QAD Enterprise Applications

User Guide

QAD Business Intelligence Portal

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

Contents

Chapter 1

QAD Business Portal Overview and Navigation

This chapter provides an introduction to the QAD BI Portal as well as information about use and navigation.

It discusses the following topics:

Overview

The QAD Business Intelligence Portal (BI Portal) gives the user information in a quick, at-a-glance, customizable format.

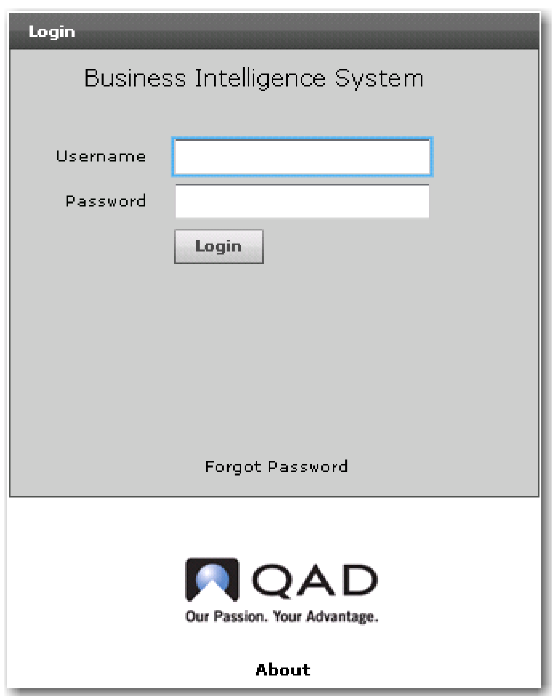
From the BI Portal menu bar you can access the following items:

- Dashboard - The Dashboard consists of various visual items that display information in a number of formats.
- Report - Access and run reports.
- Designer - Design dashboards, reports, visual items and queries.
- Administration - Set user and data security.
- Help

Accessing QAD BI Portal

Access the system by launching an internet page and activating the link given to you by your administrator. This will bring up the login screen.

Fig. 1.1
Login



Fill in the following fields:

Username. Enter a username.

Password. Enter a password.

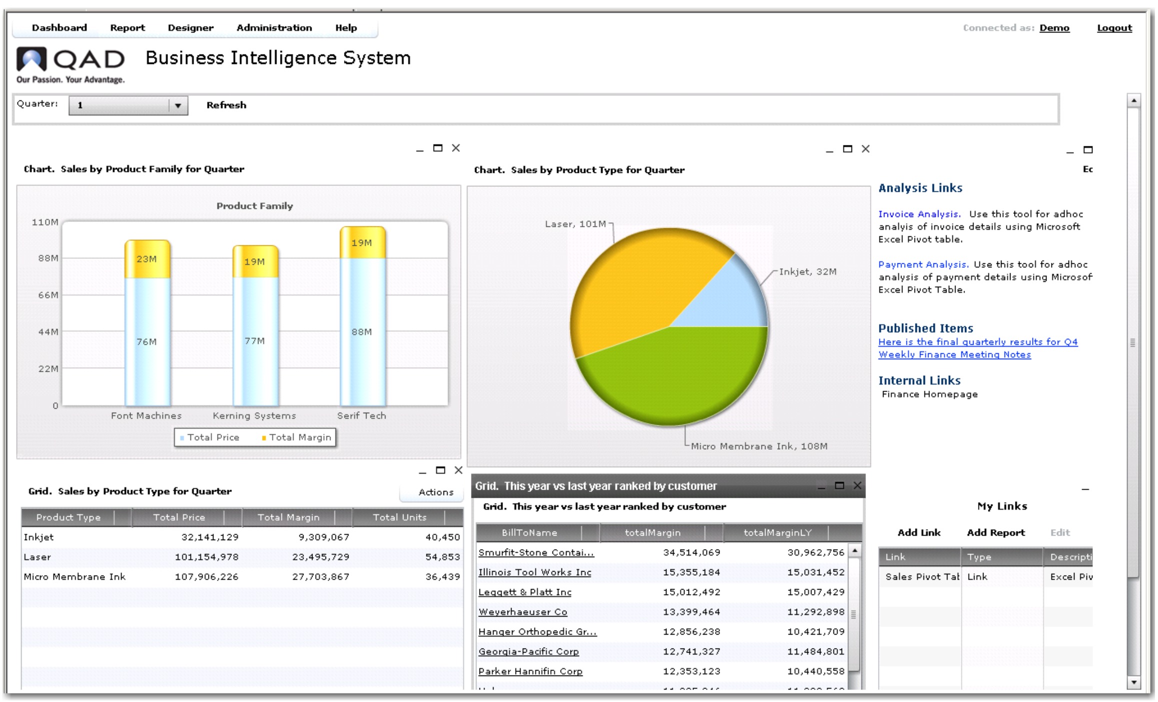
Click Login.

If you have forgotten your password, click Forgot Password.

Fig. 1.2
Forgot Password

Enter a user ID and click Request New Password. A new password will be generated and sent your primary email address. To return to the Login screen, click Cancel/Back.

Dashboard



The BI Portal Dashboard is the front page view for the data warehouse analysis. The user sees information in quick, easily analyzed formats for better decision making.

Access Dashboards through the menu bar at the top left of the screen. All users have access to the Dashboard menu.

Use the drop-down list to find the desired dashboard. QAD BI Portal remembers the last dashboard visited and makes this the default dashboard for the next login. You can export an image of any dashboard. Right-click anywhere within the dashboard, then select Export image of this dashboard.

Visual Items

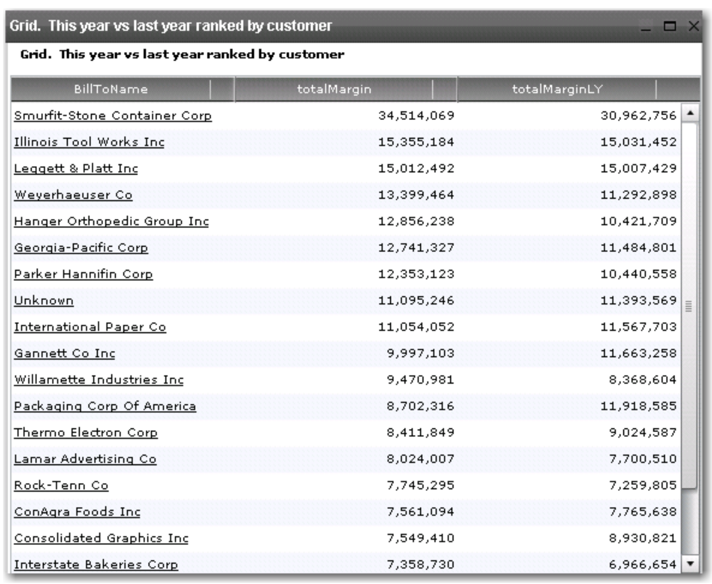
The BI Portal Dashboard consists of various visual items that display information in a number of formats. Some of these visual items can be moved, minimized, maximized, closed, and restored. You can export an image of any visual item. Right-click on the title bar of a visual item, then select Export image of this item. Some visual items have Action drop-down options, click Actions to view a list of options.

Note When a visual item is closed on the dashboard, it will only be removed from that session. The item will return in the default area the next time you access the dashboard.

Parameter Bars

Parameter bars, or drop-down options that list various parameters, allow you to set the subject or parameters that the visual items display. They can be located anywhere on a dashboard. Click the parameter bar to view a drop-down list of the available options. Click Refresh to view changes.

Grids

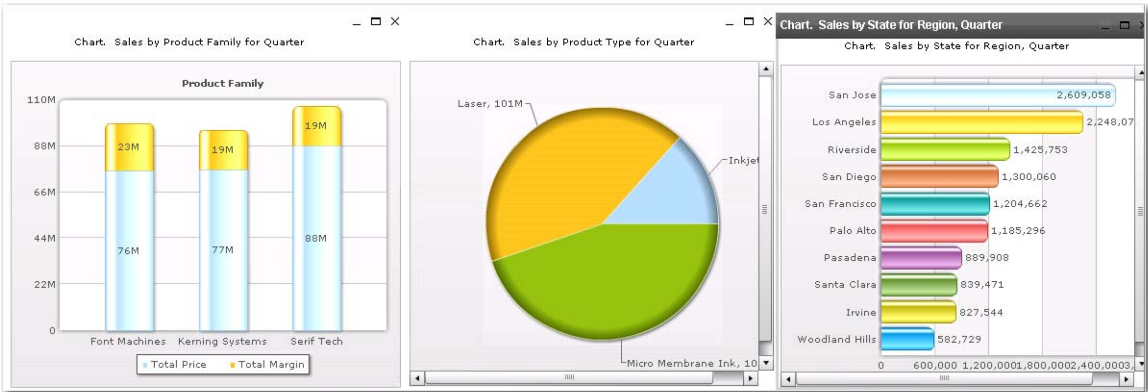

Grid. This year vs last year ranked by customer

Grid. This year vs last year ranked by customer

BillToName	totalMargin	totalMarginLY
Smurfit-Stone Container Corp	34,514,069	30,962,756
Illinois Tool Works Inc	15,355,184	15,031,452
Leggett & Platt Inc	15,012,492	15,007,429
Weyerhaeuser Co	13,399,464	11,292,898
Hanger Orthopedic Group Inc	12,856,238	10,421,709
Georgia-Pacific Corp	12,741,327	11,484,801
Parker Hannifin Corp	12,353,123	10,440,558
Unknown	11,095,246	11,393,569
International Paper Co	11,054,052	11,567,703
Gannett Co Inc	9,997,103	11,663,258
Willamette Industries Inc	9,470,981	8,368,604
Packaging Corp Of America	8,702,316	11,918,585
Thermo Electron Corp	8,411,849	9,024,587
Lamar Advertising Co	8,024,007	7,700,510
Rock-Tenn Co	7,745,295	7,259,805
ConAgra Foods Inc	7,561,094	7,765,638
Consolidated Graphics Inc	7,549,410	8,930,821
Interstate Bakeries Corp	7,358,730	6,966,654

Grids, or tables, allow for a simple, straight-forward arrangement of information in a sortable format. The columns within a grid are sortable, click on the column heading to sort: ascending, descending, and nested sort. Some grids support drilling. If the item can be drilled into, an underline displays on the data, similar to a link. Click the link to drill into the item to either another visual item or a report. Use the breadcrumbs at the top of the item frame to return to the grid.

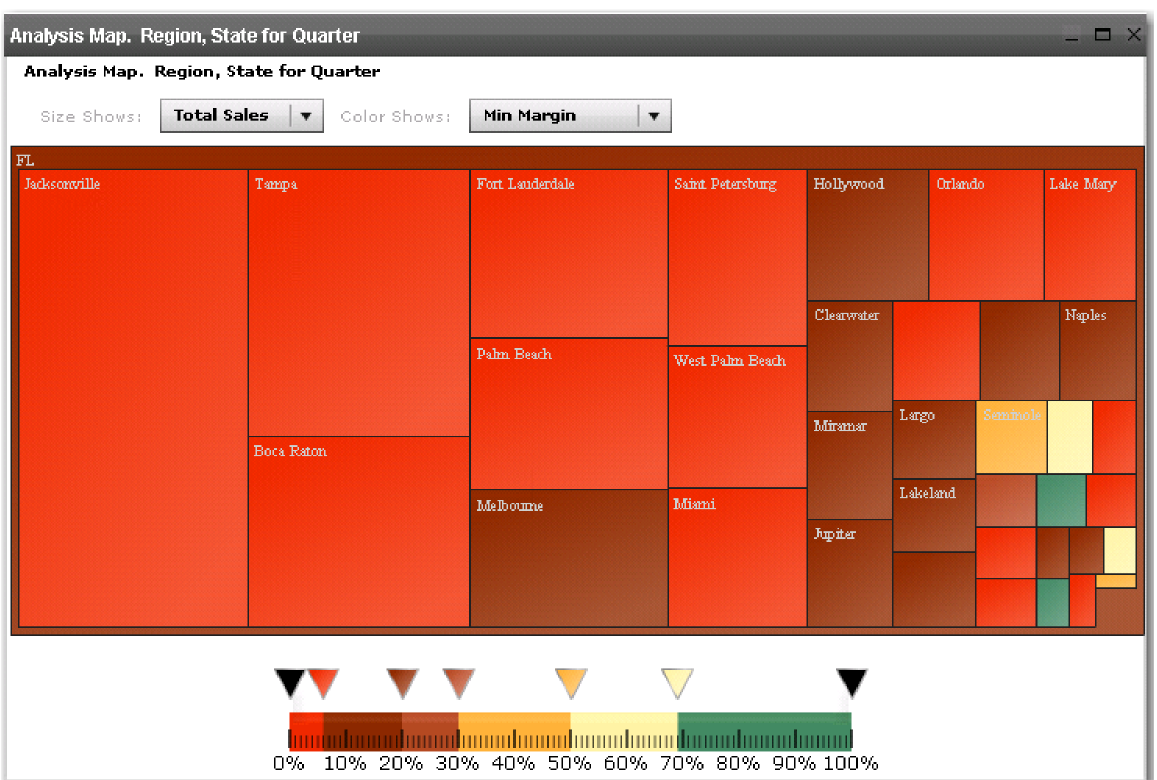
Charts



Charts display information in a variety of chart formats such as pie charts, bar charts, or line charts.

If items on a chart allow for drilling, the cursor changes to indicate a drill is possible. Drilling into an item brings you to a new visual item or a report. Return to the chart using the breadcrumbs, or back arrow button, at the top of the image frame.

Heat Maps (Analysis Maps)

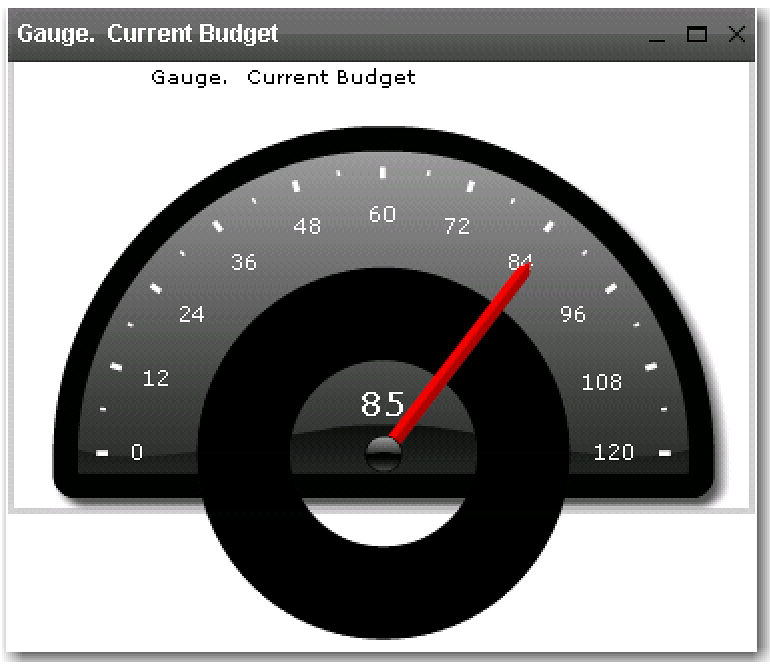


The heat map allows you to compare information displayed through size and color. Hover the cursor over areas to see details about individual rectangles. Change the size and color metrics by using the corresponding drop-down list in the upper part of the window. Change color ranges by using the range slide at the bottom of the window. Click and drag the desired color triangle to the appropriate value.

In the example each rectangle is a geography. A large rectangle equals relatively large Total Sales. Red rectangles mean relatively small Margin. A geography with a large, red rectangle might represent an opportunity to drive margin and have a big impact.

If items on a chart allow for drilling, the cursor changes to indicate a drill is possible. Drilling into an item brings you to a new visual item or a report. Return to the chart using the breadcrumbs, or the back button, at the top of the image frame.

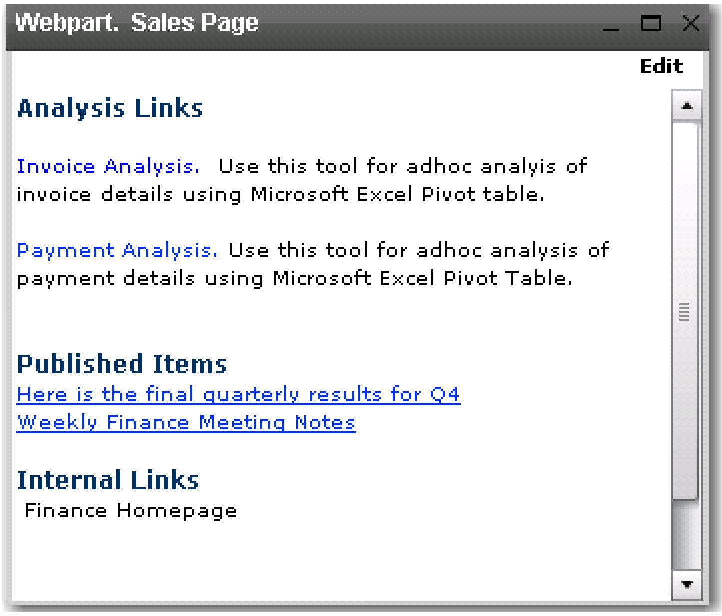
Gauge Items



Gauges are a specialized form of visual item. They are used to show some value compared to a target, for example, sales to forecast, or actual to budget.

