QAD Enterprise Applications

Administration Guide
QAD .NET UI

Introduction to QAD NET UI Administration
Administration Features and Functions
Configuring System Environments
Configurable Screens

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Chapter 1

Introduction to QAD NET UI Administration

The QAD .NET User Interface (UI) provides a common framework for multiple QAD applications. This framework is based on Microsoft .NET technology, and incorporates familiar UI standards, reducing the need for users to learn how to navigate QAD applications.

The QAD .NET UI is the common interface for both Standard Edition, the core QAD solutions suite, and Enterprise Edition, which offers all of the core Standard Edition capabilities as well as enhancements and new features in a number of other areas. This guide describes how to use the many .NET UI maintenance functions to administer the .NET UI, how to customize the interface for your own business requirements, and how to maintain the most commonly used configuration files. This chapter contains the following sections:

.NET UI Administration

The .NET UI contains a range of maintenance programs and utilities that let you customize programs and the interface itself for specific requirements. These include programs to:

- Monitor user sessions
- Configure menus, programs, and workspaces
- Define menu and browse collections
- Add links to program help and enable the Guide Me feature
- Use the QAD Shell Interface

See “Administration Features and Functions” on page 3.

Configuration Environments

Many of the interface features are controlled using the system configuration files:

- `client-session.xml`
- `client-bootstrap.xml`
- `plugin-menus.xml`

These files also control program parameters and timings, and enable and disable application menus as required.

See “Configuration Files” on page 38.

Configurable Screens

The programs within the QAD .NET UI are fully customizable, and the Configurable Screens function lets you add or remove fields and frames from the application screen using user-defined templates. Once you have designed your template, you apply the template to enable your changes. The template system ensures that individual customizations can be applied without impacting the core application code.

See “Configurable Screens” on page 63.

Chapter 2

Administration Features and Functions

This section provides information for system administrators on how to use the administration features and functions to configure and customize the QAD .NET User Interface.

This section covers the following topics:

Configuring User Features

The following sections describe user configuration features.

Monitoring User Sessions

Use Session Master Maintenance (36.4.22) to view information about users who are currently logged in to the system through the QAD .NET UI. This information displays in the form of session records, each identified by a unique session ID that is generated by the system. (You can identify your current session ID by selecting Help|View Configuration and viewing the Session ID.) A session record is automatically created when a user successfully logs in to the system from the QAD .NET UI and is deleted when the user logs out.

Only some of the settings displayed on this screen apply to the QAD .NET UI sessions. You can ignore the following: Active Web, Number of Records, Security Profile, Active Telnet, Menu Substitution, and Context ID. The session context detail displays information about the current workspace (domain). One user session can be associated with multiple contexts if programs have been activated in more than one workspace. You can also monitor the status of sessions for maintenance programs, reports, and inquiries using Connection Manager.

Active Directory Authentication

The QAD .NET UI supports Microsoft's Active Directory authentication for use with the Enforce OS User ID option in Security Control (36.3.24, `mgurpmmt.p`). With Active Directory support, user passwords can be centrally managed. User accounts must be created in the QAD system, and the User ID must match the Active Directory User ID. Note that in the QAD system, the User ID is limited to eight characters. To enable Active Directory authentication:

1. Locate the `client-session.xml` file on the home server. (By default, the file is located in the *`TomcatInstallDir`*`/webapps/qadhome/configurations/default` directory.)
2. In the `client-session.xml` file, remove the comments (denoted by `<!--` and `-->`) around the `<QAD.Authentication.ActiveDirectory>` configuration parameter and set it to `true`.
3. In Security Control (36.3.24, `mgurpmmt.p`), enable the Enforce OS User ID option.
4. Define users in User Maintenance (36.3.1) and set their passwords to blank. The user IDs must match the Windows user IDs.

Once Active Directory is enabled, the following restrictions will be enforced during authentication:

- The users' computers must be joined to the domain (Windows) for Active Directory authentication.
- Local accounts are not supported.
- Blank passwords are not supported. The password will be sent to Active Directory for authentication.
- The user ID setup within Active Directory must be eight characters or less (QAD has a limitation on user ID of that size.

Configuring Menus, Programs, and Workspaces

Using Menu System Maintenance

With Menu System Maintenance (36.4.4), you can assign menu labels and execution files (such as programs) to menu numbers. When users type the menu number, either in the QAD .NET UI's Menu Search field in the application area or in the character UI, the execution file runs. If you want to move a menu item's location in the menu system, or have it run a different execution file, you can make those changes using Menu System Maintenance.

Understanding the Menu System

The menu system controls what displays when a user logs in. It is designed like a product structure, recorded as single-level relationships between a parent menu item and a child item. At the top level in the character UI, the parent item is the Main Menu (Menu 0).

Note The menu groups represented by the folders in the QAD .NET UI are referenced through the letter A. For example A.1 is Sales, A.2 is Manufacturing and so on.

At lower levels, the parent item is a submenu such as the Call Management Menu (11.1) or an executable function.

Menus are stored in a table indexed by language ID. Each user has a default language. When a user logs on, the system determines the user language and displays menu text in that language.

As a user moves through menus and makes selections, the Execution File specified in Menu System Maintenance controls the function or submenu that displays.

QAD applications are delivered with all offered menus and functions. You can remove menus for programs that you do not use by either taking them off the menu or controlling them with menu security.

Note It is easier to update your software releases if menus are not modified. Instead, use menu security for functions you do not use. In the character UI, you can set up User Menus for commonly used menus and functions. In the QAD .NET UI, each user can define a personal menu subsystem of commonly used functions using the Favorites feature.

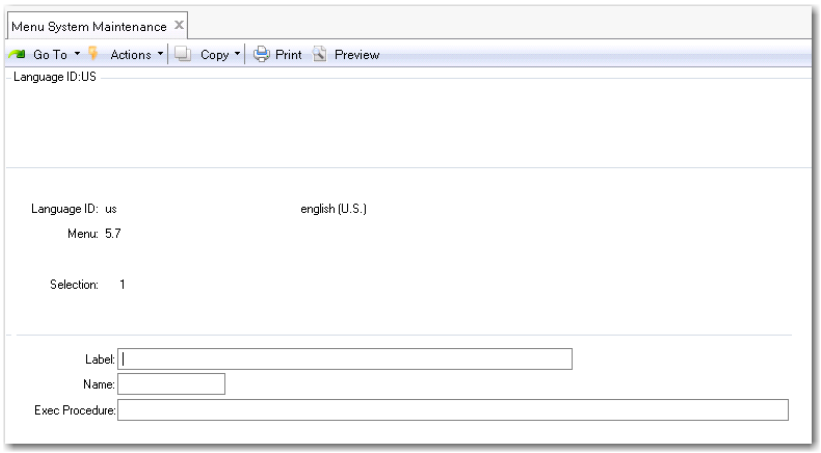
Configuring the Menu System

Note Menu System Maintenance changes might be lost during software updates when menus are reloaded.

Important Menus are cached in memory when you log in to the system. You must log out and log in again to see any changes made with this program. In addition, if you add menu items, you must grant access to them before anyone can see them.

In the QAD .NET UI, when you first start Menu System Maintenance, you must first specify the language to which the changes apply.

Fig. 2.1
Menu System Maintenance Settings



Language. Specify the language code to which the changes will apply.

As you modify or create a menu item, complete the following fields:

Menu. Specifies the code that places the menu item within the hierarchy of the menu system. Note that the menu groups represented by folders in the QAD .NET UI are referenced through the letter A. For example, A.1 is Distribution, A.2 is Manufacturing, and so on.

Selection. Specifies the code that, together with the menu code, identifies the menu item number. For example, for Purchase Approvals Maintenance, Menu is 5.1 and Selection 1, resulting in a menu item number of 5.1.1. If you enter 5.1.1 in the application pane's Menu Search field, you will get Purchase Approvals Maintenance.

Label. Specifies the menu label associated with the menu item. For example, the default menu label for the execution file sosomt.p is Sales Order Maintenance.

Name. Specifies a shortcut name for the menu item, so that rather than entering the full program name or number, users can just enter the shortcut to access the menu item.

Exec Procedure. Specifies the execution procedure. For example, sosomt.p is the execution file for Sales Order Maintenance. The execution procedure can be one of the following:

- A menu number such as `1.1`
- A Progress program such as `sosomt.p`
- A component-based function specified in the form of a uniform resource name (URN) such as
  `urn:cbf:BCreditor.Modify`
- A process map specified in the form of a URN such as
  `urn:pmap:IndustryProcessLevel1`
- A browse collection specified in the form of a URN such as
  `urn:collection:fcb4af10-e778-4db5-9461-766f5b7e2891`

To delete a menu item, click the Delete icon at the top of the screen.

To save the changes you have made so far, click the Save icon at the top of the screen.

Defining Program Information

The program information table contains a record for each menu-level program, defining characteristics that affect the way it runs. Each program in the QAD .NET UI must have a record both in Menu System Maintenance (36.4.4) and in Program Information Maintenance (36.3.21.1). In addition to menu-level programs, lookups must be defined in order for the look-up icon to display next to a field in an Desktop screen.

Note Reports created using the Report Resource Designer do not require an entry in Program Information Maintenance.

Program information records are loaded with other default data during system installation and can be viewed in Program Information Maintenance or Program Information Browse (36.3.21.2). You must manually create records for any custom programs that you want users to be able to access from the QAD .NET UI.

The following table lists the default settings for different program types.

Program Type	Web Logic Implemented	Type
Browses, lookups	Yes	Blank
Special Desktop programs such as Browse Maintenance and Kanban workbenches	Yes	Blank
Desktop reports and inquiries	No	Desktop
Desktop maintenance programs	No	Desktop

The Multi Domain field indicates a program that updates data that applies to all domains in a database. When this is set to Yes, the string All Domains displays in the Menu Properties window for the associated menu program. Otherwise, the domain name displays.

Appropriate default settings for the Multi Domain field are set during installation. For example, generalized codes apply to each domain separately so Multi Domain is set to No by default for Generalized Codes Maintenance (36.2.13). Country codes apply to the database as a whole so Multi Domain is set to Yes by default for Country Code Maintenance (2.14.1).

You can update the setting for your custom programs or change it if you want the current working domain to continue to display even when a user is updating a table that applies across domains. This change affects what displays on the UI only. The program continues to update data for all domains.

Adding Records

To execute a program from the QAD .NET UI menus, add a record to Program Information Maintenance for each custom program.

If you want to create records for a number of programs at once, use Program Information Update (36.3.21.23.18) to scan them and automatically create records.

To create program information records:

1. Enter a custom program name.
2. Indicate if this program updates data for all domains in the database.

3. Click Next to continue.
4. Set Web Logic Implemented to Yes if this is a browse written according to QAD standards. Set Web Logic Implemented to No if this is a maintenance program, report, or inquiry.
5. Leave the Type field blank for a browse. Specify Desktop for a maintenance program, report, or inquiry.

Adding Records Automatically for Custom Programs

Use Program Information Update (36.3.21.23.18) to automatically add records for custom programs to Program Information Maintenance. Use this utility as an alternative to adding records manually. It is especially useful for initially populating records with referenced tables.

Domain/Workspaces Configuration

With the introduction of Enterprise Financials, workspaces are partitioned by domain and entity. This has a dramatic impact on the number of workspaces, the amount of memory used, usability and migration. For this reason, you can configure the behavior of workspaces in your system using two configuration settings in the `client-session.xml` file:

- Workspace.Provider

  This setting controls the type of plugin used to display workspaces. It has two options:

  - `QAD.Plugin.Services.DomainWorkspaceProvider`

    This option displays one workspace per domain.
  - `QAD.Plugin.Services.DomainEntityWorkspace Provider`

    `QAD.Plugin.Services.DomainEntityWorkspace Provider` displays one workspace per domain and entity
- Workspace.Format

  This setting lets you customize the workspace display name. The following variables have been defined to allow flexible naming.

  ```
  db-name
  domain-name
  domain-id
  currency
  entity-name
  entity-id
  culture-name
  ```

  Example

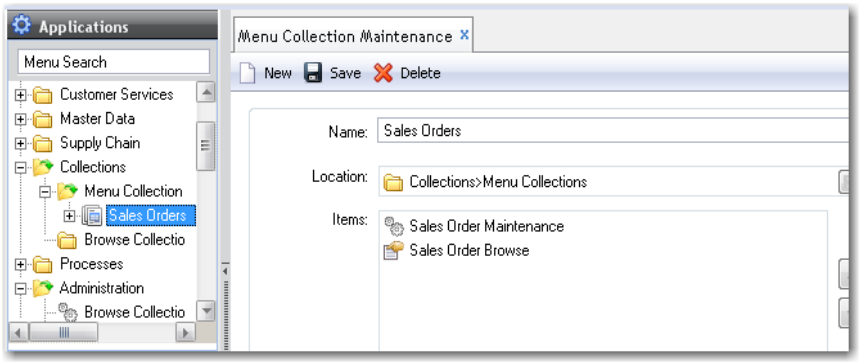
  ```
  QAD.Plugin.Services.DomainWorkspaceProvider = ${domain-name}
  QAD.Plugin.Services.DomainEntityWorkspaceProvider = ${domain-id} ${domain-name}
  [${currency}] ${entity-id} > ${entity-name}
  -->
  <Workspace.Format>${domain-id} ${domain-name} [${currency}] > ${entity-id} ${entity-
  name}</Workspace.Format>
  ```

Defining Menu and Browse Collections

Menu Collection Maintenance

You can define collections of menu items such as programs, browses, process maps, and dashboards using Menu Collection Maintenance. You can place menu collections in any folder in the Applications pane. The default location for menu collections is the Menu Collections folder, and you can use drag and drop to place the collection in any other menu.

Fig. 2.2
Menu Collection Maintenance

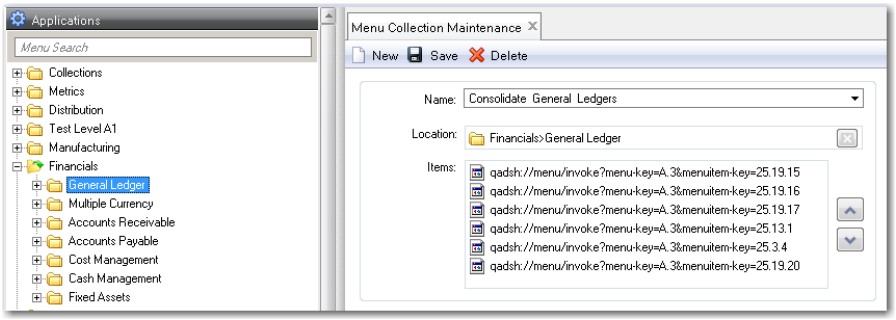


Note Menu Collection Maintenance is only available if you have access to the Administration menu.

To define a menu collection:

1. Choose Administration|Menu Collection Maintenance.
2. In the Name field, enter a name for the menu collection.
3. In the Location field, if you want to place the menu collection in a particular menu, drag-and-drop the menu folder from the Applications area to the Location field. This replaces the Menu Collections default location with the new menu folder. If you leave the field blank, the new menu collection is placed in the Menu Collections folder (In Collections).

Fig. 2.3
Changing Default Location



4. In the Items box, drag-and-drop one or more menu items from the Applications area to the Items box. These are the items that will be in the menu collection.

5 Click Save.

To edit a menu collection:

1 Right-click on the menu collection and choose Edit, or choose Administration|Menu Collection Maintenance.

2 In the Name field, use the drop-down menu to select the name of the menu collection you want to edit.

3 To change the placement of the menu collection, drag-and-drop a menu folder from the Applications area to the Location field. The menu collection now moves from its current location to the menu folder you drag-and-drop to the Location field.

4 To change the order of a menu item in the collection's Items box, click on a menu item in Items and use the up and down arrow buttons located next to the box.

5 To delete a menu item from the collection, in the Item box, click on a menu item and press the Delete key on your keyboard.

6 Click Save.

To delete a menu collection:

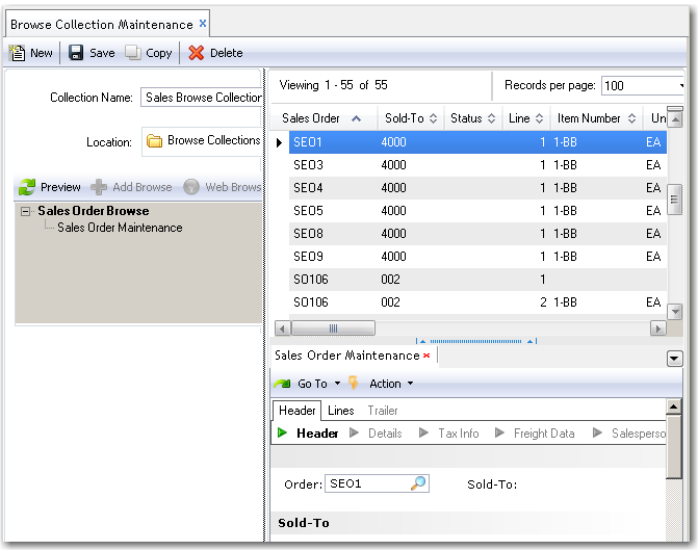
1 Right-click the menu collection and choose Delete. Alternatively, choose Administration| Menu Collection Maintenance.

