



QAD Enterprise Applications

Installation Guide

QAD Data Warehouse Designer

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Change Summary

The following table summarizes significant differences between this document and the previous version.

Date/Version	Description	Reference
March 2015 / 6.7.4	New version of DWD; changes throughout.	--
September 2012 / 6.6.2	New version of DWD; changes throughout.	--
March 2012 / 6.5.6	Numerous updates throughout	--
September 2011 / QAD BI 3.5	Rebranded for QAD BI 3.5	--

Chapter 1

Overview

It is envisaged that QAD Data Warehouse Designer will be used by experienced data warehouse designers and implementers. QAD Data Warehouse Designer provides an environment to facilitate the rapid production of prototype data warehouse analysis areas. It also provides the functionality to move that prototype into a production environment and support the day-to-day running of a data warehouse.

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Documentation Roadmap

The QAD Data Warehouse Designer **Installation and Administration Guide**, the **online help**, and the QAD Data Warehouse Designer **User Guide** assume that you are proficient in the use of the Windows operating system.

QAD Data Warehouse Designer often provides multiple ways to accomplish a task. In some cases, you can use the main menu, the right-click menu, or a toolbar, or a key combination (e.g. Alt/M and Ctrl/M to raise menus). Instructions in this documentation generally include only the most convenient method of accomplishing a task.

The following sources of information are available with QAD Data Warehouse Designer:

QAD Data Warehouse Designer Installation and Administration Guide

The **Installation and Administration Guide** is available either as online help, as a PDF, or in printed format. The Installation and Administration Guide provides the information needed to:

- ☐ Install the QAD Data Warehouse Designer software
- ☐ Validate the various software components required by QAD Data Warehouse Designer
- ☐ Install the QAD Data Warehouse Designer metadata
- ☐ Install a Scheduler
- ☐ Optionally install third-party data warehouse applications.

QAD Data Warehouse Designer User Guide

The QAD Data Warehouse Designer **User Guide** is available either as online help, as a PDF, or in a printed manual. The User Guide provides information on how to use QAD Data Warehouse Designer to build a data warehouse. It includes a set of tutorials to assist in the familiarization of the terms and methodologies embodied in QAD Data Warehouse Designer.

QAD Data Warehouse Designer Teradata User Guide

The QAD Data Warehouse Designer **Teradata User Guide** is available either as online help, as a PDF, or in a printed manual. The Teradata User Guide provides information on how to use QAD Data Warehouse Designer to build a data warehouse in Teradata. It includes a set of tutorials to assist in the familiarization of the terms and methodologies embodied in QAD Data Warehouse Designer.

Sql Admin User Guide

The **Sql Admin User Guide** is available either as online help, or as a PDF. It provides documentation in the use of the stand alone SQL query tool shipped as part of the QAD Data Warehouse Designer product.

QAD Forum

A **web forum** is available at <http://www.qad.com>. This forum contains information on the latest version, and bug reports that may be relevant for installation. In addition the QAD Blog is available at <http://www.qad.com> which may provide additional information.

How to use this Manual

QAD Data Warehouse Designer is designed to build data warehouse analysis areas within a database environment. The installation and configuration process is very rarely a simple task as it involves a number of layered products external to QAD Data Warehouse Designer. For the more complex cases a number of hours or days should be set aside to complete this task. Therefore, it is important that the reader begins the installation process with the correct expectations. Highlighted below are the major steps in the installation and setup of QAD Data Warehouse Designer. In many environments some of these steps will have been completed independently of the installation process, or may need to be completed by a third party.

Note: This document does not cover the creation and configuration of the database required to run the data warehouse. It does not cover the procedures required to create and maintain database users; nor does it cover the installation of the database client software. Refer to the database vendor manuals for assistance.

The **Installation and Configuration** chapters provide a logical outline for the installation and setup of QAD Data Warehouse Designer for the following databases:

- ☐ For SQL Server, see **SQL Server Installation and Configuration** (on page 27)
- ☐ For Teradata, see Teradata Installation and Configuration
- ☐ For Oracle, see Oracle Installation and Configuration
- ☐ For IBM DB2, see DB2 Installation and Configuration

The rest of the manual deals with the following topics:

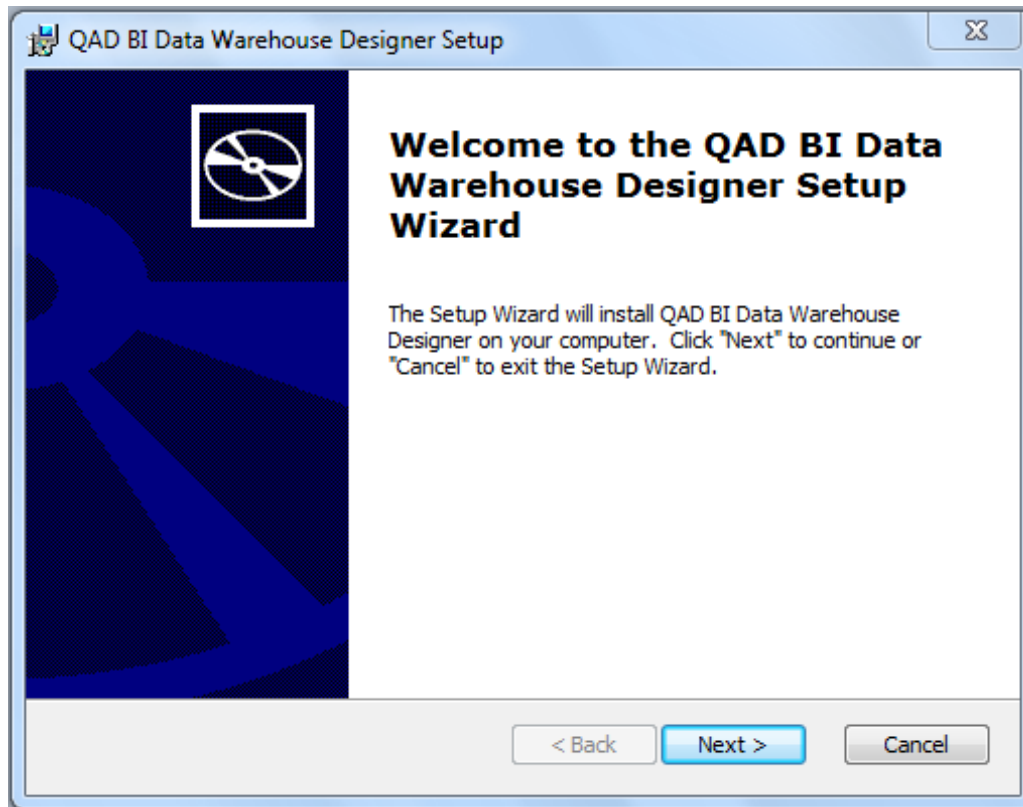
- ☐ **Tutorial Data** (on page 49) - creating and validating the tutorial data.
- ☐ **Applications** (on page 53) - loading the data warehouse applications.
- ☐ **Upgrading** (see "**Upgrading QAD Data Warehouse Designer**" on page 69) - upgrading QAD Data Warehouse Designer.
- ☐ **Unix Connection** (see "**Checking the Unix Connection**" on page 71) - checking the Unix connection.
- ☐ **Test ODBC Source** (see "**Testing an ODBC Source**" on page 73) - testing an ODBC source.
- ☐ **Validate Repository** (see "**Validating a Meta Repository**" on page 75) - validating a meta repository.
- ☐ **Maintain Scheduler** (see "**Maintaining the Windows Scheduler**" on page 77) - maintaining the Windows scheduler.
- ☐ **Languages** (on page 79) - creating and loading language files.

Chapter 2

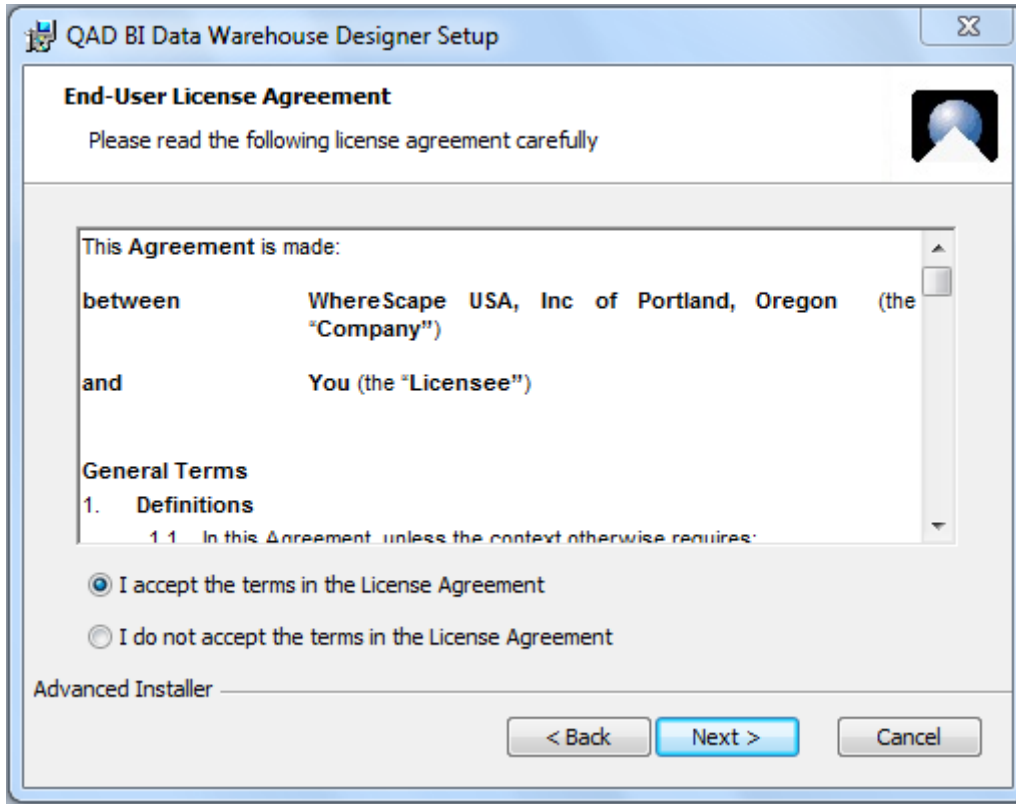
Installing QAD Data Warehouse Designer

Use the following procedure to install the QAD Data Warehouse Designer software onto a PC.

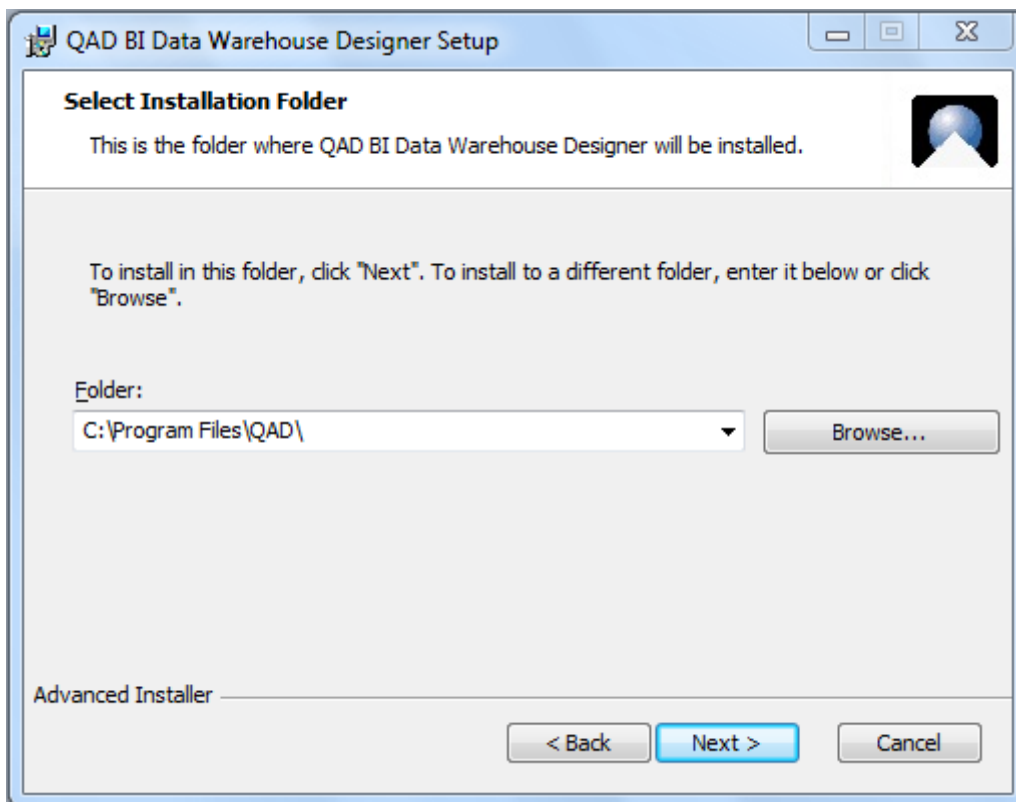
- 1 Stop any QAD Data Warehouse Designer schedulers running on the PC.
- 2 Close any other applications that are running.
- 3 Insert the QAD Data Warehouse Designer CD into your CD drive or double-click the downloaded file Data Warehouse Designer_xxxxx.msi (For example: the downloaded file for version 5.6.4, would be Data Warehouse Designer_56400.msi).
- 4 A dialog box displays, welcoming you to the QAD Data Warehouse Designer installation process. Click **Next**.



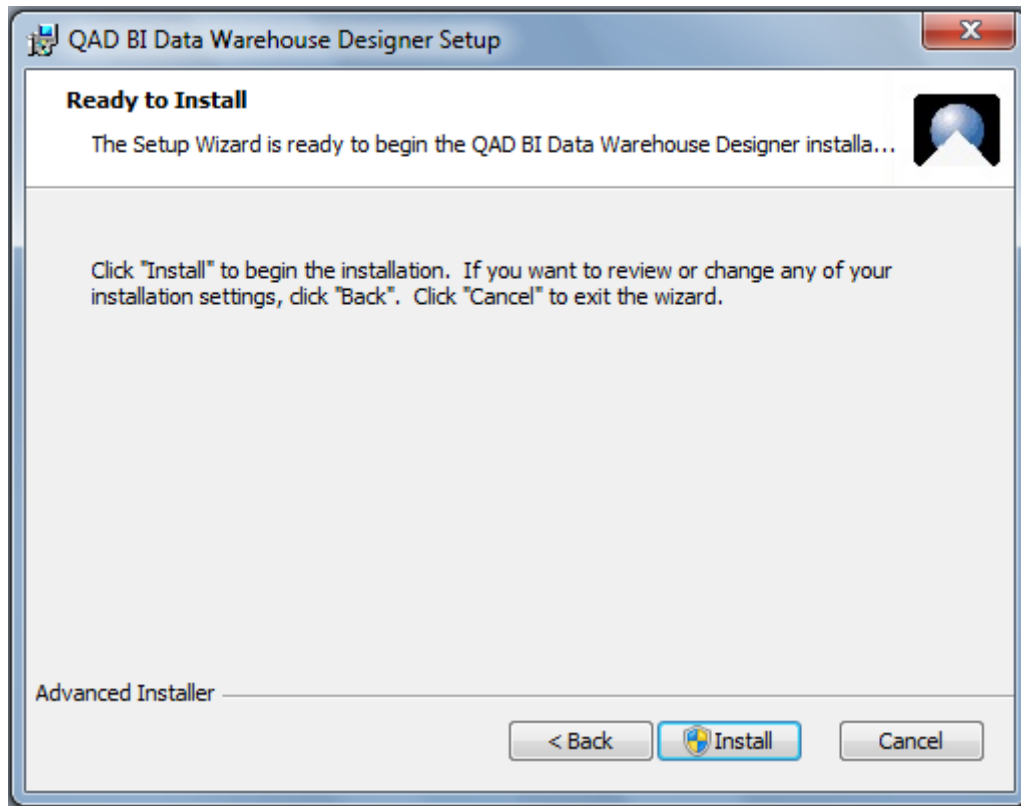
- 5 Read the license terms. If you do not accept the license agreement, you cannot continue with the installation. Select the **I Accept the terms in the License Agreement** option and click **Next**.



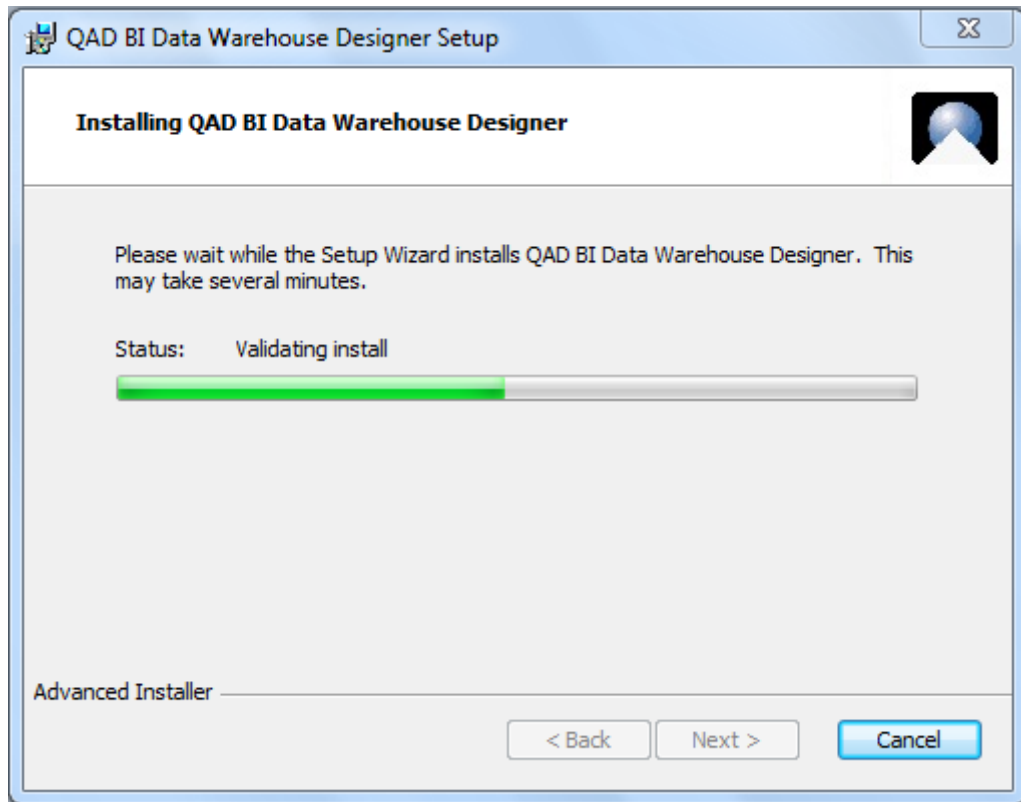
- 6 The Installation Folder dialog box displays, showing the directory where the QAD Data Warehouse Designer software will be installed. To change this directory, click **Browse...** Once you have selected the required installation folder, click **Next**.



- 7 The Ready to Install dialog box displays, giving you the opportunity to go back and change any of the information you have entered so far. Click **Install** to install the QAD Data Warehouse Designer software.



- 8 The Installing dialog box displays, showing you the progress as the files are copied.



- 9 A dialog box displays, informing you that the installation was successful. Click **Finish**.



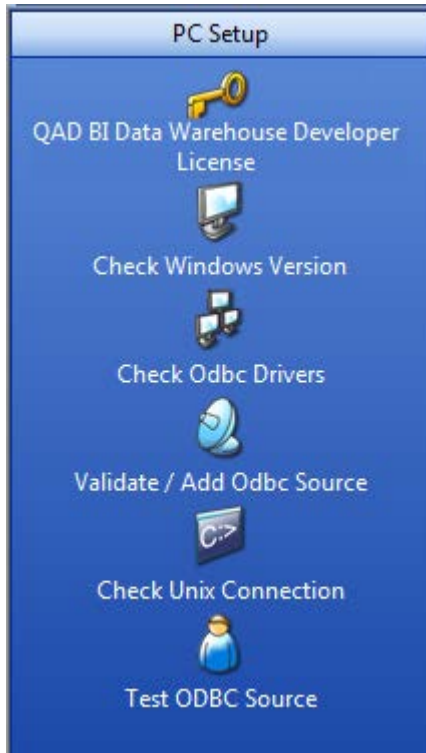
Note: If a scheduler was running or a program open (when doing an upgrade), a dialog will display, advising you that a reboot is required to finish the install.

