SpiraTeam® User Manual

Version 3.0.0

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Contents

1. Introduction

SpiraTeam® is an integrated Application Lifecycle Management (ALM) system that manages your project's requirements, releases, test cases, issues and tasks in one unified environment:

SpiraTeam® contains all of the features provided by SpiraTest® - our highly acclaimed quality assurance system and SpiraPlan® - our agile-enabled project management solution. With integrated customizable dashboards of key project information, SpiraTeam® allows you to take control of your entire project lifecycle and synchronize the hitherto separate worlds of development and testing.

This user manual outlines the features and functionality available in SpiraTeam®, and demonstrates how to use the application for managing the quality assurance and project management processes on a typical project.

1.1. Quality Assurance

Quality Assurance is a key component of the Software Development Life-Cycle (SDLC), which needs to be integrated into the planning and management of a program or project from its inception. Too often though, QA is implemented as *Quality Control* - whereby testing that the required functionality works as expected, is performed at the end, when it is most costly to make corrections and changes.

To manage QA across a project from day one, it is imperative that the original requirements are documented together with the use-cases that validate the desired functionality. These use-cases then form the basis of the test scripts that can be executed to validate that the functionality has been correctly built, and that the requirements have been satisfied. During the execution of these test scripts, failures may occur, which are recorded as *incidents* - either to be fixed or documented depending on the severity.

Typically, these activities require people to use at least three different types of software:

- Requirements Management
- Test Script Management
- Defect / Issue / Bug Tracking

However, this stove-piped approach has many limitations and drawbacks, most importantly the fact that there is no *traceability* between the different artifacts. How can the project manager know that all the requirements have been tested? Conversely, how can the developer know which test script was responsible for a recorded bug – needed to accurately reproduce the issue?

1.2. Project Management

As described in the Agile Manifesto, traditional waterfall software methodologies and lifecycles have failed to delivery projects on-time and on-budget. In addition, many systems built this way will fail to provide the expected business value as there is no ability to quickly refine the requirements as the project progresses.

Consequently software development has been transformed with these new ideas and concepts, with new methodologies such as Extreme Programming (XP), Scrum, DSDM and AUP becoming common. However the traditional tools of project management - requirements specifications, high level project plans, GANTT charts, white-board schedules and top-down task management - are too cumbersome and not well suited.

SpiraTeam® provides a complete Agile Project Management System in one package, that can manages your project's requirements, releases, iterations, tasks and issues in one environment, fully synchronized.

2. Functionality Overview

This section outlines the functionality provided by SpiraTeam® in the areas of requirements management, test case management, release planning, iteration planning, incident tracking, task management and project / user management.

2.1. Requirements Management

SpiraTeam® provides the ability to create, edit and delete project scope / requirements in a hierarchical organization that resembles a typical scope matrix. Each requirement is associated with a particular importance level (ranging from critical to low) and a status identifier that designates where the requirement is in the development lifecycle (requested, planned, in-progress and completed). In addition, each requirement is mapped to one or more test cases that can be used to validate that the functionality works as expected. This mapping is called the "Requirement Test Coverage", since the test cases "cover" the requirement so that if all the tests can be executed successfully, then the requirement is validated.

At the same time, from a development perspective, the team begins initial estimation of the lowest-level requirements in the requirements matrix to determine the complexity and associated resourcing. Once the high-level release schedule has been determined, the requirements can then be prioritized and scheduled against the appropriate release according to their business priority.

Once the release is underway, the requirements are further decomposed into their constituent low-level project tasks that can be assigned to the project team. The system will track the progress and revised estimates for the tasks and display them against the requirements so that risks to the schedule can be quickly determined.

2.2. Test Case Management

SpiraTeam® provides the ability to create, edit and delete project test cases that are stored in a hierarchical folder structure that resembles Windows Explorer ®. Each test case consists of a set of test steps that represent the individual actions a user must take to complete the test. These test steps also contain a description of the expected result and any sample data elements that the tester should use when performing the action. When a user executes a test case, the results are stored in a test run that contains the success/failure status of each test step as well as the actual observed result that the tester experienced.

In addition each test case is mapped to one or more requirements that the test is effectively validating, providing the test coverage for the requirement. During the execution of the test case, each failure can be optionally used to record a new incident, which can then be managed in the incident tracking module (see below). This provides complete traceability from a recorded incident to the underlying requirement that was not satisfied.

To streamline the assignment and tracking of multiple test cases, SpiraTeam® allows users to select groups of test cases and arrange them into *test sets*. Each test set can contain test cases from a variety of different folders and can be associated with a specific release of the system being tested.

2.2.1. Test Automation

As well as being able to store and manage manual test cases, SpiraTeam® can be used to manage the scheduling and execution of automated test scripts for a variety of third-party test automation engines. This allows you to centrally plan your automated testing and monitor the results of automated unit, functional and load testing remotely. For example, you could schedule a set of automated functional tests to run on five different machines (each with a different browser/OS combination) at 2:00 AM and have the results be ready for the next morning.

2.3. Release Planning

SpiraTeam® provides the ability to track different versions / releases of the application being tested. Each project in the system can be decomposed into an unlimited number of specific project releases, denoted by name and version number. Requirements and Test Cases developed during the design phase can then be assigned to these different releases. When a tester executes a series of test cases, they are able to choose the version of the project being tested and the resulting test run information is then associated with that release.

From a project planning perspective, the releases are the major milestones in the project, which are further sub-divided into iterations which are separate mini-projects with associated project scope and tasks. The project's requirements are scheduled at a high-level against the releases and the detailed tasks are scheduled against specific iteration within the release.

In addition, all incidents raised during the testing process are associated with this release, allowing the development team to easily determine which version of the project is affected. Finally as the incidents are resolved and verified during the testing phase, the appropriate release can be selected to indicate which release the incident was resolved and/or verified in.

2.4. Iteration Planning

As described in section 2.3, in addition to high-level project releases, SpiraTeam® can also track the individual iterations that comprise a release, giving the project manager the option to manage agile methodology projects within the SpiraTeam® environment. Unlike the release planning stage, where high-level requirements are estimated and scheduled, the iteration planning phase involves assigning each of the tasks in the project backlog against a specific iteration until the available effort in the iteration has been completely allocated.

When you first create iterations, you specify the start and end-dates together with the notional number of project resources assigned to the iteration and any non-working days. SpiraTeam® uses this information to calculate the planned effort available to the iteration, from which it will subtract the estimated task effort values to determine how much effort is available to schedule.

2.5. Incident Tracking

SpiraTeam® provides the ability to create, edit, assign, track, manage and close incidents that are raised during the testing of the software system under development. These incidents can be categorized into bugs, enhancements, issues, training items, limitations, change requests, and risks, and each type has its own specific workflow and business rules. Typically each incident is raised initially as a 'New' item of type 'Incident'. Following the review by the project manager and customer, they are changed to one of the other specific types, given a priority (critical, high, medium or low), and status changed to 'Open'. Once it is assigned to a developer for fixing, it is changed to status 'Assigned'.

The developer now works to correct the incident, after which time its status changes to 'Fixed' or 'Not Reproducible' depending on the actions taken (or not taken). Finally the project manager and customer verify that it has indeed been fixed, and the status is changed to 'Closed'. SpiraTeam® provides robust sorting and filtering of all the incidents in the system, as well as the ability to view the incidents associated with particular test cases and test runs, enabling drill-down from the requirements coverage display, right through to the open incidents that are affecting the requirement in question.

2.6. Task Management

As described above, in addition to storing the requirements for a project, SpiraTeam® includes the capability of drilling each lowest-level requirement down further into a series of work items called 'Tasks'. These tasks are the discrete activities that each member of the development team would need to carry out for the requirement to be fulfilled. Each task can be assigned to an individual user as well as associated with a particular release or iteration. The system can then be used by the project manager to track the completion of the different tasks to determine if the project is on schedule.

2.7. Projects and Users

SpiraTeam® supports the management of an unlimited number of users and projects, which can be administered through the same web interface as the rest of the application. All artifacts (requirements, tests and incidents) are associated with a particular project, and each user of the system can be given a specific role for the particular project. So, a power user of one software project, may be merely an observer of another. That way, a central set of users can be managed across the enterprise, whilst devolving project-level administration to the manager of the project. In addition to these administration functions, each user profile and project has its own personalized dashboard view of all the pertinent and relevant information. This feature reduces the information overload associated with managing such a rich source of project information, and allows a single user or project snapshot to be viewable at all times for rapid decision-making.

2.8. Document Management

SpiraPlan® and SpiraTeam® include an integrated document management collaboration system that can be used to upload, manage and share documents between the different members of the project. This module includes support for uploading files and URLs, versioning of documents, the ability to organize into folders and categorize and search using meta-tags.

2.9. Source Code Tracking

SpiraPlan® and SpiraTeam® provide the ability to browse your source code repository from within the main web application. This is an excellent way for managers and casual users of the project to browse the files and revisions of the software code without needing to install the version control software on their own workstations. In addition for all users, the ability to link source code revisions with SpiraTeam® artifacts provides traceability from requirements, incidents and tasks to the code changes that were made to implement the required feature or fix the identified defect. Should a defect resurface later, you can view the associated source code revisions to determine which changes were made and did they truly correct the defect.

