



Information Engineering Technology

Install Guide - Gen HE Upgrade



Release 8.8.3

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GuardIEn impact of a Host Encyclopaedia Upgrade

This guide describes how to re-configure your GuardIEn software when you are required to upgrade the associated Gen Host Encyclopaedia (HE) software.

Pre-Requisites

It is assumed that you have already installed the GuardIEn 8.8 release, using the '*Install Guide – HE*' and the software is successfully communicating with your existing version of Gen.

Gen Upgrade Strategy

Most HE sites take the 'upgrade in place' approach when upgrading their HE software, i.e. making the new version of the Gen software available at the same time as the old version, thus allowing concurrent running for testing and the gradual transition of application projects to the new release. This guide assumes this '*Multi-Gen*' support will be your approach, but also documents how to replace the existing Gen release in its entirety in a one-off upgrade should that be necessary.

Preparing for Multi-Gen Support

The Installation Suite

An installation suite is provided to ease the customisation and creation of the altered/new components of the GuardIEn system. This process consists of the following tasks:

- Definition of installation variables to your site standards
- Verification of the installation variables
- Generation of the runtime JCL and TSO Procedures and associated clists

Define Variables

Later, during the installation process for Multiple Gen support you will be prompted to provide values for various fields used during the installation process and at application runtime. This section allows you to identify these values.

Additional GuardIEn Software (Multiple Ency or Multi- Gen Support Variables Panel 1)

Options	Purpose	Example/Default
Additional GuardIEn Runtime Library Suffixes	The suffix that identifies an additional runtime library component in GuardIEn. By default, these will take the same suffixes as defined within the 'main' install suite but should be amended to refer to the new Parameter Libraries to be used.	GEN86.ENVCLIB, GEN86.PROCLIB.

Additional Gen Software (Multiple Ency or Multi- Gen Support Variables Panel 2)

Options	Purpose	Example/Default
Additional Gen Release Level	The <i>Release level</i> of the new version of the HE that the GuardIEn facilities will attach to. Valid values are currently 6.0 (for COOL:Gen) or 6.5 (for Advantage Gen), 7.0, 7.5 , 7.6, 7.6E (for Gen Priority Enhancement), 7.6F (for Gen support for dynamic batch psteps), 8.0 (for Gen 8 base), 8.0A (for Gen r8 FP1), 8.5 (for Gen 8.5) and 8.6 (for Gen 8.6)	8.6
Additional Gen Plan Prefix	The <i>Plan Prefix</i> that your new Gen plans use. This is the first four characters of the Gen plan names	HE86
Additional Gen Dataset Prefix	The prefix for the libraries associated with the new version of Gen you wish to connect to.	IET.GEN86
Additional Gen Dataset Suffixes	The suffix that identifies each Gen HE library. By default, these will take the same suffixes as defined within the 'main' install suite but CAN be different if required. Note that from Gen 8.0 onwards a new PARMLIB library is required and no TLIB library is used.	Pre-Gen 8.0 LOAD, DBRM, SKELETAL, CLIST, TLIB, MLIB Gen 8.0 onwards CEHBPLDO, CEHBDBRM, CEHBSKLO, CEHBCLSO, CEHBMSGO, PARMLIB
Additional Gen Look-Ahead Library Clist (optional)	Allows you to specify an additional look-ahead library for an additional Gen Clist library – typically when you have made site-customisations in a separate library to the base Gen libraries but still wish GuardIEn to make use of these customisations.	PDSPB.IEFLB.GEN86.CLIST

Create Additional GuardIEn Libraries

You will now need to allocate the two additional GuardIEn runtime libraries required for multiple Gen support as described below. If you are using SMS or similar products, these datasets may have been allocated as temporary so you will therefore need to change their management class or retention period to ensure that they are not deleted by a housekeeping routine.

Additional GuardIEn Runtime Libraries

Name	Default Suffix	Space in Tracks	Directory Blocks
Parameter Procedures	GEN85.PROCLIB	50	10
Parameter Clists	GEN85.ENVCLIB	50	10

We recommend you use the allocations of the 'main' GuardIEn GEN Parameter libraries to allocate these additional libraries.

