

Installing Review Natural Monitor

This section describes step by step how to install Review Natural Monitor under the operating systems OS/390 and VSE/ESA. It covers the following topics:

- General Installation Information
 - Installation Tape - OS/390 Systems
 - Installation Tape - VSE/ESA Systems
 - Installation Procedure
-

General Installation Information

- Installation Jobs
- Using System Maintenance Aid
- Prerequisites
- Storage Requirements

Installation Jobs

The installation of Software AG products is performed by installation jobs. These jobs are either created "manually" or generated by System Maintenance Aid (SMA).

For each step of the installation procedures described below, the job number of a job performing the respective task is indicated. This job number refers to an installation job generated by SMA. If you are not using SMA, an example installation job is provided in the job library on the Review Natural Monitor installation tape; you must adapt this job to your requirements.

Using System Maintenance Aid

For information on using Software AG's System Maintenance Aid (SMA) for the installation process, please refer to the System Maintenance Aid Manual.

Prerequisites

Natural Version 3.1.4 or above is required, for other prerequisites see the corresponding Natural for Mainframes Release Notes. For earlier Natural versions, refer to the Natural Release Notes Archive (**RN-Archive**) on the current Natural Documentation CD-ROM.

The SYSRNM application is cataloged with Natural 3.1 and therefore it can run with Natural 3.1 or above only.

Storage Requirements

The Review NM monitoring system requires CICS shared storage for collecting its monitoring data. For each Natural session, a user account area of 656 bytes is allocated plus space for a Natural call table (NCT). This table is used to track the Natural programs and database calls issued within a transaction. The number of NCT entries is determined by the NCTSIZE parameter in source member RNMSCB2 (see Step 6). Each table entry is 48 bytes long and the table contains 32 entries (default). This yields a total amount of $656+32*48=2192$ bytes per running session. The storage is reused when the session terminates.

Each active response time report requires a basic control block that is 400 bytes long. Each detail record is 128 bytes long. The maximum number of detail records per report is controlled by the Number of Records in the report definition. If the Transaction Summary Option is set in the report definition, a 64 bytes transaction summary area is allocated for each transaction ID.

After a report has been written to the repository file by the history session, all report-dependent storage is released.

Installation Tape - OS/390 Systems

The installation tape contains the datasets listed in the table below. The sequence of the datasets is shown in the **Report of Tape Creation** which accompanies the installation tape.

Dataset Name	Contents	Created by
RNM nnn .SRCE	Source programs and macros	IEBCOPY
RNM nnn .LOAD	Load modules	IEBCOPY
RNM nnn .INPL	Natural system objects	NAT UNLOAD
RNM nnn .JOBS	Example installation jobs	IEBCOPY
RNM nnn .LDEL	Delete instructions for old objects.	NAT UNLOAD

The notation nnn in dataset names represents the version number of the product.

Copying the Tape Contents to Disk

If you are using System Maintenance Aid (SMA), refer to the SMA documentation (included on the current edition of the Natural documentation CD).

If you are **not** using SMA, follow the instructions below.

This section explains how to:

- Copy data set COPY.JOB from tape to disk.
- Modify this data set to conform with your local naming conventions.

The JCL in this data set is then used to copy all data sets from tape to disk.

If the datasets for more than one product are delivered on the tape, the dataset COPY.JOB contains the JCL to unload the datasets for all delivered products from the tape to your disk.

After that, you will have to perform the individual install procedure for each component.