Chapter 3

Adding Your License

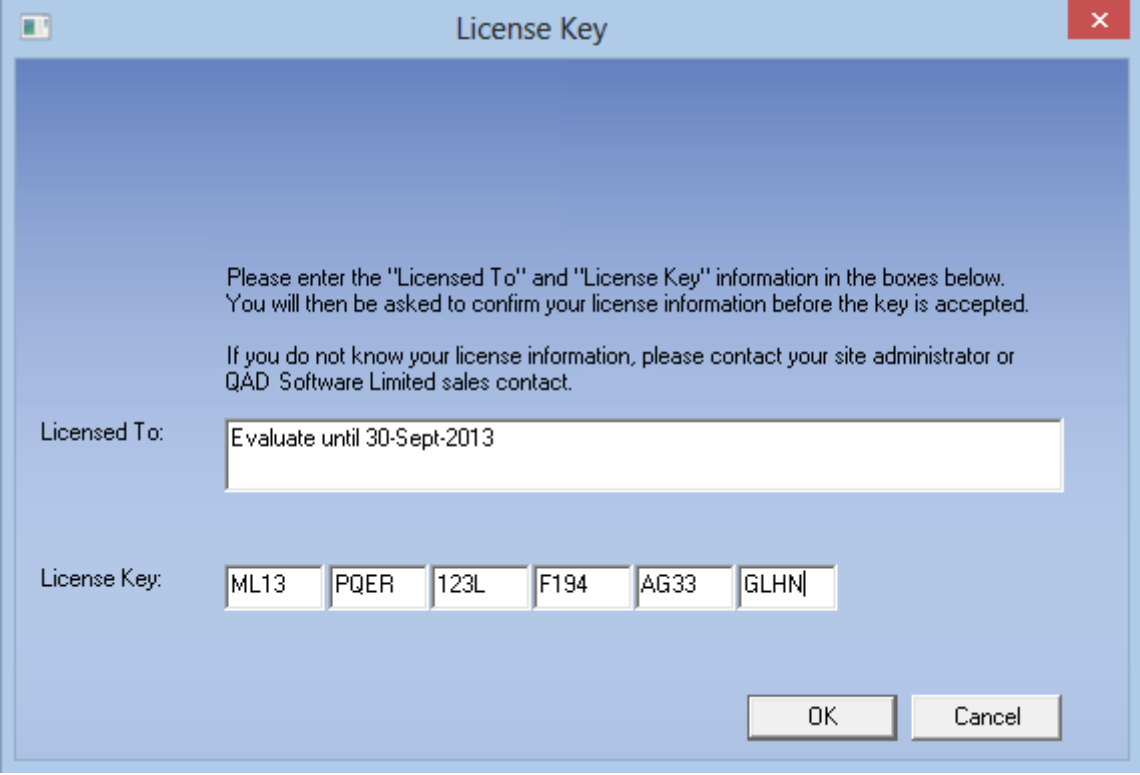
QAD Data Warehouse Designer requires a valid licensee and license key. This information and key are normally supplied in a separate email.

In QAD Administrator, click on the **PC Setup** tab in the left pane; then click on the **QAD Data Warehouse Designer License** icon.



This menu option allows the entry of the license information. Once validated the license information is stored in the registry and validated by the QAD Data Warehouse Designer program on startup.

Note: If you have not been supplied a license key then you can still use QAD Data Warehouse Designer. You will however be limited in the number of objects that you can create. The first four tutorials can be performed without a license key.



The image shows a Windows-style dialog box titled "License Key". It has a blue header bar with a standard Windows icon on the left and a red close button (X) on the right. The main area has a light blue background. The text inside reads: "Please enter the 'Licensed To' and 'License Key' information in the boxes below. You will then be asked to confirm your license information before the key is accepted." followed by "If you do not know your license information, please contact your site administrator or QAD Software Limited sales contact." Below this, there are two input sections. The first is labeled "Licensed To:" and has a single text box containing "Evaluate until 30-Sept-2013". The second is labeled "License Key:" and has six separate text boxes, each containing a two-letter code: "ML13", "PQER", "123L", "F194", "AG33", and "GLHN". At the bottom right, there are two buttons: "OK" and "Cancel".

License Key

Please enter the "Licensed To" and "License Key" information in the boxes below.
You will then be asked to confirm your license information before the key is accepted.

If you do not know your license information, please contact your site administrator or
QAD Software Limited sales contact.

Licensed To: Evaluate until 30-Sept-2013

License Key: ML13 PQER 123L F194 AG33 GLHN

OK Cancel

The example above shows the entry of an evaluation license and key.

If the key fails to validate contact <http://support.qad.com>.

Enter the license fields and click **OK**.

The license type dialog now displays:

This Agreement is made:

between **QAD** (the "Company")

and **You** (the "Licensee")

General Terms

1. Definitions

1.1 In this Agreement, unless the context otherwise requires:

Confidential Information means all information exchanged between the parties to this Agreement, whether in writing, electronically or orally, including terms of this Agreement, but does not include information which is, or becomes publicly available other than through unauthorized disclosure by the other party. In the case of the Company, the term Confidential Information includes the Software and the Documentation;

Data Warehouse Repository means a single data warehouse consisting of one or more object sets (e.g. dimensional, normalized or data store) as defined in the License Fee invoice and confirmed by you when using the License Key, and underlying support tables and utilities on one or more hardware devices sharing common objects (including but not limited to dimension tables) and may include copies or near copies used for development and testing purposes;

Documentation means software user guides (including those in electronic form), handbooks, maintenance libraries, educational materials and all other related material supplied by the Company to the Licensee for aiding the use of the Software;

Initial Support Period means the first 12 months Support Services, commencing on the date of the invoice for the License Fee and ceasing on the same date in the following year;

License Fee means the sum invoiced to the Licensee by the Company for the Licensee's use of the Software and for provision of Support Services for the Initial Support Period;

Non Production Purposes means the Licensee using the Software for the purposes of evaluation and testing but not production;

Proprietary Rights means all rights to patents, trade marks, service marks, trade names, inventions, trade secrets, copyright, moral rights, rights in a design, know-how, confidential information and all or any other intellectual property rights whether or not registered (together with the right to seek any such registration) and the right to enforce such rights which relate to the origin, manufacture, programming, operating and/or servicing of the Software and Documentation and any related enhancements or modifications;

Restricted Software means the Company's limited functionality version of the Software;

Software means the object code version of the software application;

Support Agreement means the software support agreement set out in Annex A;

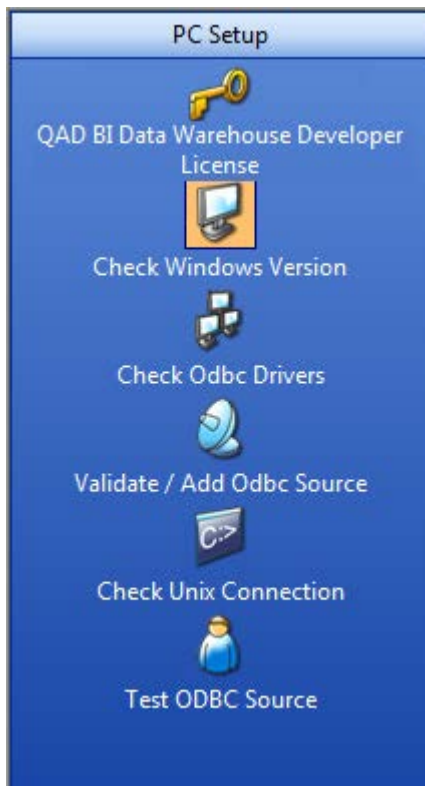
Click **ACCEPT** to confirm the type of license.

Chapter 4

Checking Your Windows Version

QAD Data Warehouse Designer requires a Windows 2003, Windows XP, Windows 2008, Windows 2008 R2, Windows Vista, Windows 7 or Windows 8 environment with a screen size set to at least 1024x768. This step simply validates that the above requirements have been met. The QAD Data Warehouse Designer front end will run in other Windows environments, but the scheduler may not. QAD Data Warehouse Designer will not run under Windows 95, 98 or NT. Please note that if the minimum screen size of 1024x768 is used then the standard font size must also be used.

In QAD Administrator, click on the **PC Setup** tab in the left pane; then click on the **Check Windows Version** icon.



Chapter 5

Checking Your ODBC Drivers

Both the SQL Server and Microsoft for Oracle ODBC drivers are shipped as normal in Windows 2003, Windows XP, Windows 2008, Windows 2008 R2, Windows Vista, Windows 7 and Windows 8. This step will usually be a validation of the pre-installed drivers.

QAD Data Warehouse Designer connects to the data warehouse database using ODBC. This step checks that the ODBC driver is present and up to date.

In QAD Administrator, click on the **PC Setup** tab in the left pane; then click on the **Check Odbc Drivers** icon.



A list of ODBC drivers will be displayed provided the PC user has sufficient privileges to access the registry.

ODBC Driver			
Driver Name	Driver File	Version	Status
Microsoft Access-Treiber (*.mdb)	C:\Windows\system32\odbcjt32.dll	6.2.9200.16384 (...)	
Driver do Microsoft Paradox (*.db)	C:\Windows\system32\odbcjt32.dll	6.2.9200.16384 (...)	
Driver do Microsoft Excel(*.xls)	C:\Windows\system32\odbcjt32.dll	6.2.9200.16384 (...)	
Microsoft Text Driver (*.txt; *.csv)	C:\Windows\system32\odbcjt32.dll	6.2.9200.16384 (...)	
Driver da Microsoft para arquivos texto (...)	C:\Windows\system32\odbcjt32.dll	6.2.9200.16384 (...)	
Microsoft dBase-Treiber (*.dbf)	C:\Windows\system32\odbcjt32.dll	6.2.9200.16384 (...)	
SQL Server	C:\Windows\system32\SQLSRV32.dll	6.2.9200.16384 (...)	OK
Microsoft Excel Driver (*.xls)	C:\Windows\system32\odbcjt32.dll	6.2.9200.16384 (...)	
Driver do Microsoft dBase (*.dbf)	C:\Windows\system32\odbcjt32.dll	6.2.9200.16384 (...)	
Microsoft Paradox-Treiber (*.db)	C:\Windows\system32\odbcjt32.dll	6.2.9200.16384 (...)	
Microsoft ODBC for Oracle	C:\Windows\system32\msorcl32.dll	6.2.9200.16384 (...)	OK
Microsoft Text-Treiber (*.txt; *.csv)	C:\Windows\system32\odbcjt32.dll	6.2.9200.16384 (...)	
Microsoft Excel-Treiber (*.xls)	C:\Windows\system32\odbcjt32.dll	6.2.9200.16384 (...)	
Microsoft Access Driver (*.mdb)	C:\Windows\system32\odbcjt32.dll	6.2.9200.16384 (...)	
Driver do Microsoft Access (*.mdb)	C:\Windows\system32\odbcjt32.dll	6.2.9200.16384 (...)	
Microsoft Paradox Driver (*.db)	C:\Windows\system32\odbcjt32.dll	6.2.9200.16384 (...)	
Microsoft dBase Driver (*.dbf)	C:\Windows\system32\odbcjt32.dll	6.2.9200.16384 (...)	
Teradata	C:\Program Files (x86)\Teradata\Client\...	14.10.00.00	OK
NetezzaSQL	C:\Windows\SysWOW64\nsqlodbc.dll	7.0.2.27689	
IBM DB2 ODBC DRIVER - DB2COPY1	C:\PROGRA~1\IBM\SQLLIB\BIN\DB2CL...		
IBM DB2 ODBC DRIVER	C:\Program Files\IBM\SQLLIB\BIN\DB2...		
PostgreSQL ANSI	C:\Program Files (x86)\Greenplum\gree...	08.04.0200	
PostgreSQL Unicode	C:\Program Files (x86)\Greenplum\gree...	08.04.0200	
SQL Server Native Client 11.0	C:\Windows\SysWOW64\sqlncli11.dll	2011.0110.3000.0...	OK
Oracle in OraClient11g_home1_32bit	C:\oracle\product\11.2.0\client_2\BIN\...	11.2.0.3.0	OK
Hortonworks Hive ODBC Driver	C:\Program Files (x86)\Hortonworks Hi...		

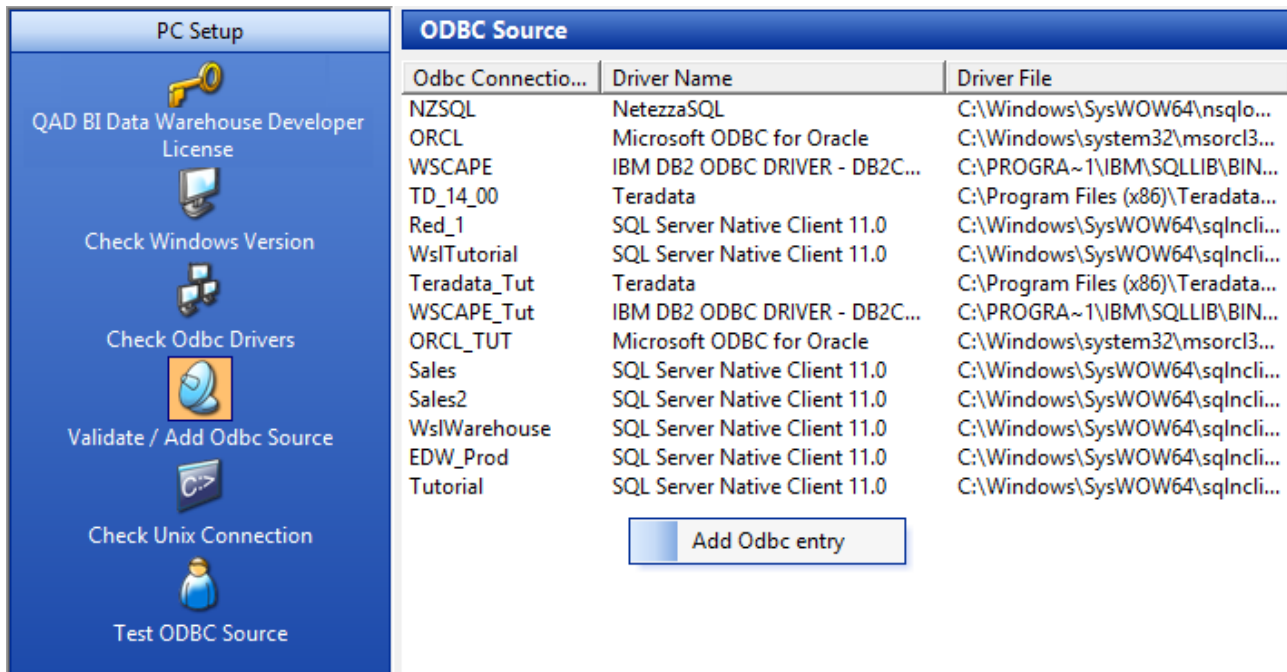
Chapter 6

Creating an ODBC Connection

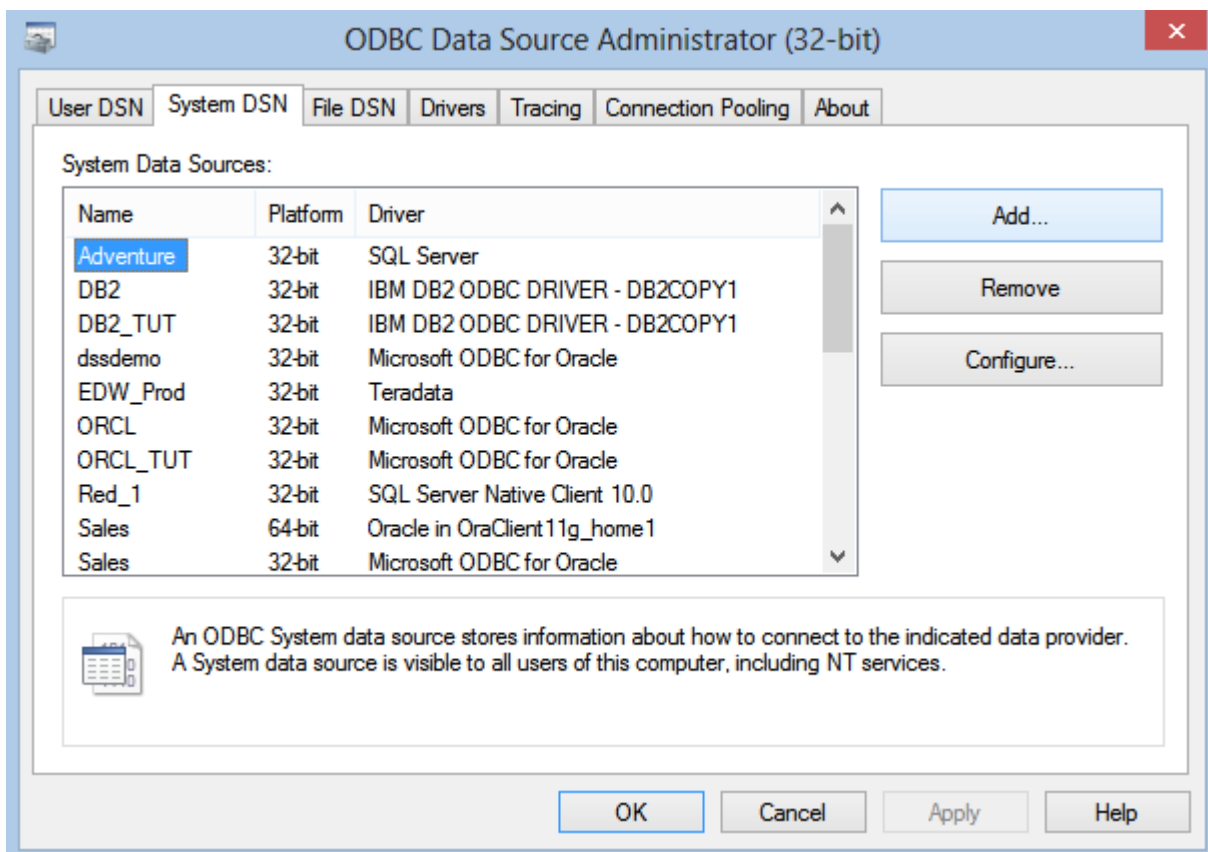
In QAD Administrator, click on the **PC Setup** tab in the left pane; then click on the **Validate/ Add Odbc Source** icon.



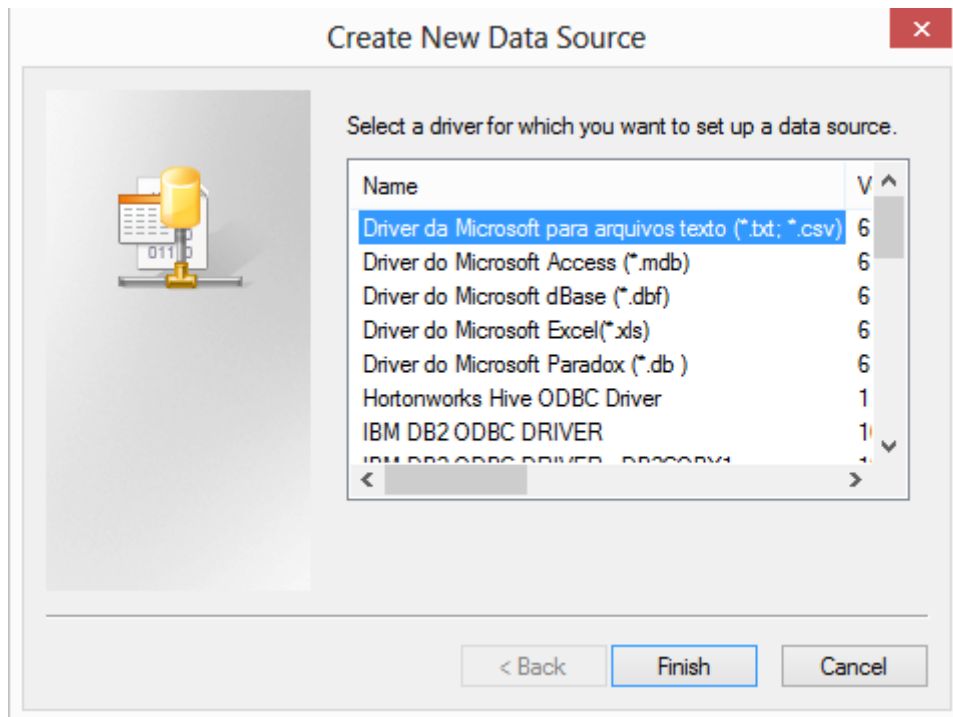
An entry needs to exist in the ODBC tables for the data warehouse database. This step lists all entries found that utilize an ODBC driver. If no entry exists for the data warehouse database then it will be necessary to add one. Right-click in the right frame to bring up the **Add Odbc entry** menu option.



