Installation Guide

QAD Business Intelligence Portal

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BI Portal v3.2
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BIPortal_IG_v032.pdf/dbg/bkp

QAD Inc.
100 Innovation Place
Santa Barbara, California 93108
Phone (805) 566-6000
http://www.qad.com

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Chapter 1

Installing QAD BI Portal Web Application

This chapter provides information about the installation and configuration steps for the QAD BI Portal web application.

It discusses the following topics:

Requirements

- Tomcat 5.5 or 6.0 installed and configured
- Java 1.5 JRE or higher
- SQL Server 2005 or 2008 installed and configured
- SQL Server has TCP enabled, in order to connect via JDBC
- WhereScape RED installed and configured
- Data Warehouse created in WhereScape: QAD BI Analytical Module(s) loaded into WhereScape, customizations made, data loaded, Scheduler created

Note End users will need Adobe Flash Player installed for their browser.

Configuration Parameters

The following configuration parameters will be required during installation, so write them down before you start:

- Tomcat Port: Port in which Tomcat is running; for example, 80 or 8080
- SQL Server JDBC URL: URL required to connect to SQL Server database (host name, port number, and database name)
- WhereScape RED user / pwd: Username and Password to connect to SQL Server Database where RED is running. This should be the RED owner account.
- BI Portal database User / pwd: Username and Password to connect to SQL Server database where BI Portal repository will be installed.

Installation Notes

Note that the QAD BI Portal cannot be installed in the same Tomcat instance as QXtend. QXtEnd is forcing the use of a specific DOM parser library that is incompatible with the BI application usage. Install the two applications in separate Tomcat instances.

Installation Steps

Follow the steps below to install and configure a new BI Portal instance.

1 Install BI Portal Web Application

   a Create a subdirectory for the web application beneath the `<tomcat_dir>\webapps\` directory; for example, qadbi.

   b With Tomcat not running, unzip `qadbi.zip` into the Tomcat webapps sub-directory created above.

2 Configure BI Portal

a Copy the XML file <tomcat_dir>\webapps\qadbi\WEB-INF\config\server-config.xml.default to a file named server-config.xml in the same directory. Edit the server-config.xml file to match the values for the configuration parameters to the appropriate values for your environment, as described below. Contents are as follows:

- dbType : database platform. Value should be SQL for SQL Server or Oracle for Oracle
- driver: JDBC driver to be loaded at runtime for business intelligence server database. For SQL Server, the value is com.microsoft.sqlserver.jdbc.SQLServerDriver. For Oracle, the value is oracle.jdbc.OracleDriver.
- jdbcUrl: JDBC URL to connect to business intelligence server database
- user: User name for the database
- pwd: Password for the database
- logCheckInterval: How often (in minutes) the portal should perform its maintenance tasks (log the system state, clean up logs, etc.). Default is 15 minutes.
- logDaysToKeepEvents: Number of days to store system events in the database (aw_evt_system and aw_evt_request tables). Default is 14 days.

- log Element:
  - watch: Whether to watch the log file for changes and update log4j settings dynamically; true or false
  - configFile: The name of the log4j configuration file
- Example contents of the server-config.xml file:

```
<root>
<repository
dbType="SQL" driver="com.microsoft.sqlserver.jdbc.SQLServerDriver" jdbcUrl=
"jdbc:sqlserver://myhost:1433;database=QAD_PORTAL" user="myuser" password=
"mypwd"
logCheckInterval="15"
logDaysToKeepEvents="14" />
<log watch="true" configFile="LoggerConfig.properties" />
</root>
```

3 Configure log4j

a Copy the file <tomcat_dir>\webapps\biportal\WEB-INF\config\LoggerConfig.properties.default to a file named LoggerConfig.properties in the same directory. Edit the Log4j configuration file to specify a path for the log file that is the R1 appender defined in the properties file. Note that if you are running Tomcat as a Windows Service, the log file name must be a full path, and the backslashes must be escaped; for example,

```
log4j.appender.R1.File=D:\\ apache-tomcat-6.0.20\\logs\\qadbi.log
```

4 Install BI Portal Repository

a Connect to the SQL Server database where BI Portal Repository is to reside, using the SQL tool of choice. Locate the BI DDL script in the `<tomcat_dir>\webapps\qadbi\install\sqlserver. Run the bi_ddl.sql` SQL script to create required repository tables.

Note This script will drop the tables first if they already exist, and re-create them. Make sure you are running this in the correct database. This must be the database in which the WhereScape metadata has already been installed.

b Edit the seed script `seed.sql` to set any variables to the specific values necessary for your installation, then run the SQL scripts to seed the repository tables.

c seed.sql: Set the email address for the initial root user to the email address of the application administrator. If required, customize the authorization roles (the values being entered into aw_auth_role table, and into aw_user_auth_role for the initial root user). Do not modify any of the aw_app_role descriptions. The aw_data_role table, as well as the data_role column in aw_user, are no longer used.

d Set the different aw_sys_config entries as follows:

- AUTHSERVICE: If a custom authentication class will be used, set the custom authClass to the customized authorization class and uncomment this section. Otherwise, leave this section commented out.
- USERSERVICE: Customize the text that will be used in the Subject of the Welcome and Password Change emails as desired.
- MAILER and SMTP: Configure this with your specific mail server parameters.
- WELCOME_EMAIL: Customize the text that will be contained in the Welcome email sent to new users. Make sure that the link to the BI Portal web application is correct for your environment.
- PWD_RESET_EMAIL: Customize the text that will be contained in the Password Reset emails sent to users who request a new password.
- SECSERVICE: Do not edit; security models will be built in the Administration UI.
- DATASERVICE: Configure with the information required to connect to the WhereScape data warehouse. This includes the dbType (SQL or Oracle), whSchema (the name of the database owner - typically dbo for SQL Server), the jdbcDriver and jdbcURL, jdbcUser, and jdbcPassword for accessing the database, and the metadataAdapter (com.awbi.server.data.adapter.WhereScapeAdapter). For example:

```
<dataConfig dbType="SQL" whSchema="dbo" jdbcDriver=
"com.microsoft.sqlserver.jdbc.SQLServerDriver"

jdbcURL="jdbc:sqlserver://myhost:1433;database=QAD_DW" jdbcUser="myuser"
jdbcPassword="mypwd"

metadataAdapter="com.awbi.server.data.adapter.WhereScapeAdapter"/>
```

5 Customize Report Logo. The report wizard allows you to choose to put a logo on your generated reports. The file it uses is stored in two places:

- <tomcat_dir>\webapps\qadbi\images\logo.gif - used for standard HTML reports.
- <tomcat_dir>\webapps\qadbi\WEB-INF\classes\images\logo.gif - used for PDF and Excel exports of reports.

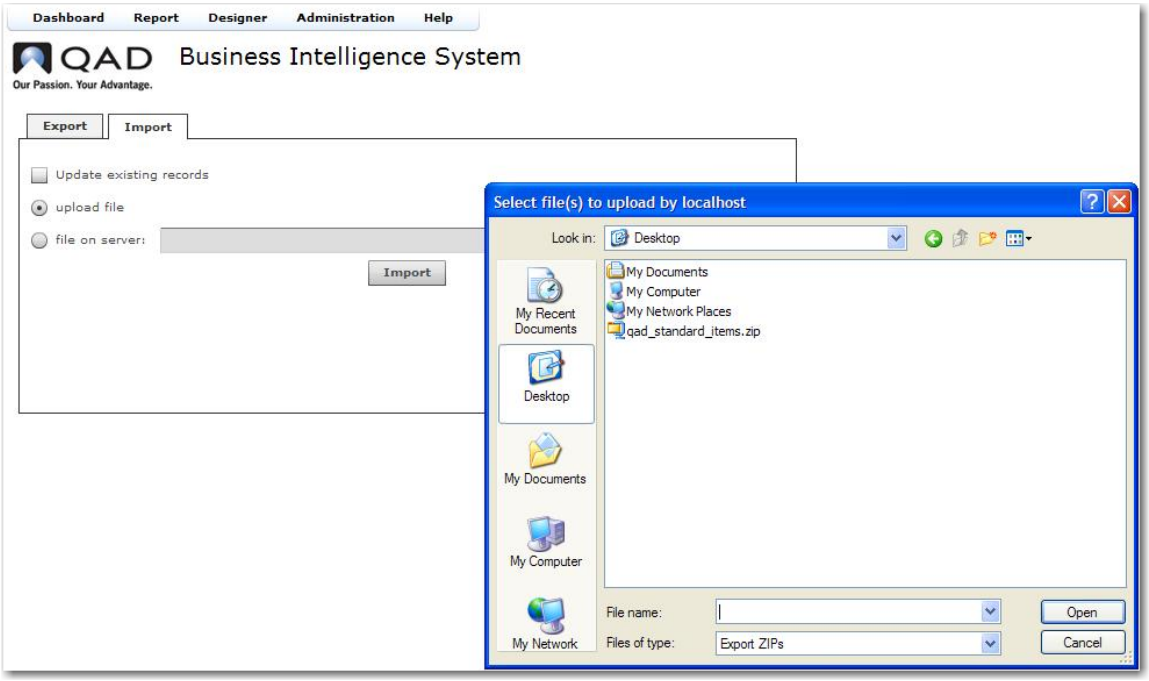
If you wish to have your company logo print on reports, replace the default logo.gif in the web application's images subdirectories with a GIF file of your logo. The logo file can be different for the two classes of report types.

Install Standard Dashboards and Reports

Standard dashboard, reports, visual items and queries are shipped with the QAD analytical modules. The contents of the zip file qad_standard_items.zip are portal documents used to interact with the standard modules.

Find the qad_standard_items.zip file and place it somewhere for easy access. Using the portal, go to the menu option Administration -> Data Migration. Select the Import tab, select the upload file option and press the Import Button. Select the qad_standard_items.zip file and select OK.

Fig. 1.1
QAD Standard Items Zip



The items will upload into the system. On completion, a message indicating that the items were loaded will be displayed.

