



MIKE Zero for Linux 2026 Installation Guide

Contents:

- Introduction
- System Requirements
- Content
- Installation
- License
- Execution

Introduction

Welcome to **MIKE Zero for Linux 2026**.

MIKE Zero for Linux provides Linux versions of the following engines including all sub-modules: MIKE 21 Flow Model FM, MIKE 3 Flow Model FM, MIKE 21 Spectral Waves FM, MIKE 21 Wave Model FM, and MIKE 3 Wave Model FM. MIKE Zero for Linux does not include a Graphical User Interface. However, the MIKE Zero for Linux installation package does include many pre- and post-processing tools to incorporate into Linux-based workflows.

In this Installation Guide, you will find information about how to install and get started with MIKE Zero for Linux.

System Requirements

Supported Linux Distributions

The supported Linux distributions listed below have been tested in accordance with MIKE's Quality Assurance procedures. DHI's warranty, as set out in the General Terms and Conditions ([Schedule 1](#)) for MIKE software and Software Maintenance Agreement ([Schedule 4](#)) only apply when MIKE Zero for Linux is installed and used on these supported Linux distributions:

- Red Hat Enterprise Linux – versions 8 and 9 (all 64-bit)
- Ubuntu – versions 20.04, 22.04 and 24.04 (all 64-bit)

Any Linux distribution **not listed** is considered **unsupported**. Installing or using MIKE software on an unsupported distribution is at Licensee's own risk and DHI provides **no warranty, no maintenance coverage**, and is **not obligated** to offer support or troubleshooting.

The supported Linux distributions are those that have been tested and verified by DHI for MIKE 2026. Other distributions may, or may not, work and are not recommended. However, past versions of MIKE Software have been successfully installed on other Linux distributions, including CentOS, Ubuntu Kylin, Galaxy Kylin (V10), AlmaLinux and Debian (all 64-bit).

Please note: Even if a Linux distribution is listed as supported, it will be considered **unsupported** if MIKE software is run in a virtualized environment, e.g., a guest operating system or a Docker container.

Minimum hardware/software requirements

- Intel® 64 architecture processor (x86-64) or compatible non-Intel processor. Please note that other processor architectures such as Power PC, Itanium, SPARC, or ARM are not supported.
- For the best experience, a multi-core or multi-processor system is recommended.
- When utilising MPI-based parallelisation in a HPC cluster, high-performance interconnection such as InfiniBand™ is recommended.



Content

MIKE Zero for Linux 2026 consists of the packages listed below. Make sure to download all 5 packages for Linux, comprising MIKE Common, MIKE Zero, Prerequisites, Additional Tools and Examples:

Component	Content
MIKE_Common_2026	common components (including License System)
MIKE_Zero_2026	core components
MIKE_Zero_2026_Prerequisites	prerequisites (Intel MPI library)
MIKE_Zero_2026_Tools	additional tools
MIKE_Zero_2026_Examples	examples

Table 1 - Installation packages for MIKE Zero for Linux

MIKE Zero for Linux 2026 includes the calculation kernels listed below, which are all included in the core component package, MIKE_Zero_2026:

Product name	Application name
MIKE 21 Flow Model FM	FemEngineHD
MIKE 21 Flow Model FM (with GPU support)	FemEngineHDGPU
MIKE 3 Flow Model FM	FemEngineHD
MIKE 3 Flow Model FM (with GPU support)	FemEngineHDGPU
MIKE 3 Wave Model FM	FemEngineHD
MIKE 21 Wave Model FM	FemEngineHD
MIKE 21 Spectral Waves FM	FemEngineSW
MIKE 21/3 Coupled Model FM	FemEngine
MIKE 21/3 Coupled Model FM (with GPU support)	FemEngineGPU

Table 2 - Engines included in MIKE Zero for Linux

The calculation kernels utilising GPU requires a Nvidia graphics card with compute capability 7.5 or higher. Please note that some of these graphics' cards have varying performance in single precision compared to double precision calculations. The GPU functionality is based on version 13.0 of the Nvidia® CUDA® Toolkit.

MIKE Zero for Linux uses Intel MPI Library and therefore requires an Intel MPI Library runtime environment to run the MPI-based applications. MIKE Zero for Linux 2026 has been built and tested with Intel® MPI Library 2021 Update 14 for Linux. The runtime environment packages are included in the prerequisite package.

