



FOUR Js
The Power of Simplicity

Four Js Genero Installation Guide



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Genero Installation Guide

The installation guide provides installation and licensing instructions for all Genero (Four Js) products.

- [Install Genero Business Development Language](#) on page 7
- [Install Genero Desktop Client](#) on page 11
- [Install Genero Application Server](#) on page 15
- [Install Genero Studio](#) on page 19
- [Install Genero Report Engine](#) on page 24
- [Install Genero Report Designer](#) on page 26
- [Install Four Js License Manager](#) on page 27
- [License Genero Business Development Language](#) on page 30
- [License Genero Report Writer](#) on page 34

The what, where, and when of installation

This topic covers what you should install (bundled software or individual packages) and where you should install it (server or workstation) based on what you want to do (development or production).

Software Bundle versus Individual Package

Genero software is provided as both software bundles and, for some products, as individual packages.

Individual packages include:

- Genero BDL with Web Services (BDL)
- Genero Desktop Client (GDC)
- Genero Application Server (GAS)
- Genero Report Engine (GRE)
- Genero Report Designer (GRD)

When you install individual packages, each package creates its own installation directory.

Software bundles include:

- Genero Suite Client/Server (Studio + GRE + BDL + GAS + GDC)
- Genero Suite Server (Studio Server + GRE + BDL + GAS)

When you install a bundle, the installation puts all of the Genero products in a single install directory, with child directories for each product included in the package (*fgl*, *gas*, *gdc*, *gre* and *gst*). You can opt during the installation to include or exclude any of the individual components when installing a bundle.

Installation for Development

For development, you can install the Genero Suite Client/Server software bundle on your local machine. This provides all the software you need, pre-configured to work together. You do not need a Web server for your development environment; you can use the standalone Genero Application Server to test your Web applications and Web services.

Installation for Production

For a production environment, you must use a Web server with the Genero Application Server. It is recommended that the Genero Business Development Language, Genero Application Server and your Web server sit on the same server host. The database can be on a separate machine, and the end-user

client software will sit on the client machine (or be delivered to a browser that sits on the client machine). For more information, refer to the various User Guides to see different architecture scenarios.

Software package names

To ensure you are installing the correct software, you must be able to interpret a Genero package filename.

A Four Js or Genero software package follows a specific naming convention:

```
fjs-product-version-build-osident.extension
```

where:

- *product* is the product identifier
- *version* is the release number of the software
- *build* is the build number
- *osident* is the operating system identifier
- *extension* is **run** on UNIX platforms, **exe** on Windows platforms, and **dmg** or **run** on OS X platforms.

Examples

```
fjs-fglgws-2.50.00-build2239_gws126106-a640610.run
```

```
fjs-fglgws-2.50.00-build2239_gws126106-w64v100.exe
```

```
fjs-gdc-2.50.03-build4949-1641x25.run
```

Installation troubleshooting tips

When you have an issue during installation of a Genero package, generating a log of the installation can provide valuable information for support.

How you log an installation of a Genero package depends on your operating system.

Table 1: Logging your installation

Operating System	How to log the installation
Windows	<ol style="list-style-type: none"> 1. Extract the msi file 2. From the command line: <pre>execute msiexe /i /log mylogfile.log</pre>
Unix	<p>From the command line:</p> <ol style="list-style-type: none"> 1. <code>export FGLINSTALLDEBUG=1</code> 2. <code>./fjs-package-name 2>&1 tee fjs.log</code>
Mac	See Debug the Genero Studio Install on OS X (GUI installer) on page 22.

Install Genero Business Development Language

These topics relate to the installation of Genero Business Development Language.

- [Software requirements](#) on page 7
- [Install Genero BDL procedures](#) on page 8

Note: See the *Genero Business Development Language User Guide* for additional installation and configuration information.

Software requirements

Before installing, ensure that your system meets the minimum system requirements and additional software.

- [Supported operating systems](#) on page 7
- [Database client software](#) on page 7
- [C compiler for C Extensions](#) on page 8
- [Java runtime environment](#) on page 8

Supported operating systems

The Genero Business Development Language is supported on a variety of operating systems. You must install the software package corresponding to the operating system that you use.

For a detailed list of supported operating systems, refer to the System Support matrix (available on the Four Js Web site in the product and documentation download area) or contact your support center. This matrix also informs you which operating systems will no longer be supported as of the next release.

Database client software

To connect to a database server, the database client software must be installed on the system where you run the Genero BDL programs.

The Genero runtime system uses database drivers to connect to database servers, as a database client program. Database vendor-specific client software needs to be installed on the system where you run the Genero programs.

Example of database client software:

- Informix Client SDK (with ESQL/C)
- DB2 Connect (with CLI)
- Oracle Client (with OCI)
- Microsoft SQL Server Native Client (with ODBC driver)
- PostgreSQL client (libpq)
- MySQL client (libmysqlclient)
- FreeTDS ODBC client (libtdsodbc)
- EasySoft ODBC client for SQL Server (libessqlsrv)
- SQLite 3.x (libsqlite3.so)

Database drivers are shipped as shared libraries and require a database client software shared library. The database driver to be selected must correspond to the database client type and version.

For a detailed list of supported databases, database driver names, and operating systems on which those database drivers are supported, refer to the System Support matrix (available on the Four Js web site documentation or download area) or contact your support center. This matrix also informs you which database drivers will no longer be supported as of the next release.

C compiler for C Extensions

Applications using C extensions need a C compiler and linker to build the C extension library that will be loaded by the runtime system.

C compiler On UNIX platforms

On UNIX platforms, you need a `cc` compiler on the system where you create the C extension libraries. Some systems may not have a C compiler by default. Make sure you have a C compiler on the system.

C compiler On Microsoft Windows platforms

On Windows platforms, it is mandatory to install Microsoft Visual C++ 2010 (also known as Visual C++ 10.0) on the system where you create the C extension libraries.

Java™ runtime environment

Install the latest Java Runtime Environment (JRE) if programs use the Java Interface.

If the Java™ Interface is used in your application programs, you need to install the latest Java™ Runtime Environment (JRE). Search the internet for latest JRE packages available for your platform.

The minimum required JRE version is **Java™ 6.10**.

Install Genero BDL procedures

- [Genero Business Development Language packages](#) on page 8
- [Pre-install tasks](#) on page 8
- [Install Genero BDL on UNIX platforms](#) on page 9
- [Install Genero BDL on Windows platforms](#) on page 9
- [Post-install tasks](#) on page 10

Genero Business Development Language packages

The Genero Business Development Language software is a self-extractable installation program.

Genero BDL package files follow a specific naming convention:

fjs-product-version-build-osident.extension

where:

- *product* is the product identifier
- *version* is the release number of the software
- *build* is the build information
- *osident* is the operating system identifier
- *extension* is **run** on UNIX platforms, **exe** on Windows platforms, and **dmg** or **run** on OS X platforms.

Examples

`fjs-fglgws-2.50.00-build2239_gws126106-a640610.run`

`fjs-fglgws-2.50.00-build2239_gws126106-w64v100.exe`

Pre-install tasks

Before launching the installation program, make sure:

1. You have a license number and a license key for Genero BDL development or runtime. See [License Genero Business Development Language](#) on page 30 for more details.

2. You have a valid maintenance contract (for BDL versions 2.20 or higher) and maintenance key. See [License Genero Business Development Language](#) on page 30 for more details.
3. You are using a [supported operating system](#).
4. You are connected to the system as a user with sufficient privileges to install the software in the target directory.
5. Your configuration matches all hardware requirements and software requirements.
6. You have access to all needed DLLs (`PATH`) or shared libraries (`LD_LIBRARY_PATH`, `LD_LIBRARY_PATH_64`, `SHLIB_PATH`, `LIBPATH` or `DYLD_LIBRARY_PATH`).
7. You have set the environment variables for the database client software (`INFORMIXDIR/INFORMIXC`, `ORACLE_HOME`, `DB2DIR`, `SYBASE`, `PGDIR`, `LD_LIBRARY_PATH`, and so on).
8. You can use the [C compiler](#) if you need to create C Extensions.

