VT	Display a transaction summary for the report.
VW	Display a vertical graph for the report.

If you issue the ST command from the **List Started Reports** screen, Natural Monitor asks whether you want to refresh (restart) the report.

To view details of a historical report

- Type EX on the selection line preceding the report listed.

An expanded list of historical snapshots (that is, pictures of data stored at previous times for the report) is displayed.

Listing Historical Reports

The **List History Reports** function provides a summary list of historical response time reports. There are two ways to access the screen.

To access the List History Reports screen

1. From any screen within Natural Monitor, type RT LH on the command line and press Enter.
2. From any screen within the **Response Time** subsystem, type LH on the command line and press Enter.

The **List History Reports** screen appears as shown below:

```

10:16:30                ***** REVIEW NM UTILITY *****                2006-03-02
                        - List History Reports -

Sel Report Name          Number  Records      Date Range
__ HIGHEST RESPONSE      1       3  1998/11/05 - 1998/11/05
__ SPECIAL REPORT        117     302 1998/11/05 - 1998/11/05
__ SYSTEM RESPONSE TIME  30     255 1998/11/05 - 1998/11/03

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

```

The Sel column provides a command input field for each report name. Reports are listed in alphabetical order by name.

The remaining fields shown on this report are as follows:

Field	Description
Number	Total number of historical snapshots available for each report.
Records	Total number of records saved for all historical snapshots.
Date Range	Range of dates for which historical snapshots are available. Format of date is YYYY/MM/DD.

 **To view details pertaining to any of these reports**

- Type EX on the selection line preceding the report listed.

An expanded list of historical snapshots (i.e., pictures of data stored at previous times for the report) is displayed.

Note:

When entered on the command line, the EX command accesses the **List History Reports** screen as shown above.

 **To purge all historical reports of a report destination**

- Type PH on the selection line preceding the history report listed.

Listing Historical Snapshots

There are three ways to access the **Expanded List** of historical snapshots for a response time report listed on the List History Reports screen.

▶ To access the Expanded List of historical snapshots

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

`RT EX reportname`
2. From any non-list display within the **Response Time** subsystem, type `EX reportname` on the command line and press Enter.
3. From the **List History Reports** screen, type `EX` in the `Se1` column next to a report name and press Enter.

An **Expanded List** for the history report selected appears as shown in the example below:

```

10:17:10                ***** REVIEW NM UTILITY *****                2000/08/08
                        - Expanded List for SPECIAL REPORT -

      Date/Time Recs      Date/Time Recs      Date/Time Recs      Date/Time Recs
      2000/08/08         ___ 10:47:00   2    ___ 14:28:00   11    ___ 14:07:00   8
      ___ -Current-      2000/08/08         ___ 14:27:00   14    ___ 14:03:00  13
      ___ 10:16:00   15    ___ 14:43:00   3    ___ 14:26:00   25    ___ 14:02:00  18
      2000/08/01         ___ 14:41:00  12    ___ 14:25:00   16    ___ 14:01:00  16
      ___ 15:00:00   9    ___ 14:40:00  16    ___ 14:24:00   6    ___ 14:00:00  15
      ___ 14:59:00   5    ___ 14:39:00  11    ___ 14:23:00  15    ___ 13:59:00  4
      ___ 14:58:00  18    ___ 14:38:00  13    ___ 14:22:00  13    ___ 13:58:00  12
      ___ 11:03:00   6    ___ 14:37:00  15    ___ 14:21:00   2    ___ 13:57:00  17
      ___ 10:57:00   5    ___ 14:36:00  12    ___ 14:20:00  12    ___ 13:55:00   5
      ___ 10:55:00   8    ___ 14:35:00  13    ___ 14:19:00   8    ___ 13:54:00   6
      ___ 10:54:00   2    ___ 14:34:00   9    ___ 14:18:00   5    ___ 13:53:00  16
      ___ 10:53:00  14    ___ 14:33:00  14    ___ 14:17:00  10    ___ 13:52:00   7
      ___ 10:51:00   9    ___ 14:32:00   7    ___ 14:16:00   2    ___ 13:51:00   8
      ___ 10:50:00  13    ___ 14:31:00   3    ___ 14:11:00   2    ___ 13:50:00   4
      ___ 10:49:00   7    ___ 14:30:00  21    ___ 14:10:00  10    ___ 13:48:00   9
      ___ 10:48:00   9    ___ 14:29:00  16    ___ 14:08:00  20    ___ 13:47:00  11

REV00055 - Select a historical snapshot
Command ==>
Enter-PF1---PF2---PF3---PF4---PF5---PF6---PF7---PF8---PF9---PF10--PF11--PF12---
      Help           Exit           --           +           Menu
  
```

The `Se1` column provides a command input field for each historical snapshot listed. Each historical snapshot is identified on this expanded list by date and time. Current data is marked as `-Current-` on the list.

