



MOSEK Installation Guide
Release 9.3.12

MOSEK ApS

14 January 2022

Contents

1	Introduction	1
2	Contact Information	2
3	License Agreement	3
4	Installation	7
4.1	External channels	7
4.2	General setup	7
4.3	Setting up the License	9
4.4	Finishing up	9

Chapter 1

Introduction

This guide describes how to install the **MOSEK** Optimization Suite.

In general **MOSEK** Optimization Suite must be installed on any computer where **MOSEK** is used and this is called a *client installation*. In addition if a *floating license* is employed then a license token server must be set up, either on the client computer or on another computer. Note that trial licenses and academic licenses are NOT floating licenses.

Chapter 2

Contact Information

Phone	+45 7174 9373	
Website	mosek.com	
Email		
	sales@mosek.com	Sales, pricing, and licensing
	support@mosek.com	Technical support, questions and bug reports
	info@mosek.com	Everything else.
Mailing Address		
	MOSEK ApS	
	Fruebjergvej 3	
	Symbion Science Park, Box 16	
	2100 Copenhagen O	
	Denmark	

You can get in touch with **MOSEK** using popular social media as well:

Blogger	https://blog.mosek.com/
Google Group	https://groups.google.com/forum/#!forum/mosek
Twitter	https://twitter.com/mosektw
LinkedIn	https://www.linkedin.com/company/mosek-aps
Youtube	https://www.youtube.com/channel/UCvIyectEVL31NXeD5mIbEw

In particular **Twitter** is used for news, updates and release announcements.

Chapter 3

License Agreement

Before using the **MOSEK** software, please read the license agreement available in the distribution at <MSKHOME>/mosek/9.3/mosek-eula.pdf or on the **MOSEK** website <https://mosek.com/products/license-agreement>.

MOSEK uses some third-party open-source libraries. Their license details follows.

zlib

MOSEK includes the *zlib* library obtained from the [zlib website](#). The license agreement for *zlib* is shown in [Listing 3.1](#).

Listing 3.1: *zlib* license.

```
zlib.h -- interface of the 'zlib' general purpose compression library
version 1.2.7, May 2nd, 2012

Copyright (C) 1995-2012 Jean-loup Gailly and Mark Adler

This software is provided 'as-is', without any express or implied
warranty. In no event will the authors be held liable for any damages
arising from the use of this software.

Permission is granted to anyone to use this software for any purpose,
including commercial applications, and to alter it and redistribute it
freely, subject to the following restrictions:

1. The origin of this software must not be misrepresented; you must not
   claim that you wrote the original software. If you use this software
   in a product, an acknowledgment in the product documentation would be
   appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be
   misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

Jean-loup Gailly          Mark Adler
jloup@gzip.org           madler@alumni.caltech.edu
```

fplib

MOSEK includes the floating point formatting library developed by David M. Gay obtained from the [netlib website](#). The license agreement for *fplib* is shown in [Listing 3.2](#).

Listing 3.2: *fplib* license.

```
/*  
 *  
 * The author of this software is David M. Gay.  
 *  
 * Copyright (c) 1991, 2000, 2001 by Lucent Technologies.  
 *  
 * Permission to use, copy, modify, and distribute this software for any  
 * purpose without fee is hereby granted, provided that this entire notice  
 * is included in all copies of any software which is or includes a copy  
 * or modification of this software and in all copies of the supporting  
 * documentation for such software.  
 *  
 * THIS SOFTWARE IS BEING PROVIDED "AS IS", WITHOUT ANY EXPRESS OR IMPLIED  
 * WARRANTY. IN PARTICULAR, NEITHER THE AUTHOR NOR LUCENT MAKES ANY  
 * REPRESENTATION OR WARRANTY OF ANY KIND CONCERNING THE MERCHANTABILITY  
 * OF THIS SOFTWARE OR ITS FITNESS FOR ANY PARTICULAR PURPOSE.  
 *  
 */
```

Zstandard

MOSEK includes the *Zstandard* library developed by Facebook obtained from [github/zstd](#). The license agreement for *Zstandard* is shown in [Listing 3.3](#).

