# Installation Guide

#### MIKE OPERATIONS Installation Guide for Release 2024.2



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# Introduction

This installation guide covers the installation of MIKE OPERATIONS and related Modules (MIKE WORKBENCH, Database Manager Utility, MIKE OPERATIONS Desktop) and required 3rd party software.

MIKE OPERATIONS can be deployed in different ways – ranging from a personal installation to a corporate installation.

- 1. Personal installation, which allows users to work in a network independent mode on their desktop. This requires the installation of a database on the local computer.
- 2. Corporate installation, which allows for an office to have multiple installations (clients) all working against a central database.
- 3. Web installation, which allows for an organisation to access MIKE OPERATIONS over the Internet (this option requires installation of MIKE OPERATIONS Web as well).

This installation guide describes the installation process for all the different deployment patterns and required associated 3rd party software.

Installation of MIKE OPERATONS Web is described in a separate installation guide.

🚹 Info

Please be aware that all MIKE software (including the DHI License Manager) on the same computer must be installed with the same service pack. This is due to the dependencies between MIKE software products and our wish to use the latest and technically most advanced development systems.

# Installation Prerequisites

MIKE OPERATIONS depends on prerequisites as listed below.

### Database service (optional)

Because MIKE OPERATIONS runs on a database, a supported database software or service must be installed.

The following databases are supported by MIKE OPERATIONS:

- PostgreSQL
- SQLite
- MS SQL Server



Please note that Oracle databases are not supported as of release 2022 of MIKE OPERATIONS.

SQLite is installed and run automatically by MIKE OPERATIONS. The other database types run as services and must be installed by the user.

#### PostgreSQL

The MIKE OPERATIONS installer includes an optional PostgreSQL installer that installs a PostgreSQL server along with the PostGIS spatial database extender.

Although the PostgreSQL installer delivered with MIKE OPERATIONS installs the latest PostgreSQL/PostGIS combination, it's also possible to use older combinations.

#### 🛕 Warning

PostgreSQL has a limitted 5-year period of support for each major version of PostgreSQL. After this period, PostgreSQL will not release security and hotfixes for the version. This also mean that MIKE OPERATIONS will not support these versions with new releases.

Read more on the PostgreSQL version policy page and on DHI Developers.

MIKE OPERATIONS 2024.2 supports the following combinations of PostgreSQL and PostGIS with this release:

PostgreSQL	PostGIS
PostgreSQL 12	PostGIS 3.0.*
PostgreSQL 13	PostGIS 3.1.*
PostgreSQL 13	PostGIS 3.2.*
PostgreSQL 14	PostGIS 3.1.*
PostgreSQL 14	PostGIS 3.2.*
PostgreSQL 14	PostGIS 3.3.*
PostgreSQL 15	PostGIS 3.3.*
PostgreSQL 15	PostGIS 3.4.*
PostgreSQL 16	PostGIS 3.4.*

Combinations of later versions may also work but have not been tested.

PostgreSQL versions accepted by MIKE OPERATIONS can also be viewed in the file DssDatabases.cfg.xml of the MIKE OPERATIONS installation folder.

In case upgrading a system running on an older unsupported version of PostgreSQL, a new version of PostgreSQL should be installed and the database moved to this new installation.

#### **MS SQL Server**

MS SQL Server must be installed by the user. An installer is not included with the MIKE OPERATIONS installer. Supported versions include 2019 and 2022.

The DHI License Management application.

The installation wizard of the DHI License Manager is included in the MIKE OPERATIONS installer.

Microsoft .NET Framework 4.7.2

The Microsoft .NET Framework is installed by default when installing Microsoft Windows.

### Microsoft Edge WebView2

Microsoft Edge WebView2 is a control that lets MIKE WORKBENCH and MIKE OPERATIONS Desktop (Operator UI) embed advanced web page in docked panels inside the application.

The following controls use the Microsoft Edge WebView2.

- MIKE WORKBENCH Start Page
- Operations Manager web page extensions
- Operator UI web items

Microsoft Edge WebView2 is installed with MIKE OPERATIONS, when running the installer using setup.exe.

# MIKE OPERATIONS Installation/Upgrade

MIKE OPERATIONS 2024.2 is installed by running the Setup.exe program coming with the installation media. The installation process consists of two parts.

It is important to run the Setup.exe as administrator to allow all components to be installed.

