MIKE Powered by DHI

Release Notes 2023.2   MIKE OPERATIONS

Contents:

Introduction

Welcome to MIKE OPERATIONS 2023.2

In this Release Note, you will find information about new features of MIKE OPERATIONS and what you need to know to install and get started with Release 2023.

MIKE OPERATIONS is a software product designed for data management and model-based forecast services and for online operational control of river systems, water collection systems and water distribution systems. MIKE OPERATIONS empowers you to build real-time systems by offering flexible tools that help you deal with complexities such as acquiring and combining online data sources in preparation for real-time modelling.

MIKE OPERATIONS is a product consolidation of software tools developed and applied in projects over the past 9-10 years. Hence, although MIKE OPERATIONS is a relatively new member of the MIKE product family it builds on proven software products that already serve many customers worldwide.

Note that model adapters of MIKE OPERATIONS support the official MIKE 2023 release only. This means that pre-releases of MIKE engines as well as the intermediate release of MIKE+ 2023 Update 1, is NOT supported.

System requirements

Operating systems

Fully supported Windows operating systems *	Windows 11 Pro, version 22H2 (64 bit) Windows 10 Pro, version 22H2 (64 bit) Windows Server 2022, version 21H2 Windows Server 2019 Standard, version 1809
Non-supported but partially tested operating systems **	Windows Server 2016 Standard, version 1607

* Fully supported operating systems are systems that have been tested in accordance with MIKE's Quality Assurance procedures and where warranty and software maintenance agreement conditions apply.

** Non-supported but partially tested operating systems are systems, which are not officially supported by the MIKE software products. These operating systems have only undergone very limited testing for the purpose of MIKE software, but the software and key features are likely to work. Installation of MIKE software on a non-supported operating system is done so at the user's own risk. The MIKE software warranty and software maintenance agreement conditions do not apply for unsupported operating systems and DHI is under no obligation to provide assistance or troubleshooting for cases where the software is being used on a non-supported operating system.

Please note that when running a fully supported operating system as a 'guest operating system' on a virtualization platform, it is automatically downgraded to a non-supported operating system under the conditions provided above.

Minimum hardware/software requirements

Processor	compatible with x64 instruction set, 2.2 GHz or higher
Memory (RAM)	4 GB or higher *
Storage	64 GB or higher *
Display	resolution 1024 x 720 (High-Definition) or higher, 24-bit color (true color)
Graphics adapter	64 MB RAM (256 MB RAM or higher recommended), 32-bit true color
Software requirements	Microsoft .NET Framework 4.7.2 or higher

*   The actual required amount of memory and disk space depend on the usage (application, model setup, size of data files etc.)

Installation

To install MIKE OPERATIONS, please go to the 'MIKE OPERATIONS' product folder and execute the setup.exe file from the downloaded, un-zipped installation files. Before you press the 'Install' button, we recommend that you read the note describing how to install MIKE OPERATIONS - this is available here.

License file and dongle

To use MIKE OPERATIONS in licensed mode, please refer to the DHI License Manager Release Notes (License Manager Release Notes).

Product invocation

Launch MIKE OPERATIONS from the Windows Start menu.

Support

For general support, please refer to our FAQ.

If you experience any difficulties, or if you have questions, please contact our Customer Care team at mike@dhigroup.com.