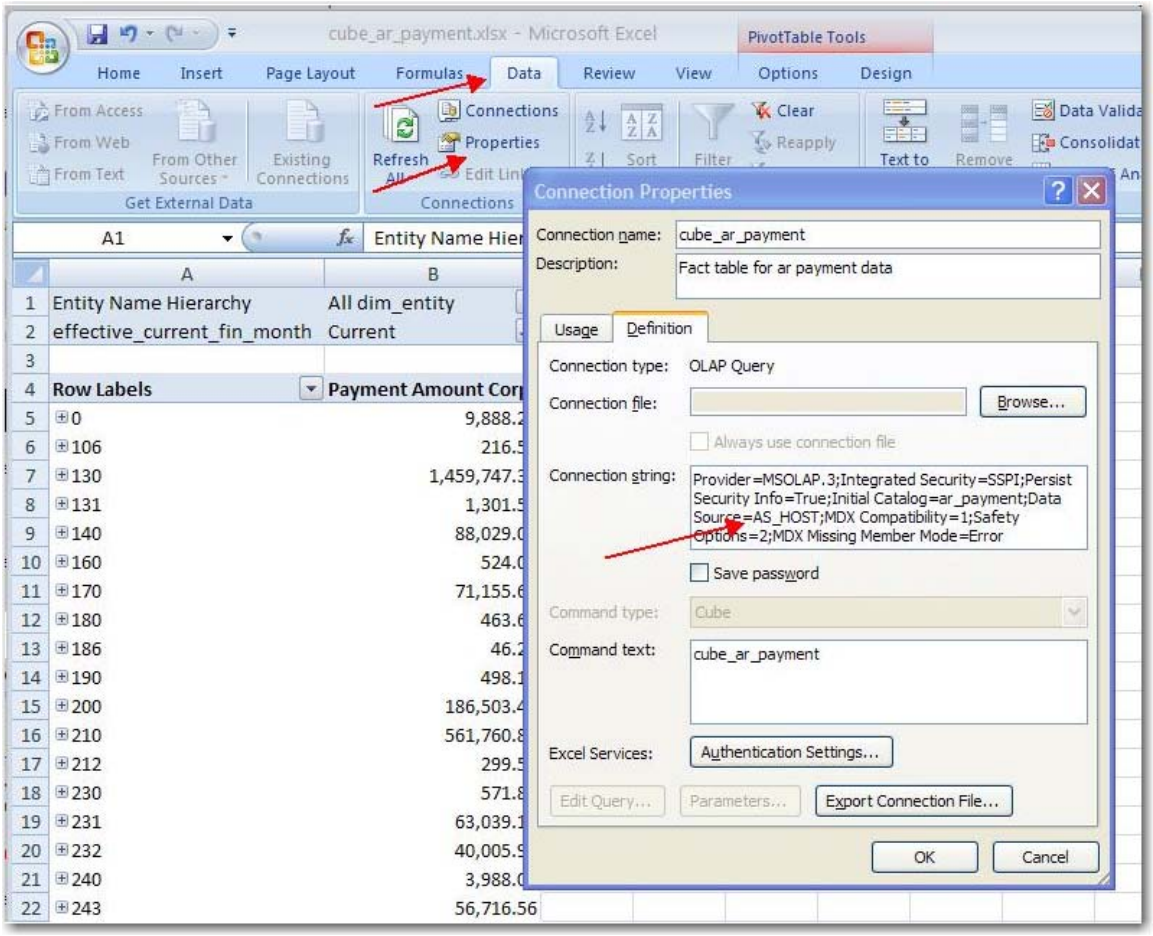
Installing Excel Workbooks

Some of the standard dashboards include Excel workbooks that connect to an Analysis Services system for ad-hoc analysis. Extract the file adhoc_excel_files.zip into the web application directory, <tomcat home>/webapps/<application name>/published. These files are referenced by the standard dashboards loaded in the step Install Standard Dashboards and Reports.

Each workbook uses a data source connection to the Analysis Services system. The connections used are embedded in the worksheets but must be modified to connect to the local Analysis Services host. To do this, open the workbook in Excel 2007, press Data, then Properties. On the Connection Properties tab select Definition and change the text that says DataSource=AS_HOST to give the name of your Analysis Services host machine.

Full documentation on this process is included in the following document from Microsoft: http://office.microsoft.com/en-us/excel/HP101672991033.aspx

Fig. 1.2
Excel Workbooks



Getting Started in the BI Portal Web Application

The initial login is root, with a password of root. You will be required to change the password immediately.

You will need to build your model before you can do any analysis. Click Administration, then Model Administration. Click on the Rebuild Master button.

Chapter 2

Installing QAD BI Portal Analytical Modules

This chapter describes the initial setup of the Data Warehouse, and the installation and configuration steps for QAD Business Intelligence Suite (Order Management and Financials Modules).

It discusses the following topics:

Describes the initial setup of the Data Warehouse.

Covers the installation and configuration steps for QAD Business Intelligence Suite (Order Management and Financials Modules).

The Data Warehouse

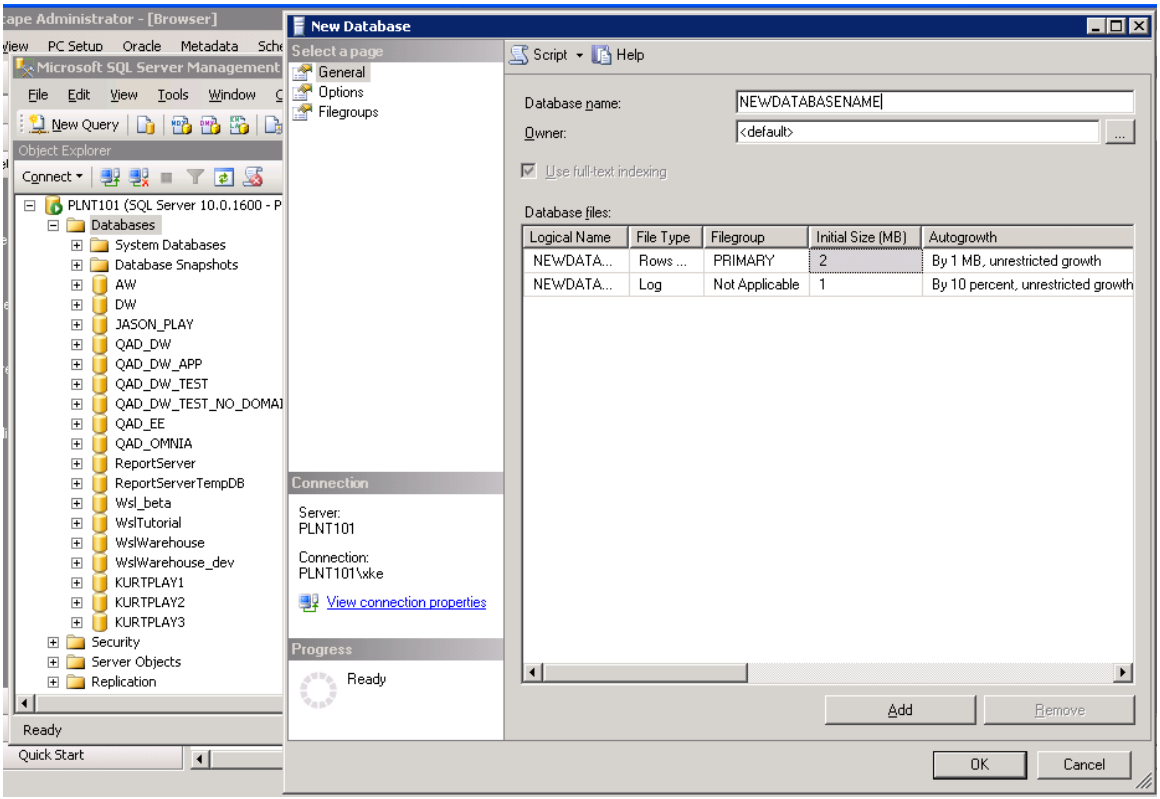
A Data Warehouse must be initialized properly prior to the installation of any QAD BI Analytical Modules.

Follow the steps below to install and configure a new QAD BI Data Warehouse instance.

1 Install RED (6.0.6 or above) if you have not already done so.

2 Create a database in SQL Server (right click on DATABASE, Create new database). Choose the Simple recovery mode (see Options):

Fig. 2.1
Create Database



Note After creating the new database, double check the recovery mode - Return to SQL Server Management Studio's Options tab for the database and ensure the Recovery Mode is set to SIMPLE.

3 Create the ODBC connection to the Data Warehouse. ODBC is used by the Data Warehouse Engine (RED) to communicate with the Data Warehouse database. Create an ODBC connection to the SQL Server database for RED's use. This will be a System ODBC connection, using the SQL Server Native Client driver and Windows Authentication:

Fig. 2.2
ODBC Connection 1

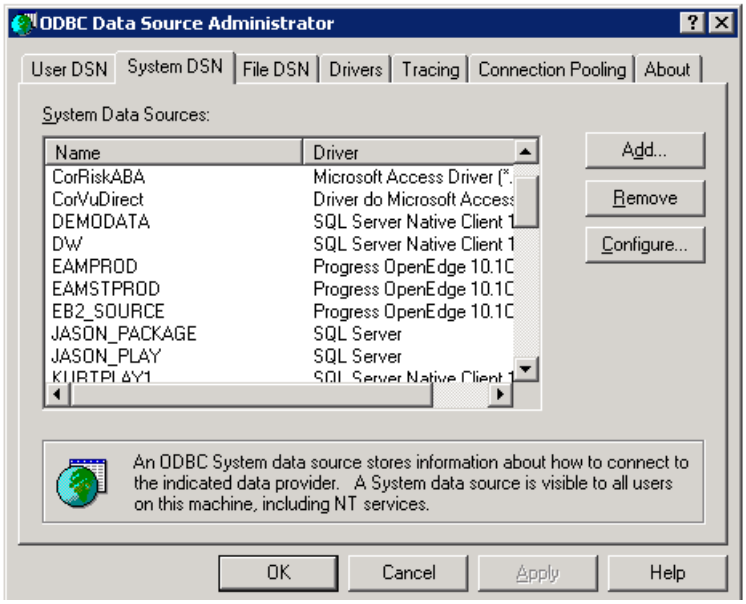


Fig. 2.3
ODBC Connection 2

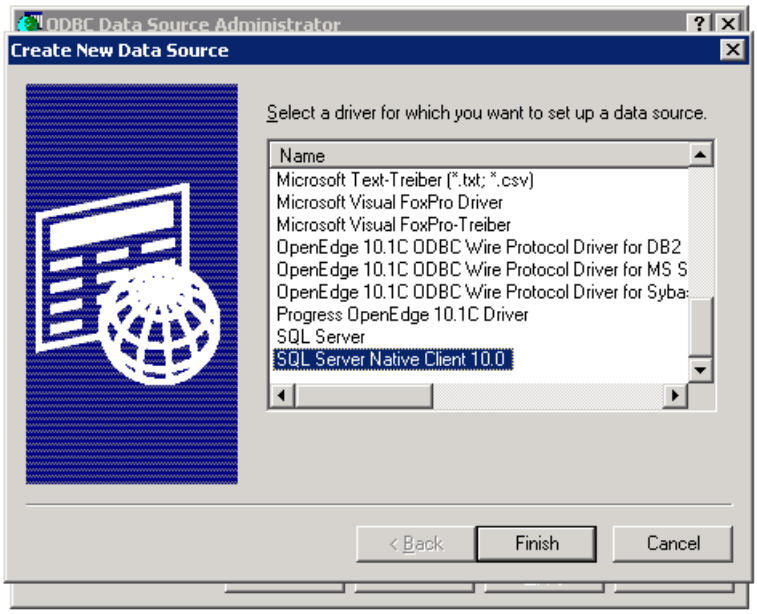
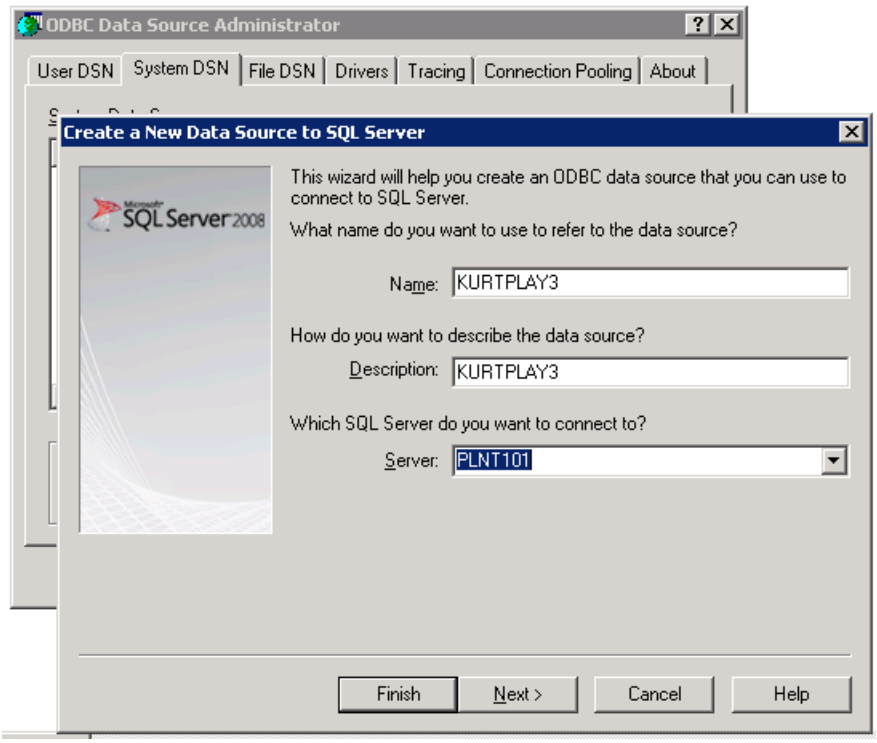
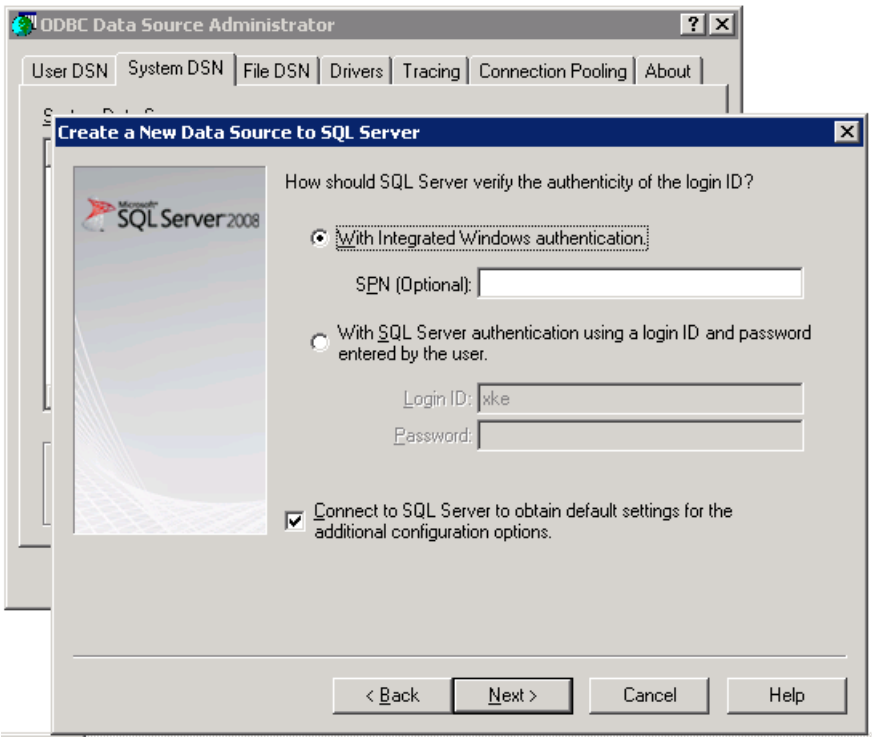