- Installation of DHI License Management application (only if not previously installed with other MIKE software).
- Installation of MIKE OPERATIONS software files including MIKE Workbench, Database Manager Utility, MIKE OPERATIONS Desktop, and PostgreSQL/PostGIS.

Installation of the MIKE OPERATIONS software package is simple and requires no user interactions beyond accepting the license conditions and specifying the installation folder.

The following section explains how to install or upgrade MIKE OPERATIONS, MIKE WORKBENCH, and required 3rd party software.

If you are installing MIKE OPERATIONS for the first time, PostgreSQL and PostGIS can be installed if you want to run on top of a PostgreSQL database.

If you want to install a different combination than the default PostgreSQL versions, refer to APPENDIX A.

### Start Installation

Run the setup.exe file from the installation media/download folder.

setup.exe will make sure that the License Manager as well as PostgreSQL is installed.

#### A Warning

Do not use the MIKE OPERATIONS msi installer unless an existing installation of MIKE OPERATIONS needs to be reinstalled.

DHI MIKE OPERATIONS 2024	Setup	-		×
Powering WATER DECISIONS	Welcome to the DHI MI 2024 Setup Wizard	KE OPEF	RATIO	NS
Powered by DHL	Please wait while the Setup Wizard through the installation. Migrating feature states from relat	l prepares to	guide yo	u
	Back	ext	Canc	el

Note: In case the DHI License Manager is not installed, the installation wizard of the DHI License Manager will start. Refer to the installation guide of the DHI License Manager for more information about features and license configuration.

### Accept the license agreement.



### Select Components

MIKE Workbench and the Database Manager Utility are required components when installing MIKE OPERATIONS.

DHI MIKE OPERATIONS 2024 Setup	– 🗆 🗙
Custom Setup Select the way you want features to be installed.	Powerd by DHI
Click the icons in the tree below to change the way	y features will be installed.
MIXE Workbench MIXE Workbench Service X • MIXE Workbench Program Database Manager Utility MIXE OPENATION Database	The MIKE Workbench Program Files
MILE OPERATIONS Prog     PostgreSQL 15.4 ind. PostGIS	This feature requires 420MB on your hard drive. It has 1 of 2 subfeatures selected. The subfeatures require 156KB on your hard drive.
Location: C:\Program Files (x86)\DHI\MIK	E OPERATIONS (2024) Browse
Reset Disk Usage	Back Next Cancel

MIKE OPERATIONS Desktop (optional)



### PostgreSQL including PostGIS (optional)

It is recommended to install MIKE OPERATIONS with PostgreSQL and PostGIS on a shared server or virtual machine.

Note

Install PostgreSQL and PostGIS on if a database server is not already installed or an older unsupported version of PostgreSQL is currently installed.

Select the way you want features to be installed.	MIKE
Click the icons in the tree below to change the way	v features will be installed.
MIXE Workbench	The PostgreSQL and PostGIS Files
A + MIKE Workbench Program     Database Manager Utility	
MIKE OPERATIONS Desktop	This feature requires 0KB on your hard drive.
PostgreSQL 15.4 ind. PostGIS	
	Browse

### Job Service Port

Specify the port to use for the Job Manager Service.

DHI MIKE OPERATIONS 2024 S Job Service Port Set the job service port.	etup – O X
Please define the Job Serv Job service port: Log on as User name: Password: Note: the job se The user must h delete on the co	Ice Port Number.
to start the Job the Installation u	Manager Service, start it manually after sing the Services (start as administrator). Back Next Cancel

Use the default port (8089).

It's possible in this step to specify a computer user profile to be used when running jobs. This can be edited later.

If the Job Manager fails to start, this might be because the default port used for the Job Manager Service is already used.

In that case, please restart the installation process and select a different port number.

### PostgreSQL administrator password

If you've selected a PostgreSQL installation, you will be asked to provide a password for PostgreSQL database.

DHI MIKE OPERATIO	INS 2024 Setup		
PostgreSQL	10000		2
Password			Powered by DHI
Please provide a pass (postgres).	word for the database superuse	r (postgres) and service	e account
Password	•••••		
Retype password	•••••		

Provide Password to the PostgreSQL database.