Important: Before starting the installation program, make sure that the database client environment variables are set.

Install Genero BDL on UNIX platforms

Follow these steps to install Genero Business Development Language (BDL) on UNIX platforms.

On Unix platforms, Genero J's BDL is provided as an auto-extractible shell script. Distribution files and installation program are provided in the same file.

The installation program has options. Display the installation program options using the `-h` option, for example:

```
./fjs-fglgws-2.50.02-build2281_gws128706-164p125.run -h
```

To perform the installation, run the auto-extractible shell script without any option, for example:

```
./fjs-fglgws-2.50.02-build2281_gws128706-164p125.run
```

The installation program determines the operating system and checks that all the system requirements are met before starting to copy the product files to your disk.

At this point, follow the instructions of the installation program. Answer the questions, including the license key and number (See [License Genero Business Development Language](#) on page 30).

Install Genero BDL on Windows platforms

Install Genero BDL on Windows platforms

On Microsoft Windows, the Genero BDL package is provided with a standard MSI Windows setup program. Distribution files and installation program are provided in the same file.

To perform the installation, login as a user with Administrator privileges and simply start the executable program in the "Start" + "Run" window.

At this point, follow the instructions of the installation program.

Installing and uninstalling in silent mode on Windows

The `.exe` file is a boot-strapper including the `.msi` file. You may want to extract the `.msi` file by running the `.exe` with the `/x` option, in order to run the `.msi` installation in silent mode, for example:

```
fjs-fglgws-2.50.02-build2281_gws128706-w32v100.exe /x
```

To install or uninstall Genero BDL in silent mode, you can use the `msiexec` command line utility. The `msiexec` utility provides the means to install, modify, and perform operations on Windows Installer from the command line.

Replace "this table" with automatic table title and link to table. It should say something like "Table 1 ..." and that should be automatic. [Table 2: msiexec install and uninstall options](#) on page 10 shows the most common options for `msiexec` relating to installation and un-installation.

Table 2: msiexec install and uninstall options

msiexec option	Description
/qn	Quiet mode with no UI.
/i <i>package-name.msi</i>	Install the specified msi package.
/x <i>package-name.msi</i>	Uninstall the specified msi package.
/log logfile	Write processing info to the specified log file.

Enter `msiexec` from the DOS command prompt to view the complete list of available options.

You can pass arguments to the `msiexec` installer on the command line.

Table 3: Arguments for the msiexec installer

Argument	Description
<code>PRODUCTDIR=<i>fgldir-path</i></code>	The path where BDL will be installed. It is an alias of FGLDIR variable.
<code>FGLDIR=<i>fgldir_path</i></code>	The path where BDL will be installed. It is an alias of the PRODUCTDIR variable.
<code>STARTMENUFOLDER=<i>startmenu-folder</i></code>	Customize the location for the shortcuts in the startmenu. For example, " <code>fjs\fgl</code> ".
<code>ALLUSERS=1</code>	To perform a per machine installation (All Users)There is no choice for BDL, a per user installation is denied.
<code>FORCEREMOVEPRODUCTDIR=YES</code>	On uninstall, remove the PRODUCTDIR location, even if it is not empty.YES = Force removal of PRODUCTDIR.Other = Keep files in PRODUCTDIR. Default value: "" (empty string)

Note: Quotes are only required around the argument value when a space character is in the value string.

Call your support center for more details if this silent installation is required.

Post-install tasks

Tasks to complete after the installation of Genero BDL.

After installing the product, you can look at the files provided in `FGLDIR/release` directory.

It is recommended that you first read the license terms provided in the `license.txt` file. Read this file carefully before using the product in production.

The release notes are in the `readme.txt` file. This file contains important last-minute information that may not be found in the documentation.

Development team changes are provided in the `changes.txt` file. This file contain detailed technical information about changes in the BDL source.

According to the database server you want to connect to, you will need to set up the correct database driver in `FGLPROFILE`. The default database driver is selected at installation time. For more details about database driver configuration, see Connections in the *Genero Business Development Language User Guide*.

Install Genero Desktop Client

These topics relate to the installation of the Genero Desktop Client.

Note: See the *Genero Desktop Client User Guide* for additional installation and configuration information.

- [System requirements](#) on page 11
- [Genero compatibility](#) on page 11
- [Install GDC on Windows](#) on page 12
- [Install GDC on Windows platforms using the MSI installer](#) on page 12
- [Install GDC on Mac OS X](#) on page 13
- [Install GDC on X11 systems](#) on page 14

System requirements

Before installing the Genero Desktop Client package, ensure that your system meets the minimum system requirements.

Operating Systems

The Genero Desktop Client is supported on a variety of operating systems.

For a detailed list of supported operating systems, refer to the System Requirements matrix or contact your support center. This matrix also informs you which operating systems will no longer be supported as of the next release.

Genero compatibility

Determine the compatibility of different versions of the Genero product family and the Genero Desktop Client.

Genero Desktop Client 3.0x compatibility

GDC 3.00 is compatible with Genero runtime system (DVM) 3.00 and 2.50 for all connections, **except** for an HTTP connection through the Genero Application Server (GAS).

When using an HTTP connection through the GAS:

- GDC 3.00 should use uaproxy (ua) and requires a Genero runtime system (DVM) 3.00.
- GDC 2.50 should use gdcproxy (wa) and requires a Genero runtime system (DVM) 2.50.

GDC 3.00 is not compatible with Genero runtime system 2.4x or earlier.

Genero Desktop Client 2.5x compatibility

Genero Desktop Client 2.5x will work only with Genero Runtime Systems 2.5x plus 2.4x, 2.3x, 2.2x and 2.1x for backward compatibility. It is not supported with Genero Runtime Systems 2.0x and 1.3x.

For those who connect through HTTP, Genero Desktop Client 2.5x is **NOT** backward compatible with versions 1.3x, 2.0x, 2.1x, 2.2x, 2.3x and 2.4x of the Genero Application Server (mainly for stability reasons due to the HTTP stack review). Genero Desktop Client and Genero Application Server need to be on the same level; for instance, both would need to be 2.5x. If you have any doubts regarding compatibility between versions, contact your support center.

Install GDC on Windows™

Procedure to install GDC on Windows™ using the exe file.

1. Close all running applications.

2. Execute the installation program.

On Windows™ Vista, Windows™ 7, and Windows™ 8, administrator privileges are needed to perform the installation. UAC will pop up, you will need to validate it to install GDC.

3. Press 'Next' to start the installation.

4. If you accept the agreement, check 'I accept the terms in the License Agreement' and click 'Next' to continue.

5. Select the folder in which you want to install GDC.

6. Select the StartMenu folder in which GDC shortcuts will be set.

7. GDC shortcuts can be stored as a gdc file.

You can associate this extension with this GDC, so that you can start GDC with this file by double-clicking the gdc file in Explorer. You can enable or disable the file associations.

GDC is now ready to be installed.

8. Click "Install" to begin the installation.

All files are copied.

GDC is installed. You can now run the GDC.

Install GDC on Windows platforms using the MSI installer

Install Genero Desktop Client on Windows platforms using the MSI installer.