You can also contact your local Customer Care team for support in your local language. A list can be found here.
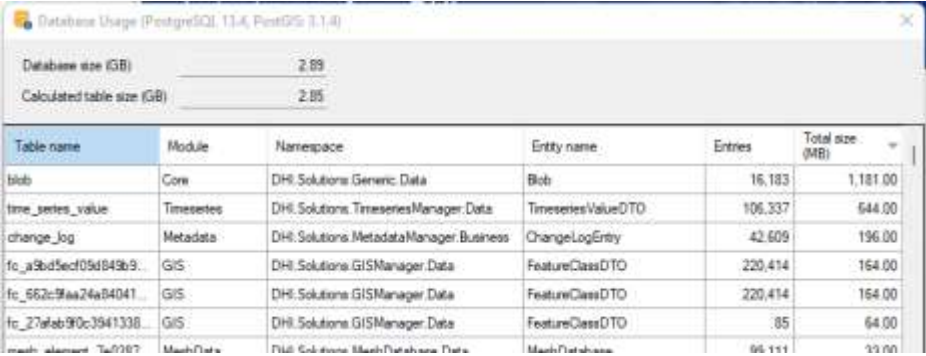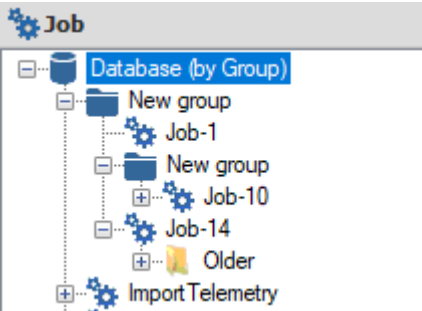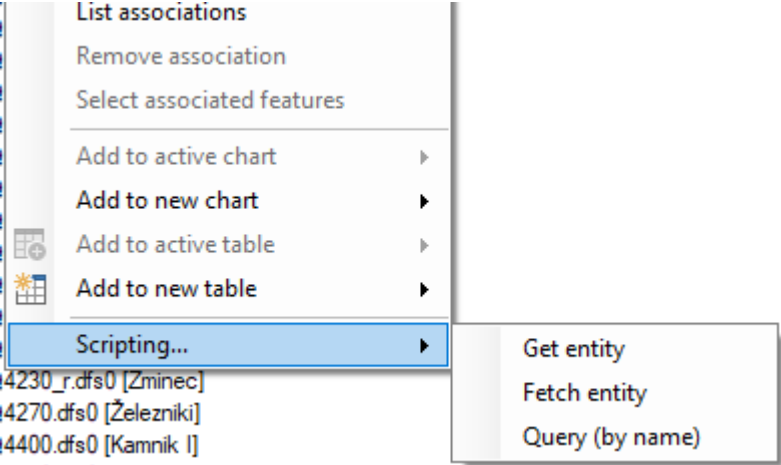
New features and fixed issues

Every new release of MIKE OPERATIONS consists of new modules, new features and/or corrections to problems or significant inconsistencies discovered in previous releases. Please find below short descriptions of the most significant news.

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Release 2023.2
The MIKE OPERATIONS 2023.2 release is an internal release based on version 2023 of MIKE Zero, MIKE+ and FEFLOW. The feature list includes both features included in the intermediate release of MIKE OPERATIONS 2023.1 and features added since. MIKE OPERATIONS 2023.2 has gone through beta testing and is considered the recommended release. This also means that installations running on the intermediate release of MIKE OPERATIONS 2023.1, should upgrade to MIKE OPERATIONS 2023.2.

New features (2023.1)

Module/type	New feature
Core	General performance improvements maintaining data. The user experience working with data in the explorers is improved retrieving data faster.
Core	Database Usage updates for a getting a better overview of data base usage.
GIS Manager	Remote DFSU provider for visualizing DFSU files in MIKE OPERATIONS.
Job Manager	Organize jobs in groups in the job explorer.
Scenario Manager	Performance updates for a better user experience in the scenario explorer when maintaining scenarios and simulations.
Scenario Manager	Import simulation, allows importing native simulation runs into MIKE OPERATIONS for selected model adapters, so that historical results can be used in MIKE OPERATIONS, without running the simulation from within MIKE OPERATIONS. The following model adapters supports simulation import. • MIKE HYDRO Basin • MIKE HYDRO River • MIKE21FM • FEFLOW

	- GoldSim - HEC-RAS - NWS - SWAT
Scenario Manager	FEFLOW adapter improvements. This includes: - Performance improvements for a nice user experience. - Select what model object types and model objects to register. - Support for setting nodal distributions based on nodes in applied node selections. - Save nodal distribution output as spatial output (feature classes).
Script Manager	New module provider query options for better performance in queries used in scripts. **OrderBy** Order results of a database query. **MaxResults** Only return a limited number of results from the database. **CountResults** Count the number of results of a query without retrieving entities from the database. ```# Count the number of time series of storage type 1 (Blob) module = app.Modules.Get('Time series Manager') query = DHI.Solutions.Generic.Query() query.Add(DHI.Solutions.Generic.QueryElement("StorageType", 1, DHI.Solutions.Generic.QueryOperator.Eq)) count = module.TimeSeriesList.CountResults(query)```
Script Manager	Support debugging CPython scripts.
Script Manager	Paste code snippets based on explorer selections directly into scripts.
Script Manager	Additional CPython Python Libraries embedded in the MIKE OPERATIONS installation. *csv, gdal geopandas glob h5netcdf matplotlib mikeio1d, MIKE.IO, mikecore-python, netCDF4, numPy, ogr, os, pythonnet, Pandas, PIP, rasterio, scipy, Xarray*
Time Series Manager	Global Cloud Data Tool for importing data from the Cloud DHI Global Data Storage.

