

Information Engineering Technology

Install Guide - HE



Release 8.8.0

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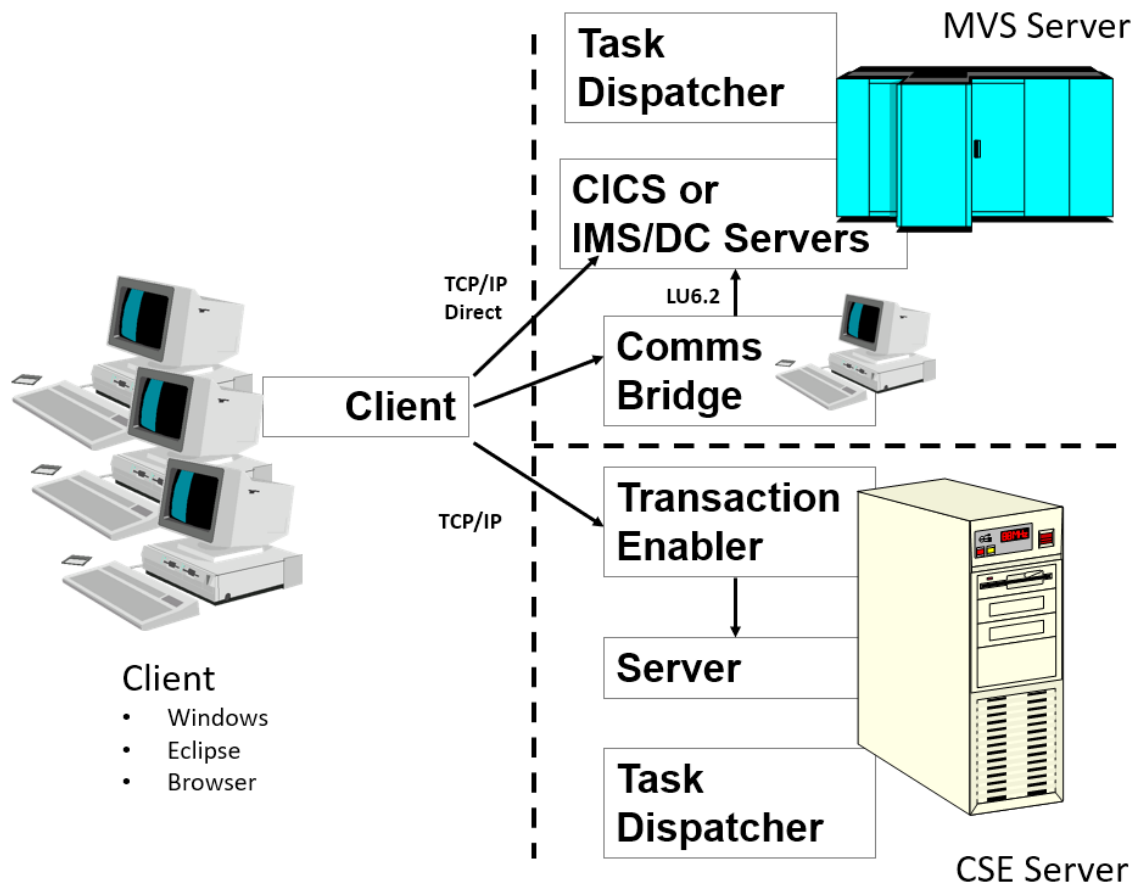
Introduction

Architecture

The IET DevOps Suite products are Gen developed *client/server* applications. This means that there are two parts to the install process: the *clients* which are deployed on each workstation; and *servers* which reside alongside your Gen encyclopaedia.

Communications

As with any Gen developed client/server application, you will require some communications software (*middleware*) so that the client programs can talk to the servers.



The IET DevOps Suite products typically use *TCP/IP* for the communications protocol, so there is no need for *Client Manager*, although you can still use this if you wish. Depending upon your server platform, you will also need other middleware to complete the link. You may choose any standard configuration e.g. *Transaction Enabler* on Windows/UNIX servers, or *Comms Bridge* and *LU6.2* on MVS servers, or direct *TCP/IP Connect / MQ Series* to MVS. For further details on appropriate middleware, consult your Gen documentation.

About the Installation Guides

There are a number of documents to help you with the install process. Below is a quick summary of what they are and which one(s) you will need to use.

Note that references below to GuardIEn in relation to the installation are synonymous with the IET DevOps suite. Earlier releases of the software referred to GuardIEn although this included other IET products like VerifiEr, genIE and pathvIEW.

- *Install Guide - Client.pdf*: You always need to perform Client Installs for each workstation, regardless of server platform.
- *Install Guide - <Platform/Ency>.pdf*: You will also need to perform a Server Install. Choose the appropriate one depending on your encyclopaedia platform. The server software is always installed on the same server as your encyclopaedia. If you eventually intend to use GuardIEn with multiple encyclopaedias then you should choose the server most capable of handling the workload for the first, or *main*, install. There are different versions of this install guide for each server platform. *THIS DOCUMENT* relates to **Host Encyclopaedia Servers**. If your server is a different platform, please locate the appropriate version of this guide now.
- *Install Guide – Multiple HE.pdf*. If you wish to additionally install GuardIEn for z/OS with multiple host encyclopaedia support, please refer to this guide.
- *Install Guide – Remote Install.pdf*. GuardIEn supports z/OS to z/OS remote server installation. To set-up z/OS remote server support, please refer to this guide.
- *Install Guide – HE Gen Upgrade.pdf*. If you need to upgrade your existing Gen HE version or need to enable concurrent running of multiple versions of Gen alongside your implementation of GuardIEn, please refer to this guide.
- **Verification**: The server installation guides also include chapters on how to verify that the installation is ok and perform essential initial customisation. You *MUST* work through these sections after you have performed the client and server installs.

This document makes continual reference to Gen. Unless explicitly stated otherwise this encompasses all Broadcom supported releases of the Gen product set, irrespective of release level.

Software for Download

All IET software is available for download from the IET support centre: <https://support.iet.co.uk>. Software is secured on the web site, so you will need register and then request access.

Download the relevant files for your platforms (client + one server) into a temporary directory on a workstation. The individual install chapters in this guide detail the files you will need and what you should do with them.

Server Install – Host Encyclopaedia

You should use this guide if you have a z/OS Server Host Encyclopaedia. Hereinafter this is referred to in this document as the 'server'.

This document covers the installation of the server component of the IET DevOps suite. Consult the separate client installation guide for installing the clients.

Who Should Perform the Installation?

The sections below document the steps required to install the IET DevOps Suite server for z/OS. You should review these to assist in determining how much time and resource is required by each step. It is estimated that, with the necessary communications infrastructure and other technical pre-requisites in place, the complete product installation (including client installation) will take approximately 2 days.

Individuals who are familiar with managing DB2 databases, z/OS, TSO, and ISPF environments should perform the installation.

For implementation of the server components, the installer should also have knowledge of implementing client/server systems for z/OS using Gen i.e. knowledge of SNA-Server, TCP/IP, LU6.2, MQ Series, IMS or CICS as appropriate.

Upgrading from previous (including unsupported) Releases

This guide also details how you can upgrade from an earlier release (from Release 8.7) to Release 8.8. The installation process is very similar to a new install – any differences are noted in the instructions. If you are at a previous release to these supported releases then follow the instructions relating to incremental upgrades of the GuardIEn data structure to Release 8.7. Thereafter the process is handled by execution of specific installation suite JCL members in a correct sequence.

Pre-Requisites

For a list of the technical and related soft and hardware pre-requisites for the installation of GuardIEn 8.8 for HE Servers, please refer to the *Technical Requirements* document, section *Server - HE for z/OS*.

Note that you should obtain an activation code for Release 8.8 from the IET Support Centre (<https://support.iet.co.uk>) prior to commencing the installation.

Download Files

The following files should be downloaded from the web site into a temporary directory.

Setup File Name	Unzipped File
IETZOSxxx.EXE (xxx is the release)	LOADCNTL.SEQ LOADSLIB.SEQ LBATCALL.SEQ LBATDBRM.SEQ LSVRCALL.SEQ LSVRDBRM.SEQ LRITCALL.SEQ LIMSCALL.SEQ LCICCALL.SEQ LOADLINK.SEQ LGENLOAD.SEQ LGENXLAT.SEQ LZ61CALL.SEQ LZ71CALL.SEQ LZ81CALL.SEQ LEXTCALL.SEQ LEXTDBRM.SEQ

When you have downloaded all files successfully:

- Extract the files by executing the .exe file
- Once this is complete, the .EXE file can be deleted.

Transfer Files to Server (z/OS LPAR)

The installation will require you to upload the datasets in the table below to the appropriate z/OS LPAR that contains the HE. These should be pre-allocated using the definitions as shown. The mainframe datasets should all be sequential datasets, with a record length of 80, i.e.

- Directory Blocks 0
- Record Format FB
- Record Length 80
- Block Size 3120

These datasets consist of the installation datasets in an 'unloaded' format.

You will need to choose a prefix for the software libraries, for example GDN88.INSTALL. Note that the installation uses fully qualified dataset names. If the libraries are to be prefixed with your userid, then include your userid in the dataset prefix.

PC File Name	z/OS Dataset Name	Space in Tracks (3390)	Notes
LOADCNTL.SEQ	<PREFIX>.LOADCNTL	150	
LOADSLIB.SEQ	<PREFIX>.LOADSLIB	150	
LOADLINK.SEQ	<PREFIX>.LOADLINK	50	
LBATDBRM.SEQ	<PREFIX>.LBATDBRM	100	
LBATCALL.SEQ	<PREFIX>.LBATCALL	1000	
LSVRCALL.SEQ	<PREFIX>.LSVRCALL	7000	
LSVRDBRM.SEQ	<PREFIX>.LSVRDBRM	1000	
LRITCALL.SEQ	<PREFIX>.LRITCALL	400	
LIMSCALL.SEQ	<PREFIX>.LIMSCALL	550	Required for IMS installs only but upload anyway
LCICCALL.SEQ	<PREFIX>.LCICCALL	5	Required for CICS installs only but upload anyway
LGENLOAD.SEQ	<PREFIX>.LGENLOAD	800	
LGENXLAT.SEQ	<PREFIX>.LGENXLAT	1200	Used for codepage translation (if required)

LZ61CALL.SEQ <i>Or</i> LZ71CALL.SEQ <i>Or</i> LZ81CALL.SEQ	<PREFIX>.LZMFCALL	10	If you DO NOT use ChangeMan at your site then upload the LZ81CALL.SEQ copy. Depending on the ChangeMan release being used (61, 71 or 81) you should upload the appropriate SEQ file to the LZMFCALL library.
LEXTCALL.SEQ	<PREFIX>.LEXTCALL	50	
LEXTDBRM.SEQ	<PREFIX>.LEXTDBRM	10	

Upload the files from the workstation to the server. It is recommended that you use FTP or another fast method of transferring the files.

All files are supplied as binary (data) files and therefore the file transfer should **NOT** use ASCII and CRLF conversion. For FTP, ensure that you have set the transfer to binary by issuing the 'binary' command. **It is vital that you transfer the files correctly.**

Application Architecture

The IET DevOps Suite application for z/OS is created from the following components:

- Object code and Link Control decks used to link-edit executable load modules
- DBRMs used to bind DB2 packages
- DDL to create the DB2 database
- JCL and TSO procedures
- DB2 LOAD data for key tables when necessary
- GuardIEn uses three started tasks (GDTD/GDTD1, GDPL and GDSYNC). Unless otherwise advised, it is recommended that you install the Task Dispatcher (GDTD or GDTD1) and PAD List (GDPL) started tasks. If you need to seek authorisation to install these started tasks on your z/OS system we advise that you commence this activity prior to commencement of the install process.
- Installation driver suite for configuration and creation of all the above

Create Software Libraries

Edit the LOADCNTL dataset

Use the ISPF editor or another text editor to edit the <PREFIX>.LOADCNTL dataset. Follow the instructions at the top of this dataset regarding changes that need to be applied before it can be submitted as a batch job. Note that this job produces a lot of output (> 50,000 lines) so it may be necessary to insert a /*JOBPARM LINES=9999 to ensure it submits successfully.

```
File Edit Edit_Settings Menu Utilities Compilers Test Help
EDIT Columns 00001 00072
Command ===> Scroll ===> CSR
***** Top of Data *****
000001 //JOBNAME JOB
000002 //*
000003 //* Welcome to GuardIEn Release 8.8
000004 //* -----
000005 //*
000006 //* +----- WARNING -----+
000007 //* ! !
000008 //* ! This dataset contains inline input cards. Do NOT perform !
000009 //* ! any other changes to this dataset except as advised by !
000010 //* ! the following installation notes. !
000011 //* ! !
000012 //* ! FAILURE TO FOLLOW THESE INSTRUCTIONS MAY CORRUPT THE !
000013 //* ! INSTALLATION FILES. !
000014 //* ! !
000015 //* +----- WARNING -----+
000016 //*
000017 //* Copyright (c) Information Engineering Technology Ltd 2021
000018 //*
000019 //* 1. Insert a valid JCL Job card at the top of this dataset
000020 //*
000021 //* 2. Change all occurrences of <PREFIX> to your selected GuardIEn
000022 //* dataset prefix.
000023 //*
000024 //* For example, if you are using the ISPF editor, type
000025 //*
000026 //* C <PREFIX> GDN88.GDNINST ALL
000027 //*
000028 //* if you want the datasets to be prefixed with GDN88.GDNINST
000029 //*
000030 //* 3. Change all occurrences of <USERID> to your userid.
000031 //*
000032 //* For example, if you are using the ISPF editor, type
000033 //*
000034 //* C <USERID> MYUSRID ALL
000035 //*
000036 //* if you want the USERID to be MYUSRID
F1=Help F2=Split F3=Exit F4=Expand F5=Rfind F6=Rchange
F7=Up F8=Down F9=Swap F10=Left F11=Right F12=Cancel
MA A 04/015
```

Submit the LOADCNTL job

Submit the job. This will allocate the GuardIEn installation and runtime libraries listed in the tables below and load them with the data in the unload files that you uploaded. Note that to ensure you do not accidentally overwrite any libraries from a previous release of GuardIEn, all of the libraries have been declared as NEW. Therefore, if they exist and you want to overwrite them, they will need to be **deleted** before executing this job.

This job is very large so it may be necessary to submit it by entering SUBMIT next to the dataset in an ISPF Data Set List screen.

Review the job output

Once the job has completed, review the output, checking for return codes > 4. If you encounter any RC 12s from the LOAD steps and an associated message...

INMR108I RECEIVE command terminated. Trailer record missing

...this typically means the sequential file you uploaded into for that step was not large enough. You will need to reallocate it with more space and restart from that step.

Check Dataset management class and retention

The job will allocate the GuardIEn installation libraries described below. If you are using SMS or similar products, these libraries 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.

