Perceptive Content Database Driver

Installation and Configuration Guide

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Overview

This document provides instructions for installing and configuring Perceptive Content Database drivers. Beginning with Perceptive Content 7.3.0, you must manually install and configure these drivers prior to the installation or upgrade of Perceptive Content. We recommend you review the supported database drivers in the Perceptive Content Technical Specifications Guide.

Each machine that directly accesses the database needs to have a manually configured database driver and ODBC datasource. You can obtain the appropriate native database driver directly from the database manufacturer. If you are running a 32-bit agent on Windows, you must install the 32-bit version of the native driver and configure a 32-bit ODBC datasource.

For more information about installing and configuring your specific version of the database driver, see the manufacturer's installation and configuration guides.

Windows ODBC driver configuration

To configure your Windows ODBC datasource for Perceptive Content, complete the following steps.

1. Install the appropriate database driver for your Perceptive Content database. For a list of supported database drivers, see the *Perceptive Content Technical Specifications Guide*.
2. Configure the ODBC datasources and verify connectivity to your Perceptive Content database.

   Note If you are running 32-bit and 64-bit agents on the same machine, you must configure the 32-bit and 64-bit ODBC datasources with the same name.
3. If you are performing an upgrade, run the installation package for Perceptive Content agents. You will need to supply the ODBC datasource name configured in the previous step. For more information, see the appropriate Perceptive Content agent's installation and setup guide.
4. To update the ODBC datasource used by Perceptive Content update the inow.ini section with the appropriate datasource name. For more information, see the the **[ODBC] inow.ini** configuration document.

Linux ODBC driver configuration

Configure Linux ODBC Driver Manager

This section only pertains to Linux configurations that consume a native ODBC driver. You must download and install a supported version of **unixODBC** and use it to manage your installed drivers and configured datasources. For list of supported ODBC driver managers, see the Perceptive Content Technical Specifications Guide.

After you install the **unixODBC** Driver Manager you must set the **IMAGENOW_LD_LIBRARY_PATH** in the **environment.ini** file in the root of Perceptive Content installation with the path to the directory containing the **libodbc.so** library.

Add the following to **environment.ini**:

```
; If present, this variable is consumed by the setenv.sh script in the Perceptive
Content bin directory.

IMAGENOW_LD_LIBRARY_PATH=/lib64
```

Example: Register the database driver with unixODBC Driver Manager

You must register your native driver with unixODBC. The following set of steps is an example of registering an installed ODBC database driver with unixODBC. For more information, see the installation guides provided by the provider of the database driver you are installing.

1. Install the database driver package.
2. Complete the following sub-steps to create a template for your database driver.
    1. Using a text editor, open a new file.
    2. Copy and paste the following code into the file.

        ```
        [msodbcsql_17]
        Description=Microsoft ODBC Driver 17 for SQL Server
        Driver=/opt/microsoft/msodbcsql17/lib64/libmsodbcsql-17.3.so.1.1
        ```

    3. **Save** and close the text editor.
3. Run the following code to install the database driver using odbcinst, where *new_driver_template.txt* is the name of your new file.

    ```
    odbcinst -i -d -f new_driver_template.txt
    ```

Example: Create a datasource with unixODBC Driver Manager

The following set of steps is an example of configuring an ODBC datasource with unixODBC Driver Manager. For more information, see the installation and configuration guides provided by unixODBC.

1. Using a text editor, open a new file.
2. Copy and paste the following code into the file.

    ```
    [inow_mssql]
    Description=
    Driver=msodbcsql_17
    Server=<IP/hostname>
    Database=INOW
    ```

3. **Save** and close the text editor**.**
4. Run the following code to install the ODBC datasource, where *new_datasource_template.txt* is the name of your new file.

    ```
    odbcinst -i -s -l -f new_datasource_template.txt
    ```

Configure DataDirect Driver Manager for Oracle

Follow these steps if your are using an Oracle Perceptive Content database on Linux. You must acquire a Datadirect package from your Perceptive Content distributor and place it on your Perceptive Content system.

1. Download and extract the Datadirect package from your Perceptive Content distributor.

    We recommend extracting the Datadirect package to **/opt/datadirect**.
2. Complete the following sub-steps to add the **IMAGENOW_LD_LIBRARY_PATH** setting to the **environment.ini** file.
    1. Using a text editor, open a the environment.ini configuration file. This file is located in the root of the Perceptive Content install directory.

2. Set IMAGENOW_LD_LIBRARY_PATH to the location of the datadirect installation's lib directory.

```
; If present, this variable is consumed by the setenv.sh script in the
Perceptive Content bin directory.
IMAGENOW_LD_LIBRARY_PATH=/opt/datadirect/lib
```

3. **Save** and close the text editor.

3. Complete the following sub-steps to create a new **odbc.ini** configuration file.
   1. Using a text editor, open a new file.
   2. Refer to Datadirect documentation for configuring an ODBC datasource. See example below:

```
[ODBC Data Sources]
inow_ora=DataDirect 8.0 Oracle Wire Protocol

[inow_ora]
Driver = /opt/datadirect/lib/IUora28.so
Description = DataDirect 8.0 Oracle Wire Protocol
HostName = <HostName/IP>
PortNumber = 1521
ServiceName = <ServiceName>

[ODBC]
InstallDir = /opt/datadirect
Trace = 0
TraceFile = /opt/datadirect/odbctrace.out
```

   3. **Save**, name the file **odbc.ini** and then close the text editor.

4. Complete the following sub-steps to add the **ODBCINI** setting to the environment.ini file.
   1. Using a text editor, open the **environment.ini** configuration file. This file is located in the root of the Perceptive Content install directory.
   2. Set **ODBCINI** to the location of the **odbc.ini** file.

```
; If present, this variable is consumed by the setenv.sh script in the
Perceptive Content bin directory.
ODBCINI=/opt/datadirect/odbc.ini
```

   3. **Save** and close the text editor.

