

Quick Start to IBM ILOG Optimization products

We appreciate your decision to use IBM ILOG Optimization products and technologies in your classroom and laboratory. This document is a quick reference guide for downloading and installing the IBM ILOG Optimization products.

In this guide, you will learn how to:

- Download and install IBM ILOG Optimization products
- Download and install your license key
- Verify your license key installation
- Review the expiration date of your license key

Table of Contents

Download from the Academic Initiative Software Catalog.....	2
Download your license key.....	4
Install your license key on Windows.....	5
Install your license key on UNIX, Linux or Mac OS.....	6
Verify your license key installation.....	7
Review the expiration date of your license key.....	8
Appendix A: Installing products from ‘IBM ILOG Optimization Suite for Academic Initiative V2.0’ eAssembly.....	9

Quick Start to IBM ILOG Optimization products

Download from the Academic Initiative Software Catalog

There are multiple ways to get to the Academic Initiative Software Catalog.

If you are on the IBM Academic Initiative home page (<http://www.ibm.com/academicinitiative/>),

look for **Get software & access** in the center of the page.



You can also find the link **Get full-version software** on the right side of many pages, such as the Operations Research/Management Science page in the Teaching topics section. The following steps described this path.

1. Go to http://www.ibm.com/developerworks/university/teachingtopics/or_ms.html

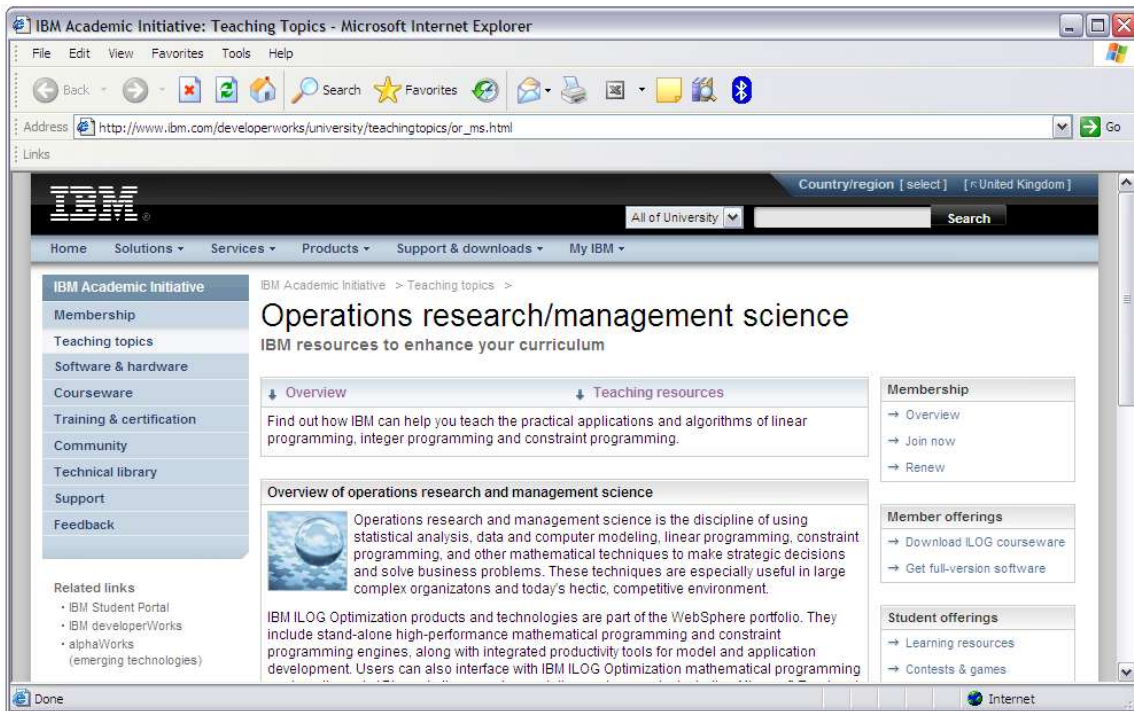


Figure 1. Academic Initiative Operations research/management science page.

