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Security Notice

The software described herein is configured to operate with at least the minimum specifications set out by Sensia. You are advised that such minimum specifications are merely recommendations and not intended to be limiting to configurations that may be used to operate the software. Similarly, you are advised that the software should be operated in a secure environment whether such software is operated across a network, on a single system and/or on a plurality of systems. It is up to you to configure and maintain your networks and/or system(s) in a secure manner. If you have further questions as to recommendations regarding recommended specifications or security, please feel free to contact your local Sensia representative.

Dec 2019
Welcome to OFM®

OFM® well and reservoir analysis software offers quick and easy access to important information for managers, petroleum engineers, and geoscientists. It provides a cost effective and integrated environment in which to accomplish complex workflows, forecasting analysis and visualization of reservoir and production data. OFM enables early detection of production problems and their cause, allowing engineers to manage more wells in less time unlocking the asset to produce at full potential.

- Interactive history matching, decline curve analysis, forecasting and reserves calculations
- 3D and 4D production trending, surveillance, bubble map visualizations, and type well analyses
- Early detection and diagnosis of production and injection problems
- Integrates with Petrel, Avocet and Merak for extended workflows
- Collaborative workspaces for best practice sharing
- API for greater openness and user customization
- Interactive analysis dashboards with multiple chart types visualized simultaneously

The full set of OFM documentation, including documentation for prior OFM releases, can be downloaded from the Schlumberger Support Portal.
Environment

Supported Application Versions
This version of OFM supports project upgrades from 2014.x, 2016.x, and 2018.x.

Supported Operating Systems
The supported operating system is Windows 10 64-bit.

Note: The 64-bit version of Microsoft Windows 10 (Enterprise and Professional versions) is shipped with Microsoft .NET 4.6.0.
Initial tests with Microsoft .NET 4.6.0 with Windows 10 highlighted major flaws that have been patched with .NET 4.6.1.

System Requirements
Before installing OFM, make sure your system meets these requirements.

<table>
<thead>
<tr>
<th></th>
<th>Recommended running Windows 7</th>
<th>Recommended running Windows 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>.NET Framework</td>
<td>Microsoft® .NET Framework 4.5.2</td>
<td>Microsoft® .NET Framework 4.6.1</td>
</tr>
<tr>
<td>Processor</td>
<td>Dual Core processor 3 GHz</td>
<td>Dual Core processor 3 GHz</td>
</tr>
<tr>
<td>Memory</td>
<td>16GB RAM</td>
<td>16GB RAM</td>
</tr>
<tr>
<td>Free Hard Disk Space</td>
<td>At least 1GB</td>
<td></td>
</tr>
<tr>
<td>Resolution</td>
<td>At least 1280x1024 screen resolution with 32-bit colors</td>
<td></td>
</tr>
</tbody>
</table>
**Tested Databases**

- Oracle® 12.1.0.2
- SQL Server® 2012 SP2 Standard (Express- optional)
- SAP HANA® 1.00.110.00

**Tested Database Drivers**

- SAP HANA ODBC Client (32 bit) 1.00.110.00
- Oracle Instant Client (32 bit) 12.1.0.2.0
- Oracle ODAC (Oracle Provider for OLE DB) (32 bit) 12.2
- SQL Server Native Client (32 bit) 2011.110.210.60

**Schlumberger Licensing**

Schlumberger Licensing version 2017.1 is included with OFM 2019.1 release. Schlumberger Licensing 2017.1 release contains critical security and stability updates. If you use any SIS 2015.1 or later product release, including OFM 2019.1, you must upgrade your Schlumberger license servers prior to the software installation. SIS 2015.1 or later product releases will only run with 2017.1 or higher versions of the Schlumberger license server. Refer to the Schlumberger Licensing User Guide that is included in the Schlumberger Licensing installation for more information.

Refer to the OFM Release Notes for specific details about the changes in Licensing.
Installing OFM

Overview

Audience

The OFM administrator or the end user can perform the tasks described in this section.

Prerequisites

Perform the following tasks before you install OFM:

- Obtain the software – it is distributed on CD or you can download it from the Schlumberger Software Support Center: [https://www.software.slb.com/support](https://www.software.slb.com/support).
- Obtain an OFM product license from your Schlumberger or Sensia account manager.
- Ensure that you have administrative privileges on the computer where you are installing OFM.
- Ensure that you have the minimum system requirements.

Install OFM

The installation makes sure that all files needed to run OFM are installed on your computer. The installation setup performs the following steps:

- Copies all required files to the user’s workstation
- Registers all required files
- Optionally, creates shortcuts for all installed modules

You may install OFM before or after optionally installing the Schlumberger License Manager.