Step 1 - Copy data set COPY.JOB from tape to disk

The data set COPY.JOB (label 2) contains the JCL to unload all other existing data sets from tape to disk. To unload COPY.JOB, use the following sample JCL:

```
//SAGTAPE JOB SAG,CLASS=1,MSGCLASS=X
//* -----
//COPY EXEC PGM=IEBGENER
//SYSUT1 DD DSN=COPY.JOB,
// DISP=(OLD,PASS),
// UNIT=(CASS,,DEFER),
// VOL=(,RETAIN,SER=<Tnnnnn>),
// LABEL=(2,SL)
//SYSUT2 DD DSN=<hilev>.COPY.JOB,
// DISP=(NEW,CATLG,DELETE),
// UNIT=3390,VOL=SER=<vvvvvvv>,
// SPACE=(TRK,(1,1),RLSE),
// DCB=*.SYSUT1
//SYSPRINT DD SYSOUT=*
//SYSIN DD DUMMY
//
```

Where:

- <hilev> is a valid high level qualifier
- <Tnnnnn> is the tape number
- <vvvvvvv> is the desired volser

Step 2 - Modify COPYTAPE.JOB

Modify the COPYTAPE.JOB to conform with your local naming conventions and set the disk space parameters before submitting this job:

- Set HILEV to a valid high level qualifier.
- Set LOCATION to a storage location.
- Set EXPDT to a valid expiration date.

Step 3 - Submit COPY.JOB

Submit COPY.JOB to unload all other data sets from the tape to your disk.

Installation Tape - VSE/ESA Systems

The installation tape contains the datasets listed in the table below. The sequence of the datasets is shown in the **Report of Tape Creation** which accompanies the installation tape.

Dataset Name	Contents	Created by
RNMnnn.LIBR	Installation sublibrary	LIBR BACKUP
RNMnnn.INPL	Natural system objects	NAT UNLOAD
RNMnnn.LDEL	Delete instructions for old objects.	NAT UNLOAD

The notation *nnn* in dataset names represents the version number of the product. The following sublibrary member types are used:

.A	Assembler source code, examples etc.
.E	Edited macros
.J	Installation jobs
.OBJ	Object modules

Copying the Tape Contents to Disk

If you are using System Maintenance Aid (SMA), refer to the SMA documentation (included on the current edition of the Natural documentation CD).

If you are **not** using SMA, follow the instructions below.

This section explains how to:

- Copy data set COPYTAPE.JOB from tape to library.
- Modify this member to conform with your local naming conventions.

The JCL in this member is then used to copy all data sets from tape to disk.

If the datasets for more than one product are delivered on the tape, the member COPYTAPE.JOB contains the JCL to unload the datasets for all delivered products from the tape to your disk, except the datasets that you can directly install from tape, for example, Natural INPL objects.

After that, you will have to perform the individual install procedure for each component.

Step 1 - Copy data set COPYTAPE.JOB from tape to disk

The data set COPYTAPE.JOB (file 5) contains the JCL to unload all other existing data sets from tape to disk. To unload COPYTAPE.JOB, use the following sample JCL:

```

* $$ JOB JNM=LIBRCAT,CLASS=0,                                     +
* $$ DISP=D,LDEST=(*,UID),SYSID=1
* $$ LST CLASS=A,DISP=D
// JOB LIBRCAT
* *****
*       CATALOG COPYTAPE.JOB TO LIBRARY
* *****
// ASSGN SYS004,NNN                                             <----- tape address
// MTC REW,SYS004
// MTC FSF,SYS004,4
ASSGN SYSIPT,SYS004
// TLBL IJSYSIN,'COPYTAPE.JOB'
// EXEC LIBR,PARM='MSHP; ACC S=lib.sublib'                       <----- for catalog
/*
// MTC REW,SYS004
ASSGN SYSIPT,FEC
/*
/&
* $$ EOJ
    
```

Where:

NNN is the tape address

lib.sublib is the library and sublibrary of the catalog

Step 2 - Modify COPYTAPE.JOB

Modify COPYTAPE.JOB to conform with your local naming conventions and set the disk space parameters before submitting this job:

Step 3 - Submit COPYTAPE.JOB

Submit COPYTAPE.JOB to unload all other data sets from the tape to your disk.

Installation Procedure

This section describes the actual installation steps after restoring the installation tape.