New features (2023.2)

Module/type	New feature
Core	Security enhancements. Various security issues have been fixed.
GIS Manager	DHI Data Catalog Download Tool. Tool for downloading DHI global shared data as either time series or spatial data. The data can be imported directly info the MIKE OPERATIONS database or into files on disk (dfs0 or dfs2).
GIS Manager	Various import and export tools have been updated to target .NET Standard 2.0 and .NET 6 Windows, making the tools available on Linux and in the upcoming .NET 6 release of MIKE OPERATIONS. This includes: • Shape File import/export • IMG raster import • KML import/export • TIFF import/export • ASCII file import/export • ASCII grid import/export
Job Manager	Additional tools and providers added to the container used by the MIKE Cloud Job Service. This means that job tasks can use e.g. scripts using more tools and providers. The container now contains the following MIKE OPERATIONS NuGet packages (managers, providers and tools): • DHI.MikeOperations.Core • DHI.MikeOperations.DocumentManager • DHI.MikeOperations.DocumentManager.Provider.MikeCloud • DHI.MikeOperations.DocumentManager.Tools.Export • DHI.MikeOperations.DocumentManager.Tools.Import • DHI.MikeOperations.FavoriteManager • DHI.MikeOperations.GISManager.Provider.MikeCloud.GIS • DHI.MikeOperations.GISManager.Provider.MikeCloud.Mesh • DHI.MikeOperations.GISManager.Provider.MikeCloud.Raster • DHI.MikeOperations.GISManager.Provider.Service • DHI.MikeOperations.GISManager.Raster • DHI.MikeOperations.GISManager.Tools.ASCIIFileImport • DHI.MikeOperations.GISManager.Tools.ASCIIGridFileExport • DHI.MikeOperations.GISManager.Tools.ASCIIGridFileImport • DHI.MikeOperations.GISManager.Tools.ASCIITemporalImport • DHI.MikeOperations.GISManager.Tools.Dfs2Import • DHI.MikeOperations.GISManager.Tools.Dfs2TemporalRasterFileExport • DHI.MikeOperations.GISManager.Tools.Dfs3Import • DHI.MikeOperations.GISManager.Tools.DfsuImport • DHI.MikeOperations.GISManager.Tools.DfsuToFeaturesImport • DHI.MikeOperations.GISManager.Tools.GeoProcessing • DHI.MikeOperations.GISManager.Tools.ImageFileImport • DHI.MikeOperations.GISManager.Tools.ImgRasterImport • DHI.MikeOperations.GISManager.Tools.KmlFileExport • DHI.MikeOperations.GISManager.Tools.KmlFileImport • DHI.MikeOperations.GISManager.Tools.MikeCloudDfsUpload

	• DHI.MikeOperations.GISManager.Tools.RasterProcessing • DHI.MikeOperations.GISManager.Tools.Res11Import • DHI.MikeOperations.GISManager.Tools.ShapeFileExport • DHI.MikeOperations.GISManager.Tools.ShapeFileImport • DHI.MikeOperations.GISManager.Tools.TiffImport • DHI.MikeOperations.GISManager.Tools.TiffTemporalImport • DHI.MikeOperations.IndicatorManager • DHI.MikeOperations.JobManager • DHI.MikeOperations.JobManager.JobServiceProviderMikeCloud • DHI.MikeOperations.JobManager.Tools.JobExport • DHI.MikeOperations.MetadataManager • DHI.MikeOperations.PlacesManager • DHI.MikeOperations.ScenarioManager • DHI.MikeOperations.ScenarioManager.Adapters.MIKE1D • DHI.MikeOperations.ScenarioManager.Adapters.MIKE21FM • DHI.MikeOperations.ScenarioManager.Adapters.MIKEFlood • DHI.MikeOperations.ScenarioManager.Adapters.MIKESHE • DHI.MikeOperations.ScenarioManager.Execution.MikeCloud • DHI.MikeOperations.ScriptManager.IronPython • DHI.MikeOperations.SpreadsheetManager • DHI.MikeOperations.SpreadsheetManager.Functions.GIS • DHI.MikeOperations.SpreadsheetManager.Functions.Indicator • DHI.MikeOperations.SpreadsheetManager.Functions.Spreadsheet • DHI.MikeOperations.SpreadsheetManager.Functions.Timeseries • DHI.MikeOperations.SystemManager • DHI.MikeOperations.TimeseriesManager • DHI.MikeOperations.TimeseriesManager.Provider.MikeCloud • DHI.MikeOperations.TimeseriesManager.Provider.MikeOperations • DHI.MikeOperations.TimeseriesManager.Tools.AdvancedStatistics • DHI.MikeOperations.TimeseriesManager.Tools.BasicStatistics • DHI.MikeOperations.TimeseriesManager.Tools.ExtremeValues • DHI.MikeOperations.TimeseriesManager.Tools.ImportTools • DHI.MikeOperations.TimeseriesManager.Tools.ImportTools.USGS • DHI.MikeOperations.TimeseriesManager.Tools.MikeCloudUpload • DHI.MikeOperations.TimeseriesManager.Tools.Processing • DHI.MikeOperations.TimeseriesManager.Tools.TimeseriesExport • DHI.MikeOperations.TimeseriesManager.Tools.TsUtilities