To install OFM,

1. Insert the OFM Installation CD or navigate to the local drive or the network drive that contains the OFM installation files.
2. To start the installation, double-click the **setup.exe** file.
   
   **CAUTION:** Do not double-click an .msi file.
3. On the **Welcome** screen, click **Install Products**.
4. On the **Select product to install** screen, click **OFM**.
5. After you agree to the license terms and conditions, the installer will check your system to ensure it is compatible. If there are no issues, click **Next**.
6. On the **Select Setup Type** screen, select an option:

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete</td>
<td>Select this to install all program features for standalone or server installations.</td>
</tr>
<tr>
<td>Workstation</td>
<td>Select this to install the files required to run OFM on a workstation that accesses OFM on a server.</td>
</tr>
</tbody>
</table>

7. On the **Install OFM 2019.1 to** screen, you can:
   - Click **Next** to accept the default location.
   - Browse to a new location and then click **Next**.

8. On the shortcuts screen, select or clear the shortcuts as you prefer, then click **Next** to start the installation process.

**Install the Schlumberger Licensing Manager**

The Schlumberger License Manager is optional software that you can use to activate an OFM license.

If your organization uses Flexera Software licensing products to manage software licenses, then the Schlumberger License Manager software is not required.

You may install the Schlumberger License Manager before or after installing OFM.

To install the Schlumberger License Manager software,

1. Insert the OFM Installation CD or navigate to the local drive or the network drive that contains the OFM installation files.
2. To start the installation, double-click the **setup.exe** file.
   
   **CAUTION**: Do not double-click an .msi file.
3. On the **Welcome** screen, click **Install Products**.
4. On the **Select product to install** screen, click **SLB Licensing**.
5. When prompted, click **Install** to install other required software.
6. After the required software is installed, click **Next** when prompted to continue.
7. On the **Destination Folder** screen, you can:
   - Select **Add a shortcut to the desktop**
   - Click **Next** to accept the default location.
   - Click **Change** to browse to a new location and then click **Next**.
8. On the **Ready to Install the Program** screen, click **Install** to start the installation process.
9. Click **Finish** to complete the installation.
Installing the CodeMeter Runtime Tool

Install the CodeMeter® runtime tool if you are using the WIBU dongle for licensing with OFM. WIBU dongle licenses can be ordered starting with OFM 2018.1.

To install the CodeMeter Runtime Tool

1. Browse to the CodeMeter folder in the OFM installation package.
2. Launch the CodeMeterRuntime executable.
   
   If using Linux license server, use the CodeMeter for Linux installation that is available in the Linux folder.
   
   The CodeMeter Runtime Kit Setup box appears.
3. Click Next, accept the license agreement, then click Next.
4. Enter User information and select the install user option then click Next.
5. Click Next to proceed with the Installation of the CodeMeter Runtime Kit components.
6. Click Next to begin installation.
   
   The installation status is displayed.
7. Click Finish to complete the installation.

The Schlumberger Licensing server, with or without CodeMeter dongles, is supported on the following platforms:

- **Windows**
  - Windows 8.1 64-bit
  - Windows 10 64-bit
  - Windows Server® 2008 R2 64-bit
  - Windows Server 2012 and 2012 R2 64-bit
- **Linux**
  - Red Hat® Enterprise® Linux Server version 6 Update 3 or later (x86_64)

For more information about configuring WIBU dongle (CodeMeter) licenses or supported platforms, refer to the Schlumberger Licensing User Guide that is included in the Schlumberger Licensing installation.
**Database Driver Upgrade**

The OFM 2019.1 installation package will install Microsoft® OLE DB Driver 18, Microsoft Access Database Engine 2016, and ADODB 6.1 on your machine.

Schlumberger recommends uninstalling Microsoft Access Database Engine 2010 before installing OFM. The OFM installation will install Microsoft Access Database Engine 2016. Keeping both Access 2010 and 2016 versions at the same time in the same environment may cause version conflict issues in OFM.

The OFM installation package will not install an Oracle driver. You must install Oracle ODAC 11.2 or newer separately. The ODAC 12.2 is preferred to support both driver types. If ODAC 18.3 is installed, you need to install a separate Instant Client in order to use the Microsoft driver.

For ORACLE users, OFM 2019.1 can connect with an ORACLE database using either Microsoft or Oracle driver options. The OFM 2018.1 and older versions only support the Microsoft OLE DB Driver option with Oracle instant client 12.2 or 11.1.