Click on the **System DSN** tab to view the system wide ODBC entries. Click on the '**Add...**' button to add a new entry.



Select the relevant driver and click **Finish**.



Enter the relevant details to create a new ODBC data source.

Chapter 7

SQL Server Installation and Configuration

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SQL Server Installation and Configuration Introduction

The steps provided here are an indication of the normal process required to install and configure QAD Data Warehouse Designer. In some environments additional processes will be required.

- 1 Install the QAD Data Warehouse Designer software onto your PC. See ***Installing Data Warehouse Designer for SQL Server*** (on page 28)
- 2 Add your license key. See ***Adding your License*** (on page 15)
- 3 Check your Windows version. See ***Checking your Windows Version*** (on page 19)
- 4 Check your ODBC Drivers. See ***Checking your ODBC Drivers*** (on page 21)
- 5 Designate a database that is to be used as the data warehouse database. See ***Creating a SQL Server Database*** (on page 29)
- 6 Add the definition of an ODBC data source to connect to the data warehouse database. See ***Configuring a SQL Server Metadata Connection (DSN)*** (on page 30)
- 7 Create the QAD metadata repository. See ***Creating a Metadata Repository for SQL Server*** (on page 35)
- 8 Install a Windows Scheduler. See ***Installing a Windows Scheduler for SQL Server*** (on page 37)
- 9 If required, load the QAD tutorial tables into a separate database. It is highly recommended that the tutorials be undertaken. See ***Creating Tutorial Data*** (on page 50)

Note: A Quickstart option is available for SQL Server. This option will perform all the required tasks (except the entering of a license key) when provided with a valid database server.

Problem Solving

If problems occur in your install that cannot be resolved proceed as follows when running the QAD Administrator utility:

- 1 Create a log file by selecting **Log/Start Log** from the menu bar. Enter a file name.

- 2 Step through at least:
 - PC Setup --> Check Windows version
 - PC Setup --> Check ODBC driver
 - PC Setup --> Validate/Add Odbc source
 - DSS User --> Validate Oracle user privileges (if an Oracle DataWarehouse)
 - Create/Validate Meta Repository --> Validate meta repository
- 3 Select **Log/Stop Log** to close off the log
- 4 Edit the log and remove any passwords that appear.
- 5 Send your log file to <http://support.qad.com>

Installing Data Warehouse Designer for SQL Server

Installation Prerequisites

QAD Data Warehouse Designer requires certain client and server components.

Client Prerequisites

- ☐ Windows 2003, Windows XP SP2, Windows 2008, Windows 2008 R2, Windows Vista, Windows 7 or Windows 8.
- ☐ 100MB available disk space
- ☐ ODBC Version 3.0 (normally shipped as part of the Operating System).
- ☐ For building a data warehouse, the appropriate Microsoft ODBC driver for SQL Server is required.

Server Prerequisites

- ☐ One of the following data warehouse database platforms is required: Microsoft SQL Server 2005, 2008, 2008 R2 or 2012
- ☐ To use the QAD Data Warehouse Designer Scheduler, a UNIX, Linux or Windows based server is also required (this may be the database server). QAD Data Warehouse Designer only supports sh and ksh under UNIX and bash under Linux.

Installation of QAD Data Warehouse Designer

To install QAD Data Warehouse Designer, see ***Installing QAD Data Warehouse Designer*** (on page 11)

Creating a SQL Server Database

The minimum SQL Server permissions are as follows:

Server roles:

- ☐ bulkadmin - this is required if you want to load files or use native odbc loads

Database roles (on the database with the RED metadata in it):

- ☐ db_datareader
- ☐ db_datawriter
- ☐ db_ddladmin

Database grants (on the database with the RED metadata in it):

- ☐ SELECT
- ☐ INSERT
- ☐ UPDATE
- ☐ DELETE
- ☐ EXECUTE

Permissions to kill process when killing jobs in the scheduler:

- ☐ VIEW SERVER STATE
- ☐ ALTER ANY CONNECTION

NOTE: When creating a new repository or validating the metadata in an existing repository, you're required to log into SQL Server with a user who has SYSADMIN or the ALTER TRACE permission.

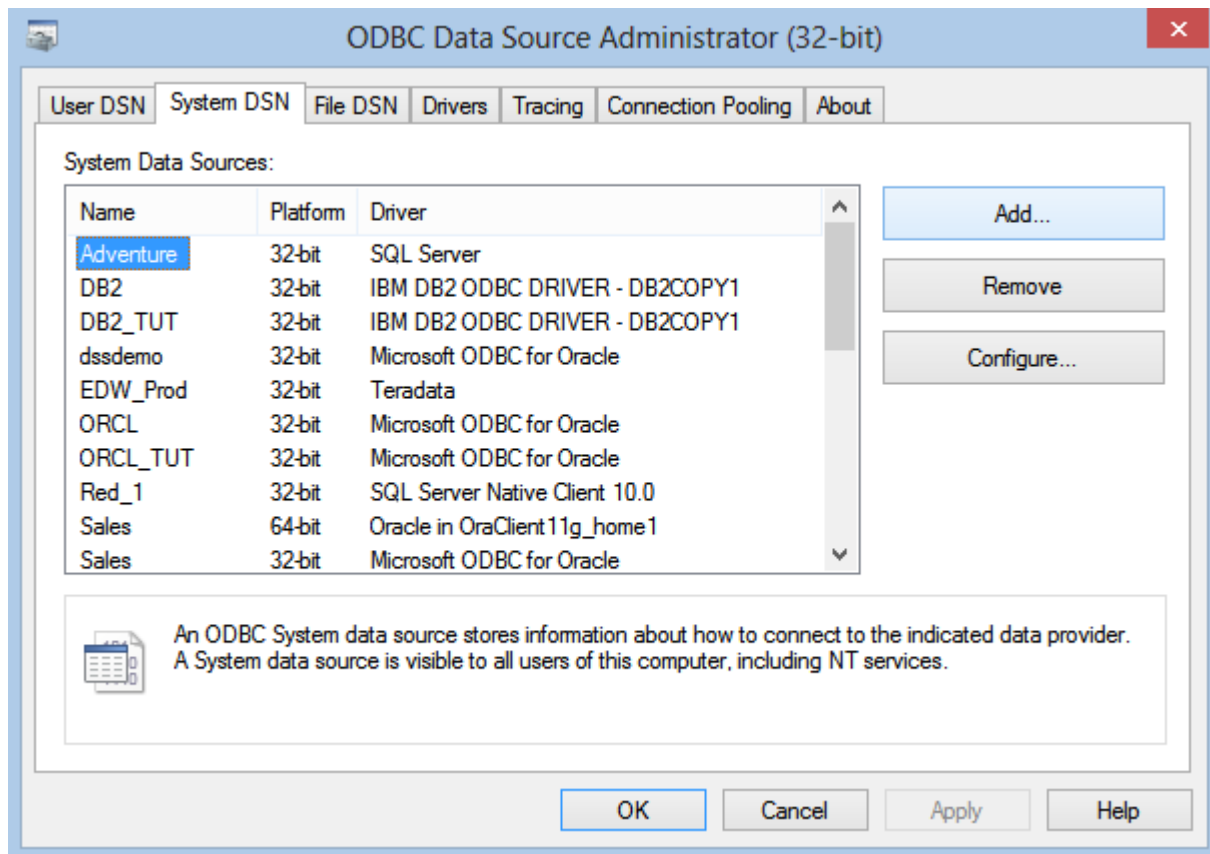
This is because almost all the QAD procedures have a catch all with log file option exception handler.

This ensures that in the event that the scheduler cannot log errors to the database, it can log errors to SQL Server logs and Application logs.

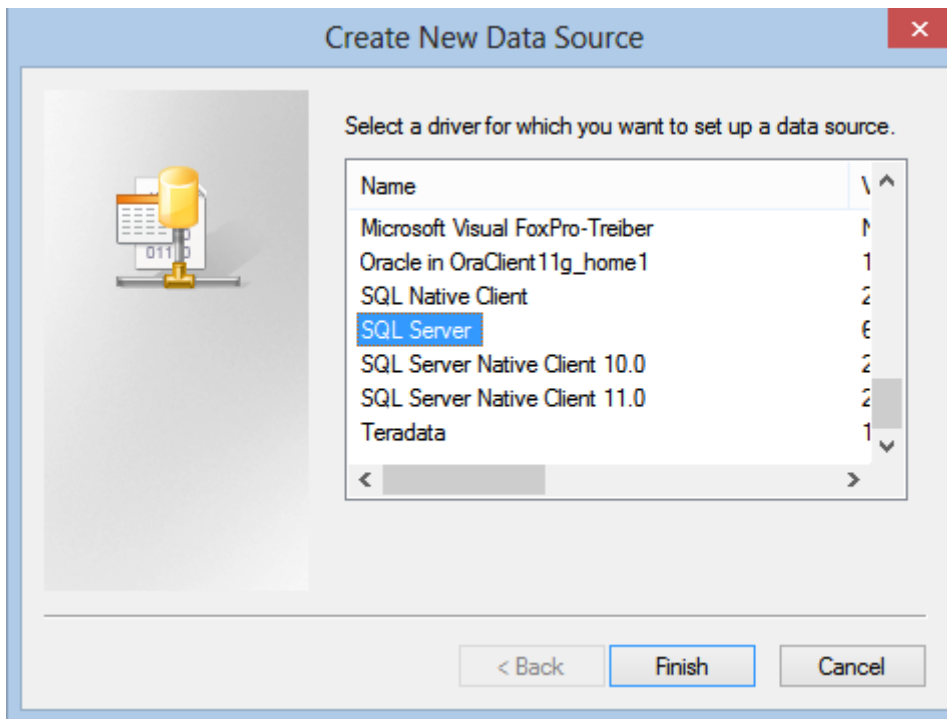
Configuring a SQL Server Metadata Connection (DSN)

To begin adding an ODBC Source from QAD Administrator, see ***Creating an ODBC Connection*** (on page 23)

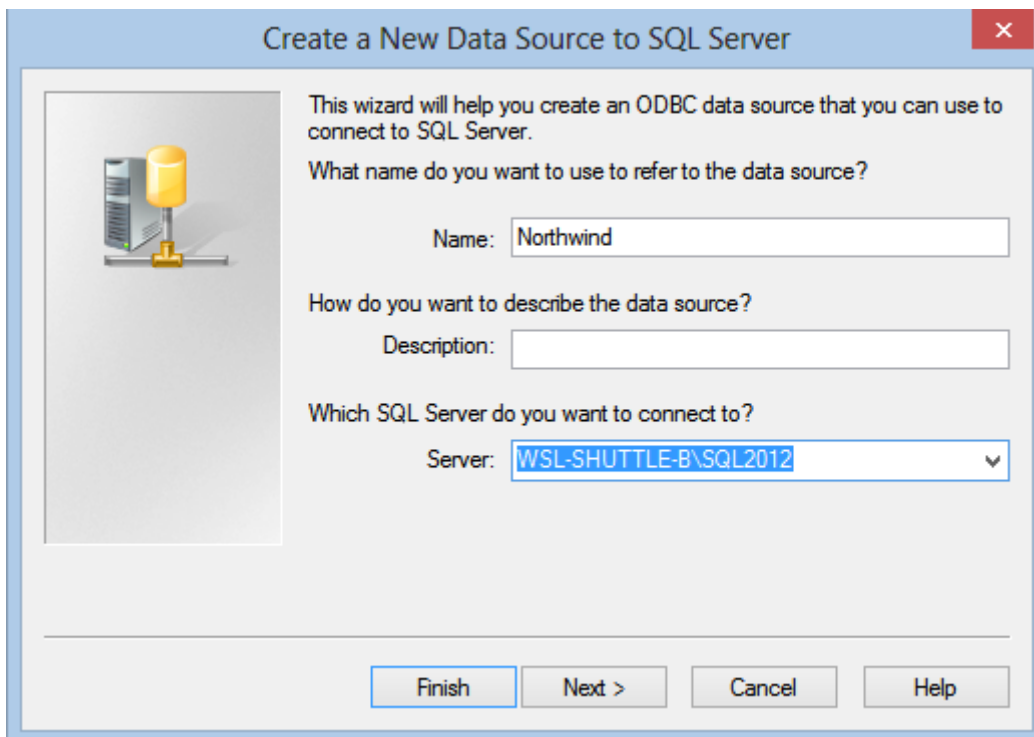
In ODBC Data Source Administrator, click on the **System DSN** tab to view the system wide ODBC entries. Click the '**Add...**' button to add a new entry.



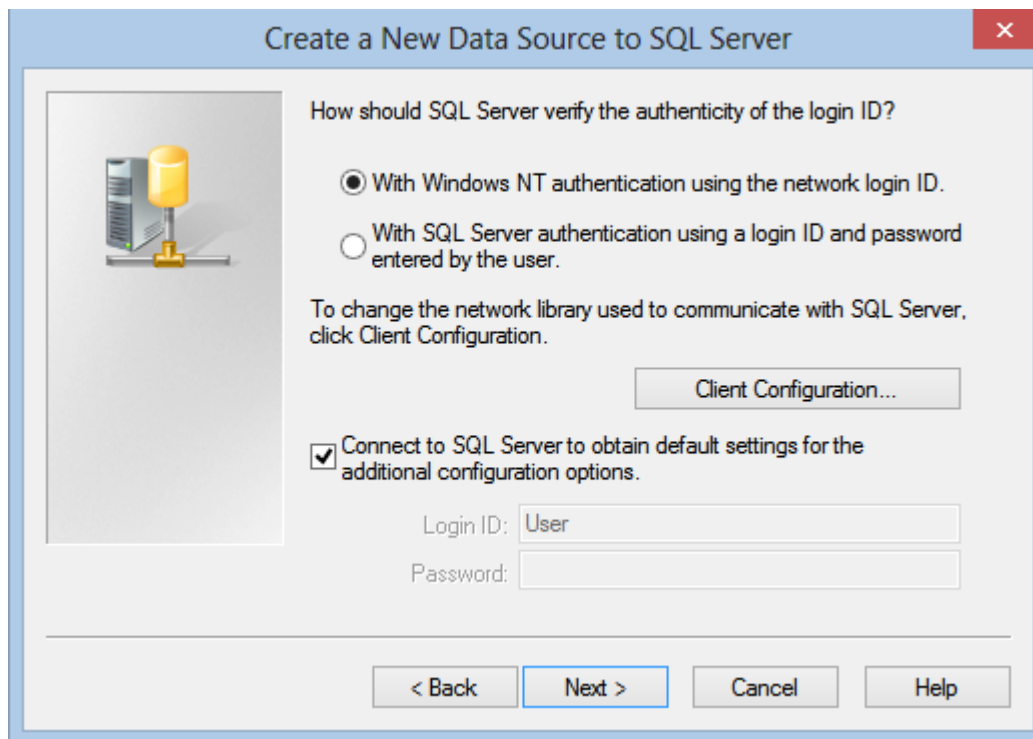
Select a **SQL Server** driver from the driver list.



A popup as shown below will appear. Enter a **Name** for the ODBC Source and select or enter the **Server**. Click **Next**.

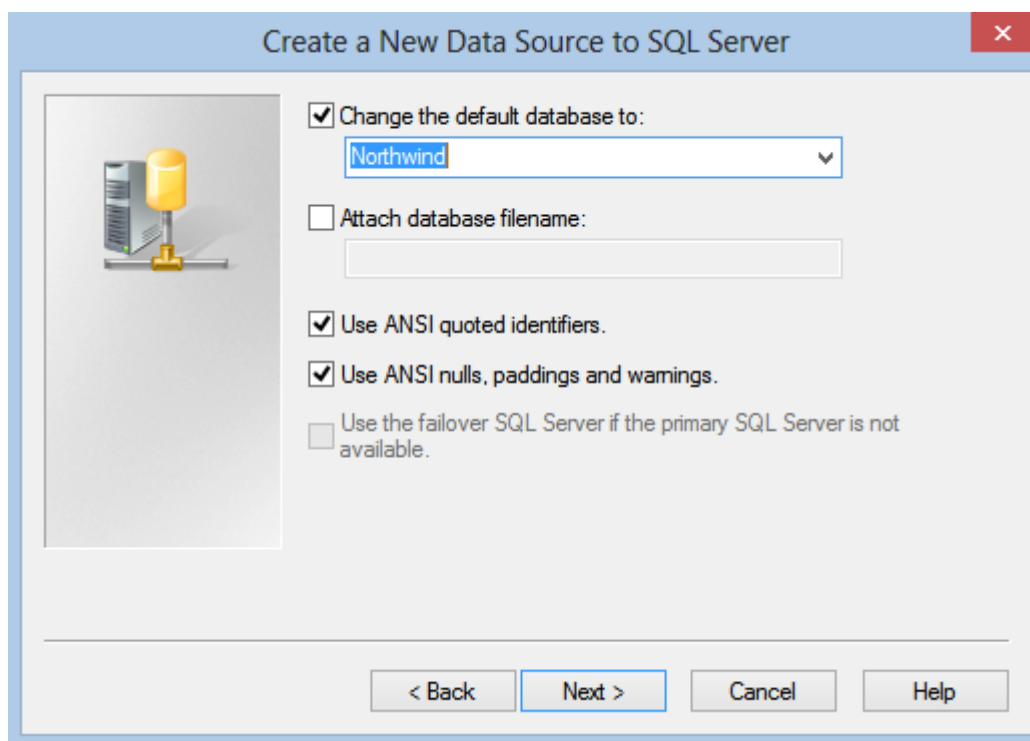


A new popup will appear with authentication details. Change as required or leave as shown if you are unsure. Click **Next**.



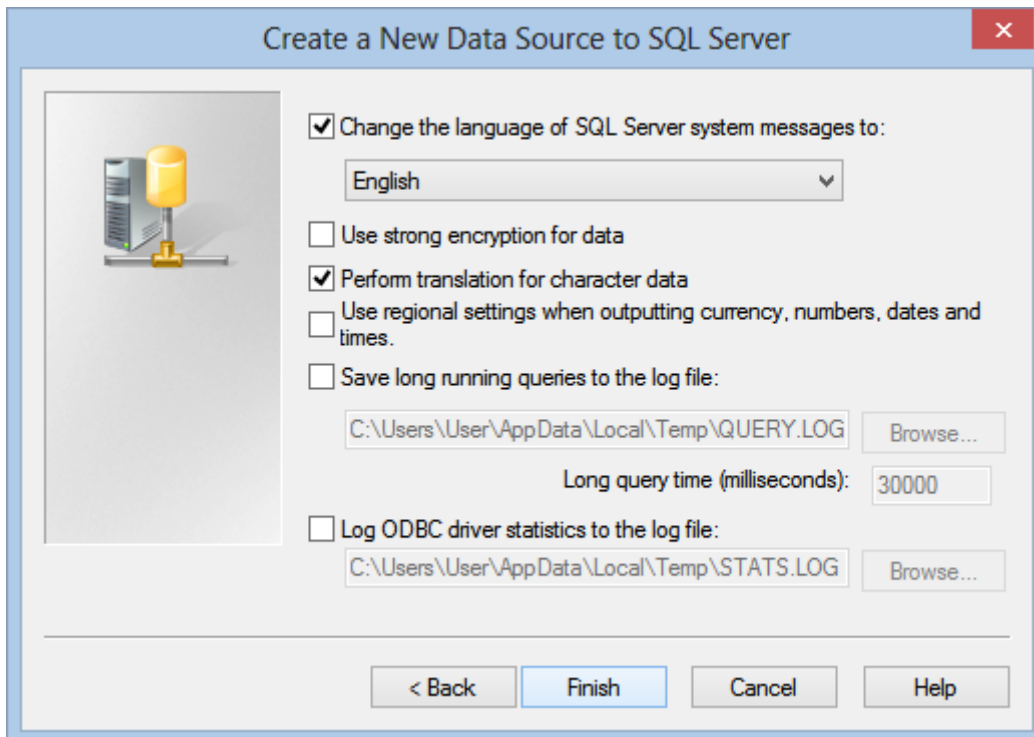
The screenshot shows a Windows-style dialog box titled "Create a New Data Source to SQL Server". On the left is an icon of a server with a yellow cylinder. The main area contains the question "How should SQL Server verify the authenticity of the login ID?". There are two radio buttons: the first is selected and labeled "With Windows NT authentication using the network login ID.", and the second is labeled "With SQL Server authentication using a login ID and password entered by the user.". Below this is a text instruction: "To change the network library used to communicate with SQL Server, click Client Configuration.", followed by a button labeled "Client Configuration...". A checkbox is checked and labeled "Connect to SQL Server to obtain default settings for the additional configuration options.". Below this are two text boxes: "Login ID:" containing the text "User" and "Password:" which is empty. At the bottom are four buttons: "< Back", "Next >", "Cancel", and "Help".