2. On the right side, under Member offerings, click **Get full-version software**.

Quick Start to IBM ILOG Optimization products

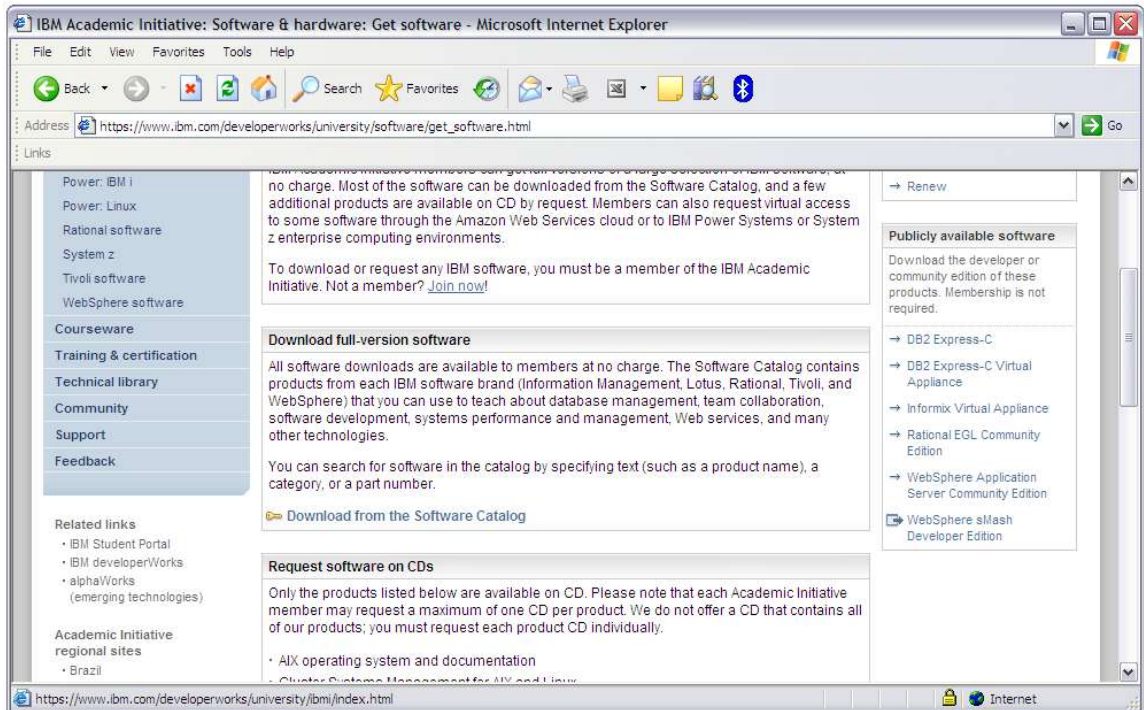


Figure 2. Academic Initiative Get software & system access page.

3. On the Get software & system access page, click **Download from the Software Catalog** and log in with your Academic Initiative user ID and password.
4. On the Software Downloads page, use the text option to search for either of these two product names:

- **IBM ILOG CPLEX Optimization Studio Academic Research Edition**

This product includes the IBM ILOG CPLEX Optimizer and, on some platforms, the IBM ILOG CP Optimizer and the OPL language. For more information about supported platforms, see the IBM ILOG CPLEX Optimization Studio support page: <http://www.ibm.com/support/docview.wss?uid=swg27019100>

- **IBM ILOG CP**

This product includes IBM ILOG Solver, IBM ILOG Scheduler, and IBM ILOG Dispatcher. For more information about supported platforms, see the IBM ILOG CP support page: http://www.ibm.com/support/entry/portal/Overview/Software/WebSphere/IBM_ILOG_CP

Note: The eAssembly titled **'IBM ILOG Optimization Suite for Academic Initiative V2.0'** contains IBM ILOG CPLEX 12.1, IBM ILOG CP 1.5, IBM ILOG CP Optimizer 2.3, and IBM ILOG OPL Development Studio 6.3. **These are not the latest versions of IBM ILOG Optimization products.** You can find instructions for installing the older versions are in the [Appendix](#).

