

GAUSS™ 4.0

Quick-Start Guide



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Contents

Introduction	1
Product Overview	1
Getting Started	2
Installation Under UNIX/Linux	2
Installation Under Windows	2
Documentation	4
GAUSS Quick-Start Guide	4
GAUSS User Guide	4
GAUSS Language Reference	5
Ordering Documentation	5
Support Services	7
Contacting Our Support Services	7
Licensing	8
Licensing Under UNIX/Linux	8
Licensing Under Windows	9

Introduction 1

Product Overview

GAUSS is a complete analysis environment suitable for performing quick calculations, complex analysis of millions of data points, or anything in between. Whether you are new to computerized analysis or a seasoned programmer, the GAUSS family of products combine to offer you an easy to learn environment that is powerful and versatile enough for virtually any numerical task.

Since its introduction in 1984, GAUSS has been a standard for serious number crunching and complex modeling of large-scale data. Worldwide acceptance and use in government, industry, and the academic community is a firm testament to its power and versatility.

The GAUSS System can be described several ways: it is an exceptionally efficient number cruncher, a comprehensive programming language, and an interactive analysis environment. GAUSS may be the only numerical tool you will ever need.

Getting Started **2**

Installation Under UNIX/Linux

1. Make a directory to install GAUSS in.
2. `cd` to that directory.
3. Unzip the `.gz` file if there is one.
4. Untar the `.tar` file.
5. Put the installation directory in the executable path.
6. Put the installation directory in the shared library search path.
7. Install the license, please refer to Chapter 5: Licensing for instructions.

For last minute information, see `README.term`.

Installation Under Windows

Machine Requirements

- A 486 computer or higher.

- Operating System and Memory (RAM) requirements
 - Windows NT4.0, SP6 IE4.0, 32 MB minimum 256 MB recommended.
 - Windows 2000, 64 MB minimum, 256 MB recommended.
 - Windows XP, 128 MB minimum, 256 MB recommended.
- Free hard disk space requirements:
 - Minimum of 100 MB free hard disk space, more may be needed depending on the size of matrices and the complexity of the program.
- Monthly defragmenting is recommended.

Installation from Download

Downloading

The production release is in `GAUSS_4.0_Win_heavy.zip`.

The GUI has online documentation in HTML format. There are also PDF versions of the Quick Start Guide and GAUSS manuals in this directory that you can download separately if you want them.

`GAUSS_4.0_Manual.zip`

Installation

Download `GAUSS_4.0_Win_heavy.zip`, unzip it in a temp directory, and run `setup.exe`.

If you are doing a command line ftp, once logged on you will be placed in the `GAUSS40` directory and will have access to all files contained in that directory and no others. Remember to set the transfer protocol to "bin" before downloading binary files. Use the "get" command to get the files you want off the ftp site.

To install the license, please refer to Chapter 5: Licensing for instructions.

Installation from CD

Insert the GAUSS 4.0 compact disc into the CD-ROM drive, and setup should start automatically. If setup does not start automatically, click Start, then click Run. Type `D:\setup.exe` in the dialog box (where D is the drive letter of the CD-ROM drive).

You can use this procedure for the initial installation of GAUSS, and for additions or modifications to GAUSS components.

To install the license, please refer to Chapter 5: Licensing for instructions.

Documentation **3**

GAUSS Quick-Start Guide

- Introduction
- Getting Started
- Documentation
- Support Services
- Licensing

GAUSS User Guide

- Introduction
- Getting Started
- Using the Command Line Interface
- Using the Windows Interface
- GAUSS Source Browser
- Language Fundamentals
- Operators

Procedures and Keywords
Libraries
Compiler
File I/O
Foreign Language Interface
Data Exchange
Data Transformations
Publication Quality Graphics
Utilities
Error Messages
Maximizing Performance
Fonts Appendix
Reserved Words Appendix
Singularity Tolerance Appendix

GAUSS Language Reference

Introduction
Commands by Category
Command Reference
Obsolete Commands
Colors Appendix

Ordering Documentation

- GAUSS Language Reference (Part No. 2368)
- GAUSS User Guide (Part No. 2369)
- GAUSS Quick-Start Guide (Part No. 2367)

For pricing information, please visit our Web site at: www.Aptech.com, or contact us at:

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Support Services **4**

Contacting Our Support Services

- To contact our support technicians, please e-mail us at: support@Aptech.com.
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E-mail for Academic Sales: acsw@Aptech.com
Info@Aptech.com
- Our Web address is: www.Aptech.com.

Licensing 5

Licensing Under UNIX/Linux

After you install GAUSS or the GAUSS Engine, go to the FLEXlm subdirectory and run the following command:

```
% ./lmutil lmhostid
```

Send the output to license@aptech.com, and you will be sent a license code. Create a file called `gauss.lic` in the FLEXlm subdirectory, and copy the license code into it.

If you have purchased a Single User or Server Locked license, the program is now ready for use. If you have purchased a floating network license, you have to start the `lmgrd` license server daemon first. Go to the FLEXlm subdirectory and run the following command:

```
% ./lmgrd -c gauss.lic -l lmgrd.dll
```

For Network licensing see your system administrator to have the license daemon started automatically in the operating system start-up scripts.