MSI installer

The GDC installer uses MSI technology. To be compliant with Microsoft User Access Control (UAC) requirements, the `msi` file is embedded inside an `exe` file. You can extract the `msi` file from the `exe` file using the `/x` option:

```
c:\fjs-gdc-version-build-osident.exe /x
```

Example:

```
c:\fjs-gdc-2.50.03-build4949-w32v100.exe /x
```

This creates a `msi` file with the same name.

Install and uninstall in silent mode

To install and uninstall GDC in silent mode, you can use the `msiexec` command line utility. The `msiexec` utility provides the means to install, modify, and perform operations on Windows Installer from the command line.

The following options for `msiexec` are the most common options regarding installation and uninstallation. Enter `msiexec` from the command prompt to view the complete list of available options.

```
msiexec /qn - Quiet mode with no UI
```

```
/i fjs-gdc-version-build-osident.msi - Install the specified msi package
```

```
/x fjs-gdc-version-build-osident.msi - Uninstall the specified msi package
```

```
/log logfile - Log to the specified log file
```

`/l*vx logfile` - Provide verbose (detailed) logs in the specified log file

Arguments

You can pass arguments to the msiexec installer on the command line.

Table 4: Arguments for the msiexec installer

Argument	Description
<code>PRODUCTDIR=your_gdcdir_path</code>	The path where GDC will be installed. It is an alias of <code>GDCDIR</code> variable.
<code>GDCDIR=your_gdcdir_path</code>	The path where GDC will be installed. It is an alias of the <code>PRODUCTDIR</code> variable.
<code>STARTMENUFOLDER=your_startmenufolder_path</code>	Customize the location for the shortcuts in the startmenu. For example, "fjs\gdc".
<code>ADDLOCAL=[ALL GDC GDC , GDCFILEASSOCGDC]</code>	Set the features to install. <ul style="list-style-type: none"> • <code>ALL</code> (default): Install GDC (mandatory) and <code>.gdc</code> file association • <code>GDC</code>: Install GDC only • <code>GDC , GDCFILEASSOCGDC</code>: Same as <code>ALL</code>
<code>ALLUSERS=1</code>	Perform a per machine installation (All Users). If not specified, it will perform a per user installation (Current User)
<code>FORCEREMOVEPRODUCTDIR=YES</code>	On uninstall, remove the <code>PRODUCTDIR</code> location, even if it is not empty. Default value: "" (empty string) <ul style="list-style-type: none"> • <code>YES</code> = Force removal of <code>PRODUCTDIR</code> • Any other entry = Keep files in <code>PRODUCTDIR</code>

Note: Quotes are only required around the argument value when a space character is in the value string.

Install GDC on Mac OS X

Procedure for installing GDC on Mac OS X.

1. Close all applications.
2. Double-click on the drive image file (dmg).
The image file is mounted by Mac OS X.
3. Double-click on the package file (mpkg).
The installation wizard displays.
4. Press **Continue** to start the installation.
The release notes display.
5. When you finish examining the release notes, press **Continue**.
The license agreement displays.
6. When you finish examining the license agreement, press **Continue**.
7. To agree to the terms of the software license agreement, press **Agree**.
8. To change the install location, press **Change Install Location**. Once you have selected who to install the software for and where to install the software, press **Continue**.

9. Press **Install**.

10. Enter your password to access your Administrator privileges and press **OK**.

Administrator rights are needed to install the Genero Desktop Client (GDC) in the *Application* directory.

The files are written, and GDC is installed.

11. Press **Close**.

The installation is complete.

12. Unmount the mounted volume. (Drop the mounted icon in the Trash).

13. Double-click the gdc icon in the Destination Folder (default **Applications**) to start the GDC.

Install GDC on X11 systems

Procedure to install GDC on X11 systems

By default, the script un-compresses data into DBTEMP. Please make sure you have the correct permissions for this directory. If you do not have the necessary permissions, either unset DBTEMP (/tmp will be used), or use the `-w <tempdir>` option to specify an alternate temporary directory.

1. Close all applications.

2. Execute the installation shell. At the command line, enter the name of the package to install.

```
./fjs-gdc-version-build-osident.run
```

Example:

```
./fjs-gdc-2.50.03-build4949-1641x25.run
```

3. Follow the directions that appear.

Install Genero Application Server

These topics relate to the installation of the Genero Application Server.

Before starting the installation, verify your system meets the system requirements.

The software is provided as an auto-extractible installation program (i.e. product files and installation program are provided in the same file). The name of the package includes the operating system type and version. You must install the Genero Application Server software package corresponding to the operating system that you use.

For the detailed list of supported operating systems, refer to the System Support matrix (available on the Four Js web site documentation or download area) or contact your support center.

The Genero Application Server and the Genero BDL runtime should be installed on the same machine.

Note: See the *Genero Application Server User Guide* for additional installation and configuration information.

- [System Requirements](#) on page 15
- [Genero compatibility](#) on page 15
- [Install Genero Application Server on UNIX platforms](#) on page 16
- [Install on Microsoft Windows platforms](#) on page 16
- [Install and Uninstall in silent mode on Microsoft Windows platforms](#) on page 17

System Requirements

Before installing the Genero Application Server package, ensure that your system meets the minimum system requirements.

- [Supported Operating Systems](#) on page 15

Supported Operating Systems

Details of the supported operating systems for the Genero Application Server.

The Genero Application Server is supported on a variety of operating systems.

For a detailed list of supported operating systems, refer to the System Support matrix (available on the Four Js Web site in the product and documentation download area) or contact your support center. This matrix also informs you which operating systems will no longer be supported as of the next release.

Genero compatibility

Determine the compatibility of different versions of the Genero product family and the Genero Application Server.

Genero Application Server 3.x compatibility

If you are using GAS 3.00:

- The Genero Web Client for JavaScript (GWC-JS) 3.00 requires a Genero runtime system (DVM) 3.00 or greater.
- The Genero Desktop Client (GDC) 3.00 requires a Genero runtime system (DVM) 3.00 or greater.
- The Genero Web Client for HTML5 (GWC-HTML5) requires a Genero runtime systems (DVM) 2.50.
- The Genero Desktop Client (GDC) 2.50 requires a Genero runtime system (DVM) 2.50.

Install Genero Application Server on UNIX platforms

Follow these steps to install the Genero Application Server on UNIX platforms.

The installation program provides options that allow you to specify configuration options from the command line. You can display the installation program options using the `-h` option:

```
./fjs-gas-version-build-osident.run -h
```

Example:

```
$ ./fjs-gas-2.50.04-build129065-164x125.run -h
```

The installation program identifies the operating system and checks that all the system requirements are met before starting to copy the product files to disk.

To perform the installation, run the auto-extractible shell script:

```
./fjs-gas-version-build-osident.run
```

Example:

```
$ ./fjs-gas-2.50.04-build129065-164x125.run
```

Once the files are copied to disk, follow the instructions displayed.

Note: You can install the package as root using the `-r` or `--root` option.

When you have completed the installation of the GAS, see *FastCGI installation* in the **Genero Application Server User Guide** for details on the Web Server configuration. Afterwards, validate your installation as described in *GAS Configuration Check* in the **Genero Application Server User Guide**.

Install on Microsoft Windows platforms

Install the Genero Application Server on Microsoft Windows platforms.

On Microsoft Windows, the GAS is provided as a standard Windows setup program.

If you plan on installing the ISAPI connector for the integration of the GAS within IIS, you must install IIS first, prior to running the setup program. On IIS 7.x, ensure also that the **IIS Management Scripts and Tools** component under Management Tools (or Web Management Tools) is installed.

The installation program and the distribution files are provided in the same file:

```
fjs-gas-version-build-osident.exe
```

Example:

```
fjs-gas-2.50.04-build129065-w32v100.exe
```

When you execute the setup program, a wizard guides you through the installation process. For the ISAPI extension, the installation process also completes the Web Server configuration. Afterwards, validate your installation as described in *GAS Installation Check* in the **Genero Application Server User Guide**.

