1

Installing BASEstar Graphics Enabler on OpenVMS AXP Systems

This chapter describes the preparation, installation instructions, and tasks performed after installation for the BASEstar Graphics Enabler.

Preparing for BASEstar Graphics Enabler Installation

Your distribution kit includes a letter titled *Read Before Installing BASEstar Graphics Enabler*. This letter discusses important information that might not be included in this chapter. You should read this letter now.

Registering Your Software License

Before you install and run BASEstar Graphics Enabler Version 2.3, you must first register a License Product Authorization Key (License PAK) using the License Management Facility (LMF). The License PAK may be shipped along with the kit if you ordered the license and media together; otherwise, it is shipped separately to a location based on your license order.

You must register and load your license for the BASEstar Graphics Enabler before you start the installation in order to run the Installation Verification Procedure (IVP) and use the software.

The BASEstar Graphics Enabler has several license options, one of which is Personal Use licensing. A Personal Use license must be reserved to a particular OpenVMS user name before it can be loaded. To reserve and load a license, use the following commands:

```
$ LICENSE MODIFY BGE-DEV /RESERVE=username
$ LICENSE LOAD BGE-DEV
```

where **username** is the name of the OpenVMS user for whom the license will be reserved.

Required Hardware

The minimum hardware required for the successful installation and operation of BASEstar Graphics Enabler software components is a Workstation or terminal that supports the X Window System.

Required Operating System Components and Software

Before installing BASEstar Graphics Enabler on OpenVMS AXP systems, ensure that OpenVMS AXP Version 6.1 or higher and the necessary components of DECwindows Motif for OpenVMS AXP are already installed.

Installing BASEstar Graphics Enabler on OpenVMS AXP Systems

Installation Procedure Requirements

This section describes the requirements for installing BASEstar Graphics Enabler (privileges, disk space, and backing up your system disk).

Privileges

To install the BASEstar Graphics Enabler, you must be logged in to an account that has SETPRV or at least the following privileges:

- CMKRNL
- WORLD
- SYSPRV

Disk Space

BASEstar Graphics Enabler's requirement for free disk storage space are different during installation and after installation. Table 1–1 summarizes the storage requirements. The space requirements are approximations; actual sizes may vary depending on your system environment and configuration.

Table 1–1 Disk Space Requirements

Component	Blocks During Installation	Blocks After Installation
Run-time	12,000	6,000 blocks
Development	28,000	14,000 blocks
Programming	6,000	3,000 blocks
Demos	20,000	10,000 blocks

Backing Up Your System Disk

At the beginning of the installation, VMSINSTAL asks if you have backed up your system disk. Digital recommends that you do a system disk backup before installing any software.

Use the backup procedures that are established at your site. For details on performing a system disk backup, see the section on the Backup Utility in the OpenVMS System Management Subkit.

Installing BASEstar Graphics Enabler

When your system meets all the hardware and software prerequisites, you can install the BASEstar Graphics Enabler. The installation takes from 2 to 30 minutes, depending on system load and configuration and the installation options selected.

Install the BASEstar Graphics Enabler on OpenVMS AXP systems using the following steps:

1. Log in to a privileged system manager's account.
2. Set the default directory to SYS$UPDATE:

   ```
   $  SET DEFAULT SYS$UPDATE
   ```

3. Invoke VMSINSTAL:

   ```
   $  @VMSINSTAL BGE023 device:
   ```

   where **BGE023** is the kit name and **device:** is the name of the device on which you plan to mount your media or the current location of the kit.

VMSINSTAL prompts you for information during the installation.

Example 1–1 shows the output from a BASEstar Graphics Enabler installation.

Example 1–1 Installation Output

```
 OpenVMS AXP Software Product Installation Procedure V6.1

It is 14-MAR-1996 at 12:21.

Enter a question mark (?) at any time for help.

%VMSINSTAL-W-ACTIVE, The following processes are still active:
        Jones
        Smith
* Do you want to continue anyway [NO]? y
* Are you satisfied with the backup of your system disk [YES]? y

The following products will be processed:

  BGE V2.3

 Beginning installation of BGE V2.3 at 12:22

%VMSINSTAL-I-RESTORE, Restoring product save set A ...
%VMSINSTAL-I-RELMOVED, Product's release notes have been moved to SYS$HELP.

* Do you want to purge files replaced by this installation [YES]? y

    The BASEstar Graphics Enabler kit consists of the following components:

    Component           Contents                        Disk space needed
    ---------           --------                        -----------------
    Development         Graphic editor and tools           14000 blocks
                        for developing models

    Runtime             Utility for running models          6000 blocks
                        and connecting to BASEstar data

    Programming         SL-GMS include files and            3000 blocks
                        programming support tools

    Demos               SL-GMS demos                       10000 blocks

    Note that if you are installing the Development component, and
    you want the models you develop to be able to access BASEstar data,
    then you must also install the Runtime component.

* Do you want to install the Development component [NO]? y
* Do you want to install the Runtime component [YES]? y
* Do you want to install the Programming component [NO]? y
* Do you want to install the Demo component [NO]? y

You have selected the following components for installation:

 Development
 Runtime
 Programming
 Demo

* Is this correct [YES]? y

* Install BASEstar Open data source [YES]? y
* Install BASEstar Classic data source [YES]? y

%BGE-I-BSTRDS, BASEstar Open data source will be installed.
%BGE-I-BCCDS, BASEstar Classic data source will be installed.
```