Fig. 2.4
ODBC Connection 3



4 Use Integrated Windows authentication if possible.

Fig. 2.5
Windows Authentication



5 Change the default database to the SQL Server database you created for the data warehouse:

Fig. 2.6
SQL Database 1

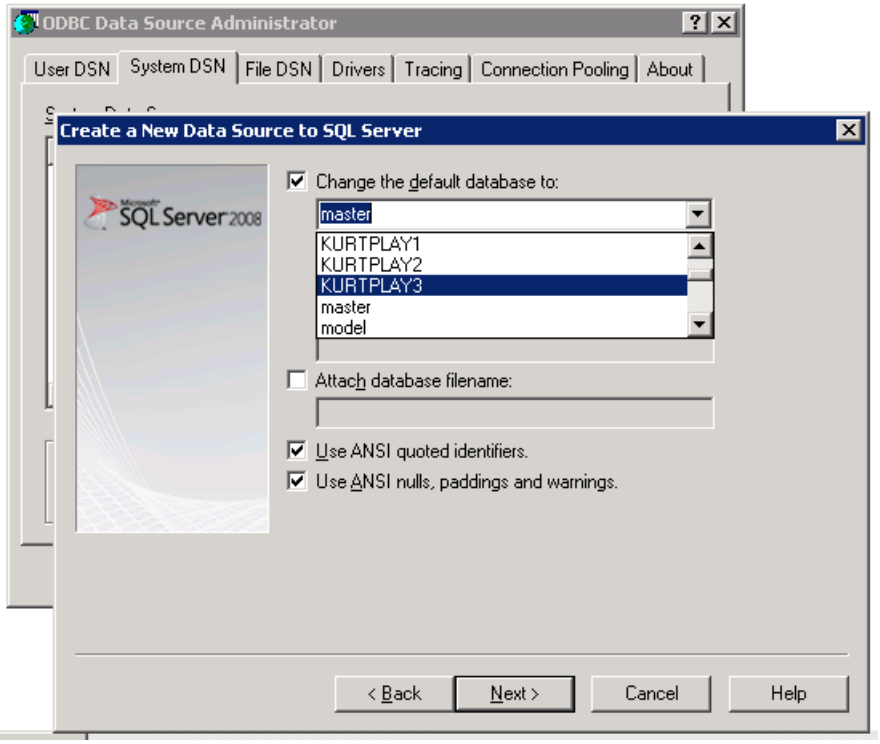


Fig. 2.7
SQL Database 2

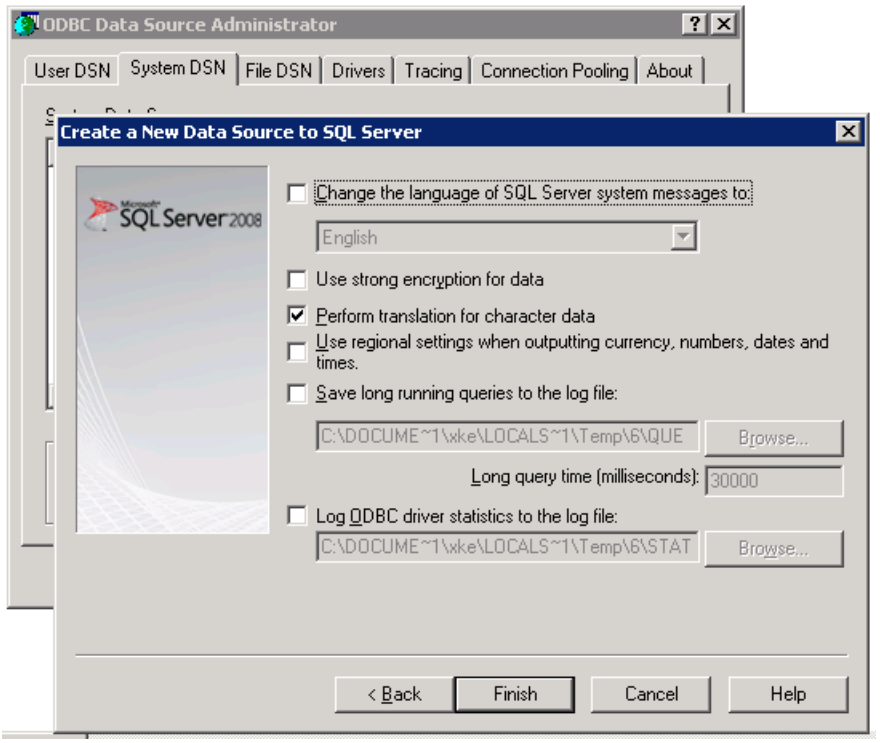
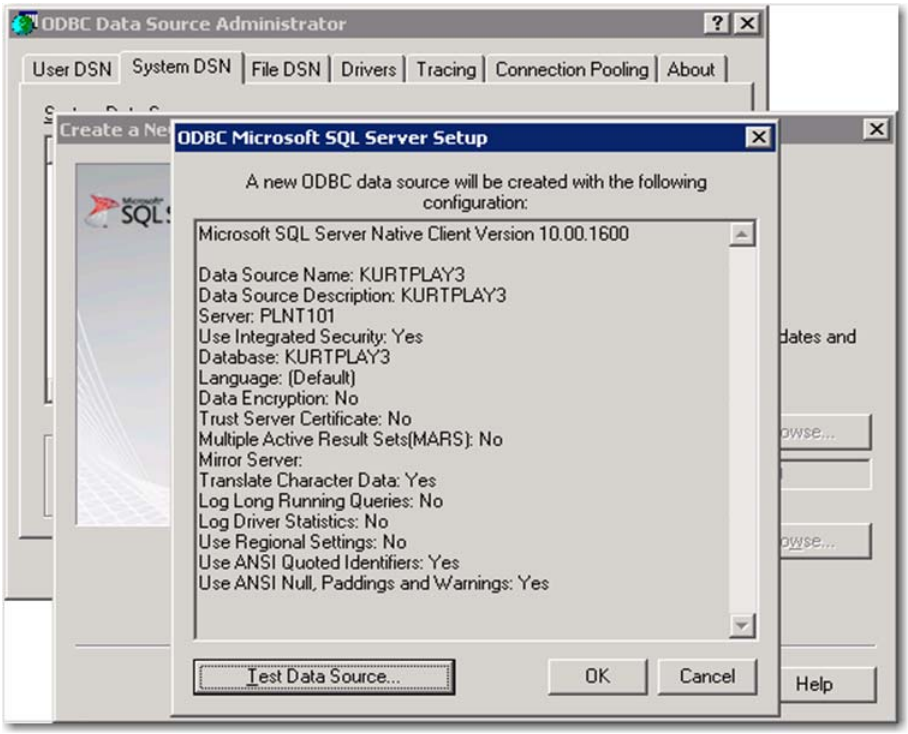
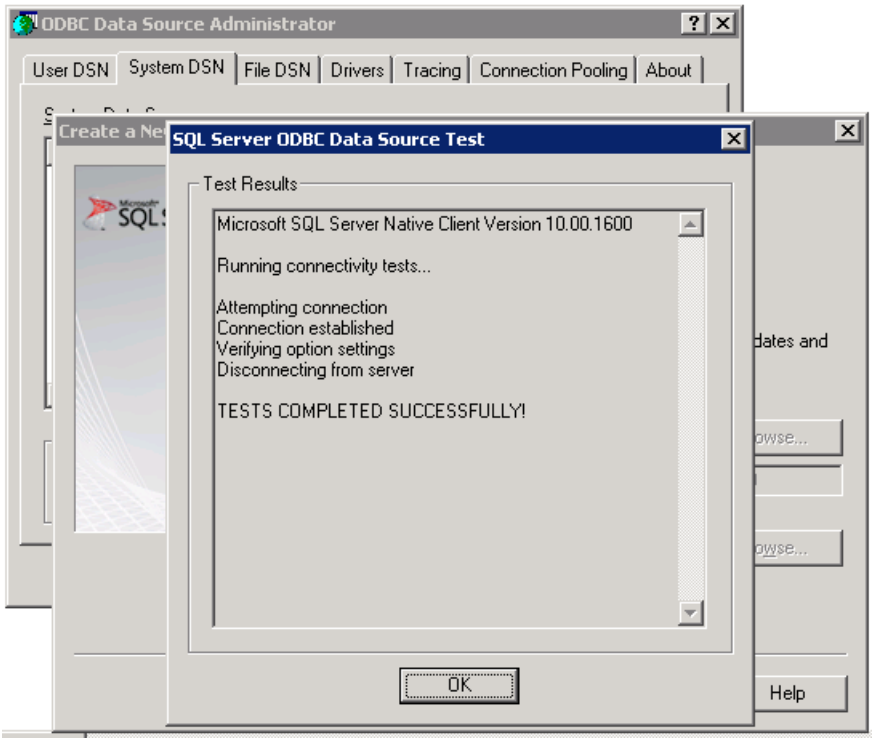


Fig. 2.8
SQL Database 3



6 Test the ODBC connection to the Data Source to make sure the connection is working.

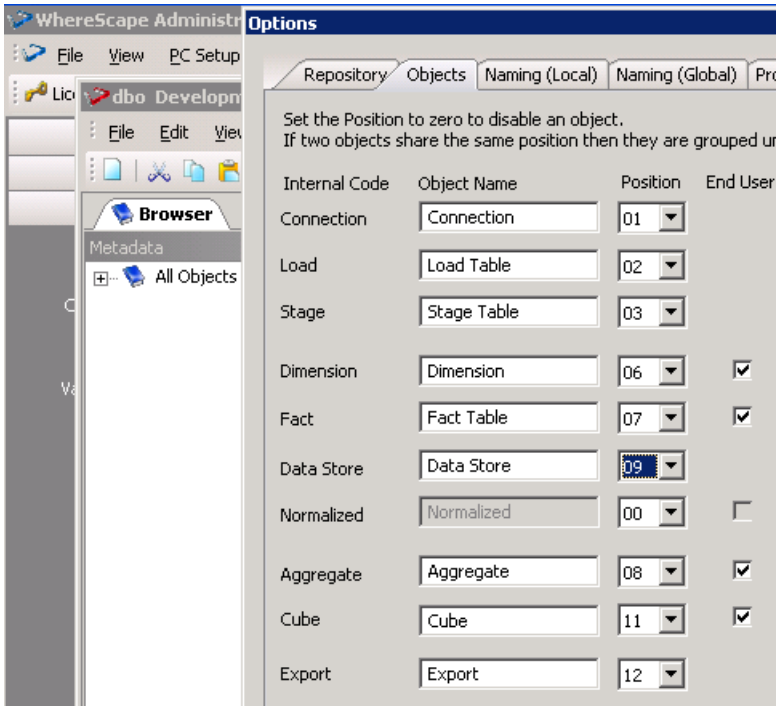
Fig. 2.9
ODBC Connection Test



7 Launch the Setup Administrator (blue glasses). (Windows 2008 Server note: launch this using Run as Administrator so that it will be able to create the Scheduler as a Windows Services.) Choose Metadata Repository, and then Create Metadata Repository. Select the ODBC connection created in the previous step. The Repository Type should be Star.

8 When RED is launched after the repository is created, in the Objects tab of the options dialog, activate Data Store objects by setting the position to a valid value (for example, 09).

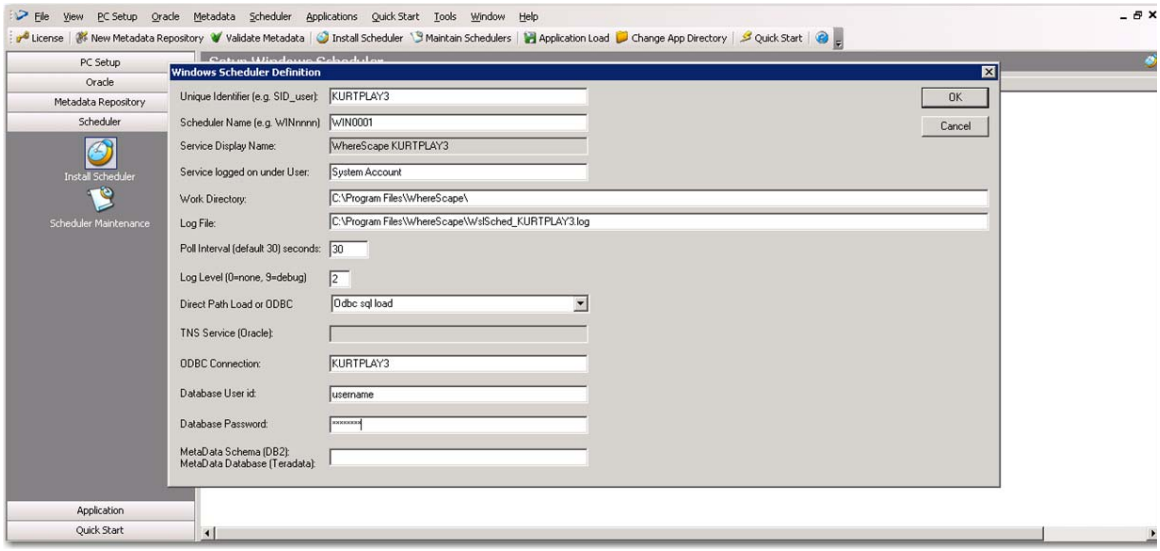
Fig. 2.10
Data Store



9 Create a RED Connection named QAD_MASTER, type ODBC and method IP. Do not include a specific ODBC Source connection (this is used during application load).

10 Back in the Setup Administrator, create a Scheduler for the Data Warehouse. This is the Windows service that runs scheduled jobs. Use the ODBC connection that was created for the Data Warehouse.

Fig. 2.11
Scheduler



Installation of BI 3.2 Module Suite - Order Management and Financials

This topic includes installation and configuration steps for QAD Business Intelligence Suite (Order Management and Financials Modules).

Requirements

- RED (version 6.0.6 or later for Microsoft Analysis Services cube support), Data Warehouse installed and Scheduler running.
- QAD Business Intelligence Suite (Order Management and Financials Modules) in the form of RED application files.