See the *ISAPI installation* in the **Genero Application Server User Guide** if you need to troubleshoot the installation or do any additional configuration.

Install and Uninstall in silent mode on Microsoft Windows platforms

Install or uninstall the Genero Application Server in silent mode on Microsoft Windows platforms.

To install or uninstall the GAS in silent mode, you can use the `msiexec` command line utility. The `msiexec` utility provides the means to install, modify, and perform operations on Windows Installer from the command line.

The `msiexec` utility expects a `msi` file, which is embedded into the setup program. To extract it, execute the following command:

```
fjs-gas-version-build-osident.exe /x
```

Example:

```
fjs-gas-2.50.04-build129065-v32v100.exe /x
```

A `msi` file will be created in the same directory and with the same name as the `exe` file.

Options

The following options for `msiexec` are the most common relating to an install and uninstall. Enter `msiexec` from the command prompt to view the complete list of available options.

```
msiexec /qn - Quiet mode with no UI
```

```
/i fjs-gas-version-build-osident.msi - Install the specified msi package
```

```
/x fjs-gas-version-build-osident.msi - Uninstall the specified msi package
```

```
/log logfile - Log to the specified log file
```

Arguments

You can pass arguments to the `msiexec` installer on the command line.

Table 5: Arguments for the misexec installer

Argument	IIS version	Description
<code>PRODUCTDIR=your_fgldir_path</code>	All	Path where GAS will be installed. It is an alias of <code>GASDIR</code> .
<code>GASDIR=your_fgldir_path</code>	All	Path where GAS will be installed. It is an alias of <code>PRODUCTDIR</code> .
<code>FGLDIR=your_fgldir_path</code>	All	Path where Genero BDL is installed. Used only when <code>SETFGLDIR=1</code> .
<code>SETFGLDIR=1</code>	All	Enable the <code>FGLDIR</code> variable. Default value is 0 (zero).
<code>GREDIR=your_gredir_path</code>	All	Path where GRE is installed. Used only when <code>SETGREDIR=1</code> .
<code>SETGREDIR=1</code>	All	Enable the <code>GREDIR</code> variable. Default value is 0 (zero).
<code>ADDLOCAL=GAS</code>	All	Install the GAS without ISAPI. Set the parameter to <code>ALL</code> to install the GAS with the ISAPI extension.

Argument	IIS version	Description
ISAPIDIR= <i>your_isapi_path</i>	All	Path where the ISAPI extension will be installed. If not specified, the default path is <PRODUCTDIR>\isapi.
STARTMENUFOLDER= <i>your_startmenufolder_path</i>	All	Customize the location for the shortcuts in the startmenu. For example: "fjs\gas"
WEBSITE= <i>your_webSite</i>	IIS 6, IIS7	Default value: "Default Web Site"
WEBAPPNAME= <i>your_webAppName</i>	All	Default value: "gas"
WEBAPPPPOOLNAME= <i>your_webAppPoolName</i>	IIS 6, IIS7	Default value: "GASAppPool"
APPPPOOLUSERDOMAIN= <i>your_AppPoolUserDomain</i>	IIS 6, IIS7	Default value: ""
APPPPOOLUSER= <i>your_AppPoolUser</i>	IIS 6, IIS7	Default value: "NetworkService" Other possible values: "LocalService", "LocalSystem"
FORCEREMOVEPRODUCTDIR=YES	All	On uninstall, remove the PRODUCTDIR location even if it is not empty. Default value: ""

Note: Quotes are only required around the argument value when a space character is in the value string.

Silent install examples

On IIS5:

```
C:\tmp> msiexec /qn /i fjs-gas-2.50.04-build129065-v32v100.msi /log
gas2.20.log PRODUCTDIR=c:\tmp\gas2 ADDLOCAL=ALL ISAPIDIR=c:\tmp\gas2\isapi
WEBAPPNAME=gas-msi
```

On IIS 6:

```
C:\tmp> msiexec /qn /i fjs-gas-2.50.04-build129065-v32v100.msi /log
gas2.20.log PRODUCTDIR=c:\tmp\gas2 ADDLOCAL=ALL ISAPIDIR=c:\tmp\gas2\isapi
WEBAPPNAME=gas-msi APPPOOLUSERDOMAIN="" APPPOOLUSER=NetworkService
WEBAPPPPOOLNAME=gas-pool-msi
```

```
C:\tmp> msiexec /qn /i fjs-gas-2.50.04-build129065-v32v100.msi /log
gas2.20.log PRODUCTDIR=c:\tmp\gas2 ADDLOCAL=ALL ISAPIDIR=c:\tmp\gas2\isapi
WEBAPPNAME=gas-msi APPPOOLUSERDOMAIN=your_domain APPPOOLUSER=your_user
WEBAPPPPOOLNAME=gas-pool-msi ALLUSERS=1
```

Silent uninstall examples

```
C:\tmp> msiexec /qn /x fjs-gas-2.50.04-build129065-v32v100.msi /log
as2_50_04.log
```

Install Genero Studio

These topics relate to the installation of the Genero Studio.

The Genero Studio software package includes Genero Studio, Genero Business Development Language, Genero Application Server, Genero Desktop Client, Genero Web Client, Genero Web Services, Genero Mobile and Genero Report Writer.

Genero Studio can be used as a standalone application, or in a client/server mode. The packages for Windows™ and GNU/Linux install client and server programs.

Use a standalone scheme when you want to use local Genero and Genero Desktop Client installations and compile files locally.

If the Genero installation and your project files are on another machine, install Genero Studio on this machine and run the server program only. You will have to declare the Genero Studio Server in your local Genero Studio (client) configuration in order to use it.

Note: See the *Genero Studio User Guide* for additional installation and configuration information.

Note: See the *Genero Mobile Developer Guide* for details on configuring Genero Mobile for Android and iOS. Those configuration topics contain additional system requirements for each mobile platform.

If you do not have a valid maintenance key for Genero, you must [license Genero Report Writer](#).

- [System Requirements for Genero Studio](#) on page 19
- [Install Genero Studio on Windows](#) on page 20
- [Windows XP Service Pack 2 Security Blocking](#) on page 21
- [Install Genero Studio on UNIX platforms](#) on page 21
- [Install Genero Studio on OS X \(GUI installer\)](#) on page 21
- [Install Genero Studio on OS X \(command line\)](#) on page 22

System Requirements for Genero Studio

Before installing Genero Studio, ensure that your system meets the minimum system requirements.

Display

Minimum video resolution is XGA (1024x768).

Genero compatibility

Genero Studio is compliant with Genero 1.3x and above.

Operating Systems

Genero Studio is supported on a variety of operating systems.

For a detailed list of supported operating systems, refer to the System Support matrix (available on the Four Js Web site in the product and documentation download area) or contact your support center. This matrix also informs you which operating systems will no longer be supported as of the next release.

Genero Mobile

Requirements for Android emulator hardware acceleration:

- The Android emulator requires a processor with virtualization technology and a dedicated driver. Most recent Intel® processors support virtualization (VT-x, EM64T). See [Speeding Up the Android* Emulator on Intel Architecture](#).

Genero Report Viewer for HTML5

Notes regarding printing:

- Google Chrome is fully supported.
- Safari is not supported.
- For all other browsers (Microsoft™ Internet Explorer, Microsoft Edge, Firefox), adjusting the scale percentage may be necessary to prevent the insertion of empty pages.

Install Genero Studio on Windows™

Procedure to install Genero Studio on Windows.

