

Oracle ODBC Configuration and Client Installation Guide

PowerSchool
Student Information System



Released July 9, 2008

Document Owner: Documentation Services

This edition applies to Release 5.2 of the PowerSchool software and to all subsequent releases and modifications until otherwise indicated in new editions or updates.

The data and names used to illustrate the reports and screen images may include names of individuals, companies, brands, and products. All of the data and names are fictitious; any similarities to actual names are entirely coincidental.

PowerSchool is a trademark, in the U.S. and/or other countries, of Pearson Education, Inc. or its affiliate(s).

Copyright © 2008 Pearson Education, Inc. or its affiliates. All rights reserved. All trademarks are either owned or licensed by Pearson Education, Inc. or its affiliates. Other brands and names are the property of their respective owners.

Contents

Introduction	1
Introduction to ODBC	1
ODBC Connection for Mac OS X.....	2
Requirements.....	2
How to Create ODBC Data Source.....	2
Oracle Client Installation and ODBC Connection for Windows	4
Requirements.....	4
How to Install Oracle Standard Edition	4
How to Install Oracle Instant Client.....	5
How to Create ODBC Data Source.....	5
Connect to Microsoft Excel.....	7
How to Query the Database	7

Introduction

PowerSchool 5.2 uses Oracle as the underlying database engine. Oracle is an Enterprise Relational Database Management System (RDBMS), which allows performance tuning and resource management options. This also opens up the world of SQL, with which you can use third party tools to create reports and use data mining tools to spot trends or drill down from summary data. Using a specified compliant driver, you can connect to the database and query PowerSchool tables directly.

Please refer to the appropriate section for step-by-step instructions:

- ODBC Connection for Mac OSX
- Oracle Client Installation and ODBC Connection for Windows

Introduction to ODBC

Open Database Connectivity (ODBC) is a standard interface for communications between a relational database and an application that needs to access that data. Though you can use any ODBC compliant application, this document demonstrates ODBC functionality using Microsoft Excel.

PowerSchool ODBC connection accounts are configured for read-only access to the PowerSchool database. This allows for support of external reporting applications while maintaining data integrity.

ODBC Connection for Mac OS X

Currently, there is no Oracle ODBC client available for Macintosh.

Mac OS X version 10.2 and above includes the ODBC Administrator application, located at **Applications > Utilities**. Connecting to an Oracle Database from Mac OSsX requires a third-party driver. The following companies provide compatible drivers:

- **Actual Technologies** <http://www.actualtechnologies.com>
- **OpenLink Software** <http://www.openlinksw.com>

Pearson does not endorse or recommend any particular vendor for this software. Each of these vendors provides trial versions, and you are advised to evaluate all options. The driver must be compatible with Oracle 10g Enterprise Edition if your server runs Mac OS X.

Note: To perform these procedures, you need to be logged in using an account with Mac OS X administrator privileges.

Requirements

Oracle client tools can be installed on any Macintosh that meets the following minimum specifications:

Tools	Requirements
Actual ODBC Driver for Oracle	Mac OS X 10.2.8 or above PowerPC or Intel Processor
OpenLink UDA Express for Oracle 10x	Mac OS X 10.4 or above PowerPC or Intel Processor

How to Create ODBC Data Source

Because no ODBC driver provider is recommended, the following procedure includes general tips for configuring your ODBC connection:

1. Download and install the driver.
2. In the Finder window, navigate to **Applications > Utilities > ODBC Administrator**. The ODBC Administrator dialog opens.
3. Select **User DSN**.
4. Click **Add**.
5. Choose the driver you just installed.
6. Use the following table to enter information in the applicable fields:

Field	Description
DSN Name	Enter PowerSchool .
Description	Enter PowerSchool ODBC Connection .

Field	Description
Server	Enter your Database Server IP address.
Port Number	Enter 1521 .
SID	Enter PSProdDB .
User Name	Enter the user name, either DataMiner or PSNavigator . Note: The PSNavigator account has access to a larger set of tables.
Password	Enter the password for the user name. Note: This is configured during the Oracle Database installation and can be changed through the PowerSchool Administrator portal.
Network Protocol	Enter TCP . Note: Some drivers may omit this option.
Include Synonyms	Enter Yes . Note: Some drivers may omit this option.
Only User's Schema	Enter Yes . Note: Some drivers may omit this option.
Unicode Support	Enter No . Note: Some drivers may omit this option.

7. Close the ODBC administrator dialog.

Oracle Client Installation and ODBC Connection for Windows

Like Mac users, Windows users can use a JDBC- or ODBC-compliant driver to connect to the database and directly query the PowerSchool tables.

This section includes step-by-step instructions to install Oracle Client with ODBC/JDBC drivers. Other ODBC-capable applications, such as Crystal Reports, can also be used to connect to the database.

Note: To perform these procedures, you need to be logged in using an account with Windows administrator privileges.