The LOADCNTL job will create libraries to contain the installation suite and the GuardIEn runtime libraries. The libraries created are listed below together with recommended space allocation. The standard suffix used by GuardIEn is shown. **Note that all partitioned datasets are now PDSE libraries.**

GuardIEn Runtime Libraries

Name	Default Suffix	Primary Allocation (3390) Tracks
Batch Load	.BATLOAD	6000
Server Load	.SVRLOAD	9000
Task Dispatcher Load	.TDLOAD	900
JCL Procedures	.PROCLIB	50
Clists	.CLIB	50
JCL	.JCLRUN	50
Cobol Options File	.COBOPT	5
Skeletal	.SLIBRUN	10
Gen Runtime Load	.GEN.RUNLOAD	500
Parameter Clists	.GEN.ENVCLIB	5
Parameter JCL Procedures	.GEN.PROCLIB	5

GuardIEn Installation Libraries

Name	Default Suffix	Primary Allocation (3390) Tracks
Exit Source	.EXITSRC	50
Exit DBRM	.EXITDBRM	50
Exit Callib	.EXITCALL	50
Exit DLL Callib	.EXITDLCL	50
Exit JCL	.EXITJCL	50
Batch DBRM	.BATDBRM	100
Batch Callib	.BATCALL	500
Server DBRM	.SVRDBRM	700
Server Callib	.SVRCALL	8000
RIT Callib	.RITCALL	250
CICS Callib	.CICSCALL	10
IMS Callib	.IMSCALL	300
Install JCL	.INS.JCL	50
Install Link Control Cards	.INS.LINKCTL	150
Install Database Control and DDL definitions	.INS.DB2CTL	70
Install Database Data Load Data	.INS.DB2LOAD	50
Install Clists	.INS.CLIB	10
Install JCL Procedures	.INS.PROCLIB	10
Install Gen Load	.INS.GENLOAD	500
Install Gen Skeletal	.INS.GENSLIB	10
Install Gen Translation Tables	.INS.GENXLAT	700
Install Skeletal Link Control Cards	.INSLIBLK	20
Install Skeletals	.INSLIB	150
Install Driver Clists	.INCLIB	50
Install Driver Panels	.INPLIB	50
Install Driver Messages	.INMLIB	5
Install Driver Tables	.INTLIB	5
Install Skeletals (Temporary)	.TMPSLIB	150

Install Upgrades?

If you have been notified that you should install an update to the installation libraries (e.g. for Known Software Problems, individual PTFs or Service Packs), then the upgrade(s) should be installed **NOW** before proceeding any further. Upgrade installation instructions are provided in a separate document associated with the upgrade(s) themselves.

Applied Maintenance Levels

Note that the base software installation available from the IET website always contains the latest available service packs already included so if, for example, this release currently includes changes up to a 'Service Pack 5' then the base release will contain all the maintenance up to and including Service Pack 5.

Preparing for Set-Up

The Installation Suite

An installation suite is provided to ease the customisation and creation of the components of the GuardIEn for HE servers. This process consists of the following tasks:

- Definition of installation variables to your site standards
- Verification of the installation variables as you have entered them
- Generation of the GuardIEn JCL, JCL Procedures, TSO Procedures and DB2 Load and Control data
- Generation of the JCL to link-edit and bind the GuardIEn software

Note: Installation variables defined are saved in the ISPF profile pool using NEWAPPL GDIN. These variables are associated only with the TSO userid used to execute the install facilities. Therefore, if you are required to use the install facilities again (e.g. for an upgrade) either the same userid should be used OR a copy of the GDIN member from that id's ISPPROF dataset should be taken and placed in the ISPPROF dataset being used.

To access these facilities, the installation suite uses the LIBDEF and ALTLIB functions to temporarily concatenate the required libraries (the install suite components as created above).

Define Variables

At a later time during the installation process, 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.

GuardIEn Software (Variables Panel 1)

Options	Purpose	Example/Default
GuardIEn Library Prefix	The prefix that your GuardIEn installation and runtime libraries have been defined with. As you defined as the <PREFIX> in the LOADCNTL job	IET.GDN88
GuardIEn Runtime Library Suffixes	The suffix that identifies a runtime library component in GuardIEn. These can often be left as the default as provided by the LOADCNTL job but site standards may require these to be changed. NOTE: If you wish to make use of the Task Dispatcher Job Check Interface it will be necessary to ensure the TDLOAD and RUNLOAD libraries are APF Authorised. See <i>Appendix B Started Tasks, Task Dispatcher Job Check Interface</i> for details.	BATLOAD, SVRLOAD, TDLOAD, PROCLIB, CLIB, JCLRUN, SLIBRUN, GEN.ENVCLIB, GEN.PROCLIB, GEN.RUNLOAD
GuardIEn Exit Libraries	The suffix that identifies an exit library component in GuardIEn. These can often be left as the default as provided by the LOADCNTL job but site standards may require these to be changed.	EXITSRC, EXITDBRM, EXITCALL, EXITDLCL, EXITJCL
GuardIEn Install Libraries	The suffix that identifies an installation library component in GuardIEn. These can often be left as the default as provided by the LOADCNTL job but site standards may require these to be changed. NOTE: CICSCALL is only required if installing for CICS. It should be left blank if installing for IMS. NOTE: IMSCALL is only required if installing for IMS. It should be left blank if installing for CICS.	BATDBRM, BATCALL, SVRDBRM, SVRCALL, RITCALL, CICSCALL, IMSCALL, INS.JCL, INS.LINKCTL, INSLIB, INCLIB, INTLIB, INPLIB, INMLIB, INSLIBLK, INS.DB2CTL, INS.DB2LOAD, INS.PROCLIB, INS.CLIB
GuardIEn Gen IEFXLATE	The suffix indicating the name of the supplied Gen 8.6 Translation Table dataset. This dataset is required at sites requiring to amend their codepage definitions from the Broadcom supplied defaults.	INS.GENXLAT
GuardIEn GEN Load	The suffix indicating the name of the Gen 8.6 runtime load library supplied by IET. This is an optional library if you would prefer to use your own copy of the Gen 8.6 load library. If you DO NOT have a copy of Gen 8.6 available or would prefer to utilise the IET supplied library then make sure this field is NOT blank.	INS.GENLOAD
GuardIEn GEN Skeletal	The suffix indicating the name of the Gen 8.6 runtime skeletal library supplied by IET to create the installation linkedit control cards. This library contains IET specific changes and MUST ONLY be used for GuardIEn installations. Do NOT use your own Gen skeletal library.	INS.GENSLIB

Gen Software (Variables Panel 2)

Options	Purpose	Example/Default
Host Ency Release Level	The <i>Release level</i> of the HE that the GuardIEn facilities will connect to. Valid values are currently 6.0 (for COOL:Gen), 6.5 (for Advantage Gen), 7.0 (for CA Gen 7.0), 7.5 (for CA Gen 7.5), 7.6 (for CA Gen 7.6), 7.6E (for CA Gen Priority Enhancement), 7.6F (for CA Gen support for dynamic batch psteps), 8.0 (for CA Gen 8.0 base), 8.0A (for CA Gen 8.0 FP1), 8.5 (for CA Gen 8.5) and 8.6 (for Gen 8.6).	8.6
Gen Dataset Prefix	The prefix for your Gen HE libraries	IET.GEN86
Gen Dataset Suffixes	The suffix that identifies each Gen HE library. Note that from CA Gen 8.0 onwards a new PARMLIB library is required and no TLIB library is used.	Pre-CA Gen 8.0 LOAD, DBRM, SKELETAL, CLIST, TLIB, MLIB CA Gen 8.0 onwards CEHBPLDO, CEHBDBRM, CEHBSKLO, CEHBCLSO, CEHBMSGO, PARMLIB
Gen Look-Ahead Library Clist (optional)	Allows you to specify an additional look-ahead library for the 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.MVPP.CLIST

ISPF Library Names (Variables Panel 3)

Options	Purpose	Example/Default
ISPF Clist, Panel, Skeletal, Message, Table Library Names	The ISPF libraries that are typically used in conjunction with the Gen application. You can concatenate up to seven (7) libraries per ISPF library type.	
ISPF Linklib	Some of the GuardIEn load modules call ISPLINK, and you therefore must specify the ISPF library that contains this module. The verify step will check the library you define to ensure that it contains the ISPLINK module.	SYS1.SISPLOAD

JCL Variables (Variables Panel 4)

Options	Purpose	Example/Default
Temp DiskUnit	Disk UNIT allocation for temporary datasets	DISK
Permanent DiskUnit	Disk UNIT allocation for permanent runtime datasets (e.g. user report files etc.)	DISK
SYSOUT Class	The JCL SYSOUT class that will be used in all GuardIEn JCL	*
Overnight JobClass	Used by GuardIEn batch routines when executed overnight (e.g. migrations, production updates etc.)	W
Profile Blksize	The default profile blocksize at your site. Used by GuardIEn batch jobs when dynamically creating a temporary profile dataset.	27920
ISPSPROF Order	This option places the &ISPSPROF temporary table allocation in ISPTLIB either at the top or the bottom of the concatenation for various GuardIEn JCL procedures. Most sites allocate these at the TOP of the concatenation since use of BOTTOM seems to create ISPT036 errors.	TOP or BOTTOM
Temp DSN prefix (optional)	Allows you to optionally prefix all GuardIEn work and temporary datasets with this name. Site standards may enforce this naming standard over the more common <userid> prefix.	OURPREF
Temp DSN suffix (optional)	Allows you to optionally suffix the <userid> prefix with a specific literal should your site standards require it. Can be used in conjunction with the DSN prefix above also.	HTF8
Task DSN prefix (mandatory only if installing the HE Task Assistant)	Defines an initial DSN prefix for files used by the Task Assistant. This field is only required if you have elected to install the Task Assistant.	GJD.TASKD
Management Class (optional)	Allows you to allocate (where relevant to GuardIEn) a management class for the allocation of runtime datasets	MCWORK10
COBOL Version	Indicate whether you are using Enterprise COBOL for z/OS v4, v5 or v6 at your site.	4

COBOL OPTFILE? (optional)	Indicates whether your compile procedures will use an OPTions parameter file instead of stating the parameters on the EXEC statement. Note that if you use COBOL 5 or 6 you MUST use an OPTFILE for GuardIEn.	YES (or NO)
DB2, COBOL and Miscellaneous Steplib Libraries (All optional except the 1 st DB2 steplib)	The standard list of DB2, COBOL and miscellaneous steplib datasets used at your site. In each case you may specify 2 libraries in order of any concatenation requirements.	DB2 Steplib: DSNB10.SDSNLOAD
COBOL, Other and LU6.2 (optional) Linklib Libraries	GuardIEn requires COBOL LE/370 or Enterprise COBOL for z/OS link libraries to be able to link successfully, so this library MUST be specified. These libraries are added to the link-edit system libraries and any other GuardIEn job step that makes reference to the link of a COBOL program. The <i>LU6.2 Link Library</i> is required ONLY if you will be connecting to the server via the LU6.2 protocol.	COBOL Linklib: CEE.SCEELKED LU6.2 Linklib: SYS1.CSSLIB
COBOL Runlib (Runtime Library)	The COBOL runtime library required on the steplib for a COBOL program to run successfully. This is an optional library as is may already be referenced dynamically (e.g. via linklist or LLA).	COBOL Runlib: CEE.SCEERUN
COBOL OPTFILE (optional)	You can specify your COBOL OPTFILE, for use if you indicate you will be using an OPTFILE in your compile procedures, here. Mandatory if you use COBOL 5 or 6.	IET.GDN88.COBOPT

DB2 and TP Monitor Variables (Variables Panel 5)

Options	Purpose	Example/Default
DB2 Subsystem or DSG Name	The <i>DB2 subsystem</i> or, if using DB2 Data Sharing, the <i>DB2 Group Attachment</i> name in which your Host Encyclopaedia (HE) and GuardIEn databases are deployed and implemented.	DSN1
DSNTEP Program Library	The name of the library containing the DSNTEP (execute SQL in batch) DB2 utility.	DSNTEP2
DSNTEP Program Name	The name of the DSNTEP program	
DSNTEP Plan Name	The DB2 Plan Name associated with the DSNTEP program	DSNTEP11
Use VERSION on Precomp?	Indicates whether the GuardIEn runtime procedures use VERSION(AUTO) in the DB2 pre-compiler. Some sites insist this is not used.	YES
Use MGEXTSZ in Zparm?	Indicates whether tablespace/indexspace allocation can be defaulted to use the DB2 Zparm setting MGEXTSZ introduced in DB2 8.1. Selecting YES will suppress the individual setting of PRIQTY and SECQTY in the GuardIEn DDL.	NO
TP Monitor	The type of <i>Server TP Monitor</i> you will be using to connect to the GuardIEn servers. You <i>must</i> select either CICS or IMS	CICS (or IMS)
CICS/IMS Load Library	The appropriate <i>CICS</i> or <i>IMS LoadLibrary</i> that will be used by the install process to successfully link the server load modules.	DFH320.CICS.SDFHLOAD
CICS External Interface Library (mandatory if CICS is the TP monitor)	If you are using CICS to connect to the servers, you should indicate the name of the <i>CICS External Interface Library</i> .	DFH320.CICS.SDFHEXCI
CICS Translator (mandatory if CICS is the TP monitor)	If you are using CICS to connect to the servers, you must indicate the name of the <i>CICS Translator</i> (pre-compiler) used during pre-compile. If you are not sure about this value, ask a CICS system programmer at your site.	DFHECP1E
Host Ency Plan Prefix	The <i>Plan Prefix</i> that your encyclopaedia plans use. This is the first four characters of the Gen plan names	HE86
Host Ency Explicit Creator Id	The <i>Explicit creator id</i> of HE tables used by GuardIEn.	P390
GuardIEn Database Name	The name you wish to call the <i>GuardIEn Database</i> (change the default if you have your own site standards)	Gddb1
GuardIEn TableSpace Storage Group	The name of the DB2 storage group where you wish to store the GuardIEn tablespaces. Change the default if you have your own site standards or will use an existing storage group)	GDSGT1
GuardIEn IndexSpace Storage Group	The name of the DB2 storage group where you wish to store the GuardIEn indices. Change the default if you have your own site standards or will use an existing storage group)	GDSGI1

GuardIEn TableSpace Bufferpool	The name of the Bufferpool to be used by the GuardIEn Database and Tablespace.	BP0
GuardIEn TableSpace Large Bufferpool	The name of the Bufferpool to be used for GuardIEn Tablespace that contain records greater than 4KB. The recommended bufferpool to use is BP32K.	BP32K
GuardIEn IndexSpace Bufferpool	The name of the Bufferpool to be used by the GuardIEn Indexspaces.	BP0
GuardIEn Explicit Creator Id OR Secondary Authid	Either an <i>Explicit creator id</i> (e.g. userid) OR a <i>Secondary authorisation id</i> to be associated with the GuardIEn databases and tables (note that these variables are mutually exclusive).	GDN
One plan for ALL Servers (Available for CICS Only)	If you are targeting CICS as the TP monitor for the Server modules then you can elect to BIND all the GuardIEn Server transactions under a single Server DB2 Plan. The option of installing a single server plan is only available if your version of CICS no longer requires a Resource Control Table (RCT) entry with one plan name per load module. If you are targeting IMS as the TP monitor for the Server modules then this option MUST be set to NO.	NO
GuardIEn Plan Name	The Plan name to be used by GuardIEn. Note that if deploying into IMS, then a single plan is also created for each of the Server load modules (they take the same name as the Server load module) in addition to the Plan name identified here.	GD88
GuardIEn Collection Name	The DB2 Collection to be used by the GuardIEn.	GD88COL
One plan for ALL Servers (Available for CICS Only)	If you are targeting CICS as the TP monitor for the Server modules then you can elect to BIND all the GuardIEn Server transactions under a single Server DB2 Plan. The option of installing a single Server plan is only available if your version of CICS no longer requires a Resource Control Table (RCT) entry with one plan name per load module. If you set this field to NO, then <i>one plan per load</i> module is assumed. If you are targeting IMS as the TP monitor for the Server modules then this option MUST be set to NO.	NO
PathvIEW Plan Name	A separate Plan for PathvIEW. Must be different to the GuardIEn Plan. Ideally use the default of GDPV.	GDPV
PathvIEW Collection Name	The DB2 Collection to be used by PathvIEW	GDPVCOLL
Connection Method to GEN?	Allows you to determine the nature of the Gen table connections within DB2 to the GuardIEn database. The default for this action is ALIAS but it is possible to use SYNONYMS in GuardIEn 8.8 if required though as support within DB2 for SYNONYMS is being deprecated we do not recommend this approach.	ALIAS

Start 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:

```
GDN8.8                                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 GuardIEn components successfully.

NOTE: You must complete each of the options in full for your site with the associated verification checks before attempting to create the GuardIEn installation and runtime components – failure to do this may produce unpredictable results.

