3D/2D modelling suite for integral water solutions

Delft3D

3D/2D modelling suite for integral water solutions

User Manual

Installation

Deltawest

Enabling Delta Life

User Manual
Delft3D

Integrated 3D modelling framework for flows, sediment transport, waves, water quality, morphological developments and ecology in coastal, river, lake and estuarine areas

Installation Manual
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1 A guide to this manual

1.1 Introduction

Deltares has developed a unique, fully integrated modelling framework for a multi-disciplinary approach and 3D computations for coastal, river, lake and estuarine areas. It can carry out simulations of flows, sediment transports, waves, water quality, morphological developments and ecology. It has been designed for experts and non-experts alike. The Delft3D framework is composed of several modules, grouped around a mutual interface, while being capable to interact with one another.

This manual describes how to install the software and the License Manager.

Chapter 2: Introduction, provides specifications of the software supplied.

Chapter 3: Installing Delft3D on Windows, explains the installation of Delft3D, the manuals and release notes, and tutorials on a Windows OS.

Chapter 4: Installing Delft3D on Linux, explains the installation of Delft3D, the manuals and release notes, and tutorials on a Linux OS.

Chapter 5: Frequently asked questions for Delft3D, gives an overview of problems and solutions related to Delft3D.

The appendices contain example license files.

1.2 Manual version and revisions

A manual applies to a certain release of the related numerical program. This manual applies to Delft3D version 4.01.00.

The manual version number and its release date are given in the page header. Revisions to (a part of) this manual will be indicated by a version number followed by the revision number separated by a dot. The version number is increased when the entire manual is upgraded.

1.3 Typographical conventions

Throughout this manual, the following conventions help you to distinguish between different elements of text.

<table>
<thead>
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<th>Example</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waves Boundaries</td>
<td>Title of a window or sub-window. Sub-windows are displayed in the Module window and cannot be moved. Windows can be moved independently from the Module window, such as the Visualisation Area window.</td>
</tr>
<tr>
<td><strong>Example</strong></td>
<td><strong>Description</strong></td>
</tr>
<tr>
<td>------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><em>Save</em></td>
<td>Item from a menu, title of a push button or the name of a user interface input field. Upon selecting this item (click or in some cases double click with the left mouse button on it) a related action will be executed; in most cases it will result in displaying some other (sub-)window. In case of an input field you are supposed to enter input data of the required format and in the required domain.</td>
</tr>
<tr>
<td><code>&lt;\tutorial\wave\swan-curvi&gt;</code> <code>&lt;siu.mdw&gt;</code></td>
<td>Directory names, filenames, and path names are expressed between angle brackets, <code>&lt;&gt;</code>. For the Linux and UNIX environment a forward slash (<code>/</code>) is used instead of the backward slash (<code>\</code>) for PCs.</td>
</tr>
<tr>
<td>&quot;27 08 1999&quot;</td>
<td>Data to be typed by you into the input fields are displayed between double quotes. Selections of menu items, option boxes etc. are described as such: for instance ‘select Save and go to the next window’.</td>
</tr>
<tr>
<td>delft3d-menu</td>
<td>Commands to be typed by you are given in the font Courier New, 10 points.</td>
</tr>
<tr>
<td><img src="https://example.com" alt="arrow" /></td>
<td>User actions are indicated with this arrow.</td>
</tr>
<tr>
<td><code>[m/s] [-]</code></td>
<td>Units are given between square brackets when used next to the formulae. Leaving them out might result in misinterpretation.</td>
</tr>
</tbody>
</table>
2 Introduction

2.1 Distributions

2.1.1 Windows distribution

For the installation on a Microsoft Windows PC we have provided you with the following files:

- `<Install-Shield.exe>`, a shell around the Delft3D set-up programs
- `<installshield.xml>`, template of the text on the install-shield screen
- `<DSFLEX_README.pdf>`, installation manual for DS_FLEX.
- `<delft3d_binaries_x86.msi>`, the full version Delft3D set-up program to install Delft3D, the User Manuals and the Release Notes.
- `<delft3dTutorial_x86.msi>`, the set-up program to install the Delft3D Tutorials used in the User Manuals.
- `<MCRInstaller.exe>`, the MATLAB redistributable (MATLAB C Runtime compiler).
- `<vcredist_x86 (2010 SP1).exe>`, the Microsoft Visual C++ 2010 Redistributable Package (x86), Service Pack 1.
- `<DS_FLEX.exe>`, installation program to install the license manager.

- Separate we have sent you an e-mail which contains the license file named `<delft3d_id.lic>`.

All set-up programs will guide you through the required steps needed for the installation, see chapter 3.

When installing the Delft Hydraulics Software (DHS) License Manager, you are asked to specify a license file. This file, `<delft3d_id.lic>`, has been sent to you by email.

2.1.2 Linux distribution

For the installation on Linux RHE 4 we have provided you with the following files:

- `<Delft3D-hydro_morpho_waq-$VERSION-$RELEASE.$ARCH.rpm>`, the full version Delft3D system, including the License Manager, User Manuals and Release Notes.
- `<Delft3D-tutorials-$VERSION-$RELEASE.$ARCH.rpm>`, the tutorials for Delft3D.
- `<MCRInstaller.bin>`, the MATLAB redistributable (MATLAB C Runtime compiler).
- Separate we have sent you an e-mail which contains the license file named `<delft3d_id.lic>`.

All set-up programs will guide you through the required steps needed for the installation, see chapter 4.
2.2 **Overall structure for Delft3D**

On both PC and Linux systems we use a similar directory structure to define the Delft3D package set-up.

Delft3D will be installed in the “installation” directory. This installation directory can be anywhere on the system and it can have any name.

In this directory and its sub-directories the Delft3D package will be installed. In this document the parent directory will be referred to as the “Delft3D home” directory. The name of this directory is stored in an environment variable named `$D3D_HOME`.

For the definition of the installation directory you should consult your system manager.

For each platform we defined an architecture name and this architecture name is stored in the environment variable `$ARCH`.

- win32: Microsoft Windows systems
- intel: Linux systems

The directory structure for all Delft3D modules is defined starting with the `<Delft3D home>` directory, followed by the architecture name and the names of the modules. For example for the D-Water Quality module this means:

- `%D3D_HOME%/%ARCH%/waq` for Microsoft Windows systems.
- `$D3D_HOME/$ARCH/waq` for Linux systems.

The following modules constitute the Delft3D package.

- Delft3D-FLOW
- Delft3D-WAVE
- D-Water Quality (incl. sediment and Ecology)
- D-Waq PART
- RGFGRID
- QUICKIN
- GPP
- Delft3D-QUICKPLOT

Additional Delft3D modules are:

- Delft3D-TRIANA
- Delft3D-NESTHD
- Delft3D-TIDE
- D-Waq DIDO
- D-Waq NESTWQ
- GISVIEW
- Delft3D-MATLAB

Finally Delft3D is delivered with the Delft3D-MENU program.
3 Installing Delft3D on Windows

3.1 Start of the installation

Make sure there is enough disk space for the installation of Delft3D. The complete Delft3D package uses approximately 2.6 Gb (500 Mb MATLAB Compiler Runtime + 600 Mb Delft3D + 1.5 Gb Tutorials) free disk space. Delft3D will come with at least the following files.

- <Install-Shield.exe>, a shell around the Delft3D set-up programs
- <installshield.xml>, template of the text on the install-shield screen
- <DSFLEX_README.pdf>, installation manual for DS_FLEX.
- <delft3d_binaries_x86.msi>, the full version Delft3D set-up program to install Delft3D, the User Manuals and the Release Notes.
- <delft3d_tutorial_x86.msi>, the set-up program to install the Delft3D Tutorials used in the User Manuals.
- <MCRInstaller.exe>, the MATLAB redistributable (MATLAB C Runtime compiler).
- <vcredist_x86 (2010 SP1).exe>, the Microsoft Visual C++ 2010 Redistributable Package (x86), Service Pack 1.
- <DS_FLEX.exe>, installation program to install the license manager.

- Separate we have sent you an e-mail which contains the license file named <delft3d_id.lic>.

3.2 Installation procedure

To install Delft3D start the installation program <Install-Shield.exe>. After starting the program the window shown in Figure 3.1 will appear.