Access Advanced Options

Return to the Installation Suite. From an ISPF command line type

TSO EX '<prefix>.INCLIB'

After a short while (as initialisation of the environment occurs), the *GuardIEn for HE Setup Main Menu* is displayed. Select option 6 'Advanced Options' and press <Enter>

```
GDN8.7                               GuardIEn for HE Setup Main Menu
===> _

Select one of the options below, then press enter.

1 Define Installation Variables
2 Create Installation Components
3 Create Runtime Components
4 Create ALL Components

5 Browse and Run Installation

6 Advanced Options

F1=Help  F3=End  F12=Cancel
```

The *Advanced Options* menu is displayed...

```
GDN8.7                               Advanced Options Menu
===> _

Select one of the options below, then press enter.

1 Define Variables for Multi-Ency or Multi-CA Gen Support
2 Create GuardIEn Components for Multi-Ency Support
3 Create GuardIEn Components for Multi-CA Gen Support
4 Alter GuardIEn Components for CA Gen Upgrade

F1=Help  F3=End  F12=Cancel
```

Select option 1 'Define Variables for Multi-Ency or Multi-Gen Support' and press <Enter>. The Define Multi-Ency or Multi-Gen Support Variables menu is displayed...

```
GDN8.7          Define Multi-Ency or Multi-CA Gen Support Variables
===> _

Select one of the options below, then press enter.

1 Define Additional GuardIEn software
2 Define Additional CA Gen software
3 Define Additional DB2 variables

Do you wish to install Multiple Encyclopaedia Support ? NO_ (Yes or No)

F1=Help  F3=End  F12=Cancel
```

First, ensure the *Multiple Encyclopaedia Support* option remains set to *NO* in the supplied field – it is only required should you need to connect GuardIEn to multiple Host Encyclopaedia: please see the separate *Multi-HE Install* guide for details.

Define Installation Variables

Once this has been done, choose option 1 and press <Enter>. The *Define GuardIEn Software* panel is displayed.

```
GDN8.7          Define Additional GuardIEn Software
===> _

Enter or verify the following GuardIEn software library names

GuardIEn Library Prefix:
  GuardIEn dataset prefix:      GJD.GDNBASE.R870_____

Additional GuardIEn Runtime Libraries:
  GuardIEn dataset suffixes:
    Parameter Clists. . . . . GEN85.ENUCLIB
    Parameter Procedures. . . . GEN85.PROCLIB

F1=Help  F2=Accept  F3=End  F6=Save  F12=Cancel
```

Additional GuardIEn Software

This panel is used to define the additional GuardIEn software required for multiple encyclopaedia support. By default, it details the standard library name suffixes.

Complete the Additional GuardIEn *suffixes* using the information identified in the earlier **Define Variables** section. The GuardIEn libraries specified must refer to the dataset names of those allocated earlier – but note that the same GuardIEn dataset *prefix* is used.

Once you have specified all the library definitions, press *F6* to save the variables and then *F2* to verify them. A verification process is executed to ensure the information is correct...

```

GDN8.7                               Installation Status                Row 1 to 3 of 3
===>  _

Activity: Additional GuardIEn Software Checked

Component      Description                               Status
-----
CHECKING ADDITIONAL GUARDIEN SOFTWARE
CHECK OF ADDITIONAL GUARDIEN SOFTWARE          ACCEPTED
                                                Now press ENTER to continue
***** Bottom of data *****

```

If the verification completes successfully, you may press *<Enter>* to exit from the *Installation Status* screen and return to the *Setup Additional GuardIEn Software* panel. If the verification fails, check the error messages displayed on the status screen (e.g. ensure that the GuardIEn library names defined match the names of the datasets you allocated) for example...

```

GDN8.7                               Installation Status                Row 1 to 5 of 5
===>  _

Activity: Additional GuardIEn Software Checked

Component      Description                               Status
-----
CHECKING ADDITIONAL GUARDIEN SOFTWARE
  GJD.GDNBASE.R870.OOPS.GEN86.PROCLIB          DATASET NOT FOUND
  GJD.GDNBASE.R870.OOPS.GEN86.ENUCLIB          DATASET NOT FOUND
CHECK OF ADDITIONAL GUARDIEN SOFTWARE          REJECTED
                                                Now press ENTER to continue
***** Bottom of data *****

```

However, when you have completed the definition successfully, press *F3* to exit the *Setup Additional Software* panel. The *Define Multi-Ency or Multi-Gen Support Variables* menu is redisplayed. Select option 2 from the menu and press *<Enter>*. The *Setup Additional Gen Software* panel is displayed.