The `Recs` column indicates the number of records written. Possible values are:

- 0 No transaction, no detail records.
- 1 Transactions, no detail records.
- >1 Transactions and detail records.

Note:

When there are no transactions, detail records do not exist. When Logging of empty records is set to NO, reports without transaction will not be written by the history session.

The following message appears on the screen:

```
REV00055 - SELECT A HISTORICAL SNAPSHOT
```

For any snapshot listed on the **Expanded List** screen, type in one of the following commands in the Sel column and press Enter to perform the associated task:

Command	Task
PH	Purge this historical snapshot.
PX	Purge marked range - start.
PY	Purge marked range - end.
VD	Display a detailed records table for the snapshot.
VH	Display a horizontal graph for the snapshot.
VW	Display a vertical graph for the snapshot.

Note:

The VT command is *not* available when viewing historical snapshots.

Once you have accessed either the **Expanded List** or the actual historical display, you may toggle back and forth between the displays by pressing PF2.

Viewing Earlier or Later Historical Snapshots

Using the PREV or NEXT command, you may access earlier or later historical snapshots.

 **To access earlier historical snapshots**

- Type the command PREV on the command line of any historical snapshot screen and press Enter.

 **To view later historical snapshots**

- Type the command NEXT on the command line and press Enter.

Accessing Natural Monitor Tables

The following tables may be generated for any response time report in Natural Monitor:

Command	Description
VD	Detailed Records table.
VT	Transaction Summary table.

Each table consists of one or more screens of data. The data generated from each of these tables is derived from the parameters entered in the report definition (**Edit Report Definition** screen).

The **Detailed Records table** provides response time statistics for individual transactions for individual users. A Detailed Records display is generated for a report only if the Detail Record parameters were entered on the Edit Report Definition screen for a report definition.

The **Transaction Summary** table provides response time statistics for transactions executed in Natural. A Transaction Summary display is generated for a report only if the Transaction Summary parameter of SUM or DET was entered on the **Edit Report Definition** screen for that report definition.

Note:

Both current and historical data are available for the **Detailed Records** table. Historical data is *not* available for the **Transaction Summary** table.

Accessing the Detailed Records Table

There are five ways to access the **Detailed Records** screen.

To access the Detailed Records Table

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

```
RT VD reportname
```

2. From within the **Response Time** subsystem, type the following string on the command line and press Enter:

```
VD reportname
```

3. From any non-list display within the **Response Time** subsystem, type VD on the command line and press Enter. The last accessed report will be displayed.
4. From the list of **Report Definitions** or the list of **Started Reports**, type VD in the Sel column next to a started report and press Enter.
5. From the **Expanded List** for a history report, type VD in the Sel column next to a historical snapshot and press Enter.

The **Detailed Records** screen for a particular report appears as shown in the example below:

```

10:21:03                ***** REVIEW NM UTILITY *****                2006-03-02
- Detailed Records for SPECIAL REPORT -
- from 1998/03/16 16:23:41 -

TP      Response Natural  Trans  Natural  Natural  _____Total Database_____
Userid   Time Userid  Name    Appl    Program  Calls  ElpTime  CmdTime
GGS      0.731 GGS     NC22    SYSREVN P-NMRTLH  394   0.388   0.08494
GGS      0.125 GGS     NC22    SYSREVN P-NMRTEX   61   0.044   0.00819
GGS      0.111 GGS     NC22    SYSREVN P-NMRTEX   62   0.040   0.01051

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

```

This display is sorted in descending numeric order by Trans End Time (transaction completion time) if the WRAP option parameter value entered for the related report definition is NONE or STD. If the WRAP option parameter value is HIGH, the display is sorted in descending numeric order by response time.

