QAD Enterprise Applications

User Guide

Introduction to QAD Enterprise Applications

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Contents

Introduction to Enterprise Applications Change Summary

The following table summarizes changes to this document.

Date/Version	Description	Reference
March 2016 EE	Added new section related to grids, “Selecting Records”	page 38
	Updated “Integrating with Microsoft Excel” to include new facility to load grids by filtering	page 139
March 2015 EE	Various updates and corrections; QAD Enterprise Cloud information added; Product Structure Maintenance (.NET) removed.	
March 2014 EE	Various updates and corrections	
September 2013.1 EE	Various updates and corrections	
	Added topic on Dashboard functionality	page 43
	Added information on side-by-side BOM comparison	
March 2013 EE	Added information on using semicolon as CSV delimiter	page 87
	Added topic on Refresh button on browse tool bar	page 89
	Added additional topics on Browse Operational Metrics	page 133
	Updated description of process viewer	page 158
	Added Process Map Configuration Settings topic	page 173
	Added Multiple Language Support for Process Maps topic	page 178
September 2012.1 EE	Updates and corrections	
March 2012/ 2012 EE	Updates and corrections	
	Added topic on special characters	page 73
	Added topic on browse performance checking	page 106
September 2011/2011.1 EE	Rebranded for QAD 2011.1 EE	
	Updates and corrections	

Chapter 1

Introduction

QAD Enterprise Applications is a complete integrated suite of software solutions. This chapter describes the basic interface elements of QAD Enterprise Applications, and includes the following sections:

Overview

QAD Enterprise Applications is a complete integrated suite of software solutions for enterprise resource planning. QAD Enterprise Applications, an enterprise resource planning suite, has been developed around best practices in business processes. The deployment methodology of QAD has been designed to simplify implementation of our solutions and to measure the efficiency of the new processes.

QAD Enterprise Applications uses leading-edge user interface (UI) technology through the QAD .NET UI, which provides a rich client framework and gives users state-of-the-art user interface features, such as ad hoc management of windows, tree view menus and drag-and-drop capabilities. Within the QAD .NET UI, Enterprise Applications transaction programs, lookups, and browses are available with powerful new .NET capabilities.

The .NET browses integrate with Microsoft Office productivity applications, with the ability to export data to Microsoft Excel and to use Excel as a means of entering data, such as financial forecasts, back into the application.

QAD Enterprise Applications is available in two editions: Standard Edition and Enterprise Edition. Both editions use the QAD .NET UI Interface, and while screen layout and navigation are common to most applications in the two editions, there are some differences in the way some Standard and Enterprise Edition programs behave:

- *Standard Edition* is the core QAD solutions suite. It includes Standard Financials, as well as a number of other key functional areas, such as Distribution (sales and purchasing elements), Manufacturing (including Kanban), Supply Chain, and Service and Support, among others.
- *Enterprise Edition* offers all of the core capabilities provided with Standard Edition. The key difference is the addition of Enterprise Financials—a new set of financial modules that provide a complete solution for global manufacturing companies. Another major difference is Internationalization—a series of enhancements to base functionality made to align QAD applications with the differing needs of international customers. In addition, Enterprise Edition offers enhancements and new features in a number of other areas.

The applications available in Standard Edition are written in traditional procedural-written client-server Progress 4GL code. The .NET UI for these applications is rendered, and does not contain application code on the .NET client side. All Enterprise Edition applications are also Progress 4GL-based, with the exception of QAD Enterprise Financials.

QAD Enterprise Financials is an event-driven, component-based application, for which the underlying business logic is written in Progress 4GL, while the QAD .NET UI application code is developed in .NET Visual Studio and written in C#. Enterprise Financials is said to be *component-based* because each area of the application is written as a single business component which you maintain separately from other business components. For example, the functions to create, modify, or delete daybooks are each separate business components.

This programmatic difference means a slightly different look and feel to Financials screens, browses, and functions.

This guide refers to these different types of functionality as follows:

- *Non-component based programs* use traditional procedural-written Progress-based technology. All Standard and Enterprise Edition programs are non-component based, except QAD Enterprise Financials.

- *Component-based programs* use business component-based technology. QAD Enterprise Financials is component-based, has additional features and utilities, and is navigated differently from non-component based programs.

Component-based and non-component based programs are described in more detail in “Component and Non-Component Based Programs” on page 62.

QAD Enterprise Cloud

QAD delivers a variety of solutions in the QAD Enterprise Cloud, including QAD Cloud Apps, QAD Cloud Services, and multiple portals housed on the QAD Cloud Portal. QAD Cloud Apps, for example, includes solutions such as QAD Cloud ERP, QAD Cloud QMS and QAD Transportation Management. QAD Cloud Services includes services such as QAD Cloud EDI, and QAD Cloud Portal includes QAD Supplier Portal for facilitation of communication and collaboration with members of your supply chain. For more information on QAD Enterprise Cloud, see: http://www.qad.com/cloud-erp-software/about-cloud-erp/.

QAD User Interfaces

The QAD user interfaces include the QAD .NET User Interface (QAD .NET UI) and the Character User Interface (character UI, or CHUI).

QAD .NET UI

The QAD .NET UI provides a common framework for multiple QAD applications. This framework, based on Microsoft .NET technology, has excellent performance and provides best-practice usability and deployment features, as well as extensive ways for users to adapt the UI to their preferred work style. Because the UI is based on Microsoft .NET technology, it incorporates familiar UI metaphors, reducing the need for users to learn how to navigate QAD applications.

QAD Character UI

The character user interface framework is based on Progress technology, and navigation and data entry are by keyboard only. You can run many Standard Edition applications in either the .NET or the character interface.

Program Types

The programs in Enterprise Applications include the following types:

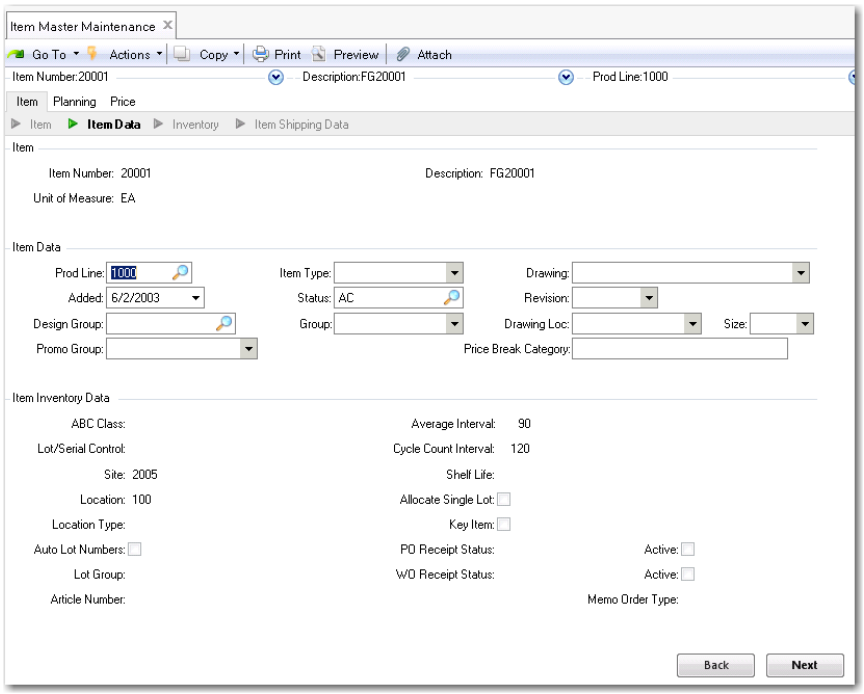
- Maintenance programs
- Inquiry and report programs
- Browse programs
- Transaction programs
- Utility programs

These program types apply to both component-based and non-component based programs. This section summarizes the characteristics and functions of each type of program.

Maintenance Programs

Operational maintenance programs are used to create basic codes such as items, sites, and locations. They are also used to record transactions that initialize business activity in a module, such as sales orders. When you enter data in a maintenance program such as Item Master Maintenance (1.4.1), an entry (called a record) is made in the item master table controlled by the program. *Financials* maintenance programs deal with financial accounting and reporting. *Operational* maintenance programs deal with other types of activities that take place in QAD applications, such as sales orders, purchasing, inventory transactions, and manufacturing activity.

Fig. 1.1
Item Master Maintenance

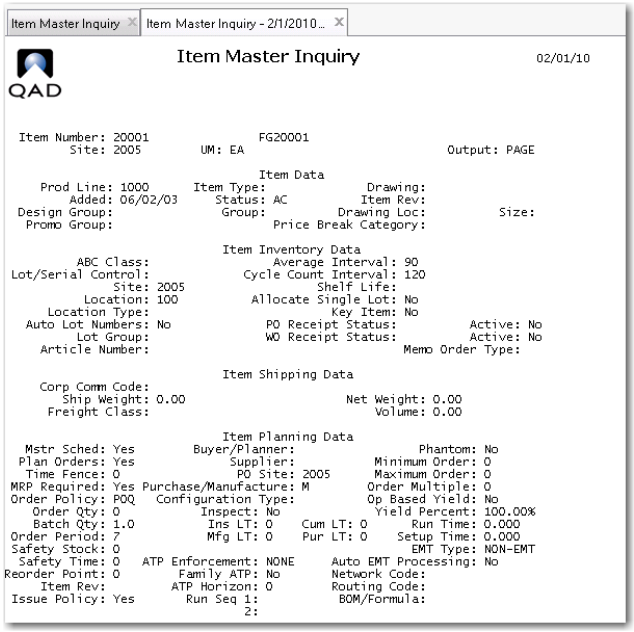


Inquiry and Report Programs

Inquiries and reports retrieve and display operational database records. Inquiries are primarily used to answer specific questions. Reports usually provide more detail and are printed for a range of data records. You select data by entering a specific range of criteria, such as item number or date.

Typically, inquiries are viewed online and reports are sent to a printer or file. However, you can also print inquiries and view reports. In addition, other output options, such as e-mail, are available.

Fig. 1.2
Item Master Inquiry



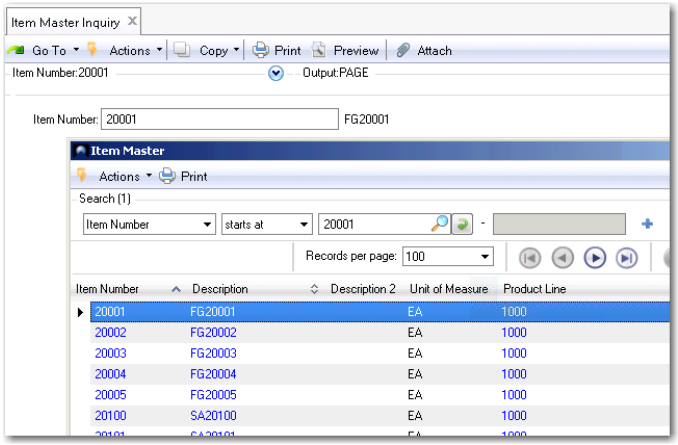
Browse Programs

Browses are inquiry programs with advanced features such as filtering, sorting, and printing information. They can be used as *drill-down* browses within programs. Based on whether you choose to display substitute programs on the menus, browses can also replace many of the simple inquiries throughout the menus. How you access them depends on your user interface.

Lookup browses are one form of online help. When attached to individual fields, these simplified browses display the records in the associated master tables. You can then select a value and have the system insert it into the field.

There are both component-based and non-component based browses, which are described in “Introduction to Browses” on page 84.

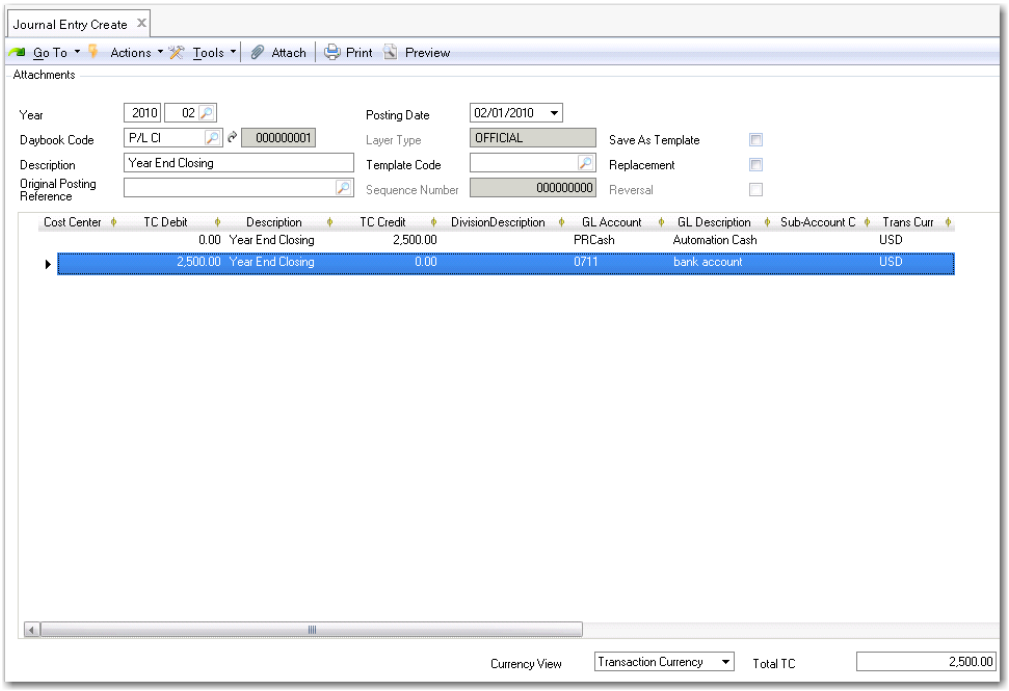
Fig. 1.3
Item Master Lookup



Transaction Programs

Transactions express the core business activities of a company. They control and record activities related to business documents such as sales orders and invoices. An example of a transaction is receipt of a shipment for a purchase order using Purchase Order Receipts (5.13.1). Financials transactions programs include Customer and Supplier Invoice, and Journal Entry.

Fig. 1.4
Journal Entry Create

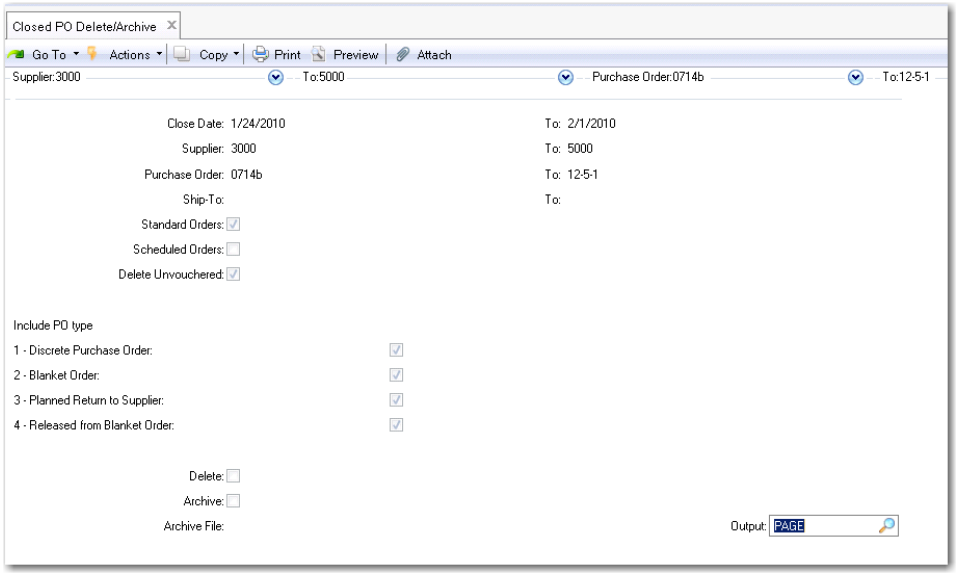


Utility Programs

Utility programs enable you to manage and perform calculations in internal databases. In Purchasing, Closed PO Delete/Archive (5.23) is a database management utility, and in MRP, Net Change Materials Plan (23.1) causes the system to run net change MRP calculations. Both are utilities.

Often utilities are designed to be used only once. For example, many utilities perform one-time data conversions following system upgrades.

Fig. 1.5
Closed PO Delete/Archive



Data Types

A QAD database contains three types of data:

- Control data
- Transaction data
- Static data

Control Data

When you implement a module, you enter data that the system uses later to control how the system interacts with users and with the database. This data is stored in control tables.

Control tables enable you to adapt the system to your environment. The data and settings in these tables determine how certain programs are displayed, the numbers assigned to transactions, the GL accounts for particular transactions, and so on. When you can manage a typical manufacturing function in more than one way, control settings let you establish a preference.

Transaction Data

Most data in the database is transaction data. Every day, sales orders come in, purchase orders go out, and work orders make demands on and create material for inventory. These events result in transactions, which are stored in transaction tables. In contrast to control programs, transaction tables are constantly updated by users of the system.

Static Data

Static data contains information about the basic building blocks and relationships of a company—the ways it does business, and the entities it does business with. Static data is used to create transaction records. However, static data is changed infrequently. Examples of static data are records for customers, suppliers, items, inventory sites and locations, and GL accounts.

Interface Elements

While the QAD .NET UI and character UI vary in appearance and navigation techniques, they have some elements in common:

- The primary interface displays in the form of a hierarchical menu.
- You select a menu item, which displays a set of fields, which are grouped in frames (or tabs for component-based programs).

Menus

Regardless of the type of interface your system uses, access to application features is controlled by a hierarchical menu system. Selecting a menu item either launches an application or drills down to a lower-level submenu.

The interfaces provide multiple access points to application programs. For example, you can launch a program by entering its Progress name or menu number on a command line in the character UI and in the search box in the QAD .NET UI. The QAD .NET UI offers point-and-click program launch as well as other interface-dependent methods of executing applications.

Fields

A field is a piece of data that is stored as an individual unit in the database. The system expects you to enter a certain kind of data in the field. For example, a field labeled Item Number would store only codes for inventory items.

Usually, you can enter or change data in a field, but sometimes the field displays system-generated data. If the system administrator has secured a field—that is, restricted user access—and you do not have access, you can see the field value but cannot update it.

The system supports different types of fields:

- A logical field requires a simple Yes or No response. In the QAD .NET UI, logical fields display as check boxes. Logical fields are like switches—you can turn them either on or off.
- Character fields accept alphanumeric data.
- Date fields accept valid dates only.
- Integer and decimal fields require numeric input.

Codes

Data entry in individual programs is simplified by codes. Each code usually represents a record with several pieces of data. For example, an item code is defined with the item weight, status, revision, ABC class, and so on. Once the code is set up, you enter the code and the system automatically retrieves all the information in the data record during processing.

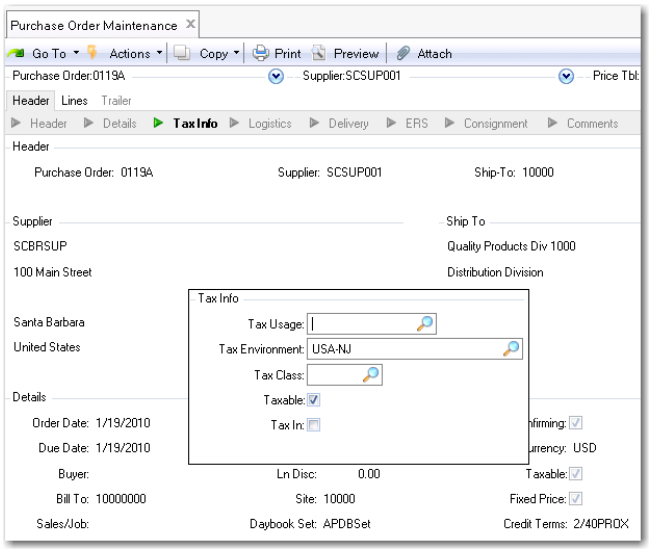
In daily processing, codes are entered on transactions to simplify data entry and on inquiries and reports to access data records. During implementation, codes are entered in control programs as default values for transactions. Codes can also be associated with other codes when setting up static data.

Frames

Fields in non-component based programs are grouped together in frames. You normally complete a number of different frames in order to create an object. For example, in order to create a purchase order, you must complete header information, line information, and trailer information, each of which type is contained in its own frame. Frames can contain sub-frames for additional required information, such as defining tax parameters for a purchase order. When a program requires more than one frame, you must complete the first frame to get to the second, and so on.

Most standard maintenance programs in the QAD .NET UI display as HTML pages using the same sequence of frames that display in the character interface. A few maintenance programs display the traditional character interface in a terminal-emulation window.

Fig. 1.6
Purchase Order Maintenance, Tax Info Frame



User Interface Management Programs

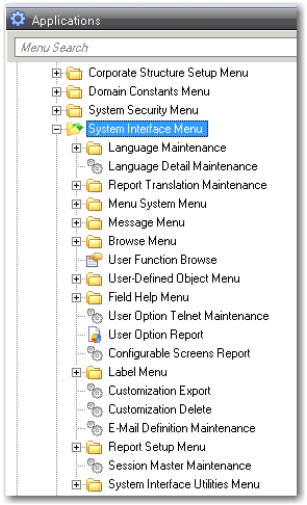
Several user interface management programs are intended primarily to let system administrators modify various aspects of the user interface. Most of these programs are provided on the System Interface menu (36.4). The System Interface menu contains programs that control menus, screen labels, messages, multi-language installations, and help. You can set up user function keys, define your e-mail system, and specify login scripts.

System interface functions also include programs for creating browses and associating them with fields and programs, and managing stored browse data. In addition, you can also define alternate programs to execute when menu items are selected and specify programs to be run from other programs.

For customization purposes, you can set up user-defined fields for both non-component and component-based programs.

See *QAD System Administration User Guide* for more information on the design mode for Financials functions. Configurable screens for the QAD .NET UI programs are described in *QAD .NET UI Administration Guide*.

Fig. 1.7
System Interface Menu



Security Considerations

The system supports role-based access control. A role is a permission list of application resources to which a user can have access. If an application resource is listed in a role permission list, then a user who is a member of the role has access to that resource. Otherwise, the resources do not display on the menu. This means that the appearance of the UI varies depending on the specific permissions that you have been assigned. System security also determines which workspaces are available after you log in. If you have access to multiple workspaces, one is defined as the default and is used during the initial login.

The login process can also be affected by security settings defined by the system administrator in Security Control (36.3.24). For example, if single sign-on is enabled, you are not prompted for a password during application login except when you first access the system or when you change your password.

See *QAD Security and Controls User Guide* for a description of the different types of security you can apply to QAD menus and functions.

Chapter 2

QAD .NET User Interface Overview

This section includes the following topics:

Introduction to the QAD .NET UI

The QAD .NET User Interface (UI) provides a common framework for multiple QAD applications. This framework, based on Microsoft .NET technology, has excellent performance and provides best-practice usability and deployment features, as well as extensive ways for users to adapt the UI to their preferred work style. Because the UI is based on Microsoft .NET technology, it incorporates familiar UI metaphors, reducing the need for users to learn how to navigate QAD applications.

Starting the QAD .NET UI

To launch the client, select the QAD Applications icon or menu item under Programs on the Start menu.

Login Window

When you start the application, the Login window is displayed.

Fig. 2.1
Login Window

Complete the following fields:

User. Enter your user ID.

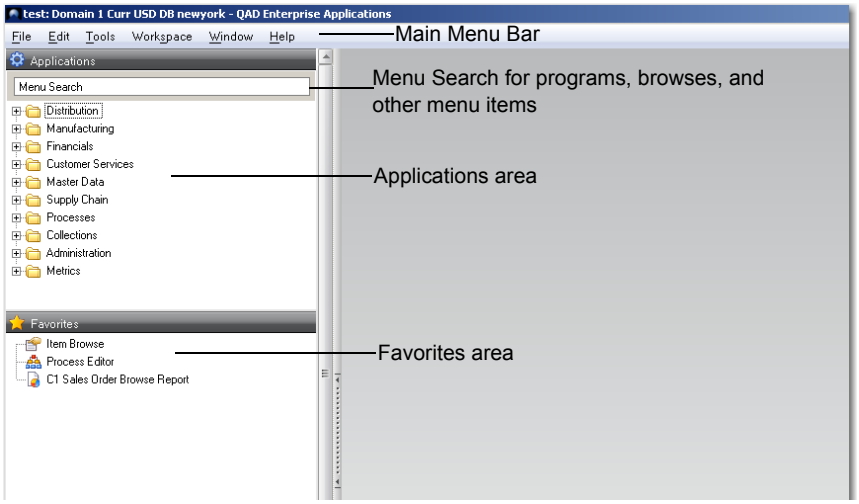
Password. Enter your password.

Log on to. Choose the system environment you want to log in to from the pull-down list.

After you complete the login screen, the QAD .NET UI main window displays.

Main Window

Fig. 2.2
Main Window

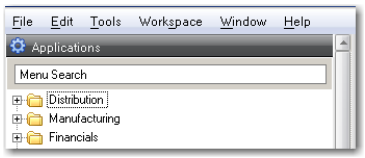


The elements of the main window include:

- “Main Menu Bar” on page 16
- “Applications Menu” on page 27
- “Favorites Menu” on page 31
- “Applications Area” on page 33
- “Status Bar” on page 34

Main Menu Bar

Fig. 2.3
Main Menu Bar

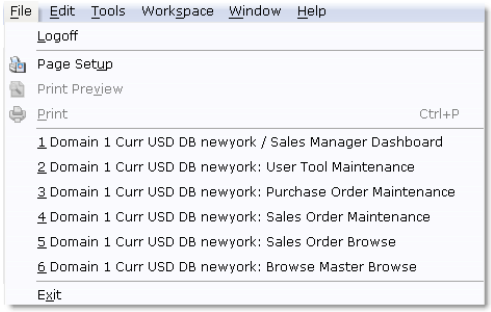


The main menu bar includes the following menus:

- “File Menu” on page 17
- “Edit Menu” on page 17
- “Tools Menu” on page 18
- “Workspace Menu” on page 22
- “Window Menu” on page 23
- “Help Menu” on page 24

File Menu

Fig. 2.4
File Menu



The File menu commands include:

Logoff/Login. Log off from all applications running in the QAD .NET UI. After you log off, this command changes to Login. This lets you log in as another user without closing the QAD .NET UI. To close the QAD .NET UI, use Exit, not Logoff.

Page Setup. Define page settings for print output, such as margins and orientation. The Page Setup options apply only to browses. For example, if you set the page to Landscape, this setting has no effect if you print a maintenance program screen, but it does take effect if you print a browse screen.

Print Preview. Generate a preview of browse data for the active screen so that you can verify that it is correct and make adjustments before printing.

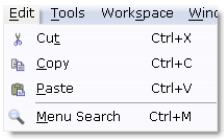
Print. Open the print dialog so that you can print the data for a browse or the screen for other programs. You can also click the Print icon in browses.

Program History. The section below Print displays the last six programs that you have opened. You can choose to open one of these programs directly from this pull-down menu.

Exit. Close the QAD .NET UI and log off any open applications.

Edit Menu

Fig. 2.5
Edit Menu



The Edit menu commands include:

Cut. Place selected text on the clipboard and remove it from the current location.

Keyboard shortcut: Ctrl+X.

Copy. Place selected text on the clipboard and leave it where it is currently located.

Keyboard shortcut: Ctrl+C.

Paste. Place the contents of the clipboard in the current cursor location.

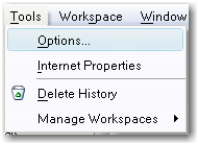
Keyboard shortcut: Ctrl+V.

Menu Search. Go to the menu search field in the Applications area so you can search for a program to execute. Using the keyboard shortcut (Ctrl+M) from anywhere in the application is a quick way to begin searching for a menu item.

Keyboard shortcut: Ctrl+M.

Tools Menu

Fig. 2.6
Tools Menu



The Tools menu commands include:

Options. View administrative information and set personal options for browses and other application settings. For more information, see “Options Menu” on page 20.

Settings the user cannot configure are viewable from Help|View Configuration.

Internet Properties. Update the same settings that display when you select Internet Options from the Tools menu in Internet Explorer. See the help provided with Internet Explorer for details about these options.

Delete History. Delete the following data:

Temporary files: Internet Explorer cache and IE cookies, and cached resources created for the current configuration.

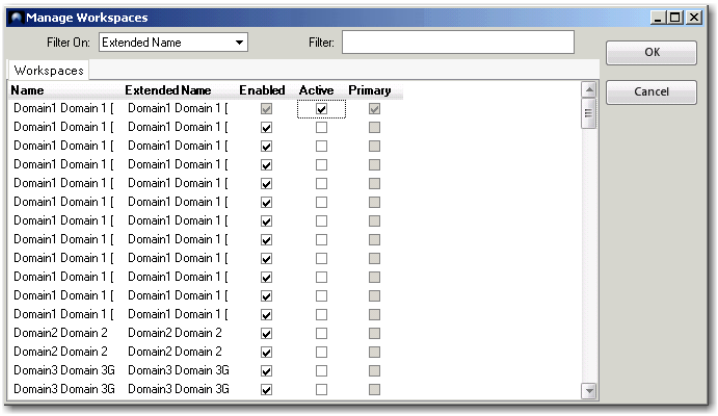
Session information: the graphical state stored by the GUI persistence manager. Also deletes user input, such as last configuration, last workspace, most recently used menu items, and credentials.

User preferences: preferences set in Tools|Options.

Log file data: the client log file (`QAD.Applications.log`)

Manage Workspaces. Activate and deactivate workspaces from a list.

Fig. 2.7
Manage Workspaces Dialog



Use the Filter On and Filter fields to select specific workspaces in order to change their status.

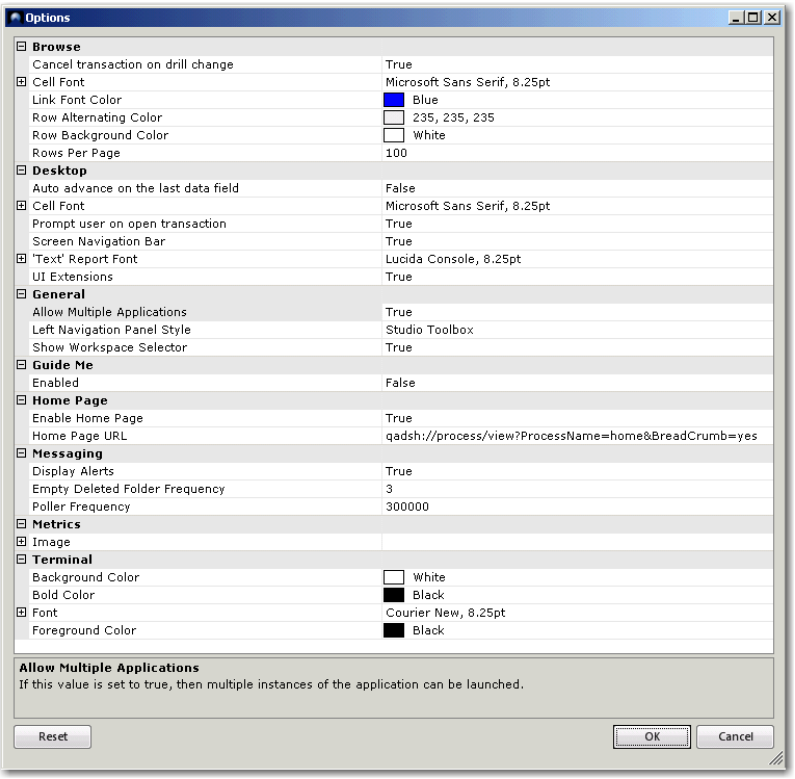
There is only one primary workspace in each installation. The primary workspace is indicated by the read-only Primary field.

The Enabled field indicates which workspaces are visible and selectable in the Workspace menu, and you clear this field to hide individual workspaces.

Only one workspace can be active for the current session. To change the active workspace, select the Active field for the workspace you want to use.

Options Menu

Fig. 2.8
Options Menu



Use the Options menu (Tools|Options) to view and modify configuration options.

To view configurations that you cannot directly modify from the QAD .NET UI, select Help|View Configuration.

Field Descriptions

Browse

Cancel transaction on drill change. Specifies the behavior of a child maintenance screen when the selected row in the parent browse is changed. Set to True or False. If this option is set to True, then a child screen always moves to the data selected in the parent browse (although a message is presented allowing you to cancel this if you have modified data in that screen). If this option is set to False, then the child screen moves to the data selected in the parent browse only if you have not modified data in the child screen. Default is True. If you change this setting, you must restart the QAD .NET UI for the change to take effect.

Cell Font. Specify the font name, style, and size to use for cell data values. This field displays a standard Windows font dialog where you can select a font, font style such as bold or italic, and font size. Alternatively, you can click the plus icon next to the Cell Font attribute to expand the values associated with it and specify them one at a time.

Specifying the underline font attribute has no effect. This attribute is used by the system to indicate a link that can be clicked to drill down in a cell.

Link Font Color. Choose the color to use for hot-linked data values. You can choose system colors, Web colors, or custom colors from a color palette.

Row Alternating Color. Specify the background color for every other row in the browse display.

Row Background Color. Specify the background color for data rows in browses.

Rows Per Page. Specify the number of data rows to retrieve for each page of data in the browse. The default is 100.

Side Panel Auto Open. Specify whether to use side panel or menu tab when side panel is closed.

Desktop

Auto advance on next data field. Specify whether to go to the next frame after leaving the last field in the current frame.

Cell Font. Specify the font name, style, and size to use for cell data values. This field displays a standard Windows font dialog where you can select a font, font style such as bold or italic, and font size.

Prompt user on open transaction. When you close a program that has a transaction running, you can have the QAD .NET UI prompt you to double-check whether you want to close the program.

Screen Navigation Bar. To help you navigate complex screens, the QAD .NET UI includes a navigation tool for selected programs. This option specifies whether to include the screen navigation bar when displaying selected programs.

Text Report Font. Specify the font in which reports are displayed when output to text.

UI Extensions. Specify whether to include additional UI extensions such as enhanced button labels.

General

Allow Multiple Applications. Specify whether you can launch multiple instances of the QAD .NET UI.

Left Navigation Panel Style. Specify the appearance of the left navigation panel, which includes the Applications Pane, Favorites Pane, and Role Menu Pane. The selections from the pull-down menu include Explorer Bar, Listbar, Toolbox, Outlook Navigation Pane, and Studio Toolbox. Note that with the Listbar style, you cannot drag-and-drop menu items from the Applications area to the Favorites pane.

Show Workspace Selector. Specify whether to display the workspace selector toolbar along the bottom of the screen. With the workspace selector toolbar, you can quickly change workspaces.

Guide Me

Enabled. Select True or False to enable Guide Me field descriptions. The default is False.

Home Page

Enable Home Page. Specify whether the home page displays in the Home Page tab when you log in.

Home Page URL. Specify the location of the home page. The URL can be an `http://` URL or a `qadsh://` URL.

Messaging

Auto Complete Recipients Textbox. Specifies whether message addresses entered in the recipient text boxes should be automatically completed (default: True).

Display Alerts. Set to True to display the New Message Prompt in the Messaging area. The prompt is displayed when the user receives a new message.

Empty Deleted Folder Frequency. Set the number of days after which the Deleted folder is emptied of messages.

Poller Frequency. Sets the interval in milliseconds after which the system automatically polls the mail server for QAD Messaging.

Metrics

Title. This option controls whether or not metric title and date information are stored in the images saved to process maps.

Terminal

Background Color. Choose the color to use for the screen background.

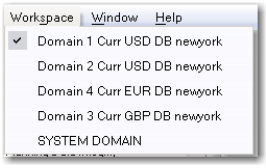
Bold Color. Choose the color to use for any text in the application that has the bold attribute.

Font. Specify the font name and style to use for text strings on the character UI. This field displays the standard Windows font dialog described for Cell Font. For optimal viewing, you should select a non-proportional font, such as Courier New (the default). The font size attribute has no effect on display. The character screens are automatically resized to fit the available space.

Foreground Color. Choose the color to use for text strings on the character UI.

Workspace Menu

Fig. 2.9
Workspace Menu



When you have access to more than one workspace, the Workspace menu lets you choose the one you want to work in. The values that display on the menu are configured in Tools|Manage Workspaces.

A workspace typically represents a domain. However, other QAD applications can have their own workspace types. When you first log in, you must choose a workspace. When you exit the QAD .NET UI, the active workspace is saved and displays when you log in again.

You can change your active workspace by selecting one from the list on the Workspace menu. You can also change your workspace from the Workspace Selector along the bottom of the QAD .NET UI window if the Tools|Options Show Workspace Selector option is True.

When you change workspaces, any programs you have running in the current workspace remain open. You can return to the workspace later to complete any open transactions.

The first time you access a workspace, the system must build the appropriate menu hierarchy for that workspace. This may take a few moments, but only occurs during the initial selection. On subsequent logins, menus are refreshed based on any changes made in the system. This also may cause a brief delay.

The Workspace menu displays only when the logged-in user has access to more than one workspace.

Workspace Activation

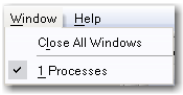
With the QAD .NET UI, the active workspace when a user logs in is the workspace that was active during the previous session. However, in QAD Enterprise Applications - Standard Edition, if there was not a previous session or if the last activated workspace is not valid for the new session, then the QAD .NET UI activates the primary workspace (the default domain) for the user as specified in User Maintenance (36.3.1).

If a primary workspace has not been defined for the user, the QAD .NET UI activates the first workspace listed in the Workspaces pull-down menu. By default, the workspaces are listed in alphabetical order, but you can change the order using Tools|Manage Workspaces.

Information about the last active workspace and the ordering of workspaces is set on the client, and the information about the primary (default) workspace is set on the server. Consequently, if a user switches computers, or logs into a different system, the active workspace will depend on the client settings of the new computer or the server setting of the new system.

Window Menu

Fig. 2.10
Window Menu



The Window menu displays a list of all programs currently open in the active workspace.

- Choose Close All Windows to close all open windows in a workspace.
- Change the active window by selecting one from the list.

The currently active window displays with a check mark next to its name in the list.

Help Menu

Fig. 2.11
Help Menu

Use the Help menu to display Application and Program Help, and to view installation and application configuration details.

The Help menu commands include:

QAD Enterprise Applications User Interface Help. This option displays the Contents page for the QAD .NET User Interface Help system in the QAD Assist Panel.

Application Help. This option is available when your cursor is placed within a non-component based field or screen. When you then select Application Help, field or procedure help is displayed for the field or screen.

View Configuration. Opens a window that displays various configuration settings that cannot be directly changed by a user of the QAD .NET UI. These settings must be changed by a system administrator.

About. Display information about the version of QAD .NET UI that is running, the time the QAD .NET UI was started, and the total amount of physical memory the QAD .NET UI is using. (If N/A is displayed, the operating system is not giving the QAD .NET UI permission to access system information.)

View log information by clicking on View Log; the log file opens in the text editor associated with files ending in the `.log` extension on your system. The log file is named `QAD.Applications.log`.

On Windows systems (including XP, Vista and Windows 7), the default location of the log file is:

```
%appdata%
```

which is a Windows system environment variable that resolves to the path for the Application Data folder of the current user.

For example, on Windows XP, `%APPDATA%` resolves to:

```
C:\Documents and Settings\{username}\Application Data.
```

Using Application Help

Application help is available in a number of options:

- Context-sensitive field help for non-component based programs is available by pressing F1 when in a non-component based field. This also provides a link to the procedure help for the program.
- Context-sensitive field help for component-based programs is available by enabling the QAD Guide Me feature, which provides mouse-over descriptions of the current field. See “QAD Guide Me” on page 27.

- Context-sensitive program help is available by pressing F1 in a component-based screen, which launches the QAD Assist Panel. See “QAD Assist” on page 25.

Accessing Application and Interface Help

You access context-sensitive help for application programs and fields by pressing F1 within the program or field, and also through the Help Menu option.

The Help menu has the following options:

- Search

  Use this option to search the default help about programs and fields. You can filter the results for only program help, field help, or both. (The Search feature is implemented with the QAD Assist component. See “QAD Assist” on page 25.) Additionally, links provide access to the online QAD Document Library (http://www.qad.com/documentlibrary/), Support, and Copyright information. The QAD Document Library hosts QAD user guides, administration guides, installation guides, training guides, and technical references.

- Application Help

  This option displays context-sensitive help when your cursor is in a program field. Pressing F1 also displays context-sensitive help.

- View Configuration

  This option displays QAD .NET UI configuration information for use by system administrators.

- Send Error Report

  Use this option to save or send an error report. You can view the report, which includes QAD .NET UI configuration information and log files. You can then enter additional information about what you were doing when the problem happened. Optionally, you can enter your e-mail address and send a screen shot. Finally, click Save to save the error report or Send to send it.

- About

  This option displays QAD .NET UI version and system information. Further, it provides access to installation details and the QAD .NET UI log file. Click Details to view configuration information about QAD .NET UI components. Click View Log to view the QAD .NET UI’s log file (`QAD. Applications.log`).

QAD Assist

The QAD Assist component provides a way to access and search online help in an HTML format. To use QAD Assist, choose Help | Search.

QAD Assist contains program and field help. When you conduct a search, the Results page displays all of the references in the product information. You can refine this search by clicking Program Help, Field Help, or All.

The Home button on the QAD Assist toolbar displays the QAD Assist home page. Use the Home page to conduct searches on any topic. Click the QAD Document Library link at the bottom of the screen to navigate to the QAD Document Library. The QAD Document Library (http://www.qad.com/documentlibrary/) offers a complete set of all QAD user guides, training guides, and other materials.

Searching QAD Assist

The following sections describe how to conduct advanced searches of QAD Assist.

Single Terms and Phrases

You can search for single terms (such as ‘test’), phrases (such as ‘test system’) or complex terms using operators (such as ‘test AND system’). The panel stores default fields, which you define during deployment, which do not need to be specified when searching. The following operators are supported by the panel:

AND, +, OR, NOT, -

Note You can also use the symbol ! instead of the NOT operator.

Operators must by typed in all capitals.

Wild Cards

The panel also supports the use of wild cards. Use a question mark (?) to replace a single character (for example, ‘te?t’) and an asterisk (*) to replace multiple characters.

Note You cannot use these wild cards as the first character in a search term.

The tilde symbol (~) lets you perform fuzzy searches, which return results similar to the term you entered. You can specify the similarity to the searched term using a numerical option between 0 and 1 (for example, ‘test~0.8’). The closer the value to 1, the greater the similarity. The default value is 0.5.

You can also use numerals to specify words within a specified distance from each other. For example, if you enter ‘test system~10’, the panel returns all instances of ‘test’ and ‘system’ appearing within 10 words of each other in a document.

The boost symbol ‘^’ allows you to specify the relevance between two terms in a search. For example, if you enter:

test^4 system

the panel applies four times more relevance to documents containing ‘test’ than to those containing ‘system’, although it returns results for both. The boost symbol can also be applied to groups of terms (for example, ‘test system^4 application deployment’).

Running QAD Assist from the Command Line

You can use the following QADSH commands to display the Assistance Panel from the command line:

`qadsh://help/search`

displays the default Search page in Assistance Panel

`qadsh://help/home`

displays the panel Home page

`qadsh://help/search?q=sosomt.p`

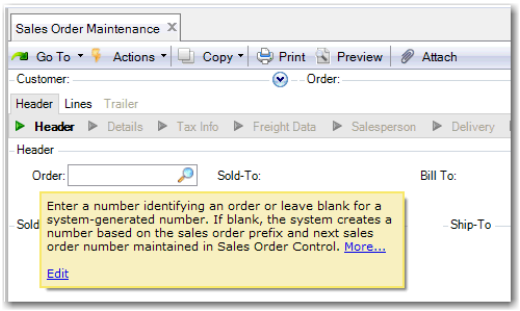
displays panel Help for the program sosomt.p

QAD Guide Me

The QAD Guide Me feature provides immediate mouse-over descriptions of fields in both component and non-component programs. The feature is disabled by default.

Note Field help for non-component based programs is also displayed by pressing the F1 key when the cursor is positioned in the field.

Fig. 2.12
QAD Guide Me



Click the More... link to display an extended description of the field, and the Edit link to edit this description in Field Help Maintenance.

Note The Edit option is only visible for users who have access to Field Help Maintenance.

Enabling QAD Guide Me

The QAD Guide Me feature is enabled in the following ways:

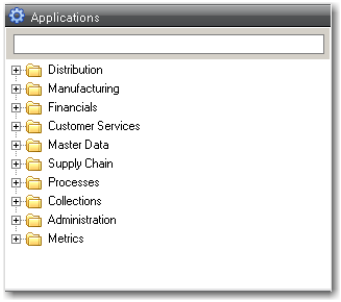
- By setting the Guide Me option in Tools|Options to Enabled: True
- By setting the Guide Me parameter in the `client-session.xml` file to True
- By adding a parameter to the shortcut path for QAD Applications on your desktop

You can disable the feature by changing the above settings to false or by disabling the Guide Me plugin in the `client-bootstrap.xml` file.

Applications Menu

The Applications menu displays the menu items for the QAD applications running in the QAD .NET UI.

Fig. 2.13
Applications Menu



When the system is installed, the default menu organization is automatically loaded.

Note Menu substitution is not supported in the QAD .NET UI; only items on the menus are included.

Menu Search

You can use the menu search field to quickly find menu items by menu item label (alias), program name, and menu number (key).

Search results display directly in the application menu area.

You can use Search for multiple purposes:

- Find programs based on one or more menu label keywords, program name, or menu number. For example, enter sales to display all menu labels that include the word sales.
- Execute a specific program based on full menu label, program name, or menu number. For example, enter Item Master Maintenance, ppptmt.p, or 1.4.1 and then press Enter to display Item Master Maintenance.
- Execute a specific program based on a shortcut defined in the Name field of Menu System Maintenance.

Example Menu is the shortcut for Menu System Maintenance; enter menu and press Enter to display this screen.

Search supports an auto-completion feature. You can type a minimal number of characters and press Enter to expand the phrase you entered with the first match. When only a single match exists, the program is executed.

Even though menus are listed by menu description, search by menu number (or key) and program name is supported to accommodate users who are familiar with other user interfaces.

Search locates all items that contain the search string, not just those that start with it. This is true of numeric as well as alphabetic input. Matches beginning with the search string display at the top of the results; matches that contain it display lower down.

Example Typing Customer finds Customer Maintenance before Controlled Customer Maintenance. Typing 1.1 finds 1.1.1 before 2.1.1 or 3.1.1.

Search results display directly in the application menu area.

The system displays results as you type, so you can select what you are looking for as soon as it is uniquely identified.

Note When a program has been added to more than one menu, each occurrence displays in the search results. This is likely to occur if you have added programs to Favorites. A tool tip displays the full path to the menu.

After using Search, you can right-click an item in the search results to display options.

In addition to the options that you have when you right-click a menu in non-search mode, you can choose Find in Menu in search mode. Choosing this option displays the currently selected menu item in location in the menu hierarchy.

You should be aware of these additional considerations when using Search:

- If you enter sales order, the search finds only menu labels containing that exact string.
- A shortcut—specified in the Name field of Menu System Maintenance—is always found first during a search. For example, Add is defined as the shortcut for Item Master Maintenance. If you enter add in Search, Item Master Maintenance displays first and executes if you press Enter.

Menu Item Options

To access the options available for each menu item in the Applications Pane, right-click on the item. The options can include the following:

Add To Favorites. Adds the menu item as one of your favorites. Menu items identified as favorites are displayed in the Favorites Pane. For more information, see “Favorites Menu” on page 31.

Collapse Menus. Returns the Applications area display to list only the top-level folders.

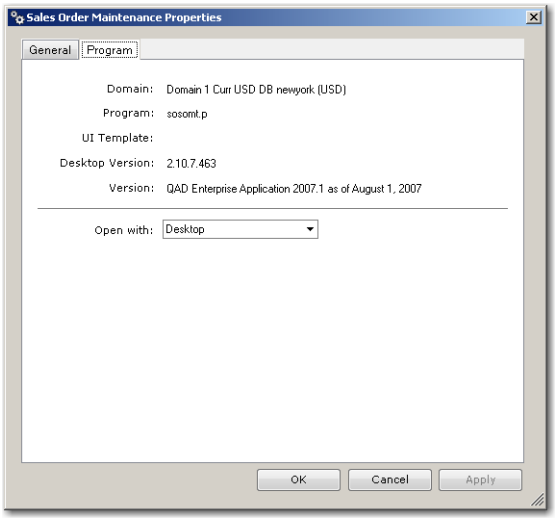
Design. If a program, gives you access to the Configurable Screens feature. This option is only available for selected programs and only available to administrative users with access to the configurable screen feature. If a collection, gives you access to Browse Collection Maintenance or Menu Collection Maintenance. If a process map, launches the Process Editor.

