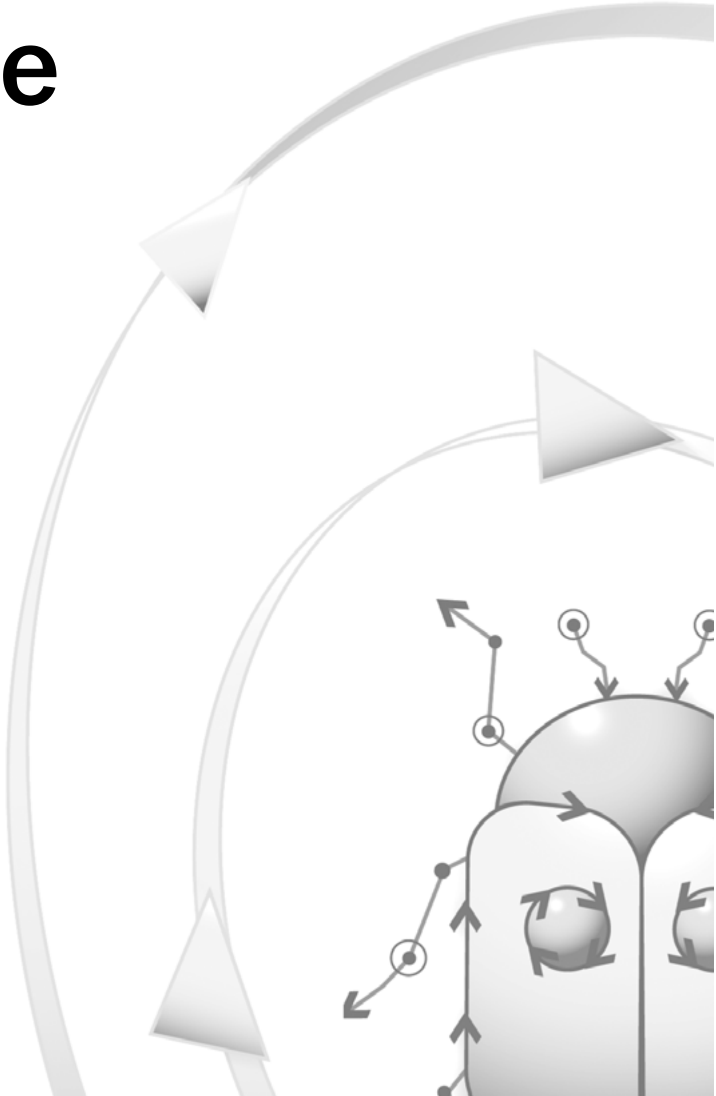
TestTrack Pro Web User Guide



Seapine Software™
changing the world of software development

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0170-7.1

February 2005

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Chapter 1
About TestTrack Pro Web

You have an important job to do - deliver a quality product on time and within budget. And, whether you are developing, testing, fixing bugs, or managing the team, you don't have time to learn another complex application. TestTrack Pro Web supports most of the feature of TestTrack Pro Windows and provides a convenient way for off-site personnel to access your bug tracking application.

What's new in TestTrack Pro 7.1

Audit trail viewing

Search for and view audit trail records for a complete history of defects, including when and how a defect was added or changed.

Image attachment thumbnails

Create thumbnail previews of defect image file attachments in GIF, JPG, BMP, and PNG formats.

Multiple logins

Allow users to log into a project multiple times simultaneously.

Required fields identification

Make required fields more visible on the Add/Edit Defect windows by changing the text color and style.

Defect attachment XML export

Include attachments when exporting defects to an XML file and importing them into another project.

About the guide

The TestTrack Pro Web User Guide provides step-by-step instructions for all the tasks you perform when working with TestTrack Pro. This guide includes information for users and administrators at a variety of levels and is not necessarily meant to be read from start to finish. Chapters 1-11 include information for most TestTrack Pro users, such as personalizing TestTrack Pro or adding defects. Chapters 12-20 include information for TestTrack Pro administrators or other high-level users, such as customizing the workflow and creating security groups.

Documentation conventions

The documentation, and most of the examples, are based on the default TestTrack Pro workflow. There are a few conventions used throughout the guide that are designed to be completely predictable – making it is easy to understand what you are reading and what you are supposed to do. When you are instructed to select a menu command, you will find the menu name, followed by an arrow. For example, to add a defect choose **Create > Defect**. Indented text is also used to draw attention to notes, tips, and examples.

Many of the TestTrack Pro commands are available from menus, toolbars, shortcut menus, and shortcut keys. Throughout this guide, most commands are explained using both the menu command and the toolbar button. As you become more familiar with TestTrack Pro, you may find shortcut menus and shortcut keys more efficient to work with.

Text set off with the light bulb icon indicates supplemental information, such as examples or additional ways of accomplishing tasks.

Contacting Seapine support

Technical support is available Monday - Friday, 9 a.m. - 6 p.m. eastern standard time.

Telephone: 513-754-1655

Email: **support@seapine.com**

Web site: **http://www.seapine.com**

Note: Don't forget to check our knowledgebase for answers to common questions. Go to **www.seapine.com/kb/index.php** to browse or search the knowledgebase.

Documentation feedback

Seapine Software welcomes your feedback on the documentation included with this product. If you have comments or suggestions about the documentation, please email: **documentation@seapine.com**. This email address is provided for documentation only. You may not receive a reply to your email. For technical questions or support, contact **support@seapine.com**.

Chapter 2
Getting Started

In just a few minutes, you'll learn about starting TestTrack Pro, opening projects, and connecting to the server - everything you need to begin tracking bugs.

Starting the TestTrack Pro server

Note: Make sure the Seapine License Server is running before you start the TestTrack Pro server.

The server must be running before users can access TestTrack Pro projects. Refer to the **TestTrack Pro Installation Guide** and the **TestTrack Pro Server Admin Utility Guide** for more information about starting and administering the server.

Windows

The TestTrack Pro server starts automatically if you are running it as an NT/2000 or Windows service. You must manually start the TestTrack Pro server if it is running as an application.

1 On the Start menu choose **Programs > Seapine Software > TestTrack Pro > TestTrack Pro Server**.

Active projects are loaded when the TestTrack Pro server is started.

Note: When the TestTrack Pro server is running, it places an icon in the status area on the taskbar of the server PC. If the bug remains yellow or red, TestTrack Pro server is not running properly. When the TestTrack Pro server compacts a project, it can take several minutes for the TestTrack Pro server icon to turn green.

Unix

Make sure you are in the directory where startup scripts are located, which is generally either the **/etc/init.d** directory or the **/usr/bin** directory.

1 Enter **./spls start** to start the server as a daemon

2 Enter **./spls foreground** to start the server in the foreground

Mac

1 Start the System Preferences and click **TestTrack Pro**.

Click the **lock** on the Start/Stop tab to make changes.

2 Make sure the server is started. You should also select **Start TestTrack Pro Server when this computer starts up** to automatically start the server.

Starting TestTrack Pro

1 Start a Web browser and enter the TestTrack Pro URL provided by your TestTrack Pro administrator.

The Welcome to TestTrack Pro Web page opens.

Note: The URL is dependent on the web server you want to connect to. It includes the server name or IP address of the server hosting the project and the path to the TestTrack Pro Web login page. For example: *http://www.wysicorp.com/ttweb/login.htm* or *http://www.127.0.0.1/ttweb/login.htm.*

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2 The Login to TestTrack Pro dialog box opens.

Note: If the login dialog box does not open click Go to Login on the welcome page. If it still does not open, disable any popup blocker software you are running and try again. For more information refer to the **Popup Blockers and TestTrack Pro Web** article in Seapine's knowledgebase.

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3 Select a **Project**.

Some projects may take a long time to load. Click **Refresh** if the project you want to use is not listed.

4 Enter your **Username** and **Password**.

5 Select an option from the **Start at** menu.

This is the page that opens when TestTrack Pro starts.

6 Click **Login**.

You are now logged in and ready to start using TestTrack Pro.

Logging out

Logout of TestTrack Pro when you finish working with a project. This is important if you use a floating license because the license does not become available to other users until you logout.

1 Click **Logout**.

2 You can now close the browser.

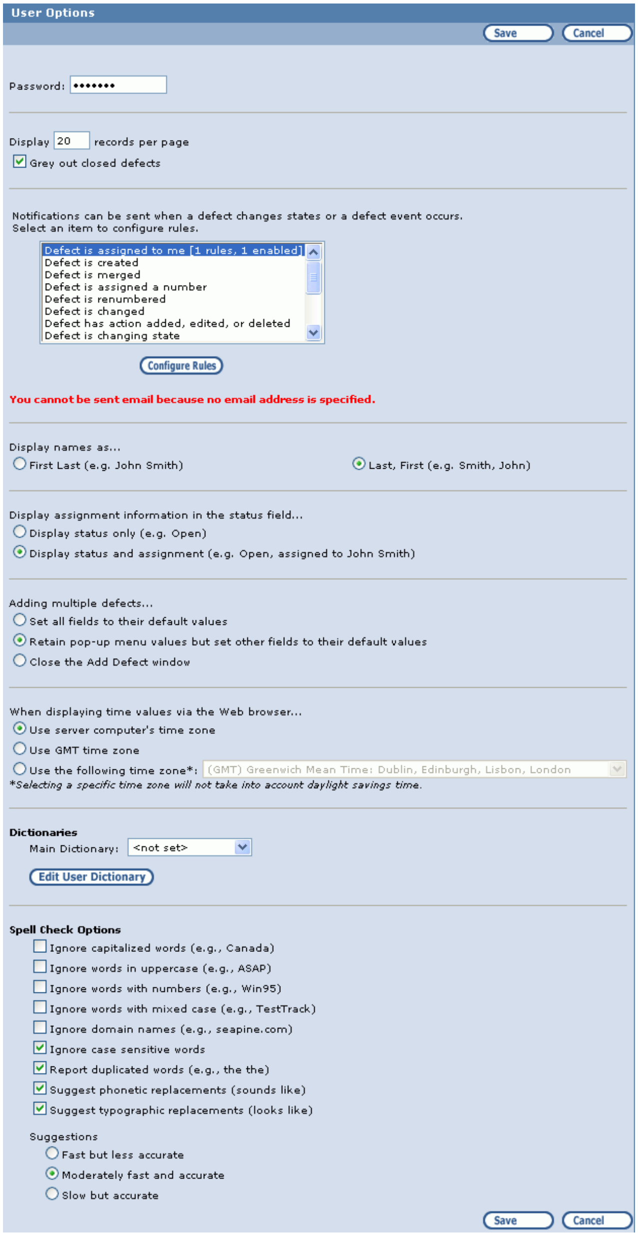
Chapter 3
Personalizing TestTrack Pro

Take the time personalize TestTrack Pro and set the options that will make your job easier.

Setting user options

1 Click **User Options**.

The User Options window opens.



2 Enter a **Password**.

You should set a password to prevent other users from accessing your account.

3 Enter the number of records you want displayed per page.

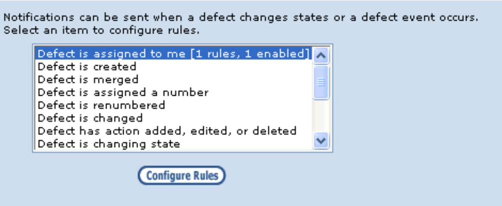
The refresh time will take longer if you choose to display a large number of records. It can also be difficult to navigate through a large number of records.

4 Select **Grey out closed defects** if you want closed defects to appear greyed-out and italicized.

This option can help you quickly view closed defects.

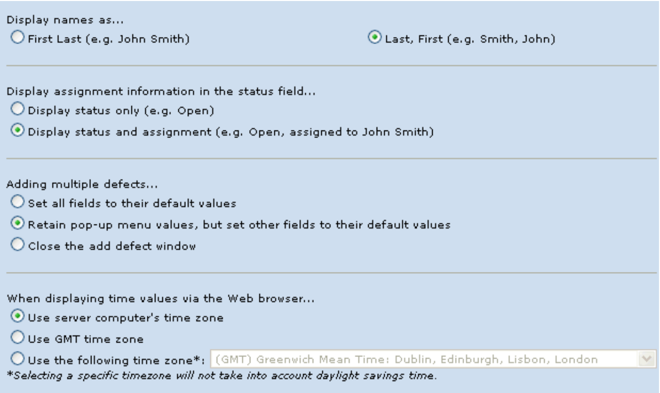
5 Click **Configure Rules** to set notification options.

You can configure TestTrack Pro to send you an email notification based on specific defect events. For more information see **Configuring user notification rules,** page 12.



6 Select a **Display names as** option.

Names can be displayed in First/Last or Last/First order.



7 Select a **Status** option.

You can display the status or the status and assignment information.

8 Select an **Adding multiple defects** option.

- Select **Set all fields to default values** to reset fields on the Add Defect dialog box to default values.

- Select **Retain pop-up menu values, but set other fields to their default values** to keep the values you choose for pop-up fields and reset all other fields with default values. Pop-up fields include: Type, Product, Disposition, Priority, Component, and Severity. The other fields include: Entered By, Found By, Version Found, Reproduced, Computer Config, and Custom fields.

- Select **Close the Add Defect window** to automatically close the Add Defect window.

9 Select a **Time zone** option.

10 Select a **Main Dictionary**.

TestTrack Pro includes American English, British English, and Canadian English dictionaries. Additional dictionaries can be downloaded from Seapine's web site. Go to **http://www.seapine.com/ttpresources.php#spellcheck** for more information.

11 Select any **Spell Check** options.

12 Click **Save** to save the user options.

Configuring user notification rules

You can configure TestTrack Pro to send you an email notification based on specific defect events. For example, you can receive a notification when a bug you reported closes. You may also receive system notifications, which the TestTrack Pro administrator configures.

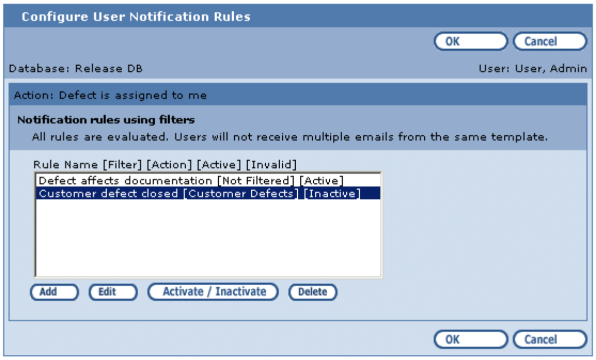
Note: Select options carefully so you do not receive an email each time a defect moves to another state in the workflow.

Adding notification rules

1 Click **User Options**.

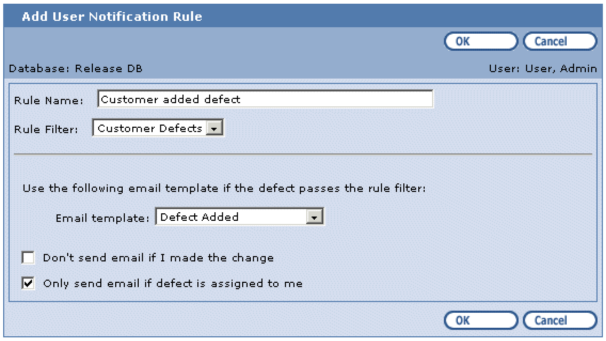
2 Click **Configure Rules**.

The Configure User Notification Rules dialog box opens. The notification name is listed in the top left corner of the dialog.



3 Click **Add** to add a rule.

The Add User Notification Rule dialog box opens.



4 Enter a **Rule Name**.

5 Optionally select a **Rule Filter**.

If a project contains a large number of defects, you may want to filter the defects the rule is applied to. If you need to add filters see **Creating filters,** page 74.

6 Select an **Email Template**.

7 Select **Don't send email if I made the change** if you do not want to receive an email if you changed the defect.

8 Select **Only send email if defect is assigned to me** to only receive an email if you are the assigned user.

9 Click **OK**.

The rule is added.

10 Click **OK** to save the settings.

Editing notification rules

1 Click **User Options**.

2 Select a notification and click **Configure Rules**.

The Configure User Notification Rules dialog box opens.

3 Select a rule and click **Edit**.

The Edit User Notification Rule dialog box opens.

4 Make any changes and click **OK**.

Your changes are saved.

Inactivating notification rules

If there is a rule that is no longer in use, inactivate it instead of deleting it. You can easily activate the rule if you decide to use it again.

1. Click **User Options**.
2. Select an item and click **Configure Rules**.

   The Configure User Notification Rules dialog box opens.
3. Select a rule and click **Inactivate.**

   The rule is inactivated. To activate an inactive rule, select the rule and click **Activate**.
4. Click **OK** to save the settings.

Deleting notification rules

Delete rules if you will not use the rule again. You can also inactivate a rule to disable it.

1. Click **User Options**.
2. Select an item and click **Configure Rules**.

   The Configure User Notification Rules dialog box opens.
3. Select a rule and click **Delete.**

   The rule is deleted.
4. Click **OK** to save the settings.

Editing user dictionaries

TestTrack Pro includes a spelling checker. You can specify which main dictionary you want to use and edit your user dictionary to add custom words to it. The main dictionaries include most common words but may not include words such as proper names, abbreviations, or technical terms.

The spelling checker ships with American English, British English, and Canadian English dictionaries. Dictionaries for other languages including Danish, Dutch, Finnish, French, German, Italian, Norwegian, Portuguese, Spanish, and Swedish are also available. Additional dictionaries can be downloaded from Seapine's web site. Go to **http://www.seapine.com/ttpresources.php#spellcheck** for more information.

Adding custom words

You can add custom words to your dictionary. This lets you add product names, acronyms, and other types of words that are not found in the main dictionary.

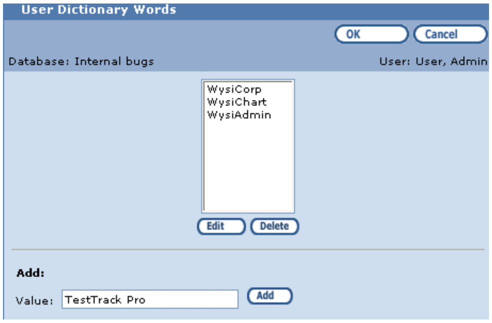
Note: You can also add words to your user dictionary while you are checking spelling. For more information see **Using spell check**, page 23.

1 Click **User Options**.

The User Options window opens.

2 Click **Edit User Dictionary**.

The User Dictionary Words dialog box opens.



3 Enter a **Value** and click **Add**.

The word is added to the dictionary.

Note: You can also add words to your user dictionary while you are checking spelling. For more information see **Using spell check,** page 23.

Editing custom words

1 Click **User Options**.

The User Options window opens.

2 Click **Edit User Dictionary**.

3 Select a word and click **Edit** to change it.

4 Enter the new spelling and click **OK** to save the changes.

Deleting custom words

1 Click **User Options**.

The User Options window opens.

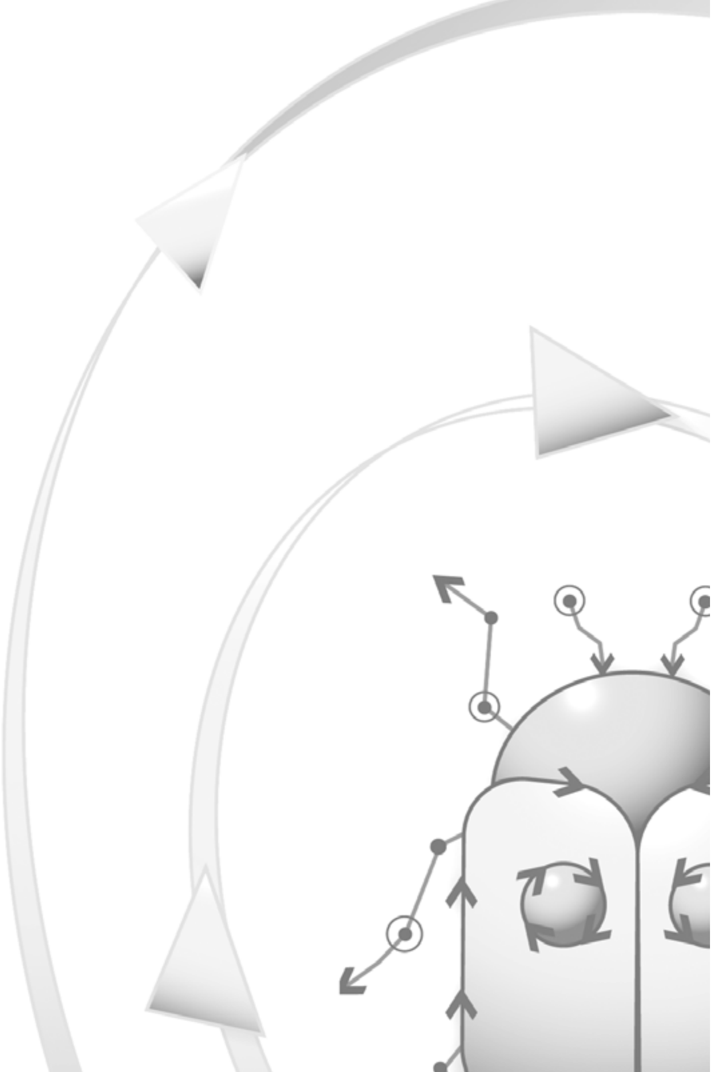
2 Click **Edit User Dictionary**.

3 Select the word you want to delete and click **Delete**.

The word is deleted.

Chapter 4
Learning the Basics

TestTrack Pro is easy to use but it is even easier when you understand the basics and learn a few shortcuts. Take a few minutes to read this overview information.



About the TestTrack Pro interface

Note: You may not have access to all of TestTrack Pro's commands. If a tab, button, or link is always greyed-out and unavailable, you do not have access to that command.

TestTrack Pro provides complex functionality with an easy to use and learn interface. The interface includes eight list windows. The tabs across the top of the page correspond to the different types of records you can work with.

Note: When adding or editing information the tabs across the top of the page are disabled because TestTrack Pro cannot automatically save your work or notify you to save it. Make sure you save your work before you navigate away from the add or edit dialog.

Command buttons

Command buttons, located at the top of every list window, are used to access the View, Add, Edit, and Delete commands.

Button	Description
View	Opens the corresponding View dialog
Add	Opens the corresponding Add dialog
Edit	Opens the corresponding Edit dialog
Delete	Deletes the selected item

Commands list

To perform commands, such as duplicating a defect, select the corresponding command link from the left side of the page. The commands change based on the records you are working with and your security level. You can also add quick link buttons that provide access to commonly used defect action commands. For example, if you are responsible for fixing defects add the **Fix Defect** quick link button to the Defects list window. For more information see **Adding quick link buttons,** page 22.

List windows

List windows are used to display basic record information. TestTrack Pro includes the following list windows: Defects, Workbook, Customers, Users, Security Groups, Test Configs, Filters, and Reports.

Opening list windows

Click the corresponding tab at the top of the page. For example, click **Customers** to open the Customers list window.

Selecting records

- To open records, select the corresponding check box and click the corresponding command or command button. You can select multiple records at one time.
- You can add quick link buttons to list windows. For example, you can click the quick link button to edit a defect. For more information see **Adding quick link buttons,** page 22.

Defects list window

The Defects list window provides access to defects and defect actions. You can filter the records that are displayed in the list window.

Defect indicators

Defect indicators are icons on the Work with Defects page that point out new defects, changed defects, closed defects, and your assigned defects.

Icon	Name	Indicates
	New Defect	Defects added since you last logged in
	Changed Defect	Defects that changed since you last logged in
	Closed Defect	Closed defects
	Assigned Defect	Defects assigned to you

Customers list window

The Customers list window provides access to customers and customer commands. For more information see **Chapter 18, "Managing Customers,"** page 189.

Users list window

The Users list window provides access to users and user commands. For more information see **Chapter 17, "Managing Users,"** page 177.

Security groups list window

The Security Groups list window provides access to security groups and group commands. For more information see **Chapter 16, "Managing Security Groups,"** page 169.

Test configs list window

The Test Configs list window provides access to test configs and test config commands. For more information see **Chapter 9, "Managing Test Configs,"** page 79.

Filters list window

The Filters list window provides access to filters and filter commands. For more information see **Chapter 8, "Using Filters,"** page 73.

Reports list window

The Reports list window provides access to reports and reports commands. For more information see **Chapter 10, "Generating Reports,"** page 83.

Workbook list window

The Workbook list window provides access to your personal workbook, your assigned defects, and tasks you add to the Workbook. For more information see **Chapter 11, "Using the Workbook,"** page 99.

Configuring columns

Configuring columns allows you to customize list windows to provide the information you need. You can add quick link buttons, add and remove columns, and select column sort orders.

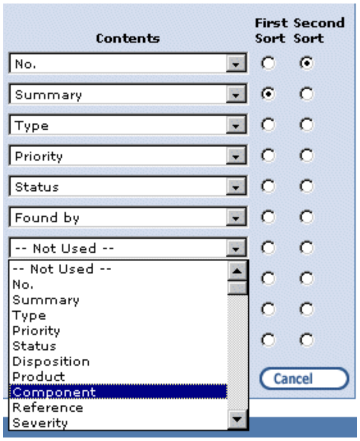
Adding columns

1 Click the **Setup Columns** button. 

The Configure Columns dialog box opens.

2 Click a **-Not Used-** column field in the **Contents** area.

A list of all available column fields opens.



3 Select the column field you want to add.

4 Click **Save**.

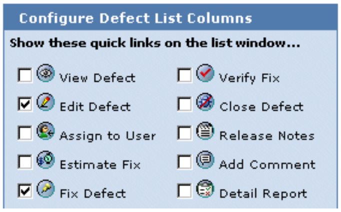
A new column with the column heading and corresponding contents is added to the page.

Adding quick link buttons

Quick links buttons provide a shortcut to the most popular list window commands. The quick link buttons you can add vary based on the list window. If a command is not available, the quick link button is disabled. For example, if you do not have security access to edit closed defects, the Edit Defect quick link button is disabled if a record contains a closed defect.

1 Click the **Setup Columns** button. 

The Configure Columns dialog box opens.



2 Select the quick links buttons you want to add.

3 Click **Save**.

The quick link buttons are added to the list window.

Sorting columns

1 Click **Setup Columns**.

The Configure Columns dialog box opens.

2 Select **First Sort** for the primary sort column.

3 Select **Second Sort** for the secondary sort column.

4 Click **Save**.

A single tick mark appears to the right of the primary sort column heading. Two tick marks appear to the right of the secondary sort column heading. Click a column heading to the sort order from ascending to descending or vice versa.

Note: To quickly sort a primary column click the column heading on the list window.

Changing column contents

You can change the column contents by selecting a new column field. You can also reorder columns by changing column contents.

1 Click **Setup Columns**.

The Configure Columns dialog box opens.

2 Click the corresponding column field you want to change.

3 Select the new column field and click **Save**.

The column heading and contents change to match the selected column field.

Removing columns

1 Click **Setup Columns**.

The Configure Columns dialog box opens.

2 Click the corresponding column menu you want to remove.

3 Select the **-Not Used-** column field from the menu and click **Save**.

The column is removed.

Using spell check

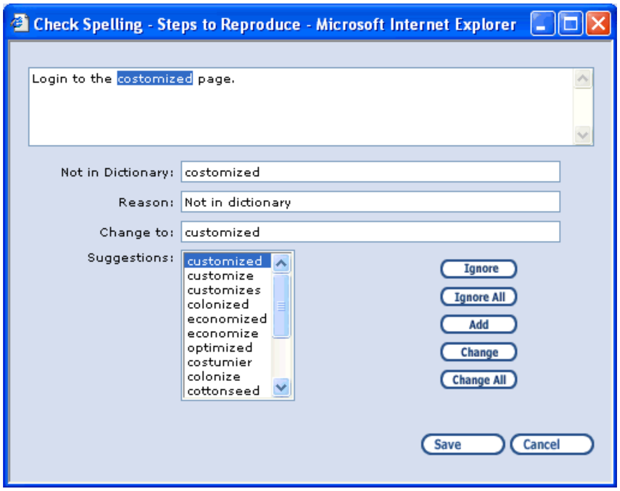
TestTrack Pro includes a spelling checker that can be used with most text fields. You can customize spell check options and add custom words to the dictionary. For more information see **Setting user options,** page 10 and **Editing user dictionaries,** page 14.

1 Click the text field spell check button. 

The Check Spelling dialog box opens.

Note: The spelling checker may be blocked if you use a pop-up blocker. You may need to temporarily disable the pop-up blocker.

The text you are checking is displayed in the dialog box. Misspelled words are highlighted.



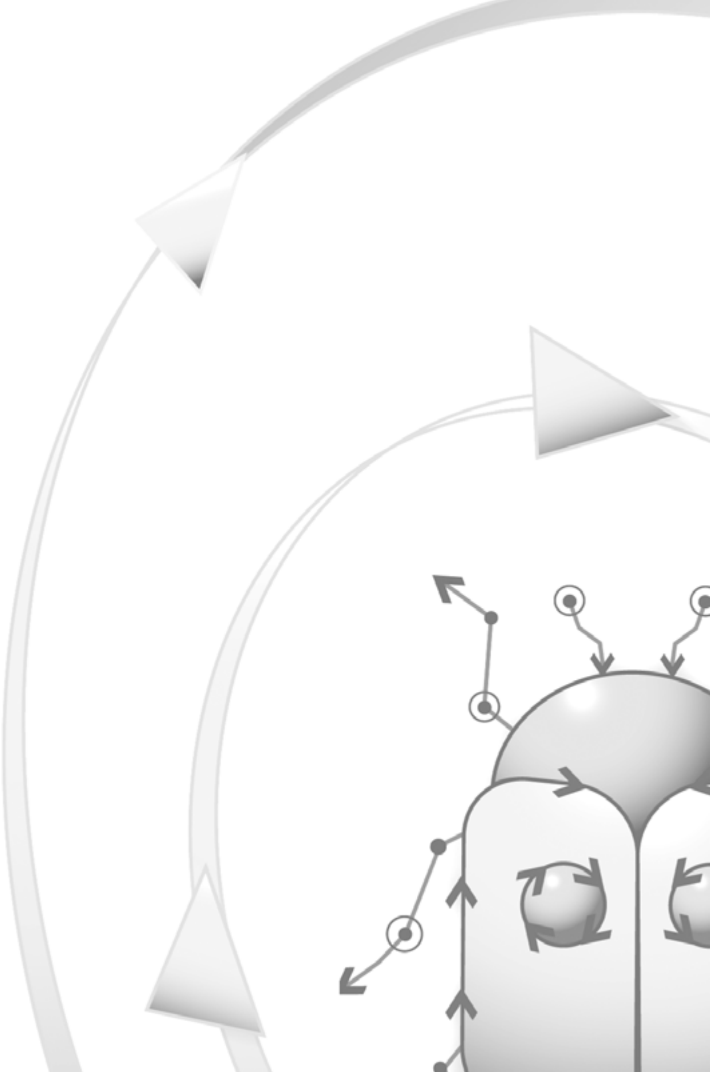
2. Click **Ignore** to ignore a misspelled word.
3. Click **Ignore All** to ignore all instances of the misspelled word.
4. Click **Add** to add a word to the dictionary.
5. To fix a misspelled word select a word from the **Suggestions** list.

   You can also edit the word in the **Not in Dictionary** field.
6. Click **Change** to use the selected suggestion or the edited word.
7. Click **Change All** to change all instances of the misspelled word at once.
8. Click **Save** to save the corrected text.

Note: If the spelling checker encounters a word it does not recognize it tries to break the word into words it recognizes. For example, firetruck would be broken into fire and truck.

Chapter 5
Working with Defects

Squash the bugs and move on! You'll be tracking defects in no time at all after learning about adding defects, deleting defects, and everything in between.



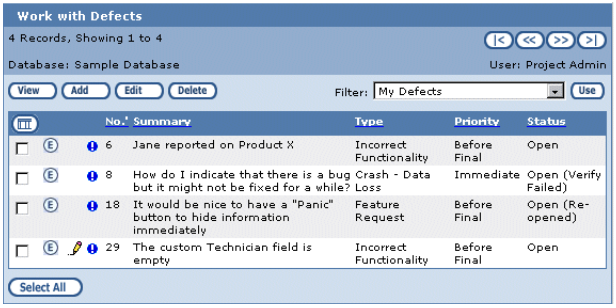
About defects

A defect is a bug, enhancement, change request, question, or any other product-related issue you want to track and resolve. It can be as simple as a typo in a Help file or as complicated as a system crash.

Adding defects

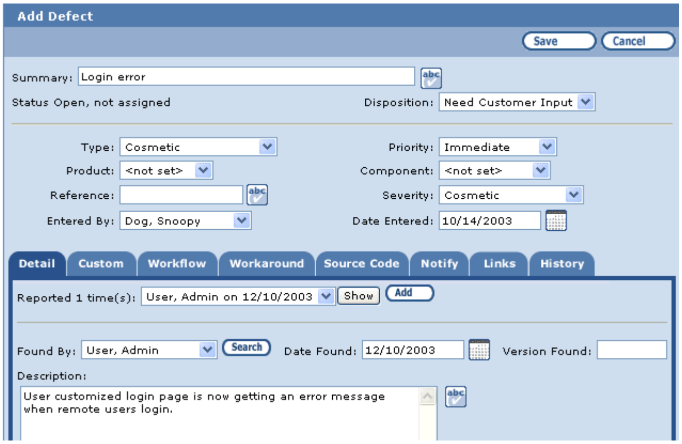
1 Click the **Defects** tab.

The Work with Defects page opens.



2 Click **Add**.

The Add Defect dialog box opens with the **Detail** tab selected.



Note: You may not have access to all Add Defect tabs.

3 Enter the information in the top portion of the Add Defect dialog box.

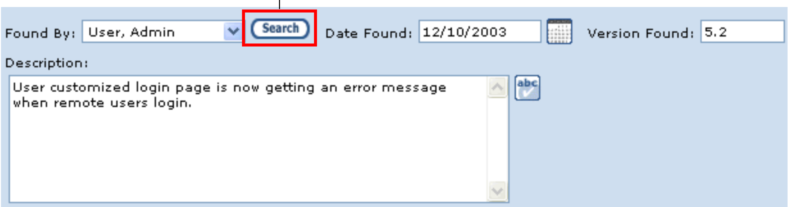
Tip: TestTrack Pro's fields and workflow can be customized. The information you enter may be slightly different depending on your company's use of TestTrack Pro.

- Enter a defect **Summary**.
- **Status** displays the defect state and assignment.
- Select the defect **disposition**.
- Select the defect **type**.
- Select the defect **priority**.
- Select the **product**.
- Select the **component**.
- Optionally enter a defect **reference** number.
- Select the defect **severity**.
- **Entered by** defaults to the current user or you can select another user.
- **Date Entered** defaults to the current date or you can enter another date.

4 Enter the Found by information on the **Detail** tab.

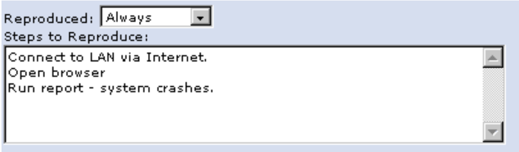
- Select a **Found by** user. Click **Search** to search for a user or customer.
- **Date found** defaults to the current date. You can enter another date or click the calendar to select a date.
- Enter a **Version Found** number.
- Enter a detailed defect **Description**.

Click to search for a user or customer. Select the user or customer to populate the **Found by** field.



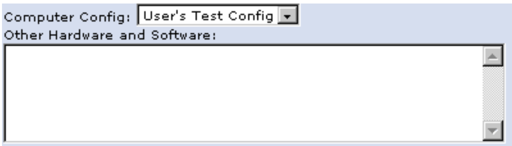
5 Enter the Reproducible information on the **Detail** tab.

- Select a **Reproduced** level.
- Enter the detailed **Steps to Reproduce** the problem. This information helps other users fix and test the defect.



6 Enter the Computer Config information on the **Detail** tab.

- Select a **Computer Config**. This field defaults to the current user's computer config.
- Enter information about other **Hardware and Software** that could be affecting the problem.



7 Optionally attach a file to the defect.

For more information see **Attaching files to a defect,** page 30.

8 Optionally click the **Custom** tab and enter the custom field values.

If a project uses custom fields, two custom fields may be displayed in the main area of the Add Defect dialog box. Custom fields can also all be displayed on the Custom Fields tab. Make sure you click this tab to enter or check custom field information.

Note: You may not have access to this tab depending on your security permissions and the project configuration.

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9 Skip the **Workflow** tab.

This tab is populated with defect action information and is useful when editing or viewing defects.

10 Click the **Workaround** tab.

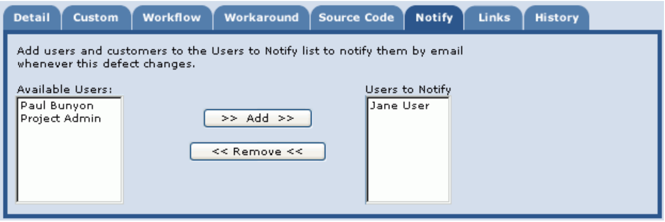
Enter a workaround solution that can be used until it is fixed or a solution is implemented.

11 Skip the **Source Code** tab.

This tab is used for SCC file information.

12 Click the **Notify** tab.

You can automatically notify users and customers when the defect change. Select the users or customers from the Available Users list and click **Add**.



13 Skip the **Links** tab.

This tab is used to work with linked defects. For more information see **Adding links,** page 47.

14 Skip the **History** tab.

This tab is populated with defect historical information and is useful when editing or viewing defects.

15 Click **Save** when you finish entering the defect information.

The defect is added to the project.

Adding additional defect reports

Users, customers, or beta sites often report the same defect. To help eliminate duplicates in your project you can add the defect once and add all additional reports to the same defect.

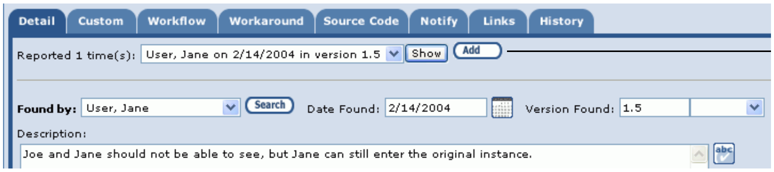
1 Click the **Defects** tab.

2 Select the defect you want to add an additional report to and click **Edit**.

The Edit Defect dialog box opens.

3 On the Detail tab, click **Add** located next to the **Show** button.

The number in the **Reported (x) Times** field increases by one.



Click to add additional defect reports

> **Note:** If your browser does not support JavaScript click **Show** to refresh the **Reported (x) Times** field.

4 Enter the defect information and click **Save**.

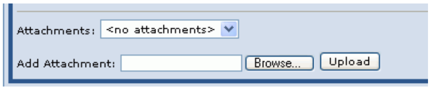
For more information see **Adding defects,** page 26.

Attaching files to a defect

You can attach files to defects as they are added or you can edit a defect and attach a file to it. This allows you to supply additional information about the defect. For example, if a defect is corrupting a file you can attach the corrupt data file for reference. Or attach a screen shot to point out a cosmetic changes to a dialog box.

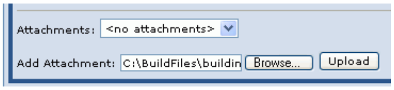
1 Click **Browse** in the Attachments area of the Detail tab.

The Choose file dialog box opens.