Quick Start to IBM ILOG Optimization products

IBM Academic Initiative Software Downloads

Overview

As a member of the IBM Academic Initiative, you are eligible to download at no cost a wide variety of IBM Software Products in your choice of operating system, language, and release.

You can search by product brands, text strings, or part number.

The software downloaded from this catalog can only be used for purposes as specified in the IBM Academic Initiative program agreement.

If you need assistance with downloading software, contact [IBM Academic Initiative technical support](#).

Find by search text

Type all or part of a product name. You can select additional filters below.

IBM ILOG CPLEX Optimization Studio

▶ Search filter options

Figure 3. Academic Initiative Software Downloads page.

5. Select the product installers for your platforms and start the download. The product images use a script-driven installation application. Launch the installer and follow the instructions.

Download your license key

1. Go to the ILOG Optimization Key Request page: https://www14.software.ibm.com/webapp/iwm/web/preLogin.do?lang=en_US&source=ai-ILOGKEY
(If prompted, log in with your Academic Initiative user ID and password.)
2. Download **access.ilm**. This is your license key file.

Quick Start to IBM ILOG Optimization products

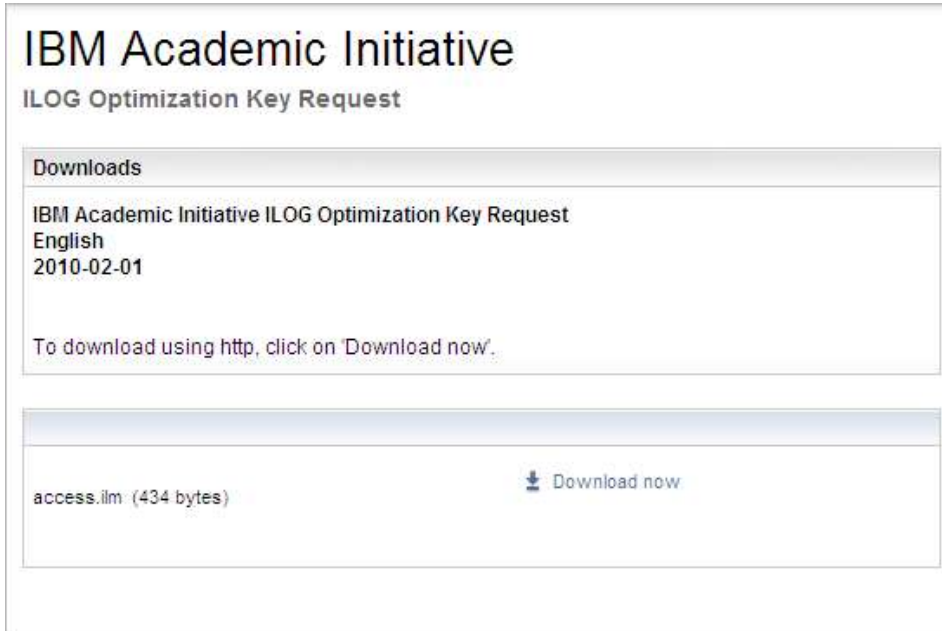


Figure 4. Academic Initiative ILOG Optimization Key Request page.

Note: The license key has an expiration date. We recommended that you download a new license key every 12 months and we will send you an email to remind you.

Install your license key on Windows

Installing the license key at the default location

This is the preferred method for installing a license key on Windows. However, it requires that you have administrator rights on the machine to install the license key in a system directory.

1. Create a directory `c:\ILOG\ILM`
2. Save the **access.ilm** license key file in this directory.

Installing the license key at a custom location

To install the license key at a custom location, follow these steps.

1. Save the license key file **access.ilm** in the location of your choice.
2. Create an environment variable named **ILOG_LICENSE_FILE** that contains the full path name pointing to your license file.

