



HDF5 ODBC Connector – Installation

Release 1.0.1b1

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1 Introduction

In this document, the installation of the HDF5 ODBC Connector (“the software”) on Windows (see [Installation on Windows Systems](#)) and Linux (see [Installation on Linux Systems](#)) systems is described. In both cases, the complete installation is a four-step process:

1. Checking the prerequisites
2. Installing the software
3. Generating a software license key request and installing the license key
4. Verifying the installation

2 Installation on Windows Systems

2.1 Checking the Prerequisites

Make sure that your version of Windows is supported.

There are no other prerequisites at the moment.

2.2 Installing the Software

There are separate installers for the 32- and the 64-bit versions of the software. They can be used and run side-by-side on 64-bit versions of Windows. Only the 32-bit version of the software is appropriate for 32-bit Windows systems. The installation process is nearly identical for both versions. Where there are differences, they'll be noted in the description.

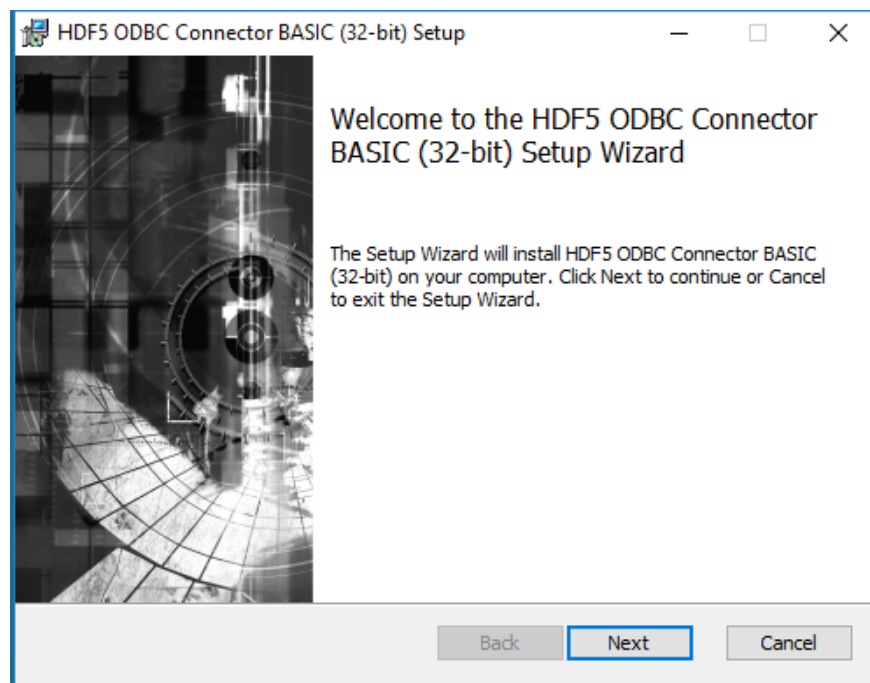
Double-click the installer file,

```
HDF5ODBCInstaller (32-bit).msi
```

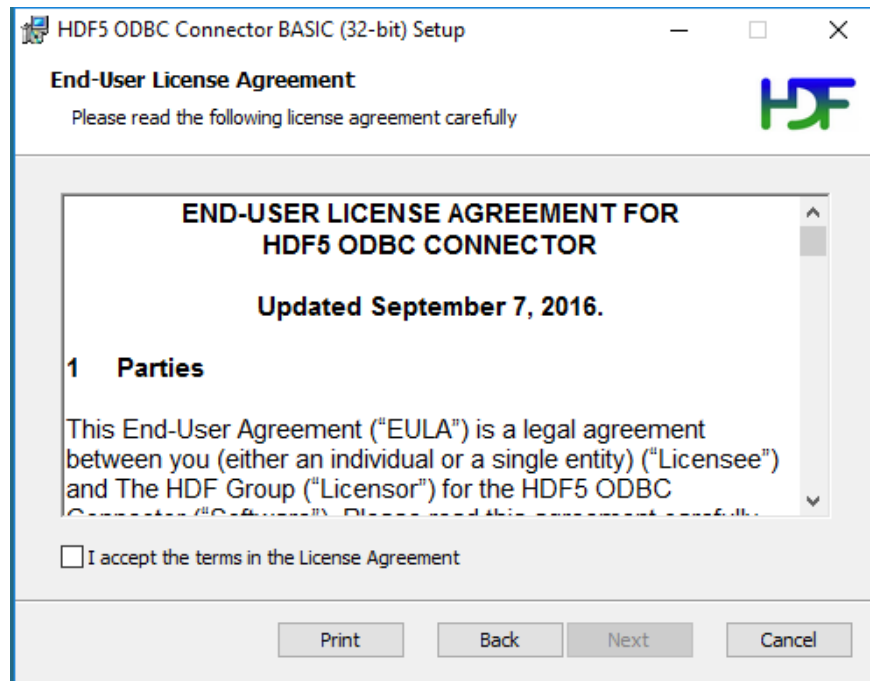
or

```
HDF5ODBCInstaller (64-bit).msi
```