Here is a download link of ODAC for ORACLE users: [ODAC Developer Downloads - Oracle Universal Installer](#)

<table>
<thead>
<tr>
<th>OFM Version</th>
<th>Microsoft Oracle Driver</th>
<th>Oracle Driver</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFM 2019.1</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>✓</td>
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<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>OFM 2018.1</td>
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<td>✗</td>
</tr>
<tr>
<td></td>
<td>✓</td>
<td>✗</td>
</tr>
</tbody>
</table>
Activating the OFM License

Activate the OFM License Using Your Flexera® Software

Schlumberger uses Flexera Software licensing products to manage software licensing. If your organization uses Flexera Software licensing products to manage software licenses, then the Schlumberger License Manager software is not required. Contact your Flexera Software licensing administrator for assistance with adding the OFM license to the established license server.

Activate a Standalone License Using the Schlumberger License Manager

A standalone license gives an individual user access to OFM.

1. Save the license file you received from your Schlumberger account manager to a directory on your local machine. (For example, C:\Flex)
2. To start the Schlumberger Licensing Manager, select Start > All Programs > Schlumberger > Schlumberger Licensing <ver.> > Schlumberger Licensing.
   The Schlumberger Licensing window opens.
3. In the Schlumberger Licensing window, in the Local License Server section, click Add license file.
4. Select the license file and then click Open.
5. In the Schlumberger Licensing window, in the Local License Server section, click Start.
   A confirmation message asks if you want to apply the license immediately.
6. On the confirmation message, click OK.
7. On the Schlumberger Licensing window, click Ok to start using the standalone license.

Activate a Server License Using the Schlumberger License Manager

Schlumberger Licensing can be set up as a local server to be used by a single user or as a remote host to serve multiple users.

To activate the server license:

1. Save the license file you received from your Schlumberger account manager to a directory on your local machine. (For example, C:\Flex)
2. To start the Schlumberger Licensing Manager, select Start > All Programs > Schlumberger > Schlumberger Licensing <ver.> > Schlumberger Licensing.
   The Schlumberger Licensing window opens.
3. In the Schlumberger Licensing window, in the Local License Server section, click Add license file.
4. Select the license file and then click Open.
5. In the Schlumberger Licensing window, in the Local License Server section, click Start.
   A confirmation message asks if you want to apply the license immediately.
6. On the confirmation message, click **OK**.

7. On the **Schlumberger Licensing** window, click **Ok** to start using the server license.

For more information on setting up license servers, refer to the *Schlumberger Licensing User Guide* that is included in the Schlumberger Licensing installation.

**Uninstalling OFM**

1. Navigate to the Microsoft Windows Control Panel.
   a. On your desktop, click the **Start** menu.
   b. Click **Control Panel**.
2. In the **Programs** group, click **Uninstall a program**.
3. To uninstall OFM, right-click the version you want to uninstall from the list and then click **Uninstall**.
OFM Support

This section describes the support resources available to you.

Schlumberger Product Documentation

OFM provides user assistance with online help, PDF documents, and video tutorials.

Online Help

For your convenience, help is provided online with an index, a table of contents, and full text search.

Example Workflows

The online help system for this release now includes example workflows. The examples use more than one feature or type of analysis to show a potential workflow. The examples help you to understand the different OFM features within workflows. You can use the sample workspaces in your OFM installation folder to work through the examples.

Online Help PDF Documents

The OFM online help is available in Adobe® Acrobat® PDF file format. There is one file for each major heading in the online help. The files are located in <installation directory>\Help\Offline PDF Files.

Guides and Release Notes

The following files are installed in the OFM installation directory:

• \Guides And Release Notes\OFM_InstallationGuide.pdf
• \Guides And Release Notes\OFM_ReleaseNotes.pdf
• \Guides And Release Notes\Getting Started with the OFM API.pdf

Using PDF Files

You can use the PDF files to navigate through a document quickly and perform full-text searches. In addition, you can view the PDF files online, distribute to multiple users electronically, or print. You must have a PDF reader application installed to read the .pdf files.

To view PDF files, double-click to open them, and then move through the document by clicking topic headings in the left pane or blue hypertext links in the text. To print copies, select File > Print.

Video Tutorials

Video tutorials are provided for:

• Creating an After-Before-Compare Plot
• Finding the Best Three Months of Production
• Creating Customized Well Symbols
Technical Support

OFM is now a product of Sensia, a Joint Venture (JV) between Rockwell Automation and Schlumberger.

You can still reach us via the Schlumberger Support Portal and Customer Care Center email:

- Support Contact Details: https://www.software.slb.com/support/contact-details
- Customer Care Center email: customercarecenter@slb.com

All support requests are entered into the Customer Care Center incident tracking system, where they are resolved by local support staff. For those times when you need to speak with a support specialist, contact numbers are provided for your local support center.

How to reach us

You can find more information about Sensia and OFM here:

Sensia Home Page: https://www.sensiaglobal.com/
Sensia Digital Solutions: https://www.sensiaglobal.com/Sensia-Digital-Solutions
Sensia Sales and Other Inquires: https://www.sensiaglobal.com>Contact