Step 1: INPL Review NM Objects

(Job I061, Steps 2620, 2621)

Review NM now runs in the new library SYSRNM, without Review DB or DC.

Load the Review NM Natural objects (SYSRNM application) into your Natural system file (FNAT) from where you want to use the SYSRNM application. It is not required to INPL Review NM on all system files you want to monitor. You may use any of your site-dependent Natural INPL JCL to accomplish this or use the sample job RNMINPL provided in the Review NM source library.

Step 1a: Delete Old Review NM Version

If you want to delete an old installed Review NM, INPL the dataset RN*nmn*.LDEL.

Step 2: Natural Security Definitions - if installed

(Job I100, Step 2210)

If you want to run Review NM under Natural Security, the Review NM Natural library SYSRNM must be defined in Natural Security. The SYSREV and SYSREVN libraries from previous versions are no longer used.

SYSRNM can have a startup menu. If the library is defined as private (i.e. with NSC parameter PEOPLE=Y), each user of this library must be linked to it.

Define REVHIST as a **person** with a default application of SYSRNM. REVHIST is used as the user ID by the Review NM history session.

Step 3: Load the Review NM Repository File

(Job I050, Steps 2620, 2621)

The Review NM repository file is an Adabas file used for storing response time reports and history data. The format of the Review NM repository file is compatible with previous versions. If you have already installed a repository file, you may continue to use it and omit this step.

It is possible to share the repository file across several CICS regions. Any Adabas file can be used to contain the Review NM repository file. The corresponding file number must be defined to Natural as a logical system file (see Step 4). The repository file has to be initialized via Natural (see Step 11).

Load the Review NM repository file using SMA or the job RNMLOAD provided in the Review NM source library. Modify this job as follows before submitting it:

- Change the dataset definitions according to your site.
- Change DB=NNN in the ADARUN statements to correct database ID.
- Change SVC=NNN to the correct Adabas SVC number.
- Select the appropriate ADALOD NAME=??? statement for the version of Review NM you are running.
- Change the FILE=NNN statements to reflect the number of the Adabas file that will contain the Review NM repository file.

Step 4: Modify, Assemble and Link the Natural Parameter Module

(Job I060, Steps 0010, 0015)

You can monitor Natural 3.1 and 4.1 sessions with Review NM. Include the following parameter settings in the Natural parameter module(s):

```
NTPRM ...
RDCSIZE=2,
MADIO=5000,
MAXCL=0
NTLFILE 180,???,???
```

The parameter RDCSIZE determines whether a session is monitored by Review NM.

Note:

If you set RDCSIZE=0 (this is the default) for a session, it is not monitored by Review NM.

The NTLFILE (or dynamic LFILE parameter) macro definition determines the repository file being used by the SYSRNM application for retrieving and maintaining report definitions and history report data. For the history session, it determines the repository file in which the history report data is stored. The DBID=??? and FNR=??? subparameters must be set to the correct values for the Review NM repository file (see Step 3). The currently accessed repository file can be changed using the LFILE command within the SYSRNM application.

If you want to link the Review NM monitor interface module separate from the Natural nucleus (see Step 6) by means of the RCA technique, the following parameter is required:

```
RCA=NATGWREV
```

Step 5: Link the Natural Nucleus with Review NM

(Job I060, Step 0020)

Relink all your Natural nuclei you want to monitor with Review NM, including the following module from the Review NM load library RNMLIB:

```
INCLUDE RNMLIB(RNMNUC2)
```

Review NM uses the Natural Data Collector exit interface to get data from Natural. For more information about the SYSRDC Data Collector, see SYSRDC Utility in the Natural Utilities documentation.

The Review NM nucleus RNMNUC2 supports all different ways of statically linked Natural subprograms. For more information about linking the Natural nucleus, see Linking Natural Objects to the Natural Nucleus in the **Natural Operations documentation**. If you run a shared Natural nucleus for multiple environments (e.g. CICS, batch, etc.), you should link RNMNUC2 to the environment-dependant Natural CICS nucleus, because Review NM monitoring runs under CICS only. This prevents unnecessary overload in your non-CICS systems.