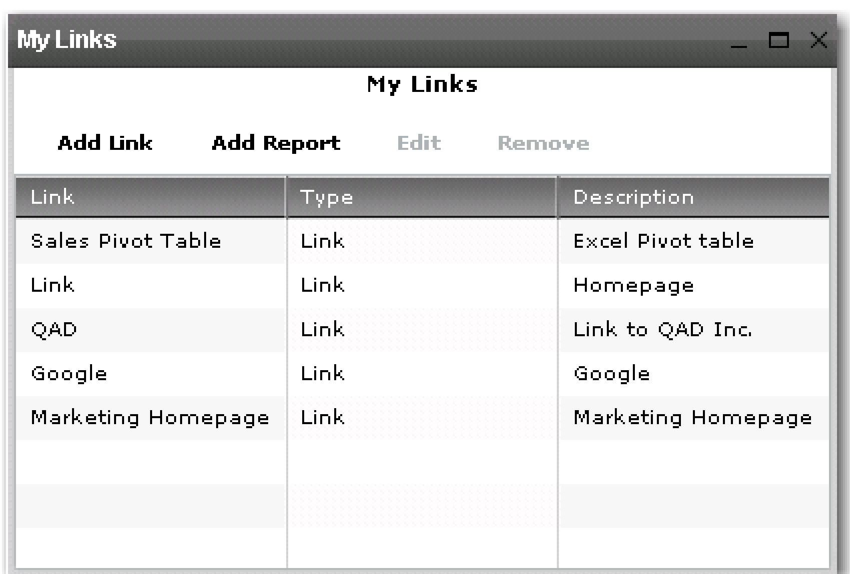
If items on a chart allow for drilling, the cursor changes to indicate a drill is possible. Drilling into an item brings you to a new visual item or a report. Return to the chart using the breadcrumbs, or the back button, at the top of the image frame.

Collaboration Area



Collaboration items allow for users (all or a select group) to set their own content to be placed on the dashboard. The collaboration area window allows you to see current information including links and messages that can be viewed by all who have access based on their role. You can edit this window if you have the appropriate role. To edit, click the edit button, then save changes.

Links List

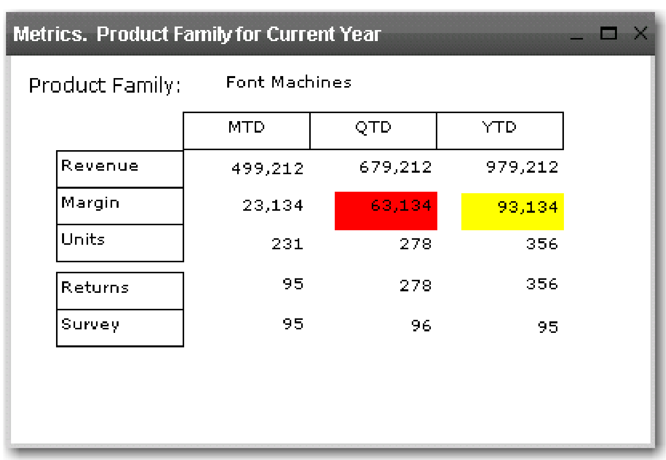


The links list window is essentially a list of useful links in the portal. If you have the proper role, you may add links to favorite reports or websites. The changes will only be seen by the individual user and will not affect other users. Add or remove links and reports by clicking the appropriate buttons.

Report Browser

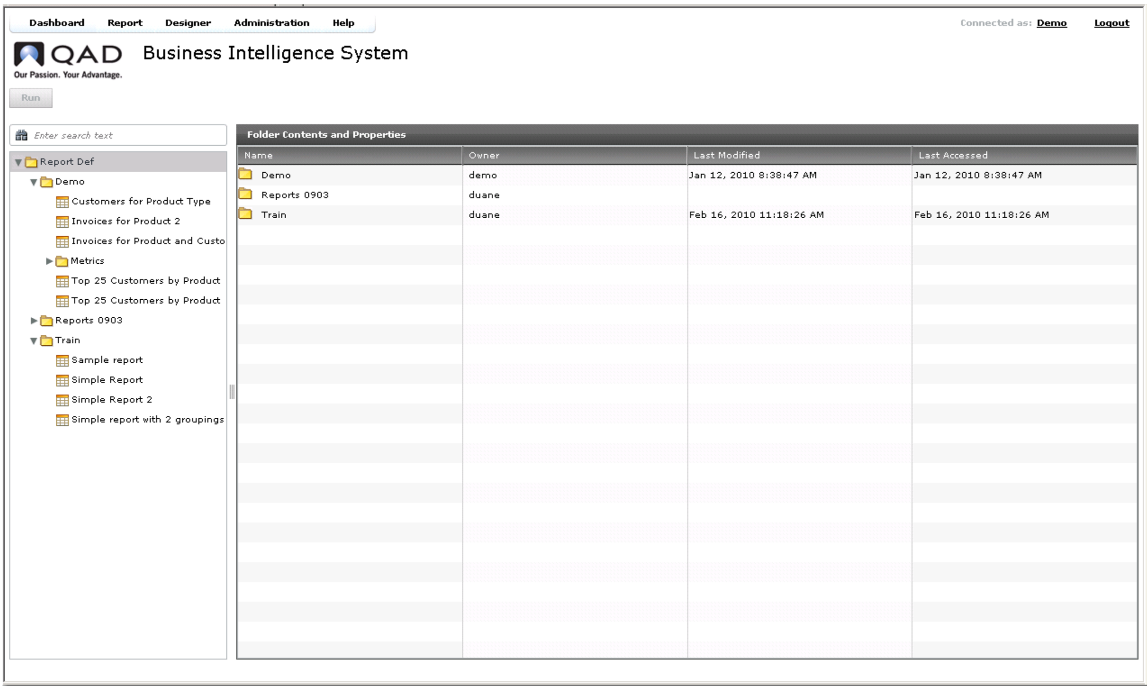
The Report Browser lest you use the dashboard to see and run reports in the report library.

Metrics Viewers (Free Form Items)



The Free Form items let you view advanced metric displays including conditional formatting of the content.

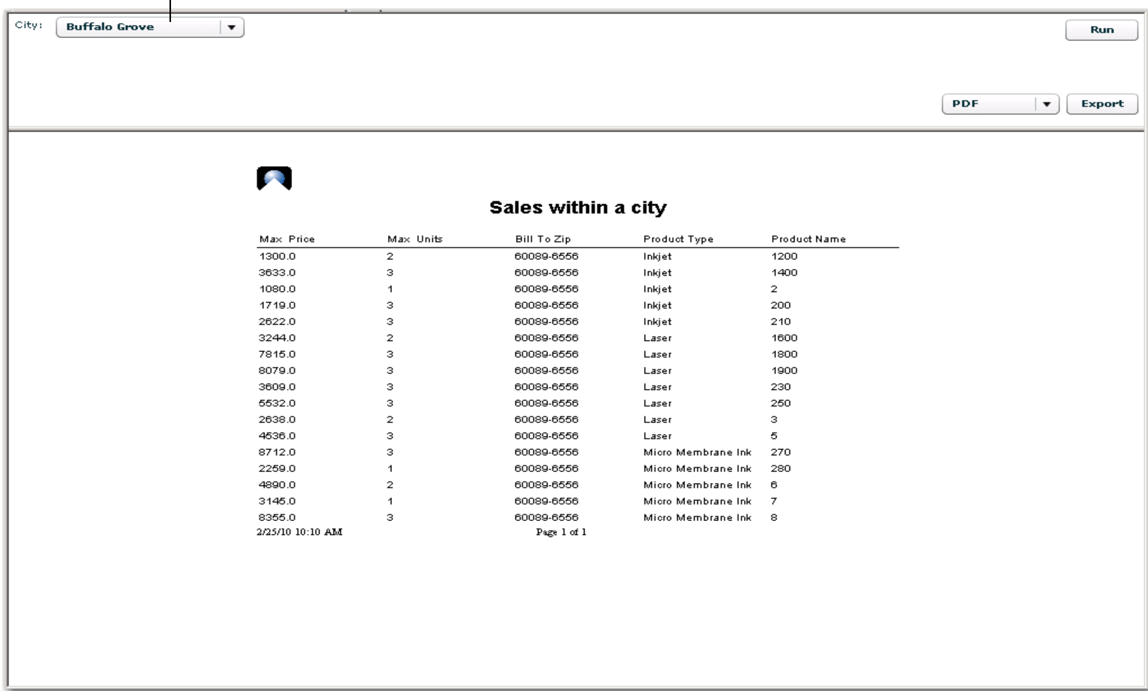
Report



Reports allows the user with access to view and run reports. To access Reports click Report, then Report Home on the BI Portal menu bar. The left side of the screen displays a document explorer list. Click a folder to see information about the contents. click a report to see information about the content and properties. Once a report is highlighted, click Run to view the report.

Fig. 1.3
Report Example

Parameter Bar



Max Price	Max Units	Bill To Zip	Product Type	Product Name
1300.0	2	60089-6556	Inkjet	1200
3633.0	3	60089-6556	Inkjet	1400
1080.0	1	60089-6556	Inkjet	2
1719.0	3	60089-6556	Inkjet	200
2622.0	3	60089-6556	Inkjet	210
3244.0	2	60089-6556	Laser	1600
7815.0	3	60089-6556	Laser	1800
8079.0	3	60089-6556	Laser	1900
3609.0	3	60089-6556	Laser	230
5532.0	3	60089-6556	Laser	250
2638.0	2	60089-6556	Laser	3
4536.0	3	60089-6556	Laser	5
8712.0	3	60089-6556	Micro Membrane Ink	270
2259.0	1	60089-6556	Micro Membrane Ink	280
4890.0	2	60089-6556	Micro Membrane Ink	6
3145.0	1	60089-6556	Micro Membrane Ink	7
8355.0	3	60089-6556	Micro Membrane Ink	8

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Depending on how the report was designed, a number of Parameter bars may be present. Use the parameter bars to choose the desired parameters, then click Run to view the report. You can export the report in PDF or Excel. Click the PDF button and choose PDF or Excel, then click Export.

Chapter 2

Administration

This chapter covers the Administration of all user and data security.

It includes the following topics:

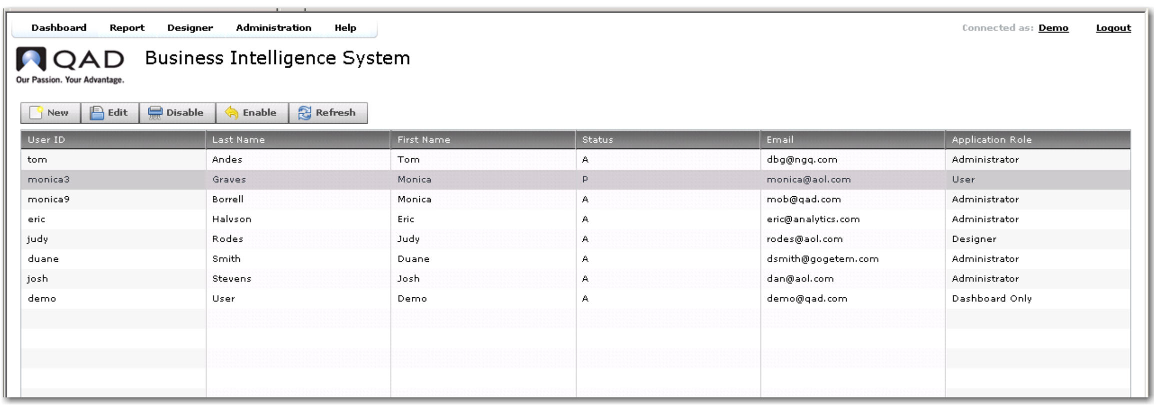
Overview

Administration handles all data and user security. From this tab the administrator can set the access levels of users, and user groups, and set security for data groups and data values.

The Administration drop-down menu item has these four options:

- User - Displays a list of users, along with their information and roles, with the options of editing, disabling, enabling, and adding users.
- Object Security Group - A tool for examining, editing, and creating security groups.
- Data Security Model - Allows the administrator to build data security.
- Model Administration - Allows the administrator to update, rebuild, or remove all data security.

User



From the User page, the administrator can add, edit, disable, and enable users. The page displays the user ID, name, status, e-mail, and application role.

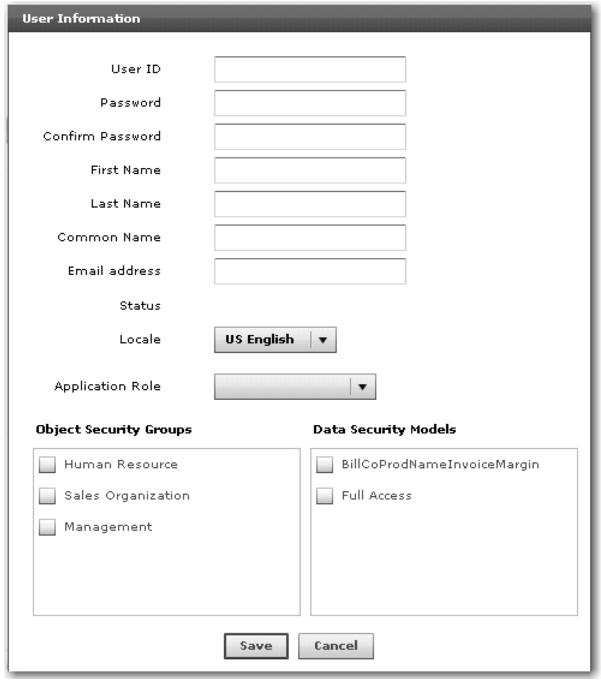
Statuses defined:

- D - User has been disabled.
- A - User is active.
- P - A new user who has not yet signed on and changed his/her initial password.

The User toolbar gives you the following options:

- New - Add a new user.
- Edit - Edit existing user information and access. User information can also be edited by double clicking on a user.
- Disable - Disable a user.
- Enable - Enable a user.
- Refresh - Refresh the list to show recent changes.

New User



To enter a new user, click New from the User toolbar, and then follow these steps:

1 Enter a user ID.

2 Enter a password.

3 Confirm password.

4 Enter a first and last name.

5 Enter a common name.

6 Enter the user's email address

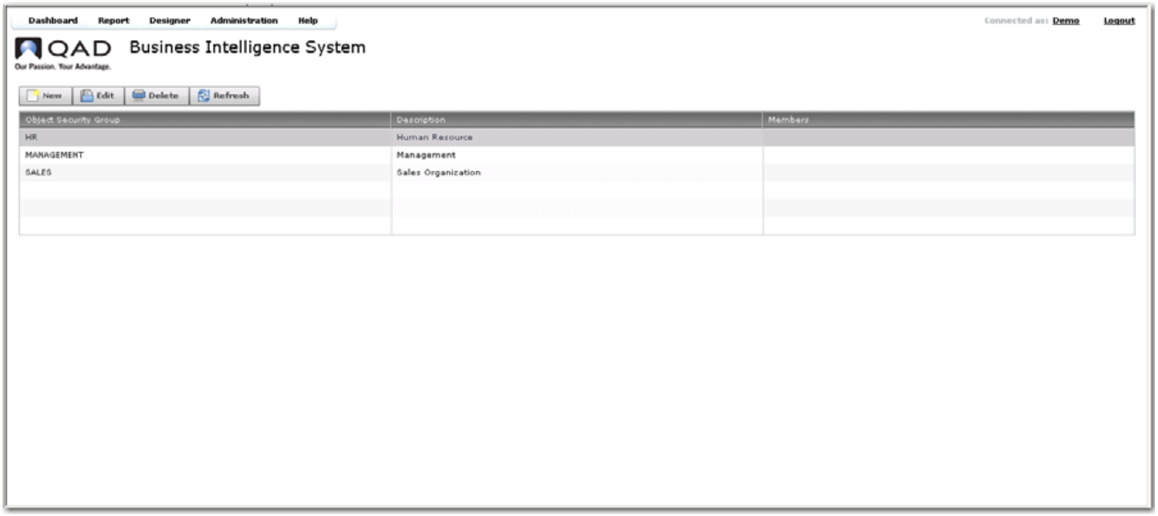
7 Choose a locale from the Locale drop-down list.