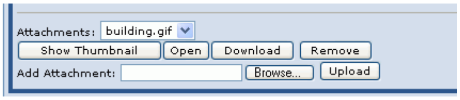
2 Select the file you want to attach and click **Open**.

3 The file information is listed in the **Add Attachment** field.



4 Click **Upload**.

The file is added to the defect.



Finding defects

You can search against the summary field, the description field, or all notes. If you do not have security access to these fields the Find Defects command is disabled. If you do not have security access to one of the fields it is not included in the Find menu.

Tip: If you know the number of a defect you can jump directly to that defect. Enter the defect number in the Go To Defect field and click **Go!**.

1 Click the **Defects** tab then click **Find Defects**.

The Find Defects dialog box opens.

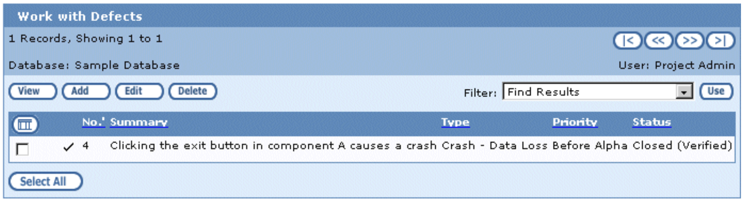
2 Select a search field from the **Find** menu.

3 Enter the text you want to search for in the **Contains** field.

Select **Based on Current Filter** if you only want to search the filtered defects.

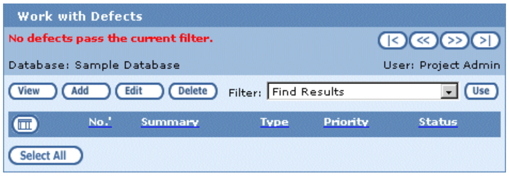
4 Click **Find**.

5 If matching defects are found the search results are displayed on the Work with Defects page. The **Find Results** filter is applied.



Note: If your browser does not support JavaScript click **Use** to refresh the screen and view found defects.

6 If matching defects are not found you return to the empty Work with Defects page. The **Find Results** filter is applied.



Note: If your browser does not support JavaScript click **Use** to refresh the screen and view found defects.

Go to command

If you know the number of a specific defect you can go directly to the defect.

1 Enter the defect number in the Go To Defect field and click **Go!**.

The defect is opened.

Using advanced find

Use advanced find to perform a more powerful search using filters and Boolean logic. You can also search on multiple restrictions. For more information about filters and Boolean logic see **Chapter 8, "Using Filters,"** page 73.

1 Click the **Defects** tab then click **Advanced Find**.

The Advanced Find Defects dialog box opens.

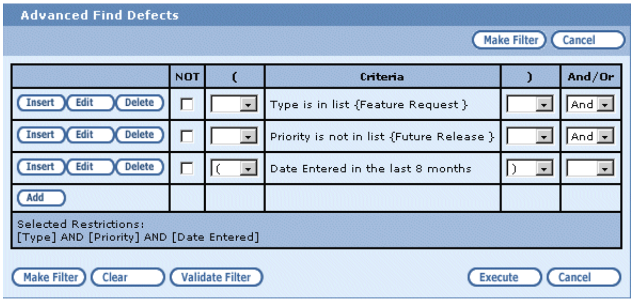
2 Click **Add** to add a search restriction.

For more information see **Adding restrictions,** page 75.

Note: If you are using a filter and click **Advanced Find,** the Advanced Find Defects dialog is populated with defects that meet the filter criteria. If you do not want to use these restrictions click **Clear** to clear the restrictions and start over.

---

3 Optionally select NOT/AND/OR operators and parentheses to build the Boolean logic for the filter.

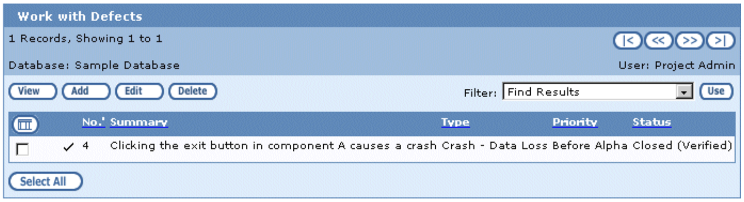


4 Click **Validate Filter** to validate the search criteria.

If the criteria is not valid an error is displayed on the Advanced Find Defects dialog. Correct the error and validate the filter.

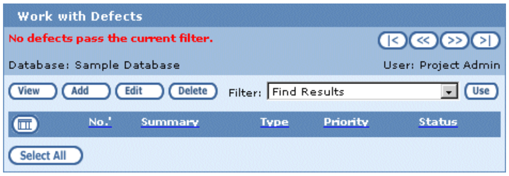
5 Click **Execute** to begin the search.

6 If matching defects are found the search results are displayed on the Work with Defects page. The **Find Results** filter is applied.



Note: If your browser does not support JavaScript click **Use** to refresh the screen and view found defects.

7 If matching defects are not found you return to the empty Work with Defects page. The **Find Results** filter is applied.



Note: If your browser does not support JavaScript click **Use** to refresh the screen and view found defects.

Viewing defects

You can view read-only defect information.

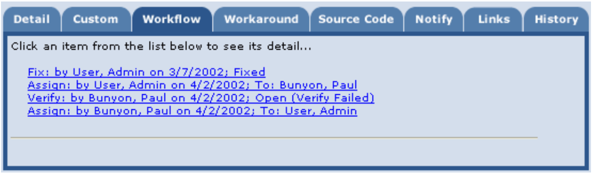
1 Click the **Defects** tab.

2 Select a defect and click **View.**

The View Defect dialog box opens. All fields are read-only.

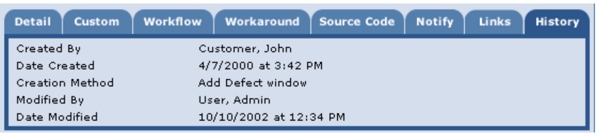
3 Click the **Workflow** tab.

This tab provides an overview of where the defect is in the workflow, what defect actions were assigned, who the actions were assigned to, and any comments or additional information a user entered.



4 Click the **History** tab.

Each time a defect action is assigned TestTrack Pro adds this information to the defect's history. The History tab includes who created the defect, when the defect was created, the creation method, who last modified the defect, and the date of the last modification.



5 Click **Done** to close the View Defect dialog box.

Editing defects

1 Click the **Defects** tab.

2 Select the defect and click **Edit**.

The Edit Defect dialog box opens.

> **Note:** If another user is editing the defect, the View Defect dialog box opens. The message **"IN USE BY (Username)"** appears in the title bar.

3 Make any changes.

You can change most of the defect information. You can also click the Links tab to link defects. Refer to **Adding links,** page 47 for more information.

4 Click **Save** to save your changes.

Opening attached files

1 Click the **Defects** tab.

The Work with Defects page opens.

2 Select the defect with the attachment you want to open and click **Edit**.

3 In the Attachments area, select the file from the **Attachments** menu and click **Open**.

The File Download dialog box opens. You are prompted to open or save the file.

4 Click **Open**.

The file is opened.

Downloading attached files

1 Click the **Defects** tab.

2 Select the defect with the attached file you want to download and click **Edit**.

3 In the Attachments area, select the attached file from the **Attachments** menu.

> **Note:** Depending on project options, you may be able to see thumbnail previews of image file attachments. Select an attachment and click **Show Thumbnail.**

4 Click **Download**.

The File Download dialog box opens. You are prompted to open or save the file.

5 Click **Save**.

The Save As dialog box opens.

6 Select a directory and enter a file name.

7 Click **Save**.

The file is downloaded to the folder you selected.

Editing additional defect reports

1 Click the **Defects** tab.

2 Select the defect and click **Edit**.

The Edit Defect dialog box opens.

3 Select the report you want to edit from the **Reported (x) time(s)** menu on the Detail tab.

4 Make any changes and click **Save**.

Removing attached files

1 Click the **Defects** tab.

2 Select the defect with the attached file you want to remove and click **Edit**.

3 In the Attachments area, select the attached file from the Attachments list and click **Remove**.

The attached file is removed.

> **Tip:** If you make a mistake and remove the wrong file click Cancel on the Edit Defect dialog box. The changes are not saved and the file is not removed.

Deleting additional defect reports

Note: Make sure you want to delete the report. You are not prompted to confirm the deletion and this action cannot be undone.

1 Click the **Defects** tab.

2 Select the defect that contains the record you want to delete and click **Edit**.

3 On the Detail tab, select the report you want to delete from the **Reported (x) time(s)** menu.

4 Click **Delete** located next to the **Show** button.

The additional defect report is deleted.

Deleting defects

1 Click the **Defects** tab.

2 Select the defect you want to delete and click **Delete**.

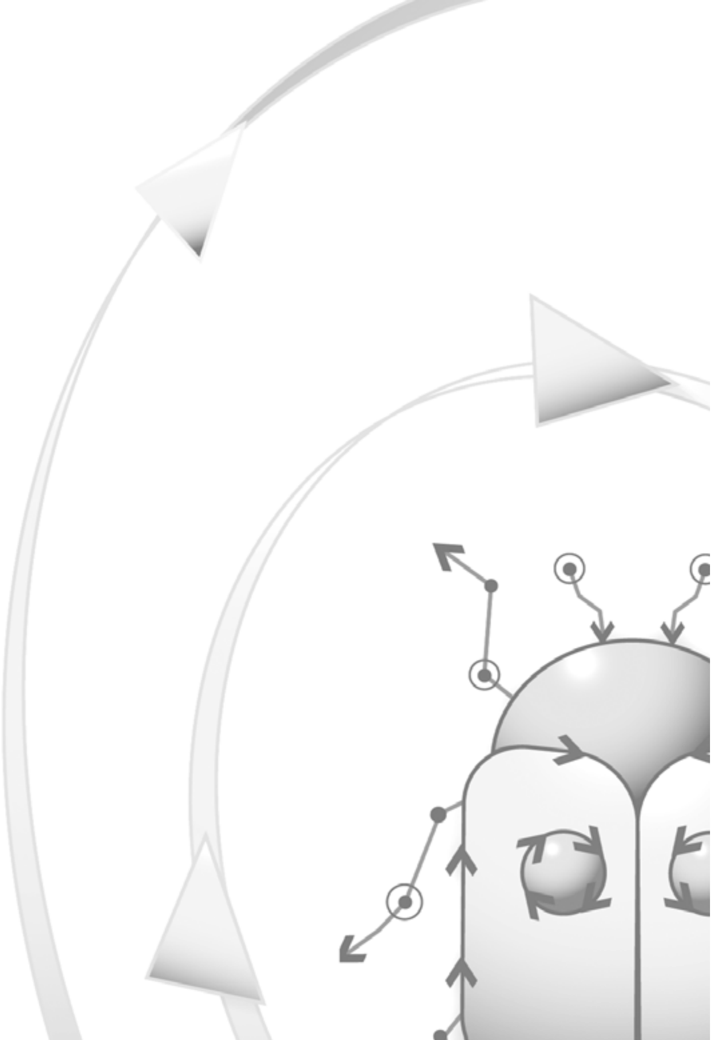
You are prompted to confirm the deletion.

3 Click **Delete**.

The defect is deleted.

Chapter 6
Managing Defects

TestTrack Pro's advanced defect features help you manage all the defects in your project. While other users focus on daily defect tasks you can duplicate and merge defects, link defects, or change bulk fields.



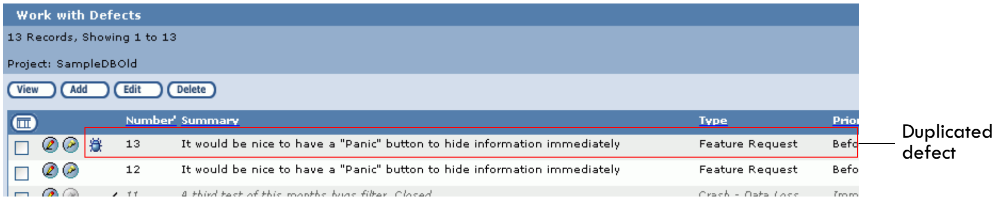
Duplicating defects

If you add defects with the same basic information, you can save time by duplicating and editing an existing defect.

1 Click the **Defects** tab.

2 Select the defect and click **Duplicate**.

The defect is duplicated and assigned the next available defect number.



3 Edit the defect and save your changes.

Merging defects

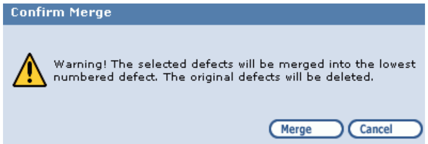
If defects report the same issue you can merge them. All defect information is retained as multiple defect records. For example, if you merge three defects the Detail tab shows three defect records. Each defect record includes the original defect information.

Note: When defects are merged, the original defects are deleted from the TestTrack Pro project and the resulting defect assumes the lowest defect number. If you need to maintain unique defects you can link defects instead of merging them. For more information see **Adding links,** page 47.

1 Click the **Defects** tab.

2 Select the defects and click **Merge Defects**.

You are prompted to confirm that you want to merge the defects.



3 Click **Merge**.

The defects are merged. The resulting defect assumes the lowest defect number and the type, priority, and severity of that defect.

Deferring defect numbering

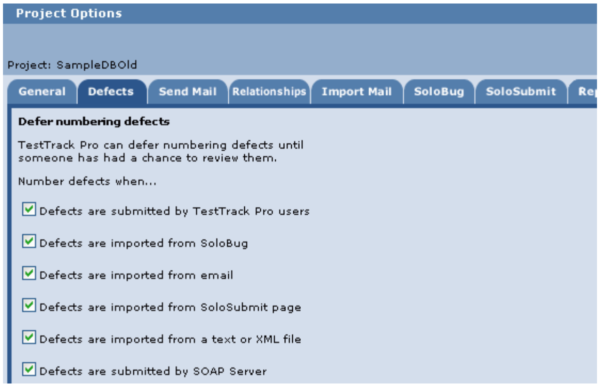
Deferred defect numbering lets you store new defects in the project and number them after confirming they are unique defects. When deferred defect numbering is active, new defects have a dash instead of a defect number. You should periodically review deferred defects to assign defect numbers, merge them with existing defects, or delete them.

1 Click the **Configure** tab.

2 Click **Project Options**.

The Edit Project Options dialog box opens.

3 Click the **Defects** tab and select the deferred numbering options.



4 Click **Save** to save the options.

Assigning defect numbers

You can assign defect numbers to deferred defects. The next available defect in the project is automatically assigned.

1 Click the **Defects** tab.

2 Select the unnumbered defects.

3 Click **Assign Numbers**.

The next available number is assigned.

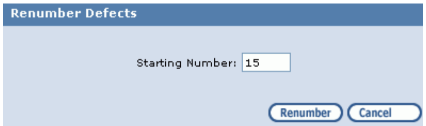
Renumbering defects

Over the duration of your project you may delete or merge defects that leave gaps in the defect numbers sequence. Or, at the start of a new development cycle you may want to purge all closed defects from the project and use it as a fresh starting point for testing. In both cases, you will need to renumber defects.

1 Click the **Defects** tab.

2 Select the defects and click **Renumber**.

The Renumber Defects dialog box opens with the starting number set to the next available defect number.



3 Enter an unused defect number and click **Renumber**.

The Renumber Defects dialog box closes and the defect is renumbered.

- If the renumbered defect number is higher than the next available defect number, the next available defect number is set to one higher than the renumbered defect.
- If you renumber the entire defect list, you still need to set the next available defect number to one greater than the highest defect number.

Configuring link definitions

Admin: You may not be able to configure link definitions. Access to link definitions is generally restricted to administrators or other high-level users.

You must define links before users can link defects. The link definition provides a name and description for the link, as well as a set of optional behaviors that restrict the workflow of linked defects.

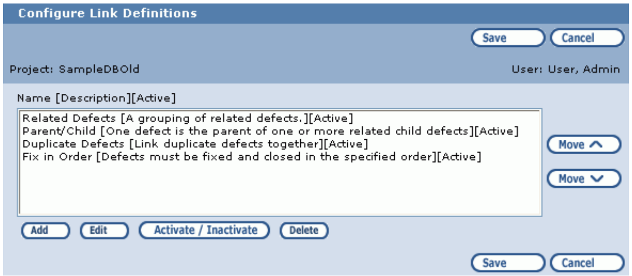
The sample TestTrack Pro project and each new project you create includes two sample link definitions, Related Defects and Parent/Child. Many companies will only need to use the default link definitions and will not need to create new definitions. The sample link definitions do not affect workflow.

1 Click the **Configure** tab.

The Project Configuration page opens.

2 Click **Link Definitions**.

The Configure Link Definitions dialog box opens. Existing link definitions are listed.



3 Click **Add** to create a new link definition. See **Adding link definitions,** page 43 for more information.

4 Select a link definition and click **Edit** to change it. See **Editing link definitions,** page 45 for more information.

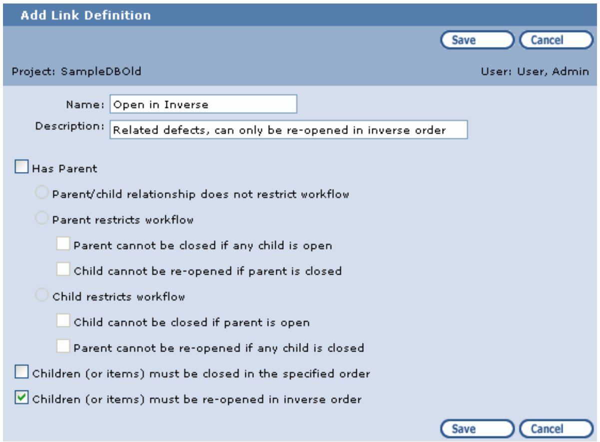
5 Select a link definition and click **Inactivate** to inactivate it. See **Inactivating link definitions,** page 45 for more information.

6 Select a link definition and click **Delete** to delete it. **Deleting link definitions,** page 46 for more information.

Adding link definitions

1 Click **Add** on the Configure Link Definitions dialog box.

The Add Link Definition dialog box opens.



2 Enter a **Name** and **Description**.

The link definition name must be unique.

3 Select **Has Parent** to create a parent/child relationship for the link definition.

- **Parent/child relationship does not restrict workflow** is the default selection.
- **Parent restricts workflow** enforces additional restrictions based on the parent. **Parent cannot be closed if any child is open** ensures that child defects are all closed before the parent. **Child cannot be re-opened if parent is closed** prevents child defects from being re-opened if the parent is closed.
- **Child restricts workflow** enforces additional restrictions based on the child. **Child cannot be closed if parent is open** prevents children defects from being closed if the parent is open. **Parent cannot be re-opened if any child is closed** prevents the parent from being re-opened if a child defect is closed.

4 Select **Children (or items) must be closed in the specified order** if you want items to be closed in order.

For example, defects #980, #872, and #922 are linked in a peer relationship in that order. With this option selected, #872 cannot be closed until #980 is closed and #922 cannot be closed until #872 is closed.

5 Select **Children (or items) must be re-opened in inverse order** to specify that items can only be re-opened in reverse order.

For example, defects #2099, #3147, #2980, and #3122 are linked in a parent/child relationship. Defect #2099 is the parent and #3147, #2980, and #3122 are all children. The parent, #2099, cannot be re-opened if any child is closed. With this option selected, the children must be re-opened in reverse order before the parent can be re-opened. The last child, #3122, must be re-opened first. Next, #2980 can be re-opened then #3147. The parent, #2099, can be re-opened after #3147 is re-opened.

6 Click **Save**.

The link definition is added and you return to the Configure Link Definitions dialog box.

Note: You may want to reorder definitions so the most-used ones display at the top of the Add Link and Edit Link dialog boxes. Select a definition and click Move Up or Move Down to move it.

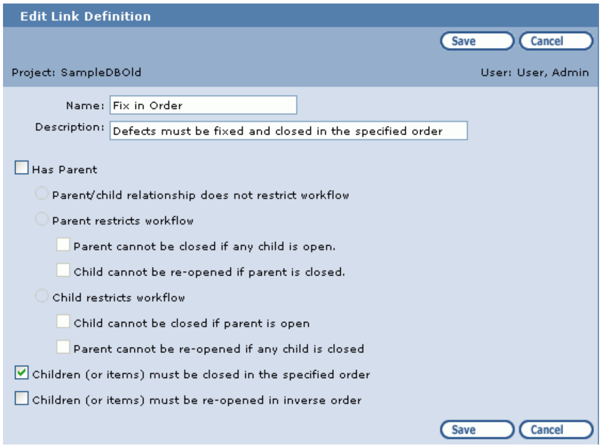
Editing link definitions

Admin: You cannot edit link definitions if other users are logged into TestTrack Pro.

You can edit a link definition to update the name and description or select additional workflow restrictions. You cannot change any Has Parent options if the link definition is in use.

1 Click **Edit** on the Configure Link Definitions dialog box.

The Edit Link Definition dialog box opens.



2 Make any changes and click **Save**.

The changes are saved.

Inactivating link definitions

Admin: You cannot inactivate or activate link definitions if other users are logged into TestTrack Pro.

You can inactivate a definition to prevent users from using it. Inactivating a link definition does not affect existing links that use the definition.

1 Select the link definition on the Configure Link Definitions dialog box.

2 Click **Activate/Inactivate**.

The link definition is inactivated. Users cannot use the definition to create new links.

Note: To activate a link definition select it and click Activate/Inactivate.

Deleting link definitions

Admin: You cannot delete link definitions if other users are logged into TestTrack Pro.

You can delete link definitions that are not being used.

1 Select the link definition on the Configure Link Definitions dialog box.

You are prompted to confirm the deletion.

2 Click **Delete**.

The link definition is deleted.

Linking defects

Defect linking lets you link defects in the same project together in a parent/child relationship or peer group relationship. You can also set additional parent/child options that restrict the workflow. Your use of defect linking depends on your company's business processes. For example, some companies do not like to merge defects because they need to maintain the original defect number. In this scenario defect linking can be used to group the defects together. The following examples are provided to help you understand some of the different uses for defect linking:

- QA is testing a new software component and reports five defects. When the team lead reviews the new defects she realizes they are all symptoms of the same coding problem. She links the defects together to make sure the same fix is applied to all defects.
- Your company is getting ready to release a major software upgrade. In conjunction with the release the marketing department needs to update the web site, write a press release, create a direct mail campaign, and create an email marketing blast. The director of marketing creates a parent defect named Upcoming Release and creates four separate defects for each task that needs to be accomplished. He then links the defects together in a parent/child relationship.
- A problem is found that includes a code change, a documentation change, and an update to an existing knowledgebase article. Instead of creating one defect, you create three different defects, link them together, and specify the order you want the defects to be closed. Requiring the code change defect to be closed first, then the documentation change defect, and finally the knowledgebase defect ensures the documentation and the knowledgebase article both reflect the code changes.

Link definitions must be configured before users can link defects. The TestTrack Pro administrator or another high-level user is generally responsible for creating and maintaining link definitions. For more information see **Configuring link definitions,** page 42.

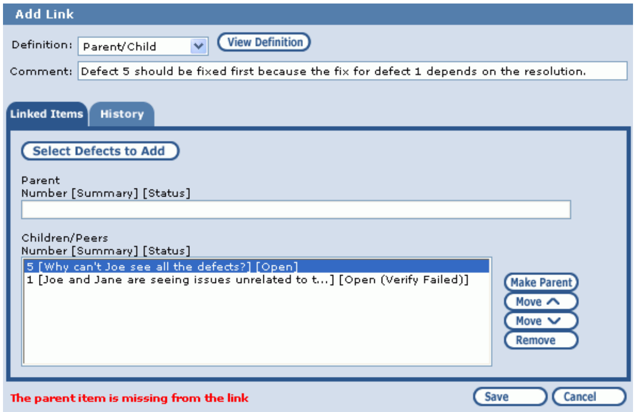
Adding links

Defect linking is used to group two or more defects together. For example, you may have related defects that all require the same code change. You can link the defects together and enter a comment that explains why they are linked. When you assign the defect, enter a note to let the developer know there are other defects linked to it. The developer can view the link information on the Links tab of the Edit Defect or View Defect dialog box.

1 Select the defects on the Defect list window or click the **Links** tab on the Edit Defect dialog box.

2 Click **Add Link**.

The Add Link dialog box opens. The selected defects are listed in the Children/Peers area.



3 Select a link **Definition**.

To view definition information select it and click **View Definition**. The read-only View Definition Link dialog box opens.

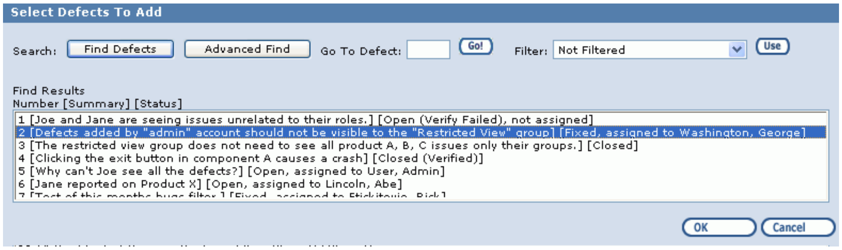
4 Optionally enter any **Comments** about the link.

The comment is displayed on the defect Links tab and the link diagram.

5 If you are adding a parent/child link select the parent defect and click **Make Parent**.

6 Click **Select Defects to Add** to add additional defects to the link.

The Select Defects to Add dialog box opens. Select the defect(s) you want to add to the link and click **OK**.



Tip: This dialog box includes many of the same functions as the Defects list window. For example, you can filter the defects or search for specific defects.

7 Select a defect and click **Move Up** or **Move Down** to reorder it.

Reorder defects if the definition specifies that defects must be closed in order or re-opened in inverse order.

8 Select a defect and click **Remove** to remove it from the link.

To remove a parent defect you must first set another defect as the parent.

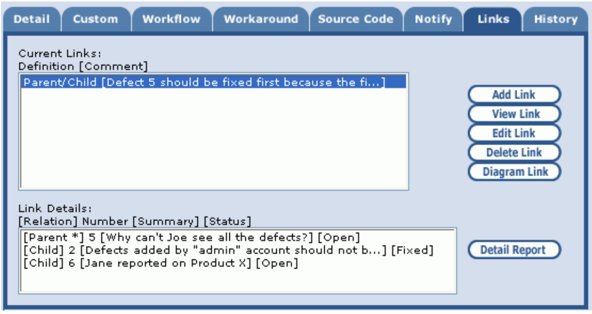
9 Click **Save** to add the link.

Viewing links

You can view read-only link information.

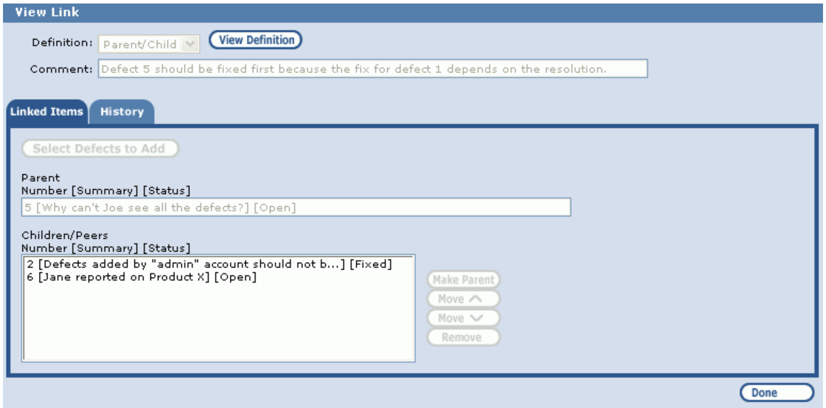
Tip: You may want to add a links column to the Defects list window. Refer to **Adding columns**, page 21 for more information.

1 Click the **Links** tab when you are editing or viewing a defect with links.



2 Click **View Link**.

The read-only View Link dialog box opens.



3 Click the **History** tab to view the link history.

For more information see **Viewing link history,** page 49.

4 Click **Done** to close the View Link dialog box.

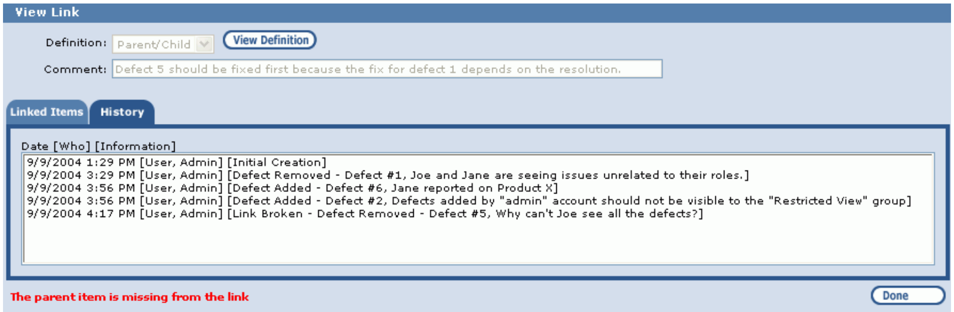
Viewing link history

You can view the history of any changes made to the link. An entry is recorded in the link history when a link is created or broken or a defect is added, removed, or merged. Keep in mind that linking history is not stored with the defects.

Tip: You may want to add a links column to the Defects list window. Refer to **Adding columns,** page 21 for more information.

1 Click the **Links** tab when you are editing or viewing a defect with links.

2 Click **View Link** or **Edit Link** then click the **History** tab.



3 The history tab displays the following link event information:

- Link Broken—Date the link was broken, the user who removed the parent defect, the defect number, and summary information.
- Defect Added—Date the defect was added, the user who added the defect, the defect number, and summary information.
- Defect Removed—Date the defect was removed, the user who removed the defect, the defect number, and summary information.
- Defects Merged—Date the defect was merged, the user who merged the defects, and the old and new defect numbers.

4 Click **Done** when you finish viewing the link history.

Editing links

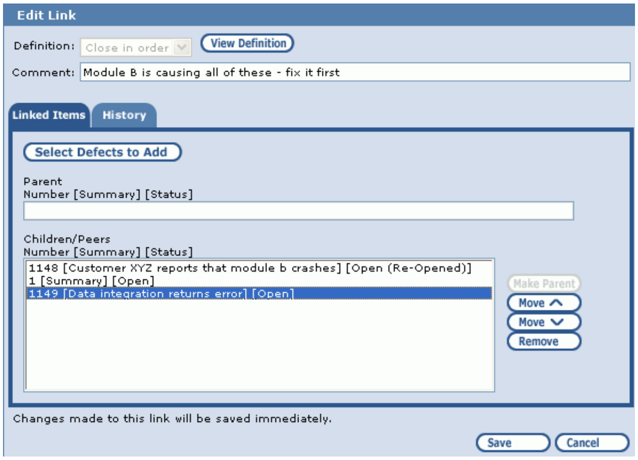
You can edit a link to add or remove defects to it, reorder defects, or change the comment.

Tip: You may want to add a links column to the Defects list window. Refer to **Adding columns,** page 21 for more information.

1 Click the **Links** tab when you are editing or viewing a defect with links.

2 Click **Edit Link**.

The Edit Link dialog box opens.



3 Make any changes and click **Save**.

Diagramming links

You can view a link-based or defect-based visual representation of a link. This allows you to quickly view which links a defect is in and its relationship to other defects in each link.

Tip: You may want to add a links column to the Defects list window. Refer to **Adding columns,** page 21 for more information.

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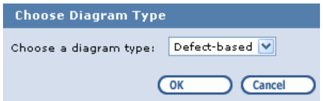
1 Click the **Links** tab when you are editing or viewing a defect with links.

2 Click **Diagram Link**.

The Choose Diagram Type dialog box opens.

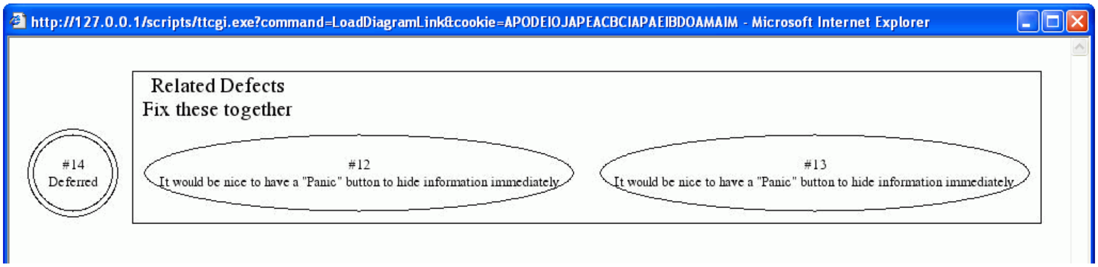


3 Select a **diagram type**.

You can diagram links based on defects or links.

4 Click **OK**.

The diagram opens in another browser window.



5 Use the browser menu to save or print the file.

Deleting links

1 Click the **Links** tab when you are editing or viewing a defect with links.

Tip: You can add a links column, such as Has Links or Is Link Child, to the Defects list window. Refer to **Adding columns,** page 21 for more information.

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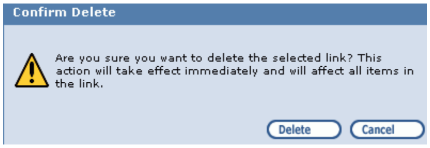
2 Click **Delete Link**.

You are prompted to confirm the deletion.



3 Click **Delete**.

The link is deleted.

Changing bulk fields

Note: The following security options must be enabled to access this command: Edit Defect, Edit Project Options, and Import from XML.

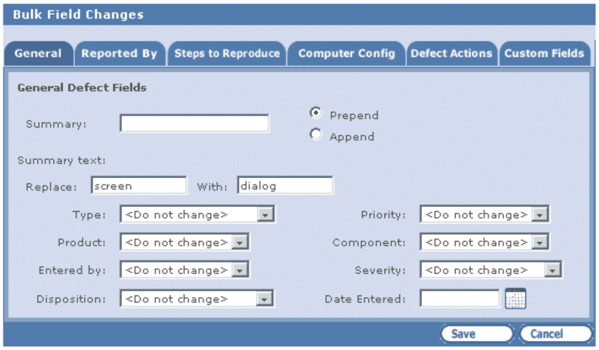
You can quickly and easily update multiple records in the TestTrack Pro project. Use this command to replace values for specific fields, search for and replace strings in text fields, or add text. You can replace values for the following field types: General, Reported By, Steps to Reproduce, Computer Config, Defect Actions, and Custom Fields. For example, you can change the disposition for 100 records to *on hold*. Or you can change the *Found by User* for specific records.

Replacing general field values

1 Click the **Defects** tab.

2 Select the defects and click **Bulk Field Changes**.

The Bulk Field Changes dialog box opens with the **General** tab selected.



3 Make any changes.

- To add text, enter the text in the **Summary** field and select **Prepend** or **Append**.

- To replace text, enter the string you want to search for in the **Replace** field and the string you want to replace it with in the **With** field.
- To change values, select the value from the corresponding menu.

4 Click **Save**.

You are prompted to confirm the changes.

5 Click **OK**.

The records are updated.

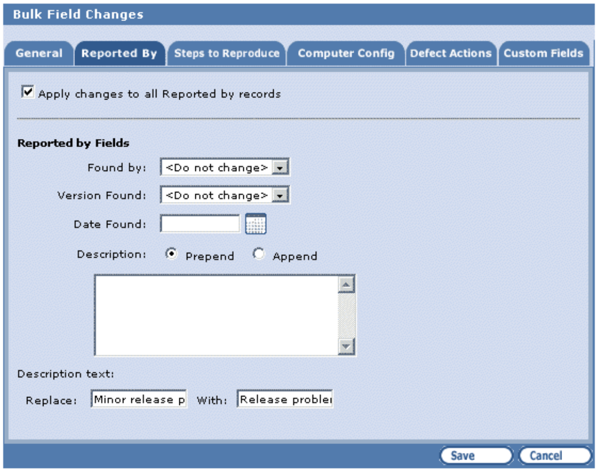
Replacing reported by field values

1 Click the **Defects** tab.

2 Select the defects and click **Bulk Field Changes**.

The Bulk Field Changes dialog box opens.

3 Click the **Reported By** tab.



4 Make any changes.

- Select **Apply changes to all Reported by records** if defects are reported multiple times and you want to change all records. If you do not select this option only the first reported by record is changed.
- To change values, select the value from the corresponding menu.
- To add text, enter the text in the **Description** field and select **Prepend** or **Append**.
- To replace **Description** text, enter the string you want to search for in the **Replace** field and the string you want to replace it with in the **With** field.

5 Click **Save**.

You are prompted to confirm the changes.

6 Click **OK**.

The records are updated.

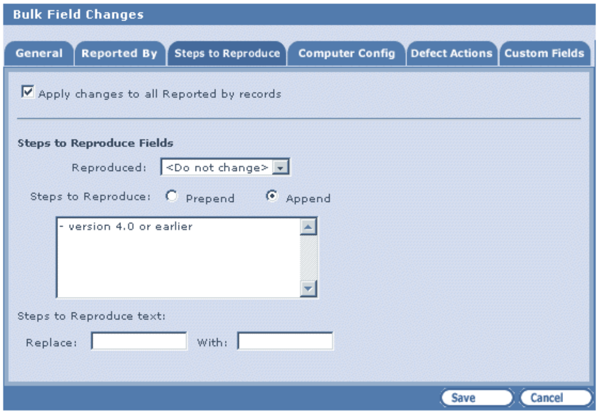
Replacing steps to reproduce field values

1 Click the **Defects** tab.

2 Select the defect(s) and click **Bulk Field Changes**.

The Bulk Field Changes dialog box opens.

3 Click the **Steps to Reproduce** tab.



4 Make any changes.

- Select **Apply changes to all Reported by records** if defects are reported multiple times and you want to change all records. If you do not select this option only the first reported by record is changed.
- To change values, select the value from the corresponding menu.
- To add text, enter the text in the **Steps to Reproduce** field and select **Prepend** or **Append**.
- To replace **Steps to Reproduce** text, enter the string you want to search for in the **Replace** field and the replacement string in the **With** field.

5 Click **Save**.

You are prompted to confirm the changes.

6 Click **OK**.

The records are updated.

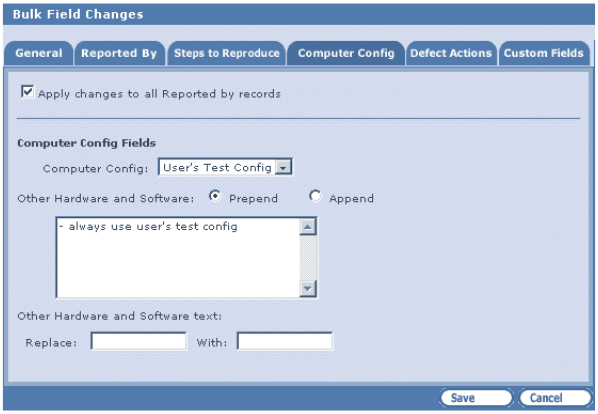
Replacing computer config field values

1. Click the **Defects** tab.

2. Select the defect(s) and click **Bulk Field Changes**.

   The Bulk Field Changes dialog box opens.

3. Click the **Computer Config** tab.



4. Make any changes.

   - Select **Apply changes to all Reported by records** if defects are reported multiple times and you want to change all records. If you do not select this option only the first reported by record is changed.
   - To change values, select the value from the corresponding menu.
   - To add text, enter the text in the **Other Hardware and Software** field and select **Prepend** or **Append**.
   - To replace **Other Hardware and Software** text, enter the string you want to search for in the **Replace** field and the replacement string in the **With** field.