Properties. Displays details about the menu item in a pop-up window. For more information, see “Properties Window” on page 29.

Properties Window

You can view the properties of a menu item by right-clicking on it and choosing Properties from the pull-down menu.

Fig. 2.14
Properties Window



The Properties window includes two tabs, General and Program.

General Tab

The General tab displays the following information about the program:

URL. The QAD Shell URL for the program.

Key. The program number. For example, 7.1.1 is the program number for Sales Order Maintenance.

Aliases. The program number and name. For example, for Sales Order Maintenance, 7.1.1 is the program number and `sosomt.p` is the program name.

Menu. The menu item folder location.

Program Tab

The Program tab displays the following information about the program:

Domain. The current working domain and domain currency. If the specific program updates data that applies to all domains, All Domains displays next to the working domain currency. This is determined by settings in Program Information Maintenance (36.3.21.1).

Program. The program name. For example, `sosomt.p` is the program name for Sales Order Maintenance.

UI Template. If the user executing the program has been assigned a configurable screens version of the program, the name of the assigned UI template displays.

Desktop Version. Version details for Desktop.

Version. Product system version details.

Open with. Options can include one or more of the following:

- Desktop. Specify that the screen displays based on XML data using .NET technology.
- .NET User Interface. Specify that the screen display is driven by a client-side plug-in, where the display is based on XML data using .NET technology. Only a small subset of programs support this option.
- Browse Viewer. Specify that the screen displays in an interactive grid or chart format (browses only).
- Terminal. Specify that the screen displays as a character-based terminal screen (also called terminal mode).

Note Custom browses saved as favorites only display in Browse Viewer mode. If the mode is changed to Terminal, the custom browse will display in Browser View mode, not Terminal.

Note Browses do not retain chart state when placed on the favorites.

Note Programs saved as favorites and then launched from the Favorites pane will launch in whatever mode the source menu item is set to run, regardless of what setting they had when they were originally saved as a favorite. Browses do not retain chart state when placed on the favorites.

Initially, each program's display mode is determined by settings in Program Information Maintenance (36.3.21.1). Each user can change this setting on a program-by-program basis using the Properties option. These choices are retained from session to session.

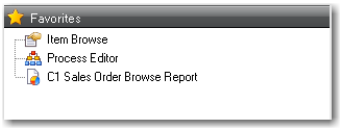
Home Page Menu Item

The home page (set in Tools | Options) displays when you log in to the QAD .NET UI. You can now also access the home page from the menu. In the Applications pane, go to Home Page to open the home page.

Favorites Menu

The Favorites menu is a custom menu you can create using menu options or drag-and-drop techniques.

Fig. 2.15
Favorites Menu



Adding Favorites

You can add favorites in the following ways:

- Right-click a menu folder or menu item in the Applications menu and choose the Add to Favorites option. The menu appears at the bottom of the list in the Favorites area.
- Select the menu folder or item you want and drag it from the Applications area to the Favorites area.

- Drag-and-drop URLs from Internet Explorer or Mozilla Firefox to the Favorites area, where the link will be saved as a favorite.
- Drag-and-drop an item from the file system (for example, from Windows Explorer) to the Favorites area, where a link to the item will be saved as a favorite. You can drag-and-drop programs (executables) as well.

You can add a menu more than once.

Note When the Left Navigation Panel Style option in Tools|Options is set to Listbar, you cannot drag-and-drop menu items from the Applications area to the Favorites pane.

Because favorites are stored on the server, when you log on to the system from a different computer than your usual client computer, you will still see your favorites. Additionally, having your favorites on the server makes them immune to any disk problems that might occur on your client computer.

Warning If several users share the same user ID, Favorites storage files can be corrupted.

Organizing Favorites

You can organize your favorites on your client screen into folders and subfolders, rename menu items and folders, rearrange the order of folders and items, and remove menu items you no longer want.

- To organize menus into a hierarchy, right-click in the menu space and choose Create New Folder. You can then drag the folder to any position and drag menu items or other folders into it.
- To rename or remove a menu item, right-click the item and choose the option you want. You can also display properties and go into design mode for enabled programs.
- To change the icon of a menu item, right-click the item and choose Change Icon. Browse to a graphics file and select it.
- To collapse the display of all open folders, right-click any item and choose Collapse Menus.

When you right-click a folder, you can also create a new subfolder within the currently selected folder.

You can launch a group of menu items organized under a folder together. Right-click on the folder and select Menu Collection. The folder icon changes to a collection icon. Click on the icon to launch all the functions at the same time.

Note If you copy a browse collection to favorites and then modify the collection without using Browse Collection Maintenance, you can no longer edit that updated browse collection using Browse Collection Maintenance. Favorites are stored locally and collections are stored on the server.

Setting Auto Start

You can automatically start any favorite menu item when you log in to the QAD .NET UI. For any menu item saved under Favorites, right click the item and select Auto Start. With Auto Start selected, the menu item starts automatically when you next log in. Favorite menu items that start

automatically are displayed in bold. With the exception of process maps, you can have more than one menu item start automatically. To disable this feature, right-click the item and deselect Auto Start.

Only one process map should have Auto Start selected. Having multiple process maps with Auto Start selected will launch the Process tab but the display will be blank. If you have multiple process maps in only one folder under Favorites, you can select Auto Start for multiple process maps in that folder, but only the first process map with Auto Start selected in that folder will open. If in that folder you include a sub-folder with one or more process maps set to Auto Start, the Process tab display will be blank.

Applications Area

The programs you choose to run from the menu display in the applications area of the QAD .NET UI. You can open multiple programs and organize them in different ways.

You can have multiple instances of an HTML program or browse open. For example, you can have multiple instances of Sales Order Browse or Sales Order Maintenance open. However, you can have only a single instance of a character screen, process map, or help window.

Tab Views

You can click a tab to activate it or click the “x” on the tab to close it.

You can use the keyboard to navigate through open programs. Ctrl+Tab displays a list of open programs you can select from, with focus on the next window. Ctrl+Shift+Tab displays the same list with focus on the previous window.

Click Close All to close all the tabs or click Close Others to close all the tabs except the currently active tab.

Horizontal and Vertical Layout

You can create additional tab groups in either horizontal or vertical layout. Right-click any tab to display the tab options.

Click New Horizontal Tab Group to split the screen horizontally and move this program to the new area.

Click New Vertical Tab Group to split the screen vertically and move this program to the new vertical area.

You can only create groups of one type. After you have created the first vertical group, the option to create a horizontal group is not available; the same is true after you create a horizontal group. However, you can create as many of one type of group as you want. When multiple groups exist, other options to move to the next or previous tab group display when you right-click a tab. Use these options to move programs from one screen area to another. You can also simply drag programs where you want them.

You can create multiple horizontal views of a browse by dragging the border indicator located above the horizontal scroll bar on the upper right side of the browse view. Similarly, you can create multiple vertical views of the same browse by dragging the border indicator located on the left of the vertical scroll bar. Creating multiple horizontal and vertical views of a browse is useful when working with a large browse that is difficult to view in a single pane.

Move Tab to New Window

You can have a tab detach from the Applications area and display in a new window. Right-click the tab and choose Move Tab to New Window or enter Ctrl+F11. To move a tab in a separate window back to a tab in the application area, enter Ctrl+F11.

Status Bar

Fig. 2.16
Status Bar Login Information

After you log in, the status bar briefly displays the date and time of your previous log-in, along with your user name and user ID. The date is in the format YY/MM/DD: for example, August 30, 2007 is 07/08/30.

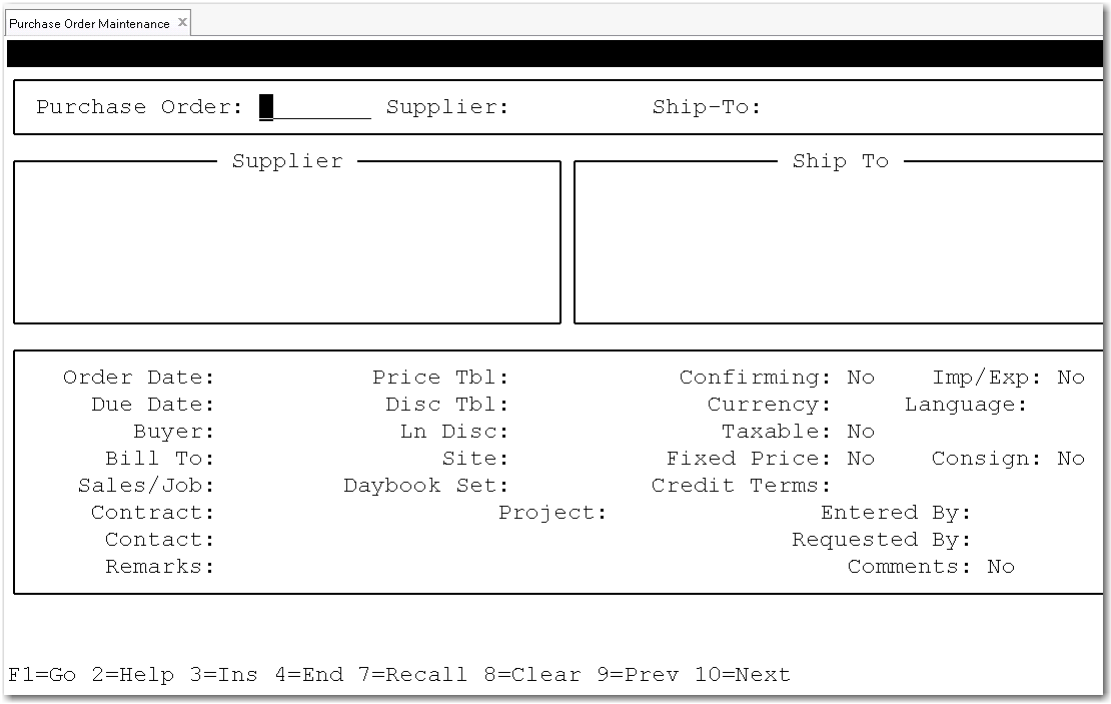
You can resize the menu area and application area by using the vertical resize bar and dragging it to the right or left. You can also resize the Application menu area and the Favorites area by dragging the horizontal resize bar up or down.

The ID of the currently logged-in user displays in the bottom right corner of the screen.

Navigating the User Interface

You can choose to run most non-component based programs in either .NET mode or in terminal mode, by selecting from the Open With drop-down menu in Program Properties. Terminal mode emulates the character UI within the .NET UI, and you navigate the program in the same way as in character.

Fig. 2.17
Purchase Order Maintenance in Terminal Mode



Because of their different underlying technologies, you navigate component and non-component based screens in the QAD .NET UI in different ways.

- You use traditional mouse-clicks, tabs, and keyboard tabbing to navigate the component-based screen.
- The non-component based screen is a rendering of the character UI for the QAD .NET UI, and uses similar tabbing and keyboard navigation.

These navigation methods are described in the following sections

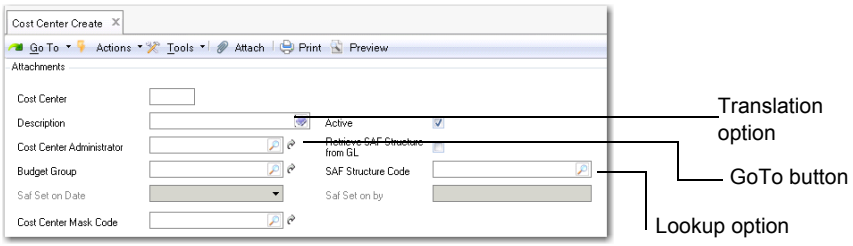
Using Component-Based Screens

Component-based screens have a number of additional navigation features.

Entering Data in Fields

Use the tab key and mouse cursor to navigate through business component forms and to enter data.

Fig. 2.18
Screen Options



A lookup option is available on fields that feature magnifying glass icons. You can also access this option by pressing Alt+L. Lookup screens can be customized in the same way as the browse overviews.

Many actions, such as Save and Create, also have keyboard shortcuts; for example, Control+S for Save and Control+N for Create (New). The shortcuts are listed in the Actions menu.

The translation option is available for description fields and lets you store translations of your description text in active system languages. “QAD Messaging” on page 48 discusses this option in more detail.

You can click the Go To button to access the related activity that created the value displayed in a field. Go To options are also available on the Go To menu. Which activity displays depends on whether the source field is empty or contains a value.

Example In Figure 2.18, you click the Go To button next to the Budget Group field when the field is empty. The Budget Group Create screen displays so you can create a new budget group for this cost center.

If you click Go To when a value already exists in the field, the Budget Group View screen displays. If you want to modify the budget group, you can switch from View to Modify in the Actions menu of the Budget Group screen.

Note The system security determines if you have modify rights.

In some amount fields, you can use the F3 key to automate data entry. When your cursor is in a transaction amount field, pressing F3 automatically fills in the balancing side of the transaction. This can be very useful in functions such as journal entry.

Using Information Grids

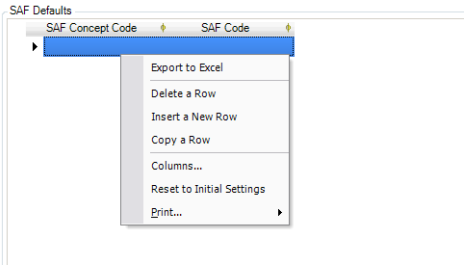
A number of screens feature information grids. These grids have many of the same features as browses; for example, you can change the column order and width. See “Status Bar” on page 34 for details.

Some grids are more complex than others, letting you add child rows with additional data related to a parent row.

System and user settings affect whether grid changes are temporary or remembered by the system. Allow User Customization must be enabled and either Automatic Save of Last Used Grid Settings or Allow Save of Grid Settings must be enabled for the system to save changes. If the save is allowed rather than automatic, you can pick that command from the context menu.

To see the commands available in the grid, right-click to display a context menu.

Fig. 2.19
Grid Context Menu

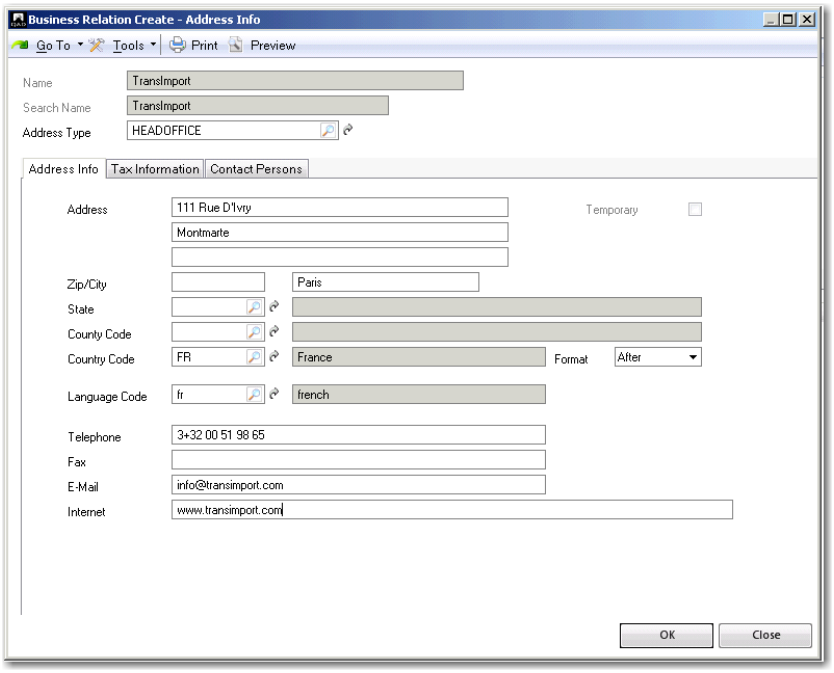


Grid Context Menu Commands

- Export to Excel. This command is enabled only when the grid includes data. All browses and grids can be exported to Excel. See “Exporting Data to Excel for Reporting” on page 141.
- Delete a Row. To delete a row, right-click in the row and select Delete a Row from the context menu or press the Delete key on the keyboard. The system prompts for confirmation before deleting the row.
- Insert a New Row. Right-click and choose Insert a New Row from the context menu or press the Insert key. This either opens a new row for updating the required data fields or displays a new screen for data input (see Figure 2.20 on page 38).
- Insert a Child Row. This command is available only in a grid that supports subordinate rows with data related to a parent row.
- Copy a Row. Right-click in the source row you want to copy and choose Copy a Row. A new row is created with the copied data. You must modify the key fields before you save the record.
- Columns. Right-click on the grid header and choose Columns to display a dialog for changing which columns display in the grid and other grid details. The same option is available for browses and is described in “Column Options” on page 97.
- Save Current Grid Settings. This option is available when Allow Save of Grid Settings is enabled system wide and automatic saving is not. Choose the option to preserve the changes you have made to the grid.
- Reset to Initial Settings. Choose this option to clear any changes you have made to the browse and reset it to its initial defaults defined at system installation.
- Print. Choose this option to send the data in the grid to the default Windows printer. You can also use the print commands on the QAD .NET UI File menu to print data.

For example, in Cost Center Create, choosing Insert a New Row opens a row directly in the grid. Figure 2.20 illustrates the same command in the Business Relation Create screen, which opens a form for entering the data in the row. In this example, right-clicking the grid and choosing Insert a New Row displays the Address Information screen.

Fig. 2.20
Address Information



Complete the information in this screen, and click OK. The new address row is now inserted into the grid in the Business Relation Create form.

Grid Sorting

You can sort the information in a grid using multiple sort levels. To use this facility, click on the first sort column on the grid. For subsequent sort levels, hold down the Shift key and click on the required column headings. The example in Figure 2.21 is sorted by Order, then by Receiver, and then by Reference. The triangle symbol to the right of the column name indicates that the column is used in the grid sort.

Fig. 2.21
Grid Sorting

Selected	Domain	Order	Order Ln	Receiver	Reference	Supplier Invoice Internal Reference	Quantity	Unit Price
☑	Domain1	D1P25	1	RCVR25	PK25		10	8
☑	Domain1	D1P26	1	rcvr26	pk26		60	5
☑	Domain1	D1P26	1	rtn26	rtn26		-10	5
☑	Domain1	D1P3	1	D1R2	Test1		100	6.86
☑	Domain1	D1P32	1	D1R11	D1R11		4	10
☑	Domain1	D1P37	1	D1R15	D1R15		9	10
☑	Domain1	test3401	1	D1R7	D1R7		50	10
☑	Domain1	test3401	1	D1R8	D1R8		-10	10
☑	Domain1	test3401	1	D1R9	D1R9		-20	10

Selecting Records

To select individual records in a grid, hold down the Ctrl key and click on the individual record that you want.

To select all records displayed in a grid, use Ctrl + Shift + End.

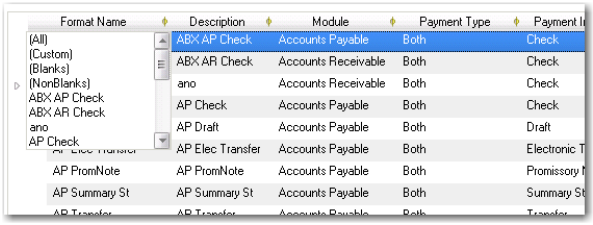
To select the last modified record, use Ctrl + End.

To select a range of records; click the first record in the range, hold down the Shift key, and click the last record in the range.

Grid Filtering

Each column header also features a drop-down filter option. Click the icon to display the available filters.

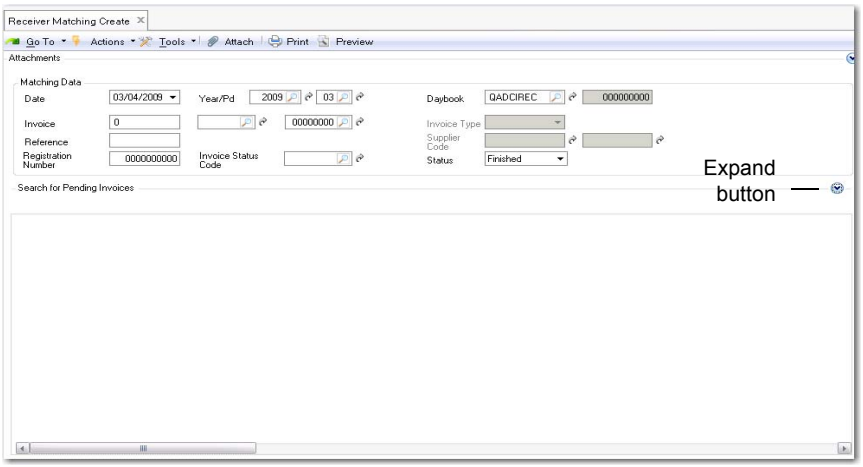
Fig. 2.22
Grid Filtering



Expand Button

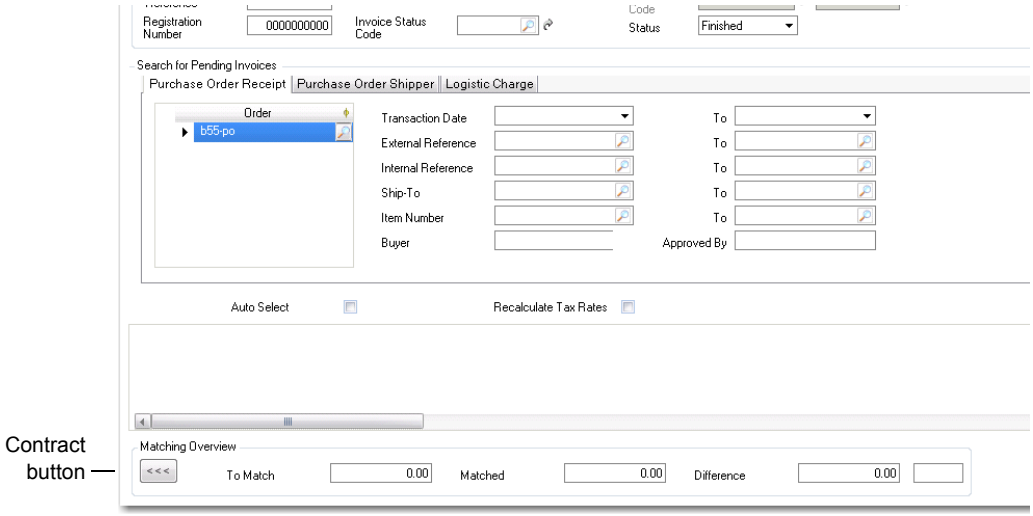
Screens that display complex details often include a button for expanding or contracting the level of detail displayed. Figure 2.23 illustrates the button in Receiver Matching Create. Currently the Pending Invoice Filter is closed.

Fig. 2.23
Expand Button



Clicking the button expands the contracted frame, as shown in Figure 2.24. Other screen areas are hidden and shown using the contract button.

Fig. 2.24
Contract Button



Saving Records

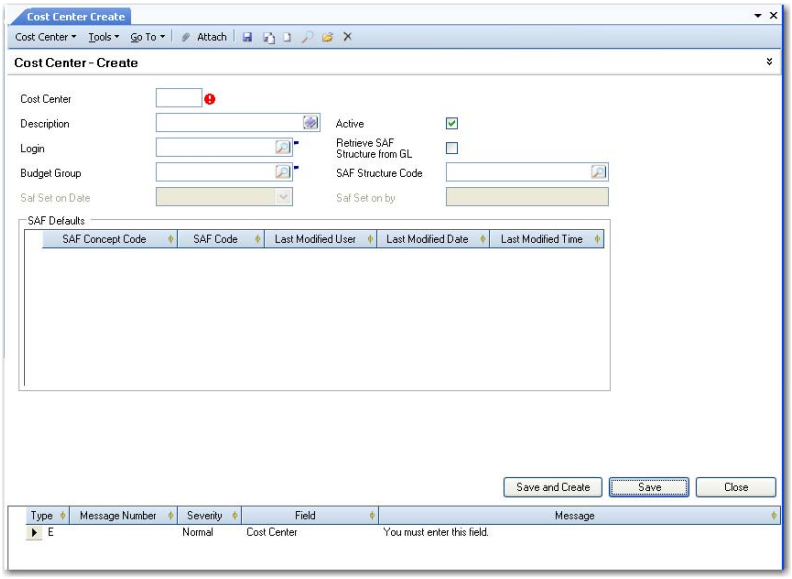
When you have entered all the data necessary for the screen, click Save or Save and Create.

Note Save and Create is available only when you are creating a new record from selected screens; when available, it lets you save the current record and then clears all fields so you can create another record.

The system validates the data before saving to the database, and prompts you if you have entered invalid data or have not completed essential fields. The prompt outlines the severity of the problem and provides instructions for resolving it. A red exclamation mark on the screen indicates which fields are affected (see Figure 2.25).

Note On fields that have a Lookup button, if you press Alt+L when your cursor is in the field, the system launches a lookup, which validates the value you entered.

Fig. 2.25
Error Prompt when Saving Data



Click Detail to view details about code that was running when the error occurred, and click Return to access the form again without closing the error prompt. When you have corrected the issues, you can click Close to close the Error Messages screen. However, you can also click Save again without closing the Error Messages screen. In both cases, the data is validated again. The status bar indicates when a record is saved successfully.

If a validation is successful, the data is saved to the database, the screen is cleared, and you can begin creating another record using Save and Create. If you clicked Save after successfully saving, the screen goes to View mode so that you can verify the data. You can select Modify from the Action menu if you want to make additional changes. Depending on your user configuration option, the successfully saved window can be closed automatically.

Fig. 2.26
Record Saved Message

Most actions, such as Save and Create, also have keyboard shortcuts; for example, Control+S for Save and Control+N for Create (New). These shortcuts are listed in the Actions menu.

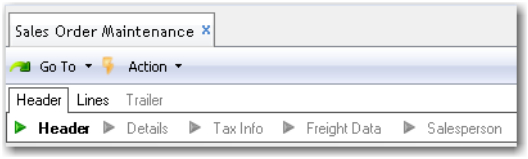
Using Non-Component Based Screens

Because non-component based screens are a rendering of the character UI, you can navigate these screens using the same keyboard commands, which are described in “Character User Interface” on page 181. You can also use mouse clicks to select fields and enter data.

Screen Navigation Bar

To help you navigate complex screens, the QAD .NET UI includes a navigation tool for selected programs.

Fig. 2.27
Screen Navigation Bar



If the program opens in .NET UI mode, a navigation bar is displayed along the top of the screen indicating where you are as you proceed through the program screens. For example, the screen for Purchase Order Maintenance includes a navigation bar indicating the parts of a purchase order: Header, Tax Info, Lines, and Trailer.

The Screen Navigation Bar option in the Desktop section of the Options menu (choose Tools| Options) specifies whether your QAD .NET UI client displays the navigation tool.

Entering Data on Screens

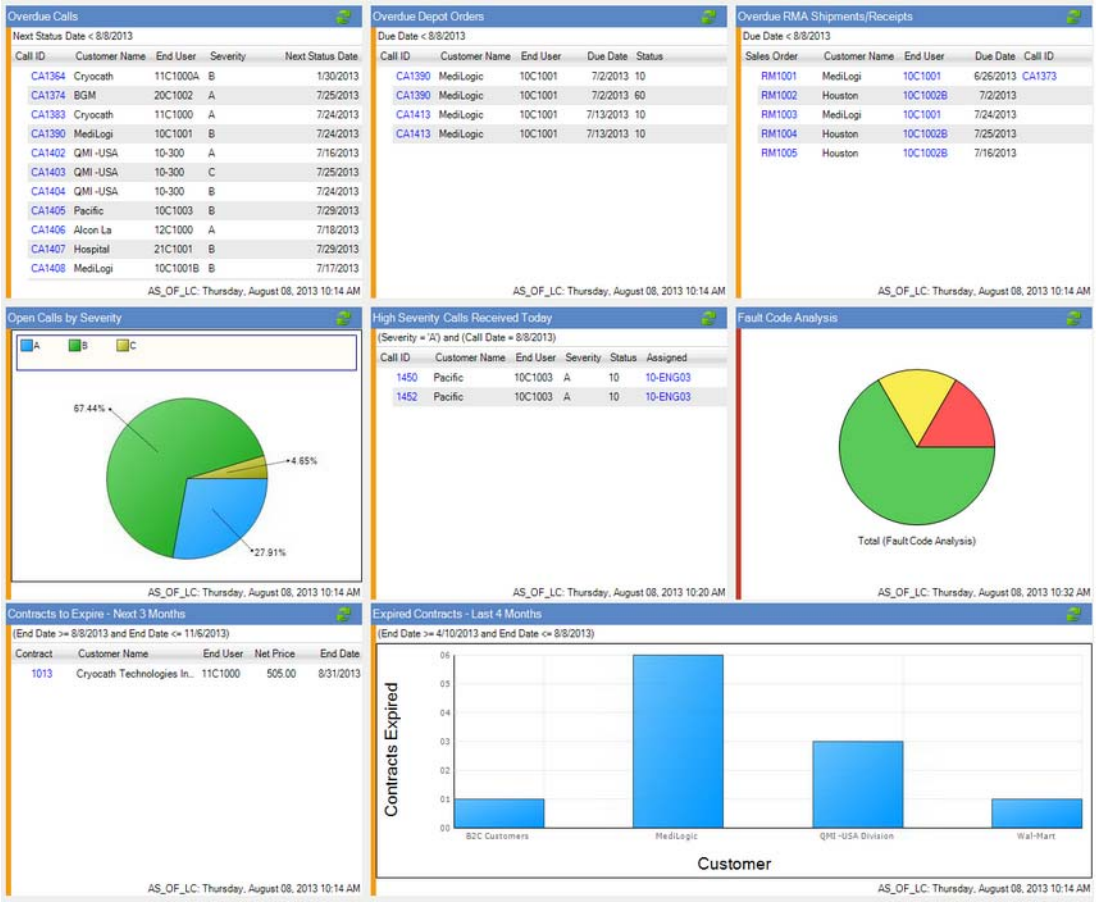
Many fields display a small magnifying glass icon. This indicates that a lookup is associated with the field. Click the icon or use the Alt+L keyboard shortcut to display the lookup. The lookup lists valid values for the field.

A drop-down list is displayed when only a few values apply to a field.

Logical fields represent Yes and No choices. These display as check boxes on HTML screens. A clear check box indicates a No value; a selected box indicates a Yes value.

Dashboards

Dashboards bring together browses, web pages, business intelligence charts, and metrics within panels. Each panel offers a quick summary; to find out more, you click on the panel. Here is an example dashboard for a customer support manager:



You can create, edit, and delete dashboards directly in the QAD .NET UI. To create a new dashboard, you open Create Dashboards and then add content. You can double or triple the width of a panel. You can also copy and edit an existing dashboard. As an administrator, you can share the dashboard with others and assign it to one or more roles.

System administrators can change the maximum number of panels allowed in a dashboard, copy dashboards between systems, and modify access and display settings.

QAD Sample Dashboards

You can start creating dashboards right away, but you can also get sample dashboards that can be associated with roles in your system. The sample dashboards are available for download from the QAD Store (http://store.qad.com). To install the sample dashboards, use the package installation tool included with the download. After installing the dashboards, edit the role assignments for dashboards (see “Editing Dashboard Role Assignments” on page 47).

Creating a Dashboard

You can start a new dashboard or copy and edit and existing dashboard.

To start a new dashboard:

1. Go to Dashboards | Create Dashboard.

   (Alternatively, open a dashboard and choose Tools | New.)

2. In the Name field, enter a label (or text string).

   QAD suggests that you use existing labels (if appropriate) to assure consistency and translation of text.

3. Add content (see Adding content).

4. When done, click Save Dashboard.

When you save a dashboard, the dashboard is included under My Dashboards on the menu.

You can then share the dashboard by choosing Tools | Publish.

Once a dashboard has been published, you can associate the dashboard with one or more roles if you are an administrator.

Note that you can also access the menu functions by right-clicking anywhere in the dashboard grid.

Adding Content

You can add panels containing browses, web pages, business intelligence, and metrics by clicking Add Content, which opens the Add Content to Dashboard window. By default, a dashboard can include up to 12 panels.

Adding Browse Panels

To add browse panels:

1. Click Add Content.

2. In the Add to Dashboard window, click Browse.

3. Use the search field to find the browse you want. Scroll through the list and double-click on the browse so that you can further configure the browse. Note that you can include browse charts (for more information on browse charts, see “Using Browse Chart Designer” on page 121).

   (Clicking the Configure button is the same as double-clicking on the browse.)

4. Note that you can go back and choose a different browse by clicking Back.

5. In the Search filter, enter any filter conditions you would like to use.

6. Click Add to Dashboard.

Adding Web Page Panels

To add web page panels:

1. Click Add Content.
2. In the Add to Dashboard window, click URL Page.
3. In the URL field, enter a full URL to a web page (such as http://www.google.com).
   (Note that qadsh:// links are not currently supported for use in the URL field.)
4. Click Preview to verify the view of the web page.
5. Click Add to Dashboard.

Adding Business Intelligence (BI) Panels

To add Business Intelligence panels:

1. Click Add Content.
2. In the Add to Dashboard window, click BI.
   (Note that if you do not have BI installed, the BI option will not be available here.)
3. Use the search field to find the BI item you want. Scroll through the list and double-click on the BI item so that you can configure it further.
4. Note that you can go back and choose a different BI item by clicking Back.
5. Click Add to Dashboard.

Adding Metrics Panels

To add metrics panels:

1. Click Add Content.
2. In the Add to Dashboard window, click Metrics.
   (Note that if you do not have Metrics installed, the Metrics option will not be available here.)
3. Use the search field to find the metric collection you want. Scroll through the list and double-click on the browse so that you can further configure the browse. For more information on metrics, see “Creating Browse Operational Metrics” on page 124.
   (Clicking the Configure button is the same as double-clicking on the metric.)
4. Note that you can go back and choose a different browse by clicking Back.
5. To configure the metric for use in the panel, choose whether to display the Operational Metric Summary or Operational Metric History.
6. If choosing the Operational Metric History:
   a. Choose the individual metric whose history you want to have in the panel.
   b. Choose the data range for the chart using the drop-down near the bottom of the window.

7 Click Add to Dashboard.

Editing Panels

To edit a panel:

1 Move the cursor to the panel.

2 Click the gear (Edit) icon near the upper-right corner.

3 You can now configure the panel. For example, you can change the Search filter on a browse or change the date range of an operational metrics history chart.

Adjusting Browse Panel Widths

You can double or triple the width of browse panels by clicking on the resizing buttons located on the lower-left corner of the panel.

Refreshing Panels

To refresh a panel's data display:

1 Move the cursor to the panel.

2 Click the circular arrow (Refresh) icon in the upper-right corner.

Deleting Panels

To delete a panel from a dashboard:

1 Move the cursor to the panel.

2 Click the X (Delete) icon in the upper-right corner.

Editing a Dashboard

Choose Tools | Edit to access the editing controls, including Add Content.

If a published dashboard is open (launched from under Published Dashboards on the menu), as an administrator, you can also edit its role assignments by choosing Tools | Edit.

Renaming a Dashboard

1 Choose Tools | Rename.

2 In the Name field, enter a label (or text string).

QAD suggests that you use existing labels (if appropriate) to assure consistency and translation of text.

Publishing a Dashboard

To share a dashboard with other users:

1. Open the dashboard.
2. Choose Tools | Publish.

The dashboard is now included under Published Dashboards on the menu.

Editing Dashboard Role Assignments

As an administrator (a user with Dashboard administration access as set in the client session configuration file, `client-session.xml`), you can assign roles to dashboards.

When you assign a role to a dashboard, only users in that role can see the dashboard under Published Dashboards. (Administrators can see all published dashboards, however.)

The sample dashboards, which are available for download from the QAD Store, do not at first have any roles assigned to them. After installing the sample dashboards, a system administrator must assign roles to the dashboards. The roles that are available for dashboards depend on the roles that customers have defined in their systems.

To assign a role to a dashboard:

1. Open a published dashboard (go to Published Dashboards and click on a dashboard).
2. Choose Tools | Edit.
3. The Edit Dashboard window includes Name and Roles options.
4. The Roles pane lists the roles currently implemented in the system.
5. Choose the role (or roles) you want to assign to the dashboard by selecting the check boxes.
6. Click OK.

Exporting and Importing Dashboards

You can export a dashboard as an .xml file. This file can be shared with other users (by e-mail, for instance), who can then import the .xml file for their own use.

To export a dashboard:

1. Open the dashboard you want to export.
2. Choose Tools | Export.
3. By default, in the Save As dialog box, the .xml file is given the name of the dashboard and will be saved to Local Disk (C drive).
4. Click Save.

To import a dashboard:

1. From any dashboard page, choose Tools | Import.
2. In the Open dialog box, navigate to the dashboard .xml file, select it, and click Open.
3. The dashboard is now available under My Dashboards.

4 If is a dashboard in the system with the same name, the system adds a number in parentheses to the menu name but the dashboard title is the same.

Deleting a Dashboard

To delete a dashboard:

1 Open the dashboard.

2 Choose Tools | Delete.

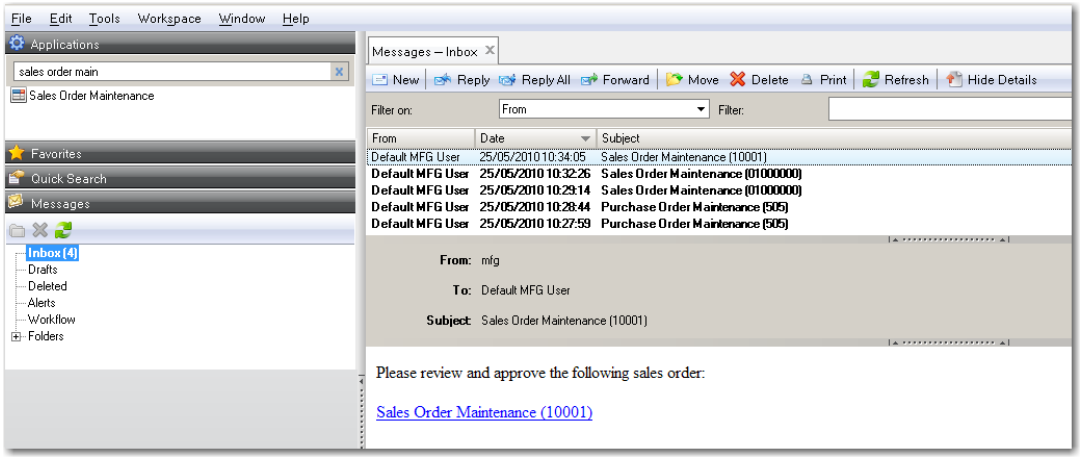
QAD Messaging

QAD Messaging is a messaging and internal e-mail system within QAD applications. You use Messaging to send messages to other users of the system. When using programs, browses, inquiries, and process maps, the QAD Messaging sidebar is permanently available on the left side of the application area for sending and receiving messages. You can also use Messaging to process program or browse workflow messages, which include links to programs or browses.

Important QAD Messaging is currently available in QAD .NET UI version 2.9.1 for Standard Edition only.

Note Workflow is described in more detail in “Workflow” on page 68.

Fig. 2.28
QAD Messaging

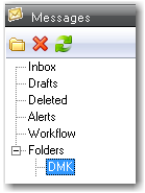


QAD Messaging is enabled by default and is displayed as a panel on the left of the main screen. The feature consists of a button toolbar and Folders area.

Messaging Toolbar

The Messaging toolbar features Create Folder, Delete, and Refresh buttons.

Fig. 2.29
Messaging Toolbar



The Create Folder button is available when you select the Folders option, and lets you create separate messages folders in which to organize messages. You can create sub-folders within folders as required.

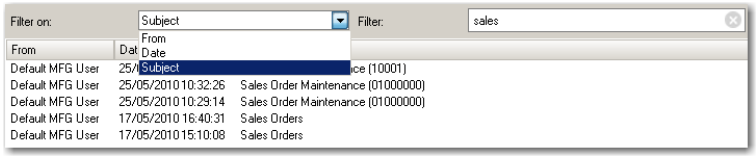
The Delete button is available when you select any sub-folder, and you use it to delete unwanted folders. You cannot delete the parent Folder, or sub-folders that contain sub-folders of their own.

The Refresh button is available for all messaging features, and refreshes the current view for each messaging folder. The Poller Frequency option in Tools|Options sets the interval in milliseconds after which the system automatically polls the mail server. See “Options Menu” on page 20.

Filter Area

The Filter area is available for all message types, and you can use the Filter drop-down list to filter messages by From, Date, or Subject.

Fig. 2.30
Messaging Filter Area



For example, to filter messages whose subject begins with “Sales,” select the Subject drop-down option and enter Sales in the Filter field.

Note that the filter displays messages whose subject begins with Sales, and not messages whose subject contains Sales. Similarly, the From filter filters on the first character entered in the Filter field. For example, if you enter S in the Filter field, the results display all messages from users whose system name begins with S.

When filtering by date, the filter displays messages whose date begins with the number entered. For example. if you filter by date and enter 1 in the Filter field, the filter displays messages whose date begins with 1, which may include 1/9, 1/19, 10/4, 10/5, 11/6, and 11/7.

Messaging Area

The Messaging area contains icons for the following folders and features:

Inbox

Click to display the inbox of current messages. Similar to standard e-mail, the Inbox folder name indicates the number of unread messages in brackets.

You can open messages in a separate tab by selecting the View option. In the Inbox, right-click on the message title and select View or double-click on the message title. The View button is also included as the first button on the Inbox's toolbar.

The Inbox screen features an e-mail toolbar, with options to create, move, delete, and print messages, and to reply, reply to all, and to forward selected messages.

The Hide Details button toggles the message details area on the bottom of the screen, and you can choose to view the message list only, or the message list with details of the selected message displayed below.

Drafts

Click to display the Drafts folder. When you click to save an unfinished message, the message is saved to the Drafts folder for future sending. You can edit, forward, move, and delete drafts, and you send a draft by selecting the message and clicking Send.

Deleted

Click to display the folder for deleted messages. Deleted messages are retained in this folder until you select the message and click Delete. The Delete menu options are Restore, Delete, Refresh, and Show Hide Details.

You restore deleted messages by selecting the message, clicking Restore, and then specifying the folder to restore the message to. The number of days for which messages are retained in the Deleted folder is set in the Empty Deleted Folder Frequency option in Tools|Options. Messages are automatically deleted from the folder after this time. See "Options Menu" on page 20.

Alerts

Click to display the folder of QXtend alerts. Alerts are application messages generated by workflow in response to QXtend events. The alerts are delivered to subscribers by standard e-mail or by QAD Messaging, depending on how the subscription was configured.

The Alerts menu options include New, Forward, Move, Delete, Print, Refresh, and Show/Hide Details.

Note Because alerts are system-generated, the New menu option on this screen lets you create a new message, and not a new alert.

Workflow

Click to display the folder of workflow messages. You create workflow messages in other applications, which are then displayed and processed in QAD Messaging. A workflow message consists of a hyperlink to the application object (for example, a sales order browse) and optional information and instructions.

Folders

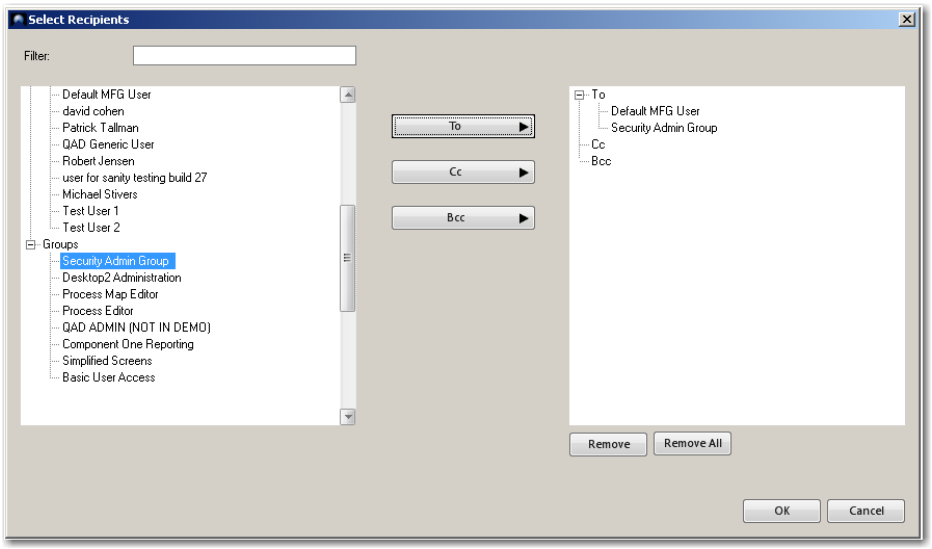
Click Folders and then click the Folders icon on the toolbar to create separate messages folders in which to organize messages. You can also use the right-click New Folder option when the main folder or a sub-folder is selected.

To delete a folder and its messages, select the folder name and click the Delete button on the Messaging toolbar, or use the right-click Delete option when the folder is selected. You cannot delete the parent folder.

Creating a New Message

The QAD Messaging interface operates as a standard e-mail function. When creating a new message, you select recipients by clicking the To link to display a list of current system users and groups.

Fig. 2.31
Selecting Email Recipients



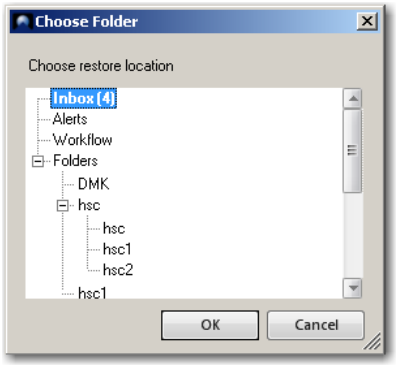
You can also enter the three-letter login initials of the recipient directly into the To field of the message header.

The recipient fields (To, Cc, and Bcc) include a “type-ahead” (auto complete) capability, so the system suggests user names based on the first letters you enter. Additionally, you can click on the To, Cc, or Bcc field names to use a menu for selecting recipients. The Select Recipients window lists all the users and allows you to filter the list of users. You can then select the user names for the To, Cc, or Bcc fields.

Moving Messages

Click the Move button to display the existing folders into which you can move the currently selected message:

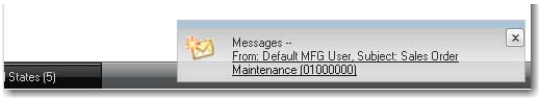
Fig. 2.32
Messaging Folders



New Messages Prompt

Each folder label (except Drafts) automatically indicates in bold the number of unread messages, and the system also displays a brief prompt to notify you that a new message has been received:

Fig. 2.33
Message Prompt



You display or hide the New Message Prompt depending on the Displays Alerts option in Tools| Options. See “Options Menu” on page 20.

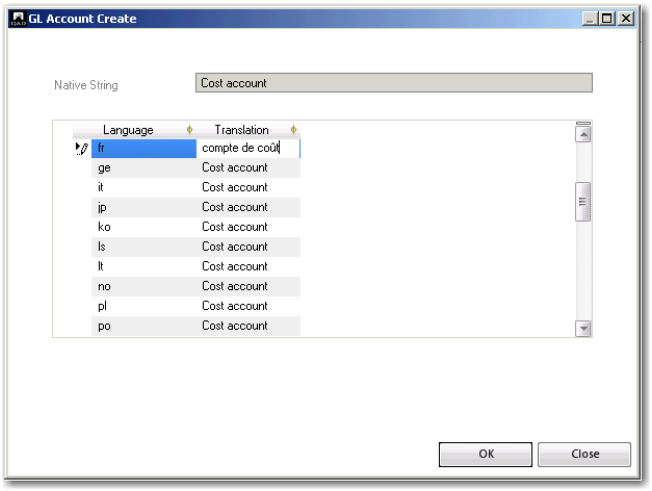
Using the Translation Option

The Description fields for most component-based records support a translation option. The initial description is essentially language neutral. However, clicking the Translation button to the right of the Description field copies that description into a record for each available language.

The Use Language Specific Object Description field in Change System Settings determines whether the system displays translated descriptions in the user’s native language. If this field is selected, field descriptions are displayed in the language associated with a user’s ID in User Maintenance, provided that translated descriptions are loaded or entered for this language. If the Use Language Specific Object Description option is enabled, the system also retrieves translated descriptions when the user runs API queries. When the Use Language Specific Object Description option is enabled system wide, you can disable it in Change System Settings for a specific user.