If RNMNUC2 is not linked to the Natural CICS nucleus, the following CICS Assembler command level stub from the CICS load library must be linked to RNMNUC2:

```
INCLUDE CICS LIB(DFHEAI)
```

Instead of linking RNMNUC2 to the Natural nucleus, you can link it as a separate module defined with profile parameter RCA. The following linkage editor statements are then required:

```
MODE RMODE(ANY)
  INCLUDE CICS LIB(DFHEAI)
  INCLUDE RNMLIB(RNMNUC2)
  ENTRY NATGWREV
  NAME NATGWREV
```

The MODE statement is optional. A CICS PPT entry is required for module NATGWREV. It must be specified with the RCA parameter (see Step 4). The module can be shared between multiple Natural 3.1 and 4.1 nuclei.

Step 6: Modify, Assemble and Link the Review NM System Control Block

(Job I070, Steps 2622, 2623)

The Review NM System Control Block RNMSCB2 is defined as a program in CICS. RNMSCB2 is not an executable program. Its storage is used by Review NM as the common anchor and control point for all monitored Natural sessions and reports within one CICS address space. There are some installation-specific generation parameters you can specify in member RNMSCB2 in the Review NM source library.

The following parameters can be specified in RNMSCB2:

NATTRAN=	This is the NATURAL/CICS transaction code for the Review NM history session. You must specify this parameter to set the correct Natural transaction code (see Step 8).				
NPARMS=	Additional dynamic Natural parameters for the Review NM history session. This parameter is optional.				
CLOSE=	<p>This parameter determines whether any started Review NM reports are closed automatically during the termination of the Review NM history session. There are two possible values:</p> <p>CLOSE=YES: All started reports are closed.</p> <p>CLOSE=NO: Started reports are not closed.</p> <p>The default value is CLOSE=YES. In previous versions of Review NM, started reports were not closed during termination of the history session.</p>				
DATE=	<p>The date format used in the records stored in the Review NM repository file. There are two possible values:</p> <table border="1" data-bbox="359 833 908 931"> <tr> <td>DATE=OLD</td> <td>The date format is YY/MM/DD</td> </tr> <tr> <td>DATE=NEW</td> <td>The date format is YYYYMMDD</td> </tr> </table> <p>The default value is DATE=OLD. This is the format that previous releases of Review NM have used. If you have any existing user-written reporting programs extracting the repository file, you may have to change them if you want to use DATE=NEW.</p>	DATE=OLD	The date format is YY/MM/DD	DATE=NEW	The date format is YYYYMMDD
DATE=OLD	The date format is YY/MM/DD				
DATE=NEW	The date format is YYYYMMDD				
EMPTY=	<p>This parameter determines whether empty history records are stored in the Review NM repository file. A record is considered as "empty", if no transactions occurred within the report time interval. There are two possible values:</p> <table border="1" data-bbox="359 1202 949 1301"> <tr> <td>EMPTY=YES</td> <td>Empty history records are stored.</td> </tr> <tr> <td>EMPTY=NO</td> <td>Empty history records are not stored.</td> </tr> </table> <p>The default value is EMPTY=NO. In previous versions of Review NM, empty records were stored.</p>	EMPTY=YES	Empty history records are stored.	EMPTY=NO	Empty history records are not stored.
EMPTY=YES	Empty history records are stored.				
EMPTY=NO	Empty history records are not stored.				
NCTSIZE=	This parameter determines the number of entries in the Natural Call Table (NCT) of Review. The NCT is allocated in CICS shared storage and is used to track the usage of the Natural programs per session. The default value is NCTSIZE=32.				