Install

DHI MIKE OPERATIONS 2024 Setup Ready to install DHI MIKE OPER	RATIONS 2024
Click Install to begin the installation. installation settings. Click Cancel to e	Click Back to review or change any of your exit the wizard.
	Back Install Cancel

Click Install

## **Finish Installation**

DHI MIKE OPERATIONS 2024	4 Setup	-		$\times$
Powering WATER DECISIONS	Completed the DHI M 2024 Setup Wizard	MIKE OPER	ATION	IS
••••	Click the Finish button to exit t	he Setup Wizard	i.	
$\geq$				
Powered by DHI				
			_	
	Back	Finish	Cano	cel

**Click Finish** 

# PostgreSQL Installation

If you are doing a PostgreSQL installation, wait until installation of PostgreSQL and PostGIS is complete.

🝯 Setup		-		×
	Installing Unpacking C:\Program []0/doc\postgresg\html\gist-e	idensibility.htm	-	
unbecking Crivingtram (Juloocipolegrasd (nom/gat-assensions) nom				

Click OK to complete the installation once the PostgreSQL installation is complete.

### **DHI License File**

The DHI license is handled through the DHI License Management software, which can be found under DHI License Administration in the Start Menu.



Open the DHI License Management program in the start menu as administrator.



There three different options: - Internet License - Network License - Local License (dongle)



All Users must be ticked to allow job execution (if job service is using another user profile) Please look in the documentation found by clicking the Help button or contact your local MIKE Sales representative.

# Set up Database

Once the software is installed for the first time, it is required to set up a database.

This includes connecting to a database file or server, creating a database, and making a database connection.

Instructions for database setup and connection are provided in the help file for the Database Manager Utility.

The following database types are supported:

- PostgreSQL
- MS SQL Server
- SQLite

It's also possible to use Azure Database Service for PostgreSQL instead of a local PostgreSQL service.

To launch Database Manager Utility, go to the Start menu and search for Database Manager Utility.



Refer to the Database Manager Utility documentation on how to connect to a database server and on how to create a new database.



# Connect to a database in MIKE Workbench

After a database has been created in the Database Manager Utility, a connection to the database must be created in MIKE WORKBENCH.

When opening MIKE WORKBENCH, a connection window appears.

AIKE Workbe	ench Login			×
MIKE V	Vorkbench			
Connection:		~	Setup	
User Name:			]	
Password:			]	
Workspace:		~	1	
Always use	the same user name and password		-	
Always login	with the above settings			
		Login	Cancel	

Click Setup...\*

A connection manager them allow you to create a connection.

Connection Manager	×
Use this dialog to add, edit or delete server connections.	_
	-11
Add Edit Delete	
Close	

Click Add...

In the Setup window, a database connection is defined.

🕋 Setup	×
Connection Properti	es
Database Type:	PostgreSQL ~
Server:	localhost 👔
Port:	5433
Database:	Sava-Demo 🗸
Connection Name:	Sava
Custom Database U	Jser
Database User:	
Password:	
	QK <u>Cancel</u>

If the selected database type is PostgreSQL, MS SQL Server, or Oracle, you should define the server name.

In the current example, we work with a database installed locally and the server name should be set to *localhost*.

The port should be set to the port associated with the server. This association is made in Database Manager Utility for local services.

The Database is selected from the databases available from the given server/port combination.

The Connection Name is set to the database name by default but can be changed.

For SQLite, you should define the path to the SQLite database file.

Setup	>
Connection Properti	es
Database Type:	SQLite ~
Server:	localhost
Port:	-1
Database:	C:\Users\tsj\OneDrive - DHI\Docum
Connection Name:	Sava
Custom Database U	lser
Database User:	

The Connection Name is set to the database name by default but can be changed.

The newly created connection appears in the list.

Connection	Manager			
Use this dialog	to add, edit or de	lete server conne	ections.	
Name	Туре	Database	Server	
Sava-Demo	PostgreSQL	Sava-Demo	localhost:5433	
Add	Edit	Delete	]	

The Connection menu now shows the newly created database connection.

By default, the pre-configured administrator account is called admin. The password is dssadmin.

This can be changed after logging in to the system. See the MIKE Workbench documentation for more information.

🕋 MIKE Workbe	nch Login			×
MIKE W	/orkbench			
Connection:	Sava	~	Setup	
User Name:	admin			
Password:				
Workspace:	workspace1	~		
Always use t	he same user name and password			
Always login	with the above settings			
		Login	Cancel	

Click Login

# Updating an Existing Database

If you are doing an update, you should ensure the database version and the MIKE OPERATIONS version are consistent. Indeed, from one version to another one, the database schema usually evolved.