Note: A general ODBC error appears when connecting to the database with the Microsoft ODBC for Oracle driver. Do not use this driver.

Requirements

Oracle PC Client can be installed on any Windows machine that meets the following minimum specifications:

Hardware	Operating System
128 Mb RAM 250 Mb available disk space	Windows NT 4.0, 2000, XP, 2003, or Vista

Oracle Client software is available via download at

<http://www.oracle.com/technology/software/products/database/index.html>

Oracle Instant Client software is available via download at

<http://www.oracle.com/technology/software/tech/oci/instantclient/index.html>

Note: An Oracle account is required in order to download the software. The account is free and does not require PowerSchool license information.

Install either Oracle 10g Standard Edition or Oracle 10g Client Express.

How to Install Oracle Standard Edition

1. Extract the downloaded package. The Welcome page appears.
2. On the Welcome page, click **Next**.
3. Select **Custom** as the Install Type.
4. Click **Next**.
5. Enter **OraClient10g_PowerSchool** in the Name field.
6. Choose an appropriate directory.
7. Click **Next**.
8. On the Available Product Components page, select **Oracle Windows Interfaces 10.2.x.x.x** and **Oracle ODBC Driver 10.2.x.x.x**. Deselect any other checkboxes.

9. Click **Next**.
10. If the installer determines that your system meets the minimum requirements, click **Next**. Otherwise, address any issues found.
11. Review the installation summary information. Click **Back** to make any corrections. Click **Install** to continue the installation. The Setup Status page appears.
12. When the install finishes, click **Exit** to close the installer.

How to Install Oracle Instant Client

1. Extract the downloaded package.
2. On the Welcome page, click **Next**. The license agreement page appears.
3. Select **I accept the terms in the license agreement**.
4. Click **Next**. The Choose Destination page appears.
5. To install Oracle Client Express in a different directory, click **Browse** and select the correct destination. Otherwise, click **Next**. The Summary page appears.
6. Review the installation summary information. Click **Back** to make any corrections. Click **Install** to continue the installation. The Setup Status page appears.
7. When the install finishes, click **Finish** to close the installer.

How to Create ODBC Data Source

1. Navigate to **Control Panel > Administrative Tools > Data Sources (ODBC)**. The ODBC Data Source Administrator dialog appears.
2. Indicate which DSN to create by selecting either the **User DSN** or **System DSN** tab.
Note: System DSN can be seen by all users while User DSN can only be seen by the user that created it.
3. Click **Add**. The Create New Data Source window appears.
4. If you installed Oracle Standard, select **Oracle in OraClient10g_home1** from the available list. If you installed Oracle Client Express, select **Oracle in XE Client** from the available list.
5. Click **Finish**. The setup dialog for the selected driver appears.
6. Click **Options** to show all options.
7. Use the following table to enter information in the applicable fields:

Note: Field names may differ depending on the drive you select.

Field	Description
Data Source Name	Enter PowerSchool .
Description	Enter PowerSchool ODBC Connection .
User ID	Enter the user name, either DataMiner or PSNavigator. Note: The PSNavigator account has access to a larger set of tables.

TNS Server Name	Enter [database server IP address]:1521/PSPROddb
Additional Settings	Leave as default.

8. Click **OK**. The newly created DSN displays in the Administration dialog.
9. Click **OK**.

Connect to Microsoft Excel

Use a third-party tool, such as Microsoft Excel, to query the database.

How to Query the Database

1. Open a Microsoft Excel worksheet.
2. Go to **Data > Get External Data > New Database Query....** The Choose Data Source dialog appears.
3. Select the Data Source that you created from the list. Click **OK** to continue. The Logon to Oracle dialog appears.
4. Enter your **Login ID** and **Password**.
Note: The password is configured during the Oracle Database installation and can be changed by the PowerSchool administrator.
5. Click **OK** to continue. The Query Wizard–Choose Columns page appears.
6. A list of all of the tables in the database appears. To view the columns within each table click the plus (+) symbol. You can select a column and click the right arrow (>) to add the column to your query.
7. To Filter the Available tables and columns list, click **Options** and change the following:
 - Select **Tables, Views, and Synonyms**.
 - Change the owner to **ps**
8. Click **Next** when you are finished building the query. The Query Wizard–Filter Data window appears.
9. Specify the filter criteria as needed.
10. Click **Next** to continue. The Query Wizard–Sort Order window appears.
11. Select the column(s) by which you want the data to be sorted.
12. Click **Next** to continue. The Query Wizard–Finish window displays.
13. Either save your query for future selection, return the data back to your Excel spreadsheet, view or edit the data in Microsoft Query, or create an OLAP Cube.
14. Click **Finish** to continue.
15. Select the cell in which the data should start.
16. Click **OK**. The New Database Query dialog closes, and the results of the query appear on the Excel spreadsheet.

PEARSON



www.PearsonSchoolSystems.com