

Mercury Quality Center™

Defects Synchronizer for
Rational ClearQuest Add-in Guide

Version 8.2 Service Pack 1

Mercury Quality Center Defects Synchronizer for Rational ClearQuest Add-in Guide, Version 8.2 Service Pack 1

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Welcome

Welcome to the Mercury Quality Center (formerly TestDirector) Defects Synchronizer for Rational ClearQuest. This add-in supports Rational ClearQuest 2002, 2003, and 2003 Service Release 4 with Mercury Quality Center Enterprise Edition 8.0 or later.

The Synchronizer organizes the transfer of defect data between Quality Center and Rational ClearQuest, enabling you to manage project defects using the most suitable tool for your needs.

For example, if the development team uses ClearQuest and the quality assurance team uses Quality Center, the Synchronizer enables the teams to integrate their projects so that they are both working with the same data. This means that the quality assurance team can use one tool to handle the testing process, while the development team can use its preferred change management tool.

The Synchronizer employs multiple transfer options to satisfy varying user needs. This enables users to create defects that do not yet exist in the receiving tool, update existing defects, or remove deleted defects.

You begin working with the Synchronizer by creating a synchronization link in the Quality Center/ClearQuest Synchronization Manager. When you create a synchronization link, you define and configure the data to be transferred between a defect entity in a ClearQuest database and a Quality Center project.

After you create a synchronization link, you can work with your defects in Quality Center or ClearQuest and, as required, initiate one of two synchronization tasks: updating links and deleting links.

You can also run the Synchronizer as a service. The service runs your links automatically, according to predetermined intervals.

Using This Guide

This guide contains the following chapters:

Chapter 1 Installing the Quality Center Defects Synchronizer

Describes how to install the Quality Center Defects Synchronizer.

Chapter 2 Creating Quality Center/Rational ClearQuest Links

Describes how to create a link between a Quality Center project and a ClearQuest database.

Chapter 3 Working with the Synchronizer

Describes how to run the Synchronizer, either manually or as a service. Also includes an example of working with the Synchronizer.

Typographical Conventions

This book uses the following typographical conventions:

1, 2, 3	Bold numbers indicate steps in a procedure.
➤	Bullets indicate options and features.
>	The greater than sign separates menu levels (for example, File > Open).
Stone Sans	The Stone Sans font indicates names of interface elements in a procedure upon which you perform actions (for example, “Click the Run button.”).
Bold	Bold text indicates function names.
<i>Italics</i>	<i>Italic</i> text indicates variable names, or introduces a new term.
Arial	The Arial font is used for examples and statements that are to be typed in literally.

1

Installing the Quality Center Defects Synchronizer

This section describes how to install the Quality Center Defects Synchronizer.

This chapter includes:

- Installing the Quality Center Defects Synchronizer
- Setting the Services Logon
- Before You Begin
- Starting the Quality Center Defects Synchronizer
- Uninstalling the Defects Synchronizer

Installing the Quality Center Defects Synchronizer

You must install the Quality Center Defects Synchronizer on a separate, dedicated standard desktop machine that is not being used as a Quality Center or ClearQuest server.

Note: To successfully work with the Synchronizer, the machine must meet the minimum requirements and recommendations for a Rational Desktop System. For more information, refer to the *Rational Software Desktop Products Installation Guide*.

Note that to install this add-in, you must log in with administrator privileges.

To install the Quality Center Defects Synchronizer:

- 1** Install a ClearQuest Windows client and a Quality Center client on the same machine and check that both clients are communicating successfully with their servers.

Note: You must install a ClearQuest Windows client to work with the Quality Center Defects Synchronizer, even if you are working with a ClearQuest Web client.

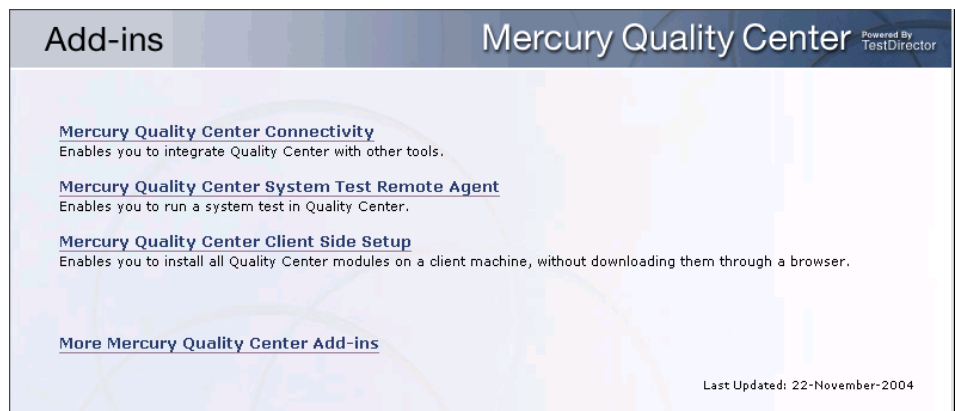
Note: If you are using ClearQuest 2003, you may need to set the ClearQuest data code page to an appropriate value. This must be done before working with the Synchronizer. For more information on setting the code page value, refer to the *Rational ClearQuest Administrator's Guide*.

- 2** Uninstall any previous versions of the TestDirector or Quality Center Defects Synchronizer for Rational ClearQuest Add-in. To uninstall, choose **Start > Settings > Control Panel > Add/Remove Programs** and follow the instructions on your screen.

- 3 Open your Web browser and type your Mercury Quality Center URL:
`http://<Quality Center server name>/<virtual directory name>/default.htm`.
The Mercury Quality Center Options window opens.



- 4 Click the **Add-ins Page** link. The Mercury Quality Center Add-ins page opens.



- 5 Click the **More Mercury Quality Center Add-ins** link. The More Mercury Quality Center Add-ins page opens.

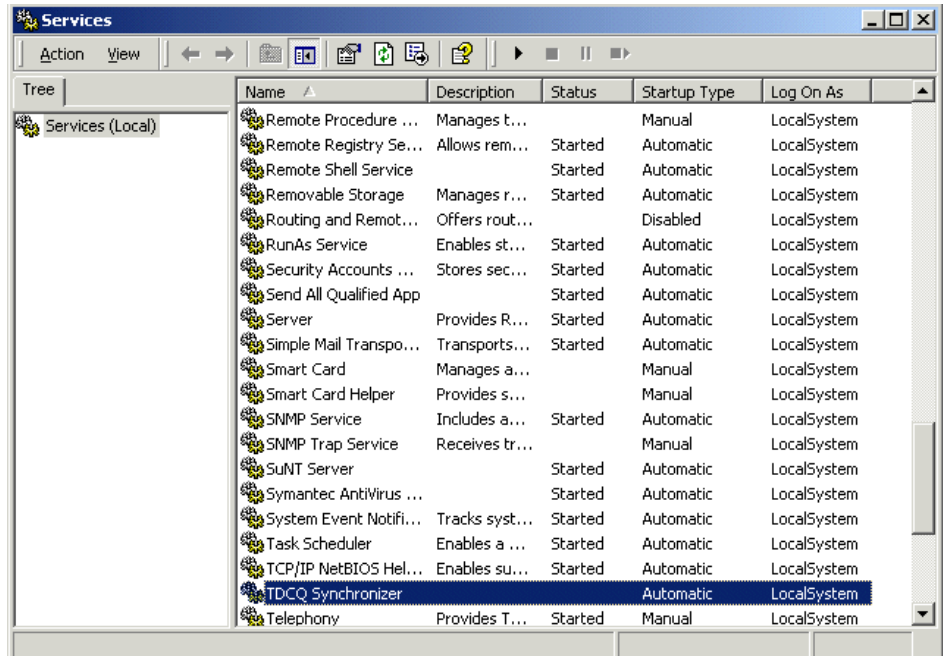
- 6** Under **Synchronization Tool Add-ins**, click the **Defects Synchronizer for Rational ClearQuest** Add-in link. The Quality Center Defects Synchronizer for Rational ClearQuest page opens.
- 7** Click the **Download Add-in** link. Follow the on-screen installation instructions.
- 8** Navigate back to the Mercury Quality Center Add-ins page and click the **Mercury Quality Center Connectivity Add-in** link. The Mercury Quality Center Connectivity Add-in opens.
- 9** Click **Download Add-in** and install the Mercury Quality Center Connectivity Add-in on your Quality Center client machine.

Setting the Services Logon

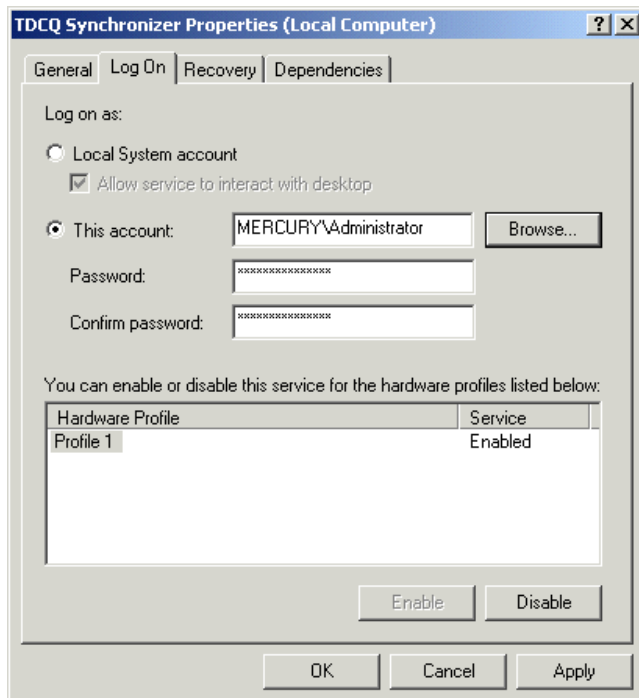
After you install the Defects Synchronizer for Rational ClearQuest add-in, you must also set the services logon.

To set the services logon:

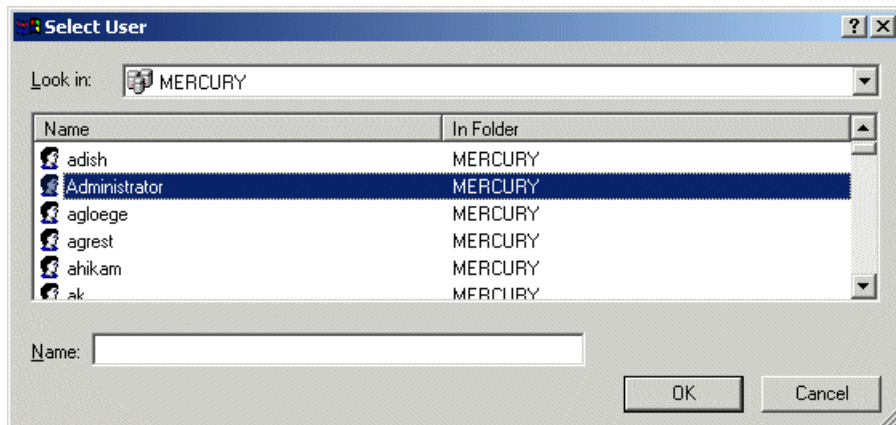
- 1 Choose **Start > Settings > Control Panel**. Click the **Administrative Tools** icon, and then click the **Services** icon. The Services window opens.



- 2 Double-click **TDCQ Synchronizer**. The TDCQ Synchronizer Properties dialog box opens.