2 In the Name field, use the drop-down menu to select the name of the menu collection you want to delete, and click the Delete icon.

Defining Browse Collections

To help you browse and maintain related item, site, sales, location, and customer data, you can define collections of related browse and maintenance programs using Browse Collection Maintenance.

Fig. 2.4
Browse Collection Maintenance



Note Browse Collection Maintenance is only available if you have access to the Administration menu.

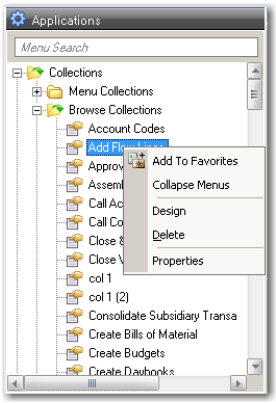
In a browse collection, a main browse drives the fields selected in the other browses and programs. The QAD .NET UI displays the other browses and programs in the lower part of a horizontal split-screen, with the main browse located in the upper part. For example, you could define a browse collection called Sales that includes a Sales Order browse with a Site browse, Customer browse, and Sales Order Maintenance program.

If you click on a record in Sales Order, the associated browses and Sales Order Maintenance program automatically have the data for that order entered. You can just click on the Customer tab to see the information on the customer for that order, or click on the Sales Order Maintenance tab to see the sales order.

Using Browse Collection Maintenance, you can define your own browse collections that you can then save under Favorites.There is no limit to the number of programs and browses you can include in a Browse Collection. However, when defining the collection, you should consider that a large collection takes longer to display on the screen, and there may be a performance issue if it is to be in constant use by a large number of users. In this case, you should consider multiple smaller collections.

Browse collections are stored by default in the Collections folder in the Applications area. When you right-click the Collection name and select Design, you can open the collection directly in Browse Collection Maintenance. This option lets you modify collection properties from the desktop without having to run the maintenance program.

Fig. 2.5
Browse Collection Design Option



To define browse collections:

1. Select Administration|Browse Collection Maintenance.
2. To start a new collection, click the New button. (To edit an existing program group, click Load.)
3. In the Name field, enter a name for the browse collection.

   You can specify a label term as a name for the browse collection. The advantage of doing this is that you can use a label term whose associated description has been translated into a supported language. To find an existing label term, open Label Master Browse (36.4.17.2). To

quickly find a label term you might want to use, use the browse's Search function. For example, if you want to find a label term that includes `Item`, set the Search fields to `Term contains Item` and click Search.

In the browse, the Term column lists the label terms that include Item and the Long Label column displays the associated descriptions. Next, in Browse Collection Maintenance's Name field, enter the label term in the format *`${Term}`*.

For example, if the label term is `ALL_ITEMS`, enter `${ALL_ITEMS}` in the Name field. After the browse collection is saved, in the Applications Pane, the browse collection name takes the description associated with the `ALL_ITEMS` label term.

If the *`${Term}`* name is not converted immediately to the label term's description, log out and log back in again to refresh the Application Pane's display.

4 In the Location field, if you want to place the browse collection in a menu folder other than the Collections default menu, drag-and-drop a menu folder from the Applications area to the Location field. The new menu replaces Collections as the collection location. If you leave the field blank, the new menu collection is placed in the Browse Collections folder (in Collections).

Note Placing the collection into a menu folder is often used to restrict access of the collection to particular user groups. Only users who have access to the menu folder will see the collection on their menus. Use Menu Security Maintenance (36.3.10, Standard Edition) and Role Permissions Maintain (36.3.6.6, Enterprise Edition) to define permissions for menus.

5 Drag-and-drop the browse you want to use as the parent browse from the Application area to the gray area in the Browse Collection Maintenance screen.

6 For example, drag Sales Order Browse from the Applications area to the grey area in Browse Collections Maintenance. Sales Order Browse is now the parent browse in the browse collection.

Note The parent browse must contain some data or you will not be able to add child browses and create a browse collection.

7 Next, you add child browses to the parent browse. You can either drag-and-drop browses from the Applications area or click the Add Browse button.

8 For example, you can drag-and-drop Customer Address Browse from the Applications pane.

9 In the gray area, click on the name of the browse you have just added as a child browse. For example, click on Customer Address Browse as displayed in the gray area under Sales Order Browse.

10 Next, use the table with the Target Field and Source Field columns to specify the relationship between the parent browse and the child browse.

11 The Target Field column includes the fields that can be driven by whatever source fields you want to select.

12 To select a source field, go to the appropriate source field cell and select a field from the pull-down menu, which lists all the available fields from the browse you first selected. Note that programs allow only one field to be the target. For example, for Customer Address Browse, the Target Field can be Customer and the corresponding Source Field can be Sold-To.

13 Now the data displayed in the child browse will be driven by the current row in the parent browse.

You can also drive URLs from browses.

1 Select Customer Address Browse and click the Web Browser button.

2 In the Title field, enter Google Address Search. In the URL field, enter `http://maps.google.com/maps?q=` and then choose Postal Code from the pull-down menu, which adds *<Postal Code>* to the Google Maps query. Now Customer Address Browse automatically drives a Google Maps query.

3 If you decide you want to remove one of the browses or programs, select the browse or program and click the Delete button just above the gray area.

4 To preview the collection, click Preview.

5 To save the program group as a favorite, click Save. The system prompts you to name the browse collection. The browse collection definition is saved as an XML file on your local machine where you are running the QAD .NET UI.

Adding Browse State Data

You can add state data (for example, charts or summaries) to a browse. When you then drill-down by right-clicking on the browse running inside Collection Maintenance, the system saves that state with the collection. This also means that you can create child drill-downs in the running browse instance in this screen, rather than having to use the collection maintenance UI to add a child program. This also means that you can deploy browses with state to the menu using Collection Maintenance.

Attachment Maintenance

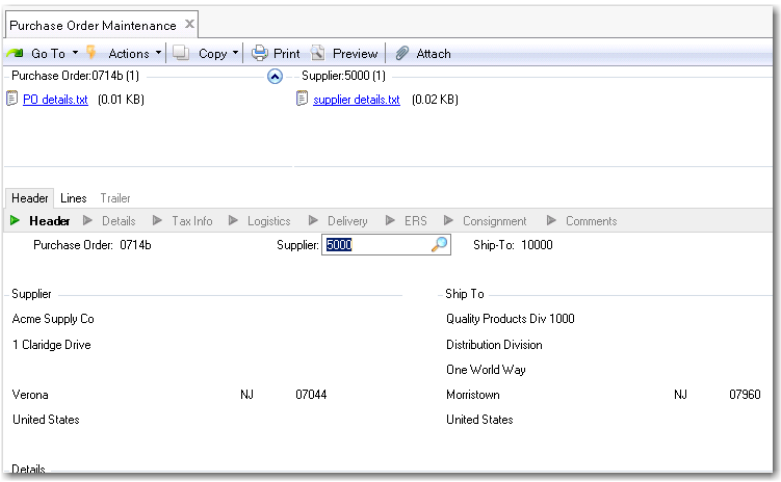
As a system administrator, you can use Attachment Maintenance to specify which programs can have attachments and can control attachment display. This option also lets you define multiple attachment areas for programs, in which you can define different attachments for different program fields. Attachment Maintenance uses a drag-and-drop facility, which means you can drag and drop attachments (such as product pictures, or text files or spreadsheets containing contact phone numbers) onto the attachment area from your desktop or Windows folder.

Once you have defined an attachment for a field in a program, an attachment area is created for that field, and is visible when you run the program. You can define attachments for a field (for example, for Sales Order Number) or for a value for a field (for example, SO1234). When the attachments you define are linked to the field value you select, and are available when you select that field value in another program. For example, when you add contact phone numbers as a text file to the site 10000 in Purchase Order Maintenance, the attachment is visible and accessible on screen when you select this site while creating a sales order in Sales Order Maintenance.

The attachments you define in Attachment Maintenance can be deleted from within the program, and can be replaced with another attachment.

When you define an attachment for a field in the initial frame of a program, for example, for Sales Order in `sosont.p`, the attachment area is visible throughout the program. If, however, you define an attachment in a subsequent frame of the program, for example, for the field Item in Sales Order Maintenance, the attachment area is visible only when the field is on screen.

Fig. 2.6
Attachments Areas on Purchase Order Maintenance

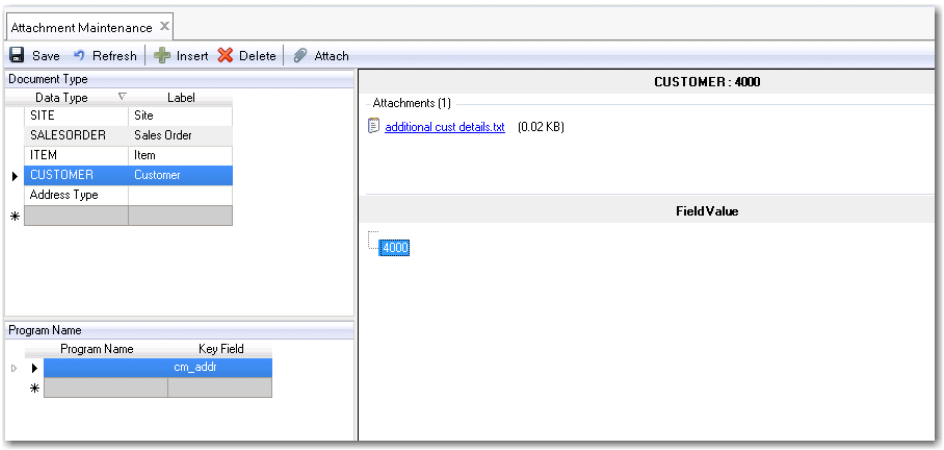


Using Attachment Maintenance

Use Attachment Maintenance to define attachments and attachment areas for fields and programs. The Attachment Maintenance screen has three areas:

- Document Type
- Program Name
- Attachment Area

Fig. 2.7
Attachment Maintenance



Document Type

Use this area to identify the attachments in the system. When you have defined a document type and label, the system searches for the document type when you run the program, and displays the attachment defined for the field value associated with this document type.

Data Type. Specify a data type identifier for organizing attachments. The data type name should relate to the program to which you are adding attachments.

Label. Specify a label for the attachment area.

For translation purposes, if you use the $ variable to specify the label, the system looks for the label in the database and translates the term accordingly. For example, if you use the label ${SALES_ORDER}, the system retrieves the translation for the term and displays the term Orden Ventas in a Latin Spanish installation.

Program Name

Program Name. Specify a program for which you want to include attachments. You must also specify a field. The wild card character * can be used to match a range of programs, for example "so*.p" A blank program name matches the field anywhere.

Key Field. Specify a field that will trigger acceptance of attachments (required).

Note You delete a document type or program name by clicking the arrow to the left of the row to select the row, and pressing Delete.

Attachments Area

This area displays attachments for the selected data type in the Document Type area. You associate attachments with specific values for a given field. The lower part of the area displays possible field values. When you click on one of these values, the attachments associated with the value are displayed in the upper part of the area.

Enabling Attachments

To enable attachments for a program field:

1. In the Document Type area, enter a data type and label for organizing attachments.
2. In the Program Name area, enter a program name (optional) and a key field (required). If you do not enter a program name, the ability to add attachments will be available whenever the focus is on the specified field. If you do enter a program name, the ability to add attachments will be available when the focus is on the field in the specified program.

Adding Attachments

In the Attachments area, you specify a field value and select an attachment as follows:

1. Select a document type. This displays the fields already defined for this document type, if any.
2. Place the cursor in the cursor in the Field Value area and right-click.
3. Select the Insert option. This positions the cursor in the name field.

4 Type the value of the field. For example, to add an attachment to the Purchase Order 114, select the type, position the cursor in the Field Value area, right-click to select Insert, and type the code.

Fig. 2.8
Entering a Field Value

5 Place the cursor in the upper part of the Attachments area, right-click, and choose Attach. (Alternatively, you can click the Attach button.)

Fig. 2.9
Defining an Attachment

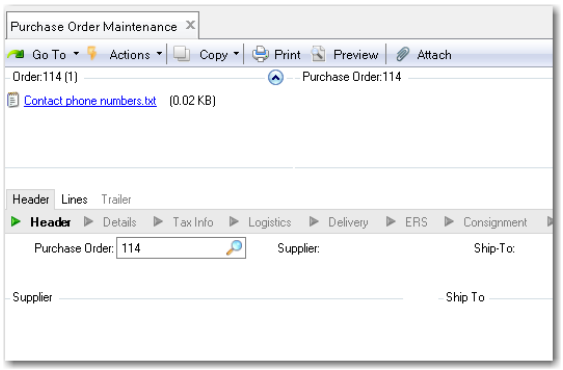
6 Browse to a file on your local computer and select it.

7 Click Save.

You can also drag-and-drop an attachment from your desktop area or Windows Explorer folder.

8 Run the program to view the attachment for the specified field.

Fig. 2.10
Purchase Order with Attachment



Deleting an Attachment

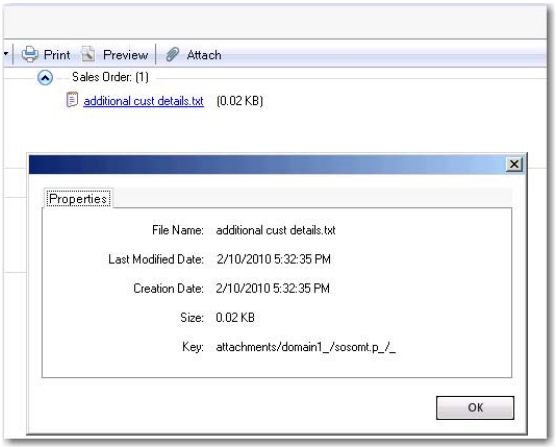
The Delete function is a right-click option either in Attachment Maintenance, or in the Attachments area of the program. In Attachment Maintenance:

1 Place the cursor in the upper part of the Attachments area, right-click, and choose Delete. (Alternatively, you can click the Delete button.)

Attachment Properties

You can view the key used for attachment areas by right-clicking the area and selecting Properties. This key also displays the location of the attachment.

Fig. 2.11
Attachment Properties



Attachment Security

You can restrict the use of Attachment Maintenance by specifying attachment administrators in the `<AttachmentAdministrationRoles>` field in the `client-session.xml` file:

```
<AttachmentAdministrationRoles><role1, role2></AttachmentAdministrationRoles>
```

where `<role1, role2>` is a comma-separated list of roles.

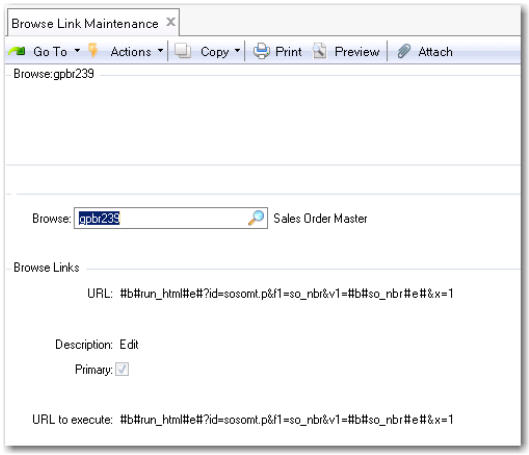
The default administrator roles are `qadadmin` and `superuser`, and you define administrators in the `plugin-config.xml` file.

Automatic Attachment Areas

The system automatically creates attachment areas for certain program fields.

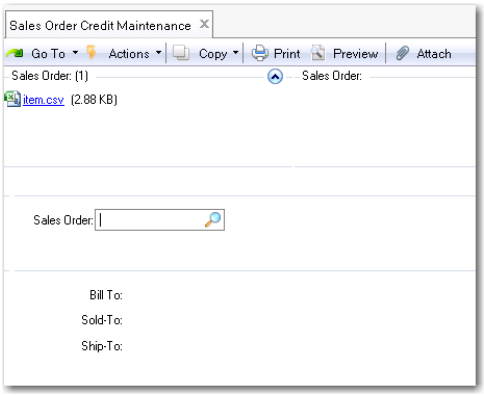
Some lookup browses within programs are defined with additional Edit program links. For example, the Sales Order Browse lookup (`gpbr239`) is defined in Browse Link Maintenance with an Edit link to Sales Order Maintenance, which ensures that Sales Order Maintenance is a right-click option on sales order records when you run the browse.