Note One of these languages is the language of the current domain. While most descriptions are likely to be entered in that language initially, the description is linked to a language only by setting up the translations.

Fig. 2.34
Translating Account Description



If you choose to use this feature, you must develop your own policies to ensure that the translation of descriptions is completed for the languages that need to be supported in your organization.

Some financial data is also displayed and accessed in other operational functions. These functions do not support multiple language-dependent descriptions. When only one description exists, it is always used in the operational functions.

Note Unless you are using a Unicode database, some restrictions exist on which languages can be used in a single database. See the appropriate installation guide for information on the Unicode database deployment.

Screen Calendars

When you click the pull-down icon next to a date field, a calendar tool is displayed. You can also use the Alt+L keyboard shortcut for this option.

Fig. 2.35
Calendar

Use the calendar to choose and insert a date into the active field. You can use the keyboard or your mouse to navigate this calendar.

Using the keyboard, use the Tab key to move the cursor through the calendar. Tabbing begins with the arrows at the top of the calendar.

With an arrow button selected, press the spacebar to display previous and next months and years as shown in the figure. Press the spacebar when a date is selected to enter that date in the date field.

Using the mouse, click the arrows for the next and previous months or years; then click the day in the displayed month to insert it into the active field.

You can select a date on the calendars without using the mouse. To do so, launch the calender, then use the arrows to get to the date you want. Use Enter to choose the selected date. Use Enter again to submit the frame.

QAD .NET UI and Terminal Keyboard Shortcuts

The following tables summarize keyboard shortcuts in QAD .NET UI.

Terminal Mode

These shortcuts can be used in all programs in Character terminal mode.

Keystroke	Action	Description
F2	Help	Display help for current cursor focus.
Ctrl+P	Display user-selected programs	Displays a list of user-selected programs
F1 *or* Ctrl+X	Next frame	Submit current data in current frame and move to the next frame. Equivalent to Next button click, Go, Enter or Tab in the Character UI.
F4 *or* Ctrl+E	Exit frame	Exit current frame (Back button click) and move back to previous frame. Equivalent to End in the Character UI.
F5 *or* Ctrl+D	Delete record	Execute the Delete Record command when valid. (Delete button click.) In a text field, delete a single character.
F7 I Ctrl+R	Recall	Recalls the last saved value in a field.
Shift+?	Clear Date	Clears the value date in date fields.
Enter *or* Tab	Next field	Move forward to next field within a frame or to next row within a selection list.
Ctrl+U	Previous field	Move back to previous field within a frame or to previous row within a selection list.
up arrow *or* F9	Previous record	In a field where next/previous processing is enabled, display the previous record. Equivalent to using the up arrow key in the Character UI.
F10 *or* Ctrl+J	Next record	In a field where next/previous processing is enabled, display the next record. Equivalent to using the down arrow key in the Character UI. This shortcut applies if only one program is open in terminal mode.
F3 *or* Ctrl+T	Insert mode toggle	Toggles insertion mode.
F8	Clear field	Clear the value in a field.
Shift+? *or* F8	Clear date field	Clear the value in a date field.
Ctrl+F	Field information	Displays information about the current program context, including the field name.
Ctrl+C	Exit program	Close currently running program.
Esc+M	Browse Menu bar	Accesses the browse menu bar. Use the mouse instead in Windows character clients.

Keystroke	Action	Description
F7	Browse options	Opens the browse options window.
Esc+F	Browse Options Toggle	Toggles the Browse Options on and off. Use the mouse instead in Windows character clients.

QAD .NET User Interface

This section lists general QAD .NET UI interface shortcuts.

Keystroke	Action	Description
Ctrl+R	Run dynamic inquiry	Run a dynamic inquiry. Dynamic inquiries display in a dynamic, hierarchical (bucketed) format that makes them more convenient to use.
Ctrl+E	Export dynamic inquiry to Excel	Export a dynamic inquiry to Excel.
Ctrl+Shift+P	View dynamic inquiry as PDF	View a dynamic inquiry in the PDF format.
Ctrl+M	Activate the menu search bar.	Places the cursor in the menu search bar
Ctrl+F6	Displays a list of active workspaces, from most recently used to least recently used.	The current workspace is highlighted. Hold the Ctrl key and use the down and up arrow keys to scroll through the list. Release the Ctrl key to select the highlighted workspace.
Ctrl+Shift+F6	Displays a list of active workspaces, from least recently used to most recently used.	The current workspace is highlighted. Hold the Ctrl key and use the down and up arrow keys to scroll through the list. Release the Ctrl key to select the highlighted workspace.
Ctrl+Tab	Display a scrollable list of current active windows.	The most recently active window is highlighted. Hold the Ctrl key, use the arrow keys or Tab key to scroll, and release the Ctrl key to select.
Ctrl+Shift+Tab	Display a scrollable list of current active windows.	The least recently active window is highlighted.Hold the Ctrl key, use the arrow keys or Tab key to scroll, and release the Ctrl key to select.
Ctrl+F4	Close current window.	Closes the currently active window.
Alt+L	Run Lookup.	Opens the lookup for the field in which the cursor is placed.
Alt+F4	Exit application.	Close the QAD .NET UI.
Right arrow	Expand parent record	Expands the parent record in a grid when there is one or more child records.
Left arrow	Collapse parent record	Collapses the parent record in a grid when there is one or more child records.
Up arrow	Increment the calendar date by one. Scroll through drop-down menus.	When a date field is selected, increments the date by one day. Scrolls up through drop-down menu records.
Alt+Up/Down arrow	Displays drop-down menu options.	Displays drop-down menu options or displays calendar in date fields.

Keystroke	Action	Description
Down arrow	Decrement the calendar date by one. Scroll through drop-down menus.	When a date field is selected, decrements the date by one day. Scrolls down through drop-down menu records.
Ctrl+Right arrow	Expand a menu group folder.	Expands the menu group in the Applications area when the group has sub-menus (indicated by a +)
Ctrl+Left arrow	Collapse a menu group folder.	Collapse the menu group in the Applications area when the group has sub-menus (indicated by a +)
Space bar	Selects/De-selects field.	Selects or de-selects check fields.
F1	Displays Help.	Displays field help if the cursor is in a field, and the QAD Assist panel if the cursor is not focused on one field.
Alt+Space	Displays application system menu.	Displays the system menu, also displayed by clicking the QAD logo in top right of the menu bar.

QAD .NET UI Maintenance Screens

These shortcuts apply to non-component based maintenance screens in the .NET UI.

Keystroke	Action	Description
Enter	Same as Next button	Moves cursor to next key field
Ctrl+Enter	Same as Back button	Moves cursor to previous key field.
CTRL+F	Field Information	Displays Properties dialog for the current field.
Up arrow	Previous value	Displays the previous value for the field.
Down arrow	Next value	Displays the next value for the field.
Ctrl+P	Pivot	Sorts data in a selection list by a different column.
Alt+B	Drill down	Drills down to the lookup for the current field.
Tab	Next field	Moves the cursor to the next key field.
Shift+Tab	Previous field	Moves the cursor to the previous key field.
Space bar	Select field in selection list	Selects the current highlighted field in a selection list.
Page Up	Previous page in selection list	For selection lists which span multiple screen pages, displays the previous page.
Page Down	Next page in selection list	For selection lists which span multiple screen pages, displays the next page.

Product Structure Maintenance

These shortcuts are specific to Product Structure Maintenance.

Keystroke	Action	Description
down arrow	Navigate down hierarchy	In Product Structure Maintenance (.NET User Interface mode), navigate downwards in the product structure hierarchy.
up arrow	Navigate up hierarchy	In Product Structure Maintenance (.NET User Interface mode), navigate upwards in the product structure hierarchy.

Keystroke	Action	Description
right arrow	Open hierarchy item	In Product Structure Maintenance (.NET User Interface mode), open an item in the product structure hierarchy.
left arrow	Close hierarchy item	In Product Structure Maintenance (.NET User Interface mode), close an item in the product structure hierarchy

Enterprise Financials

These shortcuts apply to component-based Enterprise Financials programs.

Keystroke	Action	Description
F3	Balance transaction amounts	In Enterprise Financials transaction grids, place the cursor in the debit or credit field and press F3 to balance the transaction amount.
Ctrl+Z	Undo last action	When creating a record, this cancels the create activity without saving any record details.
Ctrl+S	Save current record	Used when creating or modifying records. Saves the current data
Ctrl+N	Switch to Create activity	Switches to this activity from any other component activity.
Ctrl+B	Switch to View activity	Switches to this activity from any other component activity.
Ctrl+O	Switch to Modify activity	Switches to this activity from any other component activity.
Ctrl+D	Switch to Delete activity	Switches to this activity from any other component activity.
Insert	Insert a row	Inserts a new row into a grid
Delete	Delete a row	Deletes a row from a grid
Tab	Moves the cursor to the next field in a grid or form	Moves the cursor and highlights the next key field on a form or grid.
Shift+Tab	Moves the cursor to the previous field in a grid or form	Moves the cursor and highlights the previous key field on a form or grid.
Enter	Saves the current record	Saves the current record in a Create or Modify screen.
F1	Displays program help	Displays context-sensitive help for the current screen.
F2	Focuses the cursor on the first key field in a grid, and toggles between field and grid	Highlights the first key field in a grid, and toggles to highlight the grid itself.

QAD Messaging

These shortcuts are specific to the QAD Messaging feature.

Keystroke	Action	Description
Ctrl+N	Create a message	Enabled when you select a Messaging folder.
Ctrl+E	Edit a message	Enabled when you select a message.
Ctrl+S	Send a message	Enabled when you select a message in the Drafts folder.
Ctrl+Shift+R	Restore a message	Enabled you select a message in the Deleted folder.

Keystroke	Action	Description
Ctrl+M	Move a message	Moves messages to different folders.
Ctrl+R	Reply to a message	Reply to the current message.
Ctrl+Shift+A	Reply to all for a message	Reply to all recipients of the current message.
Ctrl+F	Forward a message	Forward the current message.
Delete	Delete a message	Delete the currently selected message.
Ctrl+P	Print a message	Print the current message.
Ctrl+Shift+M	Refresh the message list	Refresh the current Inbox folder.
Ctrl+G	Send a message	Save the current new message.
Ctrl+S	Save a message.	Save the message (to the Drafts folder).

Browse Maintenance

Keystroke	Action	Description
Ctrl+N	New browse	Create new browse in Browse Maintenance.
Ctrl+O	Open browse	Open browse in Browse Maintenance.
Ctrl+S	Save browse	Save browse in Browse Maintenance.
Ctrl+D	Delete browse	Delete browse in Browse Maintenance.
Ctrl+T	Add tables	Add tables in Browse Maintenance.
Ctrl+R	Run browse	Run browse in Browse Maintenance.
Ctrl+I	Import browse	Import browse in Browse Maintenance.
Ctrl+E	Export browse	Export browse in Browse Maintenance.
Shift+Delete	Delete multiple browses	Delete multiple browses in Browse Maintenance.

Browses

Keystroke	Action	Description
Ctrl+S	Browse search panel focus	In a browse, place cursor focus on the search panel.
Enter	Refresh browse with current search conditions	In the browse search panel, refresh the query based on the current search conditions in the browse search panel.
up arrow *and* down arrow	Set browse search date	In the browse search field, when the field is a date, use the up arrow or down arrow keys to enter the current date and then move up or down from the current date.
Alt+up arrow	First set of browse records	Display first set of records in a browse.
Alt+left arrow	Previous set of browse records	Display previous set of records in a browse.
Alt+right arrow	Next set of browse records	Display next set of records in a browse.
Alt+down arrow	Last set of browse records	Display last set of records in a browse.

Keystroke	Action	Description
up arrow *or* right arrow	Previous browse record	Select the row previous (above) the current row in a browse.
down arrow *or* left arrow	Next browse record	Select the row after (below) the current row in a browse.
Tab	Next field in browse toolbar	Move focus to next field or button in browse toolbar.
Shift+Tab	Previous field in browse toolbar	Move focus to previous field or button in browse toolbar.
Alt+ move mouse	Rotate 3D browse chart	Rotate 3D browse chart.
Alt+ move mouse scroll wheel	Zoom 3D browse chart	Zoom 3D browse chart.
Ctrl+F4 *or* Ctrl+Enter	Exit browse	Close the browse. Cursor must be in browse record display area for this shortcut to take effect. Note that if the cursor is in the Search panel of a browse, Ctrl+Enter opens and closes the panel.
Ctrl+P	Print browse	Print the current browse.

Chapter 3

Programs in QAD .NET UI

The QAD .NET UI lets you use programs using advanced features of .NET technology. This section describes using programs in the QAD .NET UI.

This section includes the following topics:

Using Programs in the QAD .NET UI

This section describes program types and program menu features in the QAD .NET UI.

Use the program menu bar to run and maintain QAD programs. Most of the menu options are the same for both component-based programs and non-component programs.

Some options, however, are only available for one type. Some individual menus can also have different options depending on the program being used.

Fig. 3.1
Non-Component Based Program Menu Bar

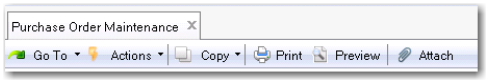
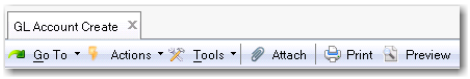


Fig. 3.2
Component-Based Program Menu Bar



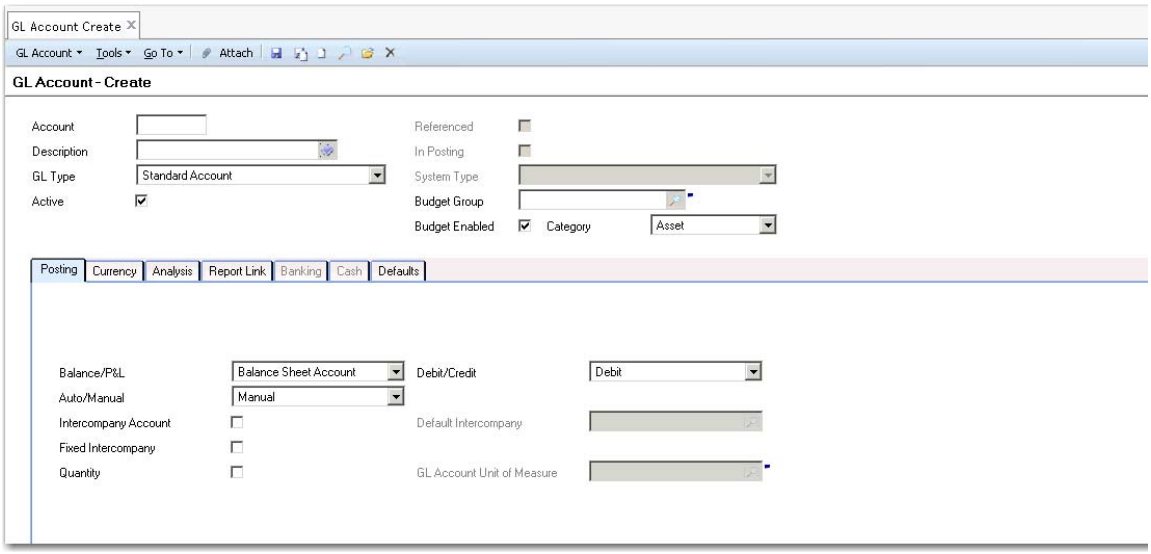
Component and Non-Component Based Programs

QAD Enterprise Applications contains two types of programs:

- *Component-based programs* use a business component-based technology that offers additional features not available in standard functions. Most Financials programs (such as GL Account Create), some administration programs (such as Entity Create), and some security programs (such as Role Create) are component-based programs.

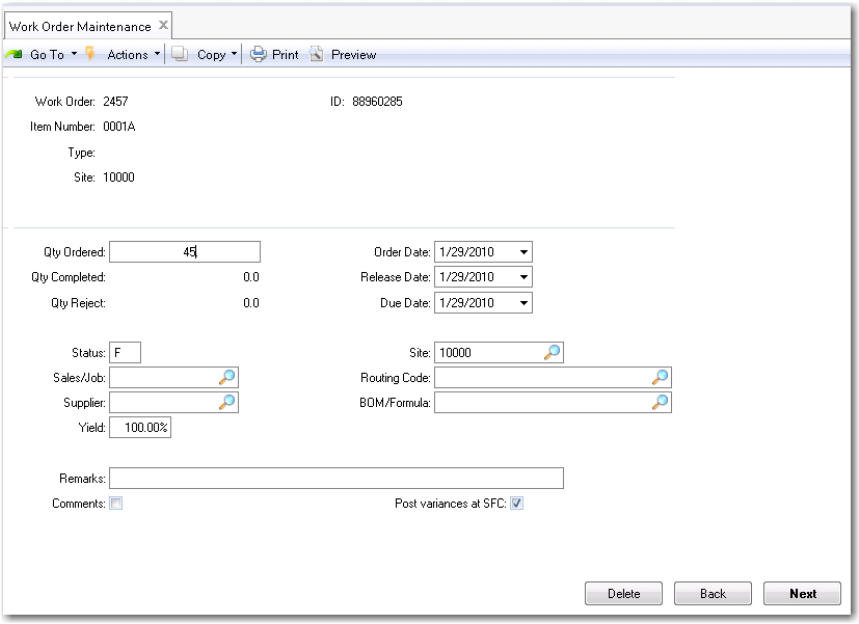
  Note Component-based programs are available only in Enterprise Edition.

Fig. 3.3
Component-Based Program



- *Non-component based programs* use traditional procedural-written Progress-based technology. The majority of Manufacturing programs (such as Work Order Maintenance) and Supply Chain programs (such as Warehouse Maintenance) are non-component based. Financials programs that are non-component based (such as Sales Order Maintenance) are described in the Enterprise Edition Financials documentation as *operational* programs, to distinguish them from the component-based *financial* programs.

Fig. 3.4
Non-Component Based Program



Note Many non-component based programs can be run in both the QAD .NET UI and in the Character UI. Component-based functions, however, are available in the QAD .NET UI only.

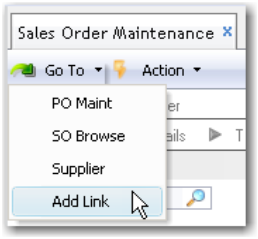
Both component-based and non-component based programs work within the QAD .NET UI and use the same menu system for navigation and the standard menu bar available through the QAD .NET UI for all programs.

QAD Enterprise Applications – Enterprise Edition uses component and non-component based functions (programs). QAD Enterprise Applications – Standard Edition uses only non-component based functions (programs).

Go To Menu

The Go To menu for non-component based programs such as Purchase Order Maintenance displays the Add Link option. Use Add Link to create links to other programs using User Tool Maintenance (36.20.4). The links you add display on the Program Links drop-down.

Fig. 3.5
Add Link Selection



They also display when you right-click a program screen. See “Creating Custom Links” on page 77.

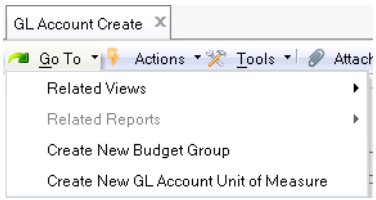
Go To for Component-Based Programs

Go To also displays links for component-based programs but in a different way. It displays commonly used views and reports that apply to the record you are currently working with.

Go To behaves differently depending on whether the current field has data in it:

- If the field has a value, Go To invokes the View activity.
- If the field is blank, Go To invokes the Create activity.

Fig. 3.6
Go To Menu for Component-Based Programs



All of the related views take the record you are currently using as the base for the information. So if you are viewing a particular customer’s record, you can simply click the Go To to see the customer’s balance and open invoices.

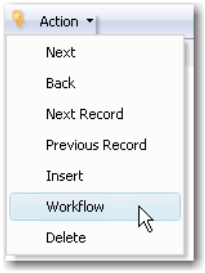
Note Go Tos are enabled only when:

- The corresponding function is an activity, not a standard program.
- The user has security permission to the linked activity.

Actions

The Actions menu displays the active commands that apply to your current program context. For non-component based programs, these commands include navigation commands such as Next, Back, Next Record, and Previous Record. These commands let you navigate to the next or previous frame, or display the next or previous record for the current field. You can also use the up and down arrows on your keyboard to display next and previous records in key fields or when the field has been defined to support next/previous processing.

Fig. 3.7
Action Pull-Down Menu



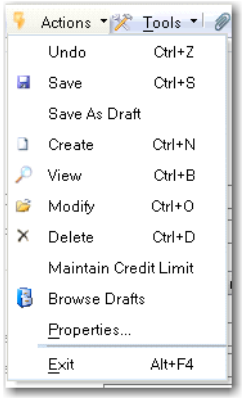
Action menu commands can also include the following:

- Commands that display in the Progress status bar in a character session can be found in the Actions menu on HTML screens. This includes Delete, Page Up, Page Down, and Pivot. These commands are only available when the program frame supports them. For example, Page Up and Page Down typically display in selection lists where the up/down keys cannot be used.
- The Delete, Insert, Page Up, and Page Down keys on your keyboard operate as shortcuts to the Actions menu. However, shortcuts do not exist for special operations such as Pivot.
- Pivot is used in a number of selection lists that support sorting by different columns, such as the call lookup in Call Maintenance (11.1.1.1). It is also used to display the next set of data in programs such as Line Utilization Maintenance (33.15.9) and Simulation Line Utilization Maintenance (33.17.19).

Actions Menu for Component-Based Programs

The Actions menu functions in a similar way for component-based screens, with some additional features.

Fig. 3.8
Actions Menu for Component-Based Screens



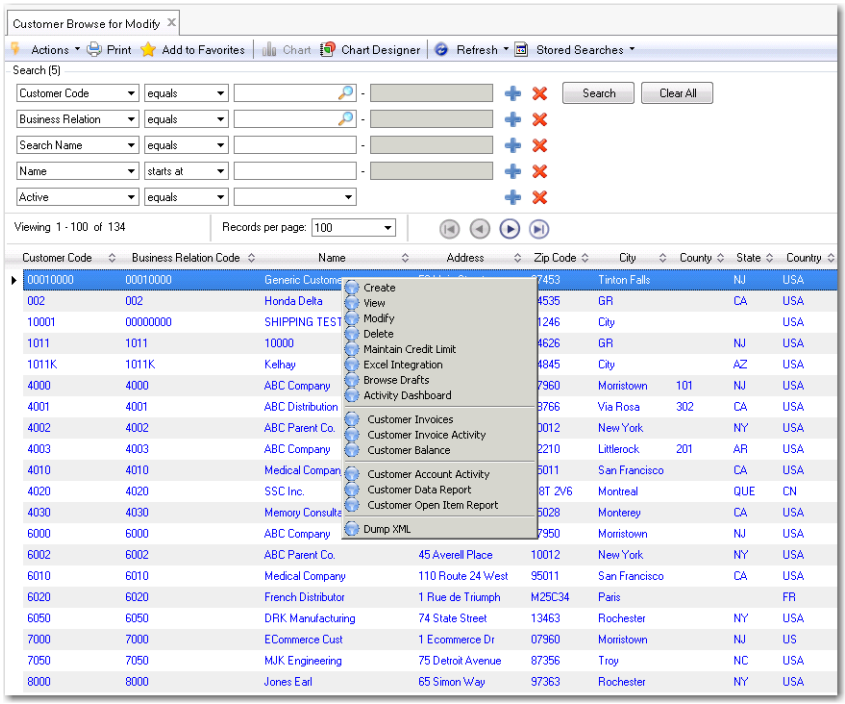
General activities are available on this menu or as buttons on the activity screen. These include Undo, Save, Save and Create, Save as Draft, and Properties.

Record-Specific Activities

Record-specific activities are also available on this menu. For example, for the Customer Create program, the Actions menu includes Create, View, Modify, Delete, and Maintain Credit Limit. You can choose record-specific activities in multiple ways:

- By selecting from this menu
- By selecting from the main application menu
- By right-clicking on a record within a browse and selecting from the context menu, as shown in Figure 3.9

Fig. 3.9
Right-Click Menu for Customer Browse



Create, view, modify, and delete are standard activities available for most types of records.

Note You can see only the activities to which you have access based on the set of roles associated with your user ID.

General Activities

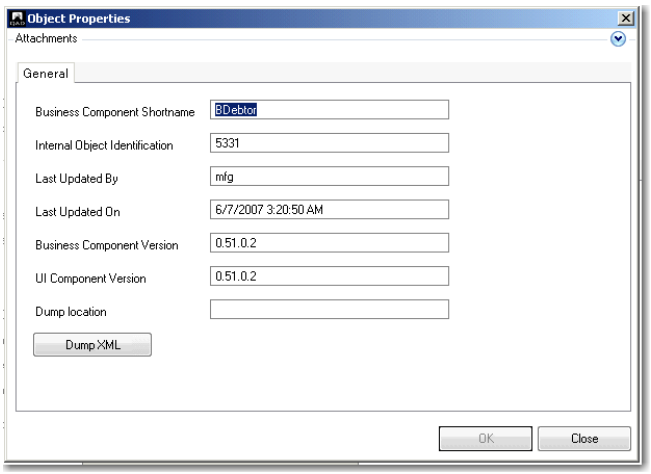
The general activities correspond to the command buttons on the screen:

- Undo discards any changes without saving them. This is the same as the Cancel button.
- Save updates the database with your current changes. All validations associated with the type of record are executed before the save is completed. Any errors or warnings are displayed on the screen so that you can correct them before continuing with the save.
- Save and Create saves changes to the current record and then clears all data from the maintenance screen so you can create a new record. This command is available only when you are creating a new record; it is not available for all functions.

The Properties action is available for all records and displays technical information about the current record, such as who last updated it, as well as details about the current build number. This information can be useful for troubleshooting problems and may be requested by technical support.

You can use the Dump XML button to create a file containing the XML data for the current component. (This can be useful as a starting point for loading data with the XML daemon.)

Fig. 3.10
Object Properties



Field Descriptions

Business Component Shortname. Displays the internal Business Component code name for the object.

Internal Object Identification. Displays the unique numeric identifier for the object.

Last Updated By. Displays the login ID of the user who last modified the object.

Last Updated On. Displays the date and time when the object was last updated.

Business Component Version. Displays the version of the business component.

UI Component Version. Displays the UI component version.

Dump Location. Specify a directory where you want the XML description of this component to be located. This field applies only when you click Dump XML.

Save as Draft

When enabled, this option lets you save component-based records in draft mode. You can access them at a later stage (for example, following approval) in order to complete them. See “Saving and Browsing Drafts” on page 76.

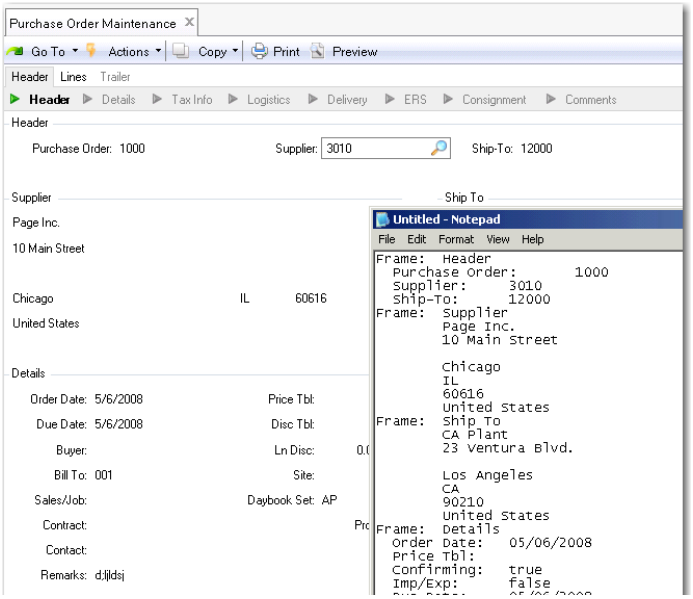
Workflow

Workflow is available for both types of program and is visible as an Actions menu option for non-component based programs and as a Tools menu option for component-based programs. When you click Workflow in a non-component based program, the system creates an e-mail message for another system user, with the current screen as an attached link. This e-mail is then posted to the user's Inbox in the QAD Messaging side-bar. Workflow for component-based programs is described in "Workflow" on page 70.

Copy

The Copy menu is only available for non-component based programs and lets you to copy the text of the current screen to the clipboard, or copy an image of the current screen to the clipboard.

Fig. 3.11
Actions|Copy



Print

The Print menu is common to both types of program and prints the current screen to the default printer.

Preview

The Preview menu is also common to both types of program and gives a preview of what will print for the current screen.

Attach

The Attach menu is available for both program types. You can also use Attachment Maintenance to create attachments for specific fields in non-component based programs.

Attach lets you attach any type of document—such as a Microsoft Word file, graphics file, or PDF—to a record within the application. This integration ensures that all required documentation is immediately accessible when needed. You can attach and view any type of file if the corresponding viewing software is available on the client.

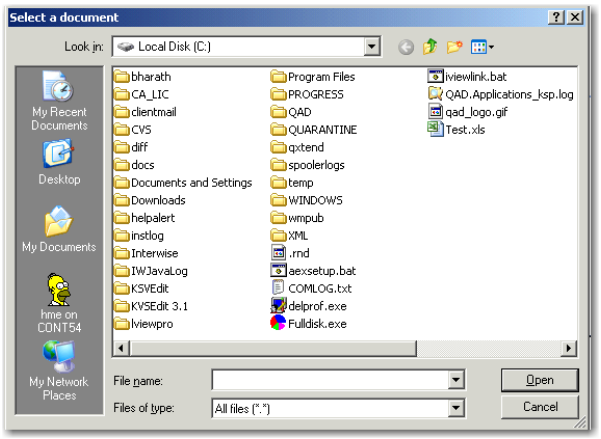
A copy of the attached document is stored in the system database, which means that the document will always be available and consistent with the application data. This storage facility ensures that the feature is very secure. However, the storage facility is not suitable for very large objects of over a gigabyte. If your system contains a large number of records with attachments, you must consider the effect of these objects on the available database space. In other application modules, you can link documents to objects by means of a URL or a Universal Naming Convention (UNC).

Example Use the Attach option to associate a summary of a customer's business activities with a customer record or attach a PDF of an invoice to a supplier invoice record.

If you have set up the Scan daemon, you can poll a directory for documents to attach to new records and have the system send work objects to the Inboxes of designated users. For example, the Scan daemon can create a new supplier invoice record, attach a scanned PDF to it, and send a link to the Inboxes of all members of the AP clerk role. When a user clicks on the link, the Supplier Invoice Create screen opens with the scanned document automatically attached.

To create a new attachment manually, choose the Attach menu option to display a dialog for selecting the file to attach.

Fig. 3.12
Document Attach



When you click Attach, a standard Windows Open dialog displays so you can select the document you want to attach. The number of attached documents displays in the menu. To see the attachments, click the chevron in the top bar on the screen. Each linked document displays in this view and can be removed if necessary.

Tools

The Tools menu is only available for component-based programs and has two options: Design Mode and Workflow.

Design Mode

Design mode lets you modify the screen layout and add user-defined fields to a screen. It also lets you remove fields from the screen, to create new tabs in a tab folder, and to create different views for grids. Design mode is enabled only if you are a member of a role with access to updating the design at a specific level. The levels of access are:

- You can make changes just for yourself that are seen only when you execute the screen.
- You can make changes that can be shared with other users that are members of your default role.
- You can make changes that can be used by all users in the system.

This feature can be used to streamline data entry and reduce training costs by customizing the UI for your particular business needs. However, only knowledgeable designers that understand the function they are modifying should be allowed to make significant screen changes.

See *QAD System Administration User Guide* for more information on the design mode for Financials functions.

Workflow

This option is the equivalent of the non-component based Workflow, which is available in the Actions menu for non-component based programs.

Workflow lets you forward final or draft work items to one or more individuals—identified by a role—in the organization for completion or validation. You activate workflow using System and User Settings.

Workflow can be used for most records created with component-based functions. The ad-hoc workflow sends a link to the current record to another user's QAD Messaging Inbox and optionally notifies them by e-mail. The recipient can double-click to open the item and complete the assigned task. If the Return to Sender option is included in the workflow, the record is returned to the originator's Inbox when the recipient saves it.

Note Return to Sender does not apply when the View activity is selected.

When workflow is initiated, the system routes the record to all users with the specified role. As soon as one user opens the object, it is removed from the Inbox of the remaining users. The system refreshes the Inbox by default every 5 minutes.

Note If you want to direct workflow to an individual, create a role that includes just that user. The role does not need to have any permissions assigned and can be used just to direct the workflow.

The following are examples of processes for which workflow can be used:

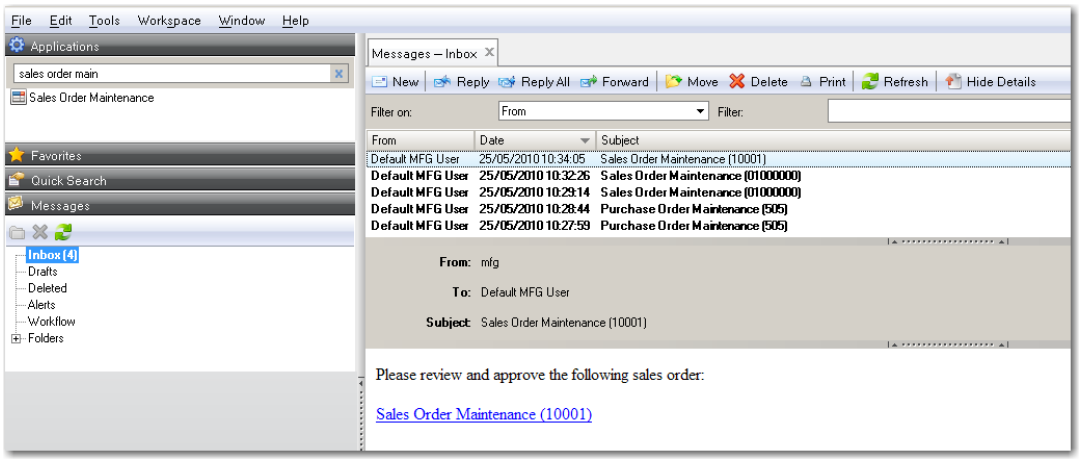
- Approve supplier invoices.
- Release invoices for payment.
- Notify stakeholders of changes to accounts, GL data, and customer or supplier data.
- Escalate overdue customer invoices.
- Approve transient journal entries.
- Create supplier invoices based on scanned documents. See "Attach" on page 68.

You can optionally use e-mail notification to inform users who do not regularly log in to the QAD application that they have activities to be performed. These users can then access the necessary function to perform the required activity. Any instructions included in the workflow are also included in the e-mail.

Example of Inbox

Workflow items display as a list in the QAD Messaging inbox by component name and activity. The key fields that identify the component are displayed in parentheses. In Figure 3.13, a single item displays in the Inbox. The customer record ID is included in the parentheses.

Fig. 3.13
Inbox

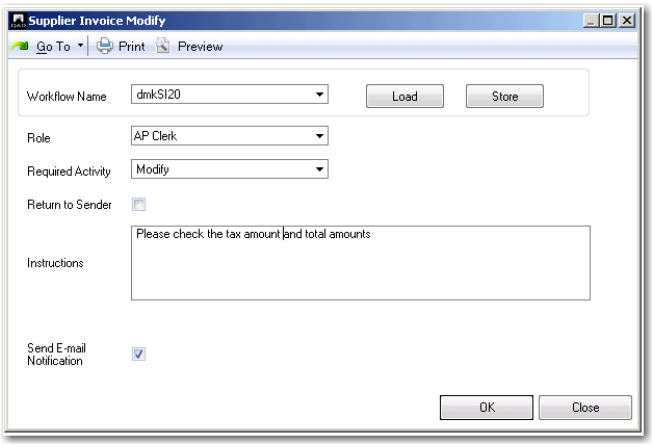


To refresh the display, right-click the inbox and choose Refresh.

Configuring Workflow

When you select Workflow from the menu, the work flow for the component displays. You can specify the recipient's role and link an activity—such as approve, comment, complete. Then add instructions and indicate whether the system should route the record back to you when the recipient's activity is complete. You can also specify that the recipient be notified by e-mail about required activities.

Fig. 3.14
Workflow Object Create



Field Descriptions

Workflow Name. Select an existing workflow from the drop-down list or enter a code (maximum 140 characters) to define a new workflow name. If you select an existing workflow, click Load to display its details. After configuring a new workflow, click Save to save it for reuse.

The workflow name is optional. You can also create a one-off, ad-hoc workflow, and leave this field blank.

Role. Select the role to receive the work item. The list contains only roles with permission to execute activities related to the type of record you are updating. For example, if you access the workflow from Customer Invoice Create, the list of roles includes only those with permission to activities related to customer invoices.

The linked record is sent to all members of this role.

Required Activity. Select the activity that the recipient of the work item should perform. The list contains all activities that can be performed on the record you are currently updating.

Note If you select the view activity, you cannot request Return to Sender. The Return to Sender option is initiated when the recipient saves the record; this is not possible in view mode.

Return to Sender. Select this field if you want the work object routed back to yourself when the recipient has completed the assigned activity. When this field is selected, the record is sent back to you when the recipient saves their changes.

Instructions. Enter any comments or instructions (maximum 200 characters) for the recipient of the record. These can be viewed by the recipient by selecting Workflow from the linked record. Instructions are also included in the e-mail, if that option is enabled.

E-mail Notification. Select this field if you want the members of the recipient roles to receive an e-mail notification regarding a pending action item. To use this option, each user must have a valid e-mail address defined in User Maintenance (36.3.1) and you must have configured the e-mail server appropriately.

Special Characters

Fields in component-based programs do not permit the use of special characters such as the comma (,) and pipe (|). This limitation is imposed because the comma and pipe are often used as list separators, and may cause the input to be misinterpreted. Fields in non-component (Progress-based) programs do not impose this limitation.

It is recommended as good practice to avoid using special characters in all QAD EE fields. For example, it is recommended not to use asterisks (*) or periods (.) in any codes because these may be interpreted as wild cards and hinder the behavior of browses.

Using Reports and Inquiries

Reports and inquiries in QAD .NET UI are displayed in the same way as maintenance programs. Some programs update both the database and produce report output. These programs display in the same way as other reports. Sales Order Print (7.1.3) is an example of a program that generates output and updates the Print Sales Order field in the sales order record. You use and navigate report programs like maintenance programs with a few exceptions.

Generating Report Output

In programs that generate report output, you choose an output device. In general, you can use any device previously defined in Printer Setup Maintenance (36.13.2). However, if you want to display the report output on your terminal, you must select a device that has Scroll Output set to Yes in Printer Setup Maintenance. Typically, you can use the Page option, which is a system default that has Scroll Output set to Yes. Or you can define another printer with this setting. You can also use the Email option in Desktop or Desktop (Web Browser) reports and inquiries.

Important System administrators should set a page limit on the Output to Page option for reports and inquiries. If you output a report or inquiry of more than 1000 pages to Page, the retrieval of the data puts a burden on client resources and can cause system instability. For this reason, you should use browse filters carefully when generating a browse. When generating a Product Line Inquiry and outputting to Page, for example, you should refine the inquiry results as much as possible. A default Product Line Inquiry generated without filtering produces a report well in excess of the 1000-page limit.

You can set up a text printer, which is essentially a version of the “page” printer output setting. The text printer renders a non-formatted report that can be saved to your local client computer as a text file or PDF file, or can be printed on a standard printer. To set up report output to a text printer, use Printer Setup Maintenance (36.13.2), setting the Initialize Ctrl field to text.

Output to terminal is not supported in Desktop or Desktop (Web Browser) screens.

Canceling HTML Reports

In other interfaces, you can use the Ctrl+C key combination to stop a report that is currently processing.

In QAD .NET UI, this key combination has no effect. Instead, a Cancel button displays. Click the Cancel button to stop the report. You can also use the close button in the program title bar to stop the report execution.

Enhanced Report Format

You can enhance the appearance of selected reports. For more information, see *QAD .NET UI Administration Guide*.

Using Fixed Assets Programs

Some programs in the Fixed Assets module include additional navigation buttons that are used to modify information or access additional screens with a program. For example, Fixed Asset Maintenance (32.3) includes multiple navigation buttons in the QAD .NET UI:

- The currently active button is indicated by the darker frame around it.
- You can use the Tab key to move forward between the buttons and Shift+Tab to move backward.
- Press the spacebar to execute the function associated with the active button.
- Pressing Enter is the same as clicking Next. This typically has no effect when the buttons are active.
- The End button and the Back link execute the same function; similarly, the two Delete buttons execute the same function.

Fig. 3.15
Fixed Asset Maintenance (32.2)

Recording Program Actions

The Program Export File function is a test utility in the QAD .NET UI and is available in the Actions menu for all non-component based programs. This function lets you record your actions as you complete an application process and save the recorded actions to an .XML or .XLS file that you store locally. You then execute the saved .XML or .XLS file in the Execute Document Import function to reproduce the recorded process on screen. Saved files can be exported for testing to another QAD .NET UI environment, or imported into the current environment.

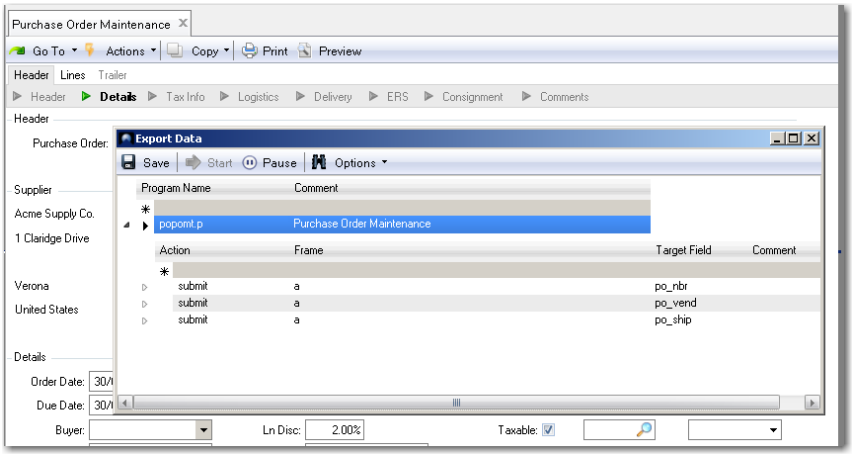
For example, if an error is occurring in the Purchase Order Maintenance flow, select Export File before creating a purchase order. As you process the purchase order, the system records each mouse and keyboard action you take, and also the values you select in each stage of the process. The saved file lists each program, field, and value selected.

Execute Document Import lets you replay the process, loop the recorded file, and step through or pause each action or selection in the process.

To Record Program Actions

1. Launch a program.
2. Choose Actions|Export Data. An Export Data screen is displayed (minimized) on the screen while the system is recording your user actions. Each user action is immediately listed in the Actions grid of this screen, and you can pause, name, and save the recording in this dialog.

Fig. 3.16
Export Data



The Options menu in the Export Data dialog lets you define the data being recorded. Select Record Changes Only to record changed values only, or Record All to record all of your actions, including the values you select during navigation.

3 Run the program, and perform the program tasks you want to record. Recording automatically starts, and the Export Data dialog lists the actions, frames, and fields being recorded.

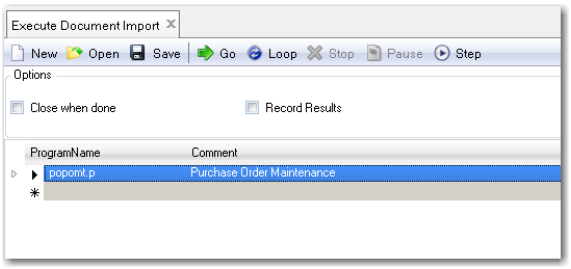
   An Export Data screen is displayed (minimized) on the screen while the system is recording your user actions. Each user action is immediately listed in the Actions grid of this screen, and you can pause, name, and save the recording in this dialog. The Options menu in the Export Data dialog lets you define the data being recorded. Select Record Changes Only to record changed values only, or Record All to record all of your actions, including the values you select during navigation.

4 When you have completed the actions you want to record, choose Save in the Export Data dialog, and save the file to a location. You can save as an `.xml` file or an `.xls` file.

To Run Saved Program Actions

1 To run the saved recording, choose Execute Document Import in the Applications Pane, under Administration.

Fig. 3.17
Execute Document Import



2 From the External Import menu, browse to the file you have saved (the `.xml` or `.xls` file).

3 Open the file and click Go. You can also Loop the recording or Step through the actions.

A `.log` file that reports the results of the actions is created when the recording is run. This file has the same prefix as the recording file but is appended with `.log`.

Saving and Browsing Drafts

The Save as Draft and Browse Drafts options are available for component-based programs only and must be enabled in Change System Settings (36.24.5.1).

When Save as Draft is enabled, you can save selected records without completing all the validations required to ensure that the record is complete. You can then finish adding data to the record at a later time by using the Browse Drafts option to find the incomplete record.

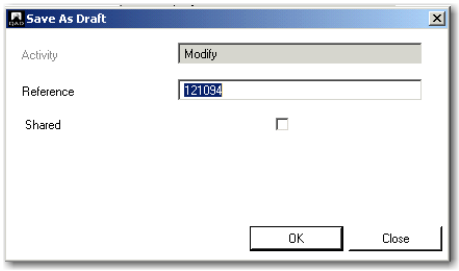
Only the following subset of components provides the ability to save unfinished records as drafts to be completed and approved later:

- Banking Entry
- Business Relation
- Petty Cash
- Customer
- Customer Invoice
- Finance Charge
- Journal Entry
- Supplier Invoice
- Supplier

Save as Draft

Selecting Save as Draft displays the following dialog.

Fig. 3.18
Save as Draft



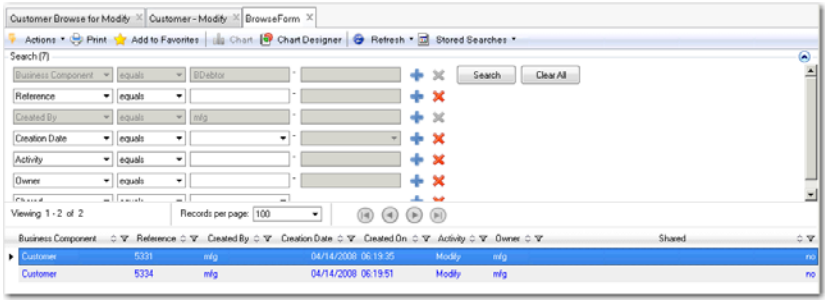
The Activity field has a value based on the activity you invoked the Save options from. You can specify reference text to identify the draft record. The system supplies a default number, but you should give the draft a name that will help you or others recognize it easily.

When Shared is selected, other users can update the record; otherwise, only you can complete the record and change its draft status.

Browse Drafts

Selecting Customer Browse Drafts opens the Draft Customer Search screen. Use this screen to select, open, and finalize draft instances that you or other users have created. Drafts created by other users are available only if they selected the Shared field when saving the draft.

Fig. 3.19
Draft Customer Search



Extended Program Button Labels

For improved usability of selected program screens, the Back button is labeled End Lines when you get to the Line Number field. When you are on the format field, the Back button is now Trailer (or End if there is no trailer section). The Next button is labeled Lines. Programs that include these buttons include the following:

- Requisition Maintenance (5.2.3, rqrqmt.p)
- Purchase Order Maintenance (5.7, popomt.p)
- Blanket Order Maintenance (5.3.1, poblmt.p)
- Sales Quote Maintenance (7.12.1, sqqomt.p)
- Sales Order Maintenance (7.1.1, sosomt.p)
- Pending Invoice Maintenance (7.13.1, soivmt.p)
- Material Order Maintenance (11.11.1, fseomt.p)

Creating Custom Links

The QAD .NET UI lets you customize the interface by adding links on a program screen that let you access other programs.

To add links on a program screen to another program, complete the following steps:

1. Open the program you want to update.
2. Choose Go To|Add Link at the top of the program screen. The User Tool Maintenance screen displays in a separate browser window.

   Specify your user ID if you want the program links to display only when you execute the parent program. Alternatively, leave the field blank to create a generic record of settings. This generic record is automatically associated with every user in the system who does not have a user-specific record.

3 Enter the name of the program where you want the link to display. Leave Program blank to add the link to all programs that do not already have a user-specific record.