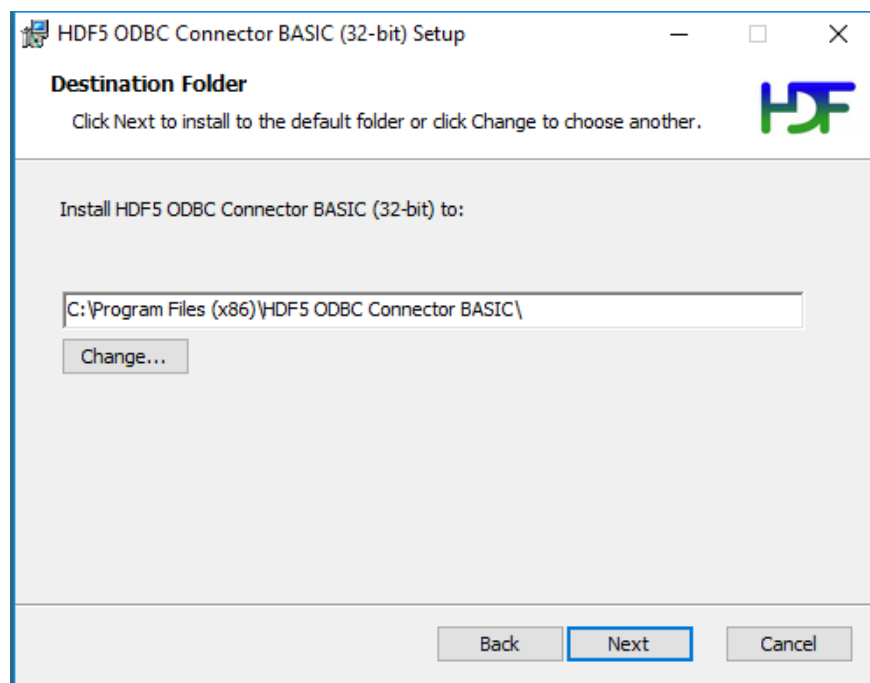
and be greeted by a welcome screen such as this:



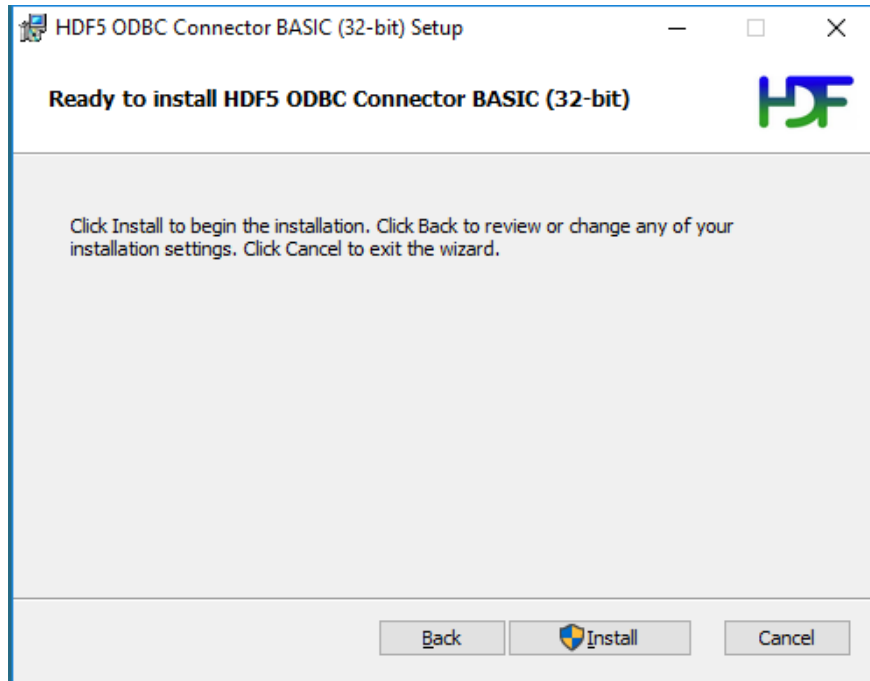
Click **Next** and review the End-User License Agreement (EULA). You cannot continue the software installation without accepting the EULA. Signify your acceptance of the EULA by ticking the checkbox.



Click **Next** and select the installation directory.

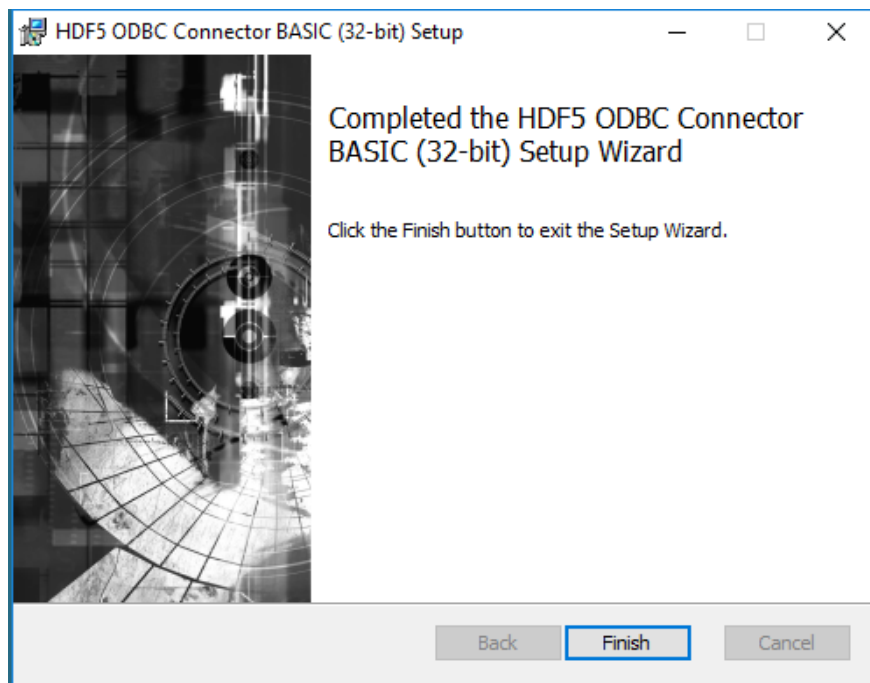


Continue by clicking **Next**.



Click **Install** to begin the installation. You'll be prompted by the installer to grant permission to install the software and to make appropriate changes to the target system.

Complete the installation by clicking **Finish**.



Congratulations! You've completed the first step.

2.3 Licensing the Software

If you've installed the software for evaluation purposes, you may skip the remainder of this section, which describes the creation and fulfillment of a software license key request. Continue reading in the next section, "Verifying the Installation."

Trial Licenses

A 14-day trial license will be automatically created the first time you attempt to use the software.

Note: If you have previously installed the software on the target system and created a trial license, no new trial license will be issued. You must obtain a valid license file to continue using the software on the target system.