Fig. 2.12
Sales Order Lookup, Browse Link Maintenance



Because the Sales Order lookup has an edit link for Sales Order Maintenance, the lookup field has an automatic attachment area, based on the name of the edit program (Sales Order Maintenance). Lookup fields with Edit links display an automatic attachment area in every program in which the lookup field is used. For example, this lookup is also used in Sales Order Credit Maintenance, and this program also displays the automatic attachment area.

Fig. 2.13
Sales Order Credit Maintenance



Use Browse Link Maintenance to create Edit links for lookups, and to identify existing links.

Adding Links to Application Help

You can add links to the Application Help for programs using the Field Help Maintenance (36.4.13) program.

In Field Help Maintenance, by leaving both the Calling Field and Calling Procedure fields blank, the content you enter in the Text field applies to all program help.

Enter brief HTML-formatted statements in the Text field.

To add a URL to a graphic such as your company logo, enter an `<img>` statement. For example, the following would include the graphic in `logo.gif` located in `http://www.yourintranet.com:8080/images`:

```
<img src="http://www.yourintranet.com:8080/images/logo.gif">
```

To add a URL to a document such as a Word (.doc) document explaining company procedures, use an `<a href>` statement. For example, the following would provide a link to a `proceduresA1.doc` file located in `http://www.yourintranet.com:8080/procedures/`:

```
<a href="http://www.yourintranet.com:8080/procedures/proceduresA1.doc">
Procedures</a>
```

In general, you can add a link to any URL using the `<a href>` tag.

You can link to programs in the QAD .NET UI. See “Viewing Process Maps with QAD Shell URL” on page 34. For example, the following would link to Sales Order Maintenance:

```
<a href="qadsh://menu/invoke?menuitem-alias=sosomt.p"> </a>
```

Enabling QAD Guide Me

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

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

- By setting the Guide Me parameter in the `client-session.xml` file to True
- By setting the option to True in the local `QAD.Client.exe.config` file or on the command line.
- By adding a parameter to the shortcut path for QAD Applications.

  When you right-click the shortcut icon for the QAD .NET UI on your desktop area. and select the Shortcut tab in the Properties dialog, you can add the following line to the Target command:

  ```
  -guidme.enabled:true
  ```

  For example:

  ```
  C:\Program Files\QAD\QAD Enterprise Applications 2010 EE\QAD.Applications.exe -
  guideme.enabled:true
  ```

  This enables the Guide Me feature when you run the client, over-riding the environment setting in the `client-session.xml` file.

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.

client-session.xml File

The following settings affect the Guide Me feature.

- `GuideMe.Enabled`. This setting enables or disables Guide Me feature. The default value is true.
- `GuideMe.Debug`. This debugging setting displays unresolved tokens and enables browser context menu. The default value is false.

- `GuideMe.ShowDelay`. This sets the delay in milliseconds before the ToolTip is displayed. The default value is 500.
- `GuideMe.HideDelay`. This sets the delay in milliseconds before the ToolTip is hidden. A value of zero indicates the ToolTip is not hidden until the mouse leaves the control region. The default value is zero.
- `GuideMe.Animation`. This enables and disables tooltip animation affects. When set to true (the default), this ensures that the Guide Me screen is displayed gradually on the screen, instead of immediately displaying and disappearing.

Like all application settings, these may also be set in the local `QAD.Client.exe.config` file or on the command line, as follows:

```
-guideme.enabled:true
-guideme.debug:false
-guideme.showdelay:250
-guideme.hidedelay:0
-guideme.animation:true
```

client-bootstrap.xml File

You can also disable the Guide Me plugin in the client-bootstrap.xml on the home application server:

```
<disable>qad.plugin.guideme</disable>
```

This option can also be performed on the command line, as follows:

```
-disable:qad.plugin.guideme
```

Connection Manager Access

Access to the Connection Manager is controlled by Tomcat's `\WEB-INF\conf\securityfilter-config.xml` file, which controls which groups have access to Tomcat administration functions. The `<role-name>` element controls which groups have access to the administration functions:

```
<security-constraint>
   <web-resource-collection>
      <web-resource-name>Administrative Functions</web-resource-name>
      <url-pattern>/admin/*</url-pattern>
   </web-resource-collection>
   <auth-constraint>
      <!-- NOTE:  This role is not present in the default users file -->
      <role-name name="mfgadmin">qadadmin</role-name>
   </auth-constraint>
</security-constraint>
```

The default setting specifies that only users in the group (or role) `qadadmin` are allowed access. Additional entries must be added here for additional groups (or roles). Further, to make sure Connection Manager is available on the QAD .NET UI menu, be sure the `<Security>` section in the menu extension configuration file (*`TomcatInstallDir`*`/webapps/qadhome/configurations/`*`SysEnvName`*`/menus/plugin-menu.xml`) specifies all the roles for administrative users using the `<Role>` element:

```
<Security>
   <SecurityConstraint key="admin" constraint="allow">
      <Role>admin</Role>
      <Role>dtadmin</Role>
      <Role>qadadmin</Role>
      <User>mfg</User>
```

```
   </SecurityConstraint>
</Security>
```

Groups have access to the administration functions:

```
<security-constraint>
   <web-resource-collection>
       <web-resource-name>Administrative Functions</web-resource-name>
       <url-pattern>/admin/*</url-pattern>
   </web-resource-collection>
   <auth-constraint>
       <!-- NOTE:  This role is not present in the default users file -->
       <role-name name="mfgadmin">qadadmin</role-name>
   </auth-constraint>
</security-constraint>
```

The default setting specifies that only users in the group (or role) `qadadmin` are allowed access. Additional entries must be added here for additional groups (or roles). Further, to make sure Connection Manager is available on the QAD .NET UI menu, be sure the `<Security>` section in the menu extension configuration file (*`TomcatInstallDir`*`/webapps/qadhome/configurations/`*`SysEnvName`*`/menus/plugin-menu.xml`) specifies all the roles for administrative users using the `<Role>` element:

```
<Security>
   <SecurityConstraint key="admin" constraint="allow">
       <Role>admin</Role>
       <Role>dtadmin</Role>
       <Role>qadadmin</Role>
       <User>mfg</User>
   </SecurityConstraint>
</Security>
```

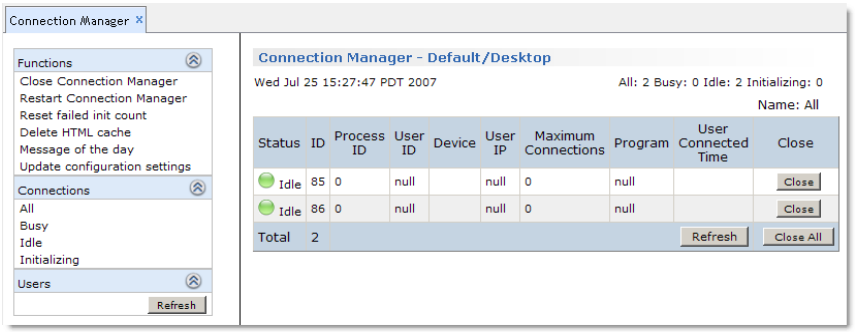
Using the Connection Manager

This section describes using the Connection Manager in the QAD .NET UI.

Note You need access to the Administration menu in order to access the Connection Manager. If you do not have access, contact your system administrator.

The Connection Manager controls the pool of telnet sessions used for Desktop maintenance programs, lookups, reports, and inquiries.

Fig. 2.14
Example of the Connection Manager



The Connection Manager lets you:

- Close, start, and reset Connection Manager.
- Update configuration settings.

- View a log file of Connection Manager actions.
- Monitor connections in the connection pool.
- Monitor users and close user sessions, if needed.

Note QAD .NET UI only displays Administration programs such as the Connection Manager for users who have security privileges or who are members of a defined administration group.

Connection Manager is composed of several administrative functions and views that help you manage the pool of telnet connections. The initial Connection Manager page includes the following menus:

- “Functions Menu” on page 22
- “Connections Menu” on page 23
- “Users Menu” on page 24

Functions Menu

The Connection Manager’s Functions menu includes the following:

Close Connection Manager. Terminates all active Desktop connections. Any data being processed by active sessions is lost. Any processes begun by active sessions are terminated.

Restart Connection Manager. Shuts down and restarts Connection Manager. This option has the same effect as Close Connection Manager, but also restarts it after complete shutdown.

Reset failed init count. Resets the initialization failed counter. The system maintains a count of the number of times Connection Manager unsuccessfully attempts to start a session. When this counter reaches the maximum number, as indicated in Maximum Failures on the Connection Manager configuration page, it stops further automatic attempts to start the session.

This number is automatically reset when a successful connection is made.

Delete HTML cache. This option clears all cached HTML maintenance screens. Removing the cache is required whenever updates are made to screen elements—such as adding lookups to a field—to ensure that the new screen information is read by the system. This is a legacy feature and does not apply to Desktop programs running in the .NET UI.

Update configuration settings. It displays the “Configuration Parameters Page” on page 22, which is used to set up and configure the Connection Manager options.

Configuration Parameters Page

The Configuration Parameters page includes the following settings:

Host. The machine name or IP address of the telnet server.

Port. The port number for the telnet server. This is normally set to 23.

Startup Script. The telnet server log-in prompts and the responses to these prompts, separated with the pipe symbol (|). The standard order is:
`loginPrompt|userid|passwordPrompt|$PASSWD|osPrompt|cd UIConfigDir|osPrompt|startScript`

For example:

```
login:|mfg|Password:|$PASSWD|$|cd /dr02/mfgpro/eb2.1sp3/ uiconfig01|
$|./connmgr.Production
```

Server Startup Password. The password for the telnet session startup script. It is encrypted on entry.

Minimum Connections. The minimum number of open connections that the system should maintain.

Maximum Connections. The maximum number of open connections that the system should allow.

Maximum Failures. Number of times Connection Manager should attempt to restart an unsuccessful connection.

Connections Monitor Frequency. Number of milliseconds between checks for all connections.

Wait Time for Idle Connection. The maximum wait time in milliseconds for a requested connection from the Connection Manager. If the maximum number of connections has been reached, or if new connections are in the initializing state, the wait time may expire. The default value is 20000 (20 seconds).

Connection Timeout. Number of milliseconds a session can remain inactive before Connection Manager closes it. The default value is 3600000 (60 minutes).

Processing Timeout. How often, in milliseconds, a locked or busy screen is pinged (that is, checked for changes). A locked or busy screen is considered to be in processing mode, which is when the underlying program is processing and is not prompting for user input. The default value is 2000 (2 seconds).

Initializing Timeout. Number of milliseconds Connection Manager will wait for a telnet session to successfully initialize. The default value is 180000 (3 minutes).

Operating System Win32/NT. True if the Progress telnet sessions are executing on a computer with a Windows operating system.

Wait Time. Number of milliseconds between checks of a session while it runs reports. The default value is 2000 (2 seconds).

Connections Menu

The Connection Manager's Connections menu displays the pool of active sessions based on session status. Each session can have one of the following statuses:

Initializing. The session is starting and is not available for use.

Idle. The session is active and available for the next user request.

Busy. The session is executing a user request.

Pause. The session is waiting for a response from the user. For example, the user might need to press the spacebar to continue.

Processing. The session is actively updating the Progress database and database records are locked.

Force Disconnect. This is a temporary state that occurs when the administrator closes an initializing session.

Disconnected. This is a temporary state that occurs when idle sessions are closed.

Click one of the options under Connections to see a listing of sessions based on status. The session information includes the following: Status, ID, Process ID, User ID, Device, User IP, Maximum Connections, Program, and User Connected Time.

All. Display all sessions.

Busy. Only display sessions with Busy, Pause, or Processing status.

Idle. Only display sessions with Idle status.

Initializing. Only display sessions with Initializing status.

Users Menu

The Connection Manager's Users menu displays a list of currently logged in users.

- Click a User ID to see information related to that user, including the following: Status, ID, Process ID, User ID, Device, User IP, Maximum Connections, Program, and User Connected Time.
- Click Refresh to update the display.
- Click Close to close a user session. This might be needed if a user has locked a database record and left their session running.

Using QAD Shell URL (qadsh://)

You can access QAD .NET UI using a URL defined by QAD. The URL has the following format:

`qadsh://menu/invoke?`*`argument_list`* where *`argument_list`* can include optional arguments for `workspace-key`, `menu-key`, `menuitem-key`, and `menuitem-alias`.

The following summarizes the *`argument_list`* options:

Argument	Value	Description	Required	Multiple
`workspace-key`	A workspace key	If provided the container will activate the workspace before forwarding the request to any service providers.	No	No
`menu-key`	A menu key	The menus that should be searched for the menu keys and aliases. If not specified all menus in the activated workspace will be searched.	No	Yes

Argument	Value	Description	Required	Multiple
`menuitem-key`	A menu item key	The keys identifying menu items to execute. You can customize the display of menu items using the following parameters: `&target=tab:` Open the program in tab view. `&target=tabgroup/Sales`: Open in a tab group called Sales. `&target=window`: Open in a detached window) `&target=fullscreen`: Open in full screen mode)	No	Yes
`menuitem-alias`	A menu item alias	The aliases identifying menu items to execute.	No	Yes

`browse-search`	A table name, a field name, an operator, start value, and end value (optional).	The fields are comma delimited and multiple search conditions can be applied by adding additional parameters to the URL. The operator can be one of the following:
		`=`
		`>=`
		`<>`
		`<`
		`>`
		`contains`
		`range`
		`isnull`
		`isnotnull`
		The start value specifies the value or the start of a value range if the optional end value is included.
			No	No

Example `qadsh://menu/invoke?workspace-key=Domain1.1000&menuitem-key=5.1.1` starts the QAD .NET UI client installed on your machine and opens Purchase Approvals Maintenance in Domain 1.

Example `qadsh://menu/invoke?menuitem-key=7.1.1&target=fullscreen` starts the QAD .NET UI client and opens Sales Order Maintenance in your default domain in full screen mode.

Example `qadsh://menu/invoke?menuitem-alias=ppptmt.p` starts the QAD .NET UI client and opens Item Master Maintenance in your default domain.

Example `qadsh://menu/invoke?menuitem-alias=mgbr003.p&browse-search=brw_mstr,brw_name,=,ad001` starts the QAD .NET UI client and opens a browse with a single search condition.

Example `qadsh://menu/invoke?menuitem-alias=mgbr003.p&browse-search=brw_mstr,brw_name,=,ad001&browse-search=brw_mstr,brw_name,=,ad002` starts the QAD .NET UI client and opens a browse with multiple search conditions.

Example `qadsh://menu/invoke?menuitem-alias=mgbr003.p&browse-search=brw_mstr,brw_name,range,ad001,ad022` starts the QAD .NET UI client and opens a browse with a range condition.

Example `qadsh://menu/invoke?menuitem-alias=mgbr003.p&browse-search=lbl_mstr%2Clbl_long%2Ccontains%2C%252C` starts the QAD .NET UI client with comma delimited values, where a comma is encoded as `%2C`.

Note If you are running multiple versions of the QAD .NET UI, the `qadsh://` URL will invoke the most recent version of the QAD .NET UI that you have installed.

Using QAD Shell URL to Run Reports

You can use the QAD URL Shell to run reports, in a similar way to running browses.

The `report-search` parameter lets you specify the report to be run, and you can also specify the value of a report field.

Example `qadsh://menu/invoke?menu-key=A.6&menuitem-key=36.4.21.12.6&report-search=tt_ca_mstr,ca_bill,=,10000`

In this example, the Call Quote Print Sample report (`tt_ca_mstr`) is run from the command line, and the Bill To field (`ca_bill`) is auto-populated with the value 10000.

The `autorun=true` can be also be added to the command for the report, which causes the report to automatically run when launched, avoiding the need to click Run on the toolbar.

Example `qadsh://menu/invoke?menu-key=A.6&menuitem-key=36.4.21.12.6&autorun=true`

This example runs Call Quote Print Sample and automatically runs the report:

Important You should be aware of possible performance issues when using the `autorun` parameter. If you automatically run multiple reports without careful filtering the search criteria, the number of system queries required can have an impact on system resources and result in lengthy delays.

Report Invoke Command

You can also run reports on the command line using the following `qadsh://` command:

```
qadsh://report/invoke?report-code=36.4.21.12.6, provider=c1, label=TestReport
```

where `report-code` is the report menu number or program name, `provider` is an optional parameter to identify the report builder (which defaults to `c1` for Component One), and `label` is the description you enter to overwrite the default tab text that appears on the report when you run it.