Installation Steps

Follow the steps below to install the QAD Business Intelligence Suite (Order Management and Financials Modules).

Create ODBC and RED Connections for Each Source System (Data Source)

ODBC is used by the Data Warehouse Engine (RED) to access each Data Source. We will create an ODBC connection to each QAD Data Source (for example, to each Progress database) using the Progress ODBC driver. You will need to enter the host name, port number, and user ID and password. The port must be for a broker that accepts SQL connections. The user ID must have read permissions on the QAD tables. On the Advanced tab of the DSN configuration, set the Default Isolation Level to READ UNCOMMITTED.

Once the System ODBC connections are created, then for each one of these ODBC connections, create a Connection object in RED:

1 Right-click on Connection in the RED Metadata Browser and choose New Object.

2 Enter a (short) descriptive name for the data source (for example, QAD_MAIN, QAD_US, QAD_EMEA, QAD_ASIA) and click OK.

3 Select a Connection Type of ODBC, Connection Method of IP, and select the ODBC connection.

4 Enter a work directory. This directory should be different for each QAD Data Source. Create this directory in the file system.

5 Enter the Extract user ID and password required for the Progress database. This user must have read permission for the QAD tables.

Install BI 3.2 Module Suite - Order Management and Financials

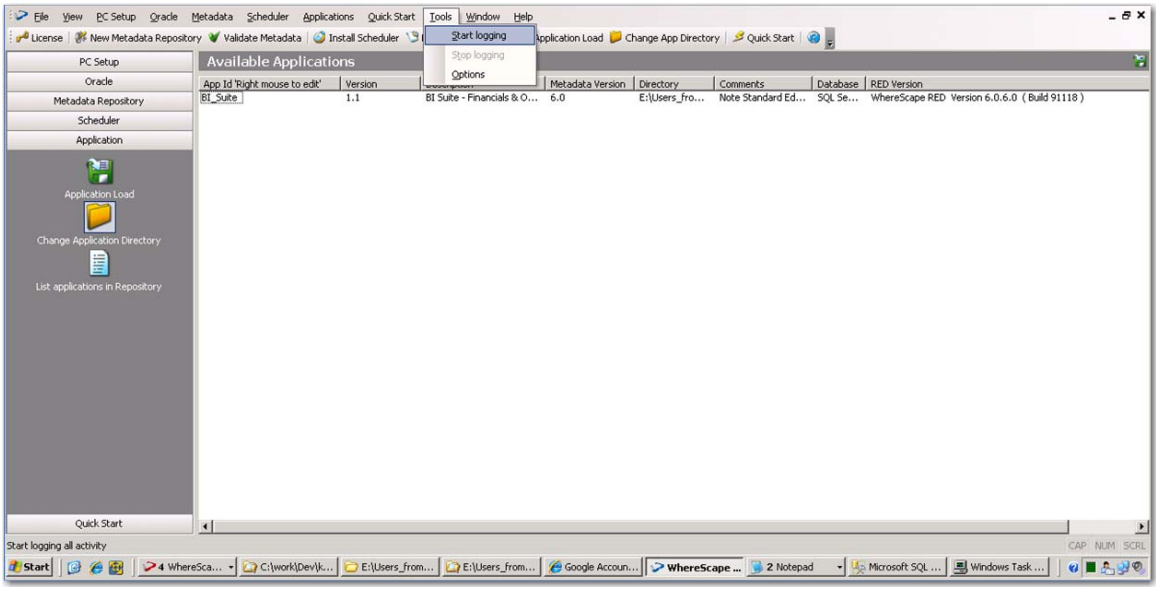
1 The QAD Business Intelligence Suite (Order Management and Financials Modules) is packaged as a zip file. Unzip the contents (meta-data files) to a directory that you will reference for the installation.

2 In Setup Administrator (blue glasses), confirm that the job scheduler is started (the service was created when the data warehouse was created). If it is not started, start the service and confirm that it does not stop.

3 Go to the Application option in Setup Administrator (blue glasses). Change Application Directory to the directory into which you extracted the QAD Business Intelligence Suite (Order Management and Financials Modules). The contents will consist of a series of .wst files.

4 Go to Tools and Start Logging.

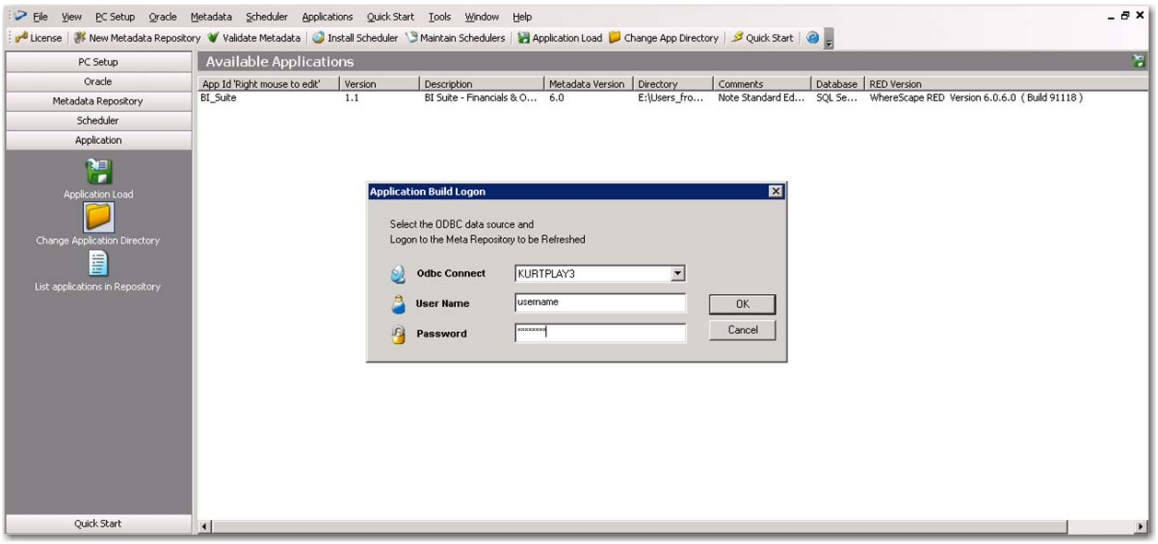
Fig. 2.12
Start Logging



5 Choose a file name for your log and a directory for it to write to.

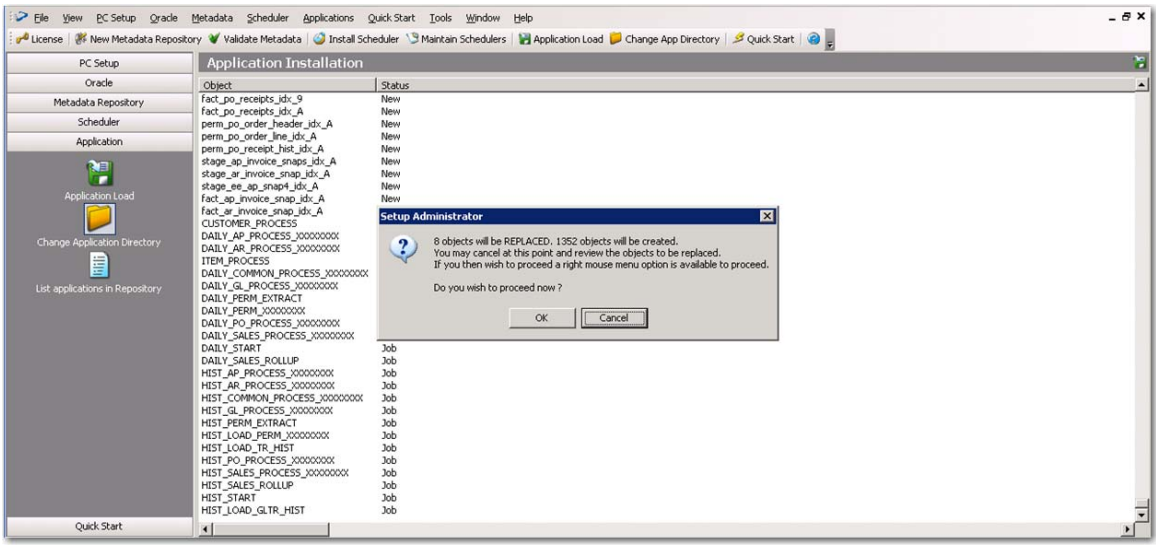
6 Install the application through Application Load. Right-click on the module you are installing and choose Install.

Fig. 2.13
Application Load



7 If a message comes up about files being overwritten, choose Cancel and confirm the files are OK to be overwritten.

Fig. 2.14
Confirm file overwrite



8 Review the message log. The files that will be replaced will be identified at the top of the log. To proceed, right click within the log and choose Proceed to Load. Once the main application load is running, this may take as long as 5-10 minutes.

9 After loading all the module components, restart RED.

10 Set runtime parameters to the proper settings based on the parameters table, see “Reference” on page 18. In particular, change the HIST_LOAD_SOURCE_Sxx, DAILY_LOAD_SOURCE_Sxx and INITIAL_JOB_SETUP_CONNECTION_xx parameters to point at the source database(s).

Note Parameters that MUST be set before running INITIAL_JOB_SETUP have an initial value of <Enter data source name here for initial setup>. See “Reference” on page 18 for more details.

11 In RED, in the Browser Window under All Objects, right click on Connection and choose the option to create a new object. Set up a connection for EACH source system.

12 Perform Initial Job Setup:

- **a** In RED, chose Scheduler menu option.
- **b** Change the view to All Jobs.
- **c** Locate the job named INITIAL_JOB_SETUP (status On Hold).
- **d** Right-click the job name and start the job.
- **e** The status will change to Waiting.
- **f** Refresh the screen until the job completes.
- **g** If the job fails to start, check the scheduler status.

13 After INITIAL_JOB_SETUP has run, check Scheduled jobs to confirm that you now have jobs with names that end with all connections you have created. If they have not been created, check the Parameters; make sure that the INITIAL_JOB_SETUP_ENABLED parameter is set to Y and run INITIAL_JOB_SETUP again.