A row of statistics three screens wide is presented in this display for each user ID in the list. Use one of the following commands or PF keys to access these additional screens or to display information for one particular user ID:

PF Key	Command	Description
PF2	HIST/CURR	Toggle between the historical display and the current display.
PF7	-	Scroll backward one screen (on list of report definitions only).
PF8	+	Scroll forward one screen.
PF9		Select (pick) a particular detail record.
PF10	LEFT	Scroll the display left one screen.
PF11	RIGHT	Scroll the display right one screen.
	TOP	Go to the top of the display.

Note:

There is *no* PF key available for the TOP command. The PICK command *cannot* be used from the command line for these displays.

From each **Detailed Records** screen, two screens are accessible which show the remaining columns of the **Detail Records** table.

 **To display the remaining columns of the Detail Records table**

- Press PF11 to access the first screen.

```

10:21:43                ***** REVIEW NM UTILITY *****                2006-03-02
                        - Detailed Records for SPECIAL REPORT -
                        - from 1998/03/16 16:25:00 -

TP      Response  _Avg Database_      High/Last
Userid   Time ElpTime CmdTime  Cmd DBID  FNR Stmt Lvl Calls ElpTime  CmdTime
GGS      0.731   0.000 0.00020 L9   10   73 2130 1   394   0.010  0.00968
GGS      0.125   0.000 0.00012 L9   10   73 7090 1    61   0.002  0.00040
GGS      0.111   0.000 0.00016 L9   10   73 7090 1    61   0.003  0.00200

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

- Press PF11 to access the second screen:

```

10:21:53                ***** REVIEW NM UTILITY *****                2006-03-02
                        - Detailed Records for SPECIAL REPORT -
                        - from 1998/03/16 16:25:00 -

TP      Response  Trans NAT  Trans      Terminal
Userid   Time  Number Thd  End Time  Name
GGS      0.731   1771   2  16:23:51  0824
GGS      0.125   1773   2  16:23:58  0824
GGS      0.111   1772   2  16:23:57  0824

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

- Press PF10 to return to the first screen.

Statistical Fields on the Natural Monitor Detailed Records Table

The fields available on the four **Detailed Records** screens are described in the following table:


Field	Description
TP Userid	The CICS user ID for the transaction. Corresponds to system variable *INIT-USER.

Field	Description
Response Time	The transaction response time, measured between terminal input and output.
Natural Userid	The Natural user ID for the transaction. Corresponds to system variable *USER.
Trans Name	The CICS transaction ID.
Natural Appl	The Natural application for the transaction. Corresponds to system variable *LIBRARY-ID.
Natural Program	The Natural program within the transaction, that had the highest database command time or in case of no database calls, the last program executed for the transaction.
Total Database Calls	The number of database calls executed during the transaction.
Total Database ElpTime	The total amount of time required for database communications. This time includes database duration, cross address space time and CICS system queue time.
Total Database CmdTime	The amount of time which expired between the time the command was received by the database system and the time the result was passed back the database system.
Avg Database ElpTime	The average elapsed time for all database calls during the transaction.
Avg Database CmdTime	The average database command time for all database calls during the transaction.
High/Last Cmd	The database command issued for the Natural program that had the highest command time or the last database command issued during the transaction.
High/Last DBID	The database ID accessed by the database call issued by the Natural program that had the highest command time or the last database ID accessed during the transaction.
High/Last FNR	The database file number accessed by the database call issued by the Natural program that had the highest command time or the last database file number accessed during the transaction.
High/Last Stmt	The Natural program statement that issued the database call that had the highest command time within the transaction.
High/Last Lvl	The Natural call level of the program that issued the database call that had the highest command time or the call level of the last program executed by the transaction.
High/Last Calls	The total number of database calls issued by the Natural program that had the highest database command time.
High/Last ElpTime	The elapsed time required to process the database call issued by the Natural program transaction that had the highest database command time.
High/Last CmdTime	The command time required by the database to process the call that had the highest database command time.

Field	Description
Trans Number	The CICS transaction number.
NAT Thd	The Natural storage thread number for the transaction. 0 indicates that a getmained storage thread or no thread was used.
Trans End Time	The time, in HH:MM:SS format, that the transaction was ended.
Terminal Name	The CICS terminal name. Corresponds to the Natural system variable *INIT-ID.

Accessing the Summary of Fields Window

You can access a single screen summary of all fields in the **Detailed Records** display for a particular transaction number for a particular user from any of the **Detailed Records** screens.