- 3 In the **Log On** tab, select **This account** and click the **Browse** button. The Select User dialog box opens.



- 4 Select a user name. Note that the user must have full network permissions.
- 5 Click **OK** to close the Select User dialog box.
- 6 Type and confirm the password.
- 7 Click **OK** to close the TDCQ Synchronizer Properties dialog box.
- 8 In the Services window, click the **Stop Service** button and then click the **Start Service** button.
- 9 Close the Services window.

Before You Begin

Before you begin using the Quality Center Defects Synchronizer, make sure that you follow these guidelines to customize your Quality Center project and ClearQuest database:

- If your ClearQuest schema or project has changed for any of your links, you must upgrade your existing synchronization links. For more information, see “Upgrading Synchronization Links” on page 8.
- Before you create a link, add the **TD_ID** field name (SHORT_STRING) to your ClearQuest database schema and make sure that the field type is not read-only. You must ensure that the value of this field is not modified in ClearQuest. For more information, refer to the *Rational ClearQuest User's Guide*.
- Make sure that the time is the same on the ClearQuest and Quality Center servers that you are synchronizing.
- In ClearQuest, it is recommended that you change the behavior of the **Submitter** field and the **Submit_date** field from **Read only** to **Mandatory**.
- ClearQuest's default configuration imposes restrictions on the permissible state changes. This may prevent the Synchronizer from being able to synchronize the defect. For more information, see “Configuring the Permissible State Changes” on page 9.

- The Synchronizer cannot mark ClearQuest defects as **Duplicate**, because ClearQuest requires the ID of the duplicate defect, which the synchronizer cannot supply. For more information, see “Setting ClearQuest Defects as Duplicate” on page 11.
- The first time you perform a synchronization for a link, you should start the synchronization manually from the Synchronization Manager, and not use the service.

Upgrading Synchronization Links

If your ClearQuest schema or project has changed for any of your links, you must upgrade your existing synchronization links.

To upgrade any existing synchronization links:

- 1** In the Quality Center/ClearQuest Synchronization Manager, right-click a link and choose **Link Properties**. The Link Properties dialog box opens.
- 2** Click the **Linked Projects** tab. Under **ClearQuest**, from the **Schema Master** list box, select the schema to which your ClearQuest project is connected.
- 3** Click **Test**. The Synchronizer tests the synchronization link to ensure that there is a connection to the schema in ClearQuest.
- 4** Click **Reload** to save the schema name. The Synchronizer reloads the synchronization link.
- 5** Click **OK** to close the Link Properties dialog box and refresh the link.

Note: It is recommended that you run an integrity check to make sure that the link is ready for synchronization. For more information, see “Verifying Synchronization Links” on page 40.

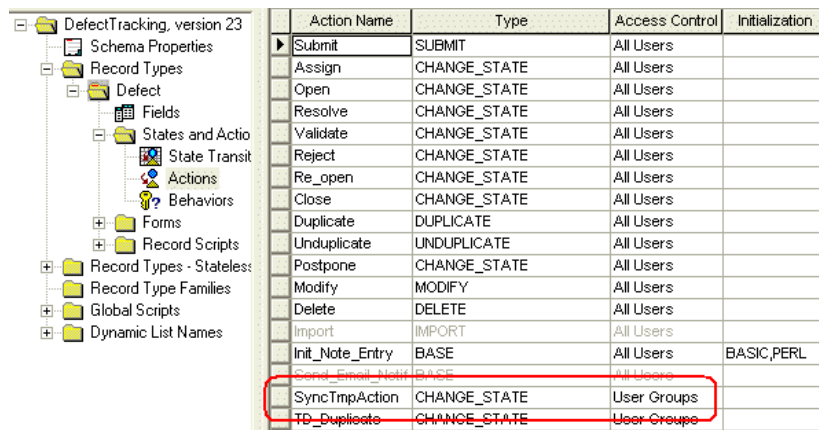
- 6** Repeat steps 1 - 5 for any additional synchronization links.

Configuring the Permissible State Changes

You can configure ClearQuest's restrictions on the permissible state changes, to enable the Synchronizer to synchronize the defect. To do so, add a new state, called "SyncTmpAction", and configure it to allow transition from any state to any other state.

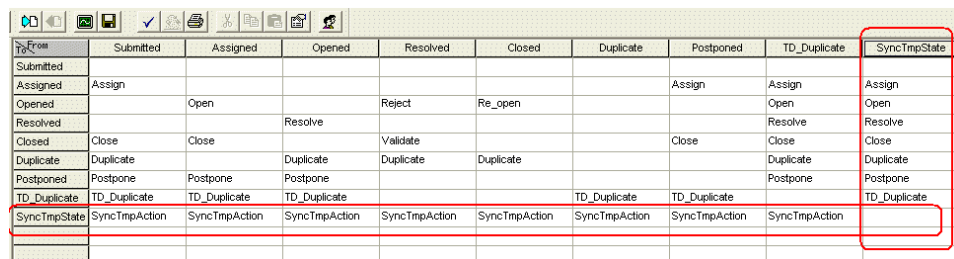
To configure the permissible state changes:

- 1 Open the ClearQuest Designer. In the Actions screen, add the **SyncTmpAction** action name. Set the type to **CHANGE_STATE**.



Action Name	Type	Access Control	Initialization
Submit	SUBMIT	All Users	
Assign	CHANGE_STATE	All Users	
Open	CHANGE_STATE	All Users	
Resolve	CHANGE_STATE	All Users	
Validate	CHANGE_STATE	All Users	
Reject	CHANGE_STATE	All Users	
Re_open	CHANGE_STATE	All Users	
Close	CHANGE_STATE	All Users	
Duplicate	DUPLICATE	All Users	
Unduplicate	UNDUPLICATE	All Users	
Postpone	CHANGE_STATE	All Users	
Modify	MODIFY	All Users	
Delete	DELETE	All Users	
Import	IMPORT	All Users	
Init_Note_Entry	BASE	All Users	BASIC_PERL
Send_Email_Note	BASE	All Users	
SyncTmpAction	CHANGE_STATE	User Groups	
TD_Duplicate	CHANGE_STATE	User Groups	

- 2 In the State Transition Matrix screen, add a new state transition called **SyncTmpState**. You must configure it as follows:



	Submitted	Assigned	Opened	Resolved	Closed	Duplicate	Postponed	TD_Duplicate	SyncTmpState
Submitted									
Assigned	Assign						Assign	Assign	Assign
Opened		Open						Open	Open
Resolved			Resolve	Reject	Re_open			Resolve	Resolve
Closed	Close	Close		Validate			Close	Close	Close
Duplicate	Duplicate		Duplicate	Duplicate	Duplicate			Duplicate	Duplicate
Postponed	Postpone	Postpone	Postpone					Postpone	Postpone
TD_Duplicate	TD_Duplicate	TD_Duplicate	TD_Duplicate			TD_Duplicate	TD_Duplicate		TD_Duplicate
SyncTmpState	SyncTmpAction	SyncTmpAction	SyncTmpAction	SyncTmpAction	SyncTmpAction	SyncTmpAction	SyncTmpAction	SyncTmpAction	

- 3** In the Behaviors screen, configure **SyncTmpAction**, ensuring that all fields are configured as optional, as shown in the following example:

	Submitted	Assigned	Opened	Resolved	Closed	Duplicate	Postponed	TD_Duplicate	SyncTmpState	
dbid	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	R
is_active	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	R
id	READONLY	OPTIONAL	READONLY	READONLY	READONLY	READONLY	OPTIONAL	OPTIONAL	OPTIONAL	O
State	READONLY	OPTIONAL	READONLY	READONLY	READONLY	READONLY	OPTIONAL	OPTIONAL	OPTIONAL	O
version	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	R
lock_version	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	R
locked_by	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	R
history	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	R
is_duplicate	READONLY	OPTIONAL	READONLY	READONLY	READONLY	READONLY	OPTIONAL	OPTIONAL	OPTIONAL	O
unduplicate_state	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	R
Headline	MANDATORY	MANDATORY	MANDATORY	MANDATORY	MANDATORY	MANDATORY	MANDATORY	MANDATORY	OPTIONAL	M
Description	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	O
Priority	OPTIONAL	MANDATORY	MANDATORY	MANDATORY	MANDATORY	OPTIONAL	OPTIONAL	MANDATORY	OPTIONAL	M
Severity	MANDATORY	MANDATORY	MANDATORY	MANDATORY	MANDATORY	MANDATORY	MANDATORY	MANDATORY	OPTIONAL	M
Submitter	MANDATORY	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	READONLY	READONLY	READONLY	OPTIONAL	M
Submit_Date	MANDATORY	MANDATORY	MANDATORY	MANDATORY	MANDATORY	MANDATORY	MANDATORY	MANDATORY	OPTIONAL	M
Owner	OPTIONAL	MANDATORY	MANDATORY	MANDATORY	MANDATORY	OPTIONAL	OPTIONAL	MANDATORY	OPTIONAL	M
old_id	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	OPTIONAL	R
Keywords	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	O
Symptoms	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	O
Note_Entry	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	O
Notes_Log	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	READONLY	OPTIONAL	R
Resolution_StateType	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	O
Resolution	USE_HOOK	USE_HOOK	USE_HOOK	USE_HOOK	USE_HOOK	USE_HOOK	USE_HOOK	USE_HOOK	USE_HOOK	U
Attachments	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	O
Project	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	O
customer_severity	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	O
customer	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	O
TD_ID	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	O
dynamic	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	O
Tool	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	O
number	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	OPTIONAL	O

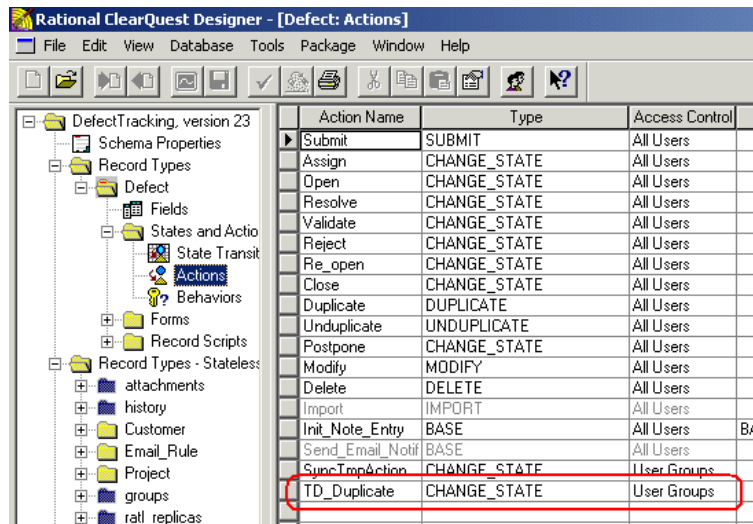
- 4** Check in the schema and upgrade the database.

Setting ClearQuest Defects as Duplicate

The Synchronizer cannot set ClearQuest defects as "Duplicate", because ClearQuest requires the ID of the duplicate defect, which the synchronizer cannot supply.

To set a ClearQuest defect as a duplicate:

- You can configure ClearQuest to not require the ID of the duplicate defect.
 - Open the ClearQuest Designer. In the Actions screen, change the type for the Duplicate action from **Duplicate** to **CHANGE_STATE**.
 - Check in the schema and upgrade the database.
- Alternatively, you set the ClearQuest defect as a duplicate, by adding a new state called **TD_Duplicate**. The synchronizer will mark duplicate defects with this state rather than **Duplicate**.
 - Open the ClearQuest Designer. In the Actions screen, add a new state **TD_Duplicate**.