2.10. Miscellaneous

2.10.1. Artifact Relationships

The sections above have outlined the different features and functions available in the system, and have described the various artifacts managed in the system (e.g. projects, users, requirements, tests, etc.). To aid in understanding how the information is related, the following diagrams illustrates the relationships between the different artifacts and entities:

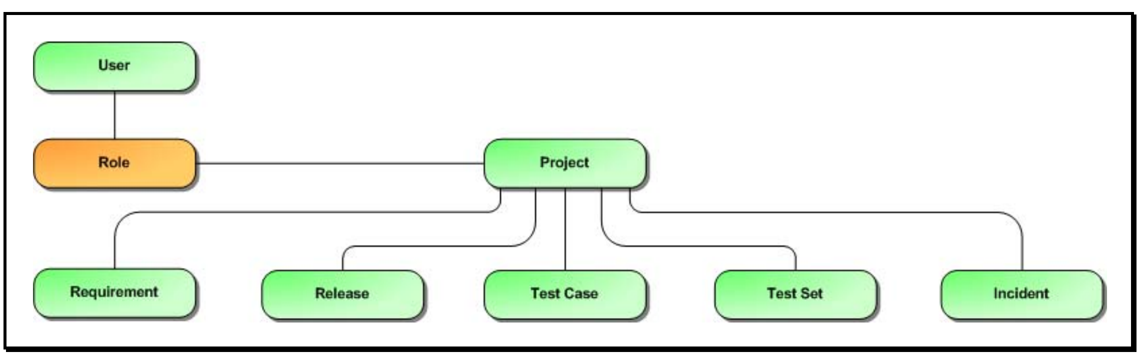


Figure 1: The main entities that comprise a SpiraTest project.

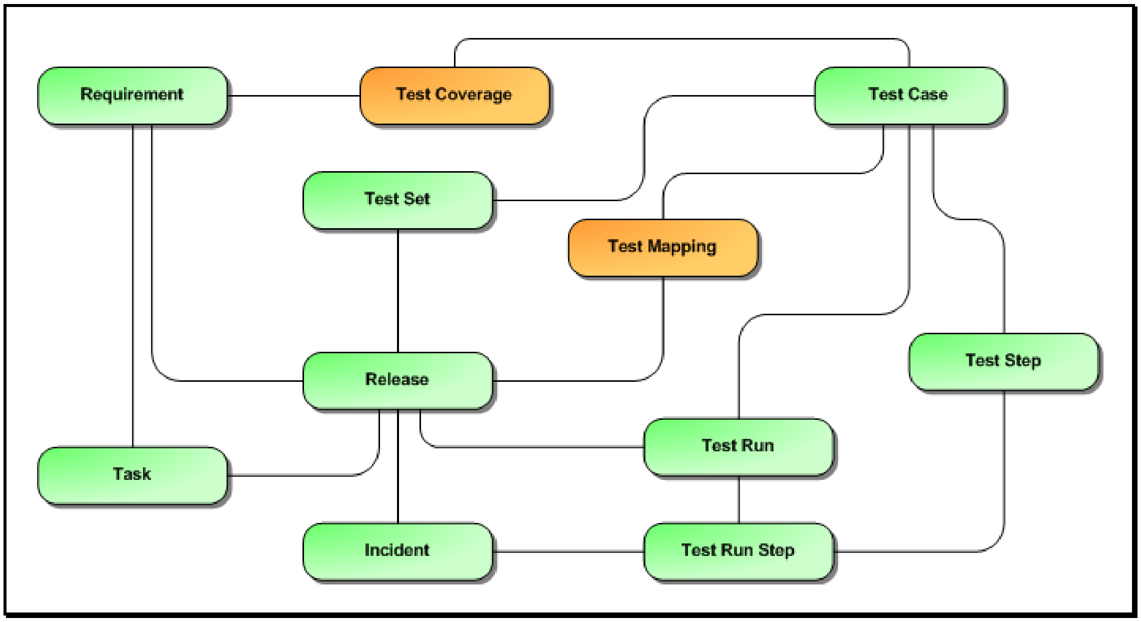


Figure 2: The relationships between the various SpiraTest entities

With these overall concepts in mind, the rest of this help manual will outline the functionality in each of the SpiraTeam® screens, and provide specific information on how to manage each of the artifacts illustrated above. Note that this manual does not explain the Administration-level functionality of the system; for that, please refer to the *SpiraTeam® Administration Guide*.

2.10.2. Artifact Naming Conventions

On various screens in the system, you will see lists of artifacts (requirements, test cases, etc.) together with a unique identification number. In order to make it easier to recognize at a glance which type of artifact the identification number refers to, SpiraTeam® uses a system of two-letter prefixes which help identify the type of artifact being displayed. The current prefixes used by the system are:

Artifact	Prefix	Artifact	Prefix
Project	PR	Project Group	PG
User	US	Incident Type	IT
Requirement	RQ	Incident Priority	IP
Release	RL	Incident Severity	IV
Test Case	TC	Workflow	WK
Test Step	TS	Workflow Transition	WT
Test Run	TR	Custom Property Values	PV
Test Run Step	RS	Project Role	RX
Incident	IN	Task	TK
Incident Status	IS	Test Set	TX
Custom List	CL	Document	DC
Document Type	DT	Document Folder	DF
Automation Host	AH		

In addition, certain artifacts in the system are displayed with an icon that helps distinguish them from each other, and provides additional context on the state of the artifact:

Icon	Artifact Description

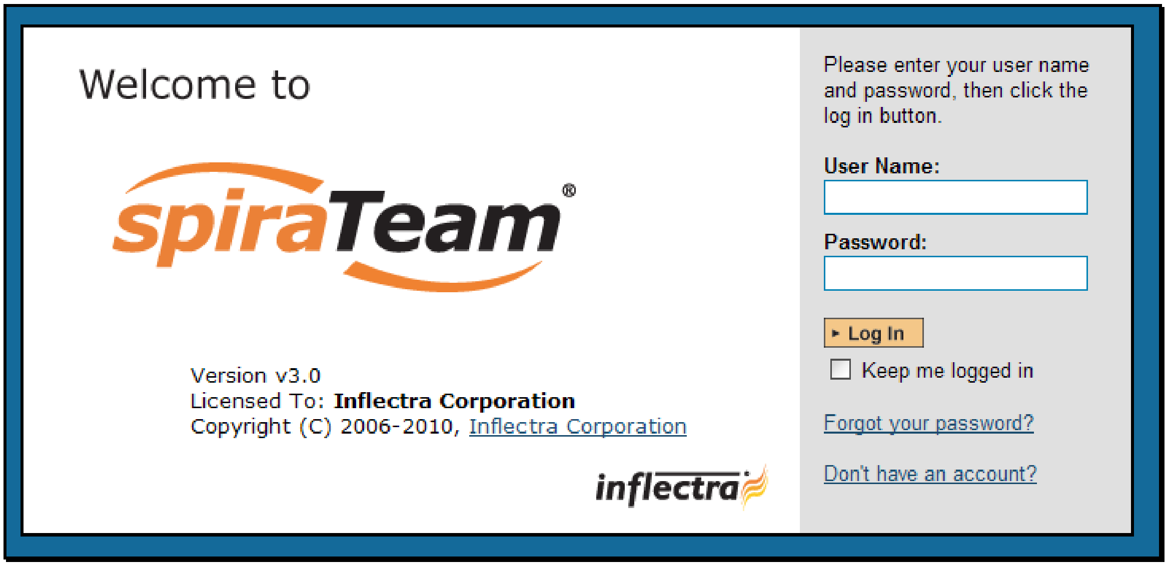
	Summary Requirement
	Detailed Requirement
	Test Folder
	Test Case with Test Steps
	Test Case without Test Steps
	Test Set
	Test Run
	Test Step
	Linked Test Case
	Release
	Iteration / Build
	Task
	Incident
	Source Code Revision
	Project Resource
	Test Automation Host
	Artifact has an Attachment

3. User/Project Management

This section outlines how you can log into SpiraTeam®, view your personalized home-page that lists the key tasks that you need to focus on, and drill-down into each of your assigned projects in a single dashboard view. In addition to your personal homepage, each of your projects has its own dashboard that depicts the overall project health and status in a single comprehensive view.

3.1. Login Screen

Upon entering the SpiraTeam® URL provided by your system administrator into your browser, you will see the following login screen:



You need to enter your given *user-name* and *password* into the system in the appropriate boxes then click the <Log In> button to gain access to the application. Normally you only remain logged in to the application whilst in active use, and you will be asked to log-in again after either closing the browser or 20 minutes of inactivity. To prevent this, and stay logged-in to SpiraTeam® regardless of browser window closing or inactivity, select the "Keep me logged in" check-box before clicking the <Log In> button. Note that this setting is specific to each individual computer you are logging-in from, and that it will be reset when you explicitly log-out with the log-out link (described in more detail in section 3.3).

If for any reason you are unable to login with the provided username/password combination, and error message will be displayed. If you cannot remember the correct log-in information, click on the "Forgot user name / password" link and your password will be emailed to the email address currently on file.

If you don't have a SpiraTeam® account setup, clicking on the "Don't have an account?" link will take you to a form that you need to fill-in, which will be forwarded to the system administrator, who will actually create your account.