 **To access a single screen summary of all fields in the Detailed Records display**

- Position the cursor on the row that provides information for that transaction and user ID and press PF9 (Pick).

Note:

The PICK command *cannot* be used from the command line in this instance.

The **Summary of Fields** window appears as shown in the example below:

```

10:21:53                ***** REVIEW NM UTILITY *****                2006-03-02
                        - Detailed Records for SPECIAL REPORT -

                        - Detail Record -

TP System Information      Database Information
  Userid ..... GGS        Total Calls ..... 62
  Response Time ..... 0.130  Elapsed Time ..... 0.056
  Transaction Name ..... NC22  Avg Elapsed Time ... 0.000
  Transaction Number .... 1811  Command Time ..... 0.01121
  Terminal Name ..... 0824     Avg Command Time ... 0.00017
  Transaction End Time .. 16:30:09

Natural Information       High/Last Database Info
  Userid ..... GGS        Calls ..... 61
  Application ..... SYSREVNMM  Elapsed Time ..... 0.006
  Program ..... P-NMRTEX      Command Time ..... 0.00059
  Statement ..... 7090        Command ..... L9
  Call Level ..... 1          Database Id ..... 10
  Thread Number ..... 2       File Number ..... 73

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

The fields displayed on this screen are the same as those shown on the **Detailed Records** screen described above.

Accessing Historical Data for Detailed Records

There are two ways to display the **Expanded List** of historical snapshots available for the **Detailed Records** display.

▶ To display the Expanded List of historical snapshots

1. Type EX on the command line of the current detail records display and press Enter, or
2. Type EX in the Sel column in one of the three list report screens and press Enter.

▶ To display a particular historical snapshot from the Expanded List

- Type VD in the Sel column preceding the snapshot you want to display and press Enter.

Once you have accessed a historical display, you may toggle back and forth between this historical display and the current display by pressing PF2.

Accessing the Transaction Summary Table

There are four ways to access the screen.

▶ To access the Transaction Summary screen

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

```
RT VT reportname
```
2. From within the **Response Time** subsystem, type the following string on the command line and press Enter:

```
VT reportname
```
3. From any non-list display within the **Response Time** subsystem, type VT on the command line and press Enter. The last accessed report will be displayed.
4. From the list of **Report Definitions** or the list of **Started Reports**, type VT in the Sel column next to a started report and press Enter.

The **Transaction Summary** screen for a particular report appears as shown in the example below:

```

10:25:03                ***** REVIEW NM UTILITY *****                2006-03-02
- Transaction Summary for SPECIAL REPORT -

Trans   Natural   Avg   Total   ___Total Database___   ___Average Database___
Name    Appl      Resp  Trans  Calls ElpTime CmdTime  Calls ElpTime CmdTime
NC22    **SUM**   0.060  11     78   0.249  0.031  7.09  0.003  0.0004

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

The sample screen above is a summary version indicating that the Transaction Summary parameter in the related report definition is set to the value SUM.

Each summary table is marked with ****SUM**** in the Natural Appl field.

If it is set to the value DET, the default report would be the detailed version of the **Transaction Summary** table.

The detailed version includes the Natural application (Natural Appl) for each root transaction program (Trans Name).

The **Transaction Summary** table is sorted in alphabetic order based on the transaction name. If a detailed version of the table is accessed, a secondary sort is performed by Natural application.

The following are the additional PF keys and commands available on this screen:

PF Key	Command	Description
PF5	DET	Access the detailed version of the Transaction Summary table. The first line shown is a summary of all detailed transactions listed. Note: This table shows information on Natural application usage.
PF6	SUM	Access the summary version of the Transaction Summary table. Note: This table does <i>not</i> show information on Natural application usage.
PF8	+	Scroll forward one screen.
	TOP	Go to the top of the display.

Note:

There is no PF key available for the TOP command.

You may use PF5 (Det) and PF6 (Sum) to toggle back and forth between the detailed and summary versions of the **Transaction Summary** table.