- In the State Transition Matrix screen, add the **TD_Duplicate** state transition and configure it. You can use the following as an example:

From	Submitted	Assigned	Opened	Resolved	Closed	Duplicate	Postponed	TD_Duplicate
Submitted								
Assigned	Assign						Assign	Assign
Opened		Open		Reject	Re_open			Open
Resolved			Resolve					Resolve
Closed	Close	Close	Validate				Close	Close
Duplicate	Duplicate	Duplicate	Duplicate	Duplicate	Duplicate			Duplicate
Postponed	Postpone	Postpone	Postpone					Postpone
TD_Duplicate	TD_Duplicate	TD_Duplicate	TD_Duplicate	TD_Duplicate	TD_Duplicate	TD_Duplicate	TD_Duplicate	TD_Duplicate
SyncTmpState	SyncTmpAction	SyncTmpAction	SyncTmpAction	SyncTmpAction	SyncTmpAction	SyncTmpAction	SyncTmpAction	SyncTmpAction

Starting the Quality Center Defects Synchronizer

After you install and configure the Quality Center Defects Synchronizer, you can start it from your **Start** menu. To open the Synchronizer, choose **Start > Programs > Quality Center 8.X > Integrations > Defects Synchronizer**.

The Defects Synchronizer program folder contains the following items:

- **Synchronizer Manager:** Opens the Quality Center ClearQuest Synchronization Manager, enabling you to create and run a synchronization task.
- **User's Guide:** Opens this user's guide in PDF format.

Uninstalling the Defects Synchronizer

This section describes the steps for uninstalling the Defects Synchronizer.

Note: If you uninstall the Synchronizer, information about the last URS and DRS will be removed for all links. If you install the Synchronizer again, the next synchronization process will synchronize all your existing defects.

To uninstall the Quality Center Synchronizer:

- 1** Go to **Start > Settings > Control Panel > Add/Remove Programs**. The Add/Remove Programs dialog box opens.
- 2** Select **Quality Center Synchronizer for ClearQuest** and click **Change/Remove**.
- 3** Follow the on-screen instructions for uninstalling the Synchronizer.

2

Creating Quality Center/Rational ClearQuest Links

You create a link in the Quality Center/ClearQuest Synchronization Manager using the Create Link Wizard. The Create Link Wizard enables you to define and configure the data to be transferred between a defect entity in a ClearQuest database and a Quality Center project.

After you create a link, the Integrity Check Results page opens. It indicates whether or not the synchronization link was created successfully.

This chapter includes:

- About Creating Quality Center/Rational ClearQuest Links
- Creating Synchronization Links
- Creating Mapping Files
- Changing the Mapping of the Status/State Fields
- Verifying Synchronization Links

About Creating Quality Center/Rational ClearQuest Links

When creating links, note the following guidelines and limitations:

- If you add a new item to a defect field selection list in one tool, you must add the item to the defect field selection list in the other tool.
- You must map your ClearQuest **Status** field values so that they are identical to the Quality Center **Status** field values, with the exception of the following static fields:

Quality Center Status Field	ClearQuest Status Field
New	Submitted
Open	Opened
Fixed	Resolved
Closed	Closed

- Each required field in Quality Center must be mapped to an identical ClearQuest field, or to the same type of ClearQuest field. The ClearQuest field must have a valid value.
- You can change the hard-coded mapping of the Status/State field and ensure that the states in Quality Center match those in ClearQuest. For more information, “Changing the Mapping of the Status/State Fields” on page 39.

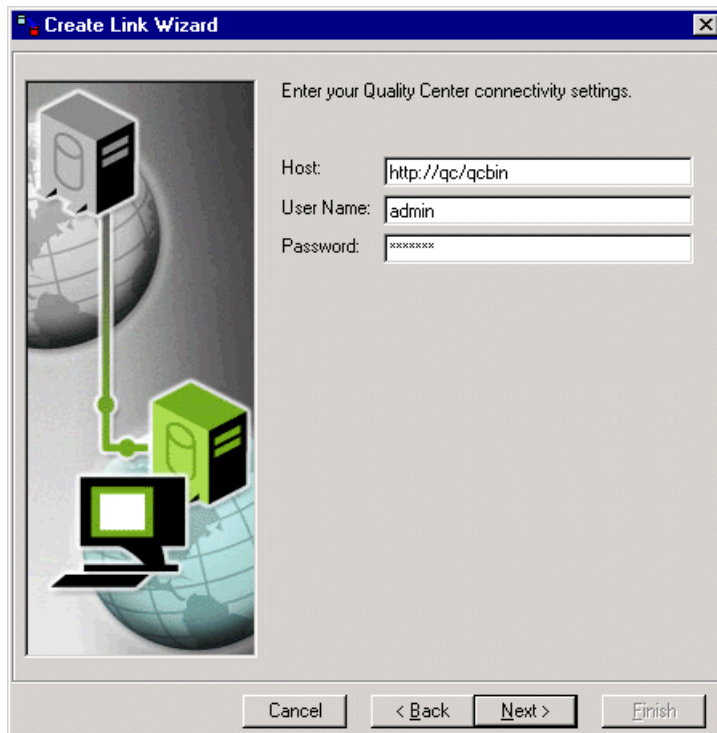
Creating Synchronization Links

To create a synchronization link, you define and configure the data to be transferred between a defect entity in a ClearQuest database and a Quality Center project.

Note: Make sure that you are logged out of Quality Center before creating a synchronization link.

To create a synchronization link:

- 1 In the Quality Center/ClearQuest Synchronization Manager, choose **Link > Create Link Wizard**. The Create Link Wizard opens.
- 2 Click **Next** to begin creating a link using the wizard. The first dialog box opens.

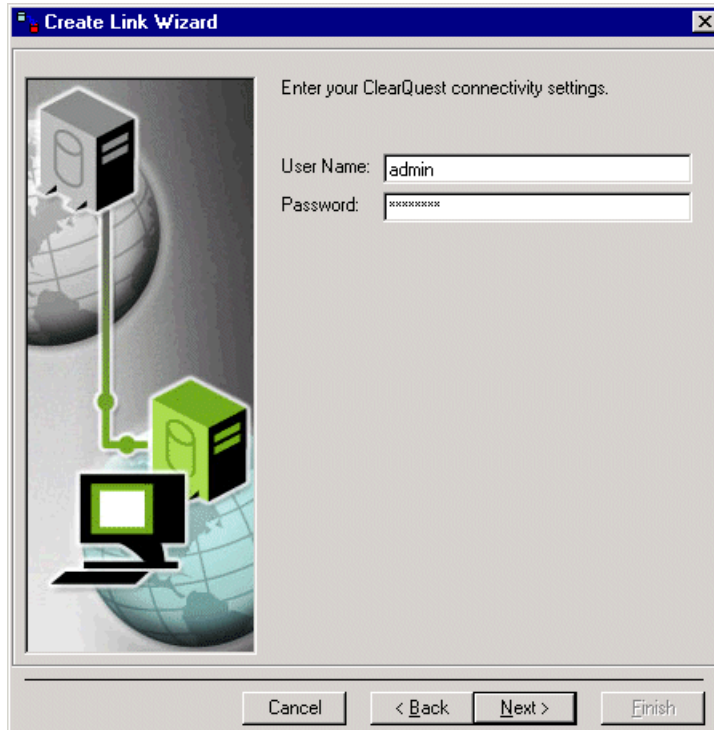


In the **Host** box, type the Quality Center server and virtual directory name (http://<server name>/<virtual directory name>). Note that you must use a real host name, not 'localhost'.

Type the **User Name** and **Password** required to connect to Quality Center.

Note: You must connect to Quality Center as an administrator with maximum permissions.

3 Click **Next**. The following dialog box opens.

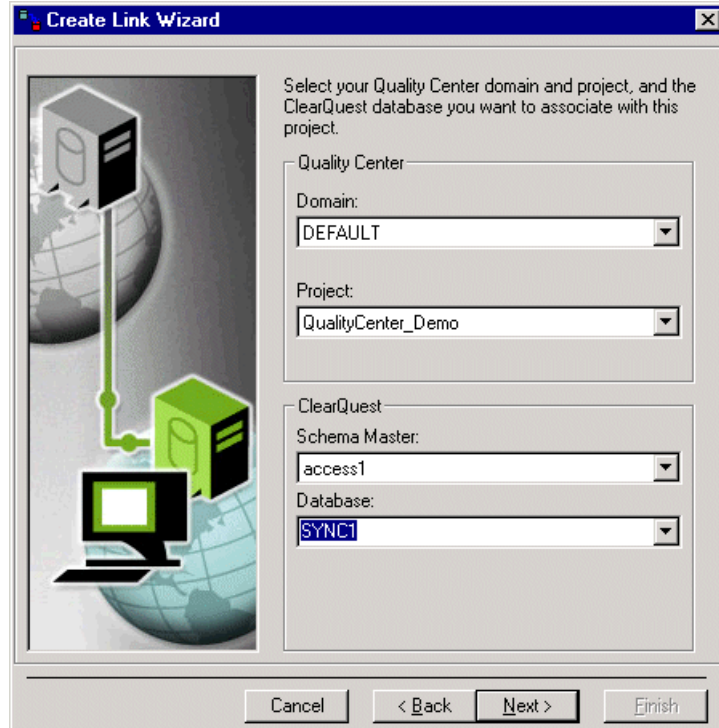


Enter the **User Name** and **Password** required to connect to ClearQuest

Notes:

- You must connect to ClearQuest as an administrator with maximum permissions.
 - The user name should be exactly as it appears in ClearQuest.
-

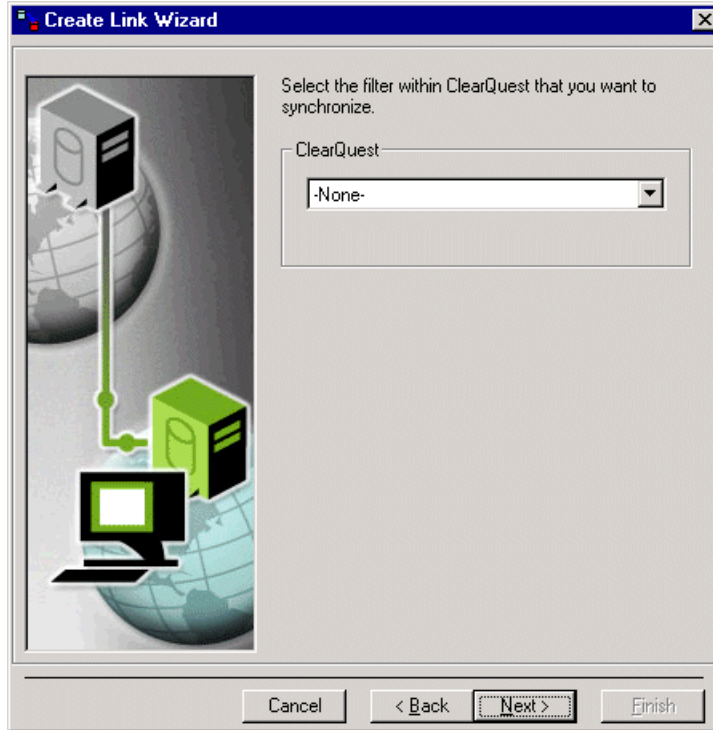
4 Click **Next**. The following dialog box opens.