Other versions of the Intel MPI Library runtime environment may work with MIKE Zero for Linux 2026, but it is strongly recommended to use the version included in the prerequisite package.

Installation

The default installation location of MIKE Zero for Linux 2026 is /opt/MIKE/2026, when installing as root, and \$HOME/MIKE/2026 when installing as a normal user.

To perform an installation of MIKE Zero for Linux 2026 follow the steps below, running the `./install.sh` command for each package:

1. Unpack the MIKE Zero for Linux installation packages listed in [Table 1](#)
2. Install the MIKE_Common_2026 package
3. Set up the runtime environment for the MIKE Zero for Linux:

```
source <install path>/MIKE/2026/mikevars.sh
```

4. Setup licensing following the instructions in [License](#)
5. Install the MIKE_Zero_2026 package, containing the FM engines in [Table 2](#)



6. Install the prerequisites (Intel MPI library) located in the MIKE_Zero_2026_Prerequisites package
7. Set up the runtime environment for the Intel MPI Library:

```
source <install path>/intel/oneapi/mpi/2021.14/env/vars.sh
```

8. Install the MIKE Zero tools from the MIKE_Zero_2026_Tools package
9. Optionally, install the MIKE Zero examples from the MIKE_Zero_2026_Examples folder

Please note, that on a cluster with multiple compute nodes MIKE Zero for Linux 2026 and Intel MPI Library must be available on all compute nodes. The standard approach is to install MIKE Zero for Linux 2026 and Intel MPI Library in a location shared across all compute nodes. Intel MPI is installed via the command:

```
sh intel-mpi-2021.14.0.791_offline.sh
```

License

MIKE Zero for Linux 2026 supports both network and internet licenses. A network license requires a DHI License Management 2026 installation. By default, MIKE Zero for Linux 2026 is configured to use a network license, and the license server name can be specified during installation.

The license configuration tool, **LicenseManagerCLI**, included with MIKE Common for Linux 2026, allows you to configure MIKE Zero for Linux to use internet or network license and modify the default license settings.

Internet license configuration can be performed using one of the following commands:

- Authentication using username and password:
 - `LicenseManagerCLI -set -file <path to configuration file>` - the default way, using the provided license configuration file
 - `LicenseManagerCLI -set -licenseType INTERNET -producer <PRODUCERID> -domain <DOMAIN> -server <SERVERID> -user <USERKEY>`

Use of Internet license requires applications to communicate with an internet license service at <https://flex13062.compliance.flexnetoperations.eu> via HTTPS (HTTP over TLS/SSL) on port 443, which must be open for outbound traffic.

Configuration of network license is done via the command:

- Network license server
 - `LicenseManagerCLI -set -LicenseType NETWORK -host <hostname>`
- Local license server
 - `LicenseManagerCLI -set -LicenseType LOCAL`

Use of network license requires applications to communicate with a network license service via a http connection using port 7070 (unless a nondefault port has been specified), which must be open for outbound traffic.

More information about LicenseManagerCLI can be found via the command:

```
LicenseManagerCLI -help
```

Execution

Note: Before running any simulations, ensure that the commands required to initialize the runtime environment for both the Intel MPI Library and MIKE Zero for Linux have been executed in your current session:

```
source <install path>/MIKE/2026/mikevars.sh
```

```
source <install path>/intel/oneapi/mpi/2021.14/env/vars.sh
```

Two examples of how to execute a simulation are listed below. The first is a MIKE 21 Flow Model FM example and the second is a MIKE 21 Spectral Waves FM example.

```
cd <install path>/examples/MIKE_21/FlowModel_FM/HD/Lake  
FemEngineHD lake.m21fm
```



```
cd <install path>/examples/MIKE_21/SW/Island  
FemEngineSW Setup.sw
```

When running FemEngineHD or FemEngineSW as shown above, the computational engines will use OpenMP parallelisation only. However, it is recommended to use MPI parallelisation, which is more efficient even with a small number of cores and scales well for larger core counts. To run simulations using MPI parallelisation you need to use *mpirun*. For example, to run the above examples with 8 cores, use the following commands:

```
mpirun -n 8 FemEngineHD lake.m21fm
```

```
mpirun -n 8 FemEngineSW Setup.sw
```

If the compute node has more cores available than specified in the *mpirun* command, additional cores will be utilized for OpenMP parallelization, provided sufficient cores are available. To disable OpenMP parallelization (restricting it to a single thread), use the following command:

```
export OMP_NUM_THREADS=1
```