Quick Start to IBM ILOG Optimization products

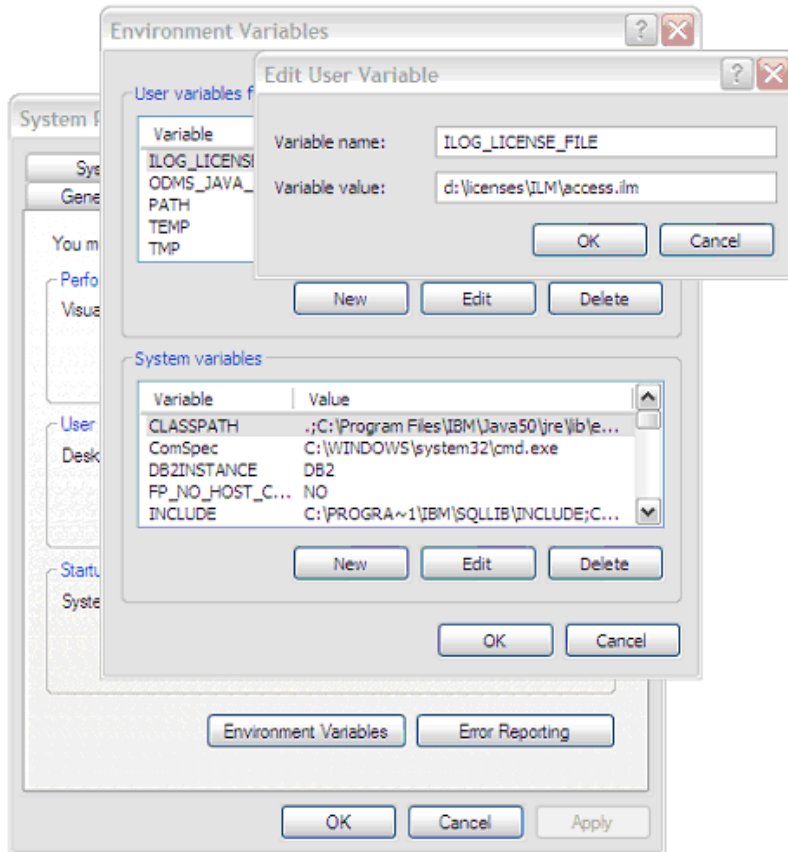


Figure 5. Windows XP User Variable editor dialog with the environment variable **ILOG_LICENSE_FILE** set to the value **d:\licenses\ILM\access.ilm**.

Install your license key on UNIX, Linux or Mac OS

Installing the license key at the default location

This is the preferred method for installing a license key on UNIX, Linux or Mac OS. However, it requires that you have administrator or root rights on the machine to install the license key in a system directory.

1. Create a **directory /usr/ilog/ilm/**.
2. Save the license key file **access.ilm** in this directory.

Installing the license key at a custom location

To install the license key at a custom location, follow these steps.

1. Save the license key file **access.ilm** in the location of your choice.
2. Create an environment variable named **ILOG_LICENSE_FILE** that contains the full path name pointing to your license file. Make sure this environment variable is initialized each time you use the software. You can initialize the variable in a profile file of your home directory, for instance **.bash_profile**.

Quick Start to IBM ILOG Optimization products

Verify your license key installation

If the license key is installed correctly, the IBM ILOG Optimization products will work without any restriction. The following steps are a straightforward test to check that these conditions are met.

After installing IBM ILOG CPLEX and its license key on your platform:

1. Go to `cplexstudio_dir/cplex/bin/machine_dir`

where:

`cplexstudio_dir` is the full directory name pointing to the CPLEX Optimization Studio installation directory

`machine_dir` is the machine description that matches your particular platform (For example, for Windows 32, `machine_dir` is `x86_win32`.)