In addition, the system will prevent you logging on to the system with the same username *at the same time* on multiple computers. This is to avoid the system getting confused by a user trying to make contradictory actions at the same time. If for any reason you do try and log in to the system when you already have an active session in progress, you will see the following screen:

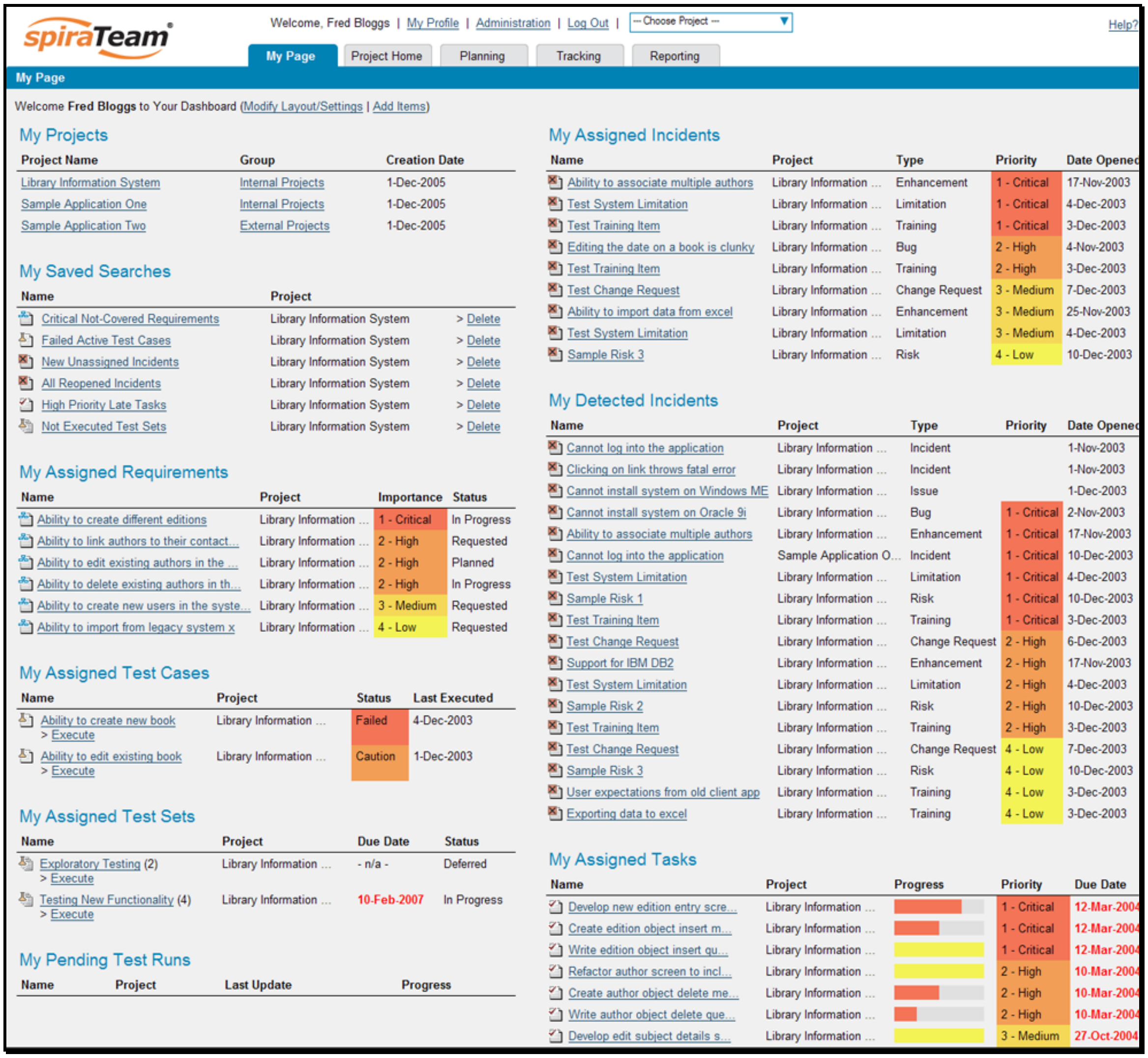
You have two choices: you can either click the "Log Out" link and try logging in as a different user, or if you want to log-off any other active sessions (e.g. you closed the browser and the session is still listed as active), simply click the "Sign Off The Other Locations" link, and you will be logged in to the application.

Since SpiraTeam® is licensed to organizations for a specific number of concurrent users – unless they have purchased an unlimited Enterprise license – only a fixed number of users may be active at the same time. So, for example if an organization has a five (5) concurrent user license and a sixth user tries to log-in, they will be presented with the following screen:

This means that one of the other users who is already logged-in, needs to click the "Log Out" button so that one of the concurrent licenses is freed for your use. If the user has logged out by closing the browser, the system may not have detected the logout. In this case, the other user needs to log back in, and then click the "Log Out" link.

3.2. My Page

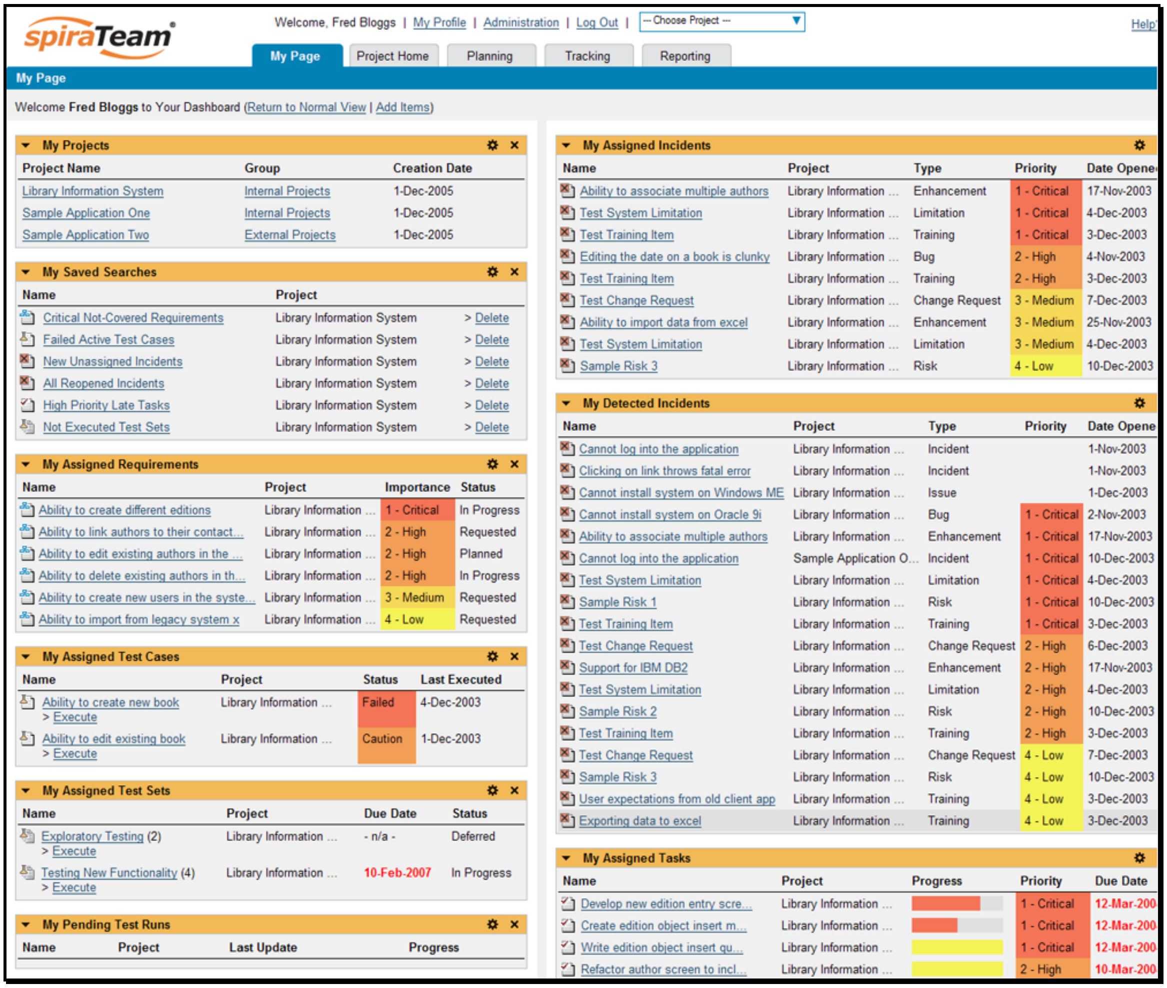
Once you have successfully logged in, you will initially be taken to your personalized home page called “My Page”:



Note that once you have successfully logged-in and chosen a project, SpiraTeam® remembers this selection, and on subsequent log-ins will automatically select that project, and highlight it for you in the “My Projects” list (see 3.2.1 below).

Your homepage contains all the information relevant to you consolidated onto a single page for you to take immediate action. *By default the page lists the information for all projects that you are a member of. However, you can choose to filter by the current project, to get a more focused list.*

Initially the page is loaded in ‘view mode’ which means that the various ‘widgets’ on the page are displayed with minimum visual clutter (no toolbars or control icons) that makes it easy to scan the items on the page and see what work has been assigned. To switch the page to ‘edit mode’, click on “Modify Layout/Settings” hyperlink:



In this mode, each of the 'widgets' displayed on the page can be minimized by clicking on the arrow icon (▼) in the top-left of the window, or closed by clicking-on the cross icon (✖) in the top-right of the window. This allows you to customize your page to reflect the types of information that are relevant. If you have closed a widget that you subsequently decide you want to reopen, you can add them back to the page display by clicking the "Add Items" hyperlink at the top of the page. In addition, the various widgets have a "settings" icon (⚙) that allows you to customize how that widget appears. The settings are specific to each widget and in general allow you to specify how many rows of data are displayed and what columns are displayed.