Additional Gen Software

This section details the Gen Release and the Gen library names for the 2nd Host Encyclopaedia software you wish to connect to GuardIEn.

Complete the *Additional Gen Software* fields using the information identified in the earlier **Define Variables** section. Note that the Gen library prefix will be initially displayed with the prefix from the first Host Encyclopaedia libraries defined – but this **MUST** ultimately be different to successfully complete the verification process.

```

GDN8.7                               Define Additional CA Gen Software
===>  _

Enter or verify the following CA Gen software information

Additional CA Gen Release Level:
  Host Ency Release Level. . . . . 8.5_      (6.0,6.5,7.0,7.5,7.6,7.6E
                                                7.6F,8.0,8.0A,8.5 or 8.6)

Additional CA Gen DB2 Specific:
  Host Ency Plan Prefix. . . . . HE85

Additional CA Gen Encyclopaedia Libraries:
  Gen dataset prefix:              CA.HE85_____
  Gen dataset suffixes:
    Load . . . . . CEHBPLD0
    Skeletal . . . . . CEHBSKL0
    Clist . . . . . CEHBCLS0
    Tlib . . . . . _____ (not required from Gen 8.0 )
    Mlib . . . . . CEHBMSG0
    Parmlib . . . . . PARMLIB_ (required from Gen 8.0 )
  Lookahead library: (if applicable)
    Clist . . . . . _____

F1=Help F2=Accept F3=End F6=Save F12=Cancel

```

Once you have specified all the library definitions, press *F6* to save the variables and then *F2* to verify them.

If you do press *F2*, a verification process is executed to ensure the information is correct. If the verification completes successfully, you may press *<Enter>* to exit from the *Installation Status* screen and return to the *Setup Additional Gen Software* panel, then press *F3* to return to the *Define Multi-Ency or Multi-Gen Support Variables* panel.

You have now successfully completed definition of the GuardIEn parameters for multiple host encyclopaedia support. You may now proceed to create all the installation and runtime components.

Create Components

Press *F3* until you return to the *Advanced Options* menu...

```
GDN8.7                               Advanced Options Menu
===> _

Select one of the options below, then press enter.

1 Define Variables for Multi-Ency or Multi-CA Gen Support
2 Create GuardIEn Components for Multi-Ency Support
3 Create GuardIEn Components for Multi-CA Gen Support
4 Alter GuardIEn Components for CA Gen Upgrade

F1=Help  F3=End  F12=Cancel
```

Select option 3 'Create GuardIEn Components for Multi-Gen Support' and press *<Enter>*. The *Confirm Component Creation* panel is displayed...

```
GDN8.7                               Confirm Component Creation
===> _

Verify the requested activity, then press ENTER to continue or F12 to cancel

Activity: Create GuardIEn Components for Multi-CA Gen Support

F1=Help  F3=End  F12=Cancel
```

...indicating that you have requested to 'Create GuardIEn Components for Multi-Gen Support'. Press *F12* to cancel or *<Enter>* to continue. Press *<Enter>* and the component creation process begins. This should not take too long and, at the end, all the requisite GuardIEn installation and runtime components for multi-Gen support will have been created...

```

GDN8.7                               Installation Status           Row 1 to 11 of 11
===> _

Activity: Create GuardIEn Components for Multi-CA Gen Support successfully

Component      Description                                     Status
-----
GDSETPRM      SET RUNTIME VARIABLES 2ND PROC                TAILORING SUCCESSFUL
GDCOMPN      COMPILER LINK OPTS NO COMPAT PROC             TAILORING SUCCESSFUL
GDCOMPY      COMPILER LINK OPTS COMPAT PROC               TAILORING SUCCESSFUL
GDINXCO      COMPILER OPTS FOR XOS INCLUDE                 TAILORING SUCCESSFUL
GDSPF       GDN ISPF INCLUDE                             TAILORING SUCCESSFUL
GDGSTEP      GEN STEPLIB INCLUDE                           TAILORING SUCCESSFUL
GDGLOB      GUARDIEN GLOBAL SET CLIST                     TAILORING SUCCESSFUL
TIUDFILE     GEN FILE ALLOCATION CLIST                       TAILORING SUCCESSFUL
XTICMMLK    GDN OVERRIDE BINDER CLIST                     TAILORING SUCCESSFUL
XTICMPL     PU OVERRIDE COMPILER CLIST                     TAILORING SUCCESSFUL
Now press ENTER to continue

***** Bottom of data *****