2. Run the **cplex** program.

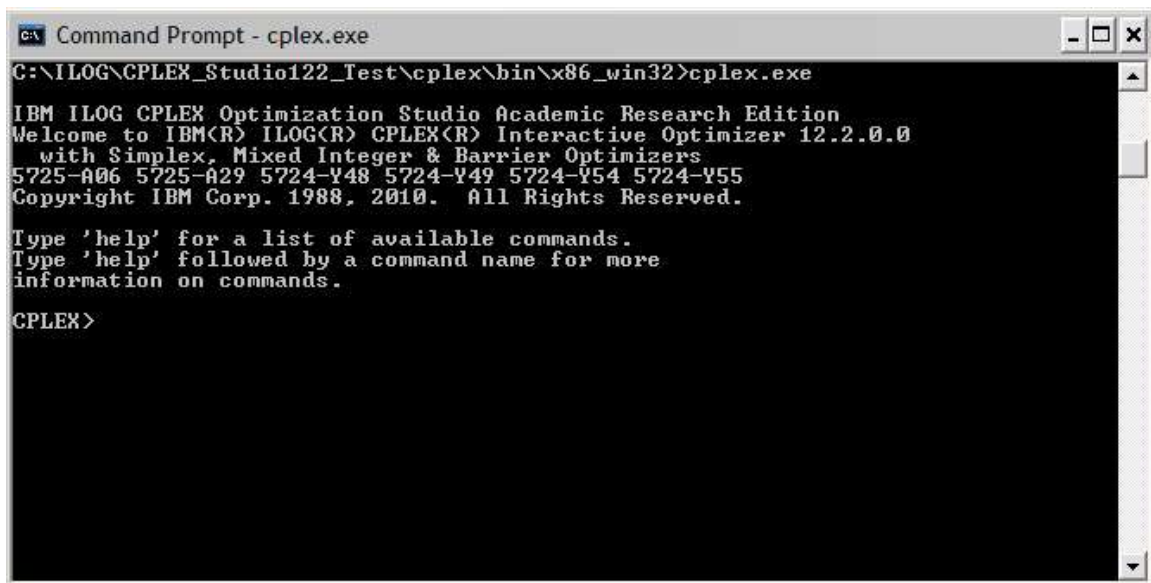
If the license is installed correctly, you will get a message inviting you to list the commands, followed by the `CPLEX>` prompt:

```
Type 'help' for a list of available commands
```

If the license is not installed correctly, you will get an error message:

```
Failed to initialize CPLEX environment.
```

```
CPLEX Error 32201: ILM Error 16: CPLEX: license file not found or unreadable.
```



```
Command Prompt - cplex.exe
C:\ILOG\CPLEX_Studio122_Test\cplex\bin\x86_win32>cplex.exe
IBM ILOG CPLEX Optimization Studio Academic Research Edition
Welcome to IBM(R) ILOG(R) CPLEX(R) Interactive Optimizer 12.2.0.0
with Simplex, Mixed Integer & Barrier Optimizers
5725-A06 5725-A29 5724-Y48 5724-Y49 5724-Y54 5724-Y55
Copyright IBM Corp. 1988, 2010. All Rights Reserved.

Type 'help' for a list of available commands.
Type 'help' followed by a command name for more
information on commands.

CPLEX>
```

Quick Start to IBM ILOG Optimization products

Figure 6. Command window showing correct response: Type 'help' for a list of available commands.

Review the expiration date of your license key

License keys are active for a minimum of 12 months after download. You can check the expiration date of a license key by opening it with a text editor. For example, in this line, the date 01-July-2011 is the expiration date for the license key:

```
EVAL CPLEX 12.1 01-July-2011 SZU3C1SM45C2 any
```


Quick Start to IBM ILOG Optimization products

Appendix A: Installing products from ‘IBM ILOG Optimization Suite for Academic Initiative V2.0’ eAssembly

IBM ILOG Optimization Suite for Academic Initiative V2.0 was released in January 2010 and contains IBM ILOG CPLEX 12.1, IBM ILOG CP 1.5, IBM ILOG CP Optimizer 2.3, and IBM ILOG OPL Development Studio 6.3.