8 Choose an application role from the Application Role drop-down, this determines the applications within BI Portal that the user has access to. The following roles are available:

- Administrator - The administrator sets user and data security and has full access to all applications.
- Dashboard only - The user only has access to the dashboard menu item. Additionally, depending on the security level of the user, they may only have access to a set number of dashboards.
- Designer - The designer builds queries, reports, visual items, and dashboards. A designer has access to every application with the exception of Administration.
- User - The user has access to all BI Portal menu items except the Designer and Administration.

9 Click the Object Security Groups and Data Security Models the user has access to.

Object Security Group

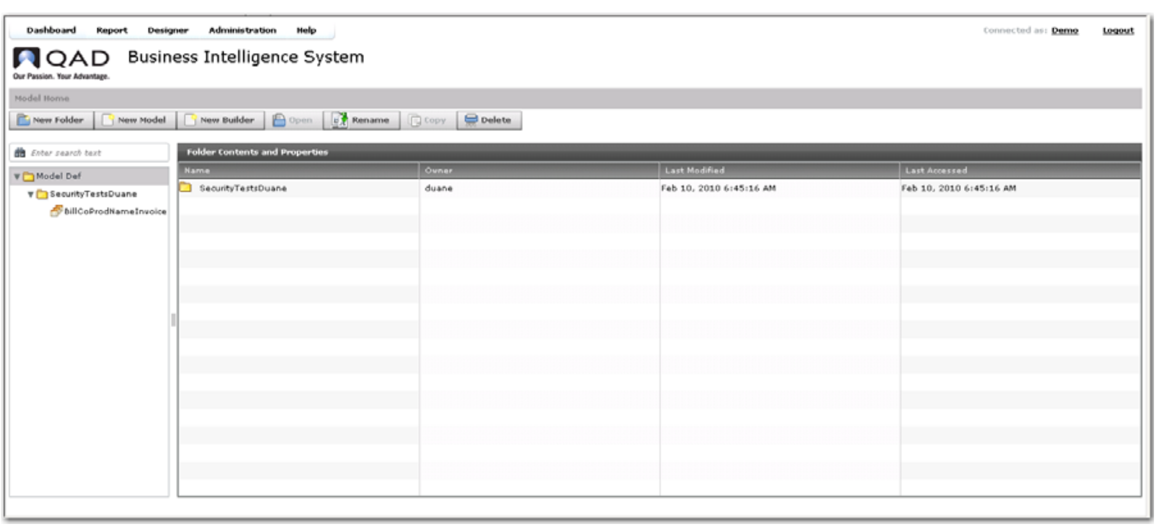


Object security is used to control the sets of designed objects or items a user can use. Each of the designers (dashboard, visual items, report, and query) permits a user to design objects for use by themselves or other users of the BI Portal. As part of the definition of the object, the designer can choose to limit the access to an object to a specific Object Security Group. The system ships with three Object Security Groups:

- Human Resources
- Sales Organization
- Management

To add a new Object Security Group click New from the toolbar, then fill in the Role name and description. To edit an existing group, highlight the group and click Edit from the toolbar, or double-click the group to view and edit. To delete a group, highlight the group, then click Delete.

Data Security Model



The Data Security Model toolbar displays the following options:

- New Folder - Enter a new folder.
- New Model - Set access to dimensions and facts to build a new Data Security Model.
- New Builder - Build a new Data Security Model based on characteristics of the data.
- Open - Open a selected model.
- Rename - Rename a model.
- Copy - Copy a model.
- Delete - Delete a model.

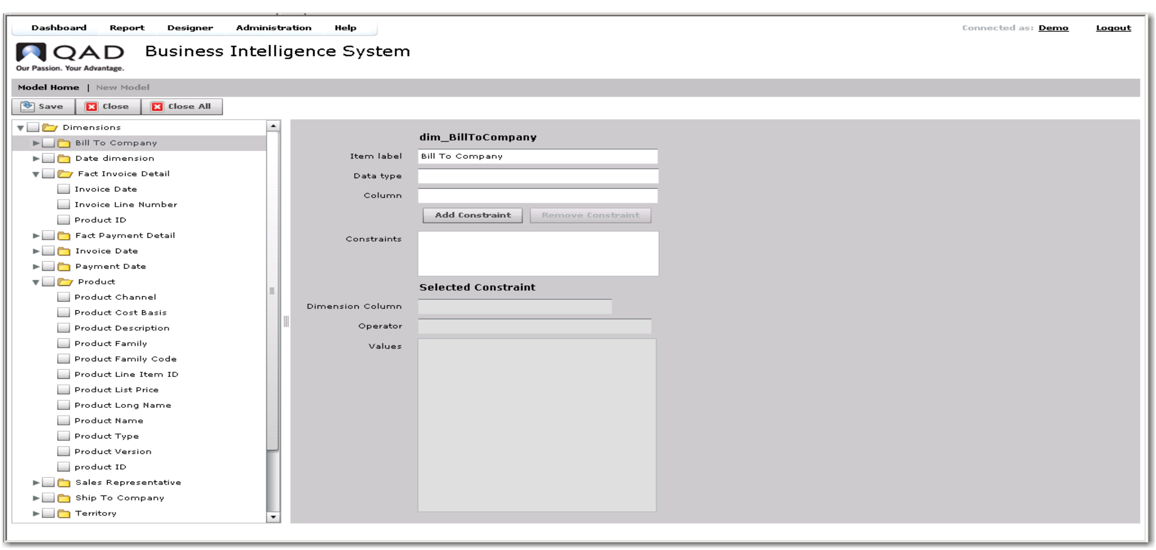
Data Security Models are used to control the specific content in the data warehouse that is accessible by a group of users. These models can control what type of data a user can access (such as orders, invoices, or both) as well as which instances of data a user can access (for example, only customers in California). Data security is quite powerful and can be used to:

- Limit the dimension and fact tables a designer can access when defining queries.
- Expose only a subset of the columns in a specific dimension or fact table; for example, show price, but not cost to a group of users.
- Constrain the rows that are exposed; for example, define a sales territory or product line a user can access.

To define specific instances in the model (rows), you can define a constraint with filters as part of the model. Each constraint requires the selection of a column from the dimension followed by the selection of the distinct values for the column that will be included in the data security model.

With Data Security Models in place, a designer can create a common dashboard with visual items that expose all the content in a data warehouse; for example, all product lines and all sales territories. Users of the dashboard see a view that limits their content to the product lines and sales territories that are exposed in the data security models of which they are members.

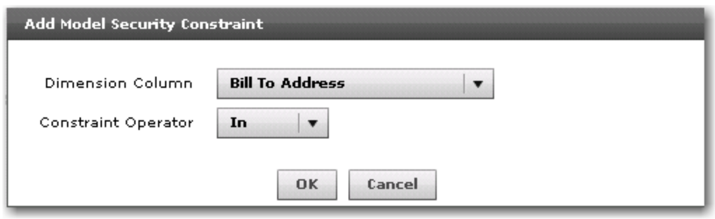
New Data Security Model



The left side of the screen displays a hierarchical representation of all dimensions and facts within the data warehouse. The right side of the screen displays information about the Data Security Model being built.

Navigate or drill into the folders to view items within selected folders. Each item in the explorer window has a box next to it. When a box is selected, an X displays in the box. The X indicates that the item can be viewed by users with access to this security model. For folders, the X also indicates that all children items within that folder can be accessed. If one of more of the children items within the folder are not selected, a dot appears in the box next to the folder, indicating partial access to the folder.

To add a constraint, select the dimension whose values you'd like to constrain, and click Add Constraint.

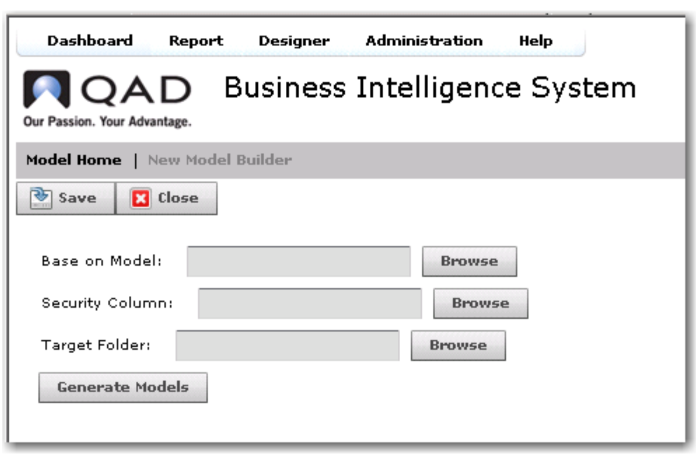


Click the Dimension Column drop-down list to choose a dimension column. The drop-down list will display all available dimension columns.

Click the Constraint Operator drop-down and choose In or Not In, press OK, then chose the set of values from the display.

When the Data Security Model is finished, click Save. click Close or Close All to close without saving.

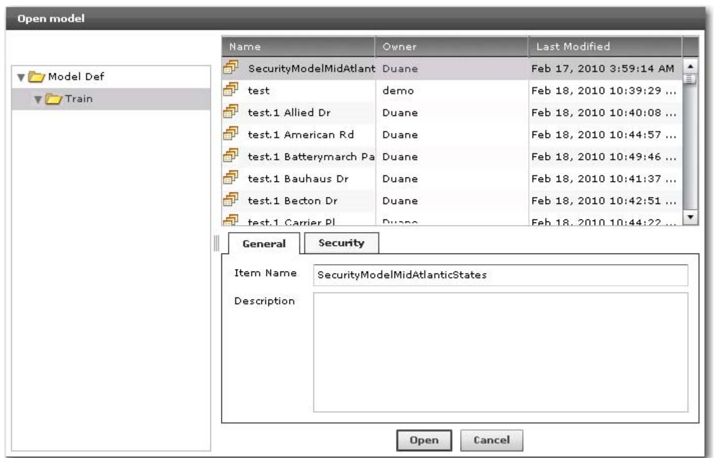
New Data Security Model Builder



The New Data Security Model Builder allows the administrator to build a new data security model based on an existing model. To begin building the model, click Browse next to the Base on Model item.

Warning The application does not prevent you from automatically creating an inordinate number of models. You should always use information that has a low number of unique values, like a state, or a sales territory. These columns would have a limited number of unique values. Using a column like street address, for a customer, is permitted but would generated thousands unique models, one per customer, which might prove unmanageable and lead to system performance issues.

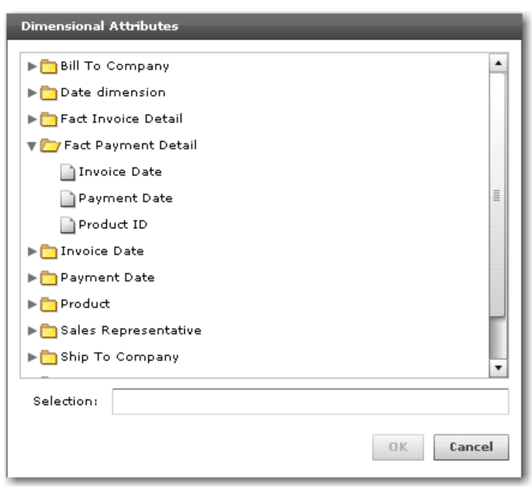
Fig. 2.1
Base on Model



From the explorer window on the left, drill down and click the desired Data Security Model. Enter a name and description for the model. click the Security tab to set which object security groups, or roles, can access and edit this security model. When finished, click Open.

Next to the Security Column field, click Browse, to set the dimensional attributes of the model.

Fig. 2.2
Security Column

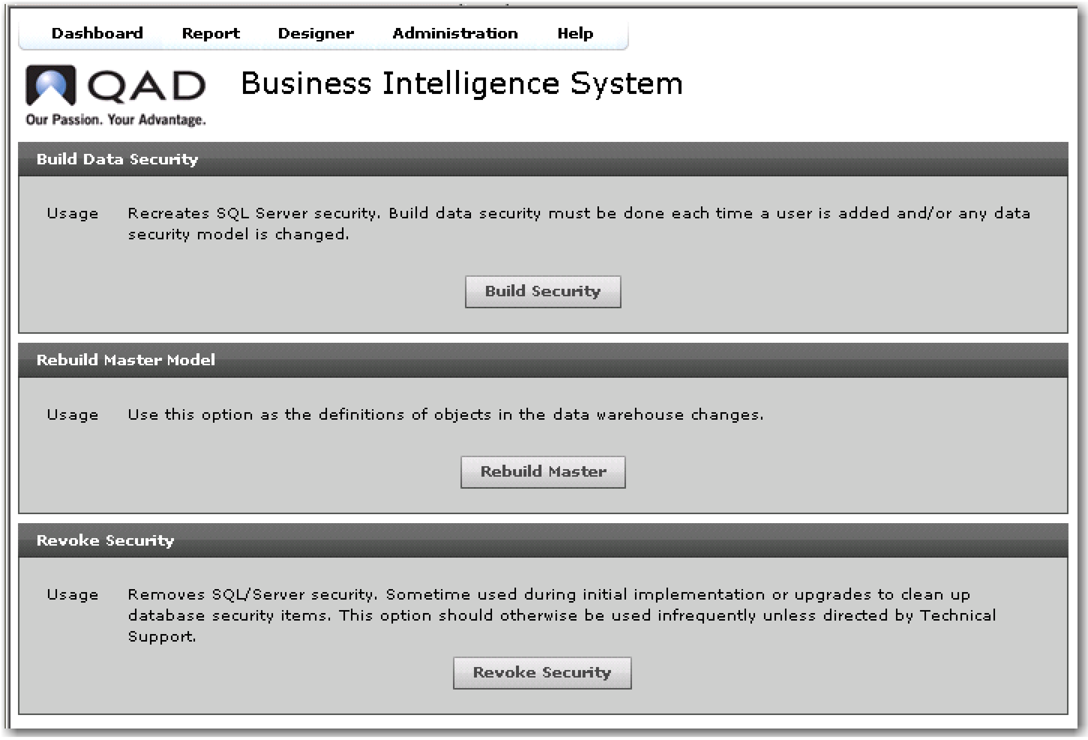


Drill into the explorer window to choose the desired attribute. Click OK when finished.

Click Browse next to Target Folder. Drill into the explorer list to choose the desired folder. Then click Open.

To generate the model, click Generate Model.

Model Administration



There are three synchronization functions on this form:

- Build Security - Synchronization of QAD BI Data Security Models with SQL Server's security.
- Master Data model - Synchronization of the QAD BI Portal data model with the QAD BI data warehouse.
- Revoke Security - Removal of QAD BI Data Security Models from SQL Server's security.

Build Security

Data security models and their relationship with users are maintained in the QAD BI Portal. The actual security is implemented in SQL Server using the database security features. Once a set of security changes are made in the QAD BI portal, it is necessary to replicate the changes to SQL Server. The SQL Server security must be created or recreated by coming to this function and executing a Build Security command.

Changes requiring a refresh of data security:

- Any change to a Data Security Model (adding/removing tables, columns, filters).
- Associating a user with data security model, or removing an association.

Due to the complexity of this activity run times can be lengthy. Actual run time depends upon the number of users, data security models and number of analytical modules in use.

Rebuild Master Data model

The data warehouse's model is replicated in the QAD BI portal database. In the event data warehouse definitions change (for example, a column added, a label or description created, a new star schema), administrators must rebuild the master model.

- This is not a destructive act. Existing data security models and user-to-data security model relationships will be maintained in the portal's database.
- Data security models that included objects affected by the change (for example, a removed column) must be opened in the BI Portal user interface and saved for the data security model to be updated.

Revoke Security

This function removes the SQL Server security. This is sometimes used during initial implementation or during upgrades to clean up database security items.

- This option should otherwise be used infrequently unless directed by Technical Support.
- QAD BI Portal Data security models and user relationships are not deleted.

Chapter 3

QAD Business Intelligence Portal Designer

This chapter provides steps and information about designing content for the QAD BI Portal.