(continued on next page)

Example 1–1 (Cont.) Installation Output

```
        Product:      BGE-DEV
        Producer:     DEC
        Version:
        Release Date: 1-DEC-1993

* Does this product have an authorization key registered and loaded? y

* Do you want to run the IVP after the installation [YES]? y

    This product has several license options, one of which is Personal
    Use licensing. If you are using a Personal Use license, it must be
    reserved to a VMS username before it is loaded. If the license
    is not reserved to the user who is performing the installation
    the IVP will not succeed.

    A Personal Use license may be reserved to a VMS username,
    and loaded, with the following commands:

        LICENSE MODIFY lmf-name /RESERVE=vms-username
        LICENSE LOAD lmf-name

    If you are using a Personal Use license you may wish to exit
    the installation at this point to verify or change the reservation
    for this license.

* Do you want to continue [YES]? y

Specify a device and directory in which to install the selected components.
* Device and directory [DKB300:[BGE]]:

You have chosen the device and directory DKB300:[BGE]
* Is this correct [YES]? y

%BGE-I-DONEASK, No further questions. The installation will
take from two to 30 minutes, depending on system configuration
and on which components have been selected for installation.

%CREATE-I-EXISTS, DKB300:[BGE] already exists
%VMSINSTAL-I-RESTORE, Restoring product save set B ...
%VMSINSTAL-I-RESTORE, Restoring product save set C ...

%BGE-I-INSTRT, Installing the BGE Runtime component.

%BGE-I-LINKRT, Linking the Runtime component images.
%CREATE-I-EXISTS, DKB300:[BGE.LIB] already exists
%CREATE-I-EXISTS, DKB300:[BGE.DEMO] already exists
%CREATE-I-EXISTS, DKB300:[BGE.DEMO.BGE] already exists
%BGE-I-EXAMPLES, Providing BGE Runtime examples in GMS$HOME:[DEMO.BGE]

%BGE-I-INSTDEV, Installing the BGE Development component.

%BGE-I-LINKDEV, Linking the Development component images.

    You must edit your system startup procedure(s) to invoke
    SYS$STARTUP:BGE$STARTUP.COM on each node from which
    the BGE components will be run.

    Additionally, users of the BGE Development component should invoke
    GMS$HOME:[BIN]BGE$LOGIN.COM in their SYS$LOGIN:LOGIN.COM files.

    Alternatively, GMS$HOME:[BIN]BGE$LOGIN.COM can be invoked
    from the system-wide login file SYS$MANAGER:SYLOGIN.COM.

%CREATE-I-EXISTS, DKB300:[BGE.BIN] already exists
%CREATE-I-EXISTS, DKB300:[BGE.LIB] already exists
%CREATE-I-EXISTS, DKB300:[BGE.DOC] already exists
%CREATE-I-EXISTS, DKB300:[BGE.DEMO] already exists
```

(continued on next page)

Example 1–1 (Cont.) Installation Output

```
%BGE-I-INSTPROG, Installing the BGE Progamming component.

%CREATE-I-EXISTS, DKB300:[BGE.LIB] already exists

%BGE-I-INSTDEMO, Installing the BGE Demo component.

%CREATE-I-EXISTS, DKB300:[BGE.DEMO] already exists

%BGE-I-CLEANUP, Deleting obsolete files from previous installations.
%VMSINSTAL-I-MOVEFILES, Files will now be moved to their target directories...

%BGE-I-RESTDEMO, Creating DEMO directories...
%BGE-I-LINKDEMO, Linking DEMO executables...

Beginning IVP...

IVP for BGE RT component has succeeded.

IVP for BGE DEV component has succeeded.

 Installation of BGE V2.3 completed at 13:09

 VMSINSTAL procedure done at 13:10
```

Files and Logical Names Installed on Your System

The BASEstar Graphics Enabler installation procedure installs a number of files on your system and defines some logical names.