```

Please scroll up (F7) and down (F8) through the list when it has completed to confirm that ALL the components were created successfully (with the 'Tailoring Successful' message in the status column. This enables you to verify that all the tailoring has completed successfully.

Additional GuardIEn Runtime Libraries

Name	Description
Parameter Procedures	The separate library containing references to the new Host Encyclopaedia and GuardIEn libraries.
Parameter Clists	The separate library containing references to the new Host Encyclopaedia release and DB2 plan.

This concludes your use of the Install suite to prepare GuardIEn for multi-Gen support. You may now exit the Install Suite.

Finalise Multi-Gen Support

Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn	Completed ?
Create Gen Specific Queues	<p>If you use the Task Dispatcher to submit background jobs it is necessary to define a set of override Task Queues to invoke your new copy of the Gen software for such activities as migrations, downloads, uploads, generates, model copies.</p> <p>To do this, logon to the Queue Manager client and define some new queues. For each queue newly defined make sure you specify a new override JCLLIB in the PROCLIB field (this field will be blank for your existing 'default' queues). For example...</p> <p>'GDN.R88.GEN85.PROCLIB','GDN.R88.PROCLIB'</p> <p>...and note that quotes ARE important!</p> <p>This setting is then used by the Task Dispatcher to specify the JCLLIB for the submitted job – thus ensuring that the job runs against the required version of the Gen host encyclopaedia software and not the 'default' version – typically the release you are upgrading FROM.</p> <p>This concludes the work required to support multiple versions of the Gen HE software using GuardIEn.</p>	YES	YES	

Altering EXISTING GuardIEn components for a Gen upgrade

Occasionally you may decide you need to upgrade the 'base' GuardIEn software to reflect a Gen upgrade, for example when you have completed the transition to a new Gen release and wish to revert to a single set of GEN environment libraries using a single copy of Gen. If you have used the multiple Gen support option in the preceding section then, in theory, you could delete the existing GEN.ENVCLIB and GEN.PROCLIB libraries and just rename the 'upgraded' GEN<nn>.ENVCLIB and GEN<nn>.PROCLIB libraries to become the new defaults.

You would also need to update the IEFVER system parameter to the correct new value AND also delete any redundant override Task Dispatcher queues created during the transition to the new Gen release.

However, an alternative approach would be to do the following:

Start Installation Suite

Return to the Installation Suite. From an ISPF command line type

```
TSO EX '<prefix>.INCLIB'
```

After a short while (as initialisation of the environment occurs), the *GuardIEn for HE Setup Main Menu* is displayed:

```
GDN8.7                      GuardIEn for HE Setup Main Menu
===> _

Select one of the options below, then press enter.

1 Define Installation Variables
2 Create Installation Components
3 Create Runtime Components
4 Create ALL Components

5 Browse and Run Installation

6 Advanced Options

F1=Help  F3=End  F12=Cancel
```

Select option 1 and press <Enter>. The *Define Installation Variables* panel is displayed. This section deals with the definition of variables required to generate the base installation of GuardIEn components successfully.

```
GDN8.7                      Define Installation Variables
===> _

Select one of the options below, then press enter.

1 Define GuardIEn software
2 Define CA Gen software
3 Define ISPF library names
4 Define JCL variables
5 Define DB2 and TP Monitor variables
6 Define Runtime JCL job header
7 Define Install JCL job header

8 Verify ALL Installation library names and variables

Do you wish to install the HE Task Dispatcher ? YES (Yes or No)
Do you wish to install the HE GuardIEn Servers ? YES (Yes or No)

F1=Help  F3=End  F12=Cancel
```

Define Installation Variables

Choose option 2 and press <Enter>. The *Define Gen Software* panel is displayed.