A popup will provide the opportunity to select a database. The following example shows the selection of the Northwind database. Select a database and click **Next**.

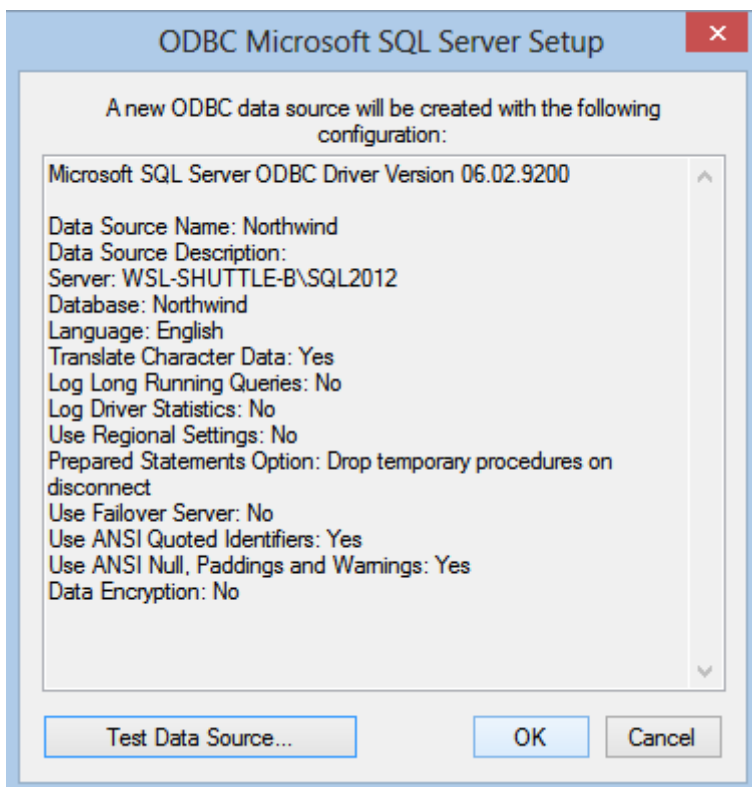


The screenshot shows the same dialog box as before, but at a different step. The "Change the default database to:" checkbox is checked, and a dropdown menu is open showing "Northwind". The "Attach database filename:" checkbox is unchecked, with an empty text box below it. The "Use ANSI quoted identifiers." and "Use ANSI nulls, paddings and warnings." checkboxes are both checked. The "Use the failover SQL Server if the primary SQL Server is not available." checkbox is unchecked. At the bottom are the same four buttons: "< Back", "Next >", "Cancel", and "Help".

A further popup will appear to allow the setting of other features if desired. Ensure that the regional settings checkbox is not used. If this is used then date and number formats will be in regional standards rather than native form. Click **Finish**.



Test the data source using the 'Test Data Source...' button, else just click **OK**.

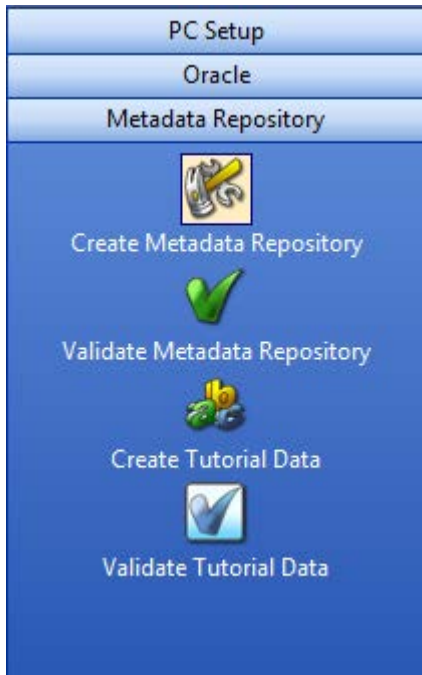




TIP: If multiple PCs will access the data warehouse they must all use the same data source name as entered here.

Creating a Metadata Repository for SQL Server

In QAD Administrator, click on the **Metadata Repository** tab in the left pane; then click on the **Create Metadata Repository** icon.

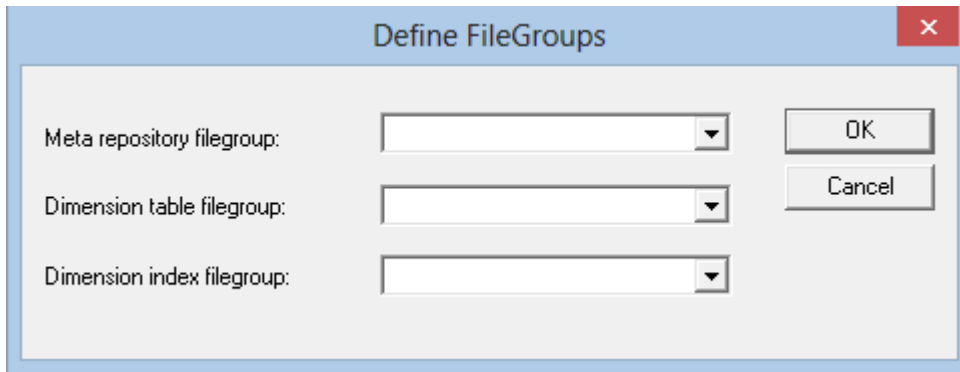


This option will create the QAD meta tables, sequences and procedures in the specified schema. It checks to ensure that the schema, database or user does not contain an existing metadata repository before starting the metadata install.

Click on **Create Metadata Repository**. Enter the **Odbc Connect**, **User Name** and **Password** and Click **OK**.

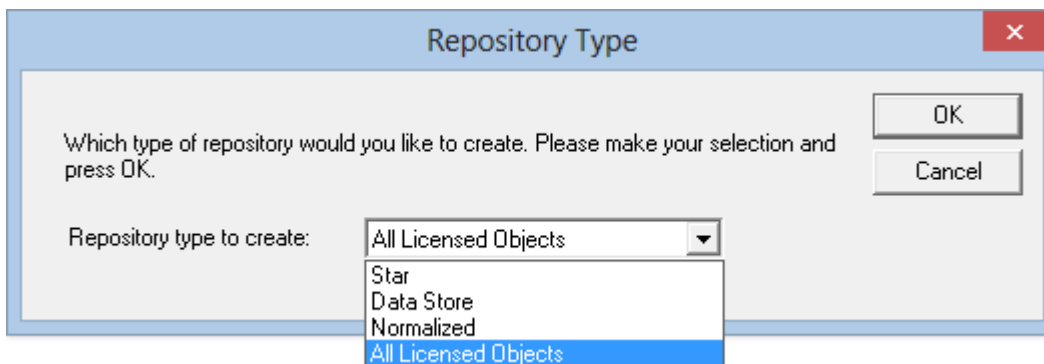
A screenshot of the 'Meta Repository Logon' dialog box. It has a title bar with a close button. The main area contains the text: 'Select the ODBC data source and Log on to the User where the NEW Data Warehouse is to be created.' Below this are three fields: 'Odbc Connect' with a dropdown menu showing 'WslWarehouse', 'User Name' with a text box containing 'WslWarehouse', and 'Password' with a text box containing 'xxx'. To the right of the fields are 'OK' and 'Cancel' buttons.

When creating a SQL Server metadata repository, an additional screen is displayed requesting **Filegroup** information. Select the required **Filegroups** and click **OK**. If Filegroups are not being used, leave the Filegroups blank and click **OK**.



The 'Define FileGroups' dialog box has a title bar with a close button. It contains three labels with corresponding dropdown menus: 'Meta repository filegroup:', 'Dimension table filegroup:', and 'Dimension index filegroup:'. To the right of these fields are two buttons: 'OK' and 'Cancel'.

Depending on the type of license you have, the following dialog may be displayed:



The 'Repository Type' dialog box has a title bar with a close button. It contains a text prompt: 'Which type of repository would you like to create. Please make your selection and press OK.' Below this is a label 'Repository type to create:' followed by a dropdown menu. The dropdown menu is open, showing a list of options: 'All Licensed Objects', 'Star', 'Data Store', 'Normalized', and 'All Licensed Objects' (highlighted in blue). To the right of the dropdown are two buttons: 'OK' and 'Cancel'.

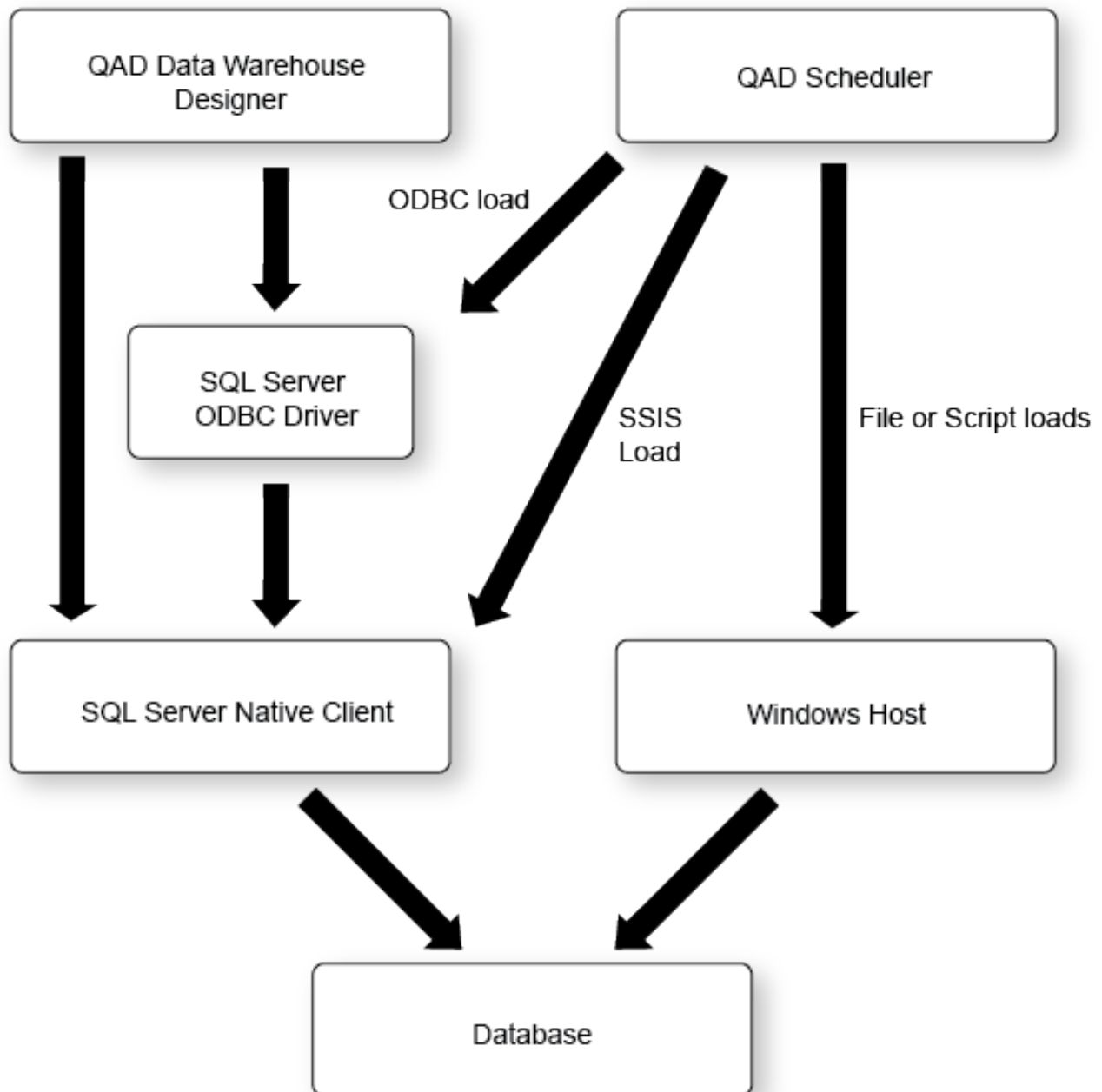
If it is displayed, select the type of repository required and click **OK**.

Note: The metadata repository and data warehouse tables must both be created under the **dbo** schema when using SQL Server as the data warehouse server. Ensure that the user creating the meta repository has the required privileges to create objects in **dbo**.

Note: This is just setting the default objects visible in Data Warehouse Designer. They can later be changed under **Tools/Options**.

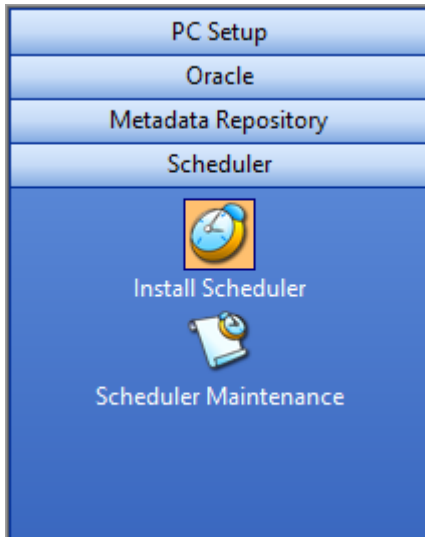
Installing a Windows Scheduler for SQL Server

This option installs and starts a copy of the QAD Windows scheduler. The scheduler runs as a system service and can also be maintained through the normal Windows services functions. The following diagram provides an overview of how QAD Data Warehouse Designer and the scheduler access a **SQL Server** database.



The scheduler makes use of the ODBC layer to perform the routine tasks involved in scheduling and running jobs. QAD Data Warehouse Designer and the scheduler can also use SSIS to load data into SQL Server. For file or script based loads, the scheduler actions the load on the host system utilizing BULK INSERT.

In QAD Administrator, click on the **Scheduler** tab in the left pane; then click on the **Install Scheduler** icon.



On selection of this menu option the following dialog box will appear:

Windows Scheduler Definition	
Unique Identifier (e.g. SID_user):	\s\Warehouse
Scheduler Name (e.g. WINnnnn):	WIN0001
Service Display Name:	QAD \s\Warehouse
Service logged on under User:	System Account
Work Directory:	C:\ProgramData\QAD\Work\
Log File:	C:\ProgramData\QAD\Scheduler\WslSched_\s\Warehouse.log
Poll Interval (default 30) seconds:	10
Log Level (0=none, 9=debug)	2
Direct Path Load or ODBC	Odbc sql load
TNS Service (Oracle):	\s\Warehouse
ODBC Connection:	\s\Warehouse
Database User id:	\s\Warehouse
Database Password:	xxx
MetaData Schema (DB2):	
MetaData Database (Teradata):	

Unique Identifier

Each scheduler requires a unique name (possibly the database name and user e.g. WslWarehouse_sa). This unique name is the name by which the service is referenced.

Scheduler Name

When scheduling a job with QAD Data Warehouse Designer it is possible to assign the job to a specific scheduler. Each scheduler should therefore have a unique name. The default name is WIN0001. Most users change this to be the scheduler machine's name followed by a number, e.g.: DWHP01, where DWHP is the name of the windows scheduler server.

Service Display Name

This field displays the name that the scheduler will appear under when viewed through the Windows services. It is a combination of the string 'QAD' and the unique identifier.

Service Logged on Under User

This is the name of the Windows local user account that the scheduler service will use when logging on. The default setting is **System Account**, also known as the **Local System** service account. To set the scheduler to use a Windows domain user account with a password, use the Service Account option from the right-click menu. If a domain user account is specified then the contents of this field (on the **Windows Scheduler Definition** dialog) are ignored.

Note: A domain user account will require the **log on as a service** privilege in order for it to work. This is assigned automatically when setting the log on account using the Services console in Windows.

Work Directory

The directory used to store some temporary files created by the scheduler.



TIP: Two schedulers should not use the same work directory

Log File

The full path where the scheduler service will write a log of the various actions undertaken. This file may get large if log level 9 is set.

Poll Interval

This defines the frequency of the scheduler polling the database, looking for work. The default is 30 seconds. If set to a very low interval such as 1 then the impact on the database may be noticeable.

Log Level

This defines the level of detail written to the log file. The following logging levels are available:

- ☐ 0 = will result in no information being written.
 - ☐ 1 = fatal errors only
 - ☐ 2 = major events
 - ☐ 3 = major events and return stats to caller
 - ☐ 9 = full debug
-



TIP: Setting Log Level 3 will return timing stats during ODBC based loads

Direct Path load or Odbc load

This should always be **ODBC sql load** for SQL Server schedulers.

TNS Service

This is not set for SQL Server schedulers.

ODBC Connection

The ODBC connection field requires the ODBC source name that will provide a connection to the data warehouse system. The scheduler uses ODBC to connect to the data warehouse.

Database User Id

For Windows Authentication, leave this field empty. For SQL Server Authentication, enter a database username.

Database Password

For Windows Authentication, leave this field empty. For SQL Server Authentication, enter the password for the database username entered in the **Database User Id** field.

Metadata Schema (DB2) / Metadata Database (Teradata)

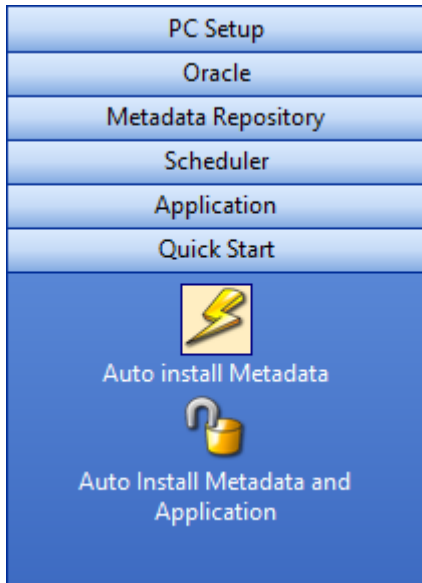
This is not set for SQL Server schedulers.

Note: A windows scheduler must be run as either the system service account or as a user with administrator privileges in windows.

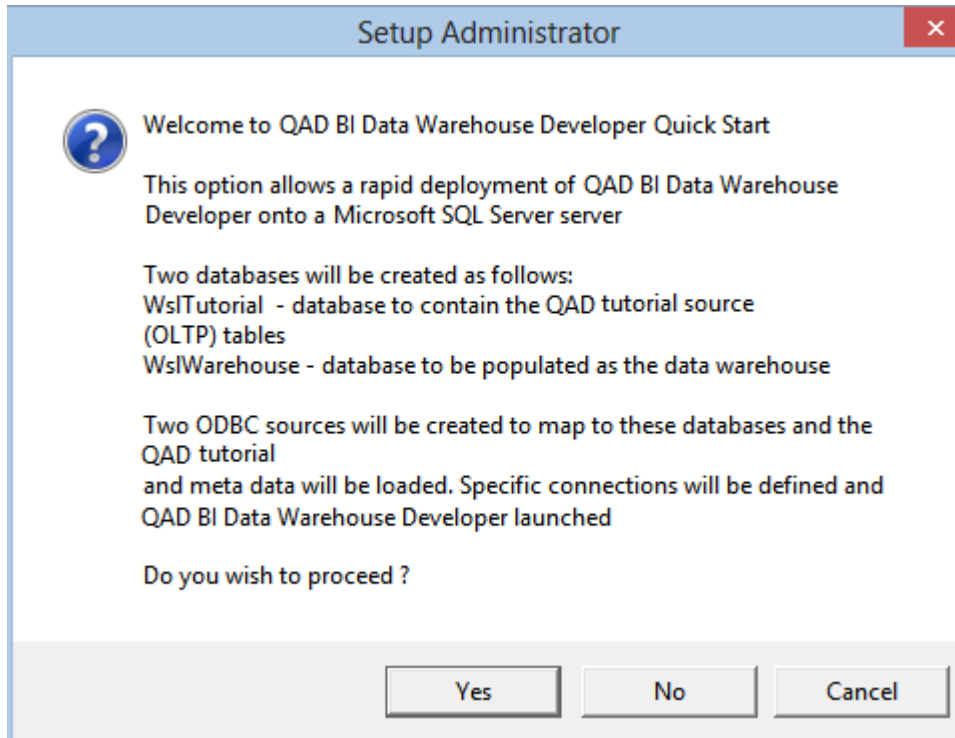
SQL Server Quick Start

The quick start component of the QAD Administrator attempts to do a rapid install of QAD Data Warehouse Designer onto a SQL Server database server. It creates two databases on this server and then installs the Data Warehouse Designer software and the tutorial; finally invoking QAD Data Warehouse Designer and the on-line tutorial help.