Instructions for updating a database are provided in the help file of the Database Manager Utility.

Beware that after updating the database, MIKE OPERATIONS users working with the earlier version of the software will not be able to use the database. After the database has been updated everybody using the database should update the client.

# Database Server Update

This chapter concerns users:

- Installing MIKE OPERATIONS on a computer different from the database server
- Upgrading MIKE OPERATIONS on a computer different from the database server
- Updating a database with Database Management Utility from a computer different from the database server

From version 2017.5, the Mesh Database was included in MIKE OPERATIONS. This requires a specific DLL to be located on the database server. The installer and the Database Management Utility will automatically copy this file if PostgreSQL is installed locally.

In the case PostgreSQL is not installed locally, the user will need to carry out the following steps to ensure MIKE OPERATIONS works correctly:

- Locate and copy the file called DHI\_mesh.dll in the MIKE OPERATIONS bin folder
- Log in to the computer on which the database server is installed (PostgreSQL)
- Paste the file to the lib folder of the PostgreSQL installation.

# APPENDIX A: Install different version of PostgreSQL

As mentioned in Chapter 2, it is possible to use several versions of PostgreSQL databases.

PostgreSQL installers for Windows can be found on the EDB PostgreSQL Download page.

### PostgreSQL Installation

The following table explains how to install a PostgreSQL installer downloaded from the web page of EnterpriseDB.

Setup		-		×
Packaged by:	Setup - PostgreSQL			
POSTGRES	Welcome to the PostgreSQL Setup Wizard.			
PostgreSQL				
(F)				
-0				
	< Back	iext >	Can	cel

Run the database installation program e.g. postgresql-XX.X-X-windows-x64.exe

### Start of installation

Accept the default installation folder.

👹 Setup	-		×
Installation Directory		ļ	
Please specify the directory where PostgreSQL will be installed.			
Installation Directory C:\Program Files\PostgreSQL\12			
VM-see fostalls ddar			
< Back	Next >	Can	cel

Select the components to install.



Accept the default data folder.

📲 Setup		-		$\times$
Data Directory				
Please select a directory under which to store your data.				
Data Directory : Program Files PostgreSQL\12\data	<b>2</b>			
VMware Installbuilder				
	< Back	Next >	Can	cel

Type in a password of your choice for the postgres user (the administrator for the database server).

\min Setup				-		×
Password					ļ	Þ
Sease provide a pa	assword for the databas	ie superuser (pos	tgres).			
Password	•••••					
Retype password						
VMware InstallBuilder						
			< Back	Next >	Can	el

၍ Tip	
Do not forget this password!	

Accept the port number (default port is 5432).

				-		$\times$
Port					ļ	Þ
Please select the port numb	er the server should	listen on.				
Port 5435						
VMware Installfulder						
			< Back	Next >	Can	cel

If more PostgreSQL servers are installed, the first free port number after port 5432 is suggested.

Leave the **Locale** as *Default Locale* 

👹 Setup	-		×
Advanced Options		ļ	Þ
Select the locale to be used by the new database cluster.			
Locale [Default locale]			
VMware InstallBuilder			
<back< td=""><td>Next &gt;</td><td>Can</td><td>cel</td></back<>	Next >	Can	cel

### Review the installation summary.

🖥 Setup	-		×
Pre Installation Summary			•
The following settings will be used for the installation::			
Installation Directory: C:\Program Files\PostgreSQL\12 Server Installation Directory: C:\Program Files\PostgreSQL\12 Data Directory: C:\Program Files\PostgreSQL\12\data Database Superuser: postgres Operating System Account: NT AUTHORITY\VetworkService Database Service: postgresql:vsf4-12 Command Line Tools Installation Directory: C:\Program Files\PostgreSQL\12 pgAdmin+ Einstallation Directory: C:\Program Files\PostgreSQL\12 Stack Builder Installation Directory: C:\Program Files\PostgreSQL\12 PostgreSQL\12			4 Þ
VMware Instalibuider Casek N	ext >	Can	cel

Click Next

🖷 Setup	-		×
Ready to Install		1	Þ
Setup is now ready to begin installing PostgreSQL on your computer.			
VMware Installbuilder	iext >	Can	cel

The database server installation has finished.