Statistical Fields on the Transaction Summary Table

The fields available on the **Transaction Summary** screen are:

Field	Description
Trans Name	The CICS transaction ID.
Natural Appl	The Natural application name (detail only). **SUM** indicates a summary line for the transaction name including all applications.
Avg Resp	The average response time in seconds for the transaction/application name.
Total Trans	The total number of transactions for the transaction/application name.
Total Database Calls	The total number of database calls issued by the transaction/application name.
Total Database ElpTime	The total amount of time in seconds for all database calls issued by the transaction/application name.
Total Database CmdTime	The total amount of time (seconds) required by the database to process all database calls issued by the transaction/application name.
Average Database Calls	The average number of database calls issued for the transaction/application name.
Average Database ElpTime	The average amount of time (seconds) required to process all database calls issued by the transaction/application name.
Average Database CmdTime	The average amount of time (seconds) required by the database to process all database calls issued by the transaction/application name.

Using Vertical and Horizontal Graphs

Response time reports are available as vertical and horizontal graphs which may be accessed from the following lists:

- Report definitions
- Started reports
- Expanded list of historical snapshots

 **To access a graph**

- Enter either of the following commands in the Sel column for a particular report (or historical snapshot) and pressing Enter:

Command	Description
VH	Display a horizontal graph of response time intervals.
VW	Display a vertical graph of response time intervals.

Once a default vertical or horizontal graph has been accessed, you may access similar graphs of three sets of statistics.

To display additional graphs

- Use the commands listed below.

Command	Report Description
TRANS	Response times for transactions (default graph).
CALLS	The total number of database calls issued for transactions.
ACALL	The average number of database calls issued for transactions.

The `Response Time Interval` in the report definition (**Edit Report Definition** screen) determines the whole or fractional number of seconds used to graph the response time intervals on each graph. On the vertical graph, intervals are designated as `Response Time Intervals in Seconds`. On a horizontal graph, intervals are designated as `Response Time Range`.

A graph may be displayed in color or noncolor; the availability of color depends on whether you are using an extended data stream (EDS) terminal. The `COLOR ON` command displays a color graph; the `COLOR OFF` command returns to a noncolor display.

Interpretation of Graphs that List Totals

A vertical or horizontal graph of total transactions or total calls is interpreted in terms of two parameters set in a report definition (**Edit Report Definition** screen): the `Response Time Interval` and the `Response Time Threshold`. The following gives the physical manifestation of that interpretation as well as describing it:

Interpretation	Color	Symbol	Description
Good Response Time	Green	-	Intervals or ranges that fall <i>below</i> the value set for the <code>Response Time Interval</code> parameter.
Warning	Yellow	=	Intervals or ranges that fall <i>between</i> the value set for the <code>Response Time Interval</code> parameter and the value set for the <code>Response Time Threshold</code> parameter.
Poor Response Time	Red	*	Intervals or ranges that <i>exceed</i> the value set for the <code>Response Time Threshold</code> parameter.

Note:

The symbol shown in the table is used when the display is *not* in color.

The following are several examples of how to interpret the values on these graphs:

- For a *good response time*:

If the Response Time Interval = 0.5, all transactions with a response time under 0.5 seconds are displayed in green or with the minus sign character (-).

- For a *warning*:

If the Response Time Interval = 0.5 and the Response Time Threshold = 3.5, all transactions with a response time between 0.5 and 3.5 seconds are displayed in yellow or with the equal sign character (=) when not in color.

- For a *poor response time*:

If the Response Time Threshold = 3.5, all transactions with a response time that exceeds 3.5 seconds are displayed in red or with the asterisk character (*).

Interpretation of Graphs that List Averages

A vertical or horizontal graph of average calls is interpreted in terms of average number thresholds as follows:

Interpretation	Color	Symbol	Description
Good Response Time	Green	-	Average number of calls is less than or (Threshold 25) equal to 25.
Warning	Yellow	=	Average number of calls is greater than (Threshold 50) 25 and is less than or equal to 50.
Poor Response Time	Red	*	Average number of calls is greater than (Beyond Threshold 50) 50.

Note:

The symbol shown in the table is used when the display is *not* in color.

The following are several examples of how to interpret the values on these graphs:

- For a *good response time* (when the threshold is 25):

If an average of 20 database calls is listed within the interval of 1.0 to 1.5 seconds, it is displayed in green or with the minus sign character (-).

- For a *warning* (when the threshold is 50):

If an average of 40 database calls is listed within the interval of 1.5 to 2.0 seconds, it is displayed in yellow or with the equal sign character (=).

- For a *poor response time* (when the threshold is greater than 50):

If an average of 70 database calls is listed within the interval of 2.5 to 3.0 seconds, it is displayed in red or with the asterisk character (*).