Note Financials Only Install - The parameters generated in the chained jobs list by INITIAL_JOB_SETUP include DAILY_SALES_ROLLUP and HIST_SALES_ROLLUP that are only necessary if we also have Order Management installed. If this is a Financial modules only install, delete these two parameters so they are not in the chained jobs list.

Note After INITIAL_JOB_SETUP if everything looks good in the Parameters and the Scheduled jobs, run HIST_START to begin the historic load.

Notes on parameters

In RED, choose Parameters from the Tools menu to display the current Parameter definitions. These need to be customized for your specific installation.

Note Refer to the `QADBIParametersAndJobs.xlsx` spreadsheet for more information on parameter settings.

Notes on Initial Jobs

The Sales/Order Management module includes several jobs that can be scheduled to run at regular intervals, plus jobs that are used for the initial load of history. These jobs are delivered as templates which have to be modified for your specific QAD ERP connection(s). To create the jobs for your system, set the INITIAL_JOB_SETUP_CONNECTION_01 parameter to your QAD ERP primary

connection (for example, QAD_MASTER). If you have more than one source system, set INITIAL_JOB_SETUP_CONNECTION_02 to your second QAD ERP connection (for example, QAD_ERP2). You may continue adding as many INITIAL_JOB_SETUP_CONNECTION_XX parameters as necessary. Eliminate the value for the connections that are not being used.

Then, set the INITIAL_JOB_SETUP_ENABLED parameter to Y, and in the Scheduler, execute the INITIAL_JOB_SETUP job. The jobs specified in the INITIAL_JOB_SETUP_JOBINJOB_XX parameters (these are defined by QAD) will be created with the XXXXXXXX replaced with the connection name for each of your INITIAL_JOB_SETUP_CONNECTION_XX values.

Notes on Load History

TR_HIST_LOAD_MAXSIZE is the maximum number of rows to load in an iteration loading tr_hist.

The Transaction History load (HIST_LOAD_TR_HIST) processes data in chunks, rather than trying to extract and load all data at once (since the tables can contain large amounts of data). The History Load processing will run this job many times, processing some subset of the data with each pass. The parameters that are used by the TR_HIST jobs are listed below.

Important Do not update them manually; the HIST_LOAD jobs use these to keep track of what data has already been processed, so that if the load job is interrupted, it can pick up where it left off.

- TR_HIST_CONNECTION_NAME
- TR_HIST_DOMAIN
- TR_HIST_DOMAIN_SXX
- TR_HIST_LOOP_NO
- TR_HIST_ROW_COUNT
- TR_HIST_SOURCE_SXX
- TR_HIST_TRAN_MAX
- TR_HIST_TRAN_MAX_SXX
- TR_HIST_TRAN_MIN

To populate the Repository with your ERP history, run the HIST_START job.

Reference

Table 2.1
Parameters

Parameter	Value	Financials	Order Mgmt	Suite
ALTERNATE_EXCHANGE_DOMAIN				
AP_PROCESS_CONNECTION_NAME		X		
AP_PROCESS_DAYS	20	X		
AP_PROCESS_RUNNING	N	X		
AP_PROCESS_RUNNING_JOB_NAME		X		

Parameter	Value	Financials	Order Mgmt	Suite
AR_PROCESS_CONNECTION_NAME		X		
AR_PROCESS_DAYS	20	X		
AR_PROCESS_RUNNING	N	X		
AR_PROCESS_RUNNING_JOB_NAME		X		
BUDGET_ACTUAL_ROW	ACTUAL	X		
COM_PROCESS_CONNECTION_NAME		X	X	
COM_PROCESS_RUNNING	N	X	X	
COM_PROCESS_RUNNING_JOB_NAME		X	X	
CORP_CURRENCY_CODE	USD	X	X	
DAILY_LOAD_JOB_CURNO	0	X	X	
DAILY_LOAD_JOB_PREFIX	DAILY_	X	X	
DAILY_LOAD_JOB001		X	X	
DAILY_LOAD_SOURCE_CURNO	0	X	X	
DAILY_LOAD_SOURCE_S01		X	X	
DAILY_LOAD_SOURCE_S99	Dummy Parameter			
DATE_EARLIEST_POSSIBLE	1900-01-01	X	X	
DATE_LATEST_POSSIBLE	2999-12-31	X	X	
DEFAULT_ACCOUNT	00000	X	X	
DEFAULT_COST_CENTER	0000	X	X	
DEFAULT_DOMAIN	00000	X	X	
DEFAULT_DOMAIN_EAM				
DEFAULT_ENTITY	0000	X	X	
DEFAULT_PROJECT	00000	X	X	
DEFAULT_SOURCE	UNKNOWN_SOURCE	X	X	
DEFAULT_SUB_ACCOUNT	0000000	X	X	
FIN_FIRST_DAY_NAME	SUN	X	X	
GL_HISTORY_LOAD_REQUIRED	Y	X		Set to N after initial history load.
GL_LOAD_DAYS	52	X		
GL_LOAD_LOOKBACK_DAYS	50	X		
GL_LOAD_PERIOD_FROM	199301	X		Set as appropriate
GL_LOAD_PERIOD_TO	201010	X		Set as appropriate
GL_PROCESS_CONNECTION_NAME	<null>	X		
GL_PROCESS_DAYS	200	X		
GL_PROCESS_RUNNING	N	X		
GL_PROCESS_RUNNING_JOB_NAME	<null>	X		
GLTR_HIST_CONNECTION_NAME	<null>	X		
GLTR_HIST_DOMAIN	<null>	X		
GLTR_HIST_LOAD_MAXSIZE	5000000	X		

Parameter	Value	Financials	Order Mgmt	Suite
GLTR_HIST_LOOP_NO	0	X		
GLTR_HIST_ROW_COUNT	0	X		
GLTR_HIST_TRAN_MAX	0	X		
GLTR_HIST_TRAN_MIN	-1	X		
HIST_LOAD_GLTR_HIST_RUNNING	N if Financials only C if Order Management	X	X	
HIST_LOAD_JOB_CURNO	0	X	X	
HIST_LOAD_JOB_PREFIX	HIST_LOAD_	X	X	
HIST_LOAD_JOB001		X	X	
HIST_LOAD_JOB002				
HIST_LOAD_JOB003				
HIST_LOAD_JOB004				
HIST_LOAD_JOB005				
HIST_LOAD_JOB006				
HIST_LOAD_JOB007				
HIST_LOAD_SOURCE_CURNO	0	X	X	
HIST_LOAD_SOURCE_S01	<DATABASE_SOURCE>	X	X	This has to be populated for INITIAL_JOB _SETUP to work.
HIST_LOAD_SOURCE_S02				
HIST_LOAD_SOURCE_S03				
HIST_LOAD_SOURCE_S99				
HIST_LOAD_TR_HIST_RUNNING			X	
INITIAL_JOB_SETUP_CONNECTION_01	<DATABASE_SOURCE>	X	X	This has to be populated for INITIAL_JOB _SETUP to work.
INITIAL_JOB_SETUP_CONNECTION_02				
INITIAL_JOB_SETUP_CONNECTION_99				
INITIAL_JOB_SETUP_ENABLED	Y	X	X	Switches to N once the job has been run once.
INITIAL_JOB_SETUP_JOBINJOB_01	DAILY_XXXXXX	X	X	
INITIAL_JOB_SETUP_JOBINJOB_02	HIST_LOAD_XXXXXX	X	X	
INITIAL_JOB_SETUP_JOBINJOB_99				
JOB_AP_PROCESS_BATCH_ID	0	X		
JOB_AR_PROCESS_BATCH_ID	0	X		
JOB_CHAINING_ENABLED			X	
JOB_COM_PROCESS_BATCH_ID			X	
JOB_GL_PROCESS_BATCH_ID	0	X		

Parameter	Value	Financials	Order Mgmt	Suite
JOB_SALES_PROCESS_BATCH_ID			X	
PERM_HIST_DATE	1900-01-01		X	
PERM_HIST_PREFIX	HIST		X	
PO_PROCESS_CONNECTION_NAME				
PO_PROCESS_DAYS	10			
PO_PROCESS_RUNNING	N			
PO_PROCESS_RUNNING_JOB_NAME				
PURCHASING_CONNECTION_NAME				
PURCHASING_LAST_RUN_DATE				
PURCHASING_PROCESS_DAYS	7			
PURCHASING_SNAPSHOT_DAYS	10			
PURCHASING_SNAPSHOT_DOW	%			
QAD_MASTER_CONNECTION_NAME	QAD_MASTER	X	X	
SALES_BOOKING_DATE			X	
SALES_BOOKING_FIRST_DATE			X	
SALES_LOAD_DAYS	30000		X	
SALES_LOAD_LOOKBACK_DAYS	20000		X	
SALES_ORDER_HISTORY_DATE			X	
SALES_ORDER_PERF_DATE			X	
SALES_PROCESS_CONNECTION_NAME			X	
SALES_PROCESS_DAYS	100		X	
SALES_PROCESS_RUNNING	N		X	
SALES_PROCESS_RUNNING_JOB_NAME			X	
SALES_SHIPMENT_FILTER	N		X	
SALES_SNAPSHOT_DAYS	10		X	
SALES_SNAPSHOT_DOW	%		X	
TR_HIST_CONNECTION_NAME		X	X	
TR_HIST_DOMAIN		X	X	
TR_HIST_LOAD_MAXSIZE	2500000	X	X	
TR_HIST_LOOP_NO	0	X	X	
TR_HIST_ROW_COUNT	0	X	X	
TR_HIST_TRAN_MAX	0	X	X	
TR_HIST_TRAN_MAX_S01	0	X	X	
TR_HIST_TRAN_MIN	-1	X	X	
UNKNOWN_NUM_VALUE	9999	X	X	
UNKNOWN_VALUE	Unknown	X	X	