Gen Software

This panel defines *Gen* release level and library names for the Host Encyclopaedia software for your site.

```
GDNS.7                      Define CA Gen Software
===> _

Enter or verify the following CA Gen software information

CA Gen Release Level:
  Host Ency Release Level. . . . . 8.6_      (6.0,6.5,7.0,7.5,7.6,7.6E,
                                           7.6F,8.0,8.0A,8.5 or 8.6)

CA Gen Encyclopaedia Libraries:
  Gen dataset prefix:                CA.HE86_____
  Gen dataset suffixes:
    Load . . . . . CEHBPLD0
    DBRM . . . . . CEHDBRM
    Skeletal . . . . . CEHBSKL0
    Clist . . . . . CEHBCLS0
    Tlib . . . . . _____ (not required from Gen8.0 )
    Mlib . . . . . CEHBMSG0
    Parmlib . . . . . PARMLIB_ (required from Gen8.0 )
  Lookahead library: (if applicable)
    Clist . . . . . _____

F1=Help  F2=Accept  F3=End  F6=Save  F7=Scroll Up  F8=Scroll Down  F12=Cancel
```

Complete the new values for the *Gen* release level, prefix and suffixes.

Once you have specified all the definitions, press *F6* to save the variables and then *F2* to verify them (although note that it is now possible to verify ALL the installation variables at the end of the definition process so the requirement to press *F2* at this point is optional).

If you do press *F2*, a verification process is executed to ensure the information is correct. If the verification completes successfully, you may press <Enter> to exit from the *Installation Status* screen and return to the *Define Gen Software* panel, then press *F3* to return to the *Define Installation Variables* panel.

Now select option 5 from the menu and press <Enter>. The *Define DB2 and TP Monitor Variables* panel is displayed.

DB2 and TP Monitor Variables

This panel allows you to provide the definitions for DB2 and TP monitor variables at your site.

```

GDH8.7                                Define DB2 and TP Monitor Variables
===> _

Enter or verify the following DB2 and TP Monitor variables
More: +

DB2 Specific:
DB2 Subsystem Id . . . . . _____
DSNTEP Program Library . . . _____
DSNTEP Program Name . . . . . _____ (Program name for DSNTEP program)
DSNTEP Plan Name . . . . . _____ (Plan name for DSNTEP program)
Use VERSION on Precomp ? . . _____ (Yes or No)
Use MGEEXTSZ in Zparm ? . . . _____ (Yes or No)

TP Monitor Specific:
Server TP Monitor . . . . . CICS      (IMS or CICS only)
CICS/IMS Load Library . . . _____
CICS Ext Interface Library . _____
CICS COBOL Translator . . . . DFHECP1E (CICS only; for COBOL translator)

CA Gen Specific:
Host Ency Plan Prefix . . . . HE86
Explicit Creator Id. . . . . HE_____

GuardIEn Specific:
Database Name . . . . . GDDB1_____
TableSpace Storage Group . . GDSTG01_____
IndexSpace Storage Group . . GDSTG01_____
TableSpace Bufferpool . . . . BP0_____
TableSpace Large Bufferpool. BP32K_____
IndexSpace Bufferpool . . . . BP0_____

Explicit Creator Id. . . . . _____ (optional)
or a Secondary Authorisation Id _____ (optional)

One Plan for ALL servers ? . NO_____ (Yes or No)
Plan Name . . . . . GD87_____
Collection Name . . . . . GD87COL_____

PathvIEW Plan Name . . . . . GDPV_____
PathvIEW Collection Name . . GDPUCOLL_____

Connection method to GEN ? . ALIAS_____ (Alias or Synonym)

F1=Help F2=Accept F3=End F6=Save F7=Scroll Up F8=Scroll Down F12=Cancel

```

For a Gen upgrade of an existing Host Encyclopaedia, you should only need to alter the Gen *Host Ency plan prefix*.

Once you have made the changes, press *F6* to save the variables and then *F2* to verify them. If you do press *F2*, a verification process is executed to ensure the information is correct. If the verification completes successfully, you may press *<Enter>* to exit from the *Installation Status* screen and return to the *Define DB2 and TP Monitor Variables* panel, then press *F3* to return to the *Define Installation Variables* panel.