Commands Used to Control Graphs

In addition to the commands and PF keys that are generally available within the system, the following special commands and PF keys control the various types of vertical and horizontal graphs available:

See *Function Codes and Commands* for a description of all function codes, PF keys, and commands available within Natural Monitor.

PF Key	Command	Description
PF2	HIST/CURR	Toggles between current and historical data.
PF4	TRANS	Accesses the default graph, the total number of transactions.
PF5	CALLS	Displays the total number of database calls issued for the total number of transactions. Each database call increases the transaction response time.
PF6	ACALL	Displays the average number of database calls issued for the total number of transactions.
PF10	HORI	Toggles to a horizontal graph from a vertical graph.
PF10	VERT	Toggles to a vertical graph from a horizontal graph.
	COLOR OFF	Displays a noncolor graph.
	COLOR ON	Displays a color graph.

Accessing a Vertical Graph

The command VW enables you to view graphs vertically. There are two ways to use it.

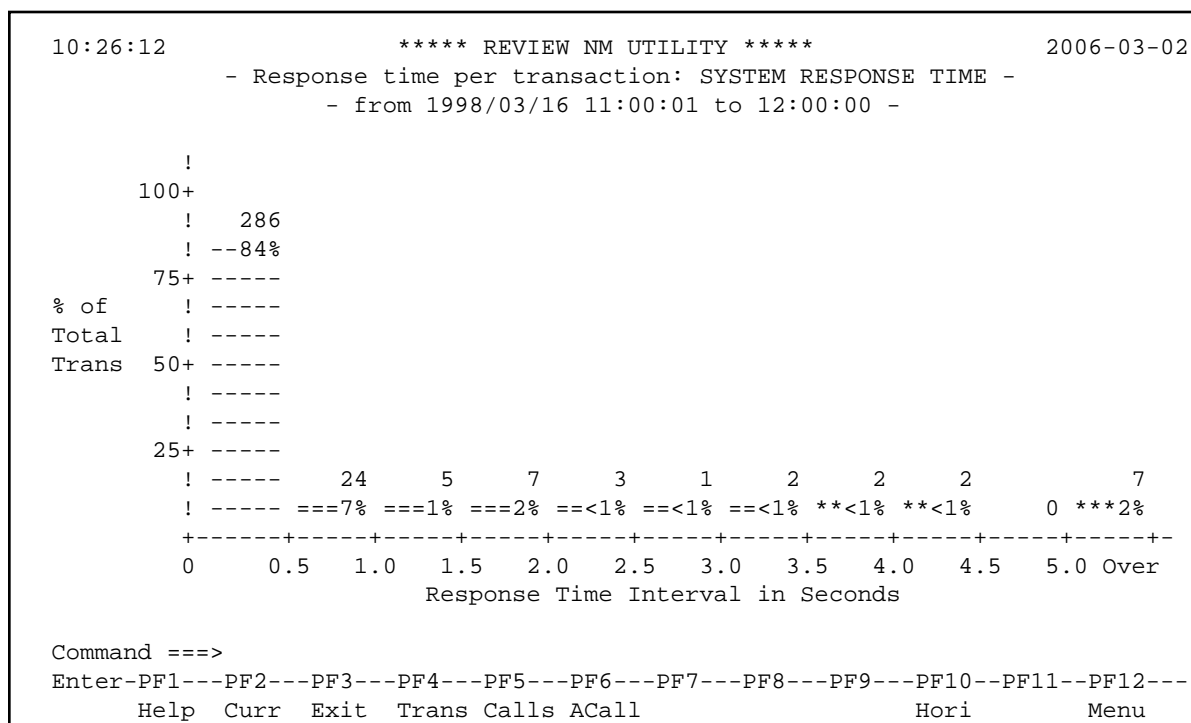
To access a vertical graph

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

```
RT VW reportname
```

2. From the list of report definitions, started reports, or the expanded list of historical snapshots, type VW in the Sel column next to the selected report (or historical snapshot) and press Enter.

A default vertical graph appears similar to the one shown below:



The default vertical graph illustrated above shows various response times for transactions. The following table describes the different graphs available in the vertical format:

Graph	Command/PF Key	Description
% of Total Trans	TRANS/PF4	The percentage of total transactions that a specific response time interval represents (default).
% of Total Calls	CALLS/PF5	The percentage of total calls that a specific response time interval represents.
Avg Call/Trans	ACALL/PF6	The average number of database calls issued for each transaction within a specific response time interval.