![Figure 3.1: Startup window of the Delft3D installation program](image)

Figure 3.1 presents an overview of the different components which need to be installed. If the software package is installed for the first time, please install the items listed in Figure 3.1 sequentially. Note that it might be necessary to reboot after a component has been installed. The user is informed when to do so.
The Install-shield, Figure 3.1, contains the following items:

- **License manual**: opens the installation manual for installing a license file.
- **Installation manual**: opens this document
- **Install License Manager**: installs the software for handling license files on your PC.
- **Install Matlab Runtime (x86)**: installs the 32-bit version of Matlab Compiler Runtime R2013b on your PC (version 12.0.0.58851).
- **Install VC redist. x86 (2010)**: installs the Microsoft redistributables 2010 SP1.
- **Install Delft3D (x86)**: installs Delft3D 32-bit version.
- **Install Delft3D tutorial**: installs the Delft3D tutorials.
- **Quit**: Quits the install shield program.

### 3.2.1 Installation manual

Click on this item to open this Delft3D Installation manual.

### 3.2.2 License manual

Click on this item to open de DS_FLEX installation manual. This manual explains how to install different types of license types.

### 3.2.3 Installation Delft3D (x86)

Click on this item to start the installation of Delft3D by launching `<delft3d_binaries_x86.exe>`, now Figure 3.2 will appear

![Delft3D Welcome Window](image)

*Figure 3.2: Welcome Delft3D 4.10.00 window*

To continue the installation, press *Next* in the **Delft3D 4.10.00** window and the license agreement window appear (Figure 3.3).
Installing Delft3D on Windows

To continue the installation you first to tick off *I accept the terms in the License Agreement*. Press *Next* to continue.

The window Figure 3.4 will appear

![Choose setup type window](image)

*Figure 3.4: Choose setup type window*

This window contains three items

1. **Typical**
   - Selecting this item installs the minimum number of components on to your system on the default location.

2. **Custom**
   - Selecting this item enables the user to change default settings, i.e. installation directory,
components to be installed, etc.

3 **Complete**

Selecting this item installs the maximum number of components on to your system on the default location.

Default, Delft3D will be installed on `<c:\Program Files (x86) \Deltares \Delft3D 4.01.00>` (see Figure 3.5).

If you prefer a different drive and or folder, press **Browse**, see Figure 3.6.

Press button **Next**
You are now ready to install Delft3D, press *Install* to initiate the installation, see Figure 3.7.

![Figure 3.7: Ready to install window](image)

Press button *Install*

A progress window shows up in which the installation is monitored, see Figure 3.8.

![Figure 3.8: Progress window when installing Delft3D](image)

The installation takes several minutes. When the installation is finished, Figure 3.9 appears. Press *Finish* to exit the installation set-up.
3.2.4 Installation Tutorials on Windows

Most of the Delft3D modules have tutorial examples described in the User Manuals. To install these tutorials click on Install Tutorial. The Welcome window will appear, see Figure 3.10.

![Welcome window when installing the tutorials](image)

Default, Delft3D Tutorials will be installed in the Delft3D Home directory. If you prefer a different location, press Browse, see Figure 3.11.

![Welcome window when installing the tutorials](image)
Installing Delft3D on Windows

The **Select Destination Directory** window appears, see Figure 3.12. Navigate to the required folder in which you want to install the Delft3D tutorials and click **OK**.

You are now ready to install the Delft3D tutorials, press **Install** to initiate the installation, see Figure 3.13.
A progress window shows up in which the installation is monitored, see Figure 3.14.

The installation takes several minutes. When the installation is finished, Figure 3.15 appears. Press Finish to exit the installation of tutorials set-up.
3.2.5 Installation of MATLAB Compiler Runtime

To install the MATLAB Compiler Runtime you need the following files `<MCR_R2012a_win32_installer.exe>`. The files are located on the install medium.

- Go to the directory where the `<MCRInstaller.exe>` and `<vcredist_x86 (2008 SP1).exe>` files are located.
- Make sure you got sufficient privileges.
- Start the installation by double click the executable `<vcredist_x86 (2008 SP1).exe>`.
- Next start the installation of the MATLAB Compiler Runtime by double clicking the executable `<MCRInstaller.exe>`.

After starting `MCRInstaller.exe` the Choose Setup Language window appears, see Figure 3.16.

- Press OK to proceed the installation.

Now the installation window for required packages will appear, see Figure 3.17.
Figure 3.17: List of required packages

Press *Install* to proceed the installation.

A progress bar will be shown to monitor the progress of the installation, see Figure 3.18

Figure 3.18: Progressbar for required packages, preparing the MCR installation

After that the start window for installing the MATLAB C Runtime environment will appear, see Figure 3.19
Installing Delft3D on Windows

Figure 3.19: Install MATLAB C Runtime environment

- Press Next to proceed the installation.

Now the Customer information appears, see Figure 3.20

Figure 3.20: Customer information window

- Press Next to proceed the installation.

Default, the MATLAB Compiler Runtime will be installed on the <C:\Program Files\MATLAB\MATLAB Compiler Runtime\> directory, see Figure 3.21. You can change the default if you wish.
Figure 3.21: Default installation directory

Press Next to proceed the installation.

The Ready to Install window will appear, see Figure 3.22

Figure 3.22: The Ready to Install window

Press Install to start the installation.

A progress window shows up in which the installation is monitored, see Figure 3.23. The installation takes several minutes.
3.2.6 Install VC redist. x86 (2010)

Click on this item to install de runtime visual C++ dynamic link libraries.

3.2.7 Install License Manager

Click on this item to install Deltares license manager, see the Deltares license manager installation manual (Click on License Readme)
3.3 Manuals and release notes

As part of the installation also the User Manuals and Release Notes will be installed. They will be available in the folder where you installed Delft3D. See Figure 3.25

![Figure 3.25: Manuals and release notes in Start-menu](image)

After installation the Delft3D folder contain:

- Folder `<manuals>`, containing the User Manuals in PDF-format for all modules.
- Folder `<release_notes>`, containing details on bug fixes and new functionality.
- Folder `<source>`, containing the plugins source for Delft3D-FLOW and D-Water Quality.
- Folder `<win32>`, containing the Delft3D system files.

3.4 Running with ArcGIS10

When using the plugins RGFGRID, QUICKIN, DIDO, GISVIEW and RemoteOLV as extension in ArcGIS10 you have to set the environment variable `WL_PLUGINS_HOME` to `c:\Program Files (x86)\Deltares\Delft3D 4.01.00\win32\plugins` and you have to register the dynamic link library `<MfeArcGis10.UI.dll>` to ArcGIS10, this can be done by running batch files which are available on the directory `c:\Program Files (x86)\Deltares\Delft3D 4.01.00\win32\plugins\bin`.

To register the dll on a 32- or 64-bits Windows operating system:

- `win32`: run `Register_Arcgis10_MFE_win32.bat` on a Windows 32-bits operating system
- `win64`: run `Register_Arcgis10_MFE_win64.bat` on a Windows 64-bits operating system.
To unregister the dll-file use the batch files Unregister_Arcgis10_MFE_win32.bat or Unregister_Arcgis10_MFE_win64.bat.
4 Installing Delft3D on Linux

4.1 Differences with a Windows installation

This chapter describes the installation of Delft3D on Linux.

On Linux the installation program will not ask for the license file, See Section 4.3.1 for details. The Linux license file should be copied to the `<delft3d>` folder.

4.2 Before starting the installation

The installation will be distributed via a ftp-server. The ftp-directory contains the installation for Red Hat Enterprise 4 Linux. The installation of the Delft3D package may be done by anyone with suitable permissions on the Linux system (i.e. system manager), basic knowledge of Linux is required to install the software.

Make sure there is enough disk space for the installation of Delft3D. The complete Delft3D package uses approximately 2.6 Gb (500 Mb MATLAB Compiler Runtime + 600 Mb Delft3D + 1.5 Gb Tutorials) free disk space. Delft3D will come with at least the following files.

- `<Delft3D-hydro_morpho_waq-$VERSION-$RELEASE.$ARCH.rpm>`, the Delft3D system, including User Manuals and Release Notes.
- `<Delft3D-tutorials-$VERSION-$RELEASE.$ARCH.rpm>`, the tutorials for Delft3D.
- `<MCRInstaller.bin>`, the MATLAB redistributable (MATLAB Compiler Runtime).
- Separate we have sent you an e-mail which contains the license file named `<delft3d_id.lic>`.