\min Setup	- 0 X
Packaged by:	Completing the PostgreSQL Setup Wizard
POSTGRES	Setup has finished installing PostgreSQL on your computer.
	Launch Stack Builder at exit?
PostgreSQL	Stack Builder may be used to download and install additional tools, drivers and applications to complement your PostgreSQL installation.
(f)	
U	
	< Back Finish Cancel

Uncheck the Launch Stack Builder at exit? option and then click Finish.

### **PostGIS Manual Installation**

The following table explains how to install PostgreSQL exemplified by using a PostGIS postgisbundle-pgXXx64-setup-X.X.X-X.exe installer from the OSGeo Download Server.

Run the PostGIS installation program (e.g. postgis-bundle-pg14x64-setup-3.2.3-2.exe).

Note

Note supported the versions of PostGIS for the installed version of PostgreSQL in the *Installation Prerequisites* section.

### Start of installation.

PostGIS Bundle 3.0.2 for PostgreSQL x64 12 Setup	×
💊 🦻 🌯 License Agreement	
Please review the license terms before installing PostGE 3.0.2 for PostgreSQL x64 12.	S Bundle
Press Page Down to see the rest of the agreement.	
GNU GENERAL PUBLIC LICENSE	
Version 2, June 1991	1
Copyright (C) 1989, 1991 Free Software Foundation, Inc. 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.	
Preamble	
The licenses for most software are designed to take away your	
If you accept the terms of the agreement, click I Agree to continue. You must accept agreement to install PostGIS Bundle 3.0.2 for PostgreSQL x64 12.	the
Nulsoft Install System v3.05	
[ I Agree	Cancel

#### Click I Agree.

#### Check Create spatial database.

A PostGIS Bundle 3.0.2 for	PostgreSQL x64 12 Setup	- 🗆 X
	Choose Components Choose which features of PostGIS	Bundle 3.0.2 for PostgreSQL
Check the components you install. Click Next to continu	want to install and uncheck the com	ponents you don't want to
Select components to insta	l: PostGIS Create spatial database	Description Position your mouse over a component to see its description.
Space required: 262.4 MB		
Nullsoft Install System v3.05 -		
	< Back	Next > Cancel

Accept the default folder.

PostGIS Bundle 3.0.2 for F	PostgreSQL x64 12 Setup		-		×
	Choose Install Location				
- 10-	Choose the folder in which PostgreSQL x64 12.	to install Post	GIS Bundle	3.0.2 for	
Setup will install PostGIS Bur in a different folder, click Bri	ndle 3.0.2 for PostgreSQL x6 owse and select another fold	4 12 in the fol ier. Click Next	lowing fold to continu	ler. To insi e.	tall
Destination Folder	reSQL (12)		Brow	şe	
Space required: 262.4 MB Space available: 491.0 GB					
Nullsoft Install System v3.05 –	< Ba	dk Nex	dt >	Cance	6

Type in the password that was specified for the postgres user when installing the PostgreSQL database server.

Database Cor	nection Information	
User Name:	postgres	
Password:	••••••	
Port:	5435	

Rename the Spatial database: template\_postgis\_20

PostGIS	S Bundle 3.0.	2 for Postgre	eSQL x64 12	Setup: Data	base N	-		×
	9	Datab	base Name	,				
	-2	Speciend of the second seco	ify the name of the install	of the spatial ation process	database	to be cre	ated at th	e
Spatia	al Database In	formation						
Data	base Name:	Jusigs_JU	sample					
Jisoft Ins	tal System va	5,05		< Back	Tost		Carr	el
				1000	100		Caric	
PostGIS	S Bundle 3.0.	2 for Postgre	eSQL x64 12	Setup: Data	base N	_		×
	9	Datab	ase Name	,				
	Sh							
	-10	speciend of the species	ify the name of the install	of the spatial ation process	database	to be cre	ated at th	e

Database N	lame: templat	te_postgis_20		

Yes, to the GDAL\_Data environment variable.

PostGIS Bundle 3.0.2 for PostgreSQL x64 12 Setup	×
Would you like us to register the GDAL_DATA environment variable for you, needed for raster transformation to work properly? This will overwrite existing settings if you have them.	
Yes No	

Yes, to both set of environment variables.



Set to 1. Enable out db rasters?

The installation has finished.



#### **Configuration of PostGIS**

Open the Windows Command Prompt.

Click the Windows Start Menu and type cmd.



Right-click on cmd.exe and choose Run as administrator.

Best match	
Command Pr	ompt
System	🕞 Run as administrator
Apps	Open file location

In the command prompt type SETX /M PROJSO libproj-9.dll and press Enter.