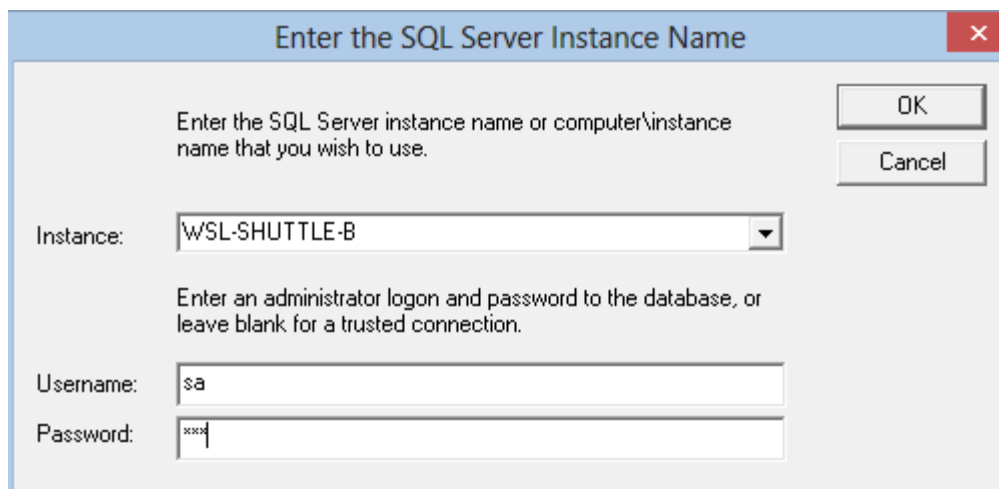
On the **Quick Start** tab, click on the **Auto install Metadata** icon to start.



The following dialog is displayed. Click **Yes** to proceed with the creation of the databases.



You will first be asked for the SQL Server instance in which to load the metadata repository and tutorial. The following dialog box is presented.



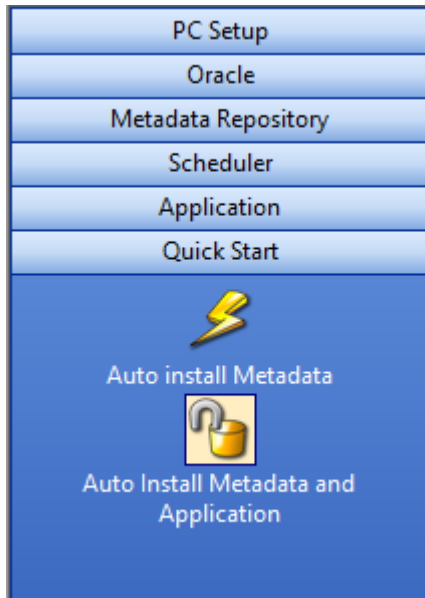
Data Warehouse Designer will attempt to locate all SQL Server servers available and list them in the drop-down. This process can fail for a number of reasons; in which case the **Instance** name will need to be ascertained and entered. Leave the **Username** and **Password** blank if using a trusted connection and no password is required. Click **OK** when complete.

Once the install has completed Data Warehouse Designer will allow you to logon to the newly created data warehouse,

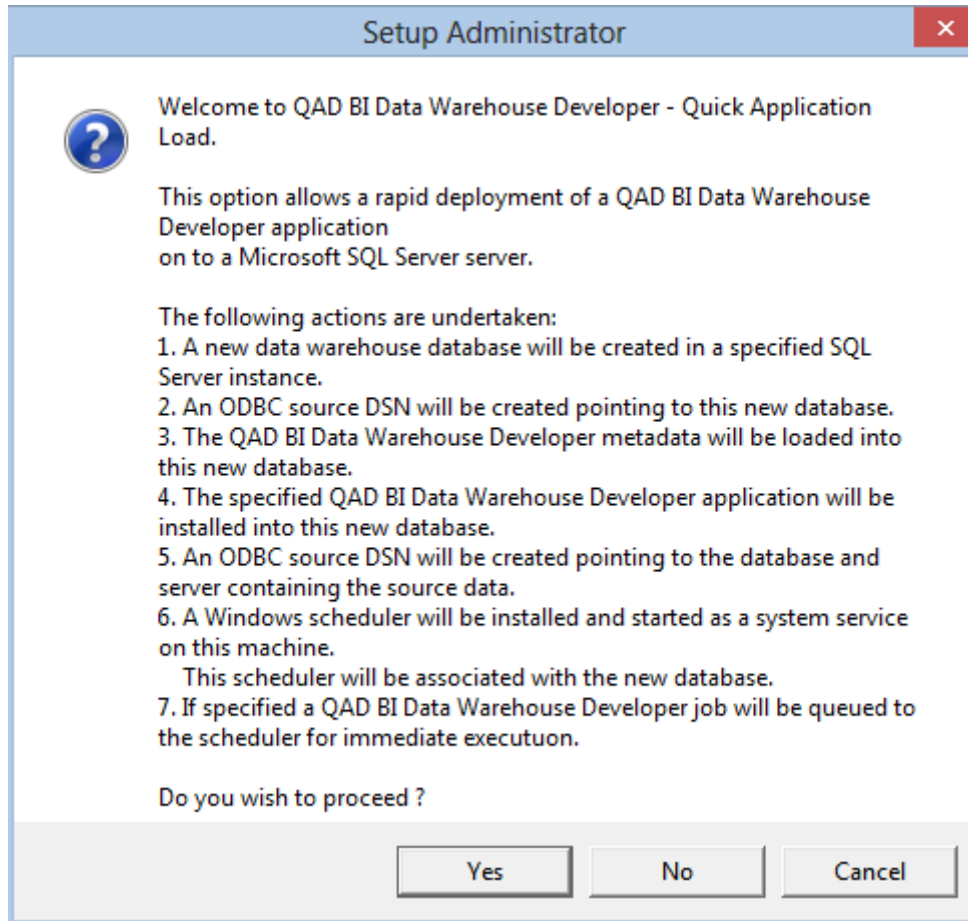
SQL Server Quick Application

The quick application option for SQL Server attempts to create a Data Warehouse database, populate that database with the QAD metadata, load an application, install a scheduler and optionally run a batch job. It provides a means of quickly installing a Data Warehouse Designer application and getting the contents of the tables loaded and populated.

On the **Quick Start** tab, click on the **Auto Install Metadata and Application** icon to start.



The following dialog is displayed. Click **Yes** to proceed.



The following dialog is displayed. Once all the values have been entered, click **OK** to proceed with the creation of the databases and the loading of the application.

Choose an Application and Database Name etc [X]

A QAD data warehouse repository will be created in a new database on the chosen instance of SQL Server. An application will be loaded into this repository and all the objects created.

A scheduler for this repository will be installed on the local machine and a job queued to run. An ODBC source DSN will also be created to be used by the data warehouse source connection.

Select an instance of Sql Server in which to install the new data warehouse.

WSL-SHUTTLE-B

Enter an administrator logon and password to the database, or leave blank for a trusted connection.

Username: sa

Password: wsl

Enter the database name which will become the new data warehouse repository.

newD\w

Please enter the location and name of the application id file (app_id_*.wst)

C:\ProgramData\QAD\Application\app_id_SQLT_tutorial_1.wst [Browse]

Enter the name of a job to queue to run.

Daily Update

An ODBC source (DSN) to be used by the data warehouse source connection will be created.

Enter the ODBC source DSN.

WslTutorial

Select the instance for the database containing the source data.

WSL-SHUTTLE-B

Enter the source database name.

WslTutorial [OK] [Cancel]

☐ Trusted connection

The quick application can also be initiated from the command line or from a Windows batch file.

Windows Command Line Invocation

The syntax for calling from the command line is as follows:

adm.exe -QA [-SWITCH "switch value"]

The switches that can be applied supply information to the Setup/Administrator utility. When all switches are provided the application install will occur automatically. Where some switches are left out a partially completed dialog will appear. The missing information can be provided and the install will then proceed.

Note: Where a parameter for a switch contains spaces, the parameter must be enclosed in double quotes.

The switches are:

Switch	Parameter to be supplied
-QA	Indicates that this is a "Quick Application". No parameter is required.
-SS	The SQL Server instance name where the Data Warehouse database will reside
-SL	The administrator user name for the SQL Server instance defined with the -SS switch. If this switch is not provided a Trusted connection is assumed.
-SP	The administrator password for the SQL Server instance defined with the -SS switch.
-SN	The Data Warehouse database name. This database will be created in the instance defined by -SS. An ODBC Source DSN of the same name will also be created on the PC.
-AN	The Data Warehouse Designer application name. This is the name of the 'id' file and is typically of the structure app_id_XXXX_vvvvvv.wst where XXXX is the application identifier and vvvvvv is the application version. For example the tutorial application would be app_id_SQLT_tutorial_6.wst
-AD	The Data Warehouse Designer application directory. This is the directory in which the file defined by the -AN switch resides.
-LI	The SQL Server instance that contains the source database.
-LD	The ODBC source DSN name as defined in the Connection object in the data warehouse application. This ODBC source will be created.
-LN	The database name on the SQL Server instance as defined by the -LI switch. This is the database that contains the source data.
-LT	This switch does not have a parameter. If set it flags the ODBC source DSN as defined in the -LD switch as a trusted connection.
-JN	The name of a job in the data warehouse that is to be run once all other tasks are completed.
-CC	The name of the cube connection if appropriate. If set then all cubes will be updated to have this as the Analysis Services connection.
-DC	The name of the Data Warehouse connection if appropriate. If set then all cubes will be updated to have this as their Source connection.

-CD	The name of the cube database in Analysis Services if appropriate. If set then all cubes will be updated to have this database as their Analysis Services database.
-----	---

For Example a batch file to call an application load of the tutorial may look as follows:

```
@echo off
```

```
c:\
```

```
cd \Program Files\QAD\
```

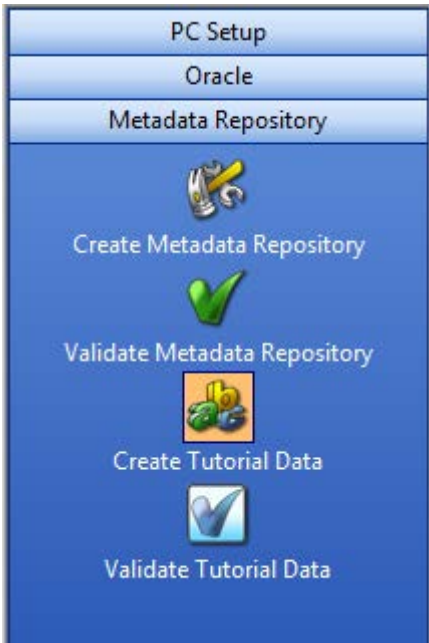
```
adm -QA -SS "WSL-TEST" -SN new_dw -LT -AN app_id_SQLT_tutorial_3.wst -AD "c:\Program Files\QAD\  
-LI WSL-TEST -LD tutorial -LN tutorial -JN "Daily Update" -CC Cubes -CD My_database -DC DataWarehouse  
exit
```


Chapter 8

Tutorial Data

The tutorial data component of the QAD Administrator attempts to validate, upgrade or perform an initial install of the QAD tutorial tables. The tutorial tables are only required if the tutorial is to be undertaken. They can be ignored if desired.

Click on the **Metadata Repository** tab in the left pane; then click on:



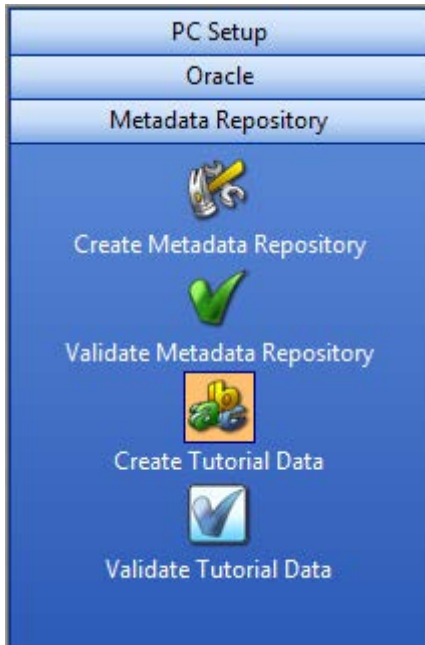
- ☐ The **Create Tutorial Data** (see "**Creating Tutorial Data**" on page 50) option to create (or re-create) the set of tables in the specified schema (user).
- ☐ The **Validate Tutorial Data** (see "**Validating Tutorial Data**" on page 51) option to check for the existence of QAD Data Warehouse Designer tutorial tables.

In This Chapter

Creating Tutorial Data	50
Validating Tutorial Data	51

Creating Tutorial Data

In QAD Administrator, click on the **Metadata Repository** tab in the left pane; then click on the **Create Tutorial Data** icon.



This option will create, or re-create, the QAD tutorial tables within the schema (user) or database provided. The normal practice is to locate these tables in a different schema from the data warehouse user for Oracle and in a different database for SQL Server. The data warehouse (DSS) user will need select access to these tables to perform the tutorial. The tutorial documentation assumes these tutorial tables will be loaded under the user 'wtutorial' for Oracle or in the Tutorial database for SQL Server. Another user or database may be used if desired. The user chosen must have sufficient privileges to allow the creation of the tables.

When this option is chosen an ODBC connection dialog will appear, and if a valid user is entered the tables will be created and populated under the specified user.

Please ensure that no tables that match those shown in the Validate tutorial tables section exist under the specified user. If existing tables are found, a prompt will be issued, and if proceed is chosen then all data will be deleted from the tables and the tutorial data loaded.

Teradata

When creating tutorial tables for Teradata, an additional dialog is displayed for the user or database name that the tutorial data will be created in. Enter the name of the user or database in which the tutorial data will be created and click **OK**.

Validating Tutorial Data

In QAD Administrator, click on the **Metadata Repository** tab in the left pane; then click on the **Validate Tutorial Data** icon.



This option validates that the tutorial tables exist in the given schema.

The tables are based around a simple sales model and are as follows:

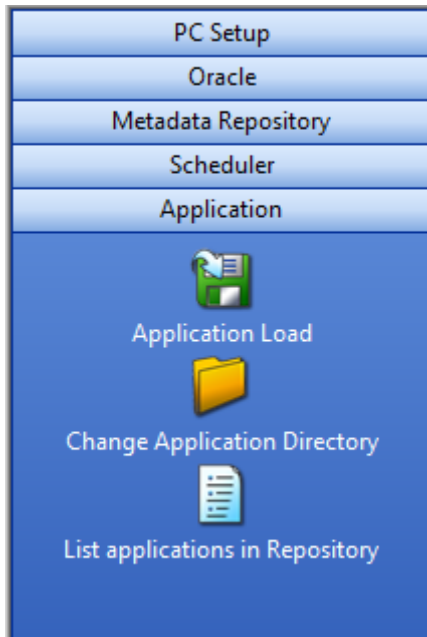
Table	Contents
product	A list of products including a product code (sku), description, group and subgroup
prod_group	A description of each product group
prod_subgroup	A description of each product sub group
prod_line	A description of each product line
code_table	A table containing the codes and descriptions for product groups, sub groups and lines. A code type of 'pg','sg' and 'pl' is used to differentiate the different codes.
customer	A list of customers containing names and addresses.
order_line	The lines on a sale. Includes the specific product code, quantities and values
order_header	The header for a sale. Includes the customer code, order data and ship date
kpi	Used to generate a KPI dimension
budget	Budget data for sales of products to customers
forecast	Demand forecast data for products and customers

Chapter 9

Applications

The application component of the QAD Administrator attempts to list, upgrade or perform an initial install of a third-party supplied data warehouse application.

Click on the **Application** tab in the left pane; then click:



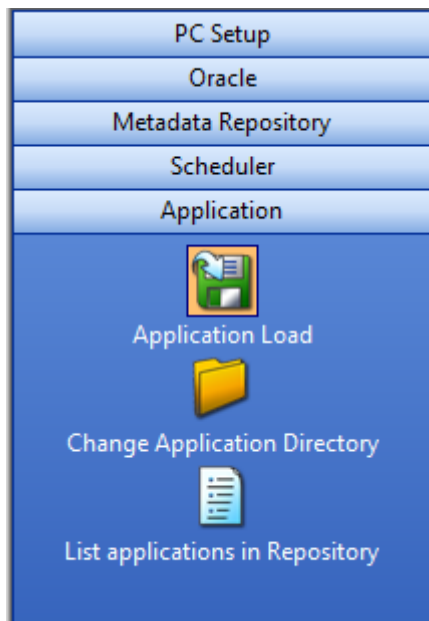
- ☐ **Application Load** (see "**Loading an Application**" on page 54) to load the metadata, tables procedures, scripts etc. provided as part of the application.
- ☐ **Change Application Directory** (see "**Changing the Application Directory**" on page 63) to change the directory of applications to be installed.
- ☐ **List applications in Repository** (see "**Listing Applications**" on page 64) to list all applications that have been applied to the chosen metadata repository.

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Loading an Application	54
Changing the Application Directory.....	63
Listing Applications	64
Testing Applications	65
XML Files for Application Loads	66

Loading an Application

In QAD Administrator, click on the **Application** tab in the left pane; then click on the **Application Load** icon.



Loading an application inserts various objects into the chosen metadata repository. An application is best defined as a set of objects that are shipped to allow inclusion of those objects into a remote repository.

Note: An application can only be loaded into a metadata repository running on the same database type as that of the application creator. (e.g. An Oracle application cannot be loaded into a SQL Server metadata repository).

During the load of an application a number of cross environment mappings need to be resolved. These are:

Connections

Connections are normally unique for each metadata repository. They provide the path to the source data and this nearly always varies. Even though an application can ship a set of connections, these connections will nearly always need modification. Alternatively a connection shipped with an application may map to an existing connection, and this can be done as part of the load process. If you are unsure whether or not a connection is required, it can be added and later modified.

Tablespaces (Filegroups in SQL Server and Databases in Teradata)

If an application ships table or index objects then these objects will typically have a tablespace (filegroup in SQL Server and database in Teradata) associated with them. During the load it will be necessary to map these tablespaces (filegroups in SQL Server and databases in Teradata) to those available for the metadata repository.

Object Changes

The application may ship objects that already exist in the metadata. In such a case the process during the load is to create a version of the existing object and then replace it with the new object. At the start of the load a check is made to see if any objects will be replaced. If the application is a patch or an upgrade of an existing application version then this will be normal. The load can be stopped at this point to allow for further investigation.

Table Changes

If the load replaces table objects, it may in turn need to alter the physical table in the database to match the new definition. Again, if this is a patch or an application upgrade, this may be desirable. If not, the proposed actions should be reviewed before proceeding.

Procedure Changes

New procedures, scripts, or modifications may be loaded as part of the application load. In the case of procedures these procedures will need to be recompiled. The load can perform this action, but any failures or issues will need to be resolved after the load has completed.

The following section covers the actual application load process.

Note: It is always a good idea to backup the QAD Data Warehouse Designer metadata before running an application load. See the section ***Backing Up the Metadata before Loading Applications*** for details.

Backing Up the Metadata before Loading Applications

It is always a good idea to backup the QAD Data Warehouse Designer metadata before running an application load.

A metadata backup can be used to restore the metadata to the state before the application was loaded.