4 Click Next to continue.

5 In the Exec field, enter the name of the program you want to execute when you click a link.

6 In the Label field, specify a text string to appear in the link area. If you leave this field blank, the standard menu description from Menu System Maintenance (36.4.4) is used.

7 Leave the Image field blank. Images do not apply in the QAD .NET UI.

8 For the changes to take effect, close the program you are updating and then reopen it.

Sending Program Links by E-mail

You can send QAD .NET UI program links in an e-mail using the Email feature:

1 Open a program. For example, open Sales Order Maintenance (7.1.1).

2 From the Actions pull-down menu, choose Email.

Alternatively, right-click in the program screen and choose Email from the pop-up menu.

3 A pop-up Information window informs you that a URL to the program will be copied to the clipboard. Click OK.

4 Your default email client program launches, opening a new e-mail for you to compose. By default, the subject of the e-mail is the name of the QAD .NET UI program.

5 In the body of the e-mail message, paste the URL to the program from the clipboard (for instance, enter Ctrl+V). Note that if a record was selected when you created the link, the program opens with that record selected when the recipient clicks on the link.

Note Your default e-mail client is defined in the browser Tools|Internet Options|Programs setting. You can also set the e-mail program from the QAD .NET UI using Tools|Internet Options.

Entering Transaction Comments

Programs such as Sales Order Maintenance, Purchase Order Maintenance, and Work Order Maintenance include the option to enter comments. Comments have a limit of 15 lines. You can cut, copy, and paste ASCII text. In general, any rich text formatting is removed from copied text when the text is pasted.

Note When you are in the comments field, pressing Enter places a carriage return in the entered text. If you are not in a comments field, pressing Enter submits the current data and advances you to the next frame (or screen), which is the equivalent of clicking the Next button on the screen.

Note You use CTRL + Enter to place a carriage return in the Comments tab of component-based programs such as Customer Create.

Using Terminal Mode Screens

You can choose which programs to run in Terminal mode using the Properties, Program, Opens With pull-down menu. Right-click a program name to display its Properties.

By default, the display mode is determined by settings in Program Information Maintenance (36.3.21.1). Any program that is not defined in Program Information Maintenance automatically displays in Terminal mode.

Note While you can have many instances of a Desktop or Desktop (Web Browser) screen open, you cannot run two instances of the same program in Terminal screens.

Terminal display mode includes the following features:

- Configuring multiple language support for terminal client
- Telnet support for Windows (limited only by how Georgia Softworks and Desktop use Telnet)
- Telnet, SSH1 and SSH2 support for UNIX, specified in the Client Session Configuration file's `<TerminalProtocol>` setting
- Right-click paste from clipboard in multiple languages
- Custom key mappings
- Multiple language support for UNIX
- Cut and Paste capability (in multiple languages)
- Print and print preview capability
- Autosizing font capability
- Authentication using ShellUser, ScriptUser, or PromptUser, specified in the Client Session Configuration file's `<TerminalAuthentication>` setting
- vt320 terminal emulation
- Custom fonts and colors

Note If record locking occurs in an environment where the database is running on a Windows server and the QAD Application Server (Tomcat) is running on a Linux server, you cannot close a program displayed in Terminal mode by using Ctrl+C or Ctrl+Break. Instead, you must close the program by clicking on the "x" in the program tab. For example, if you open Sales Order Maintenance in Desktop mode and open a record named 1234, and then open Sales Order Maintenance in Telnet mode and open a record named 1234, the Telnet mode displays an error message telling you to use Ctrl+C or Ctrl+Break to close the program. However, to close the program, you must click the "x" in the program tab instead.

You can use standard function keys to navigate in character programs. A status line at the bottom of the screen displays active function keys.

Terminal mode screens automatically resize to fill the available application space. You can use the mouse to select text on the screen to paste into another application. Otherwise, you cannot use the mouse to navigate programs in Terminal mode screens.

You can also use the Print and Print Preview commands to send images of Terminal mode screens to an output device.

Programs in Terminal Mode Only

Some programs are only available in Terminal mode, which emulates the Character UI within the .NET UI. You navigate the program in the same way as in the Character UI. The following programs are only available in Terminal mode:

- Accounts Not To Convert Maint
- AP Integrity Report
- Archive File Reload
- Call Queue Manager
- Change Deferred/Accrued Accounts
- CIM Data Load Process Monitor
- Combined Integrity Checks
- Compile Programs
- Convert Ship Qty in Ship UM
- Count Program
- Create Records for Printer Output
- Database Connect
- Database Disconnect
- Database Table Size Inquiry
- Debug CIM Document
- Dump Export/Import Doc for Edit
- End User Time Zone Change Util
- Escalation Monitor
- Exit to Operating System
- Export/Import Document Query
- Field Eligibility Maintenance
- Fixed Asset Maintenance
- Fixed Assets Integrity Report
- GL Integrity Report
- GLRW Mismatch A/C Code
- Initial Euro Exchange Rate Copy
- Inventory Integrity Report
- License Registration
- Multiple Time Zones Startup Util
- PO Integrity Report
- Process Import Documents
- Program Level
- Program/Text File Display
- Receive Import Documents

- Reload Edited Export/Import Doc
- Required Ship Schedule Update
- Send Export Documents
- Sequence Maintenance
- Server Time Zone Change Util
- Set Multiple BOL Print Utility
- Ship-From to AR
- Trading Partner Library Load
- Trading Partner Library Unload
- WIP Integrity Report

Chapter 4

Browses in QAD .NET UI

The QAD .NET UI lets you use browses using advanced features of .NET technology. This section describes using browses in the QAD .NET UI.

This section covers the following topics:

Introduction to Browses

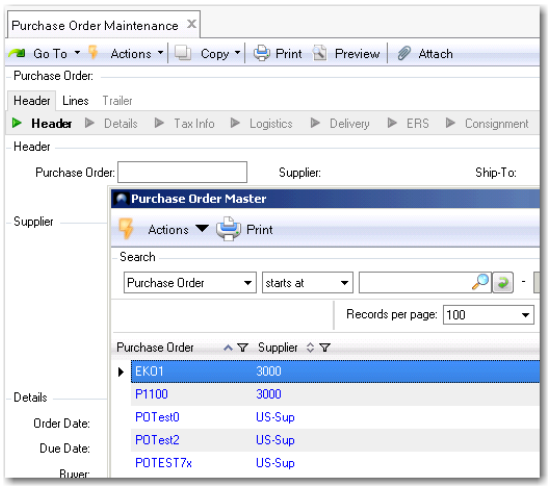
Browses display selected data in the form of a table. Column headings are field labels; rows are field values. The field values in a browse come from any table in the QAD Enterprise Applications schema. A browse includes selected values from one table or several joined tables.

Non-Component Based Browses

There are two types of non-component based browse:

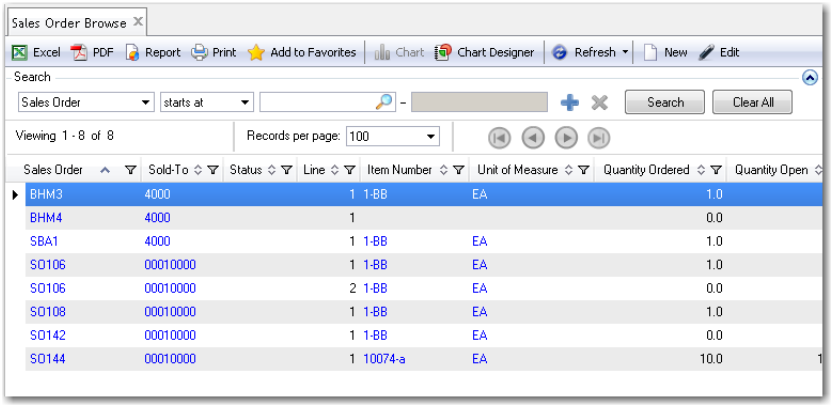
- *Look-Up Browses*. A look-up browse returns the value you select to the active field in the calling program. By default, it returns the field value of the first column. Look-up browses can display and sort up to seven columns of fields. Look-up browses cannot filter, graph, or print data. For example, when you select the lookup for purchase orders in Purchase Order maintenance, you launch a lookup browse of Purchase Order Master.

Fig. 4.1
Purchase Order Lookup Browse



- *Power Browses*. A power browse can filter, graph, and print data. Any column can be sorted, and the first ten columns can be filtered. Power browses are available as menu options in the Applications area, for example, Sales Order Browse (7.1.2), Purchase Order Browse (5.8). When attached to a field, power browses are called drill-downs. Drill-downs return a selected value to the active field of a calling program.

Fig. 4.2
Example of Sales Order Browse

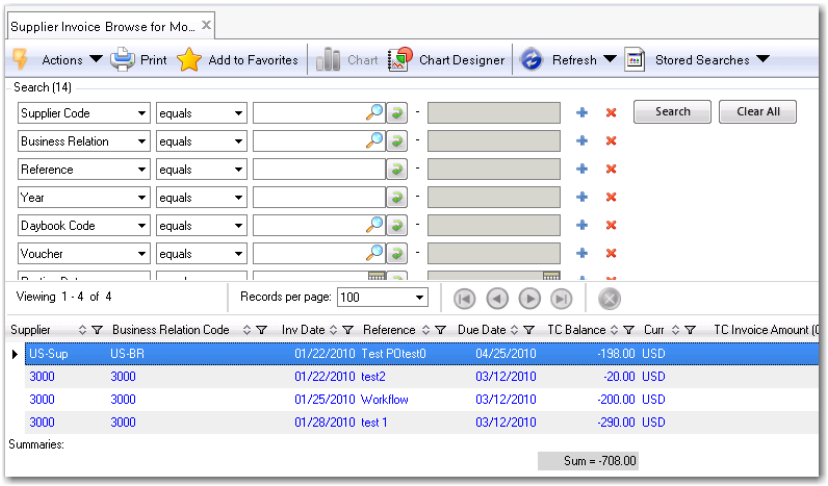


The New and Edit menu bar options are only available for non-component based browses. See “Navigating in Browses” on page 93.

Component-Based Browses

Component-based browses are launched when you view, modify, or delete a record created with a component-based activity. For example, Supplier Invoice View (28.1.1.3), Supplier Invoice Modify (28.1.1.2), and Supplier Invoice Delete (28.1.1.9) all launch browses, in which you select the record on which you want to perform the activity.

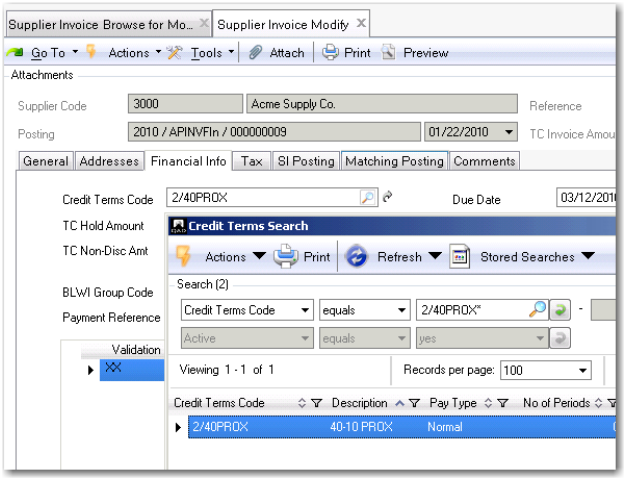
Fig. 4.3
Supplier Invoice Browse for Modify



Other component activities for which you want to select a record also launch browses. For example, there are also browses for Supplier Invoice Allocate (28.1.1.7), Supplier Invoice Approve (28.1.1.4), and Supplier Invoice Reverse (28.1.1.11).

You also launch browses from lookup fields in component-based screens.

Fig. 4.4
Supplier Invoice, Credit Terms Lookup



The Stored Searches browse option is only available for component-based browses. See “Stored Searches” on page 90.

Using Browse Menu Options

Any browse defined using standard QAD functions can be viewed from the QAD .NET UI, including custom browses developed to meet your specific business requirements.

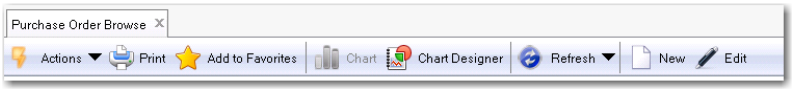
Browses and lookups in the QAD .NET UI have a consistent appearance and features. The only significant difference is that browses can be added to the menus and invoked from a menu, while lookups must be associated with a field and displayed from a program.

Note Because lookups are not invoked from a menu, you cannot save search criteria in lookups or add the saved searches to your Favorites.

Browse Menu Bar

Use the options on the Browse menu bar to manage your browses.

Fig. 4.5
Browse Menu Bar



Actions

The Actions menu contains export and reporting options, and for non-component browses, additional workflow and e-mail options.

Chart

Select Actions|Chart or Actions|Grid View to toggle between viewing a chart or the grid view of a browse. If a chart has not been created for the browse, the Chart option is not available.

Print

Select Actions|Print to print the current browse.

The system displays the standard Windows print dialog so that you can select a remote or local printer or print to file. You can also use the Print and Print Preview commands on the menu to print the browse data.

Note Make sure that the printer is online before trying to print to it. No error is displayed when you attempt to print to an offline printer.

When you print a browse, all columns in the browse are printed and scaled to fit the paper size of your printer. Depending on what data you want to print, you might want to hide some columns from the browse before you print it. For information on hiding columns, see “Column Options” on page 97.

Export to CSV

Actions|Export to CSV exports the contents of the current browse to a comma-separated-value (.CSV) file, which you can open in supporting spreadsheet applications. The export includes only the columns that are marked as visible, which lets you exclude columns from the export by hiding those columns on the browse grid.

The left-to-right position of the visible columns in the browse grid determine the order of the data fields in the exported CSV file. The sort order of the rows in the browse determine the order in which the exported CSV lines are written to the file.

When you create groups in a browse, the groups are maintained in the exported file, and columns within groups are also sorted according to the original browse. The group-by column is positioned at the beginning of each line of exported data.

Note In many non-US English environments, the delimiter for CSV export/import is a semicolon rather than a comma. You can now specify the delimiter in the client session configuration file (`client-session.xml`) browse settings:

```
<Browse>...<csvdelimiter>,</csvdelimiter>...</Browse>
```

The default is a comma. To use a semicolon as the delimiter, use the following setting:

```
<Browse>...<csvdelimiter>;</csvdelimiter>...</Browse>
```

Export to Excel

Select Actions|Export to Excel to generate an Excel worksheet with the browse data. For details, see “Creating Excel Output from Browses” on page 138.

Export to PDF

Select Actions|Export to PDF to generate a PDF file with the browse data.

Important When you output a report or browse to PDF, you should not attempt to create a PDF of more than 1000 pages, as this seriously affects application performance. Use a third-party PDF generation utility to create large PDF files.

System administrators should also set a page limit on the Output to Page option for reports. If you output a report of more than 1000 pages to Page, the retrieval of the data puts a burden on client resources and can cause system instability.

Workflow

Select Actions|Workflow to send the current browse as an e-mail attachment to a current system user. When the user double-clicks on the link in the e-mail message, the browse is displayed.

Note See “Workflow” on page 70.

Email

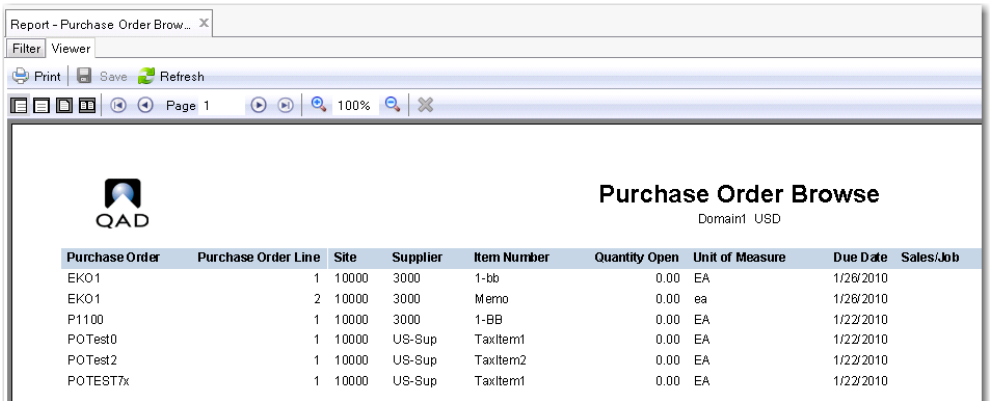
Select Actions|Email to send this browse as a program link in an e-mail using the Email feature.

See “Sending Program Links by E-mail” on page 78.

Report

Select Actions|Report to generate a report of the current browse results:

Fig. 4.6
Browse Report



Purchase Order	Purchase Order Line	Site	Supplier	Item Number	Quantity Open	Unit of Measure	Due Date	Sales/Job
EKO1	1	10000	3000	1-bb	0.00	EA	1/26/2010	
EKO1	2	10000	3000	Memo	0.00	ea	1/26/2010	
P1100	1	10000	3000	1-BB	0.00	EA	1/22/2010	
POTest0	1	10000	US-Sup	TaxItem1	0.00	EA	1/22/2010	
POTest2	1	10000	US-Sup	TaxItem2	0.00	EA	1/22/2010	
POTEST7x	1	10000	US-Sup	TaxItem1	0.00	EA	1/22/2010	

Auto Go

You can have a displayed browse automatically refresh the data at a specified rate.

1. To start the automatic refresh, choose Actions|Auto Go|Start.
2. To stop the automatic refresh, choose Actions|Auto Go|Stop.
3. To change the refresh rate, choose Actions|Auto Go|Rate, click and edit the value. (The default value is 30 seconds.)

Setup

Chart Designer

For further information, see “Using Browse Chart Designer” on page 121.

Cancel

The Cancel button becomes active when a browse is running. To stop the currently running browse, click the Cancel button.

Record Set Navigation Buttons

Use the navigation buttons to move through browse records:

Icon	Keyboard	Action
	Alt+Up Arrow Key	First set of records
	Alt+Left Arrow Key	Previous set of records
	Alt+Right Arrow Key	Next set of records
	Alt+Down Arrow Key	Last set of records

For more information, see “Navigating in Browses” on page 93.

Refresh Button

The browse toolbar includes a refresh button next to the paging buttons so you can easily refresh the display of browse data. The refresh button is included on both drill-down and lookup browses.

Add to Favorites

Save browse search criteria for reuse in a file and then retrieve them later, or create customized browse searches and add them to the Favorites menu area.

When you save a browse as a favorite, the QAD .NET UI will save any sort column settings. When you launch the browse from the favorites menu, the QAD .NET UI will apply the sort conditions, as well as all of the other saved state that you might have set, including summaries, charts, and search conditions. If you want to save multiple versions of a browse that use different filters, you can rename the favorite to reflect the filter (for example, an Items browse can be filtered for Site 100 and then named Items for Site 100, or for product line 1000 and then named Items for Product Line 1000).

Browse, Hybrid, and Screen Views

With the browse, hybrid, and screen views, you can move seamlessly between seeing a record in a browse and viewing and modifying the details for that record. As you do so, you can take advantage of screen display options that allow you to focus on the details of interest.

When in a browse, you can double-click on a record and have the details display in a pane that opens to the right of the browse. You can then quickly view and edit those details. For example, in Item Browse, you can double-click on an item number, and then the details about that item display (in Item Master Maintenance). Meanwhile, in the browse display, you can select some other item number, and the display on the right automatically updates to show you the details of the item you have just selected. If you want to have the screen display only the details for a particular item, you can click on the Screen View icon along the upper right of the display. You can then return to the hybrid view by clicking the Hybrid View icon or just have the browse display by clicking the Browse View icon.

View, Modify, and Create

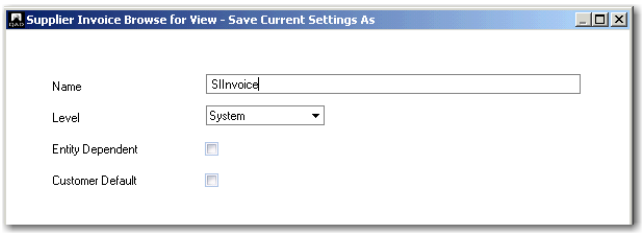
While in the browse, if you want to create a new item, click the Create icon, located next to the Screen View icon. You can also toggle between View and Modify, depending on whether you want to just view the details of an item or modify those details.

Stored Searches

Stored searches are available for component-based browses only.

Use this option to save your current lookup settings under a name. The stored search is then listed for selection when you launch this browse and can be reused. The settings you save apply to this browse only and are not listed in browses for other types of records.

Fig. 4.7
Stored Searches



Field Descriptions

Name. Enter a code (maximum of 80 characters) to identify the saved search settings. The name must be unique to that browse.

Level. Choose an option to determine which users can access the stored search. The options available in the Level drop-down list depend on your role permissions.

User <Current User ID>: Only you can access the stored search. It is not available in the stored search list of other users. This setting is the default.

Role <Current Role>: Only users who have the same role as your default role can access the stored search. It is not available in the stored search lists of users who do not have this role.

System: The stored search is available to all users in the system.

Note This option is available only to users who have a role assigned that lets them define a stored search on the system level.

Entity-Dependent. Select the field if you do not want the stored search to be available across entities.

Customer Default. The stored search settings become the initial settings for this browse for all users. They replace the factory default initial settings.

The availability of these choices depends on the access you have been given in Role Permissions Maintain to the stored search activities.

The system saves all the field, filter operator, and row and column information you configure in the Lookup Settings dialog.

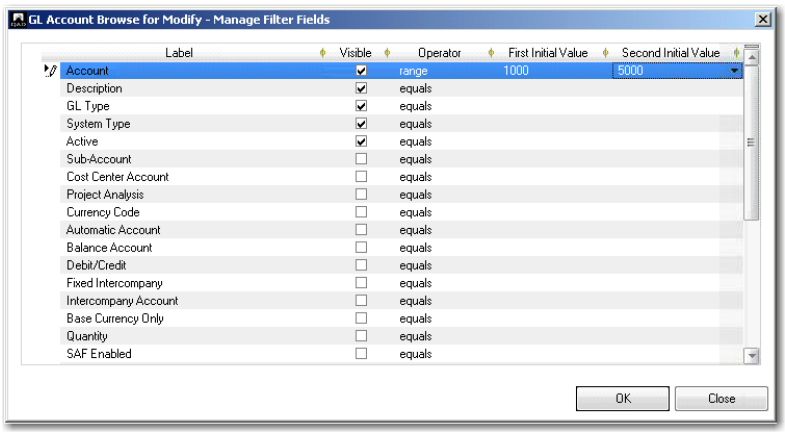
Manage Filter Fields

This option displays all the search fields possible for this type of record. You can use the Manage Filter Fields tab to:

- Specify whether a filter field should appear on the Selection Criteria tab (Visible column).
- Specify in which order the filter fields should appear.
- Specify what operator to use when finding data to view.
- Define a persistent initial value or range of values for the filter field. The values for search criteria entered in the actual Search Panel are not saved with the stored search. However, the initial values entered in Manage Filter Fields are saved.

Example You can refine the default search for GL accounts to retrieve only accounts with codes that are within a number range of 1000 to 5000.

Fig. 4.8
Manage Filter Fields

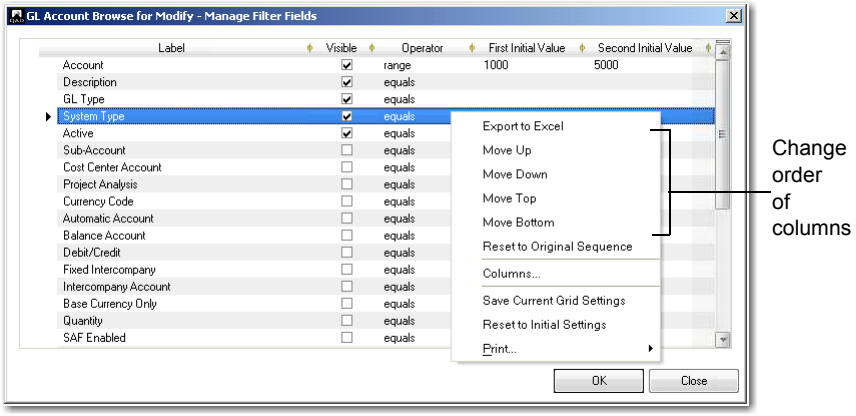


The browse is then populated with these conditions, and you click Search to conduct the search.

Ordering Fields

You can also change the order in which fields display in the filter criteria by right-clicking the field and using one of the Move commands (Figure 4.9). If you right-click in a logical field such as the Visible column, you can clear or select all of the Visible fields at one time.

Fig. 4.9
Rearranging Search Fields



Field Descriptions

Label. This read-only field displays the field label, which is also the column heading of the browse.

Visible. Select this field to include the field in the browse search criteria. This field does not affect the columns displayed in the browse; use the right-click Columns menu for that. It affects only which fields you can use for finding records.

Operator. Select an operator to apply to this field.

First Initial Value. Enter a value for this selection criterion or select a value from the drop-down list. The list displays certain variables that are interpreted by the system, such as $Today, which represents today's date.

These variables let you save stored search criteria that work correctly regardless of the date.

Second Initial Value. This field is editable only when the range operator is specified. Enter the ending value in a range for selecting records.

Saving Non-Component Based Browse Searches

You can save a browse search by adding it to your favorites:

1 Click the Save button.

2 The browse is saved to your Favorites area and named based on the name of the browse.

If it is the first instance you have saved, the browse name in the Favorites area is the name of the browse. If you save the same browse again, the name in the Favorites area is the browse name with a (2) at the end. If you save again, the name includes a (3) at the end, and so on.

Once you have saved the browse to the Favorites pane, you can rename the browse and organize it as you can other items saved in the Favorites pane.

Working with Browse Results

Browse features include the following:

- The default sort order for the multiple columns in a browse can be set using Browse Maintenance. In Browse Maintenance, the value of the Sort Order field for each column specifies the order in which the columns are sorted relative to each other, and the Sort field specifies whether a column is sorted in ascending order, descending order, or unspecified order.
- Use the navigation buttons in the top left to move through the records. The buttons from left to right move to the first set, previous set, next set, last set. See “Navigating in Browses” on page 93 for details.

Use the Records per page drop-down to determine how many records display at one time in the browse. The default value can be set using the Rows Per Page setting in Tools|Options.

Use caution in displaying all records, especially when the number of records is large. Attempting to display a large number of records at once can adversely affect performance. Instead, use the Search conditions to focus on the specific records you want to review.

Drag columns by their headings to rearrange the display.

Note As a shortcut, instead of clicking Edit, you can double-click on the row that includes the item.

Navigating in Browses

You can use the navigation buttons to move through browse records.

Icon	Keyboard	Action
	Alt+Up Arrow Key	First set of records
	Alt+Left Arrow Key	Previous set of records
	Alt+Right Arrow Key	Next set of records
	Alt+Down Arrow Key	Last set of records

You can also use Tab and Shift+Tab to move through the buttons and fields in the browse toolbar. In this case, pressing Enter is the same as a right-mouse click. When you are in the browse search panel, press Enter to execute the search with the current conditions. After you have selected a row, you can use the up arrow or right arrow keys to move the row selection up one row; the down arrow and left arrow keys move the row selection down one row.

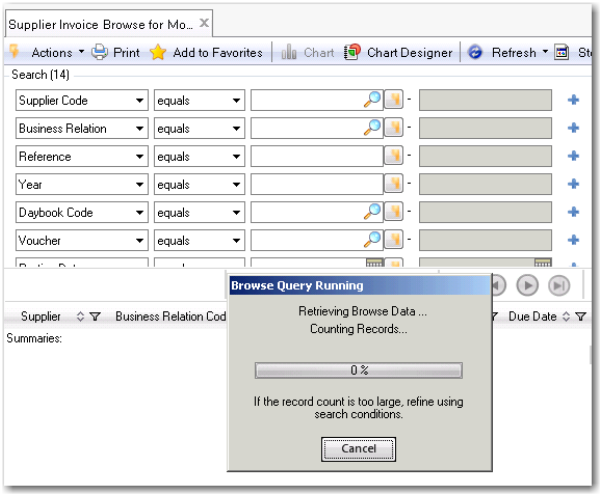
Note You may notice slower performance during paging when a large number of records is displayed. Paging performance may worsen as you get to the bottom of the list. To reduce this problem, click a relevant column to reverse the sort and page through those records at the top of the list.

Using Browses and Search

The Search options in component activities let you filter your search results in a number of ways, and save customized search settings for reuse.

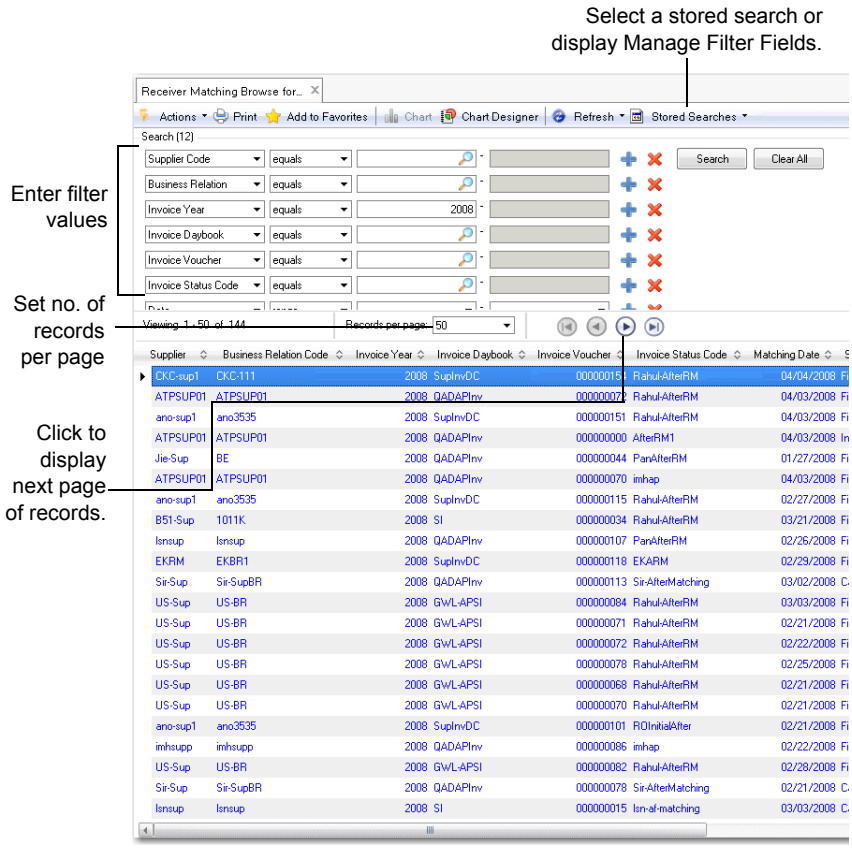
The top pane of the browse provides tools for managing the data you are viewing. You can retrieve stored searches, filter search results, and update browse settings. The bottom pane of the browse displays the retrieved records. Browses that return large numbers of records display a progress indicator while the records are being retrieved.

Fig. 4.10
Browse Progress Indicator



The existing records are displayed on scrollable pages and you can set the number of records per page. When many records exist, choosing to display all of them may take some time.

Fig. 4.11
Typical Browse



Search Criteria

The Search Criteria area displays the fields for filtering your search. If stored search criteria exist, you can select one by name from the drop-down list at the top of the search criteria. This sets up the filter criteria to produce preconfigured results.

Otherwise, the search fields display with a default configuration. You can refine the search using combinations of filters and wild cards (*). Click the + and X buttons to add and remove search filters.

Initially, one search condition displays. Choose the field that you want to search from the drop-down list.

1 Choose a search operator from the drop-down list. The search operators include the following:

- equals
- not equals
- contains
- range
- starts at (the default)
- greater than
- less than

- is null
- is not null

2 Enter a value in the search box or select a value from the associated lookup.

For character fields, the asterisk (*) is a wildcard character, matching any number of characters when the search operator is equals or contains. If you want to search for the * character, precede with a backslash (*). If you want to search for the backslash character, use two backslashes (\\).

You can enter a comma-separated list of values in the search field for browses. When the search conditions include the equals or not equals operators and the search is against values of the string data type, the search query will perform a logical OR on the results.

When configuring a browse, you can enter variables in search values. For example, when browsing for sales order bills, you can select SessionID, UserID, Entity ID, or Domain from the Search Variable drop-down list. Different components display different search variables in the drop-down list. The Toggle Search Variable Mode button toggles this option.

You can also use database fields of the same type as filters. For example, you can filter a browse to retrieve records for which Sold-To equals Ship-to, Date Due is greater than Date Shipped, or Quantity Ordered is greater than Quantity Shipped. The Toggle Search Variable Mode button also toggles this option.

Fig. 4.12
Toggle Search Variable Mode

Note When searching according to a range of values, be aware that the string comparison method used by the .NET environment can produce a different sort order than the Progress database sort order in certain situations. For instance, .NET treats the dash (-) character as greater than the zero (0) character but the Progress database does not.

3 Click Search.

4 To refine your search further, click the plus (+) icon to add another search row. You can add as many rows as needed, each with different search values and operators. If you choose the range search operator, the second search box is enabled for the ending value of the range. When you specify several criteria, note the following:

- Multiple criteria for the same field are treated as a logical OR condition.
- Multiple criteria for different fields are treated as a logical AND condition. The not equals and not null criteria are always treated as a logical AND condition, even with other criteria on the same field.

5 To remove a search criteria row, click on the delete (x) icon.

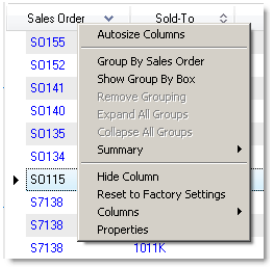
You can use the Manage Filter Fields option (see “Manage Filter Fields” on page 91) to display more fields or other fields on component-based browses. Adding and removing Filter Fields with + and X or using the Manage Filter fields menu option provides the same result. However, with the Manage Filter fields option, you can also give the fields persistent initial values if you save the changes in the Stored Search menu.

Using Manage Filter Fields, you can also change the order of the filter fields by right-clicking and choosing Move Up, Move Top, Move Down, or Move Bottom. You can also select a field and move it by pressing the Alt key and then pressing the Arrow Up or Arrow Down key.

Column Options

Right-click a column heading to display a list of options.

Fig. 4.13
Browse Column Options



With the column options, you can:

- Use Autosize Columns to resize browse columns based on the size of the displayed data. By default, the browse displays with columns already autosized. If you turn this option off and manually adjust column sizes, your settings for each browse are retained between sessions. If a cell's data exceeds the column width, three dots (...) are displayed on the right.

  Note When you are viewing all records in a browse (Records to show set to All) and Autosize Columns is on, the autosized column widths are based on the first 500 records for performance reasons.

- Use the Group By functions to create and manage custom views of the browse data. Group By functions are available only when all records are being viewed.
- Use Summary to get a summary of the data in the browse column. If the data in the column is numerical, you can get a summary based on the following:

  Count. Displays the number of items in an x-axis group. (This is the only summary option available for non-numerical data.)

  Sum. Displays the sum of the values in the column.

  Average. Displays the average of the values in the column.

  Minimum. Displays the minimum of the values in the column.

  Maximum. Displays the maximum of the values in the column.

The summaries are displayed below the column in a Summaries area.

- Use Hide Column to remove a column from display.
- Use Reset to Factory Settings to return to the default column display settings. The search conditions, autosizing, page sizing, and chart definition are all reset.
- Use Columns to display a list of all columns defined for the browse and toggle the show/hide settings. You can use this to restore a column that was previously hidden. This option displays the Column Maintenance screen, in which you select the columns to be displayed and the

position in which they appear on the screen. The position numbers range from left to right on the screen, and you assign new numbers to columns according to where you want them to appear.

- Use Properties to display technical information about the data in the column. This includes the name of the current program and the database table and field where the data for the column is stored.

Using Browse Column Filter

You can filter the results in a column using the browse column filter. Each column includes a filter so that you can refine the browse to display the data of interest.

In a browse column header, click the funnel icon.

A pull-down list displays the items displayed for the column along with options for (All), (Custom), (Blanks), and (NonBlanks).

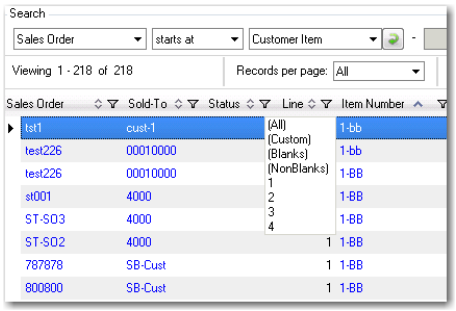
- To filter the column to display all data, choose (All). This is the default.
- To filter the column according to some custom criteria, choose (Custom).
- To filter the column to include only blank items, choose (Blanks).
- To filter the column to display everything except blank items, choose (NonBlanks).
- To filter the column for a particular item, select the item from the list.

Defining a Custom Browse Column Filter

1 In a browse column header, click the funnel icon.

2 To filter the column according to some custom criteria, choose (Custom).

Fig. 4.14
Browse Column Custom Filter



The Enter filter criteria pop-up menu displays.

By default, the menu includes an initial criteria. You can add additional criteria by clicking the Add a condition button.

3 In the left-hand Operand column, select an operation. You can select the following:

Equals

Does not equal

Less than

Less than or equal to

Greater than

Greater than or equal to

Like

Matches regular expression

Starts with

Contains

Ends with

Does not start with

Does not contain

Does not end with

Does not match

Not like

4 In the right-hand Operand column, choose the item to which you want to apply the operation.

Note You can use the symbol * as a wildcard. If you want to search for the * character, precede with a backslash (*). If you want to search for the backslash character, use two backslashes (\\).

5 Click OK.

Summarizing Results

The Summary right-click option lets you display summary information, depending on the column header in which you have clicked.

Note You must be able to view all the records on the screen page to enable the Summary option. If there are more records than can be displayed, set the Records per Page field to All.

Example By right-clicking the BC Amount column in the results grid for Supplier Invoice Browse, you can display the following summary information:

Sum. Displays a total sum of the invoice amounts

Count. Displays the number of invoice records

Average. Displays the average of the invoice amounts.

Minimum. Displays the lowest invoice amount.

Maximum. Displays the maximum invoice amount.

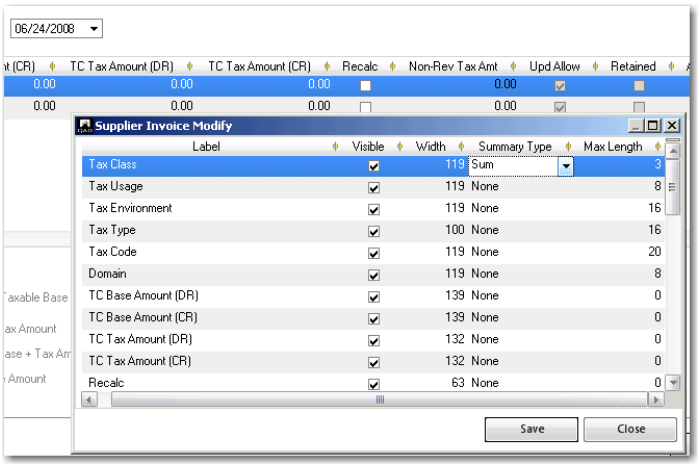
Note You only see meaningful results if the operator you choose applies to the data type. For example, applying the average operator to a date column does not produce a meaningful result.

Minimum and maximum are useful with dates, and summary and average with numeric fields.

Fig. 4.15
Results Columns Option

Summary is also available within Financials grids. For example, if you select the Tax tab on a supplier invoice, and right-click Columns while on a column header, you have the option to select a Summary type for the column.

Fig. 4.16
Summary Option, Financials Grid



You can then display a summary for the individual column.

Grouping Results

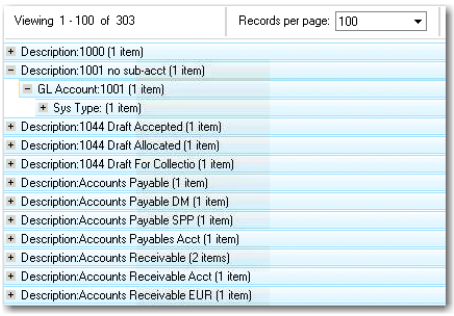
Use the right-click Group option to group data by column type. The grid now displays a summary of the column data, with the different elements sorted into groups.

Each group in the list can be expanded—to view the details of individual elements—using the plus sign next to the group.

You can also add other columns to the grid to create a group hierarchy.

Figure 4.17 illustrates a GL BC Balances browse in which the GL Description, GL Account, and System Type columns have been selected to form a hierarchy.

Fig. 4.17
Group Hierarchy



The browse data is now grouped by GL Description, GL Account, and then by System Type. Ungroup the data by dragging the column headers back into the result list.

Note The group options that you have configured are saved automatically in your last used settings, and can be reused when you open this browse again. You can also save these options as a stored search.

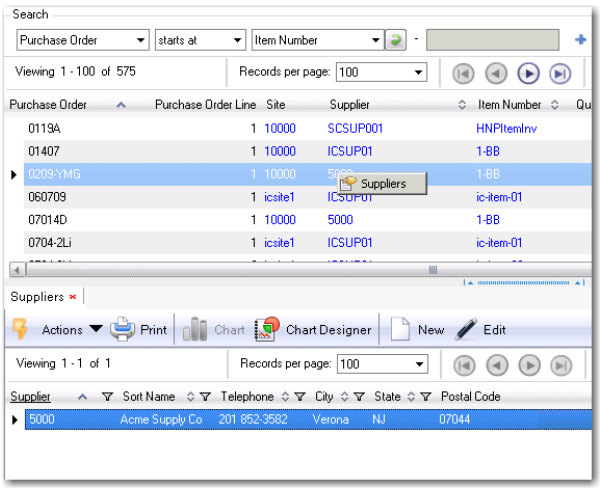
The column header menu also has a Properties option, which shows the internal field name that, in most cases, also matches the database field name.

Results Grid Options

The results grids for both component and non-component based browses have right-click options.

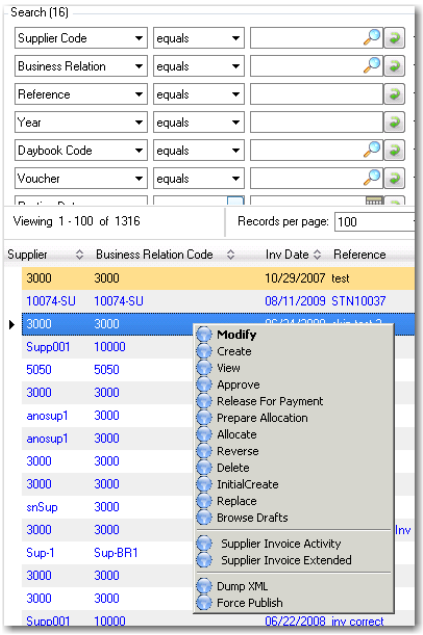
- For non-component based browses, blue underlined text indicates values where you can drill-down for additional details. Right-click any value to display a list of associated links: either a more detailed browse, a related program, or an external Web page. See “Accessing Links in Browses” on page 146 for details about the kinds of links available in browse data fields.

Fig. 4.18
Browse Results Drill-Down



For component-based browses, there are additional drill-down and configuration options for individual records, but not individual fields. For example, when you right-click a grid line in the Supplier Invoice Browse for Modify browse, you can select a supplier invoice activity to apply to this record.

Fig. 4.19
Component-Based Browse Right-Click



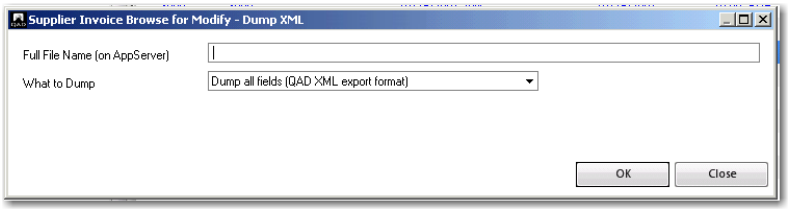
There are two additional component-based options: Dump XML and Force Publish.

Dump XML

The right-click Dump XML option on results grids lets you export selected lines to an XML file for analysis.

Specify a filename and location in the Dump Location field. The XML file is stored on the server on which the appserver is running. The option lets you specify which fields to include in the dump file.

Fig. 4.20
Dump XML



Force Publish

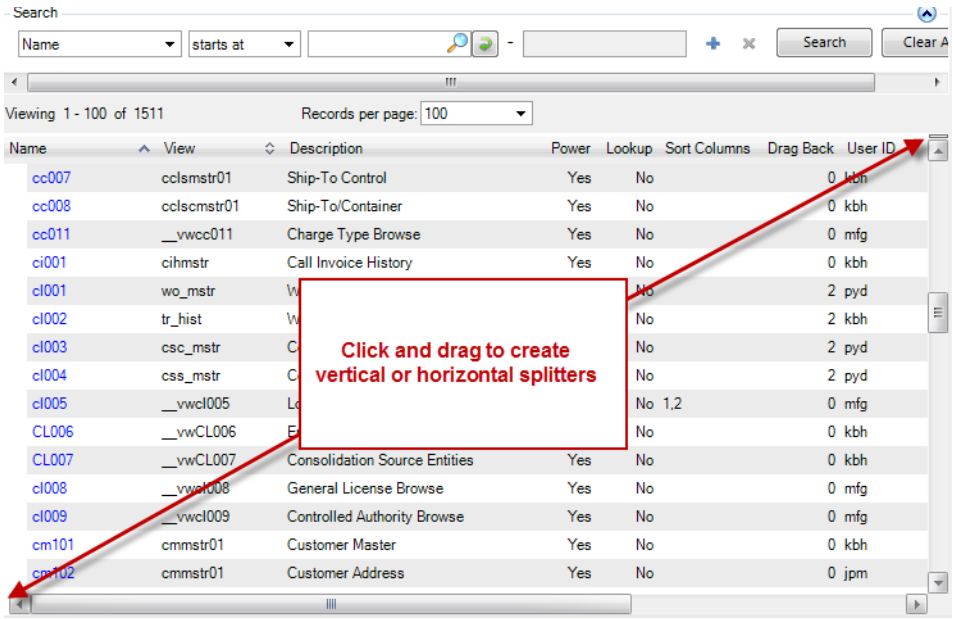
The Force Publish option is used with event publishing and the Event daemon. When you have configured event publishing, which enables changes to master data to be published and synchronized with other external systems, the Event daemon only processes events when a change has taken place. This option lets you publish events at any stage.

Browse Grid Vertical and Horizontal Splitters

With non-component browses, you can split the browse view grid both vertically and horizontally, which gives you a way to keep some part of the view stationary while you scroll through another part. You can create as many vertical and horizontal splits as you need.