Restart the computer to make the environment variable available to PostGIS

1	Closes all again.	apps, turns off the PC, and then turns it o	n
		🕤 Restart	
		Ċ	

# APPENDIX B: Advanced PostgreSQL Database management tool

The PostgreSQL database password provided during installation can be stored in the database for easy access in the future. It is an optional configuration.

Start the pgAdmin 4 database administration tool from the Windows Start menu.





### The pgAdmin tool opens.

S pgAdmin 4	
File Object Tools Help	
Object Explorer	<b>Q</b> >_ Dashboard Properties
<ul> <li>Servers (1)</li> <li>PostgreSQL 16</li> </ul>	
	PID

Right click the database server entry for localhost under the Servers node to access *Connect Server*.

S pgAdmin 4			
File Object Tools He	lp		
Object Explorer	\$ <b>m q</b> >_	Dashboard	Properties
🗸 🚍 Servers (1)		<b>=</b>	]
> 📑 PostgreSQL			J
	Register >		
	Refresh		PID
	Connect Server		
	Remove Server		
	Properties		

Provide the password for the postgres user.

🕗 Note
Check on the Store password option in case you want to store the password locally on the computer.
Connect to Server ×
Please enter the password for the user 'postgres' to connect the server - "PostgreSQL 16"
Save Password
X Cancel V OK
Note
Clicking on Store password leads to a warning.

Click OK on the warning dialog.

# APPENDIX C: Configuring the PostgreSQL Database Server for remote access

💧 Tip

This step is only needed if the database server shall accept connections from remote computers.

The section describes how to configure the PostgreSQL database server for running in corporate mode.

Start by enabling password save as shown in APPENDIX B.

) → Program Files → PoetgreSQL → 14 → dat	a >		
Name ^	Date modified 08-10-2021 10:59	Type File fulder	Size
🚞 pg_rephilot	08-10-2021 10:59	File folder	
📁 pg_serial	08-10-2021 10:59	File folder	
🚞 pg_eruspehate	08-10-2021 10:59	File folder	
📁 pg_stat	12-09-2022 06:99	File fulder	
🚞 pg_stat_tmp	14-03-2022 14:22	File folder	
ng_subtrans	11-10-2021 08:37	File folder	
ng_tblopc	08-10-2021 10:59	File folder	
ng_twophase	08-10-2021 10:59	File folder	
늘 pg_wal	02-02-2022 15:45	File folder	
D pg_xact	08-10-2021 10:50	File folder	
current_logfiles	14-00-2022 11:21	File	1 KB
pg_hba.com	08-10-2021 10:59	CONF File	5 KB
D an ideal and	A5 35 3031 35-85	2008 F 11-	1.47

Locate the pg\_hba.conf file in the data folder e.g. C:\Program Files\PostgreSQL\16\data and open it in an editor e.g. Notepad.

g,hba.conf - Notepad						
File Edit Format View Help						
# NAME-VALUE. The available options depend on the different # authentication methods refer to the "Client Authentication" # section in the documentation for a list of which options are # available for which authentication methods.						
Database and user names containing spaces, commas, quotes and other # special characters must be quoted. Quoting one of the keywords # "all", "sameuser", "samerole" or "replication" makes the name lose # its special character, and just match a database or username with # that name.						
This file is read on server startup and when the postmaster receives # a SIGHUP signal. If you edit the file on a running system, you have # to SIGHUP the postmaster for the changes to take effect. You can # use "pg_ctl reload" to do that.						
<pre># Put your actual configuration here # #</pre>						
<pre># If you want to allow non-local connections, you need to add more # "host" records. In that case you will also need to make PostgreSQL # listen on a non-local interface via the listen_addresses # configuration parameter, or via the -i or -h command line switches.</pre>						
# TYPE DATABASE USER ADDRESS METHOD						
# IPv4 local connections:						
host all all 127.0.0.1/32 md5						
host all all ::1/128 md5						
# Allow replication connections from localhost, by a user with the # replication onlyilere						
whost replication postgres 127,0.0,1/32 md5						
Whost replication postgres ::1/128 md5						
host all all 0.0.0/0 md5						

Insert a new line to open up for all non-local connections to database as shown on the right

host all all 0.0.0/0 md5

Adjust spaces!

Save the configuration.

