Four Js Genero Installation Guide
## Contents

**Genero Installation Guide** ................................................................. 5  
The what, where, and when of installation ........................................... 5  
Software package names ...................................................................... 6  
Installation troubleshooting tips ......................................................... 6  

**Install Genero Business Development Language** .............................. 7  
Software requirements ........................................................................ 7  
  Supported operating systems ........................................................... 7  
  Database client software .................................................................... 7  
  C compiler for C Extensions .............................................................. 8  
  Java® runtime environment ............................................................... 8  
Install Genero BDL procedures ............................................................. 8  
  Genero Business Development Language packages ....................... 8  
  Pre-install tasks ............................................................................... 8  
Install Genero BDL on UNIX platforms ............................................... 9  
Install Genero BDL on Windows platforms ............................................ 9  
Post-install tasks ............................................................................. 10  

**Install Genero Desktop Client** ........................................................ 12  
System requirements .......................................................................... 12  
Genero compatibility .......................................................................... 12  
Install GDC on Windows® ................................................................. 13  
Install GDC on Windows platforms using the MSI installer .................. 13  
Install GDC on Mac OS X ................................................................. 14  
Install GDC on X11 systems .............................................................. 15  

**Install Genero Application Server** .................................................. 16  
System Requirements ......................................................................... 16  
  Supported Operating Systems ......................................................... 16  
Genero compatibility .......................................................................... 16  
Install Genero Application Server on UNIX platforms ....................... 17  
Install on Microsoft® Windows® platforms ........................................ 17  
Install and Uninstall in silent mode on Microsoft Windows platforms ... 17  

**Install Genero Studio** ...................................................................... 20  
System Requirements for Genero Studio ............................................. 20  
Install Genero Studio on Windows ...................................................... 21  
Windows® XP Service Pack 2 Security Blocking ................................. 22  
Install Genero Studio on UNIX platforms ............................................ 23  
Install Genero Studio on OS X (GUI installer) .................................... 23  
  Debug the Genero Studio Install on OS X (GUI installer) ............... 23  
Install Genero Studio on OS X (command line) ............................... 23  
  Debug the Genero Studio Install on OS X (command line) .......... 24
Install Genero Report Engine................................................................. 25
  System Requirements........................................................................... 25
  Supported Operating Systems............................................................ 25
  Java® runtime environment................................................................. 25
  Install Genero Report Engine on UNIX platforms............................ 25
  Install Genero Report Engine on Windows....................................... 26
  Install GRE on Windows® platforms using the MSI installer............. 26

Install Genero Report Designer............................................................. 28
  System Requirements........................................................................ 28
  Install Genero Report Designer on Linux®...................................... 28
  Install Genero Report Designer on Windows®................................. 28

Install Four Js License Manager.......................................................... 29
  System Requirements........................................................................ 29
  Compliant DVM Versions.................................................................. 29
  Supported Operating Systems............................................................ 29
  Hardware.......................................................................................... 29
  Disk Space....................................................................................... 30
  Software.......................................................................................... 30
  Internet access................................................................................ 30
  Installation........................................................................................ 30
  Four Js License Manager packages................................................ 30
  Launching the installation................................................................ 30
  Setting the environment................................................................... 31

License Genero Business Development Language.............................. 32
  Genero Development Language License keys.................................. 32
  License Genero using a local license................................................ 32
  License from Genero Studio............................................................... 33
  Install a local license from the command line................................... 37
  Register a license............................................................................. 38
  Install the installation key................................................................. 38
  Get license information.................................................................... 41
  Uninstall a local license................................................................... 44
  The FGLDIR/lock directory............................................................... 46
  Install or update the maintenance key............................................. 46
  License an upgraded installation...................................................... 49
  License Genero using the Four Js License Manager (FLM)................ 49

License Genero Report Writer............................................................... 51
  License Genero Report Writer.......................................................... 51
  License Genero Report Writer using a local license.......................... 51
  License from Genero Studio............................................................... 52
  Install a local license from the command line................................... 54
  Register a local Genero Report Writer license............................... 55
  Get license information.................................................................... 55
  Uninstall a local license................................................................... 59
  Install or update the maintenance key............................................. 61
  License an upgraded installation...................................................... 61
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 12
• **Install Genero Application Server** on page 16
• **Install Genero Studio** on page 20
• **Install Genero Report Engine** on page 25
• **Install Genero Report Designer** on page 28
• **Install Four Js License Manager** on page 29
• **License Genero Business Development Language** on page 32
• **License Genero Report Writer** on page 51

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:

\[ fjs\text{-}product\text{-}version\text{-}build\text{-}osident\text{.extension} \]

where:

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

Examples

- \texttt{fjs-fglgws-2.50.00-build2239_gws126106-a640610.run}
- \texttt{fjs-fglgws-2.50.00-build2239_gws126106-w64v100.exe}
- \texttt{fjs-gdc-2.50.03-build4949-l64lx25.run}

Installation troubleshooting tips

If you have an issue during installation, 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

<table>
<thead>
<tr>
<th>Operating System</th>
<th>How to log the installation</th>
</tr>
</thead>
</table>
| Windows®         | 1. Extract the \texttt{msi} file from the software package executable (exe):  
|                  | \texttt{fjs-package-name.exe /x}  
|                  | 2. From the command line execute:  
|                  | \texttt{msiexec /i fjs-package-name.msi /log mylogfile.log}  
|                  | **Important:** On Windows®, you must run the command as administrator. It is not enough to simply have administrator permissions. |
| UNIX™            | From the command line:  
|                  | 1. export FGLINSTALLDEBUG=1  
|                  | 2. ./fjs-package-name 2>&1 | tee fjs.log |
| Mac®             | See Debug the Genero Studio Install on OS X (GUI installer) on page 23. |
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 (libmysqliclient)
- 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.

Depending on the platform, the minimum required JRE version is Java™ 6 (developer version 1.6), or Java™ 7 (developer version 1.7) (latest updates).