```
GDN8.8                                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
```

First, you must indicate whether you plan to install the *HE Task Dispatcher* and whether you will be installing the GuardIEn Server modules. Enter *Yes* or *No* in each case as required in the supplied fields. These fields have important implications for the definition and creation of the GuardIEn components for the remainder of the installation so please ensure you enter the correct values.

Note that if this is a **first-time installation** then it is likely that you will be using the *HE Task Dispatcher* so typically enter *YES* for this field. Normally enter *YES* for the installation of the *GuardIEn Servers*, only entering *NO* if you are planning to use ODBC to connect to GuardIEn.

Define Installation Variables

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

GuardIEn Software

This panel is used to define the GuardIEn runtime and installation libraries that were created by the LOADCNTL job. By default, it details the standard library name suffixes but you will need to enter the high-level prefix.

```

GDN8.7                                Define GuardIEn Software
===>  _

Enter or verify the following GuardIEn software library names More: +

GuardIEn Library Prefix:
  GuardIEn dataset prefix:    <PREFIX>_____

GuardIEn Runtime Libraries:
  GuardIEn dataset suffixes:
    Batch Load . . . . . BATLOAD_
    Server Load . . . . . SURLOAD_
    Task Dispatcher Load. . . . TDLOAD_
    JCL Procedures. . . . . PROCLIB_
    TSO Clists . . . . . CLIB_
    JCL . . . . . JCLRUN_
    Skeletal . . . . . SLIBRUN_

    Parameter Clists. . . . . GEN.ENUCLIB_
    Parameter Procedures. . . . GEN.PROCLIB_

    Gen Runtime Load. . . . . GEN.RUNLOAD_

GuardIEn Exit Libraries:
  GuardIEn dataset suffixes:
    Exit Source . . . . . EXITSRC_
    Exit Callib . . . . . EXITCALL
    Exit DLL Callib . . . . . EXITDLCL
    Exit DBRMLib. . . . . EXITDBRM
    Exit JCL . . . . . EXITJCL_

GuardIEn Install Libraries:
  GuardIEn dataset suffixes:
    Batch DBRMLib . . . . . BATDBRM_
    Batch Callib. . . . . BATCALL_
    Server DBRMLib . . . . . SURDBRM_
    Server Callib. . . . . SURCALL_
    Trigger Callib. . . . . RITCALL_
    CICS Callib. . . . . CICSCALL (for CICS only)
    IMS Callib. . . . . _____ (for IMS only)

    Install Skeletal. . . . . INSLIB_
    Install Skeletal Link Ctl . INSLIBLK
    Install JCL . . . . . INS.JCL_
    Install Clists. . . . . INS.CLIB_
    Install Procedures. . . . . INS.PROCLIB_
    Install Link Ctl Cards. . . INS.LINKCTL_
    Install DB2 Control . . . . INS.DB2CTL_
    Install DB2 Data Load . . . INS.DB2LOAD_
    Install GEN Translation . . INS.GENXLAT_
    Install GEN Skeletal. . . . INS.GENSLIB_
    Install GEN Load. . . . . INS.GENLOAD_ (optional)

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

Complete the GuardIEn *prefix* and *suffixes* using the information identified in the earlier **Define Variables** section. The GuardIEn libraries specified must refer to the library names of those allocated earlier in the LOADCNTL job step.

Please note that this panel is scrollable (indicated by the *More* display field). To complete all variables will require you to page up/down through the panel (via use of *F7/F8*). 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: GuardIEn Software Checked

Component      Description                               Status
-----
CHECKING GUARDIEN SOFTWARE
CHECK OF 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 *Define GuardIEn Software* panel. 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 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 libraries you allocated), for example...

```

GDN8.7                               Installation Status           Row 1 to 4 of 4
===> _

Activity: GuardIEn Software Checked

Component      Description                               Status
-----
CHECKING GUARDIEN SOFTWARE
  GJD.GDNBASE.R870.WHOOPS                DATASET NOT FOUND
CHECK OF 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 GuardIEn Software panel*. The *Define Installation Variables* panel is redisplayed. Select option 2 from the menu 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.

```
GDN8.7                               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 *Gen release level*, *prefix* and *suffixes* using the information identified in the earlier **Define Variables** section.

Once you have specified all the library 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.

Select option 3 from the menu and press *<Enter>*. The *Setup ISPF Library Names* panel is displayed.

ISPF Library Names

This panel allows you to provide the definitions for the ISPF libraries at your site.

```

GDN8.7                      Define ISPF Library Names
===> _

Enter or verify the following SYSPROC and ISPF library names

ISPFLIBLIB More: +

ISPFLIBLIB Clist Libraries:
Sysproc1 . . . _____
Sysproc2 . . . _____ (optional)
Sysproc3 . . . _____ (optional)
Sysproc4 . . . _____ (optional)
Sysproc5 . . . _____ (optional)
Sysproc6 . . . _____ (optional)
Sysproc7 . . . _____ (optional)

ISPFLIBLIB Panel Libraries:
Panel1 . . . . . _____
Panel2 . . . . . _____ (optional)
Panel3 . . . . . _____ (optional)
Panel4 . . . . . _____ (optional)
Panel5 . . . . . _____ (optional)
Panel6 . . . . . _____ (optional)
Panel7 . . . . . _____ (optional)

ISPFLIBLIB Skeletal Libraries:
Skeletal1 . . _____
Skeletal2 . . _____ (optional)
Skeletal3 . . _____ (optional)
Skeletal4 . . _____ (optional)
Skeletal5 . . _____ (optional)
Skeletal6 . . _____ (optional)
Skeletal7 . . _____ (optional)

ISPFLIBLIB Message Libraries:
Message1 . . . _____
Message2 . . . _____ (optional)
Message3 . . . _____ (optional)
Message4 . . . _____ (optional)
Message5 . . . _____ (optional)
Message6 . . . _____ (optional)
Message7 . . . _____ (optional)

ISPFLIBLIB Table Libraries:
Table1 . . . . . _____
Table2 . . . . . _____ (optional)
Table3 . . . . . _____ (optional)
Table4 . . . . . _____ (optional)
Table5 . . . . . _____ (optional)
Table6 . . . . . _____ (optional)
Table7 . . . . . _____ (optional)

ISPFLIBLIB Link library:(contains ISPLINK member)
ISPFLIBLIB LinkLib . _____

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

ME A 02/007
```

Complete the *ISPF Library Names* using the information identified in the earlier **Define Variables** section.

Please note that this panel is scrollable (indicated by the *More* display field). To complete all variables will require you to page up/down through the panel (via use of *F7/F8*). Once you have specified all the library 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 ISPF Library Names* panel, then press *F3* to return to the *Define Installation Variables* panel.

Select option 4 from the menu and press *<Enter>*. The *Define JCL Variables* panel is displayed.

JCL Variables

This panel allows you to provide the definitions for JCL and related variables at your site.

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

Enter or verify the following JCL variables and any STEPLIB library names

Your Runtime Variables:
Temp DiskUnit . . DISK____ Permanent DiskUnit . . DISK____
SYSOUT Class. . . *
O'night Jobclass. W
Profile BlkSize . 27920
ISPSPROF Order. . TOP____ (Choose TOP or BOTTOM)
Temp DSN Prefix . _____ (optional)
Temp DSN Suffix . _____ (optional)
Task DSN Prefix . _____ (for Task Assistant)
Management Class. _____ (optional)
COBOL Version . . 4 (Choose 4,5 or 6)
COBOL Optfile ? . YES (Use a COBOL OPTFILE?)

Steplib Libraries:
DB2 Steplib 1 . _____ (optional)
DB2 Steplib 2 . _____ (optional)
COBOL Steplib 1 . _____ (optional)
COBOL Steplib 2 . _____ (optional)
Misc Steplib 1 . _____ (optional)
Misc Steplib 2 . _____ (optional)

Linklib Libraries:
COBOL Linklib . . _____ (optional)
Other Linklib . . _____ (optional)
LU6.2 Linklib . . _____ (optional)

Runlib Libraries:
COBOL Runlib. . . _____ (optional)

Parameter Files:
COBOL OPTFILE . . _____ (optional)

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

Complete the *JCL Variables* using the information identified in the earlier **Define Variables** section.

Please note that this panel is scrollable (indicated by the *More* display field). To complete all variables will require you to page up/down through the panel (via use of *F7/F8*). Once you have specified all the library 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 JCL variables* panel, then press *F3* to return to the *Define Installation Variables* panel.

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.

```

GDM8.7                                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 MGEEXTS2 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

```

Complete the *DB2 and TP Monitor Variables* using the information identified in the earlier **Define Variables** section.

Please note that this panel is scrollable (indicated by the *More* display field). To complete all variables will require you to page up/down through the panel (via use of *F7/F8*). Once you have specified all the library 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 DB2 and TP Monitor Variables* panel, then press *F3* to return to the *Define Installation Variables* panel.

Select option *6* from the menu and press *<Enter>*. The *Define Runtime JCL Job Header* panel is displayed.

Runtime JCL Header

This panel allows you to provide a JCL Header for JCL job submission at runtime (utility batch jobs, started task JCL etc.)

```
GDN8.7                      Define Runtime JCL Header
===> _

Enter or verify the following Runtime JCL Header details below

Start of GuardIEn Runtime JCL Header cards

//GJDI JOB 'GDN870',MSGCLASS=X,REGION=0M
//      JCLLIB ORDER=('GJD.GDNBASE.R870.PROCLIB',
//      'GJD.GDNBASE.R870.GEN.PROCLIB')
//*
//*
//*
//*
//*
//*

End of GuardIEn Runtime JCL Header cards

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

Specify a valid job card for your site. Note: you may need to add a JCLLIB card, as in the example above, if the GuardIEn Runtime JCL Procedures and Parameter Procedures are to be stored, as is typically the case, in private libraries – these are referred to on the GuardIEn Software Installation Variables panel under ‘Runtime Libraries’. Alternatively, the procedures can be placed in system procedure libraries so there is no need to specify private JCL libraries.

When completed, press *F6* to save the job header. When completed successfully, press *F3* to exit the screen. The *Define Installation Variables* panel is redisplayed.

Select option 7 from the menu and press <Enter>. The *Define Install JCL Job Header* panel is displayed.

Install JCL Header

This panel allows you to provide a JCL Header for JCL job submission required during the installation process itself.

```
GDN8.7                      Define Installation JCL Header
===> _

Enter or verify the following Installation JCL Header details below

Start of GuardIEn Installation JCL Header cards

//GJDI JOB 'GDN870',MSGCLASS=X,REGION=0M
//      JCLLIB ORDER=('GJD.GDNBASE.R870.INS.PROCLIB')
//*
//*
//*
//*
//*
//*

End of GuardIEn Installation JCL Header cards

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

Specify a valid job card for your site. You will need to add a JCLLIB card if, as in the example above, the GuardIEn Install Procedures are to be stored in a private library, as will almost certainly be the case - these are referred to on the GuardIEn Software Installation Variables panel under ‘Installation Libraries’. When completed, press *F6* to save the job header. When completed successfully, press *F3* to exit the screen. The *Define Installation Variables* panel is redisplayed.

You have now successfully completed definition of the GuardIEn parameters. You may now proceed to verify ALL the installation variables in preparation for creating all the installation and runtime components.

Verify Installation Variables

Choose option 8 on the *Define Installation Variables* panel, press <Enter>.

On selection of this option, the verification of all installation variables defined is initiated. The first variables to be checked are the *GuardIEn Software*...

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

Activity: GuardIEn Software Checked

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

...Press <Enter>. The *Gen Software*, *ISPF Variables*, *JCL Variables* and *DB2 and TP Monitor Variables* are then verified in turn.

If all the checks complete successfully you will be returned to the *Define Installation Variables* menu with the following 'Variables accepted' message in the top right corner of the panel...

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

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
```

If, however, the checks fail at any point, the following error message will be reported at the end of the checks...

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

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)

Variables have been checked some or all are not valid

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

If this occurred, you would need to fix the error(s) and retry. Once you have successfully verified all the GuardIEn installation variables, you may proceed to generate the GuardIEn software components.

Create Components

Once all variable panels have been filled in and verified successfully, you are now ready to create the components of the GuardIEn system. Return to the *GuardIEn for HE Set-up Main Menu* by pressing **F3** again. You should now choose option 4 *Create ALL Components* 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 ALL Install and Runtime Components

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

...indicating that you have requested to 'Create ALL Install and Runtime components'. Press **F12** to cancel or **<Enter>** to continue. Press **<Enter>** and the component creation process begins. This may take some time but will eventually finish after creating all the requisite GuardIEn installation and runtime components. Now is perhaps a good time to go and have a coffee!

```

GDN8.7                                Installation Status      Row 721 to 730 of 730
===> _

Activity: Created ALL Install and Runtime Components successfully

Component      Description                      Status
-----
G7U5           SERVER LINKCTL DECK                TAILORING SUCCESSFUL
G7U1           SERVER LINKCTL DECK                TAILORING SUCCESSFUL
G7U2           SERVER LINKCTL DECK                TAILORING SUCCESSFUL
G7U3           SERVER LINKCTL DECK                TAILORING SUCCESSFUL
G7W1           SERVER LINKCTL DECK                TAILORING SUCCESSFUL
G7W2           SERVER LINKCTL DECK                TAILORING SUCCESSFUL
G7W3           SERVER LINKCTL DECK                TAILORING SUCCESSFUL
G7X1           SERVER LINKCTL DECK                TAILORING SUCCESSFUL
G7X2           SERVER LINKCTL DECK                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. Once completed you may now proceed to the **Review/Browse Created Components** section.

Creating Components Selectively (Optional)

You may wish to install the GuardIEn components selectively – useful if you have changed one or two variables and wish to refresh the settings for some of the components rather than rebuilding them all. To do this, return to the *GuardIEn for HE Setup Main Menu*. To create the *Installation Components* (JCL, procedures, clists, DB2 control, DB2 load and link control cards – all used to install the GuardIEn software) select option 2 from the menu and press <Enter>. The *Create Installation Components* panel is displayed.

Create Installation Components

This panel displays a set of options to enable creation of components specific to the installation of GuardIEn

```
GDN8.7                      Create Installation Components
===> _

Select one of the options below, then press enter.

1 Create JCL
2 Create JCL procedures
3 Create TSO clists
4 Create DB2 components
5 Create Link control cards

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

Choose each 'create' option (options 1 to 5) in turn to generate the JCL, JCL procedures, TSO clists, DB2 control, DB2 Load data, DDL, and the GuardIEn link control card decks.

The following is an example of the generation phase. Choosing option 1 from the main menu displays a confirmation screen for the creation of GuardIEn Installation JCL.

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

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

Activity: Create Installation JCL

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

Press <Enter> to confirm the selected activity. Press F3 to exit from this panel without generation of any components.

Pressing <Enter> initiates creation of all the Installation JCL. A status panel is displayed and updated as each component is created (successfully or otherwise!) thus...