For last minute information, see `README.term`.

Licensing Under Windows

Single User License

1. E-mail or FAX your completed registration form containing your contact information, serial number and the hostid that was displayed during installation to Aptech Systems. NOTE: The information displayed, is stored in the `hostid.txt` file in your `<GAUSSHOME>\flexlm` directory as well. Be sure to include your phone number, e-mail address and/or FAX number. E-mail is the preferred method for returning licenses.

If you need to obtain the hostid after installation:

- a. Open DOS prompt window
- b. `CD <GAUSSHOME>\flexlm`
- c. type the command `notepad hostid.txt`
- d. send the contents of this `hostid.txt` file to Aptech.

If your machine is a laptop or your only connection is via modem you will need to verify your hostid after installation is complete by:

- a. Reboot machine
- b. Open DOS prompt window
- c. `CD <GAUSSHOME>\flexlm`
- d. type the command `lmhost >> hostid.txt`
- e. type the command `notepad hostid.txt`

If the hostids are the same, please send us the results.

If they are not, please:

- a. Open DOS prompt window
- b. `CD <GAUSSHOME>\flexlm`
- c. type the command `lmhost -pin > hostid.txt`
- d. send the contents of the `hostid.txt` file to Aptech.

E-mail to license@Aptech.com

or

FAX to (425) 432-7832

Caution: Some text editors automatically add a `.txt` extension to files when you save them. Check to be sure that you have actually created a file named `gauss.lic`. Also, be aware that it is Windows default to hide file extensions.

2. Aptech will send you a license. Save it in a file called `gauss.lic` in the `<GAUSSHOME>\flexlm` directory. NotePad is the recommended editor.

Floating Network License

Every Installation of GAUSS 4.0 can act as a Floating Network License server. You can have a single license server or 3 redundant servers.

Install License Server(s)

Install GAUSS 4.0. For initial testing and trouble shooting you will need `GAUSS.exe` file installed. However if you are short on hard drive space, after you have confirmed that the FLEXlm License Manager is running correctly, you can delete the shortcuts off the desktop and remove all files in the `GAUSS40` directory except for the `flexlm` directory.

Obtain and Install License

To get the `hostid` of each license server, which is displayed during the GAUSS 4.0 install, it is also stored in the `<GAUSSHOME>\flexlm\hostid.txt` file.

1. E-mail or FAX your completed registration form containing your contact information, serial number and the `hostid` that was displayed during installation to Aptech Systems. NOTE: The information displayed, is stored in the `hostid.txt` file in your `<GAUSSHOME>\flexlm` directory as well. Be sure to include your phone number, e-mail address and/or FAX number. E-mail is the preferred method for returning licenses.

E-mail to license@Aptech.com

or

FAX to (425) 432-7832

Caution: Some text editors automatically add a `.txt` extension to files when you save them. Check to be sure that you have actually created a file named `gauss.lic`. Also, be aware that it is Windows default to hide file extensions.

2. Aptech will send you a license. Save it in a file called `gauss.lic` in the `<GAUSSHOME>\flexlm` directory. NotePad is the recommended editor.
3. Aptech will send you one or more licenses, depending on the number of increments you purchased. Save all of them in a file called '`gauss.lic`'. Copy `gauss.lic` to the license server installation directory on each server.

Configure License Server(s)

1. Launch LMTOOLS from the GAUSS40 program group
2. Select the "Configuration using Services" radio button
3. Select "Configure Services" tab
 - a. Specify Service Name, we suggest "GAUSS License Server"
 - b. Complete the next 3 fields
 - c. "Path to the lmgrd.exe file"
 - d. "Path to the license file"
 - e. "Path to the debug log file" (specify a filename of your choice)
 - f. On NT, select "Use Services"
 - g. Select "Start Server at Power Up" box
 - h. Click "Save Service" button
4. Select "Start/Stop/Reread" tab
 - a. From the "Flexlm license Services installed on the computer" field, choose the name of the server to start.
 - b. Click on the "Start Server" button
5. Close LMTOOLS
6. Test by starting GAUSS on Server.

Configure Clients

Copy the `gauss.lic` license file to the `<GAUSSHOME>/flexlm` directory on each client workstation where GAUSS is installed.

GAUSS is now ready to run.

Server Locked License

1. Email or FAX your completed registration form containing your contact information, serial number and the hostid that was displayed during installation to Aptech Systems. Be sure to include your e-mail address and/or FAX number. E-mail is the preferred method for returning licenses.

E-mail to license@Aptech.com

or

FAX to (425) 432-7832

If you need to obtain the hostid after the installation:

- a. Open DOS prompt window
- b. CD <GAUSSHOME>\flexlm
- c. Run lmhost.exe

Caution: Some text editors automatically add a .txt extension to files when you save them. Check to be sure that you have actually created a file named *gauss.lic*. Also, be aware that it is Windows default to hide file extensions.

2. Aptech will send you a license. Save it in a file called 'gauss.lic' in the <GAUSSHOME>\flexlm directory.

GAUSS is now ready to run.