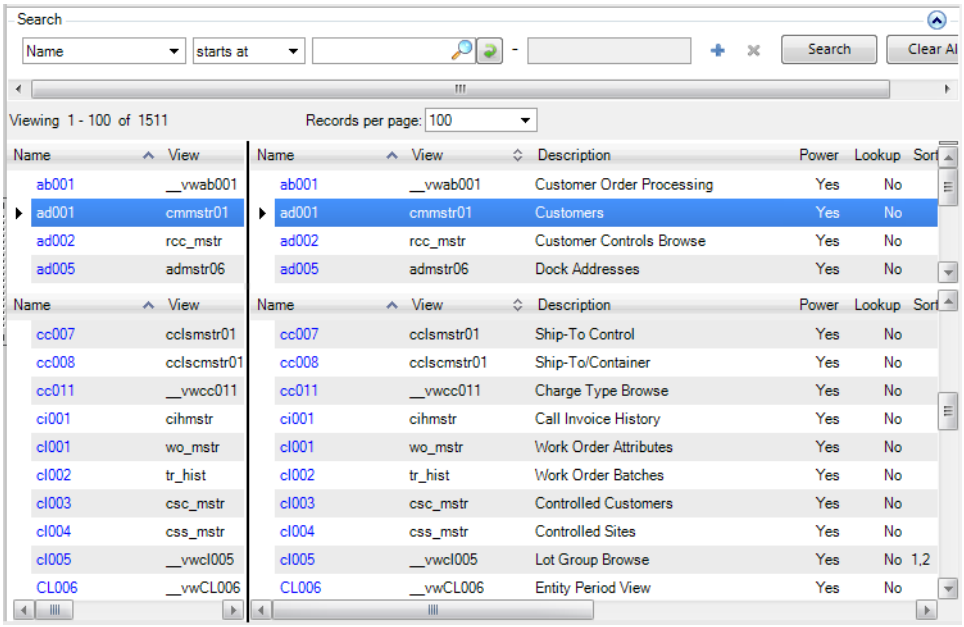
To create a splitter, click and drag on the upper right or lower left locations on the browse grid as shown:

Fig. 4.21
Creating Browse Grid Splitters



Vertical and horizontal split views display as follows:

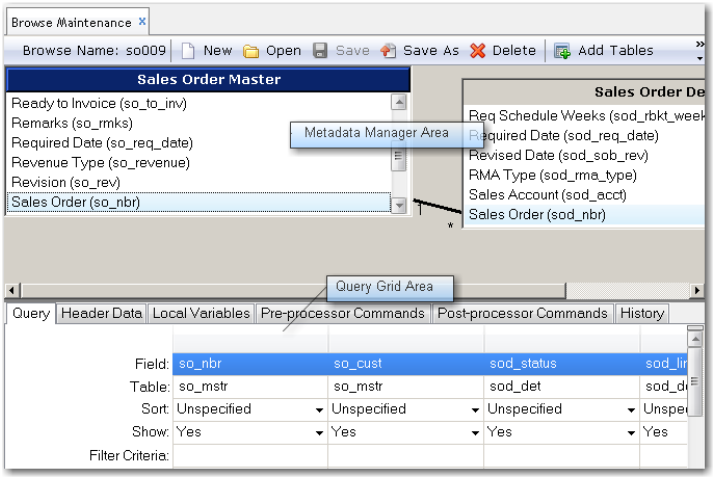
Fig. 4.22
Browse Grid Vertical and Horizontal Splitters



Browse Maintenance

Browse data is defined with Browse Maintenance (36.20.13) and View Maintenance (36.20.18). The Browse Maintenance (36.20.13) program includes a new graphical tool for creating, editing, duplicating, and deleting browses. This tool is only available with the QAD .NET UI.

Fig. 4.23
Browse Maintenance (.NET UI mode)



In the Desktop (Web Browser) and Terminal (Character UI, or CHUI) modes, to define a browse, you must create both a view and a browse using View Maintenance and Browse Maintenance. With Browse Maintenance in the .NET User Interface mode, you do not need to create a view using View Maintenance. Rather, you can simply use Browse Maintenance to specify the components of a browse. The system automatically stores the browse definition.

Note Although all browses created by Browse Maintenance (.NET User Interface) can be maintained in the Character UI, some legacy browses defined using the Character UI might not be maintainable by Browse Maintenance (.NET User Interface). In the Character UI, you create a browse by entering data in two maintenance programs, View Maintenance and Browse Maintenance. You have to enter the join data in View Maintenance's Join Phrase field, where join data is a clause of the form *<from table>.<from field> = <to table>. <to field>*. However, more than just join data can be entered in View Maintenance's Join Phrase field. For example, you can include field filters of the form *<field name> <operator> <value>*. Browse Maintenance (.NET User Interface) only supports maintaining join data.

Browse Performance Guidelines

Before developing browses, please note the following guidelines:

- You should have a good working knowledge of RDBMS, schema and Progress indexing when using Browse Maintenance. If you include a join, filter, or sort field that is not indexed, Progress performs a full table scan whenever the browse is run, which causes performance issues. For this reason, you should use the Table Indexes feature in Browse Maintenance to display the types of indexes available for selected tables, before you save the browse. See "Viewing Table Indexes" on page 109.
- A browse on a database table that has many records (for example, tr_hist) can take a long time to save and run. You should consult the data dictionary before defining a browse to check the number of records being retrieved by a browse.
- There is no limit to the number of tables you can include using the .NET UI Browse Maintenance; however, including a large number of tables can cause performance issues. In general, keep the browse definition as simple as possible.
- The .NET UI Browse Maintenance was created to simplify the creation and modification of browse definitions. Although the majority of browses defined by Character UI (CHUI) Browse Maintenance are maintainable in .NET UI Browse Maintenance, a number of definitions will not open for modification. The most common reason that a browse defined by CHUI Browse Maintenance cannot be opened in .NET UI Browse Maintenance is that a non-standard RDBMS join exists in the View's Join Phrase field. Typically, this is a join between a table in the definition and a string literal (for example, itm_prefix = "CA") as opposed to a join between two fields. The former is actually a filter condition and not a relationship between tables. The .NET UI Browse Maintenance does not allow for display of filters in the Join Phrase.
- Indexing (you can view the indexes defined for a table, right-click the table in .NET UI Browse Maintenance and select Table Indexes).
  - Join tables by indexed fields.
  - Supply sufficient join fields to take advantage of indexing.
  - You want indexes available for all your joins, filters, and sort columns.

- Organize the table order to optimize likely queries. For instance, you could have Items first and then Orders, or Orders first and then Items. The efficiency varies depending on the data setup, table size, and filter conditions. If necessary, create some similar browses to accomplish different tasks. A “one size fits all” browse can perform poorly when used outside its original intent.
- In general, avoid pre- and post-processor logic. The biggest drawback besides general performance issues is the problem of multiple users running the same browse at the same time. The pre- and post-processor code is executed for each browse request.
- Keep browse functions simple so that the browse is easier to understand. Complex calculations should be done outside of the browse engine to allow for better data tracking. Avoid having browse results which depend on other data that could change unexpectedly.
- Avoid use of OR in filter conditions.
- If using .NET UI Browse Maintenance, allow it to automatically join the tables to the domain. This is the default and is set on the Header tab using the Join to Domain check box. This ensures that the first table added is filtered by global_domain and any other related tables are joined on their Domain field.
- If creating a browse to run in .NET UI only, you should use the .NET UI Browse Maintenance. If the browse is intended only for use in the Character UI, you should use CHUI View Maintenance and CHUI Browse Maintenance. In some cases, the result set for a browse defined using .NET UI Browse Maintenance can vary depending on whether the browse is run in the .NET UI versus the CHUI. When developing a browse, you should first test the browse in both .NET UI and CHUI to verify that the results are as expected.
- Avoid filters on calculated fields. The browse is run first using the Progress query on database fields. Then the calculated field filters are applied. Try to get the database fields to restrict the amount of calculation required.
- The calculated fields are computed each and every time a browse is run. If the calculation is used commonly and is something the users want to filter on, consider adding a side table with the proper join. A menu-level program can be run to fill the table at convenient times.
- Browses on large tables with mixed data (for instance, tr_hist) can be simplified by extracting the desired subset of data into a side table specific to the function (for instance, Item-based transactions only). Fill a table with all the current data at scheduled times, or have a menu program do this on demand and then browse this table. Note that using Preprocessor logic to do this is extremely inefficient because this work is done for each browse request. Each next page will run the calculations again.
- Limit browse table joins to accomplish what is required. A complex browse need not be used as a look-up. Browse Maintenance makes copying browses simple. Avoid using one unwieldly browse to meet all requirements.

Browse Performance Checking

The system can do a performance check on the index use of a new browse definition when you save it from Browse Maintenance. The performance check, Show Index Information, helps to avoid the creation of poorly performing browses with non-indexed fields in joins, filters, and sorts.

When a browse definition is saved from Browse Maintenance, the Progress Query Parser’s INDEX-INFORMATION is examined. Checks are made to determine whether indexes can be used. Improperly defined query definitions are indicated as whole index scans and are displayed in

red in the Index Information tab. For instance, the browse definition could result in a table scan that could cause performance issues and you might need to modify the definition so that no whole index scans occur. Tables with large numbers of records might negatively impact performance, so you might need to analyze the query string to identify possible causes. To do so, open the Query String tab to view the dynamically generated query string as determined by the Browse Engine.

The performance check is on by default, but can be changed from the Show Index Information setting Tools | Options or from the config-session.xml file, which now includes the following:

```
<DotNetBrowseMaintenanceShowIndexInformation>true</DotNetBrowseMaintenan
ceShowIndexInformation>
```

The setting specifies whether the output of the Progress INDEX-INFORMATION attribute for a query is displayed when there is an issue.

Note The ability to examine what the Progress Query Parser determines as the indexes for a query is limited. The Browse Engine currently only exposes the dynamic query string prior to appending sorts, local variables, pre and post processor commands, and so on. This performance check will help eliminate most poorly performing browses that have been built from improperly constructed definitions. However, this check does not cover situations where users apply search conditions and sorts after the browse has been displayed in the user interface.

Starting Browse Maintenance

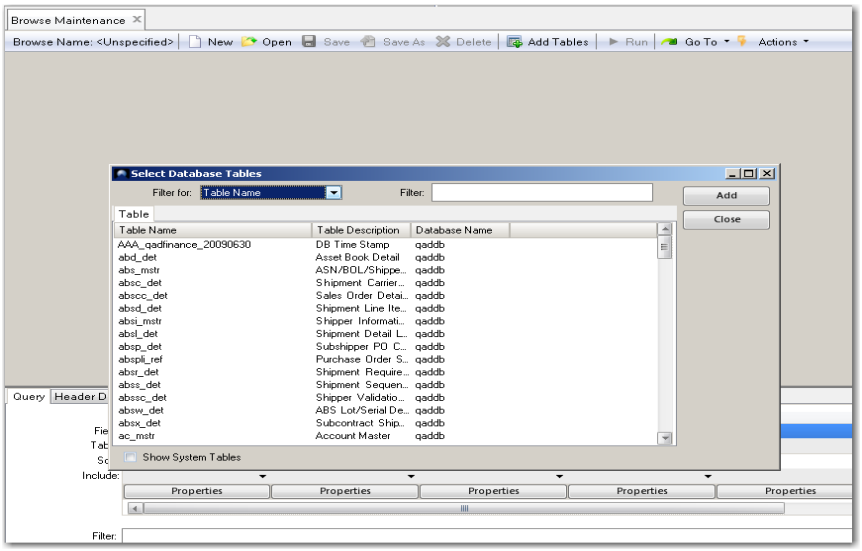
To start Browse Maintenance:

1. The Browse Maintenance program must first be set to open in .NET User Interface mode. In the Application pane, right-click on Browse Maintenance and select Properties.
2. Set the Open With field to .NET User Interface and click OK.The Browse Maintenance screen includes a toolbar, a metadata manager area, and a query grid area. The toolbar provides options for creating new browses, opening existing browses, saving browses, and deleting browses.

Creating a New Browse

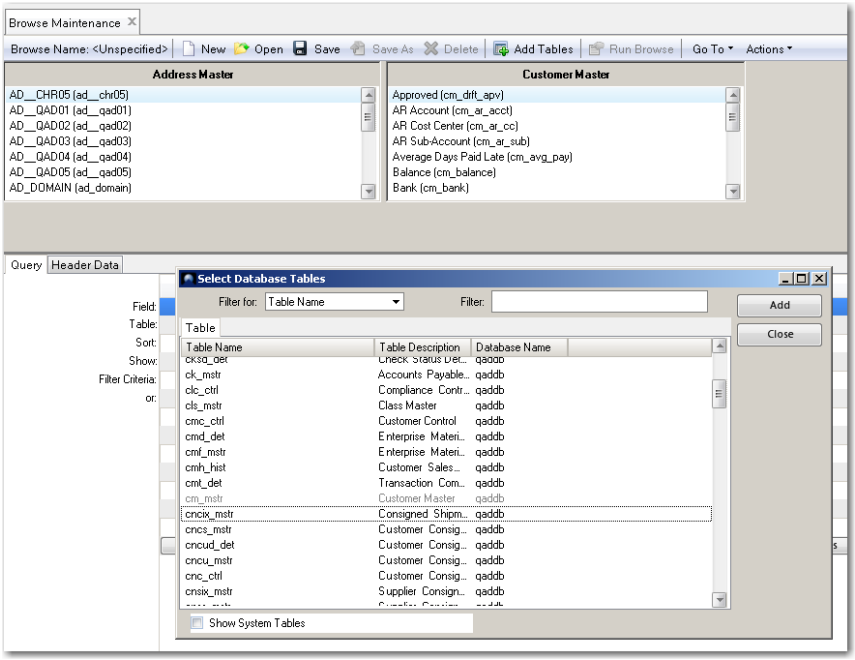
To create a new browse, click the New icon or enter Ctrl+N. The system automatically displays the Select Database Tables screen.

Fig. 4.24
Browse Maintenance



Next, add the left and right tables you want to use.

Fig. 4.25
Select Database Tables



From the window, double-click on the name of the table you want to add as the left table, and then double-click on the name of the table you want to add as the right table. Click Close to close the window.

Click the Add Tables menu icon to display this screen at any time.

Note You can print the visual relationships between tables shown in Browse Maintenance by choosing File | Print.

Field Descriptions

Filter For. A pull-down list of the columns in the table list. The value selected specifies which column is filtered using the value entered in the Filter field.

Table. The list of tables available for use in the browse definition.

Show System Tables. When checked, the Progress database system tables (such as `*_Db`, `*_File`, and `*_Field`) are displayed in the Table List. When unchecked, the system tables are not displayed.

Add. Click to add selected tables to the metadata manager area in Browse Maintenance.

Note The tables displayed for each program are defined in the `client-session.xml` file. The Browse Maintenance function reads this .XML file before populating the Select Tables screen. You can prevent tables from being displayed by modifying this file.

Example If the administrator wants to restrict access to `so_mstr` to the users with the logins `pjt` and `jjp`, but allowing all other users to access to the table, they add a line specifying these logins to the `<DotNetBrowseMaintenanceRestrictedTables>` section of the file:

```
<DotNetBrowseMaintenanceRestrictedTables>
<Table name="cnt_mstr" database="qaddb" restricted="*"></Table>
<Table name="hwm_det" database="qaddb" restricted="*"></Table>
<Table name="lcap_hist" database="qaddb" restricted="*"></Table>
<Table name="lpm_mstr" database="qaddb" restricted="*"></Table>
<Table name="lpmd_det" database="qaddb" restricted="*"></Table>
<Table name="lua_det" database="qaddb" restricted="*"></Table>
<Table name="lvr_det" database="qaddb" restricted="*"></Table>
<Table name="pin_mstr" database="qaddb" restricted="*"></Table>
<Table name="pex_mstr" database="qaddb" restricted="*"></Table>
<Table name="so_mstr" database="qaddb" restricted="pjt,jjp"></Table>
</DotNetBrowseMaintenanceRestrictedTables>
```

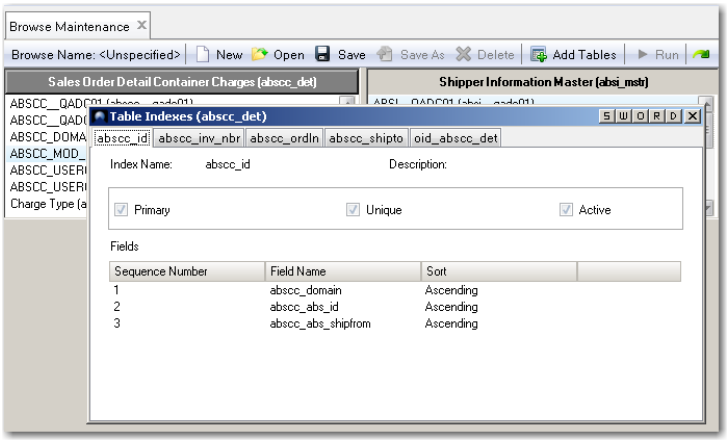
You can also restrict user groups by specifying the user group name in place of the user logins. When you restrict a user group, all users within that group are restricted.

Note that an asterisk (*) indicates no users have access, and the table is completely restricted.

Viewing Table Indexes

When defining a browse, it may be useful for performance purposes to view the indexes defined for the browse tables you are using. To view the index for a table, right-click the table window or header and select the Table Indexes context menu.

Table 4.1
Browse Table Indexes



Each table index is displayed in a separate tab with the index name as the tab caption. The primary index is displayed as the first tab. Each tab displays the index attributes and the table fields that make up the index. For each field the sequence, field name, and sort type is listed.

Index Name. The name of the index as defined in the database schema.

Description. The index description as defined in the database schema (this is often blank).

Primary. Whether the index is the primary index for the table. There can only be one primary index defined for a table.

Unique. Whether the index is unique. A unique index does not allow duplicate values.

Active. Whether the index is currently active.

Fields. The list of fields making up the index.

Sequence Number. The order in which the field appears in the index

Field Name. The name of the field

Sort. The sort type: ascending or descending

You now use the Query tab to add fields to the browse.

Using the Query Tab

To add a field from a table to the browse, drag-and-drop a field from the table to a column in the Query section. Note that you can view and modify the properties by clicking the Properties button at the bottom of the column.

Field Descriptions

Field. The field name from the database schema. The default value is retrieved from the dragged field object.

Table. The table name from the database schema.

Sort. Specifies whether the column is a column used to sort the Browse results. The combo box lists the options: Ascending, Descending, and Unspecified.

Show. Specifies whether the column is displayed (returned) in the results when the browse is executed against the data source.

Filter Criteria. Enter up to nine filters that are processed using a logical or operation for the filter in each row. The format of the filter criteria is: `<operator> <value>`, where `<operator>` is =, <>, <, >,<=, matches, or begins and where `<value>` is a valid string for the entered operator. Although there are nine rows per column for filter criteria, the total length of the filter generated from this data is limited to 256 characters.

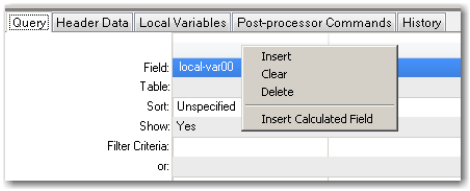
Properties. Each column includes a Properties button, which opens a Properties screen for entering additional field information.

You can filter the fields displayed using the Select Fields screen.

Inserting New Columns in the Query Grid

To insert new blank columns into the grid, right-click the column header to display the column options.

Fig. 4.26
Query Grid Right-Click Options



Insert. Select to insert a new blank column.

Clear. Select to clear the contents of the selected column.

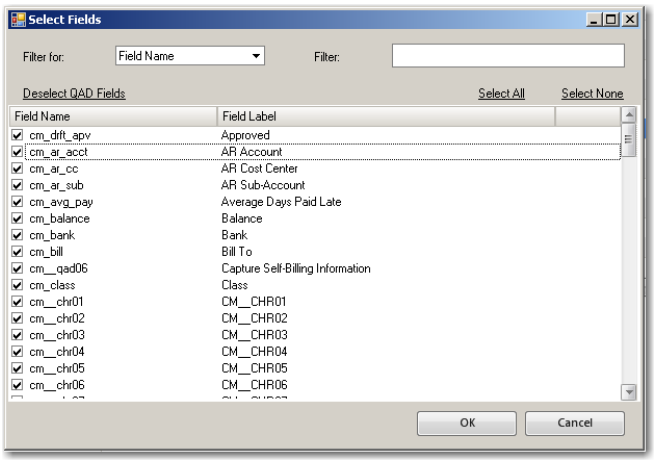
Delete. Select to delete the selected column

Insert Calculated Field. Select to display the Field Properties screen, in which you define a calculated field that is then inserted into a new column.

Displaying Fields in the Field List

The table areas display all the fields defined in the schema for that table. To display only the fields you require, right-click on the table area and choose Select Fields.

Fig. 4.27
Select Fields



Field Descriptions

Filter For. Use this filter to filter by field name or field label.

Filter. Use this field to enter a string by which to filter the columns. For example, to view AR columns, filter by field labels, and then enter AR in the Filter field. Do not include carriage returns (CR or CR/LF) in the filter, because carriage returns are removed when the filter is saved. The text before and after a carriage return will then be merged into one string.

Field List. This area displays the list of fields available for display in the Table Control.

Deselect QAD Field. Click this field to automatically deselect/select the QAD system fields; that is, fields containing a double underscore (__).

Select All. Click to automatically select all the currently displayed fields.

If the field list is filtered by the Filter textbox, only the displayed fields are checked.

Select None. Click to automatically deselect all the currently displayed fields.

Note If the field list is filtered by the Filter textbox, only the displayed fields are unchecked.

The Select Fields dialog has the following constraints:

- A field used in a table join may not be unchecked and is displayed as grayed-out text in the dialog field list.
- A minimum of one field must be checked in the dialog field list before you can click OK to exit the screen.

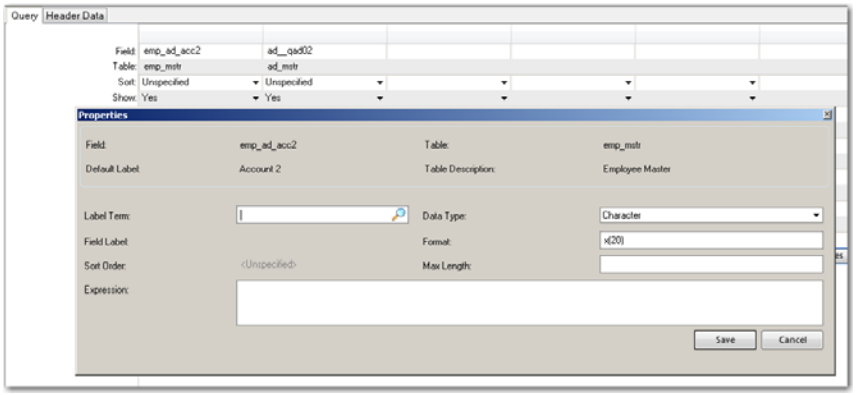
When a subset of fields for a table have been selected (any number of fields less than all of the fields available for the table), only the selected fields are displayed in the table control area. Note the filter icon displayed in the upper right corner of the Table Control to indicate to the user that a filtered list of fields is being displayed.

Note Fields that have been added to a screen using Configurable Screens are displayed for that table in Browse Maintenance.

Field Properties

Use the Field Properties screen to view and modify field properties.

Fig. 4.28
Field Properties



Field. This field displays the database schema field name.

Table. This field displays the database schema table name to which the Field belongs.

Default Label. This field displays the default label from the database schema.

Table Description. This field the default table description from the database schema.

Label Term (Optional). This field specifies the key or label term from the label master table which is used to retrieve the field label displayed in the column in the browse results.

The following algorithm is applied to the label term entered when saving the browse definition:

- If the label term does not exist in the label master table, the system creates a new label master record using the string entered (the string is set to all uppercase and spaces are replaced with underscores).
- The new label master record's value is the entered label term. For example, if you enter the new term `Red Book`, the label master table would be queried and the term would not be found. A new label master record would be created with the key `RED_BOOK` and the value `Red Book`.

This field contains an associated lookup that allows the user to select an existing label term from the label master table.

Note When creating a browse, you cannot use the following characters in a label term: asterisk (`*`), ampersand (`&`), question mark (`?`), colon (`:`), semi-colon (`;`), dollar sign ($), hash mark (#), at sign (@), plus sign (+), equals sign (=), less-than sign (<), greater-than sign (>), or period (`.`).

Field Label. This field displays the value for the label term retrieved from the label master table.

Sort Order (Optional.). This field specifies the sort order for the column as an integer from 1 to 8. For a given browse, the value of the sort order for each column specifies the order in which the columns are sorted relative to each other. By default, this field is set to Unspecified and

read-only until the Sort field on the query grid is set to Ascending. As you specify the Sort field, the Sort Order is automatically set to reflect the order in which you specify the Sort field for various columns, but you can then change the Sort Order as needed.

Expression. This field is required when Field is a local variable (that is, has the name `local-varNN`, where each `N` is an integer from 0 to 9). When Field is a local variable, the Expression is the Progress 4GL syntax that defines the local variable. The string entered must be valid Progress syntax. You can enter an expression of up to 512 characters.

Data Type. This drop-down list specifies the Progress data type for the local variable. This field is required when the Field is a local variable (that is, has the name `local-varNN`, where each `N` is an integer from 0 to 9). Valid data types are character, date, integer, decimal, logical, and recid. If the Field is a table field, this value should not be changed.

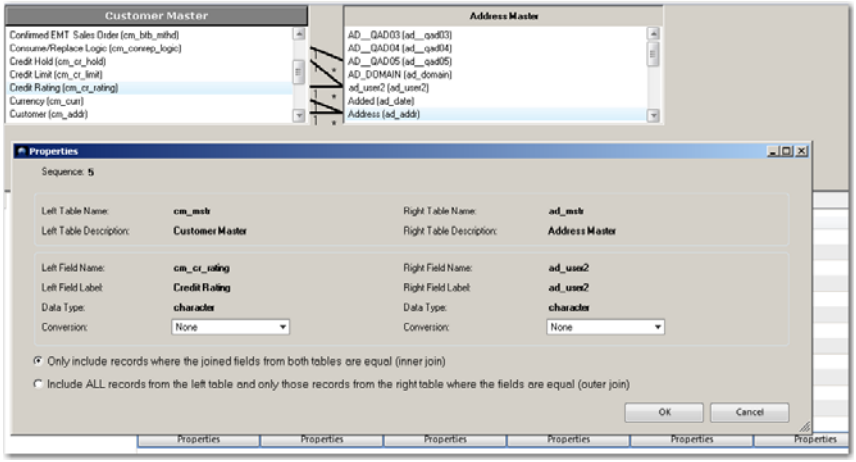
Format. Specifies the display format for the local variable. This field is required when the Field is a local variable (that is, has the name `local-varNN`, where each `N` is an integer from 0 to 9). These are Progress database formats, such as NN/NN/NN for dates or x(N) for characters. If the Data Type is logical, a label term such as Yes/No or True/False should be entered. Note that this setting only applies to the display of browses in the Character UI; it does not apply to browses displayed in the QAD .NET UI.

Max Length. (Optional). Specifies the maximum display length for the field. Note that this setting only applies to the display of browses in the Character UI; it does not apply to browses displayed in the QAD .NET UI.

Creating Table Joins

To define join properties between two tables, drag-and-drop a field from one table to a field in the other table. The screen displays a line indicating the join. Right-click the line to display the Join Properties screen.

Fig. 4.29
Join Properties



This screen displays the table name and description, field name and label, and character type for the left and right join elements.

Using Join Types

An inner join returns the records selected for the first table combined with related records selected from the second table. If a record does not exist in the second table, no records are returned. Only related records selected from both sides of the relationship display in the view.

An outer join returns the records found by an inner join. However, in addition, for each value in the first table, it returns unknown values from the second table when no related record is found. As a result, all matching records from the first table are preserved for unmatched records in the second table.

The default join type is inner. Using the outer join can give you more flexibility in displaying information.

Example An inner join between customers and sales orders displays only customers with sales orders. An outer join includes all customers, even those who do not have orders.

The fields in a join must be of the same datatype, and the Conversion drop-down list lets you convert the left or right datatype to ensure that they match. When you attempt to create a join of fields of differing datatypes, the system warns you of the difference, and automatically displays the Join Properties screen to let you convert one of the datatypes.

The other options on this screen are:

Only include records where the joined fields from both tables are equal (inner join). If a record from the left table does not have a related record in the table on the right, no row is returned.

Include all records from the left table and only those records from the right table where the fields are equal (outer join). If a record from the left table does not have a related record in the table on the right, return the data from the left table and null for the data for the table on the right.

Click OK to save any changes or Cancel to exit without saving changes.

Header Data Tab

Use the Header Data tab to complete the browse information:

Browse Name. Enter the name of the browse. The name entered must have the format `xxNNN`, where each `x` is an alphabet character and each `N` is an integer from 0 to 9. The convention is that the two letters indicate the module name. Once the browse has been saved, the name is read-only and cannot be changed.

Description Term. Enter the label term for the label master records whose value is used in the description for the browse. The format is an upper case alphanumeric string with no spaces. You can specify the label term in the following ways:

Leave the field blank. If you do not enter a Description Term, this field defaults to the value you entered for the Browse Name and a label master record will be created with the browse name as the label term and default description text when you save the browse. For example, if you enter xx007 as the Browse Name and leave Description Term blank, the Description Term field is assigned the value XX007, which creates the label master record XX007 when you save the browse.

Use the lookup to select an existing label term from the Label Master window, which displays labels as listed in Label Master Browse for your language.

Enter a value in the Description Term field that does not yet exist as a label term. The system will create a new label master record for your language when you save the browse.

When a new label term is created, either because you left the Description Term field blank or because you entered a value that did yet exist as a label term, you must then enter a description for it using Label Master Maintenance (36.4.17.1). You must enter the description in the Long Label field. You must do this for each language you support in your system environment using Label Master Maintenance (36.4.17.1), selecting the appropriate Language field for the label term and entering the appropriate description in the Long Label field. If you do not do this, Browse Master Browse (and Browse Maintenance's Open Browse window, which is driven by Browse Master Browse) will not list the new browses in the other language environments because Browse Master Browse does not show browses that do not have a label master record for a given user's language.

Description. Displays the description text associated with the label term entered in the Description Term field. If you leave the Description Term field blank or enter a label term that does not yet exist, you must use Label Master Maintenance (36.4.17.1) to enter the description.

User IDs/Groups (Optional). Specifies a user or group ID to restrict editing permissions for this browse. Only those users authorized can edit the browse or use the generated view to create browses. To allow access to all users, leave this field blank.

Value-Returned Column (Optional.). Specifies the column from the query grid whose value you want returned when the user double-clicks a row in the browse or lookup.

Filter By Current Domain. Applies the global_domain filter to the primary table (parent table) for the browse (for example, `pt_mstr.pt_domain = global_domain`). Joins tables on their domain fields where appropriate (for example, `so_mstr.so_domain = sod_det.sod_domain` for a browse containing `so_mstr` and `sod_det` in the definition). These changes appear in the Join Phrase field in the `vue_mstr` table of the Browse Maintenance database schema.

Current Entity Only. If the Filter by Current Domain check box in the Header Data tab is selected, you can then select Current Entity Only to filter the browse by the current entity. If the Company table from the Financials schema is present in the definition, the `Company.CompanyCode` is filtered by the current_entity global variable (for example, `Company.CompanyCode = current_entity`). The Enterprise Financials schema is highly normalized and thorough knowledge of the schema is required to create definitions against it. In order to create legitimate browses (that is, limiting the results to the current domain and entity), the Company table must be included and joined (on `Company_ID`) appropriately. When selected, only records for the current domain and entity will be included in the result set. This check box is only applicable for QAD Enterprise Applications – Enterprise Edition and is not displayed in Standard Edition.

Power Browse. Specify the browse to be a power browse. (A power browse is a browse that can be run from the menu.)

Look-up Browse. Specify the browse to be a look-up browse. (A look-up browse is a browse run as a look-up from a field.)

Note The Power Browse and Look-up Browse check boxes duplicate the function of the CHUI fields, allowing a definition to only be used as a browse and/or lookup in CHUI. However, it is important to note that in the QAD .NET UI no such distinction exists. A definition can be used as either a Browse or a Look-up regardless of this Browse Type setting in the database.

Right-click the Header Data tab to include the Local Variables, Pre-processor Commands, Post-processor Commands, and History tabs.

The Pre-Processor Commands and Post-processor Commands tabs are available only for backwards compatibility with browses defined using the Character UI. These tabs provide a way to enter Progress 4GL code that can run either before (pre-processor) or after (post-processor) the browse runs. You do not need to use these tabs when creating a new browse using the QAD .NET UI.

The History tab displays revision history for this browse.

Click Save to save the browse. When you save a browse from Browse Maintenance, the system does not save the browse source code .p files. The system only generates the .p files automatically when you save a browse from Browse Maintenance in Terminal mode. However, you can generate the .p files using the Browse Generation Utility (36.25.70), which allows you to generate the .p files by entering the browse name. The system writes the files to the working directory of the Connection Manager scripts, which is the same as for reports. In a default installation, this directory is where the `/com` directory is located.

When you save a browse definition to the database, an attempt to run the browse is made to validate the definition after the definition is saved to the database. The attempt to run the browse can identify both definition errors and performance problems. The Save dialog box includes a progress indicator so you can get an indication of the browse's performance. If the performance is poor, you can cancel the attempt to run and validate the browse by clicking the Cancel button in the Save dialog box. After clicking Cancel, you can undo the save of the browse definition to the database. Click Yes to remove the definition you have just saved and restore the browse definition to the previous definition. Click No to save the new browse definition in the database even though it was not validated.

Modifying a Browse

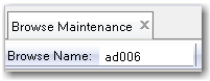
To modify an existing browse:

1. Launch Browse Maintenance (36.20.13).
2. Click the Open icon or enter Ctrl+O.

   The Open Browse window is displayed.
3. From the Open Browse window, double-click on the browse you want to modify.

If you know the name of the browse you want to open, you can click the Browse Name or <Unspecified> menu labels, enter the browse name, and then press Tab or Enter to display the browse.

Fig. 4.30
Browse Open Shortcut



You can also use the Up and Down arrow keys to scroll through browse names. For example, to retrieve a browse whose name begins with ‘ad’, enter these letters in the Browse Name field, and press the down arrow key to scroll through the browse names that begin with those letters. The system prompts you if you enter an incorrect browse name, but does not attempt to load a browse whose name does not conform with the xxNNN name format.

You can add fields and table joins to existing browses, and edit current field properties.

In the query grid area, you can view and modify the following values: Query, Header Data, Local Variables, Pre-processor Commands, Post-processor Commands, and History.

Important Only a user specified in the UserID/Groups field can access a browse in Browse Maintenance (.NET UI mode). If you have not been specified in UserID/Groups, you can run the browse but cannot open the browse in Browse Maintenance.

Deleting a Browse

Use Browse Master Browse (36.20.14) to view all the browses in your system.

To delete a browse:

1. Click the Delete icon.
2. The system prompts you to confirm. Once you delete the browse, you cannot undo the delete.
3. Click OK to delete the browse.

Browse Maintenance Menu Options

The GoTo and Actions menus on the Browse Maintenance menu bar provide additional maintenance functions.

GoTo

Use the GoTo menu to select the following related maintenance activities:

- Browse Link Maintenance
- Browse URL Maintenance
- Drill Down/Lookup Maintenance

When you select one of the activities, the current browse is opened in the new maintenance menu.

Actions

The Actions menu has the following options:

- Import

- Export
- Delete Multiple Browses

Import

To import a browse, open Browse Maintenance and choose Actions|Import (shortcut: Ctrl+I). Use the Input File field to specify the location and filename of the browse data you want to import. The browses you have selected are listed in the Available pane.

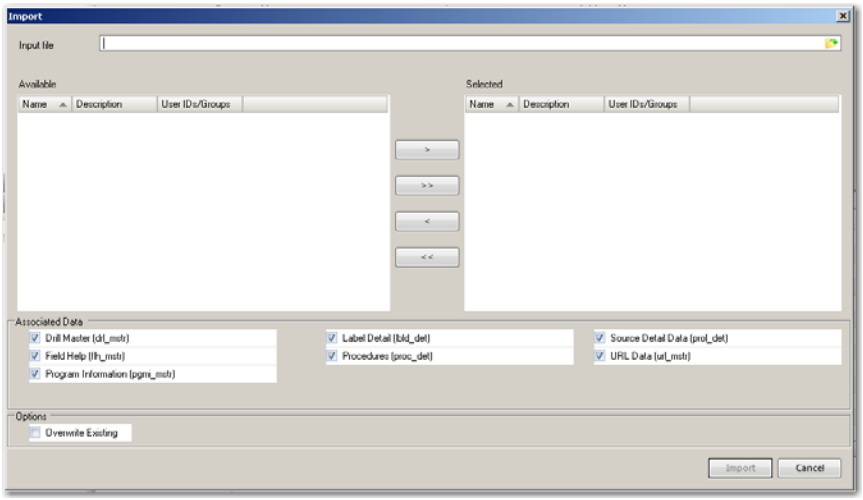
From the Available pane, select a browse by clicking on it and then click right angle bracket (>) button to move the browse to the Selected pane. Note that you can select multiple browses by using the Ctrl key and can place all the browses in the Selected area using the double angle bracket (>>) button.

Importing includes the browse and view data for the browse, but you can specify whether to include associated browse data in the Associated Data pane, which includes check boxes for including the Drill Master, Field Help, Program Information, Label Detail, Procedures, Source Detail Data, and URL Data.

If you are importing a browse that has the same name as an existing browse, specify whether you want the system to replace the existing browse with the one you are importing by choosing the Overwrite Existing check box in the Options pane. Finally, click the Import button.

Click the Name, Description, or User IDs/Groups column headings to sort by that column.

Fig. 4.31
Browse Import



An imported browse includes all the labels for languages supported by the system, not just the ones for the user's current language. If the browse includes labels for languages that are not defined in the system, a warning message is included in the system log file ("WARNING: The Language *language* for the Label Term *label term* does not exist in the target language. Label not imported for this language").

Export

To export a browse, open Browse Maintenance and choose Actions|Export (shortcut: Ctrl+E). An Export menu displays, listing the browses and their associated data.

Use the Output File field to specify the location and filename of the browse data you want to export.

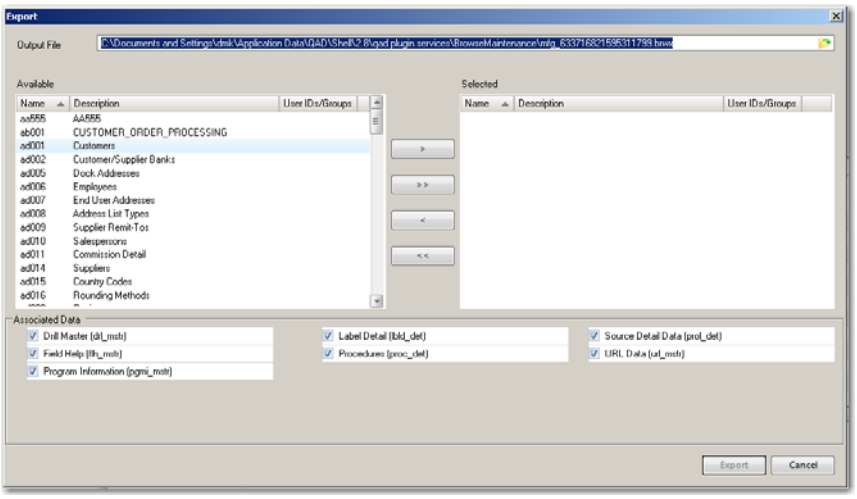
By default, the location is `C:\Documents and Settings\`*`username`*`\Application Data\QAD\Shell\`*`version`*`\qad.plugin.services\ BrowseMaintenance`, and the filename is your user ID followed by a numerical string and then the `.brwx` extension.

From the Available pane, select a browse by clicking on it and then click right angle bracket (>) button to move the browse to the Selected pane. Note that you can select multiple browses by using the Ctrl key and can place all the browses in the Selected area using the double angle bracket (>>) button.

Exporting includes the browse and view data for the browse, but you can specify whether to include associated browse data in the Associated Data pane, which includes check boxes for including the Drill Master, Field Help, Program Information, Label Detail, Procedures, Source Detail Data, and URL Data. Finally, click the Export button.

Click the Name, Description, or User IDs/Groups column headings to sort by that column.

Fig. 4.32
Browse Export



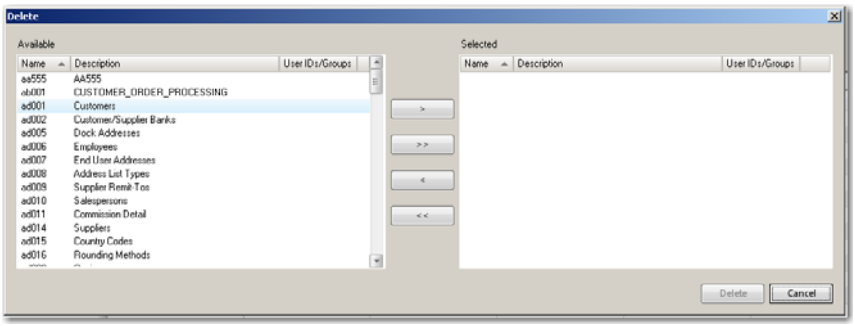
Note Prior to QAD .NET UI 2.9.5, when a browse was exported using Browse Maintenance, the labels used in the browse were included for all the supported languages. However, when imported, only the labels for the user importing the browse were included with the imported browse. Starting with QAD .NET UI 2.9.5, an imported browse includes all the labels for languages supported by the system, not just the ones for the user's current language. If the browse includes labels for languages that are not defined in the system, a warning message is included in the system log file ("WARNING: The Language language for the Label Term label term does not exist in the target language. Label not imported for this language").

Delete Multiple Browses

To delete one or more browses, open Browse Maintenance and choose Actions|Delete Multiple Browses (shortcut: Shift+Delete). A Delete menu displays, listing the browses and their associated data. From the Available pane, select a browse by clicking on it and then click right angle bracket (>) button to move the browse to the Selected pane. Note that you can select multiple browses by

using the Ctrl key and can place all the browses in the Selected area using the double angle bracket (>>) button. Finally, click the Delete button. Deleting will remove the browse and view data along with the associated data.

Fig. 4.33
Multiple Browse Delete



Browses are stored in an XML-based file format with the `.brwx` file extension.

Security

The ability to export, import, and delete browses should be limited to authorized users. The `client-session.xml` file (located in *`TomcatInstallDir`*`/webapps/qadhome/configurations/ SysEnv/`) now includes a setting for authorizing access to the import, export, and delete features. A new `<DotNetBrowseMaintenanceUtilities>` element includes a `<Utility>` element whose attributes specify authorization. The format is as follows:

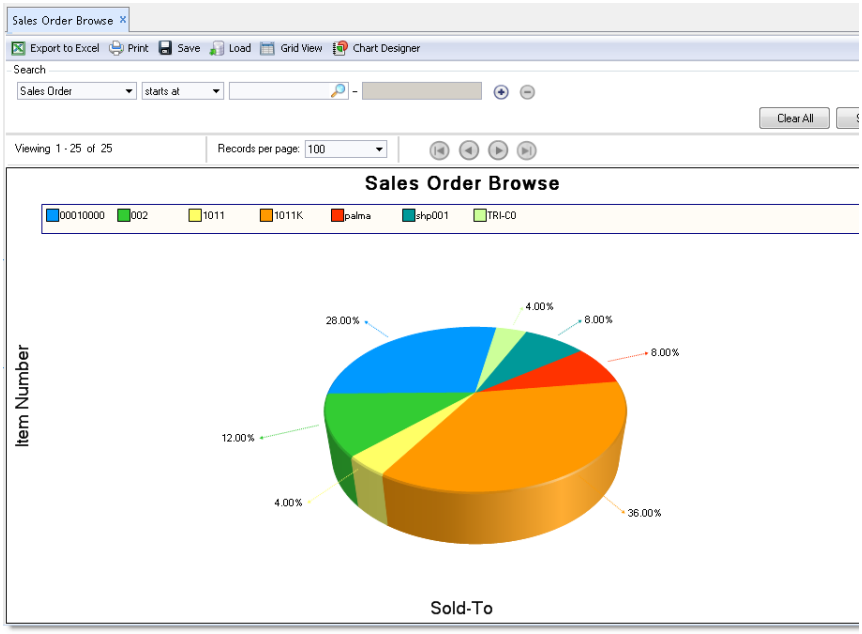
```
<DotNetBrowseMaintenanceUtilities>
      <Utility name=name enabled=boolean authorization=users></Utility>
</DotNetBrowseMaintenanceUtilities>
```

Where *`name`* can be `"Import"`, `"Export"`, or `"MultipleDelete"`, *`enabled`* can be `"true"` or `"false"`, and *`users`* can be `"*"` for all users or some list of user IDs.

Using Browse Chart Designer

With the browse chart designer feature, you can quickly generate graphical representations of browse data. You can toggle between the standard browse display (called the grid view) and the new chart view. Using the chart view editor, you can select data in a browse and have it displayed as a pie chart or bar graph, for example.

Fig. 4.34
Example of a Browse Chart

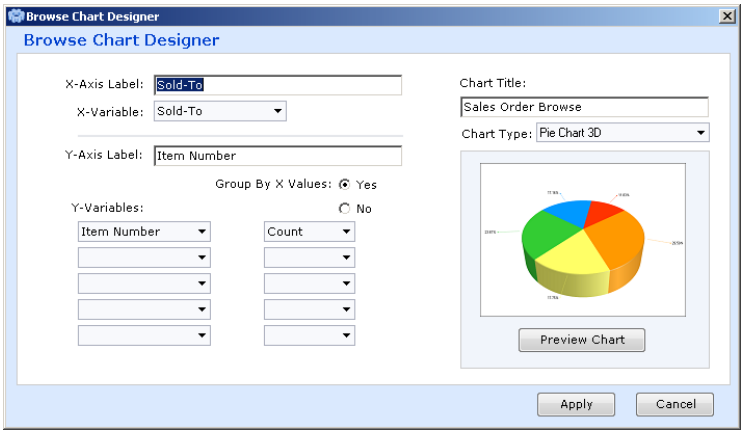


To create charts from browses:

1 Start a browse and choose Setup | Chart Designer.

2 Design a chart using the Browse Chart Designer.

Fig. 4.35
Browse Chart Designer



The Browse Chart Designer lets you choose settings that define a chart:

X-Axis Label. Enter the label for the chart's x-axis data.

X Variable. Select the variable for the x-axis data from a pull-down menu listing the available columns in the browse.

Y-Axis Label. Enter the label for the chart's y-axis data.

Y-Variables. Select the variables for the y-axis data from a pull-down menu listing the available columns in the browse. You can select up to five variables, depending on the type of chart you would like to use. For example, for a stacked bar chart you can select two or more variables.

Group By X Values. Select Yes if you want to display all the common x-axis data together in groups. Select No if you want to display the x-axis data individually. The x-axis data can be grouped in the following ways:

- Count displays the number of items in an x-axis group.
- Sum displays the sum of the values in an x-axis group.
- Average displays the average value in an x-axis group.
- Minimum displays the minimum value in an x-axis group.
- Maximum displays the maximum value in an x-axis group.

Chart Title. Enter a title for the chart.

Chart Type. Select from among the following types of charts:

- Column Chart
- Column Chart 3D
- Bar Chart
- Bar Chart 3D
- Pie Chart
- Pie Chart 3D
- Stacked Column Chart
- Stacked Column Chart 3D
- Stacked Bar Chart
- Stacked Bar Chart 3D

Preview. Click the Preview Chart button to view the chart before you save it.

3 Click Apply to view the chart.

Note Rendering charts with many elements can be CPU-intensive. To prevent users from attempting to render large charts that could degrade their computer's performance, the system checks the number of elements in a chart before rendering the chart and provides a warning if the number of elements might degrade performance.

In a chart without grouping, the number of elements in a chart is the number of records in the browse display. In a chart with grouping, the number of elements is the number of groups of records. The default value for the maximum number of elements allowed before a warning is displayed is 100 by default. An administrator can change this default setting by editing the `<ChartElementsForChartWarning>` setting in the Client Session Configuration file.

For stacked bar and column charts, the data values must be all positive or all negative.

For stacked 3D bar and column charts, you must have at least one row and one numeric column, and the data values must be all positive or all negative.

You can toggle between the chart view and the grid view of the browse by clicking on the Show Grid View or the Show Chart View icons. If you are in chart view, the Show Grid View icon is displayed, and if you are in grid view, the Show Chart View icon is displayed.

While in chart view, you can do the following:

- *Rotate and Zoom 3D Charts*. You can rotate 3D charts by pressing the Alt key and moving the mouse. Similarly, you can zoom 3D charts by pressing the Alt key and moving the mouse's scroll wheel.
- *Search Charts*. The QAD .NET UI's browse search capabilities apply to the chart view as well as the grid view. By using the search capabilities you can interactively change the chart view of the browse.
- *Hide Titles and Legends*. Chart titles and legends are shown by default. You can hide (or show) titles by right-clicking and selecting Hide Titles (or Show Titles). Similarly, you can hide (or show) the legend by right-clicking and selecting Hide Legend (or Show Legend).
- *Launch Chart in New Window*. To launch a chart in a new window, right-click on the chart and select Launch in New Window.
- *Copy Chart to Clipboard*. You can copy the chart to the clipboard so you can paste it in other applications. To copy the chart to the clipboard, right-click in the chart area and select Copy to Clipboard.
- *Edit Chart Design*. To return to the chart editor, click the Edit Chart Design icon.
- *Interactive Charting*. For any item in the chart that has a drill-down, you can have a split-screen view of both the chart and the drill-down browse, which can also be displayed as a chart. When you click on an item in the first chart, the drill-down chart will automatically change to reflect the changed data for the drill-down. Clicking on an item in the chart also selects the associated row in the browse. Conversely, clicking on a row in a browse also selects the associated item in the chart.