You can enter multiple search conditions and search range conditions into the command syntax.

Example `qadsh://menu/invoke?menu-key=A.6&menuitem-key=36.4.21.12.6&report-search=tt_ca_mstr,ca_bill,range,1000,2000`

This command runs the Call Quote Print Sample report (`tt_ca_mstr`), and creates a range for the the Bill To field `ca_bill`.

Heartbeat URLs for Load Balancing

System administrators setting up a load balancer for multiple Tomcat instances can access heartbeat URLs to check connection status for each instance.

Load balancing scripts (or other custom status scripts) can access the following links under `http://`*`TomcatHost`*`:`*`TomcatPort`*`/heartbeat/`:

- `status.jsp` — returns a status message containing the number of agents that are All, Idle, Init, or Busy.
- `idle.jsp` — returns a page containing the number of idle connections
- `busy.jsp` — returns a page containing the number of busy connections
- `init.jsp` — returns a page containing the number of initializing connections

The pages are installed in *`TomcatInstallDir`*`/webapps/heartbeat/`.

Enhancing Reports

You can display selected non-component based reports in an enhanced format. The enhanced format improves the appearance of reports, including:

- Enhanced report header and footer
- Report header inclusion of company logo
- Data representation using HTML tables
- True Type font support
- Different colors for alternate rows

The upper-right area displays the date and time. Additionally, to improve readability, the program name and number are at the bottom of a report rather than at the top near the report title.

Setting Report Format

You can specify whether to use the enhanced format on selected reports or the standard format on a system-wide basis as follows:

1. To use the enhanced format, edit the `settings.dat` file in the `QADInstallDir/qadui/com/mfgpro` directory, setting `beautifyReports` to `yes`. For information on the setting.dat file, see “Editing setting.dat File” on page 28.
2. The selected reports that display in the enhanced format are specified in the `beautifyReports.lst` file. For more information on using the `beautifyReports.lst` file to select which reports use the enhanced format, see “Selecting Which Reports Use Enhanced Format” on page 28.
3. To use the standard format, set `beautifyReports` to `no`. By default, `beautifyReports` is set to `yes`.
4. Restart the Connection Manager for the changes to take effect.
5. Finally, all users must clear the QAD .NET UI’s cache of temporary Internet files before running further reports.

Editing setting.dat File

The `setting.dat` file is located in the *`QADInstallDir`*`/qadui/com/mfgpro` directory. However, you must also edit the additional `setting.dat` file located in the *`QADInstallDir`*`/qadui/com/qad/mfgpro` directory.

The `setting.dat` file in the *`QADInstallDir`*`/qadui/com/mfgpro` directory is compiled from the `setting.dat` file in the *`QADInstallDir`*`/qadui/com/qad/mfgpro` directory. When you change the files in the *`QADInstallDir`*`/qadui/com/mfgpro` directory, you see the effect of the change right after you edit the file.

When you change the files in the *`QADInstallDir`*`/qadui/com/qad/mfgpro` directory, you do not see the effect of the change until after a compile, at which time the files in the *`QADInstallDir`*`/qadui/com/mfgpro` directory are over-written by the new files compiled from the files in the *`QADInstallDir`*`/qadui/com/qad/mfgpro` directory.

After you make changes to the `setting.dat` file, you must restart the Connection Manager for the changes to take effect.

Selecting Which Reports Use Enhanced Format

The `beautifyReports.lst` file in the *`QADInstallDir`*`/qadui/com/mfgpro` directory lists the reports that will use the enhanced format when the `beautifyReports` setting in the `setting.dat` file is set to `yes`.

The reports listed in `beautifyReports.lst` have been tested to display using the enhanced format. You can include other reports in this list but QAD recommends only using the reports listed by default in `beautifyReports.lst`. If you do modify the `beautifyReports.lst` file, be sure to restart the Connection Manager and have all users clear the QAD .NET UI’s cache of temporary Internet files before running further reports.

As with the two `setting.dat` files, the `beautifyReports.lst` file is located in the *`QADInstallDir`*`/qadui/com/mfgpro` directory. However, you must also edit the additional `beautifyReports.lst` file located in the *`QADInstallDir`*`/qadui/com/qad/mfgpro` directory.

The `beautifyReports.lst` file in the *`QADInstallDir`*`/qadui/com/mfgpro` directory is compiled from the `beautifyReports.lst` file in the *`QADInstallDir`*`/qadui/com/qad/mfgpro` directory. When you change the files in the *`QADInstallDir`*`/qadui/com/mfgpro` directory, you see the effect of the change right after you edit the file. When you change the files in the *`QADInstallDir`*`/qadui/com/qad/mfgpro` directory, you do not see the effect of the change until after a compile, at which time the files in the *`QADInstallDir`*`/qadui/com/mfgpro` directory are over-written by the new files compiled from the files in the *`QADInstallDir`*`/qadui/com/qad/mfgpro` directory.

Including Company Logo

With the enhanced format, the upper-left area can include your company's logo. To include a logo:

1. Locate the Tomcat installed images directory (for example, *`TomcatInstallDir`*`/webapps/qadui/images`).
2. Place any graphics files containing company logos in this directory. For example, place a file named `myLogo.jpg` that contains the logo you want to use. By default, the directory includes `companyLogo.jpg`, which contains the QAD logo. For example, place a file named `myLogo.jpg` that contains the logo you want to use. By default, the directory includes `companyLogo.jpg`, which contains the QAD logo.

   Note Use `companyLogo.jpg` as the file name so that you do not have to modify the `setting.dat` file as described in the next step.

   Note If the height of the logo exceeds 60 pixels, report page formatting can be affected.
3. To add your company's logo to the report, edit the `setting.dat` file in the *`QADInstallDir`*`/qadui/com/mfgpro` directory, setting `reportCompanyLogoImage` to the graphics file (for example, `images/myLogo.jpg`). By default, `reportCompanyLogoImage` is set to `image/companyLogo.jpg`. (Note that the file name is case-sensitive.) For information on the `setting.dat` file, see "Editing setting.dat File" on page 28.
4. If you do not want to display a logo on reports, set `reportCompanyLogoImage` to blank (do not enter any graphics file).
5. Finally, all users must clear the QAD .NET UI's cache of temporary Internet files before running further reports.

Removing Report Footer

The enhanced report footer now includes the program name and number at the bottom of the report. If required, you can remove the footer information as follows:

1. Edit the *TomcatInstallDir*/webapps/qadui/css/AppReportStandard.css file, changing the `div.reportFooter` statement to the following:

   ```
   div.reportFooter {display:none;}
   ```

2. Finally, all users must clear the QAD .NET UI's cache of temporary Internet files before running further reports.

Setting Default Browser Text Size

To have reports use your default browser text size setting, edit the setting.dat file in the *QADInstallDir*/qadui/com/mfgpro directory, setting `allowBrowserFontSize` to `yes`. The default setting is `no`. (Note that to set the default browser text size setting in Internet Explorer, select View|Text Size). For information on the `setting.dat` file, see "Editing setting.dat File" on page 28.

Different Colors for Alternate Rows

If a report includes different colors for alternate rows, to have the different colors display, select Tools|Internet Properties and click the Advanced tab. In the Settings view, scroll down to Printing and select Print background color and images.

Saving Enhanced Reports to Excel

In general, you cannot export reports from the QAD .NET UI to Microsoft Excel. While in a report, right-clicking and selecting Internet Explorer's Export to Microsoft Excel will not export the report data to Excel. However, you can quickly copy data from an enhanced report and place it into Excel. To do so, while in an enhanced report, right-click and select Select All (Ctrl+A) and then select Copy (Ctrl+C). Next, open Excel and select Paste. Excel places the report data into appropriate columns and rows in Excel.

Configuring Multiple Language Support for Terminal Client

Supporting multiple languages requires the `<TerminalEncoding>` setting in the client session configuration file to be synchronized with the `cpstream` setting for the character Progress session. When starting a Progress client session, you must include the `-cpstream <encoding>` parameter, which directs Progress to transform the internal database encoding sent to the client. The client must know which encoding is being sent in order to display the correct characters on the screen and return the correct data to the Progress client.

For Windows, the `<TerminalEncoding>` setting must be UTF-8 for all languages.

Note Progress on a Windows Server does not support the display of double-byte characters through its terminal client. Consequently, if your system uses Progress on a Windows server, the QAD .NET UI will not receive the data it needs to display double-byte characters such as Japanese and Chinese.

For UNIX, refer to the following table, which identifies the `TerminalEncoding` setting based on the QAD language code and Progress codepage (`cpstream`) language code:

QAD Language Code	Language	Progress Codepage cpstream Setting	Terminal Encoding Setting
us	English	iso8859-1	iso-8859-1
jp	Japanese	shift-jis	shift-jis
ch	Simplified Chinese	cp936	cp936
ge	German	iso8859-1	iso-8859-1
bu	Bulgarian	1251	windows-1251
cz	Czech	1250	windows-1250
da	Danish	iso8859-1	iso-8859-1
du	Dutch	iso8859-1	iso-8859-1
fr	French	iso8859-1	iso-8859-1
it	Italian	iso8859-1	iso-8859-1
no	Norwegian	iso8859-1	iso-8859-1
po	Portuguese	iso8859-1	iso-8859-1
cs	Castilian Spanish	iso8859-1	iso-8859-1
sw	Swedish	iso8859-1	iso-8859-1
hu	Hungarian	1250	windows-1250
pl	Polish	1250	windows-1250
ro	Romanian	1250	windows-1250
ru	Russian	1251	windows-1251
tu	Turkish	1254	windows-1254
tw	Traditional Chinese	cp950	cp950
ko	Korean	cp949	cp949
fi	Finnish	iso8859-1	iso-8859-1
lt	Lithuanian	1257	windows-1257
ua	Ukrainian	1251	windows-1251

Defining Custom Key Mappings

A system administrator can define custom key mappings for use in the QAD .NET UI's terminal mode.

Use an XML file to define the key mappings. Name the file `keymapping.xml` and place it in the directory defined by the HomeServer configuration value, which is defined at installation time. (The HomeServer configuration value is typically *`TomcatInstallDir`*`/webapps/qadhome`.) The system identifies the `keymapping.xml` file through the `<TerminalKeyMapUrl>` element in the client session configuration file. If the element is not in the file by default, you must add it.

For example, in the client session configuration file, you can add a `<TerminalKeyMapUrl>` element and set it to `${HomeServer}/keymap.xml` as follows:

```
<TerminalKeyMapUrl>${HomeServer}/keymapping.xml</TerminalKeyMapUrl>
```

The `keymapping.xml` file includes a `<KeyMapping>` element that includes one or more `<KeyMap>` elements, whose key and value attributes define a key mapping.

Note You can change the name and location of the XML file provided you also change the value of the `<TerminalKeyMapUrl>` setting accordingly.

In this example, the `keymapping.xml` file directs the number pad keys "/" and "*" to act as F1 and F4 keys in terminal mode:

```
<KeyMapping>
   <KeyMap key="/" value="\u001bOP" />
   <KeyMap key="*" value="\u001bOS" />
</KeyMapping>
```

For a listing of possible key settings, see Microsoft Developer Network's .NET Framework Class Library for Key Enumeration (http://msdn2.microsoft.com/en-us/library/system.windows.forms.keys(vs.71).aspx).

The following table lists the possible value settings:

Terminal Mode Key	Value
F1	`"\u001bOP"`
F2	`"\u001bOQ"`
F3	`"\u001bOR"`
F4	`"\u001bOS"`
F5	`"\u0004"`
F6	`"\u001b[17~"`
F7	`"\u001b[18~"`
F8	`"\u001b[19~"`
F9	`"\u001b[20~"`
F10	`"\u001b[21~"`
F11	`"\u0002"`
F12	`"\u001b[24~"`
F13	`"\u001b[25~"`
F14	`"\u001b[26~"`
F15	`"\u001b[28~"`
F16	`"\u001b[29~"`
F17	`"\u001b[31~"`
F18	`"\u001b[32~"`
F19	`"\u001b[33~"`
F20	`"\u001b[34~"`
0 (keypad)	`"0"`
1 (keypad)	`"1"`
2 (keypad)	`"2"`
3 (keypad)	`"3"`

Terminal Mode Key	Value
4 (keypad)	"4"
5 (keypad)	"5"
6 (keypad)	"6"
7 (keypad)	"7"
8 (keypad)	"8"
9 (keypad)	"9"
/ (keypad)	"/"
* (keypad)	"*"
- (keypad)	"-"
+ (keypad)	"+"
Tab	"\u0009"
Shift Tab	"\u001bOP\u0009"
Page Up	"\u001b[5~"
Page Down	"\u001b[6~"

Process Map Configuration

Process Map Storage and Multiple Language Support

Process maps look up the appropriate label text to display for the user's current language when the QAD .NET UI displays the process map. The system identifies the label text to display based on a label key and the user's language.

Maintaining the label text for the supported languages in these properties files makes it easier for QAD .NET UI administrators to modify the label text of process maps for the language that they must support.

Note Use the Language button in Preview mode to view maps in other languages.

Enabling New Language Support for Process Maps

You use the Process Label Maintenance option to store process map labels in different languages. The translated labels are stored in the `properties_language.xml` file in the `QADDesktopBase/webapps/WEB-INF/pronav/properties` directory. Each language has its own XML file – for example, the file for the label text in English is `properties_en.xml`.

To add a new language to the drop-down language list in Process Label Maintenance, you must create a `properties_<language>.xml` for the language, add a line for the new language to the `process-config.xml` file (as shown below), and restart the web appserver when you have updated the file:

```
<PropertySet id="locale" name="locale_Castilian_Spanish" value="es_es" />
    <PropertySet id="locale" name="locale_Dutch" value="nl" />
    <PropertySet id="locale" name="locale_English" value="en" />
    <PropertySet id="locale" name="locale_French" value="fr" />
```

```
<PropertySet id="locale" name="locale_German" value="de" />
<PropertySet id="locale" name="locale_Italian" value="it" />
<PropertySet id="locale" name="locale_Japanese" value="ja" />
<PropertySet id="locale" name="locale_Latin_America_Spanish" value="es_mx" />
<PropertySet id="locale" name="locale_Polish" value="pl" />
<PropertySet id="locale" name="locale_Portuguese" value="pt" />
<PropertySet id="locale" name="locale_Simplified_Chinese" value="zh_cn" />
<PropertySet id="locale" name="locale_Traditional_Chinese" value="zh_tw" />
```

Note On the Home Server the current property files are found in the `packages/plugins/base.code/data.zip` file on the home server.

Viewing Process Maps with QAD Shell URL

You can also view and edit process maps using the QAD Shell URL.

To view a process map using the QAD Shell URL, use the following format:

`qadsh://process/view?ProcessName=<process_name>`

To edit a process map using the QAD Shell URL, use the following format:

`qadsh://process/edit?ProcessName=<process_name>`

Regional Display Setting Control

The language code associated with a QAD application user in User Maintenance (36.3.1) determines the language of strings displayed on the user interface. Other regional settings such as date and number format are determined in different ways, depending on which type of program or browse the user is executing.

- QAD .NET UI screens displayed in the default Desktop mode—the mode using native .NET technology—are formatted based on the regional settings of the user's client PC, set by choosing Start|Control Panel|Regional and Language Options|Regional Options and editing the Standards and Formats section.
- QAD .NET UI screens displayed in terminal or HTML mode as well as character UI screens always derive regional settings based on the country code associated with the user in User Maintenance and country-specific settings in the `locale.dat` file located in the application installation directory.

Typically, the settings in the `locale.dat` file and the available regional settings on the user's computer are in agreement according to ISO locales. However, in some situations, this is not the case. This can result in inconsistent formatting depending on which type of screen the user is viewing. To avoid this inconsistency, a new setting can be used to control how the system applies regional settings.

For example, to configure settings for a user who wants to view screens in English but dates and numbers in the French format, follow these steps:

1. In User Maintenance (36.3.1), set the language to `US` and country code to `FR`.
2. Make sure the alternate country code for `FR` defined in Country Code Data Maintenance (2.14.1) is also the ISO code `FR`.
3. Edit the `locale.dat` file and add a line with the combination of settings that the user wants displayed. For example, for a user whose associated language is `US` and country is `FR`, `locale.dat` should include the following line:

   ```
   US,en,FR,,dmy,European
   ```

   Where `US` is the user's language code, `en` is the ISO language code associated with `US`, `FR` is the ISO country code associated with the user's country code, the optional variant is blank (indicated by `,,`), `dmy` (day/month/year) is the date format, and `European` is the numeric format (period as the decimal separator; comma as the thousand separator).
4. In the `client-session.xml` file (located under *`TomcatInstallDir`*`/webapps/qadhome`), set the following new parameter to `false`:

   ```
   <UseLocalDateAndNumberFormats>false</UseLocalDateAndNumberFormats>
   ```

   The default setting is `true`, which results in the behavior seen in prior releases of the QAD .NET UI. When set to `false`, all types of UIs derive locale settings from the same `locale.dat` file, ensuring consistency regardless of which screen is being viewed.