It discusses the following topics:

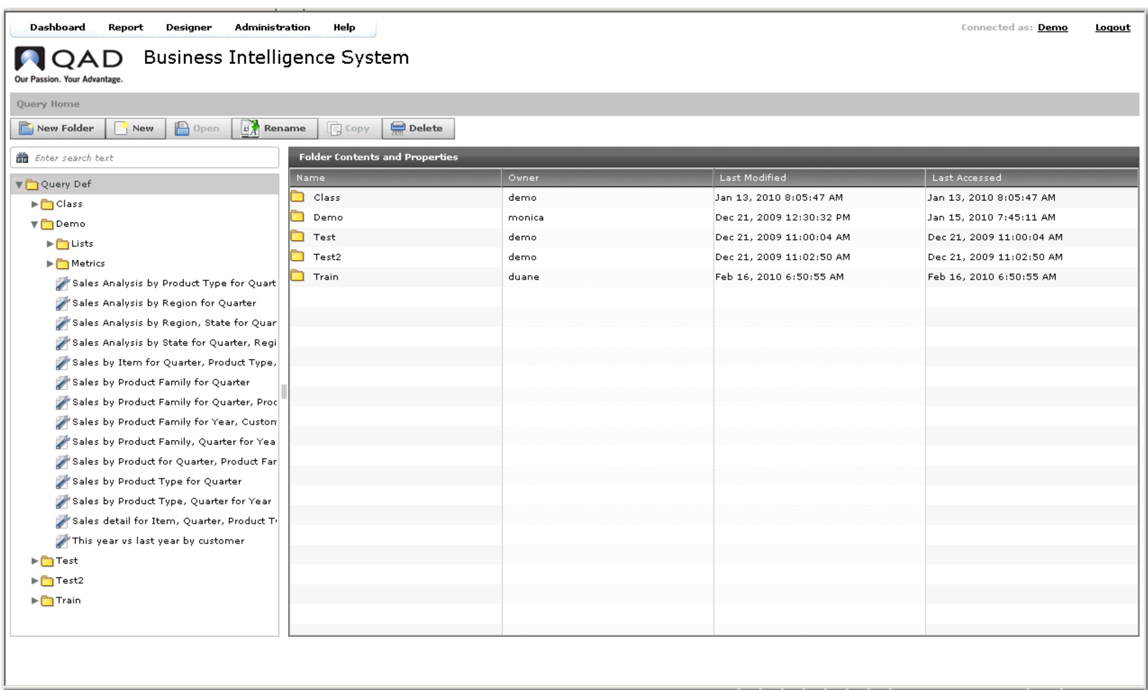
Overview

At the heart of the QAD BI Portal, are the Designers. The designers are responsible for building all of the components within the BI Portal. All of these components, or building blocks, are reusable, and can be designed in conjunction with security and run time parameters to provide distinct information without proliferation of the components.

Items that are created by the Designers can be restricted so they are viewable only by some users of the system. This is managed through Object Security Groups. Object Security Group assignments can be set when Designer elements are saved.

Query Designer

Queries are the building blocks of the QAD BI Portal. They are used to access data from the data warehouse for use in BI Portal objects such as reports and visual items such as charts, grids, gauges, and heat maps.



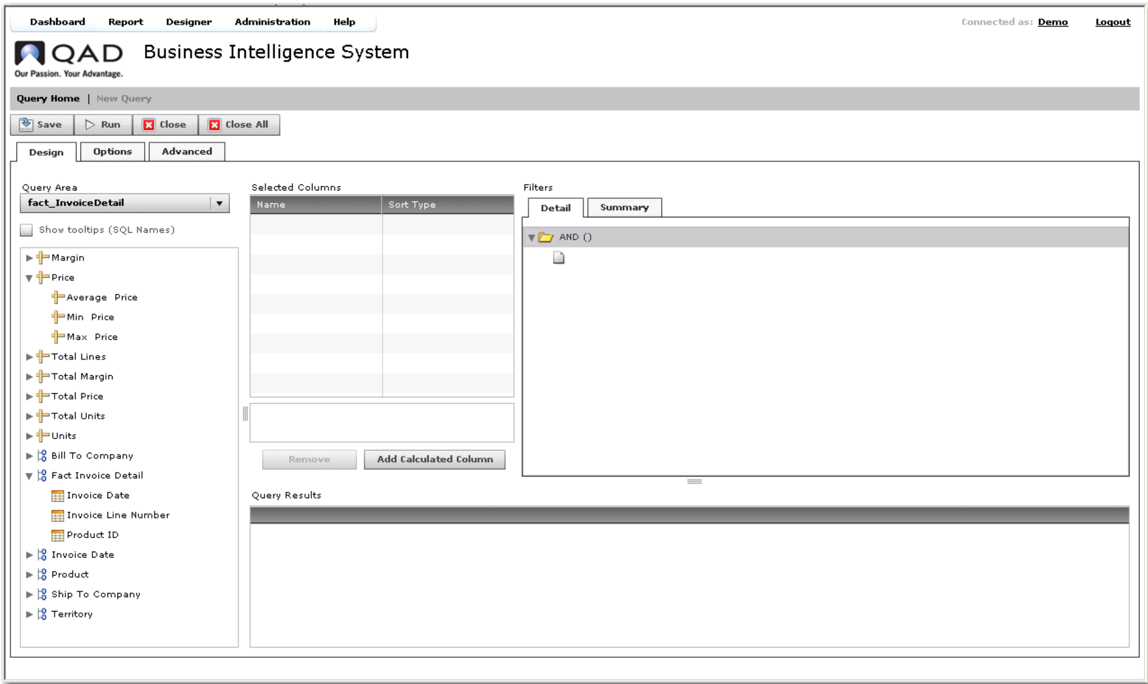
The Query Designer is accessed by clicking Query from the drop-down list under the Designer button on the Menu Bar.

From the Query toolbar you can add a new folder, create a new query, or open, rename, copy, or delete an existing query.

The left side of the screen displays a document explorer list of all existing queries. The right side shows information on a folder or about a selected query.

To view detailed information about a query, or to edit a query, double-click the query, or highlight the query and click Open from the toolbar. To save changes made to the query, click Save.

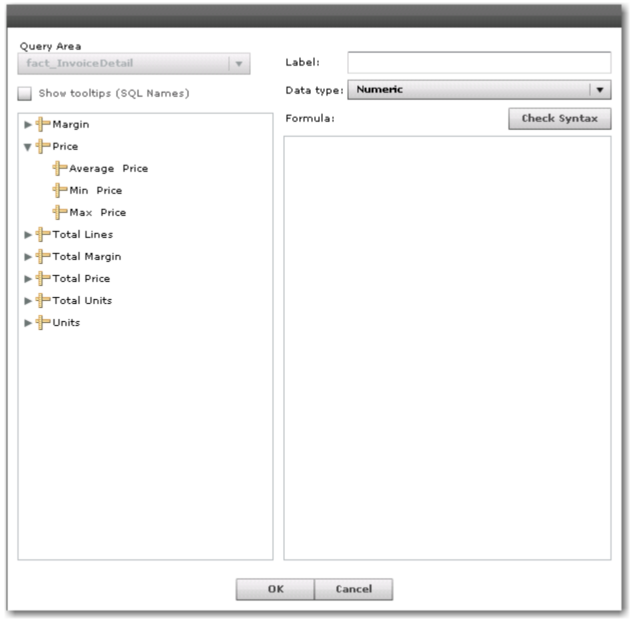
Creating Queries



To create a new query, click New from the Query Home toolbar. The new query designer has three tabs: Design, Options, and Advanced. The box in the lower left displays an explorer list of dimensions and facts. Facts, which can be analyzed, are shown at the top of the list. Dimensions, or selection criteria, are at the bottom. Follow these steps to create a new query:

1. Choose a Query Area (fact table) from the drop-down list.
2. Click and drag desired values, not folders, from the left column and drop them into the Selected Columns box to begin building the query.
3. The arrangement or order of the items can be changed manually by clicking and dragging the items to the desired position.
4. Click Sort Type: Ascending or Descending.
5. Add Detail or Summary filters by dragging and dropping appropriate filter values into the filter box. See “Filters” on page 25.
6. Remove columns by clicking Remove.
7. Click Add Calculated Column to create calculated columns. See “Calculated Column” on page 24.
8. Click Run from the toolbar to preview the query.

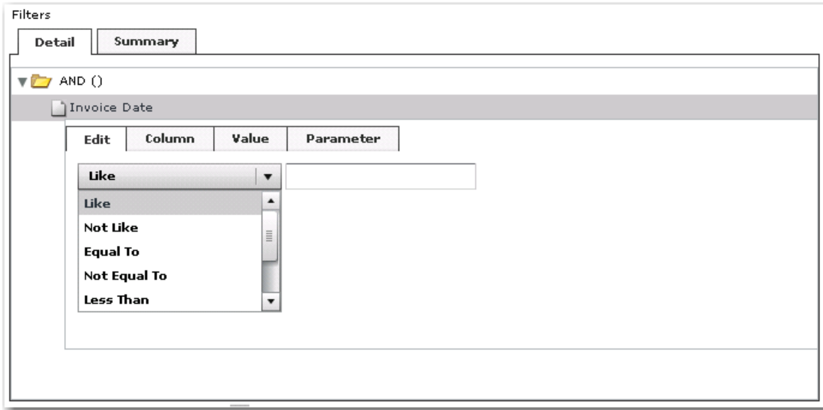
Calculated Column



To add a calculated column:

1. Click the Add Calculated Column from the New Query designer located in approximately the middle of the screen.
2. Click a Query Area using the drop-down list.
3. When the Show tooltips (SQL Names) box is checked, the cursor displays the SQL names when hovered over dimensions.
4. Click and drag a selected dimension and drop it into the formula box to begin building a formula using SQL syntax.
5. Click Check Syntax to ensure no errors exist in the formula.
6. Enter a Label.
7. Click a Data Type of Numeric or Integer from the drop-down list.
8. When finished click OK.

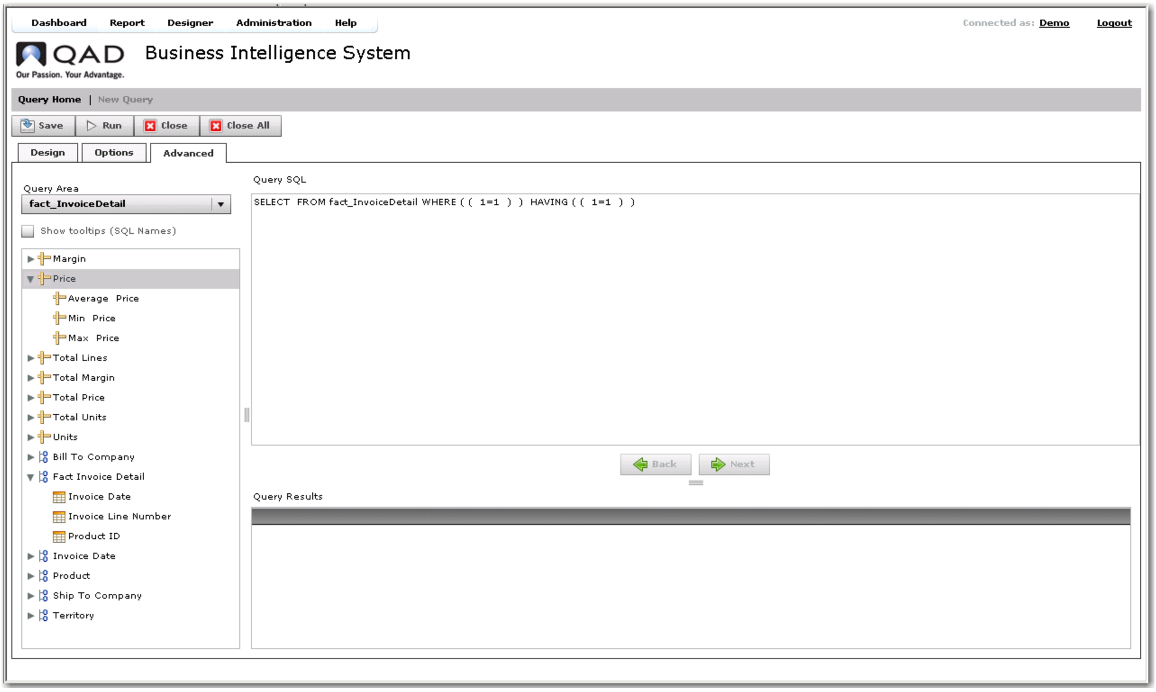
Filters



The Filters box is located on the right side of the New Query screen. To add a filter follow these steps:

1. Click detail or summary.
2. Click the And folder, then choose And or Or from the drop-down list.
3. Click and drag a selected fact from the explorer window, and drop under the And/Or folder.
4. Once that value is under the And/Or folder, click the value. You will see four tabs:
    - Edit
    - Column
    - Value
    - Parameter
5. Each tab has a drop-down list with several choices, select one, then proceed with the next tab:
6. Under the Edit tab, enter the Prompt Text and Default Value.
7. Click the Column tab, then click a column from the list.
8. Under the Value tab, click a value on the list.
9. Click the Parameter tab, then enter the Prompt Text and Default Value.

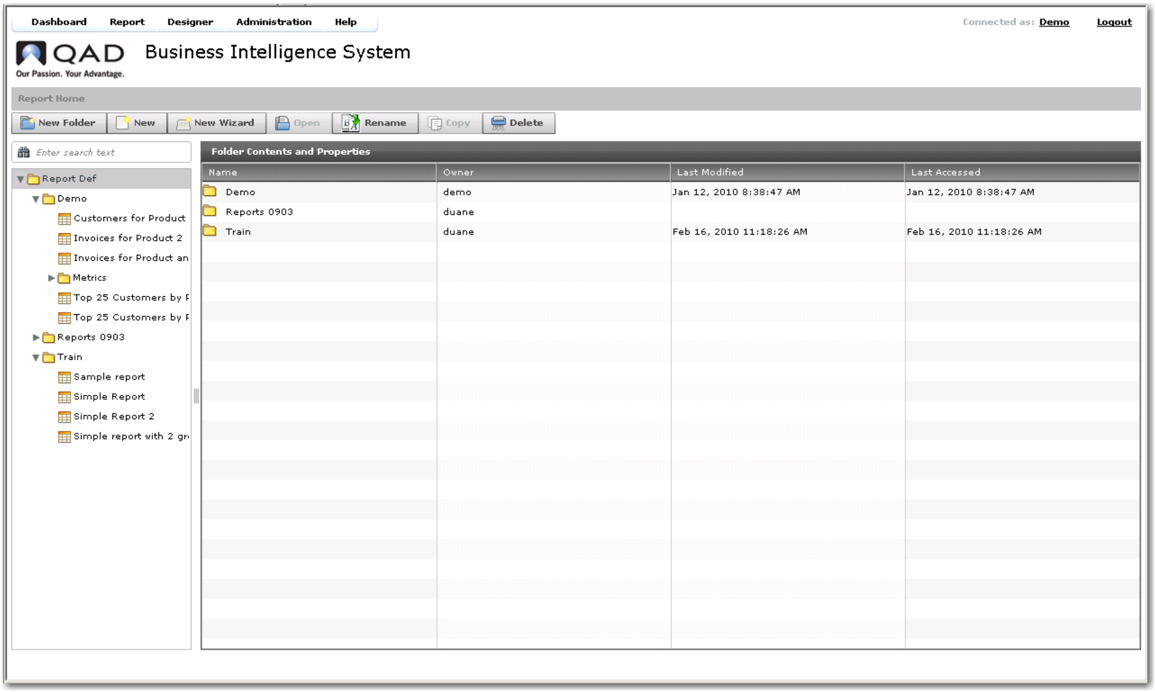
Advanced



For advanced query designer options, click the Advanced Tab. The Advanced tab gives the user the options of directly editing the query SQL to further fine-tune the query results. Choose a query area from the drop-down list. Click a dimension or fact from the left explorer window and drop items into the Query SQL box. Edit SQL as needed, then click Run to check SQL syntax or to run the query. Query results display at bottom of the screen.

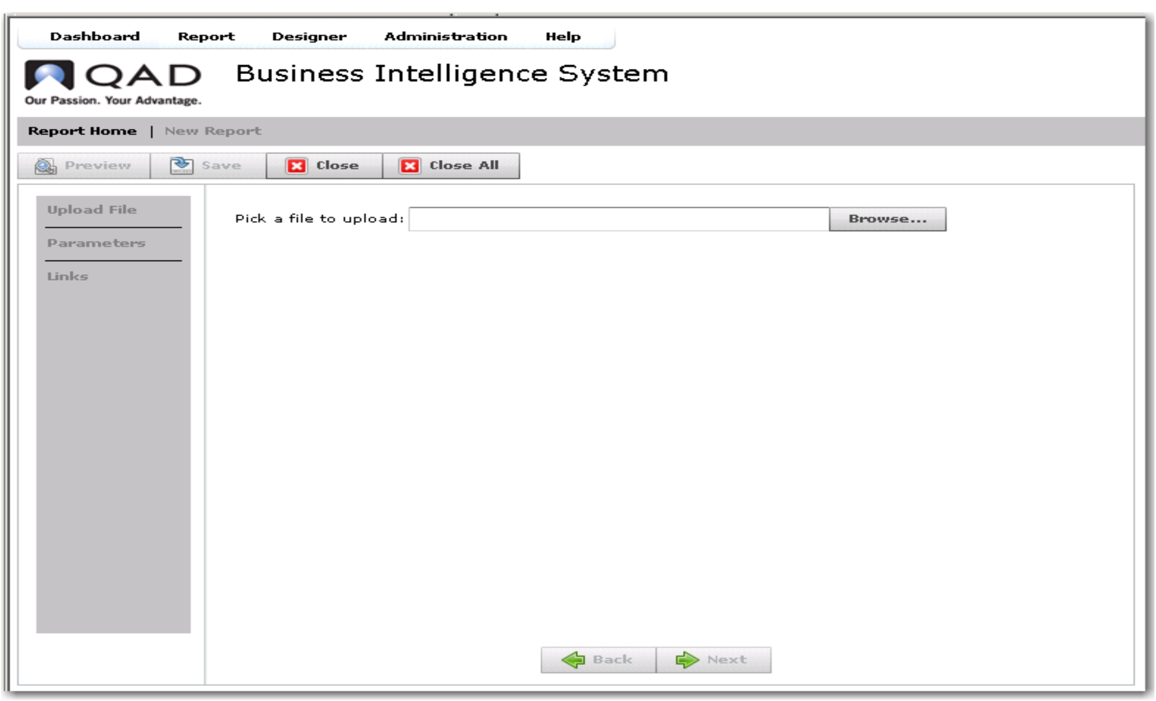
Query designs can be created in the Design tab and refined in the Advanced tab. This is useful for creating SQL that is not supported by the Designer. Once the Advanced tab is used to alter the designed SQL, the drag and drop features of the Query Designer can no longer be used. The query can still be edited in the Advanced tab, however.