Files

Table 1–2 shows the files created during the installation. All files are created on the disk defined by the logical name SYS$COMMON.

Table 1–2 Installed Files

Directory	File Name
[SYSEXE]	BGE$BIND.EXE
	BGE$RUN.EXE
	BGE$UI.EXE
[SYSLIB]	BGE$RUN.OLB
	BGE$RUN.OPT
	BGE$UI.UID
[SYSHLP]	BGE$HELPLIB.HLB
	BGE$UIHELP.HLB
	BGE023.RELEASE_NOTES
[SYS$STARTUP]	BGE$STARTUP.COM

Installing BASEstar Graphics Enabler on OpenVMS AXP Systems

Logical Names

The BASEstar Graphics Enabler uses the following logical names:

- BGE$DB—Defines the full path name to DEC Rdb.
- BGE$MODELS—Provides a directory search list for locating model and binding files, in addition to the current default directory. This search list is used both when creating binding files and when running models. If this logical name is not defined, only the current working directory will be used.
- BGE$MSG_SIZE—For BASEstar Classic users only. Provides a value used when creating BASEstar Message Ports for the maximum message size allowed by the port. If this logical name is not defined, the default value of 500 is used.
- BGE$MSG_QUEUE—For BASEstar Classic users only. Provides a value used when creating BASEstar Message Ports for the maximum number of messages allowed by the port. If this logical name is not defined, the default value of 50 is used.
- BGE$PREFIX—Provides a string that is preappended to the names of source objects. For BASEstar Open users, this can be used to specify the Domain. BASEstar Open users can also use BGE$DOMAIN for this purpose.
- BGE$WCPF—Provides an integer value to specify a World Coordinate Pixel Factor for all data sources.

Note that these logical names must be defined in the GROUP or SYSTEM name tables, so that they will be seen by the detached processes created by the BASEstar Graphics Enabler Runtime component.

In the following example, the BGE$MODELS logical is defined in the GROUP name table so that all users sharing the same UIC group will have access to the models:

```
$ DEFINE/GROUP BGE$MODELS device:[directory]
```

In the following example, the BGE$MODELS logical is defined in the SYSTEM name table so that all users on the system will use the same value:

```
$ DEFINE/SYSTEM BGE$MODELS device:[directory]
```

For more information on defining logical names, refer to the *OpenVMS DCL Dictionary*.

Recovering From Errors

You may see VMSINSTAL messages during the installation procedure. The following messages are specific to the BASEstar Graphics Enabler installation:

You must be running at least V5.5 of OpenVMS.,

Explanation: The installation procedure failed because the version of OpenVMS is not 5.5 or higher.

User Action: You must upgrade your system to at least OpenVMS Version 5.5 for the installation procedure to execute successfully.

This package requires nnnn blocks after installation.,

Explanation: The installation procedure failed because there are not enough free blocks on the selected disk.

User Action: You must delete any unnecessary files to free up space for the installation to complete.

This installation requires BASEstar Classic version V3.1 or higher.,

Explanation: The installation procedure failed because the required version of BASEstar Classic is not installed.

User Action: You must install BASEstar Classic, Version 3.1 or higher for the installation procedure to execute successfully.

After Installation

The following sections describe the tasks to perform after installing the BASEstar Graphics Enabler.

Editing the Startup Command File

You must edit the system startup file to provide for automatic startup of BASEstar Graphics Enabler when your system is rebooted. The installation creates a startup command file called BGE$STARTUP.COM in SYS$STARTUP. Edit the site-specific startup file SYS$MANAGER:SYSTARTUP_VMS.COM and add the following line:

```
$ @SYS$STARTUP:BGE$STARTUP
```

User Account Requirements

To work with BASEstar Graphics Enabler, user accounts on your system must have certain privileges and quotas.

Installing BASEstar Graphics Enabler on OpenVMS AXP Systems

Privileges and User Account Quotas

To run models from the BASEstar Graphics Enabler CLI, users must have the OpenVMS GRPNAM privilege defined for their process. The user process must also have the OpenVMS privilege DETACH or process quotas of at least the value indicated in Table 1–3.

Table 1–3 User Account Quotas for Using BASEstar Graphics Enabler

Account Quota	Value
ASTLM	400
BIOLM	200
BYTLM	32768
DIOLM	200
ENQLM	400
FILLM	200
PGFLQUOTA	20000
PRCLM	6
TQELM	50
WSDEFAULT	400
WSEXTENT	1000
WSQUOTA	800

Accessing the BASEstar Graphics Enabler DCL Command

OpenVMS users logged in to the system prior to the installation must log out and log back in before the BGE command is defined for their process.