```

GDH8.7                               Installation Status           Row 1 to 36 of 89
==>  _

Activity: Created Installation JCL successfully

Component      Description              Status
-----
@JOB00A        *ALL* GSETPCK EXIT JCL   TAILORING SUCCESSFUL
@JOB01A        *ALL* LINK-EDIT JCL      TAILORING SUCCESSFUL
@JOB02N        *NEW* CREATE GDN DB JCL   TAILORING SUCCESSFUL
@JOB2U1        *UPG* UPGRADE GDN DB 8.5 TO 8.7 TAILORING SUCCESSFUL
@JOB2U2        *UPG* UPGRADE GDN DB 8.6 TO 8.7 TAILORING SUCCESSFUL
@JOB03N        *NEW* GRANT GEN ACCESS JCL TAILORING SUCCESSFUL
@JOB4N         *NEW* DATA LOAD JCL     TAILORING SUCCESSFUL
@JOB4U1        *UPG* UPGRADE DATA 8.5 TO 8.7 TAILORING SUCCESSFUL
@JOB4U2        *UPG* UPGRADE DATA 8.6 TO 8.7 TAILORING SUCCESSFUL
@JOB5A        *ALL* DB2 RUNSTATS JCL   TAILORING SUCCESSFUL
@JOB6A        *ALL* PACKAGE BIND JCL   TAILORING SUCCESSFUL
@JOB7A        *ALL* PLAN BIND AND GRANT JCL TAILORING SUCCESSFUL
SCSDDEF       *SAMP* SAMPLE CICS GUARDIEN DEF TAILORING SUCCESSFUL
PUCSDDEF      *SAMP* SAMPLE CICS PATHUIEW DEF TAILORING SUCCESSFUL
SHQDEF        *SAMP* SAMPLE HQ DEFINITION TAILORING SUCCESSFUL
SGRNTUW       *SAMP* SAMPLE GRANT REPORT UIEWS TAILORING SUCCESSFUL
SHKCRUN       *SAMP* SAMPLE CODEPAGE INSTALL TAILORING SUCCESSFUL
SCPYGEN       *SAMP* SAMPLE COPY GEN RUNTIMES TAILORING SUCCESSFUL
ODG7685       *OLD* UPGRADE GDNDDB 7.6 TO 8.5 TAILORING SUCCESSFUL
ODG7785       *OLD* UPGRADE GDNDDB 7.7 TO 8.5 TAILORING SUCCESSFUL
ODG7885       *OLD* UPGRADE GDNDDB 7.8 TO 8.5 TAILORING SUCCESSFUL
ODG8085       *OLD* UPGRADE GDNDDB 8.0 TO 8.5 TAILORING SUCCESSFUL
ODG8185       *OLD* UPGRADE GDNDDB 8.1 TO 8.5 TAILORING SUCCESSFUL
ODGCC0A       *OLD* CREATE CCH TEMP TABLE TAILORING SUCCESSFUL
ODGCC0B       *OLD* UPGRADE CCH TABLE TAILORING SUCCESSFUL
ODGCC0C       *OLD* CLEANUP CCH TABLE TAILORING SUCCESSFUL
ODGCC0A       *OLD* CREATE CCA TEMP TABLE TAILORING SUCCESSFUL
ODGCC0B       *OLD* UPGRADE CCA TABLE TAILORING SUCCESSFUL
ODGCC0C       *OLD* CLEANUP CCA TABLE TAILORING SUCCESSFUL
ODGCC0X       *OLD* CREATE CDX TEMP TABLE TAILORING SUCCESSFUL
ODGCC0X       *OLD* UPGRADE CDX TABLE TAILORING SUCCESSFUL
ODGCC0X       *OLD* CLEANUP CDX TEMP TABLE TAILORING SUCCESSFUL
OCG7685       *OLD* GRANT GEN 7.6 TO 8.5 TAILORING SUCCESSFUL
OCG8085       *OLD* GRANT GEN 8.0 TO 8.5 TAILORING SUCCESSFUL
OLD7685       *OLD* UPGRADE DATA 7.6 TO 8.5 TAILORING SUCCESSFUL
OLD7785       *OLD* UPGRADE DATA 7.7 TO 8.5 TAILORING SUCCESSFUL
OLD7885       *OLD* UPGRADE DATA 7.8 TO 8.5 TAILORING SUCCESSFUL
OLD8085       *OLD* UPGRADE DATA 8.0 TO 8.5 TAILORING SUCCESSFUL
OLD8185       *OLD* UPGRADE DATA 8.1 TO 8.5 TAILORING SUCCESSFUL
OINLDCR       *OLD* SAMPLE CR UNLOAD TAILORING SUCCESSFUL
OINLDCCH      *OLD* SAMPLE CCH UNLOAD TAILORING SUCCESSFUL
SUNLDCCA      *OLD* SAMPLE CCA UNLOAD TAILORING SUCCESSFUL
SUNLDCDX      *OLD* SAMPLE CDX UNLOAD TAILORING SUCCESSFUL
GDJCLSUB      INSTALL JCL FOR EXIT GDJCLSUB TAILORING SUCCESSFUL
GDPUEXIT      INSTALL JCL FOR EXIT GDPUEXIT TAILORING SUCCESSFUL
GDAUF2        INSTALL JCL FOR EXIT GDAUF2 TAILORING SUCCESSFUL
GDAUF3        INSTALL JCL FOR EXIT GDAUF3 TAILORING SUCCESSFUL
GDAUF44       INSTALL JCL FOR EXIT GDAUF44 TAILORING SUCCESSFUL
GDAUF45       INSTALL JCL FOR EXIT GDAUF45 TAILORING SUCCESSFUL
GDAUF46       INSTALL JCL FOR EXIT GDAUF46 TAILORING SUCCESSFUL
GDBINDEX      INSTALL JCL FOR EXIT GDBINDEX TAILORING SUCCESSFUL
GDCCNDEX      INSTALL JCL FOR EXIT GDCCNDEX TAILORING SUCCESSFUL
GDCODEX       INSTALL JCL FOR EXIT GDCODEX TAILORING SUCCESSFUL
GDCRUEX       INSTALL JCL FOR EXIT GDCRUEX TAILORING SUCCESSFUL
GDEUNTEX      INSTALL JCL FOR EXIT GDEUNTEX TAILORING SUCCESSFUL
GDFTPX0       INSTALL JCL FOR EXIT GDFTPX0 TAILORING SUCCESSFUL
GDGNIUAR      INSTALL JCL FOR EXIT GDGNIUAR TAILORING SUCCESSFUL
GDHXGFTP      INSTALL JCL FOR EXIT GDHXGFTP TAILORING SUCCESSFUL
GDINFDEX      INSTALL JCL FOR EXIT GDINFDEX TAILORING SUCCESSFUL
GDLOWREX      INSTALL JCL FOR EXIT GDLOWREX TAILORING SUCCESSFUL
GDNDLCT       INSTALL JCL FOR EXIT GDNDLCT TAILORING SUCCESSFUL
GDPACKEX      INSTALL JCL FOR EXIT GDPACKEX TAILORING SUCCESSFUL
GDPMTGEX      INSTALL JCL FOR EXIT GDPMTGEX TAILORING SUCCESSFUL
GDPUCKEX      INSTALL JCL FOR EXIT GDPUCKEX TAILORING SUCCESSFUL
GDPUEXCH      INSTALL JCL FOR EXIT GDPUEXCH TAILORING SUCCESSFUL
GDPWDEX       INSTALL JCL FOR EXIT GDPWDEX TAILORING SUCCESSFUL
GDSCCSEX      INSTALL JCL FOR EXIT GDSCCSEX TAILORING SUCCESSFUL
GDSETPCK      INSTALL JCL FOR EXIT GDSETPCK TAILORING SUCCESSFUL
GDSUBEX2      INSTALL JCL FOR EXIT GDSUBEX2 TAILORING SUCCESSFUL
GDSUBSEX      INSTALL JCL FOR EXIT GDSUBSEX TAILORING SUCCESSFUL
GDSYNRMT      INSTALL JCL FOR EXIT GDSYNRMT TAILORING SUCCESSFUL
GDUVFXE       INSTALL JCL FOR EXIT GDUVFXE TAILORING SUCCESSFUL
GDSUGTEX      INSTALL JCL FOR EXIT GDSUGTEX TAILORING SUCCESSFUL
GDSUGLEX      INSTALL JCL FOR EXIT GDSUGLEX TAILORING SUCCESSFUL
GDSUGPEX      INSTALL JCL FOR EXIT GDSUGPEX TAILORING SUCCESSFUL
GDSUGVEX      INSTALL JCL FOR EXIT GDSUGVEX TAILORING SUCCESSFUL
GDVALEI1     INSTALL JCL FOR EXIT GDVALEI1 TAILORING SUCCESSFUL
GDUMIGEX      INSTALL JCL FOR EXIT GDUMIGEX TAILORING SUCCESSFUL
GDUREXIT      INSTALL JCL FOR EXIT GDUREXIT TAILORING SUCCESSFUL
GDUSEXIT      INSTALL JCL FOR EXIT GDUSEXIT TAILORING SUCCESSFUL
GDJCLEX       INSTALL JCL FOR EXIT GDJCLEX TAILORING SUCCESSFUL
GDCCHJCL      INSTALL JCL FOR EXIT GDCCHJCL TAILORING SUCCESSFUL
GDCMNPX       INSTALL JCL FOR EXIT GDCMNPX TAILORING SUCCESSFUL
GDCMNPX       INSTALL JCL FOR EXIT GDCMNPX TAILORING SUCCESSFUL
GDNURCX       INSTALL JCL FOR EXIT GDNURCX TAILORING SUCCESSFUL
GDNURSC       INSTALL JCL FOR EXIT GDNURSC TAILORING SUCCESSFUL
PUNUB         INSTALL JCL FOR EXIT PUNUB TAILORING SUCCESSFUL
PUENUC        INSTALL JCL FOR EXIT PUENUC TAILORING SUCCESSFUL
Now press ENTER to continue
***** Bottom of data *****

```

Please note that you can **scroll up** and **down** through the list when it has completed. This enables you to verify that all the tailoring has completed successfully. The same process is carried out for JCL Procedure, TSO procedure, DB2 Control Data, DB2 load, DB2 DDL and Link Control Deck components. Once all components have been generated successfully you may then progress to the next phase of the GuardIEn installation.

Return to the *GuardIEn for HE Set-up Main Menu* by pressing F3. Select option 3 from the menu and press <Enter>. The *Create Runtime Components* panel is displayed.

Create Runtime Components

This panel displays a set of options to enable creation of components specific to using GuardIEn as an application at runtime.

```
GDNS.7                                Create Runtime Components
===> _

Select one of the options below, then press enter.

1 Create JCL
2 Create JCL procedures
3 Create TSO clists and control cards

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

Choose each 'Create' option (options 1 to 3) in turn to generate the runtime JCL, JCL procedures and TSO clists in exactly the same way as you created the installation components.

Once you have successfully completed the creation of all the GuardIEn installation and runtime components you can then move on to the next section.