Remarks:

- To check what will be installed, go to the directory where the rpm-files are located and type the command:
  `rpm -qlp *.rpm`
- Be aware in case you quit/abort the installation that some of the already performed steps, depending on the stage of the installation, should be reversed and/or removed manually.

4.3 Start of the installation

4.3.1 Installation of Delft3D

Remarks:

- Together with Delft3D, the User Manuals and Release Notes will be installed.
- The tutorials are delivered in a separate rpm distribution. To install the Tutorials, see section 4.3.2.

Make sure there is enough disk space for the installation of Delft3D. The complete Delft3D package uses approximately 2.1 Gb (600 Mb + 1.5 Gb tutorials) free disk space.
Installation using rpm

Switch to the directory where the rpm files are located, for example:

```
% cd /mnt/cdrom
```

Make sure you have sufficient rights:

```
% su
```

Install the rpm files with the rpm command:

```
% rpm -ivh Delft3D-$VERSION-$RELEASE.$ARCH.rpm
% rpm -ivh Delft3D-tutorials-$VERSION-$RELEASE.$ARCH.rpm
```

If all goes well you will see progress bars showing the installation progress, Figure 4.1.

You always need the license file `<delft3d_id.lic>` to install Delft3D.

◇ After a new login Delft3D can be used.
Installation without rpm

If for some reason you are not able to use rpm the following procedure can be used to install Delft3D.

The rpm-file can be manually extracted using the command:

```
% rpm2cpio Delft3D-$VERSION-$RELEASE.$ARCH.rpm | cpio -idv
```

Place the files in the correct directories. The etc-files should go in the `</etc>` directory and the opt/delft3d-files should go in the `</opt/delft3d>` directory.

If you do not wish to install Delft3D in directory `</opt>` you have to alter the `profile` and `ld.so.conf.d` files manually by changing occurrences of `/opt/delft3d` to the directory you installed Delft3D. For example:

```
% sed -i s#/opt/delft3d#/usr/local/delft3d# /etc/profile.d/delft3d.sh /etc/ld.so.conf.d/delft3d-i386.conf
```

4.3.2 Installation Tutorials on Linux

Make sure there is enough disk space for the installation of Delft3D. The complete Delft3D package uses approximately 1.5 Gb free disk space.

Switch to the directory where the tutorial rpm file is located, for example:

```
% cd /mnt/cdrom
```

Make sure you have sufficient rights:

```
% su
```

Install the rpm files with the rpm command:

```
# rpm -ivh Delft3D-tutorials-$VERSION-$RELEASE.$ARCH.rpm
```

4.3.3 Installation of MATLAB Compiler Runtime

To install the MATLAB Compiler Runtime you need the following file `<MCRInstaller.bin>`. The file is located on the install medium.

- Go to the directory where the `<MCRInstaller.bin>` file is located, for example:
  ```
  % cd /mnt/cdrom
  ```
- Make sure you got sufficient privileges:
  ```
  % su
  ```
- Start the installation with the command:
  ```
  # MCRInstaller.bin
  ```
  or start with the command
  ```
  # MCRInstaller.bin -console
  ```
  to run it as a console application.
After starting the following text will be displayed in your command-terminal and an installation window will appear.

You can leave the installation by pressing the **Cancel** button.

Default, the MATLAB Compiler Runtime will be installed on the `</opt/MATLAB/MATLAB_Compiler_Runtime>` directory, you can change the default if you wish. For this manual we have changed the installation directory, see Figure 4.3, to `</u/mooiman/linux/opt/MATLAB/MATLAB_Compiler_Runtime>`.

Press **Next** to proceed the installation.

Now a report is given about the installation, Figure 4.4.

Press **Next** to continue the installation or press **Back** to go to the previous window.
Press *Install* to start the installation.

A progress window shows up in which the installation is monitored, see Figure 4.5. The installation takes several minutes.

When the installation is finished, Figure 4.6 appears.
Press *Finish* to exit the installation set-up. The window will close and you are back on the command-prompt, see Figure 4.7.

Close your super-user session:

```
# exit
```

**Checking the Delft3D environment variables**

To check the environment variables type the following command (bash-shell).

```
% env
```

Amongst the environment variables displayed, the Delft3D variables should have proper values:

- `$D3D_HOME`: Pointing to the pre-defined "Delft3D home" directory (e.g. `<opt/delft3d>`)  
  `D3D_HOME=/opt/delft3d`
- `$ARCH`: Pointing to the architecture directory  
  `ARCH=intel`
Installing Delft3D on Linux

Figure 4.8: <delft3d> directory with directory <doc> (Manuals, Tutorial, Release Notes) and system directory <intel>

- $DHSDELFT_LICENSE_FILE: e.g. /opt/delft3d
  This environment variable is needed for the license variable
  DHSDELFT_LICENSE_FILE=/opt/delft3d
- $PATH: The PATH environment variable specifies a search path for executables of Delft3D
  PATH=${PATH}:${D3D_HOME}/${ARCH}:
  ${D3D_HOME}/${ARCH}/gpp/bin:
  ${D3D_HOME}/${ARCH}/flow/bin:
  ${D3D_HOME}/${ARCH}/part/bin:
  ${D3D_HOME}/${ARCH}/util:
  ${D3D_HOME}/${ARCH}/waq/bin:
  ${D3D_HOME}/${ARCH}/wave/bin
- $LD_LIBRARY_PATH: The LD_LIBRARY_PATH environment variable specifies a search path for shared libraries which are needed by Delft3D
  LD_LIBRARY_PATH=${LD_LIBRARY_PATH}:${D3D_HOME}/${ARCH}/lib
- $UIDPATH: This environment variable is needed for the GUI’s.
  UIDPATH=${UIDPATH}:${D3D_HOME}/${ARCH}/gpp/bin:
  ${D3D_HOME}/${ARCH}/flow/bin:
  ${D3D_HOME}/${ARCH}/part/bin:
  ${D3D_HOME}/${ARCH}/waq/bin:
  ${D3D_HOME}/${ARCH}/wave/bin

4.4 Manuals and release notes

As part of the installation also the User Manuals and Release Notes will be installed. They will be available in the directory where you installed Delft3D. See Figure 4.8.

After installation the Delft3D folder contains:

- Directory <intel>, containing the Delft3D system files.
- Directory <doc>, containing the Tutorials. User Manuals and Release Notes for all modules in PDF-format.

4.5 Example scripts to run modules outside the MENU

The example scripts are located in directory <delft3d/intel/scripts>.
4.6 How to remove an existing Delft3D installation

If required, remove an old Delft3D version by typing:

```
% rpm -e Delft3D
```
5 Frequently asked questions for Delft3D

5.1 QUICKPLOT: Could not find version 7.11 of the MCR

The MATLAB runtime environment will be installed on (default installation):

c:\Program Files\MATLAB\MATLAB Compiler\Runtime\v711

As part of the Matlab Compiler Runtime installation (MCRInstaller.exe) the path to the directory
c:\Program Files\MATLAB\MATLAB Compiler\Runtime\v711\runtime\win32

should be added to the Windows environment variable PATH.

If this path is not added to the environment variable PATH then QUICKPLOT gives the following message, see Figure 5.1:

![Figure 5.1: QUICKPLOT could not find version 7.11 of the MCR](image)

in that case you have to add the directory to the PATH environment variable, i.e.:

PATH=c:\Program Files\MATLAB\MATLAB Compiler\Runtime\v711\runtime\win32;%PATH%

5.2 Authorisation error for specific module or functionality

Suppose you get the error shown in Figure 5.2 or Figure 5.3:

![Figure 5.2: Error window for unauthorised use of QUICKIN](image)
Figure 5.3: Error window for unauthorised use of FLOW 3D

Check your license file first if you are authorised to use the module. Look in the DS_Flex folder for <*.lic> files and check if the FEATURE for the specific module occurs in one of the license files.

If not found, and your License Agreement states the use of this module, contact the Helpdesk at delft3d.support@deltares.nl.

If not found, and your License Agreement does not state the use of this module, you are not authorised to use this functionality. If you are interested in the module or functionality, please contact the Sales Manager at delft3d.sales@deltares.nl.

If this feature is found in the license file, this license file is not recognised by the License Manager, see the DS_FLEX Installation Manual.