Table 2.2
Jobs

Job	Financials	Order Management	Suite
CUSTOMER_PROCESS	X	X	X
DAILY_AP_PROCESS_XXX	X		X
DAILY_AR_PROCESS_XXX	X		X
DAILY_COMMON_PROCESS_XXX	X	X	X
DAILY_GL_PROCESS_XXX	X		X
DAILY_PERM_EXTRACT	X	X	X
DAILY_PERM_XXX	X	X	X
DAILY_PO_PROCESS_XXX	X		X
DAILY_SALES_PROCESS		X	X
DAILY_SALES_ROLLUP		X	X
DAILY_START	X	X	X
FINANCIAL_REPORT_GENERATOR	X		X
HIST_AP_PROCESS_XXX	X		X
HIST_AR_PROCESS_XXX	X		X
HIST_COMMON_PROCESS_XXX	X	X	X
HIST_GL_PROCESS_XXX	X		X
HIST_LOAD_GLTR_HIST	X		X
HIST_LOAD_PERM_XXX	X	X	X
HIST_LOAD_TR_HIST		X	X
HIST_PERM_EXTRACT	X	X	X
HIST_PO_PROCESS_XXX			X
HIST_SALES_PROCESS_XXX		X	X
HIST_SALES_ROLLUP		X	X
HIST_START	X	X	X
INITIAL_JOB_SETUP	X	X	X
ITEM_PROCESS	X	X	X

Table 2.3

Parameter	Value	Financials	Order Management	Inventory	Purchasing	Suite	
ALTERNATE_EXCHANGE_DOMAIN						x	
AP_PROCESS_CONNECTION_NAME		x					
AP_PROCESS_DAYS	20	x					
AP_PROCESS_RUNNING	N	x					
AP_PROCESS_RUNNING_JOB_NAME		x					
AR_PROCESS_CONNECTION_NAME		x					
AR_PROCESS_DAYS	20	x					

Table 2.3

Parameter	Value	Financials	Order Management	Inventory	Purchasing	Suite	
AR_PROCESS_RUNNING	N	x					
AR_PROCESS_RUNNING_JOB_NAME		x					
BUDGET_ACTUAL_ROW	ACTUAL	x					
COM_PROCESS_CONNECTION_NAME						x	
COM_PROCESS_RUNNING	N					x	
COM_PROCESS_RUNNING_JOB_NAME						x	
CORP_CURRENCY_CODE	USD					x	
DAILY_LOAD_JOB_CURNO	0					x	
DAILY_LOAD_JOB_PREFIX	DAILY_					x	
DAILY_LOAD_JOB001						x	
DAILY_LOAD_SOURCE_CURNO	0					x	
DAILY_LOAD_SOURCE_S01						x	
DAILY_LOAD_SOURCE_S99	Dummy Parameter					x	
DATE_EARLIEST_POSSIBLE	1900-01-01					x	
DATE_LATEST_POSSIBLE	2999-12-31					x	
DEFAULT_ACCOUNT	0000					x	
DEFAULT_COST_CENTER	0000					x	
DEFAULT_DOMAIN	0000					x	
DEFAULT_ENTITY	0000					x	
DEFAULT_PROJECT	0000					x	
DEFAULT_SOURCE						x	
DEFAULT_SUB_ACCOUNT	0000000					x	
FIN_FIRST_DAY_NAME	SUN					x	
GL_HISTORY_LOAD_REQUIRED	Y					x	
GL_LOAD_DAYS	52					x	
GL_LOAD_LOOKBACK_DAYS	50					x	

Table 2.3

Parameter	Value	Financials	Order Management	Inventory	Purchasing	Suite	
GL_LOAD_PERIOD_FROM	199301					x	
GL_LOAD_PERIOD_TO	201010					x	
GL_PROCESS_CONNECTION_NAME						x	
GL_PROCESS_DAYS	200					x	
GL_PROCESS_RUNNING	N					x	
GL_PROCESS_RUNNING_JOB_NAME						x	
GLTR_HIST_CONNECTION_NAME						x	
GLTR_HIST_DOMAIN						x	
GLTR_HIST_LOAD_MAXSIZE	500000					x	
GLTR_HIST_LOOP_NO	0					x	
GLTR_HIST_ROW_COUNT	0					x	
GLTR_HIST_TRAN_MAX	0					x	
GLTR_HIST_TRAN_MIN	-1					x	
HIST_LOAD_GLTR_HIST_RUNNING	N if Financials only C if Order Management					x	
HIST_LOAD_JOB_CURNO	0					x	
HIST_LOAD_JOB_PREFIX	HIST_LOAD_					x	
HIST_LOAD_JOB001						x	
HIST_LOAD_JOB002						x	
HIST_LOAD_JOB003						x	
HIST_LOAD_JOB004						x	
HIST_LOAD_JOB005						x	
HIST_LOAD_JOB006						x	
HIST_LOAD_JOB007						x	
HIST_LOAD_SOURCE_CURNO	0					x	

Table 2.3

Parameter	Value	Financials	Order Management	Inventory	Purchasing	Suite	
HIST_LOAD_SOURCE_S 01	<DATAB ASE_SO URCE>					x	This has to be populat ed for INITIA L_JOB _SETU P to work.
HIST_LOAD_SOURCE_S 02						x	
HIST_LOAD_SOURCE_S 03						x	
HIST_LOAD_SOURCE_S 99						x	
HIST_LOAD_TR_HIST_R UNNING						x	
INITIAL_JOB_SETUP_C ONNECTION_01	<DATAB ASE_SO URCE>					x	This has to be populat ed for INITIA L_JOB _SETU P to work.
INITIAL_JOB_SETUP_C ONNECTION_02						x	
INITIAL_JOB_SETUP_C ONNECTION_99						x	
INITIAL_JOB_SETUP_E NABLED	Y					x	Switche s to N once the job has been run once.
INITIAL_JOB_SETUP_JO BINJOB_01	DAILY_X XXXXX					x	
INITIAL_JOB_SETUP_JO BINJOB_02	HIST_LO AD_XXX XXX					x	
INITIAL_JOB_SETUP_JO BINJOB_99				x			
INV_PROCESS_CONNEC TION_NAME				x			
INV_BALANCE_HIST_S TART_DATE				x			

Table 2.3

Parameter	Value	Financials	Order Management	Inventory	Purchasing	Suite	
INV_LAST_IN_MSTR_EXTRACT				x			
INV_PROCESS_DAYS	10			x			
INV_PROCESS_RUNNING	N			x			
INV_PROCESS_RUNNING_JOB_NAME				x			
INV_REVALUE_PERIODS	100			x			Number of periods to revalue

Table 2.3

Parameter	Value	Financials	Order Management	Inventory	Purchasing	Suite	
INV_TRANS_TYPES	'CST-ADJ','CST-TR','CYC-CNT','CYC-ERR','CYC-RCNT','ISS-CHL','ISS-COR','ISS-DO','ISS-FAS','ISS-GIT','ISS-PRV','ISS-RV','ISS-SCRP','ISS-SO','ISS-TR','ISS-UNP','ISS-WO','PLCG-ADJ','RCT-CHL','RCT-DO','RCT-FAS','RCT-GIT','RCT-PO','RCT-RS','RCT-SOR','RCT-TR','RCT-UNP','RCT-WO','RJCT-WO','TAG-CNT','CN-CNT'			x			Transaction types (tr_type) related to inventory changes

Table 2.3

Parameter	Value	Financials	Order Management	Inventory	Purchasing	Suite	
INV_TRANS_TYPES_CONS	'CN-SHIP','CN-USE','CN-ADJ','CN-RCT','CN-ISS			'x			Transaction types (tr_type) related to consignment inventory movements
INV_TRANS_TYPES_COUNT_ERR	CYC-ERR			'x			Transaction types (tr_type) related to count errors
INV_TRANS_TYPES_COUNT_TR	'CYC-CNT			'x			Transaction types (tr_type) related to count transactions
INV_TRANS_TYPES_CUST	ISS-SO','RCT-SOR','ISS-COR			'x			Transaction types (tr_type) related to customers
INV_TRANS_TYPES_ISSUED	'ISS_SO','ISS-COR','ISS-WO','ISS-FAS','ISS-DO','ISS-RMA			'x			Transaction types (tr_type) related to inventory issued

Table 2.3

Parameter	Value	Financials	Order Management	Inventory	Purchasing	Suite	
INV_TRANS_TYPES_RECEIVED	RCT-FAS','RCT-PO','RCT-WO','RCT-DO			'x			Transaction types (tr_type) related to inventory received
INV_TRANS_TYPES_RECOUNT	'CYC-RCNT			'x			Transaction types (tr_type) related to re-count transactions
INV_TRANS_TYPES_SALES	'ISS-SO','ISS-COR			'x			Transaction types (tr_type) related to sales orders
INV_TRANS_TYPES_SUPPLIER	'ISS-PRV','RCT-PO			'x			Transaction types (tr_type) related to suppliers
JOB_AP_PROCESS_BATCH_ID		X					
JOB_AR_PROCESS_BATCH_ID		X					
JOB_CHAINING_ENABLED						X	
JOB_COM_PROCESS_BATCH_ID			x				
JOB_GL_PROCESS_BATCH_ID			x				
JOB_SALES_PROCESS_BATCH_ID		x					
JOB_INV_PROCESS_BATCH_ID				x			
JOB_PO_PROCESS_BATCH_ID					x		

Table 2.3

Parameter	Value	Financials	Order Management	Inventory	Purchasing	Suite	
PERM_HIST_DATE	1900-01-01					x	
PERM_HIST_PREFIX	HIST					x	
PO_PROCESS_CONNECTION_NAME	QAD_MASTER				x		
PO_PROCESS_DAYS	10				x		
PO_PROCESS_RUNNING	N				x		
PO_PROCESS_RUNNING_JOB_NAME					x		
PO_BOOKING_DATE					x		
PO_BOOKING_FIRST_DATE					x		
PO_ORDER_HISTORY_DATE					x		
QAD_MASTER_CONNECTION_NAME	QAD_MASTER		x				
SALES_BOOKING_DATE			x				
SALES_BOOKING_FIRST_DATE			x				
SALES_LOAD_DAYS	30000		x				
SALES_LOAD_LOOKBACK_DAYS	20000		x				
SALES_ORDER_HISTORY_DATE			x				
SALES_ORDER_PERF_DATE			x				
SALES_PROCESS_CONNECTION_NAME			x				
SALES_PROCESS_DAYS	100		x				
SALES_PROCESS_RUNNING	N		x				
SALES_PROCESS_RUNNING_JOB_NAME			x				
SALES_SHIPMENT_FILTER	N	x					
SALES_SNAPSHOT_DAYS	10	x					
SALES_SNAPSHOT_DOW	1	X					
TR_HIST_CONNECTION_NAME		X					
TR_HIST_DOMAIN		X					
TR_HIST_LOAD_MAXSIZE	2500000	x					
TR_HIST_LOOP_NO	0	x					

Table 2.3

Parameter	Value	Financials	Order Management	Inventory	Purchasing	Suite	
TR_HIST_ROW_COUNT	0	x					
TR_HIST_TRAN_MAX	0	x					
TR_HIST_TRAN_MAX_S01	0	x					
TR_HIST_TRAN_MIN	-1	x					
UNKNOWN_NUM_VALUE	9999					x	
UNKNOWN_VALUE	Unknown					x	

Chapter 3

QAD BI Portal CFO Dashboard

This chapter provides information about configuring the QAD BI Portal CFO Dashboard application.