Modify and run job RNMASMB to generate the Review NM System Control Block. The module must be linked with the NORENT option. The target link library can be any library defined to CICS.

Step 7: Link the Review NM History Session Startup Module

(Job I070, Step 2625)

Review NM history data is written to the repository file by an asynchronous (i.e. not terminal-bound) Natural session. Modify and run job RNMLINK in the Review NM source library. It links the CICS-dependant history session startup module RNMHIST2. The target link library can be any library defined to CICS.

Within one CICS address space there can be only one history session. The Review NM application (see Step 1) must be loaded to the FNAT system file running with the history session.

Step 8: Add CICS Control Table Entries for Review NM

(Job I005, Step 2201)

Define the following CICS table entries with RDO. If you still have assembled CICS tables, you find sample table entries in member RNMTBLS in the Review NM source library. You may have to include additional parameters due to your site requirements (e.g. security keys etc.). For CICS version 3 or higher, Review supports transaction isolation (i.e. it can run in user key).

Program Control Table (PCT):

Define the Review NM history session start/stop transaction:

```
CEDA DEFINE TRANSACTION(RVH1) PROGRAM(RNMHIST2)
      GROUP(RNM36)
```

Define the Review NM asynchronous Natural history session transaction:

```
CEDA COPY TRANSACTION(XXXX) GROUP(YYYY) AS(RVH2)
      TO(RNM36)
```

This copies your existing Natural transaction ID *xxxx* from your Natural definition group *yyyy* as an alias transaction for Review NM. This definition is optional and you may use the online Natural transaction code *xxxx* as well, but it helps the administrator to identify the Review NM asynchronous history session.

The transaction codes RVH1 and RVH2 can be chosen freely (i.e. you may change them if desired). The Natural session transaction code must be the same as defined with parameter NATTRAN (in this example NATTRAN=RVH2) in Step 6.

Processing Program Table (PPT):

Define the Review NM history session start/stop program:

```
CEDA DEFINE PROGRAM(RNMHIST2) LANGUAGE(ASSEMBLER)
      GROUP(RNM36)
```

Define the Review NM system control block:

```
CEDA DEFINE PROGRAM(RNMSCB2) LANGUAGE(ASSEMBLER)
      RESIDENT(YES) GROUP(RNM36)
```

After entering the online definitions, activate them using CEDA INSTALL GROUP(RNM36). The new GROUP should be added to the GRPLIST defined for CICS coldstart.

Program List Tables CICS Startup and Shutdown (PLTPI and PLTSD):

Define the Review NM history session start/stop program:

```
DFHPLT TYPE=ENTRY, PROGRAM=RNMHIST2
```

This table entry is optional. You may use it for automatic start and termination of the Review NM history session during CICS startup and shutdown. Insert the table entry in your assembled PLTPI and/or PLTSD CICS table. This avoids manual starting and stopping of the Review NM history session (see Step 13).

Step 9: Activate the Review NM Modules

If you have assembled CICS tables or if you cannot copy the Natural nucleus module(s) with RNMNUC2 and NATPARM linked, you have to restart CICS. Otherwise, just copy the linked Natural nucleus module(s), to which RNMNUC2 and the modified NATPARM are linked, by means of transaction CEMT:

```
CEMT SET PROGRAM(. . . .) NEWCOPY
```

Step 10: Initialize the Review User Profile Subsystem

(Job I100, Step 2622)

The User Profile Subsystem is no longer shared between the three Review products (DB, DC and NM).

This step is no longer required, since the profile text member DEFAULT will be delivered with the Natural INPL and will be copied to SYSRNM.

If you have a previous version of Review NM installed and you want to keep the user profiles, use online SYSMAIN to copy the profile text members from SYSREVUS to SYSRNM.

Nevertheless, you can re-initialize the User Profile Subsystem. Logon to library SYSRNM and enter the following on the NEXT prompt:

```
INSTALL UP
```

The following message will then appear:

```
Default user Profile installed
```

Step 11: Initialize the Review NM Repository File

(Job I100, Step 2624)

After loading the Review NM repository file (see Step 3), you must initialize it. If your repository file is already initialized, skip this step.