Restart the services to apply the update

Q. Services					-		$\times$
File Action View	Help						
💠 🔶 📷 🖾 🖉	i 🗟 📓 📰 🕨 🖷 🕪 🕒						
Services (Local)	C) Services (Local)						
	postgresgi-x64-14 - PostgreSQL Server 14	Name	Description This service Enforces pt	Status	Startup Typ Manual Monual (Th	ia	Leg Lec
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	Description: Provides relational database storage.	C podgrespieski 14 + Podgre C Power C Print Spocker	Novides rel Manages p This service	Running Running Running	Automatic Automatic Automatic		Net Les

Configuring the Windows Firewall for remote access

The section describes how to configure the Windows firewall for MIKE OPERATIONS running in enterprise mode.

Open the Firewall applet in the Windows Control Panel.

💣 Windows Defender Firesall with	Advanced Security		- 0	×
File Action View Help				
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🔐 Windows Defender Freuell with	Windows Defender Firewall with Advanced Security on Local Co	Act	tions	_
Cuthound Rules	-0	-	indows Defender Firewall with Advanced Security on Loc.	
Connection Security Rules	Windows Defender Reevall with Advanced Security provides ne		Import Pokey	
) 💺 Manitoring			Expart Pakey	
	Overview		Rentore Default Policy	
	(a) For your security, some settings are controlled by Group Poli		Chagnese / Repair	
	Domain Profile is Active		View	•
	Windows Defender Flewvall is on.	8	Refresh	
	O Hound connections that do not match a sile are blocked.	10	Properties	
	Outpound connections that do not match a sile are allowed.	E	Help	
	Private Profile			
	Vindore Defender Ferend is an.			
	O Hound corrections that do not match a take are blocked.			
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### Select Inbound Rules

Click New Rule in the Actions panel to the right



#### Select Port

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ute.	
inner type of rule would you are to create r	
Dragman Rule Truit controls connections for a program.     Port Rule that controls connections for a TCP or UDP port.     Prodefined:     @ Appletimed:     @ Appletimed:     @ Appletimes     Controls     Controls     Controls     Controls	
< [set > Canol	-
	dd: What type of rule would you like to owner? Degram Rule that controls connections for a program. Period Rule that controls connections for a TCP or UCP pot. Period Period Period Rule that controls connections for a Windows experience. Control Canton Rule. (gask Just ) Cantol

Select TCP, Specific local ports and enter 5432 (or the port number specified when installing PostgreSQL)

🔗 New Inbound Rule Water	d	
Protocol and Ports		
Specify the protocols and poils to	a which this rule applies.	
Shepse		
<ul> <li>Rule Type</li> </ul>	Does this rule apply to TCP or U	D63
Protocol and Ports	O TCP	
<ul> <li>Action</li> </ul>	O UDP	
Profile		
<ul> <li>Nane</li> </ul>	Does this rule apply to all local p	ofs or specific local polis?
	Al local ports	
	Specific local ports:	5432
		Example: 80, 443, 5000-5010
		clinit Nation Canad

Select Allow the connection.



Click on for all profiles.

Phew Inbound Rule Water	d	×
Profile		
Specify the profiles for which this	nie apples.	
Shepe		
<ul> <li>Rule Type</li> </ul>	When does this rule apply?	
Protocol and Ports     Action     Profile	Domain Applies when a computer is connected to its corporate domain.	
e Nane	Private Applies when a computer is connected to a private network location, such as a home or work place.     Pake Applies when a computer is connected to a public network location.     Cancel     Cancel     Cancel	

Specify a rule name - e.g. PostgreSQL (5432) - and a description.

	New Inbound Rule Waard		×
N	isme		
5	eolly the name and description	d this sile.	
9	ingen:		
•	Rule Type		
٠	Protocol and Ports		
٠	Action	L2	
٠	Profile	Sene:	
	Nane	Polge90L0412	
		Description (aptional):	
		MIKE OPERATIONS - Renote access to PostgreSGL on port 5433	
		clark Brith Carry	
		- geo Caro	_

The new rule is now added to the list of Inbound rules.

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Internet False	Name	Group	Interund Rules		
Convertion Security Rules	Postpetick (5412)		1 New Rule		
Nonitoring	Advanced TCP/IP Port Installer		The ty holic		
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	CHUSelutions.Shell		Pertyr/SQL(5455)		
	CHISelutions.Shell		<ul> <li>Orable Rule</li> </ul>		
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	Children Shell		Ra Cepy		
			🗶 Delete		

# APPENDIX D: Troubleshooting

### Job Manager Service will not start

In situations where a specific user has been specified for running the Job Manager Service, the installer could be prevented

from starting the service in case the user does not have the necessary rights to run services.