If you plan to install the Genero Application Server (GAS), you have a choice to make. For the development cycle, the stand-alone GAS provides a direct http connection to access applications without using a Web server. If you want to use a local Microsoft™ Internet Information Services (IIS) as your Web server, you must install the ISAPI extension. You make this choice during the installation.

1. Execute the package name to start the Setup Wizard.

```
fjs-gst-version-build-osident.exe
```

Example:

```
fjs-gst-2.50.03-build127192-w32v100.exe
```

2. When the **Welcome** page displays, click **Next**.
3. **End-User License Agreement** - read and accept the license agreement and click **Next**.
4. **Third-Party License Agreement** - read and accept the terms of the license agreement and click **Next**.
5. **Setup Type** - select your machine type and components.
Workstation or Server - Full installs the entire product suite. Click **Next**.
6. **Product Features** - select all the features you want to install and click **Next**.

By default, all components are selected for installation. The list box for each feature or component allows you to specify whether:

- Feature/component will be Installed on the local hard drive
- Entire feature will be installed on the local hard drive
- Entire feature will be unavailable

If you have chosen to install the ISAPI extension for the Genero Application Server, some additional pages will display later in the process related to the ISAPI extension.

7. **Destination Folder** - specify the destination folder for your Genero installation (or use the default) and click **Next**.
8. **Start Menu Folder** - choose the folder and click **Next**.

The following pages are for the ISAPI installation only. See the *ISAPI Installation* page in the **Genero Application Server User Guide** for additional information.

- a) **ISAPI - Web Site:** Choose the web site where you want to add your applications.
- b) **ISAPI - Web Application Name:** Assign a name that will be included as the path to the GAS in the URL for your applications. Click **Next**.
- c) **ISAPI - Web Application Path:** Enter the physical path of your applications. Within this directory the isapidispatch.ini file will be created.
- d) **ISAPI - Application Pool name:** Give the name for your Application Pool that will run the worker process. This name must not already exist within your IIS installation.

The general installation pages continue.

9. **Licensing** - Choose the method of licensing and indicate which products you are licensing.
10. **Java™ Virtual Machine** - Choose an installed JVM version displayed in the list, or click **Install JVM** to do a silent install of the specified version. Click **Next**.
11. **Ready to install** - click Install to begin the installation.
12. **Enter License Information** - If you choose to license Studio at this point, provide the license number, the license key, and the maintenance key (if available). Click **Install**. As an alternative, you can check the box to use the Four Js Activation Server.
13. Click **Quit** to leave the License Information dialog.
14. Click **Finish**.

The installation completes and the install wizard closes.

When installation is complete, see the *Setting Up* page in the **Genero Studio User Guide** for configuration information and instructions.

Windows™ XP Service Pack 2 Security Blocking

Details about Windows XP Service Pack 2 security blocking and Genero Studio.

Microsoft™ has added several security systems since Windows™ XP Service Pack 2 (SP2). The firewall included in Windows™ XP is now enabled by default. From the network point of view, Genero Studio Server and the Genero Desktop Client (used by Genero Studio to display forms) are both considered servers. When you start Genero Desktop Client, or attempt to connect to Genero Studio Server, the firewall detects this and blocks the programs.

A dialog window allows you to choose **Keep Blocking**, **Unblock**, or **Ask Me Later**. Choose **Unblock** to allow the programs to run. Pressing **Keep Blocking** or **Ask Me Later** will continue to block the programs.

If **Keep Blocking** has been pressed by mistake, you can change this parameter in the Windows™ Firewall settings of the Windows™ Control Panel. In the Exceptions tab, add Genero Studio, Genero Studio Server and Genero Desktop Client to the list of exceptions, and make sure that their listings have a check mark.

Install Genero Studio on UNIX platforms

Follow these steps to install Genero Studio on Gnu/Linux and UNIX.

1. Type the following command to start the installation:

```
$ sh fjs-gst-version-build-osident.run
```

Example:

```
$ sh fjs-gst-2.50.03-build127192-164x124.run
```

2. Follow the instructions provided on the screen.

When installation is complete, see the topic *Setting Up* in the **Genero Studio User Guide** for configuration information and instructions.

Install Genero Studio on OS X (GUI installer)

Procedure to install Genero Studio on OS X Mountain Lion for Mac.

You need a MacOSX 10.6 or higher and an user account which have administrator access level.

You need the GST MacOSX dmg package. For example: `fjs-gst-2.50.00-buildxxxxxx-m64x106.dmg`

1. Double-click on the `dmg` package in the finder.
The `dmg` mounts. You have a new icon on your desktop with the same name as the package (`fjs-gst-2.50.00-buildxxxxxx-m64x106`, for example).
2. Double click on the new icon.
It will display a new window containing `fjs-gst-2.50.00-buildxxxxxx-m64x106.pkg`.
3. Double click on the `fjs-gst-2.50.00-buildxxxxxx-m64x106.pkg` to launch the installation process.
The GUI installer can be installed GST in `/Applications` or `$HOME/Applications`. You can have several GST installed in the same time.

When installation is complete, see the *Genero Studio User Guide* for configuration information and instructions.

Debug the Genero Studio Install on OS X (GUI installer)

Procedure to debug the install Genero Studio on OS X Mountain Lion for Mac.

Follow these steps to debug a failed installation in GUI mode:

1. When the installation process begin, you will have a "Window" menu. Go to the **Window** menu and choose the **Installer Log** item.
It launches a window where the installation logs are displayed.
2. To the left of the new window, you can choose **Show all logs** from a combobox.
3. When the installation process ends (with or without error), you can use the save button to create a file containing all log messages.

Install Genero Studio on OS X (command line)

Procedure to install Genero Studio on OS X Mountain Lion for Mac.

You need a MacOSX 10.6 or higher and an user account which have administrator access level.

You need the GST MacOSX `dmg` package. For example: `fjs-gst-2.50.00-buildxxxxxx-m64x106.dmg`

1. Open a terminal.
2. Mount the `dmg` file using the `hdiutil` tool:

```
hdiutil mount fjs-gst-2.50.00-buildxxxxxx-m64x105.dmg
```
3. Launch the install process:

```
sudo installer -pkg /Volumes/fjs-gst-2.50.00-buildxxxxxx-m64x106/fjs-gst-2.50.00-buildxxxxxx-m64x106.pkg/ -target "/Volumes/Macintosh HD"
```
4. Change the owner of `$HOME/.Fourjs`:

```
sudo chown -R [My Account]:staff $HOME/.Fourjs
```
5. Umount the `dmg`:

```
hdiutil unmount /Volumes/fjs-gst-2.50.00-buildxxxxxx-m64x106
```

When installation is complete, see the *Genero Studio User Guide* for configuration information and instructions.

Debug the Genero Studio Install on OS X (command line)

Procedure to debug the install Genero Studio on OS X Mountain Lion for Mac.

To debug a failed installation, use the following command line:

```
sudo installer -pkg /Volumes/fjs-gst-2.50.00-buildxxxxxx-m64x106/fjs-  
gst-2.50.00-buildxxxxxx-m64x106.pkg/ -target "/Volumes/Macintosh HD" -  
dumplog -verbose 2>&1 | tee fjs-gst-2.50.00-buildxxxxxx-m64x106.log
```

Install Genero Report Engine

These topics relate to the installation of the Genero Report Engine.

If you do not have a valid maintenance key for Genero, you must [license Genero Report Writer](#).

- [System Requirements](#) on page 24
- [Install Genero Report Engine on UNIX platforms](#) on page 24
- [Install Genero Report Engine on Windows](#) on page 24

System Requirements

Before installing the Genero Report Engine, ensure that your system meets the minimum system requirements.