Under **Quality Center**, select the domain and project that you want to link to the ClearQuest database.

Under **ClearQuest**, select the schema and database you want to link to the Quality Center project.

5 Click **Next**. The following dialog box opens.



Select the ClearQuest query that you want to use for synchronization.

- If you select **None**, you can synchronize a single ClearQuest database with a single Quality Center project without a ClearQuest query.
- If you select a ClearQuest query, you can synchronize a single ClearQuest database with a single Quality Center project, or with multiple Quality Center projects.

Note that when you select a ClearQuest query, you are also setting ClearQuest as the dominant tool when synchronizing deleted defects (see step 11 on page 30).

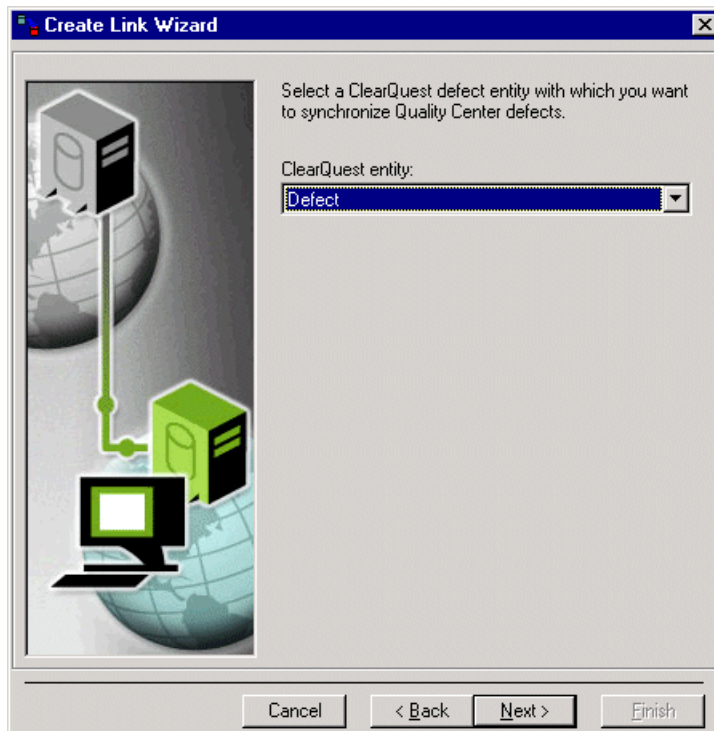
Notes:

- Make sure that the ClearQuest query name contains the **QC_** prefix. Note that the **TD_** prefix is also supported.
 - You cannot synchronize multiple ClearQuest databases with a single Quality Center project.
 - Make sure that queries do not overlap each other. For example, make sure that a query does not contain defects that are in another query.
 - Make sure that each query contains a single field in the “Where” clause. Do not sort queries. If queries are sorted, the integrity check will fail.
 - Using a query in a link may cause the Synchronizer to take longer to synchronize the link.
-

Recommendations:

- Save queries in the **Personal Queries** folder.
 - Do not change or update a query if it is used in a synchronization link.
 - When you create a query, make sure that you use the same user name that you use to connect to ClearQuest (see step 3 on page 18).
-

6 Click **Next**. The following dialog box opens.

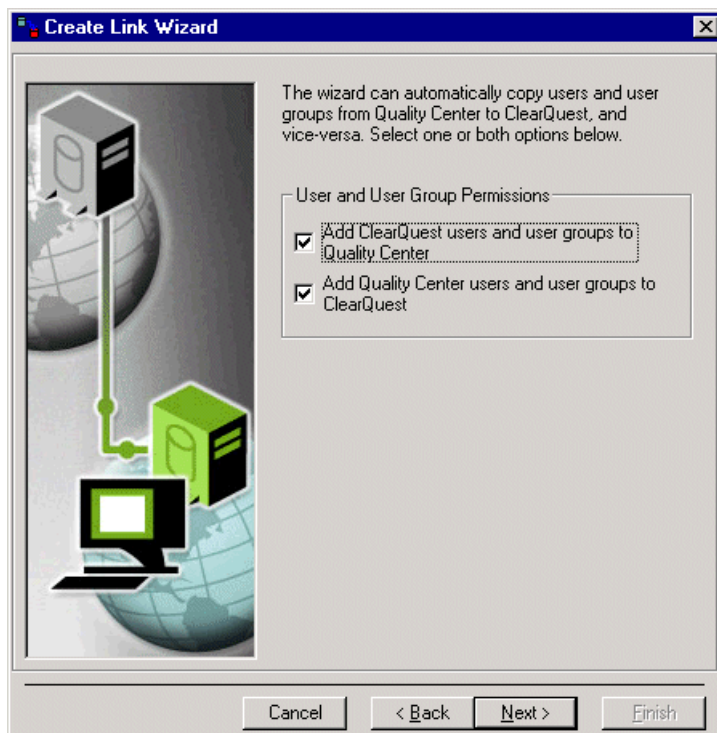


Select the ClearQuest defect entity with which you want to synchronize your Quality Center defects.

Notes:

- The entity you select must not be **Stateless**.
 - The entity you select must contain the field **id** in the schema.
-

7 Click **Next**. The following dialog box opens.

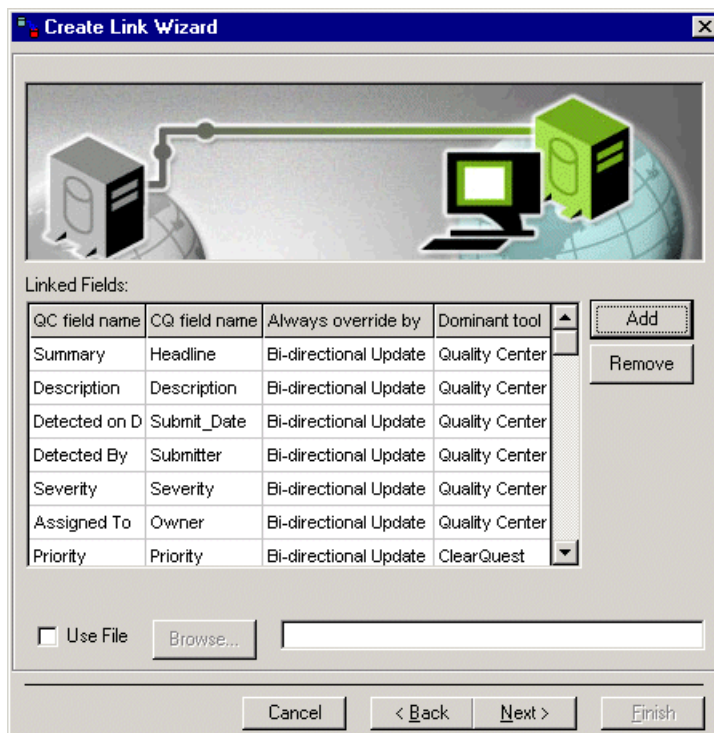


Select **Add ClearQuest users and user groups to Quality Center** to automatically copy users and user groups from ClearQuest to Quality Center.

Select **Add Quality Center users and user groups to ClearQuest** to automatically copy users and user groups from Quality Center to ClearQuest.

Note: If you select the options in this dialog box, all users and user groups are synchronized. If you want to synchronize specific users and user groups, you must do so manually.

8 Click **Next**. The following dialog box opens.



The "Create Link Wizard" dialog box features a header with the title and a close button. Below the header is a graphic showing a server, a monitor, and a storage unit connected by a green line over a globe. The main section is titled "Linked Fields:" and contains a table with four columns: "QC field name", "CQ field name", "Always override by", and "Dominant tool". The table lists seven field mappings, all with "Bi-directional Update" for the override and "Quality Center" for the dominant tool, except for "Priority" which uses "ClearQuest". To the right of the table are "Add" and "Remove" buttons. Below the table is a checkbox labeled "Use File" and a "Browse..." button next to an empty text field. At the bottom are "Cancel", "< Back", "Next >", and "Finish" buttons.

QC field name	CQ field name	Always override by	Dominant tool
Summary	Headline	Bi-directional Update	Quality Center
Description	Description	Bi-directional Update	Quality Center
Detected on D	Submit_Date	Bi-directional Update	Quality Center
Detected By	Submitter	Bi-directional Update	Quality Center
Severity	Severity	Bi-directional Update	Quality Center
Assigned To	Owner	Bi-directional Update	Quality Center
Priority	Priority	Bi-directional Update	ClearQuest

☐ Use File

A default list of linked Quality Center and ClearQuest fields is displayed.

Column	Description
QC field name	Displays the Quality Center field in the Quality Center project you selected. This column is read-only.
CQ field name	Displays the ClearQuest fields in the ClearQuest database and entity you selected. Note that you can edit the entries in this column.
Always override by	<p>Select one of the following override options:</p> <ul style="list-style-type: none"> • Quality Center: Changes made to a field in Quality Center override changes made to the corresponding field in ClearQuest, during synchronization. • ClearQuest: Changes made to a field in ClearQuest override changes made to the corresponding field in Quality Center, during synchronization. • Bi-directional Update: Enables data updates in both Quality Center and ClearQuest during synchronization. Note that in the Dominant tool column, you must select the tool that overrides if changes were made in both Quality Center and ClearQuest.

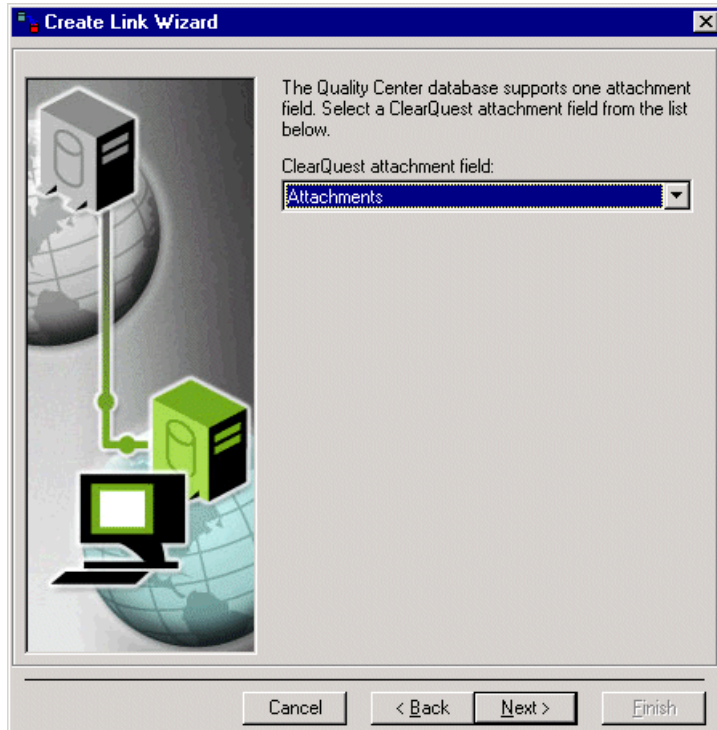
- To add a row to the Linked Fields list, click **Add**.
- To delete the row from the Linked Fields list, click **Remove**.
- To select a common XML mapping file, select **Use File** and click the **Browse** button to select a common XML mapping file.

This file can be used by multiple links. It enables you to maintain changes to the mapping in a common file. Note that during the synchronization process, a combined list of fields and links is created. When duplicates are found, the definitions in the Linked Fields table overwrite the definitions in the common file. For more information on mapping files, see “Creating Mapping Files” on page 36.

