

Install and configure ODBC on Linux

The ODBC driver for Windows is provided as a shared library.

This tutorial shows how to install and configure ODBC on Linux.

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Prerequisites

unixODBC

The ODBC driver requires a driver manager to manage the DSNs. SQreamDB's driver is built for unixODBC.

Verify unixODBC is installed by running:

```
$ odbcinst -j
unixODBC 2.3.4
DRIVERS.....: /etc/odbcinst.ini
SYSTEM DATA SOURCES: /etc/odbc.ini
FILE DATA SOURCES...: /etc/ODBCDataSources
USER DATA SOURCES...: /home/rhendricks/.odbc.ini
SQLULEN Size.....: 8
SQLLEN Size.....: 8
SQLSETPOSIROW Size.: 8
```

Take note of the location of `.odbc.ini` and `.odbcinst.ini`. In this case, `/etc`. If `odbcinst` is not installed, follow the instructions for your platform below:

Install unixODBC on:

- [Install unixODBC on RHEL](#)

Use this method if you have never used ODBC on your machine before. If you have existing DSNs, see the manual install process below.

1. **Unpack the tarball** Copy the downloaded file to any directory, and untar it to a new directory:

```
$ mkdir -p sqream_odbc64
$ tar -xf sqream_odbc_vX.Y_x86_64_linux.tar.gz --strip-components=1 -C
sqream_odbc64/
```

2. **Run the first-time installer.** The installer will create an editable DSN.

```
$ cd sqream_odbc64
./odbc_install.sh --install
```

3. **Edit the DSN created by editing** `/etc/.odbc.ini`. See the parameter explanation in the section [ODBC DSN Parameters](#).

Use this method when you have existing ODBC DSNs on your machine.

1. **Unpack the tarball** Copy the file you downloaded to the directory where you want to install it, and untar it:

```
$ tar xf sqream_2019.2.1_odbc_3.0.0_x86_64_linux.tar.gz -C sqream_odbc64
```

Take note of the directory where the driver was unpacked. For example,
`/home/rhendricks/sqream_odbc64`

2. **Locate the** `.odbc.ini` **and** `.odbcinst.ini` **files, using** `odbcinst -j`.

1. In `.odbcinst.ini`, add the following lines to register the driver (change the highlighted paths to match your specific driver):

```
[ODBC Drivers]
SqreamODBCDriver=Installed

[SqreamODBCDriver]
Description=Driver DSII SqreamODBC 64bit
Driver=/home/rhendricks/sqream_odbc64/sqream_odbc64.so
Setup=/home/rhendricks/sqream_odbc64/sqream_odbc64.so
APILevel=1
ConnectFunctions=YYY
DriverODBCVer=03.80
SQLLevel=1
IconvEncoding=UCS-4LE
```

2. In `.odbc.ini`, add the following lines to configure the DSN (change the highlighted parameters to match your installation):

```
[ODBC Data Sources]
MyTest=SqreamODBCDriver
```

```
[MyTest]
Description=64-bit Sqream ODBC
Driver=/home/rhendricks/sqream_odbc64/sqream_odbc64.so
Server="127.0.0.1"
Port="5000"
Database="raviga"
Service=""
User="rhendricks"
Password="Tr0ub4dor&3"
Cluster=false
Ssl=false
```

Parameters are in the form of `parameter = value`. For details about the parameters that can be set for each DSN, see the section [ODBC DSN Parameters](#).

3. Create a file called `.sqream_odbc.ini` for managing the driver settings and logging. This file should be created alongside the other files, and add the following lines (change the highlighted parameters to match your installation):

```
# Note that this default DriverManagerEncoding of UTF-32 is
# for iODBC. unixODBC uses UTF-16 by default.
# If unixODBC was compiled with -DSQL_WCHART_CONVERT, then
# UTF-32 is the correct value.
# Execute 'odbc_config --cflags' to determine if you need
# UTF-32 or UTF-16 on unixODBC
[Driver]
DriverManagerEncoding=UTF-16
DriverLocale=en-US
ErrorMessagesPath=/home/rhendricks/sqream_odbc64/ErrorMessage

LogLevel=0
LogNamespace=
LogPath=/tmp/
ODBCInstLib=libodbcinst.so
```

Install the driver dependencies

Add the ODBC driver path to `LD_LIBRARY_PATH`:

```
$ export LD_LIBRARY_PATH=$LD_LIBRARY_PATH:/home/rhendricks/sqream_odbc64/lib
```

You can also add this previous command line to your `~/ .bashrc` file in order to keep this installation working between reboots without re-entering the command manually

Testing the connection

Test the driver using `isql`.

If the DSN created is called `MyTest` as the example, run `isql` in this format:

```
$ isql MyTest
```

ODBC DSN Parameters

| Item | Default | Description |
|-----------------------|---------------------|--|
| Data Source Name | None | An easily recognizable name that you'll use to reference this DSN. |
| Description | None | A description of this DSN for your convenience. This field can be left blank |
| User | None | Username of a role to use for connection. For example, <code>User="rhendricks"</code> |
| Password | None | Specifies the password of the selected role. For example, <code>User="Tr0ub4dor&3"</code> |
| Database | None | Specifies the database name to connect to. For example, <code>Database="master"</code> |
| Service | <code>sqream</code> | Specifies service queue to use. For example, <code>Service="etl"</code> . Leave blank (<code>Service=""</code>) for default service <code>sqream</code> . |
| Server | None | Hostname of the SQreamDB worker. For example, <code>Server="127.0.0.1"</code> or <code>Server="sqream.mynetwork.co"</code> |
| Port | None | TCP port of the SQreamDB worker. For example, <code>Port="5000"</code> or <code>Port="3108"</code> for the load balancer |
| Cluster | <code>false</code> | Connect via load balancer (use only if exists, and check port). For example, <code>Cluster=true</code> |
| Ssl | <code>false</code> | Specifies SSL for this connection. For example, <code>Ssl=true</code> |
| DriverManagerEncoding | <code>UTF-16</code> | Depending on how unixODBC is installed, you may need to change this to <code>UTF-32</code> . |
| ErrorMessagesPath | None | Location where the driver was installed. For example, <code>ErrorMessagePath=/home/rhendricks/sqream_odbc64/ErrorMessage</code> . Set to 0-6 for logging. Use this setting when instructed to by SQreamDB Support. For example, <code>LogLevel=1</code> |
| LogLevel | 0 | <ul style="list-style-type: none">• 0 = Disable tracing• 1 = Fatal only error tracing• 2 = Error tracing• 3 = Warning tracing• 4 = Info tracing• 5 = Debug tracing• 6 = Detailed tracing |

Limitations

Please note that the SQreamDB ODBC connector does not support the use of ARRAY data types. If your database schema includes ARRAY columns, you may encounter compatibility issues when using ODBC to connect to the database.