5.3 Module termination with unclear message

If an application ends abnormal with unclear messages, please contact the Helpdesk if you have a Maintenance and Support contract. Report the Delft3D and the module version numbers and send all input files with a description of the error.
A Examples of server license files

A.1 For Delft3D version 4.00.00 and higher

# Used configuration file(s):
# Delft3D_4.00.01

FEATURE DHS_DELFT3D dhsdelft 4.20 01-feb-2013 uncounted
VENDOR_STRING="USERNAME = 'DELTARES 373'; FIRMNAME = 'Deltares';" HOSTID=ANY TS_OK SIGN="19B4 59A0 2D77 4761 A691 6973 25D0 6221 9596 6696 ADD3 98B3 240F 11F3 6CDA 63B3 43A3 2F2A 42D9 797D DB30 1B85 EAA8 07FA 2310 745A B8B0 2AED 9C49 089F"

FEATURE DHS_Delft3D_HYD_MOR_DYNAMICS dhsdelft 4.20 01-feb-2013 uncounted
VENDOR_STRING="USERNAME = 'DELTARES 373'; FIRMNAME = 'Deltares';" HOSTID=ANY TS_OK SIGN="118C 5418 D8AF 34C3 1F67 AFE4 3C04 A6BA CEB1 D09B C047 C782 D21F 3D6A 625D 67EA 6970 7334 B2F8 8D9F 8F73 18F7"

FEATURE DHS_Delft3D_WATER_QUALITY dhsdelft 4.20 01-feb-2013 uncounted
VENDOR_STRING="USERNAME = 'DELTARES 373'; FIRMNAME = 'Deltares';" HOSTID=ANY TS_OK SIGN="1571 FAD9 8B97 1CC0 EB75 070D 121B 1275 E7B6 6691 304F 4366 72EF F236 1703 3E81 EBA3 0311 51FA 39A3 28A9 B206 10A9 92DB 5E5A C445 826D C7CB"

FEATURE DHS_Delft3D_PART dhsdelft 3.93 01-feb-2013 uncounted
VENDOR_STRING="USERNAME = 'DELTARES 373'; FIRMNAME = 'Deltares';" HOSTID=ANY TS_OK SIGN="1C03 2C42 0A64 8FAB 837A 4476 D77F 3F77 EBC9 D6F4 618E 3F2F 1696 93ED 8606 03E3 5844 2F8F DBAE 3ED7 95EE 1B1C 2063 9667 479F 0E59 F4C1 9C0F 3B5E 6063"

FEATURE DHS_Delft3D_PART_3D dhsdelft 3.93 01-feb-2013 uncounted
VENDOR_STRING="USERNAME = 'DELTARES 373'; FIRMNAME = 'Deltares';" HOSTID=ANY TS_OK SIGN="11D1 FA3A F63F 1E98 0348 2FAC 68BC 1351 EFP3 8126 262C C36D 5249 0BA9 7367 C26F A361 DE67 86C2 FD45 APE2 BC03 F7B0 01F6 04CD E0C5 97DB 4129 C7B0 A044"

FEATURE DHS_Delft3D_PART_OIL dhsdelft 3.93 01-feb-2013 uncounted
VENDOR_STRING="USERNAME = 'DELTARES 373'; FIRMNAME = 'Deltares';" HOSTID=ANY TS_OK SIGN="14E6 ADD4 D964 ED5F 2948 BE42 9886 10EB D860 F7CB CE6E BA66 D69A 1846 0F4E 1D11 54AD 9DE8 9086 F6B0 366E 5B8E 07E9 2F69 D655 9891 2065 83AB 02E6 OA05"

FEATURE DHS_Delft3D_WAQ dhsdelft 4.72 01-feb-2013 uncounted
VENDOR_STRING="USERNAME = 'DELTARES 373'; FIRMNAME = 'Deltares';" HOSTID=ANY TS_OK SIGN="1737 D18E FA2A F759 AE1D 9F99 A433 9E66 C7D9 6B49 C697 3466 464A 77EF 6A5B 0677 A7B8 9666 0A28 437F 3F81 2CF3 6C36 096D 2211 952A 4F37 3E41 104D 48C0"

FEATURE DHS_Delft3D_ECO_3D dhsdelft 4.72 01-feb-2013 uncounted
VENDOR_STRING="USERNAME = 'DELTARES 373'; FIRMNAME = 'Deltares';" HOSTID=ANY TS_OK SIGN="1B54 69A0 2D77 4761 A691 6973 25D0 6221 9596 6696 ADD3 98B3 240F 11F3 6CDA 63B3 43A3 2F2A 42D9 797D DB30 1B85 EAA8 07FA 2310 745A B8B0 2AED 9C49 089F"

FEATURE DHS_Delft3D_SED_3D dhsdelft 4.72 01-feb-2013 uncounted
VENDOR_STRING="USERNAME = 'DELTARES 373'; FIRMNAME = 'Deltares';" HOSTID=ANY TS_OK SIGN="10E5 6292 D16A 3322 0E8B 3E77 8A5A 1967 9063 6009 D605 54B8 E5DE A2C2 01FA 2CC1 D118 EDEE E102 5E2F D234 6A0F 17A0 E0DA F973 834D A504 CEO7 C66E 17C09"

FEATURE DHS_Delft3D_OPL_3D dhsdelft 4.72 01-feb-2013 uncounted
VENDOR_STRING="USERNAME = 'DELTARES 373'; FIRMNAME = 'Deltares';" HOSTID=ANY TS_OK SIGN="11EF B9AE 277F 3676 0946 6B53 B10B B07C C6E2 090C 5E7A 364B A181 2D54 0E5F 6661 E529 6A5B 3B1D 1606 07CC 2F89 6350 40DF 8AED 2540 6F63 3484 B562 658E"

FEATURE DHS_Delft3D_IPL_3D dhsdelft 4.72 01-feb-2013 uncounted
VENDOR_STRING="USERNAME = 'DELTARES 373'; FIRMNAME = 'Deltares';" HOSTID=ANY TS_OK SIGN="0FCE 3D7E 3A31 542E 4E7F"
A.2 For Delft3D version 3.24.00 until 4.00.00

A.2.1 M&S functionality

# FLEXLM version 7.0 used
# Created by LicFilGen (License File Generator). 2.43, December 2005
SERVER buffer 0000P87E0DC4 TCP:8500
VENDOR dhsdelft c:\Program Files\DS_flex

# Begin Delft3D license
#
# Delft3D : 3.24.02.00
# Cfg-file: 3.09.06
# Date : 05 Dec 2005
#
FEATURE DHS_Delft3D dhsdelft 3.39 01-jan-2007 2100 
VENDOR_STRING="USERNAME = 'University of Harderwijk'; FIRMNAME = \
"Deltares';" DUP_GROUP=UHD SIGN="0458 58BC 5E5C 8E69 9B05 1978 F698 1E21 5A33 \ 
8347 9E1E BF13 AAC2 A2CC FFD2 2547 A0D7 AF09 952F 4BBF F3C4 \ 
E04B"

FEATURE DHS_Delft3D_RGFGRID_GIS dhsdelft 4.29 01-jan-2007 100 
VENDOR_STRING="USERNAME = 'University of Harderwijk'; FIRMNAME = \
"Deltares';" DUP_GROUP=UHD SIGN="0458 58BC 5E5C 8E69 9B05 1978 F698 1E21 5A33 \ 
8347 9E1E BF13 AAC2 A2CC FFD2 2547 A0D7 AF09 952F 4BBF F3C4 \ 
E04B"

FEATURE DHS_Delft3D_WAQ dhsdelft 4.72 01-feb-2013 uncounted 
VENDOR_STRING="USERNAME = 'DELTARES 373'; FIRMNAME = \
"Deltares';" HOSTID=ANY TS_OK SIGN="07AB 5967 EA78 06AC 3DC5 \ 
235A 82D4 5494 4AC0 522E 16EB E667 336D 7B89 5611 0164 F999 \ 
CD18 CE2E 6723 8F7D 7044 7EDC CB85 86A1 B163 E690 3904 76B3 \ 
4B7C"

FEATURE DHS_PROC_LIB_ECO dhsdelft 4.72 01-feb-2013 uncounted 
VENDOR_STRING="USERNAME = 'DELTARES 373'; FIRMNAME = \
"Deltares';" HOSTID=ANY TS_OK SIGN="17CE C069 CB22 F34C 6E81 \ 
6F06 6406 A605 26EF 7266 237B 3B64 67DC 1C1B 0E1E B657 \ 
10X5 5881 2034 7576 1B28 8020 A62A 0B8E 8942 82DF 770D"