Notes:

- If you renamed a default field, for example the **Priority** field name in Quality Center or ClearQuest, the field name is not displayed in the **Linked Fields** list. To display it in the **Linked Fields** list, click **Add**. Then, in the Add Field Link dialog box, select the name of the field in Quality Center and in ClearQuest. Click **OK**.
 - The field mapping between **Status** and **State** must not be removed.
 - You must not link ClearQuest fields which are of type Dynamic List.
 - If a read-only field in ClearQuest is linked to a writable field in Quality Center, the field in Quality Center may be updated inadvertently if one of the other fields in the ClearQuest defect has changed.
 - If you define masks for user-defined fields in Quality Center, make sure that the data you enter in ClearQuest matches the input mask string.
-

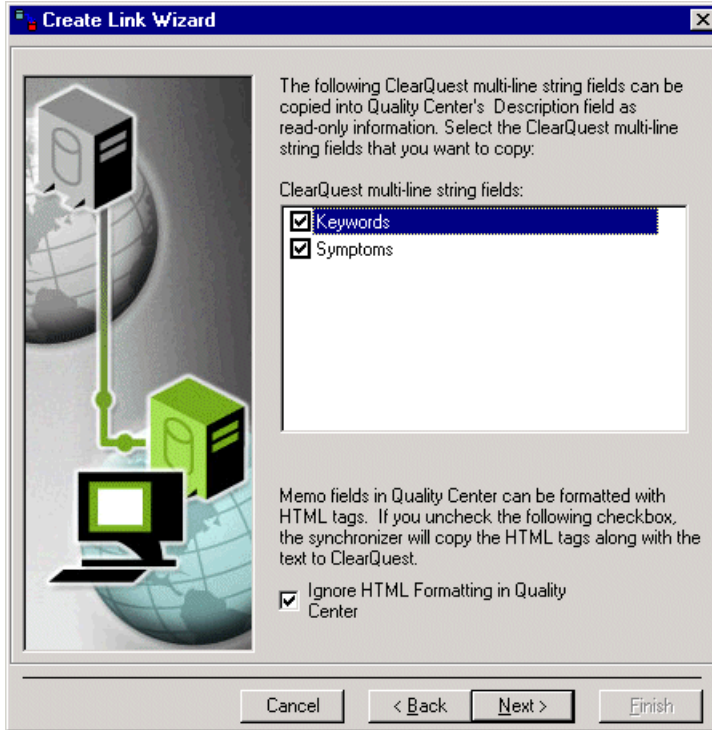
- 9 Click **Next**. The following dialog box opens.



Select a ClearQuest attachment field that you want to synchronize with Quality Center. Note that Quality Center supports only one attachment field.

Note: The Synchronizer does not support URL attachments when added via the **Attach URL** button in Quality Center.

10 Click **Next**. The following dialog box opens.



- Under **ClearQuest multi-line string fields**, select the ClearQuest multi-line string fields and multi-value fields that you want to copy into the Quality Center **Description** field. Note that you will not be able to edit this text in Quality Center.

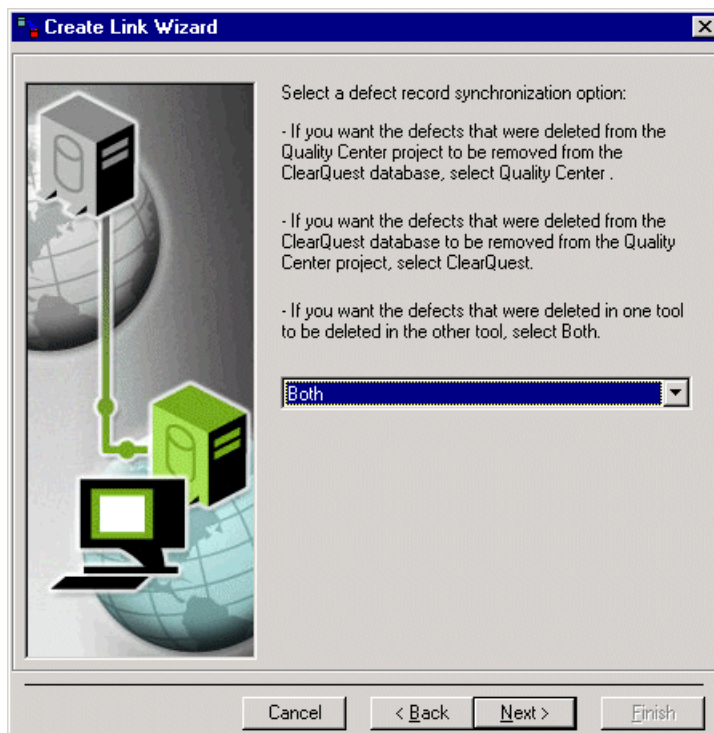
Note: You can map the multi-value fields with other Quality Center fields, except for **Description**, using the Linked Fields grid (see step 8 on page 24). If you do so, the fields will not be displayed in the ClearQuest multi-line string fields.

- Memo fields in Quality Center can be formatted in HTML. If you select the **Ignore HTML formatting in Quality Center** check box, the Synchronizer does not preserve formatted text. After synchronization, all formatted text is displayed in ClearQuest as plain text. Note that if this option is selected, it can cause the Synchronizer to work considerably slower.

Note:

- If **Ignore HTML formatting in Quality Center** is selected, you may also lose the formatted text in Quality Center when the defect is synchronized.
 - ClearQuest does not support formatted text. Therefore, in ClearQuest, formatted text is displayed as plain text with HTML tags.
-

11 Click **Next**. The following dialog box opens.



Select the type of deleted record synchronization you want the Synchronizer to perform:

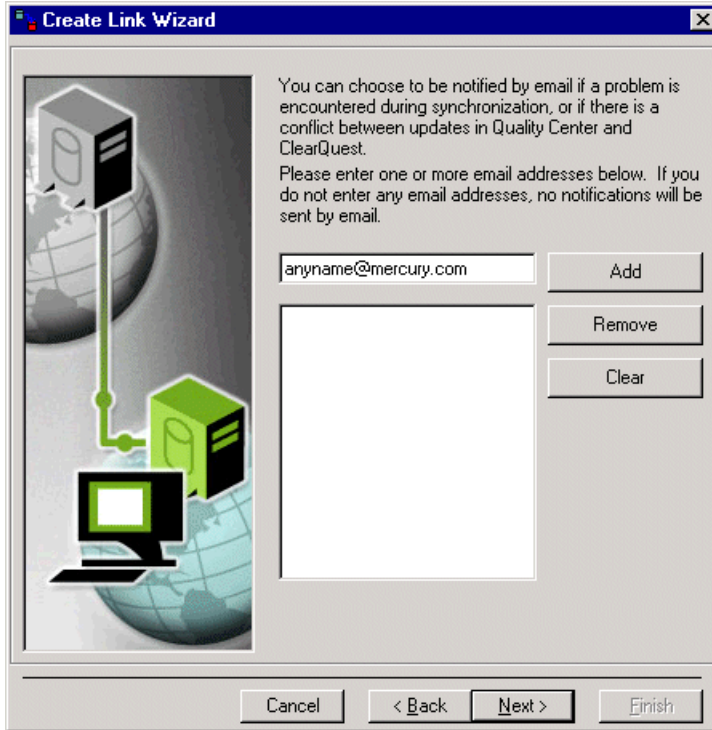
- If your ClearQuest query is set to **None** (see step 5 on page 20), you can choose one of the following options:

Option	Description
Quality Center	Only defects that were deleted from the Quality Center project are to be removed from the ClearQuest database.
Both	Defects that were deleted in one tool will be deleted in the other tool.

- If you chose a ClearQuest query (see step 5 on page 20), the following type is preselected:

Option	Description
ClearQuest	Only defects that were deleted from the ClearQuest database are to be removed from the Quality Center project.

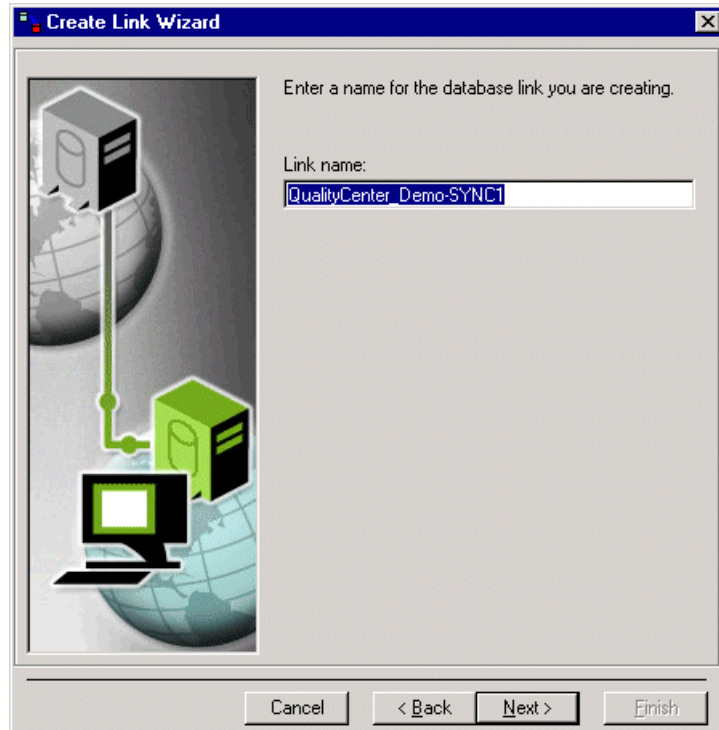
12 Click **Next**. The following dialog box opens.



You can choose to notify users by e-mail if a problem is encountered during the synchronization process or if there is a conflict between updates in Quality Center and ClearQuest.

- To add an e-mail address to your list, type the e-mail address and click the **Add** button.
- To remove an e-mail address from you list, select the e-mail address and click the **Remove** button.
- To clear the entire list, click the **Clear** button.

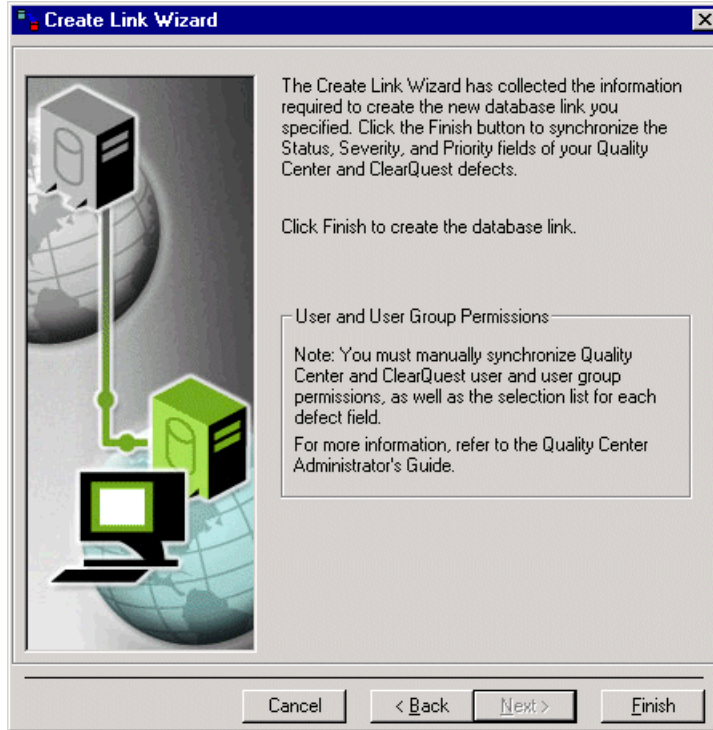
- 13** Click **Next**. The following dialog box opens.