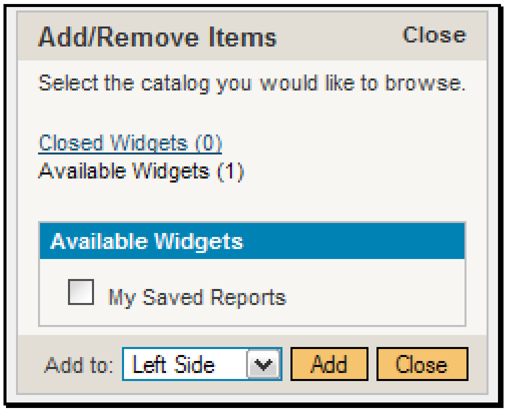
You can move and reposition the various widgets on the dashboard by clicking the mouse on the title bar of the widget you want to move and dragging it to the desired location. This change will be remembered when you next login to the system. Once you have the dashboard configured the way you like it, you can click "Return to Normal View" to switch back to 'view mode'.

When you load your 'My Page' for the first time it will consists of the following main elements:

- My Projects
- My Saved Searches
- My Assigned Requirements
- My Assigned Test Cases
- My Assigned Test Sets
- My Pending Test Runs

- My Assigned Incidents
- My Detected Incidents
- My Assigned Tasks

However these are not the only widgets available. If you click on the "Add/Remove" items hyperlink it will display the list of any additional widgets that are available:



You can add the additional widgets by selecting the appropriate checkbox, choosing the destination location (left side vs. right side) and then click the [Add] button. The additional widgets available in the My Page are:

- My Saved Reports

3.2.1. My Projects

This section lists all the projects you have been given access to, together with the name, description, project group and date of creation. To view the description of the project, simply position the mouse pointer over the link, and a tooltip window will popup containing the description.

When you initially view the page, all of the projects will be shown as links, in normal type, with a gray background. When you click on a project to view, you will be taken to that project's home-page, and that project will be set as the current project. That project will now appear in your home-page in bold-type with a white background (see above screen-shot). To change the currently selected project, simply click on the link of another project name. You can always change your current project by clicking on the drop-down-list of projects displayed on the global navigation bar to the right of the "Log Out" link.

If you are a project group member, the name of the project group will also be displayed as a hyperlink. In which case, clicking on the project group hyperlink will take you to the Project Group dashboard (see section 3.5).

3.2.2. My Saved Searches

This section lists any filters/searches you have saved from the various artifact list screens throughout the application. This allows you to store specific combinations of searches that you need to perform on a regular basis (e.g. display all newly logged incidents, display all requirements that are completed but have no test coverage).

The name of the saved search is displayed along with an icon that depicts which artifact it's for and the project it refers to. Clicking on the name of the saved search will take you to the appropriate screen in the project and set the search parameters accordingly. Clicking the "Delete" link next to the saved search will delete it.

3.2.3. My Assigned Requirements

This section lists all the requirements you have been made owner of, across *all the different projects* you are a member of. This typically means that the project manager has assigned you to be responsible for either developing the supporting test cases or decomposing the requirement into its detailed work breakdown structure of project tasks. The requirement name is displayed, along with its status (requested, accepted, in-progress, etc.) and its importance.

3.2.4. My Assigned Test Cases

This section lists all the test cases you have been made owner of, across *all the different projects* you are a member of. This typically means that the project manager has assigned you to be responsible for executing the assigned test scripts. To aid in this process, the script name is displayed, along with its last execution status (failed, passed or not-run) and date of last execution. This enables you to see how recently the tests have been run, and whether they need to be re-run.

If you click on the test-name hyperlink, you will be taken to the details page for this test-case (see section 5.2) and the project that the test-case belongs to will be made your current project. If you click on the ">Execute" link listed below it will actually launch the test-case in the test-case execution module (see section 5.4) so that you can easily retest failed cases.

3.2.5. My Assigned Test Sets

This section lists all the test sets (groups of test cases) you have been made owner of, across *all the different projects* you are a member of. This typically means that the project manager has assigned you to be responsible for executing the test cases contained within the test set against a specified release of the system under test. To aid in this process, the test set name is displayed, along with its status, the project it belongs to, the number of remaining test cases to be executed, and the date by which all the tests need to have been run.

If you click on the test-set name hyperlink, you will be taken to the details page for this test-set (see section 5.6) and the project that the test-set belongs to will be made your current project. If you click on the ">Execute" link listed below it will actually launch the test-cases contained within the test-set in the test-case execution module (see section 5.4) so that you can easily carry out your assigned testing task.

3.2.6. My Pending Test Runs

This section lists any test runs that you started executing in the test case module but haven't yet completed. Once a test case or test set is executed, a pending test run entry is stored in the system so that you can continue execution at a later date. Any pending test run can be either deleted or resumed by clicking on the appropriate link.

3.2.7. My Assigned Tasks

This section lists all the project tasks that you have been made the owner of across *all the different projects* you are a member of. This typically means that the manager of the project in question has assigned development tasks to you that need to be completed so that a release can be completed and/or a requirement can be fulfilled. The tasks are listed in ascending date order so that the items with the oldest due-dates are displayed first. In addition, each task is displayed with a progress indicator that graphically illustrates its completion against schedule. See section 8 – task management for details of the different progress indicators.

Clicking on the task name hyperlink will take you to the task details page. This page will describe the task in more detail, illustrate which requirement and release it is associated with, and also allow you to view the change log of actions that have been performed on it.

3.2.8. My Assigned Incidents

This section lists all the open incidents you are the owner of, across *all the different projects* you are a member of. This typically means that the project manager has assigned you to be responsible for resolving the incident. In the case of a bug, this can mean actually fixing the problem, whereas for other incident types (e.g. training item) it may mean simply documenting a workaround. In either event, this section highlights the open incidents you need to manage, ranked by importance/priority and categorized by type, with the open date displayed to give you a sense of the age of the incident.

Clicking on the incident name hyperlink takes you to the incident details page (see section 6.2) that describes the incident in more detail, and allows you to add new information or change its status to indicate actions taken. In addition, if you position the mouse pointer over the name of the incident, a more detailed description is displayed as a "tooltip".

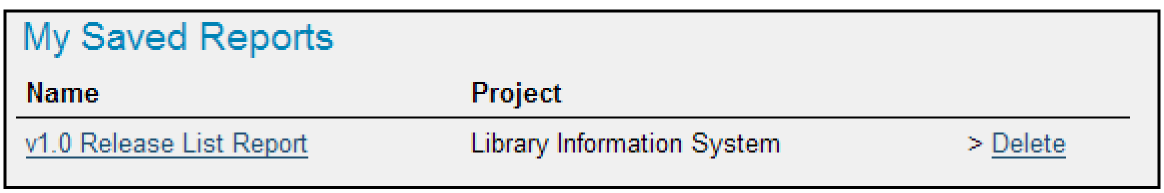
3.2.9. My Detected Incidents

This section lists all the open incidents that you have detected, across *all the different projects* you are a member of. These incidents are not necessarily ones that you need to take an active role in resolving, but since you were the originator – either by executing a test case or just logging a standalone incident – you can watch them to make sure that they are resolved in a timely manner.

Clicking on the incident name hyperlink takes you to the incident details page (see section 6.2) that describes the incident in more detail, and allows you to add new information or change its status to indicate actions taken. In addition, if you position the mouse pointer over the name of the incident, a more detailed description is displayed as a "tooltip".

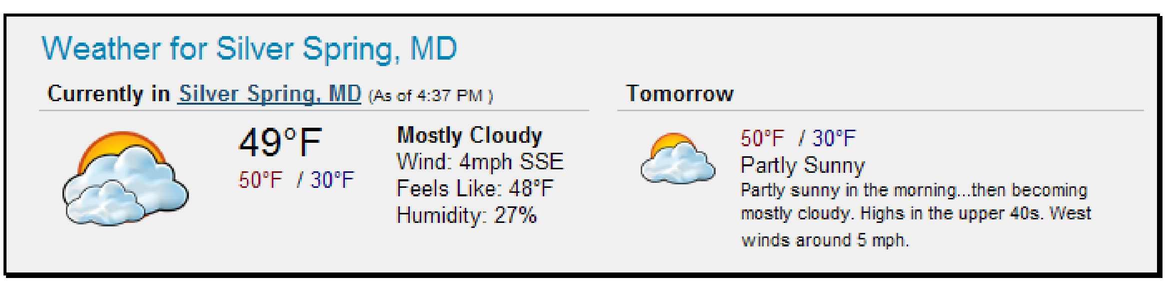
3.2.10. My Saved Reports

This section lists any reports you have saved from the reports center. This allows you to store specific combinations of report elements, format, filters and sorts (see the section on Reporting for more details on how to configure a report) for reports that you need to run on a regular basis:



3.2.11. My Weather

This "fun" widget is designed to allow users to make the SpiraTeam® homepage more useful so that the page becomes more central in their day-to-day operations and therefore they are more likely to keep track of the other items reflected on the page.