Creating Browse Operational Metrics

The Browse Operational Metrics option lets you create a visible metric from browse data. Operational metrics provide you with a live snapshot of production data, which lets you monitor in real-time how the system is being used. You can use operational metrics to visually track any type of browse data, including data from customized browses created in Browse Maintenance.

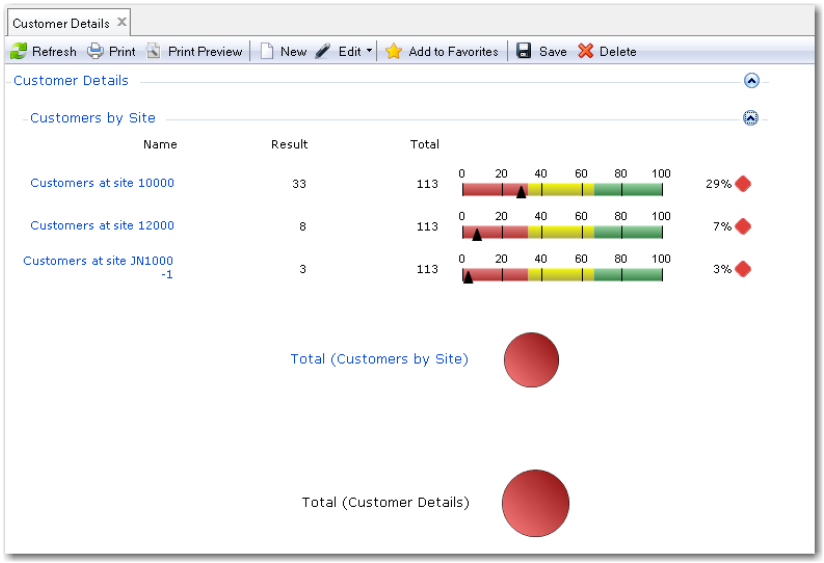
You create operational metrics using the following components:

- Metric collection. This is the container for the metric data. Name the collection for the area for which you want to display data (for example, Inventory, Sales, Purchasing, Accounts Receivable). You add one or more metric groups to the metric collection.
- Metric group. Metric groups contain the metrics that display the data. For example, the metric group Customers by Site can contain separate metrics for each site you want to view. The metric group can contain any number of metrics. You select a parent browse (in this case, Customer) when you create the metric group.
- Metric. The metric consists of the parent browse filtered for specific data. For example, the metric Customers at Site 10000 is based on the Customer browse results filtered for Site equalled to 10000. When you set the metric result to display by percentage of the total, the

metric indicates the number of items for which the status is not Active, this number as a percentage of the total, and the total number of items. See “Creating an Operational Metric” on page 128.

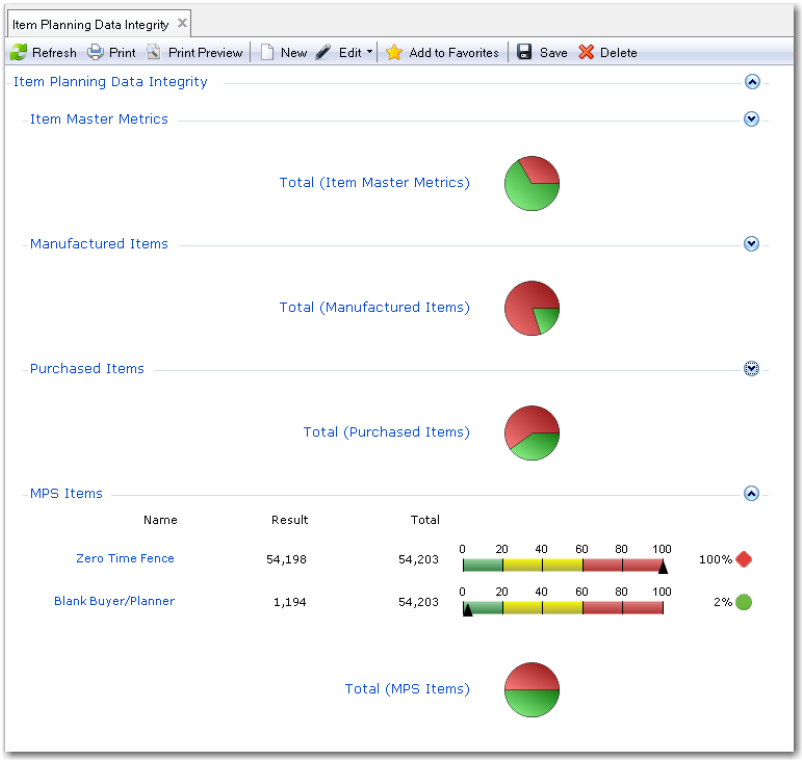
You can design a metric collection to contain a single metric group with a number of related metrics. For the example described above, you create a metric collection that contains a metric group based on the parent browse Customer. You then create metrics for each site you want to view.

Fig. 4.36
Customers by Site Operational Metric



A metric collection can also contain multiple metric groups. For example, a metric collection to display item planning statistics can contain metric groups for Item Master, Manufactured Items, Purchased Items, and MPS Items.

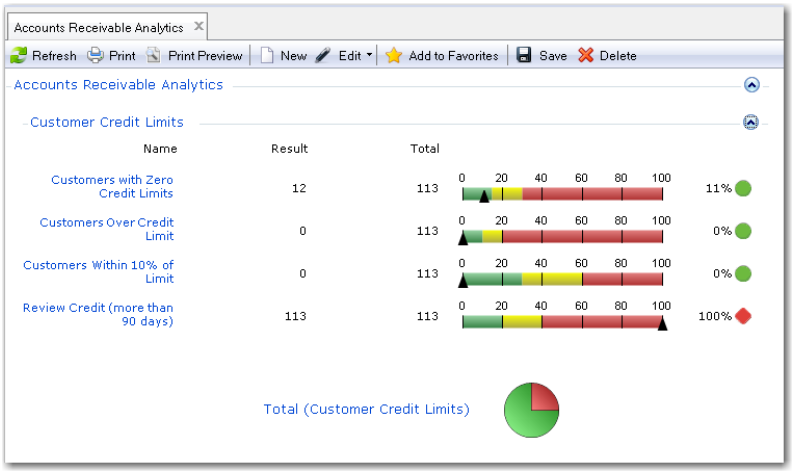
Fig. 4.37
Operational Metrics



In the above example, note that one of the metrics used is Blank Buyer/Planner. This metric indicates the number of items for which no buyer or planner was specified. You can use operational metrics to monitor incomplete records in browses. Metrics are hyperlinked to the original filtered browse, and you can drill down to the actual records to complete or correct them.

You set the thresholds for the colored slider when you create the metric. Thresholds are most useful for setting limits on data beyond which you need to take corrective action (for example, item inventory levels or customer credit limits). The following operational metric displays different views of customer credit limits:

Fig. 4.38
Accounts Receivable Operational Metric



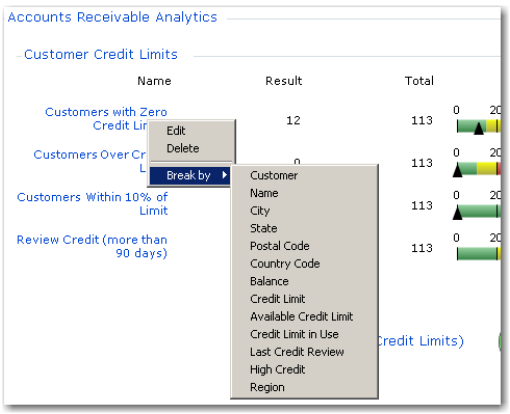
In this case, the color thresholds on the slider are set to acceptable limits for customer credit, and the slider counter indicates immediately when the limit is exceeded.

There are three metric colors: green, red, and yellow. You customize the order in which they appear on the slider, and the limits of each. The Total pie chart indicates the percentage of results for the whole metric group that appear in each color band. In the above example, 75% of results appear in the green band, and 25% in the red.

Viewing Metrics by Field

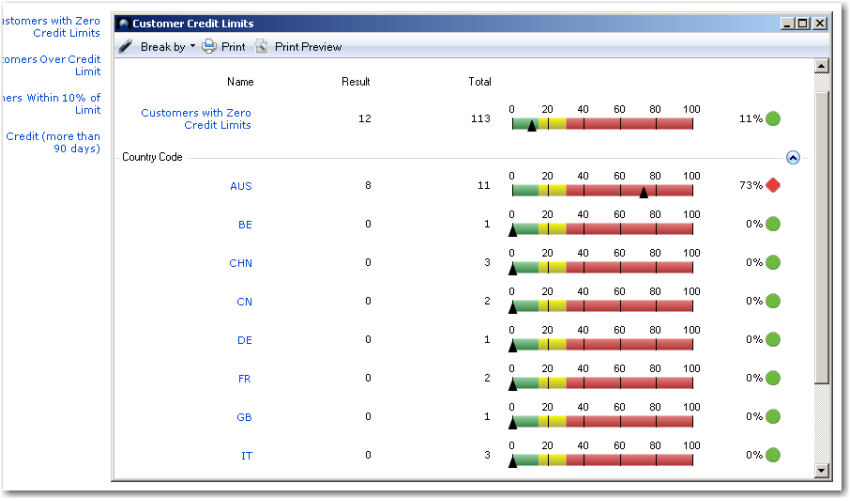
Each metric is linked to the original filtered browse. When you right-click the metric name and select Break By, you can select another browse field by which to view the data:

Fig. 4.39
Operational Metric Break-By Feature



In this example, you can choose to view the browse filtered for Country Code:

Fig. 4.40
Metric Break By Country Code



Licensing for Operational Metrics

Operational Metrics is provided through Active Maintenance, and you require the Active Maintenance license key in order to use this function. The license key is available on the QAD Support Web site at the following URL:

https://support.qad.com/license_keys/activemaintenance

Click the `Term License Key Request` link to receive the Active Maintenance license. The Support Web site requires your Support login information.

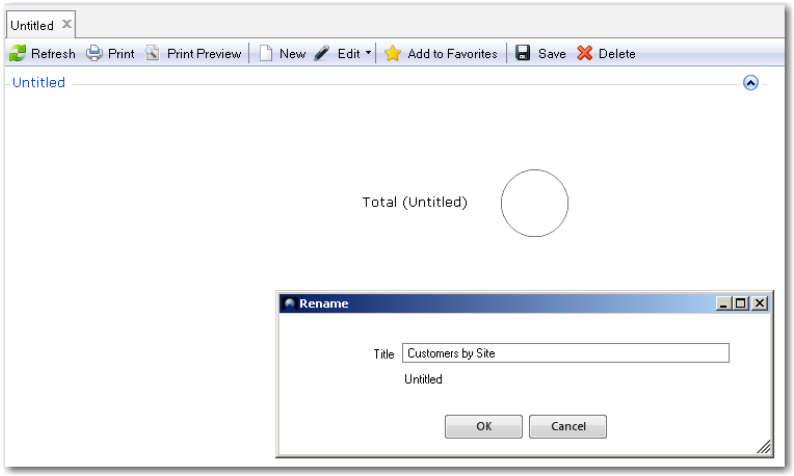
Creating an Operational Metric

Use the following steps to create an operational metric collection for Customers by Site.

1 Select Create Metric Collection from the Administration menu to create the initial metric collection.

The system prompts you to name the collection:

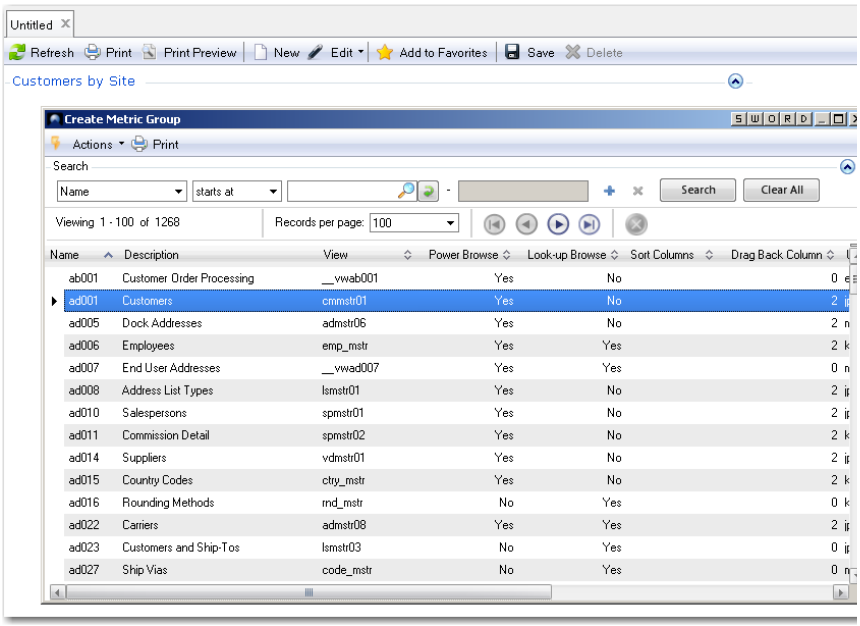
Fig. 4.41
Create Metric Collection



2 Right-click the collection title, or select Edit|Create Metric Group to create a metric group for the collection.

You are prompted to select the parent browse for the group. Double-click the name of the browse to select it.

Fig. 4.42
Edit, Create Metric Group

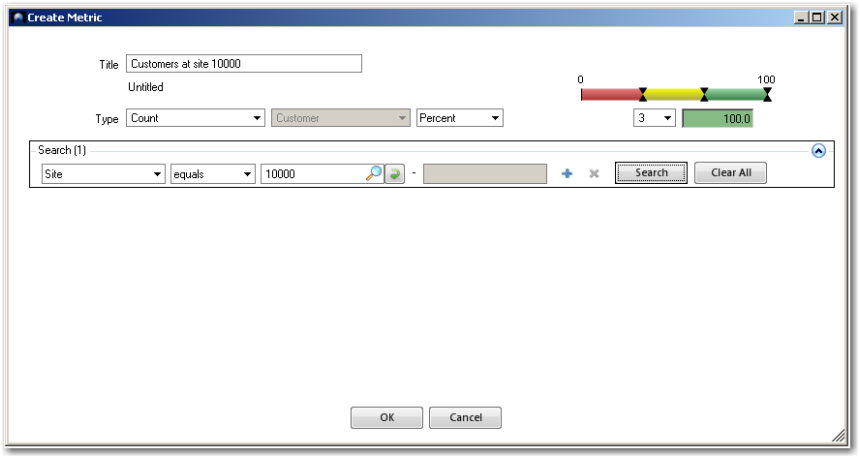


Note You can also select the parent browse by dragging a browse from the Applications area and dropping it onto the metric group area.

3 Enter a name for the metric group (for example, Customers by Site) and click OK.

The system prompts you to create the first metric.

Fig. 4.43
Create Metric



Title. Enter a title for the metric (for example, Customers at site 10000).

Type. The default type is Count. When you select the Count type, the browse filter drop-down is unavailable.

Type options depend on the type of browse. For browses that produce numerical values as results, you can also choose Sum, Average, Maximum, or Minimum as the Type option. When you select a type other than Count, you can then select the value to which you apply the type. For example, if the parent browse is Salespersons, you can choose to select Average as the type, and Commission as the value. This metric displays the average commission of Salespersons, and does not display this value as a percentage of the total.

Percent/Range. Select Percent to display the metric as a percentage of the browse total.

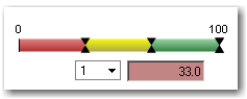
Select Range to display the metric as a range of figures. This option lets you increase the granularity of the results. For example, when a metric displays results in low figures. it may be more useful to set the metric to display results within a range 1 to 20, rather than the default percentage range of 1 to 100.

Search. Select the browse filter, operator, and value to define the metric. For example, this metric is based on the number of customers in Customer browse whose site code equals 10000. You therefore select the site code filter to equal 10000. You can set multiple filters for the metric, as you do on a normal browse.

Click Search to find out how many sites meet the criteria (in this case, the number is 33). This information is displayed as a percentage of the total (when you have selected the Percent display option).

4 Use the slider controls on the percentage bar to set the color code for thresholds.

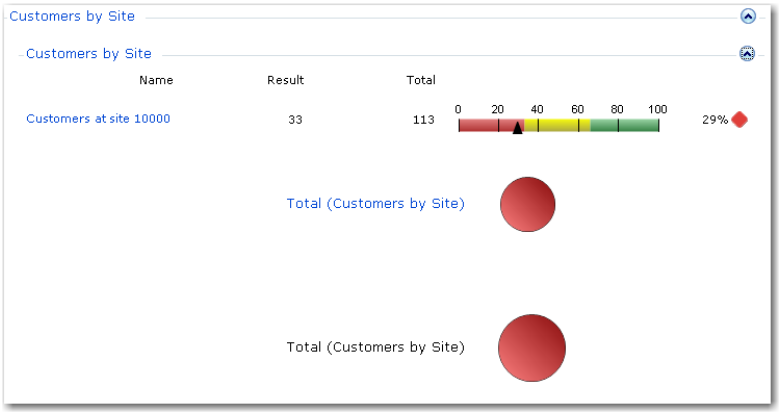
Fig. 4.44
Percentage Bar



The percentage bar is a visual indicator in up to three colors. There are four sets of slider controls, and you can create up to five separate sections on the slider. In this example, the red section indicates 0% to 33%. Drag the slider controls along the bar to set a percentage range for the yellow section (for example, 33% to 66%), and again for the green section (66% to 100%). You can also manually set a percentage range up to four decimal places by entering the number in the colored number field.

Click OK to view the main screen. Click Refresh to update the metric data.

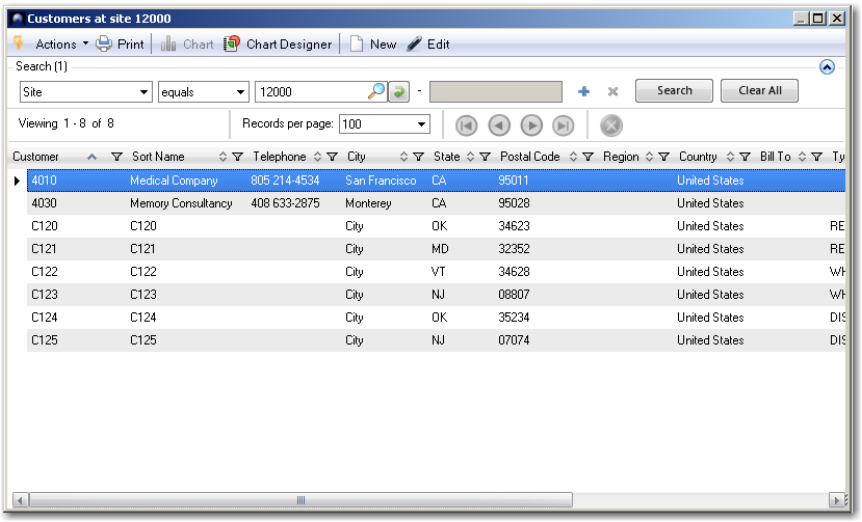
Fig. 4.45
Metric Group with Totals



The main screen now indicates the total of customers (113), the metric result (33), and the percentage of the total (29%).

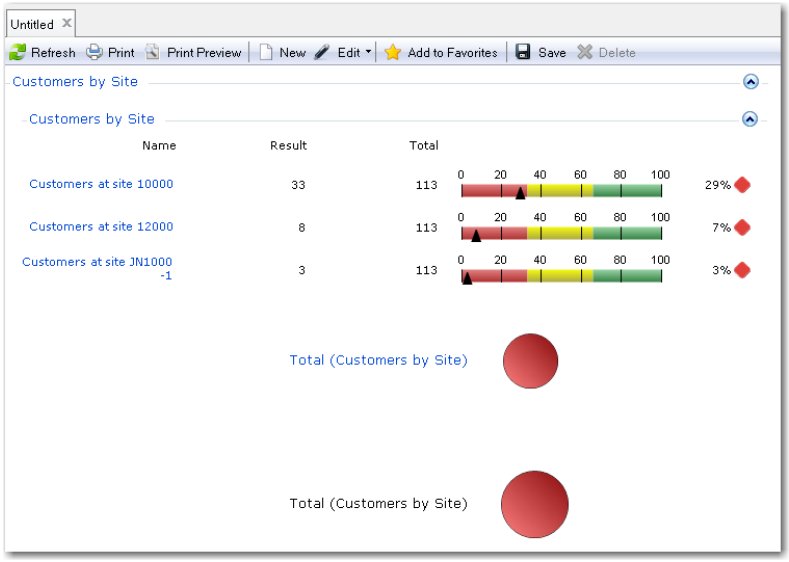
Click the linked metric name to view the metric data in browse form.

Fig. 4.46
View Metric Data



5 Add additional operational metrics to this group by right-clicking the metric group name and selecting Create Metric.

Fig. 4.47
Operational Metric Group



You can edit metric details by right-clicking the metric name on the main screen and selecting Edit.

6 Click on the Save button to save the operational metric to the Metrics folder, New to save the metric for the first time, and Replace to replace an existing metric.

The metric is now available in the Metrics folder. You can also add operational metrics to Favorites.

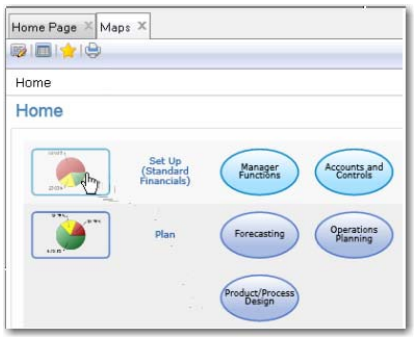
You can change the metric group within a collection. However, this invalidates the metrics within a group, which are based on the initial browse you selected.

To refresh the metric information, re-run the individual browses from within their metrics.

Operational Metrics and Process Maps

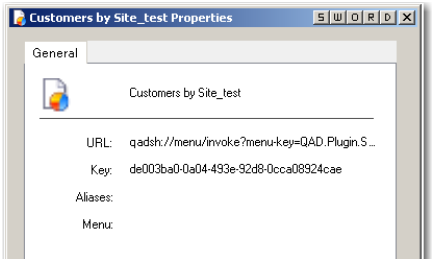
Operational metrics are accessible from the menu bar, and can be embedded into the process map for the related data area. The embedded metric is hyperlinked, and lets you run the metric from within the process map.

Fig. 4.48
Operational Metric within Process Map



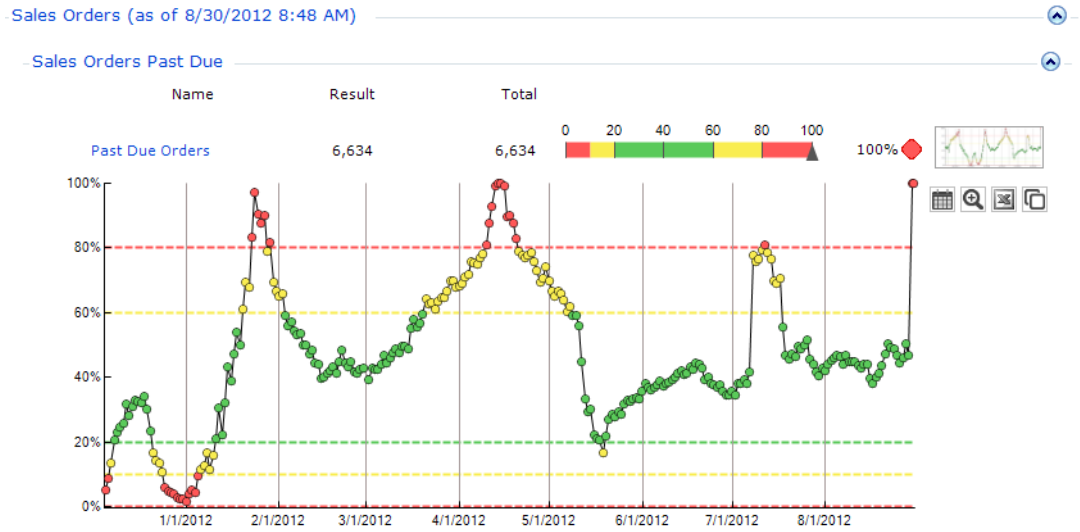
For this, you require the metric URL and Key, which you can view by right-clicking the metric name in the Metrics folder and selecting Properties.

Fig. 4.49
Operational Metric Properties



Operational Metrics History

With the QAD Operational Metrics History, you can view changes in operational metrics over time. The system stores the history of operational metric activity and then generates charts of the data for you.



You can then explore the chart data further, change the time range, scroll right and left or zoom in and out of particular areas of interest, and export the chart data to Excel for further analysis.

When you open an operational metric page, the system uses the most recent history data to display the initial view of the metric page if the data is less than 24 hours old. This allows the page to be displayed more quickly than if the underlying metric browses were queried to retrieve the data.

The system saves history data whenever the browse queries for the metrics are run. In addition to the history data, a pie chart that summarizes the metric results is also saved so that the Operational Metrics View process map can show the most recently generated results.

The system queries the metric browses (and saves history data) in the following situations:

- When you click an operational metric's Refresh button.

- When you open an operational metric and the history data is more than 24 hours old. (Note that 24 hours is the default; the interval is configurable and applies to all metrics in the system.)
- When the QAD_OpMetricsAutoRun report is run. Typically, this report is run when metrics are scheduled for periodic running, but if a report administrator runs this report from the report designer, it will also run the metric and its processes.

The history data is never deleted from the system.

A new “as of” label next to the metric name indicates the date and time of the metric data being displayed. If the browse queries are currently running, “loading...” is displayed next to the metric name; when they finish running, the “as of” time will show the current time.

Metric history data contains at most one history record per day for a given metric. If the metric’s browses run more than once in a given day, the history reflects the most recent run.

Configuring Operational Metrics History

Operational Metrics History Update Interval

By default, if operational metric history data is more than 24 hours old, the system updates the data (by running the metric browses) when you launch a metric collection; otherwise, the most recent history data is used to display the metric more quickly.

You can change the time interval by adding (and modifying) the following to the `client-session.xml` configuration file:

```
<Metrics>
...
      <StaleDataAllowedHours>24</StaleDataAllowedHours>
...
</Metrics>
```

The time interval applies to all metrics in the system.

Operational Metrics History and the QAD Reporting Framework

Operational Metrics History uses the QAD Reporting Framework report server’s scheduled batch mode to auto-run a special report that runs the desired metric and generates and stores metric history data. The new QAD-supplied report, QAD_OpMetricsAutoRun, is used for auto-running the metrics in scheduled batch mode.

Your system must be configured to run scheduled reports in scheduled batch mode (see the Scheduled Batch Mode section in the *QAD Reporting Framework User Guide* Administering Reports chapter).

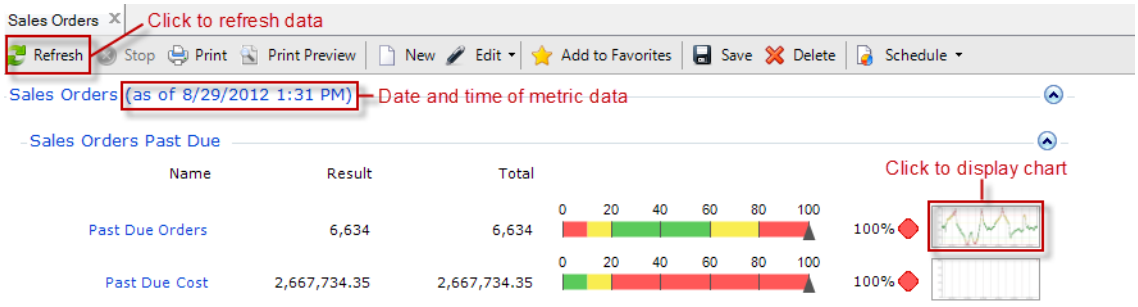
Additionally, the Set Up a Scheduled Batch section in the *QAD Reporting Framework User Guide* Administering Reports chapter describes how to create a parameter file to contain command line parameters with fixed values, using a params.pf file as an example. In that file, you must add the following line in order for the metric report to run properly:

```
-enable:qad.plugin.opmetrics
```

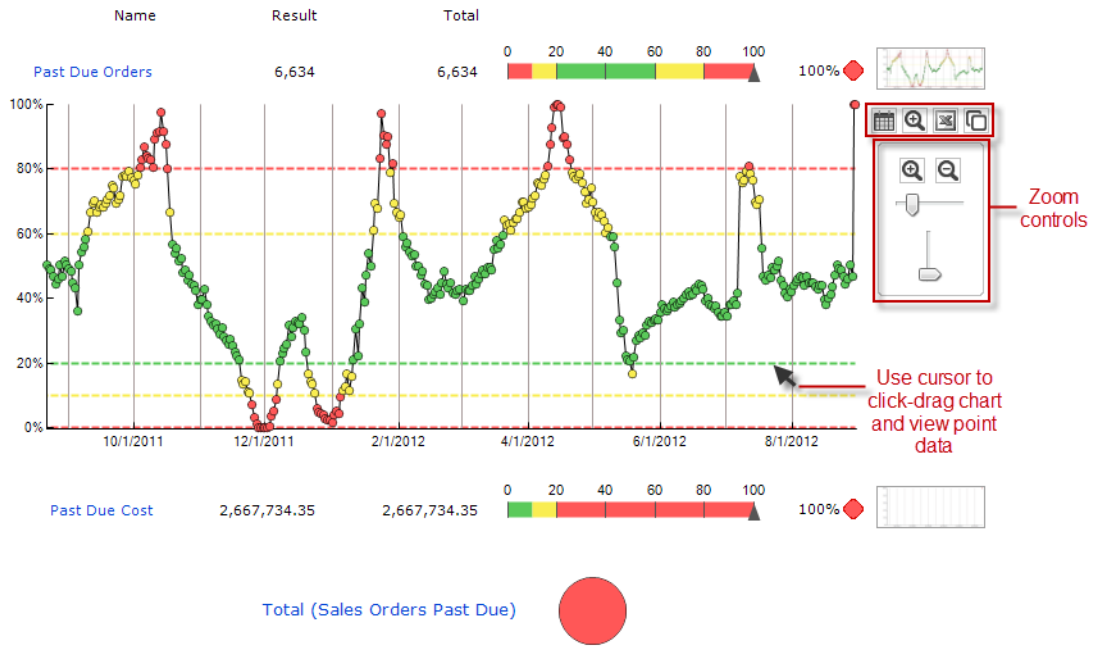
Using Operational Metrics History

With the QAD Operational Metrics History, you can view changes in operational metrics over time. The system stores the history of operational metric activity and then generates graphs of the data for you.

For example, in the Sales Orders metric collection, open the Sales Orders Past Due metric. Notice the thumbnail images to the right of the displays for Past Due Orders and Past Due Cost. Click the thumbnail image for Past Due Orders:



When you click the chart thumbnail, a metric history chart displays:



Navigating the History Chart

Under the thumbnail image of the chart, click the icons that allow you to:

- Change the time range of the display (1 week, 1 month, 3 months, 6 months, 1 year, 2 years, 3 years).

- Toggle the Zoom control to:
  - Zoom in
  - Zoom out
  - Zoom horizontally
  - Zoom vertically
- Export the history data to Excel for further analysis.
- Detach the chart to a separate window to enlarge the view.

You can also click-drag to navigate the metric history chart.

If you mouse over a data point, the system displays its value. The color of the dot on a given day corresponds to the metric result for that day. Boundaries for the result ranges (where red indicates an error, yellow indicates a warning, and green indicates good) are also displayed on the chart as colored dotted lines.

Click the chart thumbnail again to hide the metric history chart.

Scheduling Batch Processes for Operational Metrics History

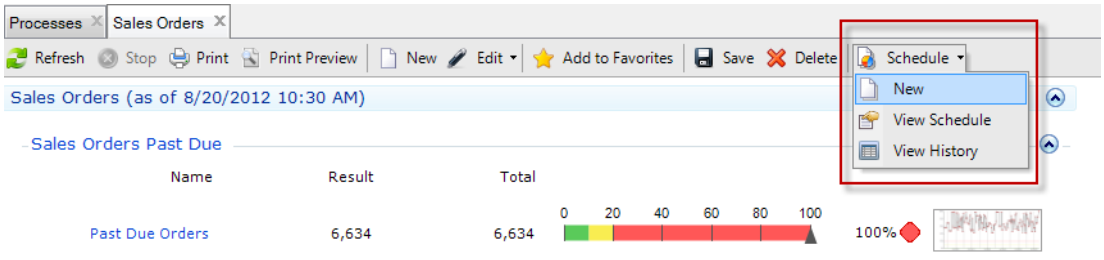
Although metric history gets generated whenever a user manually refreshes a metric (or opens a metric that does not have recent history data), you can schedule metrics to be run at regular intervals to guarantee the regular creation of history data. For example, you might want to schedule a certain metric to be auto-run daily and a different metric to be auto-run weekly.

Operational Metrics History uses the QAD Reporting Framework report server's scheduled batch mode to auto-run a special report that runs the desired metric and generates and stores metric history data.

Scheduling and Running Batch Processes

You can schedule and edit these batch processes directly from a metric display.

From the toolbar, choose Schedule to schedule batch processes:



The Schedule pull-down options include:

- New — schedule a new batch process. Enter a valid batch ID.

Note Batch IDs must first be defined by an administrator using Batch ID Maintenance. It can be useful to name the batches according to the time interval at which the report server is configured to run that batch. For example, you might define a batch called “daily” that is configured to run every day and another batch called “weekly” that is configured to run once a week. When a batch ID is specified by the user, the metric auto-running only occurs if a report server is configured to process that batch ID.

- View Schedule — view currently scheduled batch processes in a browse. You can view further details and modify the batch process by right-clicking on the ID and chooosing Scheduled Report History, Parameters, and Scheduled Report Maintenance. Use Scheduled Report Maintenance to modify batch details.
- View History — view previously run batch processes in a browse that includes their status, such as New, Waiting, Running, Complete, or Error.

Saving Operational Metrics as Favorites

To save a metric as a favorite, you can either:

- Drag the menu item for the metric from the Applications pane to the Favorites pane.

  or

- When the metric is open, click the Add to Favorites button in the toolbar.

Important These two ways do not create the new favorite in the same way:

When you drag the metric from the Applications pane to the Favorites pane, the new item in the Favorites pane points to exactly the same metric with the same history data. Clicking on the favorite opens the same metric as clicking on the metric in the Applications pane.

When you click Add to Favorites, however, a new metric is created and the new item in the Favorites pane points to the new metric. The reason it creates a new metric is that you are free to make custom changes to it before saving it as a favorite. As with all favorites, the new favorite metric is only visible to the user that saved it. Although the new favorite can have the same name (by default) as the one on the Applications pane, clicking on the favorite opens the new metric. Although the new metric is based on the same browses, the history data saved for the new metric is different. Addtionally, the new metric saved as a favorite by using Add to Favorites does have the scheduling functionality.

Note If you want the metric saved as a favorite to be the same metric (with the same history data) as the one on the Applications pane, be sure to drag the menu item from the Applications pane to the Favorites pane.

Attaching Metrics History Manually

Metrics history is attached to specific metrics collections that reside as XML files on the QAD home server. If these XML files are replaced by new or modified files (during an upgrade, for example) the system will reconnect the existing history to the new XML files. However, in some cases, due to certain changes in the new (or old) XML files (changes in metric names, for example), the history might not get reconnected. To address this, a history connection screen can be enabled, allowing an administrator to manually connect the history to metrics. To enable this feature:

1 Edit the client-session.xml file, and find the `<Metrics>` element.

2 Inside the `<Metrics>` element, add the following:

```
<ManualAttachHistory>true</ManualAttachHistory>
```

3 Launch the QAD .NET UI client.

When an administrator (someone with access to create metric collections) runs a metric and right-clicks on the metric name, a History menu item offers the following options:

- Merge — this brings up a window in which the current history chart is displayed along with a chart in which can be displayed one or more sets of history that are available to merge with the current history.
- Replace — this brings up the same window as above, only the selected history set completely replaces the current history, instead of merging with it.
- Unlink — this disconnects the metric from any history allowing history to start fresh.

The changes done in all three cases only take effect if the collection is saved using the Replace option.

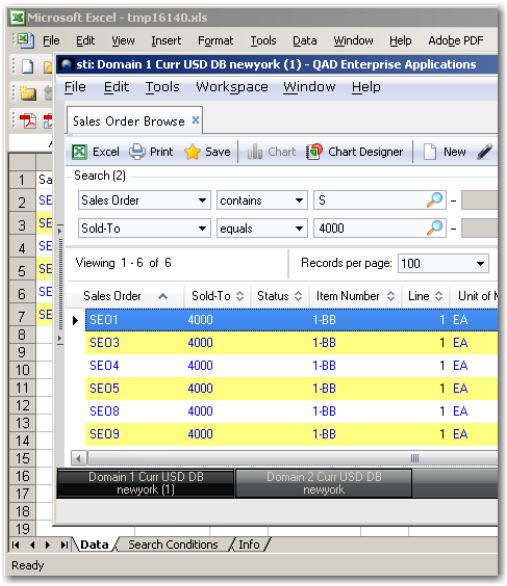
Creating Excel Output from Browses

All browse data can be exported to Excel. Component-based browses can also be exported to Excel, edited, and re-imported as Enterprise Financials data. See “Integrating with Microsoft Excel” on page 139.

1 Click the Export to Excel button.

2 The export creates three worksheets in an Excel workbook, which is opened for display.

Fig. 4.50
Example of Export to Excel



Data. This page contains the actual data columns and headings from the printed browse.

Search Conditions. This page displays any search conditions used to filter the printed data. The conditions listed are field name, operator, value, and, for a range operation, the ending value.

Info. This page lists details about the report generation including the ID of the user generating the report, the date the report was generated, the name of the browse, and the browse program.

Note If you have grouped data in the browse, the grouping is preserved in Excel as a collapsible outline.

After exporting to Excel, you can use the Excel chart features to create visual displays of your data, such as a pie chart showing quantity on hand of various inventory items.

Integrating with Microsoft Excel

Excel integration is a utility for component-based programs that lets you export data into Excel spreadsheets, create new data within Excel, and import it to the system database, where it is validated before being saved. Export to Excel for reporting is available in all browses and grids. The more advanced bi-directional Excel integration is supported in only a subset of components.

With advanced Excel integration, you can:

- Export all records for remote maintenance. You then modify the data and reimport the saved results into the system database.
- Create a blank template that consists of column headings for all of the fields in a business component and export this template for remote maintenance. You can then create the data in the spreadsheet or load data from another application into the template for importing to the system database.

Advanced integration with Excel is available as a menu activity for the following business components:

- Alternate COA Group
- Alternate COA Structure
- Bank Branch
- Business Relation
- COA Cross Reference
- Cost Center
- Cost Center Mask
- Country
- County
- Credit Terms
- Customer
- Customer Bank Number
- Customer Ship-To
- Daybook
- Deduction Category

- Employee
- End User
- Exchange Rate
- GL Account
- Gross Income Accounting
- Incoming Bank File
- Journal Entry
- Journal Entry Cross-Company
- Journal Entry Repair
- Mirroring Daybook
- Mirroring GL Account
- Payment Format
- Project
- Project Mask
- Reporting Daybook
- Report Master
- SAF Code
- SAF Concept
- SAF Structure
- SOD Category
- State
- Sub-Account
- Sub-Account Mask
- Supplier
- Supplier Bank Number

Note You can also use Excel integration when maintaining budgets. However, the budget integration is maintained in real time and is referred to as a hotlink.

Excel integration is also available for payment formats. However, Payment Format Excel Integration does not include a Load option.

The integration requires that you have one of the following versions of Microsoft Office installed:

- Microsoft Office 2003 International
- Microsoft Office 2003 with a MUI (Multilingual User Interface) Pack
- Microsoft Office XP International
- Microsoft Office XP with a MUI Pack
- Microsoft Office 2007

Exporting Data to Excel for Reporting

To export data directly into an Excel spreadsheet:

1 Choose Export to Excel from the Actions menu of a full or filtered browse search.

The browse results grid is displayed in a new Excel window. The formatting of the original grid is preserved in the new spreadsheet; for example, the font type and size and the order of headings are the same as those in the original results screen.

Note The Export to Excel option from a browse search only lets you create spreadsheets. You cannot re-import the data from these spreadsheets into the database.

Advanced Excel Integration

This activity has multiple steps:

- Choose the Excel Integration activity from the menu.
- Load data into the grid using the Load option (right-click the empty grid and choose Load). The Load option lets you retrieve all database records for a supported business component.

  Alternatively, load data into the grid using the Load by Filter option, which is available for a select number of Excel integration business components. This option lets you filter data to select only the records you want. Right-click the empty grid and choose Load <business component> by Filter, for example, Load Suppliers by Filter. See “Loading Data Using Filters” on page 142.
- Export the data to a spreadsheet, open the data in Excel, and modify it (right-click the grid again to select Export to Excel).
- After saving your changes, you return to the QAD application and import the modified data (right-click the empty grid to select Import from Excel, and click Save to create or update the data in the system database).

To export data for maintenance:

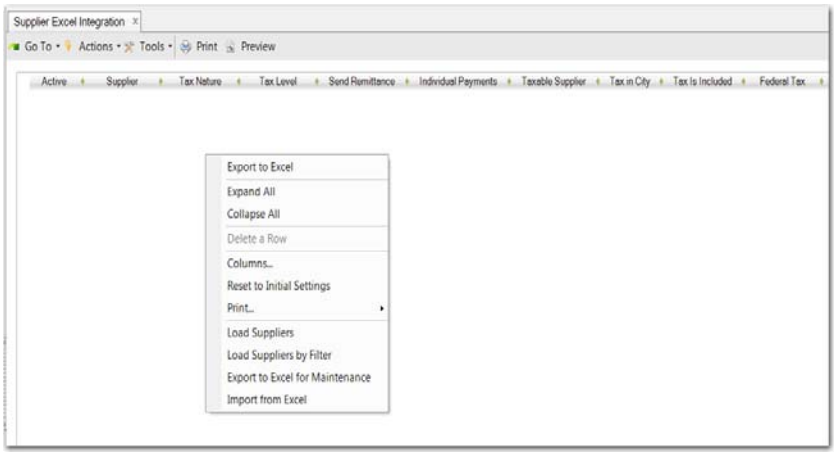
1 Choose the Excel Integration activity for one of the supported record types, such as supplier.

The system displays a blank grid containing the data fields for this business component as column headings.

2 Right-click on the blank grid and choose Load Suppliers.

Alternatively, you can choose Load Suppliers by Filter. See “Loading Data Using Filters” on page 142.

Fig. 4.51
Supplier Excel Integration



The system retrieves all supplier records from the database and loads them into the grid. The order of columns in the grid is determined by the sequence of the fields in the original data model, and this is the order in which they appear in the spreadsheet.

You can also make modifications directly on screen before exporting to Excel, once the business component data is loaded. Your modifications are validated when you click Save.

Important You should not customize the display by hiding columns before export. When you hide a column, the corresponding field is not exported to the spreadsheet. If the field is mandatory for this business component, the system attempts to validate it before saving to the database, and will generate validation errors. You can, however, move and resize columns.

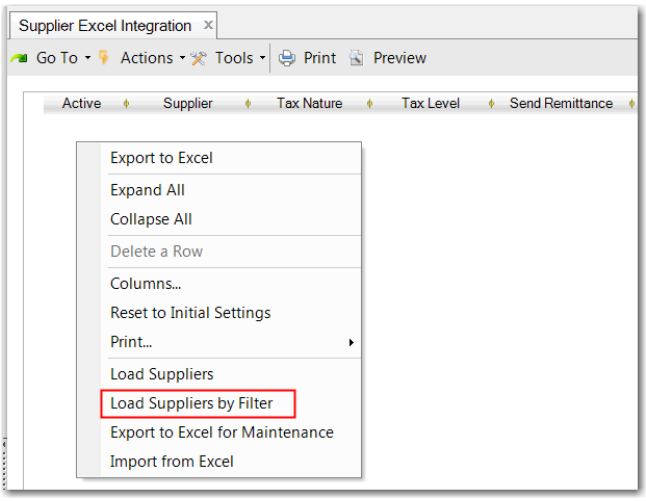
Loading Data Using Filters

When loading data from the database for certain Excel Integration components, you can filter the data to select only the records you want, which increases loading performance.

Loading by filtering is available in the following commonly used Excel Integration components:

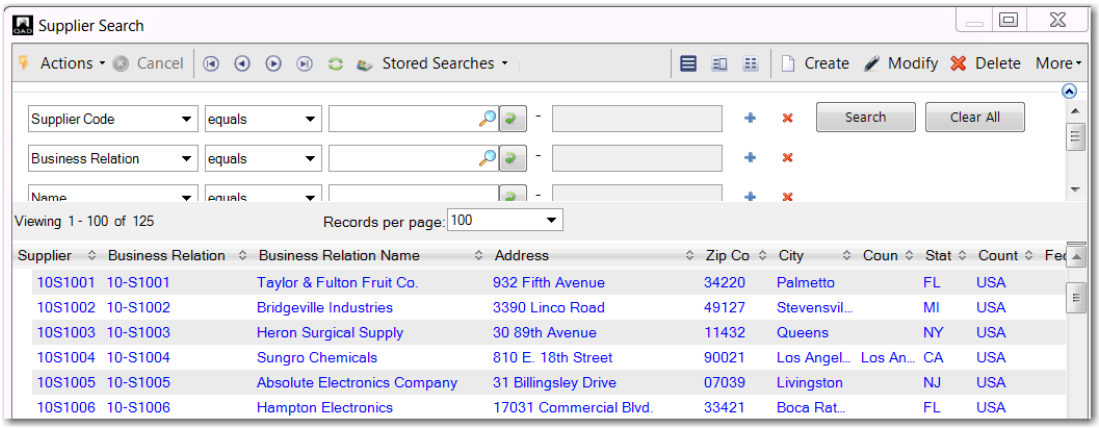
- Business Relation Excel Integration
- Customer Excel Integration
- Supplier Excel Integration
- Supplier Bank Number Excel Integration
- End User Excel Integration

Fig. 4.52
Load Suppliers by Filter, Right-Click Menu Option



When you right-click in the Excel integration grid and choose Load <business component> by Filter, the application opens a Search browse. The Load by Filter option is available regardless of whether the grid is populated.

Fig. 4.53
Supplier Search Browse



The filtering options available in the Search browse match those available in other browses for the same business components. You can use combinations of the Shift, Ctrl, and End keys to select individual records, a range of records, or all records displayed in the grid. See “Selecting Records” on page 38, “Grid Filtering” on page 39, and “Search Criteria” on page 95.

When you finish filtering records using the Search browse, only the records you selected are loaded and displayed in the Excel integration grid, along with their associated sub-fields.

You can modify the records in your refined selection or export the records to Excel for maintenance, as in the regular Excel integration process. See “Export Data to Excel for Modification” on page 144.

You can also repeat the process of loading additional records using filters.

Export Data to Excel for Modification

To export the data:

1 Right-click in the grid and choose Export to Excel for Maintenance.

2 At the prompt, enter the name of the spreadsheet in which to save the data.

3 Open the spreadsheet in Excel and make your modifications.

Note You do not have to exit the QAD application before working in Excel. For minor maintenance, it is more convenient to run the applications simultaneously, and to switch back to your QAD application to import the saved data.

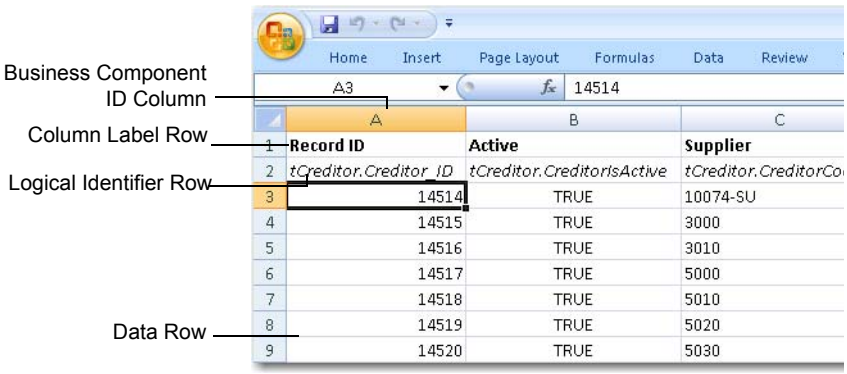
If you want to modify only a subset of the records that were loaded from the database into the grid, you can delete the redundant rows from the grid before exporting to Excel. Only the records that remain are then updated in the following steps. Excel integration does not delete records from the database.