Creating a Software License Key Request

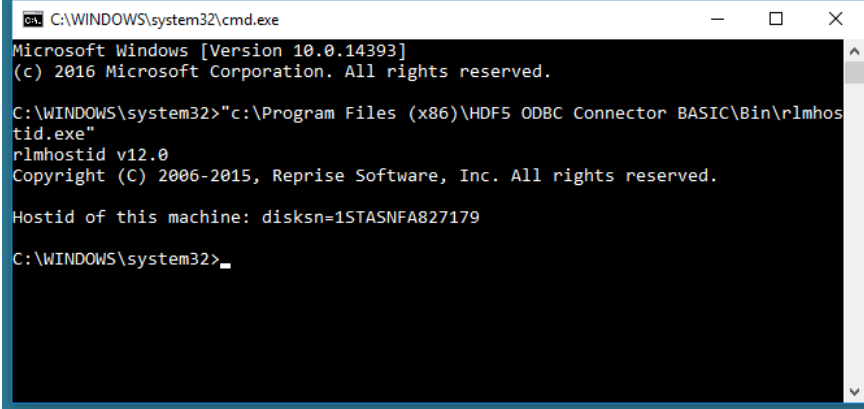
The installation includes an executable (`rlmhostid.exe`), which can be found in the `Bin` subdirectory of the software installation directory. Open a Windows Command Prompt and navigate to this directory. If you accepted the default installation path, this directory is:

```
C:\Program Files\HDF5 ODBC Connector BASIC\Bin
```

Note: If you've installed the 32-bit version of the software on a 64-bit version of Windows, the path is `C:\Program Files (x86)\HDF5 ODBC Connector BASIC\Bin`. You can run either version of `rlmhostid.exe` on a 64-bit Windows system. The generated software license key requests will be identical and the license key issued will work with both versions of the software.

Type the following command and hit **Enter**:

```
rlmhostid.exe
```



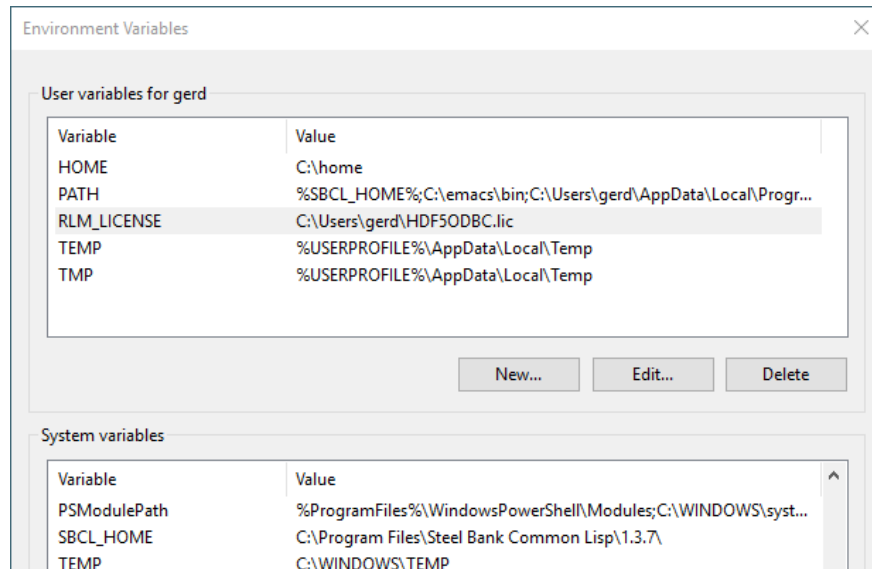
```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.14393]
(c) 2016 Microsoft Corporation. All rights reserved.

C:\WINDOWS\system32>"c:\Program Files (x86)\HDF5 ODBC Connector BASIC\Bin\rlmhos
tid.exe"
rlmhostid v12.0
Copyright (C) 2006-2015, Reprise Software, Inc. All rights reserved.

Hostid of this machine: disksn=1STASNFA827179

C:\WINDOWS\system32>_
```

Please send the output of this command, that's the string "Hostid of this machine: disksn=...", to help@hdfgroup.org. A text file containing the license key will be generated and sent back to you via e-mail. Place the license file anywhere on the system where you generated the license request and set the `RLM_LICENSE` environment variable to point to this file.