3.3. Global Navigation

Regardless of the page you are on, SpiraTeam® will always display the global navigation bar, consisting of six section tabs (My Page, Project Home, Planning, Testing, Tracking and Reports) that correspond to the main activities that take place in the system, as well as three secondary links to “My Profile” and “Log Out” and “Help”. Under the various tabs are several secondary menu options that are displayed when you hover the mouse over the appropriate tab as illustrated below:

- **Project Home**
    - Project Home (described in Section 3.4)
    - Project Group Home (described in Section 3.5)
    - Documents (described in Section 10)
- **Planning**
    - Requirements (described in Section 4)
    - Releases (described in Section 7)
    - Iterations (described in Section 7.3)
- **Testing**
    - Test Cases (described in Section 5)
    - Test Sets (described in Section 5.7)
    - Test Runs (described in Section 5.5)
    - Automation Hosts (described in Section 5.9)
- **Tracking**
    - Incidents (described in Section 6)
    - Tasks (described in Section 8)
    - Resources (described in Section 9)
    - Source Code (described in Section 12)
- **Reports** (described in section 11)

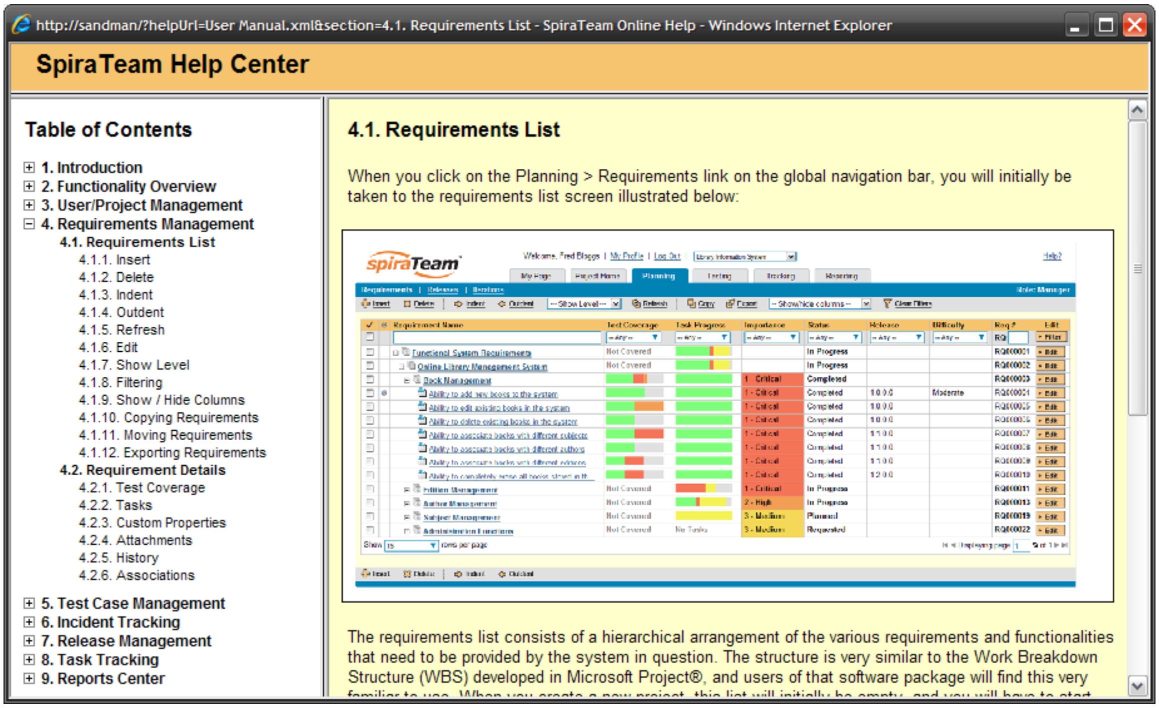
Note: The main tabs will take you to the appropriate artifact type (requirement, test case, incident, etc.) for the currently selected project. However if you haven’t selected a project, then clicking on any of the tabs will simply take you back to “My Page” so that you can select a project.

3.3.1. Log Out

Clicking on the “Log Out” link will immediately log you out of your current session and return you to the login page illustrated in section 3.1. If you had set the “Remember Me” option during your previous login, that setting will be reset; so if you want to avoid having to keep logging-in, you’ll need to re-check that box during your next log-in.

3.3.2. Help

Clicking on this link on any page will bring up the online version of this manual shown below:



Clicking on any of the [+] expand links in the left hand table of contents will open up the detailed list of topics for each of the main areas of the system. In each area, clicking on one of the individual links will open the appropriate section in the help manual. By default, the reading-pane will open to the help item that is most closely related to the screen you happened to be on when you clicked the “Help” link.

3.3.3. Choose Project

Choosing a project from the list of your assigned projects in the drop-down-menu allows you to quickly and easily jump between projects regardless of the page you happen to be on. When you choose a project, you will be taken to the home page for that project (which is described in section 3.4 below).

3.4. Project Home

When you click on either the “Project Home” tab or the name of the project in the “My Page” project list, you will be taken to the homepage of the specific project in question:

This page summarizes all of the information regarding the project into a comprehensive, easily digestible form that provides a “one-stop-shop” for people interested in understanding the overall status of the project at a glance. It contains summary-level information for all types of artifact (requirements, test cases, incidents, etc.) that you can use to drill-down into the appropriate section of the application. *In addition to viewing the project home page, you can choose to filter by a specific release, to get the homepage for just that release (and any child iterations).*

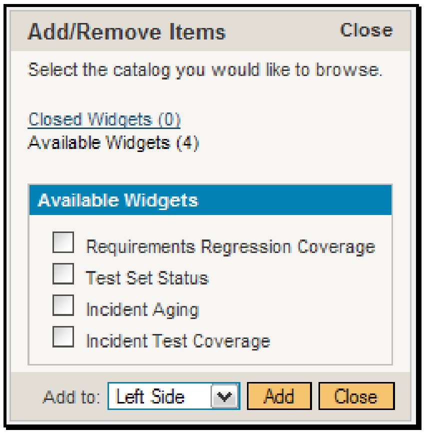
In a similar manner to the ‘My Page’, the Project Home dashboard is initially loaded in ‘view mode’ which means that the various ‘widgets’ on the page are displayed with minimum visual clutter (no toolbars or control icons) that makes it easy to scan the items on the page and see the health of the status of the project at a glace. To switch the page to ‘edit mode’, you should click on “Modify Layout/Settings” hyperlink.

Once in ‘edit mode’, each of the ‘widgets’ displayed on the project homepage can be minimized by clicking on the arrow icon (▾) in the top-left of the window, or closed by clicking-on the cross icon (✖) in the top-right of the window. In addition, the widgets allow you change their settings by clicking on the settings icon (⚙).This allows you to customize your view of the project to reflect the types of information that are relevant to you. If you have closed a widget that you subsequently decide you want to reopen, you can rectify by clicking the “Add Items” hyperlink at the top of the page, and locating the closed item from the list of ‘Closed Widgets’.

When you load your ‘Project Home’ for the first time it will consists of the following main elements:

- Project Overview
- Requirements Summary
- Requirements Coverage
- Release Task Progress
- Late Finishing Tasks
- Late Starting Tasks
- Top Open Issues
- Top Open Risks
- Test Execution Status
- Release Test Summary
- Incident Summary
- Incident Open Count
- Requirement Incident Count

However these are not the only widgets available. If you click on the “Add/Remove” items hyperlink it will display the list of any additional widgets that are available:



You can add the additional widgets by selecting the appropriate checkbox, choosing the destination location (left side vs. right side) and then click the [Add] button. The additional widgets available in the Project Home dashboard are:

- Requirements Regression Coverage
- Test Set Status
- Incident Aging
- Incident Test Coverage

Each of the different widgets listed is described in more detail below:

3.4.1. Project Overview

This section displays the name of the project, together with a brief description, the web-site that points to any additional information about the project, and the names of the owners of the project.

3.4.2. Requirements Summary

This section consists of a summary table that displays the aggregate count of requirements in the system broken-down by importance (on the x-axis) and status (on the y-axis). This allows the project manager to determine how many critical vs. low priority enhancements are waiting to be implemented, vs. actually being implemented. In addition, it makes a distinction between those requirements simply requested and those actually planned for implementation, so the project manager can see what the backlog is between the customer’s demands, and the plan in place. Clicking on the “View Details” link at the top of the table simply brings up the project requirements list (see section 4.1), whereas clicking on the individual values in the cells will display the requirements list with the filter set to match the importance and status of the value.

3.4.3. Requirements Coverage

This section consists of a bar graph that displays the aggregated count of requirements test coverage for the project. The Passed, Failed, Blocked, Caution and Not-Run bars indicate the total count of requirements that have tests covering them, allocated across the execution status of the covering tests. For example if a requirement is covered by *four tests*, two that have passed, one that has failed and one that has not yet been run, the counts would be passed = 0.5, failed = 0.25 and not-run 0.25. These fractional quantities are then summed across all the requirements to give the execution status breakdown of the covered requirements.

In addition to the five statuses for the covered requirements, the sixth (“Not Covered”) bar depicts the total number of requirements that have no tests covering them, putting the five other bars into perspective. Typically a project is in good health if the “Not Covered” bar is zero, and the count of “Passed” requirements is greater than “Failed”, “Caution” or “Not Run”. The greatest risk lies with the “Blocked”, “Not Covered” and “Not Run” status codes, since the severity/quantity of any bugs lurking within is not yet fully known.

If you position the mouse pointer over any of the four bars, the color of the bar changes slightly and the underlying raw data is displayed as a tooltip, together with the percentage equivalent. Clicking on the any of the bars in the chart will take you to the requirements list page (see section 4.1) with the corresponding filters set.

When you filter the project home by release/iteration, this widget will filter the requirements coverage graph to only include ***requirements that are specifically mapped to the selected release/iteration***. This is useful when you want to determine the test coverage of new requirements that are being added to the specific release/iteration. If instead you want to determine the regression test coverage for a release, you should add the separate “Requirements Regression Coverage” widget to the page instead.