The spreadsheet has the following features:

- The first row of every spreadsheet contains the column header labels for the business component fields. You can edit these headers for maintenance purposes within Excel. When you import your saved data into the system, your edits are discarded.
- The second row contains technical field names for the business component fields, as illustrated in Figure 4.54. The names correspond directly to the database fields, and must not be edited. Any change you make to a logical identifier generates an error during validation.
- The other rows contain your business component data.
- The spreadsheet contains business component ID columns, which identify the business component instances in the databases. You cannot edit these IDs, and you should leave these columns blank for any new rows you create. Each spreadsheet can contain a number of ID columns. For example, when you export Business Relation data to a spreadsheet, there are ID columns for business relation, address, default SAF, contact, and tax number.

Important All rows are imported into the system, which allows you to hide unnecessary rows while working with large spreadsheets. You should avoid hiding columns, however, as hidden columns are not imported. You can create extra columns for maintenance purposes, which are also not imported. You can, however, move and resize columns in the Excel sheet.

Fig. 4.54
Exported Excel Spreadsheet



- Avoid using the Sort option in Excel.

  Most business components contain sublevel information. For example, the business relation can contain separate address rows for head office, delivery, invoice, reminder and remittance, and can also contain contact details.

  When you export to Excel, the main business component data and its sublevel data are grouped together in a hierarchy, with each main business component row followed by sublevel rows. If you sort the data in Excel, the sublevel rows are rearranged throughout the spreadsheet, and the hierarchical relationship is lost. This creates a conflict and prevents you from importing the saved data.
- Ensure that your column widths are set to Autofit before saving. If the column width is too narrow and the data is not readable, the data does not import correctly.
- The spreadsheet you create has the Shared attribute, which allows other network users to modify the data.

Be aware of mandatory fields while you are modifying data. For example, you must specify a bank number, currency, and banking profile when you create a GL bank account. If you do not enter valid information for these fields while creating a new GL bank account in the spreadsheet, an error occurs after import when you try to save the data.

Import Modified Data from Excel

When you have completed the modifications:

1. Save the changes to your Excel spreadsheet.
2. Switch back to your QAD application.
3. Right-click in the business component data grid and choose Import from Excel.

   Important When you export records to Excel, edit them, and load them back into the system for the same business component, the existing records in the database are overwritten. It is especially important to bear this detail in mind when working with customer and supplier data in Customer Excel Integration and Supplier Excel Integration.
4. When prompted, select your spreadsheet and click OK.
5. Click Save to validate the data and save to the database.

If the system returns validation errors, you can resolve them on screen at this stage, and save again to validate. The system only saves multiple records to the database if there are no errors. The system treats the entire Excel spreadsheet as a single transaction, and does not make partial updates for rows without errors.

Creating a Template to Export to Excel

This option creates a blank spreadsheet for maintenance that contains the relevant fields as column headings. You use the template to add your own data and import it, which creates new records in the system.

This is similar to the previous activity, but you do not load existing system data. It is recommended to load one existing record from the database that can be used as an example of how to fill the fields. To do this, load all records and then delete all except one from the grid.

1 Choose the Excel Integration activity for a supported business component such as customer.

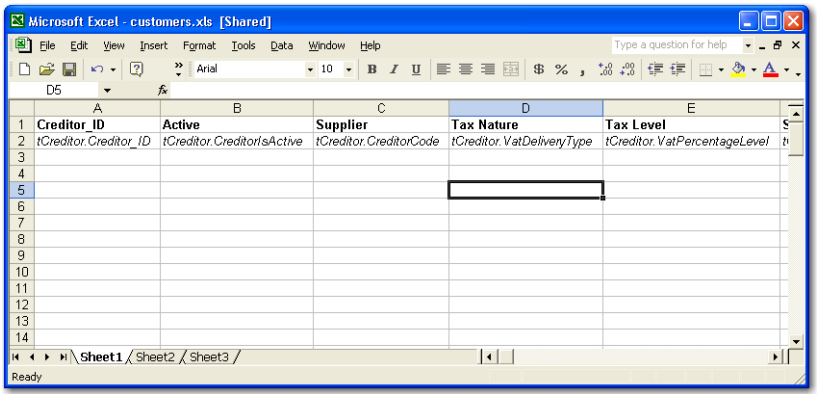
The system displays the blank grid consisting of the data fields as column headings.

2 Right-click on the blank grid and choose Export to Excel for Maintenance.

3 Open your spreadsheet in Excel and make your modifications.

Important You must leave the first column with the `<component name>_ID` field blank. The system supplies the IDs when you import the data.

Fig. 4.55
Blank Spreadsheet Exported for Maintenance

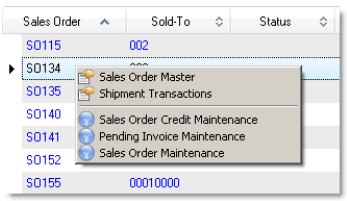


4 Save your spreadsheet and import the data into the application, as described in Import Modified Data from Excel on page 145.

Accessing Links in Browses

Browse data columns can contain multiple types of links, which display in colored text in individual browse cells. You set link attributes using the Cell Font and Link Font Color settings in Tools|Options. You access the link by right-clicking in the cell to display the linked choices.

Fig. 4.56
Example of Browse Links



Browses can contain links to other browses. These links are defined in Drill Down/Lookup Maintenance (36.20.1).

Browses also can contain uniform resource locator (URL) links defined in Browse URL Maintenance (36.20.10.11).

Two different kinds of URL links can be defined:

Links to External Web Sites

For example, a supplier Web site associated with a supplier ID or to an intranet resource, such as a document containing the design specifications for an item.

Right-click to display the list of links; select one to launch a new browser window and display the intranet or Internet resource to which that URL refers.

For example, the supplier ID field in the Supplier Browse is associated with a URL link to that supplier's company Web site. When you right-click the supplier ID underlined in blue text, you can choose the URL to launch. This automatically launches a Web browser to display the supplier's Web site.

Links to Other Menu-Level Programs

These links let you use browses as a means of navigating directly to maintenance programs while passing specific data values to them. Right-clicking and selecting one of these links opens the program from within the browse and fills in any fields that are part of the link. The program launches in a split-screen subtab below the browse. You can use the up and down arrows on the keyboard to select new drill items as listed in the browse if the Cancel transaction on drill change option in Tools|Options is True (the default).

When you close the browse, the program in the split-screen subtab also closes. For example, the supplier ID field in the Supplier Browse is associated with a link to Supplier Maintenance. Right-clicking this supplier ID, underlined in blue text, displays available links. Selecting Supplier Maintenance automatically launches Supplier Maintenance with the currently selected supplier ID filled in so you can make any required updates.

While in Supplier Maintenance, you can use the down arrow to choose the next supplier ID (or use the up arrow to choose the previous one) as listed in the browse without having to go to the browse itself to select the next supplier ID.

More than one browse, URL, or program link can be associated with a browse field. Right-click in a cell or column containing links to display a list of all the links associated with that cell or column.

Browse URL Maintenance

Use Browse URL Maintenance (36.20.10.11) to create URL links that users can activate from QAD .NET browses. For more information, see "Accessing Links in Browses" on page 146.

When a browse cell contains a URL link, double-clicking it launches a new browser window and displays the intranet or Internet resource associated with the URL. You can use these URLs in two ways:

- Create links to external Web sites that users can activate from QAD .NET browses, such as a supplier Web site associated with a supplier ID.
- Create links to other programs and pass specific data values to the programs. This lets you use browses as a means of navigating directly to maintenance programs.

You can access links to other programs only from drill-down browses, not lookups. Drill-down browses are typically available directly from the menus, but can also be associated with program fields in Drill Down/Lookup Maintenance (36.20.1).

Note When using Browse URL Maintenance, and Drill Down/Lookup Maintenance, you need to identify the field name associated with a field. What you see on the screen is the field label and not the field name. To find out the field name for a program field, place the cursor in the field and enter Ctrl+F. To find out the field name of a browse column, place the cursor in the column heading, right-click, and choose Properties.

Defining Links from Browses to Programs

Use Browse URL Maintenance (36.20.10.11) to create links to other programs. In Browse URL Maintenance, you can use the QAD Shell URL (`qadsh:\\`) as the URL or use the run-HTML string URL.

run_HTML String URL

This section describes how to use the `run_html` string URL to create a link to other programs from a browse.

For example, you can set up links in an item browse to directly access Item Master Maintenance (1.4.1), passing the current item number to the maintenance program, and executing the Next command any number of times. When a user clicks the link, Item Master Maintenance displays in a detached window. Multiple columns of data in a browse can contain links so that you can access maintenance programs for any data related to a record. However, data for only one field can be passed to each program.

To support this kind of URL link, use the `run_html` setting to indicate that you want to build a URL for programs. The string must include the beginning and ending indicators required for other strings in URLs:

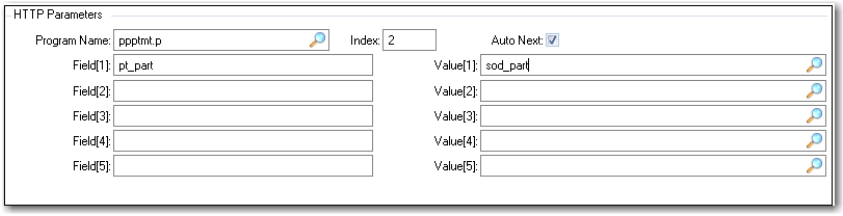
- Enter `#b#` to indicate the beginning of the string.
- Enter `#e#` to indicate the end of the string.

Then specify values that determine:

- The name of the program to be executed when a user clicks the link.
- The field in the designated program to which you want to supply a value. You can specify up to five fields.
- The value to be passed to the specified field.
- The number of times the Next command should be executed in order to reach the field

You can also use the HTTP Parameters frame to automatically create the build command. To build the URL, leave the URL and URL Script fields blank and click Next to display the HTTP Parameters frame, in which you enter the values required:

Fig. 4.57
Browse URL Maintenance, HTTP Parameters



Field Name	Value
Browse	`sobr009.p`
User ID	*
Field Name	`sod_part`
Value	*
URL	Leave Blank
Description	Link to Item Master Maintenance
Program Name	`ppptmt.p`
Field	`pt_part`
Value	`sod_part`
Index	2

In this case, the system builds the URL including the `run_html` setting using the values you supply.

The URL that the system builds based on these input values looks like the following example:

```
#b#run_html#e#?id=ppptmt.p&f1=pt_part&v1=#b#sod_part#e#&x=2
```

When the user clicks item 01053 in the `sobr009.p` browse, Item Master Maintenance is displayed with 01053 entered in the Item Number field and the active cursor focus in the Name field below it.

Auto Next Field

Select this field to have up/down arrow keys applied to the first field. When the program supports this, it will allow the first frame of data to be populated on launch of the program.

Defining URLs from Browses to Web Pages

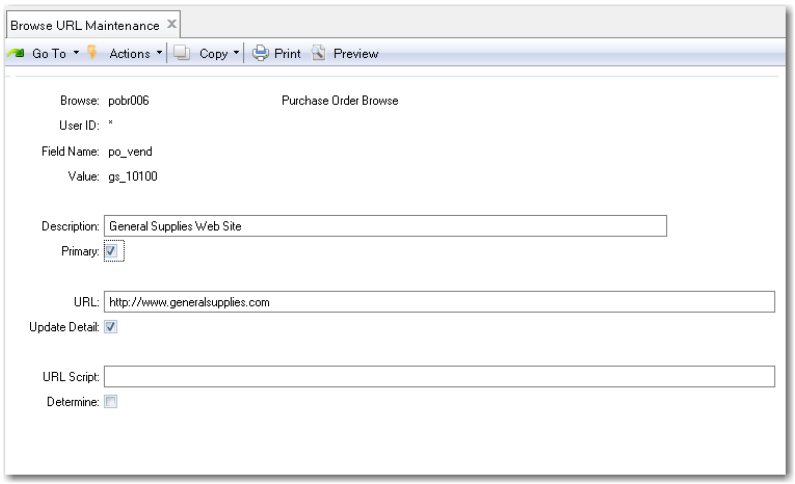
Use Browse URL Maintenance (36.20.10.11) to create links to external URLs with information that is related to items in the browse, as in the following example.

You want to establish a URL link in the Purchase Order Browse from supplier ID GS10100 to the corresponding supplier's company Web site, located at http://www.generalsupplies.com. To do this, enter the values in listed here in Browse URL Maintenance:

Field Name	Value
Browse	`pobr006.p`
User ID	*

Field Name	Value
Field Name	po_vend
Value	gs_10100
URL	http://www.generalsupplies.com
Description	General Supplies Web Site
Primary	Yes

Fig. 4.58
Browse URL Maintenance



URLs can contain special strings that are automatically replaced by field values in the browse. Selecting a link containing this type of string automatically replaces that string with the corresponding field value in the row.

Follow these steps to define this type of special string in a URL:

1. Enter #b# to indicate the beginning of the string.
2. After the #b#, enter a field name associated with the specified browse.
3. Enter #e# to indicate the end of the string.
4. The Web site for one of your primary suppliers contains a catalog of items. Entering an item's identifier at this Web site accesses the catalog entry for that item, containing information such as item cost, quantity available, and ship weight. To create links from the supplier item numbers to their corresponding catalog entries at the supplier's Web site, create the following URL: `http://www.generalsupplies.com/catalog/#b#vp_vend_part#e#`

   Note You must include `http://` in the URL. For example, you must use `http://www.generalsupplies.com/` and not just `www.generalsupplies.com`.
5. Next, associate the URL with the Supplier Item column in the Supplier Item Browse.
6. After you establish this link, selecting a supplier item number in the Supplier Item Browse automatically inserts the selected field value. For example, selecting supplier item 10-1005 creates this URL: `http://www.generalsupplies.com/10-1005`.
7. The system then launches a Web browser to display the relevant catalog information for that item located at that URL address.

Browse URL Link to E-mail

You can also define a URL link that will launch e-mail from within a browse. This feature is useful, for example, when you are viewing purchase orders or sales orders and need to get e-mail confirmation or update on order details.

In the following example, you configure an e-mail link for fields in Purchase Order Browse. The e-mail link automatically creates an e-mail with the message header:

Changes requested to Purchase Order *order number* Line *line number*

where the order number and line number are retrieved from the purchase order you select in the browse results screen.

The e-mail body contains the message:

We request you to change PO *order number*, Line: *line number*, Due Date: *PO due date*

You must create a .JSP file that contains the message header and body, and also contains the code that retrieves values for each of the fields in the message from the browse. The .JSP file also invokes the mail client configured for this client instance. The .JSP file is stored on the Tomcat appserver directory, and is called by the URL link when the link is activated.

Use the following steps:

1. Navigate to the QAD UI desktop Tomcat directory; for example, `/TomcatInstallDir/webapps/<application>/`.
2. Create a .JSP file called `mail.jsp` in this directory.

   This file invokes the e-mail client and retrieves values for the following purchase order fields:

   Purchase Order (`pod_nbr`); Line Number (`pod_line`); Due Date (`pod_due_date`)

   You also specify these fields in the URL you define in Browse URL Maintenance for the browse.

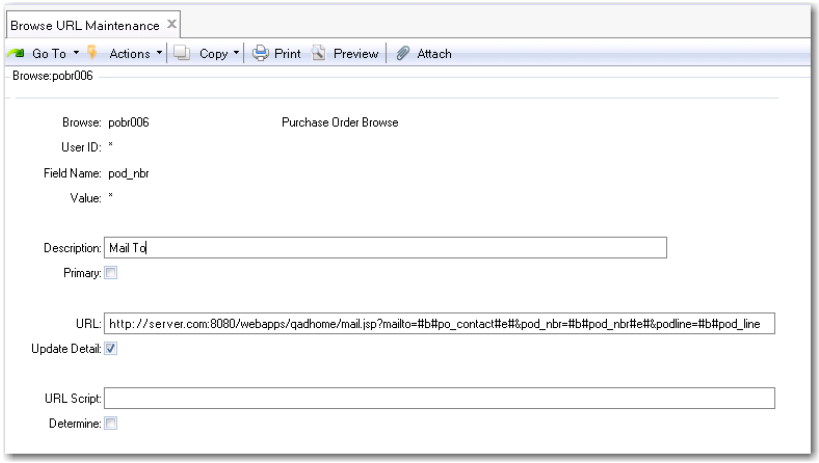
   Use the following sample code for the file:

```
<html>
<head> <title>Changes requested to Purchase Order</title> </head>
<body>
<a href="mailto:<%=request.getParameter("mailto")%>?subject=Changes requested to
Purchase Order <%=request.getParameter("podnbr")%> Line <%=
request.getParameter("podline")%>&body=We request you to change PO: <%=
request.getParameter("podnbr")%>, Line: <%=request.getParameter("podline")%>, Due Date:
<%=request.getParameter("podduedate")%>.">Send a mail.</a>
<br>
</body>
</html>
```

   You now define the URL link in Browse URL Maintenance.

3. In Browse URL Maintenance, select Purchase Order Browse as the browse for which you want to create the e-mail link.
4. Specify `pod_nbr` as the field for which you want to add a link.

Fig. 4.59
Browse URL Maintenance, Email Link



5 Enter the following URL:

```
http://<your server>:<port
number>/webapps/<application>/mail.jsp?mailto=
PurchasingOffice@qad.com&pod_nbr=#b#pod_nbr#e#&podline=
#b#pod_line#e#&pod_due_date#b#pod_due_date#e#.
```

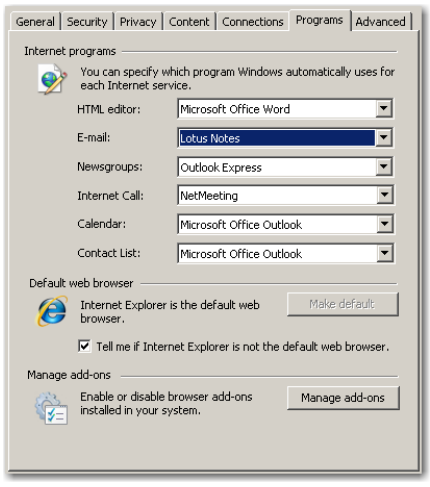
where `<your server>:<port number>/webapps/<application>` is the name and port number of your server, and `<application>` is the home directory of your application. In the section `mailto=PurchasingOffice@qad.com` is the e-mail address to which the e-mail is to be sent, and `mailto` is the parameter used in the JSP file.

Note that every browse field begins with `#b#` and ends with `#e#`.

6 Ensure that your client PC is configured to invoke the correct e-mail client

In your Web browser, open Internet Options|Programs, and select the e-mail program of choice.

Fig. 4.60
Internet Options, Email Configuration

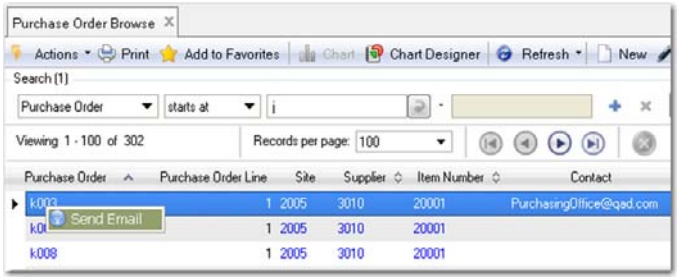


7 In QAD Enterprise Applications, Select Purchase Order Browse.

8 Right-click on the Purchase Order column.

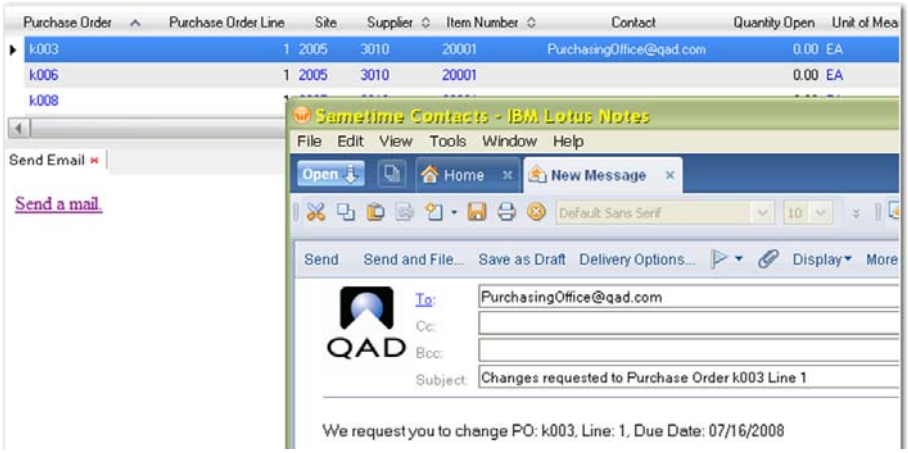
9 Click Send Email.

Fig. 4.61
Purchase Order Browse, Send Email option



10 Click the Send a Mail link on the screen.

Fig. 4.62
Purchase Order Browse, Email Link



Browse Link Maintenance

Selected browses include Create and Modify buttons at the top of the browse display in the QAD .NET UI.

- The Create button is a link to the maintenance program you use to create an item in the browse.
- The Modify button is a link to the program you use to modify an item in the browse.

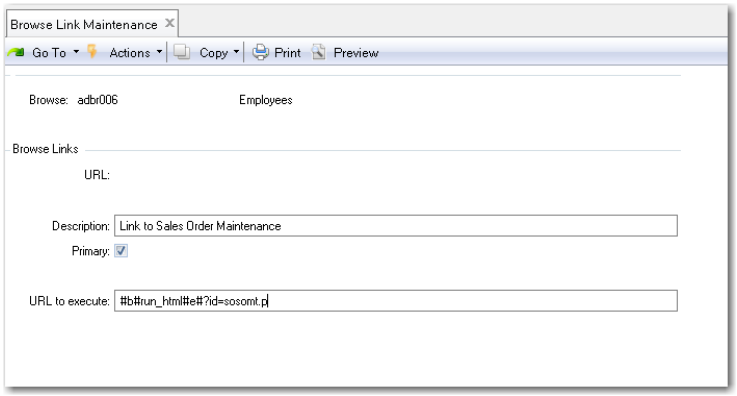
The Create and Modify buttons provide browse program links. When you click on a browse program link Modify button, data from the currently selected row in the browse is passed to the linked program.

For example, in Sales Order Browse, click Create to open Sales Order Maintenance to enter a new sales order. Click Modify to open Sales Order Maintenance to modify the order for the currently selected row in Sales Order Browse.

The browse program link buttons are defined and maintained using the Browse Link Maintenance program and can be browsed using Browse Link Browse (36.20.22). The columns list the browse, the description for the button, whether to launch is the primary action, and the URL to execute. The URL to Execute field specifies the program to run, and also any fields that should be populated based on the current row in the browse.

To define browse program links, open Browse Link Maintenance (36.20.21).

Fig. 4.63
Browse Link Maintenance



Field Descriptions

Browse. Specify the browse to which you want to add a browse program link button.

URL. Specify a URL (optional).

Description. Specify the description for the link.

Primary. Set the checkbox to indicate the browse program link is the primary action.

URL to Execute. Specify the URL to execute, which is the program to be run when the link is clicked. When defining the URL to execute, use the following format:

a Enter `#b#` to indicate the beginning of the string.

b After the `#b#`, enter `run_html`.

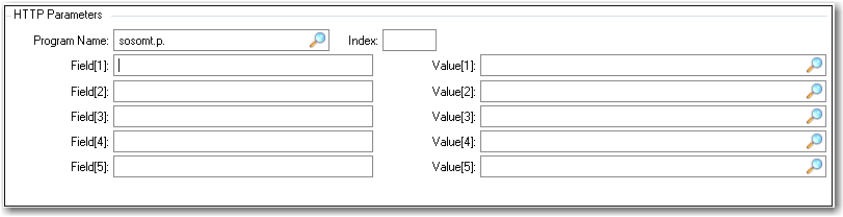
c Enter `#e#`.

d Enter `?id=`*`program_name`*. For example, `?id=sosomt.p` specifies to launch Sales Order Maintenance.

Example The following URL to Execute launches Sales Order Maintenance: `#b#run_html#e#?id=sosomt.p`.

Click Next to display the HTTP Parameters screen for the URL you have defined.

Fig. 4.64
Browse Link Maintenance, HTTP Parameters



Program Name. This field displays the program you have defined to be executed by the link. Click the lookup to select a different program, if required.

Index. The index value is the number of Go commands (or submits) that a program will execute when launched using this link.

The index field is used to store the number of times the program will execute an Enter action (similar to pressing the Next button). This has the effect of processing the active fields that were enabled for input and then executing any program logic that occurs until the next prompt for data is encountered.

In simple maintenance programs, this is set to 1 to simply enter the key field values and access the fields that can be maintained in the linked record.

For more complex maintenance programs, there may be multiple sets of input prompts to be processed to access the frame of maintainable data.

For example, the first prompt for data in `addkmt.p` requires a value for the field `Shipto`. The program link record provides the value of `ad_ref` from the browse and executes the first Enter action. The next prompt for data in the maintenance program requires a value for the field `ad_addr` and the browse link provides the value of `ad_addr` from the browse and executes a second Enter action. This advances the maintenance program to its frame of maintainable data for the user. Each time the program asks for data to be entered, the browse link logic offers up the fields it has and if there is a match between the field names it has data for and the fields the program is looking for, the field value is provided and an Enter action is executed (if there are any left to execute).

Field. Enter the name of the variables that the target program is using to prompt for data. To find this information, execute the program, advance the cursor to the desired fields, and press Ctrl-F. The value fields (Value[1], Value[2], and so on) are the variables names from the browse providing the data and must be contained within `#b#` and `#e#`. The browse link logic uses these tags to parse out the value of the field from its record buffer.

Example

Field[1]: shipto; Value[1] : `#b#ad_ref#e#`

Field[2]: ad_addr; Value[1] : `#b#ad_addr#e#`

Important Progress has a limit in the size of the data that can be stored in an index. In versions prior to 10.1B, the limit is around 200 characters (the sum of all the data contained in the fields of an index of a record). This limit has been increased to around 2000 characters in version 10.1B and beyond. Within Browse Link functionality, you are restricted to the 200-character limit unless you have upgraded your version of Progress. This limits the number of parameters that can be defined in a browse link, usually to four or less, although a fifth parameter is possible if the names of all of the involved fields are small.

Browse Collections

A browse collection features a main browse displayed with related programs and browses. The fields and records selected in the related programs and browses are based on the currently selected record in the main browse. The QAD .NET UI displays the other browses and programs in the lower part of a horizontal split-screen, with the main browse located in the upper part. On the Applications pane, browse collections are located in the Browse Collections folder, located in the Collections folder.

When you drill-down a couple of times, the screen can start to display a lot of useful information. So that you can focus on an area of interest, buttons that can hide or show the display are available on the left side of the toolbar for a browse or program. The buttons display as two up-arrow symbols when a view is open and as two down-arrow symbols when a view is closed.

Additionally, on the right side of the toolbar, two icons, Tile Screen and Full Screen, allow you to switch between the tile screen view (the default) and the full screen view. When you select the full screen view for a program or browse driven by the main browse, the screen expands to show just the selected program or browse. To return to view all the driven programs and browses, click on the Tile Screen icon. Next to the Tile Screen and Full Screen icons, the browse hybrid view icons (Browse View, Hybrid View, and Screen View) are included for controlling the main browse.

The following summarizes the browse collection display icons:

- Tile Screen (the default “split-screen” view) for the collection
- Full Screen (display the current view in full screen mode)
- Browse View (display the browse, focusing on the row for the currently selected item)
- Hybrid View (display a combination of the row for the currently selected item and the program that can modify the item)
- Screen View (displays the program that can modify the currently selected item in a full screen)

These icons provide you with a useful way to control the display and focus on the information you need.

Chapter 5

Process Maps in QAD .NET UI

Processes, or process maps, are graphical models of workflows that link to programs, browses, and other process maps. This chapter describes how to view and edit process maps with the Process Viewer and Process Editor.

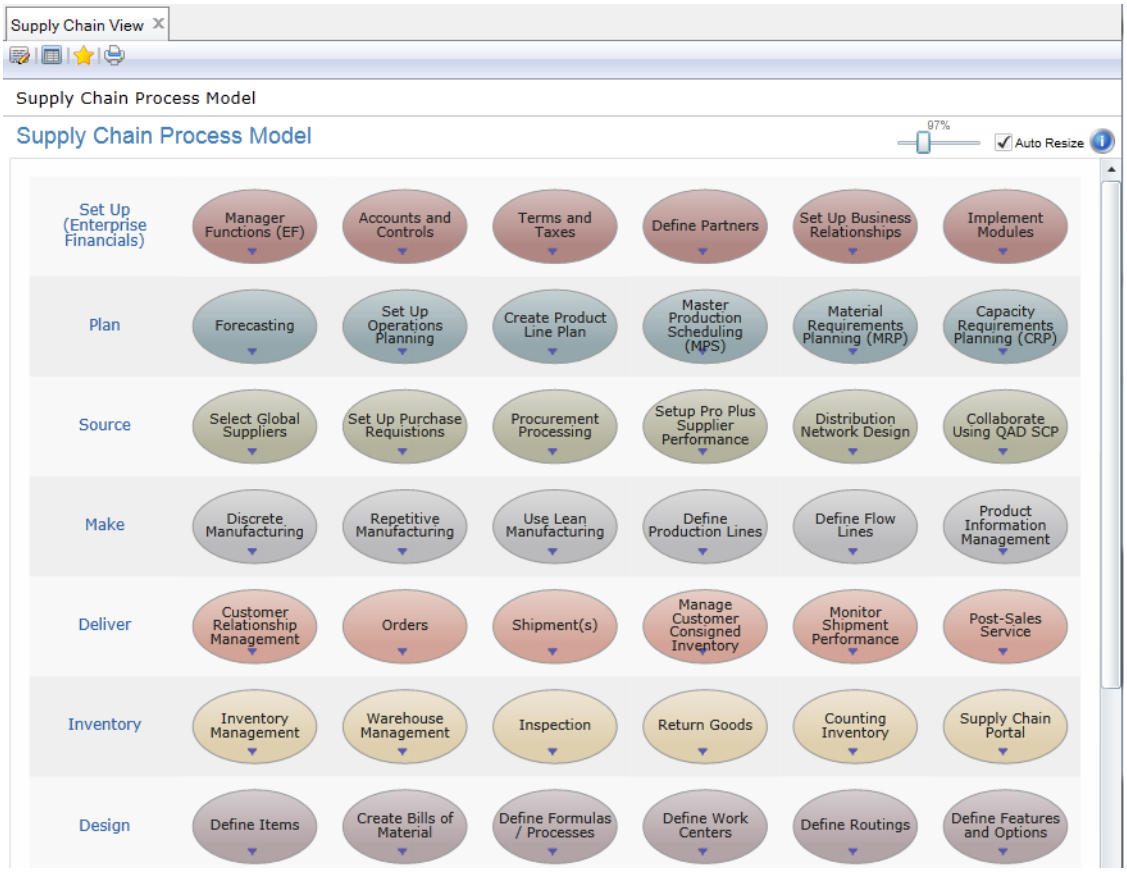
This chapter includes the following sections:

Using the Process Viewer

The Process Viewer displays process maps, which are graphical representations for workflows.

The process maps display the workflows you need to follow as you use the system. Process maps can link to programs, browses, documents, or other process maps.

When you open a process map from the menu system, the Process Viewer launches and displays the map. For example, in the Applications pane, navigate to Processes | Process Maps and click Supply Chain View to view the Supply Chain Process Model map.



Next, click any of the ovals (or, nodes) in the Supply Chain View map to go to other maps. For example, click the Forecasting node to view the Forecasting Sales map.

Process map nodes can include tool tips that pop up when you move your cursor across a node.

To resize the display of a process map, use the resize (indicated as a percentage) slider or the Auto Resize checkbox, both located near the upper-right corner of the viewer.

On the upper-left, the following options are available:

- Edit Process. Click this button to access menus for customizing the process map. For more information, see “Editing Process Maps from the Process Viewer” on page 159.
- Process Label Maintenance. Click this button to get a listing of all the process map labels. These are the labels for all the text on the process maps. For more information, see “Process Label Maintenance” on page 178.

- Add To Favorites. Click this button to add the process map to your Favorites pane.
- Print. Click this button to print the process map.

Editing Process Maps from the Process Viewer

To edit a process map from the Process Viewer:

1. Click on the Edit Process icon in the upper-left corner of the screen.
2. Along the left side of the screen, a set of menus is displayed:
   - Title. Enter a new title for the process map.
   - Grid Properties. For more information, see “Grid Properties Menu” on page 164.
   - Style Properties. For more information, see “Style Properties Menu” on page 165.
   - Process Properties. For more information, see “Process Properties Menu” on page 166.
   - Connector Properties. For more information, see “Connector Properties Menu” on page 167.
   - Node Properties. For more information, see “Node Properties Menu” on page 168.
   - Row and Column Properties. For more information, see “Row and Column Properties Menus” on page 173.
3. Click Save to save the modified process map or click Close to exit edit mode.

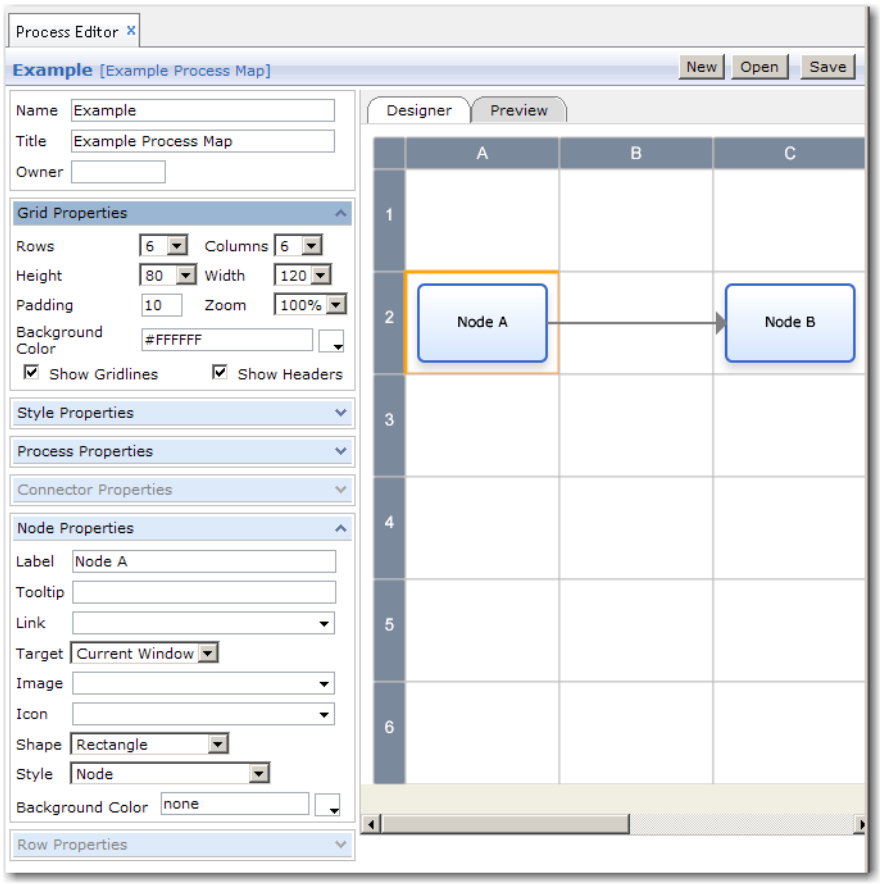
Using the Process Editor

With the Process Editor, you can build graphical models of workflows that link to programs and browses. These processes, or process maps, are clickable image maps that have associated URLs. The URLs can point to various resources such as images, video, audio, and documents, as well as programs. Any application that can be viewed in a browser can be associated with one of the locations on a process map.

Note The QAD .NET UI only displays Administration programs such as the Process Editor for users who have security privileges or who are members of a defined administration group.

To open the Process Editor, choose Administration|Process Editor.

Fig. 5.1
Process Editor



The Process Editor has the following areas:

- On the top, options for creating a new process, opening a process, and saving a process.
- Tabbed views for developing the process map (Designer) and previewing the process map (Preview).
- On the right, a grid displays the process being created or maintained.
- On the left, various property editors let you modify aspects of a process. Use a different property editor for process information, process properties, nodes, connectors, styles, and the process grid.

Some editors become active only when the appropriate object is selected. For example, the Node Properties editor is available only when a node is selected.

Before you begin creating processes, you can update default properties, or use those supplied with the system. You can:

- Define the appropriate size for the drawing grid.
- Set up styles you want to use.
- Set up any variables needed for URLs.

To begin creating a process:

1. Click in the grid to add a node with the default rectangular shape.
2. Use Node Properties to modify the node and assign other values.
3. To add a connector, select the first node by clicking. Hold down Shift and click the second node. A connector is added pointing from the first to the second node.
4. Use the Connector Properties to modify the connector and assign other values.

To delete a node or connector:

1. Click the node or connector to select it.
2. Press the Delete key on your keyboard or right-click the node and choose Delete from the context menu.

Creating a Process

Processes are built with two basic components:

- *Nodes* are represented by various shapes and typically indicate a step within the process.
- *Connectors* are lines with arrows that indicate the direction of execution for the steps (nodes) within the process.

To create a new process:

1. Click New at the top of the Process Editor. The grid is cleared so you can begin defining a new process.
2. Assign the process a name and optional description and owner; then click Save. Process names can contain letters, numbers, underscores, and hyphens; spaces are not allowed.
3. Add nodes and connectors as needed.

Opening a Process

You can modify an existing process by opening it in the Process Editor:

1. Click Open on the Process Editor Menu Bar.
2. To reorder processes, click a column heading to sort by that column. Click the same column heading for a reverse sort. The arrow next to the primary sort column name indicates the direction of the sort (ascending or descending).
3. Click the name of the process you want to edit. The process displays in the grid and the Open screen is closed.
4. If you leave the index open for a period of time, click Refresh to regenerate the index based on your latest changes.

Previewing a Process

Previewing a process lets you see the process the way users would see it in a browser. You can also test links to ensure they work correctly. If you are using variables defined with Process Properties, the variables are fully expanded during preview.

To preview a process:

1. Create a new process or open a process to preview.
2. Click the Preview tab in the Process Editor.
3. The process displays in the tab window. All of the URLs that are part of the process are active. You can click them to test the related actions. In addition, images not viewable in the editor display in preview mode.

Use the Language drop-down list to select a language in which to preview the map. This option allows you to edit processes in the language in which they will be saved.

The preview slide button lets you view the map at up to 200% of original size, and you can select the Auto-Resize field to ensure that the map resizes to the screen width and height when you click to preview it.

Saving a Process

Click Save at the top of the Process Editor to save your updates. the system displays a confirmation prompt.

If this is a new process, you must specify a name in Process Properties before you can save your changes.

Deleting a Process

To delete a process:

1. Click Open at the top of the Process Editor.
2. Click the check box next to the name of the process you want to delete. Click multiple check boxes to delete multiple processes. You can sort columns to facilitate selection.
3. Click Delete All Checked.
4. You are prompted to confirm the deletion. Click OK to continue.
5. The process file or files are removed from the operating system.

Associating URLs with Processes

One of the powerful features of the Process Editor is its ability to associate URLs with nodes and connectors. These URLs can point to many different types of files. You can configure them to open in a new window, or replace the content in an existing window.

You can use URLs to:

- Execute audio files.

- Display movies.
- Open documents in portable document format (PDF).
- Display images.
- Open Microsoft Word documents
- Open catalogs, training material, and help files.

In addition to these external resources, processes typically link to other processes and programs. For instance, you can create nested processes that together build a more complex model.

When you specify a URL, you can enter the full path relative to your computing network. However, if you do this, you may not be able to use the processes if your network setup changes. You will also have problems executing them from other systems if you want to deploy them to multiple sites.

To execute a program from a process requires knowing the application program interface (API) for calling the program.

To simplify the use of URLs and ensure that they are portable, you can use a set of variables when defining URLs. Values for these variables are defined in a file named process-config.xml. This file is located in:

TomcatInstallDir`/webapps/qadui/WEB-INF/conf/process-config.xml`

These values can be updated if needed using the Process Admin menu. All of the processes that use the variables are then updated automatically.

Note In addition to variable values, `process-config.xml` contains default values for other process properties. These can also be modified if necessary.

Several variables are supplied with the Process Editor. These variables have a global scope since they apply to all processes. They cannot be modified in the Process Editor.

You can also create your own variables. The scope of user variables is local. They apply only to the current process. See “Process Properties Menu” on page 166.

Process Editor Menu Bar

The Process Editor menu bar includes the following:

New. Clears the grid so you can begin creating a new process map.

Open. Opens a window from which you can choose an existing process map. Select a map by clicking the hyperlinked name.

When you have modified a process map, and saved your changes, use the Refresh button in the Open screen to refresh the

Save. Saves the process map currently in development

Process Label Maintenance. Use this option to define the text for the label keys in all the available languages. See “Process Label Maintenance” on page 178.

Process Information Menu

Use Process Information to assign a name, title, and owner to a process.

Name. Assign the process a name. The process name is the physical file name on the operating system. You can use alphanumeric characters, hyphens, and underscores in the name; you cannot use spaces or the following characters:

! @ # $ % ^ & * ( ) + = [ ] { } | \ : ; " ' < , > > / ? ` ~

You must assign a name before you can preview or save a process.

Title. Assign a title to the process map. You can use any characters in the title. Assigning a title to the process map is recommended.

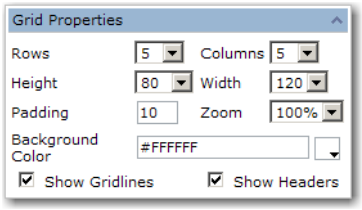
Owner. Assign the process an owner. This is the person responsible for updating and maintaining the process. Owner is optional.

Note Owner information is maintained within the process file. It does not indicate operating system file permissions, which are managed on the Web server.

Grid Properties Menu

Use the Grid Properties menu to customize the grid.

Fig. 5.2
Grid Properties



Rows. The number of rows in the grid. A warning displays if your change would cause nodes or connectors to be deleted.

Columns. The number of columns in the grid. A warning displays if your change would cause nodes or connectors to be deleted.

Note You can specify from 1 to 12 rows and columns in the grid. The default is 6. If you specify a larger number, you may need to reduce the size of the cells in the grid or reduce the zoom percentage so that you can see the entire process definition as you work with it.

Note If you are displaying header rows, you can also add and remove columns and rows directly within the grid. When your cursor hovers over the header row, a plus (+) and minus (-) sign appear. Click the plus to add a row or column; click the minus to remove it.

Show Gridlines. Specify whether to show the lines of the grid.

Height. The height in pixels of each grid cell.

Width. The width in pixels of each grid cell.

Padding. The distance in pixels from the edge of a cell to the node in a cell. The padding defines the space around a node within a cell.

Zoom. The scaled view of the grid expressed as a percentage.

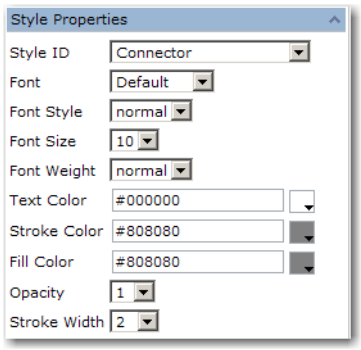
Background Color. The background color of the grid. Use the color selector adjacent to the field to click on a color.

Show Headers. Specify whether to show the row (1, 2, 3, ...) and column (A, B, C, ...) headers. These are the rows with numbers and letters that can be used to identify grid blocks.

Style Properties Menu

Use Style Properties to modify attributes of system-defined styles. Associate styles with nodes in Node Properties and with connectors in Connector Properties. Style attributes are immediately visible when applied to a node or connector in the grid.

Fig. 5.3
Style Properties



Style ID. The predefined styles include the following:

- Connector is the default style associated with a connector.
- Link Node is the default style associated with a link node.
- Mouse Over Node changes the style of a node when the mouse is pointing to it.
- Node is the default style associated with a standard node.
- Plan is the default style for plan nodes in QAD-supplied process maps.
- Source is the default style for source nodes in QAD-supplied process maps.
- Make is the default style for make modes in QAD-supplied process maps.
- Warehouse Mgmt is the default style for warehouse management nodes in QAD-supplied process maps.
- Financial & Acct Mgmt is the default style for financial and account management nodes in QAD-supplied process maps.
- Human Resource Mgmt is the default style for human resource management nodes in QAD-supplied process maps.
- Setup is the default style for setup nodes in QAD-supplied process maps.
- Style 1, Style 2, Style 3, and Style 4 are predefined styles you can further customize.
- Text Node is the default style for a text node.
- Disabled lets you disable a node in a process map without deleting it.

Font. Use the pull-down menu to choose from a variety of fonts. When you select the default option, the system selects the most appropriate font for the language in which you are working.

Font Style. Use the pull-down menu to choose a normal or italic font style.

Font Size. Use the pull-down menu to choose the font size.

Font Weight. Use the pull-down menu to choose bold, bolder, lighter, or normal.

Text Color. The text color of the node. Use the color selector adjacent to the field to click on a color.

Stroke Color. The stroke color, which is the color of the node border line. Use the color selector adjacent to the field to click on a color.

Fill Color. The fill color, which is the background color inside the node. Use the color selector adjacent to the field to click on a color.

Opacity. The opacity of the fill color. Use the pull-down menu to select from .1 (nearly transparent) to 1 (opaque).

Stroke Width. The width in pixels of the border line of the node (or the connector between two nodes, if the style applies to connectors).

Adding or Modifying Styles

A system administrator can add additional styles or modify the default attributes of the system-defined styles.

Styles and their attributes are defined in the *`TomcatInstallDir`*`/webapps/qadui/WEB-INF/conf/process-config.xml` file. Any changes you make to this file are reflected in the Style Properties editor.

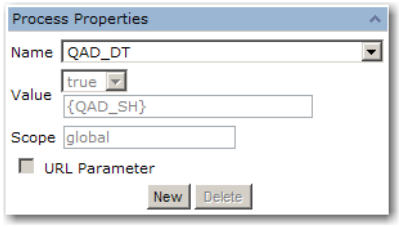
However, if you modify styles, be aware that the style attributes are embedded in the XML used to define a process. If you change a style that has already been used, existing processes are not affected.

To change the style in an existing process, you must open it and change the style attributes in the Style Properties editor.

Process Properties Menu

The Process Properties menu displays variables for use with individual processes. You can create your own local variables for use with individual processes. You can see the value of global variables, but you cannot modify them with this editor.

Fig. 5.4
Process Properties



Name. The name of a variable.

Value. The value of the variable. For example, the value for the `QAD_SHELL` global variable is `qadsh://menu/invoke?menuitem-key=,` which invokes the QAD Shell URL.

Scope. The scope of the variable, which can be either global or local.

URL Parameter. This check box indicates if the variable is added automatically to every URL in the process.

New. Click this button to create a new local variable. For more information, see “Creating Process Properties Local Variable” on page 179.

Delete. Click this button to delete a local variable. You cannot delete QAD-reserved variables, which are global.

Creating a Process Properties Local Variable

Use Process Properties to create your own variables for use with individual processes. These variables have local scope. You can see the value of global variables, but you cannot modify them with this editor.

To create a local variable, follow these steps:

1. Click New. You are prompted to specify the name of the new variable.
2. Enter a name and click OK. The new variable is added to the drop-down list in the Process Properties.
3. Choose the new variable from the list. Scope automatically defaults to local and cannot be changed.
4. Enter a value for the variable.
5. Click the URL Parameter check box if you want the new variable to be added automatically to every URL in this process.

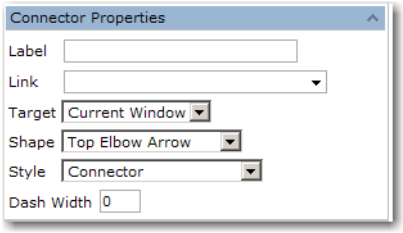
You can use the Delete button to delete a local variable. You cannot delete QAD-reserved variables (global scope).

See “Process Properties Menu” on page 166

Connector Properties Menu

Use Connector Properties to modify attributes of connectors.

Fig. 5.5
Connector Properties



Label. A text string that specifies a label for the connector. The label uses the font attributes associated with the style. While you can specify a long label, you typically want to constrain the label to the size of its connector.

Link. A URL associated with the connector. When a user clicks on the connector, the URL is launched in a new or current window, based on the value of Target. You can use variables with URLs so that your processes are not confined to one computing environment.