Press F3 to return to the *GuardIEn for HE Setup Main Menu* panel, then select option 6 'Advanced Options' and press <Enter>. The *Advanced Options* menu is displayed...

```
GDN8.7                               Advanced Options Menu
===> _

Select one of the options below, then press enter.

1 Define Variables for Multi-Ency or Multi-CA Gen Support
2 Create GuardIEn Components for Multi-Ency Support
3 Create GuardIEn Components for Multi-CA Gen Support
4 Alter GuardIEn Components for CA Gen Upgrade

F1=Help  F3=End  F12=Cancel
```

Select option 4 'Alter GuardIEn Components for Gen Upgrade' and press <Enter>. The *Confirm Component Creation* panel is displayed

```
GDN8.7                               Confirm Component Creation
===> _

Verify the requested activity, then press ENTER to continue or F12 to cancel

Activity: Alter GuardIEn Components for CA Gen Upgrade

F1=Help  F3=End  F12=Cancel
```

...indicating that you have requested to 'Alter GuardIEn Components for Gen Upgrade'. Press F12 to cancel or <Enter> to continue. Press <Enter> and the component creation process begins. This should not take too long and, at the end, all the requisite GuardIEn installation and runtime components for the Gen upgrade will have been created...

```

GDN8.7                               Installation Status           Row 1 to 11 of 11
===> _

Activity: Altered GuardIEn Components for CA Gen Upgrade successfully

Component      Description                                     Status
-----
GDSETPRM      SET RUNTIME VARIABLES PROC                     TAILORING SUCCESSFUL
GDCOMPY      COMPILER LINK OPTS NO COMPAT PROC             TAILORING SUCCESSFUL
GDINXCO      COMPILER LINK OPTS COMPAT PROC               TAILORING SUCCESSFUL
GDSPF        GDN ISPF INCLUDE                             TAILORING SUCCESSFUL
GDGNSTEP     GEN STEPLIB INCLUDE                           TAILORING SUCCESSFUL
GDGLOB       GUARDIEN GLOBAL SET CLIST                    TAILORING SUCCESSFUL
TIUDFILE     GEN FILE ALLOCATION CLIST                     TAILORING SUCCESSFUL
XTICMLK      GDN OVERRIDE BINDER CLIST                   TAILORING SUCCESSFUL
XTICMPL      PU OVERRIDE COMPILER CLIST                   TAILORING SUCCESSFUL
Now press ENTER to continue
***** Bottom of data *****

```

Please scroll up (F7) and down (F8) through the list when it has completed to confirm that ALL the components were created successfully (with the 'Tailoring Successful' message in the status column. This enables you to verify that all the tailoring has completed successfully.

Additional GuardIEn Runtime Libraries

Name	Description
Parameter Procedures	The library containing references to the new Host Encyclopaedia and GuardIEn libraries.
Parameter Clists	The library containing references to the new Host Encyclopaedia release and DB2 plan

This concludes your use of the Install suite to prepare GuardIEn for a Gen upgrade. You may now exit the Install Suite.

Finalise Gen Upgrade Support

Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn	Completed ?
Update IEFVER System Parameter	<p>Logon to the System Administration client->System Parameters and set the IEFVER system parameter to the new value of Gen being invoked 'by default'. The TEXT_VALUE should be one of...</p> <p>C6.0, C6.5, C7.0, C7.5, C7.6, C7.6E, C7.6F, C8.0, C8.0A, C8.5, C8.6</p> <p>The <i>Release level</i> of the new version of the HE that the GuardIEn facilities will attach to. Valid values are currently 6.0 (for COOL:Gen) or 6.5 (for Advantage Gen), 7.0, 7.5, 7.6, 7.6E (for Gen Priority Enhancement), 7.6F (for Gen support for dynamic batch psteps), 8.0 (for Gen 8 base), 8.0A (for Gen r8 FP1), 8.5 (for Gen 8.5) and 8.6 (Gen 8.6)</p> <p>This concludes the work required to support an upgrade of the Gen HE software to the existing GuardIEn installation and libraries.</p>	YES	YES	