There are three options for backing up the metadata:

- 1 In Data Warehouse Designer, use the **Backup/Unload the metadata to disk** option to unload the metadata to a QAD Proprietary backup. See the section **Unloading Metadata** in the QAD Data Warehouse Designer User Guide for more information.
- 2 In Data Warehouse Designer, use the **Backup/Export the metadata** option to backup the metadata using the data warehouse database's backup utility. See the section **Backup using DB Routines** in the QAD Data Warehouse Designer User Guide for more information.
- 3 In Data Warehouse Designer, use the **Tools/Build application tables** option to build an application of the objects being replaced. This is achieved by selecting the new application files you're about to load in the **Previous application** box of the Define and build an application distribution dialog. See the section **Application Creation** in the QAD Data Warehouse Designer User Guide for more information.

Note: If the table changes in the application are being applied to the data warehouse database, then it is also a good idea to backup the data warehouse tables being changed.

Application Load Process

An application consists of five files that are loaded from a directory. The default directory is the QAD program directory. Another directory may be specified by clicking on the **Change Application Directory** button. The last selected application directory is the default directory for the next application load.

Once the directory has been selected, the application load is started by clicking on the **Application Load** button. This displays the available applications in the right pane.

Note: If the **Change Application Directory** button was used, then the list of available applications will already be displayed and the **Application Load** button need not be clicked.

If no applications are present, the list in the right pane will be empty and no application load will be possible. The tutorial applications are nearly always present. An example application list follows:

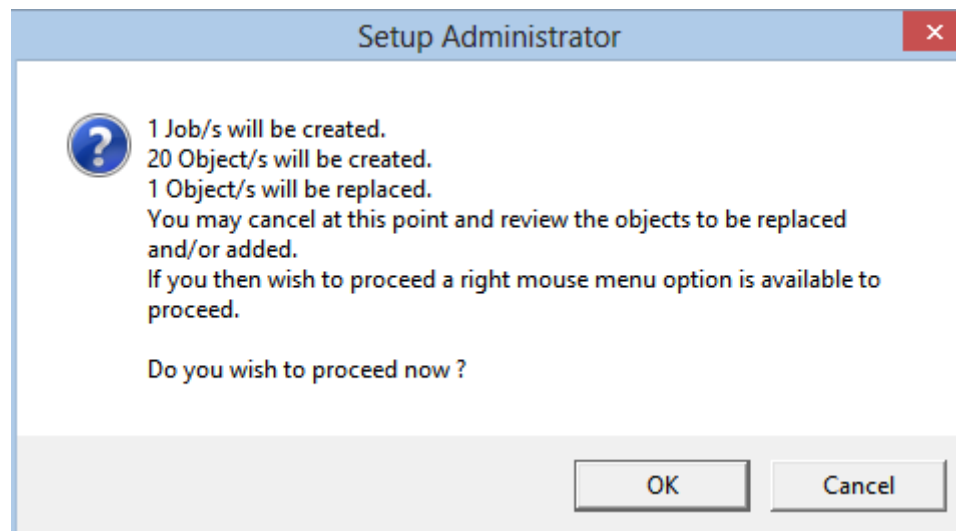
Available Applications					
App Id 'Right mouse to edit'	Version	Description	Metadata Versi...	Directory	Comments
SQLT	tutorial_1	QAD Tutorials (SQL Se...	6.1	C:\Program ...	Tutorial 1 - Basic...
SQLT	tutorial_2	QAD Tutorials (SQL Se...	6.1	C:\Program ...	Tutorial 2 - Rollu...
SQLT	tutorial_3	QAD Tutorials (SQL Se...	6.1	C:\Program ...	Tutorial 3 - Sche...
SQLT	tutorial_4	QAD Tutorials (SQL Se...	6.1	C:\Program ...	Tutorial 4 - Com...
SQLT	tutorial_5	QAD Tutorials (SQL Se...	6.1	C:\Program ...	Tutorial 5 - Anal...
SQLT	tutorial_6	QAD Tutorials (SQL Se...	6.1	C:\Program ...	Tutorial 6 - KPI f...

To load an application, right-click on the required Application and select **Install Application** from the pop-up menu.

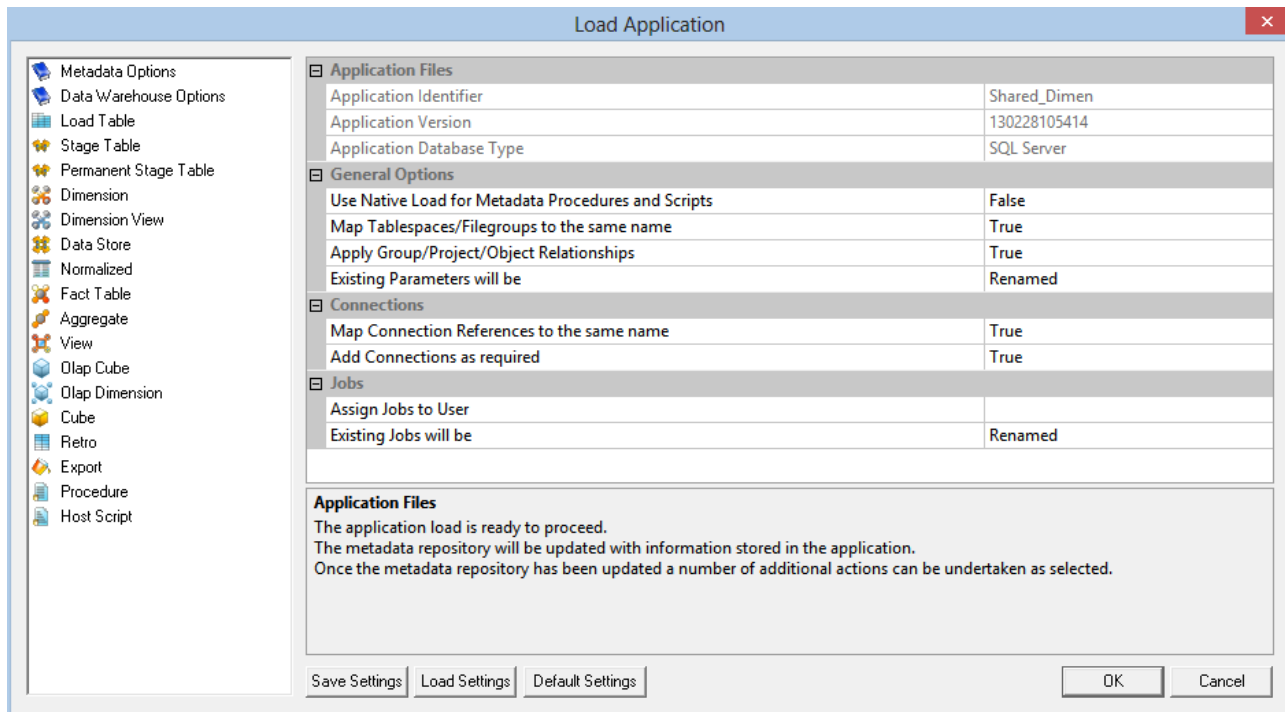
Once this menu option is chosen, enter the ODBC data source and logon to the meta repository and click **OK**.

Note: If the application is being loaded into a Teradata database, an additional dialog is displayed for selecting the metadata repository database. Select the database and click **OK**.

A list of all the objects in the application is displayed in the right pane. Each object will be identified as either new to the metadata, or as replacing an existing object. For example:

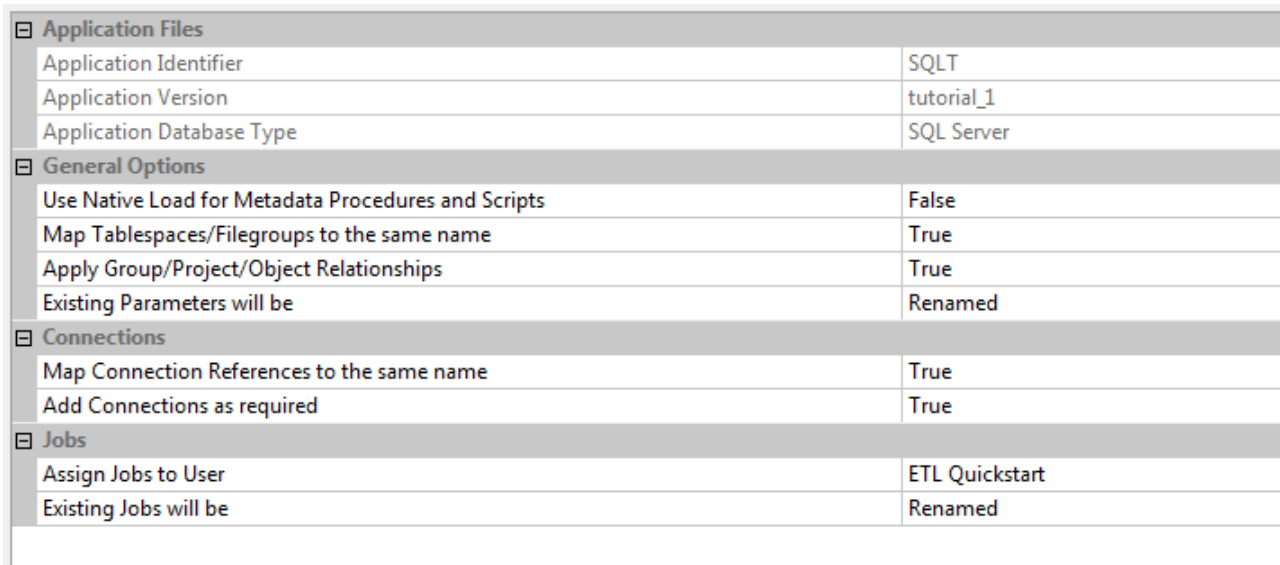


A dialog will appear after the list has been displayed advising of what is to occur. You may cancel the application load at this point and review the objects to be replaced. The load can then be continued by using the right-click menu option when positioned over any object. Click **OK** to proceed with the application load. A new dialog will appear providing options for the application load:



If you click **OK**, the objects will be inserted into the metadata.

Metadata Options



Application Files	
Application Identifier	SQLT
Application Version	tutorial_1
Application Database Type	SQL Server
General Options	
Use Native Load for Metadata Procedures and Scripts	False
Map Tablespaces/Filegroups to the same name	True
Apply Group/Project/Object Relationships	True
Existing Parameters will be	Renamed
Connections	
Map Connection References to the same name	True
Add Connections as required	True
Jobs	
Assign Jobs to User	ETL Quickstart
Existing Jobs will be	Renamed

Use Native Load for Metadata Procedures and Scripts

This option causes the metadata for procedures and scripts to be loaded into the target metadata repository using the target repository's load utility instead of ODBC. This can have significant performance advantages when loading large applications, when loading applications into a slow target database or over a slow network. The loaders used are: **SQL*Loader** for Oracle, **bcp** for SQL Server and **BTEQ** for Teradata data warehouses.

Map Tablespace/Filegroups to the same name

Every table in Oracle and DB2 is located in a tablespace. SQL Server tables may be in filegroups. If this option is marked as true, the tablespaces and filegroups of objects will be set to the same name they had in the source repository if the tablespace/filegroup exists in the target data warehouse database. If the tablespace/filegroup does not exist in the target data warehouse database, an alternative tablespace/filegroup must be selected using the **Tablespace selection** dialog. This dialog appears once for each tablespace/filegroup that cannot be matched.

Note: This option is not available for Teradata

Apply Group/Project/Object Relationships

If this option is marked as true, the project group relationships are updated in the target data warehouse database.

Existing Parameters will be

The options are

- ☐ **Updated/Overwritten**
- ☐ **Retained**
- ☐ **Renamed**

Map Connection References to the same name

Use this option to ensure that any objects with linked connections map to an existing connection using the same name as the connection that linked to in the metadata repository where the application was built. If a connection does not exist in the target metadata repository and the option *Add new connections as required by the application* is not selected, then an alternative connection must be selected using the **Connection Build** dialog. This dialog appears once for each tablespace/filegroup that cannot be matched.

Add Connections as required

If this option is marked as true, any connection objects included in the application that do not exist in the target metadata repository, that are used by other objects in the application, will be added to the target metadata repository.

Assign Jobs to User

All jobs in the QAD scheduler belong to a user. If this option is marked as true, the user name specified in the **User name for any jobs added by the application** drop-down is set as the user name of all jobs loaded by the application. If the specified user name does not exist, it is then created.

Existing Jobs will be

The options are

- ☐ **Updated/Overwritten**
- ☐ **Retained**
- ☐ **Renamed**

Data Warehouse Options

Data Warehouse Options	
Apply Metadata Changes to Data Warehouse Objects	True
Log Metadata DML and Data Warehouse DDL to a File	True
DDL File	C:\Users\User\Documents\WhereScape\app_SQLT_tutorial_1_ddl.sql
DDL File Statement Terminator	;
Terminate lines with carriage return as well as new line	True
Compile New and Changed Procedures	True

Apply Metadata Changes to Data Warehouse Objects

If this option is marked as True, the changes contained in the application are applied to the metadata according to the options selected for each object type.

Log Metadata DML and Data Warehouse DDL to a File

If this option is marked as True, the changes contained in the application are written to a file.

- ☐ **DDL File** - Option to enter the file name/path for the DDL file.
- ☐ **DDL File Statement Terminator** - Option to specify the statement terminator.
- ☐ **Terminate lines with carriage return as well as new line** - Option to terminate lines with a carriage return.

Compile New and Changed Procedures

If this option is marked as true then all procedure objects loaded by the application load are compiled in the target data warehouse database.

Note: Depending on the type of database, invalid procedures may not compile.

Data Warehouse Table/View Options

Load Table	
New Load Tables will be	Created
New Load Tables will be Versioned	False
New Load Table Indexes will be	Created
Existing Load Tables will be	Recreated
Existing Load Tables will be Versioned	True
Existing Load Table Indexes will be	Recreated

For each table and view object loaded by the application load, it is possible to specify whether or not the metadata changes should be applied to the data warehouse table or view; and to the indexes on these objects. The change action can be specified by object type. New objects can have a different action to existing objects of the same type. Possible actions are:

- ☐ **Created** - available for new tables and indexes of any object type
- ☐ **Recreated** - available for existing tables and indexes of any object type
- ☐ **Altered** - available for existing tables and indexes of most object types (not available for load tables or views)
- ☐ **Nothing** - available for all new and existing object types and indexes.

This dialog also enables you to set whether or not new or existing objects are to be versioned. Set to **True** to use versioning, else set to **False**.

Stage Table	
New Stage Tables will be	Created
New Stage Tables will be Versioned	False
New Stage Table Indexes will be	Created
Existing Stage Tables will be	Recreated
Existing Stage Tables will be Versioned	True
Existing Stage Table Indexes will be	Recreated
Alter allows columns to be dropped	False

Another option enables you to set whether or not columns are allowed to be dropped by object type, for tables being altered. Set to **True** to allow columns that are not in the metadata, to be dropped; else set to **False**. This option applies to Stage, Permanent Stage, Dimension/Model, ODS, Normal, Fact and Aggregate Tables.

Object action settings may be saved and reloaded later for another application using the **Save Settings** and **Load Settings** buttons. Supplied default settings may also be loaded by clicking on the **Default Settings** button.

The Connection Build dialog

If connections are encountered and are not automatically mapped (see connection options above), a dialog is issued to ascertain whether the connection can be mapped to an existing connection or whether the connection needs to be added. The application vendor will need to advise of the action required. The dialog is as follows:

Connection Build

The objects you are deploying contain connections which need to be resolved to the new data warehouse.

The Load table or Script you are loading contains connection data.

No corresponding connection data was shipped with the application.

Please select an existing connection to replace this connection.

OK

Cancel

Existing connections:

Connection:

Sales2

Connection Type:

ODBC

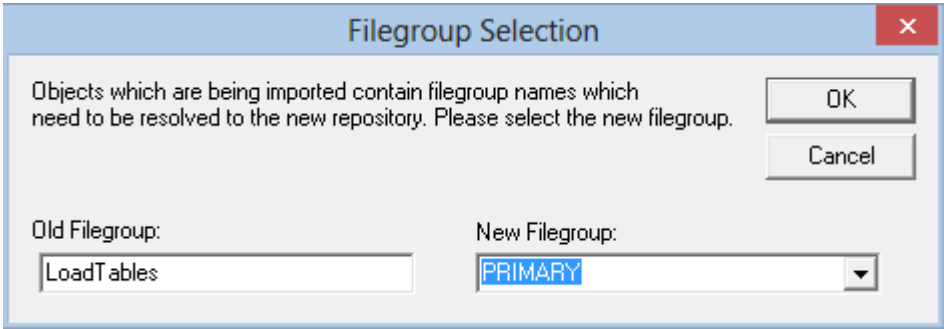
Tutorial (OLTP)

Either a connection is selected from the **Existing connections** drop-down list or the **Add New** button is clicked. If a new connection is added then it will need to be modified to match the database and user names of the new environment.

 **TIP:** Added connections will need to be modified by selecting their **Properties** in QAD Data Warehouse Designer.

The Filegroup /Tablespace Selection dialog

Filegroups/Tablespaces may need to be manually remapped to the corresponding Filegroup/Tablespace available to the metadata repository. A dialog box as follows will appear for each Filegroup/Tablespace encountered that is not automatically mapped (See Filegroup/Tablespace options above).



The dialog box titled "Filegroup Selection" contains the following elements:

- Text: "Objects which are being imported contain filegroup names which need to be resolved to the new repository. Please select the new filegroup."
- Buttons: "OK" and "Cancel" in the top right corner.
- Labels: "Old Filegroup:" and "New Filegroup:".
- Input fields: A text box for "Old Filegroup" containing "LoadTables" and a dropdown menu for "New Filegroup" with "PRIMARY" selected.

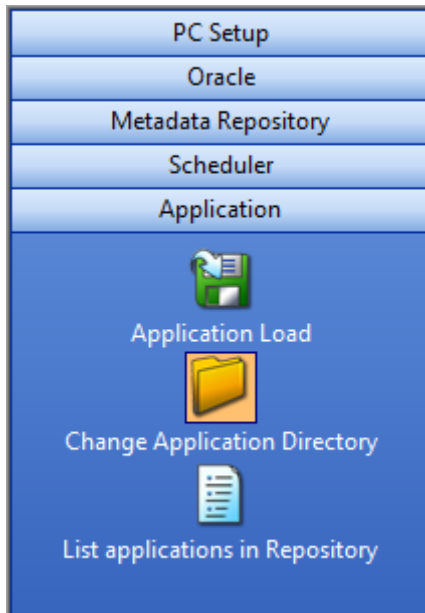
The drop-down list box **New Filegroup** provides a list of all filegroups visible to the repository.

A dialog box will appear when the application load has completed. The full results should be reviewed by scrolling back, or you can right-click and click **Excel It** to send the results to Excel.