If you want to assign a name to the new database link, type the name in the **Link Name** box. Note that it is recommended that you accept the link name that is automatically provided by the Synchronizer.

Note: Link names cannot contain spaces.

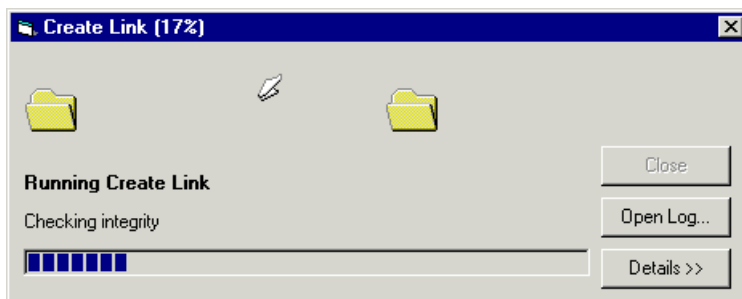
14 Click **Next**. The final dialog box opens.



15 Click **Finish** to close the wizard and create the new database link. The Synchronizer replaces the Quality Center **Severity** and **Priority** field options with the ClearQuest options for these fields.

Note: The Synchronizer does not automatically synchronize user and user group permissions, or the selection lists available for some defect fields. You must synchronize these manually. For more information on user and user group permissions, refer to the *Mercury Quality Center Administrator's Guide*.

The Create Link progress dialog box opens.



- To view progress details, click the **Details** button.
- To view a color-coded HTML synchronization log file, click the **Open Log** button.
 - Green rows indicate general information.
 - Purple rows indicate debugging information.
 - Yellow rows indicate highlighted information.
 - Red rows indicate errors.
- To close the Create Link progress dialog box, click **Close**.

When the create link process is completed, the Integrity Check Results Web page opens. For more information, see “Verifying Synchronization Links” on page 40.

Note: Unlinked required fields are listed in the integrity checker but not in the log file.

Creating Mapping Files

You can create a common XML mapping file that lists linked Quality Center and ClearQuest fields. You can use the same file for multiple links. For example, if a field name changes, you can modify this field in one central file, instead of modifying each link that is affected by this change.

A mapping file can contain the following attributes:

Attributes	Description
FIELD name	The field name, as displayed in Quality Center.
td_name	The physical name of the Quality Center field, as displayed in the database. For example, BG_USER_03.
cq_name	The field name as displayed in ClearQuest and the database.
who_overrules	<p>CQ (ClearQuest) or TD (Quality Center)</p> <p>Indicates the overriding tool when changes are made. If force_overruling=true, during synchronization, changes made to a field in the who_overrules tool override changes made to the corresponding field in the second tool.</p> <p>If force_overruling=false, an override will occur only if changes were made in both Quality Center and ClearQuest.</p>
force_overruling	<p>(true or false) If force_overruling=true, changes that were made to a field in one tool will override changes that were made in the corresponding field in the second tool, even if there are no changes, during synchronization. The prevailing tool is defined in who_overrules.</p> <p>If force_overruling=false, the overruling is relevant only if both fields in both tools were changed. The synchronizer determines by which change to update the fields according to the value defined in the who_overrules attribute.</p>

For example, suppose you want to create a mapping file that links between the following fields:

Quality Center Field	ClearQuest Field	Description
Summary	Headline	System field
Detection date	Submit_Date	System field
list	List	<ul style="list-style-type: none"> • User-defined in Quality Center as a “list” type field. • User-defined in ClearQuest as "SHORT_STRING" with "CONSTANT LIST" type field.
number	number	<ul style="list-style-type: none"> • User-defined in Quality Center as a “number” type field. • User-defined in ClearQuest as a "INT" type field.
Severity	Severity	System field
Status	State	System field

The following mapping file is created:

```
- <FIELDS>
  <FIELD name="Summary" td_name="BG_SUMMARY" cq_name="Headline"
    who_overrules="TD" force_ouerruling="false" />
  <FIELD name="Detection date" td_name="BG_DETECTION_DATE"
    cq_name="Submit_Date" who_overrules="TD" force_ouerruling="false" />
  <FIELD name="list" td_name="BG_USER_02" cq_name="List"
    who_overrules="CQ" force_ouerruling="False" />
  <FIELD name="number" td_name="BG_USER_03" cq_name="number"
    who_overrules="CQ" force_ouerruling="False" />
  <FIELD name="Severity" td_name="BG_SEVERITY" cq_name="Severity"
    who_overrules="TD" force_ouerruling="false" />
  <FIELD name="Status" td_name="BG_STATUS" cq_name="State"
    who_overrules="CQ" force_ouerruling="false" />
</FIELDS>
```

Notes:

- It is recommended that you use a mapping file only if you have two or more links that share field mappings.
 - Do not use the **DefaultLinks.xml** file as your mapping file.
 - Make sure that you use proper XML syntax when creating your mapping file.
 - If you use a memo field in the mapping file, you must not select that field in the multi-line string field section of the Wizard.
 - You can only map the **Description** field using the Linked Fields grid (see step 8 on page 24).
 - To update changes made to a mapping file after you create a synchronization link, you must reopen the Quality Center/ClearQuest Synchronization Manager.
-

After you create the file, you load it from the Create Link Wizard. For more information on loading this file, see step 8 on page 24.

Changing the Mapping of the Status/State Fields

You can change the mapping of the Status/State field and ensure that the states in Quality Center match those in ClearQuest. You can change your mapping by creating an XML file to be used for a single project, or for all projects.

To define the XML file:

- 1** Create a file. Use the following example:

```
<STATES>
  <STATE td_state="Open" cq_state="Assigned"/>
  <STATE td_state="Closed" cq_state="Closed"/>
  <STATE td_state="Fixed" cq_state="Resolved"/>
  <STATE td_state="New" cq_state="Submitted"/>
  <STATE td_state="Duplicate" cq_state="TD_Duplicate"/>
</STATES>
```

- 2** To use this file for a single project:

- Name the file using the following format: <link name>_states.xml (for example, **TDProj_CQProj_states.xml**).
- Save the file in the following location: ..\..\Mercury Interactive\TDBugSync\Config.

- 3** To use this file for all projects:

- Name the file with the *.xml* extension (for example, states.xml).
- Add **StateFullFileName** to the registry under **KEY_LOCAL_MACHINE\SOFTWARE\TDCQ Synchronizer**.
- Type the full path for the XML file. For example: C:\Program Files\Common Files\Mercury Interactive\TDBugSync\Config\states.xml.

- 4** When synchronizing a project, the synchronizer searches for the XML file per project. If the file is invalid or cannot be found, it searches for the file for all projects. If the file is invalid or cannot be found, the synchronizer uses the hard-coded states.

Verifying Synchronization Links

When the create link process is completed, the Integrity Check Results page automatically opens and displays advance warnings and notification of problems that may occur during the synchronization.

You can also manually run the integrity checker from the Quality Center/ClearQuest Synchronization Manager dialog box. Select a link and choose **Tools > Check Integrity**.

Note that after you modify a synchronization link, it is recommended that you manually run the integrity checker.

The screenshot shows a web browser window titled "Integrity Check Results". The address bar shows a file path: C:\Program Files\Common Files\Mercury Interactive\TDBugSync\Logs\IntegrityResults_QualityCenter_Demo-SYNC1-2004_04_2. The main content area has a title "Integrity Check Results" and a subtitle "Link: QualityCenter_Demo-SYNC1, Date: 4/29/2004 4:56:54 PM". Below this is "CQ Version: 2002.05.00".

The first section is "Integrity Check Summary", which contains a table with three rows:




Status	Number	
✓	30	30 checks passed successfully.
!	13	Check failed to complete successfully. As a result, the synchronization process may complete successfully, but certain defects may fail to synchronize correctly. We recommend that you address these warnings before synchronizing the link.
✗	8	8 checks failed to complete successfully. As a result, some or all the defects might not be synchronized. You should correct these problems before synchronizing this link.

The second section is "Integrity Check Report", which contains a table with four columns: Step, Check, Status, and Result.

Step	Check	Status	Result
Initialization and Login...			
1	Quality Center Object Creation	✓	Quality Center object created successfully.
2	ClearQuest Object	✓	ClearQuest object created successfully.

The Integrity Check Results page includes the Integrity Check Summary and the Integrity Check Report.

The Integrity Check Summary summarizes the results.

Status	Description
	Passed component steps.
	Component steps that failed to complete successfully. It is recommended that you address these warnings before synchronizing the link.
	Component steps that failed to complete successfully. You should correct these problems before synchronizing this link.

The Integrity Check Report lists the verified components.

Component	Description
Initialization and Login	<ul style="list-style-type: none"> • Checks whether the ClearQuest and Quality Center clients can be accessed. • Checks that the user name and password are valid, and that the user has the correct permissions.
User and Group Validation	Checks that the user groups in both ClearQuest and Quality Center have the same users.
Field Validation	<ul style="list-style-type: none"> • Checks that fields in Quality Center are mapped to corresponding fields of the correct type in ClearQuest. • Checks whether any of the mapped fields are read-only. • Checks whether any of the mapped fields are required in one application but not in the other. • Checks that all of the required fields are mapped. • Checks that it is possible to access defects in both the ClearQuest and Quality Center projects. • Checks conflicting links. • Checks that field list values in ClearQuest match the field list values in Quality Center.

Notes:

- If a Quality Center field is a list which has hierarchical sub-items, it will not be checked, as ClearQuest does not support hierarchical lists. Nevertheless, if you ensure that all of the items in the list are unique, then the value will be synchronized.
 - If defects have already been created in Quality Center prior to creating the link, the following fields may have invalid values: **Priority**, **Severity**, **Status**. If any of these fields have values that do not exist in the list of permitted values for that field, you must set them to valid values.
 - If the integrity checker finds that mandatory fields have not been mapped, it will report that the field was not mapped, but it will not specify the field. You must check each mandatory field and ensure that it is mapped correctly.
-

3

Working with the Synchronizer

After you have created a synchronization link, you can use the Synchronizer to manually synchronize users, user groups, and records that were updated or deleted. You can also run the Synchronizer as a service, edit your link properties, disable synchronization for a link, and refresh a link.

This chapter describes:

- About Working with the Synchronizer
- Synchronizing Users and User Groups
- Manually Synchronizing Updated and Deleted Records
- Running the Synchronizer Service
- Setting Options
- Editing Synchronization Link Properties
- Disabling, Deleting, and Refreshing Links
- Viewing Log Files
- Synchronization Example

About Working with the Synchronizer

When working with the Synchronizer, note the following guidelines and limitations:

- In Quality Center, when you display the Add Defect dialog box, the ClearQuest field **CQ_ID** is also displayed. You must not remove this field in Quality Center, or change its value.
- In Quality Center, if you only modify a defect's attachment, the Synchronizer does not recognize this as an update and therefore does not include the change in the synchronization process.
- In ClearQuest, you must ensure that all user names are lower case. This is required because the user names in Quality Center are lower case. They need to match in order to synchronize properly.
- In Quality Center, if you need to change the value of a field in several defects to a specific value (for example, if you change the name of an item in a list and need to update all defects to the new value), you can use the **Find** and **Replace** menu options.
- When modifying the ClearQuest schema in the ClearQuest Designer, make sure that the Quality Center/ClearQuest Synchronization Manager is closed.
- The Synchronizer service may hold a checked out ClearQuest license, even if no URS is running. The license is also held at the end of the Run URS procedure. This means that when you start the ClearQuest client to free the license, you should also restart the Synchronizer service.
- If the Synchronizer hangs, and you restart it, the next time the Synchronizer runs, it may synchronize defects that were successfully synchronized during the previous run.
- You can stop during the following processes: Integrity Check, Run URS, DRS, Users and Groups. When you resume the task, the entire data will be resynchronized.