Scenario Manager	FEFLOW adapter improvements. This includes:
	• Create feature class for first element layer.
	• Support for temporal 2D output as individual slices for:
	    ○ Head
	    ○ Nodal Distributions

Fixed issues (2023.1)

Module/type	Error/Inconvenience fixed
CON – Configuration	Run R-Statistics tool gets a warning that contains path3 that does not exist
COR - Core	It must be possible to delete saved tool instance after close / open the shell
COR - Core	Error in Database usage feature; wrong calculation of database storage
COR - Core	Support new PostGIS 3.3 version for PostgreSQL 14 and 15
COR - Core	Database Usage - Size of the blob table is not accurate
GIS – GIS Manager	GIS: Temporal Zonal Statistics Tool returns wrong timeseries
GIS – GIS Manager	GIS: Color Representation of Raster is misleading
GIS – GIS Manager	Error in display of NetCDF files
GIS – GIS Manager	GISRasterProcessor.Clip does not work for different coordinate systems
GIS – GIS Manager	Vector to Raster - error for rotated rasters - wrong position
GIS – GIS Manager	Vector to Raster - error for rotated rasters - lock MO
GIS – GIS Manager	Big raster from MIKE Cloud raster provider cannot be drawn on map
GIS – GIS Manager	Polygon feature class that has amount of data, change the layer style from simple to unique values, shell vanish
GIS – GIS Manager	Change the layer style of a line type feature class to
GIS – GIS Manager	Reset layer symbology to workspace default crash for Remote raster providers (file + cloud)
JOB – Job Manager	RunScript task does not log print statements
JOB – Job Manager	Delete the job Target then press delete again will cause an error
JOB – Job Manager	Beta: pictures in online help for jobs look terrible
JOB – Job Manager	JobView does not dimm disabled task for MIKE Cloud

JOB – Job Manager	Displaying job task description does not respect changing category
JOB – Job Manager	Beta: Workflow does not run from job
JOB – Job Manager	MIKE 1D support in MO for External Simulation
MET – Metadata Manager	Metadata manager cannot set float value for property
MIKE Workbench	Documentation on Initial Condition logic in Scenario Manager (CAS-06766)
MIKE Workbench	There is still a lot of "MC" in the help file
SCM – Scenario Manager	Register MHR Model - Scenario creation error message
SCM – Scenario Manager	MIKE SHE adapter has issue with NON-UTM
SCM – Scenario Manager	Mike Operations GoldSim Adapter
SCM – Scenario Manager	MIKE1D adapter links wrong hot start and result for RR
SCM – Scenario Manager	SCM: HEC-RAS cannot load geometry data - and does not inform about the cause
SCM – Scenario Manager	Beta: MIKE1D adapter fails to synchronize from cloud in case of engine error
SCM – Scenario Manager	MIKE1D exception in MIKE Cloud fails on scripts
SCM – Scenario Manager	MIKE1D adapter: Exceptions thrown during preprocessing of simulation runs does not show the full stack trace
SCM – Scenario Manager	MHB takes a very long time to run when using dfs0 files with multiple items.
SCM – Scenario Manager	MIKE Hydro River Adapter fails to execute model
SCM – Scenario Mode	Creating scenario for MIKE+ model in MIKE OPERATIONS
SCR – Script Manager	CPython storage fails to "import" another CPython storage
TIM – Time Series Manager	Slow run time for delta change factor tool
TIM – Time Series Manager	Timeseries Flags are not maintained correctly
TIM – Time Series Manager	Crash when there are no flag definitions of a flag type being used on a time series