Report Designer



Reports are designed using existing queries. The left side displays a report explorer window. Drill into the explorer tree to find the desired report. Click folders to display information about the contents of the folder in the right-hand window. Click a report to view and edit information about the report. When a report is highlighted, click Open to further fine-tune and edit the report.

Creating Reports



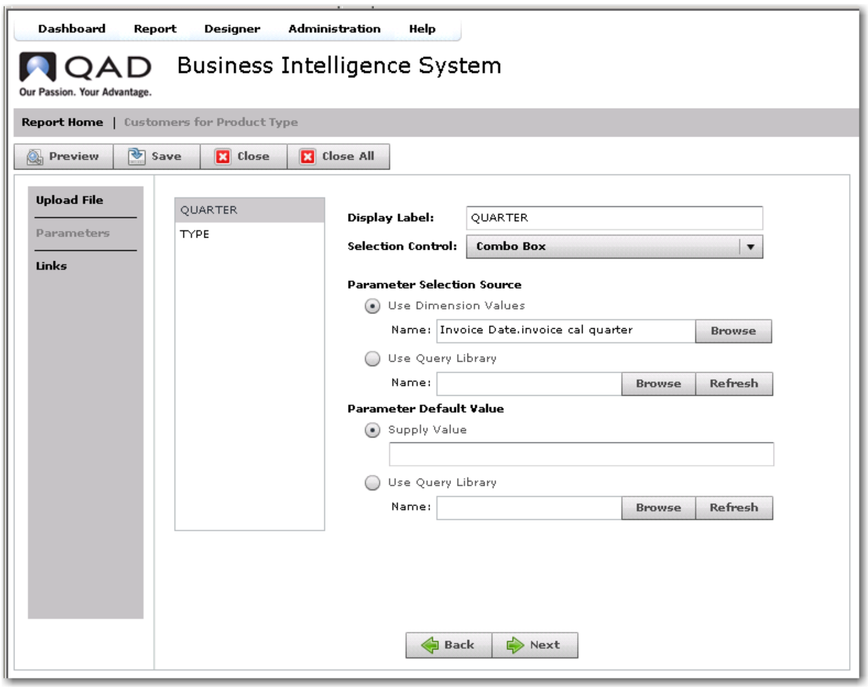
To begin uploading a report designed outside the portal (for example, in iReports), from the Report Designer Home, follow this sequence:

1 Click Upload on the toolbar.

2 Navigate to the folder containing the .jrxml file (which is the saved report definition from the external application, like iReports).

3 Once the file is uploaded, the Parameters window is displayed.

Report Parameters



Fill in the following fields:

Display Label. Enter a display label. This will be used as the prompt to the user when the report is executed.

Selection Control. Use the drop-down list to choose a selection control. Choose between Combo Box and Selection List. A Combo Box permits a single selection while a Selection List permits multiple selections at the same time.

Parameter Selection Source. Click either Use Dimension Values or Use Query Library.

For Use Dimensional Values, click Browse to display a list to choose from. Click OK.

For Use Query Library, click Browse to view the query library and make a selection. When finished, click Open, then click Refresh.

Parameter Default Value. Click Supply Value or Use Query Library. The value should match a valid value in the source list.

To continue, click Links, or click Next.

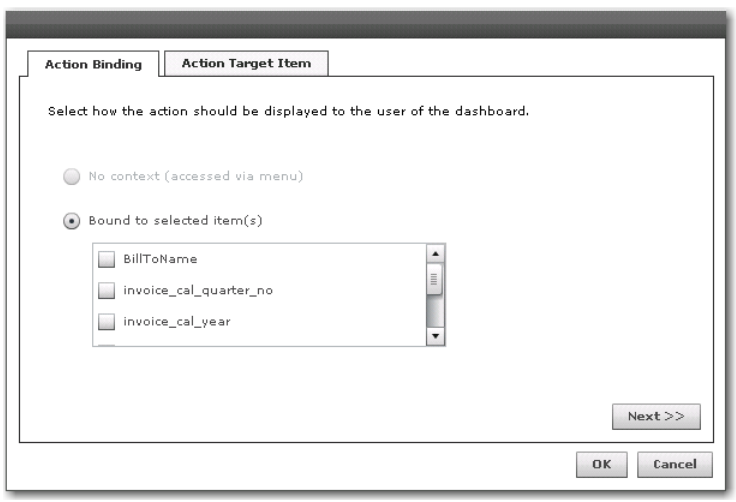
Report Links

Links, on a report, allow the user to drill from a row on the report, down to another, more detailed, report. First, choose the Action Binding, or the item to be linked from. Then, choose the Action Target Item, or the target item being linked to.

To link items on the report to other reports or visual items, click Add New.

Note The from/to values of linked items should be aligned, for example the bill to name, and quarter would not be tied together.

Fig. 3.1
Action Binding



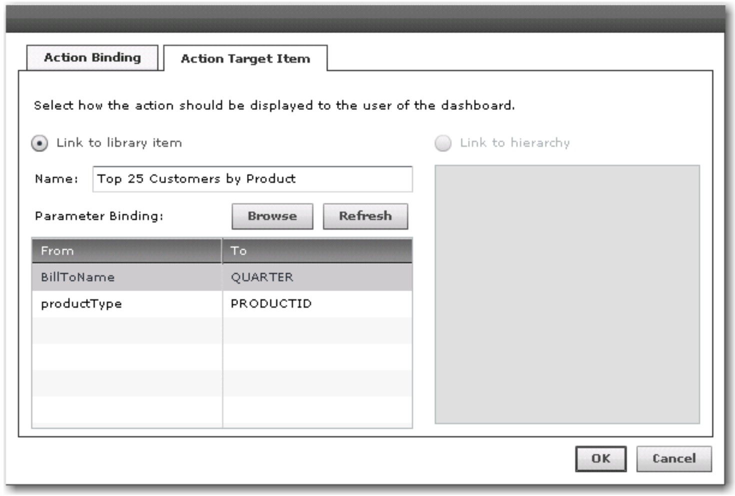
1 Click the Action Binding tab. This will determine how the items are linked and what items are linked.

- No context - accessed through the menu
- Bound to selected item

Note When Bound to selected item(s) is clicked, the window beneath that selection displays a list of items available to link from. Choose any items from the list.

2 Click Next, or the Action Target Item tab.

Fig. 3.2
Action Target



The Action target item is the item being linked to.

3 Click Link to library item, or Link to hierarchy.

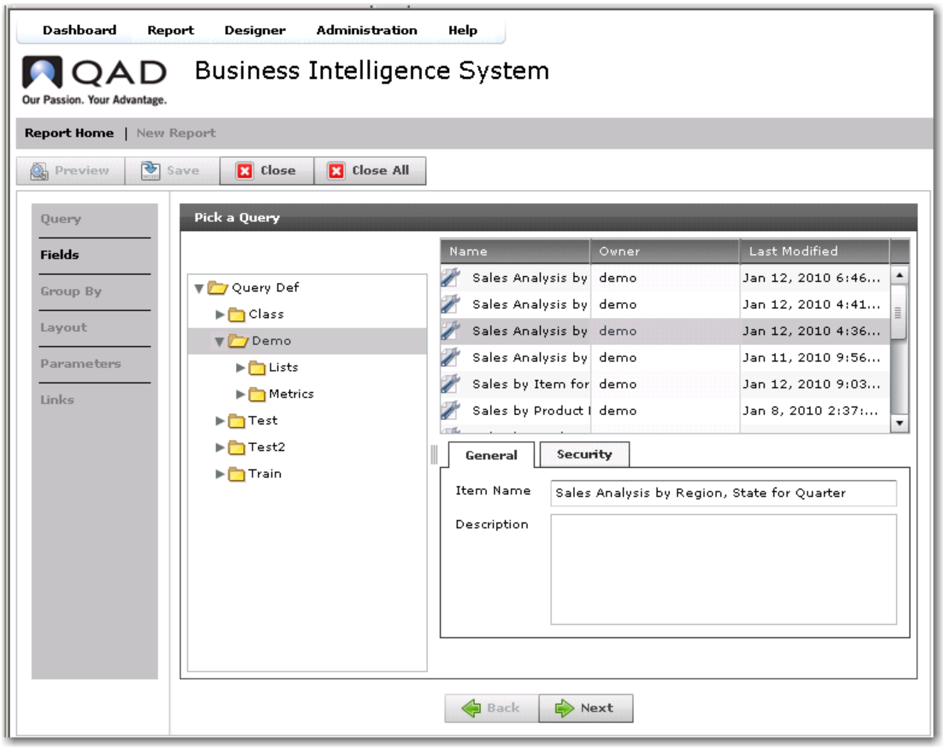
4 If Link to library item is selected, then click Browse to bring up the visual item library. Drill into the list and click desired visual item, then click Open.

This populates the table with a list of items in two columns: From and To. From here you can double-click on an item in the From column to bring up a list of other available items to link from. The From column on the current report is the selection for which more detail will be provided on the drill to report.

By linking the reports in this manner, the values in the from columns are hyperlinks in the reports, when pressed, the value is provided as the To value to the second report.

5 When finished, click OK.

Report Designer New Wizard

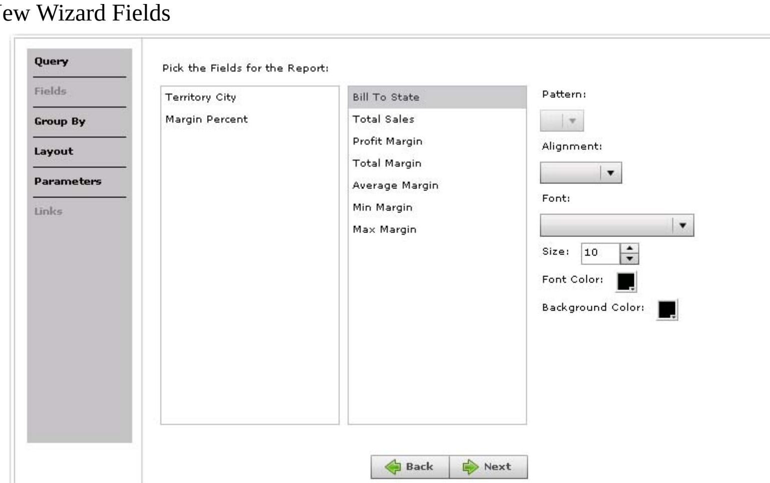


To access the New Report Wizard, click New Report Wizard from the Report Designer Home.

To design a new report, follow these steps:

1. Drill into the query list to click the desired query. Optionally you can set the security roles that can view and edit the report.
2. Click Fields, or click Next.

Fig. 3.3
Report Designer New Wizard Fields



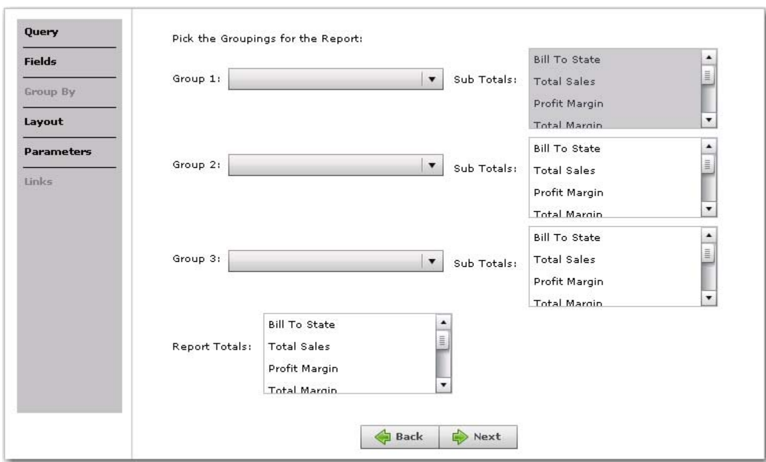
3. The left box shows a list of available fields. Click and drag desired fields and drop them into the right box.

4 Click a field to edit the following items:

- Pattern
- Alignment
- Font
- Font Size
- Font Color
- Background Color

5 When all fields are added, click Group by, or Next.

Fig. 3.4
Report Designer Groups



6 Click the group drop-down lists to choose a group, then click the corresponding subtotals. You can select multiple subtotals can be clicked using shift+click, or control then click.

7 Slick Report totals. Multiple totals can be clicked using shift then click, or control+click.

8 Click Layout, or Next.

9 Adjust the layout using the following options:

a Orientation:

- Portrait
- Landscape

b Enter a report title.

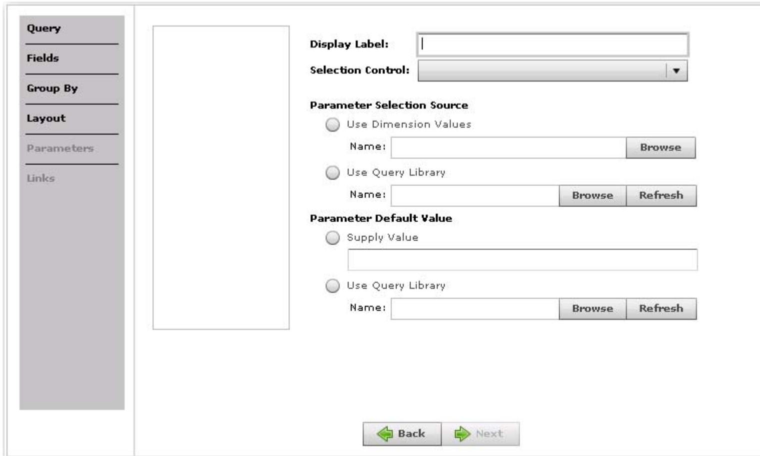
c Click page header: Logo.

d Slick Page footer:

- Page X of Y
- Current Date

10 Click Parameter, or click Next.

Fig. 3.5
Report Designer New Wizard Parameter



11 Fill in the following fields:

Display Label. Enter a display label.

Selection Control. Use the drop-down to choose a selection control. Choose between Combo Box and Selection List. A Combo Box permits a single selection while a Selection List permits multiple selections at the same time.

Parameter Selection Source. Click either Use Dimension Values or Use Query Library.

- For Use Dimensional Values, click Browse to display a list to choose from. Click OK.
- For Use Query Library, click Browse to view the query library and make a selection. When finished, click Open, then click Refresh.

Parameter Default Value. Click Supply Value or Use Query Library.

12 To continue, click Links, or click Next. See “Report Links” on page 29.

13 Add links as desired.

14 When finished, click Save, drill into the report library to locate the desired folder, enter a name and description, then click Save.