- [Supported Operating Systems](#) on page 24
- [Java runtime environment](#) on page 24

Supported Operating Systems

The Genero Report Engine (GRE) is supported on a variety of operating systems.

For a detailed list of supported operating systems, refer to the System Support matrix (available on the Four Js Web site in the product and documentation download area) or contact your support center. This matrix also informs you which operating systems will no longer be supported as of the next release.

Java™ runtime environment

The Genero Report Engine (GRE) requires Java JRE 1.6 or above.

It is strongly recommended to use a Sun (Oracle) or an IBM JVM.

Open JDK and other free JVMs are currently not supported.

Tip: Please check the release notes to view the most up-to-date information regarding Java JRE support.

Install Genero Report Engine on UNIX platforms

Follow these steps to install Genero Report Engine on Gnu/Linux and UNIX.

1. Type the following command to start the installation:

```
$ sh fjs-gre-version-build-osident.run
```

Example:

```
$ sh fjs-gre-2.50.03-build127148-164x124.run
```

2. Follow the instructions provided on the screen.

When installation is complete, see the *Genero Report Writer User Guide* for configuration information and instructions.

Install Genero Report Engine on Windows™

Follow these steps to install the Genero Report Engine on Windows.

1. Execute the installation package to start the Setup Wizard.

`fjs-gre-version-build-osident.exe`

Example:

`fjs-gre-2.50.03-build127148-w32v100.exe`

2. Follow the instructions provided online.

The installation completes and the install wizard closes.

When installation is complete, see the *Genero Report Writer User Guide* for configuration information and instructions.

Install Genero Report Designer

These topics relate to the installation of the Genero Report Engine.

- [System Requirements](#) on page 26
- [Install Genero Report Designer on UNIX platforms](#) on page 26
- [Install Genero Report Designer on Windows](#) on page 26

System Requirements

Before installing Genero Studio, ensure that your system meets the minimum system requirements.

- [Supported Operating Systems](#) on page 26

Supported Operating Systems

Details of the supported operating systems for the Genero Report Designer.

The Genero Report Designer is supported on a variety of operating systems.

For a detailed list of supported operating systems, refer to the System Support matrix (available on the Four Js Web site in the product and documentation download area) or contact your support center. This matrix also informs you which operating systems will no longer be supported as of the next release.

Install Genero Report Designer on UNIX platforms

Follow these steps to install Genero Report Designer on Gnu/Linux and UNIX.

1. Type the following command to start the installation:

```
$ sh fjs-grd-version-build-osident.run
```

Example:

```
$ sh fjs-grd-2.50.03-build127192-164x124.run
```

2. Follow the instructions provided on the screen.

When installation is complete, see the *Genero Report Writer User Guide* for configuration information and instructions.

Install Genero Report Designer on Windows™

Follow these steps to install Genero Studio on Windows. *

TBD - what is the context here?

1. Execute the package name to start the Setup Wizard.

```
fjs-grd-version-build-osident.exe
```

Example:

```
fjs-grd-2.50.04-build129065-w32v100.exe
```

2. Complete the instructions provided online.

The installation completes and the install wizard closes.

When installation is complete, see the *Genero Report Designer User Guide* for configuration information and instructions.

Install Four Js License Manager

To centralize licensing, install the Four Js License Manager.

- [System Requirements](#) on page 27
- [Installation](#) on page 28

System Requirements

Before installing Four Js License Manager, ensure that your system meets the minimum system requirements.

- [Compliant DVM versions](#) on page 27
- [Supported Operating Systems](#) on page 27
- [Hardware](#) on page 27
- [Supported Operating Systems](#) on page 27
- [Disk Space](#) on page 28
- [Software](#) on page 28
- [Internet access](#) on page 28

Compliant DVM versions

Four J's License Manager is ported to all platforms supported by the Four J's Dynamic Virtual Machine (DVM). The following DVM versions are fully compatible with the Four J's License Manager:

- BDS version 3.55 and higher
- Genero version 1.32 and higher

Versions older than those listed above need to be patched (or entries in `fglprofile` need to be updated) to be compliant with Four J's License Manager.

Recent versions of the DVM can show the minimum license version required. The License Controller or License Manager will return an appropriate message in case of incompatibility. The minimum license version required should be displayed.

Supported Operating Systems

The Four Js License Manager is supported on the same operating systems as the Genero Business Development Language. Refer to the Genero Business Development Language column in the list of supported operating systems.

For a detailed list of supported operating systems, refer to the System Support matrix (available on the Four Js Web site in the product and documentation download area) or contact your support center. This matrix also informs you which operating systems will no longer be supported as of the next release.

Hardware

Four J's License Manager requires either a Unix or Windows machine. Aside from requiring a host machine, the Four J's License Manager does not require any specific hardware.

Supported Operating Systems

The Four Js License Manager is supported on the same operating systems as the Genero Business Development Language. Refer to the Genero Business Development Language column in the list of supported operating systems.

For a detailed list of supported operating systems, refer to the System Support matrix (available on the Four Js Web site in the product and documentation download area) or contact your support center. This matrix also informs you which operating systems will no longer be supported as of the next release.

Disk Space

1.2 Mb of disk space is required for installation. Once the License Manager is installed, the required disk space is approximately 900 Kb. The actual amount of disk space may vary slightly, depending on the operating system.

Software

The Four J's License Manager itself does not require any specific software. During the installation phase, however, the installer program calls some system commands (such as **df**, **tar** and **gzip** on Unix systems). The installation program automatically checks for such prerequisites and raises an error message if a required system command is missing.

Internet access

In order to license the product online from the Four J's Web site (<http://www.4js.com>), you need an Internet connection.

Installation

Four Js License Manager is a separate product, to be installed in a dedicated directory with its own configuration file.

- [Four Js License Manager packages](#) on page 28
- [Launching the installation](#) on page 28
- [Setting the environment](#) on page 29

Four Js License Manager packages

The Four Js License Manager (FLM) software is a self-extractable installation program.

On Unix, the installation program is a shell script. On Windows, the installation file is an executable (`exe`) file.

A Four Js or Genero software package follows a specific naming convention:

`fjs-product-version-build-osident.extension`

where:

- *product* is the product identifier ("**flm**" for Four J's License Manager).
- *version* is the software release number.
- *build* is the software build number.
- *osident* is the operating system identifier.
- *extension* is the file extension: **sh** or **run** on UNIX platforms, **exe** on Windows platforms, and **dmg** or **run** on OS X platforms.

Launching the installation

Warning: Be sure you are installing the correct binary files for your operating system. To do so, examine the installation package name, which includes the operating system brand name. For more information on the installation package name, refer to Four J's License Manager packages.

- [Installing on Unix platforms](#) on page 29
- [Installing on Windows platforms](#) on page 29

- [Installing the service \(Windows only\)](#) on page 29

Installing on Unix platforms

- Log in as a user with permission to write to the chosen directory.
- Choose a directory name where Four J's License Manager will be installed, such as **/opt/fourjs/flm**
- Copy the self-extractable file into a temporary directory.
- Run the self-extractable shell script with the **-i** option:

```
sh fjs-flm-5.10.3a-build333-lnxlc23.run -i
```

- Follow the instructions displayed on your screen.
- Other options may be needed, valid options can be displayed using the **-h** option:

```
sh fjs-flm-5.10.3a-build333-lnxlc23.run -h
```

Installing on Windows platforms

- Log in as a user with Administrator privileges.
- Choose the directory name where Four J's License Manager will be installed, such as **c:\fjs\flm**
- Copy the self-extractable file into a temporary directory.
- Double-click the file to launch it, or use the **Run** option from your **Start** menu.
- Follow the instructions displayed on your screen.