FEATURE DHS_PROC_LIB_OPL dhsdelft 4.72 01-feb-2013 uncounted 
VENDOR_STRING="USERNAME = 'DELTARES 373'; FIRMNAME = \
"Deltares';" HOSTID=ANY TS_OK SIGN="1526 C638 80FD 549C F6D0 \ 
706F 56C1 9867 4B7D C366 5F05 E0B7 1A78 PE3D 512C 7E2B 4040 \ 
8767 B433 F53C 9067 5CA1 15C7 ES3A 2152 FA7 16C8"

FEATURE DHS_PROC_LIB_SED dhsdelft 4.72 01-feb-2013 uncounted 
VENDOR_STRING="USERNAME = 'DELTARES 373'; FIRMNAME = \
"Deltares';" HOSTID=ANY TS_OK SIGN="0A54 6259 4BB9 012E D1C0 \ 
3DAE C10E 6D0F 41D5 5426 20EF 99CC 15E6 A948 5EED 074B CFB9 \ 
715D 2OB8 BE27 BE30 74P2 450A BAED 980D 5DA1 819F 770F 042C"

FEATURE DHS_PROC_LIB_WAQ dhsdelft 4.72 01-feb-2013 uncounted 
VENDOR_STRING="USERNAME = 'DELTARES 373'; FIRMNAME = \
"Deltares';" HOSTID=ANY TS_OK SIGN="1471 B9D2 7B95 5F78 FD99 \ 
DB1F 1B51 7EE9 5AE7 5869 A116 1C2A F916 8E28 A5E2 014C 596E \ 
47ED 207C BA3A D599 3870 5E9E 7B04 96F7 10E2 8E04 AE12 \ 
972C"

FEATURE DHS_Delft3D_GISVIEW dhsdelft 4.25 01-jan-2007 uncounted 
VENDOR_STRING="USERNAME = 'University of Harderwijk'; FIRMNAME = \
"Deltares';" HOSTID=ANY TS_OK SIGN="0E94 932D E91B 37F2 FC53 \ 
7F86 C196 6E00 83E2 88CB F74E FCD4 E93B F3F8 A85B 0E6G 485D \ 
0CBE 5C8D 2F33 4CF3 055F 0430 A905 9718 D3EB 3EEF DF7B 7124 \ 
FAB4"
Examples of server license files

DUP_GROUP=UHD SIGN="00E7 5075 4ECF 1934 54B7 7D35 87EC C327 \ 54B9 0E8E FFOC E7D9 3B69 815D E97B B02E 2E5D 26E4" FEATURE DHS_Delft3D_QUICKIN_GIS dhsdelft 4.29 01-jan-2007 100 \ DUP_GROUP=UHD SIGN="0B52 2FBF A634 2680 879A F876 BC29 E894 \ 1FCF CE83 C77F CF80 B92C 146C 5BFA EA15 0757 3E00" # # Hydrodynamics module FLOW # FEATURE DHS_Delft3D_FLOW dhsdelft 3.69 01-jan-2007 100 DUP_GROUP=UHD \ SIGN="11C8 3AA3 4E06 8B13 59BD DF46 841F 52CO 9228 5ED4 6EFE \ 8840 2A99 D50C 7EEF FD29 8C0E AD78" FEATURE DHS_Delft3D_FLOW_3D dhsdelft 3.69 01-jan-2007 100 \ DUP_GROUP=UHD SIGN="062E 336C 1748 59E6 1ED0 0444 9291 6A4C \ C72F B51F 3FBE E4D9 53F3 D66A F53C 6EED 0033 F762" FEATURE DHS_Delft3D_FLOW_SPHERICAL dhsdelft 3.69 01-jan-2007 100 \ DUP_GROUP=UHD SIGN="0786 1443 B5EA A25E DA0C B422 C609 2557 \ 896D C384 C92B 5A23 234B 5DA4 7Z0C E847 BD0E 41C9" FEATURE DHS_Delft3D_FLOW_DD dhsdelft 3.69 01-jan-2007 100 \ DUP_GROUP=UHD SIGN="0DDF AB47 3FBE E4D9 2E20 D553 C531 5FF7 B577 \ 0948 2B20 D176 3E0F 9A47 884B A066 892A 90D0 9758" FEATURE DHS_Delft3D_FLOW_STRUCTURES dhsdelft 3.69 01-jan-2007 100 \ DUP_GROUP=UHD SIGN="1A7C 4DF8 2383 6A4A 7B7B E346 E797 DC4E \ F7A2 8973 1518 9EB9 8A4F 2875 C51D 695C 76A4 C199" FEATURE DHS_Delft3D_FLOW_HLES dhsdelft 3.69 01-jan-2007 100 \ DUP_GROUP=UHD SIGN="1B34 D2C3 CD46 99F1 C389 471D F8FA 81D3 \ 7E88 B36E OE6F ED66 16B6 3259 77A2 0070 0438 38CC" FEATURE DHS_Delft3D_FLOW_SED_NOR_2D dhsdelft 3.69 01-jan-2007 100 \ DUP_GROUP=UHD SIGN="12D8 B091 12B5 7BD1 3A52 5855 2E48 47EB \ 8EFB 7EBB E088 1750 8120 FE7F AE8E 9222 1777 3B47" FEATURE DHS_Delft3D_FLOW_SED_NOR_3D dhsdelft 3.69 01-jan-2007 100 \ DUP_GROUP=UHD SIGN="1BD2 15D1 15E1 D6ED 7033 918A 4006 AD5F \ 235V F3F3 138E 050B 7686 76D5 0790 C3CD 1028 DF00" FEATURE DHS_Delft3D_FLOW_DREDGE_DUMP dhsdelft 3.69 01-jan-2007 100 \ DUP_GROUP=UHD SIGN="096A 21DF 6745 25F2 B141 6D4A FD0F ADAF \ A945 CDAB D73B COBO CB99 FE38 D1B9 A431 3EBF E18B" # # Hydrodynamics module FLOW, additional tools # FEATURE DHS_Delft3D_TRIANA dhsdelft 3.09 01-jan-2007 100 \ DUP_GROUP=UHD SIGN="1025 43BE FF07 CEAB 5603 A0DE 3975 5F70 \ 8066 A191 A00C 435E 5C91 3SEC 5C33 2F08 1C99 F86D" FEATURE DHS_Delft3D_TIDE dhsdelft 3.09 01-jan-2007 100 DUP_GROUP=UHD \ SIGN="0E5C 2EE1 02D7 387A 2778 A47F 47A6 973D 7114 98A2 39BE \ 9FB8 D9B2 20FE 2388 E614 CC51 82A9" # # Waves module WAVE # FEATURE DHS_Delft3D_WAVE dhsdelft 2.39 01-jan-2007 200 DUP_GROUP=UHD \ SIGN="03OF 3BE1 818A 6DBL 7353 10E9 49F6 F10D 156C 1AFD 6908 \ B469 CB8A EC1F 7272 AA33 0498 5232" FEATURE DHS_Delft3D_SWAN dhsdelft 4.49 01-jan-2007 100 DUP_GROUP=UHD \ SIGN="1078 2480 B1E3 EDD0 2204 D998 2F8E 23A5 38B6 274D 27C7 \ D700 1365 618D 8336 8644 FERC 40AF" # # Grid aggregation module # FEATURE DHS_Delft3D_DIDO dhsdelft 3.39 01-jan-2007 100 DUP_GROUP=UHD \ SIGN="1006 23F5 5753 36B8 2759 D4AE C505 3DF9 DD72 E220 \ 733B 6A7F 6A1C 84A2 40F2 94FE C1F0" # # Far-field water quality module WAQ #
A.2.2 No M&S functionality anymore