5. Click **Save**.

   You are prompted to confirm the changes.

6. Click **OK**.

   The records are updated.

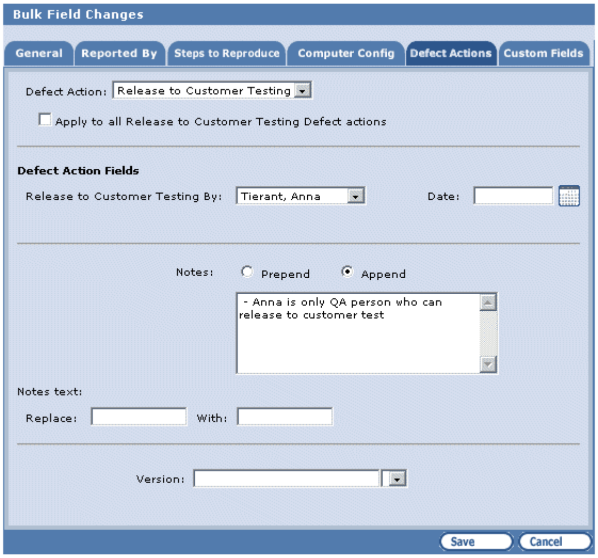
Replacing event field values

1 Click the **Defects** tab.

2 Select the defects and click **Bulk Field Changes**.

The Bulk Field Changes dialog box opens.

3 Click the **Defect Actions** tab.



4 Select a **Defect Action**.

The fields on this tab change based on the defect action you select.

5 Make any changes.

- Select **Apply to all events** to change all corresponding defect events.
- To change values, select the value from the corresponding menu.
- To add text, enter the text in the **Notes** field and select **Prepend** or **Append**.
- To replace **Notes** text, enter the string you want to search for in the **Replace** field and the string you want to replace it with in the **With** field.

6 Click **Save**.

You are prompted to confirm the changes.

7 Click **OK**.

The records are updated.

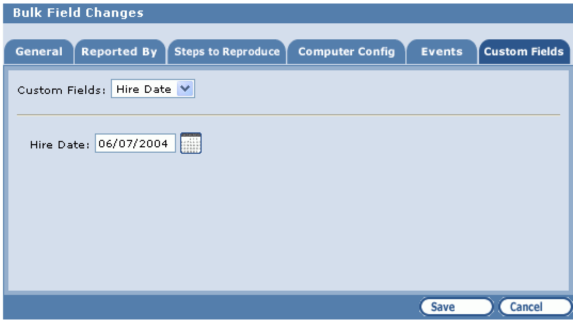
Replacing custom field values

1 Click the **Defects** tab.

2 Select the defects and click **Bulk Field Changes**.

The Bulk Field Changes dialog box opens.

3 Click the **Custom Fields** tab.



4 Select a **Custom Field**.

The fields on this tab change based on the custom field you select.

5 Make any changes.

6 Click **Save**.

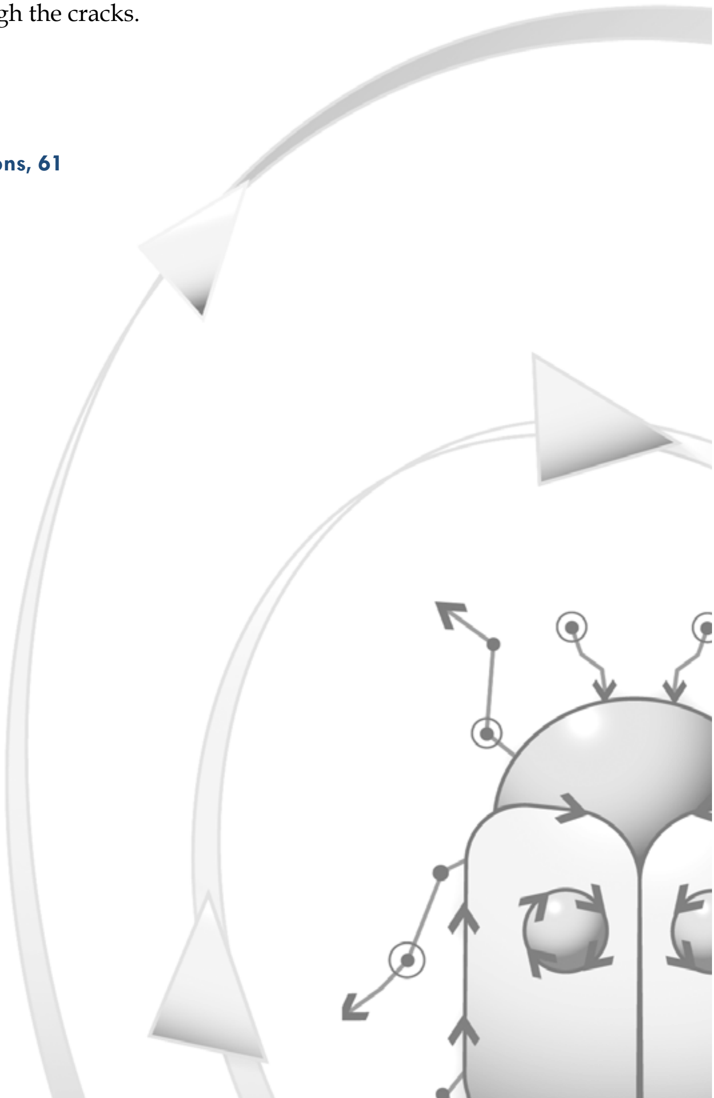
You are prompted to confirm the changes.

7 Click **OK**.

The records are updated.

Chapter 7
Managing the Workflow

Jump into the workflow and track your defects. The workflow ensures a defect moves efficiently from start to finish and doesn't fall through the cracks.

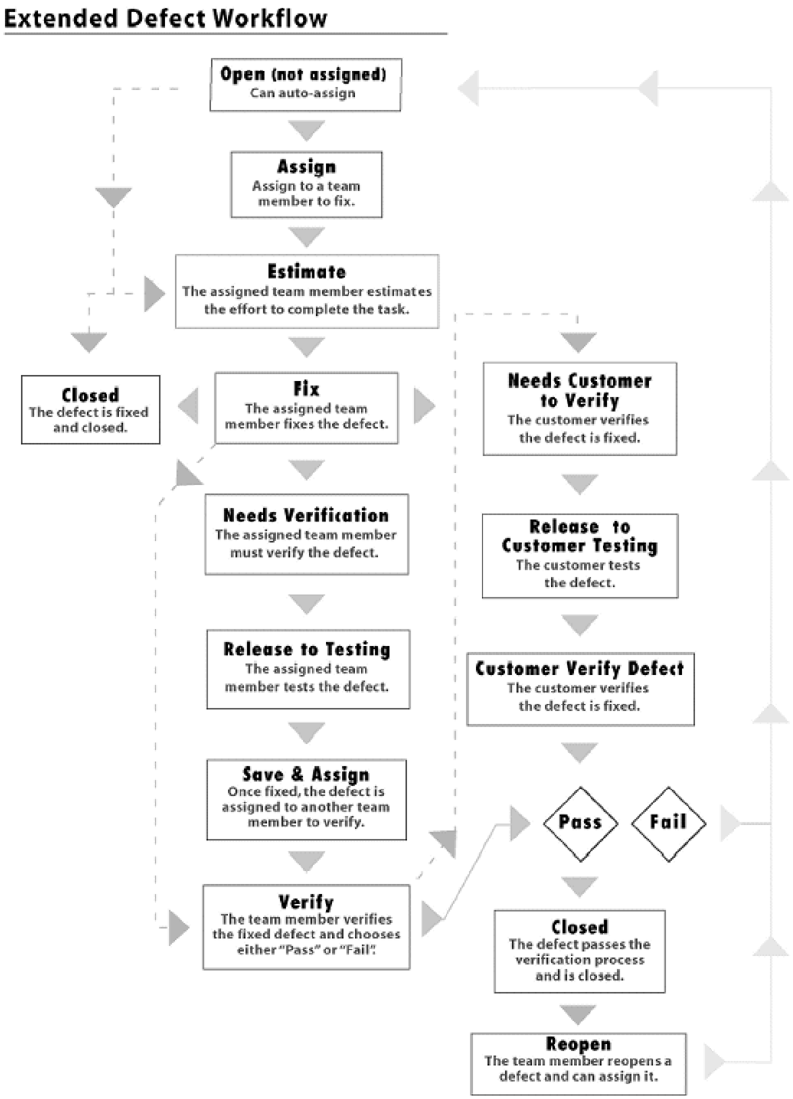


About the workflow

The TestTrack Pro workflow consists of states, events, and transitions that define the path an issue takes from initial reporting to resolution. To move a defect from state to state, the defect is assigned to users who perform the event assigned to them. TestTrack Pro's workflow can be used out of the box or customized to support your company's business processes. For more information about configuring the workflow see **Chapter 13, "Customizing the Workflow,"** page 119.

Defect workflow example

The following example illustrates a defect tracking workflow process:



Understanding defect assignments and actions

Accountability, such as who is responsible for estimating, fixing, or verifying a fix, is an important component of defect tracking. Defects, and defect actions, are assigned to users to ensure someone is accountable and to move the defect through the workflow states. Depending on your security level and the project configuration, you may not have access to all or some of the defect actions.

Each company uses defect assignments and actions differently. One company might let all users assign defects. Another company might only want team leads to be responsible for assigning defects while the users are responsible for such things as estimating a fix, fixing a defect, or verifying the fix.

Following is an example of how defect events move a defect through the lifecycle:

The Lead Engineer is notified when a defect is added to the project. After reviewing the defect, the Lead Engineer assigns the defect to Joe Estimator. The next day, Joe Estimator is notified of the defect assignment in two ways: the Assigned defect indicator appears next to the defect on the Defects list window and he receives an email notification. Joe Estimator opens the defect and views the Workflow tab. He can view who assigned the defect and what event he needs to perform. He decides what needs to be done to fix the defect and enters the estimate information.

The Lead Engineer is notified that the defect changed. She reviews Joe Estimator's work and assigns the fix to Jane User. When Jane User logs in, she is notified of the defect assignment. Jane User opens the defect and views the Workflow tab. She can view her current defect assignment information and also view Joe Estimator's notes – this helps her begin working on the fix. When Jane User finishes entering the Fix Defect information, the Lead Engineer is notified that the defect changed. The Lead Engineer reviews Jane User's fix and assigns the next defect event. This process continues until the defect is fixed, tested, verified, and closed.

About the default workflow

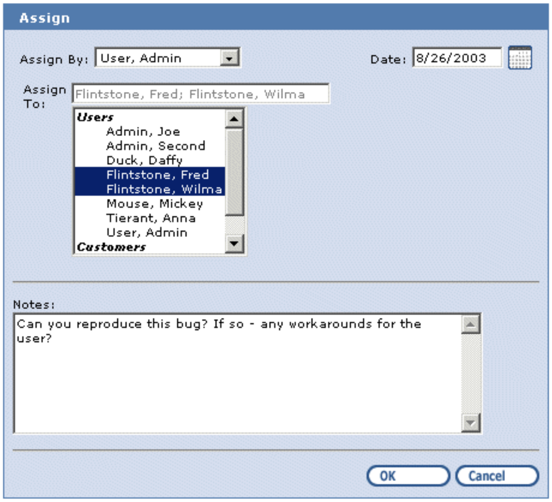
The information in this section is specific to the default workflow. The default workflow includes the following events: Assign, Estimate, Fix, Verify, Force Close, Reopen, Release Notes, and Comments. The steps you follow and the defect actions you use can differ depending on your company's workflow.

Assigning defects

1 Select the defect on the Work with Defects page.

2 Click **Assign**.

The Assign dialog box opens.



3 Check the **Assign by** field.

This field defaults to the current user.

4 Select an **Assign to** user.

To select multiple users **Ctrl + click** each user.

5 The **Date** defaults to the current date.

You can enter another date or click the calendar to select a date.

6 Enter any **Notes** about the defect you are assigning or any additional information.

7 Click **OK**.

If you accessed this event from the Edit Defect dialog, click **Save** on the dialog to save the changes.

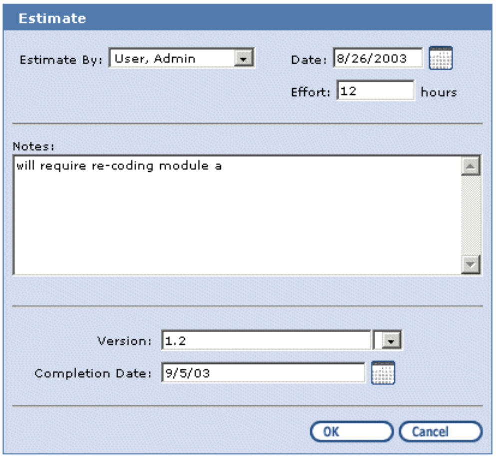
Note: When you are assigned a defect, open the defect (Edit/View Defect dialog box) and click the **Workflow** tab. You can review the assignment notes. The person who assigned the defect should let you know what defect event you are responsible for and provide any detailed information. If you need more information about the defect, select **Mail > Reply to Submitter** to send an email from TestTrack Pro.

Estimating fix time

1 Select the defect on the Work with Defects page.

2 Click **Estimate**.

The Estimate dialog box opens.



3 Select an **Estimate by** user.

This field defaults to the current user.

4 The **Date** defaults to the current date.

You can enter another date or click the calendar to select a date.

5 Enter the estimate **Effort**.

6 Enter any **Notes** about the estimate.

7 Select a **Version** number.

You may also be able to enter a version number.

8 Enter a **Completion Date**.

You can also click the calendar to select a date.

9 Click **OK**.

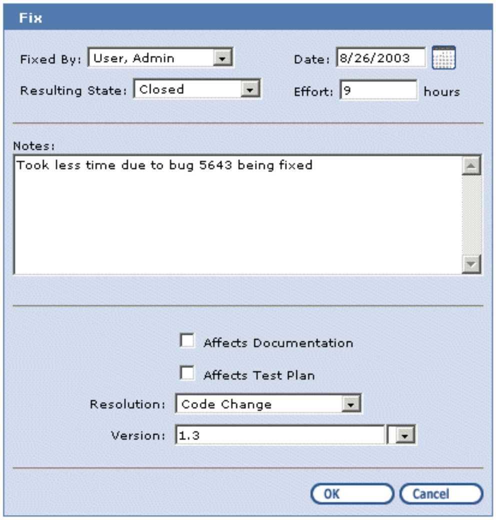
If you accessed this event from the Edit Defect dialog, click **Save** on the dialog to save the changes.

Fixing defects

1 Select the defect on the Work with Defects page.

2 Click **Fix**.

The Fix dialog box opens.



3 Select a **Fixed By** user.

4 The **Date** defaults to the current date.

You can enter another date or click the calendar to select a date.

5 Optionally select a **Resulting State**.

You can only select a state if the workflow allows multiple resulting states.

6 Enter the fix **Effort**.

7 Enter any **Notes** about the fix.

8 Select the **Affects Documentation** check box or the **Affects Test Plan** check box if either applies.

9 Select a fix **Resolution**.

10 Select the **Version** number.

You may also be able to enter a version number.

11 Click **OK**.

If you accessed this event from the Edit Defect dialog, click **Save** on the dialog to save the changes.

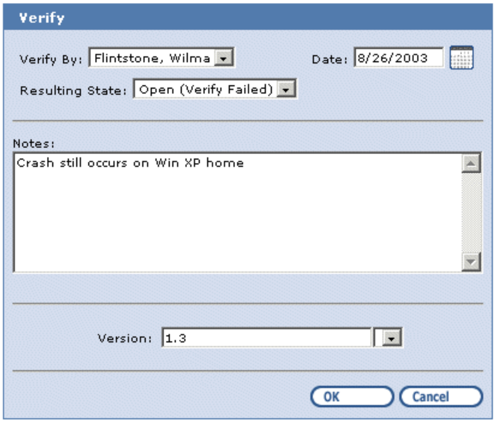
Verifying a fix

Note: A defect must be fixed before it can be verified.

1 Select the defect on the Work with Defects page.

2 Click **Verify**.

The Verify dialog box opens.



3 Select a **Verify By** user.

This field defaults to the logged in user.

4 The **Date** defaults to the current date.

You can enter another date or click the calendar to select a date.

5 Optionally select a **Resulting State**.

You can only select a state if the workflow allows multiple resulting states.

6 Enter any **Notes** about the verification.

If a fix fails, record why the fix failed. It can help with future planning.

7 Select the **Version** number.

You may also be able to enter a version number.

8 Click **OK**.

If you accessed this event from the Edit Defect dialog, click **Save** on the dialog to save the changes.

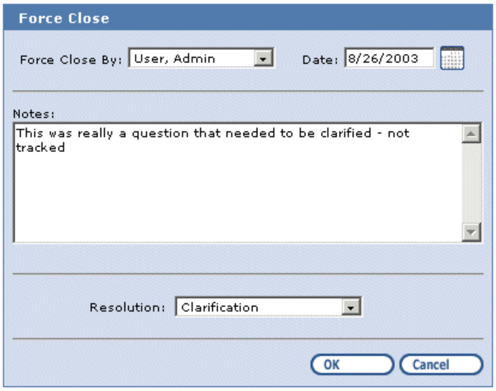
Closing defects

The resolution of some defects does not follow the standard fix/verify model. For example, a defect might not be a bug. In this situation, you can close the defect immediately and bypass the workflow.

1 Select the defect on the Work with Defects page.

2 Click **Force Close**.

The Force Close dialog box opens.



3 Select a **Force Close By** user.

This field defaults to the logged in user.

4 The **Date** defaults to the current date.

You can enter another date or click the calendar to select a date.

5 Enter any **Notes**.

It is helpful to provide information about why the defect was closed.

6 Select a **Resolution**.

7 Click **OK**.

If you accessed this event from the Edit Defect dialog, click **Save** on the dialog to save the changes.

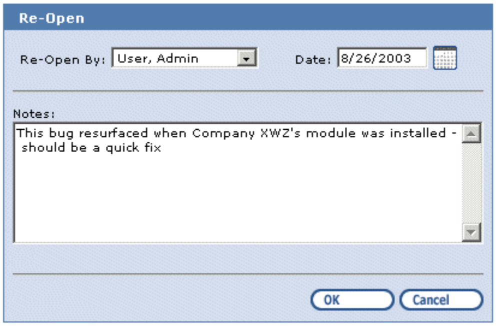
Re-opening defects

You can re-open closed defects if they resurface and need to go through your fix process again.

1 Select the defect on the Work with Defects page.

2 Click **Re-open**.

The Re-open Defect dialog box opens.



3 Select a **Re-Open By** user.

This field defaults to the logged in user.

4 The **Date** defaults to the current date.

You can enter another date or click the calendar to select a date.

5 Enter any **Notes**.

It is helpful to include the reason the defect was re-opened.

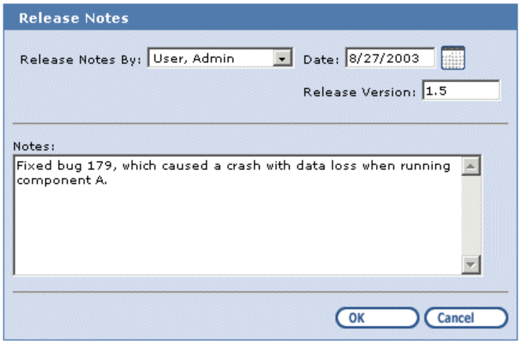
6 Click **OK**.

If you accessed this event from the Edit Defect dialog, click **Save** on the dialog to save the changes.

Adding release notes

1 Select the defect on the Work with Defects page. Click **Release Notes**.

The Release Notes dialog box opens.



2 Select a **Release Notes By** user.

This field defaults to the logged in user.

3 The **Date** defaults to the current date.

You can enter another date or click the calendar to select a date.

4 Enter the **Release Version**.

5 Enter the release notes.

The notes are recorded with the defect history.

6 Click **OK**.

If you accessed this defect action from the Edit Defect dialog, you **must** click **Save** on the Edit Defect dialog to save the changes.

Generating release notes is a two-step process. After you add release notes to a defect, you need to generate the release notes file. You can generate a file containing all the release notes for a specific version, date, etc. You can insert this file in your Read-me file or use it to create a separate Release Notes guide. For more information see **Creating release notes**, page 71.

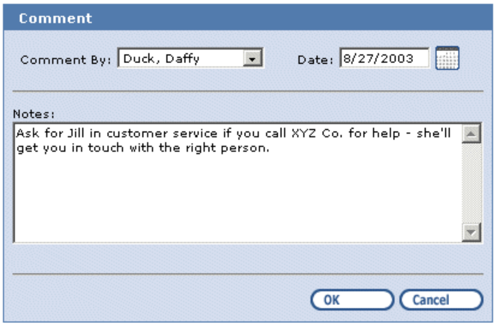
Adding comments

You can add comments to a defect to point something out to other users, clarify an issue, or just as a reminder. Other users can view your comments on the Workflow tab.

1 Select the defect on the Work with Defects page.

2 Click **Comment**.

The Comment dialog box opens.



3 Select a **Comment By** user.

This field defaults to the current user.

4 The **Date** defaults to the current date.

You can enter another date or click the calendar to select a date.

5 Enter the comments.

The comments are recorded with the defect history.

6 Click **OK**.

If you accessed this event from the Edit Defect dialog, click **Save** on the Edit Defect dialog to save the changes.

Note: To view defect comments, select the defect, click **View** or **Edit**, and then click the **Workflow** tab. All comments are included on the Workflow tab.

Viewing defect events

1 Select the defect on the Work with Defects page.

2 Click **View**.

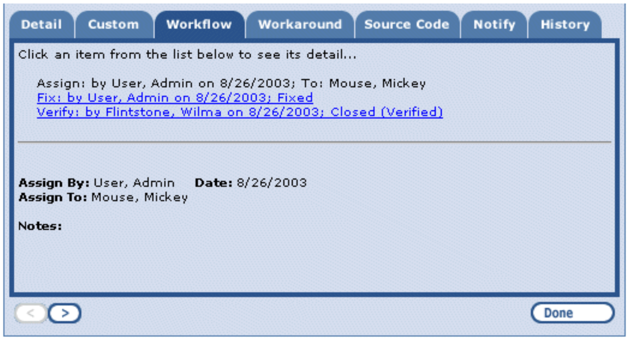
The View Defect dialog box opens.

3 Click the **Workflow** tab.

All the defect actions are listed on the Workflow tab.

4 Click the defect action you want to view.

Read-only defect action information opens.



5 Click **Done** to close the View Defect dialog box.

Editing defect events

You can edit defect actions to add more information or correct mistakes.

Note: For example, a defect resolution affects documentation but you forgot to select the Affects Documentation check box. You can edit the action to select the check box.

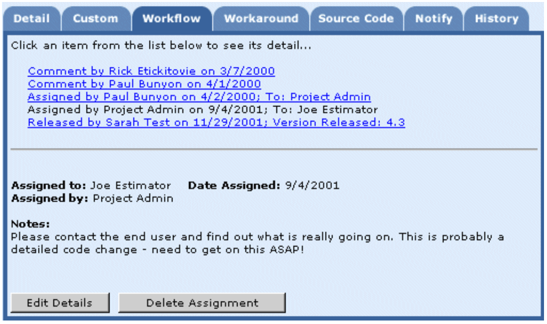
1 Select the defect on the Work with Defects page.

2 Click **Edit**.

The Edit Defect dialog box opens.

3 Click the **Workflow** tab.

All the defect actions are listed on the Workflow tab.



4 Click the defect action then click **Edit Details**.

5 Make any changes and click **OK**.

6 Click **Save**.

All changes are saved and you return to the Work with Defects page.

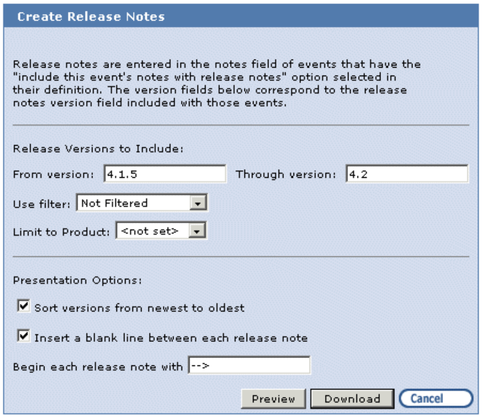
Creating release notes

You can create release notes for any defect. You may want to include the text file in a read me file or include the notes with your installer to inform users of new features and bug fixes.

Note: To generate release notes for just a few defects, select the defects on the Work with Defects page. If you do not know which defects contain release notes, add a column to the Work with Defects page to display the Has Release Notes? field.

1 Click **Create Rel. Notes** on the Work with Defects page.

The Create Release Notes dialog box opens.



2 Enter the **From version** and the **Through version** you want to include in the release notes.

If the release notes are specific to one version, enter the same version number in both fields.

3 Select a filter from the **Use Filter** list to generate release notes for defects that meet the filter criteria.

4 Select a product from the **Limit to Product** list to generate release notes for a specific product.

5 Enter a character in the **Begin each release note with** field if you want each release note to start with the specific character (e.g., a bullet). You can also enter ASCII characters or leave the field empty.

6 Click **Preview**.

The Release Notes preview window opens. You can edit the release notes in the preview window.

7 Click **Download** to save the release notes.

The Save Release Notes As dialog box opens.

8 Select the directory where you want to save the release notes and enter a file name. Click **Save**.

TestTrack Pro generates the release notes and saves the text file in the specified directory.

Deleting defect events

1 Select the defect on the Work with Defects page.

2 Click **Edit**.

The Edit Defect dialog box opens.

3 Click the **Workflow** tab.

All the defect events are listed on the Workflow tab.

4 Click the defect action then click **Delete <defect action>**.

The button changes based on what you are deleting. If you are deleting a close event the button is labeled **Delete Close**. Likewise, it is labeled **Delete Assignment** if you are deleting an assignment event.

Note: Make sure you want to delete the defect event. You are not prompted to confirm the deletion and it cannot be undone.

5 The defect event is deleted.

Chapter 8
Using Filters

Filter Out the Noise! TestTrack Pro includes extensive filtering capabilities. You can use filters to sort defect records and list only those defects that meet the criteria you select.

Creating filters

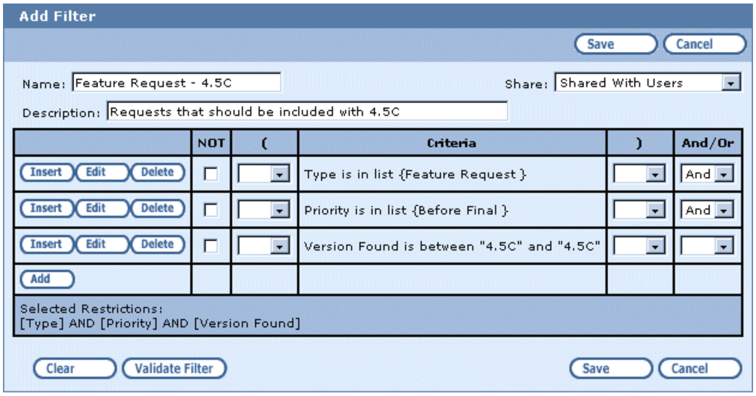
Create filters to quickly view specific types of defects. For example, you can create a filter to view bugs by priority or a filter to view opens bugs that need to be fixed by a specific release.

1 Click the **Filters** tab.

The Work with Defect Filters page opens

2 Click **Add**.

The Add Filter dialog box opens.



3 Enter a **Name** and **Description**.

4 Select a **Share** option.

The default is private. If you share the filter other users can edit it.

5 Click **Add** to add filter restrictions.

For more information see **Adding restrictions,** page 75.

6 Select NOT/AND/OR operators and parentheses to build the Boolean logic for the filter (optional step).

For more information see **About Boolean logic,** page 75.

7 Click **Validate Filter** to validate the filter criteria.

- Click **OK** if the filter criteria is valid.
- An error message opens if the filter criteria is not valid. Click **OK** to return to the Defect Filter dialog box and correct the error. Click **Clear** to clear all restrictions and start over.

8 Click **Save** when you finish building the filter.

The filter is added to the project.

About Boolean logic

You can use Boolean logic to create complex and highly precise filters. Boolean logic uses three connecting operators (AND, OR, NOT) to narrow or broaden a search or to exclude a term from a search.

"And" is a narrowing term. When you connect filter or search criteria using the "and" operator, records that match all of the criteria are returned. For example, if you search for Component A "and" Component B, records that contain both components are displayed.

"Or" is a broadening term. When you connect filter or search criteria using the "or" operator, records that match any of the criteria are returned. For example, if you search for Component A "or" Component B, records that contain either component are displayed.

"Not" is a excluding term. When you connect filter or search criteria using the "not" operator, records that do not contain any of the criteria are returned. For example, if you search for "not" Component A , records that contain Component A are not displayed.

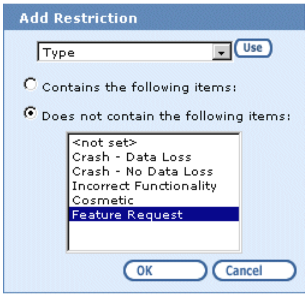
Nesting - with Boolean operators

You can combine searches in a variety of ways using the different combinations of Boolean operators. Parentheses are important because they keep the logic straight. In the grouping **(Component A OR Component B) AND (Component C OR Component D)** the parentheses around the first set tells the project to create a final set of records that may include either Component A OR Component B, but only when the records also include either Component C OR Component D.

Adding restrictions

1 Click **Add** on the Add Filter or Edit Filter dialog.

The Add Restriction dialog box opens.



2 Select the field you want to add to the restriction.

When you select a field the restrictions options for that field are displayed.

Note: If your browser does not support JavaScript click **Use** to refresh the screen.

3 Select any options and enter the restrictions for the field. The restrictions you can set changed based on the selected restriction.

- **<Unknown>** represents an empty field. For example, if you select **<Unknown>** with Restrict by set to Assigned To, it is interpreted as “Show all defects not assigned to anyone.”
- If you are adding restrictions with fields that include a text value, you can leave the text value empty. When the filter is applied, TestTrack Pro searches for the Restrict by field with an empty text value. This is useful if you are cleaning up defect records and want to make sure each defect includes a summary. Select **Restrict by: Summary** and leave the text value empty. When you apply the filter, all defects with an empty Summary field are listed.

4 Click **OK** to add the restriction.

5 Repeat **steps 1-3** to continue adding restrictions.

6 Select any options and enter the restrictions for the field and click **OK**.

The restriction is added.

Using filters

1 Select a **Filter** on the Work with Defects page.

> **Note:** If your browser does not support JavaScript click **Use** to refresh the screen and update the Filter list.

2 The filter is applied to the defects.

Defects that meet the filter criteria are listed on the Work with Defects page. To return to a list of all defects select **Not Filtered**.

Viewing filters

1 Click the **Filters** tab.

2 Select the filter and click **View**.

The View Filter dialog box opens. All fields are read-only.

3 Click **Close** when you are finished.

Editing filters

1 Click the **Filters** tab.

2 Select the filter and click **Edit**.

3 Make any changes and click **Save**.

Your changes are saved and you return to the Work with Defect Filters page.

Editing restrictions

1 Select a filter and click **Edit**.

The Edit Defect Filter dialog box opens.

2 Click **Edit** to edit the restriction.

The Edit Restriction dialog box opens.

3 Make any changes and click **OK**.

4 Click **Save** to save the changes.

Inserting restrictions

If your filter contains a large number of restrictions you can insert a restriction in a specific position.

1 Select a filter and click **Edit**.

The Edit Defect Filter dialog box opens.

2 Click **Insert** to insert a restriction.

The Insert Restriction dialog box opens.

3 Select the field you want to include in the restriction.

4 Select any options and enter the restrictions for the field. Click **OK**.

The restriction is inserted.

Click **Save** to save the changes.

Duplicating filters

If you add filters with the same basic information, you can save time by duplicating and editing an existing filter.

1 Click the **Filters** tab.

2 Select the filter and click **Duplicate**.

TestTrack Pro duplicates the filter.

3 Modify the filter and save your changes.

Deleting restrictions

Note: Make sure you want to delete the restriction. You are not prompted to confirm the deletion and the action cannot be undone.

1 Click **Delete** on the Advanced Find Defects dialog in the row corresponding to the restriction you want to delete.

2 You are prompted to confirm the deletion.

3 Click **Delete**.

The restriction is deleted.

Deleting filters

1 Click the **Filters** tab.

2 Select the filter and click **Delete**.

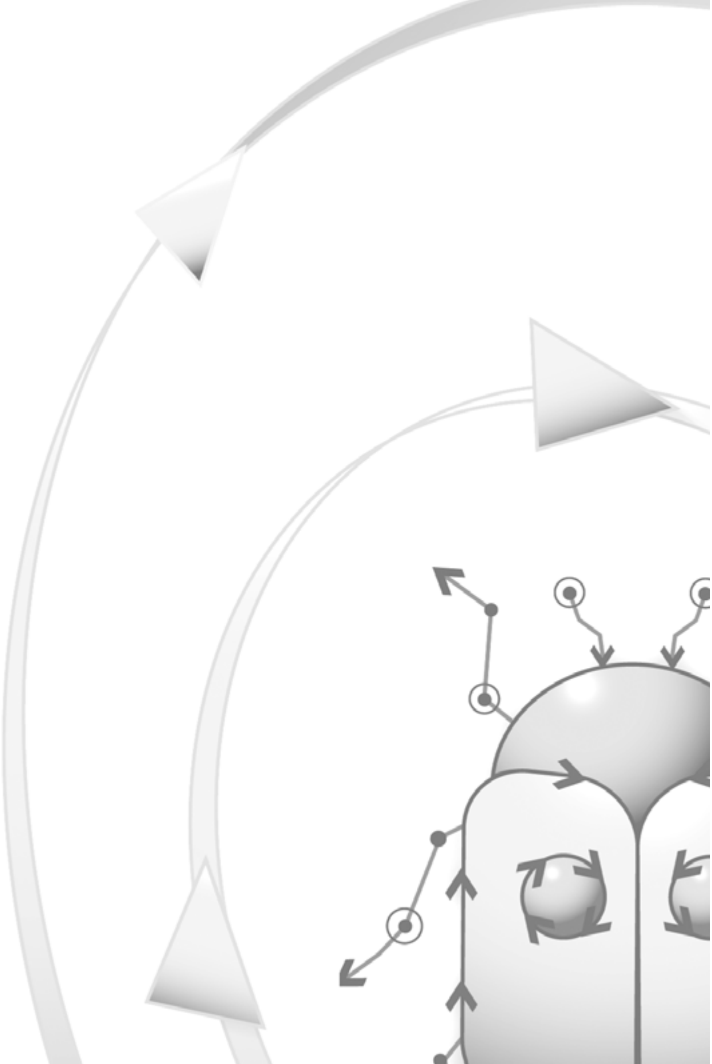
You are prompted to confirm the deletion.

3 Click **Delete**.

The filter is deleted.

Chapter 9
Managing Test Configs

Track the nuts and bolts! It is important to pay attention to the computers defects are found on. Is it a hardware problem or a display driver bug? Track your test configurations and identify the patterns.



About test configs

A test configuration generally refers to a specific computer used for testing and the hardware and software found on this computer. You should track all your systems to see if bugs are computer-specific. Tracking test configurations helps you identify patterns in defects that may be related to specific hardware or software configurations. You can verify that your application functions the same, or in a similar manner, across all supported platforms or configurations.

Adding test configs

1 Click the **Test Configs** tab.

The Work with Test Configs page opens.

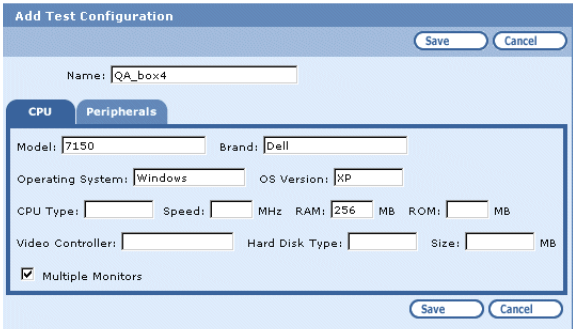
2 Click **Add**.

The Add Test Configuration dialog box opens.

3 Enter a **Name** to uniquely identify the test config.

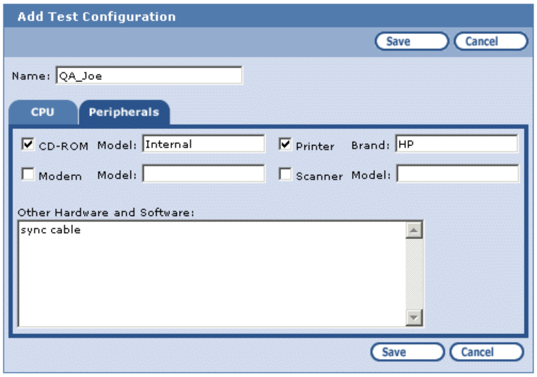
4 Enter the information on the **CPU** tab.

These fields are optional but you should enter as much information as possible.



5 Click the **Peripherals** tab and enter the peripherals information.

These fields are optional but you should enter as much information as possible.



6 Click **Save** when you finish entering the test config information.

The test config is added.

Viewing test configs

1 Click the **Test Configs** tab.

2 Select the test config and click **View**.

The View Test Configuration dialog box opens. All fields are read-only.

3 Click **Close** when you are finished.

Editing test configs

1 Click the **Test Configs** tab.

2 Select the test config and click **Edit**.

The Edit Test Configuration opens.

3 Make any changes and click **Save**.

Your changes are saved.

Duplicating test configs

If you add test configs with the same basic information, you can save time by duplicating and editing an existing filter.

1 Click the **Test Configs** tab.

2 Select the test config and click **Duplicate**.

The test config is duplicated. A number is added to the end of the name. For example, if you select and duplicate Eng-cube the duplicated test config is named Eng-cube1.

3 Modify the duplicated test config and save your changes.

Deleting test configs

1 Click the **Test Configs** tab.

2 Select the test config and click **Delete**.

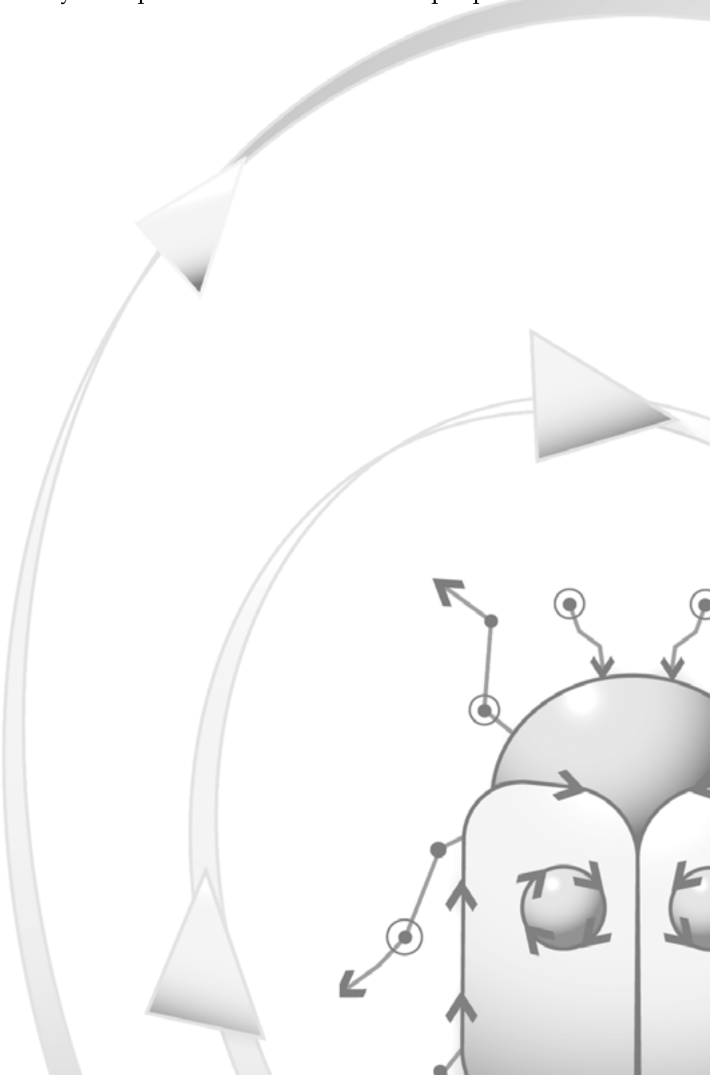
You are prompted to confirm the deletion.