These are not the latest versions of IBM ILOG Optimization products.

This eAssembly doesn't contain script-driven installation application for all platforms. If you need the product versions included in this eAssembly and cannot use the latest version of IBM ILOG CPLEX Optimization Studio or of IBM ILOG CP, the steps below will guide you to install the software. Select the product image you need using the following table.

Product	Images	Operating Systems
IBM ILOG OPL Development Studio Modeling language and integrated development environment for optimization and constraint programming models Product details	IBM ILOG OPL Development Studio V6.3 for Windows English	Windows 32 and 64
	IBM ILOG OPL Development Studio V6.3 for Windows 64 bit English	
IBM ILOG CPLEX High-performance mathematical programming engine Product details	IBM ILOG OPL Development Studio V6.3 for UNIX English	AIX, Linux, Solaris
	IBM ILOG CPLEX V12.1 for Windows English	Windows 32 and 64
	IBM ILOG CPLEX V12.1 for Windows 64 bit English	
	IBM ILOG CPLEX V12.1 for UNIX English	AIX, HP-UX, Linux , Solaris , MacOS

Quick Start to IBM ILOG Optimization products

IBM ILOG CP Optimizer Constraint programming engine for solving detailed scheduling problems and combinatorial problems Product details	IBM ILOG CP Optimizer V2.3 for Windows English	Windows 32 and 64
	IBM ILOG CP Optimizer V2.3 for UNIX English	AIX, Linux, Solaris, Mac OS
IBM ILOG CP IBM ILOG's first generation constraint programming engine featuring IBM ILOG Solver, IBM ILOG Scheduler, IBM ILOG Dispatcher Product details	IBM ILOG CP V1.5 for Windows English	Windows 32 and 64
	IBM ILOG CP V1.5 for UNIX English	AIX, HP-UX, Linux, Solaris

Install your product on Windows

The Windows images use a script-driven installation application (look for an .exe extension.) Launch the installer and follow its instructions.

Install your product on UNIX, Linux or Mac OS

The images for UNIX are zipped files that contain multiple product archives.

1. Select the product archive for your platform using the following table.

Product	Platform	Archive
IBM ILOG OPL Development Studio	AIX	opl63.aix.tar.gz
	Linux	opl63.linux.tar.gz
	Solaris	opl63.solaris.tar.gz
	Documentation	Included in archives
IBM ILOG CPLEX	AIX	cplex121_0.power.tar.gz
	HP-UX	cplex121_0.hp.tar.gz (on PA RISC) cplex121_0.hpia64.tar.gz (on Itanium)
	Linux	cplex121_0.x86linux.tar.gz (Intel 32) cplex121_0.x64linux.tar.gz (Intel 64) cplex121_0.ia64linux.tar.gz (Itanium)
	Solaris	cplex121_0.solaris.tar.gz (SPARC) cplex121_0.x64solaris.tar.gz (Intel 64)
	MacOS	cplex121_0.darwin.tar.gz

Quick Start to IBM ILOG Optimization products

	Documentation	Included in archives
IBM ILOG CP Optimizer	AIX	cptoptimizer23.power.tar.gz
	Linux	cptoptimizer23.linux.tar.gz
	Solaris	cptoptimizer23.solaris.tar.gz
	Mac OS	cptoptimizer23.darwin.tar.gz
	Documentation	cptoptimizer23doc.tar.gz
IBM ILOG CP	AIX	cp15.power.tar.gz
	HP-UX	cp15.hp.tar.gz
	Linux	cp15.linux.tar.gz
	Solaris	cp15.solaris.tar.gz
	Documentation	cp15doc.tar.gz

- Use the `cd` command to move to the top level directory into which you want to install the product subdirectory.
- Then, type either of the following commands:

```
gzip -dc < path_to_archive | tar xf -
tar zxf path_to_archive
```

where *path_to_archive* is the full path name of the location of the archive file selected from the previous table.