Target. The target window to use when the URL specified in the Link field is activated. Choose the following from the pull-down menu:

- New Window. The URL opens in a new window. The process window remains open.
- Current Window. The URL replaces the contents of the current window.

Shape. The shape of the connector. Choose one of the following shapes from the pull-down menu:

Straight Line

Straight Arrow

Top Elbow Line

Top Elbow Arrow

Bottom Elbow Line

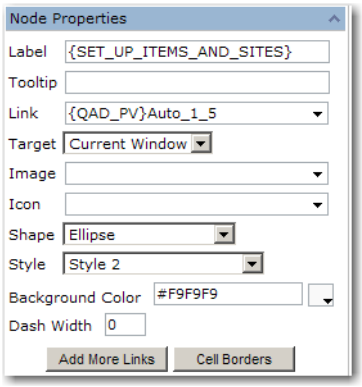
Bottom Elbow Arrow

Style. The style of the connector. The style determines the color, line width, and font attributes of the connector's label. The available styles are defined in the Style Properties menu. For more information, see "Style Properties Menu" on page 165.

Node Properties Menu

Use Node Properties to modify aspects of a node.

Fig. 5.6
Node Properties



Label. A text string that specifies a label for the node. The label uses the font attributes associated with the style. While you can specify a long label, you typically want to constrain the label to the size of its associated node. To specify line breaks, you can include the `<br>` tag in the text. Use the up and down arrow keys to select from the existing label definitions.

Tooltip. A text string that specifies a tool tip for the node. To specify line breaks, you can include the `<br>` tag in the text. You can have up to four lines. The title for the tool tip is the node label, as specified in the Label field.

Link. Enter a URL or select from the pull-down menu options, which include the following:

Choose File. Use this option to browse to and select a file, such as an MS Word document.

Menu Lookup. Use this option to select a program.

Process List Lookup. Use this option to select a process map.

Target. The target window to use when the URL is executed. Choose the following from the pull-down menu:

New Window. The URL is opened in a new window. The process window remains open.

Current Window. The URL replaces the contents of the current window. You must use this setting whenever the destination URL is a program.

Image. The full path or URL for an image to be associated with this node. This image is used instead of any shape specified in the Shape field. This image displays in the Process Editor only when you specify a literal path. If you use the QAD_DT_IMG variable, you must click Preview to expand the variable and view the graphic. The system sizes the image to fit into the cell height and width. Ensure that the image is correctly proportioned for the cell size or it may be distorted.

Icon. The full path or URL for an image of an icon to be associated with this node. The icon displays in the lower right corner of the node when viewed in the Process Viewer. To view the icon included in the node while using the Process Editor, click the Preview button.

Shape. The shape of the node. Choose the following shapes from the pull-down menu:

Rectangle. (If your grid height and width are the same, the Rectangle setting displays as a square.)

Ellipse. (If your grid height and width are the same, the Ellipse setting displays as a circle.)

Diamond

Report

Manual Operation

Manual Input

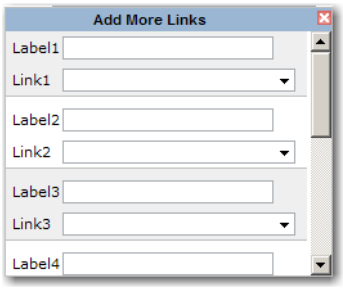
Style. Choose a style from the pull-down menu. The style determines font attributes, color, line width, and filter. Style attributes are immediately visible in the grid area. The available styles are defined in the Style Properties menu. For more information, see “Style Properties Menu” on page 165.

Background Color. The background color of the node. Use the color selector adjacent to the field to click on a color.

Dash Width. The length in pixels of dashed lines and the spaces between dashed lines for the node border (or the connector between two nodes, if the style applies to connectors). If set to zero (0) or left blank, the line is a solid line. You can enter two values separated by a space to specify the length in pixels of each dash and the space in pixels separating each dash. For example, 2 5 specifies that each dash has a length of two pixels and that the space between each dash is five pixels.

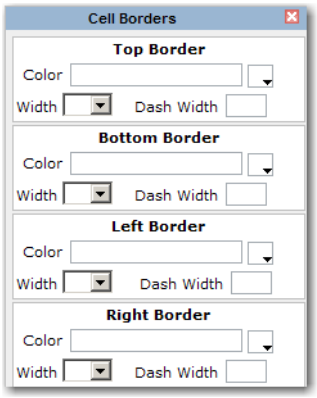
Add More Links. You can add up to eight URLs as links on a process map node. Enter text in the Label field for the label text of the link. Enter the URL in the Link field.

Fig. 5.7
Add More Links



Cell Borders. You can specify the color, width, and dash width of the top, bottom, left, and right borders of the cell in which the node is located.

Fig. 5.8
Cell Borders



Adding an Operational Metric to a Process Map

Operational metrics are visual representations of browse data, and can be imported into process maps as node images.

When you generated and save a metric, the saved metric is stored in the `{QAD_HOMESERVER}configurations/<environment_name>/storage/metrics_images` directory and can be imported into a process map as a .PNG file. The metric can only be used in a process map when it has been generated and saved.

To access these files, you must:

- Identify their storage folder as a Process Properties variable.
- Identify the name of the metric graphic file URL as a process map node link. This ensures that the metric image is linked to the original operational metric, and lets you drill down from within the process map.
- Identify the name of the metric graphic file as a process map node image.

Use the following steps to import metrics as map images:

1. Set the metrics storage folder in the *QAD_METRICS_IMAGE* variable on the Process Properties screen.

   The Metric Groups variable has the syntax

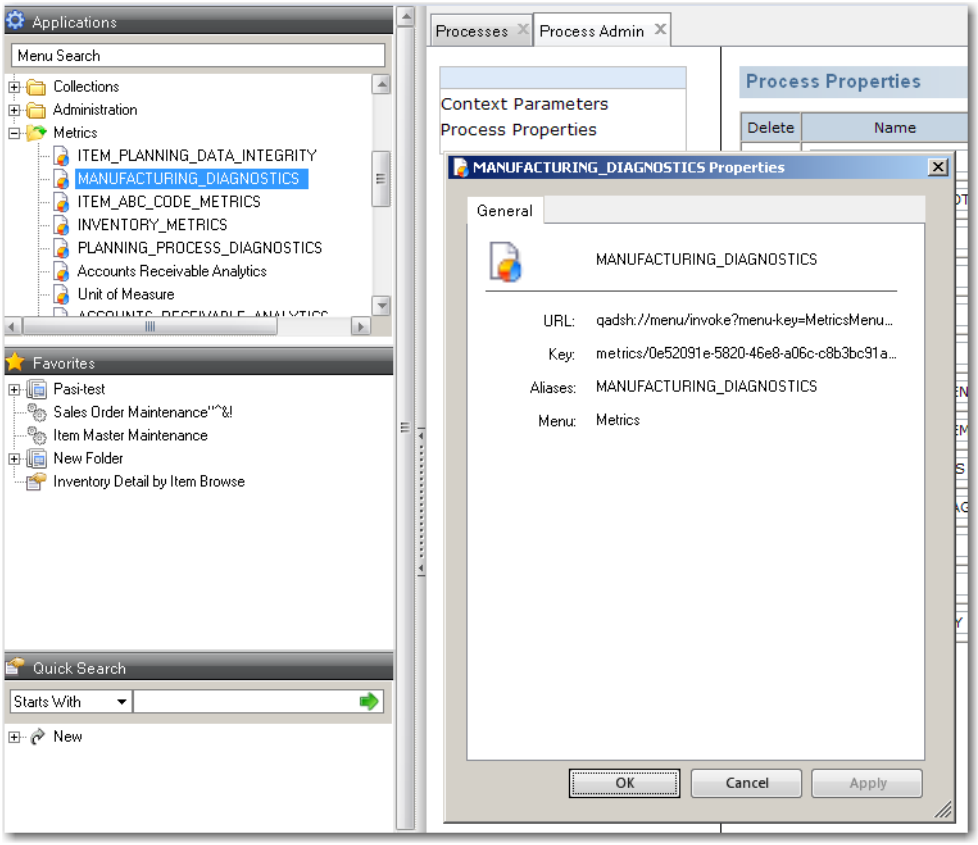
   `{QAD_HOMESERVER}GetMetricImage.jsp?config=<environment>&key=`

   where `<environment>` is the name of the environment to which you log in.

   See “Process Properties Menu” on page 166 for details.

2. Click Apply to apply the change, and Refresh to refresh the configuration.
3. In the Metrics folder of the Applications area, select the metric you want to import into the process map.
4. Right-click the metric name to view its properties.

Fig. 5.9
Operational Metric Image Properties



The properties dialog identifies the metric URL and the metric image name.

The metric URL consists of a QAD Shell command followed by the name of the metric image, for example:

```
qadsh://menu/invoke?menu-key=MetricsMenu&menuitem-key=a23618a2-e86b-4360-80ee-67668e6b2baa
```

The identifying keys for metrics are typically long random strings; for example:

```
a23618a2-e86b-4360-80ee-67668e6b2baa
```

5 Run Process Editor, and open an existing process map or create a new one.

6 Select a Node Cell.

7 In the Node Properties, Link field, enter the metric URL. For example:

```
qadsh://menu/invoke?menu-key=MetricsMenu&menuitem-key=0e52091e-5820-46e8-a06c-c8b3bc91a152
```

8 In the Node Properties, Image field, enter the identifying key for the metric.

You must include the metric variable prefix and the .PNG file extension in the metric key.

For example, to include the Manufacturing Diagnostics metric displayed in Figure 5.9, enter the following in the Image field:

```
{QAD_METRICS_IMAGES} 0e52091e-5820-46e8-a06c-c8b3bc91a152.png
```

Click Preview to view the metric image in the map. The metric image is now displayed in the process map cell, and you can click the metric image to display the operational metric.

Row and Column Properties Menus

Use the Row Properties or Column Properties menu to specify the background color of a row or column.

To access the menu, select a row or column by clicking on the row header or column header.

Background Color. The background color of the row or column. Use the color selector adjacent to the field to click on a color. The most recently selected color takes precedence in a cell whose row and column have different colors.

Process Map Configuration Settings

Starting with QAD .NET UI 2013 – Enterprise Edition, the process map viewer, editor, and related components are installed on the home server as a stand-alone web application named `pronav` (`tomcat/webapps/pronav`). The following settings in the client session configuration file (`client-session.xml`) specify the default configuration:

```
<!-- Process map settings -->
<ProcessMapBaseUrl>${DesktopProtocol}://${DesktopHost}:${DesktopPort}/pronav</ProcessMap-
BaseUrl>
  <qad.url.process.editor>${ProcessMapBaseUrl}/ProcessEditor.jsp</qad.url.process.editor>
  <qad.url.process.viewer>${ProcessMapBaseUrl}/ProcessViewer.jsp</qad.url.process.viewer>
```

Previously, the process viewer and editor were in `/tomcat/webapps/<environment>` and the process map content was in `/tomcat/webapps/<environment>/WEB-INF/pronav.`

Now, process maps are included in an environment named `pronav` (`/tomcat/webapps/pronav`) by default. A benefit of this approach is that you can now define a single process map installation that can be shared across multiple environments.

Note The configuration setting for the process map images (QAD_IMG), set in Administration | Process Admin, requires a fully qualified domain name. The settings include a QAD_PMAP_ROOT setting to specify the URL to the process map installation (`http://server.domain.com:port/pronav/`), and then the QAD_IMG setting is `{QAD_PMAP_ROOT}images/`.

Using Process Admin

You can configure the process map context parameters and process properties using Process Admin. To access Process Admin, select Administration|Process Admin.

Click Refresh to update the view of context parameters and process properties.

Setting Context Parameters

The Process Admin's Context Parameters page displays variables needed by the Process Editor.

Note Double-check any changes you make to the settings. A mistake that is easy to make but difficult to notice is a blank space at the end of a value. The value appears to be correct but is really incorrect because of the blank space at the end.

1. Choose Process Admin|Context Parameters and edit the Context Parameters page. For more information, see “Context Parameters Screen” on page 174.
2. The page displays with defaults for all context parameters. Some of these are derived from values specified during the build process. Typically, most of these parameters do not need to be changed.
3. Click Save when you are done making any changes.

Refresh

When you modify a Process Map context parameter, click Save to save the change, and then Refresh to update the process map function configuration. The screen now displays a refresh status, and indicates when the refresh is complete.

Note Deleting the browser history also has the effect of refreshing the configuration. You can use Tools, Delete History to delete the Internet Explorer history cache.

Context Parameters Screen

Use the Process Admin’s Context Parameters page to set administration parameters. Typically, these parameters are set for you during the QDT-based installation process for QAD Enterprise Applications — Enterprise Edition, but are described here for your reference.

Menu Lookup Result Size. Enter a value that determines the number of records returned when a user displays the Program Lookup associated with the URL field in Node Properties and Connector Properties. The default is 100.

Menu Lookup Timeout. Enter the number of minutes the system should retain menu information in memory. When a user uses the Program Lookup, the system connects to the active database using the URL specified in Menu Lookup URL and reads the menu information from the database. This information is held in memory for the number of minutes specified in this parameter. The default is 30.

Menu Lookup URL. Enter the full URL the system should use to connect to a database when it reads menu records to display in the Program Lookup. The URL is the WebSpeed Workshop path, except instead of `/workshop` at the end of the URL you have the string for the WebSpeed API menu lookup: `/com/qad/nav/xmenu.p?Action=MenuLookup.`

For example, if the WebSpeed Workshop path is:

`http://host:port/environment/cgi-bin/wspd_cgi.sh/WService=QADMFG_WS/workshop`

The Menu Lookup URL would be:

`http://host:port/environment/cgi-bin/wspd_cgi.sh/WService=QADMFG_WS/com/qad/nav/xmenu.p?Action=MenuLookup`

If the home server and port is `http://example.qad.com:17170` and the environment is `production-1`, the Menu Lookup URL would be as follows:

```
http://example.qad.com:17170/production-1/cgi-
bin/wspd_cgi.sh/WService=QADMFG_WS/com/qad/nav/xmenu.p?Action=
MenuLookup
```

Note that you can verify the Menu Lookup URL by entering it in a web browser; if the URL is valid, an XML listing of menu items is displayed.

Properties Directory. Specifies the directory path where the language properties files are located (such as `WEB-INF/pronav/properties`).

SVG Directory. Specifies the directory path where the SVG files created with the Process Editor are stored. The path is relative to the *`TomcatInstallDir`*`/webapps` directory.

URL Lookup. Specifies the file to use for generating the listing of programs associated with the URL field in Connector and Node Properties. By default, this is `MenuLookup.jsp`.

XML Directory. Specifies the path to the directory where the XML files created with the Process Editor are stored. A file created with the Process Editor is initially saved in XML format and then converted to SVG using a stylesheet built with the Extensible Stylesheet Language (XSL). The path is relative to the *`TomcatInstallDir`*`/webapps` directory. For Enterprise Edition, process maps are stored in the *`TomcatInstallDir`*`/webapps/WEB-INF/pronav/xml/eB3` directory, so the default setting is `/WEB-INF/pronav/xml/eB3`.

SVG XSL Path. Specifies the path to the XSL file used to convert process files from XML to SVG format, typically `WEB-INF/pronav/xsl/process.xsl`. The path is relative to the *`TomcatInstallDir`*`/webapps` directory. This file was installed during installation.

Silverlight XSL Path. Specifies the path to the XSL file used to convert process files from XML to Silverlight format, typically `WEB-INF/pronav/xsl/process_sl.xsl`. The path is relative to the *`TomcatInstallDir`*`/webapps` directory. This file was installed during installation.

Use Silverlight Viewer. Use this option to set the default process map viewer. Default is `Yes`.

Setting Process Properties

The Process Admin's Process Properties page displays variables that let you set up URL links in the Process Editor without using hard-coded values. This ensures that your processes can be used in multiple environments, if necessary.

The Process Admin's Process Properties page displays variables that let you set up URL links in the Process Editor without using hard-coded values. This ensures that your processes can be used in multiple environments, if necessary.

Note Double-check any changes you make to the settings. A mistake that is easy to make but difficult to notice is a blank space at the end of a value. The value appears to be correct but is incorrect because of the blank space at the end.

1. Choose Process Admin | Process Properties.
2. Edit the Process Properties page. For more information, see the "Process Properties Screen" on page 176

3 The process properties variables also display in the Process Properties Menu, but cannot be changed there. The default values can only be changed using Process Admin|Process Properties. The only variable you may need to change is QAD_DT_DOC_ROOT. The values of other properties are determined by QAD.

4 After making any changes, click Apply to save the new values.

5 Click New to insert a new row for defining a variable. When you create variables with the Process Properties editor, you can create local variables only. You can define new global variables using Process Admin | Process Properties, and delete existing variables.

Warning If you delete any of the QAD-supplied variables, the sample processes no longer work properly.

Process Properties Screen

These variables display in the Process Properties Menu, but cannot be changed there. The default values can only be changed using Process Admin | Process Properties. The only variable you may need to change is QAD_DT_DOC_ROOT.

Attachments. Specifies a full URL or a directory path for locating attachments for easy on-boarding (EOB) process maps. If just a directory path is specified, the link to the attachment will be relative to the URL to the process map (pronav) environment. Note that the pronav URL is shown in the Help | View Configuration menu (search for the "processmapbaseurl" setting).

QAD_CONTENT. Specifies a URL for locating content in a directory under QAD_DT_DOCROOT, such as:
`{QAD_DT_DOCROOT}/content/`

QAD_CONTENT_IMG. Specifies the directory name for locating content (typically images) such as:
`/content/`

QAD_DT. Invokes a menu item based on the program name. Set to `{QAD_SH}`. (Previously set up the API between a process and the Desktop.)

QAD_DT_DOC_ROOT. This directory is unique to each installation. It specifies the root directory where Desktop is installed on the Web server.

You can append other directories to this variable to locate specific resource files.

QAD_DT_IMG. This variable points to the images directory below the Desktop installation directory defined in QAD_DT_DOC_ROOT.

QAD_HOMESERVER. This variable is a URL that points to the root directory for the QAD .NET UI application home server. The home server URL is shown in the Help | View Configuration menu (search for the "homeserver" setting). Note that the QAD_HOMESERVER setting typically requires a backslash at the end of the URL (example: `http://localhost:8080/qadhome/`) because this variable is used to define URLs in other variables such as QAD_METRICS_IMAGES.

QAD_IMG. This variable points to the images directory in the process map installation directory defined in QAD_PMAP_ROOT.

Note If you want to store your images in some other location, you can create a new variable such as `QAD_IMAGES` and specify its value as the full path (for example, `http://path/images/`) to where you are storing the images. The path value must be explicitly specified or you can use the `{QAD_PMAP_ROOT}` or `{QAD_HOMESERVER}` variables as part of the path.

QAD_IMG_DOCUMENT. This variable points to the image file used as the icon in a node when in the Process Editor you select the Choose Document option from the Link pull-down in Node Properties. The image file is located in the directory set by the {QAD_IMG} variable.

QAD_IMG_MENUITEM. This variable points to the image file used as the icon in a node when in the Process Editor you select the Menu Lookup option from the Link pull-down in Node Properties. The image file is located in the directory set by the {QAD_IMG} variable.

QAD_IMG_PROCESS. This variable points to the image file used as the icon in a node when in the Process Editor you select the Process List Lookup option from the Link pull-down in Node Properties. The image file is located in the directory set by the QAD_IMG variable.

QAD_METRICS_IMAGES. This variable uses a JSP page to retrieve operational metrics images from the home server.

For example,

`{QAD_HOMESERVER}GetMetricImage.jsp?config=env-1&key=`

For the `config=` setting, enter the environment name (for example, `env-1`). The key element of the variable is used to import operational metric images into process maps. See “Creating Browse Operational Metrics” on page 124.

QAD_PMAP_ROOT. Specifies the URL to where the process map environment (pronav) is installed. (The default setting is `http://localhost:8080/pronav/`). The URL is shown in the Help | View Configuration menu (search for the “processmapbaseurl” setting). Note that the QAD_HOMESERVER setting typically requires a backslash at the end of the URL (example: `http://localhost:8080/qadhome/`) because it can be used to define other variables, such as QAD_IMG.

QAD_PV. This variable opens the Process Viewer (default is `ProcessViewer.jsp?ProcessName=`).

QAD_PE. Use this variable to open the Process Editor (default is `ProcessEditor.jsp?Action=load&ProcessName=`).

QAD_SEARCH. This variable specifies the URL for searching the QAD Document Library (default is `http://search.qad.com/search?site=qad_proddoc&client=portal_doclib&output=xml_no_dtd&proxystylesheet=portal_doclib&getfields=*&proxyreload=1&filter=p&access=p&q=`).

QAD_SEARCH_LBL. This variable specifies the text of the link on process maps for searching the QAD Document Library (default is `Documentation Search`).

QAD_SEARCH_LOCALE. This variable specifies the language code for searching the QAD Document Library (default is `en`).

QAD_SH. This variable is the QAD Shell URL for invoking a menu item based on the program name (`qadsh://menu/invoke?menuitem-alias=`). For example, for Sales Order Maintenance, you would use `sosomt.p` as the program name.

QAD_SH_MENU_KEY. This variable is the QAD Shell URL for invoking a menu item based on the program key (`qadsh://menu/invoke?menuitem-key=`). For example, for Sales Order Maintenance, you would use 7.1.1 as the program key.

QAD_SH_REPORT. This variable is the QAD Shell URL for invoking a report based on the report code (`qadsh://report/invoke?report-code=`).

Multiple Language Support for Process Maps

In a process map, each node has a label that specifies the text that is displayed on the node. Although you can enter text directly in the Label field, a better approach is to reference a label key.

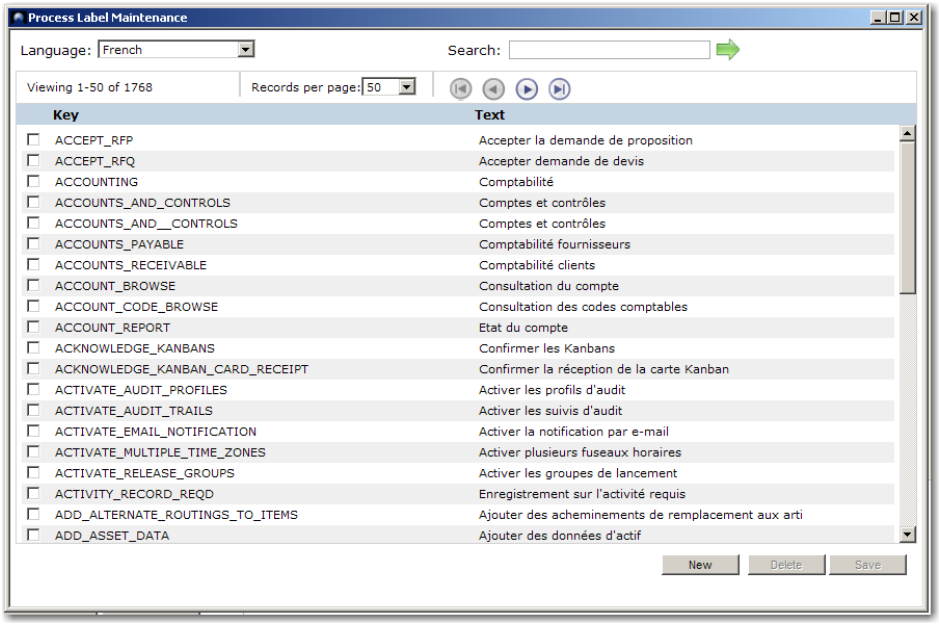
The process maps include many label keys whose text has been translated into multiple languages. You can review all the available label keys using Process Label Maintenance (see “Process Label Maintenance” on page 178).

If you are customizing a map and cannot find a label that you would like to use, you can create a new label key using Process Label Maintenance. You can then reuse that label key in other maps you create rather than re-entering the text, which can help assure consistency.

Process Label Maintenance

Administrative users can use the Process Label Maintenance program to create and maintain each label key and its associated text for all the available languages.

Fig. 5.10
Process Label Maintenance



From the Language pull-down, select a language; the text for each label is displayed in the selected language. You can search on any label key from the Search field. From the Records per page field, specify the number of records displayed on a page, and use the First Page, Prev Page, Next Page, and Last Page icons to view each page.

Editing Label Text

You can edit the label text simply by placing the cursor in the text area and modifying the existing text. Fields with modified text display a yellow exclamation mark (!) next to them to show they have been modified. If you want to save the modifications, click the Save button in the lower right corner of the screen.

Adding New Label Keys and Text

To add a new label key and text, click the New button in the lower right corner of the screen. In the Process Label Maintenance pop-up window, enter the label key in the Key field and the label text in the Text field. The label key format should be in uppercase with no spaces (for example, `ADD_ASSETS`). Finally, click Save to add the new label key and text. Note that if the label key you enter is the same as an existing label key, the existing key will be replaced by the new one.

Deleting Label Keys

To delete a label key, select the check box next to the label key and then click the Delete button in the lower right corner of the screen. Do not delete a label key unless you are sure you will no longer need it.

Note A button to access the Process Label Maintenance program is also available from the Process Viewer. The button is located in the upper left corner, next to the button for accessing the Process Editor from the Process Viewer.

Chapter 6

Character User Interface

Unlike the QAD .NET user interface, the character user interface depends completely on input from the keyboard. Because it is not a graphical user interface, all navigation is based on:

- A command-prompt interface to execute programs
- Combinations of keystrokes to issue commands within programs
- Navigation without use of a mouse through the UNIX character interface

Component-based functions are accessible only through the QAD .NET UI. You cannot access any of these functions from the Character UI.

This chapter describes the appearance and use of programs from the character user interface.

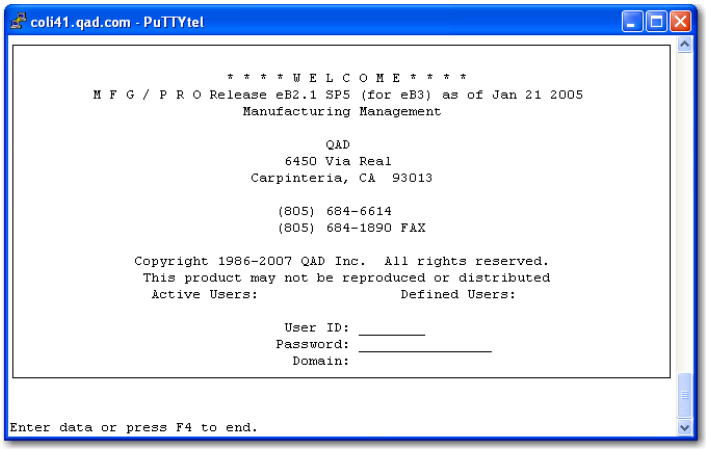
Starting in Character Mode

To start a character session, follow the procedures provided by your system administrator.

The first screen you see after launching the system lets you log in to the system. Enter the login ID assigned by your system administrator and your password. If you have been given access to more than one domain in the system, enter its name in the Domain field. If you have access to only one domain, this domain displays in read-only mode.

You must be a valid user to log in. Your password can be blank only if the password in your user record is blank.

Fig. 6.1
Character Login Screen



Program Interface Elements

This program includes the following:

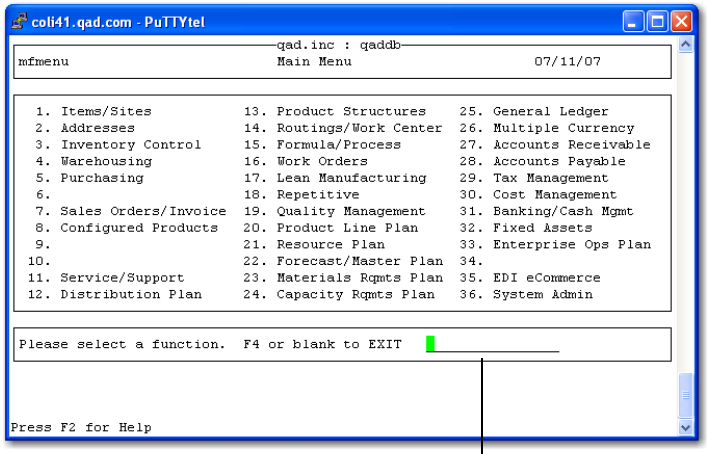
- “Menu System” on page 182
- “Menu Substitutions” on page 183
- “Program Screen Elements” on page 184

Menu System

MFG/PRO has locations for 36 modules on the character-based Main Menu. In turn, each module has one or more menus attached to it. Menus are lists of programs you use to look up or input data.

The menus that you will see depend on the security access that has been granted to your role. Only menus with programs that you have access to display.

Fig. 6.2
Main Menu in Character Mode



When you enter a menu number on the command line, the system either executes a program or displays a lower-level menu. You can keep drilling down through the menus until you reach the appropriate level. Alternatively, you can access a program directly by entering its Progress name—such as ppptmt.p for Item Master Maintenance—or number at the command prompt.

Note You can only run Progress programs that are on the menu this way.

To run a program from the current submenu, enter just its number on that menu; for example, 1. If it is on a different submenu, you must enter its full menu number preceded by a period.

Example If the current menu displayed is System Admin (36), you can enter 24.1 to access Database Control (36.24.1). However, you must enter .1.4.1 to run Item Master Maintenance (1.1.4) because it is on a different submenu.

You can also use the arrow keys to move around the menu, then press Enter to execute the highlighted selection.

Menu Substitutions

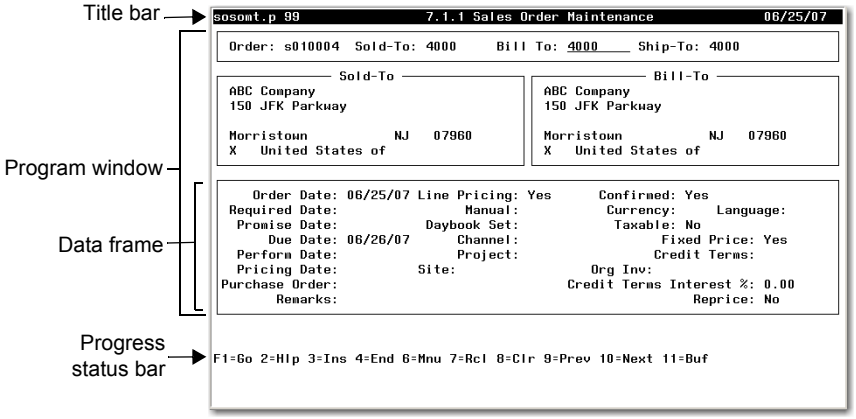
Menu substitution lets you toggle between displaying browses and inquiries on the menu. You can also use it to switch between customized and noncustomized versions of a program. The system administrator can use Menu Substitution Maintenance (36.4.4.7) to specify which programs are substituted for others when you select this option.

By default menu substitution is disabled. It can be enabled for individual users in User Maintenance (36.3.1).

Program Screen Elements

The following is an example of a program in character mode.

Fig. 6.3
Program in Character Mode



Elements of the character user interface are explained in the following sections:

- “Title Bar” on page 184
- “Program Window” on page 185
- “Progress Status Bar” on page 185
- “User Menu” on page 185

Title Bar

The title bar identifies the program currently running. What displays in the title bar depends on the Header Display Mode setting in Security Control (36.3.24). Based on that setting, you may see any of the following elements:

- The title bar includes—from left to right—the program name, the version of the program, the menu number and title, and the current date.
  - The Progress program name, such as `sosomt.p`
  - The program version, such as 99
  - The menu number and title, such as 7.1.1 Sales Order Maintenance
  - The current date
- The title bar is the same as previous except that the login ID of the current user replaces the current date.
- The title bar includes—from left to right—the short name and currency of the current working domain, the menu number and title, and the current date.
- The title bar is the same as previous except that the login ID of the current user replaces the current date.

Some regulatory environments may require the name associated with the ID of the logged-in user to be available from any program. In the character interface, you can use the Ctrl+F key combination to review this information and other context details.

Header Display Mode also affects what you see in the menu titles, which is either:

- The name associated with the current domain followed by the current database name defined in Database Connection Maintenance (36.6.1).
- Only the current database name.

Program Window

The program window displays the frames and fields of the current program.

Getting Help

Two help tools that are accessible from any program window:

- Lookup browses
- Online help

In the character user interface, access help by pressing F2 successively. Up to three help windows display:

- The first time you press F2, a lookup browse displays if one is attached. If not, field help displays first.

  Use lookup browses to view records available to specified fields. You then choose a record to enter in the field.

  If you enter a value and press Enter, the list in the bottom of the browse frame scrolls to the first record that matches that value. Use the arrow keys to scroll through the list, then select the record by pressing Enter.
- Press F2 again to display field help. It describes a specific field and how it is used in the program. Most updateable fields have field help. Display-only fields do not.
- Press F2 again to display procedure help. It describes the program and how it is used in the module. Procedure help is not generally provided for reports, inquiries, browses, or control programs.

Press F4 successively to exit all levels of help and return to the program window.

Progress Status Bar

The status bar shows the basic commands needed to navigate through the specific program currently displayed in the program window. See “Character-Mode Keyboard Commands” on page 192 for a complete list.

User Menu

The User Menu saves time by letting you access a set of predefined programs directly, without entering menu numbers or program names at the command prompt. This way, you can execute a program without having to remember its menu number or Progress name.

Although the menu bar is available only with browses, you can access a User Menu from any program or menu by pressing F6. This listing includes programs specified in User Function Maintenance (36.4.10).

User Function Maintenance lets you assign programs to individual users or to all users. Use the following steps to navigate through the User Menu:

- Press F6 to open a pop-up window listing the programs assigned specifically to your user ID. If no programs are assigned, the list includes programs assigned to the blank user ID (all users).
- Press F4. If you have both user-specific and blank-ID programs assigned, the list updates to display programs assigned to all users. Otherwise, the pop-up window closes.
- Press Tab to move the cursor between the menu number and the program label. The system sorts lexically; for example, 28.13 is listed before 3.18. When you move the cursor to the program label column, the system re-sorts the list alphabetically.
- To run a program from the user menu, use the up and down arrows to select the program. Then press Enter.

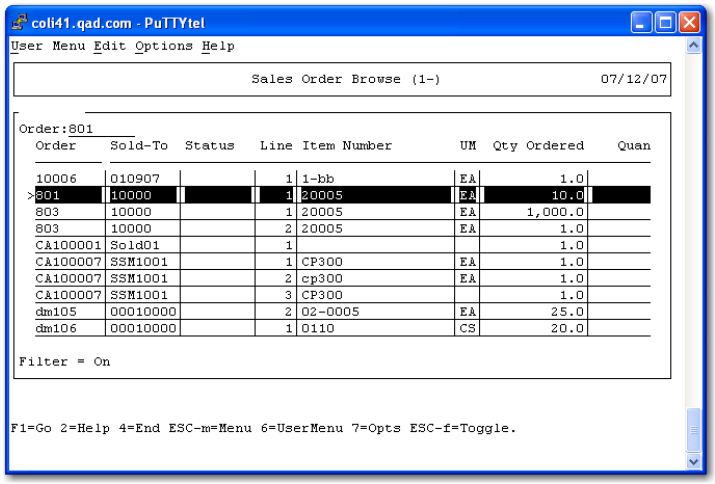
Using Browses in Character UI

Browses display selected data in the form of a table. Browses in the character UI are similar to those in the QAD .NET UI, but have a simpler set of features. Two types of browses are available:

- *Look-up browses* return the value you select to the active field in the calling program.
- *Drill-down browses* display, filter, or print data.

The field values in the browse can come from a table or a view. A view is a table that has selected values from one table or several joined tables.

Fig. 6.4
Character Browse



Browses display several records at a time. To scroll through the records, use the Up and Down arrows.

Configuring Lookups for Multiple Return Values

The majority of field lookups in character mode return one value to the calling field. However, a number of fields return values to several screen fields. For example, when you select a sales order in Sales Order Maintenance, the system returns the sold-to, bill-to, and ship-to address codes for the sales order (when they have been defined).

This mechanism is controlled by the `lookupreturnfields.xml` file, which is stored in the `/tomcat/webapps/<appname>/net/lookups/` folder. Use the following XML element to configure the option:

```
<program>
<program name="<program.p>" screenid="f:<first field>" lookupfield="receiver">
      <returnvalue screenfield="rcvr_line" fieldinlookup="prh_hist.prh_line"/>
   </program>
```

`<program name>` is the menu-level program name.

`<screenid>` is a combination (separated by a colon) of the frame name and the first enabled field on that frame.

`<lookupfield>` is the name of the field that the lookup is attached to. Use CTRL+F to view the name of the field.

`<fieldinlookup>` can be determined by running the lookup, right-clicking on the column of the data you are interested in returning, and selecting Properties.

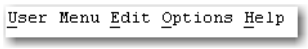
If more than one additional return value is needed, add another `<returnvalue>` element with the appropriate attributes.

Once you have added your data into the XML document, save it, close the QAD .NET UI, and then restart the application.

Menu Bar

In character mode, browses have a menu bar that you can use to perform various tasks.

Fig. 6.5
Browse Menu Bar



To access the menu bar, press Esc-M while a browse is running. You can then select a menu item with one of the following methods:

- Use the left and right arrows to move across to the menu you want. Then use the up and down arrows to highlight an item on the menu. Press Enter to select the item.
- Press the underlined letter for the menu you want to select. The cursor moves to that menu and displays the menu items. Use one of these methods to select an item:
  - Use the up and down arrows to highlight the item you want and press Enter.
  - Press the underlined letter for the item you want.

Note You can use the mouse from Windows character clients.

The following sections describe the items available on each menu in browses.

User Menu

The User Menu in the browse menu bar differs from the User Menu accessed by pressing F6. The User Menu in the browse menu bar provides access to:

- User Menu Items
- Print Options
- Run Program
- Exit

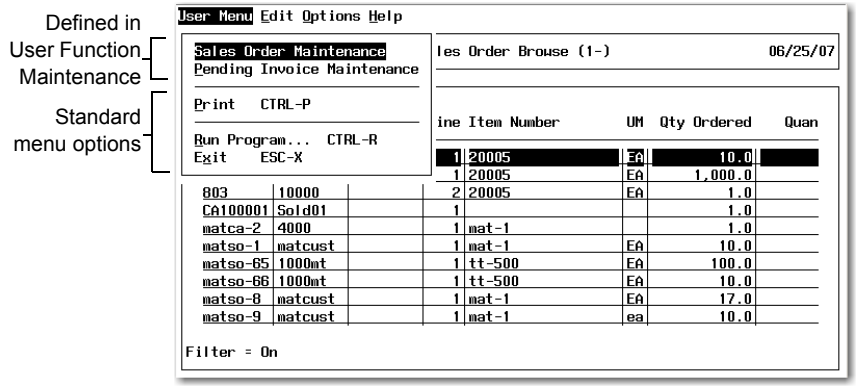
Note You can only run programs that are defined in the menu system.

User Menu Items

User Menu items are user defined; you can use them to jump to other programs. When you exit the second program, the system returns you to the program that was running when you accessed the User Menu.

Programs displayed on the User Menu are defined in User Function Maintenance (36.4.10). This list is always the same, regardless of which program you are running.

Fig. 6.6
User Menu in Character Mode



Print

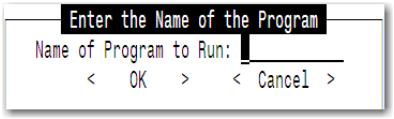
Use this command to display the Printer Options dialog box. You can use this dialog to specify the print destination; for example, a server printer or your terminal. You can also indicate that the output should be placed in a file.

After you select an output device, the Browse Print Configuration window lets you specify the fields to be output. When you select fields, the system displays the number of characters in each line of the output.

Run Program

Run Progress programs with this option. You can run any menu-level program without having to exit the current program.

Fig. 6.7
Run Program Dialog Box



1 Press Esc-M to access the drop-down User Menu and select Run Program (or use the keyboard shortcut Ctrl+R).

2 In the pop-up window, enter one of the following:

- The Progress program name, such as `pptmt`. You do not have to enter the file extension of `.p`.
- A menu number. To run a program from the same submenu as the current program, enter just its number on that menu; for example, enter 1. If it is on a different submenu, you must enter its full menu number preceded by a period; for example, enter .1.4.1 to run Item Master Maintenance.

3 Press Go.

When you exit the second program, the system returns to the program that was running when you accessed the User Menu.

Exit

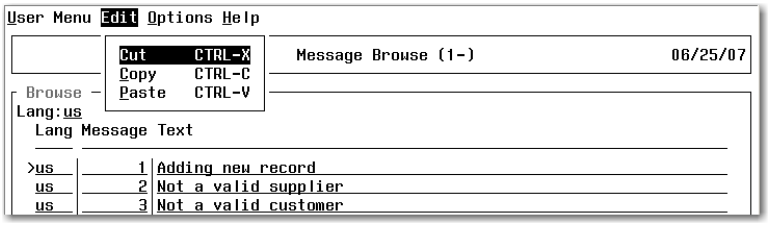
You can exit the current program through the User Menu. You can also exit programs by either of the following methods:

- Press F4.
- Press Ctrl+E.

Edit Menu

Use this drop-down menu to cut, copy, and paste text.

Fig. 6.8
Edit Drop-Down Menu



Cutting text deletes it from its current location and copies it to the clipboard. Copying is similar, but it leaves the original text in place. In both cases, you can paste the text to another location, such as a field.

1 Choose the text to cut or copy.

2 Display the Edit menu. This menu choice is available only when text is selected.

3 Choose Cut or Copy.

4 Position the cursor in the new location.

5 Display the Edit menu and choose Paste.

Options Menu

To turn an option on or off, access the menu, scroll to the option, and press Enter, or type the underlined letter.

Fig. 6.9
Options Menu in Character Mode

Browse Options

Use this option to set up filter criteria for browses. The filter criteria limit the viewable records according to your specifications. For example, you can filter out product numbers or statuses that you do not want to view.

Toggle Filter

Use the toggle filter setting to turn on and off the filter criteria set up in the browse filter options.

Help Menu

Use this menu to access help on fields, as well as display drill downs and lookup browses on selected fields.

Field Help

The fastest way to get help for the current field is by pressing F2 twice (press F2 once and, if available, a lookup browse displays), but you can also bring it up with the Help menu. With the cursor in the field, drop down the Help menu and choose Field Help.

Procedure Help

Procedure help is not included for browses. Choosing this option displays an error message.

Drill-Down

Drill-downs are browses accessed by choosing Drill-Down on the menu. You use drill downs to view records associated with specified fields and programs.

With the cursor in the field, drop down the Help menu and choose Drill-Down.

Lookup Browse

This is the same browse that displays the first time you press F2, if it is attached to the field.

About...

This option gives you technical information about the system.

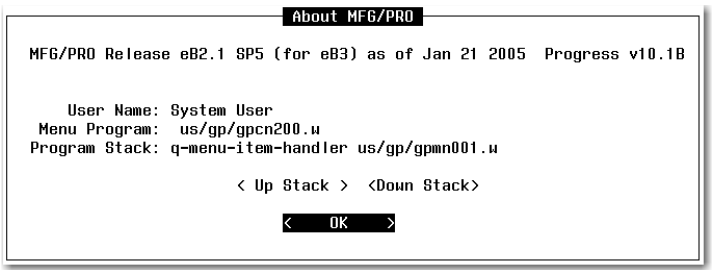
You can use the Program Stack field to display the names of the programs used to call the current program.

Press Tab to move between the command buttons, then press Enter to move up or down the program stack.

- Select Up Stack to move toward the main menu.
- Select Down Stack to move toward the current program.

When you reach either the top or the bottom of the stack, the appropriate command button is disabled.

Fig. 6.10
Character About Screen



Output Devices

You can send the output from reports, inquiries, and browses to a number of devices, including the following:

- Your terminal
- A server printer
- An e-mail message

However, the character user interface does not offer as many options as the QAD .NET UI.

- You can send output to Terminal or page, but not to Window. If you select Window, the system displays an error message.
- The Winprint option is designed only for Windows clients. If you select this option, the system displays an error message.

Otherwise, the output options are the same in both interfaces. If you select a printer as the output device, be sure to use one that has been defined with a Destination Type of Default in Printer Setup Maintenance (36.13.2).

Just as in the QAD .NET UI, you cannot use e-mail unless it has been set up properly.

Character-Mode Keyboard Commands

The following tables list the navigation, help, and edit keyboard commands used throughout the character user interface. When you are using a program, the Progress status bar at the bottom of the screen summarizes the specific keys used in that program.

Some commands require two keys to be pressed at the same time; other key strokes are sequential. This table uses a plus sign (+) to indicate keys pressed at the same time and a hyphen (–) to show keys pressed in sequence.

Navigation Commands	Keyboard Entry	Control Key Entry	Description
Go	F1	Ctrl+X	Moves to next frame.
End	F4	Ctrl+E	Exits a frame, program, or menu.
User Menu	F6	Ctrl+P	Displays list of user-selected programs.
Previous	F9 or up arrow	Ctrl+K	Retrieves previous record in a key data field and scrolls up in lookup browses.
Next	F10 or down arrow	Ctrl+J	Retrieves next record in a key data field and scrolls down in lookup browses.
Enter	Enter		Moves to next field within a frame.
Tab	Tab		Moves to next field within a frame.
Back Tab		Ctrl+U	Moves back one field within a frame.
Menu Bar (Browse)	Esc-M		Accesses the menu bar. This is not available from Windows character clients. Use the mouse instead.

Help Commands	Keyboard Entry	Control Key Entry	Description
Field Help	F2		Opens help on current field.
Procedure Help	F2		Opens help on current program.
Lookup Browse	F2		Displays choice of records.
Browse Options	F7		Opens the browse options window.
Browse Options Toggle	Esc-F		Turns the browse options on and off. This is not available from Windows character clients. Use the mouse instead.
Field Name	Ctrl+F	Ctrl+F	Displays a screen of information about the current program context, including the field name.

Edit Commands	Keyboard Entry	Control Key Entry	Description
Insert	F3	Ctrl+T	Enables text insertion.
Delete Record	F5	Ctrl+D	Deletes an open record.
Recall	F7	Ctrl+R	Recalls last saved value in a field.
Cut	F8		Clears a field.
Copy	F11	Ctrl+B	Copies a field.
Paste	F11	Ctrl+B	Inserts value that you copied.
Multiple Copy	F12	Ctrl+A	Copies values from one or more fields and pastes them into the same fields of another record.
Clear Date	Shift+?		Clears the value in date fields.

Stored Values for Fields

F12 or Ctrl+A stores values for any number of fields. Values are pasted back when you press F12 or Ctrl+A again. The field values are stored separately for each field and for each user, and the values are saved between logon sessions.

Example Using Sales Order Maintenance, enter a value in Channel and press F12 while the cursor is still in the field to store the value. Then enter a value in Credit Terms and press F12 to store that entry. Finish entering the sales order. The next time you enter a sales order, press F12 in the empty Channel field and the stored value is entered. Press F12 on the Credit Terms to input the stored credit terms.

To store field values in a maintenance program, you must select Go or Enter through the frame containing the field values you stored. If you exit the frame using End, the field values you stored are not saved. This is only true in maintenance and other update programs. Values stored using F12 in reports and inquiries are saved even if you do not select Go or Enter to complete the frame.

Windows Character Client Interface

Because of performance issues, you may not want to run resource-intensive processes such as Material Requirements Planning (MRP) from the QAD .NET UI. In an environment that does not include UNIX character clients, you can run these processes through the Windows character client interface.

Navigation in this interface is almost identical to what is described in this chapter, with some exceptions:

- Optionally, you can use the mouse to access fields directly instead of pressing Tab to move from field to field.
- In browses, you cannot use the Esc key normally required for some keyboard shortcuts:
  - Use the mouse to access the menu bar instead of pressing Esc-M.
  - Pull down the Options menu to access Browse Filter, rather than pressing Esc-F.
  - Pull down the User Menu to access Exit, rather than pressing Esc-X.

Product Information Resources

QAD offers a number of online resources to help you get more information about using QAD products.

QAD Forums (community.qad.com)
Ask questions and share information with other members of the user community, including QAD experts.

QAD Knowledgebase (knowledgebase.qad.com)*
Search for answers, tips, or solutions related to any QAD product or topic.

QAD Document Library (documentlibrary.qad.com)
Get browser-based access to user guides, release notes, training guides, and so on; use powerful search features to find the document you want, then read online, or download and print PDF.

QAD Learning Center (learning.qad.com)*
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*Log-in required

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