Chapter 3

Configuring System Environments

This section provides information for system administrators on how to administer and configure the QAD .NET User Interface.

This section covers the following topics:

Configuration Storage Directories

The QAD .NET UI provides the default storage data for attachments, browse collections, menu collections, and favorites in the *TomcatInstallDir*/webapps/qadhome/configurations/default/storage directory.

For each environment, attachments, browse collections, menu collections, and favorites are stored in the following locations:

- Attachments are stored in *TomcatInstallDir*/webapps/qadhome/configurations/*SysEnvName*/storage/attachments, where subdirectories organize the attachments based on domain, program, type, and field. Each directory includes a underscore character (_) at the end by default to account for the possibility of using a blank.
- Browse collections are stored in *TomcatInstallDir*/webapps/qadhome/configurations/*SysEnvName*/storage/browse-collections. Each browse collection is assigned a unique ID by the system.
- Menu collections are stored in *TomcatInstallDir*/webapps/qadhome/configurations/*SysEnvName*/storage/menu-collections. Each menu collection is assigned a unique ID by the system.
- Favorites are stored in *TomcatInstallDir*/webapps/qadhome/configurations/*SysEnvName*/storage/user-data, where subdirectories based on user ID and domain maintain UserMenu.dat files that include favorites information.

Configuration Files

For system administrators, the default configuration files are consolidated in a *TomcatInstallDir*/webapps/qadhome/configurations/default directory. This directory includes the following:

- Client bootstrap configuration file (client-bootstrap.xml): defines parameters for the QAD .NET UI client that apply to all system environments associated with the home server (*TomcatInstallDir*/webapps/qadhome). For more information, see “Client Bootstrap Configuration File” on page 39.
- Client session configuration file (client-session.xml): defines session characteristics of a client session. For more information, see “Client Session Configuration File” on page 41. Note that the client-session.xml.sample file included in the configurations directory provides an example backup copy of client-session.xml.
- Menu extension configuration file (.../menus/plugin-menu.xml): defines menu items added to the QAD .NET UI outside of the standard programs and functions, along with security settings. For more information, see “Menu Extension Configuration File” on page 46.

In the configurations directory, the default directory provides the system-wide default settings for the home server (*TomcatInstallDir*/webapps/qadhome). Because it is the default, the default system environment does not appear in the “Log on to” pull-down on the Login window. Be sure not to delete the /configurations/default directory, which specifies the system-wide defaults and is a useful reference when you define other system environments.

You define additional system environments by creating additional directories under the `configurations` directory. For example, to create a system environment named `demo`, create a `/configurations/demo` directory. Copy the `client-session.xml` file from the `/configurations/default` directory to the `/configurations/demo` directory, and copy `/configurations/default/menus/plugin-menu.xml` to `/configurations/demo/menus/plugin-xml`. You can now modify the settings in `/demo/client-session.xml` and `/demo/menu/plugin-menu.xml` to the demo system environment. Meanwhile, the `/default/client-bootstrap.xml` file continues to define system-wide settings. (You should not remove or rename the default directory.) When users log in to the QAD .NET UI client, they will now see the demo system environment available in the “Log on to” pull-down menu on the Login window.

In the configurations directory, the storage directory is where menu collections and browse collections are stored when they are saved from Menu Collection Maintenance or Browse Collection Maintenance. The `/configurations/storage/menu-collections` directory contains XML files representing menu collections and the `/configurations/storage/browse-collections` directory contains XML files representing browse collections. Menu and browse collections included with the QAD .NET UI are in the menu-collections and browse-collections directories under the `.../default/storage` directory (*`TomcatInstallDir`*`/webapps/qadhome/configurations/default`). To access the menu and browse collections when you set up a system environment, you must copy the menu-collections and browse-collections directories (and their contents) under the appropriate system environment directory. For example, if you have set up a system environment named demo, you need to set up a `/configurations/demo/storage` directory with the `menu-collections` and `browse-collections` subdirectories.

Client Bootstrap Configuration File

The client bootstrap configuration file defines parameters for the QAD .NET UI client that apply to all system environments associated with the home server (*`TomcatInstallDir`*`/webapps/qadhome`).

Some configuration parameters must be resolved prior to the selection of a system environment. These parameters are identified as bootstrap only and apply to all system environments for the home server. The other parameters can be configured on a system environment basis by commenting or removing the definition from the client bootstrap configuration file and adding definitions in the various client session configuration files for each system environment.

The variable `${installation/directory}` expands to the directory in which the executing instance of the QAD .NET UI is installed.

`${[pluginkey]/installation/directory}` identifies the directory in which a specific plugin is installed.

All other variable references are resolved first as configuration parameter references and if not resolved as environmental variables on the client.

By default, the client bootstrap file is located in *`TomcatInstallDir`*`/webapps/qadhome/configurations/default/client-bootstrap.xml`.

File Usage

The client bootstrap file must be placed in the `/configurations/default` directory, as follows:

`TomcatInstallDir/webapps/qadhome/configurations/default/client-session.xml`.

File Format

The client bootstrap configuration file's top-level XML element is `<Configuration>`, which then includes the elements listed in the next section.

File Elements

Element	Description	Default
<log.level>	Specifies a threshold limiting the type of information that will be logged for all logging contexts in which a threshold has not been set (`OFF`, `ERROR`, `WARN`, `INFO`, `DEBUG`). Bootstrap only.	`INFO`
<log.file>	Specifies the location of the file on the client where logging output should be written. Value type: file system path. Bootstrap only.	`${storage/directory}\QAD.Applications.log`
<log.file.size>	Specifies the maximum size of the log file in kilobytes. When the maximum size is reached, the log file is renamed as a backup and a new log file is created. Value type: integer. Bootstrap only.	`5000`
<log.file.backups>	Specifies the number of log file backups that should be retained. When the maximum number of backups is reached, the oldest log file backup is deleted. Value type: integer. Bootstrap only.	`5`
<style.enabled>	When true, application styling is enabled. Value type: boolean (`true` or `false`). Bootstrap only.	`true`
<style.path>	Specifies the location of a file that configures the look and feel of the application. Value type: file system path. Bootstrap only.	`${installation/directory}\container\QAD.Applications.Style.isl`
<style.reload>	When true, changes to the style file will be automatically reapplied. Value type: boolean (`true` or `false`). Bootstrap only.	`false`
<storage.directory>	Specifies the directory on the client where local state may be stored where `${APPDATA}` resolves to the user-specific `%APPDATA%` environment variable.Value type: file system path. Bootstrap only.	`${APPDATA}\QAD\Shell`
<webdav.uri>	Specifies a URI locating a WebDAV service where shared state may be stored. Value type: URI. Bootstrap only.	`${homeserver}/webdav`

Element	Description	Default
<check.updates>	When true, the version of the installed client will be compared with the version of the client available on the configuration server. If the configuration server has a newer version available, the user will be prompted to update their local installation. Value type: boolean (`true` or `false`). Bootstrap only.	`true`
<allow.multiple>	When false, a check will be made to see if the client is already running on the target computer. If it is, the user will be notified, and the existing instance will be activated. Value type: boolean (`true` or `false`). Bootstrap only.	`true`
<show.workspace selector>	When true, a navigation bar will be displayed on the bottom of the application with a button for each enabled workspace. Clicking on a button switches the active workspace to the workspace represented by the button. Value type: boolean (`true` or `false`). Bootstrap only.	`true`
<perf>	Controls whether performance metrics will be collected and printed to the log file. May be set to `true` or `false`, or to an integer value that specifies a threshold in milliseconds to limit the output to timed tasks whose duration was equal to or greater than the threshold. Value type: boolean or integer. Bootstrap only.	`false`
<disable>	Specifies that a plugin deployed on the client that should not be initialized. Multiple plugins can be disabled by repeating this configuration. Value type: plugin key. Bootstrap only.	(blank)
<config.ignore.errors>	Allows the client to continue even if configuration errors are reported. Value type: boolean (`true` or `false`). Bootstrap only.	`false`

Client Session Configuration File

The client session file defines client session characteristics of the QAD .NET UI.

By default, the file is located in *`TomcatInstallDir`*`/webapps/qadhome/configurations/default/client-session.xml`.

The default `client-session.xml` file also includes parameters for QAD Enterprise Applications–Enterprise Edition's Financials module, starting from `<!-- QAD Financials Settings -->` to the end of the file. Each parameter includes comment sections that describe parameter usage. These parameters only apply if you are using QAD Enterprise Applications–Enterprise Edition. They do not apply if you are using QAD Enterprise Applications–Standard Edition.

Note The `client-session.xml.sample` file in the *`TomcatInstallDir`*`/webapps/qadhome/configurations/default/` directory includes examples of using the parameters for each file entry.

File Usage

You can define client session files for each system environment by placing them in appropriate sub-directories under the `/configurations` directory, as follows:

`TomcatInstallDir``/webapps/qadhome/configurations/`
`SysEnvName``/client-session.xml`

Where *`SysEnvName`* is the system environment name that you select when you log in to the QAD .NET UI.

File Format

The client session configuration file's top-level XML element is `<Configuration>`, which then includes the elements listed in the next section.

File Elements

Element	Description	Default

<AttachmentAdministrationRoles>	Specifies the administator roles that have permission to use Attachment Maintenance. For example:
	`<AttachmentAdministrationRoles>`
	`<role1, role2>`
	`<AttachmentAdministrationRoles>`
		None

<BrowseRecordsForPrintWarning>	When this number of records is reached or exceeded during printing, a warning is displayed on the client.	`10000`
<BrowseRecordsForExcelWarning>	When this number of records is reached or exceeded during export to Excel, a warning is displayed on the client.	`10000`
<ChartElementsForChartWarning>	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 exceeds the value specified here. 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.	`100`
<ConnectionProtocol>	Specifies the application server (AppServer) protocol. Enter one of the following: `AppServer` — Unsecured connection to the name server. `AppServerS` — Secure connection to the name server. `AppServerDC` — Unsecure connection to the AppServer broker. `AppServerDCS` — Secure connection to the AppServer broker.	`AppServer`

Element	Description	Default
<ConnectionHost>	Specifies the host name of the Progress Name Server if <ConnectionProtocol> is set to AppServer or AppServerS. Specifies the Progress AppServer broker host name if <ConnectionProtocol> is set to AppServerDC or AppServerDCS.	$NameServerHost
<ConnectionPort>	Specifies the NameServer port number if <ConnectionProtocol> is set to AppServer or AppServerS. The default NameServer port number is 5164. Specifies the AppServer broker port number if <ConnectionProtocol> is set to AppServerDC or AppServerDCS.	$NameServerPort
<ConnectionService>	Specifies the name of the Progress AppServer created for this configuration.	$AppServerBrokerName
<ConnectionSecure Protocol>	Specifies the AppServer secure protocol used during authentication.	AppServer
<ConnectionSecure Service>	Specifies the protocol to use when launching Desktop maintenance programs within the QAD .NET UI. This may be changed to https for that kind of communication.	$AppServerBrokerName
<ConnectionSecure Host>	Specifies the secure AppServer host name.	$NameServerHost
<ConnectionSecure Port>	Specifies the secure AppServer port number.	$NameServerPort
<DefaultRefreshRate>	Specifies the default rate in seconds at which browses are automatically refreshed. QAD .NET UI users can start the automatic refresh by choosing Refresh|Start and can stop it by choosing Refresh|Stop. They can change the refresh rate by choosing Refresh|Rate, right-clicking, and editing the value.	30
<DesktopProtocol>	Specifies the protocol for connecting to the AppServer. Valid values are http or https.	http
<DesktopHost>	Specifies the name of the machine that Tomcat is running on.	$TomcatHostName
<DesktopPort>	Specifies the port number that Tomcat listens on; by default this is 8080, but could be 8443 if <DesktopProtocol> is https.	$TomcatPort
<DesktopService>	Specifies the name of the UI configuration directory under Tomcat webapp directory.	$DesktopWebappName
<DesktopAPI>	Specifies the program used to run Desktop maintenance programs; it does not change.	shell.jsp
<DesktopBaseUrl>	Specifies the Desktop base URL.	${DesktopProtocol}://${DesktopHost}:${DesktopPort}/${DesktopService}
<DesktopHelp Service>	Specifies the link to the program that delivers the QAD Desktop help service.	com/qad/desktop/interface/wsep1.p

Element	Description	Default
<DesktopUsercount Servlet>	Specifies the name of the servlet used to track user log-ins; it does not change.	`UsercountServlet`
<GoOnLastField>	Specifies whether a program screen (frame) will be automatically submitted when the cursor leaves the last field on the frame. Enter `true` or `false`.	`false`.
<GuideMe.Debug>	When set to “true” unresolved tokens are displayed and the Browser context menu is enabled. Tokens are in the form {help:program:field} and by default unresolved tokens are not displayed.	`False`
<GuideMe.Enabled>	Enables/disables the GuideMe feature.	`False`
<GuideMe. ShowDelay>	Sets the time in milliseconds the mouse must hover over a control region before diplaying the GuideMe tooltip	`500`
<GuideMe. HideDelay>	Sets the time in milliseconds to display the GuideMe tooltip before hiding the tooltip. A value of zero indicates the tooltip will not be hidden until the mouse leaves the control region.	`0`
<GuideMe. Animation>	Enables/disables GuideMe animation. Animation can cause performance issues in Citrix environments and can be disabled using this setting.	`True`
<HomePage.Enabled>	Specifies whether the home page feature is enabled or disabled by default. Enter `true` or `false`.	`false`.
<HomePage.Url>	Specifies the default home page URL. The URL can be any valid URL, including `qadsh:\\` links.	`http://www.qad.com`.
<HelpService>	Specifies the help service program. This is an administration setting; it does not change.	`mfwb01.p`
<MaximumBrowseRecordsToCount>	Specifies the maximum number to check for (count) before a > symbol is displayed on a client.	`50000`
<MaximumBrowse RecordsToDownload>	Specifies the maximum number of records that a client can download.	`50000`
<Metrics>	This element defines parameters for operational metrics: <Metrics> <-- Max records for count metrics --> <MaxBrowseRecordsForCount>100000</MaxBrowseRecordsForCount> <!-- Max records returned to client when requested --> <MaxBrowseRecordsReturned>50000</MaxBrowseRecordsReturned> <!-- Show title and date on saved images --> <ShowTextOnImage>true</ShowTextOnImage> <!-- The font used on saved images --> <ImageFont>MS Gothic, 8.5pt</ImageFont> </Metrics>	As listed
<QAD.Message.Poller .Frequency>	Specifies the frequency to retrieve Inbox messages from the server in milliseconds.	`300000` (five minutes).
<RequestTimeout>	This parameter sets the number of seconds after which a web request times out. The range is 10 to 120 seconds.	30 seconds.

Element	Description	Default
<SshProviderUrl>	Specifies the location for the DLL file (`Routrek.granados.dll`) to be downloaded to the clients when they use SSH for terminal connections. Note that the file is not included with QAD software because of exportation laws regarding encryption software. When installing QAD software, you must download the file from `http://www.routrek.co.jp/support/download/varaterm/granados200.tar.gz`. and place the file in the location specified by the `<SshProviderUrl>` so that the file is downloaded to clients. For additional information, see the comments in the client session configuration file (`client-session.xml`) for the `<SshProviderUrl>` element.	`${HomeServer}/Routrek.granados.dll`
<TerminalProtocol>	Specifies the protocol used for terminal connections. Options include `telnet`, `ssh1`, and `ssh2`. The telnet option is the default setting for typical non-secure Telnet implementations. The `ssh1` option is for Secure Shell protocol 1 (SSH1). The `ssh2` option is for Secure Shell protocol 2 (SSH2). Note that Telnet uses port 23 and SSH protocols use port 22. The port number is set in User Option Telnet Maintenance (36.20.10.3).	`telnet`
<TerminalEncoding>	Specifies the encoding for terminal connections.	`UTF-8`
<Terminal Authentication>	Specifies the credentials to use for terminal connections. Valid values are `ShellUser`, `ScriptUser`, or `PromptUser`. (The values are case-insensitive.) `ShellUser` specifies to use the QAD .NET UI user ID and password when logging into the server. `ScriptUser` specifies to use the user ID and password defined in User Option Telnet Maintenance (36.20.10.3). With `PromptUser`, when a terminal screen is launched, the user is prompted for a user ID and password to log into the server. These credentials are used throughout the current session, so the user is not prompted again until they log in again to the QAD .NET UI.	`ShellUser`
<UseLocalDateAnd NumberFormats>	Specifies whether the QAD .NET UI uses the regional settings on a user's computer. Enter `true` or `false`.	`true`
<Web.Connection Limit>	Specifies the maximum number of Web connections.	`11`
<Web.DnsRefresh Timeout>	Specifies the DNS refresh timeout limit in milliseconds.	`7200000` (two hours)
<Web.MaxService PointIdleTime>	Specifies the session "keep alive" limit in milliseconds.	`10000` (10 seconds).