3 Click **Delete**.

The test config is deleted.

Chapter 10
Generating Reports

TestTrack Pro makes reporting simple—point, click, print, and read. You can design and preview each report before printing. You can also share your report with other users or keep it private.



About reports

Reports are used to analyze the data collected in a TestTrack Pro project. You can use filters to build reports that focus on the data you need. You can also share reports with other users or keep them private. TestTrack Pro includes the following types of reports:

- **Detail reports** include detailed information about defects, customers, users, security groups, or test configurations.
- **Distribution reports** include the distribution of defects. You can choose options such as defects found by user, defect status by component, etc. You can add a chart to the report for additional impact. For example, you could build a distribution report that shows the number of fixed defects for each user.
- **List reports** include summary information about defects, customers, users, security groups, or test configurations. You select the fields to include in the report.
- **Trend reports** include defect events over time. For example, how many defects have been fixed this week? You can add a chart to the report for additional impact. Use this report to determine how well you are managing defects.

Using stylesheets

Stylesheets are templates you can use to quickly generate formatted reports. Several Extensible Style Language (XSL) stylesheets are installed with TestTrack Pro to help you easily create reports with predefined layout and design options.

Customizing stylesheets

You can customize an existing XSL stylesheet or create your own and add it to the TestTrack Pro project. Stylesheets are generally located in the **Program Files/TestTrack Pro/StyleSheets** directory or the **Program Files/ Seapine/ TestTrack Pro/ Stylesheets** directory. Each report type has a corresponding folder in the Stylesheets directory.

- To customize an existing stylesheet, open the corresponding report folder, select the stylesheet, and modify it using a third-party tool, such as Altova's XML Spy.
- To add a new stylesheet, use a third-party tool to create the stylesheet. Copy the completed stylesheet to the corresponding report folder.
- To include an image with a stylesheet, copy the image to the **Images** folder in the TestTrack Pro directory. Include the following script in the stylesheet:

```
<img>
  <xsl:attribute name=”src”>
      <xsl:value-of select=”external:get-server-image(‘imagename.gif’)” />
  </xsl:attribute>
</img>
```

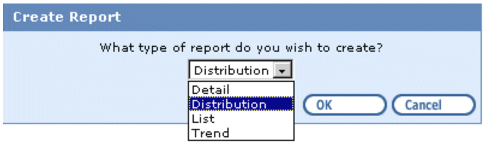
Creating detail reports

1 Click the **Reports** tab.

The Work with Reports page opens.

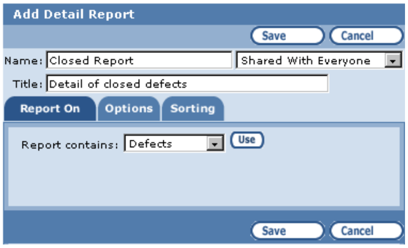
2 Click **Add**.

The Create Report dialog box opens.



3 Select **Detail** and click **OK**.

The Add Detail Report dialog box opens.



4 Enter a **Name** and **Title**.

5 Select a **Share** option.

6 Select the **Report On** options.

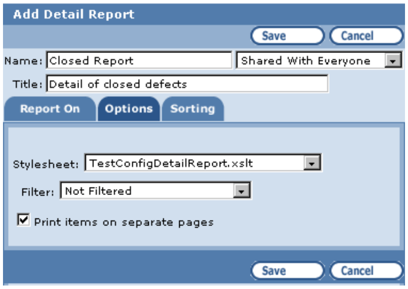
- Select the record type from the **Report contains** menu.
- If you select **Customers**, **Users**, **Security Groups**, **Customers**, or **Test Configs** you can build a report on all or selected records.

Note: If your browser does not support JavaScript click **Use** to refresh the screen.

7 Click the **Options** tab.

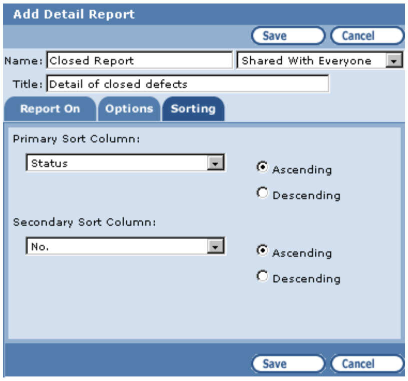
- Select a **Stylesheet**.
- Select a **Filter** if you are reporting on defects and only want to include filtered defects.

- Select **Print items on separate pages** to insert page breaks between each item in the report. Internet Explorer is the only browser that supports page breaks.



8 Click the **Sorting** tab.

Select a Primary or Secondary sort column and set the column sort order.



9 Click **Save**.

The report is saved.

Creating distribution reports

1 Click the **Reports** tab.

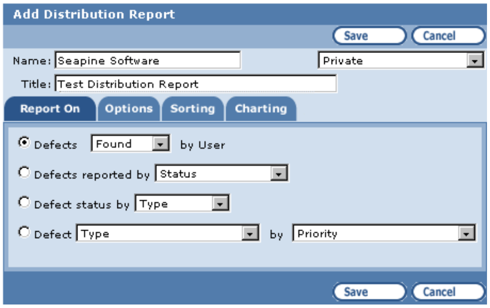
The Work with Reports page opens.

2 Click **Add**.

The Create Report dialog box opens.

3 Select **Distribution** and click **OK**.

The Add Distribution Report dialog box opens.



4 Enter a **Name** and **Title**.

5 Select a **Share** option.

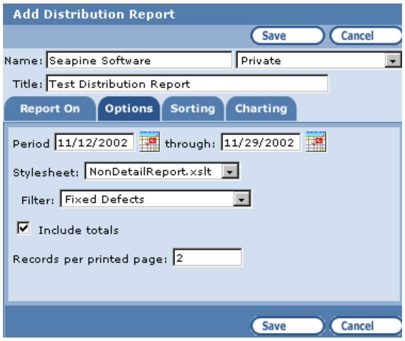
6 Select the **Report On** options.

- Select **Defects <field> by User** to build a report that includes action by user. For example, Defects Found by User.
- Select **Defects report by <field>** to build a report that includes the number of defects based on the chosen category. For example, Defects reported by Status.
- Select **Defect status by <field>** to build a report that includes the defect status based on the chosen category. For example, Defects status by Type.
- Select **Defect <field> By <field>** to build a report that includes the defect status using two criteria. For example, Defect Type by Priority.

7 Click the **Options** tab.

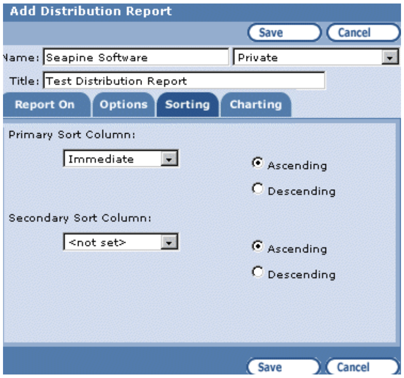
- Enter the date parameters for your report in the **Period** and **through** fields.
- Select a **Stylesheet**.
- Select a **Filter** if you are reporting on defects and only want to include filtered defects.

- Select **Include totals** to include totals for the selected report items. If you select this option, you can add the totals to a chart using the **Data to Graph** menu on the **Graphing** tab. Totals cannot be graphed with any other report items.



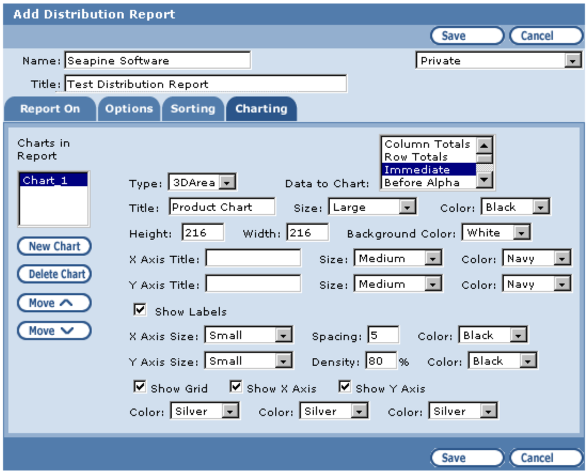
8 Click the **Sorting** tab.

Select a Primary or Secondary sort column and set the column sort order.



9 Click the **Charting** tab.

This tab is used to add and design charts. For more information, see **Charting report data,** page 94.



10 Click **Save**.

The report is saved.

Creating list reports

1 Click the **Reports** tab.

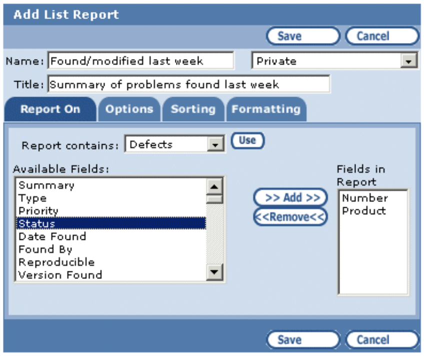
The Work with Reports page opens.

2 Click **Add**.

The Create Report dialog box opens.

3 Select **List** and click **OK**.

The Add List Report dialog box opens.



4 Enter a **Name** and **Title**.

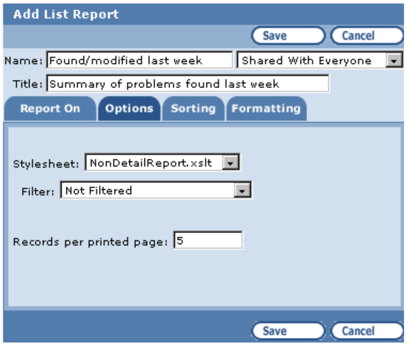
5 Select a **Share** option.

6 Select the **Report On** options.

- Select the record type from the **Report contains** menu.
- Select the fields you want to add to the report.

7 Click the **Options** tab.

- Select a **Stylesheet**.
- Select a **Filter** if you are reporting on defects and only want to include filtered defects.
- Enter the number of **Records per printed page** to add page breaks between rows in the report.

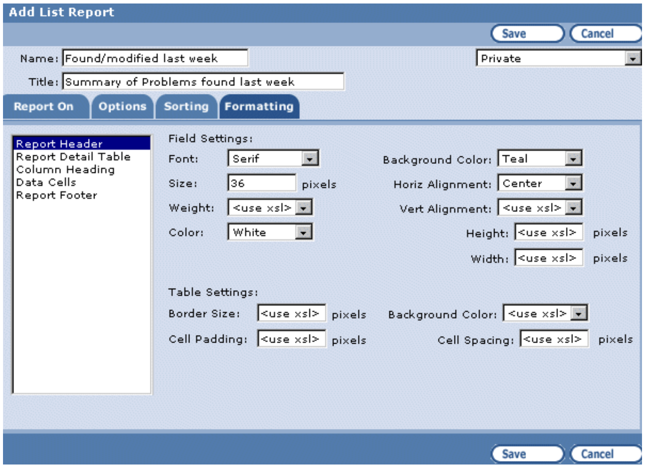


8 Click the **Sorting** tab.

Select a Primary or Secondary sort column and set the column sort order.

9 Click the **Formatting** tab.

You can override the stylesheet settings for a list report. For example, you can change the header font style, size, color, or alignment. Select **Report Header** and use the field settings to make any adjustments.



10 Click **Save**.

The report is saved.

Creating trend reports

1 Click the **Reports** tab.

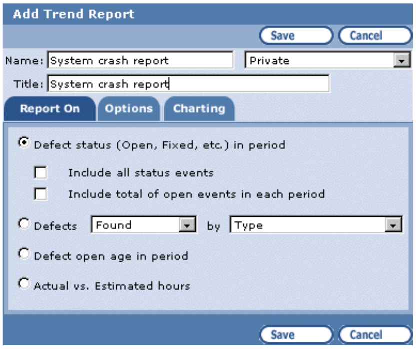
The Work with Reports page opens.

2 Click **Add**.

The Create Report dialog box opens.

3 Select **Trend** and click **OK**.

The Add Trend Report dialog box opens.



4 Enter a **Name** and **Title**.

5 Select a **Share** option.

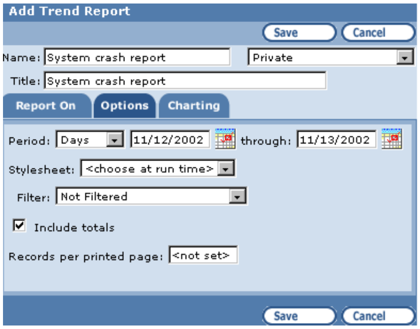
6 Select the **Report On** options.

- Select **Defect status in period** to report the number of defects in each state (Open, Fixed, etc.) over the specified reporting period.
- Select **Defects <field> by <field>** to report on the number of defects that are Open, Fixed, Closed, etc. by Type, Priority, or Resolution.
- Select **Defect open age in period** to report on the number of defects open over the specified period.
- Select **Actual vs. Estimated hours** to report on the difference between the actual and estimated fix time.

7 Click the **Options** tab.

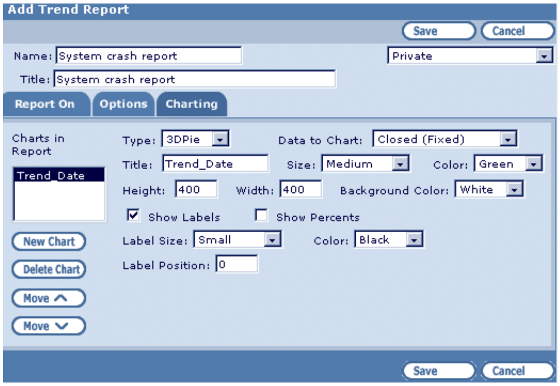
- Select a unit from the **Period** menu and enter the date parameters.
- Select a **Stylesheet**.
- Select a **Filter** if you are reporting on defects and only want to include filtered defects.
- Select **Include totals** to include totals for the selected report items. If you select this option, you can add the totals to a chart using the **Data to Graph** menu on the **Graphing** tab. Totals cannot be graphed with any other report items.

- Enter the number of **Records per printed page** add page breaks between rows in the report.



8 Click the **Charting** tab.

This tab is used to add and design charts. For more information, see **Charting report data,** page 94.



9 Click **Save**.

The report is saved.

Charting report data

You can add charts to distribution and trend reports. The available charts include pie, 3D pie, bar, 3D bar, area, 3D area, line, and 3D line.

Bar, area, and line charts

The following fields are used to design bar, area, or line charts.

Graphing field:	Use to:
Type	Select the type of report
Data to Chart	Select report data
Title	Enter a chart title
Size	Select the chart title size
Color	Select the chart title font color
Height	Select the chart height
Width	Select the chart width
Background Color	Select the chart background color
X Axis Title	Enter an X axis title
Y Axis Title	Enter a Y axis title
Size	Select the X and Y axis title size
Color	Select the X and Y axis title font colors
Show Labels	Show chart component labels
X Axis Size	Select the X axis label size
Y Axis Size	Select the Y axis label size
Spacing	Enter the amount of space (pixels) between labels
Color	Select the X and Y axis label colors
Density	Enter a density percentage. 80% displays all labels, 40% displays half, etc.
Show Grid	Select to show the chart grid pattern
Show X Axis	Select to show the X axis
Show Y Axis	Select to show the Y axis
Color	Select the color for the grid lines and the X and Y axis lines

Pie charts

The following fields are used to design pie charts.

Graphing field:	Use to:
Type	Select pie or 3D pie
Data to Chart	Select report data
Title	Enter a chart title
Size	Select the chart title size
Color	Select the chart title font color
Height	Select the chart height
Width	Select the chart width
Background Color	Select the chart background color
Show Labels	Show chart data labels
Show Percents	Show chart data in percents
Label Size	Select the chart label size
Color	Select the label colors
Label Position	Set the spacing of the pie chart labels

Note: Pie charts are scaled based on a number of factors, including image size, label size, and number of labels. You may need to change the image height and width dimensions for the pie chart to display correctly.

Viewing report settings

1 Select the report on the Work with Reports page.

2 Click **View**.

The View Report dialog box opens. All fields are read-only.

3 Click **Done** when you are finished.

Running reports

1 Select the report on the Work with Reports page.

2 Click **Run**.

The report opens in a new browser window.

3 Depending on the browser you are using you can print the report, export the data, save the report to view later, or simply close the report after you view it.

Running quick reports

You can run a quick detail or list report from the Work with Defects page. These reports cannot be customized.

1 Select the defects you want to include on the Work with Defects page.

2 Click **Detail Report** or **List Report**.

The report runs automatically and opens in a new browser window.

Editing reports

1 Select the report on the Work with Reports page.

2 Click **Edit**.

The Edit Report dialog box opens.

3 Make any changes and click **Save**.

Your changes are saved and you return to the Work with Reports page.

Duplicating reports

If you add reports with the same basic information, you can save time by duplicating and editing an existing report.

1 Click the **Reports** tab.

2 Select the report and click **Duplicate**.

The report is duplicated.

3 Modify the report and save your changes.

Deleting reports

1. Select the report on the Work with Reports page.
2. Click **Delete**.

   You are prompted to confirm the deletion.
3. Click **Delete**.

   The report is deleted.

Chapter 11
Using the Workbook

So much to do...so little time to do it? Not when you use TestTrack Pro to help you keep track of the loose ends and organize other project-related tasks.

About the workbook

Use the workbook to keep track of defects, loose ends, and other tasks. For example, you can add To Do tasks to remind you about meetings and upcoming deadlines.

Understanding Workbook tasks

You can track defect tasks and To Do tasks in the workbook. Defects are automatically added to the workbook. You add To Do tasks to your workbook.

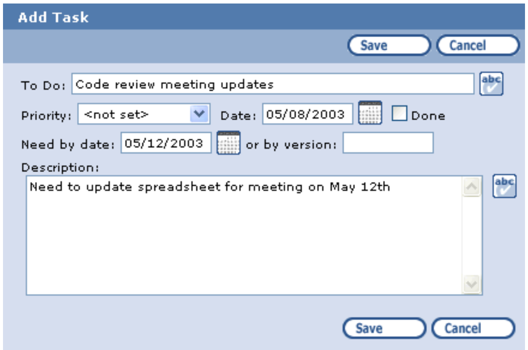
Adding to do tasks

1 Click the **Workbook** tab.

The Work with Workbook page opens.

2 Click **Add**.

The Add To Do dialog box opens.



3 Enter a task name in the **To Do** field.

4 Select the task **Priority**.

5 Check the date.

You can enter another date or click the calendar to select a date.

6 Select a **Need by date** or **Version**.

7 Enter a **description**.

8 Click **Save**.

The task is saved.

Viewing to do tasks

1 Click the **Workbook** tab.

2 Select the task and click **View**.

The View To Do dialog box opens. All fields are read-only.

3 Click **Close** when you are finished.

Editing to do tasks

1 Click the **Workbook** tab.

2 Select the task and click **Edit**.

The Edit To Do dialog box opens.

3 Make any changes.

Select **Done** if the task is complete.

4 Click **Save**.

Your changes are saved and you return to the Work with Workbook page.

Duplicating to do tasks

If you add tasks with the same basic information, you can save time by duplicating and editing an existing tasks.

1 Click the **Workbook** tab.

2 Select the task and click **Duplicate**.

The task is duplicated.

3 Modify the task and save your changes.

Deleting to do tasks

1 Click the **Workbook** tab.

2 Select the task and click **Delete**.

You are prompted to confirm the deletion.

3 Click **Delete**.

The task is deleted.

Chapter 12
Configuring Projects

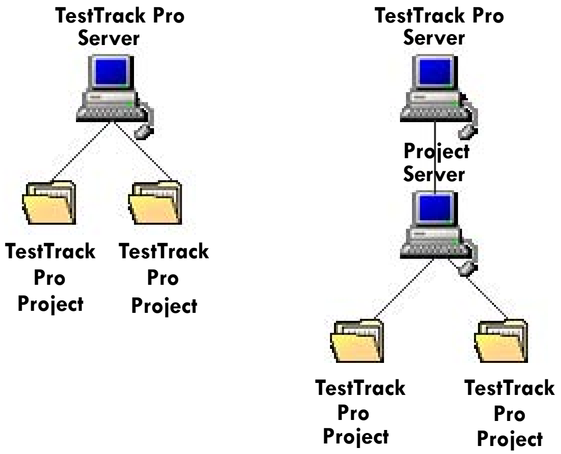
Projects are one of the most important components of TestTrack Pro - take the time to configure your projects and keep your users productive.

About projects

A TestTrack Pro project contains all the information you track including defects, security groups, users, customers, filters, test configurations, and workbook tasks.

Projects are initially created and stored on the computer where the TestTrack Pro Server is installed. Projects can be also be moved to another computer, separate from the computer where the TestTrack Pro Server is installed. For more information see the **Server Admin Utility Guide**.

Sample server/project configurations



Creating projects

The TestTrack Pro administrator or another user with high level security creates all projects using the TestTrack Pro Server Admin Utility. Refer to the **Server Admin Utility Guide** for more information about creating projects.

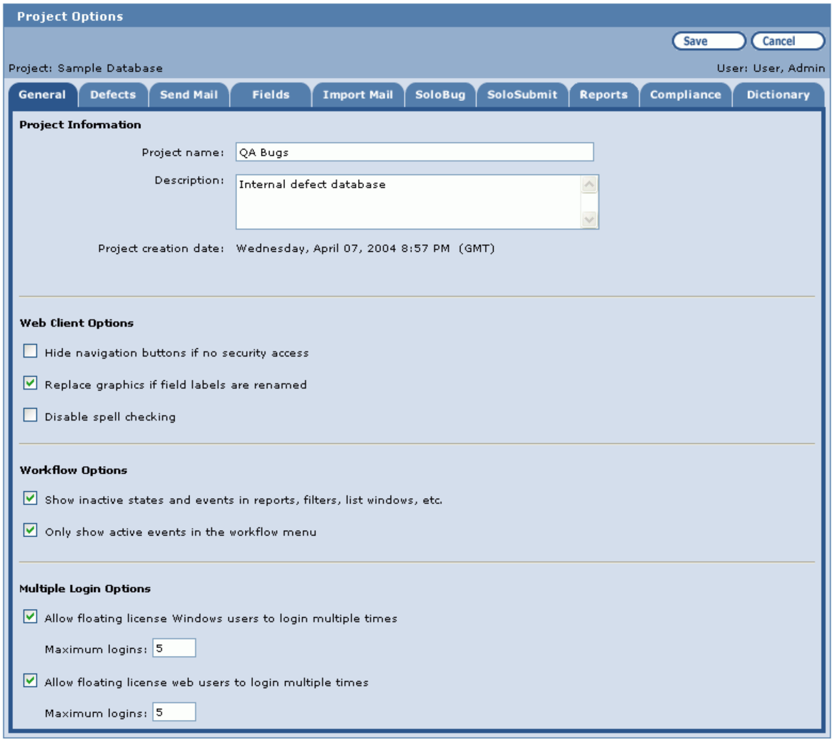
Setting general options

1 Click the **Configure** tab.

The Project Configuration page opens.

2 Click **Project Options**.

The Project Options dialog box opens with the **General** tab selected.



3 Enter a unique **Project name** and **Description**.

4 Select any **Web Client Options**.

- Select **Hide navigation buttons if no security access** to hide Web navigation buttons. If this option is not selected the buttons are visible but disabled.
- Select **Replace graphics if field labels are renamed** to automatically replace the field label graphics on the Web Configure page. Do not select this option if you use custom graphics for renamed fields.
- Select **Disable spell checking** to disable spell checking in the Web interface.

5 Select the **Workflow Options**.

- Select **Show inactive states and events in reports, filters, list windows, etc.** to display inactive states and events in the add/edit reports dialog, the filter restrictions dialog, and the defects list window column pop-up menu.
- Select **Only show active events in the workflow menu** to only display active events in the workflow menu. Select this option if you have a large number of events in your workflow or simply want to decrease user confusion. Only the events that can be entered for the current defect(s) are displayed.

Note: This option also affects the activities menu and events toolbar in TestTrack Pro Windows.

6 Select the **Multiple Login Options**.

These options restrict the number of times floating license users can simultaneously log into the project.

A floating license is used each time a user logs into a project. For example, if a user logs into a project three times simultaneously using the Windows client, three floating licenses are used and unavailable to other users.

- Select **Allow floating license Windows users to login multiple times** to allow Windows users to log into the project multiple times simultaneously.
- Enter the number of **Maximum logins**. The default is 1, which restricts users from logging in multiple times.
- Select **Allow floating license web users to login multiple times** to allow Web users to log into the project simultaneously.
- Enter the number of **Maximum logins**. The default is 1, which restricts users from logging in multiple times.

Admin: When multiple logins are enabled, users must log off from TestTrack Pro Web before closing the browser. If they do not log out, the session remains active and the floating licenses will not be available for other users until the session times out or you manually log out users.

7 Select RDBMS **File Attachment** options.

These options are only available if you are currently logged into an RDBMS project.

- Select **Store file attachments as files** to store attachments as files on the TestTrack Pro server instead of blob files in the database
- Select **Store file attachments in the database when size is < xx mb** to specify the maximum file size that can be stored in the database. Any attachment larger than the specified size will be stored as a file on the TestTrack Pro server. The maximum value is 25 mb.

- Select **Convert existing file attachments when the server is restarted** to change how file attachments are stored.

8 Click **Save** to save the project options.

Setting defect options

1 Click the **Configure** tab.

The Project Configuration page opens.

2 Click **Project Options** then click the **Defects** tab.

3 Select the **Defer numbering defects** options.

For each of the options, select the check box to automatically assign a defect number. If you do not select a check box the defect is created without a defect number, which can be assigned at a later time.

Note: Defer defect numbering if you want a user or department to review all defects before they are accepted into the project.

4 Select the **Next number** options.

- The **Next defect number** can be set to any value greater than the largest existing defect number.
- The **Next sequence number** should be set to a value greater than the largest sequence number. TestTrack Pro cannot enforce this rule because the sequence number is appended to the reference field and is not an independent field.

5 Select the **Version fields** options.

These options affect the version found field and any custom field in a defect event (e.g., version fixed, version verified, version released).

- Configure version field menus to accept text entries or restrict version fields to pop-up menus.
- Select **When sorting on version field, use advanced logic** to look for delimiters and sort the alphanumeric characters in that section. If this option is not selected a string comparison is performed when sorting.

6 Select the **Image file attachments** options.

Selecting these options creates thumbnail previews of image files attached to defects. Thumbnails can be created for GIF, JPG, BMP, and PNG files.

- Select **Create thumbnails for image file attachments** to generate image file attachment thumbnails. Selecting this option does not automatically display thumbnails. Users must select an image file attachment and click **Show Thumbnail** to view the image.
- Select **Automatically show thumbnails when opening a defect** to always display image file thumbnails.

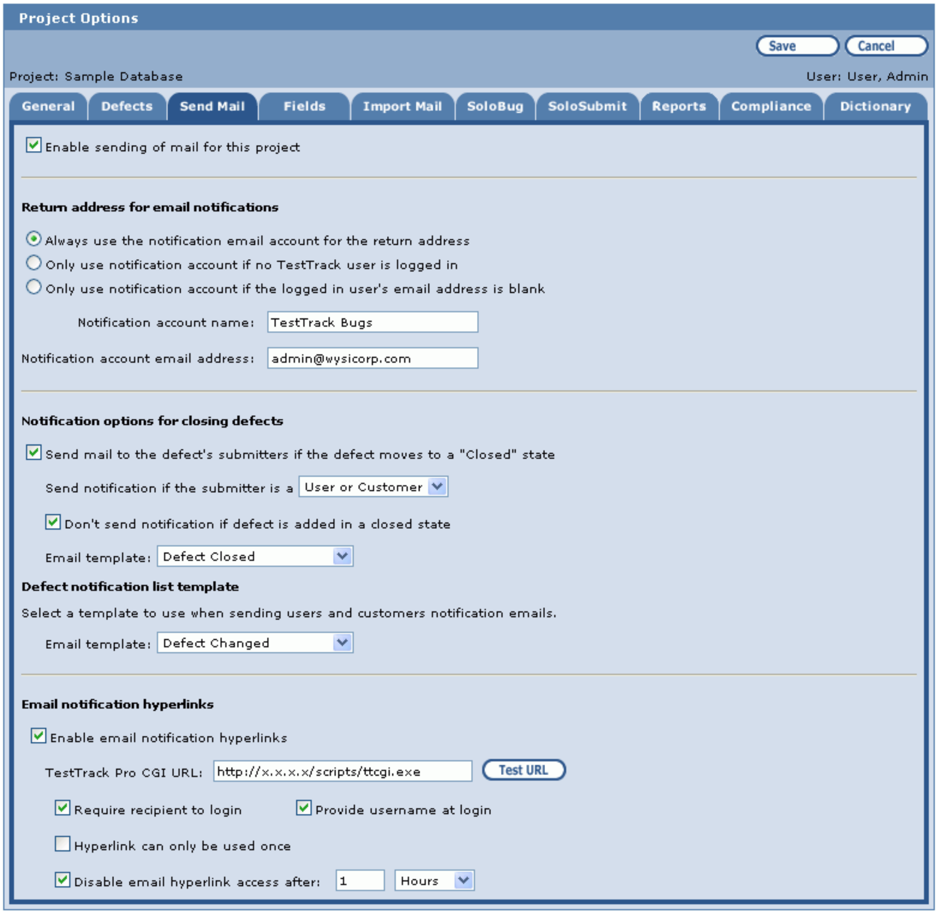
7 Click **Save** to save the project options.

Setting send mail options

1 Click the **Configure** tab.

The Project Configuration page opens.

2 Click **Project Options** then click the **Send Mail** tab.



3 Select **Enable sending of mail for this project** to enable email.

If you do not select this option users cannot send mail from TestTrack Pro or receive email notifications.

4 Select the **Return address** options.

- **Always use the notification email account for the return address** is the default option.
- **Only use notification account if no TestTrack user is logged in** uses the notification account information. In general, a user is not logged in during email import, automatic SoloBug import, or when SoloSubmit is used. The notification account is used in these scenarios.
- **Only use notification account if the logged in user's email address is blank** ensures that an email address is available if the logged in user did not provide an email address.
- Enter a **notification account name**. The notification account name defaults to "TestTrack." You will probably want to customize the account name for your company
- Enter an **email address**. If you do not enter an email address, your email may be rejected because some Internet providers will not accept email without a return address.

5 Select the **Closing defects notification** options.

These options send notifications when a defect is closed.

- Select **Send mail to defect's submitters if defect moves to a "Closed" state** to notify the submitters of the change. Select a submitter option from the dropdown list. If a defect has multiple found by entries each found by user is sent an email.
- Select **Don't send notification if defect is added in a closed state** if you do not want to send notifications for defects added in a closed state.
- Select the email template you want to use with this notification.

6 Select a **Defect notification template**.

This template is used when notifications are sent to users or customers listed on the Notify tab of the Add/Edit Defect dialog box.

7 Select the **Email notification hyperlinks** options.

You can add a hyperlink to email notifications to log a user into TestTrack Pro and display the defect that caused the notification. For more information see **Adding email notification hyperlinks,** page 211.

- Select **Enable email notification hyperlinks** to enable hyperlinks for this project.
- Enter the **TestTrack Pro CGI URL**. The CGI is required because hyperlinks launch TestTrack Pro Web. Click **Test URL** to validate the TestTrack Pro connection.
- Select **Require recipient to login** to prompt users to enter their TestTrack Pro username and password. If this option is not selected users are automatically logged into the TestTrack Pro server.
- Select **Provide username at login** to automatically enter the username in the TestTrack Pro login dialog box. This option is only enabled if the **require recipient to login** option is selected. Users also need to enter their password for authentication.

- Select **Hyperlink can only be used once** to allow users to log in once from the link. If this option is not selected users can use the link to log in multiple times.

- Select **Disable email hyperlink access after** to specify the number of hours, days, weeks, or months the the email notification hyperlink remains active.

8 Click **Save** to save the project options.

Setting field options

1 Click the **Configure** tab.

The Project Configuration page opens.

2 Click **Project Options** then click the **Fields** tab.

3 Select the **Field Relationship Options**.

These options force a child field’s value to **<not set>** if a parent field changes and invalidates the child field value.

Note: Text entries in version fields decrease the power of field relationships. For example, if **Version Found** is a child field, and users can add text entries, the value cannot be forced to **<not set>** because field relationship rules cannot be enforced.

- Select **On the Add Defect window, force the child field’s value to <not set>** to enforce the field relationship and prevent data that does not make sense from being added.

- Select **On the Edit Defect window, force the child field's value to <not set>** to enforce the field relationship and prevent data that does not make sense from being added. Do not select this option if historical defect information is important and you want to preserve the original defect information in the child field.

4 Select the **Required Fields Identification** options.

These options change the appearance of required field labels on the Add Defect and Edit Defect windows. You can select the text color and style to make required fields more visible.

- Select text properties for **Windows client** required fields. To use a color not listed, select **<Custom>** and enter a hex color code.

Note: Selecting a specific color may make fields difficult to read because of user-defined Windows color schemes.

- Select text properties for **Web client** required fields.

5 Click **Save** to save the project options.

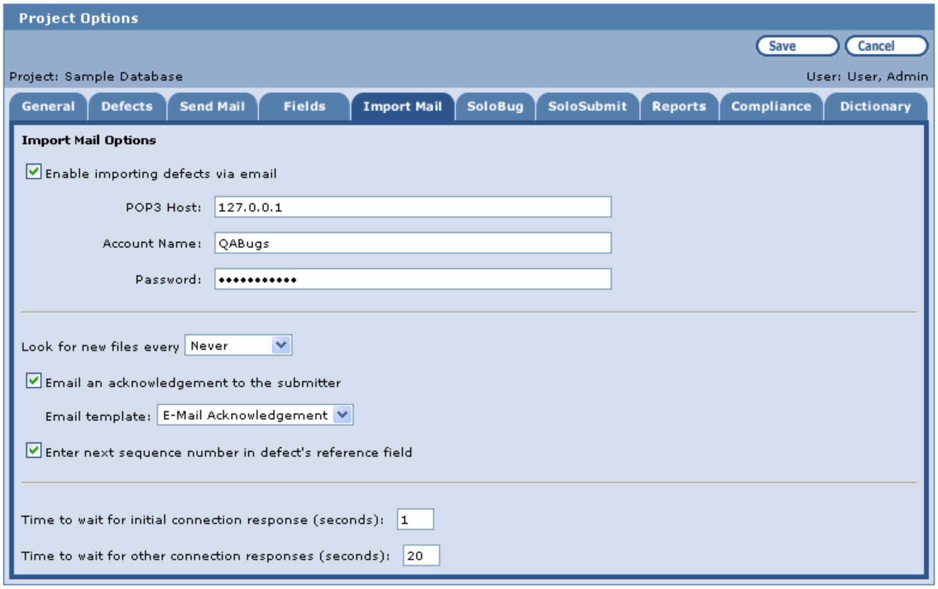
Setting import mail options

TestTrack Pro can automatically import mail from most email accounts.

1 Click the **Configure** tab.

The Project Configuration page opens.

2 Click **Project Options** then click the **Import Mail** tab.



3 Select **Enable importing defects via email** to enable email import.

4 Enter the **POP3 Host** IP address or domain name.

Do not use the same address as the return email account configured on the Send Mail tab. TestTrack Pro can get stuck in a loop if an email account uses an auto-reply and you configure TestTrack Pro to send an acknowledgment after importing mail.

Note: Keep in mind that TestTrack Pro cannot determine which project an email should be imported into and cannot differentiate between personal and business emails.

5 Enter the **Account Name** and **Password**.

Leave the password field empty if a password is not required.

6 Select a **Look for new files** time interval.

7 Select **Email an acknowledgement to the submitter** to automatically send an acknowledgement then select an email template.

8 Select **Enter next sequence number in defect's reference field** to automatically enter the next defect number.

9 Enter the **Time to wait for initial connection response**.

This is the time the TestTrack Pro server waits for an initial response from the email server.

10 Enter the **Time to wait for other connection responses**.

This is the time the TestTrack Pro server waits for other connection responses from the email server.

11 Click **Save** to save the project options.

Setting SoloBug options

1 Click the **Configure** tab.

The Project Configuration page opens.

2 Click **Project Options** then click the **SoloBug** tab.

3 Select a **Look for new files** time interval.

4 Select an **After importing** option.

5 Select **Email an acknowledgement to the submitter** to automatically send an acknowledgement.

Select the email template you want to use.

6 Select **Enter next sequence number in defect's reference field** to automatically enter the next number.

7 Click **Save** to save the project options.

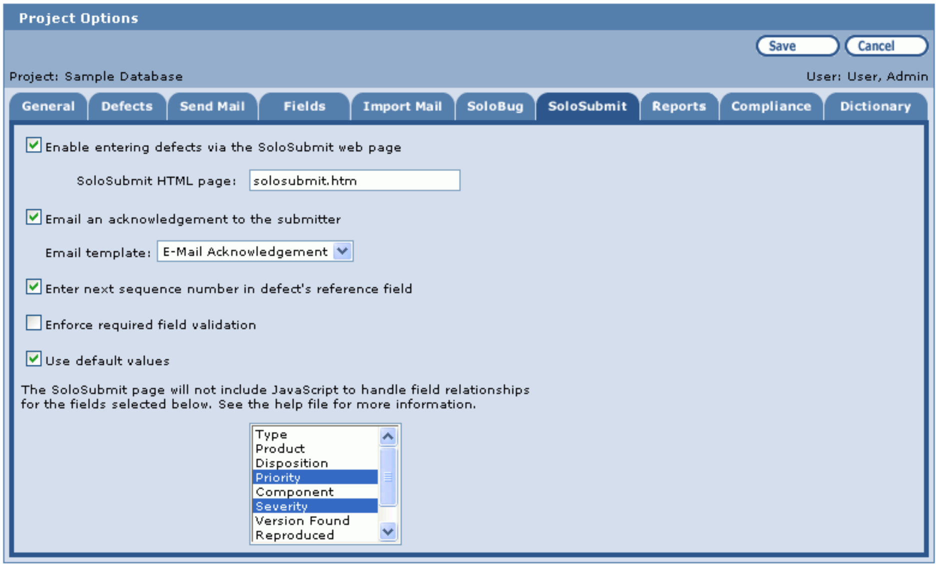
Setting SoloSubmit options

Note: The **TestTrack Pro SoloSubmit Admin Guide** includes detailed information about configuring and customizing SoloSubmit.