3.4.4. Requirement Incident Count

This section displays a count of the total number of incidents, and the number of open incidents mapped against requirements in the system, sorted by the requirements that have the most open incidents first. This section is useful for determining the parts of the application that have the most instability, as you can look at the requirements that have yielded the greatest number of incidents. Clicking on any of the requirements hyperlinks will take you to the detail page for the requirement in question (see section 4.2). *You can configure in the settings whether to include requirements with no open incidents, and also how many rows of data to display.*

3.4.5. Top Open Issues

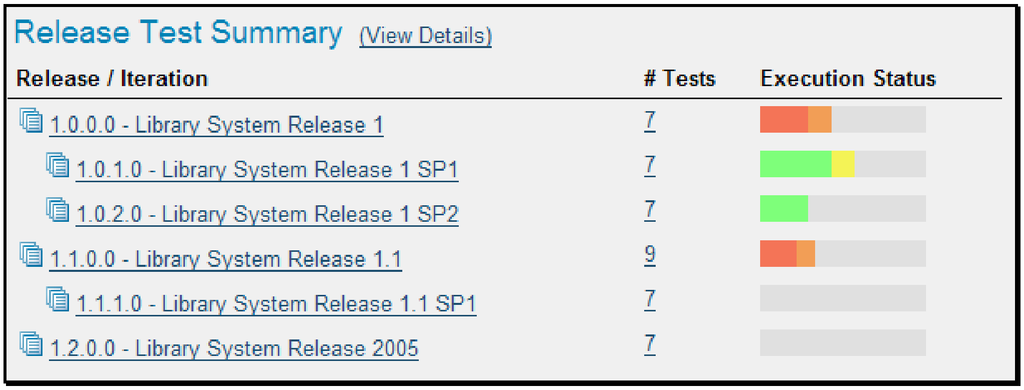
This section displays a breakdown of the top issues logged against the project, in order of decreasing priority. Note that items not given a priority are listed at the top, since critical issues could be lurking in that list, and the project manager will want to immediately review these to assign priorities. Clicking on the issue item hyperlink will take you to the incident details page for the issue in question (see section 6.2). *You can configure in the settings whether to use Priority or Severity for the display, and also how many rows of data to display.*

3.4.6. Top Open Risks

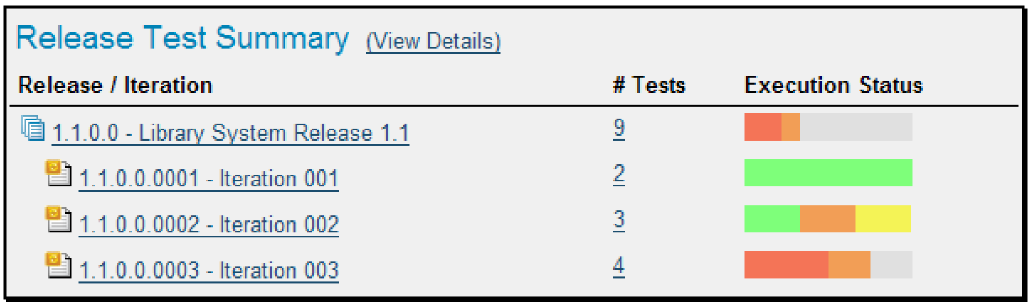
This section displays a breakdown of the top risks logged against the project, in order of decreasing priority. Note that items not given a priority are listed at the top, since critical risks could be lurking in that list, and the project manager will want to immediately review these to assign priorities. Clicking on the risk item hyperlink will take you to the incident details page for the risk in question (see section 6.2). *You can configure in the settings whether to use Priority or Severity for the display, and also how many rows of data to display.*

3.4.7. Release Test Summary

This widget allows you to quickly ascertain the test execution status of each of the active releases that make up the current project in one snapshot. Each release is displayed together with a graphical display that illustrates the execution status with different colored bars. In addition, if you hover the mouse over the graphical display it will display a tooltip that provides a more detailed description of the number of tests in each status.



Each release will display the aggregate status of any test cases directly assigned to itself, together with the test status of any child iterations that are contained within the Release. Clicking on one of the releases will drill you down one level further and display the test execution status for the parent release as well as each of the child iterations separately:



3.4.8. Incident Summary

This section consists of a summary table that displays the aggregate count of incidents in the system broken-down by priority (on the x-axis) and status (on the y-axis). This allow the project manager to determine how many critical vs. low priority incidents are waiting to be addressed, and how many new items need to be categorized and assigned. Clicking on the "View Details" link at the top of the table simply brings up the incident list (see section 6.1), whereas clicking on the individual values in the cells will display the incident list with the filter set to match the priority and status of the value.

By default this summary table displays the total count of all incidents – regardless of type, however my changing the drop-down list to a specific incident type (e.g. bug, enhancement, issue, etc.), the project manager can filter the summary table to just items of that type. *You can also configure in the settings whether to use Priority or Severity for the x-axis*

3.4.9. Test Execution Status

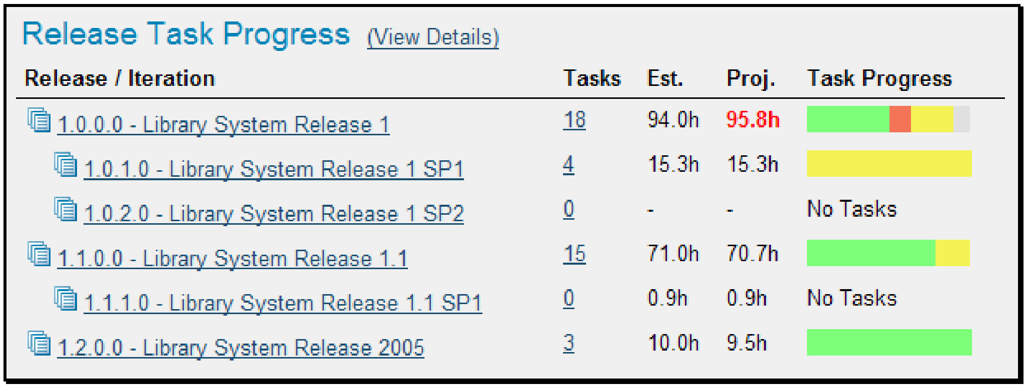
This section consists of a bar graph that displays the aggregated count of test cases in each execution status for the project. Note that this graph does not consider past test-runs when calculating the totals in each status (Passed, Failed, Not Run, etc.), it simply looks at each test-case and uses the last-run status as the best health indicator. Thus if a test case that previously passed, has subsequently failed upon re-execution, it will be considered a failure only.

If you position the mouse pointer over any of the five bars, the color of the bar changes slightly and the underlying raw data is displayed as a tooltip, together with the percentage equivalent. Clicking on any of the bars will bring up the project test case list (see section 5.1) with the appropriate filter applied.

In addition to the bar-chart, there is a also a display of the total number of test runs recorded for the project, and a list of the *five most recent* days of recorded test-runs, together with the daily count.

3.4.10. Release Task Progress

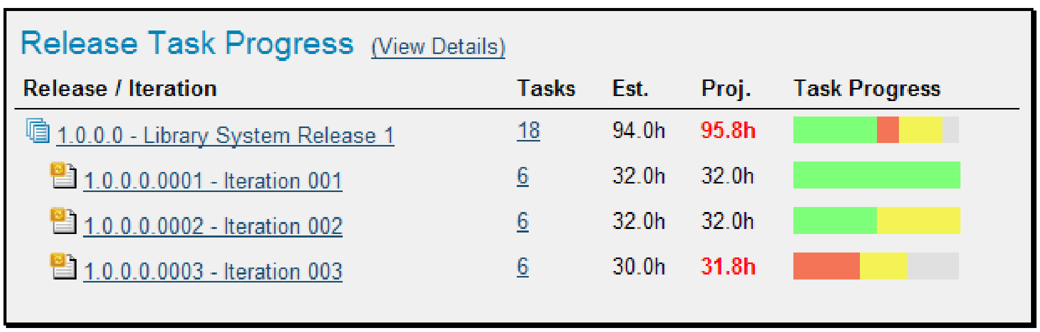
This widget allows you to quickly ascertain the task progress of each of the active releases that make up the current project in one snapshot. Each release is displayed together with a graphical display that illustrates the completion percentage and status with different colored bars. In addition, if you hover the mouse over the graphical display it will display a tooltip that provides a more detailed description of the number of tasks in each status.



Release Task Progress (View Details)

Release / Iteration	Tasks	Est.	Proj.	Task Progress
1.0.0.0 - Library System Release 1	18	94.0h	95.8h	
1.0.1.0 - Library System Release 1 SP1	4	15.3h	15.3h	
1.0.2.0 - Library System Release 1 SP2	0	-	-	No Tasks
1.1.0.0 - Library System Release 1.1	15	71.0h	70.7h	
1.1.1.0 - Library System Release 1.1 SP1	0	0.9h	0.9h	No Tasks
1.2.0.0 - Library System Release 2005	3	10.0h	9.5h	

Each release will display the aggregate progress of any tasks directly assigned to itself, together with the task progress of any child iterations that are contained within the Release. Clicking on one of the releases will drill you down one level further and display the task progress for the parent release as well as each of the child iterations separately:



Release Task Progress (View Details)

Release / Iteration	Tasks	Est.	Proj.	Task Progress
1.0.0.0 - Library System Release 1	18	94.0h	95.8h	
1.0.0.0.0001 - Iteration 001	6	32.0h	32.0h	
1.0.0.0.0002 - Iteration 002	6	32.0h	32.0h	
1.0.0.0.0003 - Iteration 003	6	30.0h	31.8h	

3.4.11. Late Finishing Tasks

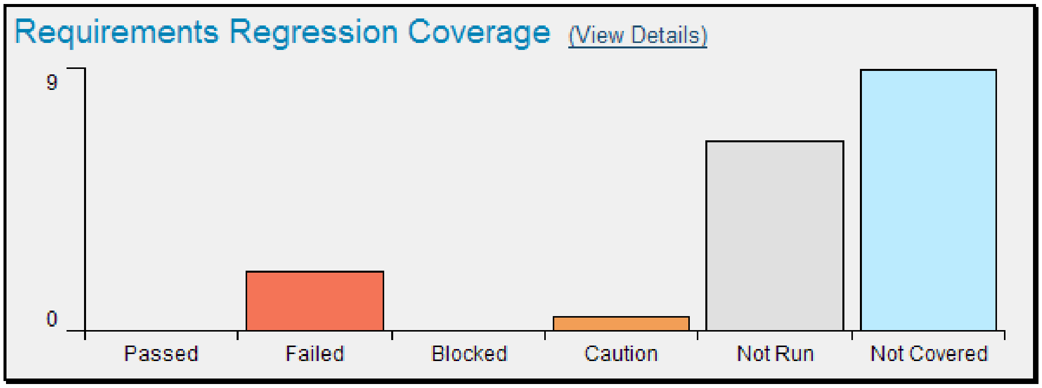
This section displays the list of any project tasks that have not yet been completed, but whose scheduled end date has already elapsed. A graphical progress bar is included with each task in the grid, so that you can easily see which tasks are nearest completion.