Element	Description	Default
<Workspace.Provider>	Specifies the workspace provider as `QAD.Plugin.Services.DomainWorkspaceProvider`, which creates one workspace per domain, or `QAD.Plugin.Services.DomainEntityWorkspaceProvider`, which creates one workspace per domain plus entity.	`QAD.Plugin.Services.DomainEntityWorkspaceProvider`.
<Workspace.Format>	Specifies the format of a workspace display name. You can use the following to customize the workspace name: `${db-name}` (the database name) `${domain-name}` (the domain name) `${domain-id}` (the domain ID) `${currency}` (the currency) `${entity-name}` (the entity name) `${entity-id}` (the entity ID) `${culture-name}` (the culture name)	`${domain-id} ${domain-name} [${currency}] > ${entity-id} ${entity-name}`

Menu Extension Configuration File

The menu extension configuration file defines menus added to the QAD .NET UI outside of the standard programs and functions. By default, the menu extension configuration file is located in *TomcatInstallDir*`/webapps/qadhome/configurations/default/menus/plugin-menu.xml`.

File Usage

You can define menu extension configuration files for each system environment by placing them in appropriate sub-directories under the `/configurations` directory, as follows:

TomcatInstallDir`/webapps/qadhome/configurations/`*SysEnvName*`/menus/plugin-menu.xml`

Where *SysEnvName* is the system environment name that you select when you log in to the QAD .NET UI.

File Format

The default menu configuration file is located in *TomcatInstallDir*`/webapps/qadhome/configurations/menus/plugin-menu.xml`. The file contains hierarchical XML elements. The top-level element is `<PluginExtender>`.

File Elements

The file includes the following XML elements:

<PluginExtender>

The `<PluginExtender>` element is the top-level container for the menu extension configuration file.

Contains

```
<ResourceFile>
<Security>
<Workspaces>
```

Contained By

Not contained by any other element.

Attributes

Name	Description	Default	Req?
provider	Identifies the originator of the menu extensions.	QAD	Yes
key	Specifies the element identifier.	blank	Yes
version	Specifies the version of the menu extension file definition.	1.0.0.0	Yes

Example

```
<PluginExtender provider="QAD" key="" version="1.0.0.0">
```

<Security>

The <Security> element contains a set of security constraints.

Contains

```
<SecurityConstraint>
```

Contained By

```
<PluginExtender>
```

Attributes

N/A

Example

```
<Security>
 <SecurityConstraint key="admin" constraint="allow">
  <Role>admin</Role>
  <Role>dtadmin</Role>
  <Role>qadadmin</Role>
  <User>mfg</User>
 </SecurityConstraint>
</Security>
```

<SecurityConstraint>

The `<SecurityConstraint>` element defines a security constraint key and whether the constraint is to allow or deny access.

Contains

```
<Role>
<User>
```

Contained By

```
<Security>
```

Attributes

Name	Description	Default	Req?
`key`	Specifies a security constraint key, which identifies a shell menu security group consisting of various roles and users. The menus made available by a given <ShellMenu> element are only available to roles and users within the security constraint key.	admin	Yes
`constraint`	Define a listing of allowed (allow) or denied (deny) roles or users.	allow	Yes

Example

```
<Security>
 <SecurityConstraint key="admin" constraint="allow">
  <Role>admin</Role>
  <Role>dtadmin</Role>
  <Role>qadadmin</Role>
  <User>mfg</User>
 </SecurityConstraint>
</Security>
```

<Role>

The `<Role>` element specifies a role subject to a security constraint.

Contains

N/A

Contained By

```
<SecurityConstraint>
```

Attributes

N/A

Example

```
<Role>admin</Role>
```

<User>

The <User> element specifies a user subject to a security constraint.

Contains

N/A

Contained By

```
<SecurityConstraint>
```

Attributes

N/A

Example

```
<User>mfg</User>
```

<Workspaces>

The <Workspaces> element contains the workspace elements within which the menu extensions are available.

Contains

```
<Workspace>
```

Contained By

```
<PluginExtender>
```

Attributes

N/A

Example

```
<Workspaces>
 <Workspace key="all" image="" label="">
 ...
 </Workspace>
<Workspaces>
```

<Workspace>

The `<Workspace>` specifies the workspace within which the menu extensions are available. By default, the key attribute is set to all so that it applies to all the workspaces.

Contains

`<ShellMenus>`

Contained By

`<Workspaces>`

Attributes

Name	Description	Default	Req?
`image`	Specifies the element identifier.	all	Yes
`key`	Specifies an image for the workspace.	blank	Yes
`label`	Specifies a label for the workspace.	blank	Yes

Example

```
<Workspace key="all" image="" label="">
  <ShellMenus>
  ....
  </ShellMenus>
  <ShellMenus>
  ....
  </ShellMenus>
</Workspace>
```

<Properties>

The `<Properties>` element specifies a set of properties. Specifies a property whose type is defined as `string`, `config` or `label`. Properties defined as a `label` are translated using Label Master. The `config` properties are resolved using configuration values. The `string` properties are resolved using any combination of properties or literal strings.

Note The entries for this element do not typically require any changes by a system administrator. This section is provided for informational purposes only.

Contains

N/A

Contained By

`<PluginExtender>`

Attributes

N/A

<Property>

The `<Property>` element under `<Properties>` specifies a property whose type is defined as `string`, `config` or `label`. Properties defined as a `label` are translated using Label Master. The `config` properties are resolved using configuration values. The `string` properties are resolved using any combination of properties or literal strings.

Note The entries for this element do not typically require any changes by a system administrator. This section is provided for informational purposes only.

Contains

N/A

Contained By

`<Properties>`

Attributes

Name	Description	Default	Req?
`name`	The name of the property, which is resolved from an item such as a label defined in the format $(name).	N/A	Yes
`value`	The value of the property, which the system uses to look up the translation for the name	N/A	Yes
`type`	The type of the property. The type of the property is set to string by default if type is not included.	string	No

Example

You have defined a shell menu with the label set as `${Processes}`, as follows:

```
<ShellMenus>
 <ShellMenu key="process" menuType="application" label "${Processes}">
 ...
 </ShellMenu>
</ShellMenus>
```

The system resolves the string inside the dollar sign and brackets and identifies the value to look up the label based on an entry for the string in a `<Property>` element's name attribute:

```
<Property name="Processes" value="PROCESSES" type="label"/>
```

The system looks up the actual string for the label based on the `PROCESSES` value and displays the string as the label in the QAD .NET UI.

<ShellMenus>

The <ShellMenus> element contains the <ShellMenu> elements that define a particular menu extension.

Contains

<ShellMenu>

Contained By

<Workspace>

Attributes

N/A

Example

```
<ShellMenus>
 <ShellMenu key="process" menuType="application" label="Processes">
 ...
 </ShellMenu>
</ShellMenus>
```

<ShellMenu>

The <ShellMenu> element specifies a menu extension consisting of one or more <ShellMenuItem> elements.

Contains

<ShellMenuItem>

Contained By

<ShellMenus>

Attributes

Name	Description	Default	Req?
key	Specifies the element identifier.	N/A	Yes
menuType	Specifies the menu type, such as application.	N/A	Yes
label	Specifies the name of the menu as it appears on the QAD .NET UI.	N/A	Yes
security	Specifies a security constraint key, defined using the <SecurityConstraint> element.	N/A	No

Example

```
<ShellMenu key="process" menuType="application" label="Processes">
 <ShellMenuItem key="process.0" label="Inventory" image="ProcessMap">
```

```
    ...
    </ShellMenuItem>
</ShellMenu>
```

<ShellMenuItem>

The <ShellMenuItem> specifies a menu item.

Contains

```
<Command>
<Parameter>
<Property>
```

Contained By

```
<ShellMenu>
```

Attributes

Name	Description	Default	Req?
key	Specifies the element identifier.	N/A	Yes
label	Specifies the name of the menu item as it appears on the QAD .NET UI.	N/A	Yes

Name	Description	Default	Req?
`image`	Specifies a image to be associated with the menu item on the QAD .NET UI. A 16x16 pixel icon is returned and converted to a bitmap. There are two methods for resolving image names. The first method uses internal images and can be referenced by a case-insensitive canonical name. If the image can not be found internally, the image is retrieved from the operating system. Images resolved by the operating system can reference file names or file extensions. For example, `image="print"` uses the internal print image and `image=".pdf"` uses the image associated with a PDF file. Standard image keys include the following: • Help • AddTable • OpenFolder • ClosedFolder • Cut • Paste • Copy • Excel • Document • Forms • Mail • Save • Search • Print • PrintPreview • Views • Filter • Chart	N/A	Yes

Name	Description	Default	Req?
`image`	• Quantity • Browse • Maint • Report • ProcessMap • Fields • FirstPage • LastPage • PrevPage • NextPage • Load • ClearResults • Go • Add • Remove • Globe • Admin • Bom • BomComponent • NewNode • NewFile • Refresh • Cancel • Home • Favorites • UndoProductStructure • UndoComponent • NewNode • NewFile • Refresh • Cancel • Home • Favorites • UndoProductStructure • UndoComponent • BrowseGrid • ChartDesignIcon • Clear • SaveAs • Edit • MenuCollection	N/A	Yes

Name	Description	Default	Req?
`image`	• GoTo • Action • Sort • SortUp* • SortDown* • GridColumnHeaderBackground* • CompanyLogo* • CloseActive* • CloseInactive* • CloseInactiveMouseOver* • CloseActiveMouseOver* • TabHeaderBackground* • TabSeparator* • ChartSampleColumn* • ChartSampleColumn3D* • ChartSampleBar* • ChartSampleBar3D* • ChartSamplePie* • ChartSamplePie3D* • ChartSampleStackedColumn* • ChartSampleStackedColumn3D* • ChartSampleStackedBar* • ChartSampleStackedBar3D* • ActiveTabBackground* • Bullet* • BulletWithTail* • Arrow* • BulletTriangle* • ToolbarBackground* • Delete* • QADIcon* The asterisk (*) indicates that images that are not 16x16 pixels in size.	N/A	Yes
`security`	Specifies a security constraint key, defined using the `<SecurityConstraint>` element.	N/A	No

Examples

The following example adds a process map:

```
<ShellMenuItem key="process.3" label="Inventory" image="ProcessMap">
 <Command type="QAD.Commands.ProcessViewerCommand">
<Parameter value="${DesktopBaseUrl}/ProcessViewer.jsp?ProcessName=Inventory" type=
"System.Uri,System"/>
 <Property name="Text" value="Inventory"/>
 </Command>
</ShellMenuItem>
```

The following example adds Microsoft Notepad:

```
<ShellMenuItem key="apps.word" label="Notepad" image="notepad.exe">
 <Command type="QAD.Commands.ProcessCommand">
   <Property name="StartInfo.FileName" value="notepad.exe"/>
 </Command>
</ShellMenuItem>
```

The following adds Microsoft Word:

```
<ShellMenuItem key="apps.word" label="Word" image=".doc">
 <Command type="QAD.Commands.ProcessCommand">
   <Property name="StartInfo.FileName" value="WinWord.exe"/>
 </Command>
</ShellMenuItem>
```

The following adds Microsoft Excel:

```
<ShellMenuItem key="apps.excel" label="Word" image=".xls">
 <Command type="QAD.Commands.ProcessCommand">
   <Property name="StartInfo.FileName" value="Excel.exe"/>
 </Command>
</ShellMenuItem>
```

The following adds Microsoft Internet Explorer:

```
<ShellMenuItem key="apps.iexplore" label="WebBrowser" image=".html">
 <Command type="QAD.Commands.ProcessCommand">
   <Property name="StartInfo.FileName" value="about:blank"/>
 </Command>
</ShellMenuItem>
```

<Command>

The `<Command>` element specifies a QAD-defined command for a menu item.

Contains

```
<Parameter>
<Property>
<Method>
```

Contained By

```
<ShellMenuItem>
```

Attributes

Name	Description	Default	Req?

`type`	Specifies the command type as made available by QAD. Examples of command type include the following:
	`QAD.CommandsProcessCommand`
	`QAD.CommandsProcessViewerCommand`
	`QAD.CommandsStackedCommand`
	`QAD.CommandsWebBrowserCommand`
	`QAD.CommandsPlayListCommand`
	`QAD.CommandsRoleListCommand`
		N/A	Yes

Example

```
<Command type="QAD.Commands.ProcessViewerCommand">
```

<Parameter>

The `<Parameter>` element specifies a parameter associated with a particular command or method.

Contains

N/A

Contained By

```
<Command>
<Method>
```

Attributes

Name	Description	Default	Req?
`value`	Specifies a path or program as required by a `<Command>` or `<Method>` element.	N/A	Yes
`type`	Specifies the value type.	N/A	No

Example

```
<Parameter value="${DesktopBaseUrl}/ProcessViewer.jsp?ProcessName=Inventory" type=
"System.Uri,System"/>

<Parameter value="gpbr348.p" type="System.String" />

<Parameter value="popomt.p,sosomt.p" />
```

<Property>

The `<Property>` element under `<Command>` specifies a property associated with a particular command.

Contains

N/A

Contained By

```
<Command>
```

Attributes

Name	Description	Default	Req?
`name`	Specifies the name of the property.	N/A	Yes
`value`	Specifies the value of the property.	N/A	Yes

Example

```
<Property name="Text" value="Inventory"/>
```

<Method>

The `<Method>` element specifies a method associated with a particular command.

Contains

```
<Parameter>
```

Contained By

```
<Command>
```

Attributes

Name	Description	Default	Req?
name	Specifies the name of the method.	N/A	Yes

Example

```
<Method name="AddMenuItemAliases">
 <Parameter value="popomt.p,sosomt.p" />
 ...
</Method>
```

Setting Menu Extension Security

With the <SecurityConstraint> element, you can define a key that specifies a group of roles and users that are subject to a security constraint. You can then refer to that key as an attribute in a <ShellMenu> or <ShellMenuItem> element, which specify the external menus and menu items. In this way, you can limit the availability of menus or menu items.

For example, you could define an admin security constraint key that applies to some roles (admin, qadadmin) and users (mfg), as follows:

```
<SecurityConstraint key="admin" constraint="allow">
   <Role>admin</Role>
   <Role>qadadmin</Role>
   <User>mfg</User>
</SecurityConstraint>
```

With the constraint attribute set to allow, only the admin roles or users can access menus defined in a <ShellMenu> element that includes a security attribute set to admin:

```
<ShellMenu key="images" menuType="application" label="Example Menu" security="admin">
...
</ShellMenu>
```

Use of the security attribute in <ShellMenu> is optional, so if it is not used there are no security constraints on that particular menu set.

With the above setup, you will see Example Menu and everything under it in the QAD .NET UI only if you are the user mfg or have the admin or qadadmin roles.

The menu extension configuration file does not define the roles and users in the system; it only identifies the ones to which it applies security constraints.

You can also define a security constraint key with constraint=deny. In this case, the roles and users in the security constraint key definition are denied access to any <ShellMenu> (or <ShellMenuItem>) element with the security attribute set to that key. Further, those roles and users are denied access to any items defined below the initially denied element in the hierarchy, even if another security constraint key further down in the hierarchy has been set that allows them access.

You can control how the menu extension configuration file gets applied depending on how it is named and where you put it, which can affect how security constraints are applied.

Defining Labels

In the menu extension configuration file, you can map label names as used in the file to label values that display in the QAD .NET UI.

The `<Properties>` element maps a label name to a label value as follows:

```
<Properties>
   <Property name="LabelName" value="Label Value" type="label"/>
   ...
   ...
</Properties>
```

In the menu extension configuration file, you can now use `${LabelName}` in your menu item definitions. When the label displays as a menu item in the QAD .NET UI, the menu item label is displayed as Label Value.