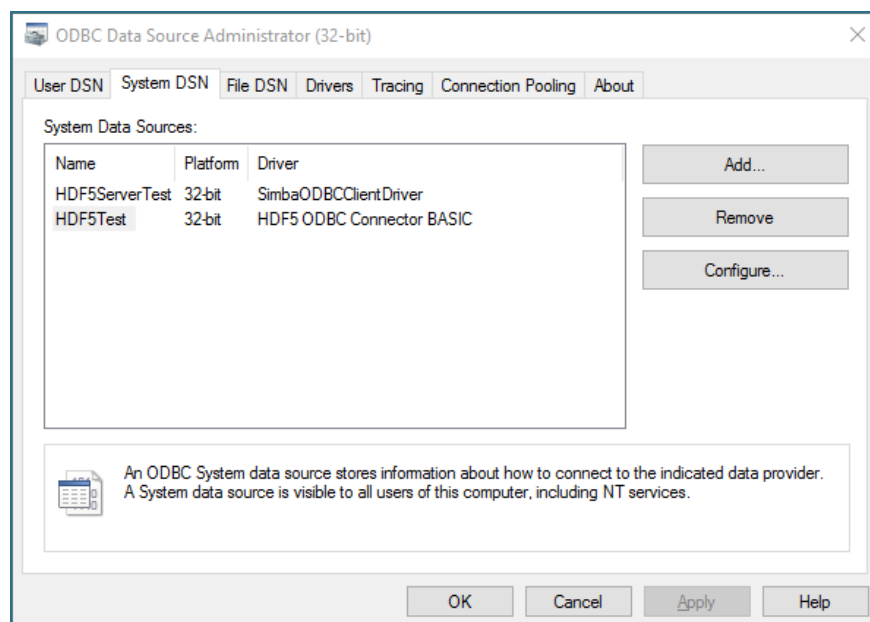


Note: If this variable is already set on your system, you can append the license file path to the existing setting. Use a semicolon to separate multiple entries.

Congratulations! You've completed the second step.

2.4 Verifying the Connector Installation

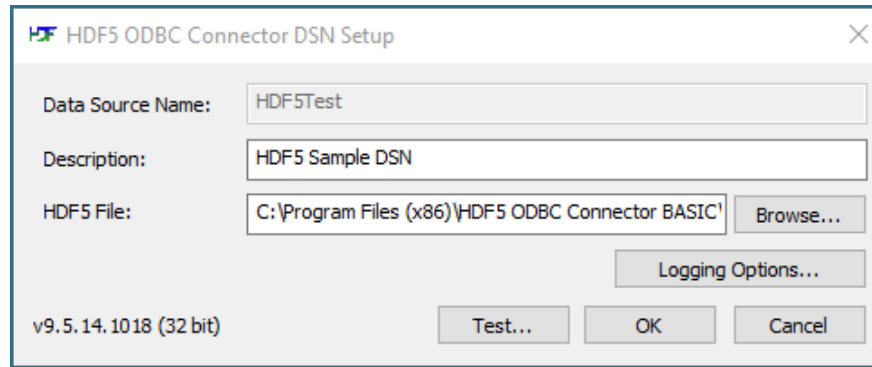
Before attempting to access your own HDF5 files, it is important to verify the correctness of the installation. The installer creates two system-wide ODBC resources for testing, which are backed by the sample HDF5 files located in the `HDF5` subdirectory of the installation directory. These resources can be accessed through the Windows *ODBC Data Source Administrator*. Click on the *System DSN* tab, and select the data source named `HDF5Test`.