3.4.12. Late Starting Tasks

This section displays the list of any project tasks that have not yet started, but whose scheduled start date has already elapsed. Each task is listed along with its owner, priority and due-date so that you quickly ascertain how many days late it will be starting, how important it is to the project, and who needs to be contacted to get more information.

3.4.13. Requirements Regression Coverage

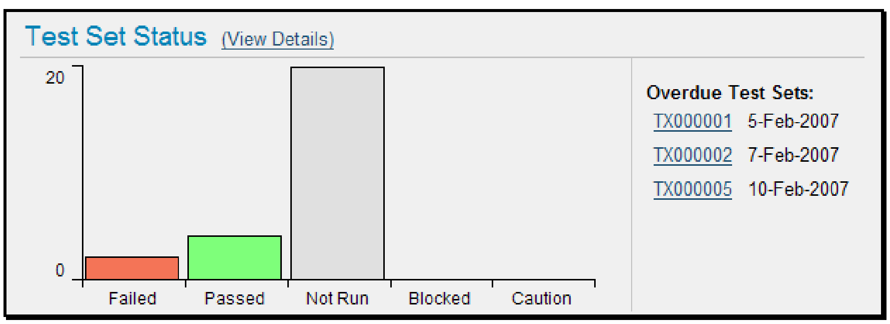
This section consists of a bar graph that displays the aggregated count of requirements test coverage for the project in a similar fashion to the 'Requirements Coverage' widget:



However, unlike the 'Requirements Coverage' widget, when you filter the project home by release/iteration, this widget will filter the requirements coverage graph to include all requirements (regardless of release/iteration), but only considering covering test cases that are associated with the selected release/iteration. This is useful when you want to determine the regression requirements test coverage of a specific release (i.e. does running all the tests relevant to this release cover all the necessary requirements, not just new requirements).

3.4.14. Test Set Status

This section consists of a bar graph that displays the aggregated count of test cases in each execution status for each test set in the project:



Therefore if you have the same test cases stored in multiple test sets, then this widget will display the total test case count for all combinations of test set. This is useful if you have the same test cases being executed in different environments – represented by different test sets – and you need to make sure that the tests passed successfully in all environments.

If you position the mouse pointer over any of the five bars, the color of the bar changes slightly and the underlying raw data is displayed as a tooltip, together with the percentage equivalent. Clicking on any of the bars brings up the project test set list (see section 5.6) page with the appropriate filter applied. In addition to the bar-chart, there is a also a display of the *five most overdue test sets in the project*.

3.4.15. Incident Aging

This section displays the number of days incidents have been left open in the system. The chart is organized as a histogram, with the count of incidents on the y-axis and different age intervals on the x-axis.

3.4.16. Incident Test Coverage

This section displays a bar-graph that illustrates the execution status of any test cases that previously failed and resulted in the generation of an incident that has subsequently been resolved. This is very useful when a test case was executed in Release 1.0 and an incident was logged. That incident has now been resolved in Release 1.1 (and is in a closed status) but we need to know that the test case that caused the failure has been successfully re-run. Any test cases listed as Blocked, Caution, Not-Run or Failed in this graph need to be executed to verify that all resolved bugs in the release have truly been fixed.

3.5. Project Group Home

When you click on either the “Project Group Home” tab in the global navigation or the name of the project group in the “My Page” project list, you will be taken to the homepage of the specific project group in question:

This page summarizes all of the information regarding the project group into a comprehensive, easily digestible form that provides a “one-stop-shop” for people interested in understanding the overall status of the group as a whole as well as the relative performance of the different projects that make up the group. It contains summary-level metrics for all types of artifact (requirements, test cases, tasks, incidents, etc.) that you can use to drill-down into the appropriate project for more details.

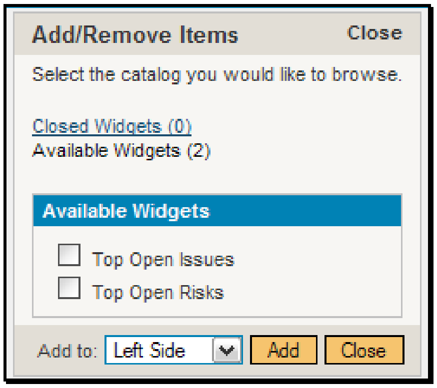
In a similar manner to the ‘My Page’, the Project Group Home dashboard is initially loaded in ‘view mode’ which means that the various ‘widgets’ on the page are displayed with minimum visual clutter (no toolbars or control icons) that makes it easy to scan the items on the page and see the health of the status of the project at a glace. To switch the page to ‘edit mode’, you should click on “Modify Layout/Settings” hyperlink.

Once in ‘edit mode’, each of the ‘widgets’ displayed on the project group homepage can be minimized by clicking on the arrow icon ( ) in the top-left of the window, or closed by clicking-on the cross icon ( ) in the top-right of the window. In addition, the widgets allow you change their settings by clicking on the settings icon ( ).This allows you to customize your view of the project group to reflect the types of information that are relevant to you. If you have closed a widget that you subsequently decide you want to reopen, you can rectify by clicking the "Add Items" hyperlink at the top of the page, and locating the closed item from the list of 'Closed Widgets'.

When you load the 'Project Group Home' for the first time it will consists of the following main elements:

- Group Overview
- Requirements Coverage
- Task Progress
- Project List
- Test Execution Status
- Incident Aging

However these are not the only widgets available. If you click on the "Add/Remove" items hyperlink it will display the list of any additional widgets that are available:



You can add the additional widgets by selecting the appropriate checkbox, choosing the destination location (left side vs. right side) and then click the [Add] button. The additional widgets available in the Project Group Home dashboard are:

- Top Open Issues
- Top Open Risks

Each of the different widgets listed is described in more detail below:

3.5.1. Group Overview

This section displays the name of the project group, together with a brief description, the web-site that points to any additional information about the project group, and the names of the owners of the project group.

3.5.2. Project List

This section lists all the active projects that make up the group, together with the name, description, project group and date of creation. To view the description of the project, simply position the mouse pointer over the link, and a tooltip window will popup containing the description.

3.5.3. Requirements Coverage

This section consists of a bar graph that displays the aggregated count of requirements test coverage for the entire project group. The Passed, Failed, Blocked, Caution and Not-Run bars indicate the total count of requirements that have tests covering them, allocated across the execution status of the covering tests

Under the main bar graph is displayed a table containing each project in the group and a colored bar illustrating the specific requirements coverage distribution for that project. That way you can see both the aggregate coverage and also the relative coverage for the projects. *You can configure in the widget settings whether you want to see the aggregate bar graph, and/or the project-specific requirements coverage.*

3.5.4. Task Progress

This section consists of a bar graph that displays the aggregated count of tasks by progress category for the entire project group. The 'On Schedule', 'Late Finish', 'Late Start' and 'Not Started' bars indicate the total count of tasks that are in that category for all the projects in the group.

Under the main bar graph is displayed a table containing each project in the group and a colored bar illustrating the specific task progress for that project (using the same coloring convention as the main graph). That way you can see both the aggregate task progress and also the relative progress for each project. *You can configure in the widget settings whether you want to see the aggregate bar graph, and/or the project-specific task progress.*

3.5.5. Test Execution Status

This section consists of a bar graph that displays the aggregated count of test cases by execution status for the entire project group. The Passed, Failed, Blocked, Caution and Not-Run bars indicate the total count of test cases that are in that category for all the projects in the group.

Under the main bar graph is displayed a table containing each project in the group and a colored bar illustrating the specific test case execution status for that project (using the same coloring convention as the main graph). That way you can see both the aggregate test status and also the relative status for each project. *You can configure in the widget settings whether you want to see the aggregate bar graph, and/or the project-specific test status.*

3.5.6. Incident Aging

This section displays the number of days incidents have been left open in the system. The chart is organized as a histogram, with the count of incidents on the y-axis (for all projects in the group) and different age intervals on the x-axis.