1 Click the **Configure** tab.

The Project Configuration page opens.

2 Click **Project Options** then click the **SoloSubmit** tab.



3 Select **Enable entering defects via the SoloSubmit web page** to enable SoloSubmit.

This option is project-specific. SoloSubmit must be enabled for each project.

4 The SoloSubmit HTML page field defaults to **solosubmit.htm**.

If you use a customized SoloSubmit HTML page, enter the file name. Make sure the HTML file is in the correct TestTrack Pro directory on your web server.

5 Select **Email an acknowledgement to the submitter** to automatically send an acknowledgement. Select the email template you want to use.

6 Select **Enter next sequence number in defect's reference field** to automatically enter the next number in the reference field.

7 Select **Enforce required field validation** to ensure that values are entered for all required fields.

The required field validation is **not** enforced for the **Entered By** field because users do not log into SoloSubmit. If **Entered By** is a required field, defects entered via SoloSubmit cannot pass the required field validation check.

8 Select **Use default values** to initially populate the SoloSubmit web page with default values.

SoloSubmit **cannot** determine which time zone to use as **default values** for **date/time custom fields**. When a defect is submitted via SoloSubmit there is no associated user in the project. Therefore, there are no user options to check to determine which time zone to use. The current time of the computer the SoloSubmit CGI is running on when the SoloSubmit page is loaded is used as the default value for date/time custom fields. In addition, the date is assumed to be in the server's time zone.

9 Select fields you do not want JavaScript to handle field relationships for on the SoloSubmit web page.

You would choose **not** to include the JavaScript for one of the following reasons:

- The SoloSubmit web page includes hidden fields. For example, you comment out a field you do not want the customer to see. You can delete the HTML, but the field and its values will still display in the JavaScript if the customer chooses View Source on the SoloSubmit web page. Choosing not to include the JavaScript resolves this issue.
- The SoloSubmit web page is customized and you do not want to overwrite the customization. For example, you hard code a list of field values in the HTML. If you include the JavaScript your customization is overwritten. By ignoring JavaScript for the field, the hard coded list values are used.

If neither reason applies and you select a field from the list it could result in unexpected behavior. For example, you ignore JavaScript for Component, which is a child field of Product. When SoloSubmit is accessed, Product and Component are populated with the initial values. If the user chooses a different Product, the Component values are not changed.

10 Click **Save** to save the project options.

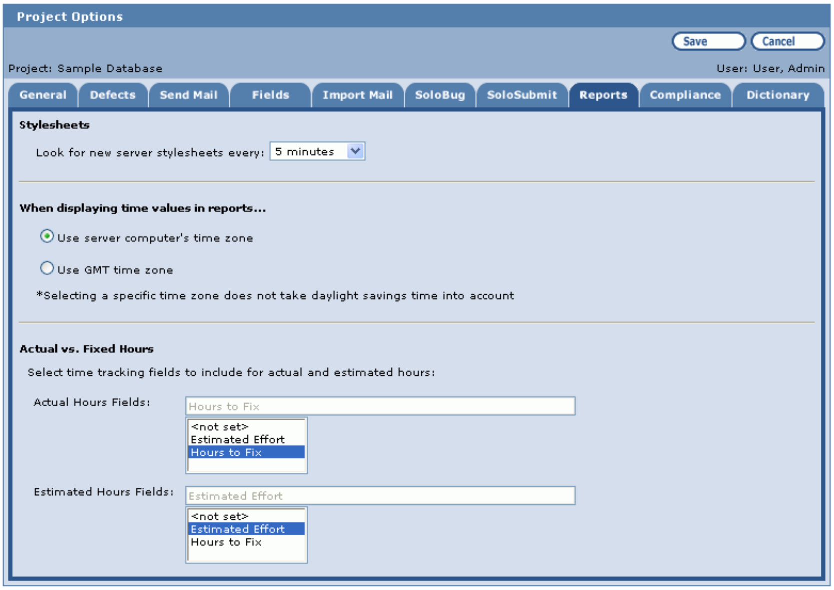
Note: Remember to provide users and customers with the SoloSubmit URL. To submit bug reports or feature requests, they simply open a browser and enter the SoloSubmit URL (e.g., http://WysiCorp.com/ttweb/loginSoloSubmit.htm).

Setting report options

1. Click the **Configure** tab.

   The Project Configuration page opens.

2. Click **Project Options** then click the **Reports** tab.



3. Select a **Look for new stylesheets** time interval.

   The server periodically searches the project for new stylesheets and updates the stylesheet menus.

4. Select a **time zone** option.

   Detail reports display the creation and modified time at the bottom of the report. Configure the report to use the server's time zone or GMT.

5. Select the **time tracking** fields.

   You can select which event time tracking fields to use for actual and estimated hours. When calculating the value, TestTrack Pro uses the selected events and determines which defect historical event(s) to use based on the "Sum of hours from all events of this type" or "Hours from last event of this type entered" event type setting.

6. Click **Save** to save the project options.

Setting dictionary options

You can specify the default main dictionary for a project. You can also add custom words to the dictionary. This lets you add product names, acronyms, and other types of words that are not found in the main dictionary. Before you specify the main dictionary, make sure it is available for all Windows and Web users. It is possible to select a dictionary using the Windows client that is not available on the Web client and vice versa. In this case, users will not be able to spell check.

The spelling checker ships with American English, British English, and Canadian English dictionaries. Dictionaries for other languages including Danish, Dutch, Finnish, French, German, Italian, Norwegian, Portuguese, Spanish, and Swedish are also available. Additional dictionaries can be downloaded from Seapine's web site. Go to **http://www.seapine.com/ttpresources.php#spellcheck** for more information.

1 Click the **Configure** tab.

The Project Configuration page opens.

2 Click **Project Options** then click the **Dictionary** tab.

3 Select a **Main Dictionary**.

TestTrack Pro includes three dictionaries: American English, British English, and Canadian English. You can download additional dictionaries from Seapine Software's web site.

Note: Users can specify a different dictionary in their user options.

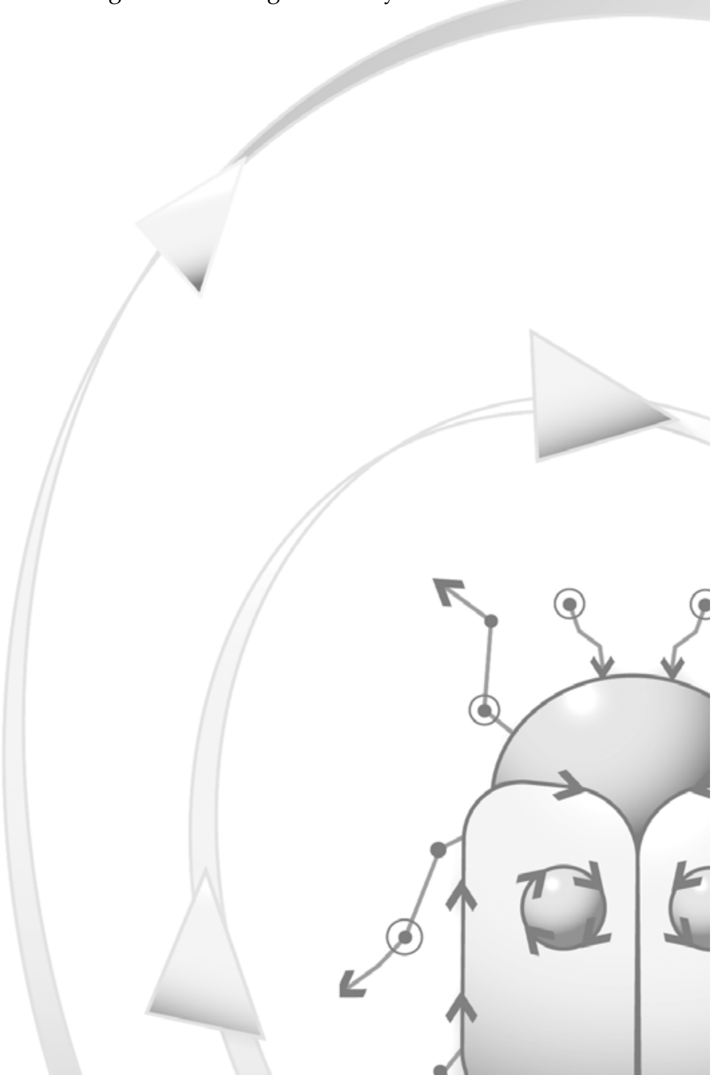
4 Click **Edit Custom Dictionary** to add words to the dictionary.

For more information see **Adding custom words,** page 14.

5 Click **Save** to save the project options.

Chapter 13
Customizing the Workflow

TestTrack Pro's customizable workflow allows you to define and follow your company's business processes. Customize the workflow instead of asking users to change how they work.



About workflows

A workflow consists of states, events, and transitions that define the path a defect takes from initial reporting to resolution. The workflow guides users through your tracking process. The complexity of your workflow depends on the process you are following. Simple processes may only require a few steps while more complex processes may include multi-user assignments and stricter requirements.

States

States indicate a step in the workflow. Transition rules are used to move defects from state to state. States can also include rules for processing multi-user assignments.

Events

Events specify the action that can be performed at each state or step in the workflow.

Transitions

Transitions specify the initial state when a defect is created and the events that can be added for each state. They move defects from one state to another.

Analyzing your workflow

Before you customize the workflow, you should take the time to document and understand your company's business process. Analyzing your workflow helps you easily determine the states that are used, the actions that users perform, and how information moves through the workflow. A clearly defined workflow ensures that issues move from initial reporting to resolution and do not get stranded.

A carefully understood and customized workflow can guard against wasted time, redundancy, and disorganization. When analyzing your workflow, you should identify the steps that make up your business process and determine the actions that you want to associate with each step. The workflow should include a state for each step. In addition, consider the business process, the individuals involved in the process, the types of events they perform, the type of data they track, and the types of transitions that are used.

After you analyze the workflow, you should be able to list most states, events, and transitions used throughout the process. To begin customization you should first create the workflow states then define the events that can be performed for each state. You can view a graphic representation of the workflow to help understand how the states, events, and transitions work together.

Customizing workflows

Workflow examples and sample projects can be downloaded from Seapine's Web site.To download the examples go to: **http://www.seapine.com/ttpresources.php#database**

TestTrack Pro's workflow can be used out of the box to track defects and other issues such as change requests. However, your company may have other processes you need to track. You can easily customize the workflow to reflect your current process. If you need to track types of processes such as software defects and hardware assets, you can create multiple TestTrack Pro projects and customize the workflow for each project.

For example, you may want to create a TestTrack Pro project and customized workflow for your human resources department. Most companies have a defined process for hiring new personnel. Customize the workflow to provide an easy and convenient way for your human resources staff to track hiring new staff from receiving a staffing request from a manger to training a new hire.

The following steps are followed to customize a workflow:

- Define states
- Define events
- Define transition rules, including multi-user assignments
- Define state assignment rules
- Configuring auto-assignment rules
- Configuring notification rules

It can be difficult to keep track of states, events, and transitions and how they relate to each other. You can evaluate and graph the workflow to view potential problems and see a graphic representation of the workflow. For more information see **Evaluating the workflow,** page 140 and **Diagramming the workflow,** page 141.

Note: Customizing the workflow takes many steps. If you make a mistake, or end up with a workflow that has too many problems, you can reset the workflow as long as there are no defects in the project. To reset the workflow, go to **Configure** > **Workflow** and click **Reset.** The Reset button is only visible if there are no defects in the project.

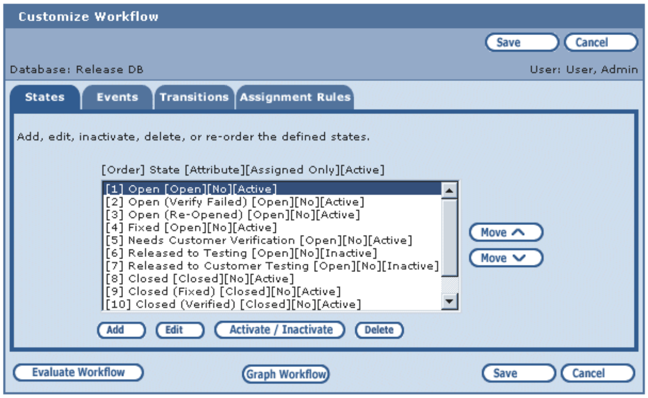
Defining states

A defect is either open or closed. However, there are different states that an open or closed defect can have, based on process. For example, an open defect can be Open, On-Hold, Fixed, or Pending Verification. A closed defect can be Fixed, User Error, or Not Reproduced. Your company workflow determines the number and variety of open and closed states. Each state includes a name, description, and attribute (open, closed).

Adding states

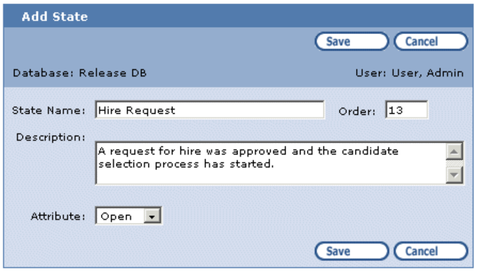
1 Click the **Configure** tab then click **Workflow**.

The Customize Workflow dialog box opens with the **States** tab selected. The States tab displays the defined states.



2 Click **Add**.

The Add State dialog box opens.



3 Enter a **State Name** and **Description**.

4 Select an **Attribute**.

5 Click **Save**.

The state is added.

Editing states

1 Click the **Configure** tab then click **Workflow**.

The Customize Workflow dialog box opens with the **States** tab selected.

2 Select a state and click **Edit**.

The Edit State dialog box opens.

3 Make any changes and click **Save**.

Your changes are saved.

Inactivating states

To preserve historical information inactivate a state instead of deleting it. You cannot inactivate a state if a defect is currently in the state.

1 Click the **Configure** tab then click **Workflow**.

The Customize Workflow dialog box opens with the **States** tab selected.

2 Select a state and click **Activate/Inactivate**.

The state is inactivated.

Note: To activate an inactive state, select the state and click **Activate/Inactivate.**

Deleting states

You cannot delete states that are referenced in the project. If a state is referenced in the project, and you no longer want users to have access to it, inactivate it.

1 Click the **Configure** tab then click **Workflow**.

The Customize Workflow dialog box opens with the **States** tab selected.

2 Select a state and click **Delete**.

You are prompted to confirm the deletion.

3 Click **Delete**.

The state is deleted.

Defining events

Events specify the activities that can be performed on a defect. Each event defines an operation in the workflow that may cause the defect to move to a new status, cause another operation such as assigning the defect to other users, or simply record that the event occurred. Some events are performed by users and other are automatic system events. For example, auto-assignment of defects based on auto-assign rules are system events.

Note: A defect's history includes the events that have occurred for the defect. Edit or view a defect to access the History tab.

Adding events

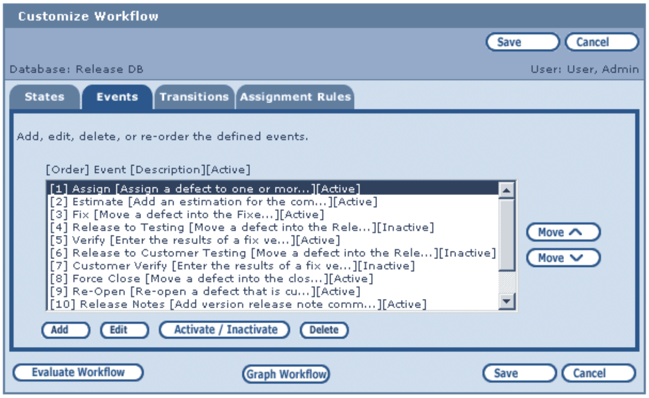
Events are accessed from the Activities menu or the defects shortcut menu.

1 Click the **Configure** tab then click **Workflow**.

The Customize Workflow dialog box opens.

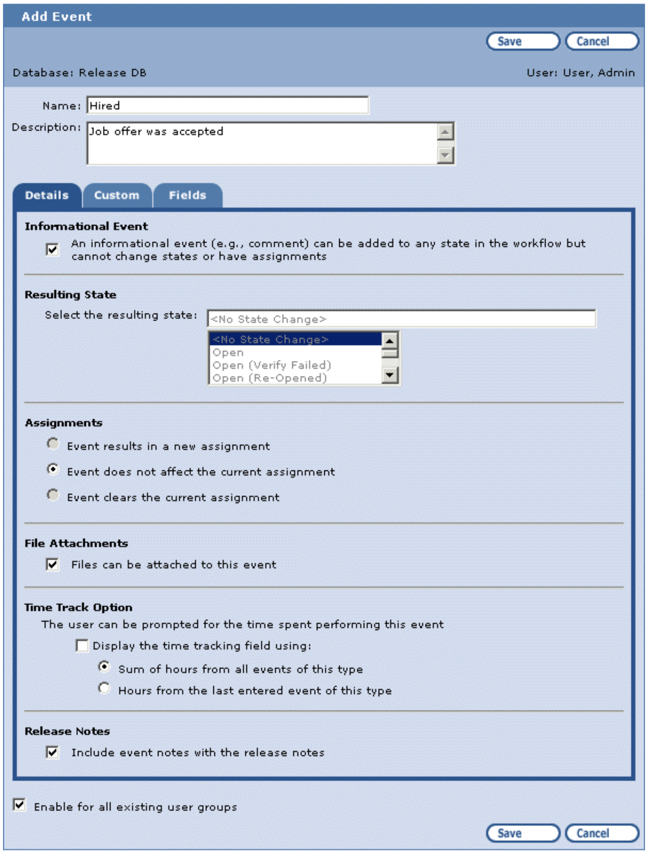
2 Click the **Events** tab.

The Events tab displays the defined events.



3 Click **Add**.

The Add Event dialog box opens with the **Details** tab selected.



4 Enter a **Name** and **Description**.

5 Select any **Details** options. The Details tab specifies the event details that determine the resulting state after the event is entered and what optional pre-defined fields are added to the event dialog.

- Select **Informational Event** to mark the event as an information-only event. Informational events can be added to the defect from any state in the workflow since they do not affect the workflow.
- Select a **Resulting State**. The resulting state specifies which state the defect moves to after the event is entered. You can select multiple states if you want the user to choose a state. For example, you may want users to select a specific state for a fix event so you select Fixed, Closed, or Closed (Fixed) as the resulting states. When users enter fix events they are prompted to select a resulting state.
- Select an **Assignments** option. This option specifies how the event affects the assignment. An assign to field is added to the event dialog if **Event results in a new assignment** is selected.

- Select **Files can be attached to this event** to allow users to attach files to the event. An attachments section is added to the event dialog if this option is selected.

- Select **Display time tracking field using:** to track event time then select an hours option. A time spent field is added to the event dialog if time tracking is selected. You can add these fields to a report to view the estimated time and actual time.

- Select **Include event notes with the release notes** to add any event notes to the release notes.

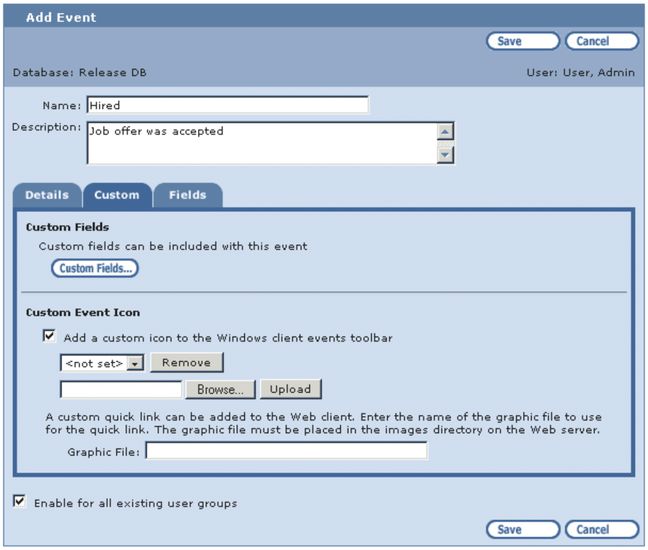
6 Click the **Custom** tab.

The Custom tab is used to add custom fields and custom icons to the event.

- Click **Custom Fields** to add a custom field to the event. If this option is selected, a custom fields section is added to the event dialog. See **Configuring custom fields,** page 158 for more information.

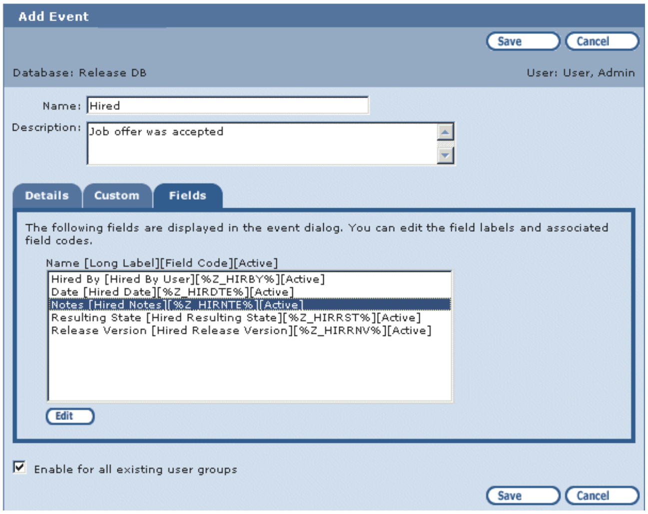
- Click **Choose Icon** to add a custom event icon to the TestTrack Pro Windows event toolbar. The icon must be a .bmp file that is 16x16 pixels. If you do not add an icon to an event, the event will only be available from the Activities and shortcut menus. See **Customizing the event toolbar,** page 128 for more information.

- Enter a **graphic file** name to add a quick link icon to the TestTrack Pro Web page. The web pages require two quick link icons, one for the enabled event and one for the disabled event. The disabled quick link icon should use the same name and be preceded with "d_". For example, the disabled hire icon is named d_hir.gif because the enabled icon is named hire.gif. Both images must be added to the ttweb/images folder on the web server.

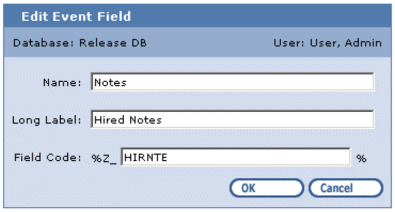


7 Click the **Fields** tab.

The Fields tab displays the standard fields that are displayed on the event dialog. The list includes the field name, the long label, and the field code. The field name may also be referred to as a short label.



- Select a field and click **Edit** to edit the name, the long label, or the field code.



- Make any changes and click **OK**.

Note: Field names, or short labels, are displayed in generated event dialogs. Long labels are displayed in dropdown lists and help users distinguish between the same fields in different events. Field codes automatically generate data and are used with such things as email templates or reports.

8 Click **Save**.

The event is added.

Customizing the event toolbar

The TestTrack Pro Windows workflow event toolbar icons can be customized. You can use the additional icons installed in the Seapine\TestTrackPro\workflowicons directory or create custom icons. Keep the following in mind if you create custom icons:

- Icons must be 16x16 pixel .bmp files.
- The pixel at 0,0 is used for the transparency color. For example, if you draw a red enclosing box the box won't show because the top left pixel is the same color.
- Icons must be saved in the Seapine\TestTrack Pro\workflowicons directory.

1 Click the **Configure** tab then click **Workflow**.

The Customize Workflow dialog box opens.

2 Click the **Events** tab.

3 Select the event you want to add the custom icon to and click **Edit**.

The Edit Event dialog box opens.

4 Click the **Custom** tab.

5 Click **Choose Icon** to add a custom event icon.

Select an icon from the Seapine\TestTrack Pro\workflowicons directory.

6 Click **Open**.

The icon is added to the event.

7 Click **Save**.

Your changes are saved.

Editing events

1 Click the **Configure** tab then click **Workflow**.

The Customize Workflow dialog box opens.

2 Click the **Events** tab.

3 Select an event and click **Edit**.

The Edit Event dialog box opens.

4 Make any changes and click **Save**.

Your changes are saved.

Inactivating events

To preserve historical information inactivate an event instead of deleting it.

1 Click the **Configure** tab then click **Workflow**.

The Customize Workflow dialog box opens.

2 Click the **Events** tab.

3 Select an event and click **Activate/Inactivate**.

The event is inactivated.

Note: To activate an inactive event, select the event and click **Activate/Inactivate.**

Deleting events

You cannot delete events that are referenced by the transitions tab or that are part of a defect's historical events.

1 Click the **Configure** tab then click **Workflow**.

The Customize Workflow dialog box opens.

2 Select an event and click **Delete**.

You are prompted to confirm the deletion.

3 Click **Delete**.

The event is deleted.

Defining transitions

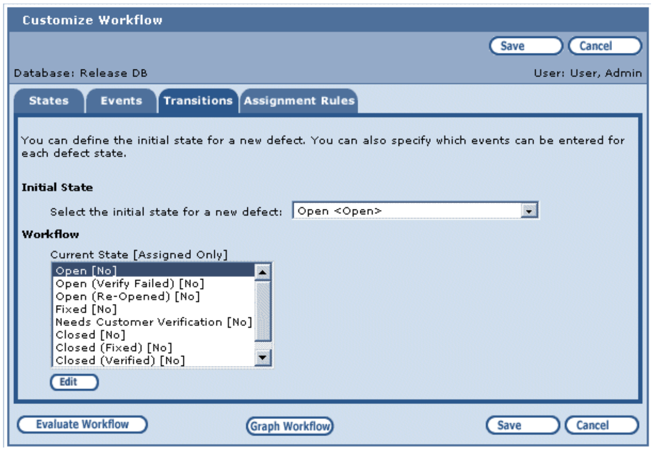
Transitions specify the initial state when a defect is created and the events that can be added for each state. Transitions help enforce the workflow by enabling event menu items and icons based on the current state of the defect.

Selecting the initial defect state

1 Click the **Configure** tab then click **Workflow**.

The Customize Workflow dialog box opens.

2 Click the **Transitions** tab.



3 Select the **initial state for new defects**.

All new defects will be added in the selected state.

4 Click **OK**.

Editing transitions

1 Click the **Configure** tab then click **Workflow**.

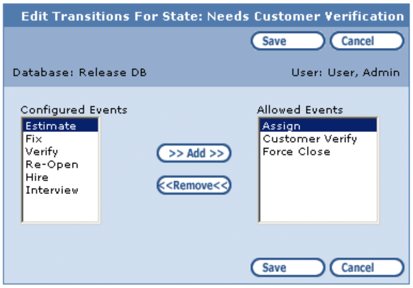
The Customize Workflow dialog box opens.

2 Click the **Transitions** tab.

3 Select a state to view the allowed events.

4 Click **Edit** to add or remove the allowed events.

The Edit Transitions dialog box opens.



5 **Add** or **Remove** events.

6 Click **Save**.

Your changes are saved and the Edit Transitions dialog box closes.

7 Click **Save**.

Defining assignment rules

Assignment rules specify how state assignment events are processed. You can restrict which users can enter an event, specify multi-user assignment options, and change the order rules are processed in.

1 Click the **Configure** tab then click **Workflow**.

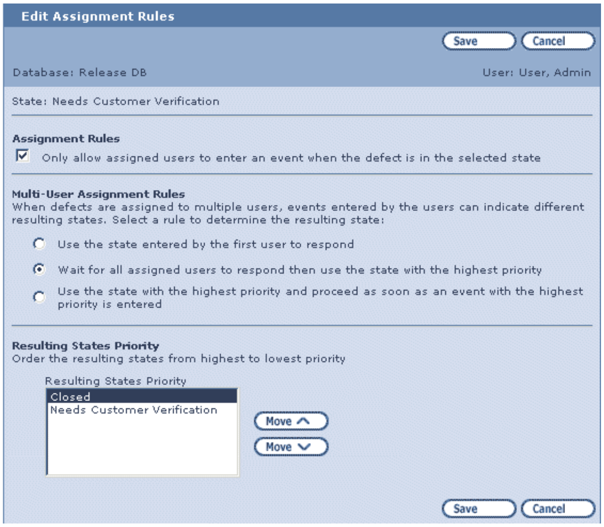
The Customize Workflow dialog box opens.

2 Click the **Assignment Rules** tab.

3 Select a state to view its assignment rules and resulting state priorities.

4 Select a state and click **Edit** to change assignment rules or the resulting states priority.

The Edit Assignment Rules dialog box opens.



5 Select **Only allowed assigned users to enter an event when the defect is in the selected state** to make sure that only assigned users can enter an event.

6 Select a **multi-user assignment rules** option to determine the resulting state if a conflict occurs. Defects may have different resulting states when they are assigned to multiple users.

Options change based on the selected assignment rules. For example, if **Use the state entered by the first user to respond** is selected, the resulting states priority cannot be changed because priority does not affect this option.

- **Use state entered by first user to respond** processes the event entered by the first user and moves the defect to the corresponding state. If the event moves the defect to a new state or affects the current assignment, the remaining assignments are removed. If the event leaves the defect in the current state or does not affect the current assignment, the remaining assignments are not removed and users can still enter events.

- **Wait for all assigned users to respond then use the state with the highest priority** waits until all users respond then uses the event with the highest resulting state to determine the next state. For example, one user enters “Verify Fixed” resulting in a Close state and another user enters “Verify Failed” resulting in an “Open” state. The defect moves to “Open” because it has the highest priority.

- **Use the state with the highest priority and proceed as soon as an event with the highest priority is entered** accept events from users until an event with the highest resulting state priority is entered or until all users have responded. If all users respond, the highest resulting state of the entered events is used. For example, “Open” is the highest resulting state. As soon an event with “Open” as a resulting state is entered, the defect moves to “Open” and the assignment list is cleared. If all users enter events with “Close” as a resulting state, the defect moves to “Close”.

7 Select a state and click **Up** or **Down** to reorder the resulting states priority.

8 Click **Save**.

Your changes are saved and you return to the Customize Workflow dialog.

Configuring auto-assignment rules

Auto-assignment rules automatically move a defect from state to state and assign the defect to a specified user. These rules only run if a defect is not assigned to a user when changes are saved.

For example, your team is in Beta testing and you want to make sure defects that fail verification get immediate attention.Two auto-assignment rules are checked if a defect fails verification. If the defect passes the failed fix filter it is automatically assigned to the last fixed by user. This user can review why the defect failed and make the necessary corrections. If the defect does not pass the failed fix filter, the second rule is checked. The defect passes the on hold filter and it is automatically assigned to the project administrator. The administrator can determine if the defect needs to be resolved in Beta or at a later time.

When a defect moves into a state with an auto-assignment rule, TestTrack Pro checks the rules in top-down order. The assignment action is applied if the defect passes a filter. If the defect does not pass the filter the next rule is checked. If the defect does not pass any of the filters the default action is applied. You can also select a default auto-assignment action to use if you do not want to configure rules or if a defect does not pass the auto-assignment rule filter. For more information see **Setting default actions,** page 135.

Keep the following in mind:
A state is only displayed in the auto-assignment rules state list if it has at least one valid assignment event that can be entered for that state in the workflow transition. A valid assignment event is an event that cannot change the current state of the defect.

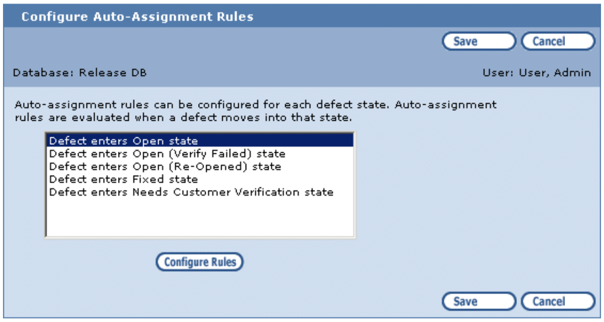
Auto-assignment rule exceptions

Auto-assignment processing is skipped when a defect is created using XML import, text import, or by duplication. For example, if you duplicate a defect that is unassigned, the new defect is also unassigned. If you duplicate a defect that is assigned to Barry, the new defect is also assigned to Barry.

Adding auto-assignment rules

1 Click the **Configure** tab then click **Auto-Assignment Rules**.

The Configure Auto-Assignment Rules dialog box opens.

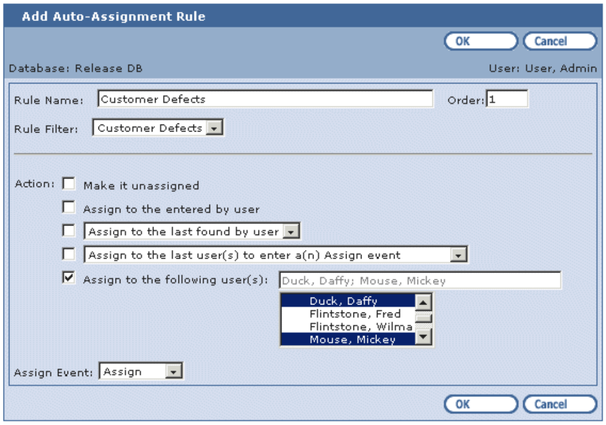


2 Click **Configure Rules**.

The Configure Rules dialog box opens.

3 Click **Add**.

The Add Auto-Assignment Rule dialog box opens.



4 Enter a **Rule Name**.

5 Select a **Rule Filter**.

6 Select an auto-assign **Action**.

- Select **Make it unassigned** if you do not want to assign the defect to a user.
- Select **Assign to the entered by user** to assign the defect to the user who entered the defect.

- Select **Assign to the found by user** to assign the defect to all found by users, the first found by user, or the last found by user.
- Select **Assign to the last user(s) to enter...** to assign the defect to the last user who entered the event. The auto-assignment is applied to all users who responded to the event if the last user entered the event in response to a multi-user assignment event.
- **Assign to the following user(s)** assigns the defect to the selected users or customers.

7 Select an **Assign Event**.

The rules cannot be saved unless a valid assignment event is selected. Valid events must be active, result in a new assignment, and only allow <No State Change> as the resulting state.

8 Click **OK**.

The rule is added. You return to the Configure Auto-Assignment Rules dialog.

Note: Rules are checked in top-down order. To change the rule order, select a rule and click **Move Up** or **Move Down**.

Setting default actions

You can set a default action for each defect state if you do not want to configure auto-assignment rules.

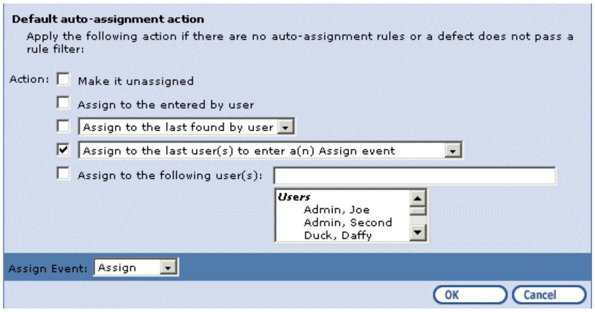
1 Click the **Configure** tab then click **Auto-Assignment Rules**.

The Configure Auto-Assignment Rules dialog box opens.

2 Select a defect state and click **Configure Rules**.

The Configure Rules dialog box opens.

3 Select a **Default action**.



4 Click **OK**.

You return to the Configure Auto-Assignment Rules dialog.

5 Click **Save** to save your changes.

Editing auto-assignment rules

1 Click the **Configure** tab then click **Auto-Assignment Rules**.

The Configure Auto-Assignment Rules dialog box opens.

2 Select a defect state and click **Configure Rules**.

The Configure Rules dialog box opens.

3 Select a rule and click **Edit.**

4 Make any changes and click **OK**.

You return to the Configure Auto-Assignment Rules dialog.

5 Click **Save** to save your changes.

Inactivating auto-assignment rules

If there is a rule that is no longer in use, inactivate it instead of deleting it. You can easily activate the rule if you decide to use it again.

1 Click the **Configure** tab then click **Auto-Assignment Rules**.

The Configure Auto-Assignment Rules dialog box opens.

2 Select a defect state and click **Configure Rules**.

The Configure Rules dialog box opens.

3 Select a rule and click **Activate/Inactivate.**

The rule is inactivated.

Note: To activate an inactive rule, select the rule and click **Activate.**

Deleting auto-assignment rules

Delete rules if you are certain you will not use the rule again. You can also inactivate a rule to disable it.

1 Click the **Configure** tab then click **Auto-Assignment Rules**.

The Configure Auto-Assignment Rules dialog box opens.

2 Select a defect state and click **Configure Rules**.

The Configure Rules dialog box opens.

3 Select a rule and click **Delete.**

The rule is deleted.

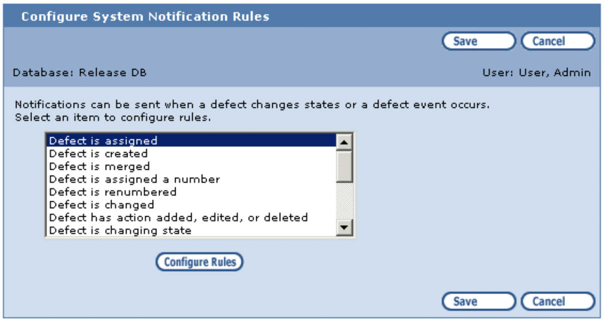
Configuring system notification rules

Set up system auto-notification rules to automatically inform users about events, such as status changes, via email. Email notifications can be configured for each state defined for defects. Notifications only inform users of the event change, they do not assign users a task. System auto-notifications rules are configured by the administrator and are run in addition to any personal email notifications users set up.

Adding system notification rules

1. Click the **Configure** tab then click **System Notification Rules**.

   The Configure System Notification Rules dialog box opens.

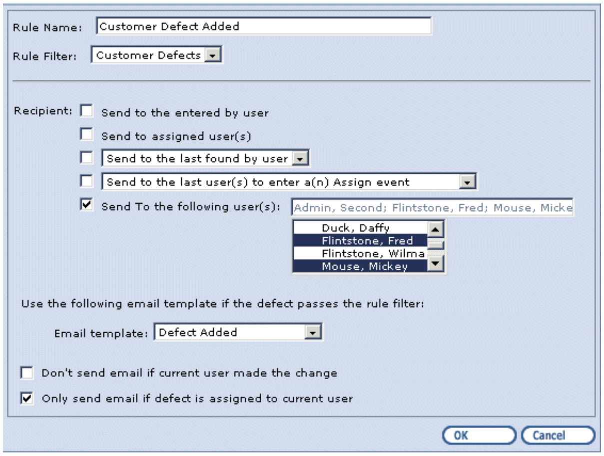


2. Click **Configure Rules**.

   The Configure System Notification Rules dialog box opens.

3. Click **Add**.

   The Add System Notification Rule dialog box opens.



4. Enter a **Rule Name**.

5 Optionally select a **Rule Filter**.

If a project contains a large number of defects, you may want to filter the defects the rule is applied to. If you need to add filters see **Creating filters,** page 74.

6 Select a **Recipient**.

- **Send to the entered by user** sends the email notification to the user who entered the defect.
- **Send to assigned user(s)** sends the email notification to all assigned users.
- **Send to the found by user** sends the email notification to all found by users, the first found by user, or the last found by user.
- **Send to the last user(s) to enter...** sends the email notification to the user who last entered the selected defect event. The list includes all of the events defined for the workflow in the project. If the last user entered the event in response to a multi-user assignment event, the notification is sent to all users who responded to that event.
- **Send to the following user(s)** sends the email notification to the selected users or customers.