5. Complete the following sub-steps to configure the ODBC datasource in the Perceptive Content **inow.ini** configuration file.
   1. Using a text editor, open the **inow.ini** configuration file.
   2. Under the **ODBC** section, set the **odbc.dbms**, **odbc.dsn**, and **odbc.use.dddriver** properties. The **odbc.use.ddriver** property must be set to TRUE. Ensure that **odbc.user.id** and **odbc.user.password** properties are correctly configured for your Perceptive Content database.

```
[ODBC]
odbc.dbms=Oracle
odbc.dsn=inow_ora
odbc.user.id=inuser
odbc.user.password=
odbc.use.dddriver=TRUE
```

   3. **Save** and close the text editor.

DataDirect Oracle configuration using Oracle DMBS

Acquire the appropriate version of the DataDirect driver that has been validated against the targeted Oracle DBMS.

Progress DataDirect Driver for Oracle version	Oracle Database 12c R1 (12.1)	Oracle Database 12c R2 (12.2.0.2)	Oracle Database 18c	Oracle Database 19c
07.15.0243	Supported	Supported	Not supported	Not supported
07.16.0395*	Supported	Supported	Supported	Supported
8.02.2099	Supported	Supported	Supported	Not supported
8.02.2371	Supported	Supported	Supported	Supported

*If using the DataDirect ODBC Driver for Oracle 07.16.0395 against Oracle Database 19c, you must configure the database to accept the 10G authentication protocols. This requires that the `SQLNET.ALLOWED_LOGON_VERSION_SERVER=11` property be set in sqlora.net. If a password was generated prior to enabling support for 10G authentication, please regenerate the user's password to allow the connection to authenticate as expected.

Appendix A: ODBC database driver configuration examples

Configure Oracle Native Driver for Windows

1. Download the 32-bit and 64-bit instantclient basic packages.
2. Download the 32-bit and 64-bit instantclient-odbc packages.
3. Extract the instantclient and instantclient-odbc packages into the same directory, keeping the 32-bit and 64-bit packages separate.
4. Once the system extracts the odbc drivers, run the following command to install the odbc drivers.

   ```
   odbc_install.exe
   ```

5. After the system installs the drivers, you must configure the **TNSNAMES** file. The default location for this file is in the **`ORACLE_HOME/network/admin`** directory. If this directory does not exist, you can create it. This file should contain the service description for each datasource. The following is an example **tnsnames.ora** file; however, we strongly recommend you consult with your system DBA to ensure the correct configuration for your environment.

   ```
   INOWTNS =
     (DESCRIPTION =
       (ADDRESS =
         (PROTOCOL = TCP)
         (HOST = <HostName/IP>)
         (PORT = 1521)
       )
       (CONNECT_DATA =
         (SERVER = DEDICATED)
         (SERVICE_NAME = INOW)
       )
   ```

```
)
```

Add the 32-bit and 64-bit Oracle native driver datasources via odbcad32. This should use the same address name specified in the **tnsnames.ora** file.

Appendix B: ODBC database connection string properties

Perceptive Content uses connection strings with default properties set. The following is a detailed list of properties that is set for each database configuration.

Default connection properties

DataDirect Oracle connection properties

For more information about these settings, see the *Progress DataDirect for ODBC Oracle Wire Protocol Driver* manual. The provided defaults should be sufficient for most installations.

Property Name	Default Value	Configurable inow.ini ODBC Setting
DSN		odbc.dsn
UID	inuser	odbc.user.id
Password		odbc.user.password
StaticCursorLongColBuffLen	131072	odbc.max.long.varchar.column.size
IANAAppCodePage	2252	

Native Oracle connection properties

For more information about these settings, see the "Format of the Connection String for the SQLDriverConnect Function" section in Oracle's *Using Oracle ODBC Driver* reference document.

Property Name	Default Value	Configurable inow.ini ODBC Setting
DSN		odbc.dsn
UID	inuser	odbc.user.id
PWD		odbc.user.password
FWC	F	
QTO	T	
DBA	W	
APA	T	

Native Microsoft SQL Server connection properties

For information, see the Microsoft ConnectionString documentation.

Property Name	Default Value	Configurable inow.ini ODBC Setting
DSN		odbc.dsn
UID	inuser	odbc.user.id
PWD		odbc.user.password
APP	Current App Name	
Trusted_Connection	no	
AutoTranslate	no	
Regional	no	

Native PostgreSQL connection properties

For more information see the PostgreSQL libpq-connect documentation.

Property Name	Default Value	Configurable inow.ini ODBC Setting
DSN		odbc.dsn
UID	inuser	odbc.user.id
PWD		odbc.user.password
Protocol	7.4-2	
UserServerSidePrepare	1	
UniqueIndex	1	
MaxVarcharSize	2048	odbc.max.char.column.size
UnknownSizes	0	
UnknownAsLongVarchar	0	
ByteaAsLongVarBinary	1	
ReadOnly	0	
BI	-5	
AB	0x0	

UserDeclareFetch	0	
LFConversion	0	

Override connection properties

By default the aforementioned settings override any conflicting properties set on the ODBC datasource. If you need to override any of the default properties then you can remove them from the connection string by adding them to the **inow.ini ODBC** section's `odbc.connection.string.blacklist` property. This takes a comma separated list of properties to exclude from the connection string when creating an ODBC connection. We recommend you consult your system DBA before overriding any default connection string properties. Hyland Software is not responsible for consequences arising from changes to the connection string properties.

Example:

```
[ODBC]
odbc.connection.string.blacklist=UID,Password
```