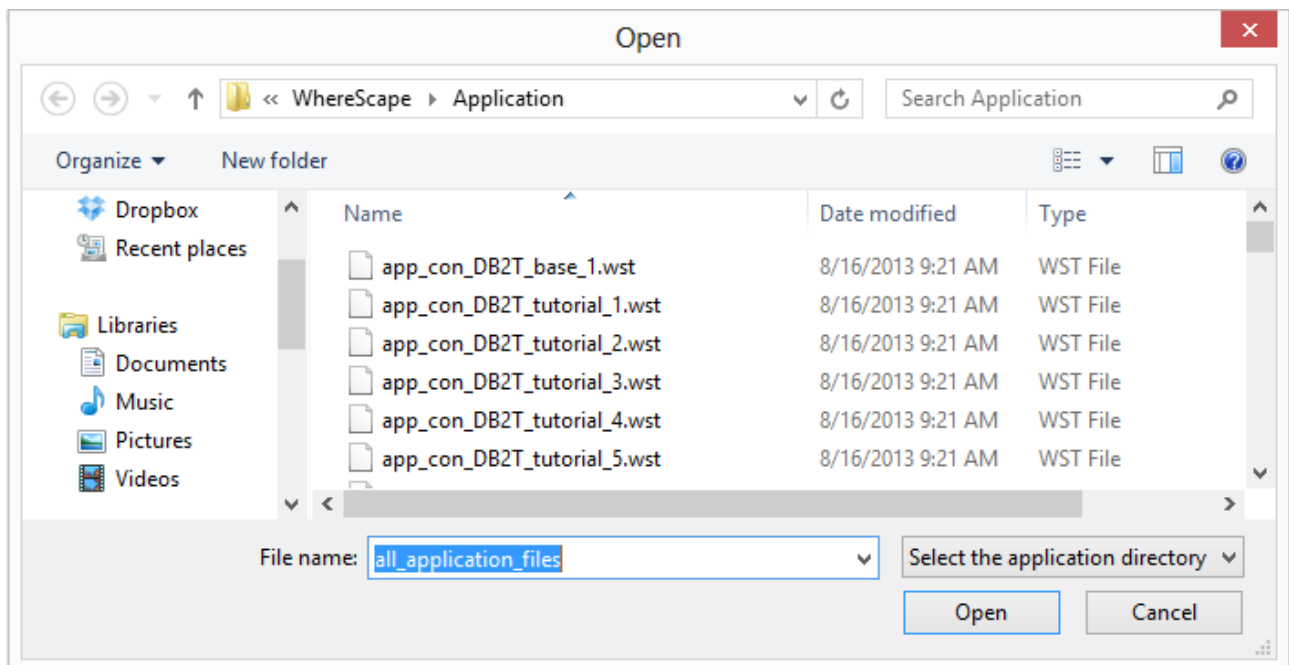
Application Installation	
Object	Status
fact_forecast_idx_3	Index created
fact_forecast_idx_A	Index created
fact_sales_analysis	Table created
fact_sales_analysis_idx_1	Index created
fact_sales_analysis_idx_2	Index created
fact_sales_analysis_idx_3	Index created
fact_sales_detail	The table fact_sales_detail already exists, and contains 21 rows of data
agg_sa_customer	Table created
agg_sa_customer_idx_1	Index created
agg_sa_customer_idx_2	Index created
agg_sa_product	Table created
agg_sa_product_idx_1	Index created
agg_sa_product_idx_2	Index created
dim_order_date	The view dim_order_date already exists, and contains 0 rows of data
dim_order_date	View (re)created
dim_ship_date	The view dim_ship_date already exists, and contains 0 rows of data
dim_ship_date	View (re)created
get_dim_customer_key	Compiled
update_dim_customer	Compiled
get_dim_date_key	Compiled
update_dim_date	Compiled
get_dim_order_date_key	Compiled
get_dim_product_key	Compiled
update_dim_product	Compiled

Changing the Application Directory

In QAD Administrator, click on the **Application** tab in the left pane; then click on the **Change Application Directory** icon.

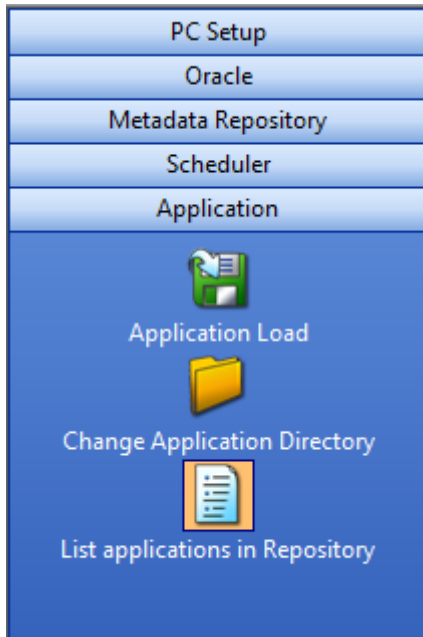


A dialog will allow you to browse and select a new application directory.



Listing Applications

In QAD Administrator, click on the **Application** tab in the left pane; then click on the **List applications in Repository** icon.



The **List applications in Repository** menu option will prompt for a logon to the required metadata repository. Applications are applied to a specific metadata repository.

Once logged on a list of the applications that have been installed into that repository will be shown. If no applications have been loaded then the list will be empty. An example output is as follows:

List Installed Applications				
App Id	Name	Version	Status	Date installed
SQLT	QAD Tutorials (SQL ...	tutorial_1	Completed	2010-06-15 13:42:36....
SQLT	QAD Tutorials (SQL ...	tutorial_2	Completed	2010-06-15 13:44:18....

This example shows that the tutorial_2 application has been loaded into the metadata.

Testing Applications

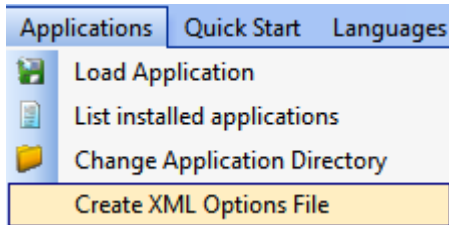
A testing application set consists of a Procedure and an XML script and provides the ability to define a series of tests against data warehouse objects; either comparing them to an expected value or to the results of a query.

The XML script contains the test definitions. Each test is a new XML node in the XML script and contains a name, a test query, an expected value, or a comparison query.

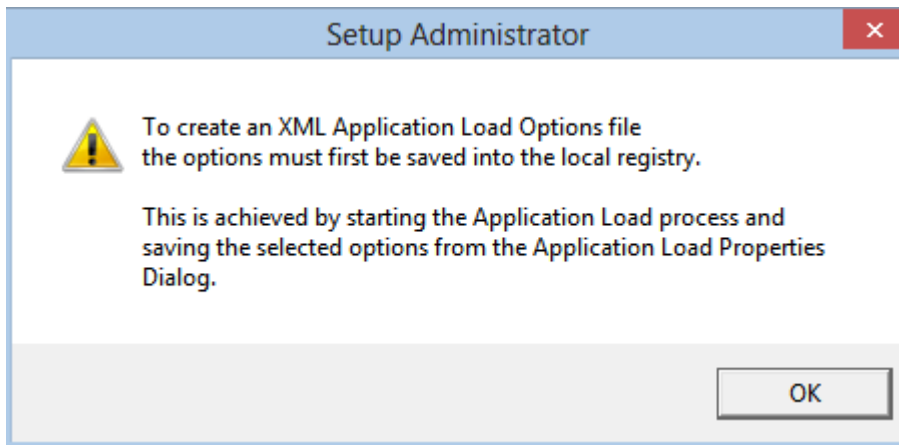
The procedure simply runs the tests and determines whether the tests are passed or not. This is most likely to be run as a scheduled job within QAD Data Warehouse Designer.

XML Files for Application Loads

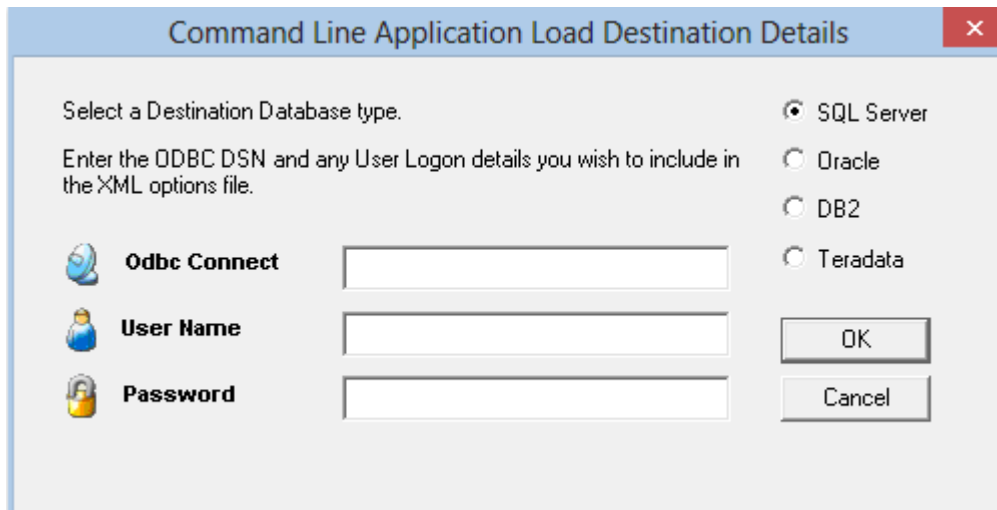
If applications are being loaded using the command line, the saved application load options in the local registry can be outputted to an xml file for use in the application load. To create the xml file, select **Applications/Create XML Options File** from the top toolbar.



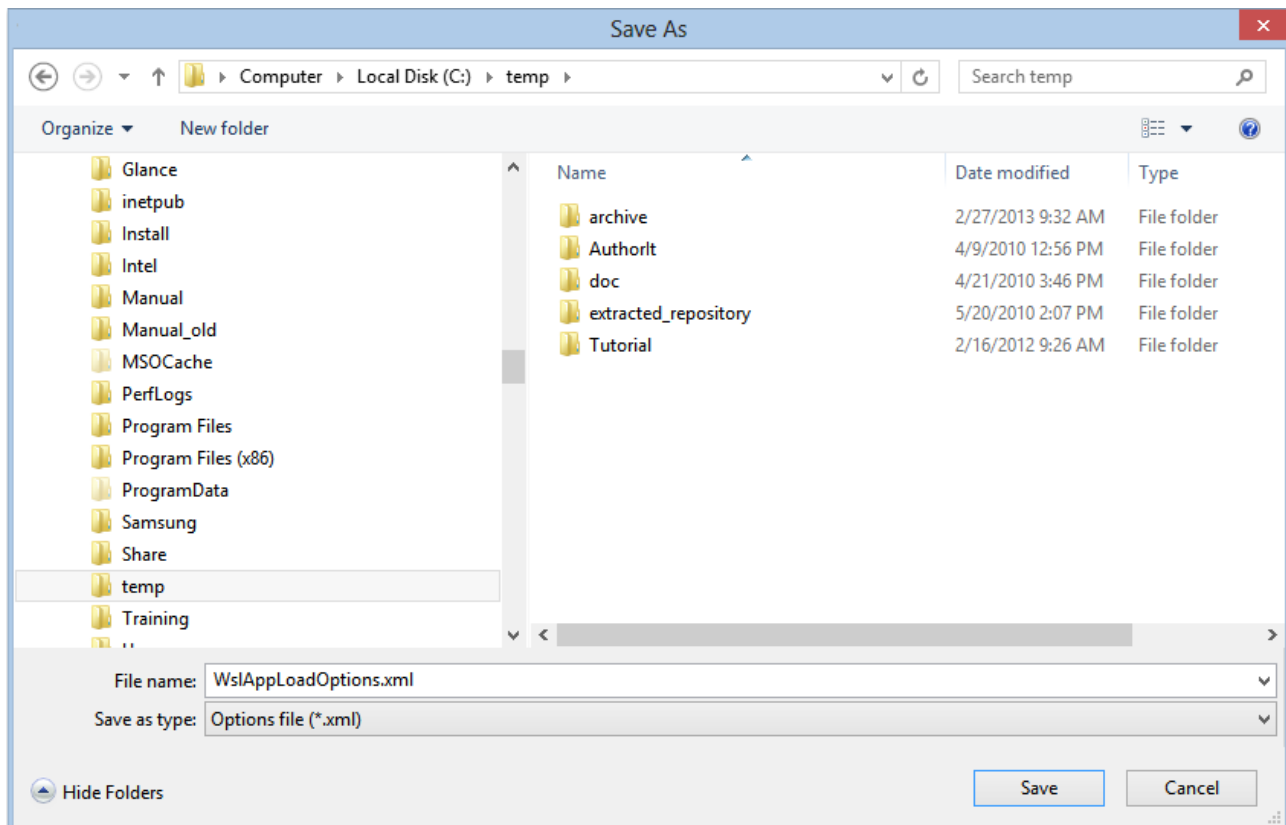
If the load options have not yet been saved into the local registry, the following message will appear; prompting you to select the application to be loaded and to save the load settings for that application.



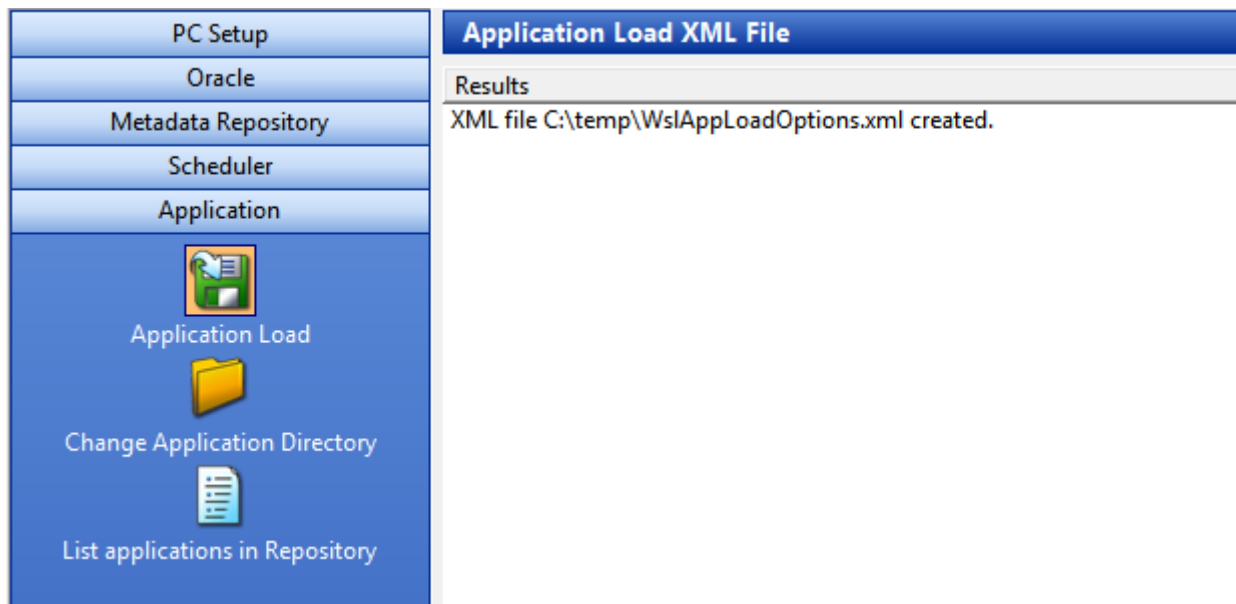
Enter in the **Odbc Connection**, **User Name** and **Password**; thus adding the destination details to the XML options file.



Choose the location; where the XML file is to be saved.



The results will confirm that the XML file has been created.



Chapter 10

Upgrading QAD Data Warehouse Designer

QAD Versions

QAD Data Warehouse Designer has a four part version number normally shown as xx.xx.xx.xx. An example of this may be 6.0.6.0. The first number represents the major release. The second number represents the metadata repository version. The third and fourth numbers relate to application specific releases.

From the example above we see that the current version is version 6 of QAD Data Warehouse Designer. We are on version 6.0 of the metadata repository.

Metadata Changes

A change from a 6.0.. release to a 6.5.. release would indicate a change in the metadata tables. All metadata changes are non destructive. They simply add new columns or new meta tables. In this way they can be applied without harming an existing metadata repository. The impact of a metadata change is that the associated applications (namely the Data Warehouse Designer executable, the Scheduler, security module etc.) will need to be at the same metadata version. Therefore a 6.0.6.0 version of Data Warehouse Designer may not successfully run against a version 6.5 metadata repository.

Application changes

The final two numbers in the version represent application releases. Applications are deemed to be all of the executable images supplied with QAD Data Warehouse Designer as well as the UNIX scheduler scripts and the stored procedures. Application changes reflect enhancements and bug fixes. A change in the first number indicates a major enhancement in one of the application components.

Upgrading Data Warehouse Designer

Upgrading QAD Data Warehouse Designer consists of the following steps:

- 1 Allow any active jobs to complete. Halting active jobs will allow running tasks to complete with no new tasks starting. Aborting active jobs will kill any running tasks and stop running jobs.
- 2 Stop all schedulers. Windows schedulers can be stopped with QAD Administrator. To stop a UNIX or Linux scheduler, kill the active scheduler process and comment their crontab entries (to stop the scheduler re-starting itself).
- 3 Close any QAD programs that are running on your machine.
- 4 Install the new version of Data Warehouse Designer on your machine.
- 5 Back up your metadata.
- 6 Validate the metadata by selecting the **Validate Metadata Repository** option in QAD Administrator. For an *Application* upgrade, this will compile any new metadata procedures and re-compile existing metadata procedures. For a *Metadata* upgrade, some tables may be altered, new tables created, new metadata procedures compiled and existing metadata procedures recompiled.
- 7 Back up your metadata again (just in case).
- 8 If using a UNIX or Linux scheduler and this is a major application enhancement then rename the wsl/bin directory to say wsl/bin_versionxxxxxx. Create a new bin directory and ftp over the files under the unix directory (see the main install instructions). Change the protections on the files (chmod 750 *.sh).

- 9 Restart all schedulers. Windows schedulers can be restarted with QAD Administrator. For any UNIX or Linux schedulers, uncomment any commented out crontab entries - this is enough to restart the schedulers.
- 10 Restart any halted or aborted jobs.

Notes:

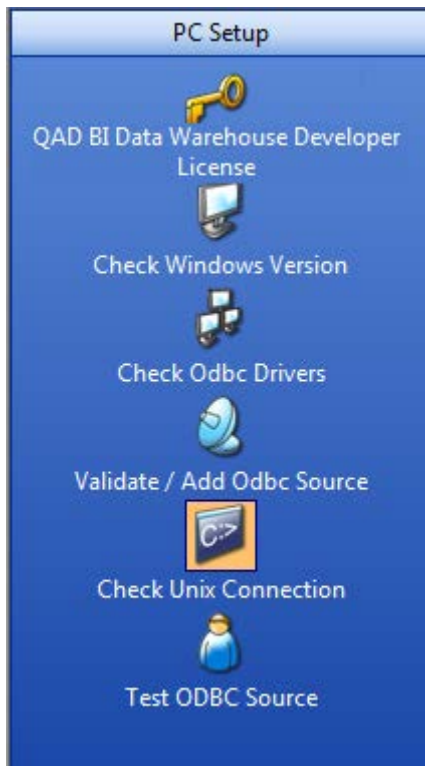
1. There are different versions of the scripts for each database and for UNIX versus Linux. You should also be looking in the sub directory with the highest version number.
 2. Metadata tables do not change between minor releases, but metadata procedure often and usually do change.
 3. Data Warehouse Designer will not let you sign into an old repository version using a newer version of Data Warehouse Designer
 4. Data Warehouse Designer will let you sign into a new repository version using an older version of Data Warehouse Designer, but it will warn you that this may potentially cause issues
 5. It is very important when using the windows scheduler to have the installed Data Warehouse Designer version on the scheduler server EXACTLY matching the stored procedures.
 6. Side by side installations are possible (two versions in two directories on the same machine), but be careful with schedulers. If you install the new version of Data Warehouse Designer in a new directory, you will have to remove and reinstall all windows schedulers in order for the scheduler(s) to use the new version of Data Warehouse Designer.
 7. As a general rule, the UNIX and Linux scheduler scripts, metadata tables/procedures and Data Warehouse Designer front end should all be in sync.
 8. If the scripts for the UNIX or Linux scheduler have changed, you should replace files in your old and new shell scripts in the QAD Program Files directory and see if any have changed.
-

Chapter 11

Checking the Unix Connection

Note: This section applies to **IBM DB2** and **Oracle** data warehouses only

To check the UNIX connection, click on the **PC Setup** tab and then click on the **Check Unix Connection** icon.



QAD Data Warehouse Designer can allow the user to browse a Unix file system and utilize the drag and drop functionality to setup the loading of files from a Unix file system. It can also perform interactive file loads. To facilitate this and to obviate the need to port code to every Unix environment the Telnet protocol is used for the Unix connectivity.

This step is not necessary for the successful running of a Unix based data warehouse environment. As mentioned above it is provided to simplify the process of setting up the loading of Unix files. This step is totally unnecessary for a Windows based data warehouse environment.