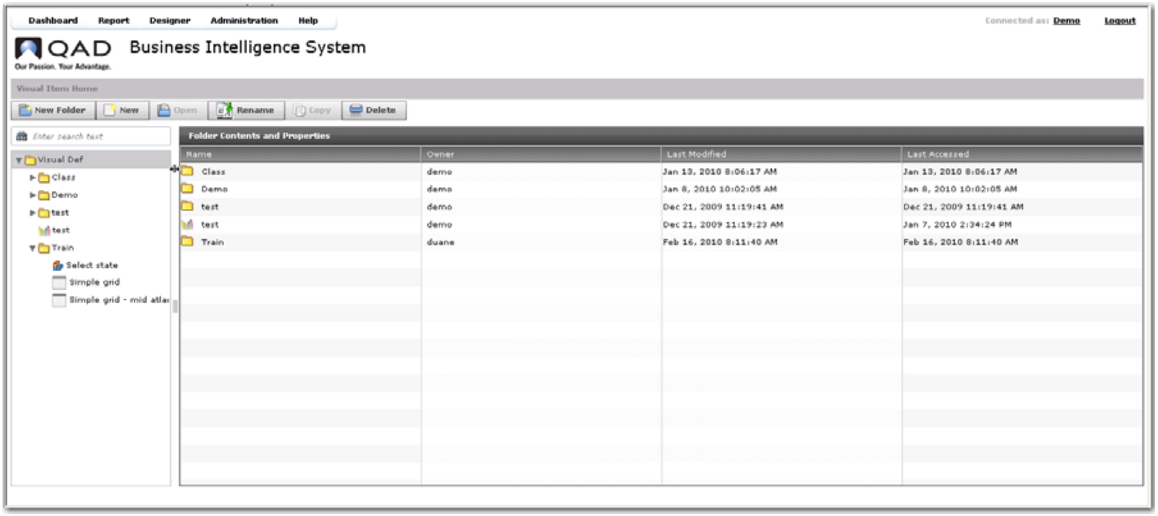
Visual Item Designer

Visual items are built using queries. All visual items created and saved in the visual library are used as content for dashboards. QAD BI Portal supports a wide variety of visual items to choose from:

- Grids
- Charts
- Tree Maps
- Gauges
- Metrics Viewers
- Text Areas

• Links List

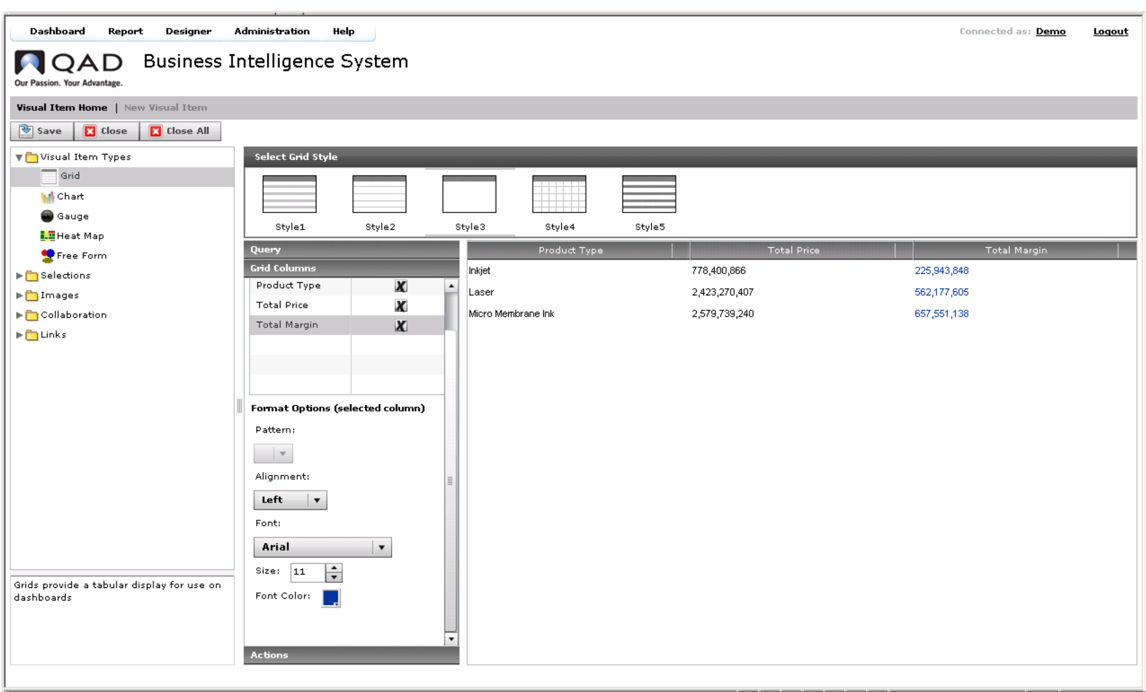
To access the Visual Item Designer, click Designer from the menu bar, then click Visual Item.



The screen displays an explorer window on the left that contains a list of saved visual items. Drill into the list to find the desired item. Click a folder to view information about the contents of the folder in the right document window. Click an item to view and edit information about the item. Click an item, then click Open to view or alter the item.

To begin building new visual items, while a folder is highlighted in the document explorer window, click New.

Designing Grids



To begin designing a grid, follow these steps:

1 Click New from the Visual Item Designer Home.

The left side displays an explorer window with a folder titled Visual Item Types.

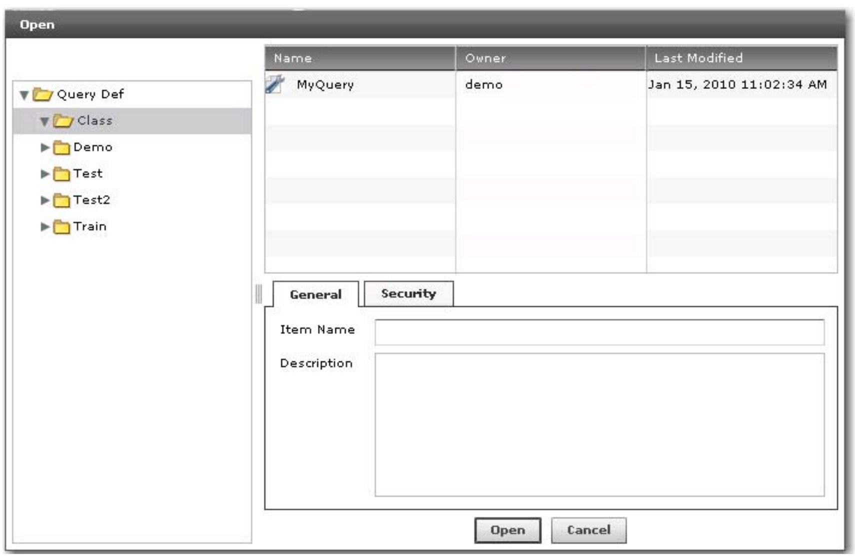
2 Under the Visual Item Types folder on the left, click Grid.

The right side of the screen is the document window. The top displays the different grid styles. Click the desired style. The left side of the document window shows three gray bars:

- Query
- Grid Columns
- Actions

3 Click the gray bar titled Query, then click Open. Search the document explorer window until you locate the desired query. Click Open.

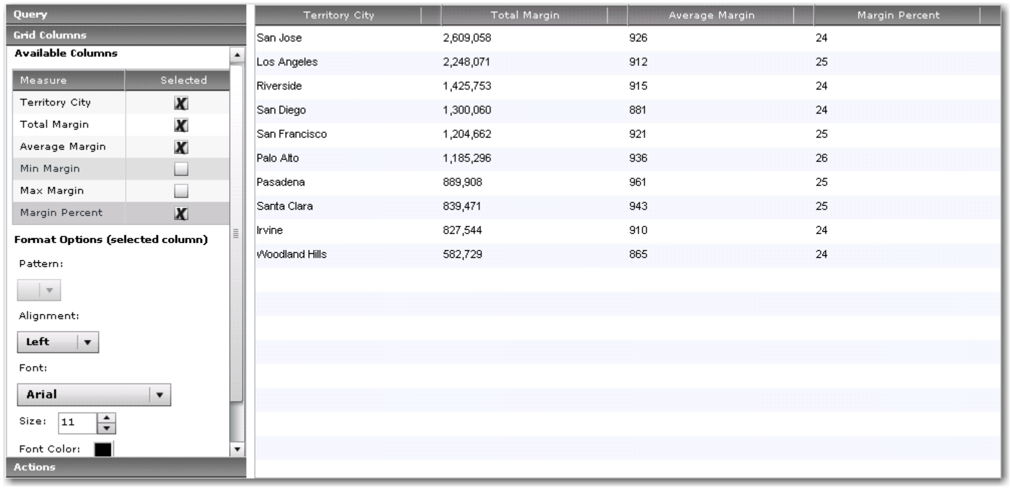
Fig. 3.6
Query Folder



4 Drill into the document explorer list on the left to find the correct query. You can also set the roles or security groups that can view and edit the query by clicking the Security tab.

5 Click the gray bar titled Grid Columns to open that window.

Fig. 3.7
Grid Columns



6. Click the columns you want displayed in the grid from the Available Columns list.

   The right side of the document window displays the columns and values.

7. Further fine-tune the grid by clicking from the following options:
   - Pattern
   - Alignment of left, right or center
   - Font
   - Font size
   - Font color

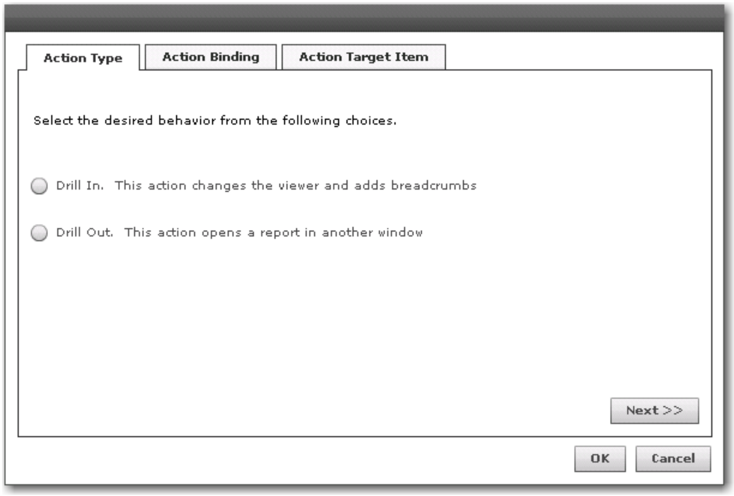
8. Click Save. A pop-up window displays an explorer window listing all saved visual items. Drill into the list to click a folder to save the new grid. Enter a name and description. You can also set the roles that can view and edit this item by clicking the Security tab. When finished, click Save.

Add an Action Item

Actions are generally available on grids or charts. They are used to expose more detailed data to the user. They are displayed on the visual item as a drop-down list. Click on the drop-down do see available options.

If you want to add an action drop-down icon to the grid, click the Actions bar, then click Add New.

Fig. 3.8
Visual Item Action Type



1 From the Action Type tab, click the desired behavior of the action from the following choices:

   a Drill In. This allows the user to drill into the grid to other visual items or reports. This changes the viewer by adding breadcrumbs and a back or forward button.

   b Drill Out. This action opens the report or visual item in another window.

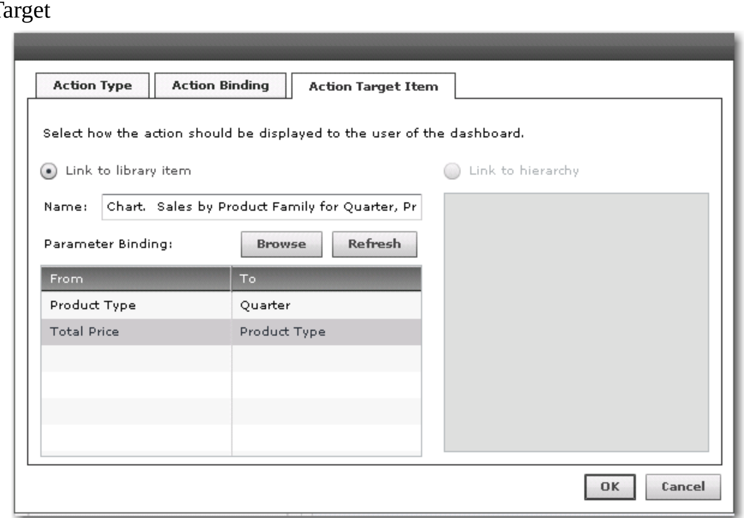
2 Click the Action Binding tab. This will determine how the items are linked and what items are linked.

   - No context - accessed through the menu
   - Bound to clicked item(s)

   Note When Bound to clicked item(s) is clicked, the window beneath that selection displays a list of items available to link from. Choose any items from the list.

3 Click Next or the Action Target Item tab.

Fig. 3.9
Visual Item Action Target



The Action target item is the item being linked to.

4 Click Link to library item, or Link to hierarchy.

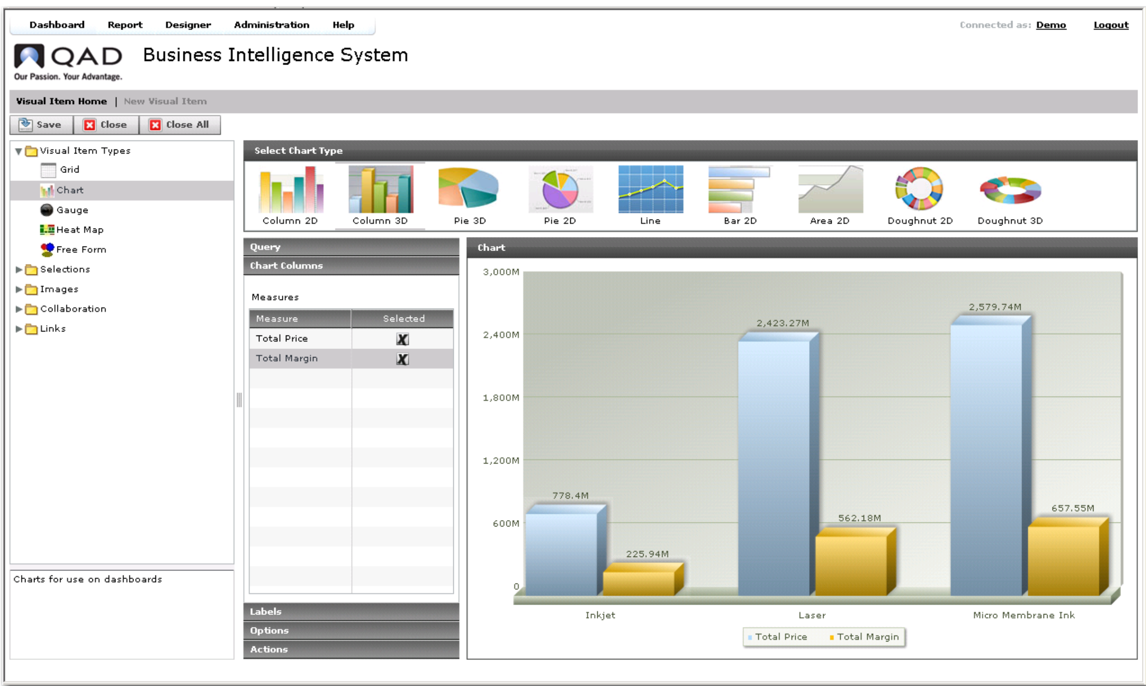
5 If Link to library item is selected, then click Browse to bring up the visual item library. Drill into the list and click desired visual item, then click Open.

This populates the table with a list of items in two columns: From and To. From here you can double-click on an item in the From column to bring up a list of other available items to link from. The From column on the current report is the selection for which more detail will be provided on the drill to report.

By linking the reports in this manner, the values in the from columns are hyperlinks in the reports, when pressed, the value is provided as the To value to the second report.

6 When finished, click OK.

Designing Charts



Access the Chart designer from the New Visual Item window by clicking Chart from the Visual Item Types folder.

The top of the document window displays the nine options for chart styles.

The left side of the document window shows five gray bars:

- Query
- Chart Columns
- Labels
- Options
- Actions

To begin designing a chart, follow the steps for designing a grid, with the following additions for clicking labels and options:

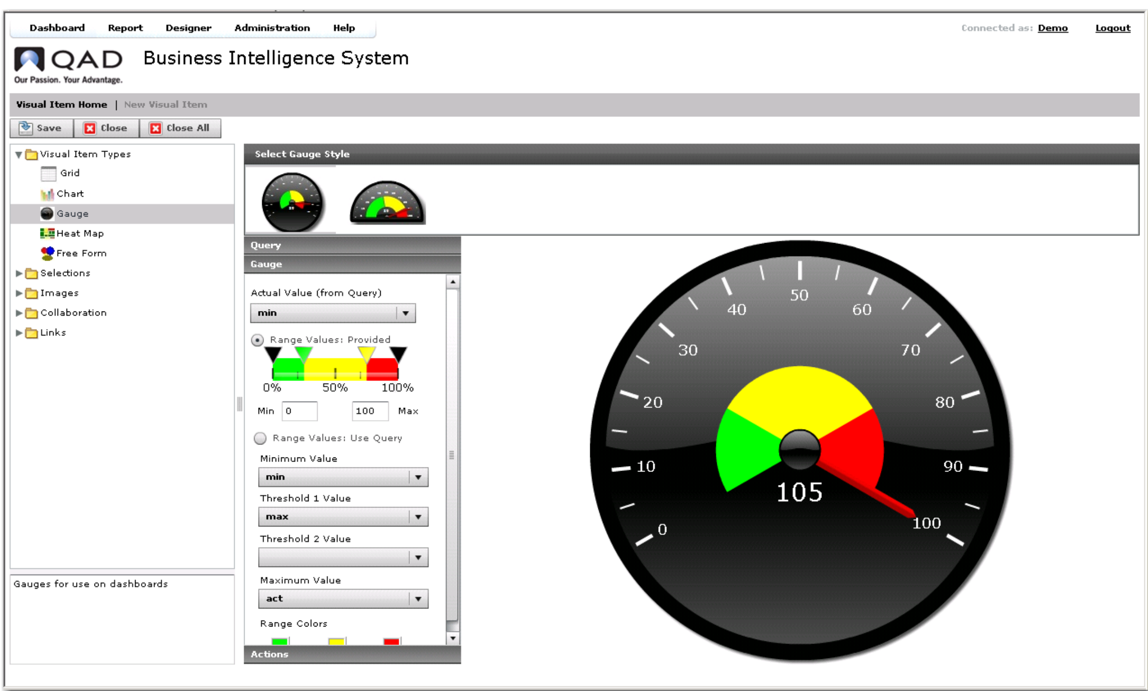
1 Click the gray bar titled Labels, then fill in the following fields:
  - Title
  - Subtitle
  - X Axis Label
  - Y Axis Label

2 Click the gray bar, Options. Then click any of the following items:
  - Stacked (multiple measure)
  - Scroll
  - Show Value Labels
  - Display decimal

  c Glass effect, (2D charts)

3 When finished, click Save, drill into the visual item library to locate the desired folder, enter a name and description, then click Save.