Review/Browse Created Components

Return to the *GuardIEn* for *HE Setup Main Menu* by pressing *F3*. Select option 5 from the menu and press *<Enter>*. The *Browse and Run Installation* panel is displayed.

```

GDN8.7                                     Browse and Run Installation
===>  _

Select one of the options below, then press enter.

1 Browse DB2 Control
2 Browse DB2 Load Data
3 Browse Link Control Decks
4 Browse Installation JCL
5 Browse Exit Source Code JCL

6 Edit   Exit Source Code
7 Edit   Installation JCL
8 Edit   Exit Source Code JCL

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

The Installation or Exit JCL, DB2 control, DB2 Load, Link control can be browsed/reviewed as necessary. In addition the Exit Source (containing IET supplied default USER EXIT COBOL code), Installation or Exit JCL library can also be edited and, if applicable, submitted.

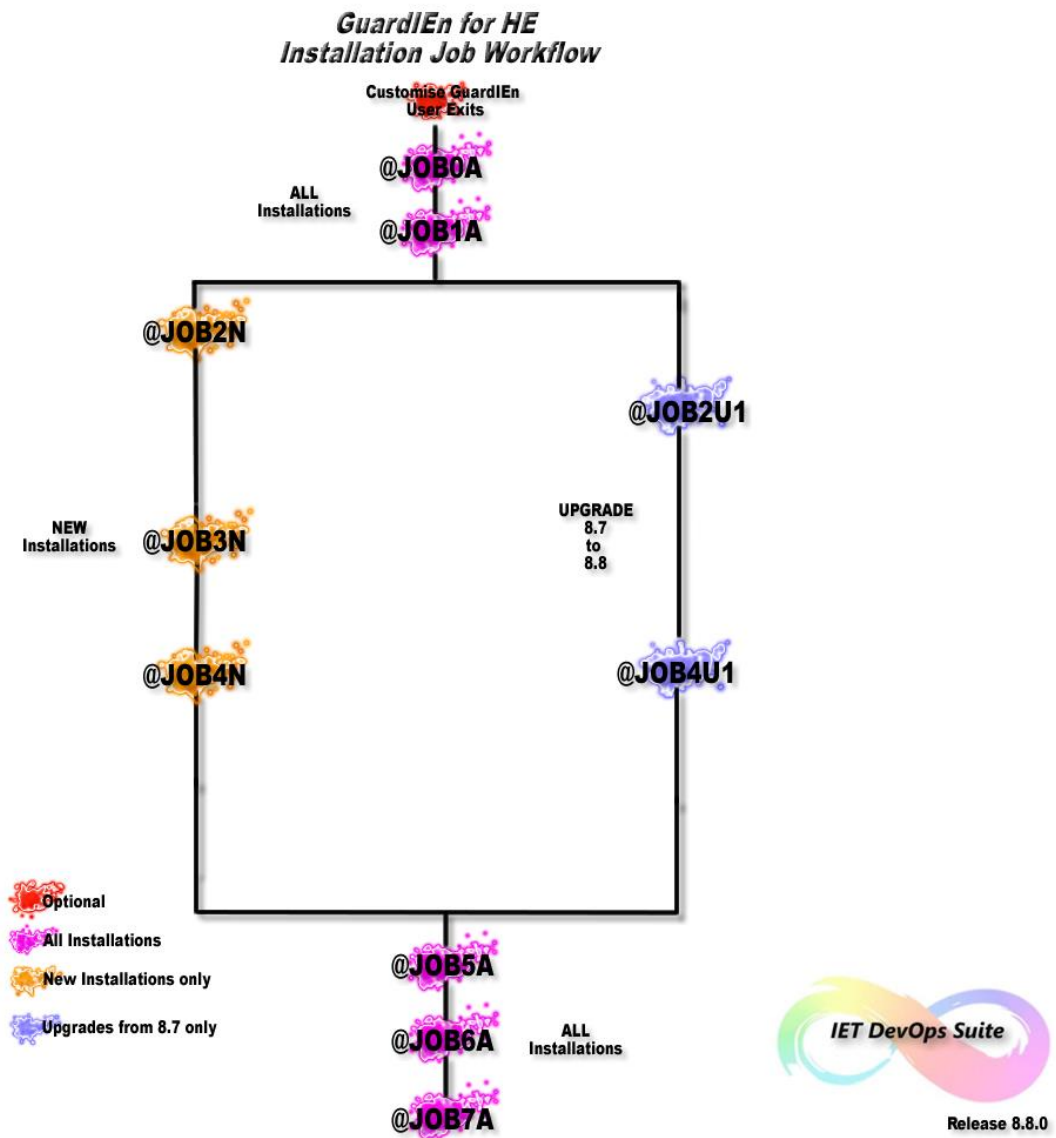
Menu Functions Utilities Help						
BROWSE						Row 00001 of 00116
Command	Name	Size	Created	Changed	Scroll	PAGE
.	CGALIAS	41	2008/03/11	2008/03/11 13:00:25		GJD
.	CGALIAS2	41	2008/03/11	2008/03/11 13:00:26		GJD
.	CGAS00	22	2008/03/11	2008/03/11 13:00:37		GJD
.	CGAS1	21	2008/03/11	2008/03/11 13:00:38		GJD
.	CGAS3	24	2008/03/11	2008/03/11 13:00:39		GJD
.	CGA70	22	2008/03/11	2008/03/11 13:00:40		GJD
.	CGARANT	40	2008/03/11	2008/03/11 13:00:33		GJD
.	CGS00	24	2008/03/11	2008/03/11 13:00:34		GJD
.	CGS1	23	2008/03/11	2008/03/11 13:00:34		GJD
.	CGS3	27	2008/03/11	2008/03/11 13:00:35		GJD
.	CG70	24	2008/03/11	2008/03/11 13:00:36		GJD
.	CGSN	41	2008/03/11	2008/03/11 13:00:26		GJD
.	CGSN70	22	2008/03/11	2008/03/11 13:00:27		GJD
.	CGU1EWS	92	2008/03/11	2008/03/11 13:00:28		GJD
.	CGU1EWS2	92	2008/03/11	2008/03/11 13:00:29		GJD
.	CGU1EWS1	36	2008/03/11	2008/03/11 13:00:30		GJD
.	CGU1EWS2	33	2008/03/11	2008/03/11 13:00:31		GJD
.	CGU1EWS0	25	2008/03/11	2008/03/11 13:00:32		GJD
.	CRCC	116	2008/03/11	2008/03/11 12:59:41		GJD
.	CRCCN	116	2008/03/11	2008/03/11 12:59:42		GJD
.	CRCCU	112	2008/03/11	2008/03/11 12:59:43		GJD
.	CRCC1	109	2008/03/11	2008/03/11 12:59:36		GJD
.	CRCC4	139	2008/03/11	2008/03/11 12:59:37		GJD
.	CRCC5	137	2008/03/11	2008/03/11 12:59:38		GJD
.	CRCC6	200	2008/03/11	2008/03/11 12:59:39		GJD
.	CRCC7	113	2008/03/11	2008/03/11 12:59:40		GJD
.	CRCDN	125	2008/03/11	2008/03/11 12:59:45		GJD
.	CRCD3	105	2008/03/11	2008/03/11 12:59:44		GJD
.	CTCC	5	2008/03/11	2008/03/11 13:00:16		GJD
.	CTCCB	7	2008/03/11	2008/03/11 13:00:17		GJD
.	CTCCD	15	2008/03/11	2008/03/11 12:59:46		GJD
.	CTCCF	16	2008/03/11	2008/03/11 12:59:46		GJD
.	CTCCG	23	2008/03/11	2008/03/11 12:59:47		GJD
.	CTCCH	8	2008/03/11	2008/03/11 12:59:48		GJD
.	CTCCI	8	2008/03/11	2008/03/11 12:59:49		GJD
.	CTCCU	11	2008/03/11	2008/03/11 12:59:50		GJD
.	CTCCX	9	2008/03/11	2008/03/11 12:59:51		GJD
.	CTCC1	14	2008/03/11	2008/03/11 12:59:52		GJD

Menu Functions Utilities Help						
EDIT						Row 00001 of 00039
Command	Name	Size	Created	Changed	Scroll	PAGE
.	GJOB00A	21	2008/03/11	2008/03/11 15:48:23		GJD
.	GJOB01A	307	2008/03/11	2008/03/11 15:48:24		GJD
.	GJOB02N	45	2008/03/11	2008/03/11 15:48:25		GJD
.	GJOB02U1	74	2008/03/11	2008/03/11 15:48:25		GJD
.	GJOB02U2	68	2008/03/11	2008/03/11 15:48:26		GJD
.	GJOB02U3	58	2008/03/11	2008/03/11 15:48:27		GJD
.	GJOB02U4	37	2008/03/11	2008/03/11 15:48:28		GJD
.	GJOB03N	59	2008/03/11	2008/03/11 15:48:29		GJD
.	GJOB04N	973	2008/03/11	2008/03/11 15:48:30		GJD
.	GJOB04U1	137	2008/03/11	2008/03/11 15:48:31		GJD
.	GJOB04U2	123	2008/03/11	2008/03/11 15:48:32		GJD
.	GJOB05A	175	2008/03/11	2008/03/11 15:48:33		GJD
.	GJOB06A	2005	2008/03/11	2008/03/11 15:48:35		GJD
.	GJOB07A	56	2008/03/11	2008/03/11 15:48:35		GJD
.	CCMUNLD	37	2008/03/11	2008/03/11 15:48:35		GJD
.	CG4275	179	2008/03/11	2008/03/11 15:48:45		GJD
.	CG5075	149	2008/03/11	2008/03/11 15:48:45		GJD
.	CG5175	107	2008/03/11	2008/03/11 15:48:46		GJD
.	CG5275	93	2008/03/11	2008/03/11 15:48:47		GJD
.	CG5375	65	2008/03/11	2008/03/11 15:48:48		GJD
.	CG5475	65	2008/03/11	2008/03/11 15:48:49		GJD
.	CTCSCSD	246	2008/03/11	2008/03/11 15:48:52		GJD
.	CRUNLOAD	254	2008/03/11	2008/03/11 15:48:50		GJD
.	GD00	32	2008/03/11	2008/03/11 15:48:53		GJD
.	GD4275	357	2008/03/11	2008/03/11 15:48:36		GJD
.	GD5075	192	2008/03/11	2008/03/11 15:48:37		GJD
.	GD5175	164	2008/03/11	2008/03/11 15:48:38		GJD
.	GD5275	136	2008/03/11	2008/03/11 15:48:39		GJD
.	GD5375	107	2008/03/11	2008/03/11 15:48:40		GJD
.	GD5475	79	2008/03/11	2008/03/11 15:48:41		GJD
.	GD7075	51	2008/03/11	2008/03/11 15:48:42		GJD
.	LD5275	87	2008/03/11	2008/03/11 15:48:43		GJD
.	LD5375	58	2008/03/11	2008/03/11 15:48:44		GJD
.	HEJOB1	73	2008/03/11	2008/03/11 15:47:29		GJD
.	HEJOB1U1	46	2008/03/11	2008/03/11 15:47:30		GJD
.	HEJOB1U2	32	2008/03/11	2008/03/11 15:47:31		GJD
.	HEJOB3	1783	2008/03/11	2008/03/11 15:47:32		GJD
.	HEJOB3	56	2008/03/11	2008/03/11 15:47:33		GJD

Install Software

Installation Jobs

Once all the components (installation and runtime) have been created you can then begin the process of installing the software. The installation process has been separated into a number of discrete jobs that reside in the JCL library – the following flowchart describes the workflow...



...with each job performing the following function. Note that some jobs must always be run (suffixed 'A') with some jobs applicable only to completely new installations (suffixed 'N') or upgrades from specific GuardIEn releases (suffixed 'U').

Installation Jobs Sequence


Jobname	Description	When used ?
@JOB0A	Compile/Linkedit GDSETPCK program	All Installations
@JOB1A	Linkedit GuardIEn Executable Load modules	All Installations
@JOB2N	Create GuardIEn DB2 database and views	New Install only
@JOB2U1	Upgrade GuardIEn DB from GuardIEn 8.7 release to GuardIEn 8.8 release	Upgrades from 8.7 only
@JOB3N	Create Gen table aliases, new views and grant SQL access to the GuardIEn authid	New Install only
@JOB4N	Load empty GuardIEn tables with default data	New Install only
@JOB4U1	Upgrade existing GuardIEn tables load data from GuardIEn 8.7 to GuardIEn 8.8	Upgrades from 8.7 only
@JOB5A	Run DB2 Runstats against GuardIEn tablespaces	All Installations
@JOB6A	Bind GuardIEn application DB2 packages	All Installations
@JOB7A	Bind GuardIEn application DB2 plan & Grant Plan/Packages to Public (to allow use of the GuardIEn application)	All Installations

Upgrade Impact (Important Note)

Please note that when upgrading an existing installation of GuardIEn the upgrade process above requires exclusive access to the GuardIEn database. As a consequence, IET recommends that all currently installed GuardIEn software elements (CICS/IMS servers, batch routines and started tasks) are NOT active during the period of the upgrade process itself. Downtime will therefore need to be arranged with development and support teams.

Failure to ensure any existing software is deactivated during the period of the upgrade may cause unpredictable results and delay the successful implementation of the upgrade itself.

Customise GuardIEn User Exits (optional)


Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn 8.7	Completed ?
Customise USER EXITS (optional)	<p>If you are installing GuardIEn for the first time then you can probably skip this section and go on to the next: Create EXECUTABLES. If however you are an existing GuardIEn licensee and make use of the exits at present then you will need to check for changes to the exits as provided by IET in GuardIEn 8.8 and then rework your changes, as required, into the new versions of the exits.</p> <p>These exits are implemented as COBOL external action blocks. For the full list and implementation details please see <i>Appendix A – HE Server User Exits</i>.</p>  <p>IMPORTANT NOTE - PLEASE READ THIS SECTION</p> <p>If you are installing the Task Dispatcher (TD) started task and DO NOT wish the USER/PASSWORD cards to be supplied automatically to the job header, then you will need to amend the supplied GDJCLEX member of EXITSRC. To undo the password functionality contained therein all that is necessary is to comment out the following line...</p> <p>MOVE 'Y' TO WS-ADD-PWD</p> <p>...and then use the GDJCLEX EXITJCL library member to compile/link/bind the amended version.</p> <p>If you do not wish to automatically convert your password to UPPER case then you should also remove the section within the standard GDJCLEX exit that converts any lower-case characters to upper case. This is used in conjunction with the Windows client environment variable GDN_PWD_UPPER being set to NO. Conversion to UPPER case is the default behaviour</p>	N/A	YES	
Customise GDJCLSUB exit (optional)	<p>If you are installing GuardIEn without the HE Task Assistant and/or PAD Extract Started Tasks (not recommended) then it is necessary to customise this exit to allow batch jobs created by GuardIEn at runtime to be submitted to your internal reader (via your site's resident TP monitor – CICS or IMS).</p> <p>The GDJCLSUB program is used to submit the generated batch job JCL via your chosen TP monitor. You must complete this section to ensure that the GuardIEn Server transactions can submit batch jobs to the z/OS environment.</p> <ul style="list-style-type: none"> • Create a new member called GDJCLSUB in the EXITSRC library. • Copy the standard exit from the EXITSRC library into this new member. The standard exit is GDJCLCIC for CICS Servers or GDJCLIMS for IMS/DC Servers. Please ensure that you copy the correct version of the GDJCLSUB program for your chosen TP monitor (CICS or IMS/DC). • Review the source code in the exit to ensure that the exit conforms to your site standards for submitting jobs from IMS/DC or CICS. You will find advice on how to amend GDJCLSUB to make it work at your site within the code itself. • Save the new member GDJCLSUB. • Once you have amended GDJCLSUB to conform to your site requirements, edit the Install JCL library and submit the member GDJCLSUB. This compile/links the GDJCLSUB program ready for use by the rest of the GuardIEn application and places it within the G8EXITn DLL. • Ensure you receive a return code of 4 or less. Any higher and the program will not have compiled correctly. 	YES	YES	



Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn 8.7	Completed ?
Specify Alternative Date Edit Pattern (optional)	<p>The default edit pattern for date input in GuardIEn is DD-MM-YYYY.</p> <p>US customers may prefer to use the MM-DD-YYYY edit pattern. To use a US date edit pattern, alter the EXITSRC member GDNDLCT, commenting out the 'default' dialect and un-commenting the 'US' reference.</p> <p>* MOVE 'DEFAULT ' TO DIALECT-CODE. MOVE 'US ' TO DIALECT-CODE.</p> <p>Now run the EXITJCL member GDNDLCT to install the changes into the G8EXITn DLL.</p>	YES	YES	



Create Executables



Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn 8.7	Completed ?
Customise GSETPCK	<p>The GSETPCK exit (located in the EXITSRC library) is used to set the current DB2 PACKAGESET to enable GuardIEn to connect to multiple Host Encyclopaedia. Note that you MUST install this exit even if you are not planning to connect to multiple Host Encyclopaedia as GuardIEn also uses this exit to reference the original Package Bind Collection for a standard installation.</p> <p>Note that if you alter the name of the DB2 packages defined within the exit after initial installation you should make the code changes required and then reinstall the exit.</p> <p>If you DO wish to use GuardIEn to connect to more than one Host encyclopaedia, you will need to additionally customise the GSETPCK exit to refer to a second Package Bind Collection (for full context please see the separate <i>MultiHE Install</i> document). Follow the instructions as detailed within GSETPCK itself and then continue with the base installation.</p>	YES	YES	
Execute @JOB0A	<p>Once you have amended GSETPCK to conform to your site requirements, browse the Install JCL library and submit job @JOB0A This DB2 pre-compile/compile/links the GSETPCK program into the G8EXITn DLL ready for use by the rest of the GuardIEn application. Please note that even if you do not make changes to GSETPCK it is still necessary to implement GSETPCK to ensure the correct GuardIEn collection is set.</p> <p>Ensure you receive a return code of 4 or less. Any higher and the program will not have compiled correctly.</p>	YES	YES	
Execute @JOB1A	<p>Browse the Install JCL library and submit job @JOB1A to link-edit all the GuardIEn load modules into 'executable' load modules. Due to the number of load modules that may be involved the job is actually a number of separate link jobs all with the same Jobname – so they will run sequentially when submitted.</p> <p>Please ensure that each step in each of the jobs completes with a return code of 4 or less.</p>	YES	YES	

Install/Upgrade Database Structures

Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn 8.7	Completed ?
<p>Execute @JOB2N</p>	<p>If this is a new installation of GuardIEn then you should review the GDNEW member in the DB2CTL library. It contains the DDL to create a new GuardIEn database – and although the DDL will have been configured based on the variables entered in the Installation Suite you may wish to verify the information defined.</p> <p>For example, please ensure the SQLID used has the necessary DBA access to create the various DB2 objects (e.g. DBADM, USE of STOGROUP, USE of BUFFERPOOL, BINDADD etc) and that the DB2 storage groups defined in the installation suite exist prior to attempting to create the GuardIEn database – at least DBADM will be necessary.</p> <p>Browse the Install JCL library and submit job @JOB2N to create the GuardIEn database and associated GuardIEn table views.</p> <p>Please ensure that each step completes with a return code of zero (0) – although you may have to scan the individual SQL statement return codes rather than rely on the overall job return code.</p>	<p>YES</p>	<p>N/A</p>	
<p>Review GuardIEn DDL requirements prior to Release GuardIEn 8.0</p>	<p>IF YOU ARE NOT AT GUARDIEN 8.5 OR HIGHER READ THIS SECTION</p> <p>If you are upgrading an existing GuardIEn system prior to Release 8.5, then the following members in the DB2CTL library contain the necessary DDL. It is recommended that you take a full image copy (AND a DB2 UNLOAD) of the database before applying any of the changes. This process has to be carried out manually.</p> <p>For the upgrades from GuardIEn 7.6, 7.7, 7.8, 8.0 and 8.1 table structures it was necessary to produce a number of separate DDLs to complete the extension of certain fields in a number of tables. In DB2 the only way to achieve this is by DROPPING and RECREATING the relevant table. Before proceeding with these changes, we therefore recommend you perform some UNLOADs of any tables affected by these DROP/RECREATES to backup your data in the event of problems during the redefinition processing.</p> <p>It is also assumed in the supplied DDL that you are using the IBM recommended single table/tablespace structure for GuardIEn introduced in GuardIEn 4.2 onwards. Failure to apply this structure prior to execution of the following upgrade DDL may result in DATA LOSS.</p> <p> IMPORTANT NOTE - PLEASE READ THIS SECTION</p> <p>If you plan to run your existing version of GuardIEn concurrently with the new version then be aware that the 'drop table' redefinition processes above will also drop existing packages to those tables in your present GuardIEn version so a REBIND of those packages will be required.</p>	<p>N/A</p>	<p>N/A</p>	

Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn 8.7	Completed ?
Review GuardIEn DDL requirements prior to Release GuardIEn 8.5	<p>IF YOU ARE NOT AT GUARDIEN 8.5 OR HIGHER READ THIS SECTION</p> <p>To upgrade the GuardIEn tables to the lowest supported GuardIEn Release (8.7) you will need to run the following...</p> <p>From GuardIEn 7.6, submit OGD7687 as contained within the Install JCL library. From GuardIEn 7.7, submit OGD7787 as contained within the Install JCL library. From GuardIEn 7.8, submit OGD7887 as contained within the Install JCL library. From GuardIEn 8.0, submit OGD8087 as contained within the Install JCL library. From GuardIEn 8.1, submit OGD8187 as contained within the Install JCL library.</p> <p>Do NOT proceed with the installation until this work is successfully completed. If you are upgrading from a release prior to GuardIEn 7.6 please contact IET support for guidance.</p>	N/A	N/A	
Review GuardIEn DDL requirements prior to Release GuardIEn 7.7	<p>IF YOU ARE NOT AT GUARDIEN 7.7 OR HIGHER READ THIS SECTION</p> <p>Browse the Install JCL library and submit job OGDCCMA to create a backup copy of the present CCM_DELLINK table prior to a restructure. The current data is placed within a table CCM_TEMP.</p> <p> IMPORTANT NOTE - PLEASE READ THIS SECTION</p> <p>We recommend you review the primary/secondary allocations for the temporary tablespace & index created by this JCL to ensure it is large enough to accommodate the extracted rows.</p> <p>Please ensure that each step completes with a return code of zero (0) – although you may have to scan the individual SQL statement return codes rather than rely on the overall job return code.</p>	N/A	N/A	
Review GuardIEn DDL requirements prior to Release GuardIEn 7.7	<p>IF YOU ARE NOT AT GUARDIEN 7.7 OR HIGHER READ THIS SECTION</p> <p>Browse the Install JCL library and submit job OGDCCMB to implement the data structure (DDL) changes for the restructuring of the GuardIEn deliverable linkage table (CCM_DELLINK).</p> <p> IMPORTANT NOTE - PLEASE READ THIS SECTION</p> <p>Make sure OGDCCMA completed successfully and extracted all the rows contained within the CCM_DELLINK table before submitting this job. This restructure requires the CCM_DELLINK table to be dropped and recreated and so for this reason it is strongly recommended that you UNLOAD the existing CCM_DELLINK table before executing this JCL should any problems arise.</p> <p>Please ensure that each step completes with a return code of zero (0) – although you may have to scan the individual SQL statement return codes rather than rely on the overall job return code.</p>	N/A	N/A	


Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn 8.7	Completed ?
Review GuardIEn DDL requirements prior to Release GuardIEn 7.7	<p>IF YOU ARE NOT AT GUARDIEN 7.7 OR HIGHER READ THIS SECTION</p> <p>Browse the Install JCL library and submit job OGDCCMC to clean-up the CCM_TEMP table created to copy the data in the old CCM_DELLINK table. It removes the temporary table and tablespace created by the OGDCCMA job. Only run this job once you have confirmed that OGDCCMB completed successfully.</p> <p>Please ensure that each step completes with a return code of zero (0) – although you may have to scan the individual SQL statement return codes rather than rely on the overall job return code.</p>	N/A	N/A	
Review GuardIEn DDL requirements prior to Release GuardIEn 7.8	<p>IF YOU ARE NOT AT GUARDIEN 7.8 OR HIGHER READ THIS SECTION</p> <p>Browse the Install JCL library and submit job OGDCCAA to create a backup copy of the present CCA_TXTBLK table prior to a restructure. The current data is placed within a table CCA_TEMP.</p> <p> IMPORTANT NOTE - PLEASE READ THIS SECTION</p> <p>We recommend you review the primary/secondary allocations for the temporary tablespace & index created by this JCL to ensure it is large enough to accommodate the extracted rows.</p> <p>Please ensure that each step completes with a return code of zero (0) – although you may have to scan the individual SQL statement return codes rather than rely on the overall job return code.</p>	N/A	N/A	