If you stop during a Run URS task, when you resume the task only data that has not already been synchronized will be included in the next synchronization.

- If a URS fails, and the log file has an error line containing the text "...Unhandled Exception At The OLE Call Boundary", you may find that the synchronization process skips the defect, or, in rare occasions, hangs. These errors are due to known issues with ClearQuest. If you experience these problems, you can configure the Synchronizer to disconnect from ClearQuest and reconnect periodically. This can help minimize the risk of encountering these problems. If one or more defects are skipped, they will be synchronized correctly with the next URS.

To configure the Synchronizer to disconnect and reconnect periodically, you must modify the registry as follows:

- Disable the service, if it is running, and close the Synchronization Manager.
- Run regedit and navigate to:
HKEY_LOCAL_MACHINE\SOFTWARE\TDCQ Synchronizer
- Modify the value of 'CQDisconnectCount' to 500.
- Restart the Synchronization Manager and re-enable the service.
- After each URS, verify the log file to determine if there were any errors during synchronization. If the synchronization succeeds, but the log file indicates that some defects could not be synchronized due to errors, check these defects in ClearQuest. For example, the log file may indicate the following errors:

SaveBugs Error: 160,Failed to save bugs. Caught An Unhandled Exception At The OLE Call Boundary - File:../oadentity.cpp Line: 523 Thread: 424, Source: cqole

SynchByCQBugs Error: 5555, Failed to synchronize TDBug 11730 and CQBug BIG0000041353.

Verify the ClearQuest defect with the ID specified on the second error. If the defect has no value in its TD_ID field, modify the defect in ClearQuest and set the TD_ID field to the ID of the corresponding defect in Quality Center, as specified on the second error. Make sure that you enter the correct ID to prevent duplicate defects from being created the next time the URS is run.

Contact Mercury Customer Support if you need assistance in resolving synchronization problems.

Synchronizing Users and User Groups

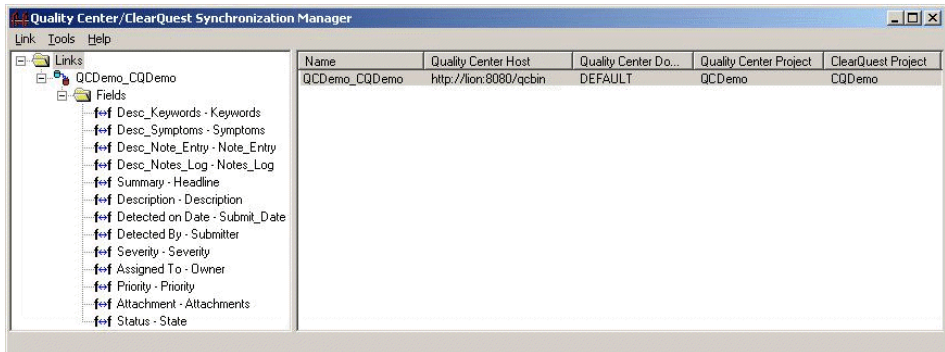
You can use the Synchronizer to manually synchronize the users and user groups in your Quality Center project and ClearQuest database. Note that this is only necessary if you added users or user groups in your Quality Center project or ClearQuest database after you created the synchronization link.

Notes:

- The Synchronizer only synchronizes users and user groups that have been added. It does not synchronize users and user groups that you changed or deleted.
- After the user properties have been synchronized, any modifications to these user properties will not be synchronized.
- The Synchronizer does not automatically synchronize user and user group permissions, or the selection lists available for some defect fields. You must synchronize these manually.
- If you delete users or user groups, you must delete them from Quality Center and ClearQuest.

To manually synchronize users and user groups:

- 1 Select the appropriate synchronization link in the Quality Center/ClearQuest Synchronization Manager.



- 2 Choose **Tools > Synchronize > Users and Groups**. The users and user groups in your Quality Center project and ClearQuest database are synchronized, according to the synchronization rules that you set in the Create Link Wizard. For more information, see page 23.

Manually Synchronizing Updated and Deleted Records

You can manually run an updated record synchronization or a deleted record synchronization for each Quality Center/ClearQuest synchronization link that you created. Note that you can also choose to synchronize records for all of your synchronization links automatically, at specified time intervals, by running the Synchronizer service. For more information on running the Synchronizer as a service, see “Running the Synchronizer Service” on page 49.

An *updated record synchronization* identifies defects that were created or updated in one of the tools since the last synchronization. It then creates or updates the relevant defects in the other tool, according to the mapping rules you specified in the Create Link Wizard.

A *deleted record synchronization* identifies defects that were removed from one tool and deletes them from the other tool, according to the deletion rules you specified in the Create Link Wizard.

For more information on specifying mapping rules and deletion rules, see Chapter 2, “Creating Quality Center/Rational ClearQuest Links.”

Notes:

- Before running an updated record synchronization for the first time, you must log out of the Quality Center project and only log in again after the synchronization process finishes.
 - You must stop the service before performing a URS manually. When the URS is finished, you can restart the service. For more information on starting and stopping the service, see “Running the Synchronizer Service” on page 49.
 - A DRS task takes a long time to complete, even if no defects were deleted. If only a small number of defects were deleted, it is more expedient to simply delete the corresponding defect manually, rather than run a DRS.
 - If your ClearQuest database contains many defects, the synchronization process will be slow.
-

To synchronize updated and deleted records:

- 1** Select the appropriate synchronization link in the Quality Center/ClearQuest Synchronization Manager.
- 2** Choose **Tools > Synchronize > Run URS** to synchronize the updated records in one tool with the records in the other tool.
- 3** Choose **Tools > Synchronize > Run DRS** to synchronize the deleted records in one tool with the records in the other tool.

Running the Synchronizer Service

Instead of manually synchronizing the updated records for each synchronization link, you can instruct the Synchronizer to run as a service. The Synchronizer service automatically synchronizes deleted records, according to the intervals specified in the Synchronization Scheduling tab of the Options dialog box. For more information, see “Setting Options” on page 50.

Notes:

- Do not use the Services window to start or stop the Synchronizer service.
- If the “Run-time error ‘53’:” message is displayed after starting the service, check the log file for errors that occurred while running the service. Also, open Task Manager and end the **SynchProcess** task if it is still running. Restart the service. If this error recurs, contact Mercury Customer Support.

To run the Synchronizer service:

- To start the service, choose **Tools > Synchronize > Enable Automatic Synchronization**. The Quality Center/ClearQuest Synchronization Manager displays a message indicating that the service has started.
- To stop the service, choose **Tools > Synchronize > Disable Automatic Synchronization**. The Quality Center/ClearQuest Synchronization Manager displays a message indicating that the service has stopped.

Setting Options

If you are running the Synchronizer as a service, you can change the frequency at which updated records are synchronized. You can also choose whether you want to disable the log to which error messages are sent during manual or automatic synchronization.

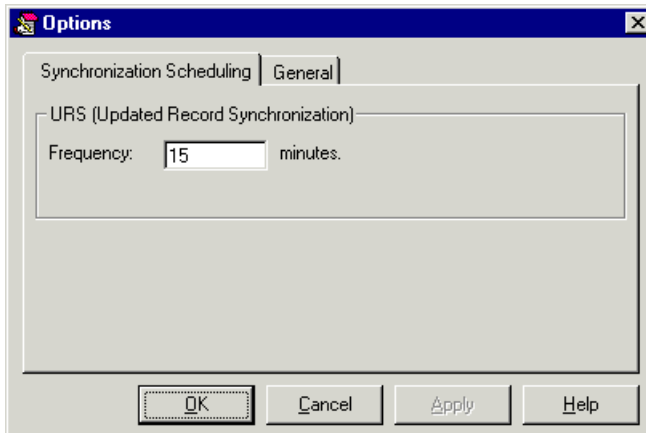
Setting Synchronization Scheduling Options

In the Options dialog box, you use the Synchronization Scheduling tab to set the time interval between updated record synchronizations.

Note: To change the frequency, you have to stop the service and then restart it.

To set the synchronization scheduling options:

- 1 Choose **Tools > Options**. The Options dialog box opens and displays the Synchronization Scheduling tab.



- 2 Under **URS**, enter the time in minutes you want the Synchronizer to wait between updated record synchronizations. For more information on the synchronization of updated records, see page 47.

Note: The recommended minimum update interval is at least twice the time it takes to run a URS on all enabled links manually.

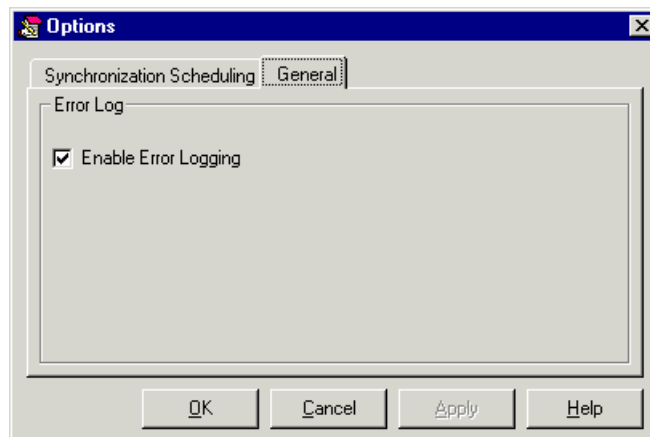
- 3 Click **Apply** to save your settings. Click **OK** to close the Options dialog box.

Setting General Options

You can specify if you want messages to be sent to an error log during manual or automatic synchronization.

To set the general options:

- 1 Choose **Tools > Options**. The Options dialog box opens.
- 2 Click the **General** tab.



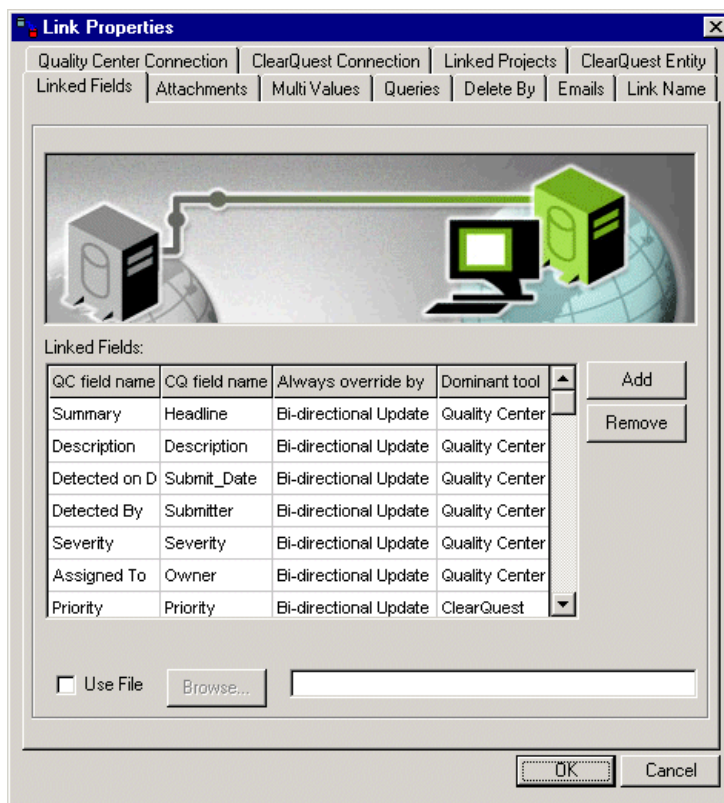
- 3 To disable the error log, clear the **Enable Error Logging** check box.
- 4 Click **Apply** to save your settings. Click **OK** to close the Options dialog box.