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:

\[ fjs\text{-}product\text{-}version\text{-}build\text{-}osident\text{.}extension \]

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

\[ \text{fjs-}f\text{glgw}\text{s-}2.50.00\text{-}build2239\_gws126106\_a640610\_run} \]
\[ \text{fjs-}f\text{glgw}\text{s-}2.50.00\text{-}build2239\_gws126106\_w64v100\_exe} \]

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 32 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 32 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 32).

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**

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

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**

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

**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 12
- Genero compatibility on page 12
- Install GDC on Windows on page 13
- Install GDC on Windows platforms using the MSI installer on page 13
- Install GDC on Mac OS X on page 14
- Install GDC on X11 systems on page 15

**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.

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 3.00 is not compatible with Genero runtime system 2.5x 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.

When using an HTTP connection through the GAS:

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

For those who connect through HTTP, Genero Desktop Client and Genero Application Server need to be on the same level; for instance, both would need to be 2.5x. 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.

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

Table 4: Arguments for the msiexec installer

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRODUCTDIR=your_gdcdir_path</td>
<td>The path where GDC will be installed. It is an alias of GDCDIR variable.</td>
</tr>
<tr>
<td>GDCDIR=your_gdcdir_path</td>
<td>The path where GDC will be installed. It is an alias of the PRODUCTDIR variable.</td>
</tr>
<tr>
<td>STARTMENUFOLDER=your_startmenufolder_path</td>
<td>Customize the location for the shortcuts in the startmenu. For example, &quot;fjs\gdc&quot;.</td>
</tr>
<tr>
<td>ADDLOCAL=[ALL</td>
<td>GDC</td>
</tr>
<tr>
<td></td>
<td>• ALL (default): Install GDC (mandatory) and .gdc file association</td>
</tr>
<tr>
<td></td>
<td>• GDC: Install GDC only</td>
</tr>
<tr>
<td></td>
<td>• GDC, GDCFILEASSOCGDC: Same as ALL</td>
</tr>
<tr>
<td>ALLUSERS=1</td>
<td>Perform a per machine installation (All Users). If not specified, it will perform a per user installation (Current User)</td>
</tr>
<tr>
<td>FORCEREMOVEPRODUCTDIR=YES</td>
<td>On uninstall, remove the PRODUCTDIR location, even if it is not empty. Default value: &quot;&quot; (empty string)</td>
</tr>
<tr>
<td></td>
<td>• YES = Force removal of PRODUCTDIR</td>
</tr>
<tr>
<td></td>
<td>• Any other entry = Keep files in PRODUCTDIR</td>
</tr>
</tbody>
</table>

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.

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

   Example:

   ```bash
   ./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 16
- Genero compatibility on page 16
- Install Genero Application Server on UNIX platforms on page 17
- Install on Microsoft Windows platforms on page 17
- 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 16

### 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.

When the installation completes, follow the instructions to install and configure the ISAPI dispatcher in the **Genero Application Server User Guide**.

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 `msiexec` installer

<table>
<thead>
<tr>
<th>Argument</th>
<th>IIS version</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>PRODUCTDIR=your_fglasdir_path</code></td>
<td>All</td>
<td>Path where GAS will be installed. It is an alias of GASDIR.</td>
</tr>
<tr>
<td><code>GASDIR=your_fglasdir_path</code></td>
<td>All</td>
<td>Path where GAS will be installed. It is an alias of PRODUCTDIR.</td>
</tr>
<tr>
<td><code>FGLDIR=your_fgldir_path</code></td>
<td>All</td>
<td>Path where Genero BDL is installed. Used only when SETFGLDIR=1.</td>
</tr>
<tr>
<td><code>SETFGLDIR=1</code></td>
<td>All</td>
<td>Enable the FGLDIR variable. Default value is 0 (zero).</td>
</tr>
<tr>
<td><code>GREDIR=your_gredir_path</code></td>
<td>All</td>
<td>Path where GRE is installed. Used only when SETGREDIR=1.</td>
</tr>
<tr>
<td><code>SETGREDIR=1</code></td>
<td>All</td>
<td>Enable the GREDIR variable. Default value is 0 (zero).</td>
</tr>
<tr>
<td><code>ADDLOCAL=GAS</code></td>
<td>All</td>
<td>Install the GAS without ISAPI. Set the parameter to ALL to install the GAS with the ISAPI extension.</td>
</tr>
<tr>
<td><code>ISAPIDIR=your_isapi_path</code></td>
<td>All</td>
<td>Path where the ISAPI extension will be installed. If not specified, the default path is <code>&lt;PRODUCTDIR&gt;\isapi</code>.</td>
</tr>
<tr>
<td><code>STARTMENUFOLDER=your_startmenufolder_path</code></td>
<td>All</td>
<td>Customize the location for the shortcuts in the startmenu. For example: &quot;fjs\gas&quot;</td>
</tr>
<tr>
<td><code>WEBSITE=your_webSite</code></td>
<td>IIS 6, IIS7</td>
<td>Default value: &quot;Default Web Site&quot;</td>
</tr>
<tr>
<td><code>WEBAPPNAME=your_webAppName</code></td>
<td>All</td>
<td>Default value: &quot;gas&quot;</td>
</tr>
<tr>
<td>Argument</td>
<td>IIS version</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-------------</td>
<td>------------------------------------------------------------------</td>
</tr>
<tr>
<td>WEBAPPPPOOLNAME=your_webAppPoolName</td>
<td>IIS 6, IIS7</td>
<td>Default value: &quot;GASAppPool&quot;</td>
</tr>
<tr>
<td>APPPOOUSERDOMAIN=your_AppPoolUserDomain</td>
<td>IIS 6, IIS7</td>
<td>Default value: &quot;&quot;</td>
</tr>
<tr>
<td>APPPOOLUSER=your_AppPoolUser</td>
<td>IIS 6, IIS7</td>
<td>Default value: &quot;NetworkService&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other possible values:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&quot;LocalService&quot;,&quot;LocalSystem&quot;</td>
</tr>
<tr>
<td>FORCEREMOVEPRODUCTDIR=YES</td>
<td>All</td>
<td>On uninstall, remove the PRODUCTDIR location even if it is not empty. Default value: &quot;&quot;</td>
</tr>
</tbody>
</table>

**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 WEBAPPPNAME=gas-msi WEBAPPPPOOLNAME=gas-pool-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 WEBAPPPNAME=gas-msi APPPOOUSERDOMAIN=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.


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 20
• Install Genero Studio on Windows on page 21
• Windows XP Service Pack 2 Security Blocking on page 22
• Install Genero Studio on UNIX platforms on page 23
• Install Genero Studio on OS X (GUI installer) on page 23
• Install Genero Studio on OS X (command line) on page 23

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 Products download page of the Four Js web site) or contact your support center. This matrix also informs you which operating systems will no longer be supported as of the next release.

Java requirements
Java is required for Java extensions in Genero BDL, Genero Report Engine (GRE), and Genero Mobile for Android™ (GMA).
On Microsoft® Windows®, Linux®, and macOS™:

- To work with these products bundled in Genero Studio, you must install the latest Oracle® Java Development Kit (JDK).
  
  **Note:** Starting with macOS™ 10.10, you must install the latest Oracle® JDK. The system will ask you to install the legacy Oracle® Java 1.6 for compatibility reasons.

On IBM® AIX®, HP-UX®, Oracle® Sun®:

- You cannot run your Genero Mobile for Android™ (GMA) application using Genero Studio. GMA is unable to compile on these operating systems.
- To compile Genero BDL with Java extensions and to use the GRE:
  - For IBM® AIX®, install IBM® Java 1.6 or higher.
  - For HP-UX®, install HP-UX® JDK 6 or higher.
  - For Oracle® Sun®, install Oracle® Java Development Kit (JDK) 1.6 or higher.

**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-buildxxxxx-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:
   ```bash
   hdiutil mount fjs-gst-2.50.00-buildxxxxx-m64x105.dmg
   ```
3. Launch the install process:
   ```bash
   sudo installer -pkg /Volumes/fjs-gst-2.50.00-buildxxxxx-m64x106/fjs-gst-2.50.00-buildxxxxx-m64x106.pkg/ -target "/Volumes/Macintosh HD"
   ```
4. Change the owner of $HOME/.Fourjs:
   ```bash
   sudo chown -R [My Account]:staff $HOME/.Fourjs
   ```
5. Umount the dmg:
   ```bash
   hdiutil unmount /Volumes/fjs-gst-2.50.00-buildxxxxx-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:

```bash
sudo installer -pkg /Volumes/fjs-gst-2.50.00-buildxxxxx-m64x106/fjs-gst-2.50.00-buildxxxxx-m64x106.pkg/ -target "/Volumes/Macintosh HD" -dumplog -verbose 2>&1 | tee fjs-gst-2.50.00-buildxxxxx-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 25
- Install Genero Report Engine on UNIX platforms on page 25
- Install Genero Report Engine on Windows on page 26
- Install GRE on Windows platforms using the MSI installer on page 26

System Requirements

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

- Supported Operating Systems on page 25
- Java runtime environment on page 25

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 for the most current information regarding Java JRE support. The release notes are GRE_DIR/release/readme.txt.

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 GRE on Windows® platforms using the MSI installer

Install Genero Report Engine on Windows® platforms using the MSI installer.

**MSI installer**

The GRE 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-gre-version-build-osident.exe /x`

Example:

`c:\fjs-gre-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 GRE 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.

Before you install the GRE, you must install the Java Runtime Engine (JRE).

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-gre-version-build-osident.msi` - Install the specified msi package
`/x fjs-gre-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>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRODUCTDIR=your_gredir_path</td>
<td>The path where GRE will be installed. It is an alias of GDCDIR variable.</td>
</tr>
<tr>
<td>GREDIR=your_gredir_path</td>
<td>The path where GRE will be installed. It is an alias of the PRODUCTDIR variable.</td>
</tr>
<tr>
<td>STARTMENUFOLDER=your_startmenufolder_path</td>
<td>Customize the location for the shortcuts in the startmenu. For example, &quot;fjs\gre&quot;.</td>
</tr>
<tr>
<td>ADDLOCAL=[ALL</td>
<td>GRE</td>
</tr>
<tr>
<td></td>
<td>• ALL (default): Install GRE (mandatory) and .gre file association</td>
</tr>
<tr>
<td></td>
<td>• GRE: Install GRE only</td>
</tr>
<tr>
<td></td>
<td>• GRE, GDCFILEASSOCGDC: Same as ALL</td>
</tr>
<tr>
<td>ALLUSERS=1</td>
<td>Perform a per machine installation (All Users). If not specified, it will perform a per user installation (Current User)</td>
</tr>
<tr>
<td>FORCEREMOVEPRODUCTDIR=YES</td>
<td>On uninstall, remove the PRODUCTDIR location, even if it is not empty. Default value: &quot;&quot; (empty string)</td>
</tr>
<tr>
<td></td>
<td>• YES = Force removal of PRODUCTDIR</td>
</tr>
<tr>
<td></td>
<td>• Any other entry = Keep files in PRODUCTDIR</td>
</tr>
</tbody>
</table>

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

**Example**

The following commands install the JRE and the GRE silently:

```
jre8u102windowsx64.exe INSTALL_SILENT=Enable INSTALLDIR="C: \Program Files\Java\jre1.8.0_102" STATIC=1 AUTO_UPDATE=Disable SPONSORS=Disable msiexec /qn /i fjsgre2.50.18build141868w64v100.msi /l*vx gre.log GREDIR=D:\gre2.50 STARTMENUFOLDER="Four Js Genero Report Engine 2.50.18 (64 bits)"
```
Install Genero Report Designer

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

- **System Requirements** on page 28
- **Install Genero Report Designer on Linux** on page 28
- **Install Genero Report Designer on Windows** on page 28

**System Requirements**

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

**Supported Operating Systems**

The Genero Report Designer is supported on Linux and Microsoft Windows.

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 Linux**®

Follow these steps to install Genero Report Designer on Linux.

1. Type the following command to start the installation:
   
   ```
   $ sh fjs-grd-version-build-osident.run
   ```
   
   Example:
   
   ```
   $ sh fjs-grd-3.00.22-build149130-164x1212.run
   ```

2. Follow the instructions provided on the screen.

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

**Install Genero Report Designer on Windows**®

Follow these steps to install Genero Studio on Windows.

1. Execute the package name to start the Setup Wizard.
   
   ```
   fjs-grd-version-build-osident.exe
   ```
   
   Example:
   
   ```
   fjs-grd-3.00.22-build149130-w64v120.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 29
- Installation on page 30

System Requirements

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

- Compliant DVM Versions on page 29
- Supported Operating Systems on page 29
- Hardware on page 29
- Supported Operating Systems on page 29
- Disk Space on page 30
- Software on page 30
- Internet access on page 30

Compliant DVM Versions

Dynamic Virtual Machine (DVM) versions that are fully compatible with the Four J's License Manager and those older versions that need to be patched.