Review GuardIEn DDL requirements prior to Release GuardIEn 7.8	<p>IF YOU ARE NOT AT GUARDIEN 7.8 OR HIGHER READ THIS SECTION</p> <p>Browse the Install JCL library and submit job OGDCCAB to implement the data structure (DDL) changes for the restructuring of the GuardIEn Text Block table (CCA_TXTBLK).</p> <p> IMPORTANT NOTE - PLEASE READ THIS SECTION</p> <p>Make sure OGDCCAA completed successfully and extracted all the rows contained within the CCA_TXTBLK table before submitting this job. This restructure requires the CCA_TXTBLK table to be dropped and recreated and so for this reason it is strongly recommended that you UNLOAD the existing CCA_TXTBLK table before executing this JCL should any problems arise.</p> <p>Please ensure that each step completes with a return code of zero (0) – although you may have to scan the individual SQL statement return codes rather than rely on the overall job return code.</p>	N/A	N/A	
Review GuardIEn DDL requirements prior to Release GuardIEn 7.8	<p>IF YOU ARE NOT AT GUARDIEN 7.8 OR HIGHER READ THIS SECTION</p> <p>Browse the Install JCL library and submit job OGDCCAC to clean-up the CCA_TEMP table created to copy the data in the old CCA_TXTBLK table. It removes the temporary table and tablespace created by the OGDCCAA job. Only run this job once you have confirmed that OGDCCAB completed successfully.</p> <p>Please ensure that each step completes with a return code of zero (0) – although you may have to scan the individual SQL statement return codes rather than rely on the overall job return code.</p>	N/A	N/A	

Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn 8.7	Completed ?
Review GuardIEn DDL requirements prior to Release GuardIEn 8.1	<p>IF YOU ARE NOT AT GUARDIEN 8.1 OR HIGHER READ THIS SECTION</p> <p>Browse the Install JCL library and submit job OGD8587 to create a backup copy of the present CDX_CHAREQTYPE table prior to a restructure. The current data is placed within a table CDX_TEMP.</p> <p> IMPORTANT NOTE - PLEASE READ THIS SECTION</p> <p>We recommend you review the primary/secondary allocations for the temporary tablespace created by this JCL to ensure it is large enough to accommodate the extracted rows.</p> <p>Please ensure that each step completes with a return code of zero (0) – although you may have to scan the individual SQL statement return codes rather than rely on the overall job return code.</p>	N/A	N/A	
Review GuardIEn DDL requirements prior to Release GuardIEn 8.1	<p>Browse the Install JCL library and submit job OGD8587 to implement the data structure (DDL) changes for the restructuring of the GuardIEn Change Request Type table (CDX_CHAREQTYPE).</p> <p> IMPORTANT NOTE - PLEASE READ THIS SECTION</p> <p>Make sure OGD8587 completed successfully and extracted all the rows contained within the CDX_CHAREQTYPE table before submitting this job. This restructure requires the CDX_CHAREQTYPE table to be dropped and recreated and so for this reason it is strongly recommended that you UNLOAD the existing CDX_CHAREQTYPE table before executing this JCL should any problems arise.</p> <p>Please ensure that each step completes with a return code of zero (0) – although you may have to scan the individual SQL statement return codes rather than rely on the overall job return code.</p>	N/A	N/A	
Review GuardIEn DDL requirements prior to Release GuardIEn 8.1	<p>Browse the Install JCL library and submit job OGD8587 to clean-up the CDX_TEMP table created to copy the data in the old CDX_CHAREQTYPE table. It removes the temporary table and tablespace created by the OGD8587 job. Only run this job once you have confirmed that OGD8587 completed successfully.</p> <p>Please ensure that each step completes with a return code of zero (0) – although you may have to scan the individual SQL statement return codes rather than rely on the overall job return code.</p>	N/A	N/A	
Review GuardIEn DDL requirements prior to Release 8.7	<p>IF YOU ARE NOT AT GUARDIEN 8.7 READ THIS SECTION</p> <p>To upgrade the GuardIEn data structures to the lowest supported GuardIEn Release (8.7) you will need to run the following...</p> <p>From GuardIEn 8.5, submit OGD8687 as contained within the Install JCL library. From GuardIEn 8.6, submit OGD8687 as contained within the Install JCL library.</p>	N/A	N/A	
Execute @JOB2U1	<p>Browse the Install JCL library and submit job @JOB2U1 to implement the data structure (DDL) changes for the GuardIEn 8.7 to GuardIEn 8.8 upgrade.</p> <p>Please ensure that each step completes with a return code of zero (0) – although you may have to scan the individual SQL statement return codes rather than rely on the overall job return code.</p>	N/A	YES	

Create Host Encyclopaedia Connects

Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn 8.7	Completed ?
<p>Execute @JOB3N</p>	<p>Several of the GuardIEn executables SELECT/UPDATE/DELETE/CREATE data from tables in the encyclopaedia, but the generated SQL refers to the Host Encyclopaedia (HE) table using an unqualified name, e.g. SELECT OBJ_ID FROM DOBJ. Therefore, to enable GuardIEn plans/packages to bind against the HE tables, the following needs to occur...</p> <ul style="list-style-type: none"> • An alias for each table using the high-level qualifier needs to be allocated. You may need to have previously granted the necessary access rights to the GuardIEn SQLID specified to perform the grants to the Gen tables (this cannot be done by the SQLID for itself). This requires the CREATEALIAS privilege. • Appropriate levels of access for the GuardIEn SQLID to the Gen tables are GRANTED to that SQLID. • DB2 views are created against the Gen tables for the GuardIEn SQLID. <p>Browse the Install JCL library and submit job @JOB3N to create the appropriate levels of access to the Gen tables.</p> <p>Please ensure that each step completes with a return code of zero (0) – although you may have to scan the individual SQL statement return codes rather than rely on the overall job return code.</p>	<p>YES</p>	<p>N/A</p>	
<p>Review Gen DDL requirements prior to Release GuardIEn 8.1</p>	<p>IF YOU ARE NOT AT GUARDIEN 8.1 OR HIGHER READ THIS SECTION</p> <p>To upgrade the Gen access to the lowest supported GuardIEn Release (8.7) you will need to run the following...</p> <p>If upgrading from GuardIEn 7.6, 7.7 or 7.8, submit OCG7687 as contained within the Install JCL library.</p> <p><i>Or</i></p> <p>If upgrading from GuardIEn 8.0, submit OCG8087 as contained within the Install JCL library.</p> <p>Do NOT proceed with the installation until this work is successfully completed. If you are upgrading from a release prior to GuardIEn 7.6 please contact IET support for guidance.</p> <p>Note there are no Gen access upgrade jobs when upgrading from GuardIEn 8.1 onwards</p>	<p>N/A</p>	<p>N/A</p>	

Load New/Existing GuardIEn Tables with Data

Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn 8.7	Completed ?
Review GuardIEn DataLoad requirements prior to Release GuardIEn 8.7	<p>IF YOU ARE NOT AT GUARDIEN 8.7 OR HIGHER READ THIS SECTION</p> <p>To upgrade the GuardIEn tables to the lowest supported GuardIEn Release (8.7) you will need to run the following...</p> <p>From GuardIEn 7.6, submit OLD7687 as contained within the Install JCL library. From GuardIEn 7.7, submit OLD7787 as contained within the Install JCL library. From GuardIEn 7.8, submit OLD7887 as contained within the Install JCL library. From GuardIEn 8.0, submit OLD8087 as contained within the Install JCL library. From GuardIEn 8.1, submit OLD8187 as contained within the Install JCL library. From GuardIEn 8.5, submit OLD8587 as contained within the Install JCL library. From GuardIEn 8.6, submit OLD8687 as contained within the Install JCL library.</p> <p>Do NOT proceed with the installation until this work is successfully completed. You may experience a return code 8 attempting to load some changes to the CE1_TASK_TYPE table for the 7.7 upgrade. This is acceptable.</p> <p>If you are upgrading from a release prior to GuardIEn 7.6 please contact IET support for guidance.</p>	N/A	N/A	
Execute @JOB4N	<p>Browse the Install JCL library and submit job @JOB4N to load the new GuardIEn tables with the IET supplied base data.</p> <p>Please ensure that each load step completes with a return code of 4 or less. Any higher and the loads have failed for some reason for that table. When restarting a particular step remember to TERM the existing UTILITY to avoid additional job failures.</p>	YES	N/A	
Execute @JOB4U1	<p>Browse the Install JCL library and submit job @JOB4U1 to load the existing GuardIEn tables with the IET supplied base data for the GuardIEn 8.7 to GuardIEn 8.8 upgrade.</p> <p>You may encounter duplicate records warning messages when reloading the CDI_PERMVALUE table. This is acceptable.</p> <p>Please ensure that each load step completes with a return code of 4 or less. Any higher and the loads have failed for some reason for that table. When restarting a particular step remember to TERM the existing UTILITY to avoid additional job failures.</p> <p> IMPORTANT NOTE - PLEASE READ THIS SECTION</p> <p>It is also assumed in this job that you are using the IBM recommended single table/tablespace structure for GuardIEn that was introduced in GuardIEn 42 onwards. Failure to apply this structure prior to execution of this job may result in DATA LOSS.</p>	N/A	YES	

DB2 Runstats

Task or Job Name	Task Description (and Notes)	New Install	Upgrade Guard!En 8.7	Completed ?
Execute @JOB5A	<p>Browse the Install JCL library and submit job @JOB5A to perform a DB2 RUNSTATS against the Guard!En tablespaces. This is performed prior to the DB2 Plan and Package binds to optimise the DB2 access paths.</p> <p>Please ensure that the GDRSTAT step completes with a return code of zero (0).</p>	YES	YES	

Bind Packages

Task or Job Name	Task Description (and Notes)	New Install	Upgrade Guard!En 8.7	Completed ?
Execute @JOB6A	<p>Browse the Install JCL library and submit job @JOB6A to bind all the packages for the Guard!En batch, server and started task components – using a single DB2 package collection for the entire installation. To bind to a new collection will require PACKADM privilege for the Guard!En SQLID.</p> <p>Please ensure that each bind package completes with a return code of zero (0) – although you may have to scan the individual SQL statement return codes rather than rely on the overall job return code. A tip is to search through the output looking for 'UNSUCCESSFUL' for any failed bind packages.</p>	YES	YES	

Bind Plan and Grant Execution Authority to Public

Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn 8.7	Completed ?
Execute @JOB7A	<p>Browse the Install JCL library and submit job @JOB7A to initially grant access to the previously created DB2 collection and then bind the GuardIEn Plan. Note that GuardIEn has been implemented using DB2 packages and so each of the plans refer to a package list (collection id) – allowing the plan bind to only be performed once. Thereafter any changes to the application can take place at PACKAGE level.</p> <p>Please ensure that the bind plan completes with a return code of zero (0) – although you may have to scan the individual SQL statement return codes rather than rely on the overall job return code. A tip is to search through the output looking for ‘NOT SUCCESSFUL’</p> <p>Once completed, the job then grants execute authority to the GuardIEn application plan to PUBLIC.</p>	YES	YES	

DB2 Steplib in TP Monitor Definition

Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn 8.7	Completed ?
Check DB2 DSNLOAD in TP Region steplib	<p>Please ensure that your DB2 DSNLOAD library is referenced in the started task for either your CICS or IMS regions. If not, then users may encounter runtime errors when attempting to use a feature of GuardIEn called the <i>Upload Assistant</i>.</p>	YES	YES	

Install GuardIEn CICS Server Transactions into CICS Region

If you are implementing GuardIEn into a CICS TP environment (region) then please complete this section.

Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn 8.7	Completed ?																					
<p>Define GuardIEn Transaction/ Program Definitions</p> <p>(CICS Only)</p>	<p>In the CICS environment, you need to perform at least the following steps:</p> <ul style="list-style-type: none"> • Check that the CICS Region is defined with the AUTOINSTALL option. This prevents problems executing the GDNDLCT dynamic module (now located within the G8EXITn DLL) • Define a CICS transaction definition for each transaction code <p>The GuardIEn INS.JCL library contains a sample job SGDNCSD that defines all the CICS resources.</p> <ul style="list-style-type: none"> • Edit the SGDNCSD member in the JCL library, step STEPGD87 • Review the names for the CICS SDFHLOAD & CSD libraries to ensure that the correct CSD file is updated • Edit the name for the LIST that you want to add the entries to. The group name is GDNG8. <p>If you are installing the GUI interface for the first time then all the Server trancodes are new and so all will have to be defined –. GuardIEn 7.7 used a G0 (Zero) prefix GuardIEn 7.8 used a G2 (Two) GuardIEn 8.0 used a G3 (Three), GuardIEn 8.1 used a G4 (Four) prefix, GuardIEn 8.5 used a G5(Five), GuardIEn 8.6 used a G6 (Six), GuardIEn 8.7 used a G7 (Seven) and GuardIEn 8.8 uses a G8 (Eight).</p> <table border="1" data-bbox="336 972 627 1588"> <thead> <tr> <th>Trancodes</th> </tr> </thead> <tbody> <tr><td>G8AP</td></tr> <tr><td>G8A1,2,3,4</td></tr> <tr><td>G8B1</td></tr> <tr><td>G8C1,2,3,4</td></tr> <tr><td>G8D1,2,3</td></tr> <tr><td>G8E1,2</td></tr> <tr><td>G8G1,2,3</td></tr> <tr><td>G8HA</td></tr> <tr><td>G8I1,2,3,4</td></tr> <tr><td>G8K1</td></tr> <tr><td>G8L1,2,3</td></tr> <tr><td>G8M1,2,3,4</td></tr> <tr><td>G8P1,2,3,4</td></tr> <tr><td>G8S1,2,3,4</td></tr> <tr><td>G8T1</td></tr> <tr><td>G8U1,2,3,4,5</td></tr> <tr><td>G8V1,2,3</td></tr> <tr><td>G8W1,2,3</td></tr> <tr><td>G8X1,2</td></tr> <tr><td>G8Z1, G8Z3, G8Z4, G8Z5, G8Z6, G8Z7</td></tr> </tbody> </table> <p>The new 'G8' prefix in this release will allow concurrent running of all old versions of the supported levels of the GuardIEn application.</p> <p>Note that, for performance reasons, we recommend that your CICS region's EDSALIM parameter (related to provision of storage for your EDSAs) is set to no less than 400M and will ideally be set to the installation default of 800M. If not, then activities within your GuardIEn deployed CICS region may be impacted by lack of storage availability.</p>	Trancodes	G8AP	G8A1,2,3,4	G8B1	G8C1,2,3,4	G8D1,2,3	G8E1,2	G8G1,2,3	G8HA	G8I1,2,3,4	G8K1	G8L1,2,3	G8M1,2,3,4	G8P1,2,3,4	G8S1,2,3,4	G8T1	G8U1,2,3,4,5	G8V1,2,3	G8W1,2,3	G8X1,2	G8Z1, G8Z3, G8Z4, G8Z5, G8Z6, G8Z7	YES	YES	
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<p>Copy Server Load Modules to DFHRPL concatenation</p> <p>(CICS Only)</p>	<p>Copy the load modules (same as trancodes above) to a program load library for the CICS region being targeted. Alternatively, you could add the GuardIEn SVRLOAD to the DFHRPL definition of the CICS region in question. Issue a CICS NEWCOPY command to refresh the load modules</p> <p>- CEMT SET PROG(G8*) NEWCOPY</p> <p>Note that, unless you define the GuardIEn SVRLOAD to DFHRPL, you should also copy the following dynamic exit load modules from SVRLOAD into the program load library for the CICS region being targeted:</p> <p>G8CASC, G8CASCI, G8EXITC, GNSE, GDENQDQ1</p>	<p>YES</p>	<p>YES</p>	
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Install IMS Server Transactions into IMS Region

If you are implementing GuardIEn into an IMS TP environment (region) then complete this section.

Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn 8.7	Completed ?																				
<p>Define Transaction/ Program Definitions</p> <p>(IMS Only)</p>	<p>In the IMS environment, you need to perform at least the following steps:</p> <ul style="list-style-type: none"> Define an IMS transaction definition for each transaction code via execution of an IMS Gen. Perform PSB/ACB Generation <p>The GuardIEn INSLIB library contains a sample DEFIMST that provides the IMS Generate required for each of the transactions listed below.</p> <p>The GuardIEn INSLIB library contains a sample DEFACPSB that provides the PSB/ACB Generate for each of the transactions listed below.</p> <p>If you are installing the GUI interface for the first time then all the Server trancodes are new and so all will have to be defined –. GuardIEn 7.7 used a G0 (Zero) prefix GuardIEn 7.8 used a G2 (Two) GuardIEn 8.0 used a G3 (Three), GuardIEn 8.1 used a G4 (Four) prefix, GuardIEn 8.5 used a G5(Five), GuardIEn 8.6 used a G6 (Six), GuardIEn 8.7 used a G7 (Seven) and GuardIEn 8.8 uses a G8 (Eight).</p> <table border="1" data-bbox="336 1256 627 1821"> <thead> <tr> <th>Trancodes</th> </tr> </thead> <tbody> <tr><td>G8A1,2,3,4</td></tr> <tr><td>G8B1</td></tr> <tr><td>G8C1,2,3,4</td></tr> <tr><td>G8D1,2,3</td></tr> <tr><td>G8E1,2</td></tr> <tr><td>G8G1,2,3</td></tr> <tr><td>G8HA</td></tr> <tr><td>G8I1,2,3,4</td></tr> <tr><td>G8K1</td></tr> <tr><td>G8L1,2,3</td></tr> <tr><td>G8M1,2,3,4</td></tr> <tr><td>G8P1,2,3,4</td></tr> <tr><td>G8S1,2,3,4</td></tr> <tr><td>G8T1</td></tr> <tr><td>G8U1,2,3,4,5</td></tr> <tr><td>G8V1,2,3</td></tr> <tr><td>G8W1,2,3</td></tr> <tr><td>G8X1,2</td></tr> <tr><td>G8Z1</td></tr> </tbody> </table> <p>The new 'G8' prefix in this release will allow concurrent running of all old versions of the supported levels of the GuardIEn application.</p>	Trancodes	G8A1,2,3,4	G8B1	G8C1,2,3,4	G8D1,2,3	G8E1,2	G8G1,2,3	G8HA	G8I1,2,3,4	G8K1	G8L1,2,3	G8M1,2,3,4	G8P1,2,3,4	G8S1,2,3,4	G8T1	G8U1,2,3,4,5	G8V1,2,3	G8W1,2,3	G8X1,2	G8Z1	<p>YES</p>	<p>YES</p>	
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G8A1,2,3,4																								
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<p>Copy Server Load Modules to IMS Region</p> <p>(IMS Only)</p>	<p>Copy the load modules (same as trancodes above) to a program load library for the IMS region being targeted. Alternatively, you could add the GuardIEn SVRLOAD to the Steplib definition of the IMS region in question.</p> <p>Note that, unless you define the GuardIEn SVRLOAD to IMS Region steplib, you should also copy the following dynamic exit load modules from SVRLOAD into the program load library for the IMS region being targeted:</p> <p>G8CASC, G8CASCI, G8EXITI, GNSE, GDENQDQ1</p>	<p>YES</p>	<p>YES</p>	
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Define Gen Runtimes into CICS Region

If you are implementing GuardIEn into a CICS TP environment (region) then please complete this section.

Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn 8.7	Completed ?
Define Gen Runtime Transaction/ Program Definitions (CICS Only)	<p>In the CICS environment, you need to perform at least the following steps:</p> <ul style="list-style-type: none"> Assess whether you have previously installed the CICS Gen runtimes into the CICS region and, if so, confirm the present Gen release of those runtimes. <p>The GuardIEn INS.JCL library contains a sample job SCACSD that defines all the CICS resources for Gen. As GuardIEn requires a Gen 8.6 runtime environment it is important to bring the CICS region concerned up to that Gen level.</p> <ul style="list-style-type: none"> Edit the SCACSD member in the JCL library Review the names for the CICS SDFHLOAD & CSD libraries to ensure that the correct CSD file is updated Edit the group name if required. The default group is set as GENGRP. Comment out the Gen steps that are not required. STEPCA80 contains the CICS runtimes introduced in CA Gen 8.0, STEPCA85 the runtimes introduced in CA Gen 8.5 and STEPCA86 the runtimes introduced in Gen 8.6. <p>You should only need to run the steps in this job that bring the environment up to the Gen 8.6 level (e.g. if you are already running CA Gen 8.5 in the CICS region you should only need to run STEPCA86 to achieve this).</p>	YES	YES	

Install Gen Runtimes into TP Environment

Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn 8.7	Completed ?