The following table describes the fields found on a vertical graph:

Field	Graph(s)	Description
Avg DB Calls/Tran	Avg Call/Trans	The average number of database calls issued for each transaction within a specific response time interval.
Response Time Interval in Seconds	Avg DB Calls/Tran % of Total Trans % of Total DB Calls	The average number of database calls issued for each transaction within a specific response time interval.
% of Total	% of Total Trans % of Total DB Calls	The percentage of the total that a specific range represents.

The following are three examples of how to interpret the values on these graphs:

- On the graph displaying the % of total transactions (see the above screen):
84% of all transactions experienced a response time between 0 and 0.5 of one second.
- For a graph displaying the % of total DB calls:
20% of total calls for transactions may have occurred between 0 and 0.5 of one second.
- For a graph displaying average DB calls per transaction:
an average of 175 DB calls per transaction may have occurred between 1.5 and 2.0 seconds.

Accessing a Horizontal Graph

The command VH enables you to view graphs horizontally. There are two ways to use it.

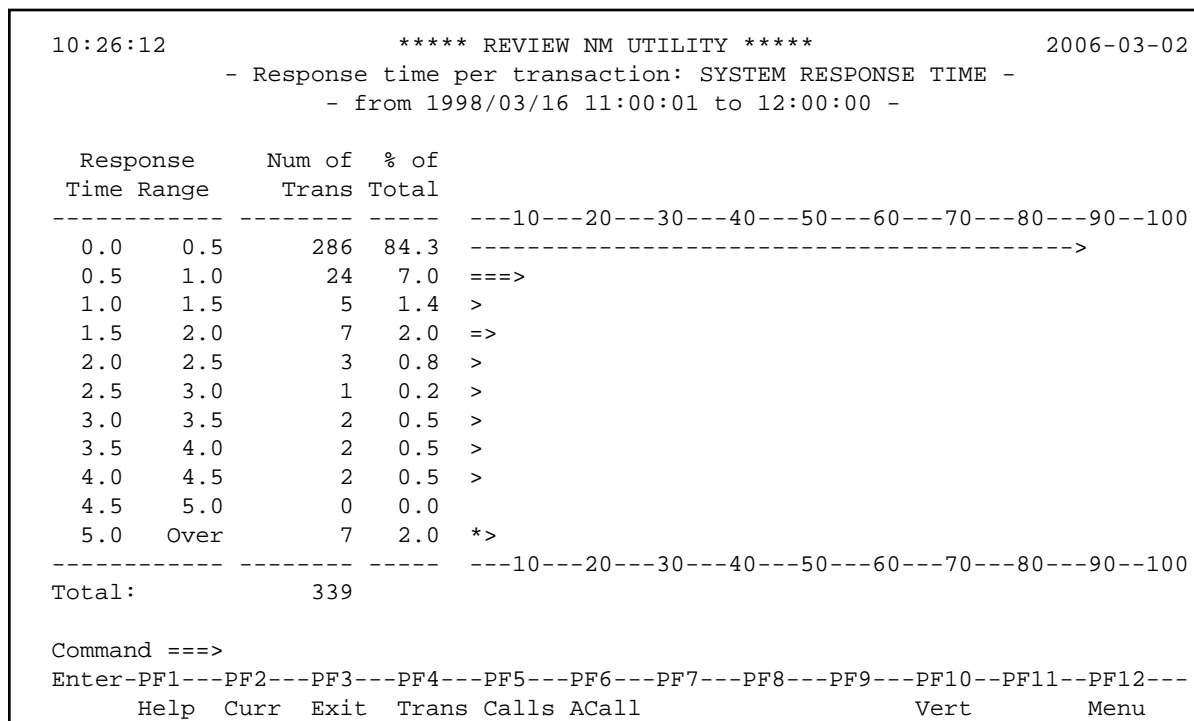
To access a horizontal graph

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

```
RT VH reportname
```

2. From the list of report definitions, started reports, or the expanded list of historical snapshots, type VH in the Sel column next to the selected report (or historical snapshot) and press Enter.