Four Js License Manager is ported to all platforms supported by the Four Js DVM. The following DVM versions are fully compatible with the Four Js License Manager:

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

Versions older than those specified above need to be patched (or entries in the fglprofile file need to be updated) to be compliant with Four Js 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 too.

Supported Operating Systems

The Four Js License Manager is supported on the same operating systems as Genero Business Development Language (BDL)

For a list of supported operating systems refer to the topic on supported operating systems in the Genero Business Development Language User Guide.

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.
**Disk Space**

Disk space required for Four Js License Manager installation.

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**

Software requirements of Four Js License Manager.

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 30
- Launching the installation on page 30
- Setting the environment on page 31

**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 31
- Installing on Windows platforms on page 31
- Installing the service (Windows only) on page 31
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:

  ```bash
  sh fjs-flm-5.10.3a-build333-1nxl2c23.run -i
  ```

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

  ```bash
  sh fjs-flm-5.10.3a-build333-1nxl2c23.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:

```bash
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 shellscript):

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

on Windows:

```bash
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.

- Genero Development Language License keys on page 32
- License Genero using a local license on page 32
- License Genero using the Four Js License Manager (FLM) on page 49

Genero Development Language License keys

Four Js provides a license number and license key with the product package, as well as a maintenance key with your maintenance contract.

Genero Development Language license numbers start with the letter T. For example:

- License number: TAB#X35006TG
- License key: RFAL8FS73XDT

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: M9A3R5UCLMGH

License Genero using a local license

Information about local license.

This section contains topics about installing and managing licenses locally using the license controller (fglWrt) installed with the product. Alternatively, if you do not want to install or manage licenses locally, you can use the License Manager, see the topic Using a license manager.

Notes About Upgrading

When upgrading a Genero product, the product is installed over the existing directory having a valid license. You do not have to re-enter the license keys. See License an upgraded installation on page 49

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. See Install or update the maintenance key on page 46.

- License from Genero Studio on page 33
- Install a local license from the command line on page 37
- Register a license on page 38
- Install the installation key on page 38
- Get license information on page 41
- Uninstall a local license on page 44
- The FGLDIR/lock directory on page 46
- Install or update the maintenance key on page 46
- License an upgraded installation on page 49
License from Genero Studio

You can complete licensing of Genero Business Development Language (BDL) from the Genero Studio installation.

Before you begin:

- You must have your product's license number and license key to hand.
- You need a valid maintenance key. If you do not have this, please contact your local sales office to purchase a new maintenance contract.
- Make sure you have the Customer code delivered by Four Js with your product. Typically, this is delivered by email with license number, license key, and maintenance key. If you do not have a Customer code, please contact your local sales office.

1. From Genero Studio’s Tools > Genero Tools menu select Genero BDL Licenser. The Four Js Licensing Application opens.
Figure 1: Genero BDL Licenser

2. In the **License number** field enter your license number.
3. In the **License key** field enter your license key.
4. Select **Install license**.
   An **installation number** is generated.
**Note:** You have 30 days to register the installation number and obtain an **installation key**.

**Register the license**

5. If you have internet access from the machine you are installing the license, select the **Install using Four Js Activation server** option to complete the license installation:
If you need to go out through a proxy, you will have to provide the required information here. But if you have direct access to the internet, you can just leave the **HTTP proxy** and **Port** options blank.
6. In the **Login** field, enter your customer code.
7. **Select Install Keys**
   If the response from the activation server is good, a window pops up displaying "Licence successfully installed".
8. **Select OK** to continue.
   The maintenance key is automatically installed at the same time, so another window pops up displaying "Maintenance key successfully installed".
9. **Select OK** to continue.
   License status updated:
   - The **Licensing status** field is updated; "temporary information stored" has been replaced with "License installation successful".
   - In the field under **Licensing status** you will see the maintenance expiry date appears after the **End of maintenance date**: This means that your maintenance key is valid until the date displayed.

If you do **not** have internet access, follow the procedure to register the license in **Register a license** on page 38, and then continue with the installation procedure described in **Install or update the maintenance key** on page 46.

**Note**: Until registration is completed:
- Your Genero product has a temporary license, which means that all product features are available for use for 30 days.
- You also have 30 days to fully complete the license installation.

**Install a local license from the command line**
You can license Genero Enterprise and Genero Mobile 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 44
- 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**.

**Register the license automatically**
4. If you have internet access from the machine you are installing the license, at the prompt:
   
   ```
   Do you want to obtain the installation key using http? (y/n)
   enter: y
   ```
   
   The **installation key** is retrieved automatically from the Four Js Activation server. License installation is now completed.

**Registering the license manually**
If you do **not** have internet access, follow the procedure to register the license in **Register a license** on page 38, and then continue with the installation procedure described in **Install or update the maintenance key** on page 46.
Note: Until registration is completed:

- Your Genero product has a temporary license, which means that all product features are available for use for 30 days.
- You also have 30 days to fully complete the license installation.

Register a license

Register the installation number manually on the Four Js product website to validate the license.

An installation number is generated from the license number and license key. For information on getting the installation number see Get license information on page 41. You need to register the installation number with Four Js to validate the license and obtain the installation key.

Note: If you did not opt to automatically register the license at the time you installed the license number and license key, you have 30 days to register the installation number and obtain an installation key.

If you do not have internet access from the machine you are installing the license, take one of the following options to register your license:

- You can manually register the license on the Four Js product web site to get an installation key, see the procedure described in "Register the license" in the Genero Licensing User Guide.
- Or alternatively, you can also obtain the installation key by contacting your local support center.

After obtaining the installation key, your next step is to install the installation key, see Install the installation key on page 38.

Install the installation key

Enter the installation key with either the fglWrt -k command or the Genero BDL Licenser.

About this task:

After installing the license number and license key, you need to install an installation key. The procedure in this topic describes the installation of the installation key for Genero Enterprise and Genero Mobile products using the licence controller program, fglWrt.

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

Important: You can run the command to install an installation key whilst users are on the system. They will not be affected by this procedure.

Before you begin:

- You must be the root user or the user who installed the software to run the fglWrt command.
- You must have set your Genero environment, if you wish to run the fglWrt command from any directory

Before you begin a manual installation:

If you intend to manually install the installation key, you must have a valid installation key to hand, see Register a license on page 38. If you do not have this, please contact your local Four Js support office.

Before you begin an automatic installation:

If you intend to use the auto option to automatically complete licensing over the internet:

- You must have the Customer Code delivered by Four Js with your product. Typically, this is delivered by email with license number, license key, and maintenance key. If you do not have a Customer Code, please contact your local Four Js sales office.
- You do not need the installation key as it will be retrieved automatically and installed for you.

Choose from one of the following command line options:
• If you do not have internet access, type the command:

```
fglWrt -k <installation-key>
```

Where `<installation-key>` is the installation key. You should receive a message to say the license installation was successful.

• If you have internet access from the machine you are installing, you can complete licensing automatically using the `auto` option.
  1. At the command prompt type:

```
fglWrt -k auto
```
  2. At the prompt

```
Enter your customer login >
```

Type in your:

```
Customer Code
```

3. At the prompt for proxy configuration:

```
Do you need to configure an HTTP proxy? (y/n)
```

Enter:

```
n
```

Note: If you enter `y`, you will be prompted for the required proxy information.

The maintenance key is then retrieved from the Four Js Activation server and is displayed.

```
Installing maintenance key 'S7MO51KGYR7Z'
License installation successful.
```

License installation is now completed. To check your license status, see Get license information on page 41.

Use the Genero BDL Licenser to Install the Installation key.

You also have the option of using the Genero Licenser Application tool, which provides you with a graphical user interface to the licence controller. This task shows you how to install the installation key using the Genero BDL Licenser.

1. From Genero Studio's Tools > Genero Tools menu select Genero BDL Licenser, or launch the application tool from the desktop by selecting Genero BDL Licenser from your Four Js program list.
2. In the **Installation Key** field, enter the installation key and select **Install key**
3. Select **Quit** to exit the dialog.
At this point: If you need to install the maintenance key, see Install or update the maintenance key on page 46.

Get license information
Display the license information for the Genero Business Development Language.

About this task:
The procedure in this topic describes a method you can use to display information about the license of your Genero product using the license controller. Use this procedure, for example, to find out the date the maintenance contract expires.

Tip: You can also use the procedure described in this topic to retrieve the installation number when you need to register the license and finalize the installation.

Before you begin:
• 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 a command prompt, enter fglWrt -a info license.

Example of Genero BDL license information:

<table>
<thead>
<tr>
<th>License</th>
<th>THM-AAF00ZSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>License key</td>
<td>JIEG6GN8P065</td>
</tr>
<tr>
<td>Product</td>
<td>Four Js Universal Compiler</td>
</tr>
<tr>
<td>Type</td>
<td>Development version</td>
</tr>
<tr>
<td>Users</td>
<td>5</td>
</tr>
<tr>
<td>Extension(s)</td>
<td>Open Database Interface, Enhanced license key format</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>License</td>
<td>This license is date limited and expires the 2016/03/31 (Year/Month/Day).</td>
</tr>
<tr>
<td>License key</td>
<td>Warning! This is a temporary license, installation number is 'CLXANYVAFML8'.</td>
</tr>
<tr>
<td>Product</td>
<td>This temporary installation will expire in 29 day(s).</td>
</tr>
<tr>
<td>Type</td>
<td>WARNING! Your maintenance key has expired. Please contact your vendor.</td>
</tr>
<tr>
<td>Users</td>
<td>End of maintenance date: 2016/03/03 (Year/Month/Day).</td>
</tr>
</tbody>
</table>

The output from the license controller command may display the following details about the installed license:

| Server name                           | Is the name of the license manager server. |
| TCP Port                               | Is the port the license manager is listening. |
|                                       | Note: Server name and TCP port details are only displayed if the licensing is managed by a License Manager. |
| License                                | Is the value of the license number. |
| License key                            | Is the value of the license key. |
| Product                                | Is the name of the product license. In relation to Genero product, this can be, for example: Four J's Universal Compiler for Genero Enterprise and Genero Mobile products. |
| Type                                    | Is the type of license. This can be runtime or development. |
| Users                                   | Is the maximum number of users allowed. |
Extension(s) Provides information on some specific conditions of the license. For example:

- "Open Database Interface" means that your license allows you to use any database.
- A "Strict licensing option" means that you do not have an option to install as a temporary license. Therefore, the license needs to be registered at the time of license installation.

The **installation number** is displayed if the license is a temporary license and the installation has not been finalized.

If the license is **date-limited**, then the date when the license expires is shown.

**End of maintenance date** is the date the maintenance contract expires.

2. Alternatively, you can also use the **Genero BDL Licenser** to display license information.

Launch the Genero Licenser tool from the desktop by selecting **Genero BDL Licenser** from your Four Js program list.
Figure 4: Genero BDL Licenser Sample License Window

License information is displayed in the **Licensing status** field.

3. Select **Quit** to exit the dialog.
Uninstall a local license

Follow this procedure to uninstall a local license.

About this task:

The procedure in this topic describes methods you can use to uninstall the license of your Genero product using the license controller.

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

Before you begin:

- You must be the root user or the user who installed the software.
- At the command line 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.

![Image of fglWrt command output](image)

Figure 5: Uninstalling a License with the License Controller (fglWrt)

Using the Genero BDL Licenser application to uninstall the license

3. Alternatively, you can also use the **Genero Licenser** application to uninstall the license.
   Launch the **Genero BDL Licenser** from your Four Js program list.
4. Select **Uninstall** to uninstall the license.
   The **Licensing status** field is updated to show a license is not installed.
5. Select **Quit** to exit the dialog.

**The FGLDIR/lock directory**

When using a local license, the license controller 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.

**Note:** 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 `rw-rw-rwx` 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 all users 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**

Information on methods for installing or updating the maintenance key for your Genero product using the license controller and the **Genero BDL Licenser**.

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 the **Four Js License Manager User Guide**.

**Before you begin:**

- You must be the root user or the user who installed the software to run the `fglWrt` command.
- You must have set your Genero environment, if you wish to run the `fglWrt` command from any directory

**Before you begin a manual installation:**

If you intend to manually add the maintenance key, you must have a valid maintenance key to hand. If you do not have this, please contact your local Four Js sales office to purchase a new maintenance contract.

**Before you begin an automatic installation:**

If you intend to use the auto option to automatically complete licensing over the internet:

- You must have the **Customer Code** delivered by Four Js with your product. Typically, this is delivered by email with license number, license key, and maintenance key. If you do not have a **Customer Code**, please contact your local Four Js sales office.
- You do **not** need the maintenance key as it will be retrieved automatically and installed for you.

Choose from one of the following command line options:

- If you do **not** have internet access, run the command:

  ```
  fglWrt -m <maintenance-key>
  ```

  Where `<maintenance-key>` is the maintenance key. You should receive a message to say the license installation was successful.
• If you have internet access from the machine you are installing, you can complete licensing automatically using the auto option.

1. At the command prompt type:
   
   fglWrt -m auto

2. At the prompt
   
   Enter your customer login >
   
   Type in your:
   
   Customer Code

3. At the prompt for proxy configuration:
   
   Do you need to configure an HTTP proxy? (y/n)
   
   Enter:
   
   n

   **Note:** If you enter y, you will be prompted for the required proxy information.

You should receive a message to say the maintenance key installation was successful.

```
Installing maintenance key 'S7MO51KGYR7Z'
License installation successful.
```

Your Genero product is now fully licensed. All features are available for use. To check your license status, see Get license information on page 41

**Use the Genero BDL Licenser to Install or Update the Maintenance key**

You also have the option of using the Genero Licenser Application tool, which provides you with a graphical user interface to the licence controller. This task shows you how to install or update the maintenance key using the **Genero BDL Licenser**.

1. Launch the Genero Licenser tool from the desktop by selecting **Genero BDL Licenser** from your Four Js program list.
2. In the Maintenance/Subscription Key field, enter the maintenance key and select Update key. A window pops up displaying “Maintenance key successfully installed”.

Figure 7: Genero BDL Licenser Sample License Window
License status updated:

- The **Licensing status** field is updated: “temporary information stored” has been replaced with “License installation successful”.
- In the field under **Licensing status** you will see the maintenance expiry date appears after the **End of maintenance date**: This means that your maintenance key is valid until the date displayed.

Your product is now fully licensed.

3. Select **Quit** to exit the dialog.

### License 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 Business Development Language (BDL) package is greater than the end of maintenance date (encoded in the maintenance key).

### License Genero using the Four Js License Manager (FLM)

How to set up a Genero Business Development Language (BDL) product installation to use a license manager on the network.

To specify the use of a license manager, you need to configure the *fglprofile* locally. The default *fglprofile* is found in `$FGLDIR/etc/fglprofile`. To specify an alternate *fglprofile*, set the *FGLPROFILE* environment variable. To specify a license manager, set these *FGLPROFILE* resources:

**Table 7: Virtual Machine - License Server Configuration Required Resources**

<table>
<thead>
<tr>
<th>Resource</th>
<th>Default Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>flm.server</td>
<td>none</td>
<td>Name of the machine that holds the license service program. You must set this value to use FLM from this machine.</td>
</tr>
<tr>
<td>flm.license.number</td>
<td>none</td>
<td>Value of your current license number. (For example: XXX#XXXXXXXX)</td>
</tr>
<tr>
<td>flm.license.key</td>
<td>none</td>
<td>Value of your current license key. (For example: YYYYYYYYYYYY)</td>
</tr>
</tbody>
</table>

If needed, specify these optional resources:

**Table 8: Virtual Machine - License Server Configuration Optional Resources**

<table>
<thead>
<tr>
<th>Resource</th>
<th>Default Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>flm.service</td>
<td>6399</td>
<td>Service or port number for the communication between the local license controller and Four Js License Manager. This port number should be the same as that set in the FLM configuration file, $FLMDIR/etc/lmprofile. See the topic Configuring the License Manager in the <em>Four Js License Manager User Guide</em></td>
</tr>
<tr>
<td>Resource</td>
<td>Default Value</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>--------------</td>
<td>-------------</td>
</tr>
<tr>
<td>flm.check</td>
<td>10</td>
<td>Number of iterations between two controls of the user list. This resource is only available on UNIX™ platforms.</td>
</tr>
</tbody>
</table>
| flm.ps   | ps -ae       | Specifies the command that gives a process list for a machine. This value is used to recover unreleased licenses by synchronizing the real user list on the current machine with the registered users list on FLM.  

**Warning:** This entry is not used on most platforms as the default value `ps -ae` is replaced by a call to an operating system specific API. This resource should not be set unless the internal implementation relying on API calls fail. |

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*. 
License Genero Report Writer

These topics cover the licensing of Genero Report Writer.

The topics in this section provide information on installing licenses for Genero Report Writer products:

- Genero Report Writer for Java, C# and PHP
- Genero Report Engine (GRE)

Different licence controller programs are used for both, though they perform similar licensing functions. To license Genero Report Writer for Java, C# and PHP use `grxWrt`. To license Genero Report Engine (GRE) use `greWrt`. The licence controller appropriate for your product is provided in the product package.

Alternatively, you can use the License Manager to manage Genero Report Engine (GRE) licenses, see the topic License Genero Report Engine using the Four Js License Manager on page 61 topic.

**Important:** Licensing for Genero Report Writer for Java, C# and PHP must be managed locally as it can not be managed by the License Manager.

- License Genero Report Engine
- Genero Report Writer License keys
- License Genero Report Writer using a local license on page 51
- License Genero Report Engine using the Four Js License Manager on page 61

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 licensing Genero Report Writer products using a license controller.

**Licensing at product installation**

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

At the time of installation, you are prompted for the license number and license 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.
Notes about Upgrading

When upgrading, if the product is installed over the existing directory having a valid license, you do not have to re-enter the license keys, see License an upgraded installation on page 49.

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. See Install or update the maintenance key.

- License from Genero Studio on page 52
- Install a local license from the command line on page 54
- Register a local Genero Report Writer license on page 55
- Install the installation key
- Get license information on page 55
- Uninstall a local license on page 59
- Install or update the maintenance key
- License an upgraded installation on page 49

License from Genero Studio

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

About this task:

A Genero Report Engine (GRE) license is included with Genero Studio. While your Genero Business Development Language (BDL) installation has a valid maintenance key, you do not need to install a separate license for GRE. If your Genero BDL installation does not have a valid maintenance key, a GRE license is required. This topic describes how to install a GRE license from within Genero Studio.

- You must have your product's license number and license key to hand.
- You need a valid maintenance key. If you do not have this, please contact your local sales office to purchase a new maintenance contract.
- Make sure you have the Customer code delivered by Four Js with your product. Typically, this is delivered by email with license number, license key, and maintenance key. If you do not have a Customer code, please contact your local sales office.

1. From the Genero Studio Tools > Genero Tools menu select Genero Report Engine Licenser
The Four Js Licensing Application opens.

2. In the License number field enter your license number.

3. In the License key field enter your license key.
4. Select Install license.
   An installation number is generated.

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

**Register the license**

5. If you have internet access from the machine you are installing the license, select the Install using Four Js Activation server option to complete the license installation:
   - If you need to go out through a proxy, you will have to provide the required information here, but if you have direct access to the internet, you can just leave the HTTP proxy and Port options blank.

6. In the Login field, enter your customer code.

7. Select Install Keys
   - If the response from the activation server is good, a window pops up displaying "Licence successfully installed".

8. Select OK to continue.
   - The maintenance key is automatically installed at the same time, and another window pops up displaying "Maintenance key successfully installed".

9. Click OK to continue.
   - License status is updated:
     - The Licensing status field is updated; "temporary information stored" has been replaced with "License installation successful".
     - In the field under Licensing status you will see the maintenance expiry date appears after the End of maintenance date: This means that your maintenance key is valid until the date displayed.

   The Genero Report Engine is licensed. All features of the Genero Report Writer are available for use.

If you do not have internet access, follow the procedure to register the license in Register a local Genero Report Writer license on page 55, and then continue with the installation procedures described in Install the installation key and Install or update the maintenance key.

   **Note:** Until registration is completed:
   - Your Genero product has a temporary license, which means that all product features are available for use for 30 days.
   - You also have 30 days to fully complete the license installation.

**Install a local license from the command line**

You can license the Genero Report Writer from the command line using the licence controller program.

Different licence controller programs are used for both Genero Report Writer for Java, C# and PHP and Genero Report Engine. The licence controller appropriate for your product is provided in the product package.

<table>
<thead>
<tr>
<th>Genero product</th>
<th>Licence controller</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genero Report Writer for Java, C# and PHP</td>
<td>grXwrt</td>
</tr>
<tr>
<td>Genero Report Engine</td>
<td>greWrt</td>
</tr>
</tbody>
</table>

**Before you begin:**

- You must have a valid license number and license key.
- Your Genero environment must be set:
  - GREDIR must be set to the Genero Report Writer installation directory.
  - PATH must include GREDIR/bin.
- To register the license automatically, you must have internet access.
1. Run the license controller with the command to install the license:
   • To license Genero Report Writer for Java, C# and PHP with a local license, run the following command:
     grxWrt -l
   • To license GRE with a local license, run the following command:
     greWrt -l

2. At the prompts, enter your license number and license key.
   An installation number is generated.
   
   Note: You have 30 days to register the installation number and obtain an installation key.

Register the license automatically
3. If you have internet access from the machine you are installing the license, at the prompt:
   Do you want to obtain the installation key using http? (y/n)
   enter: y
   The installation key is retrieved automatically from the Four Js Activation server.
   
   Note: Licensing can be completed by installing the maintenance key.

Registering the license manually
If you do not have internet access, follow the procedure to register the license in Register a local Genero Report Writer license on page 55, and then continue with the installation procedure described in Install the installation key.
   
   Note: Until registration is completed:
   • Your Genero product has a temporary license, which means that all product features are available for use for 30 days.
   • You also have 30 days to fully complete the license installation.

Register a local Genero Report Writer license
Enter the installation key to complete the licensing.

To perform a full licensing of your product, you will be prompted for the license number and license key.
   An installation number is generated from the license number and license key. You need to register the installation number to validate the license and obtain the installation key. This topic describes how to register a license and install the installation key.
   
   Note: If you do not opt to automatically register the license at the time you installed the license number and license key, you have 30 days to register the installation number and obtain an installation key.

If you do not have internet access from the machine you are installing the license, take one of the following options to register your license:
   • You can manually register the license on the Four Js product website to get an installation key, see the procedure described in "Register the license" topic in the Genero Licensing User Guide.
   • Or alternatively, you can also obtain the installation key by contacting your local support center.

After obtaining the installation key, your next step is to install the installation key, see Install the installation key.

Get license information
Display the license information for Genero Report Writer products.

About this task:
The procedure in this topic describes a method you can use to display information about the license of your Genero Report Writer product using the license controller. Use this procedure, for example, to find out the date the maintenance contract expires.

**Tip:** You can also use the procedure described in this topic to retrieve the **installation number** when you need to register the license and finalize the installation.

**Before you begin:**

Your Genero environment must be set:

- **GREDIR** must be set to the Genero Report Writer installation directory.
- **PATH** must include **GREDIR/bin**.

1. From a command prompt, enter the license controller command.
   - To display license details for a Genero Report Writer for Java, C# and PHP installation, run the following command:
     ```
     grxWrt -a info license
     ```
   - To display license details for a Genero Report Engine installation, run the following command:
     ```
     greWrt -a info license
     ```

**Example of Genero Report Writer license information:**

<table>
<thead>
<tr>
<th>License</th>
<th>RAA#AAA0000X</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product</td>
<td>Genero Report Writer for Java C# PHP</td>
</tr>
<tr>
<td>Type</td>
<td>Development version</td>
</tr>
<tr>
<td>Warning! This is a temporary license, installation number is 'CLWA9NPAAQE0'.</td>
<td></td>
</tr>
<tr>
<td>This temporary installation will expire in 8 day(s).</td>
<td></td>
</tr>
<tr>
<td>End of maintenance date: 2016/07/31 (Year/Month/Day).</td>
<td></td>
</tr>
</tbody>
</table>

The output from the license controller command may display the following details about the installed license:

- **Server name**
  - Is the name of the license manager server.
- **TCP Port**
  - Is the port the license manager is listening.
  - **Note:** Server name and TCP port details are only displayed if the licensing is managed by a License Manager.
- **License**
  - Is the value of the license number.
- **Product**
  - Is the name of the product.
- **Type**
  - Is the type of license. This can be runtime or development.
- **Users**
  - Is the maximum number of users allowed.
- **Extension(s)**
  - Provides information on some specific conditions of the license. For example:
    - "- Open Database Interface" means that your license allows you to use any database.
    - A "-Strict licensing option" means that you do not have an option to install as a temporary license. Therefore, the license needs to be registered at the time of license installation.
The **installation number** is displayed if the license is a temporary license and the installation has not been finalized.

If the license is **date-limited**, then the date when the license expires is shown.

**End of maintenance date**

Is the date the maintenance contract expires.

2. Alternatively, you can also use the **Genero Licenser** application to display license information.
   
   - For Genero Report Writer for Java, C# and PHP licensing, launch the **Genero Report Engine for Java Licenser** from your Four Js program list.
   - For Genero Report Engine licensing, launch the **Genero Report Engine Licenser** from your Four Js program list.
Figure 9: Genero Report Engine for Java Licenser

The Licensing status field displays details of the license installed. For more information see Step 1.

3. Select Quit to exit the dialog.
Uninstall a local license

Follow this procedure to uninstall a local Genero Report Engine (GRE) or Genero Report Writer for Java, C# and PHP installation license.

Before you begin:

• Your Genero environment must be set:
  • GREDIR must be set to the Genero Report Writer installation directory.
  • PATH must include GREDIR/bin.

1. Uninstall a GRE license.

• To uninstall a license for a Genero Report Writer for Java, C# and PHP installation, run the following command:
  grxWrt -d

• To uninstall a license details for a Genero Report Engine installation, run the following command:
  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.

Using the Genero Licenser application to uninstall the license

3. Alternatively, you can also use the Genero Licenser application to uninstall the license.

• For Genero Report Writer for Java, C# and PHP licensing, launch the Genero Report Engine for Java Licenser from your Four Js program list.
• For Genero Report Engine licensing, launch the Genero Report Engine Licenser from your Four Js program list.
4. Select **Uninstall** to uninstall the license. The **Licensing status** field is updated to show the license is not installed.

5. Select **Quit** to exit the dialog.
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 `ZZZZZZZZZZZZZ` is the new maintenance key.
- You can also use the Genero Report Engine Licenser on Windows™ to update the maintenance key.

License 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 Business Development Language (BDL) package is greater than the end of maintenance date (encoded in the maintenance key).

License Genero Report Engine using the Four Js License Manager

How to set up a Genero Report Engine (GRE) product installation to use a license manager on the network.

The procedure described in this topic is valid for configuring the licensing of Genero Report Engine (GRE) using the License Manager.

Important: Licensing for Genero Report Writer for Java, C# and PHP must be managed locally as it can not be managed by the License Manager.

To specify the use of a license manager, you need to configure the greprofile locally. By default, the greprofile used is found in `$GREDIR/etc/greprofile`. To specify an alternate greprofile, set the GREPROFILE environment variable. The following greprofile resources need to be set:

<table>
<thead>
<tr>
<th>Resource</th>
<th>Default Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>flm.server</td>
<td>none</td>
<td>Name of the machine that holds the license service program. You must set this value to use FLM from this machine.</td>
</tr>
<tr>
<td>flm.license.number</td>
<td>none</td>
<td>Value of your current license number. (For example: XXX#XXXXXXXX)</td>
</tr>
<tr>
<td>flm.license.key</td>
<td>none</td>
<td>Value of your current license key. (For example: YYYYYYYYYYYY)</td>
</tr>
</tbody>
</table>
If needed, specify these optional parameters:

**Table 10: Virtual Machine - License Server Configuration Optional Resources**

<table>
<thead>
<tr>
<th>Resource</th>
<th>Default Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>flm.service</td>
<td>6399</td>
<td>Service or port number for the communication between the local license controller and Four Js License Manager. This port number should be the same as that set in the FLM configuration file, $FLMDIR/etc/lmprofile. See the topic Configuring the License Manager in the <em>Four Js License Manager User Guide</em>.</td>
</tr>
<tr>
<td>flm.check</td>
<td>10</td>
<td>Number of iterations between two controls of the user list. This resource is only available on UNIX™ platforms.</td>
</tr>
<tr>
<td>flm.ps</td>
<td>ps -ae</td>
<td>Specifies the command that gives a process list for a machine. This value is used to recover unreleased licenses by synchronizing the real user list on the current machine with the registered users list on FLM.</td>
</tr>
</tbody>
</table>

**Warning**: This entry is not used on most platforms as the default value `ps -ae` is replaced by a call to an operating system specific API. This resource should not be set unless the internal implementation relying on API calls fail.

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*. 