Installing the service (Windows only)

The installation program installs Four J's License Manager as a service. To install the service manually as a service on Windows, execute the following command:

```
flmprg --service-install
```

Setting the environment

Before starting the Four J's License Manager, the `FLMDIR` and `PATH` environment variables must be set.

A script for setting the environment is created during the installation phase. Located in the Four J's License Manager root directory, this file is named `envflm` on Unix platforms and `envflm.bat` on Windows platforms. By running this script file, the following actions are performed:

on Unix (using `sh` as shellsript):

```
FLMDIR=/opt/fourjs/flm
export FLMDIR
PATH=$PATH:$FLMDIR/bin
export PATH
```

on Windows:

```
set FLMDIR=c:\fjs\flm
set PATH=%PATH%;%FLMDIR%\bin
```

A default environment script is generated by the installation program. This script is called `envflm` on Unix and `envflm.bat` on Windows and is located in the installation directory (`FLMDIR`).

License Genero Business Development Language

These topics cover the licensing of Genero Business Development Language.

- [License Genero using a local license](#) on page 30
- [License Genero using the Four Js License Manager](#) on page 33

License Genero using a local license

Information about local license.

If you do not want to install a local license, see the topic [Using a license manager](#).

To license Genero with a local license, run the following command:

```
fglWrt -l
```

You are prompted for the license number and license number key. If you have a direct internet connection, the maintenance key is automatically activated. If you are not connected to the internet, you must update the maintenance key.

When upgrading, the product is installed over the existing directory having a valid license. You do not have to re-enter the license keys.

When you have purchased a new maintenance contract, the new maintenance key must be installed. To install your new maintenance key, you do not need to reinstall your license. Updating the maintenance key is handled separately. There is also no need to uninstall the old maintenance key.

- [License from Genero Studio](#) on page 30
- [Install a local license from the command line](#) on page 31
- [Register a local license](#) on page 31
- [Get license information](#) on page 31
- [Uninstall a local license](#) on page 31
- [The FGLDIR/lock directory](#) on page 32
- [Install or update the maintenance key](#) on page 32
- [Licensing an upgraded installation](#) on page 32

License from Genero Studio

You can license Genero Business Development Language from the Genero Studio installation.

Before you begin:

- You must be able to access the internet.
- You must have a valid license number and license number key.
- Your Genero environment must be set:
 - *FGLDIR* must be set to the Genero Business Development Language (BDL) installation directory.
 - *PATH* must include *FGLDIR/bin*.

1. From the Start menu, select **All Programs >> Genero Studio** or **Genero Mobile >> Admin >> Genero BDL Licenser**.

The **Four Js Licensing Application** opens.

2. Enter your license number and license number key, and click **[Install license]**.

An **installation number** is generated.

Note: You have 30 days to register the installation number and obtain an **installation key**.

3. Enter the installation number key and click **[Install key]**.
Genero Business Development Language is licensed.

At this point, you need to [install a maintenance key](#).

Install a local license from the command line

You can license Genero products from the command line using the licence controller program, `fglWrt`.

Before you begin:

- You must be the root user or the user who installed the software.
 - If a license already exists, you must first uninstall the license, see [Uninstall a local license](#) on page 31
 - Your Genero environment must be set:
 - `FGLDIR` must be set to the Genero Business Development Language (BDL) installation directory.
 - `PATH` must include `FGLDIR/bin`.
1. At the command line enter the command, `fglWrt -l`.
 2. When prompted, enter the license number.
 3. When prompted, enter the license key.
An **installation number** is generated.

Note: You have 30 days to register the installation number and obtain an **installation key**.

4. Enter the installation key with the command `fglWrt -k <installation-key>`.
The Genero product is licensed. All features are available for use.

At this point, you need to [install a maintenance key](#).

Register a local license

Enter the installation number to complete the licensing.

To perform a full licensing, you will be prompted for the license number and license number key.

An installation number is generated from the license number and license number key. The license installation program will give you instructions to get the installation key. Contact your local support center if you fail to get the key from the installation program. To complete licensing, enter the installation number key.

You have 30 days to enter the installation number key.

To finalize the installation, from a command prompt, enter `fglWrt -k installation-number-key`

Get license information

Display the license information for the Genero Business Development Language.

From a command prompt, enter `fglWrt -a info license`.

The license number displays, along with information about the product, license type, and number of users. The installation number is retrieved if the license installation has not been finalized.

Uninstall a local license

Follow this procedure to uninstall a local license.

Before you begin:

- You must be the root user or the user who installed the software.
- Open a command line and set your Genero environment:
 - `FGLDIR` must be set to the Genero Business Development Language (BDL) installation directory.
 - `PATH` must include `FGLDIR/bin`.

1. Enter `fglWrt -d`.
2. Enter "y" when prompted if you really want to uninstall the license.
The license is uninstalled. A message confirms the license is uninstalled.

The FGLDIR/lock directory

When using a local license, the license manager uses the `FGLDIR/lock` directory to store information (number of active users). This directory must have access rights for any user running a BDL program. If it does not exist, it is automatically created.

The `FGLDIR/lock` directory is not used when Genero is configured to use a [license manager](#).

By default, the `FGLDIR/lock` directory is created with `rwXrwxrwx` rights, to let any user access the directory and create files. To restrict the access to a specific group or user, use the `FGLWRTUMASK` environment variable to force `fglWrt` to use a specific mask when creating the lock directory:

```
$ FGLWRTUMASK="022"; export FGLWRTUMASK
```

Important: The `FGLWRTUMASK` environment variable must be set for any user executing BDL programs, because the `FGLDIR/lock` directory can be re-created by any user at first BDL program execution.

Install or update the maintenance key

A maintenance key is provided with your maintenance contract. The key indicates the day that the maintenance contract expires. If you are licensing the product, you will be prompted for the maintenance key during the licensing process.

If you have purchased a new maintenance contract, you only need to install the new maintenance key. You do not need to reinstall your license, or uninstall the old maintenance key.

Note: This topic is valid for a local license only. If you are using the Four Js License Manager, see refer to the *Four Js License Manager User Guide*.

- If you have direct access to the Four Js web site (<http://www.4js.com>), at the command line enter:

```
fglWrt -m auto
```

- If you do not have direct internet access, enter:

```
fglWrt -m ZZZZZZZZZZZZ
```

where `ZZZZZZZZZZZZ` is the new maintenance key.

You can also use the **Genero BDL Licenser** on Windows™ to update the maintenance key.

1. In the **Maintenance Key** field, enter the maintenance key and click **Update key**.
2. Click **Quit** to exit the dialog.

Licensing an upgraded installation

It is not necessary to re-enter the license of the product if the new version:

- is installed into an existing installation directory
- is not a major version number change

You will need to enter a new maintenance key if the build date of the Genero BDL package is greater than the end of maintenance date (encoded in the maintenance key).

License Genero using the Four Js License Manager

Setup and access a license manager on the network.

For server-side configuration of the license manager and for information on installing a license in the license manager, see the *Four Js License Manager User Guide*.

To use a license manager, set these FGLPROFILE parameters:

Configuration parameter	Description
<code>flm.server = "<hostname>"</code>	The name of the license manager machine.
<code>flm.license.number = "<number>"</code>	The license number.
<code>flm.license.key = "<key>"</code>	The license key.

By default, the `fglprofile` used is `$FGLDIR/etc/fglprofile`. To specify an alternate `fglprofile`, set the `FGLPROFILE` environment variable.

If needed, specify these optional parameters:

Configuration parameter	Description
<code>flm.service = <port></code>	TCP port number used by license manager. Default is 6399.
<code>flm.check = <count></code>	Number of iterations between two controls of the user list. Default is 10.
<code>flm.ping = <milliseconds></code>	Timeout (ms) for ping to detect license manager machine. Default is 3000.
<code>flm.ps = "<ps command>"</code>	Command to get the number of processes. Default is <code>ps -ae</code> .