<p>Check CODEPAGE TRANSLATION requirements</p> <p>(optional)</p>	<p>The Gen runtime modules TIRCRUNC for CICS or TIRCRUNI for IMS perform codepage translation between the server and client. These are supplied with the default server codepage of 037 enabled. If you need to support an alternative codepage for your site, then follow these instructions:</p> <p>Amend the TIRXINFO exit as located in the GuardIEn EXITSRC library:</p> <ul style="list-style-type: none"> • Locate the line DEFODEP DC CL8'0000037' and change '0000037' to the value of the EBCDIC codepage required. • Locate the line DEFPADCH DC XL4'0000040' and change '0000040' to the value of the padding character for the EBCDIC code page selected. <p>Amend the sample JCL member SMKCRUN located in the Installation JCL library:</p> <ul style="list-style-type: none"> • Confirm that the library CEE.SCEEMAC corresponds to the z/OS macro library at your site. If not then amend all occurrences to the correct name. • Confirm that the library SYS1.MACLIB corresponds to the z/OS maclib containing the YREGS. • Amend the GEN step SYSIN card by supplying the code page pairs required to support the server default code page: The first number is the EBCDIC code page value, the 2nd is the ASCII code page value. NOTE...leave all the entries marked 'Required' but remove all the comments. • Submit the SMKCRUN job. Depending on your selected TP monitor, an amended version of TIRCRUNC (CICS) or TIRCRUNI (IMS) will be created into the GuardIEn SVRLOAD library. <p>For further information, please consult the <i>Gen Installation Guide for Host Encyclopedia and Host Construction</i> manual.</p>	YES	YES	
<p>Copy Gen Runtimes to CICS/IMS Region steplib</p>	<p>The CICS or IMS region used by GuardIEn must be configured such that the GuardIEn Server transactions can access the Gen runtime software modules.</p> <p>The GuardIEn INS.JCL library contains a sample job SCPYGEN that will copy the appropriate runtimes FROM a Gen runtime library TO the required CICS/IMS Region steplib.</p> <p>The Gen Runtime modules should be copied from the IET supplied INS.GENLOAD or, if you have a Gen 8.6 HE or IT installed, from the runtime load library CEHBPLD1. As GuardIEn 8.8 is a Gen 8.6 generated application you must upgrade the IMS or CICS region used to Gen 8.6.</p> <ul style="list-style-type: none"> • Edit the SCPYGEN member in the JCL library. • Review the name for the source library <Source Gen Library here> • Review the name for the target library <Target Server Library here> <p> IMPORTANT NOTE:</p> <p>The target library used to contain the Gen runtime modules must be a PDSE.</p> <p>For full details relating to these requirements, please see the Gen 8.6 document <i>Gen z/OS Installation Guide, Chapter 11 (Configuring IMS and CICS)</i>.</p>	YES	YES	

Install GuardIEn Started Tasks

Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn 8.7	Completed ?																					
Install GDTD or GDTD1 Started Task?	<p>The Task Dispatcher started task needs to be implemented if you are using the Task Assistant. As standard, the Task Dispatcher submits jobs to the JES internal reader to perform the required functions. When these jobs complete, they mark the task as complete or failed.</p> <p>In some circumstances (i.e. a JCL error) the batch job terminates before the status of the task can be updated. In this situation, the task remains in the started state and needs to be manually marked as failed. For tasks that run in overnight queues, this means that no further tasks run in these queues until the task is marked as failed.</p> <p>The Task Dispatcher Job Check Interface (JCI) addresses this issue by monitoring the status of the submitted job. If the task dispatcher detects that the job has finished execution but the status of the task has not been updated, it marks the task as failed.</p> <p>If you wish to install the JCI version of the Task Dispatcher, skip the next section and go to the 'Install GDTD1 (JCI)' step.</p>	YES	YES																						
Install GDTD (non-JCI) <i>Or...</i>	<p>To start the Task Dispatcher started task...</p> <ul style="list-style-type: none"> Copy the GDTASKD member from the GuardIEn PROCLIB library to your system proclib (i.e. SYS1.PROCLIB). The GDIOVF and GDSTEP INCLUDE JCL members should also be copied. Copy the GDSETPRM INCLUDE JCL from the GuardIEn GEN PROCLIB library to your system proclib (i.e. SYS1.PROCLIB). Verify that the necessary GuardIEn configuration has been performed. This is detailed below. Start the started task (i.e. /S GDTASKD) <p>To verify if the initial GuardIEn configuration has been performed to enable the Task Dispatcher started task to run...</p> <ul style="list-style-type: none"> Logon to the GuardIEn system administration client and access System Parameters Check that the values for the following system parameters <table border="1" data-bbox="331 1305 1126 1637"> <thead> <tr> <th>Code</th> <th>Description</th> <th>Example Value</th> </tr> </thead> <tbody> <tr> <td>TASKD</td> <td>YES specifies that the Task Dispatcher is used.</td> <td>YES</td> </tr> <tr> <td>TSOPROC</td> <td>Specifies the JCL procedure used to execute a GuardIEn System Update</td> <td>GDSOT if using the task dispatcher</td> </tr> <tr> <td>DOWNDSN</td> <td>Library prefix for download tran files</td> <td>GDN.DOWNLOAD</td> </tr> <tr> <td>UPLDSN</td> <td>Library prefix for upload tran files</td> <td>GDN.UPLOAD</td> </tr> <tr> <td>VERDSN</td> <td>Library prefix for verify tran files</td> <td>GDN.VERIFY</td> </tr> <tr> <td>JOBCHECK</td> <td>Specifies if job check interface is used.</td> <td>NO</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Logon to the Queue Manager and check that a <TASKD> queue has been defined. If there isn't a queue with a code of <TASKD>, create one using the File->Create <TASKD> queue menu item. Use the Queue Manager function Set Task Priorities to review the default Task Type Priorities and adjust these as required. 	Code	Description	Example Value	TASKD	YES specifies that the Task Dispatcher is used.	YES	TSOPROC	Specifies the JCL procedure used to execute a GuardIEn System Update	GDSOT if using the task dispatcher	DOWNDSN	Library prefix for download tran files	GDN.DOWNLOAD	UPLDSN	Library prefix for upload tran files	GDN.UPLOAD	VERDSN	Library prefix for verify tran files	GDN.VERIFY	JOBCHECK	Specifies if job check interface is used.	NO	YES	YES	
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TSOPROC	Specifies the JCL procedure used to execute a GuardIEn System Update	GDSOT if using the task dispatcher																							
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UPLDSN	Library prefix for upload tran files	GDN.UPLOAD																							
VERDSN	Library prefix for verify tran files	GDN.VERIFY																							
JOBCHECK	Specifies if job check interface is used.	NO																							

Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn 8.7	Completed ?																					
...Install GDTD1 (JCI)	<p>To start the Task Dispatcher JCI started task...</p> <ul style="list-style-type: none"> • APF authorise the <PREFIX>.TDLOAD and associated <PREFIX>.GEN.RUNLOAD library. This is necessary because of the usage of an extended status SSI call requiring that the TASKD runs in supervisor state instead of problem state which in turn requires the program to run in AC(1). • Copy the GDTASKD1 member from the GuardIEn PROCLIB library to your system proclib (i.e. SYS1.PROCLIB). You may want rename it GDTASKD in SYS1.PROCLIB. The GDIOVF and GDSTEP INCLUDE JCL members should also be copied. • Copy the GDSETPRM INCLUDE JCL from the GuardIEn GEN PROCLIB library to your system proclib (i.e. SYS1.PROCLIB). • Verify that the necessary GuardIEn configuration has been performed. This is detailed below. • Start the started task (i.e. /S GDTASKD) <p>To verify if the initial GuardIEn configuration has been performed to enable the Task Dispatcher started task to run...</p> <ul style="list-style-type: none"> • Logon to the GuardIEn system administration client and access System Parameters • Check that the values for the following system parameters <table border="1" data-bbox="333 909 1125 1240"> <thead> <tr> <th>Code</th> <th>Description</th> <th>Example Value</th> </tr> </thead> <tbody> <tr> <td>TASKD</td> <td>YES specifies that the Task Dispatcher is used.</td> <td>YES</td> </tr> <tr> <td>TSOPROC</td> <td>Specifies the JCL procedure used to execute a GuardIEn System Update</td> <td>GDTSTOT if using the task dispatcher</td> </tr> <tr> <td>DOWNDSN</td> <td>Library prefix for download tran files</td> <td>GDN.DOWNLOAD</td> </tr> <tr> <td>UPLDSN</td> <td>Library prefix for upload tran files</td> <td>GDN.UPLOAD</td> </tr> <tr> <td>VERDSN</td> <td>Library prefix for verify tran files</td> <td>GDN.VERIFY</td> </tr> <tr> <td>JOBCHECK</td> <td>Specifies if job check interface is used.</td> <td>YES</td> </tr> </tbody> </table> <ul style="list-style-type: none"> • Logon to the Queue Manager and check that a <TASKD> queue has been defined. If there isn't a queue with a code of <TASKD>, create one using the File->Create <TASKD> queue menu item. • Use the Queue Manager function Set Task Priorities to review the default Task Type Priorities and adjust these as required.. 	Code	Description	Example Value	TASKD	YES specifies that the Task Dispatcher is used.	YES	TSOPROC	Specifies the JCL procedure used to execute a GuardIEn System Update	GDTSTOT if using the task dispatcher	DOWNDSN	Library prefix for download tran files	GDN.DOWNLOAD	UPLDSN	Library prefix for upload tran files	GDN.UPLOAD	VERDSN	Library prefix for verify tran files	GDN.VERIFY	JOBCHECK	Specifies if job check interface is used.	YES	YES	YES	
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UPLDSN	Library prefix for upload tran files	GDN.UPLOAD																							
VERDSN	Library prefix for verify tran files	GDN.VERIFY																							
JOBCHECK	Specifies if job check interface is used.	YES																							

Task or Job Name	Task Description (and Notes)	New Install	Upgrade GuardIEn 8.7	Completed ?
Install GDPL Started Task	<p>The PAD List started task manages the production of action diagram prints. If you are not using the PAD List started task, action diagram prints are produced by batch jobs that are submitted when the user needs to view an action diagram.</p> <p>The advantages of the PAD List started task over submitted batch jobs are...</p> <ul style="list-style-type: none"> • There is no need to implement the batch job submission facility from CICS/IMS (i.e. no need for the GDJCLSUB exit) • Creation of PAD lists is more rapid since the user does not have to wait for a batch job to execute <p>To start the PAD List started task...</p> <ul style="list-style-type: none"> • Logon to the GuardIEn system administration client and access System Parameters • Check that the PADLIST system parameter is set to the value TASK. If the system parameter does not exist, add a new system parameter (code=PADLIST, text value=TASK). • Copy the GDPL, GDIOVF and GDSTEPT INCLUDE members from the GuardIEn PROCLIB library to your system proclib (i.e. SYS1.PROCLIB). • Copy the GDSETPRM and GDSPF INCLUDE members from the GuardIEn GEN PROCLIB (GEN.PROCLIB) library to your system proclib (i.e. SYS1.PROCLIB). Note if you have already copied members GDSETPRM, GDIOVF and GDSTEPT while setting up the Task Dispatcher started task, these do not need to be copied again. • Start the started task (i.e. /S GDPL) <p>If you are using multiple host encyclopaedias, you will need to start one instance of the started task for each encyclopaedia. Each instance should have a different name, i.e. GDPL1 for GuardIEn system 1, GDPL2 for GuardIEn system 2, etc.</p>	YES	YES	
Install GDSYNC Started Task (optional)	<p>The Sync Server started task is used to synchronise the GuardIEn Change Request database with an external data source. You will not need to start this started task unless you have a specific requirement for synchronisation.</p> <p>For more information on the Sync Server, consult the GuardIEn user documentation.</p>	YES	YES	

Appendix A – HE Server User Exits

GuardIEn contains several user exits for the HE server that can be customised if required. These exits are implemented as COBOL external action blocks on the z/OS platform.

The list of supported exits is as follows. The GuardIEn documentation provides greater detail on the use of the exits.

Exit Source Member	Latest Release	Changed Date	Usage	Dynamic	Changed in GuardIEn 8.8?
GDAVF2	77.2	N/A	Batch/Server	YES	NO.
GDAVF3	77.0	N/A	Batch/Server	YES	NO.
GDAVF44	77.0	N/A	Batch/Server	YES	NO.
GDAVF45	77.0	N/A	Batch/Server	YES	NO.
GDAVF46	77.0	N/A	Batch/Server	YES	NO.
GDBINDEX	86.0	28/08/2014	Batch	YES	NO.
GDCCN0EX	77.0	05/02/2007	Batch/Server	YES	NO.
GDCODEEX	77.0	05/02/2007	Batch/Server	YES	NO.
GDCRUPEX	77.0	05/02/2007	Batch/Server	YES	NO.
GDEVNTEX	80.0	09/09/2009	Batch/Server/Task Dispatcher	YES	NO.
GDFTPXO	81.0	07/09/2010	Server	YES	NO.
GDGNUVAR	87.0	12/03/2018	Batch	YES	NO.
GDHXGFTP	81.0	06/09/2010	Batch	YES	NO.
GDINFOEX	81.0	28/06/2010	Server	YES	NO.
GDJCLEX	88.0	23/06/2021	Batch/Server/Task Dispatcher	YES	YES. Changed to support 100 bytes passwords and passphrase
GDLOWREX	78.0	30/07/2008	Batch/Server	YES	NO.
GDPACKEX	81.0	06/09/2010	Batch	YES	NO.
GDPMIGEX	1.0	06/05/2003	Batch	YES	NO.
GDPUCKEX	77.0	26/03/2007	Batch/Server	YES	NO.
GDPUEXCH	77.0	20/12/2007	Batch	YES	NO.
GDPUEXIT	81.1	06/02/2012	Batch	NO	NO.
GDPWDEX	88.0	23/06/2021	Server	YES	YES. Import views changed to support 100-byte passwords and passphrase
GDSCCSEX	80.0	22/09/2009	Server	YES	NO.
GDSUBEX2	81.0	10/02/2011	Server	YES	NO.
GDSUBSEX	77.0	05/02/2007	Server	YES	NO.
GDSYNRMT	53.0	10/06/2002	Server	YES	NO.
GDUAUFEX	80.0	13/09/2011	Batch/Server	YES	NO.
GDUSGIEX	80.0	30/11/2009	Server	YES	NO.
GDUSGLEX	81.0	24/02/2012	Server	YES	NO.
GDUSGPEX	80.0	24/03/2010	Server	YES	NO.
GDUSGVEX	80.0	30/11/2009	Server	YES	NO.
GDVALEII	77.0	05/02/2007	Batch/Server	YES	NO.
GDVMIGEX	80.0	13/09/2011	Batch/Server	YES	NO.
GDVREXIT	77.0	05/02/2007	Batch/Server	YES	NO.
GDVSEXIT	77.0	05/02/2007	Batch/Server	YES	NO.

The 'changed in' section indicates changes since the previous commercial GuardIEn release (GuardIEn 8.7). If you are upgrading from a release previous to this then you should also review all the exit import/export views in previous releases to assess the implications OR contact IET for guidance.

Please note that in GuardIEn 8.8, the dynamic exits have been implemented into a single DLL (G8EXITn) which allows for concurrent execution with previous versions of GuardIEn.

If you are using any of the user exits, please check to ensure that you have upgraded your exit to reflect changes in the import/export views or processing logic of the standard IET-supplied exits above. The latest version of the exit can be found in the EXITSRC library (*accessible via the Installation Suite option 5.6*). If you have customised the exits, then you should copy your custom code into the default exit and then use the supplied JCL for each EXITSRC member to (optionally) pre-compile then compile/linkedit and (optionally) bind as follows...

The EXITJCL library (*accessible via the installation suite option 5.8*) contains a compile job for each exit identified with the same name as the exit. The object code is written to the EXITDLCL library for the Dynamic Exits and EXITCALL for any modules that remain non-dynamic (e.g. GDPUEXIT).

The GDAVF2, GDAVF3, GDAVF44, GDAVF45, GDAVF46 exits are for the VerifiEr product and are supplied as models provided by IET with VerifiEr. Any code changes required are made within the model and then generated (either locally or using host construction). The resulting module should then be placed within the GuardIEn EXITSRC library and the associated compile JCL within INS.EXITJCL used to deliver the changes into the G8EXITn DLL.

For details about the IET supplied model exits, please see the main *VerifiEr* documentation under *VerifiEr customisation*.

Appendix B - Supporting Websphere MQ Series

GuardIEn can use MQ series as the communications middleware for the client to server communications. Please read the Gen 8.6 technical pre-requisites documentation for the 3rd party software requirements.

To enable MQ series support, you need to define MQ series queues for the GuardIEn server modules and customise the GuardIEn clients to enable them to communicate via MQ.

The GuardIEn Server transactions execute under CICS or IMS and these transactions are not affected if MQ series is used. With MQ support, the transactions are executed via MQ series as opposed to TCP/IP direct connect or LU 6.2.

The steps required to implement MQ support are as follows:

Verify MQ environment

The GuardIEn transactions will be executed by the MQ CICS or IMS adaptor. You must therefore verify that the relevant MQ series Adaptor has been installed into your CICS or IMS region.

The reply message is sent to a dynamic reply-to queue that uses SYSTEM.DEFAULT.MODEL.QUEUE as the model. Verify that this model queue has been defined to MQ series.

Check the name of the CICS or IMS initiation queue, e.g. CICS01.INITQ

Define MQ queues and trigger processes

The default mechanism for supporting the GuardIEn Servers is to define an MQ local queue for each GuardIEn server transaction. This queue has an associated trigger process that places the message onto a CICS or IMS initiation queue. The CICS or IMS MQ Adaptor will then get the message from the queue and execute the GuardIEn Server transaction.

You will therefore need to define a local queue (on the MQ Queue Manager) for each GuardIEn Server and an associated trigger process. If you want to use the Gen Transaction Dispatcher for CICS (TDC), then you can configure this instead of the default GuardIEn setup for MQ.

To use the GuardIEn default configuration (one queue per server), first edit the GDINMQ member in the GuardIEn Install CLIB library (default: INS.CLIB). Verify that the APPLTYPE is correctly set to CICS or IMS and that the initiation queue is correct.

Then edit the sample MQ installation job SMQDEF job in the installation JCL library. Check that the queue manager name is correct and that the correct high-level qualifier has been provided for the MQ software. Then submit the job to define the queues and processes to MQ series. Verify that the job completed and all definitions were successful.

Configure Clients

Install the GuardIEn client software, selecting MQ as the communications middleware. This will create the commcfg.ini file to correctly establish connections to MQ. See the GuardIEn client installation guide for further details.

Verify that the MQ client software has been installed on the client machine and the necessary environment variables defined to connect to the correct queue manager and channel.

Test the connections by logging onto GuardIEn.

Appendix C – SYSPLEX and Multi Instance TD/GDPL considerations

Gen uses MVS Global Resource Serialization “GRS” or ENQ/DEQ to serialise access to models and thus avoid inconsistent updates to models or subsets.

To avoid submitting a task that would conflict with another process and thus cause a resource conflict, the GuardIEn Task Dispatcher checks the ENQs issued by the Gen host encyclopaedia to monitor model and subset locks. genIE also issues ENQs using the same resource names as Gen to ensure that genIE updates are serialised with Gen updates.

The scope of the Gen ENQ is SYSTEM which means that the same resource can be used by programs in more than one address space on the same system.

Setup Support for Multiple LPARs

If the GuardIEn Task Dispatcher or CICS/IMS servers execute in a different LPAR to the TSO system used for the Gen encyclopaedia, the scope of these ENQs will need to be changed from SYSTEM to SYSTEMS so that the resource scope is shared across all systems in the sysplex.

This is achieved by using the System Inclusion Resource Name List (RNL) located in the GRSRNLxx member in the PARMLIB to define that the Gen ENQs that are specified with a scope of SYSTEM are changed to a scope of SYSTEMS:

```
RNLDEF RNL(INCL) TYPE(GENERIC) QNAME(IEFENCY)
```

Setup Multiple Instance Task Dispatcher and PAD List Started Task

To enable multiple instances of the Task Dispatcher and PASD List Started Task operating on different LPARs and sharing the same DB2 tables:

1. Create a system parameter with a code of MULTINST and a text value of YES.
2. Create the started task JCL for the second instance as a copy of the first instance JCL. The second instance should be given a different name so that MVS console commands can be directed at a specific instance.
3. Setup an RNL Include statement in the GRSRNLxx member in the PARMLIB to change the scope of GuardIEn ENQs from SYSTEM to SYSTEMS:

```
RNLDEF RNL(INCL) TYPE(GENERIC) QNAME(GUARDIEN)
```

You can use the DISPLAY GRS command on both LPARS once the RNL definitions are in place and the started tasks executing to ensure they are defined correctly for the RNL inclusions.

Appendix D – CICS PHASEIN Option (CICS only)

By default, the GuardIEn mechanism for automating the deployment of changed CICS application load modules utilises a CICS NEW COPY via load module GNSE deployed into the target CICS region. However, if desired, this behaviour can be altered to invoke a CICS PHASEIN by deployment of a different version of the GNSE module that is also supplied with the GuardIEn HE installation.

To activate this functionality, you will need to firstly rename the GuardIEn SVRCALL member GNSE to GNSEO, rename member GNSE2 to GNSE and then relink the GNSE load module. This ensures the CICS PHASEIN call replaces the default CICS NEW COPY.

Appendix E – GNSE Options for CICS NEW COPY/PHASEIN (CICS only)

By default, the GuardIEn mechanism for automating the deployment of changed application CICS load modules utilises the standard mirror transaction (CSMI) as defined to DFHMIRS to invoke a CICS NEW COPY or PHASEIN via a batch job (GNSEBTCH). For most sites use of CSMI will be acceptable although should you need to utilise a separate and discrete mirror transaction then GNSE may itself be used, defined as a transaction based on CSMI.

GNSE will also have to be defined with the necessary authorities to run CSMI requests otherwise security errors will be encountered when the GNSEBTCH batch job attempts to invoke GNSE via the mirror transaction.

To activate this functionality, you will need to firstly rename the GuardIEn BATCALL member GNSEBTCH to GNSEBTCO, rename member GNSEBTC2 to GNSEBTCH and then relink GNSEBTCH. This ensures a TRANSID with the GNSE transaction is passed into CICS instead of the default CSMI.