# FLEXLM version 7.0 used
# Created by LicFilGen (License File Generator), 2.43, December 2005
SERVER buffel 0000F87E0BC4 TCP:8500
VENDOR dhsdelft c:\Program Files\DS_flex
#
# Deprecated features for older versions of Delft3D
#
FEATURE DHS_Delft3D dhsdelft 3.39 permanent 2100 \  
VENDOR_STRING="USERNAME = 'University of Harderwijk'; \ 
FIRMNAME = 'Deltares' ;" \ 
DUP_GROUP=UHD SIGN="04A3 6A3C E280 8475 D415 5C65 DC61 CF81 \ 
C411 6303 B701 B3E3 E643 7208 0ADF 6507 C26B 290D"
#
# Waves module WAVE, until Delft3D version v3.23.01
#
FEATURE DHS_Delft3D_WAVE dhsdelft 2.39 permanent 200 \  
DUP_GROUP=UHD SIGN="1F5A ODF1 07E2 4CDD 16E5 5D67 0460 8F0E AECC 1FD1 73DA \ 
411C 0085 D2D9 9B12 41B1 08DB 07BE"
#
# Morphology module MOR, until Delft3D version v3.23.05.01
#
FEATURE DHS_Delft3D_MOR dhsdelft 6.08 permanent 100 \  
DUP_GROUP=UHD SIGN="0779 BA81 B941 E967 4E12 663D 5AA5 D726 1E33 E77A 1A46 \ 
E0C4 E666 4757 A415 1064 C900 1A42"
FEATURE DHS_Delft3D_MOR_DREDGE1 dhsdelft 6.08 permanent 100 \  
DUP_GROUP=UHD SIGN="09E7 D474 21D4 67B5 D777 1BB6 6B86 23EA \ 
8F70 B4A3 84F1 52C6 9069 F1DD AD64 E584 61D9 C657"
#
# End license

A.3 For Delft3D version 3.23.10 and lower

A.3.1 M&S functionality

# FLEXLM version 7.0 used
Examples of server license files

# Created by LicFilGen (License File Generator), 2.43, December 2005
SERVER buffel 000F87E0B04 TCP:8800
VENDOR dwldelft c:\Program Files\DS_flex
VENDOR lmwldelft c:\Program Files\DS_flex
#
# Begin Delft3D license
#
# Delft3D : v3.23.05.10
# Cfg-file: v3.8.9
# Date : 14 Dec 2005
#
FEATURE Delft3D dwldelft 3.39 01-jan-2001 2200 414WK3C34332FA \ 
   VENDOR_STRING="USERNAME = 'University of Harderwijk'; 
   FIRMNAME = 'Deltares' ;" \ 
   DUP_GROUP=UHD
FEATURE Delft3D lmwldelft 3.39 01-jan-2001 2200 41HJ94B349D51 \ 
   VENDOR_STRING="USERNAME = 'University of Harderwijk'; 
   FIRMNAME = 'Deltares' ;" \ 
   DUP_GROUP=UHD
#
# Grid and bathymetry modules
#
FEATURE Delft3D_RGFGRID dwldelft 4.29 01-jan-2001 200 20F3GF45650C7 \ 
    DUP_GROUP=UHD
FEATURE Delft3D_RGFGRID_GIS lmwldelft 4.29 01-jan-2001 200 968M6637ADAA0 \ 
    DUP_GROUP=UHD
FEATURE Delft3D_QUICKIN dwldelft 4.29 01-jan-2001 200 C7777458190E49 \ 
    DUP_GROUP=UHD
FEATURE Delft3D_QUICKIN_GIS lmwldelft 4.29 01-jan-2001 200 388Q8546ADEAE \ 
    DUP_GROUP=UHD
#
# Hydrodynamics module FLOW
#
FEATURE D3D_FLOW dwldelft 3.59 01-jan-2001 100 399GR977FAE49 \ 
    DUP_GROUP=UHD
FEATURE D3D_FLOW lmwldelft 3.59 01-jan-2001 100 00M388SE38336 \ 
    DUP_GROUP=UHD
FEATURE 3D dwldelft 3.59 01-jan-2001 100 C5EBBHUB93E5F9 \ 
    DUP_GROUP=UHD
FEATURE 3D lmwldelft 3.59 01-jan-2001 100 944DFFG3183D3 \ 
    DUP_GROUP=UHD
#
# Waves module WAVE
#
FEATURE D3D_WAVE dwldelft 2.39 01-jan-2001 200 84ER0IR3BD8CE \ 
    DUP_GROUP=UHD
FEATURE D3D_WAVE lmwldelft 2.39 01-jan-2001 200 A6RRVH8AC7C37F \ 
    DUP_GROUP=UHD
FEATURE SWAN1 dwldelft 40.49 01-jan-2001 100 4E660REW8HR3417 \ 
    DUP_GROUP=UHD
FEATURE SWAN1 lmwldelft 40.49 01-jan-2001 100 1484HWQH579106 \ 
    DUP_GROUP=UHD
#
# Far-field water quality module WAQ
#
FEATURE D3D_WAQ dwldelft 4.59 01-jan-2001 300 399SGWWhhjjC37 \ 
    DUP_GROUP=UHD
FEATURE D3D_WAQ lmwldelft 4.59 01-jan-2001 300 6D0F8F61F9198 \ 
    DUP_GROUP=UHD
FEATURE WAQ dwldelft 4.59 01-jan-2001 663861785C514 \ 
    DUP_GROUP=UHD
FEATURE WAQ lmwldelft 4.59 01-jan-2001 663861785C514 \ 
    DUP_GROUP=UHD
FEATURE SED dwldelft 4.59 01-jan-2001 100 7E446QW9C516F1 \ 
    DUP_GROUP=UHD

Deltar
# Postprocessing modules

FEATURE QUICKPLOT\ dwldelft 2.19 01-jan-2001 100 WSE7222525415 \ DUP_GROUP=UHD
FEATURE QUICKPLOT\ lmwldelft 2.19 01-jan-2001 100 345RD566781B68 \ DUP_GROUP=UHD

# End license

A.3.2 No M&S functionality anymore

# FLEXLM version 7.0 used
# Created by LicFilGen (License File Generator), 2.43, December 2005
SERVER buffel 0000F87E0BC4 TCP:8500
VENDOR dwldelft c:\Program Files\DS_flex
VENDOR lmwldelft c:\Program Files\DS_flex

# Deprecated features for older versions of Delft3D

FEATURE Delft3D dwldelft 3.39 permanent 2200 27184473062C7C \ VENDOR_STRING="USERNAME = 'University of Harderwijk'; \ FIRMNAME = 'Deltares' ;" \ DUP_GROUP=UHD
FEATURE Delft3D lmwldelft 3.39 permanent 2200 5353730F9D3F3 \ VENDOR_STRING="USERNAME = 'University of Harderwijk'; \ FIRMNAME = 'Deltares' ;" \ DUP_GROUP=UHD

# Waves module WAVE, until Delft3D version v3.23.01

FEATURE D3D_WAVE dwldelft 2.39 permanent 200 5353353535498CE \ DUP_GROUP=UHD
FEATURE D3D_WAVE lmwldelft 2.39 permanent 200 535335353537F \ DUP_GROUP=UHD
FEATURE HISWA dwldelft 110.61 permanent 100 6D6535353580F9 \ DUP_GROUP=UHD
FEATURE HISWA lmwldelft 110.61 permanent 100 ED99923C35D4 \ DUP_GROUP=UHD

# Features for not supported Delft3D versions

FEATURE BC_TURBULENCE_MODEL dwldelft 3.43 permanent 100 337888345A7607 \ DUP_GROUP=UHD
FEATURE BC_TURBULENCE_MODEL lmwldelft 3.43 permanent 100 A7675435346A85 \ DUP_GROUP=UHD
FEATURE CURVI dwldelft 3.43 permanent 100 AC5DDB3C43476 DUP_GROUP=UHD
FEATURE CURVI lmwldelft 3.43 permanent 100 B835B84344006F DUP_GROUP=UHD
FEATURE RIGID_SHEET dwldelft 3.43 permanent 100 B143344068A994 \ DUP_GROUP=UHD
FEATURE RIGID_SHEET lmwldelft 3.43 permanent 100 7F4334448CB388 \ DUP_GROUP=UHD
FEATURE SPILLWAY_2DH dwldelft 3.43 permanent 100 2F1D22F3344A3A \ DUP_GROUP=UHD
FEATURE SPILLWAY_2DH lmwldelft 3.43 permanent 100 F2311A442E7056 \ DUP_GROUP=UHD
FEATURE WAVE dwldelft 3.43 permanent 100 80144433366EB DUP_GROUP=UHD
FEATURE WAVE lmwldelft 3.43 permanent 100 6082944353348 DUP_GROUP=UHD