Note: On 64-bit Windows systems there are two copies of the *ODBC Data Source Administrator*, one for 32-bit applications and one for 64-bit applications. Both are called `odbcad32.exe`, but they are located in differ-

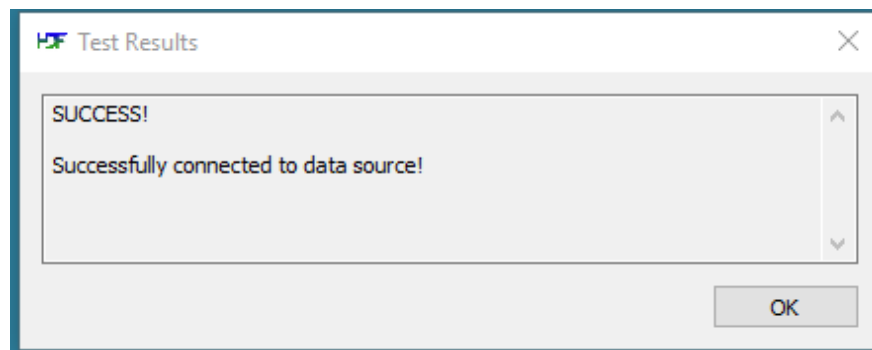
ent directories. The 64-bit version is located in %SystemRoot%\System32. The 32-bit version is located in %SystemRoot%\SysWOW64.

Click **Configure** and a dialog such as the one shown below should pop up.

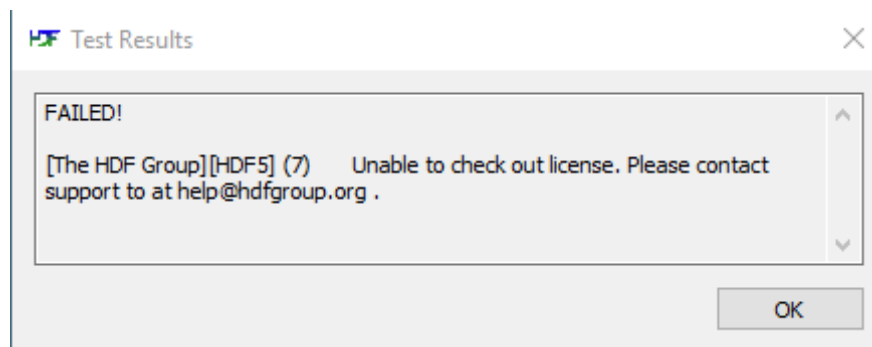


(This is also the configuration dialog for creating your own HDF5 ODBC resources. Here you can configure the resource name, add a description, select the HDF5 file to be accessed, and adjust the software logging options.)

Click **Test**. A working HDF5 ODBC Connector installation will yield the following message box.



If your trial license has expired or no valid license file was found, you will see a pop-up like this:



In this or similar cases, please contact support at help@hdfgroup.org.

3 Installation on Linux Systems

3.1 Checking the Prerequisites

Two components are required in order to connect applications to ODBC data sources:

1. An *ODBC driver* for the particular Data Source type. (e.g., HDF5 files)
2. An *ODBC driver manager*.

The ODBC driver for HDF5 files is provided with the HDF5 ODBC Connector. There are several ODBC driver managers available for Linux. One of the more popular, freely available ODBC driver managers is [unixODBC](#). In this installation guide, we assume that you have *unixODBC* installed on your system. If unsure, please consult with your IT Team. (See also: [unixODBC Tools](#).)

In addition, you need a copy of the HDF5 ODBC Connector installation script `HDF5_ODBC_Basic.sh`.

3.2 Installing the Software

Open a shell and navigate to the directory where the HDF5/ODBC Connector install script is located. Begin the installation by typing:

```
sh ./HDF5_ODBC_Basic.sh <Return>
```

The output should be similar to the output shown below:

```
user@host:~$ sh ./HDF5_ODBC_Basic.sh
Creating directory HDF5_ODBC_Basic
Verifying archive integrity... 100% All good.
Uncompressing Self-extracting installer for HDF5_ODBC_Basic 100%
HDF5 ODBC Connector Installer Version: 1.0.1b1, Copyright (c) HDF_Group
This is a self-extracting archive.
The archive will be extracted to: /home/gerd/HDF5_ODBC_Basic

If you want to stop extracting, please press <ctrl-C>.

END-USER LICENSE AGREEMENT FOR
HDF5 ODBC CONNECTOR

Updated September 7, 2016.

1 Parties

This End-User Agreement ("EULA") is a legal agreement between you (either an individual or a single entity) ("Licensee") and The HDF Group ("Licensor") for the HDF5 ODBC Connector ("Software"). Please read this agreement carefully before downloading, installing or using the Software.

If you are accepting this agreement on behalf of a company, organization, educational institution, or agency ("Entity") as its authorized legal representative, you represent and warrant that you have the power and authority to bind such Entity to these terms. If you do not agree to all of the terms of this agreement, you are not permitted to download, install, or use the Software.

...
```