For example, in the following `<ShellMenu>` definition with the label `${Admin}` will be transformed to `Administration` in the QAD .NET UI because the `<Property>` element maps `Admin` to `Administration`.

```
<Properties>
   <Property name="Admin" value="ADMINISTRATION" type="label" />
   ...
   ...
   ...
</Properties>
   ...
   ...
   ...
<ShellMenu key="images" menuType="application" label="${Admin}" security="admin">
   <ShellMenuItem ...>
   ...
   </ShellMenuItem>
   ...
   ...
   ...
</ShellMenu>
```

Adding URIs as Shell Menu Items

You can add URI links as shell menu items within any shell menu set. For example, the `<ShellMenuItem>` element for adding a link to Google is as follows:

```
<ShellMenuItem key="example.1" label="Google">
<Command type="QAD.Commands.WebBrowserCommand">
<Parameter value=”http://www.google.com” type="System.Uri,System">
<Property name="Title" value="Google"/>
</Command>
</ShellMenuItem>
```

Similarly, a URI link to FedEx is as follows:

```
<ShellMenuItem key="spec.3" label="FedEX">
<Command type="QAD.Commands.WebBrowserCommand">
<Parameter value="http://www.fedex.com" type="System.Uri,System" />
<Property name="Title" value="FedEX" />
</Command>
</ShellMenuItem>
```

Adding Process Maps

To add process maps to the QAD .NET UI, you must add them in the menu extension configuration file using the `<ShellMenuItem>` element. The format for adding a process map using the `<ShellMenuItem>` element is as follows:

```
<ShellMenuItem key="process.N" label="ProcessMapName" image="ProcessMap">
<Command type="QAD.Commands.ProcessViewerCommand">
<Parameter value="${DesktopBaseUrl}/ProcessViewer.jsp?ProcessName=ProcessMapName" type=
"System.Uri,System"/>
<Property name="Text" value="ProcessMapName"/>
</Command>
</ShellMenuItem>
```

The first process map defined in the file includes `<ShellMenuItem key="process.0"...`, the next map includes `<ShellMenuItem key="process.1"...`, and so on. If the last process map defined in the file includes `<ShellMenuItem key="process.9"...`, then the next map you add should include `<ShellMenuItem key="process.10"...`. Next, references to the process name need to be included in the `<ShellMenuItem>`'s label attribute, the `<Parameter>` element's value attribute, and the `<Property>` element's value attribute. For example, the following adds a process map named `MapExample` as the eleventh map defined in the file:

```
<ShellMenuItem key="process.10" label="MapExample" image="ProcessMap">
   <Command type="QAD.Commands.ProcessViewerCommand">
<Parameter value="${DesktopBaseUrl}/ProcessViewer.jsp?ProcessName=MapExample" type=
"System.Uri,System"/>
<Property name="Text" value="MapExample"/>
</Command>
</ShellMenuItem>
```

Chapter 4

Configurable Screens

This chapter describes using Configurable Screens in the QAD .NET UI:

Using Configurable Screens

This section describes using Configurable Screens in the QAD .NET UI.

QAD provides a design tool for configuring selected screens. The design tool lets users in a designated UI design group disable fields for input, hide fields, set a predefined default value for a field, mark a field as required, add fields and frames, and indicate that navigation through a frame should occur automatically. By combining these features, designers can create a screen sequence that greatly streamlines data input for users.

Screen definitions are stored as UI templates, which can be assigned to user groups so that the screen appearance and behavior can vary based on the user's role within an organization. Tools are provided so that administrators can resolve any conflicts that occur regarding screen assignment when a user belongs to more than one user group.

Configuring screens enables you to help the individuals in your company get their jobs done quicker and more effectively. By eliminating fields that are not used at your site, you can also reduce training time and potential data input errors. However, you must have a very clear understanding of how a particular function is being used before you change the data input requirements. Because of the inherent flexibility of the software, each company that implements a particular function may use different features. This can affect which fields are required and which are optional.

The following are a few examples of how this can occur:

Example Generalized codes validation. Many programs support the used of generalized codes. If codes have been defined for a field in Generalized Codes Maintenance (36.2.13), built-in validation results in an error when the field is left blank. However, if no codes are defined, the field can be left blank and an error is not generated. Hiding a validated field without providing a valid default value creates a problem in the first scenario but not in the second.

Example Optional modules. The behavior of some programs is affected by the implementation of optional related modules. For example, different fields and pop-ups display in Sales Order Maintenance depending on whether you are using available-to-promise features, Enterprise Material Transfer, or updating the Service/Support Management installed base. In addition, Container and Line Charges, Customer Consignment Inventory, and Logistics Accounting affect sales orders.

Example Control settings. Settings in control programs can determine whether a field is required or even whether it displays on the interface. For example, the Invoice From Recording setting in Call Management Control determines if certain fields display in the last frame of Call Activity Recording (11.1.1.13).

These examples highlight that you must take care in planning the changes you want to implement. You must also thoroughly test the templates you create before using them in a production environment.

Note The Configurable Screens function is available for non-component-based screens only. You can customize component-based screens using component-based Design Mode. See *User Guide: QAD Financials* for a description of this function.

Assigning Configurable Screen Templates

A set of changes to a particular program's user interface is stored as a template. Templates are then assigned to user groups. In QAD Enterprise Applications - Standard Edition, groups are defined in User Group Maintenance (36.3.4) and then assigned to users in User Maintenance (36.3.1). The system displays all groups defined in User Group Maintenance. In addition, you can assign a generic template to all users. The system activates a template assigned to all users only when a specific template is not assigned to users, based on their group membership.

Specific group assignments always take precedence over generic templates. However, it is still possible for a user to belong to more than one group with different assigned templates. The system handles this by using the template of the first group assigned to the user.

The system also provides a UI Template Conflicts administrative function that lets you view UI template assignment conflicts and manually determine which template should be used

When you design your templates, you should plan how you want to assign users and determine if your existing groups accommodate the way you want to develop your templates. Since security groups often reflect functional responsibility within an organization, they typically already represent different views of an organization that can be supported by different templates. However, you may find that you need to add new groups to be able to use templates to the best advantage in your particular implementation.

Impact of System Changes to Configurable Screens

UI templates are based on the order and organization of a specific user interface. Certain changes to screens can invalidate existing UI templates, resulting in unexpected behavior during execution. These changes include:

- Key fields are added or removed.
- The initial focus field or the first field of a frame is changed. These fields are points of reference for other field information in the template.
- The internal Progress frame name is changed.
- The location of a frame on the screen is changed; for example, moving a frame from the top of the screen to the bottom. This changes the x and y coordinates of the frame, which are used as location identifiers.

  These types of changes are not common.

You should be aware of possible UI impacts when:

- You customize any supported programs.
- You install QAD service packs or upgrade QAD releases.

Be sure to check the release notes provided with the release or service pack to see if these kinds of program changes occurred.

The following kinds of UI changes do not adversely affect UI templates:

- Adding or removing fields from frames, other than the initial focus field or first field mentioned previously.
- Adding or removing frames.

- Changing the sequence that frames appear as long as the frames remain in the same screen location.

Configurable Screen Error Handling

To help you during testing, an additional message displays when a program error is generated because a template does not allow entering a field that is validated by the system.

For example, a frame can have a field that is validated by the system. If that field is hidden so that the user cannot supply a value, the user will not be able to proceed through the program.

In this case, the system displays additional information with the error indicating that a configurable screen setting caused the error, like the following example:

```
The following error was caused by a configurable screen setting.
Please contact your System Administrator.
ERROR: Country code does not exist. Please re-enter.
```

Resolving Configurable Screen UI Template Conflicts

Use the Configurable Screen UI Template Conflicts screen to resolve conflicting template assignments. These conflicts can occur because users belong to more than one group.

For example, John Smith belongs to the Sales1 user group and Manager1 group. The UI designer creates a UI template for Sales Order Maintenance and assigns it to group Sales1. The designer also creates a second Sales Order Maintenance template for managers and assigns it to group Manager1. When John logs in and uses Sales Order Maintenance, the system has no way of knowing which version of the UI to present.

In these situations, the system uses the template associated with the first group assigned to the user. However, this may not be what you want or expect. The system notes this as a conflict to be resolved by the UI Template Conflicts function. You can view and manage these conflicts using the UI Template Conflicts function, accessible from the Configurable Screens table on the Configurable Screens Admin screen.

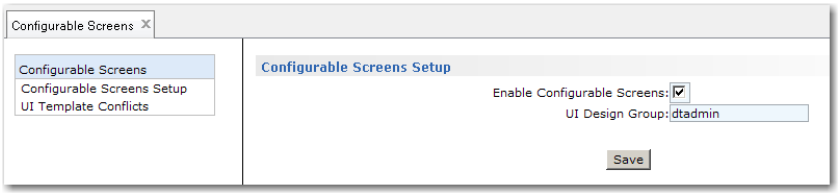
The UI Templates Conflict screen lists all users that belong to more than one group with an assigned template. The administrator can use the drop-down list in the Conflict column to select the group assignment that the system should prioritize.

Setting up Configurable Screens

To set up configurable screens:

1. Choose Administration|Configurable Screens.
2. Click Configurable Screens Setup.

Fig. 4.1
Configurable Screens Setup



You must specify values for the following fields:

Enable Configurable Screens. Select this field to enable members of the group specified for UI Design Group to create screen templates and assign them to users.

- Enabled: Members of the UI design group can create templates, and templates assigned to user groups are active when those users access the associated program.
- Disabled: Templates cannot be created and any that exist are not active even if assigned to users.

UI Design Group. Enter the name of a user group that is authorized to create and modify screen templates. Only members of this group can create configurable screen templates. In QAD Enterprise Applications - Standard Edition, predefine groups in User Group Maintenance (36.3.4) and then associate them with users in User Maintenance (36.3.1).

Click Save to apply this setting.

Setting Up Configurable Screens in Enterprise Edition

In QAD Enterprise Applications - Standard Edition, you assign templates to user groups, which you define in User Group Maintenance (36.3.4) and then assign to users in User Maintenance (36.3.1).

In QAD Enterprise Applications - Enterprise Edition, the user group function is replaced by the role function. To enable Configurable Screens in Enterprise Edition, you therefore enter the name of the role to which you want to assign the function in the UI Design Group setup field. The users to which this role has been assigned are then authorized to create and modify templates for Configurable Screens.

Designing a Template

When you configure screens, you create templates and assign them to user groups. Each template defines how fields display, whether they are required and enabled, if default values are supplied, and any automatic navigation from frame to frame.

To create a new template, select one of the programs in the menu system, such as Customer Maintenance. Right-click to display options and choose Design.

Note This option is enabled only when you are logged in as a member of the UI Design Group.

To move through the sequence of frames in a program, you must either create a new record or modify an existing one. However, when you are in configure mode, none of the changes that you make to database records are saved. You use the record simply as a way to move through the screen.

In cases where new records are assigned sequential numbers, it may be better not to create new records. Although the records are not saved, number sequences are incremented. For example, if you create a new sales order in configure mode, the new order is not saved. However, the next sales order number in Sales Order Control (7.1.24) is incremented, leaving a gap in sales order numbers.

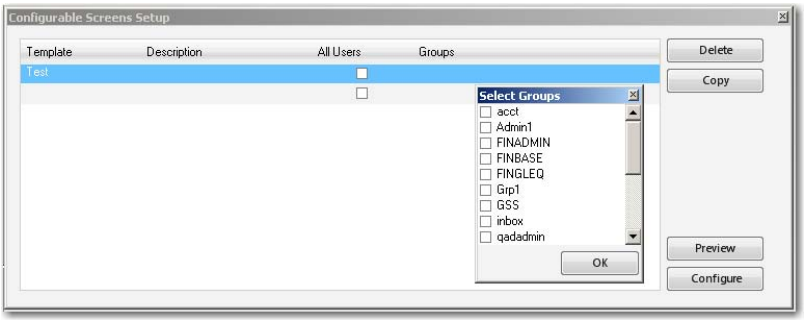
On the other hand, testing of template changes is simplified when you create a new record, rather than editing an existing one. When a new record is created, many fields that require data may be initially blank. For an existing record, these would already have values. If you hide a required field and test with an existing record that has a field value, no error is generated. Later when a user attempts to create a new record, template errors may occur because a field that needs input cannot be updated.

Important To support rolling back changes when you exit design mode, some database records may remain locked during the entire time you are in simplify mode. To reduce any adverse effects of record locking on other users of the system, designers should create and modify UI templates when other users are not actively using the system.

Creating a Template

The Configurable Screens Setup screen is displayed when you right-click on a program in the Applications area and choose Design. Use this screen to manage the UI templates for the selected program.

Fig. 4.2
Configurable Screens Template



To create a new template, follow these steps:

1. Enter a name (up to 40 characters) for the new template in the Template column of the Configurable Screens Setup screen.
2. Enter the template description (up to 60 characters) to indicate its purpose.
3. Indicate if you want this template to be a generic template assigned to all users. If you want this template to be used whenever a more specific one is not found, select the All Users field. When this option is selected, you cannot assign any specific groups.
4. If this is not a generic template, select one or more user groups to assign to this template. The Select Groups list displays all defined groups in the system.

   Select one or multiple user groups to which to assign the template.

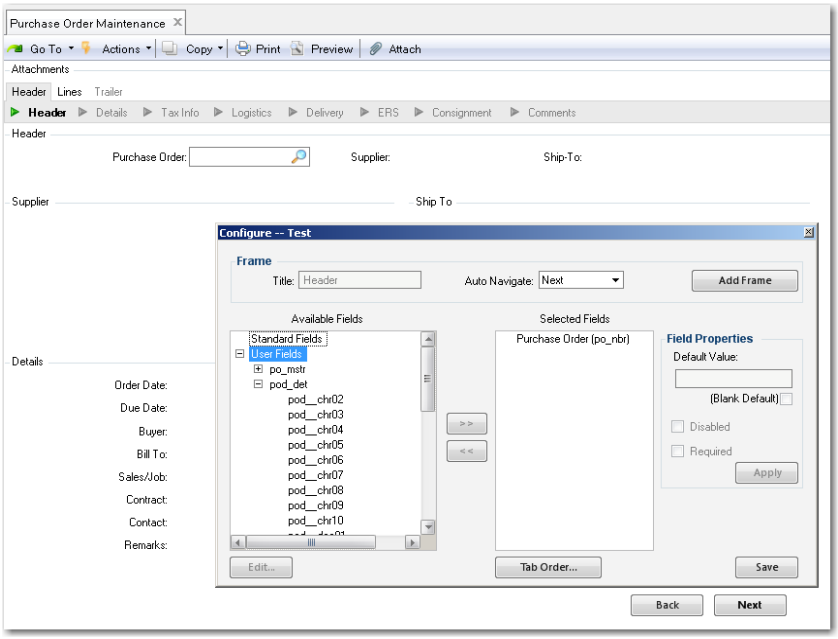
5 Click Delete to delete the selected template, Copy to create a copy of the selected template, or Preview to display the template as it applies to the current program screen.

6 Click Configure to display the Configure screen and program screen, and to begin the template design, as described in the next section.

Configuring Program Screens

Once you click Configure, you view the program screen in configurable mode. The fields in the current frame are highlighted when you mouse over their borders. Grab this highlighted area to move fields around the screen.

Fig. 4.3
Configure



Use the Configure screen to add or remove fields, modify field properties, set the tabbing order on the screen, add new frames, and set the navigation properties on frames.

You can click the Save button at any time to save your changes and leave configuration mode. Your changes are also saved each time you click Next or Back to access a new frame.

Field Descriptions

Frame

Title. This field displays the title of the current frame in read-only format. When you create a new frame, use this field to specify a name (up to 36 characters).

Auto-Navigate. Select from None (the default), Next, and Back. You can use the Next and Back options to simplify data entry by skipping entire frames. Use Next and Back only with careful planning. To skip an entire frame without generating an error, the proper defaults must exist for all required fields. Next and Back have a similar effect; use them to skip the display of a frame. Which one you use depends on the normal screen navigation.

To proceed from one frame to the next, you normally use the Next command. However, when you are in a frame that lets you enter multiple lines—such as sales order detail or customer banks—you use the Back command to indicate you are through entering lines and ready to display the next frame.

So, for example, if you do not want a particular user group to modify bank accounts associated with customers or even see them, set the Back option on the Bank Accounts frame in Customer Maintenance.

When users execute the program, that frame does not display. Typically, Next and Back prevent the display of a frame. However, in some cases, the screen may be visible before the navigation reaches that point.

For example, if you set Next on the bottom frame of the first screen in Customer Maintenance, the frame will still be visible when the screen is launched. When the user navigation reaches that frame, it will then be skipped.

Add Frame. Click to add a frame to the program. See “Adding Fields and Frames” on page 71.

Available Fields. This area displays the user-defined fields you can add to the current frame or to a new frame. These fields are defined for each program in the `configscreens.xml` file. See “Adding New Fields and Tables to Programs” on page 72.