In this case, start the job manager service (DHI Solutions Job Manager Service) manually using the Services application of Windows.

The Services application will automatically grant the user access to running services.



### Event Manager Service will not start (System.PlatformNotSupportedException)

If the DHI Event Manager Service is not starting during the installation, the installation cannot complete and will roll back.

The following stack trace can be found in the Windows Event Viewer.

```
Service cannot be started. System.PlatformNotSupportedException: Operation is not
supported on this platform.
    at System.Net.HttpListener..ctor()
    at System.ServiceModel.Channels.SharedHttpTransportManager.OnOpen()
    at System.ServiceModel.Channels.TransportManager.Open(TransportChannelListener
```

channelListener)
at
System.ServiceModel.Channels.TransportManagerContainer.Open(SelectTransportManagersC
selectTransportManagerCallback)
at System.ServiceModel.Channels.TransportChannelListener.OnOpen(TimeSpan
timeout)
at System.ServiceModel.Channels.HttpChannelListener`1.OnOpen(TimeSpan timeout)
at System.ServiceModel.Channels.CommunicationObject.Open(TimeSpan timeout)
at System.ServiceModel.Dispatcher.ChannelDispatcher.OnOpen(TimeSpan timeout)
at System.ServiceModel.Channels.CommunicationObject.Open(TimeSpan timeout)
at System.ServiceModel.ServiceHostBase.OnOpen(TimeSpan timeout)
at System.ServiceModel.Channels.CommunicationObject.Open(TimeSpan timeout)
at DHI.Solutions.EventManager.Service

To solve the System.PlatformNotSupportedException issue:

- 1. Start a command prompt as administrator.
- **2. Run** sc config http start=demand
- 3. Run sc start http (to make sure that the http service is running).

Microsoft Windows [Version 10.0.16299.309] (c) 2017 Microsoft Corporation. All rights reserved. C:\WINDOWS\system3.>sc config http start=demand 1 [SC] ChangeServiceConfig SUCCESS C:\WINDOWS\system3.>sc start http 2 [SC] StartService FAILED 1056: An instance of the service is already running. C:\WINDOWS\system32>\_

### Template\_postgis\_20 does not exist

After making a fresh installation of MIKE OPERATIONS, when trying to create a new database, if you receive an error message mentioning a missing database model template\_postgis\_20, it means that PostGIS was not installed correctly.

	(1 high)
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	DOD FUNCTION
	SET
	SEI
	SET
	SET
	CREATE FUNCTION
	dss_alter_system_manager
	User workspace_member already existed. been updated
	(1 ligne)
	DROP FUNCTION
	SET
	SET
-	SET
	SET
d	SET
~	CREATE FUNCTION
	dss_alter_system_manager
	User workspace_reviewer already existed, been updated
	(1 ligne)
	DROP FUNCTION
	ERREUR: la base de donnã@es modã"le $A_{\leq}$ template postois 20 $A_{\geq}$ n'existe pas
	"C:\Program Files\PostgreSQL\9.6\bin\psgl.exe" -d postgres -h localhost -p 5432 -U postgres -c "CREATE DATABASE ""barragemikep""
	PostGIS20
	Restore, bat could not create "barragemiken", does it already exist?
	Bestore Database 'barragemiken' Done
1	v

The solution is to reinstall PostGIS (see APPENDIX A). The download file can be found online.

# APPENDIX E: Custom Tools, Managers and Providers

MIKE OPERATIONS is a software product build on plugable components.

This also includes adhoc custom components developed for projects.

The loading of custom components is added done in runtime.config files.

In case updates to the runtime.config file has been made the installer will notify the user during installation.

Once a new installation of MIKE OPERATIONS has been made, custom components loaded in previous versions MIKE OPERATIONS must manually be moved to the new versions of the ruimetime.config files.

The sample below shows a section loading a custom tool MyCustomTool with the full name MyProject.Tools.MyCustomTool compiled into the assembly (dll) MyProject.Tools.MyCustomTool.dll.

```
<Plugin
Name="MyProject.Tools.MyCustomTool"
Type="DHI.Solutions.Generic.ITool"
Assembly="MyProject.Tools.MyCustomTool.dll" />
```