License Genero Report Writer

These topics cover the licensing of Genero Report Writer.

- [License Genero Report Writer](#) on page 34
- [License Genero Report Writer using a local license](#) on page 34
- [License Genero Report Writer using the Four Js License Manager](#) on page 36

License Genero Report Writer

If your Genero Business Development Language installation has a valid maintenance key, you do not need to install a license for the Genero Report Engine. Otherwise, a license is required.

If your Genero Business Development Language installation does not have a valid maintenance key, you must license the Genero Report Engine before you can use Genero Report Writer. To register the license, you need a valid license number and license number key.

For example:

- License number: F4Z#X34006TG
- License number key: GFAS9FD78XDT

After you apply the license number and license key, you must apply the maintenance key to use Genero Report Writer. Therefore, you need a valid maintenance key.

For example:

- Maintenance key: M9A3T5UCLMGH

License Genero Report Writer using a local license

Information about local license.

If you do not want to install a local license, see the topic [Using a license manager](#).

If you want to install a local license during the initial installation, you need the license number and license number key supplied with the product package, as well as the maintenance key supplied with your maintenance contract.

For example:

- License number: TAB#X34006TG
- License number key: RFAL9FS73XDT
- Maintenance key: M9A3T5UCLMGH

To license Genero with a local license, run the following command:

```
$ fglWrt -l
```

You are prompted for the license number and license number key. If you have a direct internet connection, the maintenance key is automatically activated. If you are not connected to the internet, you must update the maintenance key.

When upgrading, the product is installed over the existing directory having a valid license. You do not have to re-enter the license keys.

When you have purchased a new maintenance contract, the new maintenance key must be installed. To install your new maintenance key, you do not need to reinstall your license. Updating the maintenance key is handled separately. There is also no need to uninstall the old maintenance key.

- [License from Genero Studio](#) on page 35
- [Install a local license from the command line](#) on page 35
- [Register a local license](#) on page 35
- [Get license information](#) on page 36
- [Uninstall a local license](#) on page 36
- [Install or update the maintenance key](#) on page 36
- [Licensing an upgraded installation](#) on page 32

License from Genero Studio

You can license the Genero Report Engine from the Genero Studio installation.

You must be able to access the internet.

You must have a valid license number and license number key.

`GREDIR` must be set to the Genero Report Writer installation directory.

`PATH` must include `GREDIR/bin`.

1. From the Start menu, select **Genero Studio >> Admin >> Genero Report Engine Licenser**.
The Four Js Licensing Application opens.

2. Enter your license number and license number key, and click **[Install license]**.
An **installation number** is generated.

Note: You have 30 days to register the installation number and obtain an **installation key**.

3. Enter the installation key and click **[Install key]**.
The Genero Report Engine is licensed. All features of the Genero Report Writer are available for use.

Install a local license from the command line

To license the Genero Report Writer, you can license the Genero Report Engine from the command line.

Before you begin:

- You must have internet access.
- You must have a valid **license number** and **license key**.
- `GREDIR` must be set to the Genero Report Writer installation directory.
- `PATH` must include `GREDIR/bin`.

1. From the command line, execute `greWrt -l`

2. Enter your license number and license number key.
An **installation number** is generated.

Note: You have 30 days to register the installation number and obtain an **installation key**.

3. Enter the **installation key** with the command `greWrt -k <installation-key>`.
The Genero Report Engine is licensed.

At this point, you need to [install a maintenance key](#).

Register a local license

Enter the installation number to complete the licensing.

To perform a full licensing, you will be prompted for the license number and license number key.

An installation number is generated from the license number and license number key. The license installation program will give you instructions to get the installation number key. Contact your local support center if you fail to get the key from the installation program. To complete licensing, enter the installation number key.

You have 30 days to enter the installation number key.

To finalize the installation, from a command prompt, enter `greWrt -k installation-number-key`

Get license information

Display the license information for the Genero Report Engine.

From a command prompt, enter `greWrt -a info license`.

The license number displays, along with information about the product, license type, and number of users. The installation number is retrieved if the license installation has not been finalized.

Uninstall a local license

Follow this procedure to uninstall a local license.

Open a command line and set your Genero environment.

1. Enter `greWrt -d`.
2. Answer "y" when asked whether you really want to uninstall the license.
The license is uninstalled. A message confirms the license is uninstalled.

Install or update the maintenance key

A maintenance key is provided with your maintenance contract. The key indicates the day that the maintenance contract expires. If you are licensing the product, you will be prompted for the maintenance key during the licensing process.

If you have purchased a new maintenance contract, you only need to install the new maintenance key. You do not need to reinstall your license, or uninstall the old maintenance key.

Note: This topic is valid for a local license only. If you are using the Four Js License Manager, refer to the *Four Js License Manager User Guide*.

- If you have internet access to the Four Js web site (<http://www.4js.com>), at the command line enter:
`greWrt -m auto`
- If you do not have direct internet access, enter:
`greWrt -m ZZZZZZZZZZZZ`
where ZZZZZZZZZZZZ is the new maintenance key.
- You can also use the **Genero Report Engine Licenser** on Windows™ to update the maintenance key.

Licensing an upgraded installation

It is not necessary to re-enter the license of the product if the new version:

- is installed into an existing installation directory
- is not a major version number change

You will need to enter a new maintenance key if the build date of the Genero BDL package is greater than the end of maintenance date (encoded in the maintenance key).

License Genero Report Writer using the Four Js License Manager

Setup and access a license manager on the network.

For server-side configuration of the license manager and for information on installing a license in the license manager, see the *Four Js License Manager User Guide*.

To use a license manager, set these GREPROFILE parameters:

Configuration parameter	Description
<code>flm.server = "<hostname>"</code>	The name of the license manager machine.
<code>flm.license.number = "<number>"</code>	The license number.
<code>flm.license.key = "<key>"</code>	The license key.

By default, the `greprofile` used is `$GREDIR/etc/greprofile`. To specify an alternate `greprofile`, set the `GREPROFILE` environment variable.

If needed, specify these optional parameters:

Configuration parameter	Description
<code>flm.service = <port></code>	TCP port number used by license manager. Default is 6399.
<code>flm.check = <count></code>	Number of iterations between two controls of the user list. Default is 10.
<code>flm.ping = <milliseconds></code>	Timeout (ms) for ping to detect license manager machine. Default is 3000.
<code>flm.ps = "<ps command>"</code>	Command to get the number of processes. Default is <code>ps -ae</code> .

License Genero using the Four Js License Manager

Setup and access a license manager on the network.

For server-side configuration of the license manager and for information on installing a license in the license manager, see the *Four Js License Manager User Guide*.

To use a license manager, set these FGLPROFILE parameters:

Configuration parameter	Description
<code>flm.server = "<hostname>"</code>	The name of the license manager machine.
<code>flm.license.number = "<number>"</code>	The license number.
<code>flm.license.key = "<key>"</code>	The license key.

By default, the `fglprofile` used is `$FGLDIR/etc/fglprofile`. To specify an alternate `fglprofile`, set the `FGLPROFILE` environment variable.

If needed, specify these optional parameters:

Configuration parameter	Description
<code>flm.service = <port></code>	TCP port number used by license manager. Default is 6399.
<code>flm.check = <count></code>	Number of iterations between two controls of the user list. Default is 10.
<code>flm.ping = <milliseconds></code>	Timeout (ms) for ping to detect license manager machine. Default is 3000.
<code>flm.ps = "<ps command>"</code>	Command to get the number of processes. Default is <code>ps -ae</code> .