Selected Fields. This area displays the fields selected for use on the current frame.

Field Properties

Use this area to view and modify the properties of a field selected in the Selected Fields area.

You can assign more than one option to a field; for example, you can provide a default value for a field as well as disabling or hiding it.

If you plan to mark fields as required, you should consider marking all fields that are validated by the application logic as required, and not just newly added fields.

You can configure all types of enabled fields in a frame except for fields that are represented with drop-down lists, such as the Line Format field in Sales Order Maintenance (7.1.1). None of the field-level commands can be used with this type of field. When you right-click the Line Format field, the commands are disabled.

Default Value. You can add a default value to existing or new fields, which is displayed in red on the screen. A drop-down list of default values (None, True, or False) is displayed beside logical-type fields.

Defaults you specify for a template override any other defaulting logic associated with a field. Defaults are only applied to new records; when a record is being edited, no field values are overridden.

The following is a list of the programs for which the Default Value option for fields is available:

adcsmt.p	icunrc01.p	remove.p	sfoptr06.p
advnmt.p	kbcdrp01.p	renplf.p	sfscrap.p
aprvmt.p	kbcdrp03.p	rescrap.p	soivmt.p
apvomt.p	poblmt.p	reset.p	sosomt.p
bmpsmt.p	popomt.p	rewadj.p	sosopk.p
dsdopk01.p	poporc.p	rework.p	sososl.p
fscamt.p	pppsmt01.p	rqrqmt.p	sqqomt.p
fsrmamt.p	ppptmt.p	rspomt.p	wobkfl.p
icccaj.p	ppptmt04.p	rwopmmt.p	woopmt.p
iclomt.p	rcpsmt.p	rwromt.p	wowois.p
iclotr02.p	rcsomt.p	rwromt01.p	wowoisrc.p
iclotr03.p	rcssmt.p	sfoptr01.p	wowomt.p
icrsrc.p	rebkfl.p	sfoptr02.p	woworc.p
icsorc.p	redt.p	sfoptr03.p	woworl.p
icunis.p	reject.p	sfoptr04.p	woworl01.p
icunrc.p	relbr.p	sfoptr05.p	

Blank Default. Select this field to set a blank default for the selected field.

Disabled. Select this field to disable the selected field in the screen. The field label remains on the screen, the value box is removed from the screen, and the user cannot update it.

You can remove both field name and value box from the screen by selecting the field in the Selected Fields area and using the arrow key to return it to the Available Fields area. Existing fields are moved to the Standard Fields section of the Available Fields area, and new fields are moved to the User Fields section.

Required. Select this field to prevent users from advancing through the current frame without supplying a value for this field. In configurable mode, the field name is bolded, changed to a blue color, and marked with an asterisk (*) at run-time.

New. Click to display the New field screen, in which you add a new field to the list of Available Fields. This option is only available for Enterprise Edition applications.

Edit. Select a field in the Available Fields area and click Edit to display the field properties. See “Editing Field Properties” on page 73.

Note You cannot edit the properties of a Standard Field.

Tab Order. The tabbing order is the sequence in which you access fields using the Tab key. Click to display the tabbing order of fields in the current frame. Use the Up and Down buttons to change the order, if required.

Apply. Click to apply your field properties changes.

Save. Click to save your template changes.

Adding Fields and Frames

In component-based screens in QAD Enterprise Edition, you can add a new field to a table and then add the new field to the current screen. See *User Guide: QAD Financials* for details of Design Mode for component-based screens.

In Standard Edition, the list of fields that you can add to a screen is displayed in the Available Fields area of the Configure screen. The Available Fields area has two sections:

- Standard Fields

  These are existing data fields for the program. The Standard fields area only displays fields that have been hidden from the screen as part of a previous customization.

- User Fields

  These are the default user customization fields that are defined for all tables.

Adding New Fields and Tables to Programs

When you design a program, the user fields available to add to the screen are displayed in the Available Fields area. You can add these to existing frames, or create a new frame to contain one or more of these fields.

By default, only specific tables and fields are displayed for a particular program. These tables and fields are defined in the `configscreens.xml` file.

The `<tableaccess>` section of this file lists the tables associated with some of the programs that are available for Design mode.

By default, you can only add fields that follow these naming conventions:

```
*__chr..
*__dte..
*__log..
*__dec..
*_user1
*_user2
```

These names correspond to the following field types:

character

date

logical

decimal

integer

These fields are reserved for customization and can be added as values for any table.

The `<userfields>` section of the file allows additional fields to appear in the User Fields section of the Configure screen.

Warning The default fields that follow the naming convention above are safe to add to screens because they are specifically reserved for customizations. However, when adding other fields to the `<userfields>` section of `configscreens.xml`, you must be very familiar with the fields and the side effects that can be caused by adding them to the screen. Some fields are heavily validated and verified by the standard code. If they are added to the screen using this mechanism, this validation and verification will be bypassed—causing data corruption.

In the example, the `<tableaccess>` section of the `configscreens.xml` file lists the tables for `woworl01.p` and `wowor1.p`.

The `default` value of each program displays the default table that appears first in the Available Fields area of the Design window.

```
<configscreens>
   <tableaccess>
      <program name="woworl01.p" default="wo_mstr">
         <table name="wo_mstr"/>
         <table name="pt_mstr"/>
      </program>
      <program name="woworl.p" default="wo_mstr">
         <table name="wo_mstr"/>
         <table name="pt_mstr"/>
      </program>

        …
</tableaccess>
   <userfields>
      <table name="pt_mstr">
         <field name="pt_desc1"/>
         <field name="pt_desc2"/>
      </table>
   </userfields>
</configscreens>
```

There are two copies of `configscreens.xml`, in the `com/qad/mfgpro` and `com/mfgpro` folders. You must modify both files to enable your additional field changes.

Adding Available Fields to Screens

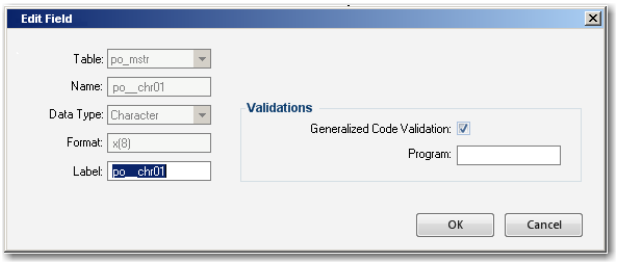
To add a field to the current frame, select the field in the Available Fields area and use the arrow button to move the field to the Selected Fields area. Before moving the field, click Edit to view and modify the field properties. The Edit button is only available for user fields in the Available Fields area.

Editing Field Properties

The Edit Field screen displays read-only properties for the selected field, and lets you modify the field label and validation.

Note The Edit Field screen is not available for Standard Fields.

Fig. 4.4
Edit Field



Field Descriptions

Table. This read-only field displays the database table for which this field is defined.

Name. This read-only field displays the field name.

Data Type. This field displays the field type: character, date, logical, decimal, user 1, or user 2.

Format. This read-only field displays the field data format; for example, the maximum number of characters for a character field.

Label. This field displays the field label. You can modify the label up to a maximum of 35 characters. Note that the system will translate the value you put in the Label field if the value is a label term. Otherwise, the system will just use the value for the label.

Validations

Use this area to define how the field is to be validated.

Generalized Code Validation. Check this field to ensure that the values for this field are based on the valued specified in Generalized Code Maintenance (36.2.13). You can use Generalized Codes Validation Rpt (36.2.15) to view a list of database fields that have schema validation assigned.

Note When adding values in Generalized Codes Maintenance, you must specify the full table and field name. For example, if specifying values for the field `pt_chr01`, you enter the table and field name `pt_mstr.pt_chr01`.

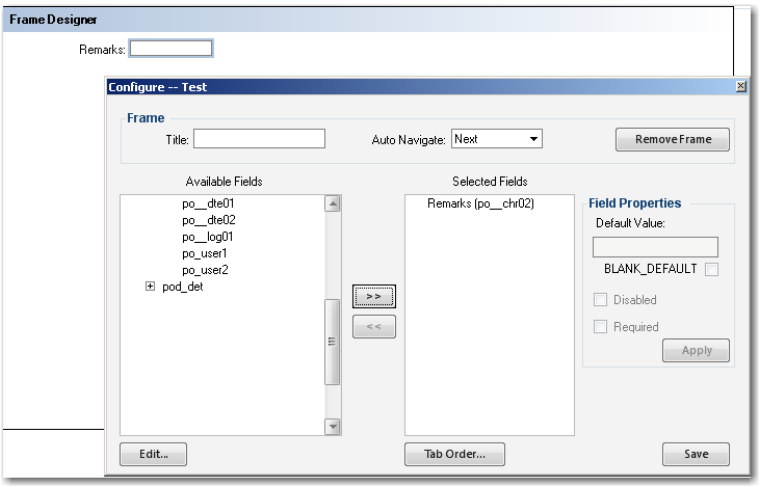
Program. Use this field to enter the name of a user-defined Progress program that validates the field.

You can use the program template `gpvalidate.p` to create your own Progress programs. This template is stored in the *`QADInstallDir`*`/qadui/com/qad/shell/interface` directory and contains instructions for usage. Copy the template and rename it appropriately.

Adding New Frames to Screens

Click the Add Frame button to add a new frame to the program.

Fig. 4.5
Add Frame



The button is only available when there are available fields to add. A default message (8622, ‘See User Guide for adding User Fields’) is displayed when no fields are available.

The new frame is displayed behind the Configure screen. To add fields to the screen, use the arrow key to move fields from the Available Fields area to the Selected Fields area. Use the cursor to position fields in the frame, and click the Tab Order button to set the tabbing order for the frame.

Click Save to save this frame and insert it into the program sequence, or Remove Frame to remove the frame from the sequence. When you remove a frame, the fields are selectable again in the Available Fields area.

When you create a new frame, save your updates, and exit Configure Screens, the frame is displayed immediately following the current frame when you next launch the program.

Adding Lookups to a User-Defined Field

Note To add a lookup to a user-defined field, you must use the full field name when you set up the lookup in Drill Down/Lookup Maintenance. The full field name includes the table name and the field name in the format *`table_name.field_name`*. View the screen and enter Ctrl+F on the added field. You will see the full field name (for example, `ad_mstr.ad__chr02`, where `ad_mstr` is the table name and `ad_chr02` is the field name).

You can remove fields you have added by clicking Delete. (You can only remove the fields you have added.)

Warning When you create your own field and frame, you add the field to the schema, and as the program is used, users add values to it. When you delete, you delete the field and all its stored values from the database. Use the Disable or remove options to remove a field from the screen without deleting it from the database.

Using New Fields in Character Code

The Configurable Screens functionality for Enterprise Edition allows New Fields that are not part of the existing schema to be added to screens via the Configure dialog-box. These New Fields are not physically part of the master tables but are stored in a side table and thus require a different way to access their values from the CHUI code.

For this purpose, the include file `gpgenfld.i` gives access to the values of these new fields through function calls.

Note This function is only used when modifying character code.

To access to the function calls, include the following file at the top of the program that will use them:

```
{com/qad/mfgpro/gpgenfld.i}
```

The `get` function calls provided by `gpgenfld.i` are as follows:

`GetFieldValueChar` returns `character` (`pTable` as character, `pField` as character, `pRecordID` as decimal, `pRefresh` as logical).

`GetFieldValueDec` returns `decimal` (`pTable` as character, `pField` as character, `pRecordID` as decimal, `pRefresh` as logical).

`GetFieldValueInt` returns `integer` (`pTable` as character, `pField` as character, `pRecordID` as decimal, `pRefresh` as logical).

`GetFieldValueDate` returns `date` (`pTable` as character, `pField` as character, `pRecordID` as decimal, `pRefresh` as logical).

`GetFieldValueLog` returns `logical` (`pTable` as character, `pField` as character, `pRecordID` as decimal, `pRefresh` as logical).

Where:

`pTable` is name of the table.

`pField` is name of the new field that is being accessed.

`pRecordId` is the OID value of the specific record of table `pTable`.

`pRefresh` specifies whether the function should read the record fresh or use a cached value. The first call for a particular OID value will always read the record. From then on, the cached record will be used for additional function calls, unless the call specifies `yes` for this parameter. Then the record will be re-read.

For example: `GetFieldValueDec("so_mstr", "so_field1", oid_so_mstr, yes).`

The set function calls provided by `gpgenfld.i` are as follows:

`SetFieldValueChar` returns logical (`pTable` as character, `pField` as character, `pRecordID` as decimal, `pValue` as function-dependent datatype).

`SetFieldValueDec` returns logical (`pTable` as character, `pField` as character, `pRecordID` as decimal, `pValue` as function-dependent datatype).

`SetFieldValueInt` returns logical (`pTable` as character, `pField` as character, `pRecordID` as decimal, `pValue` as function-dependent datatype).

`SetFieldValueDate` returns logical (`pTable` as character, `pField` as character, `pRecordID` as decimal, `pValue` as function-dependent datatype).

`SetFieldValueLog` returns `logical` (`pTable` as character, `pField` as character, `pRecordID` as decimal, `pValue` as function-dependent datatype).

Each function returns a logical that indicates if the operation was successful and accepts the parameters as follows:

`pTable` is the name of the table.

`pField` is the name of the new field that is being accessed.

`pRecordId` is the OID value of the specific record of table `pTable`.

`pValue` is the value to assign (the datatype varies depending on which function is called).

Example `SetFieldValueDec("so_mstr", "so_field1", oid_so_mstr, 5.6).`

Restricting Configurable Screens by Domain

By default, the Configurable Screens function does not take into account the user's domain when providing access to the Configurable Screens templates. This means that if you have access to a template in one domain, access is granted across all domains. You can, however, restrict this function by domain by re-setting the `configByDomain parameter` in the `setting.dat` files for the environment.

For example, you have access to a template as a member of the group/role G1 in domain D1. If `configByDomain=no`, the template is applied regardless of the domain you are logged into. If `configByDomain=yes`, however, the template is applied only when you are logged into domain

D1. If, however, a group/role named G1 is also available in a different domain D2, the template is also applied in domain D2. This is because templates are assigned to groups/roles and not specifically to domains.

The `setting.dat` files are located in two directories:

`QADInstallDir``/qadui/com/mfgpro`, and *`QADInstallDir`*`/qadui/com/qad/mfgpro`

and you must apply this change to both files:

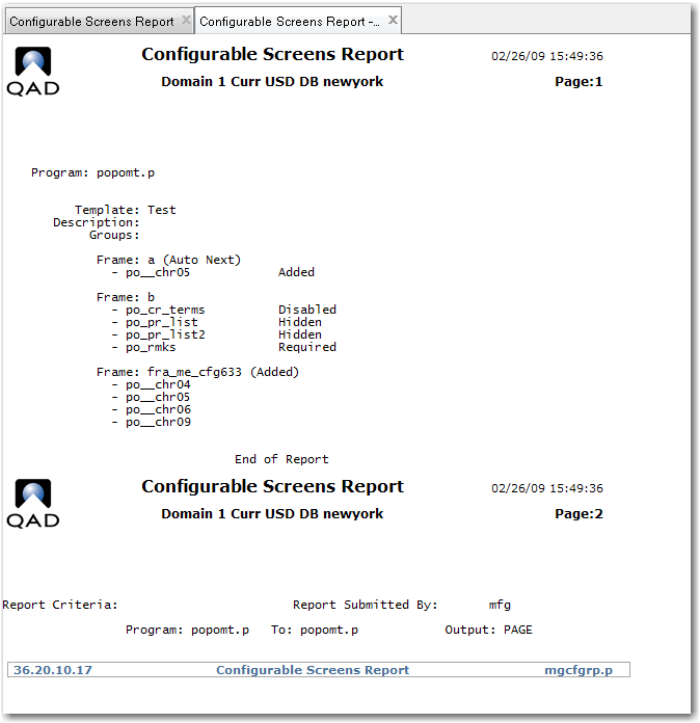
1. Locate the following parameter in the `setting.dat` files:
   `/* Restrict Configurable Screens by Domain */ configByDomain=No`
2. Set `configByDomain=Yes` in both files.
3. Exit the files and log into the application.
4. Select Connection Manager and click Restart Connection Manager.

Configurable Screens Report

Configurable Screens Report (36.20.10.17) lists all screens that have been configured. The Report details the fields that have been modified or added, and you can generate a report on individual configured screens or on all screens.

Note The Configurable Screens Report is available in QAD Enterprise Applications Standard Edition 2009 or greater, and QAD Applications 2009 Enterprise Edition or greater, or if you have installed the patch ECO Q1WY.

Fig. 4.6
Configurable Screens Report



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