Listing 3.3: *Zstandard* license.

```
BSD License  
  
For Zstandard software  
  
Copyright (c) 2016-present, Facebook, Inc. All rights reserved.  
  
Redistribution and use in source and binary forms, with or without modification,  
are permitted provided that the following conditions are met:  
  
* Redistributions of source code must retain the above copyright notice, this  
list of conditions and the following disclaimer.  
  
* Redistributions in binary form must reproduce the above copyright notice,  
this list of conditions and the following disclaimer in the documentation  
and/or other materials provided with the distribution.  
  
* Neither the name Facebook nor the names of its contributors may be used to  
endorse or promote products derived from this software without specific  
prior written permission.  
  
THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND  
ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED  
WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE  
DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR  
ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES
```

(continues on next page)

(continued from previous page)

(INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

mimalloc

MOSEK includes the *mimalloc* memory allocator library from [github/mimalloc](https://github.com/mimalloc). The license agreement for *mimalloc* is shown in [Listing 3.4](#).

Listing 3.4: *mimalloc* license.

MIT License

Copyright (c) 2019 Microsoft Corporation, Daan Leijen

Permission is hereby granted, free of charge, to any person obtaining a copy of this software and associated documentation files (the "Software"), to deal in the Software without restriction, including without limitation the rights to use, copy, modify, merge, publish, distribute, sublicense, and/or sell copies of the Software, and to permit persons to whom the Software is furnished to do so, subject to the following conditions:

The above copyright notice and this permission notice shall be included in all copies or substantial portions of the Software.

THE SOFTWARE IS PROVIDED "AS IS", WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT. IN NO EVENT SHALL THE AUTHORS OR COPYRIGHT HOLDERS BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE SOFTWARE.

blis

MOSEK includes the *blis* implementation of BLAS library from [github/blis](https://github.com/blis). The license agreement for *blis* is shown in [Listing 3.5](#).

Listing 3.5: *blis* license.

Copyright (C) 2018, The University of Texas at Austin
Copyright (C) 2016, Hewlett Packard Enterprise Development LP
Copyright (C) 2018 - 2019, Advanced Micro Devices, Inc.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

- Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
- Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
- Neither the name(s) of the copyright holder(s) nor the names of its contributors may be used to endorse or promote products derived

(continues on next page)

from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

OpenBLAS

MOSEK includes the *OpenBLAS* implementation of BLAS library from [github/OpenBLAS](https://github.com/OpenBLAS). The license agreement for *OpenBLAS* is shown in [Listing 3.6](#).

Listing 3.6: *openblas* license.

Copyright (c) 2011-2014, The OpenBLAS Project
All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of the OpenBLAS project nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE COPYRIGHT HOLDERS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE COPYRIGHT OWNER OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Chapter 4

Installation

4.1 External channels

MOSEK client can be installed from the following package managers and repositories:

- Anaconda for Python (<https://anaconda.org/MOSEK/mosek/>):

```
conda install -c mosek mosek
```

- PIP for Python (<https://pypi.org/project/Mosek/>):

```
pip install Mosek
```

- Nuget.org for .NET Core (<https://www.nuget.org/packages/Mosek/>)

```
dotnet add package Mosek
```

Note that this only installs the client package. If you need the floating license server or the OptServer you still need to download the full distribution as described below.

4.2 General setup

This section describes how to install **MOSEK** from the full distribution packages downloaded from our website.

4.2.1 Linux

1. Download the Linux 64bit x86 or Linux ARM64 **MOSEK** Optimization Suite distribution from <https://mosek.com/downloads/> and unpack it into a chosen directory.
2. Optionally add the path

```
<MSKHOME>/mosek/9.3/tools/platform/<PLATFORM>/bin
```

to the OS variable PATH, where <MSKHOME> is the directory where **MOSEK** was installed and <PLATFORM> is linux64x86 or linuxaarch64 depending on the version of **MOSEK** installed.

4.2.2 Mac OS

1. Download the MAC OS 64bit x86 **MOSEK** Optimization Suite distribution from <https://mosek.com/downloads/> and unpack it into a chosen directory.
2. Run the command

```
python <MSKHOME>/mosek/9.3/tools/platform/osx64x86/bin/install.py
```

where <MSKHOME> is the directory where **MOSEK** was installed. This will set up the appropriate shared objects required when using **MOSEK**.