Designing Gauges



Access the Gauge designer from the New Visual Item window by clicking Gauge from the Visual Item Types folder.

The top left of the document window displays the two options for gauge styles.

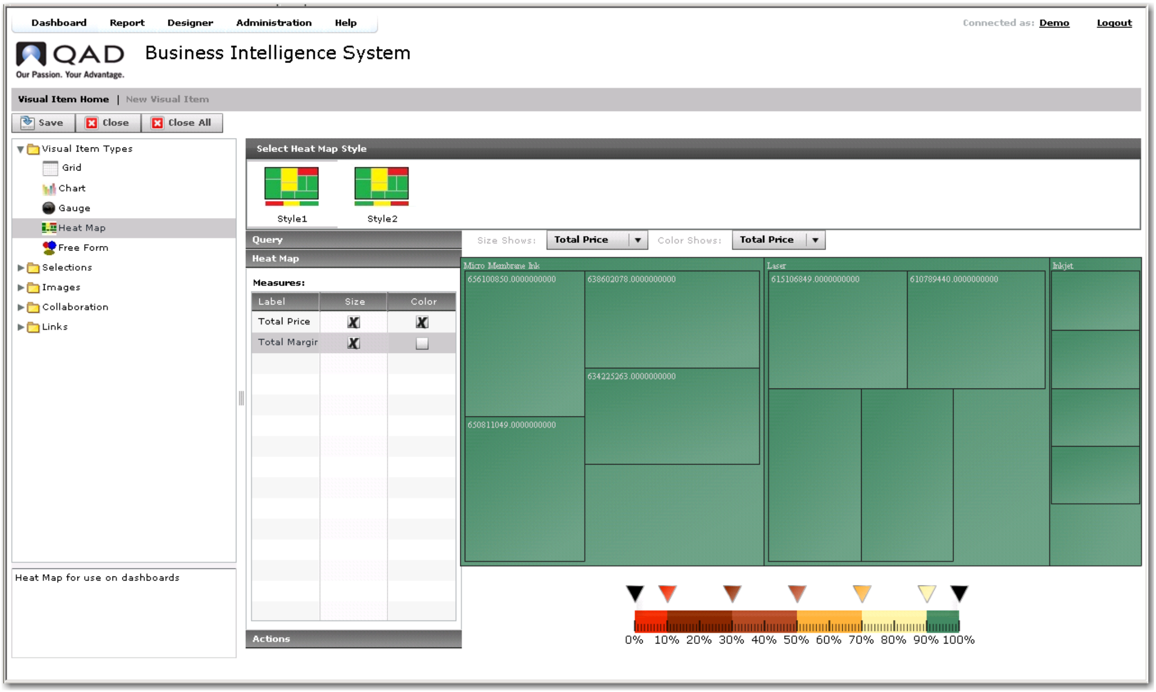
The left side of the document window shows three gray bars:

- Query
- Gauge
- Actions

To design a gauge, follow the steps for designing a grid, with the following additions for the Gauge bar:

1. Click one of the two options for gauge style in the upper left corner of the document window.
2. Click the Gauge bar.
3. Use the drop-down list under Actual Value (from Query) to choose the value that will be displayed for the gauge needle.
4. Choose one of the following:
   - Range Values: Provided. The gauge displays ranges based on percentages.
   - Range Values: Use query. The gauge displays ranges based on values from the query.
5. To use Range Values: provided:
   - You can click and move the colored triangles on the color bar to adjust the ranges corresponding to the colors.
   - You can also enter minimum and maximum values.
6. To use Range Values: Use query, you have the following drop-down options to click:
   - Minimum Value
   - Threshold 1 Value
   - Threshold 2 Value
   - Maximum Value
7. Optionally you can choose the colors displayed for each range.
8. When finished, click Save, drill into the visual item library to locate the desired folder, enter a name and description, then click Save.

Designing Heat Maps



Access the Heat Map designer from the New Visual Item window by clicking Heat Map from the Visual Item Types folder.

The top of the document window displays the two options for heat map styles. The styles provide two options for the color value display:

- Style1 - Small values are red, large ones are green.
- Style 2 - Large values are green, small values are red.

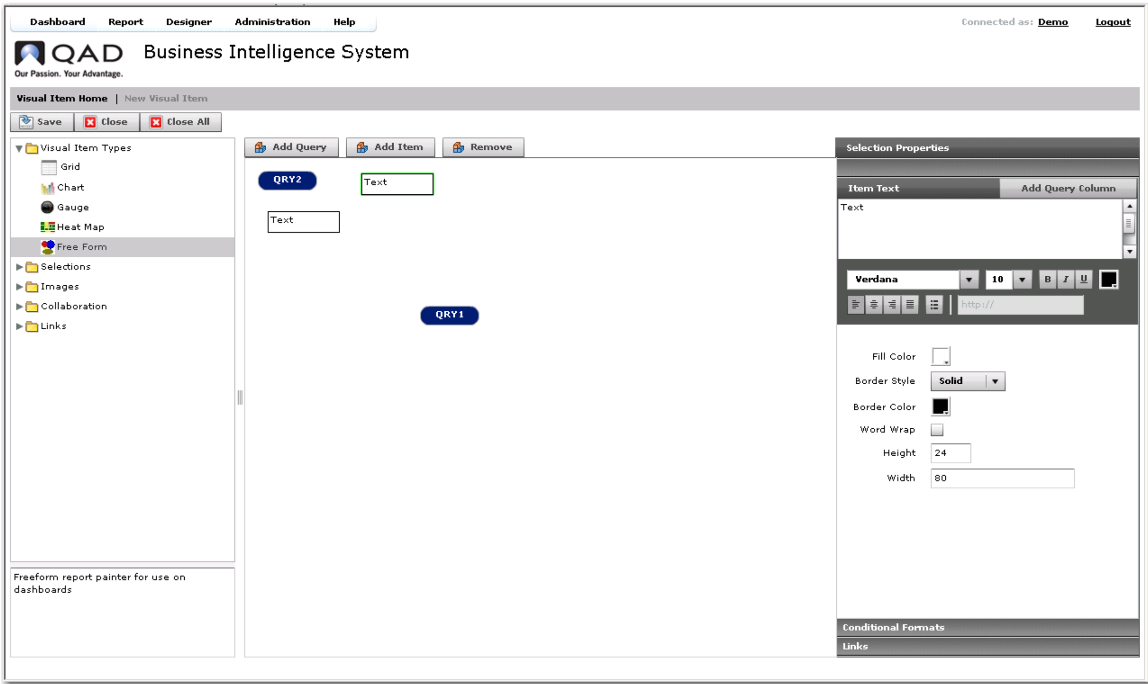
The left side of the document window shows three gray bars:

- Query
- Heat Map
- Actions

To begin designing a chart, follow the steps for designing a grid, with the following additions for clicking Heat Map:

1. Click one of the two options for Heat Map style in the upper left corner of the document window.
2. Click the Heat Map bar.
3. The heat map bar window displays a list of available values that can be displayed by the heat map. These populate the two drop-down bars (size shows, and color shows), depending on which items are clicked.
4. When finished, click Save, drill into the visual item library to locate the desired folder, enter a name and description, then click Save.

Designing Free Form Items



Free form items allow for creation of advanced metric displays. Content included on a free form visual item can be highlighted based on conditions associated with the data itself. For example, a sales figure that falls below a threshold can be highlighted with a red background. Access the Free Form designer from the New Visual Item window by clicking Free Form from the Visual Item Types folder.

Access the Free Form Item designer from the New Visual Item window by clicking Free Form Item from the Visual Item Types folder.

The right side of the document window shows different gray bars depending on whether a text item or a query item is clicked.

Items represent content that will be displayed in the visual item. They can be fixed text or a result from a query.

Note In order for an item to display a result from a query, a query must be open within the free form item.

A free form visual item showing this quarter and the last quarter sales with a label next to each would consist of four items: two items whose text were the labels, and two items whose contents were the respective quarter sales.

Queries show up in the designer as ovals. They do not appear on the runtime dashboards. Queries are added to the visual item to permit the data they return to be available for display in a text item or to be used to test conditions and alter the background of items on the Visual item (text or query).

Note Query results columns being displayed or used in conditions should, by design, be a single value, not an array.

If a text item is clicked, the following three bars are displayed:

- Text
- Conditional Formats
- Links

If a query item is clicked, only the Selection Properties bar is displayed.

To begin designing a chart, click Add Query or Add Item to add the desired items.

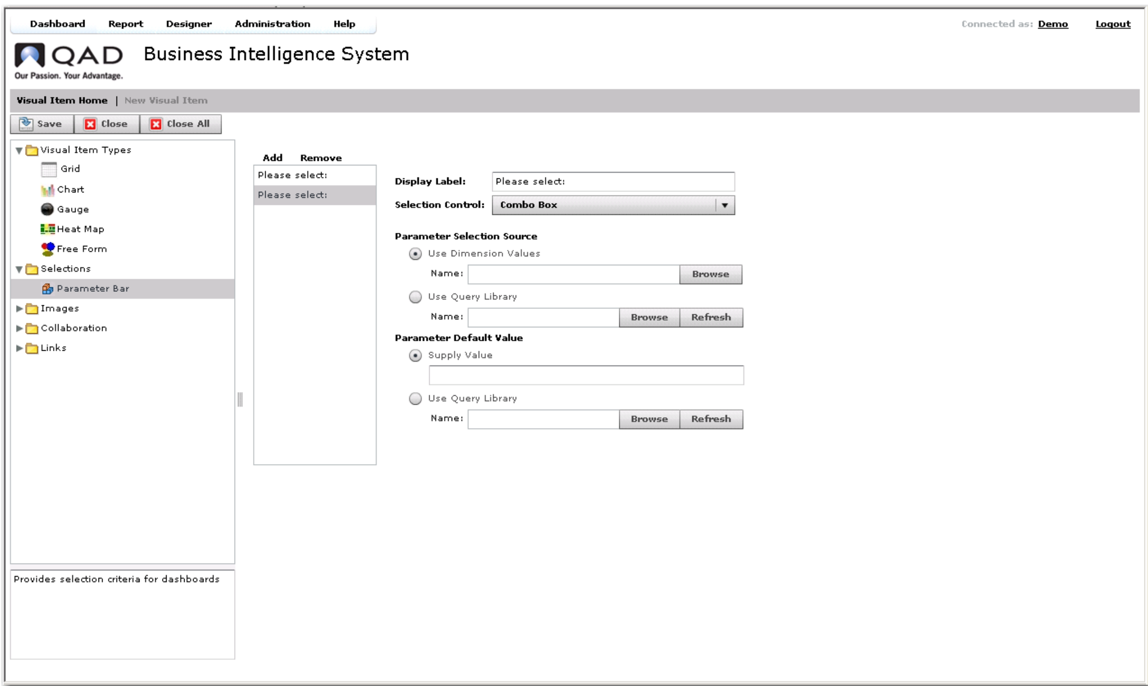
If a text item is clicked, follow these steps:

1. Click the Text bar.
2. If you would like a query result to be displayed in the box, first add a query, following the directions below. Once the query is open you may click Add Query Column. Choose a query column from the list of available columns, then click OK.
3. The following properties can be edited whether the item box is a query result or text.
   a. Change text properties as desired.
   b. Change Fill color as desired.
   c. Choose Border Style.
   d. Choose border color.
   e. Click word wrap if desired.
   f. Enter box height and width.
4. To add a conditional format to the query result, click the Conditional Formats bar. Then add conditional formats using the following buttons:
   - Add
   - Up
   - Down
   - Remove
5. Choose from the following conditions:
   - When
   - Operator
   - Value
6. Choose from the following formats:
   - Fill color
   - Border style
   - Border color
7. When finished, click Save, drill into the visual item library to locate the desired folder, enter a name and description, then click Save.

If a query item is clicked, follow these steps:

1. Click Browse to view the query library and choose a query to display.
2. Optionally you can edit the name and description.
3. When finished, click Save, drill into the visual item library to locate desired folder, enter a name and description, then click Save.

Designing Parameter Bar Selectors



Parameter bars can be placed on dashboards to allow users to set the parameters for one or more visual items on a dashboard.

Access the Parameter designer from the New Visual Item window by clicking Parameter Bar from the Selections folder.

Begin designing a Parameter Bar by following these steps:

1. Click Add from the document window. You can also click Remove to delete any unwanted selections.
2. Enter a name in the Display Label box.
3. Use the drop-down list to choose a Selection Control.
4. For Parameter Selection Source, choose one of the following;
   a. Use Dimension Values. Click Browse to view a list of dimensional attributes, make a selection, then click OK.
   b. Use Query Library. Click Browse to view a list of saved queries, make a selection, then click Open.

5 For Parameter Default Value click one of the following:

   a Supply Value. Enter a value.

   b Use Query Library. Click Browse to view a list of saved queries, make a selection, then click Open.

6 When finished, click Save, drill into the visual item library to locate the desired folder, enter a name and description, then click Save.

Designing Image Items

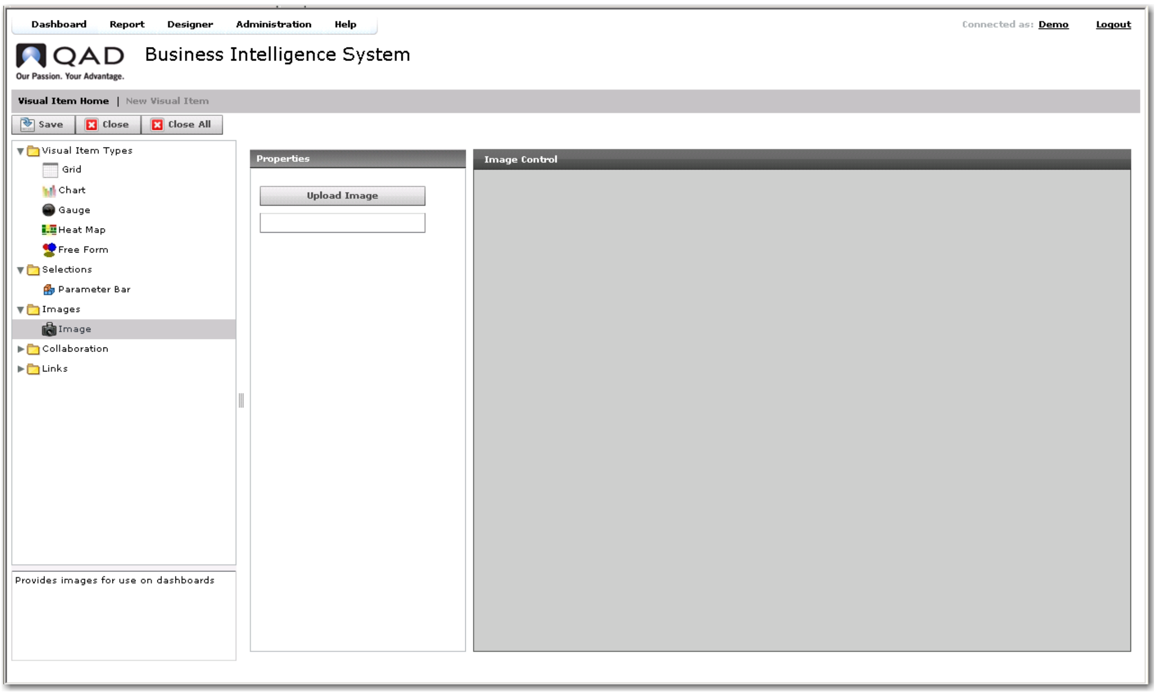


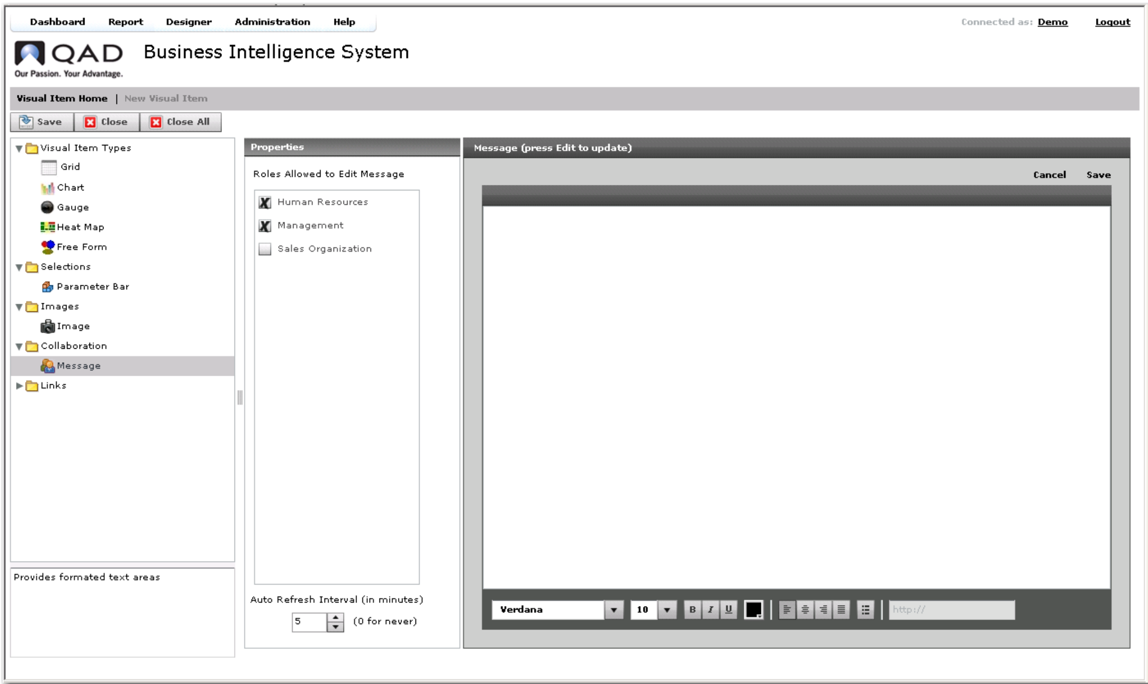
Image Items allow you to upload image files such as logos and pictures for use on dashboards.