7 Select an **Email Template**.

Users can view all information in the email. Make sure you want users to view all information in the selected email template.

Note: When email templates are created you can set template access options.These options are ignored when system notification rules are created. For example, you add a system notification rule that sends an email when a customer reports a defect. Do not select an email template that includes sensitive information such as the defect status. You may not want customers to have access to this information.

8 Select **Don't send email if current user made the change** if you do not want the user who made the change to receive an email notification.

For example, if JoeQA changes a defect, he probably does not need to be sent an email notifications regarding the status change.

9 Select **Only send email if defect is assigned to current user** if you only want the assigned user who made the change to receive an email notification.

10 Click **OK**.

The rule is added. You return to the Configure System Notification Rules dialog.

Editing system notification rules

1 Click the **Configure** tab then click **System Notification Rules**.

The Configure System Notification Rules dialog box opens.

2 Select a rule and click **Edit.**

3 Make any changes and click **OK**.

Your changes are saved.

Inactivating system notification rules

If there is a rule that is no longer in use, inactivate it instead of deleting it. You can easily activate the rule if you decide to use it again.

1 Choose **Configure > Auto-Notification Rules**.

The Configure System Notification Rules dialog box opens.

2 Click **Configure Rules**.

The Configure Rules dialog box opens.

3 Select a rule and click **Inactivate.**

The rule is inactivated.

Note: To activate an inactive rule, select the rule and click **Activate.**

Deleting system notification rules

Delete rules if you are certain you will not use the rule again. You can also inactivate a rule to disable it.

Note: Make sure you want to delete the rule. You are not prompted to confirm the deletion and this action cannot be undone.

1 Choose **Configure > Auto-Notification Rules**.

The Configure System Notification Rules dialog box opens.

2 Click **Configure Rules**.

The Configure Rules dialog box opens.

3 Select a rule and click **Delete.**

The rule is deleted.

Overriding the workflow

If a defect is assigned to multiple users and events can only be entered by assigned users, the defect can be delayed if a user is out of the office or busy with other tasks. You can override the workflow to move the defect to another state.

1. Select the defect you need to override the workflow for on the Defects List window.
2. Click **Edit**.

   All workflow events are disabled after the defect is open.
3. Click the **Override Workflow** link.

   The valid workflow events for the current state are enabled.
4. Click the corresponding event link. For example, click **Fix** to add a defect fix.

   The defect moves to the resulting state for the selected event. A workflow override entry is added to the workflow tab.
5. Click **Save**.

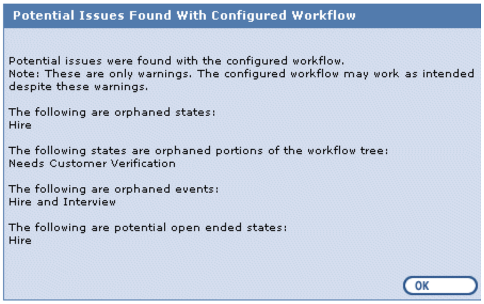
Evaluating the workflow

When you customize a workflow, you may find it helpful to periodically evaluate the workflow for potential issues. If any issues are found, you can correct the issues before continuing. For example, if a state is set to only allow assigned users to enter an event for that state, but the state can be reached through an event other than as assign event, it is returned as a potential issue that should be fixed.

1. Click the **Configure** tab then click **Workflow**.

   The Customize Workflow dialog box opens.
2. Click **Evaluate Workflow**.

   The Potential Issues dialog box opens. All potential issues are listed on the dialog.



3. Click **OK** to close the dialog box.

Diagramming the workflow

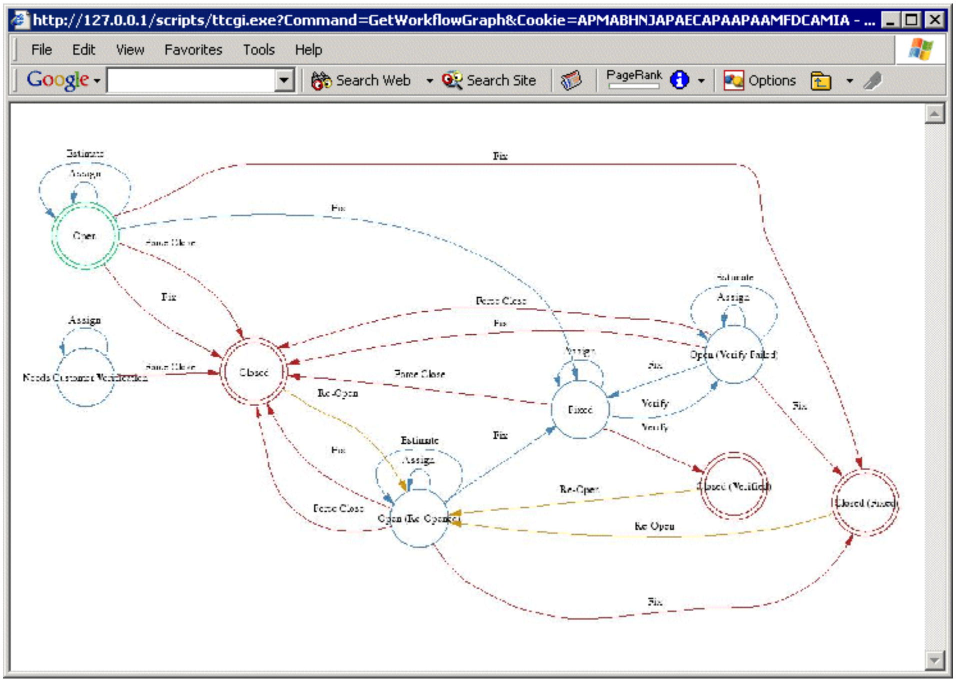
You can view a visual representation of the workflow. This can help you solve issues and quickly view configured states and events the state, events, and transitions.

1 Click the **Configure** tab then click **Workflow**.

The Customize Workflow dialog box opens.

2 Click **Diagram Workflow**.

A graphical representation of the workflow open in a browser window.



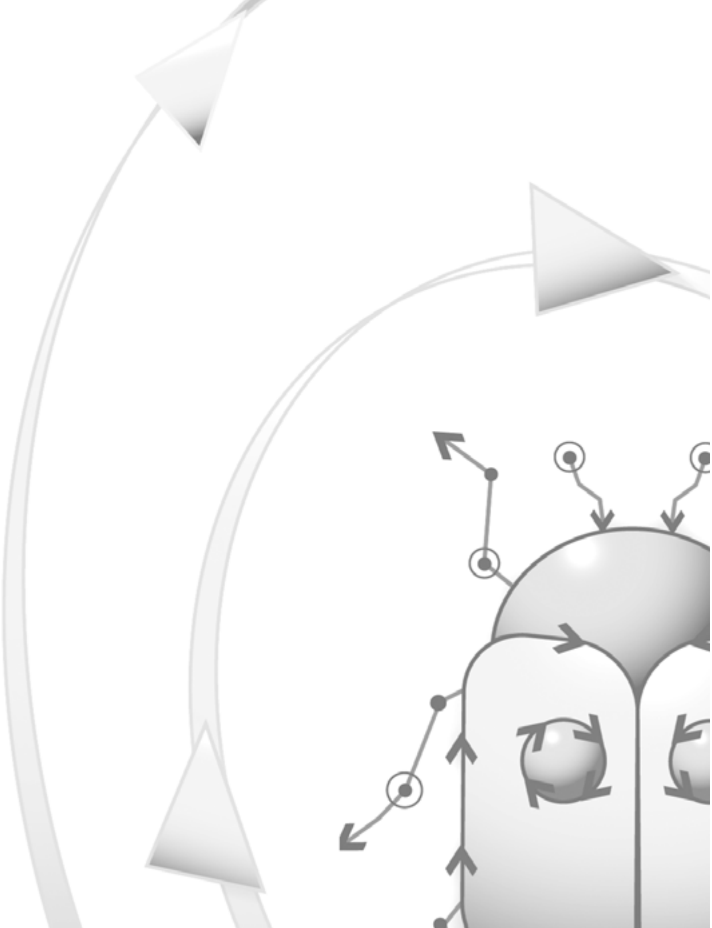
The following information will help you interpret the workflow:

Green Double Circle - Indicates the default state
Red Double Circle - Indicates a closed state
Blue Circle - Indicates an open state
Blue Line - Indicates a normal transition
Red Line - Indicates a transition to a closed state

3 Use the browser menu to save or print the file.

Chapter 14
Managing Business Processes

Managing regulatory compliance or internal business processes is now simple - let TestTrack Pro do the work for you!



About process management

When properly implemented and managed, TestTrack Pro can strengthen most best practice and regulatory compliance processes. TestTrack Pro's compliance features can be used to track both internal business processes and regulatory compliance processes such as Sarbanes-Oxley or 21 CFR Part 11.

Tip: More information about using TestTrack Pro and Surround SCM for process management can be found in the following Seapine white papers, which are available on our web site: **Managing Projects for Regulatory Compliance** and **Impact of 21 CFR Part 11 on Software Development**.

In addition to compliance options, the following options can provide enhanced security and tracking.

Password options

Using the Seapine License Server Admin Utility, you can set password options to help enforce your company's requirements and provide greater security.

- Password requirements including minimum length and the minimum number of letter, numeric, and non-alphanumeric characters.
- Password restrictions that prevent users from using usernames, first names, or last names in passwords and allow you to set the password to expire in a specified number of days.
- Password history options that prevent users from reusing passwords.

Note: You can also require users to change their passwords the next time they login. This lets you 'force' users to change their passwords.

Security options

Access to TestTrack Pro functions is controlled by security groups. Users must be assigned to a security group before they can work with TestTrack Pro projects. Security determines what projects users can access, their view and edit rights (on a per-field level), and what commands they can access.

User log options

Using the TestTrack Pro Server Admin Utility, you can configure failed login email notifications, providing an easy way to archive events. Failed login attempts are automatically logged in the TestTrack Pro server log. The log includes the following information:

- Date/time of failed login
- TestTrack Pro client type and IP address (Windows, Web)
- Failed login reason (invalid username, invalid password, license type not specified)
- Login username
- Project, if one was specified

About historical defect logging

Historical defect logging records the fields that change when a defect is modified. It does not record the values that change. Users can view what changed in a defect record, who made the change, and when the change was made on the History tab. The historical log is stored with the defect record. When a defect is deleted, the historical defect log information is also deleted.

About audit trail logging

Audit trail logging records the information that is modified when a defect is added, edited, or deleted. This information is logged in an audit log change record and cannot be deleted. You can trace back to view a complete trail of when and how the data was modified. This provides a more secure environment with stricter auditing of changes and more accountability. Audit trail records are not affected when defects are deleted because they are maintained separately from the defect history log. The audit trail is project-specific and is only viewable for the project you are currently logged in to. For more information about audit trail records, see **About audit trail records,** page 147.

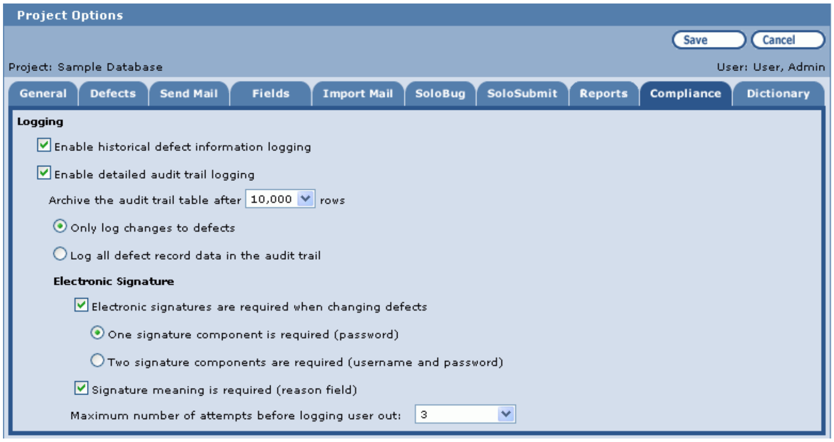
Audit trail tables can be archived in TestTrack Pro native projects. When the audit trail log is archived the following tables files are copied and renamed: AUDITLOG.TTT, AUDITLOG.TTI, and AUDITLOG.FPT. The files are stored in a project subdirectory named Archive and are appended with the date and time. For example, AUDITLOG.TTT is saved as AUDITLOG2003120114_56_20.TTT when it is archived.

Setting project compliance options

1 Click the **Configure** tab.

The Project Configuration page opens.

2 Click **Project Options** then click the **Compliance** tab.



3 Select **Enable historical defect information logging** to log historical information.

Historical defect logging records the changes made to a specific defect but not the changed values. The historical log is stored with the defect record and does not contain detailed information about the changes. For more information see **About historical defect logging,** page 145.

Note: Disabling this option does not affect any information already logged in the project.

4 Select **Enable detailed audit trail logging** to log the audit trail information.

Audit trail logging records the information that is modified when a defect is added, edited, or deleted. The audit trail log is stored in its own project table and contains changed values. For more information see **About audit trail logging,** page 145.

- Select the number of audit trail rows before the table is automatically archived. This option applies to TestTrack Pro native projects only.
- Select **Only log changes to defects** to log changed defect fields and values changes only.
- Select **Log all defect record data in the audit trail** to log all defect data with the detailed audit trail each time the defect changes.

If you enable audit trail logging for an existing project, the entire defect is logged the first time you edit and save it. When this option is enabled, the date and time is stored and logged in the audit trail. TestTrack Pro compares the last modification date to the date and time audit trail logging was enabled. The entire contents of the defect are logged if the last modification date is earlier than the date and time that audit trail logging was enabled.

5 Select **Electronic signatures are required when changing defects** to enable electronic signatures. This option is enabled if you select the audit trail logging option.

Electronic signatures ensure users sign off on each change to a defect. When a defect is created, modified, or deleted the user is prompted to enter their electronic signature along with an optional reason for making the change. When the defect is saved the user's full name, the defect ID, and the change reason are all stored with the defect.

- Select **Only one signature component is required** to require users to enter passwords when changing defects.
- Select **Two signature components are required** to require users to enter usernames and passwords when changing defects.
- Select **Signature meaning is required** to require users to enter a reason for changing the defect.
- Select the **Maximum number of attempts before logging user out**. If the user exceeds this number of failed attempts the changes are discarded and the user is automatically logged out of TestTrack Pro.

6 Click **OK** to save the compliance options.

Deleting historical defect log information

You can delete log entries if the project becomes too large because of historical defect information. Deleting historical defect log entries does not reduce the amount of used disk space until the project is compressed. Refer to the **TestTrack Pro Server Admin Utility Guide** for more information.

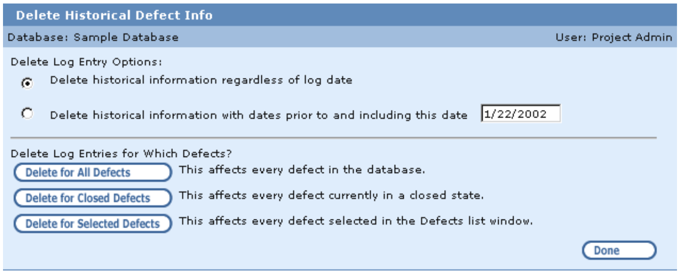
Note: To delete log entries for specific defects, select the defects before proceeding.

1 Click the **Defects** tab then click **Delete Historical**.

The Delete Historical Defect Info dialog box opens.

2 Select the **Delete Log Entry** options.

- **Delete historical information regardless of log date** deletes all log entries.
- **Delete historical information with dates prior to and including this date:** deletes log entries prior to and including the date you enter.



3 Click a **Delete Log Entries For Which Defects?** button.

You are prompted to confirm the deletion.

4 Click **Delete**.

The defect historical log information entries are deleted.

About audit trail records

When you set project options to enable audit trail logging, an audit trail record is created each time a defect is added, edited, or deleted. You can search audit trail records and trace back to view a complete trail of when and how data was modified.

Audit trail records are not affected when defects are deleted because they are maintained separately from the defect history log. It is important to understand the difference between data records and audit trail records:

- **Data records** contain the information stored in defects and associated tables as well as cached in memory. Data records can be edited by TestTrack Pro users.

- **Audit trail records** are created within the audit trail and are stored in a separate table. Audit trail records cannot be edited using TestTrack Pro.

For more information see **About audit trail logging,** page 145.

Searching audit trail records

You can search the project's audit trail to find change records based on criteria such as date, user, defect number, modification source, and modification type.

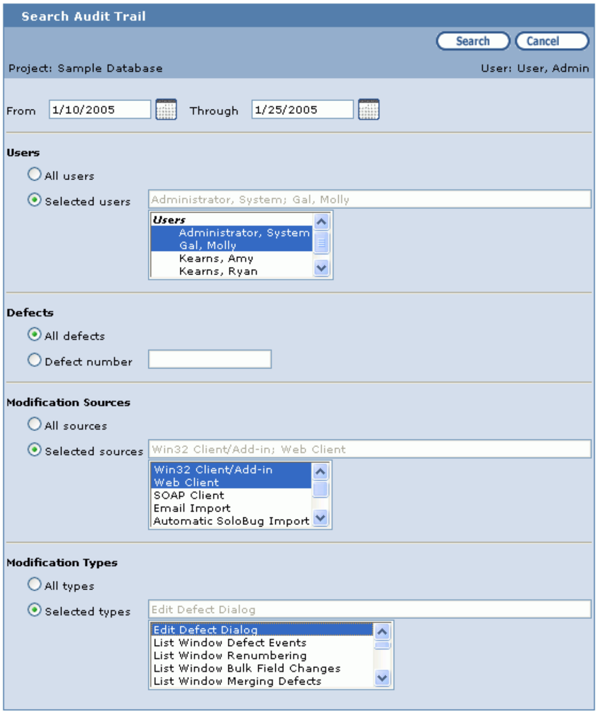
> **Note:** Disable the **Delete Historical Defect Info** command security setting if you do not want a user group to have access to the **View Audit Trail** menu item.

1 Click the **Configure** tab.

The Project Configuration page opens.

2 Click **View Audit Trail**.

The Search Audit Trail dialog box opens.



3 Select the date range of records to view.

The date defaults to today's date. You can enter another date or use the calendar to select another date.

4 Select a **Users** option.

- Select **All users** to include records for all users.
- Select **Selected users** to include records only for specific users. Select the users to include.

Tip: To include more than one user, **Ctrl+click** each name.

5 Select a **Defects** option.

- Select **All defects** to include records of all defects in the project.
- Select **Defect number** then enter the defect number to include records for a specific defect.

6 Select a **Modification Sources** option to include records based on the application used to change the defect.

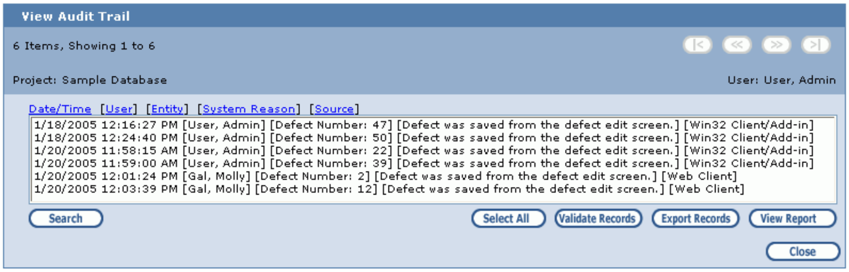
- Select **All sources** to include records of defects changed using all available sources.
- Select **Selected sources** then choose the sources to include.

7 Select a **Modification Types** option to include records based on the action that changed the defect.

- Select **All types** to include all modification types.
- Select **Selected types** then choose the modification types to include.

8 Click **Search**.

The View Audit Trail dialog box opens displaying entries matching the search criteria.



Viewing audit trail record details

1 Click the **Configure** tab.

The Project Configuration page opens.

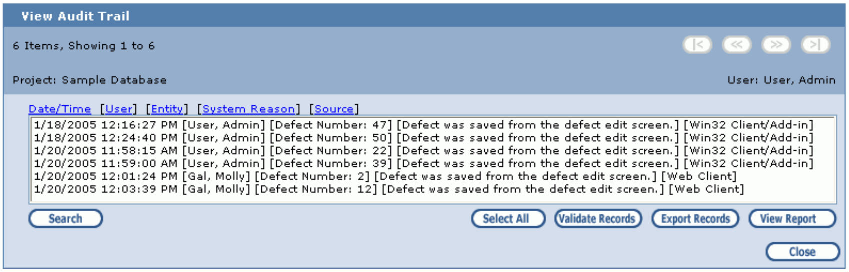
2 Click **View Audit Trail**.

The Search Audit Trail dialog box opens.

3 Select search criteria and click **Search**.

The View Audit Trail dialog box opens and displays records matching the search criteria. The records list displays the following information:

- **Date/Time** - The date and time the audit trail record was created
- **User** - The user who made the change to the defect resulting in the creation of the audit trail record
- **Entity** - The defect changed resulting in the creation of the audit trail record
- **System Reason** - The system generated reason the audit trail record was created
- **Source** -The application used to change the defect



Note: The search may result in more records than can be displayed. Click the buttons in the upper right corner of the window to browse through all results.

4 Select records and click **Validate Records** to ensure the records were created using a valid TestTrack Pro source. See **Validating audit trail records,** page 152 for more information.

5 Select records and click **Export Records** to export the records to a text or XML file. See **Exporting audit trail records,** page 152 for more information.

6 Select records and click **View Report** to generate a report detailing what changed in the defect. See **Generating an audit trail detail report,** page 151 for more information.

7 Click **Search** to narrow or broaden the previous search or perform a new search. See **Searching audit trail records,** page 148 for more information.

Generating an audit trail detail report

You can generate a report containing all details in the change record. The report includes defect fields before they changed (**From**) and after they changed (**To**).

Note: Audit trail records created prior to TestTrack Pro 7.1 will not include the **From** data. You can only view the **To** data.

1 Click the **Configure** tab.

The Project Configuration page opens.

2 Click **View Audit Trail**.

The Search Audit Trail dialog box opens.

3 Select search criteria and click **Search**.

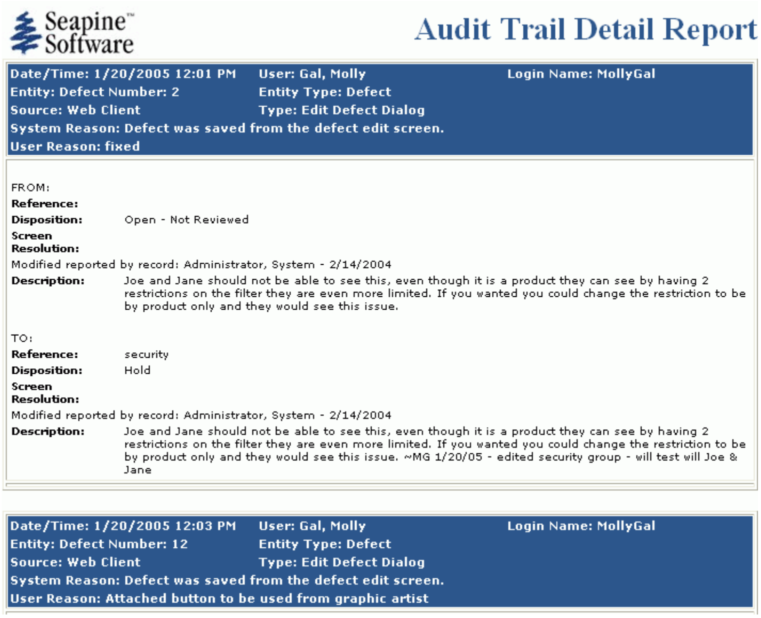
The View Audit Trail dialog box opens.

4 Select the records to include in the report.

To select all records, click **Select All**. To include more than one record, **Ctrl+click** each record.

5 Click **View Report**.

The Audit Trail Detail Report opens in a new browser window.


Seapine Software

Audit Trail Detail Report

Date/Time: 1/20/2005 12:01 PM **User: Gal, Molly** **Login Name: MollyGal**
Entity: Defect Number: 2 **Entity Type: Defect**
Source: Web Client **Type: Edit Defect Dialog**
System Reason: Defect was saved from the defect edit screen.
User Reason: fixed

FROM:
Reference:
Disposition: Open - Not Reviewed
Screen Resolution:
Modified reported by record: Administrator, System - 2/14/2004
Description: Joe and Jane should not be able to see this, even though it is a product they can see by having 2 restrictions on the filter they are even more limited. If you wanted you could change the restriction to be by product only and they would see this issue.

TO:
Reference: security
Disposition: Hold
Screen Resolution:
Modified reported by record: Administrator, System - 2/14/2004
Description: Joe and Jane should not be able to see this, even though it is a product they can see by having 2 restrictions on the filter they are even more limited. If you wanted you could change the restriction to be by product only and they would see this issue. ~MG 1/20/05 - edited security group - will test will Joe & Jane

Date/Time: 1/20/2005 12:03 PM **User: Gal, Molly** **Login Name: MollyGal**
Entity: Defect Number: 12 **Entity Type: Defect**
Source: Web Client **Type: Edit Defect Dialog**
System Reason: Defect was saved from the defect edit screen.
User Reason: Attached button to be used from graphic artist

Validating audit trail records

You can validate audit trail records to ensure changes were made using TestTrack Pro, not other means such as editing a record directly in a database table. Records that cannot be validated are displayed in a report for further review.

Note: Audit trail records created prior to TestTrack Pro 7.1 cannot be validated using this feature.

1 Click the **Configure** tab.

The Project Configuration page opens.

2 Click **View Audit Trail**.

The Search Audit Trail dialog box opens.

3 Select search criteria and click **Search**.

The View Audit Trail dialog box opens.

4 Select the records to validate.

To select all records, click **Select All**. To select more than one record, **Ctrl+click** each record.

5 Click **Validate Records**.

- Click **OK** if the records are valid.
- Records that cannot be validated are displayed in a report.

Exporting audit trail records

You can export audit trail records to text or XML files.

Note: Exported records do not include the related defects or file attachments. To export defects, see **Chapter 19, "Importing and Exporting Files,"** page 197.

1 Click the **Configure** tab.

The Project Configuration page opens.

2 Click **View Audit Trail**.

The Search Audit Trail dialog box opens.

3 Select search criteria and click **Search**.

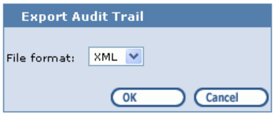
The View Audit Trail dialog box opens.

4 Select the records to export.

To select all records, click **Select All**. To include more than one record, **Ctrl+click** each record.

5 Click **Export Records**.

The Export Audit Trail dialog box opens.

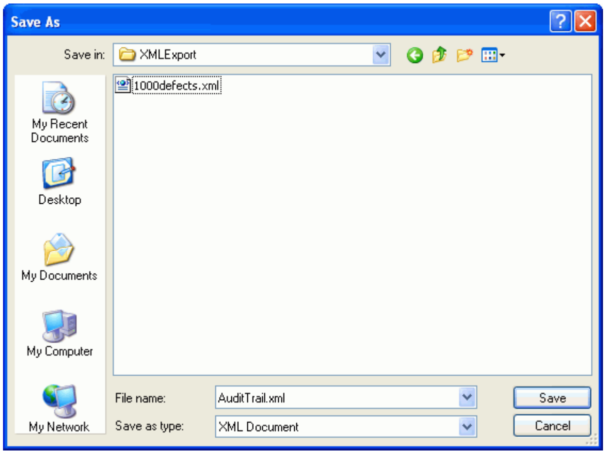


6 Select a **file format** then click **OK**.

The File Download dialog box opens.

7 Click **Save**.

The Save As dialog box opens.



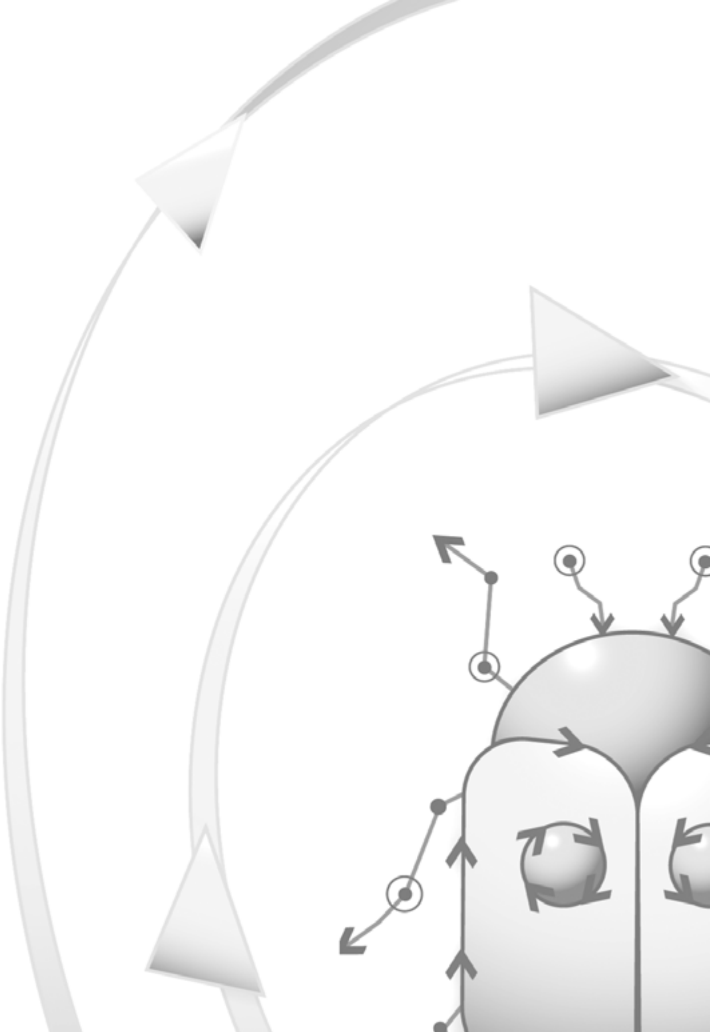
8 Enter a file name and choose the location where you want to save the file.

9 Click **Save**.

The file is saved.

Chapter 15
Customizing Fields

Customize fields...to collect the data you need. TestTrack Pro allows you to customize fields to meet your company’s requirements and make sure users are providing the correct types of information. You can also rename field labels and change existing field data.



Configuring list values

You can configure menu list values to customize TestTrack Pro with your company's terminology. The list values you configure are project-specific. You can configure type names, priority names, severity names, product names, component names, disposition names, reproduced names, and version names.

Note: You can also configure custom field items and event custom field items. The Custom Field Items menus contains the short names of the defect custom field dropdown objects configured for the system. The Event Custom Field Items menu contains the long labels of each event custom field dropdown.

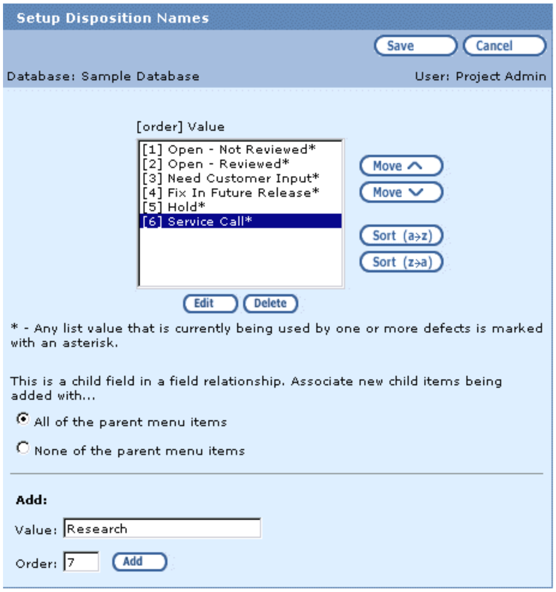
Adding list values

The following example uses Disposition Names. You follow the steps are the same for all list values.

1 Click the **Configure** tab.

2 Click the corresponding **Edit list values** link. For this example, click Disposition Names

The Setup dialog box opens.



Note: The setup dialog changes based on the type of field. For example, if you add a value to a parent field, you are reminded to configure field relationships for the new value. Likewise, if you add a child field, you can associate the new field value with all or none of the parent values.

3 Enter the **Value**.

4 Enter an **Order** number.

The value is added to the end of the list by default. Enter a different number to change the order.

5 Click **Add**.

6 Click **Save** when you finish adding field values.

Editing list values

1 Click the **Configure** tab. Click the corresponding **Edit list values** link.

The Setup dialog box opens.

2 Select the value and click **Edit**.

3 Make any changes.

You can edit the value name and the value order.

4 Click **OK**.

5 Click **Save** when you finish editing field values.

Deleting list values

1 Click the **Configure** tab. Click the corresponding **Edit list values** link.

2 Select the value and click **Delete**.

You are not prompted to confirm the deletion. If you delete a list value by mistake, click **Cancel** to discard the changes without saving them.

3 Click **Save** to save the changes.

Note: If you delete a list value that is used in a field relationship, an error message opens indicating the action may result in defects that do not follow the field relationship rules.

Configuring custom fields

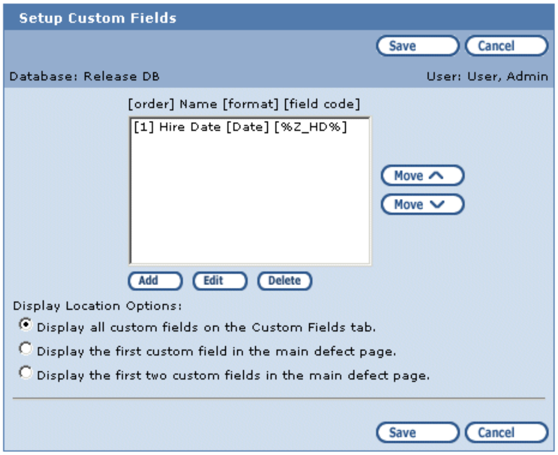
You can add up to 100 custom fields to a project. All custom fields can be displayed on the Custom Fields tab or up to two custom fields can be displayed in the main area of the Add Defect, Edit Defect, and View Defect dialog.

Note: Make sure all users are logged out of TestTrack Pro. You cannot add custom fields if other users are logged in.

Adding custom fields

1 Click the **Configure** tab then click **Custom Fields**.

The Setup Custom Fields dialog box opens.

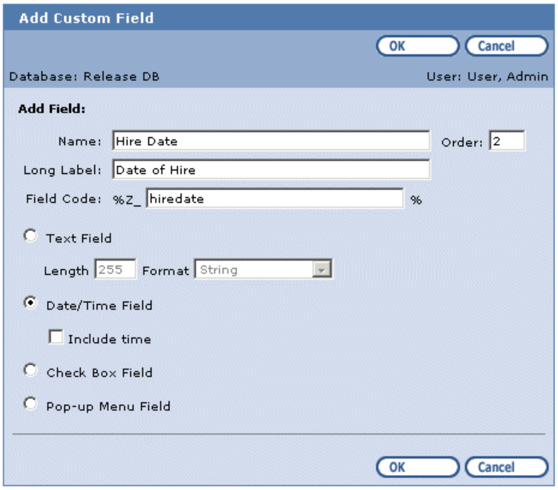


2 Click **Add**.

The Add Custom Field dialog box opens.

Note: If you add a field that will be used in a field relationship, make sure you choose **Pop-Up Menu.** You need to restrict the information users can enter.

3 Enter the **Name**.



4 Enter an **Order** number.

By default, the value is added to the end of the list. Enter a different number to change the order.

5 Enter the **Long Label**.

Long labels are displayed in dropdown lists and help users distinguish between the same fields in different events.

6 Enter the **Field Code**.

The field code automatically generates data and lets you use the custom field with email templates, reports, or SoloSubmit.

7 Select **Text Field** to create a text field. Enter the field **Length** and select string, integer, or decimal number from the **Format** menu.

8 Select **Date/Time Field** to create a date/time field. When users select this type of custom field, the current date and time is set. Users can change the date and time.

9 Select **Check Box Field** to create a check box field. The check box custom fields works the same as other check boxes, users select or clear the check box.

10 Select **Pop-up Menu Field** to create a pop-up menu field.

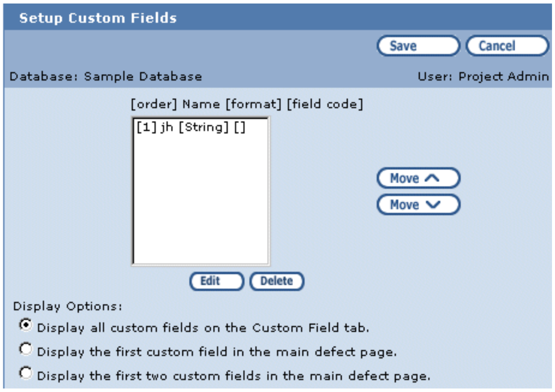
The Setup Custom Pop-up Menu dialog box opens. To add values to the popup menu, in the Add area, enter a value and select the order. Click **Add** to add the custom pop-up menu items. Continue this process until all values are added to the custom popup menu.

11 Click **OK**.

You return to the Setup Custom Fields dialog.

12 Select the **Display Options**.

You can display all the custom fields on the Custom Field tab or display up to two custom fields in the main area of the Add, Edit, and View Defect dialogs.



13 Click **Save**.

The custom field is saved.

Editing custom fields

1 Click the **Configure** tab then click **Custom Fields**.

The Setup Custom Fields dialog box opens.

2 Select the custom field and click **Edit**.

The Edit Custom Field dialog box opens.

3 Make any changes and click **OK**.

You return to the Setup Custom Fields dialog.

4 Click **Save** to save the changes.

Deleting custom fields

1 Click the **Configure** tab then click **Custom Fields**.

The Configure Custom Fields dialog box opens.

2 Select the custom field and click **Delete**.

If you delete a custom field by mistake, click **Cancel** on the Setup Custom Fields dialog.

3 Click **Save** to save the changes.

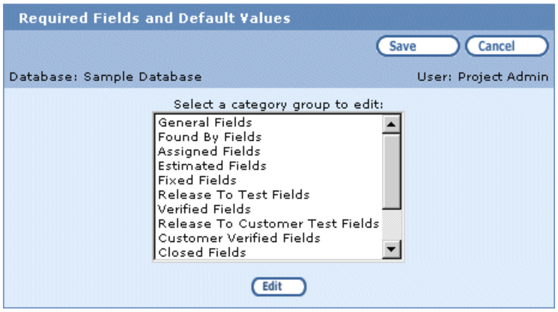
Defining default values

You can define default values for most fields included in the Add Defect or Defect Action dialog box. Required fields and default field values are project-specific.

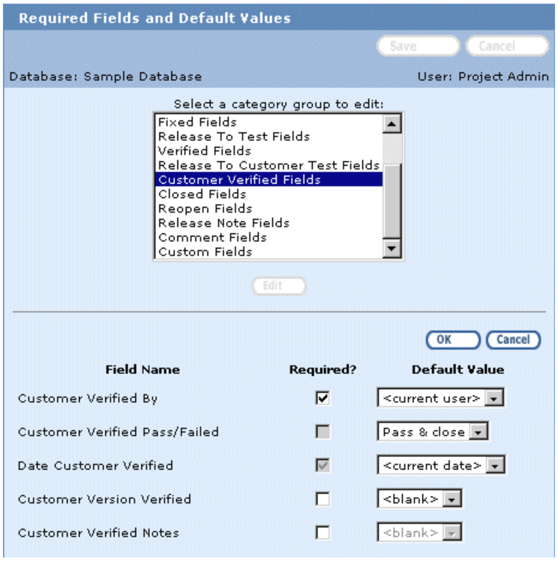
1 Click the **Configure** tab.