# End license
B Examples of standalone license files

B.1 For Delft3D version 3.24.00 and higher

B.1.1 M&S functionality

```plaintext
# FLEXLM version 7.0 used
# Created by LicFilGen (License File Generator). 2.43, December 2005
#
# Begin Delft3D license
#
# Delft3D : 3.24.02.00
# Cfg-file: 3.09.06
# Date : 05 Dec 2005
#
FEATURE DHS_Delft3D dhsdelft 3.39 01-jan-2005 uncounted \
VENDOR_STRING="USERNAME = 'University of Harderwijk'; \ 
FIRMNAME = 'Deltares' ;" \
HOSTID=FLEXID=9-123ABC89 SIGN="1121 291A FC33 7F7C 88C2 A145 \ 
4BC8 C981 DD30 3CED 164F 8079 3061 1368 C434 F4FC 1DBD 0CD1"
#
# Grid and bathymetry modules
#
FEATURE DHS_Delft3D_DRGFGRID dhsdelft 4.29 01-jan-2005 uncounted \
HOSTID=FLEXID=9-123ABC89 SIGN="158A 8CBF 66C3 C8CA D9B 3FE1 \ 
2400 268A CD03 62DD 92AB 2C7C 418F AEB9 F6A9 4082 A22B"
FEATURE DHS_Delft3D_DQUICKIN dhsdelft 4.29 01-jan-2005 uncounted \
HOSTID=FLEXID=9-123ABC89 SIGN="0D18 7EAA 920F 22F9 FD28 335E \ 
8862 DFE8 7569 0356 AB77 1806 A0C6 68D4 5348 82DC B804 FED3"
#
# Waves module WAVE
#
FEATURE DHS_Delft3D_WAVE dhsdelft 2.39 01-jan-2005 uncounted \
HOSTID=FLEXID=9-123ABC89 SIGN="1440 8CE9 2419 88ED CD05 4650 \ 
3800 F05F 77A3 55B1 7643 240C F61B E985 1DE6 E111 79F9 39C9"
FEATURE DHS_Delft3D_SWAN dhsdelft 40.49 01-jan-2005 uncounted \
HOSTID=FLEXID=9-123ABC89 SIGN="19A6 0B9F 9DF0 CF97 3B1C 6A47 \ 
E1EF 78A6 4C6D 2190 E95D F64B CSDE 1512 EB2E D257 8444 A98E"
#
# Postprocessing modules
#
FEATURE DHS_Delft3D_GISVIEW dhsdelft 4.19 01-jan-2005 uncounted \
HOSTID=FLEXID=9-123ABC89 SIGN="1A91 FD2F 4BFC F896 44ED C5C \ 
D897 7C14 989C ECE1 69E6 5444 5584 E206 D594 0099 0FBD 484A"
#
# End license
```

B.1.2 No M&S functionality anymore

```plaintext
# FLEXLM version 7.0 used
# Created by LicFilGen (License File Generator). 2.43, December 2005
#
# Deprecated features for older versions of Delft3D
#
FEATURE DHS_Delft3D dhsdelft 3.39 permanent uncounted \ 
VENDOR_STRING="USERNAME = 'University of Harderwijk'; \ 
FIRMNAME = 'Deltares' ;" \
HOSTID=FLEXID=9-269D717A SIGN="1B3E 7DFA 76A1 7DBB B75E 3587 \ 
```

Deltares
B.2 For Delft3D version 3.23.10 and lower

B.2.1 M&S functionality

# FLEXLM version 7.0 used
# Created by LicFileGen (License File Generator). 2.43, December 2006
# Begin Delft3D license
#
# Delft3D : v3.23.05.10
# Cfg-file: v3.8.9
# Date : 14 Dec 2005
#
FEATURE Delft3D dwldelft 3.39 01-jan-1998 uncounted 69D559C5AD
VENDOR_STRING="USERNAME = 'University of Harderwijk';
FIRMNAME = 'Deltares';"
HOSTID=FLEXID=9-123ABC89
FEATURE Delft3D lmwldelft 3.39 01-jan-1998 uncounted 5Ar22EB6D6
VENDOR_STRING="USERNAME = 'University of Harderwijk';
FIRMNAME = 'Deltares';"
HOSTID=FLEXID=9-123ABC89
#
# Grid and bathymetry modules
#
FEATURE RGFGRID dwldelft 4.29 01-jan-1998 uncounted FD624272A8
HOSTID=FLEXID=9-123ABC89
FEATURE RGFGRID lmwldelft 4.29 01-jan-1998 uncounted C9242C9AD6
HOSTID=FLEXID=9-123ABC89
FEATURE QUICKIN dwldelft 4.29 01-jan-1998 uncounted 23D424460E
HOSTID=FLEXID=9-123ABC89
FEATURE QUICKIN lmwldelft 4.29 01-jan-1998 uncounted 32779B921E
HOSTID=FLEXID=9-123ABC89
#
# Hydrodynamics module FLOW
#
FEATURE D3D_FLOW dwldelft 3.59 01-jan-1998 uncounted 1555709D64
HOSTID=FLEXID=9-123ABC89
FEATURE D3D_FLOW lmwldelft 3.59 01-jan-1998 uncounted A5757C60DD
HOSTID=FLEXID=9-123ABC89
#
# Hydrodynamics module FLOW, additional tools
#
FEATURE TIDE dwldelft 3.09 01-jan-1998 uncounted 7343B2575D
HOSTID=FLEXID=9-123ABC89
FEATURE TIDE lmwldelft 3.09 01-jan-1998 uncounted 083264973
HOSTID=FLEXID=9-123ABC89
#
# Grid aggregation module
#
FEATURE D3D_DIDO dwldelft 3.39 01-jan-1998 uncounted B3331q0E13
HOSTID=FLEXID=9-123ABC89
Examples of standalone license files

HOSTID=FLEXID=9-123ABC89
FEATURE D3D_DIDO dwldelft 3.39 01-Jan-1998 uncounted 22429367E6 \ 
# # Particle tracking module PART
# 
# FEATURE D3D_PART dwldelft 3.79 01-Jan-1998 uncounted 914242A269 \ 
HOSTID=FLEXID=9-123ABC89
FEATURE D3D_PART lmwldelft 3.79 01-Jan-1998 uncounted C4528483C0 \ 
HOSTID=FLEXID=9-123ABC89
# # Postprocessing modules
# 
# FEATURE DELFT_GPP dwldelft 2.19 01-Jan-1998 uncounted 94242B848F \ 
HOSTID=FLEXID=9-123ABC89
FEATURE DELFT_GPP lmwldelft 2.19 01-Jan-1998 uncounted 53421BBF3C \ 
HOSTID=FLEXID=9-123ABC89
# # End license

B.2.2 No M&S functionality anymore

# FLEXLM version 7.0 used
# Created by LicFilGen (License File Generator), 2.43, December 2005
# # Deprecated features for older versions of Delft3D
# 
FEATURE Delft3D dwldelft 3.39 permanent uncounted 05752DF9C5C8 \ 
VENDOR_STRING="USERNAME = 'TU Delft, Civiele Techniek en Geowetenschappen'; FIRMNAME = 'Deltares' ;" \ 
HOSTID=FLEXID=9-123ABC89
FEATURE Delft3D lmwldelft 3.39 permanent uncounted 65A0776466BF \ 
VENDOR_STRING="USERNAME = 'TU Delft, Civiele Techniek en Geowetenschappen'; FIRMNAME = 'Deltares' ;" \ 
HOSTID=FLEXID=9-123ABC89
# 
FEATURE D3D_WAVE dwldelft 2.39 permanent uncounted 569FB3424264 \ 
HOSTID=FLEXID=9-123ABC89
FEATURE D3D_WAVE lmwldelft 2.39 permanent uncounted 12B532425DE5 \ 
HOSTID=FLEXID=9-123ABC89
FEATURE HISWA dwldelft 110.61 permanent uncounted AD952423B56F \ 
HOSTID=FLEXID=9-123ABC89
FEATURE HISWA lmwldelft 110.61 permanent uncounted 9044242F79CB \ 
HOSTID=FLEXID=9-123ABC89
# # Morphology module MOR, until Delft3D version v3.23.01
# 
FEATURE D3D_MOR dwldelft 6.07 permanent uncounted D377486786FA \ 
HOSTID=FLEXID=9-123ABC89
FEATURE D3D_MOR lmwldelft 6.07 permanent uncounted 9EF7775F5B70 \ 
HOSTID=FLEXID=9-123ABC89
FEATURE DREDGE1 dwldelft 6.07 permanent uncounted FD6A453539F4 \ 
HOSTID=FLEXID=9-123ABC89
FEATURE DREDGE1 lmwldelft 6.07 permanent uncounted EA30535FDF16 \ 
HOSTID=FLEXID=9-123ABC89
FEATURE DREDGE2 dwldelft 6.07 permanent uncounted 2B35356FDF17 \ 
HOSTID=FLEXID=9-123ABC89

