



MOSEK Release notes
Release 11.0.4

MOSEK ApS

20 January 2025

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Chapter 1

Supported platforms

Below are the **minimal requirements** for various **MOSEK** interfaces and operating systems. In some cases using **MOSEK** with older versions of the software will be possible, but is neither actively supported nor tested.

Operating systems

Table 1.1: Operating systems

| Platform | Minimal OS version | Specific library dependencies |
|--------------|------------------------------------|-------------------------------|
| linux64x86 | RHEL 8, Ubuntu 20.04 or compatible | GLIBC 2.17, GLIBCXX 3.4.21 |
| win64x86 | Windows 10, Server 2016 | |
| linuxaarch64 | Ubuntu 20.04 or compatible | GLIBC 2.29, GLIBCXX 3.4.26 |
| osxaarch64 | macOS 11 | |

Optimizer API and Fusion API

Table 1.2: Optimizer API and Fusion API (where available).

| Platform | C | C++(Fusion) | Java | .NET | .NET Core | Python | Julia | Rust |
|--------------|-----|-------------|------|------|----------------|----------|-------|------|
| linux64x86 | Yes | C++11 | 1.8 | – | netstandard2.0 | 3.9-3.13 | 1.6 | 1.59 |
| win64x86 | Yes | C++11 | 1.8 | 4.5 | netstandard2.0 | 3.9-3.13 | 1.6 | 1.59 |
| linuxaarch64 | Yes | C++11 | 1.8 | – | netstandard2.0 | 3.9-3.13 | 1.6 | 1.59 |
| osxaarch64 | Yes | C++11 | 17 | – | netstandard2.0 | 3.9-3.13 | 1.6 | 1.59 |

API for MATLAB, Rmosek and other MOSEK tools

Table 1.3: Other APIs and tools.

| Platform | API for MATLAB | Rmosek | OptServer | OptServerLight | Imgrd | Toolbox (old) |
|--------------|----------------|--------|-----------|----------------|-------|---------------|
| linux64x86 | R2021a | 3.6 | Yes | Yes | Yes | R2019b |
| win64x86 | R2021a | 3.6 | Yes | Yes | Yes | R2019b |
| linuxaarch64 | – | – | – | Yes | Yes | – |
| osxaarch64 | R2023b | 4.1 | – | Yes | Yes | R2022b |

Other distribution channels

- pip package. <https://pypi.org/project/Mosek/>
- NuGet package. <https://www.nuget.org/packages/Mosek/>
- Julia package. <https://github.com/MOSEK/Mosek.jl>
- Rust package. <https://lib.rs/crates/mosek>

Other remarks

- Numpy is required in Python Fusion.

Chapter 2

Major changes

Specific information regarding particular APIs, parameters and portability of code from version 10 can be found in the section *Interface changes* towards the end of the respective manual. This section lists general changes throughout **MOSEK**.

2.1 Release notes for 11.0

2.1.1 New features

Mixed-integer optimizer

- Major performance improvement of the mixed-integer optimizer.
- Restarts can now be initiated at any point during the solution process if the solver estimates the remaining search space to be large (`MSK_IPAR_MIO_MAX_NUM_RESTARTS`).
- If a problem can be split into independent components the solver can exploit this structure by solving them in parallel (`MSK_IPAR_MIO_INDEPENDENT_BLOCK_LEVEL`).
- Improved separator for clique cuts
- Enhanced large neighborhood search heuristics and new rounding heuristics
- Increased presolve speed, particularly for large problems

New API for MATLAB

- A new **MOSEK** API for MATLAB, which supports linear and conic problems and their mixed-integer versions.
- The new API has a convenient syntax and allows for building the optimization problem in chunks in an intuitive way.
- See <https://docs.mosek.com/11.0/matlabapi/index.html>

Optimizers

- The interior-point optimizer can exploit folding for linear problems to reduce problem size.

Interface

- Introduced an option to write the dual of the current problem to a file (command-line tool, Optimizer API).

Platform support

- Python support is now 3.9-3.13.

Licensing

- FLEXlm is at version 11.19.6. Upgrade of floating license servers is required to use clients from **MOSEK** 10.1 or older.

2.1.2 Deprecations

- Conic constraints restricted to $x \in \mathcal{K}$ for a variable x are deprecated and will be removed in a future major version. Use affine conic constraints instead. This affects mainly the Optimizer API.
- The OPF file format for conic problems is deprecated in favor of PTF.
- The old **MOSEK** Optimization Toolbox for MATLAB remains supported, but will eventually be phased out and replaced by the new API.
- The conda package is deprecated and may be dropped in a future release. Consider pip instead.

2.1.3 Removed features

Platform support

- Dropped support for osx64x86 (Apple Intel).
- Dropped support for win32x86 (Windows 32bit).

Chapter 3

Known issues

- The MATLAB API can lead to crashes and undefined behavior in MATLAB R2024b. It is recommended to use MATLAB R2024a or older with the (new) MATLAB API. We are working on the issue.

Chapter 4

Bug fixes

11.0.4

- First stable release.
- Fixed a memory leak in Python `writedatastream`.

11.0.3(BETA)

- Fixed a rare bug caused by constraint removals in *Fusion*.
- Fixed a bug in the retrieving the infeasible subproblem.
- Fixed minor bugs in the conic optimizer.
- Fixes and improvements in the new API for MATLAB.
- Fixed an issue with comments in parameter files.

11.0.2(BETA)

- Fixes in remote optimization, simplified client protocol, fixes in `OptServerLight`.
- Removed unneeded library dependencies on Windows.
- Fixed bug that incorrectly triggered an assert on some ill-posed conic problems.
- Fixes in the `Optimzier` API for Rust.
- Syntax change in `Var.repeat` in *Fusion*.
- Fixed a bug in task file reader.

11.0.1(BETA)

- Fixed an issue with an assert.
- `OptServer` upgrade, reorganization and documentation.
- Various small updates.
- Fixed an error allowing incorrect names in LP files.

11.0.0(BETA)

- First beta release.