2 Click **Required Fields/Default Values**.

The Required Fields and Default Values dialog box opens.



3 Select the group from the menu and click **Edit.**



4 Select a value from the corresponding **Default Value** menu to set a default value.

How do default values affect field relationships?
A child field's default value may be invalid, depending on the parent field's default value. If a default value that does not follow the defined field relationships is selected, the default value can still be used but the child field's value will not follow field relationship rules.

How do hidden fields affect field relationships?
A hidden child field can cause unintended changes. If you change a parent field, you may cause a child field's value to no longer follow field relationship rules. In addition, changes cannot be saved if the child field is required.

5 Click **OK** to save your selections.

Defining required fields

You can set any defect or defect action input field, including custom fields, as a required field. When a field is required a user must enter data in the field before TestTrack Pro will add the defect or defect action to the project or save any edit changes.

Note: Required fields are set for all users. Field level security is set for Security Groups. For example, a project is set up and the Priority field is required but does not have a default value. A Customer Security Group is created and the Priority Field is hidden for both Add and Edit privileges. The Customer Security Group can add defects. A customer who belongs to the Customer Security Group cannot add a defect. This is because the Priority field is required but the customer cannot set this field. To work around this problem, grant access to the Priority field when adding defects and hide the Priority field when editing defects.

The required field must be populated for all instances of actions. For example: the Found By field is required and does not have a default value. When multiple detail records are created for a single defect, the Found By field must be populated for all of the detail records.

1 Click the **Configure** tab.

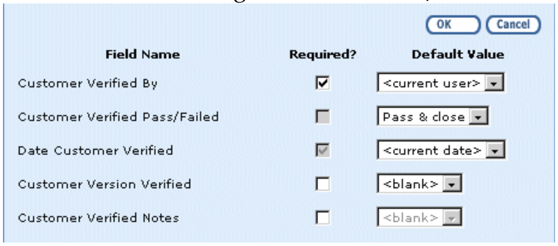
2 Click **Required Fields/Default Values**.

The Required Fields and Default Values dialog box opens.

3 Select the group from the menu and click **Edit.**

4 Select the corresponding **Required?** check box to set a required field.

A field that is set using check boxes and/or radio buttons cannot be set as a required field.



Note: If a field is **always required,** the check box is selected and inactive. If a field **cannot be set** as a **required field,** the check box is not selected and it is inactive.

5 Click **OK** to save your selections.

Configuring field relationships

Parent-child field relationships create project dependencies and allow you to configure menus so users can only select values based on the field relationship. This helps users input better data and make more logical choices. When a field is selected from a menu, TestTrack Pro determines if the field has any child relationships. If there is a parent-child relationship the child field is populated with the values based on the parent's field value.

- The following fields can be set as parent fields: type, product, disposition, priority, component, severity, and custom fields. Defect event fields can be set as parent fields for other event fields in the same event type.
- The following fields can be set as child fields: type, product, disposition, priority, component, severity, version found, reproduced, computer config, and custom fields. Defect event fields can be set as child fields to defect fields and other event fields in the same event type.
- The following fields cannot be set as parent or child fields: entered by, found by, fixed by.

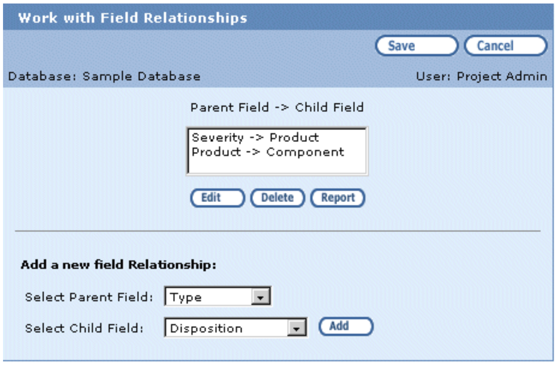
When a field that is part of a parent-child relationship is selected, the child field is populated with values based on the parent field. For example, Product is the parent field of Component and Version. Component is the parent field of Routine, which is a custom field. When a user adds a defect, the Component and Version fields are populated based on the selected Product field value. The Routine field is populated with values based on the selected Component field value.

Adding field relationships

1 Click the **Configure** tab.

2 Click **Field Relationships**.

The Work with Field Relationships dialog box opens.

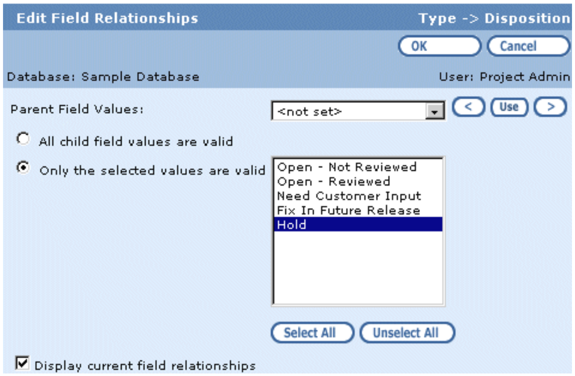


3 Select a **Parent Field** in the Add a Field Relationship area.

4 Select a **Child Field** in the Add a Field Relationship area.

5 Click **Add**.

The Edit Field Relationships dialog box opens. The field relationship you are adding is listed in the top-right of the dialog.



6 Select child field values for each parent field value.

To select specific values select **Only the selected values are valid** then **Ctrl+click** each field.

Note: If your browser does not support JavaScript click **Use** to refresh the screen.

7 Select the next parent field value from the list or click an arrow to move to the next value.

Repeat **steps 5 - 7** until child field values are set for all parent fields.

Note: A parent field can have one or more child field relationships. A child field can only have one parent. A child field can also be the parent of another field.

When a field is set as a child field, it is excluded from the child field list. For example, Priority is the child field of Severity. When you add a field relationship, you cannot select Priority as a child field.

To prevent a circular reference, fields that are a parent or grandparent of the selected parent field are excluded from the parent list. For example, Product is the parent field of Component. Component is the parent field of Version. You cannot set Version as the parent field of Product because a circular reference is created.

8 Click **OK**.

You return to the Work with Field Relationships page.

9 Click **Save**.

What if a project uses default values?
The child field's default value may be invalid, depending on the parent field's default value. If a default value is selected, and it does not follow the defined field relationships, the default value can still be used.

What if a project uses hidden fields?
Hidden fields can cause unintended changes. If a parent field is changed, causing the child field value to be, the child field may be changed to **<not set>**, depending on project options. Additionally, if the child field is required changes cannot be saved.

Editing field relationships

1 Click the **Configure** tab then click **Field Relationships**.

The Work with Field Relationships dialog box opens.

2 Select a field relationship you want to change and click **Edit**.

The Edit Field Relationships dialog box opens.

3 Make any changes and click **OK**.

You return to the Work with Field Relationships page.

4 Click **Save**.

Generating a field relationships report

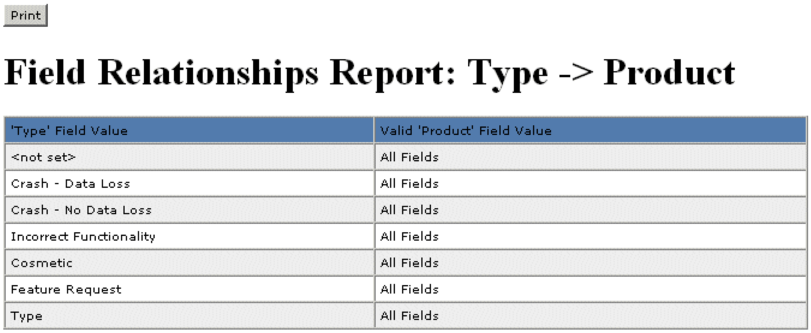
You can generate an HTML report to view all parent fields values and valid child values.

1 Click the **Configure** tab then click **Field Relationships**.

The Work with Field Relationships dialog box opens.

2 Select a field relationship and click **Report**.

The report opens in a browser window.



Print

Field Relationships Report: Type -> Product

'Type' Field Value	Valid 'Product' Field Value
<not set>	All Fields
Crash - Data Loss	All Fields
Crash - No Data Loss	All Fields
Incorrect Functionality	All Fields
Cosmetic	All Fields
Feature Request	All Fields
Type	All Fields

3 Click **Print** to print the report.

4 Close the browser window to close the report.

Deleting field relationships

Note: You are not prompted to confirm the deletion. If you make a mistake click **Cancel** to discard any changes you made.

1 Click the **Configure** tab.

2 Click **Field Relationships**.

3 Select a field relationship and click **Delete**.

You return to the Work with Field Relationships page.

4 Click **Save**.

Renaming field labels

You can rename defect field labels to match your company's terminology and decrease user confusion. For example, a service-oriented organization can rename the Custom Fields tab to Service and use it to track custom service-related fields. Renaming a field label does not change the functionality or format of the field, it only changes the label displayed in TestTrack Pro.

- The following field labels can be renamed: Summary, Type, Disposition, Priority, Product, Component, Reference, Severity, Entered By, Date Entered, Status, Found By, Date Found, Date, Version Found, Version, Description, Reproduced, Steps to Reproduce, Computer Config, and Other Hardware and Software. The Custom Fields tab label can also be renamed.
- The following words can also be renamed: Defect / defect, Defects / defects, Defect(s) / defect(s).
- The following field labels cannot be renamed: Attachments, Workaround, Notify tab, History tab, and SCC fields.

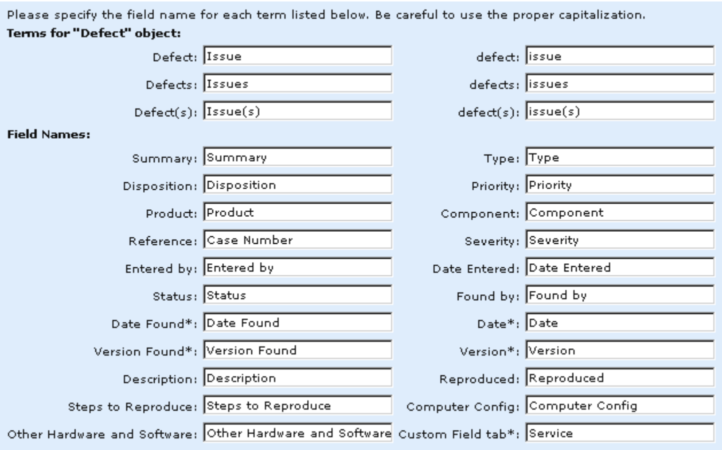
1 Click the **Configure** tab.

2 Click **Rename Field Labels**.

The Rename Field Labels dialog box opens.

3 Enter new field names for the labels you want to rename.

Field labels cannot be resized in the TestTrack Pro Windows Client and must be 32 characters or shorter. Field labels that do not fit are truncated.



Note: Date is the short form of Date Found and Version is the short form of Version Found. If you rename these field labels, use the same terminology. The short and long field names are both used. The short name is used to allow fields to fit in the user interface. For example, the Version field is on the Detail tab of the Add Defect window. This field corresponds to Version Found but Version fits in the user interface.

4 Click **OK** when you finish.

Your changes are saved and the project is updated with the new field labels. When you rename fields labels, it is possible that changes will only be visible in the Windows client. To ensure customized field labels are used by both the Windows and Web clients, do one of the following:

- TestTrack Pro can automatically update the corresponding Web graphics with the new field names. To enable this option, click the **Configure** tab, then click **Project Options**. Select **Replace graphics if Field Names are customized** on the **General** tab selected. Do not select this option if you use custom graphics for renamed fields.

- You can provide custom graphics. Image files are located in the following directory: **Inetpub/wwwroot/ttweb/images**. Most graphics include two images, one for a selected tab and one for a non-selected tab.

Restoring original labels

You can restore the field labels to their original values at any time.

1 Click the **Configure** tab.

2 Click **Rename Field Labels**.

3 Click **Restore to Original Values**.

The field labels revert to the original values.

4 Click **OK** to save the changes. If you do not want to save the changes, click Cancel.

Field label exceptions

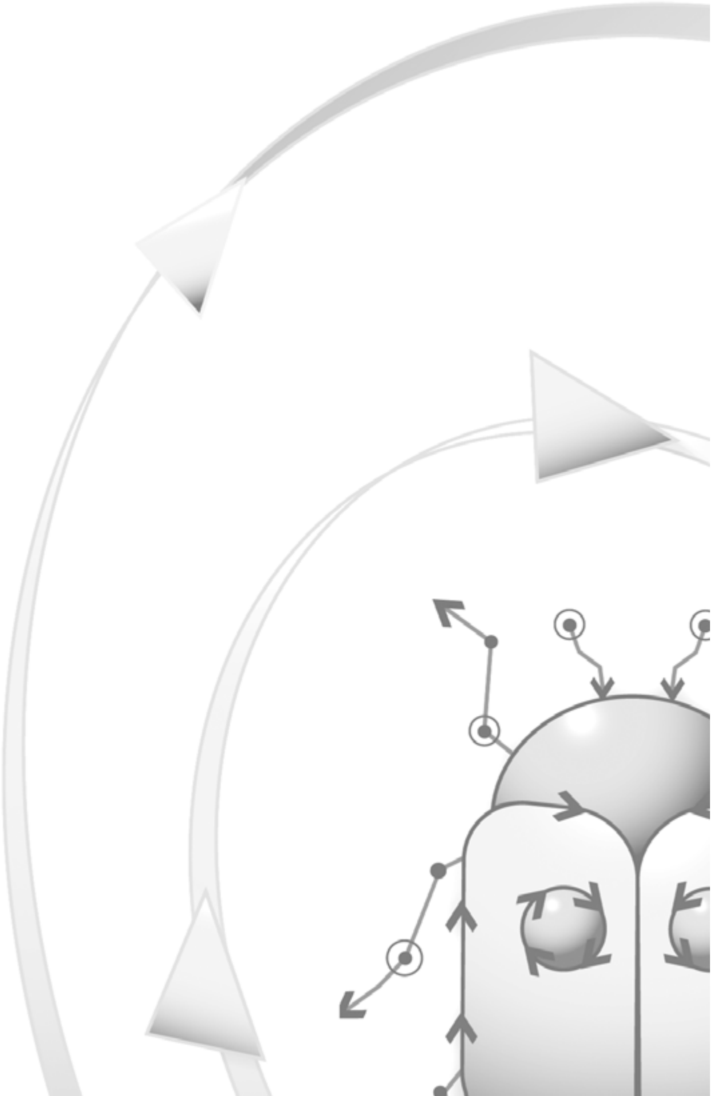
- Changes you make to field labels do not affect SoloBug. Field names can be changed when you customize the SoloBug executable.

- Field codes do not change. For example, Disposition (%DISP) is renamed to Substatus. To include the Substatus data in an email template, use %DISP%. For more information see **Label field codes**, page 216.

- Project columns are not renamed. When you use the ODBC driver, you need to use the original field name in your queries.

Chapter 16
Managing Security Groups

Security groups are your key to security. You can create different security groups to handle all of your company’s security needs.



About security groups

A security group is a collection of users who share responsibilities and perform similar tasks. TestTrack Pro security is assigned at the security group level. Each security group can be assigned different levels of security. You can create an unlimited number of security groups and levels. In order to access a project, each user must be assigned to a security group.

When you set up a project, create the security groups first. This lets you create a security structure for the users. You may find it helpful to create a table that lists the type of users accessing the project and what their needs are. You can add as many or as few security groups as you need and make their security levels as general or as specific as you want.

You can create the following structure and name the security groups according to security level:

Security Group Name	Security Level	Commands Granted
Level 1	Low	View
Level 2	Medium	View, Add
Level 3	High	View, Add, Edit
Level 4	Highest	View, Add, Edit, Delete

Or, use the same structure and name the security groups according to job description:

Security Group Name	Security Level	Commands Granted
Tech Writer	Low	View
Engineer	Medium	View, Add
QA Tester	High	View, Add, Edit
Manager	Highest	View, Add, Edit, Delete

Note: You do not need to create security groups if you want all users to have access to all commands. TestTrack Pro adds an Administration security group when a project is created. This security group has access to every command. Simply add the users to this default security group.

Security groups and security

Security determines what projects users can access, what their view and edit rights are for authorized projects (on a per-field level), and what they can do at each stage of the workflow process. You can configure projects to provide as much or as little access as needed. TestTrack Pro includes the following security options:

- Passwords limit access to projects.
- Command security limits the commands a group of users can execute.
- Field security limits who can enter or edit defect field data.
- Defect security limits the defects that are visible to each security group.
- Advanced defect logging tracks who changed defect fields and states and when changes are made.
- Server logging records unusual activity, critical, and non-critical system issues.

Command security

Command security limits the commands that can be accessed. Command security includes the following categories: General, Administration, Defects, Customers, Users, Security Groups, Test Configurations, Filters, Reports, and Workbook.

It is obvious how most of the command-level security options work. For example, the Add Customer command determines if a user can access the Add Customer dialog. The following command-level security options require additional explanation.

- XML Import, XML Export, Text Import, and Text Export actions are administrative commands. Regular, non-admin users should not be given security access to these commands.
- Edit User security lets a user edit user information for every TestTrack Pro user. The Edit Own General User Settings and Edit Own Notifications options let users set their own options only.
- Edit Own General User Settings security determines if a user can view the General tab on the User Options dialog box. This tab lets the user set their own TestTrack user options.
- Edit Own Notifications security determines if a user can view the Email tab on the User Options dialog box. This tab lets the user set their own email notification options.
- Configure SCC DB Options security determines if a user can view the Project Options tab and the Project Paths tab on the Configure SCC Integration dialog box. Any changes made to the options on these two tabs affect all users in the TestTrack project.
- See SCC Tab security determines if a user can view the Source Code tab on the Add/Edit Defect window. This option only lets the user view the SCC actions that have already been performed; it does not provide security access to perform SCC actions. If a user does not have See SCC Tab security or Configure SCC DB Options security, then the Configure SCC Integration menu option is also disabled because these options do not apply.

- Perform SCC Actions security determines if a user can perform SCC actions such as check in and check out. Because these actions can only be performed from the Source Code tab of the Add/Edit Defect window, the user also needs the See SCC Tab security.

Defect security

Defect security restricts the defects visible to the security group based on an existing filter and/or whether the user reported the defect. Defects that do not pass the filter are not displayed in the defect list or included in reports.

For example, you have a group of managers who only need information about feature requests. Select the **Open Feature Requests** filter for this group. The managers can only view defects that meet the filter criteria.

Field security

Field security affects defects and defect events and restricts users' ability to view or add/edit field data. Three types of field security can be assigned: Read/Write, Read Only, and Hidden. You can also set field-level security for add and edit scenarios. For example, you can assign a restricted security group read/write add privileges for the Type field. Next, you assign the same security group read only edit privileges for the Type field. When a new defect is added users can enter information for the type field. However, when a defect is edited users can view the Type field but will not be able to make any changes.

Security can be assigned to the following field categories: General, Found By fields, defect event fields, and custom fields.

- Field security cannot be applied to the following areas: email templates, SoloSubmit, SoloBug, XML import/export, and text file import/export.

- System-generated fields cannot be assigned read/write field security. This includes the following fields: defect number, defect status, has attachments?, has workaround?, date created, created by, creation method, date last modified, last modified by, found by group, found by company, how many?, and has release notes?

For example, Add privileges can be used to set field security. Assign the Department Manager group Read/Write access to the Priority field. Users in the Department Manager group can set the priority level. Assign the Programmer group Read Only access to the Priority field. Users in the Programmer group can view, and not edit, the priority level. Assign the Customer group Hidden access to the Priority field. Users in the Customer group cannot view the priority level assigned to defects.

Adding security groups

1 Click the **Security Groups** tab.

The Work with Security Groups page opens.

2 Click **Add**.

The Add Security Group dialog box opens.

3 Enter a **Name** and **Description**.

This information is required.

4 Click the **Users** tab to add users to the group.

5 Select **Include users in pop-up menus** to list users in pop-up menus.

Clear the check box if users in the security group will not be assigned defects.

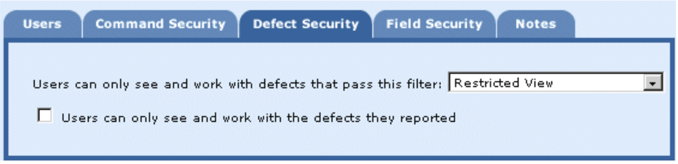
6 Select **Include customers in pop-up menus** to list the customers in pop-up menus.

Clear the check box if customers in the security group will not be assigned defects.

7 Click the **Command Security** tab and set the security for each category.

TestTrack Pro enables all commands by default. Click the check mark to disable access to a command.

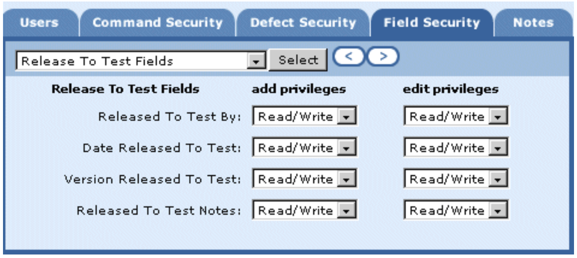
8 Click the **Defect Security** tab and set the defect security.



9 Click the **Field Security** tab and set field security.

Field security defaults to full security when a new security group or project is created. Users in this group can view and edit every defect field. Be sure to set Add and Edit privileges for all field group.

- Use the page arrows to move through the field categories or select a field category from the list and click **Select**.
- Be sure to set **Add** and **Edit** privileges for each field.



Note: A field can be represented by an edit box, check box, radio button, or a list box. Remember, setting field security affects **all** field types.

10 Click the **Notes** tab and enter any information about the security group.

11 Click **Save**.

The security group is added to the project.

Viewing security groups

1 Click the **Security Groups** tab.

2 Select the security group and click **View**.

The View Security Group dialog box opens. All fields are read-only.

Editing security groups

1 Click the **Security Groups** tab.

2 Select the security group and click **Edit**.

The Edit Security Group dialog box opens.

3 Make any changes and click **Save**.

Your changes are saved and you return to the Work with Security Groups page.

Duplicating security groups

If you are adding security groups with the same basic information, you can save time by duplicating and editing an existing group.

1 Click the **Security Groups** tab.

2 Select the security group and click **Duplicate**.

The security group is duplicated.

3 Modify the security group and save your changes.

Deleting security groups

1 Click the **Security Groups** tab.

2 Select the security group and click **Delete**.

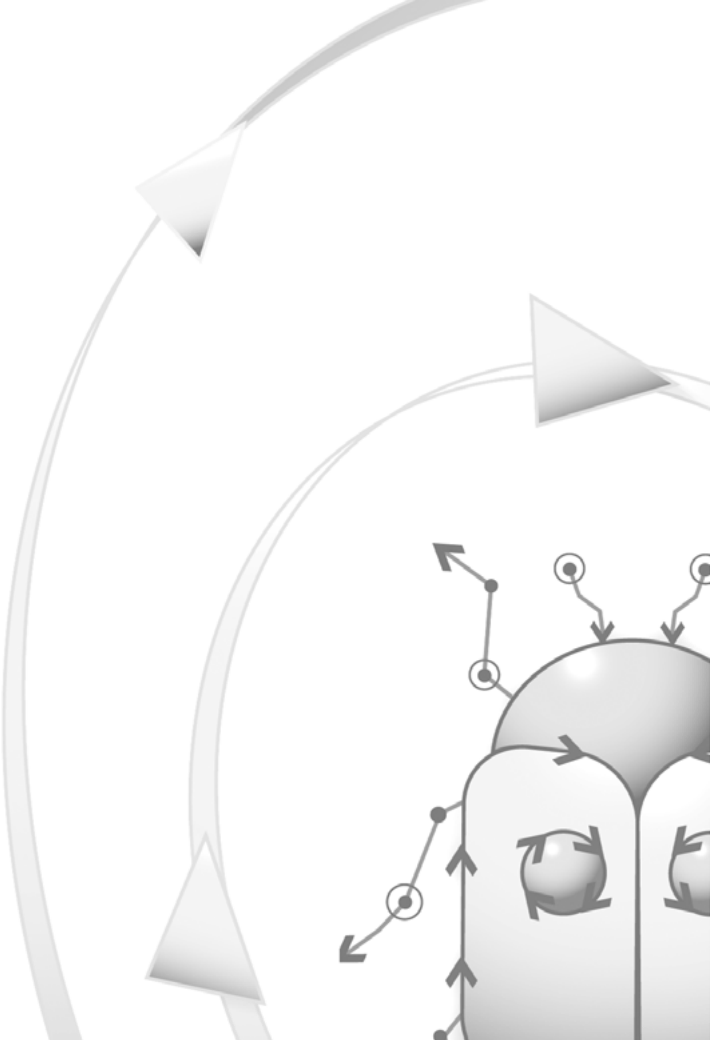
You are prompted to confirm the deletion.

3 Click **Delete**.

The security group is deleted.

Chapter 17
Managing Users

Defect, defect, who has the defect? Users, the people who find, fix and verify defects—who found it, who fixed it, who should be verifying it? By tracking users, TestTrack Pro improves your internal communications and accountability.



About users

TestTrack Pro includes global and local users. Users can be created using the license server admin utility or TestTrack Pro. Global users have access to all projects and can be created using the license server admin utility or in TestTrack Pro. Local users cannot log in to TestTrack Pro and can only be created in TestTrack Pro. The Users list window provides an overview of the users and includes a Type column that shows which users are local and which users are global.

Local users cannot access projects and cannot login to TestTrack Pro. Local users are created when bugs are submitted via SoloBug or SoloSubmit. You can also create local users for tracking purposes. For example, if there is an issue that you need to communicate with a user about, you can add the customer as a local user.

Global users have access to all projects and can be created using the license server admin utility or in TestTrack Pro. Global users can also be shared between TestTrack Pro and Surround SCM.

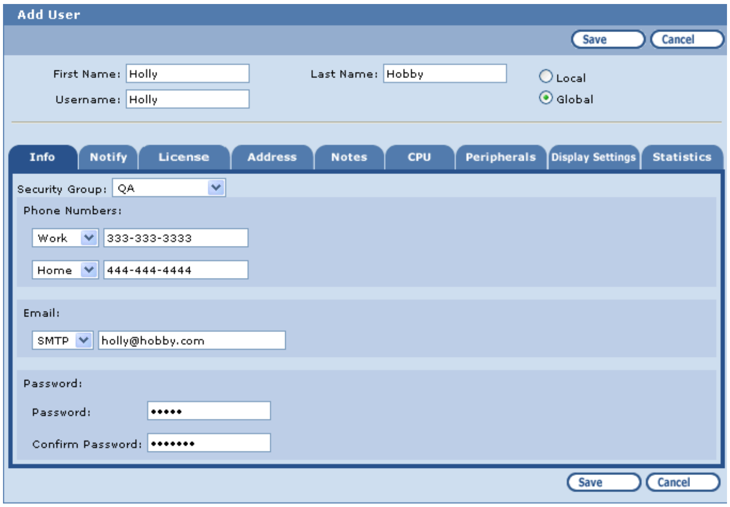
Adding users

1 Click the **Users** tab.

The Work with Users page opens.

2 Click **Add**.

The Add User dialog box opens with the Info tab selected.



3 Enter the user's **First Name** and **Last Name**.

You also need to enter a **Username** if you are adding a global user.

4 Select **Local** to add the user to the current project.

This option creates a local user.

5 Select **Global** to add the user to all projects.

This option creates a global user whose demographic information is stored on the license server.

6 Enter the information on the **Info** tab.

- Select a **Security Group**.
- Enter the user **Phone Numbers**.
- Select an email type and enter the user **Email Address**.
- Enter and confirm a user **Password**. Users can change their passwords when they login.

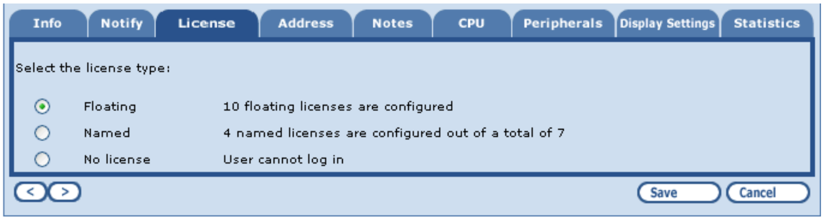
Note: Make sure you accurately enter the user's email address. Email notifications are sent to this address.

7 Click the **Notify** tab to select email notification options.

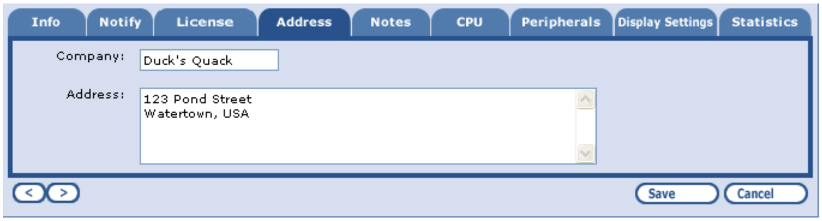
Click **Configure Rules** to configure the user notification rules for each state a defect moves into. For more information see **Configuring user notification rules,** page 181.

8 Click the **License** tab and select a license for the user.

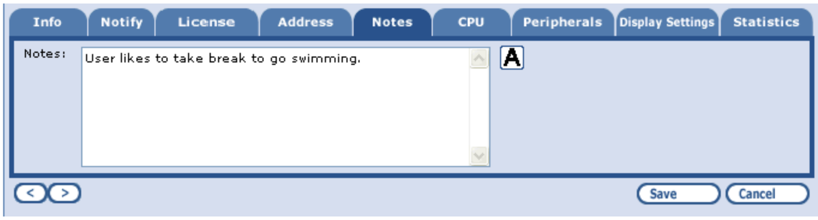
All fields are disabled if you are adding a local user.



9 Click the **Address** tab and enter the user's address.

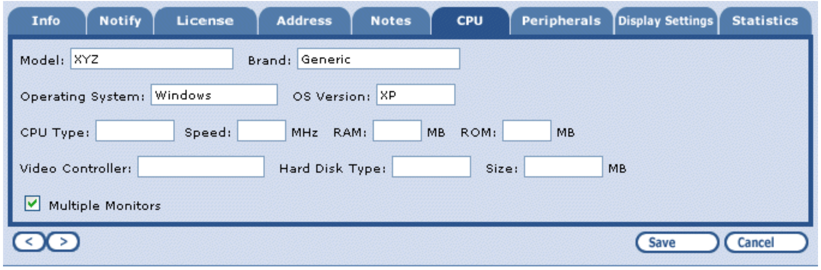


10 Click the **Notes** tab and enter any notes about the user.



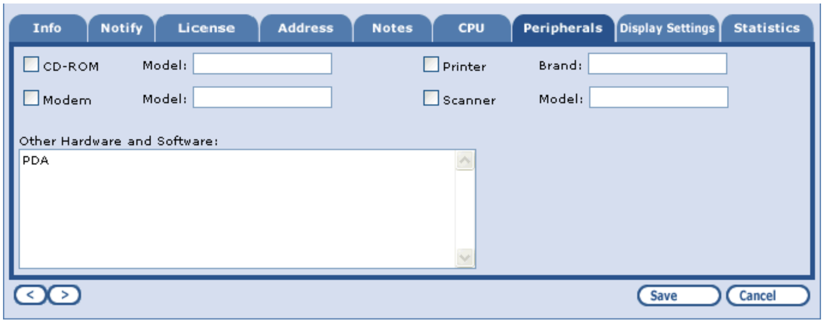
11 Click the **CPU** tab and enter the CPU information.

These fields are optional but you should enter as much information as possible.



12 Click the **Peripherals** tab and enter the peripherals information.

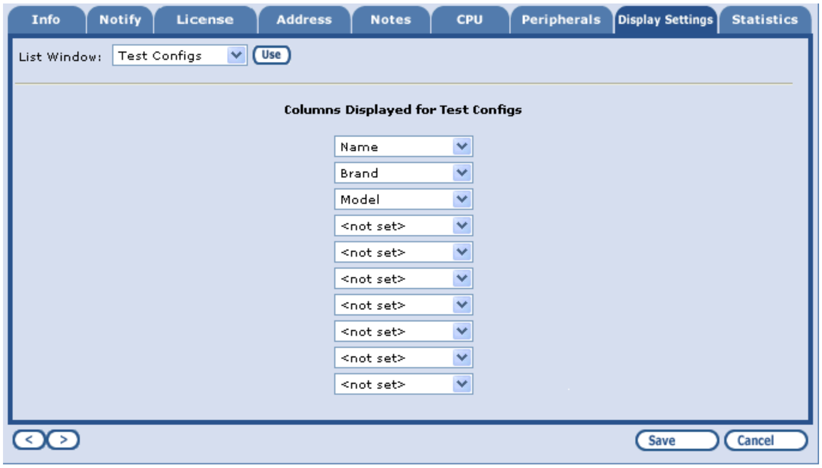
These fields are optional but you should enter as much information as possible.



13 Click the **Display Settings** tab to select the information you want to display on the list windows.

- Select a **Filter** to automatically filter the Defects list window. Performance can be negatively affected when projects contain a large number of records. Filtering the Defects list window ensures the Defects list window is populated as quickly as possible.

- Select a **List Window** to limit which columns display. Select the columns you want to include and click **Add**. To reorder the columns, select the column and click **Up** or **Down**.



Note: If your browser does not support JavaScript click **Use** to refresh the screen.

14 Skip the **Statistics** tab.

This read-only tab contains user statistical information.

15 When you finish entering the user information, click **Save**.

The user is added to the project.

Configuring user notification rules

Email notifications can be configured for each state defined for defects. Notifications, which are not the same as assignments, simply inform a user of the event change. Notification rules are based on actions and administrator-defined state changes. The notification rules are run to determine if an email should be sent when a defect moves into a corresponding state.

Adding notification rules

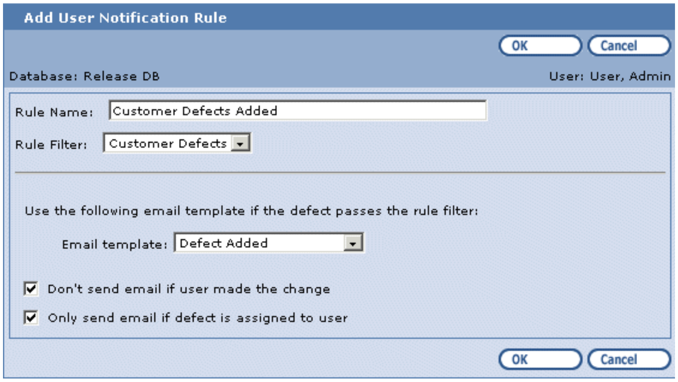
1 Click the **Notify** tab when you are adding or editing a user.

2 Click **Configure Rules**.

The Configure User Notifications Rules dialog box opens.

3 Click **Add**.

The Add Notification Rule dialog box opens.



4 Enter a **Rule Name**.

5 Optionally select a **Rule Filter**.

If a project contains a large number of defects, you may want to filter the defects the rule is applied to. If you need to add filters, see **Creating filters,** page 74.

6 Select an **Email Template**.

Users can view all information in the email. Make sure you want users to view all information in the selected email template.

Note: When email templates are created you can set template access options.These options are ignored when user notification rules are created. Do not select an email template that includes information you do not want the user to have access to.

7 Select **Don't send email if user made the change** if you do not want the user who made the change to receive an email.

8 Select **Only send email if defect is assigned to user** if you only want an email sent to the assigned user.

9 Click **OK**.

You return to the Configure User Notification Rules dialog. Click **Add** to add another rule or click **OK** to return to the User dialog.

Editing user notification rules

You can easily tell how many rules are set up and enabled for an email notification. Edit a user and click the Notify tab. The number of rules and the number of enabled rules are listed after the notification.

1 Click the **Users** tab.

2 Select the user and click **Edit**.

3 Click the **Notify** tab.

4 Click **Configure Rules**.

5 Select the rule and click **Edit**.

The Edit Notification Rule dialog box opens.

6 Make any changes and click **OK**.

Your changes are saved.

Inactivating user notification rules

Instead of deleting a user notification rule, inactivate it. You can then activate the rule to use it again.

1 Click the **Users** tab.

2 Select the user and click **Edit**.

3 Click the **Notify** tab.

4 Click **Configure Rules**.

5 Select the rule and click **Activate/Inactivate**.

The rule is inactivated.

6 Click **OK**.

Note: To activate an inactive rule, select the rule and click **Activate/Inactivate.**

Deleting user notification rules

Make sure you want to delete the rule. You are not prompted to confirm the deletion and this action cannot be undone.

1 Click the **Users** tab.

2 Select the user and click **Edit**.

3 Click the **Notify** tab.

4 Click **Configure Rules**.

5 Select the rule and click **Delete**.

The rule is deleted.

Retrieving global users

Global users, which reside on the license server, can be associated with the current project. After a global user is added to the current project, they are displayed in the Users list window. If the user is assigned a named or floating license, they can also login and work with TestTrack Pro.

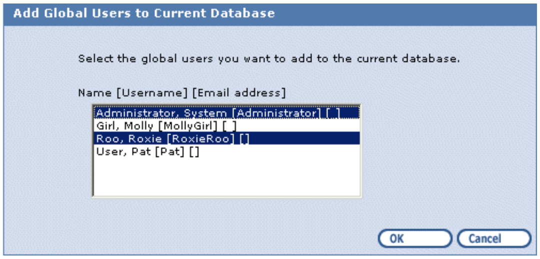
1 Click the **Users** tab.

The Work with Users page opens.

2 Click **Add Global**.

The Add Global Users to Current Project dialog box opens.

3 Select the user you want to add to the current project.



4 Click **OK**.

The global user is added.

Viewing users

1 Click the **Users** tab.

2 Select the user and click **View**.

The read-only View User dialog box opens. Click the tabs to view the user information.

3 Click **Done** when you are finished.

Editing users

1 Click the **Users** tab.

2 Select the user and click **Edit**.

The Edit User dialog box opens.

3 Make any changes and click **Save**.

Your changes are saved.

Duplicating users

If you are adding users with the same basic information, you can save time by duplicating and modifying a user.

1 Click the **Users** tab.

2 Select the user and click **Duplicate**.

The user is duplicated.

3 Modify the user information and save your changes.

Promoting users

Local users can be promoted to global users and made available to all projects. Promoting users moves the shared demographic information from the TestTrack Pro server to the license server.

1 Click the **Users** tab.

2 Select a local user and click **Promote**.

The Promote User dialog box opens.

3 Enter a **Username**.

4 Select a **Promote As** user.

If the local user's first and last name matches an existing global user, that matching user is automatically selected as the **Promote As** user. The user can also be promoted as a new global user.

Note: When a user is promoted, you can either create a new global user or you can use an existing user record on the license server. For example, a global user named Joseph User is created. A local user named Joe User is also created. These are the same user with a different first name. Joe User can be promoted as Joseph User. The local user information is discarded and replaced with the global user information.

5 Click **OK**.

The user is promoted.

Making a customer a user

Use this command if you made a mistake and entered a user as a customer.

1 Click the **Customers** tab.

The Work with Customers page opens.