Press the **Space** key repeatedly to scroll through the EULA. You'll be prompted to accept the EULA:

Appendix III: Support and Maintenance

All support for the HDF5 ODBC Connector will be provided by email to the address: `help@hdfgroup.org`

Support requests will be acknowledged by The HDF Group via email within two business days and an initial reply to the support question will be provided by email within four business days.

The HDF Group's support will be available between the hours of 9AM and 5PM (local CST time) each weekday except holidays.

If the Licensee wishes to request new functionality be added to this product, that can be requested of The HDF Group. If The HDF Group agrees to perform the work, a price for this work will be quoted separate from this EULA.

Do you accept the license? [yN]:

To accept the EULA type `y` followed by **Return**.

Do you accept the license? [yN]:

`y`

Using target directory: `/home/user/HDF5_ODBC_Basic`

Extracting, please wait...

Add `/home/user/HDF5_ODBC_Basic/Bin/Linux_x8664` to your `LD_LIBRARY_PATH` or equivalent
Unpacking finished successfully

If your output suggests an error, please submit the error message(s) and information about your operating system, such as distribution, version, etc. to help@support.org.

3.3 Licensing the Software

If you've installed the software for evaluation purposes, you may skip the remainder of this section, which describes the creation and fulfillment of a software license key request. Continue reading in the next section, "Verifying the Installation."

Trial Licenses

A 14-day trial license will be automatically created the first time you attempt to use the software.

Note: If you have previously installed the software on the target system and created a trial license, no new trial license will be issued. You must obtain a valid license file to continue using the software on the target system.

Creating a Software License Key Request

The installation includes an executable (`rlmhostid`), which can be found in the `Bin` subdirectory of the software installation directory. Open a shell and navigate to this directory. If you accepted the default installation path, this directory is:

```
$HOME/HDF5_ODBC_Basic/Bin/Linux_x8664
```

Note: If you've installed the 32-bit version of the software on a 32-bit Linux version, the path is `$HOME/HDF5_ODBC_Basic/Bin/Linux_x8632`. You can run either version of `rlmhostid` on a 64-bit Linux system. The generated software license key requests will be identical and the license key issued will work with both versions of the software.

Type the following command and hit **Enter**:

```
rlmhostid
```

The output should look similar to this:

```
rlmhostid v12.0
Copyright (C) 2006-2015, Reprise Software, Inc. All rights reserved.

Hostid of this machine: 001d09e820ee 001f2e814391
```

Please send the output of this command, that's the string "Hostid of this machine: ...", to help@hdfgroup.org. A text file containing the license key will be generated and sent back to you via e-mail. Place the license file anywhere on the system where you generated the license request and set the `RLM_LICENSE` environment variable to point to this file.

Note: If this variable is already set on your system, you can append the license file path to the existing setting. Use a semicolon to separate multiple entries.

Congratulations! You've completed the second step.

3.4 Verifying the Connector Installation

1. Verify the driver availability by running `odbcinst -q -d <Return>`. The output should include the line:

```
[HDF5ODBCDSIIDriver]
```

2. Verify the test data source availability by running `odbcinst -q -s <Return>`. The output should include the line:

```
[HDF5Test]
```

3. Verify that a connection to the *HDF5Test* data source can be established by running `isql HDF5Test<Return>`. The output should be similar to the following:

```
user@host:~$ isql HDF5Test
+-----+
| Connected!                                |
|                                           |
| sql-statement                            |
| help [tablename]                         |
| quit                                     |
|                                           |
+-----+
SQL>
```

4. Run a simple query as follows:

```
SQL> SELECT COUNT(*) FROM HDF5.VRTL.Attributes
+-----+
|  Expr_1      |
+-----+
|  574         |
+-----+
SQLRowCount returns -1
1 rows fetched
SQL>
```

5. Run a slightly more advanced query such as this:

```
SQL> SELECT COUNT(*) FROM HDF5."/test.h5"/".single8M WHERE VALUE > 4194304.0
+-----+
|  Expr_1      |
+-----+
| 4194303      |
+-----+
SQLRowCount returns -1
1 rows fetched
SQL>
```

Congratulations! You have a working HDF5 ODBC Connector installation.