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# Features for not supported Delft3D versions

## FEATURE BC_TURBULENCE_MODEL
dwldelft 3.43 permanent uncounted DF4944242A70 HOSTID=FLEXID=9-123ABC89
lmwldelft 3.43 permanent uncounted 7F65424227C HOSTID=FLEXID=9-123ABC89

## FEATURE CURVI
dwldelft 3.43 permanent uncounted 5E6F3B25353E HOSTID=FLEXID=9-123ABC89
lmwldelft 3.43 permanent uncounted 0C905253353E HOSTID=FLEXID=9-123ABC89

## FEATURE DIAGNOSTIC_MODE
dwldelft 3.43 permanent uncounted ADE53E8B356F HOSTID=FLEXID=9-123ABC89
lmwldelft 3.43 permanent uncounted 3E35A94247BA HOSTID=FLEXID=9-123ABC89

## FEATURE HLES
dwldelft 3.43 permanent uncounted 95745452393D9 HOSTID=FLEXID=9-123ABC89
lmwldelft 3.43 permanent uncounted B2256C5D65FB HOSTID=FLEXID=9-123ABC89

## FEATURE IWE
dwldelft 3.43 permanent uncounted 96975333EF3 HOSTID=FLEXID=9-123ABC89
lmwldelft 3.43 permanent uncounted 7905338686DF HOSTID=FLEXID=9-123ABC89

## FEATURE MURAKAMI
dwldelft 3.43 permanent uncounted 4574535353B4 HOSTID=FLEXID=9-123ABC89
lmwldelft 3.43 permanent uncounted CDCF58D5359D HOSTID=FLEXID=9-123ABC89

## FEATURE NUMERICAL_METHOD
dwldelft 3.43 permanent uncounted 93D73A353752 HOSTID=FLEXID=9-123ABC89
lmwldelft 3.43 permanent uncounted 40DA1531D124 HOSTID=FLEXID=9-123ABC89

## FEATURE OPEN_FLOW
dwldelft 3.43 permanent uncounted 75517FD53354 HOSTID=FLEXID=9-123ABC89
lmwldelft 3.43 permanent uncounted 1AB7E8333233 HOSTID=FLEXID=9-123ABC89

## FEATURE PARTICLE_WIND_FACTOR
dwldelft 3.43 permanent uncounted CBB7634B40DA HOSTID=FLEXID=9-123ABC89
lmwldelft 3.43 permanent uncounted BB22D74C1AEA HOSTID=FLEXID=9-123ABC89

## FEATURE RAIN_EVA
dwldelft 3.43 permanent uncounted 44C16B4441CF HOSTID=FLEXID=9-123ABC89
lmwldelft 3.43 permanent uncounted A25BE444807E HOSTID=FLEXID=9-123ABC89

## FEATURE RIGID_SHEET
dwldelft 3.43 permanent uncounted 786444128D98 HOSTID=FLEXID=9-123ABC89
lmwldelft 3.43 permanent uncounted 2F44CE065BFF HOSTID=FLEXID=9-123ABC89

## FEATURE SPILLWAY_2DH
dwldelft 3.43 permanent uncounted 2E2666671443 HOSTID=FLEXID=9-123ABC89
lmwldelft 3.43 permanent uncounted 2B737099AEDA HOSTID=FLEXID=9-123ABC89

## FEATURE WAVE
dwldelft 3.43 permanent uncounted 2B737099AEDA HOSTID=FLEXID=9-123ABC89
lmwldelft 3.43 permanent uncounted 066279927286 HOSTID=FLEXID=9-123ABC89

## FEATURE Z_WAVE
dwldelft 3.43 permanent uncounted 328C535CD501 HOSTID=FLEXID=9-123ABC89
lmwldelft 3.43 permanent uncounted 24153406BFF5 HOSTID=FLEXID=9-123ABC89

# End license
Example of a log file

12:06:08 (lmgrd) Please Note:
12:06:08 (lmgrd) This log is intended for debug purposes only.
12:06:08 (lmgrd) In order to capture accurate license usage data into an organized repository,
12:06:08 (lmgrd) please enable report logging. Use Macrovision's software license administration solution,
12:06:08 (lmgrd) FLEXnet Manager, to readily gain visibility into license usage data and to create
12:06:08 (lmgrd) insightful reports on critical information like license availability and usage. FLEXnet Manager
can be fully automated to run these reports on schedule and can be used to track license servers and usage across a heterogeneous network of servers including Windows NT, Linux and UNIX. Contact Macrovision at www.macrovision.com for more details on how to obtain an evaluation copy of FLEXnet Manager for your enterprise.

12:06:08 (lmgrd) Done rereading

12:06:08 (lmgrd) FLEXnet Licensing (v10.1.3) started on BUFFEL (IBM PC) (4/5/2007)
12:06:08 (lmgrd) Copyright (c) 1988-2004 by Macrovision Corporation. All rights reserved.
12:06:08 (lmgrd) US Patents 5,390,297 and 5,671,412.
12:06:08 (lmgrd) License file(s): D:\app\flexlm\DS_Flex\Chess101.lic D:\app\flexlm\DS_Flex\Chess72e.lic 
12:06:08 (lmgrd) lmgrd tcp-port 8500
12:06:08 (lmgrd) Starting vendor daemons ...
12:06:09 (lmwldelft) Server started on BUFFEL for: DELFT_GPP
12:06:09 (lmwldelft) DHS_Delft3D_FLOW_HLES Delft3D RGFGRID
12:06:09 (lmwldelft) D3D_GIS_RGFGRID QUICKIN D3D_GIS_QUICKIN
12:06:09 (lmwldelft) CHEM QUICKPLOT\ D3DMATLAB
12:06:09 (lmwldelft) CHEM QUICKPLOT\ D3DMATLAB
12:06:09 (lmwldelft) BWAWQ ASW HISWA
12:06:09 (lmwldelft) D3D_MOR DREDGE1 DREDGE2
12:06:09 (lmwldelft) BC_TURBULENCE_MODEL CURVI DIAGNOSTIC_MODE
12:06:09 (lmwldelft) HLES IWE MURAKAMI
12:06:09 (lmwldelft) Started dwldelft (pid 295)
12:06:09 (dwldelft) Server started on BUFFEL for: Delft3D
12:06:09 (dwldelft) FLUIDMUD Q2E TRIANA
12:06:09 (dwldelft) TIDE D3D_WAVE SWAN1
12:06:09 (dwldelft) D3D_DIDO D3D_PART OIL
12:06:09 (dwldelft) RED_TIDE D3D_WAQ WAQ
12:06:09 (dwldelft) SED ECO CHEM
12:06:09 (dwldelft) QUICKPLOT\ D3DMATLAB D3D_GISVIEW
12:06:09 (dwldelft) D3D_GISVIEW HQ_ECOM GEM TAN
12:06:09 (dwldelft) WAQS DBS WAQG ASW HISWA
12:06:09 (dwldelft) D3D_MOR DREDGE1 DREDGE2
12:06:09 (dwldelft) BC_TURBULENCE MODEL CURVI DIAGNOSTIC_MODE
12:06:09 (dwldelft) HLES IWE MURAKAMI
12:06:09 (dwldelft) Started dhlswldelft (pid 295)
12:06:09 (dhlswldelft) Server started on BUFFEL for: Delft3D
12:06:09 (dhlswldelft) FLUIDMUD Q2E TRIANA
12:06:09 (dhlswldelft) TIDE D3D_WAVE SWAN1
12:06:09 (dhlswldelft) D3D_DIDO D3D_PART OIL
12:06:09 (dhlswldelft) RED_TIDE D3D_WAQ WAQ
12:06:09 (dhlswldelft) SED ECO CHEM
12:06:09 (dhlswldelft) QUICKPLOT\ D3DMATLAB D3D_GISVIEW
12:06:09 (dhlswldelft) D3D_GISVIEW HQ_ECOM GEM TAN
12:06:09 (dhlswldelft) WAQS DBS WAQG ASW HISWA
12:06:09 (dhlswldelft) D3D_MOR DREDGE1 DREDGE2
12:06:09 (dhlswldelft) BC_TURBULENCE MODEL CURVI DIAGNOSTIC_MODE
12:06:09 (dhlswldelft) HLES IWE MURAKAMI

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