If you wish to utilize these Unix drag and drop assistants then consult the QAD Data Warehouse Designer User Guide for an explanation of Unix connections and perform the following tasks:

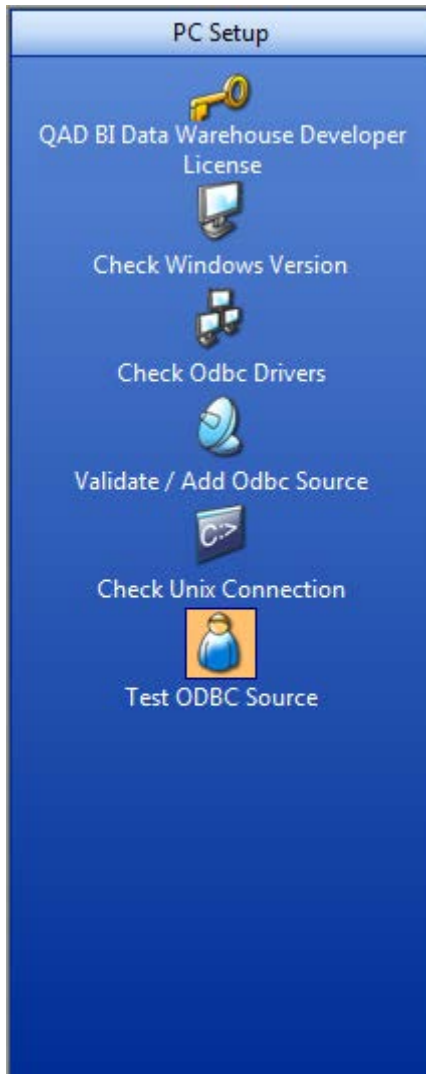
- 1 Identify a Unix user that allows direct logon to a Unix shell prompt without passing through a menu system.
- 2 Ensure that the Unix user has the Oracle 'sqlldr' program in the path after a normal logon. If not then interactive loads will not be possible. Scheduled loads should still function correctly.
- 3 Complete the dialog box presented specifying the Unix user and password identified in step (1).
- 4 Click **OK** to proceed. A timeout of 20 seconds is enabled, so that if connection is not achieved within that time the process will terminate. The Telnet window will be displayed to assist in debugging any problems. It will be closed on completion or timeout.

- 5 Review the results and attempt to address any problems. A file called 'WsITelnet.log' is created in the installation directory containing the full dialog of the connection attempt. The message 'Telnet connection worked. All OK' will be displayed if the connection worked. If successful record the parameters used as these will need to be defined when setting up a Connection within QAD Data Warehouse Designer itself. If a connection cannot be achieved then remove all reference to a username and password from the file mentioned above and mail it to <http://support.qad.com>.

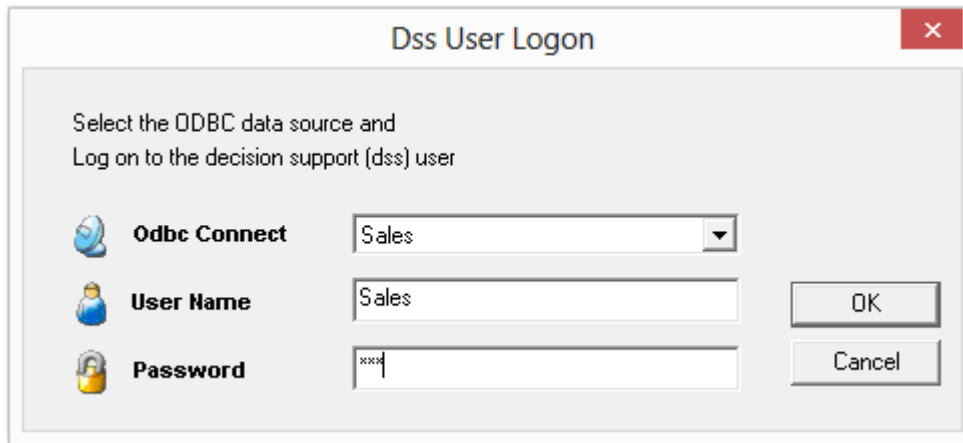
Chapter 12

Testing an ODBC Source

To test an ODBC source, click on the **PC Setup** tab and then click on the **Test ODBC Source** icon.

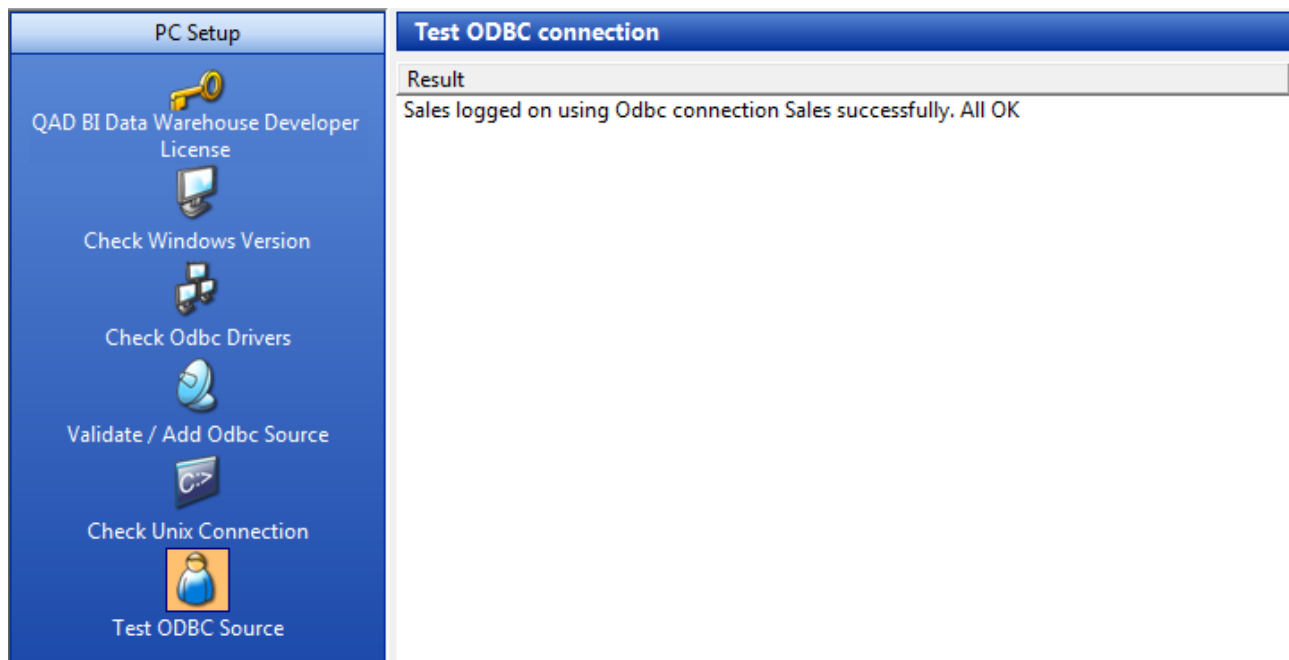


Select the **ODBC connection** from the drop-down list and enter the **User Name** and **Password**. Click **OK**.



The image shows a dialog box titled "Dss User Logon" with a close button (X) in the top right corner. Inside the dialog, there is a message: "Select the ODBC data source and Log on to the decision support (dss) user". Below this message, there are three rows of input fields, each with an icon to its left: "Odbc Connect" with a globe icon, "User Name" with a person icon, and "Password" with a key icon. The "Odbc Connect" dropdown menu is set to "Sales". The "User Name" text box contains "Sales". The "Password" text box contains "xxx". To the right of the input fields are two buttons: "OK" and "Cancel".

If the logon using the ODBC connection was successful, the following message will be displayed.



The image shows a window titled "PC Setup" on the left and "Test ODBC connection" on the right. The "PC Setup" window has a list of tasks: "QAD BI Data Warehouse Developer License" (with a key icon), "Check Windows Version" (with a monitor icon), "Check Odbc Drivers" (with a network icon), "Validate / Add Odbc Source" (with a globe icon), "Check Unix Connection" (with a terminal icon), and "Test ODBC Source" (with a person icon). The "Test ODBC connection" window has a "Result" section with the text: "Sales logged on using Odbc connection Sales successfully. All OK".

Chapter 13

Validating a Meta Repository

To validate a Metadata Repository, click on the **Metadata Repository** tab and then click on the **Validate Metadata Repository** icon.



This option validates the version of the meta tables installed in the specified SQL Server database, Oracle schema, DB2 schema or Teradata Database/User. If requested it goes on to validate the tables, sequences and procedures against the installation media. A validate can be run at any stage to confirm that all tables and procedures are up to date and that the procedures are in a compiled and valid state. This option can be used to recompile a procedure that has become invalid. This option should be used when installing a new version of Data Warehouse Designer and for SQL Server all procedures should be recompiled.

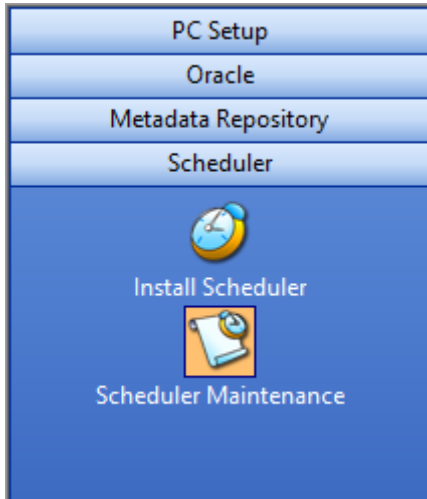
If a mismatch is found or a procedure is found to be invalid, the user is given the option of updating the metadata. If chosen the metadata will be upgraded to the latest version.

Note: Ensure the scheduler is not running and no users are accessing the metadata before doing an upgrade.

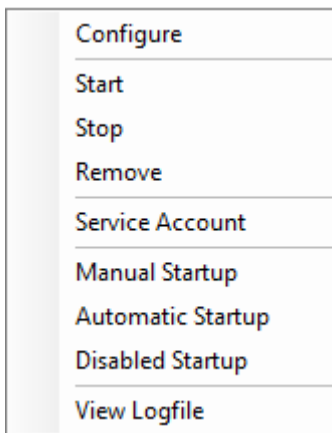
Chapter 14

Maintaining the Windows Scheduler

To maintain the Windows scheduler, click on the **Scheduler** tab and then click on the **Scheduler Maintenance** icon.



This option lists all currently active QAD schedulers. By using the right-click menu when positioned over a scheduler name it is possible to start, stop, remove, change the settings, or view the log of a scheduler. The menu is as follows:



The options are:

Option	Description
Configure	Allows the alteration of the service configuration. You can change the level of logging. The default is 2. Level 0 provides no log information and level 9 provides full debug. See Scheduler Creation for more detail.
Start	Starts a stopped scheduler. This action requires service control manager (SCM) privileges on the PC.
Stop	Stop a running scheduler. SCM privilege required.
Remove	Removes and deletes the scheduler. SCM required.
Service Account	By default the scheduler will start in the system account. If you wish to change this you can specify an account and password. However, you may have to remove the service and enter the account information when creating a new scheduler.
Manual Startup	Changes the startup profile (on PC startup) of the scheduler. The scheduler will not be automatically started when the PC starts and must be started manually. SCM required.
Automatic Startup	Sets the scheduler to start automatically when the PC starts. SCM required.
Disabled Startup	Sets the scheduler startup profile to disabled. No startup will occur unless the profile is changed to either Manual or Automatic. SCM required.
View Logfile	Displays the scheduler service log file. The level of logging is defined in the configuration of the scheduler.

Note: If an error occurs while a scheduled job is running, you should check the following:

- the audit log of the failed task, for any messages of type E or F.
- the audit log of the failed job, for any messages of type E or F.
- the scheduler log file for any error messages.
- the windows event logs, specifically the **Application** and **System** event logs, for any Error or Warning messages at the time of the job failure.

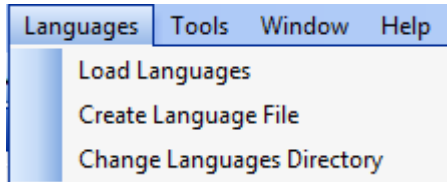
How to view and manage event logs depends on which version of Windows you are using. If you need further assistance, please contact support at <http://support.qad.com>.

Chapter 15

Languages

The Languages component of QAD Administrator allows you to create a Language file or to load a Language File into Data Warehouse Designer.

Click on the **Languages** menu item in the command bar at the top of the screen. Click on any of the options under this level to action them. The Languages menu is as follows:



- ☐ The **Load Languages** (see "**Loading Languages**" on page 80) option will list the Language files that have been created. A file can then be selected and loaded into the target Metadata Repository.
- ☐ The **Create Language File** (see "**Creating a Language File**" on page 81) option allows you to create a Language file for a particular Metadata Repository. A translator will then need to replace the English definitions in the file with the translations relevant to the chosen language.
- ☐ The **Change Languages Directory** (see "**Changing the Languages Directory**" on page 82) option allows you to change the language directory.

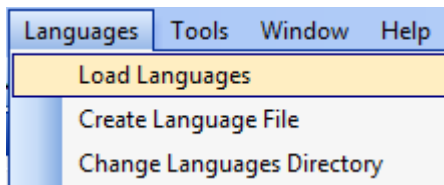
In This Chapter

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Creating a Language File	81
Changing the Languages Directory	82

Loading Languages

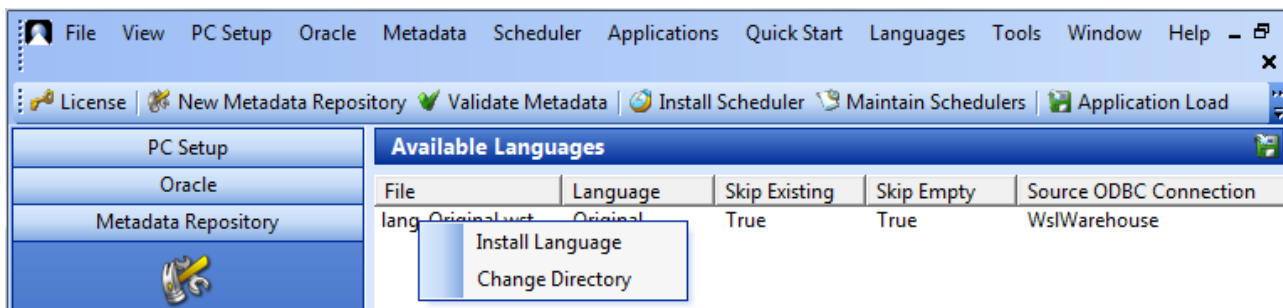
Note: Before you install a language, you will first need to logon to the repository in Data Warehouse Designer; go to **Tools/Language Options** and add the language.

Click on the **Languages** menu item in the command bar at the top of the screen, then choose **Load Languages**.



The **Load Languages** menu option will list the Language Files available.

Right-click on a particular file and select **Install Language**.



You will then be prompted to logon to the required metadata repository and to select the Language to be updated in Data Warehouse Designer.

The results will be shown in the middle pane.

Note: Language files can be loaded via the command line.

-QL Quick Language Load

-LF Absolute Language file name (C:\ProgramData\QAD\Language\Lang_Jedi.wst)

-SN DSN Name

-SL Login Name

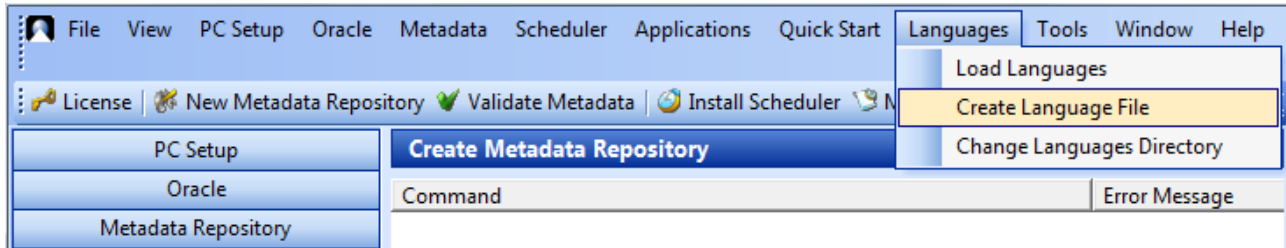
-SP Login password

-Add If the language doesn't exist yet, add it, otherwise only existing languages can be installed.

e.g. -QL -LF "C:\ProgramData\QAD\Language\Lang_Other.wst" -SN W4 -Add

Creating a Language File

Click on the **Languages** menu item in the command bar at the top of the screen. Select the **Create Language File** option.



You will then be prompted to logon to the required metadata repository. Language Files are applied to a specific metadata repository.

Once logged on, you will be prompted for

- ☐ The **Language** - select from the drop-down list. Select a Language or choose **Original** to create a Language file containing the original values.
- ☐ The **entries to exclude** from the extract.
- ☐ The file delimiter, translation prefix and translation format. The **file delimiter** provides an easy means of breaking up the file after extract. The **translation prefix** must be something that will NEVER appear in the data itself. This is used to identify the start/end of any given field translation.

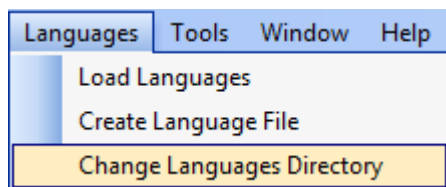
A screenshot of the 'Language Extract' dialog box. The dialog has a title bar with a close button. Inside, there is a text instruction: 'Select the language to be extracted. You can choose 'original' to extract the base values rather than any specific translations.' Below this, there is a 'Language:' label and a dropdown menu with 'Original' selected. Another instruction says 'Select the entries to exclude from the extract:'. Below this are two labels: 'Exclude if translation already exists:' and 'Exclude if no current translation and original value is empty:'. Each has a dropdown menu with 'True' selected. To the right of these are 'OK' and 'Cancel' buttons. Below the exclusion options, there is a 'Select the file formatting:' section. It contains three labels: 'Delimiter:', 'Translation prefix:', and 'Translation format:'. Each has a dropdown menu. The 'Delimiter' dropdown shows '=', 'Translation prefix' shows '{Translation}', and 'Translation format' shows '1'. At the bottom, there is a text field containing the example: '{Translation}FACT[fact_budget]->COLUMN[quantity].[DESC]=Quantity of product sold (i.e. number of product units)'.

A Language extraction file will then be created and saved into **C:\ProgramData\Data Warehouse Designer\Language**

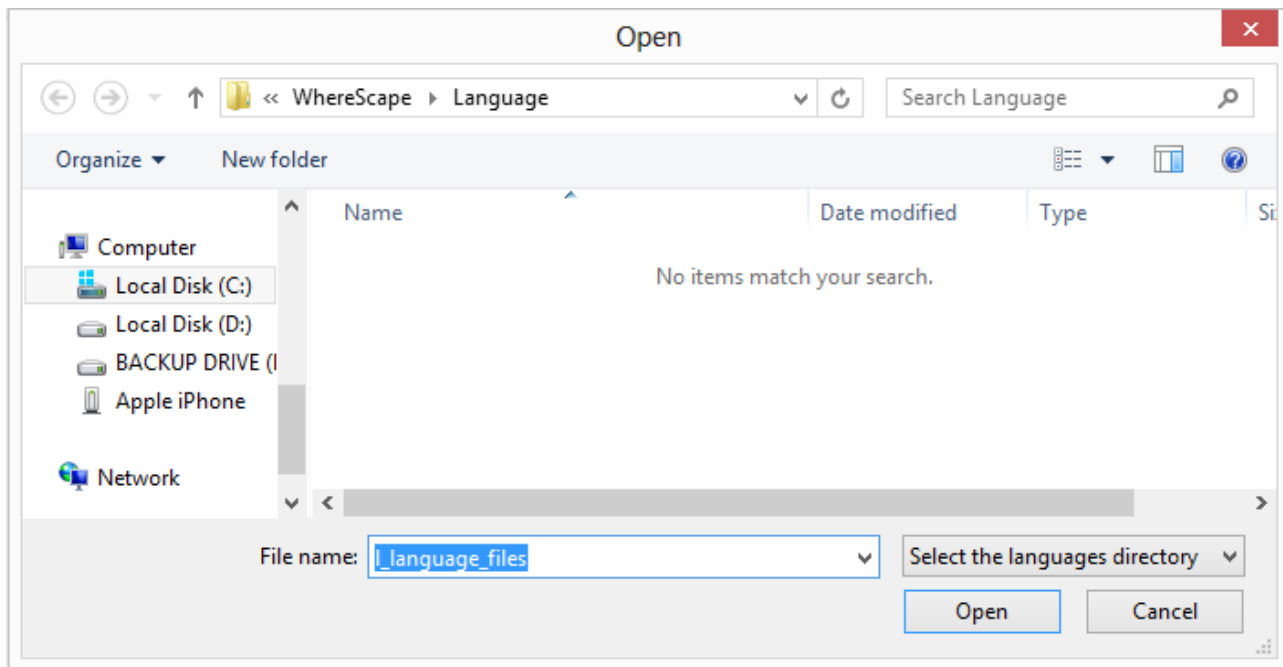
A translator will need to replace the English definitions in the file with the translations relevant to the chosen language.

Changing the Languages Directory

Click on the **Languages** menu item in the command bar at the top of the screen, then select **Change Languages Directory**.



A dialog will allow you to browse and select a new languages directory.



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