Troubleshooting

There are several potential configuration problems, which might prevent *isql* from connecting to the *HDF5Test* data source. Here are a few common issues:

1. The *HDF5Test* ODBC data source definition in `.odbc.ini` is missing or incorrect.
2. The driver installation path name in `.odbc.ini` or `.odbcinst.ini` is not correct.
3. The directory that contains the connector's shared library is missing from your `LD_LIBRARY_PATH`.
4. The `RLM_LICENSE` environment variable is not set or does not contain the path to a valid license file.
5. Your trial or production license has expired.

Please submit any error message(s) and information about your operating system, such as distribution, version, etc. to help@support.org.

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5 Appendix

5.1 unixODBC Tools

A crude but not necessarily conclusive test for an installation of *unixODBC* on a system is the presence of the *isql* and *odbcinst* command line tools. Typing *isql* <Return> in a shell prompt should yield output similar to the following:

```
*****
* unixODBC - isql                                     *
*****
* Syntax                                              *
*                                                    *
*      isql DSN [UID [PWD]] [options]                *
*                                                    *
* Options                                            *
*                                                    *
* -b          batch.(no prompting etc)              *
* -dx         delimit columns with x                *
* -x0xXX      delimit columns with XX, where        *
*             x is in hex, ie 0x09 is tab           *
* -w          wrap results in an HTML table         *
* -c          column names on first row.            *
*             (only used when -d)                   *
* -mn         limit column display width to n       *
* -v          verbose.                              *
* -lx         set locale to x                      *
* -q          wrap char fields in dquotes           *
* -3          Use ODBC 3 calls                      *
* -n          Use new line processing               *
* -e          Use SQLExecDirect not Prepare         *
* -k          Use SQLDriverConnect                 *
* -L          Length of col display (def:300)      *
```

```

* --version version
*
* Commands
*
* help - list tables
* help table - list columns in table
* help help - list all help options
*
* Examples
*
*      isql WebDB MyID MyPWD -w < My.sql
*
*      Each line in My.sql must contain
*      exactly 1 SQL command except for the
*      last line which must be blank (unless
*      -n option specified).
*
* Please visit;
*
*      http://www.unixodbc.org
*      nick@lurcher.org
*      pharvey@codebydesign.com
*****

```

Typing `odbcinst` <Return> in a shell prompt should yield output similar to the following:

```

*****
* unixODBC - odbcinst
*****
*
* Purpose:
*
*      An ODBC Installer and Uninstaller.
*      Updates system files, and
*      increases/decreases usage counts but
*      does not actually copy or remove any
*      files.
*
* Syntax:
*
*      odbcinst Action Object Options
*
* Action:
*
*      -i      install
*      -u      uninstall
*      -q      query
*      -j      print config info
*      -c      call SQLCreateDataSource
*      -m      call SQLManageDataSources
*      --version version
*
* Object:
*
*      -d driver
*      -s data source
*
* Options:
*

```

```
*      -f file name of template.ini follows *
*      this (valid for -i)                  *
*      -r get template.ini from stdin, not  *
*      a template file                      *
*      -n Driver or Data Source Name follows *
*      -v turn verbose off (no info, warning *
*      or error msgs)                      *
*      -l system dsn                       *
*      -h user dsn                         *
*                                           *
* Returns:                                *
*                                           *
*      0    Success                       *
*      !0   Failed                        *
*                                           *
* Please visit;                           *
*                                           *
*      http://www.unixodbc.org             *
*      pharvey@codebydesign.com            *
*****
```