It discusses the following topics:

The QAD Standard CFO Dashboard

The QAD CFO Dashboard is one of the standard elements that ships with the QAD Business Intelligence Portal. The CFO Dashboard is designed to collect in one easy-to-view place the important financial metrics for your organization so that the financial health of the organization can be quickly understood.

Since GL account structures vary widely from company to company, the data elements of the CFO dashboard require initial configuration. The Dashboard's visual elements are already set up in the Portal, and are ready to display graphs and charts once the data configuration is complete.

Configuring The CFO Dashboard

Metrics on the CFO dashboard are generated from report lines defined in the QAD BI database. Report lines are like the lines of a balance sheet or an income statement, representing a range (or ranges) of GL accounts. Once defined, report lines can be rolled up into groups and computations performed on the groups to generate the various metrics and data that appear on the CFO dashboard.

The CFO Dashboard report lines are defined and maintained with the help of an Excel workbook, which creates a set of text files that are used in the nightly QAD BI data load. Using Excel allows finance managers and analysts to maintain the financial metrics themselves and gives them the most freedom in creating and defining new metrics and financial reports.

The CFO Dashboard workbook cfo_dashboard_template.xls, is located in the metadata installation package. This workbook consists of four sheets, all of which are used to build the configuration data for the CFO dashboard and its charts.

The first tab, Reports, contains the very highest level of information to be displayed. This page lists the name of the report sets that the CFO dashboard describes. One set is given by default: CFO_METRICS. Multiple reports, or versions of reports, can be included in the same spreadsheet.

The second tab, Report Lines, defines the lines of each report. Report lines can be labels (which just display text), data lines, which are rollups of GL accounts, or calculations, which are rollups of data lines. The CFO_METRICS report in the default configuration is broken down on the Report Lines page into 16 different lines, such as Inventory and Net Revenue.

The third tab, Report Line Ranges, maps the Report Lines to specific accounts in the General Ledger.

Important metrics for each report may not simply summaries of accounts but more complicated combinations of the report lines. The fourth tab, Report Calculations, allows user to combine the lines of the report arbitrarily to create derived metrics.

These tabs are more fully described below. Before configuring the CFO dashboard, however, one must start with a specific goal in mind in order to properly set up the configuration elements.

Metric Example

Consider the example of an organization that wants to see a metric like debtor days: the average number of days that a payment takes. This can be computed on any account by taking the total amount in accounts receivable, divided by net revenue received, and then multiplied by the number of days in the fiscal year. Furthermore, this should be done by region so we can see the measures for the North American and Pacific Rim regions.

To do this, we'll need to first set up the accounts that we want to total. We'll need to specify the AR accounts in both North America and the Pacific Rim, and then set up the revenue received in those accounts.

Once these account lines are set up we can create the computation to display on our final dashboard.

Reports Tab

For our example, the reports tab will not have to change. This report can be collected in the set for the standard CFO_METRICS.

If the system calls for very many reports that we wish to divide at the highest level, we could add another element to the reports tab for that highest level grouping. That new element would then be carried over to the Report Lines tab.

ReportLines Tab

This tab holds the high level groupings on which the computations in the reports will be performed. In our specific example, we have four lines we need to define: Accounts Receivable for both North America and the Pacific Rim, and revenue received for both regions.

These accounts are created by setting the report_name column to the name given on the first tab. In our example, this is CFO_METRICS.

The line_number column must be unique for each entry on this page and it describes to the subsequent tabs how to reference this account line.

Line_type may have the value label, calc or data. A label type will be the text placed into the visual item on the CFO dashboard for this line. A row can be marked either calc for a computed column as described in the upcoming Calculations tab, or data to indicate that this line’s data will be used in a computation.

Line_text is a description of the account. Indent_level should be set to 0 for a label, and 1 otherwise. Items that should be visible to the end user should be marked as Y in the visible column.

All computations on a report line are done on the value of the report. Since the report computations described below are additive, and sometimes we must subtract values of one line from another, we can specify that a line should be a negative value in the report lines tab by placing a Y in the change_sign column.

In our specific example, the line of net revenues must be subtracted from the total accounts receivable for a region. When we specify the received revenue in the report lines tab, we will change its sign to a negative by indicating a Y in the change_sign column for both the North American and Pacific Rim Net Received lines.

ReportLineRanges Tab

The report line ranges tab allows the user to group the accounts required for each report line.

Accounts in the GL are listed on the report line ranges tab sequentially in order to generate the higher level reporting accounts. The report line name (CFO_METRICS) must be given in the first column. The line_number column corresponds to the report line in the second tab. Range_type can take the value of include or exclude.

The remaining columns to specify the characteristics range of accounts to include in the summarized report line. The description of each column is given here:

- Source_system_code: name of the source system in the QAD BI database. Most implementations have a single source system.
- From_entity / to_entity: entity codes to be processed, starting at from value and going until to value.
- From_account / to_account: account codes to process.
- From_subaccount / to_subaccount: sub accounts to process.
- From_department / to_department: departments to process.
- From_project / to_project: project indicators to process.

In our specific example, the accounts for the four elements of our computation are defined. Report Line 2, North American AR (East) is defined as 4000 to 4100, excluding accounts 4003 to 4005. Report Line 3, North American AR (West) is defined as 5010 to 5020. The source system for both is QAD_US. Line 4, Pacific Rim AR, is defined as accounts 1600 to 1700 for source system for both is QAD_PACRIM. The example tab continues to define the account ranges and source systems for all 5 data lines of the CFO_METRIC report.

ReportLineCalculations Tab

This tab defines the computations to be performed on the report lines as defined on the Report Lines tab. By combining the report lines together, the higher order metrics desired can be determined.

Each line in the ReportLineCalculations tab specifies part of a computation. The data into which the computation will be placed is specified in the line_number of type calc specified on the ReportLines tab. The computation steps are processed one at a time, in an order specified by each line's calc_seq. For each specific report_name and line_number, the calc_seq must be unique.

```
A step
Report_name - CFO_METRIC
Line_number - refers to the ReportLines tab, line_number. Must be a calc type.
Calc_seq - order in which computations should be performed
Operator - add or multiply
Source_line - refers to a data line in ReportLines
```

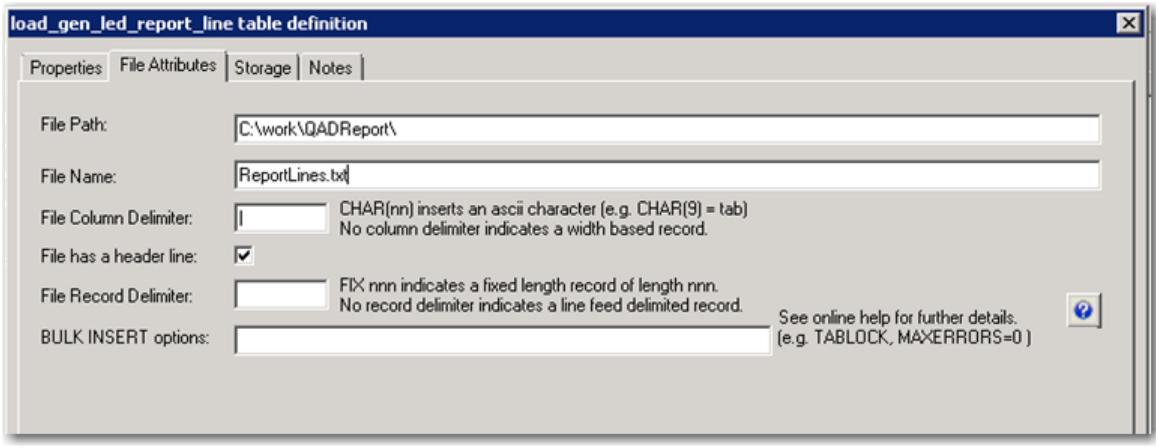
Providing the Workbook Data to the Data Warehouse

Once the data has been entered into the workbook as described, it must be translated into a format that the data warehouse processes can operate on in order to build the required elements for the CFO dashboard.

Each sheet in the workbook contains a yellow section of cells that is built automatically as the data is filled out. This section of cells must be placed into a text file and that text file moved to a location specified in the data warehouse.

The location in which the text files must be placed can be found by double clicking on the load tables in RED and noting the directory location in the File Path. By default, this is set to c:\work\QADReport. This can be changed to match the locations required by any site.

Fig. 3.1
File Path



The files to be used, by default, are

- Reports tab - Reports.txt
- Report Lines tab - ReportLines.txt
- Report Line Ranges tab - ReportLineRanges.txt
- Report Line Calculations tab - ReportLineCalculations.txt

Once the files are in place and the QAD Warehouse daily jobs run, the new computations will be reflected into the data warehouse and the CFO dashboard contents displayed. The daily jobs are usually run overnight.