Editing Synchronization Link Properties

For each synchronization link in the Quality Center/ClearQuest Synchronization Manager, you can edit the link properties that you defined in the Create Link Wizard.

To edit a synchronization link's properties:

- 1 Select the link whose properties you want to edit and choose **Link > Link Properties**. Alternatively, right-click the synchronization link and choose **Link Properties**. The Link Properties dialog box opens.



- 2 Click the tab containing the properties you want to edit. For more information on the options available in each tab, see Chapter 2, “Creating Quality Center/Rational ClearQuest Links.”

Notes:

- You cannot edit the information that appears in the Linked Projects or ClearQuest Entity tabs.
 - If you saved a link with a query, you cannot change this query to a different query in the list, as the list is read-only. Also, you cannot change the **Deleted By** option.
-

- 3 Click **OK** to save your settings and close the Link Properties dialog box.

Disabling, Deleting, and Refreshing Links

You can disable a link if you do not want the records contained in the link to be automatically synchronized during the next synchronization round. You can also refresh the information displayed for a link and delete a link from the Quality Center/ClearQuest Synchronization Manager.

Note: If you create a link between a Quality Center project and ClearQuest database, run an updated record synchronization, delete the link, and create the same link again, the next updated record synchronization you perform duplicates the defects in both Quality Center and ClearQuest. For example, if you synchronized your records so that Bug 1 and Bug 2 exist in both your Quality Center project and ClearQuest database, after deleting the synchronization link, creating the same link again, and performing another record synchronization, Bug 1 and Bug 2 will each appear twice in both Quality Center and ClearQuest.

To disable a link:

- Select the link you want to disable and choose **Link > Disable**. Alternatively, right-click the link and choose **Disable**.
- To re-enable the link, select it and choose **Link > Enable**. Alternatively, right-click the link and choose **Enable**.

To refresh a link:

Select the link you want to refresh and choose **Link > Refresh**. Alternatively, right-click the link and choose **Refresh**.

Note: The Refresh command refreshes the information displayed in the Quality Center/ClearQuest Synchronization Manager. It does not refresh the information contained in the actual project or database.

To delete a link:

- 1** Select the link you want to delete and choose **Link > Delete**. Alternatively, right-click the link and choose **Delete**.
- 2** Click **Yes** to confirm.

Viewing Log Files

You can open a log file to view a summary of data relating to the synchronization between your Quality Center project and your ClearQuest project. The log files include information such as the number of records that were successfully synchronized and the number of records for which synchronization failed. Each log file record indicates whether the synchronization occurred from your Quality Center project to your ClearQuest project, or from your AR System project to your Quality Center project.

The format of a log file name depends on a number of factors, such as whether the synchronization to which the log refers was initiated from the user interface or as a service. The following table describes the various log files.

Log File Name Begins...	Description
UI-URS-	A URS synchronization that was initiated from the user interface.
UI-DRS-	A DRS synchronization that was initiated from the user interface.
URS-	A URS synchronization that was initiated by a service.
DRS-	A DRS synchronization that was initiated by a service.
DefaultLog-	Data related to the Synchronizer being initiated.
MercSynchServiceLog	Data about when the last service synchronization occurred and how long until the next synchronization will take place (in seconds).

To view a log file:

Locate and open the log file from your system files. The format of the log file name is as follows:

<project_link_name>-<YYYY_mm_dd>-<hh_mm_ss>-Log.txt

Where:

- <project_link_name> is the name of your project link
- <YYYY_mm_dd> is the date that the log file was created
- <hh_mm_ss> is the time at which the log file was created

Synchronization Example

The following example demonstrates how the Synchronizer is used to synchronize defects in a Quality Center project with defects in a ClearQuest database. The synchronization link is set up so that Quality Center overrides all ClearQuest fields.

The following dialog box displays the ClearQuest database:

The screenshot shows the Rational ClearQuest application window titled "Rational ClearQuest - [SYNC1 : Quality Center Synchronizer Sample 1 (All Defects * (Defect))]". The interface includes a menu bar (File, Edit, View, Actions, Query, Window, Help) and a toolbar with icons for various actions like Run Query, New Defect, and Print. Below the toolbar is a table listing defects with columns for id, State, and Headline.

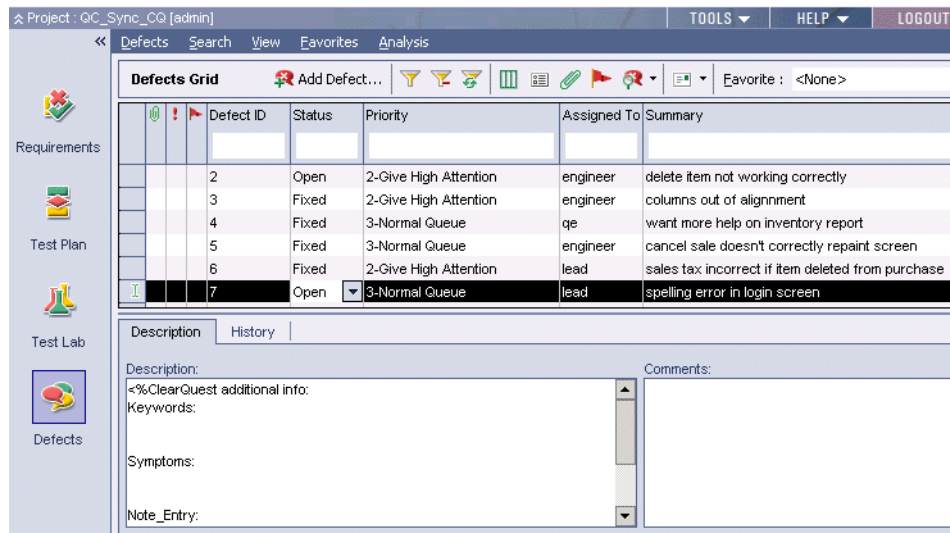
id	State	Headline
SYNC100000002	Opened	spelling error in login screen
SYNC100000003	Resolved	sales tax incorrect if item deleted from purchase
SYNC100000004	Resolved	cancel sale doesn't correctly repaint screen
SYNC100000005	Resolved	want more help on inventory report
SYNC100000006	Resolved	columns out of alignment
SYNC100000007	Opened	delete item not working correctly

Below the table, the "Result set" tab is active, showing a detailed view of the selected defect (ID: SYNC100000002). The view includes tabs for Main, Notes, Resolution, Attachments, History, and Customer. The Main tab displays the following fields:

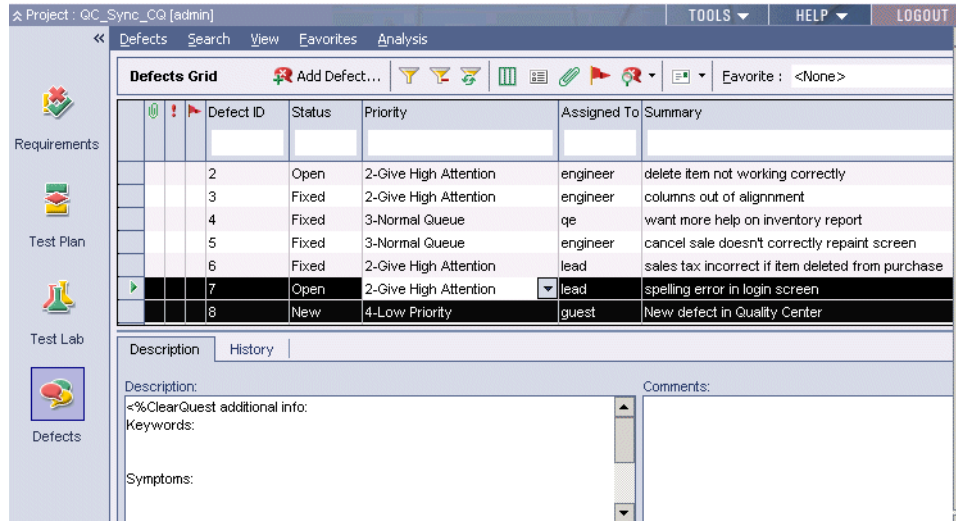
- ID: SYNC100000002
- State: Opened
- Headline: spelling error in login screen
- Project: (dropdown menu)
- Severity: 3-Average
- Priority: 3-Normal Queue
- Owner: lead
- Description: (text area)
- Keywords: (text area)
- Symptoms: (text area)

On the right side of the detailed view, there are buttons for Apply, Revert, Print Record, and an Actions dropdown menu. At the bottom right, the status bar shows "Record: 1" and "Count: 47".

The following window displays the Quality Center project after synchronization:



The user makes the following changes in the Quality Center project:



- The user changed the priority of the “spelling error in login screen” defect to Give High Attention.
- The user added a new defect with the priority set to Low.

After the next synchronization, the ClearQuest database contains the following data:

The screenshot shows the Rational ClearQuest application window titled "Rational ClearQuest - [SYNC1 : Quality Center Synchronizer Sample 1 (All Defects * (Defect))]". The window has a menu bar (File, Edit, View, Actions, Query, Window, Help) and a toolbar with icons for file operations, a "Run Query" button, and a "New Defect" dropdown menu.

Below the toolbar is a table displaying a list of defects. The table has four columns: id, State, Headline, and Priority.

id	State	Headline	Priority
SYNC100000002	Opened	spelling error in login screen	2-Give High Attention
SYNC100000003	Resolved	sales tax incorrect if item deleted from purchase	3-Normal Queue
SYNC100000004	Resolved	cancel sale doesn't correctly repaint screen	3-Normal Queue
SYNC100000005	Resolved	want more help on inventory report	3-Normal Queue
SYNC100000006	Resolved	columns out of alignment	2-Give High Attention
SYNC100000007	Opened	delete item not working correctly	2-Give High Attention
SYNC100000077	Submitted	New Defect In QualityCenter	4-Low Priority

Below the table is a "Result set" section with tabs for "Query editor" and "Display editor". The "Display editor" tab is active, showing a detailed view of the selected defect (ID: SYNC100000077).

The detailed view includes the following fields and controls:

- ID:** SYNC100000077
- State:** Submitted
- Headline:** New Defect In QualityCenter
- Project:** (dropdown menu)
- Severity:** 1-Critical (dropdown menu)
- Priority:** 4-Low Priority (dropdown menu)
- Owner:** guest (dropdown menu)
- Description:** (text area)
- Keywords:** (text area)
- Symptoms:** (text area)
- Buttons:** Apply, Revert, Print Record, Actions (dropdown menu)
- Status Bar:** Record: Count: 7

- The priority of the “spelling error in login screen” defect changes to Give High Attention to match the priority in Quality Center.
- The new defect that was added in Quality Center is added to the ClearQuest database. The corresponding status in ClearQuest appears as Submitted.