3. Optionally add the path

```
<MSKHOME>/mosek/9.3/tools/platform/osx64x86/bin
```

to the OS variable PATH.

4. Troubleshooting:

- **Missing otool.** If running the `install.py` script produces errors such as:

```
xcrun: error: invalid active developer path (/Library/Developer/  
↳CommandLineTools), missing xcrun at: /Library/Developer/CommandLineTools/  
↳usr/bin/xcrun  
...  
CalledProcessError: Command '['otool', '-L', '/users/username/mosek/9.0/  
↳tools/platform/osx64x86/bin/MOSEKLM']' returned non-zero exit status 1
```

then you need to install the command line tools, in particular `otool`. Depending on the OS version, this should be possible with one of the commands:

```
xcode-select --install  
xcode-select --switch /Library/Developer/CommandLineTools
```

- **Security exception in MacOS 10.15 (Catalina).** If an attempt to run **MOSEK** on Mac OS 10.15 (Catalina) and later produces security exceptions (`developer cannot be verified` and similar) then use `xattr` to remove the quarantine attribute from all **MOSEK** executables and binaries. This can be done in one go with

```
xattr -dr com.apple.quarantine mosek
```

where `mosek` is the folder which contains the full **MOSEK** installation or **MOSEK** binaries. See <https://themosekblog.blogspot.com/2019/12/macos-1015-catalina-mosek-installation.html> for more information. If that does not help, use the system settings to allow running arbitrary unverified applications.

4.2.3 Windows, MSI installer

1. Make the right choice between the 32bit and 64bit versions. For instance if you plan to use **MOSEK** with 32bit Python or MATLAB the 32bit version of **MOSEK** should be selected. In general it is recommend to use the 64bit version though.
2. Download the Windows 32bit x86 or Windows 64bit x86 **MOSEK** Optimization Suite MSI installer from <https://mosek.com/downloads/>.
3. Run the installer to complete the installation.
4. Check that the path

```
<MSKHOME>\mosek\9.3\tools\platform\<PLATFORM>\bin
```

was added to the OS variable PATH, where <MSKHOME> is the directory where **MOSEK** was installed and <PLATFORM> is `win64x86` or `win32x86` depending on the version of **MOSEK** installed. This is necessary for Windows to locate the **MOSEK** shared libraries.

4.2.4 Windows, Manual installation

1. Make the right choice between the 32bit and 64bit versions. For instance if you plan to use **MOSEK** with 32bit Python or MATLAB the 32bit version of **MOSEK** should be selected. In general it is recommend to use the 64bit version though.
2. Download the Windows 32bit x86 or Windows 64bit x86 **MOSEK** Optimization Suite distribution from <https://mosek.com/downloads/> and unpack it into a chosen directory.
3. Add the path

```
<MSKHOME>\mosek\9.3\tools\platform\<PLATFORM>\bin
```

to the OS variable PATH, where <MSKHOME> is the directory where **MOSEK** was installed and <PLATFORM> is win64x86 or win32x86 depending on the version of **MOSEK** installed. This is necessary for Windows to locate the **MOSEK** shared libraries, especially if **MOSEK** is to be used e.g. from MATLAB.

4.3 Setting up the License

Regardless of the method of installation, **MOSEK** requires a license file to run.

Token server setup

If you are using a floating license with a token server then follow the instructions in the [Licensing Guide](#). This step is NOT required for trial and personal academic licenses in particular.

Client setup

In practice the license is contained in a file called

```
mosek.lic
```

which should typically be saved to a file called

```
%USERPROFILE%\mosek\mosek.lic      (Windows)
$HOME/mosek/mosek.lic              (Linux, MacOS)
```

If the folder `mosek` in the home directory does not exist, then it should be created. The license can be tested with the program `msktestlic`. For further information about the license system, and other non-standard ways of setting up the license, please consult the [License Guide](#).

4.4 Finishing up

Important:

- See the [Licensing Guide](#) if you need more advanced help setting up the license.
 - For most languages and interfaces some additional steps are required. Please follow the instructions in the relevant interface documentation available from <https://mosek.com/documentation/>.
-