A default horizontal graph appears similar to the one shown below:



The default horizontal graph illustrated above shows various response times for transactions. The following table describes the different graphs available in the horizontal format:

Graph	Command/PF Key	Description
% of Total Trans	TRANS/PF4	The percentage of total transactions that a specific response time interval represents (default).
% of Total Calls	CALLS/PF5	The percentage of total calls that a specific response time interval represents.
Avg Call/Trans	ACALL/PF6	The average number of database calls issued for each transaction within a specific response time interval.

The following table describes the fields found on a horizontal graph:

Field	Graph(s)	Description
Avg Calls	Avg Call/Trans	The average number of database calls issued for each transaction within a specific response time interval.
Num of DB Calls	% of Total Trans % of Total Call	The total number of database calls issued for the total number of transactions within a specific response time interval.
Num of Trans	% of Total Trans	The actual number of transactions that received a response within a specific response time interval.
Response Time Range	% of Total Trans % of Total Calls Avg Call/Trans	The whole or fractional number of seconds used to graph response times. This number is derived from the Response Time Interval field in the report definition.
% of Total	% of Total Trans % of Total Calls	The percentage of the total that a specific range represents.

The following are three examples of how to interpret the values on these graphs:

- On the graph displaying the % of total transactions (see the above screen):
84.3% of the total of 339 transactions, or 286 transactions, experienced a response time between 0 and 0.49 of one second.
- For a graph displaying the % of total calls:
5.5% of the total of 21,930 calls, or 1,228 calls, may have experienced a response time between 1.5 and 1.99 seconds.
- For a graph displaying average calls per transaction:
an average of 225 calls per transaction (total: 675) may have occurred between 2.0 and 2.49 seconds.

Purging Report Definitions and Started Reports

The following commands enable you to purge your report definitions and started reports. These commands are available from the list of report definitions and the list of started reports by entering

To purge a report definition

- Enter the command PR in the Sel column preceding the selected report and press Enter.

To purge a started report

- Enter the command `PS` in the `Se1` column preceding the selected started report and press Enter.

In both cases, the following message appears:

```
Please confirm PURGE request for: reportname (Y or N).
```

- Verify that the correct report has been selected.
- Type `Y` at the cursor position and press Enter to purge the report; or type `N` and press Enter to retain the report.

Purging a Started Report

When you delete a started report, you delete only the current data accumulated by the report. The related report definition is not affected and can be modified for use as another report. Historical snapshots for the report are also retained.

Before you purge a started report, remember that a started report can be refreshed (restarted) using a modified report definition. A restarted report retains historical snapshots generated using the previous report definition.

Purging a Report Definition

It is possible to purge a report definition without purging the related started report. However, that started report cannot thereafter be modified (that is, refreshed or restarted).

Before you purge a report definition, remember that a report definition can be modified for use with another report. You might decide to delete a report definition that has never been started and will never be started.

Purging Historical Snapshot(s)

You may decide to purge one or more of the historical snapshots available for a particular started report. For instance, you might decide to purge the oldest historical snapshot(s). Purging a historical snapshot has no effect on the started report or its associated report definition.

To purge a historical snapshot

- Enter the command `PH` in the `Se1` column preceding the selected report and press Enter.

The `PH` command is available from the list of historical reports, the list of report definitions, the list of started reports and the expanded list of historical snapshots. In addition, this command is available in the command line of the expanded list of historical snapshots screen.

To purge a marked range - start

- In the expanded list of historical snapshots, enter the command `PX` in the `Se1` column preceding the historical snapshots and press Enter.

To purge a marked range - end

- In the expanded list of historical snapshots, enter the command PY in the Sel column preceding the historical snapshots and press Enter.

If the range of historical snapshots to be purged is not complete, the following window appears:

```

Purge report(s)
Date/Time From _____
Date/Time To   _____

```

The following date formats are accepted:

YYYY/MM/DD

YY/MM/DD

YYYY-MM-DD

YY-MM-DD

YYYY.MM.DD

YY.MM.DD

YYYYMMDD

YYMMDD

The following time formats are accepted:

HH:MM

HHMM

If the range of historical snapshots to be purged is complete, the following window appears:

```

Please verify PURGE request for
the date and time listed below:
From: 1998/03/17 00:00:00
To:   1998/03/17 23:59:00

      ( Y/N ) Y

```

Verify that the correct report range has been selected; then type Y at the cursor position and press Enter to purge the report(s); type N and press Enter to retain the report(s).