Access the Image Item designer from the New Visual Item window by clicking Image from the Images folder.

Upload an image by clicking Upload Image.

When finished, click Save, drill into the visual item library to locate the desired folder, enter a name and description, then click Save.

Designing Collaboration



Collaboration items allow for users (all or a select group) to set their own content to be placed on a dashboard, including links to documents and Web sites.

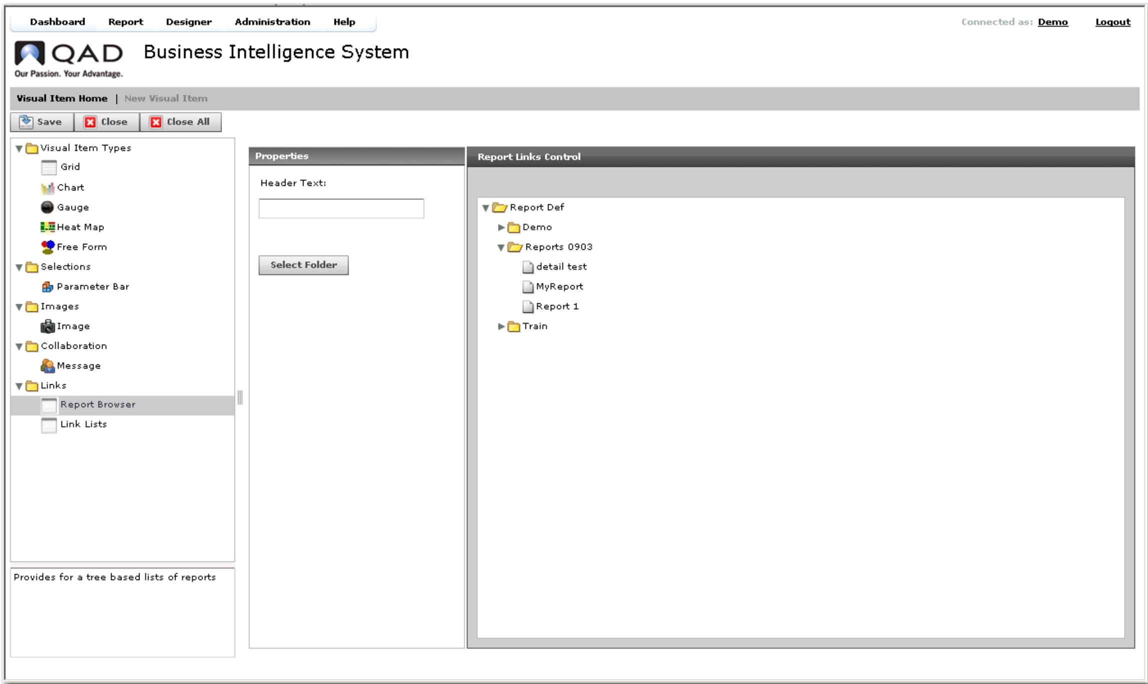
Access the Collaboration designer from the New Visual Item window by clicking Message from the Collaboration folder.

Click the roles that will be allowed to edit messages.

Click Edit to bring up a text editing window. Add and edit text.

When finished, click Save, drill into the visual item library to locate the desired folder, enter a name and description, then click Save.

Designing Report Browser Items



Report browser control allow users of the dashboard to see and run reports in the report library. Optionally, you can select a top-level folder.

Access the Report designer from the New Visual Item window by clicking Report Browser from the Links folder.

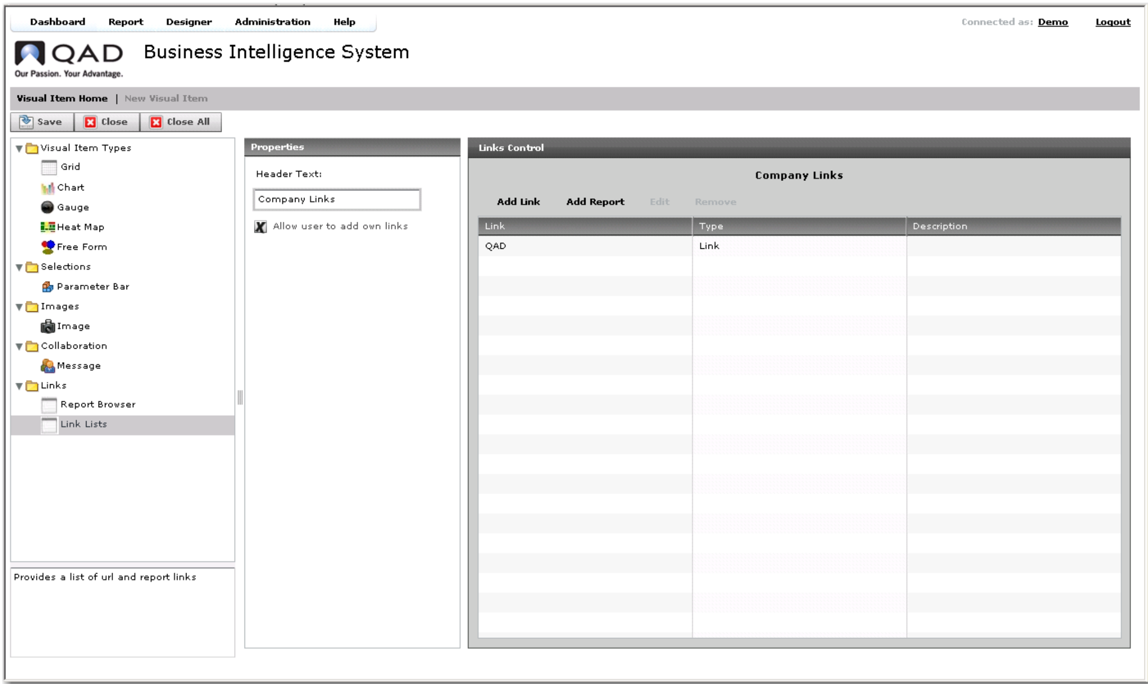
Enter Header Text.

Click Select Folder to view a list of report folders. Make a selection, then click Open.

The right side of the document window will display an explorer window of the chosen folders and their contents.

When finished, click Save, drill into the visual item library to locate desired folder, enter a name and description, then click Save.

Designing Link List Items



This item allows for the creation of links (both reports and URLs). Links can be global (seen by all users) or user specific (for example, my reports).

Access the Link List designer from the New Visual Item window by clicking Link List from the Links folder.

1 Enter header text.

2 Click, or unclick Allow user to add own links.

3 The right side of the document window shows the Links Control display.

4 To add a link, click Add Link, and fill in the following fields:

   a Enter the URL of link (can be full or relative)

   b Enter the short name to display on list.

   c Enter descriptive text for this link.

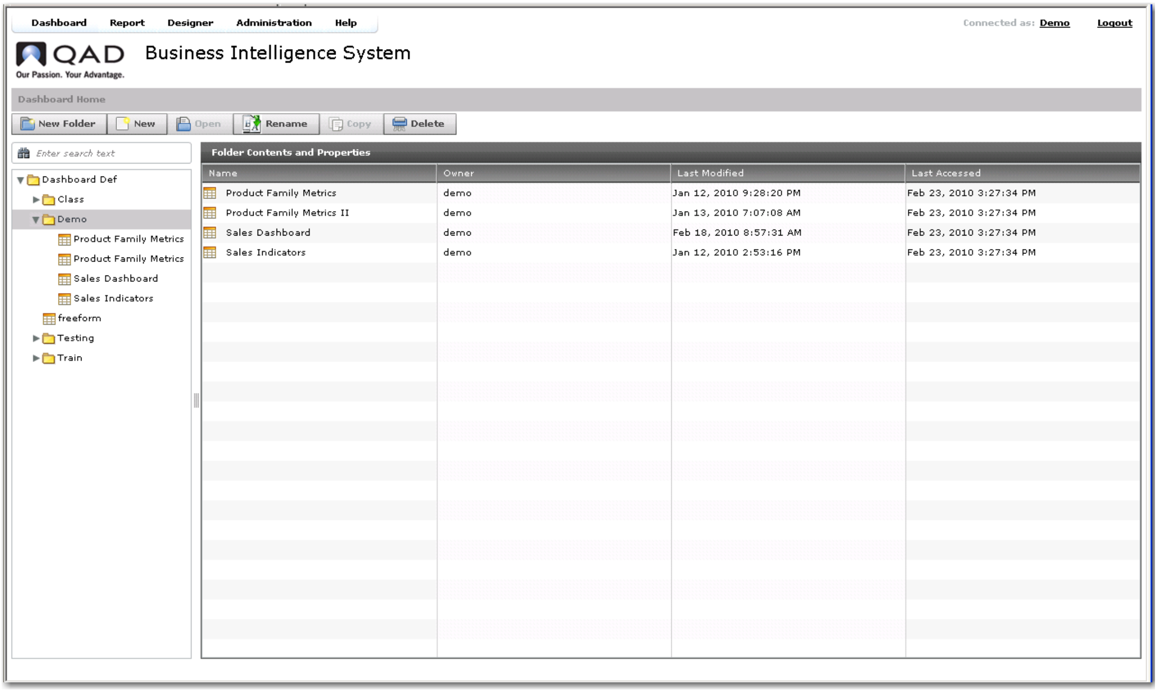
5 To add a report, click Add Report. This will bring up a document explorer window of all saved reports. Click a report, then click Open.

6 Remove items using the Remove button.

7 Edit items using the Edit button.

8 When finished, click Save, drill into the visual item library to locate the desired folder, enter a name and description, then click Save.

Dashboard Designer



Access the Dashboard designer by clicking Dashboard from the Designer menu drop-down list.

The Dashboard Home toolbar has the following options:

- New Folder - make a new folder.
- New - Design a new dashboard.
- Open - Open an existing dashboard to view and edit.
- Rename - Rename an existing dashboard.
- Copy - Copy a dashboard.
- Delete - Delete an existing dashboard.

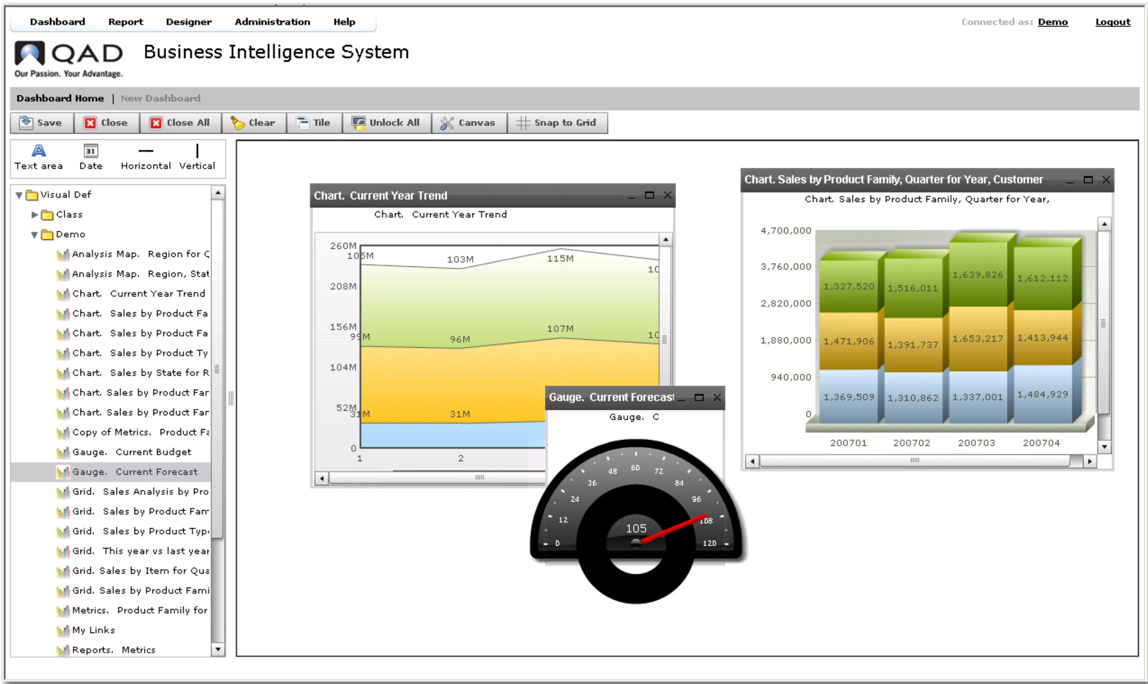
The left side of the screen displays a document explorer window listing all saved dashboards. Drill into the list to click either a folder or a dashboard.

When a folder is highlighted in the explorer window, the right side of the screen displays a list of dashboards within the folder, along with information about the items.

When a dashboard is highlighted, the right document window displays information about the dashboard with options for editing information and security options.

To view what the dashboard looks like, and to edit visual items in the dashboard, highlight the dashboard, then click Open. This will then display the dashboard for full editing.

Creating a New Dashboard



Access the Dashboard designer by clicking Dashboard from the Designer menu drop-down list.

The left side of the document window displays a document explorer window with a list of all saved visual items.

The top of the document explorer window displays four graphics options:

- Text Area - holds an arbitrary block of text.
- Date - always displays current date.
- Horizontal line - allows for a thin horizontal line used to divide elements on the dashboard.
- Vertical line - represents a thin vertical line to divide elements on the dashboard.

You can add one of these items by clicking one, then dragging it onto the dashboard canvas.

The right side of the document window displays the canvas.

The New Dashboard designer toolbar contains the following options:

- Save - Save finished dashboard.
- Close
- Close All
- Clear- Clear the canvas of all visual items.
- Tile - Tile the visual items for an organized view.
- Lock or Unlock All - Lock or unlock items into place. Locked items will not move on the dashboard, when viewed by a user.
- Canvas - You can adjust the dimensions of the canvas, and set the background color of the dashboard.

- Snap to Grid - Snap the upper left corner of an item to an invisible grid line when the item is moved. This allows the items to be easily aligned.

To build a dashboard, simply click a visual item from the list, then drag and drop it into the canvas. Move and resize the visual items however desired.

When finished, click Save, drill into the dashboard library to locate the desired folder, enter a name and description, then click Save.

To change the default characteristics of a Visual Item, right-click the title bar and select properties. The things you can control are the border, resizing options, movement options at run time, window name, and background color.

Some settings for window movement and border control take effect at run time and not at design time in order to allow the designer to easily create items. Border shading and item movement restrictions will be different at run time than they are at design time.

Another important option, for visual items that accept parameters, is defining which parameters on the dashboard are tied to each parameter on the visual item. Right click the title bar and select parameters. Required parameters represent the definitions in the visual item. Available parameters represent the list of parameters included on all parameter pars on the dashboard.

Note Parameter definitions are not required if the visual item query specifies a default, and the default will always be used on the dashboard.

Once the parameters for a visual item are set, the visual item will react to selection changes in the parameter bar.