During the initialization process, two default response time reports are added. To initialize the Review NM repository file, logon to library SYSRNM and enter the following on the NEXT prompt:

```
INSTALL NM
```

The following messages will then appear:

```
Now creating sample report system response time
  Now creating sample report highest response
  Review Natural Monitor repository initialization complete.
  Press <ENTER> to continue
```

Step 12: Start the Review Natural Monitor Application

Each time you want to start the Review NM application, logon to library SYSRNM and enter the following:

```
MENU
```

or enter SYSRNM anywhere at the NEXT prompt.

Either the Review NM logo screen (see below) or the Review NM Main Menu screen appears.

```

10:10:45          ***** Review NM UTILITY *****          2000-08-08

      RRRRRRRR      EEEEEEEE      VVV      VVV      III      EEEEEEEE      WWW      WWW
      RRRRRRRRR      EEEEEEEE      VVV      VVV      III      EEEEEEEE      WWW      WWW
      RRR  RRR      EEE      VVV      VVV      III      EEE      WWW      WWW
      RRR  RRR      EEE      VVV      VVV      III      EEE      WWW      WWW
      RRRRRRRR      EEEEEEEE      VVV      VVV      III      EEEEEEEE      WWW      W      WWW
      RRRRRRRR      EEEEEEEE      VVV      VVV      III      EEEEEEEE      WWW      WW      WWW
      RRR  RRR      EEE      VVV      VVV      III      EEE      WWW      WWWWW      WWW
      RRR  RRR      EEE      VVV      VVV      III      EEE      WWW      WWWWWW      WWW
      RRR  RRR      EEEEEEEE      VVVVVV      III      EEEEEEEE      WWWWW      WWWWW
      RRR  RRR      EEEEEEEE      VVVV      III      EEEEEEEE      WWW      WWW

```

N A T U R A L M O N I T O R 3.6.1

A P R O D U C T O F S O F T W A R E A G

If the Review NM logo screen is shown, press Enter to invoke the Review NM Main Menu screen. The Review NM logo screen can be suppressed by specifying BANNER=N in the text member CONFIG in library SYSRNM.

When the Review NM Main Menu screen is shown, you can enter the Review NM subsystem IDs NM (Natural Monitor) or UP (User Profiles). The main screen for the desired subsystem is then shown.

For installation verification, enter NM and then the TE command. You can then check your installation parameters and the status of the history session.

Step 13: Start the Review NM History Session

If you want to run history reports, the history session must be started. It runs as an asynchronous (non-terminal) Natural session and writes the collected report data to the repository file each time a report time interval has expired. You can start and stop the history session using the CICS PLTPI/PLTSD (see Step 8) or manually.

For manual starting and stopping of the history session, the RVH1 transaction (see Step 8) can be used in the following ways:

RVH1	Start the Review NM history session. The history session can also be started with the START command of Review NM.
RVH1 STOP	Terminate the Review NM history session. The history session can also be terminated with the STOP command on the TE HC screen or with the TERMNAT command on the SA screen of Review NM.
RVH1 TEST	Start the Review NM history session on the current terminal. This option may be used for debugging purposes, e.g. to debug the history session with CEDF (the CICS Debugging Facility). Note that no Natural terminal I/Os are supported during the normal processing of the history session. Therefore, you have to terminate the history session from another terminal.

After starting the history session, the following message should appear:

```

REV20200 - REVIEW NM HISTORY SESSION STARTED

```

Check the Review NM initialization messages on the console log of your CICS system to find out whether the history session has started successfully. Any error messages from the history session are displayed on the operator console log.

If desired, you can get a more detailed explanation of the messages in Review NM. Just enter MSG followed by the message number on the command line of Review NM.