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Fixed issues (2023.2)

Module/type	Error/Inconvenience fixed
COR - Core	User of the type of workspace_member can execute SQL for example from Attribute Query in map - to all tables, he have right.
COR - Core	All explorers are selected by default
COR - Core	Unrecoverable Error contains wrong svclog(s)
DOC – Document Manager	Document Manager Cloud Provider: Create new group and delete it again throws an exception
DOC – Document Manager	The read-only user should not have edit access to datasets and projects on Cloud
DOC – Document Manager	Read-only users should not have edit access for Cloud datasets and projects
GIS – GIS Manager	Invalid PostGIS version is not clear
GIS – GIS Manager	KML file import fails
GIS – GIS Manager	MIKE Cloud dfs2 is wrong
GIS – GIS Manager	GIS Manager: MIKE Cloud upload tool does not show the alias in the list of providers
GIS – GIS Manager	Platform - Show read-only datasets and projects
GIS – GIS Manager	NuGet packages not created
GIS – GIS Manager	Refresh on a group in the GIS explorer does not update nodes under the group
GIS – GIS Manager	Import from KML/KMZ file tool gets an error
GIS – GIS Manager	Import from KML tool has the wrong validation for duplicate names

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GIS – GIS Manager	If raster, having / in item name and dfsu file is loaded to the Cloud multidimensional storage by Cloud Admin or MIKE C...
GIS – GIS Manager	ASCII temporal import tool gives an error "Index was outside the bounds of the array"
JOB – Job Manager	Editing connection on MO Job Service Provider will keep a default connection
JOB – Job Manager	Change port on localhost
JOB – Job Manager	Wrong icon for scheduled MIKE Cloud job
JOB – Job Manager	Wrong sorting and strange menu
JOB – Job Manager	Execute a Cloud job is not possible
JOB – Job Manager	Job instance properties are not always shown
JOB – Job Manager	Schedule a job will not have the logs sort in the right order
JOB – Job Manager	Scheduling information is empty
JOB – Job Manager	Scripting 'fetch all entries in a group' is not consistent
JOB – Job Manager	List of job instances is not refreshed when started on schedule
JOB – Job Manager	Sorting of job instance will not refresh
JOB – Job Manager	Finish time is wrong for jobs in MIKE Cloud
JOB – Job Manager	Crash when moving window
JOB – Job Manager	Right-click in explorer crashes the application
OPR – Operations Manager	Operations manager throws an exception
OPR – Operations Manager	FilterValues is not working in the Operations Manager

REP – Report Manager	Pop-up window too small when updating report definition template
SCM – Scenario Manager	Running a scenario with auto-approve in background cause an error
SCM – Scenario Manager	Pre- and Post-Processing scripts cannot be assigned if they have multiple arguments
SCM – Scenario Manager	The attached MIKE+ model cannot run in MIKE Operations
SCM – Scenario Manager	Delete a scenario while it has simulation running in the background gets an exception
SCM – Scenario Manager	MIKE+ results with DA are different when run with MIKE+ adapter compared to without
SCM – Scenario Manager	Registered 3-way model setup (Blue Beach) does not execute
SCR – Script Manager	Data Export/Import of scripts linked to scenario fails if script moves group
SCR – Script Manager	Crash when maximizing window
SCR – Script Manager	Running job takes focus
SCR – Script Manager	Scripting get tool with properties - enum should be fully qualified
SCR – Script Manager	Reviewer role cannot script on an entity, a warning pops-up
SCR – Script Manager	Supply the script path to Execute Script Tool and clear the path, shell crashes
SPR – Spreadsheet Manager	GetTimeseries spreadsheet function does not work with providers
SPR – Spreadsheet Manager	The spreadsheet data export tool cuts off columns of more than 256
SYS – System Manager	The password reset looks wrong
TIM – Time Series Manager	Extract time series tool does not work for step accumulated
TIM – Time Series Manager	Net6: List association on a time series gets a warning that an assembly is missing

TIM – Time Series Manager	Application crashes on plotting timeseries