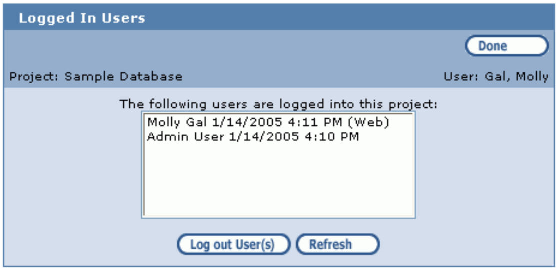
2 Select the customer and click **Make User**.

The customer is converted to a user and added to the Users list. Give the user a username and password and add the user to a security group.

Viewing logged in users

You can view the users who are currently logged in to the project, including the date and time of the user’s last activity.

1 Click the **Configure** tab then click **Logged In Users**.



The Logged In Users dialog box opens.

Note: Click **Refresh** to view an updated list of logged in users.

Logging out users

Users require licenses to run TestTrack Pro. If a user does not exit TestTrack Pro correctly, the license is not released. When this happens, you can free the license by logging out the user. You can also log out users if you need to perform maintenance or make changes that require all users to be logged out.

1 Click the **Configure** tab then click **Logged In Users**.

The Logged In Users dialog box opens.

2 Select the user you want to log out and click **Log out User(s)**.

The user is logged out.

Inactivating users

Inactivate a user to save the historic information. Inactive users cannot login to TestTrack Pro, receive email via TestTrack Pro, or be assigned defects.

1. Click the **Users** tab.
2. Select a user and click **Inactivate**.

   You are prompted to confirm the inactivation.
3. Click **OK**.

   The user is inactive.

Activating users

1. Click the **Users** tab.
2. Select an inactive user and click **Activate**.

   The user is activated.

Deleting users

Deleting a user can result in loss of historic information, such as reported by and defect action information.

1. Click the **Users** tab.
2. Select the user and click **Delete**.

   You are prompted to confirm the deletion.
3. Click **Delete**.

   The user is deleted.

Chapter 18
Managing Customers

Customers—your most valuable asset! Keeping your customers happy can be hard to do. TestTrack Pro helps you easily track customers and the issues they report. When a customer calls, you can quickly provide a status update - keeping everyone happy!

About customers

Customers are generally the end-users of your products or services. Unlike users, customers usually do not have access to the project. TestTrack Pro includes global and local customers. Customers can be created using the license server admin utility or TestTrack Pro. Global customers have access to all projects and can be created using the license server admin utility or in TestTrack Pro. Local customers cannot log in to TestTrack Pro and can only be created in TestTrack Pro. You can add the Type column to the Customers list window to quickly see which customers are local and which customers are global.

Note: **Local customers** are usually created for tracking purposes. **Global customers** have access to projects.

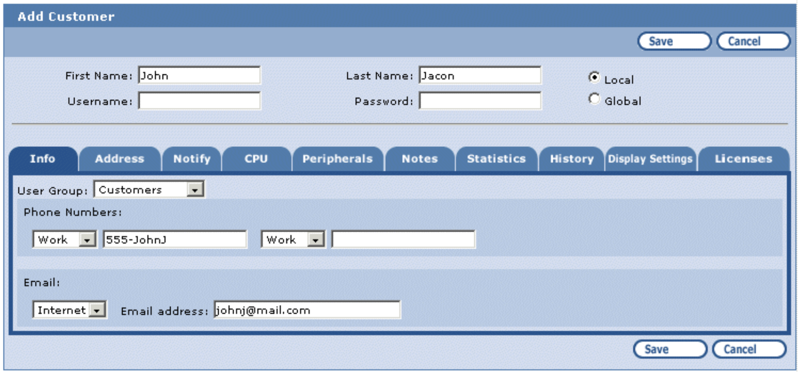
Adding customers

1 Click the **Customers** tab.

The Work with Customers page opens.

2 Click **Add**.

The Add Customer dialog box opens.



3 Enter the customer information.

You must enter a **First Name** and **Last Name**. To enable project access, enter a **Username** and **Password**.

4 Select **Local** to add the customer to the current project.

5 Select **Global** to add the customer to all projects.

This option creates a global customer whose demographic information is stored on the license server.

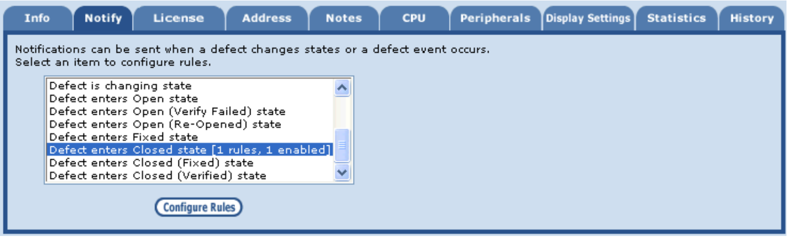
6 Enter the information on the **Info** tab.

- Select a **Security Group** for the customer.

- Enter the customer **Phone Numbers**.
- Select an email type and enter the user **Email Address**.
- Enter and confirm a **Password**. Customers can change their passwords when they login.

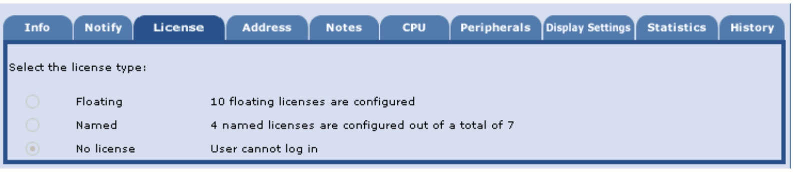
7 Click the **Notify** tab to select email notification options.

Select a rule and click **Configure Rules** to configure the notification rules. For more information see **Configuring user notification rules,** page 181.

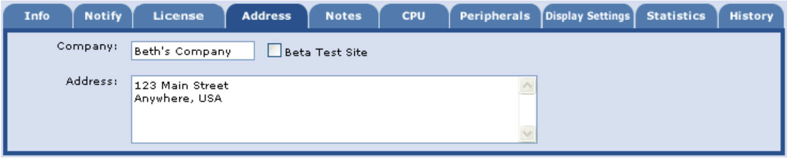


8 Click the **License** tab to select a license for the customer.

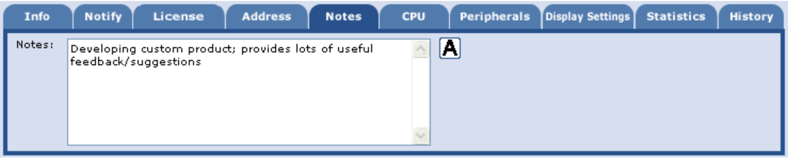
All fields are disabled if you are adding a local customer.



9 Click the **Address** tab and enter the address information.

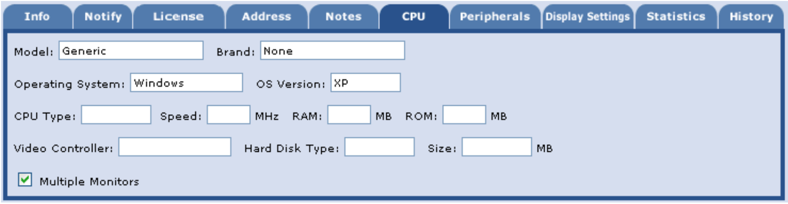


10 Click the **Notes** tab and enter any notes.



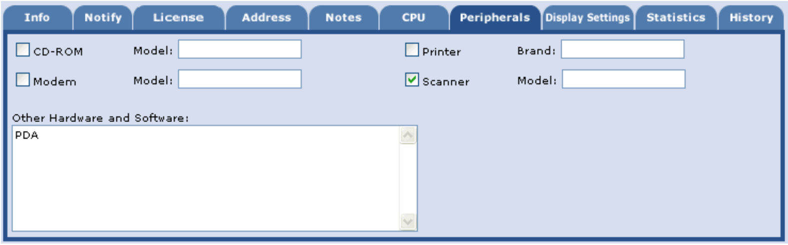
11 Click the **CPU** tab and enter the CPU information.

These fields are optional but you should enter as much information as possible.



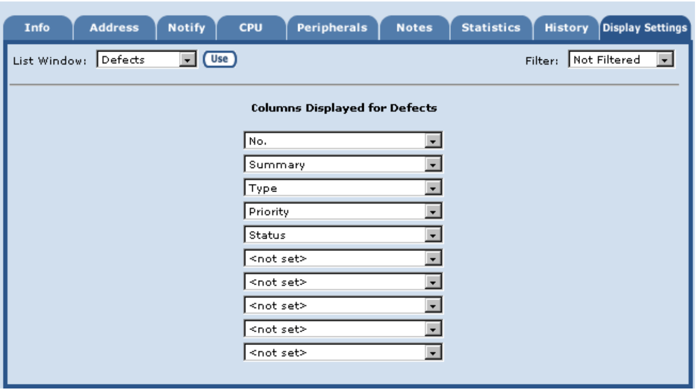
12 Click the **Peripherals** tab and enter the peripherals information.

These fields are optional but you should enter as much information as possible.



13 Click the **Display Settings** tab to select the information you want to display on the list windows.

- Select a **Filter** to automatically filter the Defects list window. Performance can be negatively affected when projects contain a large number of records. Filtering the Defects list window ensures the window is populated as quickly as possible.
- Select a **List Window** then select which columns display from the **Columns Displayed for** menu.



Note: If your browser does not support JavaScript click **Use** to refresh the screen.

14 Skip the **Statistics** tab. This read-only tab contains customer statistical information.

15 Skip the **History** tab. This read-only tab contains information about defects the customer reported.

16 Click **Save** when you finish entering the customer information.

The customer is added.

Retrieving global customers

Global customers, which reside on the license server, can be retrieved for use with the current project.

1 Click the **Customers** tab.

The Work with Customers page opens.

2 Click **Retrieve Global**.

The Retrieve Global Users dialog box opens.

3 Select the customers you want to retrieve.

4 Click **OK**.

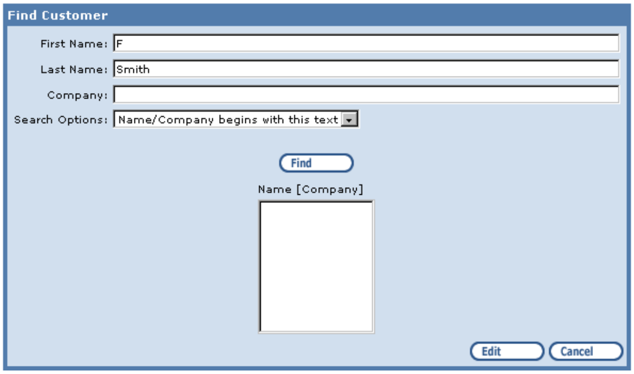
The customers are added to the current project.

Searching for customers

Searching provides an easy way to find customers.

1 Click the **Search** command button on the Customers list window.

The Find Customer dialog box opens.



2 Enter the search criteria. Leave a field blank if you do not want to include it in the search.

Enter full or partial first name, last name, and company information.

3 Select a **Search Option**.

- **Name/Company begins with this text** looks for values beginning with the entered text.
- **Name/Company contains this text** looks for values containing the entered text.

4 Click **Find**.

Customers that match the search criteria are displayed in alphabetical order.

Viewing customers

1 Click the **Customers** tab.

2 Select the customer and click **View**.

The read-only View Customer dialog box opens. Click the tabs to view the customer information.

3 Click **Done** when you are finished.

Editing customers

1 Click the **Customers** tab.

2 Select the customer and click **Edit**.

The Edit Customer dialog box opens.

3 Make any changes and click **Save**.

Your changes are saved.

Duplicating customers

If you are adding customers with similar information you can save time by duplicating existing customers.

1 Click the **Customers** tab.

2 Select the customer and click **Duplicate**.

The customer(s) is duplicated.

Modify the customer information and save your changes.

Promoting customers

Local customers can be promoted to global customers and made available to all projects. Promoting customers moves the shared demographic information from the TestTrack Pro server to the license server. When a customer is promoted, you can either create a new global customer or you can use an existing customer record on the license server.

1 Click the **Customers** tab.

2 Select the customer and click **Promote**.

The Promote Customer dialog box opens.

3 Enter a **Username**.

4 Select a **Promote As** customer.

If the local customer's first and last name matches an existing global customer, that matching customer is automatically selected as the **Promote As** customer. The customer can also be promoted as a new global customer.

Note: When a customer is promoted you can either create a new global customer or you can use an existing customer record on the license server. For example, a global customer named Anna Customer is created. A local customer named AnnaV Customer is also created. These are the same customer with a different first name. AnnaV Customer can be promoted as Anna Customer. The local customer information is discarded and replaced with the global customer information.

5 Click **OK**.

The customer is promoted.

Making a user a customer

Use this command if you made a mistake and entered a customer as a user.

1 Click the **Users** tab.

2 Select the user and click **Make Customer**.

The user is converted to a customer and added to the customers list.

Deleting customers

Deleting a customer can result in loss of historic information, such as reported by and defect action information.

1 Click the **Customers** tab.

2 Select the customer and click **Delete**.

You are prompted to confirm the deletion.

3 Click **Delete**.

The customer is deleted.

Chapter 19
Importing and Exporting Files

Save time…and learn how to import or export record information. TestTrack Pro lets you easily import or export data using XML or text files.

About XML import/export

XML import/export includes the following advantages:

- You do not need to match fields when importing or exporting records.
- You can import and/or export multiple Reported by records.
- You can import and/or export multiples of the same defect actions.
- You can import and/or export more than one record type. For example, you can import/export defects and users in a single file.
- You can import and/or export file attachments associated with defects.

Admin: Import/export security access should be limited to administrative security groups. The misuse of this import feature can result in a significant number of unwanted records in your project.

The import/export command does not enforce other command-level or field-level security options. For example, if users have export security access they can access security group information even if they do not have access to view security groups. Regular, non-administrative users should not be given security access to the import/export commands.

Exporting XML files

You can export defects (including file attachments), users, customers, and test configs to an XML file.

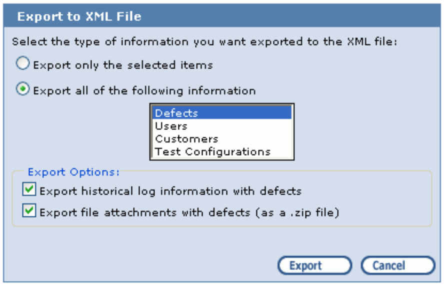
1 Click the tab corresponding to the types of records you want to export.

For example, click the **Defects** tab to export defect records.

2 Select the records you want to export.

3 Click **XML Export**.

The Export to XML File dialog box opens.



4 Select the type of information you want to export.

Note: To export more than defects, **Ctrl+click** each record type. For example, **Ctrl+click** Users and Test Configurations to export this type of information.

5 Select the export options if you are exporting defects.

- Select **Export historical log information with defects** to export a historical account of changes made to each exported defect.
- Select **Export file attachments with defects** to include file attachments associated with exported defects. Defects and file attachments are exported to a ZIP file.

6 Click **Export**.

The File Download box opens.

7 Click **Save**.

The Save As dialog box opens.

8 Enter a filename and choose the location where you want to save the file.

9 Click **Save**.

The XML or ZIP file is saved.

Calculated defect fields, which refer to the status and assigned to fields, can be exported but not imported. Calculated fields are exported to allow you to use the data with a third-party application. User statistical data, which refers to the defects found and defects assigned fields, can be exported but not imported. Usernames and passwords are both exported. Usernames are exported in plain text; passwords are always exported as encrypted text.

Importing XML files

Use XML to quickly import a large amount of data. Email notifications are not sent when you import files; the volume of email messages generated could cause some email servers to crash.

1 Click **XML Import** on the Defects, Customers, Security Groups, or Test Configs tab.

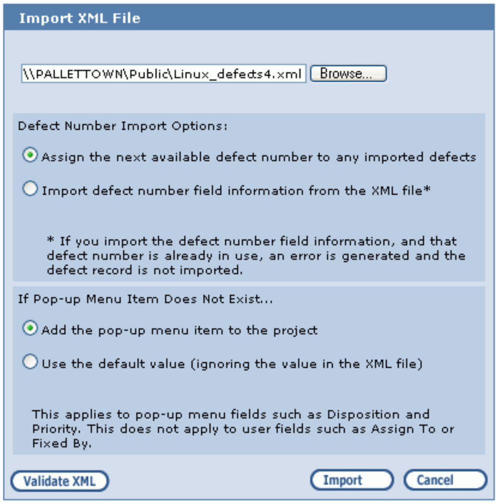
The Import XML dialog box opens.

2 Click **Browse** to select a file.

The Choose File dialog box opens.

3 Select the file and click **Open**.

You return to the Import XML dialog.



4 Select the **Defect Number Import** options.

- **Assign the next available defect number** automatically assigns the next available defect number for each defect being imported.
- **Import defect number field information** imports defect number information from the XML file. If the defect number already exists, an error will be generated and the defect record will not be imported.

Note: These options may be disabled depending on your project options.

5 Select the **Pop-up Menu Item** options.

These options apply to pop-up menu fields such as **Disposition** and **Priority** and do not apply to user fields.

- **Add the pop-up menu item to the project** automatically adds the pop-up menu item to the project.
- **Use the default value** uses the default value and ignores any value in the imported XML file.

6 Optionally click **Validate XML File** to validate the file.

If you import a file that has problems, some data will be imported and some will not be imported. It is easier to resolve the problem(s) in the XML file before importing than to clean up data in the TestTrack Pro project.

7 The XML Import Validation Message dialog box opens, showing the results of the validation. If the XML format is **invalid** an error will be reported.

8 Click **OK** to return to the Import XML dialog.

9 Click **Import**.

The file is imported.

When a user field (such as **Found By** or **Fixed By**) is imported, TestTrack Pro tries to match the first name and last name with an existing user or customer. If an exact match is not found, the user/customer is created.

A defect's historical data is not imported. The historical data fields are system-generated. The **created by** and **modified by** fields are populated with the currently logged in user's name. The **date created** and **date last modified** fields are populated with the current date and time. The **creation method** field is populated with XML file import.

When importing, the password field can be either encrypted or in plain text. If TestTrack Pro generated the XML file, the password is encrypted. If a third-party XML file is imported, the password is in plain text.

XML import/export notes

- If you manually generate XML files or use a third-party application, you can import these XML files into TestTrack Pro. Refer to the **TestTrackData.dtd** file for proper formatting of your XML file.
- Do not modify the TestTrackData.dtd file. Modifying this file may result in validation errors or errors importing XML data.
- TestTrack Pro does not support namespaces in XML files that are being imported.
- Elements that you need to set to **<"not set">** should be left empty.
- If you receive a warning message, the record was imported but some of the information could not be imported. Following are examples of warning messages: Could not find match for custom field (applies only to defects); Could not find match for pop-up menu item value; Could not generate custom field value; A default value will be used instead of the specified value.
- If you receive an error message, the record was not imported. Following are examples of error messages: Defect number already exists (applies only to defects and only if using the import defect number field information option); Name already exists (applies only to users, customers, or test configs); Username already exists (applies only to users or customers); Two defects with same defect number in XML file (applies only to defects and only if using the import defect number field information); Two entries with same name in XML file (applies only to users, customers, or test configs); Two entries with same username in XML file (applies only to users or customers).

- Control characters cannot be imported into TestTrack Pro and will be removed when exporting text fields. This includes the following:

Hex Value	Explanation
0x01	Start of Heading
0x02	Start of Text
0x03	End of Text
0x04	End of Transmission
0x05	Enquiry
0x06	Acknowledge
0x07	Bell
0x08	Backspace
0x0B	Vertical Tabulation
0x0C	Form Feed
0x0E	Shift Out
0x0F	Shift In
0x10	Data Link Escape
0x11	Device Control One
0x12	Device Control Two
0x13	Device Control Three
0x14	Device Control Four
0x15	Negative Acknowledge
0x16	Synchronous Idle
0x17	End of Transmission Block
0x18	Cancel
0x19	End of Medium

Note: Due to XML specifications, you cannot export an item with a string field that contains control character. There is no way to escape this type of character data.

Sample XML

The first three lines of every file TestTrack Pro generates when exporting to XML are the same. Following is a sample from a TestTrack Pro XML document:

```
<?xml version="1.0" encoding="iso-8859-1" 8 standalone="no"?>
<!DOCTYPE TestTrackData SYSTEM 8 "TestTrackData.dtd">
<TestTrackData>
<! - -elements - - >
</TestTrackData>
```

The document begins with a processing instruction. This declaration indicates the document conforms to version 1.0 of the XML standard. It also indicates the encoding character set and informs the program that the TestTrackData.dtd file is needed to correctly interpret the document.

The second line indicates the root element of the document, as well as the DTD that validates each of the document elements inside the root element. The root element, which is the outermost element in the document the DTD applies to, denotes the document's starting and ending points. In this example, the <TestTrackData> element is the root element of the document. The system keyword indicates the document DTD resides in a separate local file named TestTrackData.dtd.

About SoloBug

SoloBug is a stand-alone bug reporter that eliminates data entry of bug reports and feature requests. Users and customers can submit bug reports and feature requests directly to you. SoloBug also ensures your bug reporting terminology is used, captures personal information and computer information, and lets customers and users include file attachments with bug reports or feature requests.

What are SoloBug files?

SoloBug files contain a single bug report or feature request. The SoloBug file is emailed to an address you specify and can be imported into any TestTrack Pro project. A SoloBug file contains:

- The customer's or user's personal and computer information.
- A description of the problem or feature request.
- Any additional data or files attached to the SoloBug file.

Distributing SoloBug

You can freely distribute SoloBug to customers, users, and beta sites. Refer to the SoloBug license included with TestTrack Pro for rules governing distribution of SoloBug applications. SoloBug is available for Windows, Macintosh, and the Palm OS.

SoloBug comes with a user guide you can edit and distribute. Every topic in the guide is included in the online Help so you do not need to distribute the hard copy with SoloBug. You may want to customize the guide to include such things as your company's name, email addresses or URLs.

Importing SoloBug files

1. Click the **Defects** tab.

   The Work with Defects page opens.

2. Click **SoloBug Import**.

   The SoloBug Import dialog box opens.

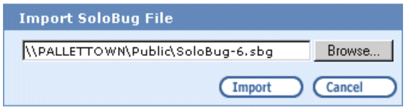
3. Click **Browse** to select the SoloBug file.

   The Choose file dialog box opens.

4. Select the SoloBug file and click **Open**.

5. You return to the SoloBug Import dialog.

   It is populated with the selected file information.



6. Click **Import**.

   The file is imported.

7. Click **Cancel** when you finish importing SoloBug files.

   You return to the Work with Defects page. The SoloBug file is added to the end of the defect list. A new defect icon appears next to it.

Importing Mac SoloBug files

Mac SoloBug files are saved as mime type application/x-macbinarya. Before you import SoloBug files using Internet Explorer (IE) for Mac you need to configure File Helpers to recognize the files.

1. In Internet Explorer, choose **Edit > Preferences**.

2. Click **File Helpers** in the Receiving Files list.

3. Click **Add**.

   The Edit File Helper dialog box opens.

4. Enter a description, such as SoloBug, and set to:

   Extension: **sbg**

   MIME type: **application/octet-stream**

5 In the File Type section browse to the SoloBug OS X file and enter **.sbg** as the file type.

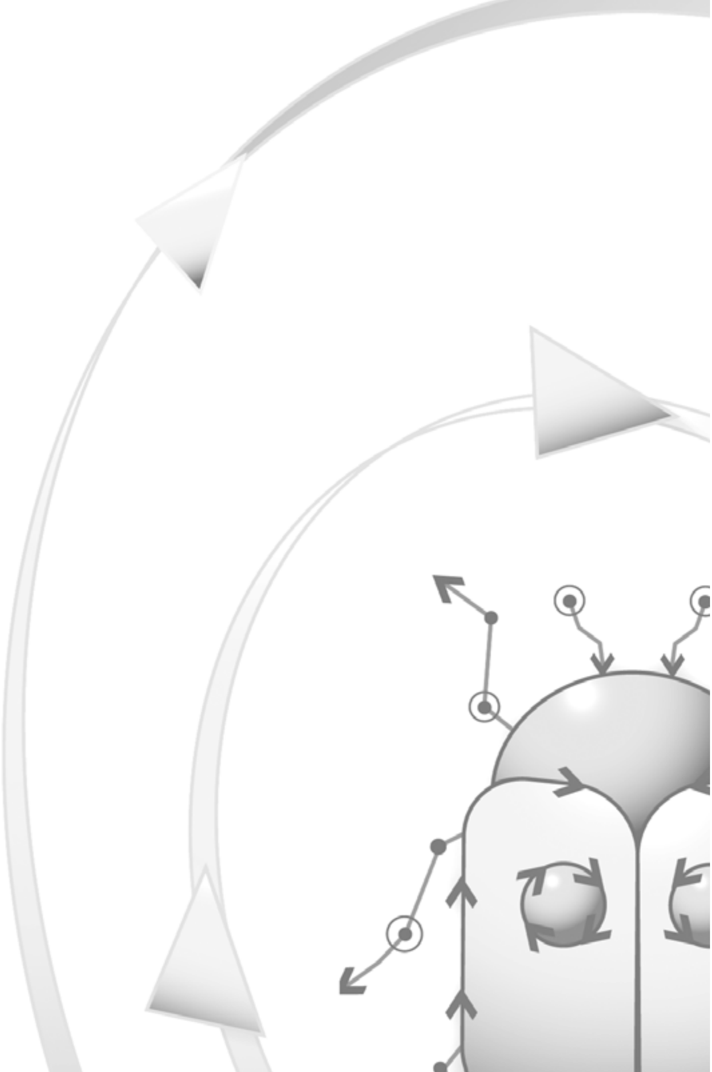
6 Click **OK**, and then click **OK** again.

The changes are saved.

Note: You should also make sure users save SoloBug files with the .sbg file extension.

Chapter 20
Customizing Email Templates

Give your users the information they need! Customize email templates to keep your users and customers up-to-date!



About email templates

Email templates are used to send messages to users who request notifications and to send confirmations to users/customers who submit items via email. Notifications and confirmations keep users informed and up-to-date.

TestTrack Pro includes standard email templates that can be used as is or customized. You can also create new email templates to meet your company's business needs. Use field codes, which are sequences of characters and letters that TestTrack Pro replaces with corresponding data from the project, and text to customize templates.

Note: **Appendix A, "Field Codes Reference"** page 213 includes a complete list of field codes supported by TestTrack Pro.

About email notification hyperlinks

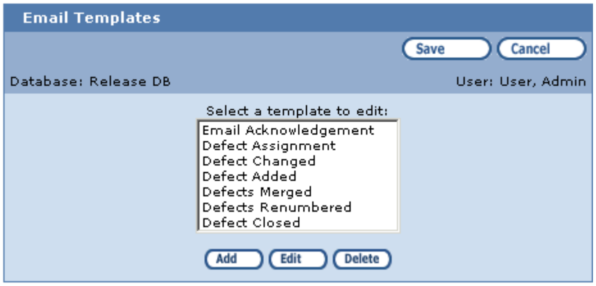
Email notification hyperlinks can be added to any email template used with system and user notifications. These clickable hyperlinks launch TestTrack Pro Web and display the defect that caused the notification. When the user clicks the link in the email, they are either automatically logged in to TestTrack Pro Web or prompted to log in. Because some administrators consider this feature to increase security risks, various options are available to set the necessary security for your environment. For more information see **Setting send mail options,** page 109.

Adding email templates

Note: Any field added to an email template can be viewed by all email recipients, regardless of field level security settings.

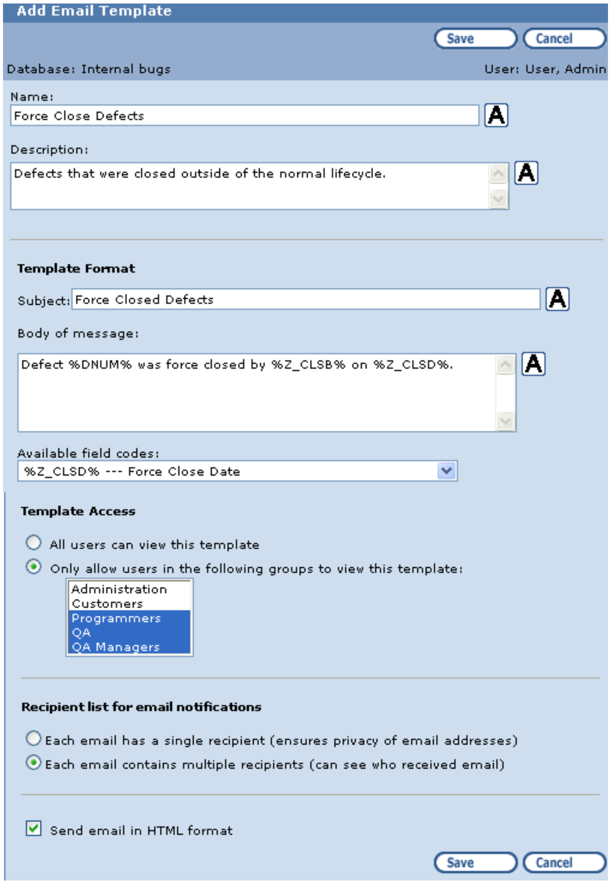
1. Click the **Configure** tab.
2. Click **Email Templates**.

   The Email Templates dialog box opens.



3 Click **Add**.

The Add Email Template dialog box opens.



4 Enter a **Name** and **Description**.

5 Enter a **Subject**.

You can enter text and use field codes to customize the subject line. For example, to use the defect number in the subject field enter **%DNUM%**.

6 Enter the **message body**.

You can enter text and use field codes to customize the template. When you customize a template, any spaces and lines that you add are saved with the template. As you type, text is automatically wrapped to the next line. When an email message notification is sent, all field codes are automatically replaced with the corresponding data from the TestTrack Pro project.

7 Select a **Template Access** option.

- Select All **users can view this template** if you do not want to restrict users from receiving the template.
- Select **Only allow users in the following groups to view this template** then choose security groups to restrict the template to specific users. This option provides template security because the email is only sent to users in the selected groups.

8 Select a **Recipient List** option.

9 Click **OK**.

The email template is added.

Editing email templates

1 Click the **Configure** tab.

2 Click **Email Templates**.

3 Select an email template and click **Edit**.

The Edit Email Templates dialog box opens.

4 Make any changes.

5 Click **OK**.

The changes are saved.

Deleting email templates

1 Click the **Configure** tab.

2 Click **Email Templates**.

3 Select an email template and click **Delete**.

The template is deleted.

Adding email notification hyperlinks

Email notification hyperlinks create clickable URLs that take users directly to the defect that caused the notification. For example, when a user receives a defect assignment message they can click the hyperlink and go directly to the defect assigned to them. Make sure email notification hyperlinks are enabled and set up. For more information see **Setting send mail options,** page 109.

Note: Disable the **Allow Access via Email Notification Hyperlink** command security setting if you do not want a security group to have access to email notification hyperlinks. Hyperlinks are only added to email notifications for users in security groups with this option enabled.

1 Click the **Configure** tab.

2 Click **Email Templates**.

3 Select the email template you want to add the hyperlink to and click **Edit**.

You can also add email notification hyperlinks when you add email templates.

4 Add the **%NURL%** field code and any text to the body of the message.

When the template is generated the field code is replaced with a hyperlink to the defect that causes the notification.

Note: If the **Send email in HTML format** is enabled for the email template, you need to use href tags with the field code. If you send a plain text email with a URL link in it, most email clients make the link clickable. If you send an html email with a URL link in it, use href tags to make the link clickable (e.g., <ahref="%NURL%"> Text <\a>).

5 Click **OK**.

The changes are saved.

Managing email notification hyperlinks

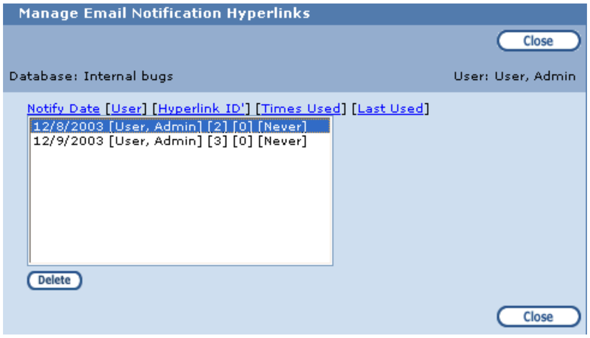
Note: You may not have access to this admin-level command.

You can view and delete active hyperlinks.

1 Click the **Configure** tab.

2 Click **Email Notification Hyperlinks**.

The Manage Email Notification Hyperlinks dialog box opens.



3 All active hyperlinks are displayed.

Click a column heading to sort the hyperlinks. You can also delete hyperlinks.

4 Select a hyperlink and click **Delete** to delete it.

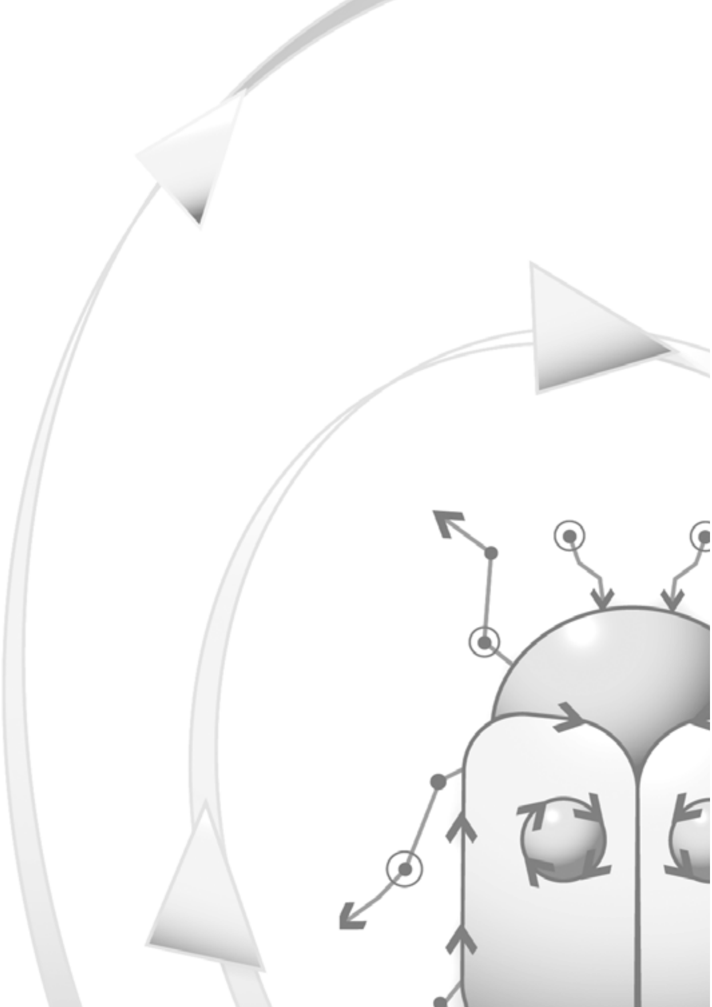
You are prompted to confirm the deletion.

5 Click **OK**.

The hyperlink is deleted. Users can no longer access the defect via the hyperlink.

Appendix A
Field Codes Reference

This appendix includes a list of field codes that can be used with email notification templates and ad hoc reporting. Field codes return the corresponding information from the project. For example, the sequence **%DATS%** is replaced with the current date format. The sequence **%DNUM%** is replaced with the defect number.



About field codes

Field codes are used to build customized email messages that provide information specific to the defect that triggered the notification or, in the case of an email acknowledgment, was imported via email. If you are creating an ad hoc report, you can use field codes to include specific project information for the report. You can also use field codes to build personalized SoloSubmit Web pages that provide information specific to your company and your customers' use of SoloSubmit.

Field codes

Field Code	Description
%CHNG%	Changes to the defect (only applies to Defect Changed template)
%CREB%	User who was logged in when the defect was created
%CRED%	Defect creation date
%CREL%	Defect creation method (e.g., SoloBug import)
%CUEM%	Currently logged in user's email address (does not apply to Email Acknowledgement template)
%CUSR%	Currently logged in user's first and last name (does not apply to Email Acknowledgement template)
%DATL%	Current date in long date format (mmmm, dd yyyy)
%DATS%	Current date in short date format (mm/dd/yy)
%DESC%	Defect description
%DISP%	Defect disposition
%DNUM%	Defect number
%DOCA%	Defect fix affects documentation
%ENTB%	User who entered the defect
%ENTD%	Date defect was entered
%FILE%	Project file name
%FNDB%	User who found the defect
%FNDD%	Date defect was found
%FNDV%	Version defect was found in
%MODB%	User who last modified the defect
%MODD%	Date defect was last modified

Field Code	Description
%NUMR%	Number of users and customers reporting the defect
%NURL%	Email notification hyperlink
%PRIO%	Defect priority
%PRNM%	Project Name field in the Project Info dialog.
%PROD%	Product that contains the defect.
%REFR%	Defect reference field
%REPR%	Defect reproducible status
%RESO%	Defect fix resolution
%SEQN%	Defect sequence number (applies only to Email Acknowledgement template)
%SEVR%	Defect severity
%STAT%	Defect status
%STEP%	Steps to reproduce the defect
%SUMM%	Defect summary
%TCFG%	Test configuration name
%TPLA%	Defect fix affects the test plan
%TYPE%	Defect type
%WORK%	Defect workaround
%WRKH%	Defect has workaround
%Z_...%	Custom field codes

Label field codes

TestTrack Pro lets you rename defect field labels. The renamed field labels have corresponding field codes. These field codes return the field label, not the field data.

Field Code	Field Name
%DFUS_L%	Defect - upper case, singular
%DFUP_L%	Defects - upper case, plural
%DFUM_L%	Defect(s) - upper case, singular/plural
%DFLS_L%	defect - lower case, singular
%DFLP_L%	defects - lower case, plural
%DFLM_L%	defect(s) - lower case, singular/plural
%SUMM_L%	Summary Type
%TYPE_L%	Type
%DISP_L%	Disposition
%PRIO_L%	Priority
%PROD_L%	Product
%COMP_L%	Component
%REFR_L%	Reference
%SEVR_L%	Severity
%ENTB_L%	Entered by
%ENTD_L%	Date Entered
%STAT_L%	Status
%FNDB_L%	Found by
%FNDD_L%	Date Found
%DATE_L%	Date (short form of Date Found)
%FNDV_L%	Version Found
%VERS_L%	Version (short form of Version Found)
%DESC_L%	Description
%REPR_L%	Reproduced

Field Code	Field Name
%STEP_L%	Steps to Reproduce
%TCFG_L%	Computer Config
%HWSW_L%	Other Hardware and Software
%CFTB_L%	Custom Field tab

Remember, renamed label field codes only return the label name and not the field data. For example, you rename Reference to Case Number. You customize an email template to notify managers of a problem, including the case number in the subject line. In the subject line of the template, enter **%REFR_L%**: **%REFR%**. When a manager is sent an email, the subject line includes: Case Number (label): case number (data).

Field code notes

- All dates use system-defined date formats. TestTrack Pro uses the short date style of the Regional Settings Properties defined in the Windows operating system.
- To include a percent sign (%) in the body of a message, include two percent signs in a row (e.g., "%%").
- Email notifications support field codes in the email subject line. Therefore, you can include personalized subjects such as "Re:%SUMM%" which expand to include the defect's summary field in the email's subject.

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