Under the main bar graph is displayed a table containing each project in the group and a colored bar illustrating the distribution of open incidents by priority for that project. That way you can see both the aggregate aging for the group and also the relative priority of open incidents for each project. *You can configure in the widget settings whether you want to see the aggregate aging histogram, and/or the project-specific incident count by priority.*

3.5.7. Top Open Issues

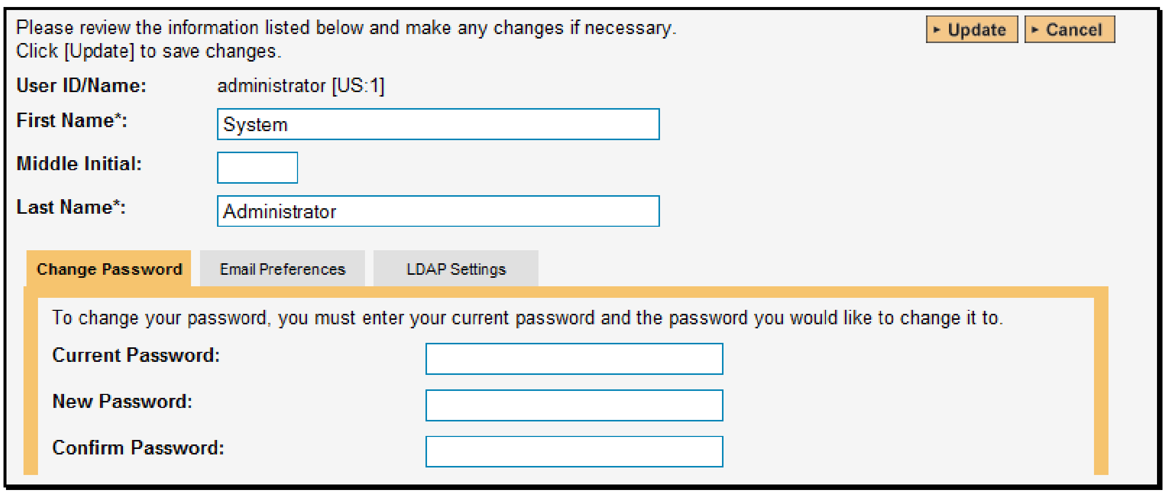
This section displays a breakdown of the top issues logged against any of the projects in the group, in order of decreasing priority. Note that items not given a priority are listed at the top, since critical issues could be lurking in that list, and the project manager will want to immediately review these to assign priorities. Clicking on the issue item hyperlink will take you to the incident details page for the issue in question (see section 6.2). *You can configure in the settings whether to use Priority or Severity for the display, and also how many rows of data to display.*

3.5.8. Top Open Risks

This section displays a breakdown of the top risks logged against any of the projects in the group, in order of decreasing priority. Note that items not given a priority are listed at the top, since critical risks could be lurking in that list, and the project manager will want to immediately review these to assign priorities. Clicking on the risk item hyperlink will take you to the incident details page for the risk in question (see section 6.2). *You can configure in the settings whether to use Priority or Severity for the display, and also how many rows of data to display.*

3.6. My Profile

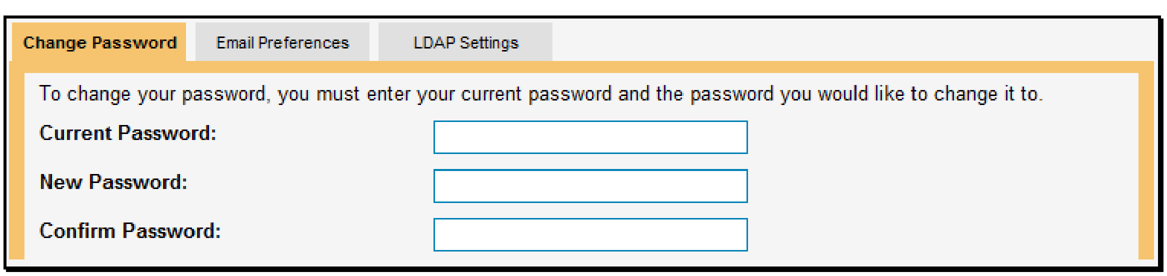
When you click on either the “My Profile” link in the global navigation, you will be taken to the page in the system that allows you to view and edit your personal profile:



You can change your user information including your first-name, last-name, and middle-initial. Clicking the <Update> button will commit the changes, whereas clicking <Cancel> returns you back to either “Project Home” or “My Page” depending on whether you have a project currently selected or not.

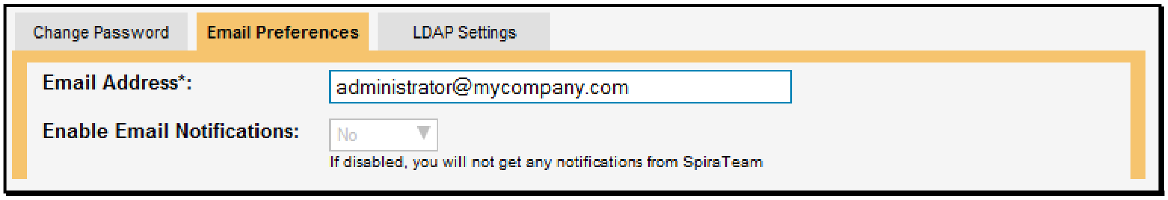
3.6.1. Change Password

In addition to being able to update your user information, you can optionally change your password at the same time. To change your password, on the Change Password tab fill in the three boxes with your current password, and your new password repeated for verification. Then when the <Update> button is clicked, the system will update your password, otherwise you will simply get a warning message indicating what needs to be corrected.



Note: If your SpiraTest user profile is linked to an account stored in an external LDAP server, you may find the change password option is disabled. This is because the system uses the password held in the external server. To change the password in this case, please contact your system administrator who will be able to help you change the password in your LDAP environment.

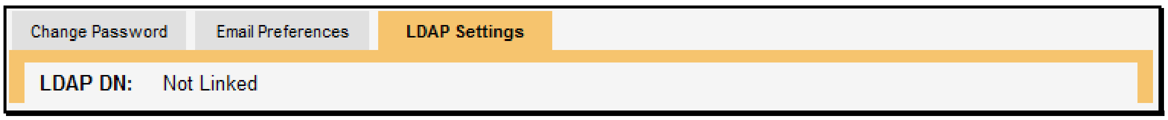
3.6.2. Email Preferences



Here you can configure the email address that the application will send notifications to, and whether or not you want to receive email notifications.

If the Enable Notifications cannot be changed, it means that the system is either not configured to send out notifications, or the administrator has disabled user's ability to opt out of notifications being sent.

3.6.3. LDAP Settings



This tab will show configured LDAP options for your account. At this time, no configurable options are on this tab, it is for reference only.

4. Requirements Management

This section outlines how the requirements management features of SpiraTeam® can be used to develop a requirements / scope matrix for a project, and how you can map any existing test-cases to the requirements. Typically when starting a project, developing the requirements list is the first activity after the Administrator has set up the project in the system.

4.1. Requirements List

When you click on the Planning > Requirements link on the global navigation bar, you will initially be taken to the requirements list screen illustrated below:

The requirements list consists of a hierarchical arrangement of the various requirements and functionalities that need to be provided by the system in question. The structure is very similar to the Work Breakdown Structure (WBS) developed in Microsoft Project®, and users of that software package will find this very familiar to use. When you create a new project, this list will initially be empty, and you will have to start using the <Insert> button to start adding requirements.

Requirements come in two main flavors: summary items shown in **bold-type**, and detail items shown in normal-type with a hyperlink. When you indent a requirement under an existing requirement, the parent is changed from a detail-item to a summary-item, and when you outdent a child item, its parent will return to a detail-item (assuming it has no other children). This behavior is important to understand, as only detail items are assigned a status themselves; the summary items simply display an aggregate of the worst-case assessment of their children's status. Also, only detail items can be mapped against test-cases for test-coverage (thus only they have hyperlinks), the summary items simply display an aggregate coverage status of their children.

Each requirement is displayed along with its importance/priority (ranked from "Critical" to "Low"), its completion status (from "Requested" to "Completed"), the version of the software that the requirement is planned for, and graphical indicators that represents its test coverage status and its task progress.

For those requirements that have no test-cases covering them (i.e. validating that the requirement works as expected) the indicator consists of a white solid bar, bearing the legend "Not Covered". For those requirements that have *at least one* test-case mapped against them, they will display block graph that illustrates the last execution status of each of the mapped test-cases. Thus if the requirement is covered by two test cases, one of which passed, and one of which wasn't run, the graph will display a green bar (50% passed) and an equal length gray bar (50% not run). To determine the exact requirements coverage information, position the mouse pointer over the bar-chart, and the number of covering tests, along with the pass / fail / blocked / caution / not-run breakdown will be displayed as a "tooltip".

For those requirements that have at least one task associated with them, they will display a block graph that illustrates the relative numbers of task that are on-schedule (green), late-starting (yellow), late-finishing (red) or just not-started (grey). These values are weighted by the effort of the task, so that larger, more complex tasks will be change the graph more than the smaller tasks. To determine the exact task progress information, position the mouse pointer over the bar-chart and the number of associated tasks, along with the details of how many are in each status will be displayed as a "tooltip".

4.1.1. Insert

Clicking on the <Insert> button inserts a requirement *above* the currently selected requirement – i.e. the one whose check-box has been selected, at the same level in the hierarchy. If you want to insert a requirement below a summary item, you need to insert it first, then indent it with the <Indent> button. If you insert a requirement without first selected an existing requirement from the list, the new requirement will simply be inserted at the end of the list.

Once the new requirement has been inserted, the item is switched to "Edit" mode so that you can rename the default name and choose a priority, status and/or author.

4.1.2. Delete

Clicking on the <Delete> button deletes all the requirements whose check-boxes have been selected. If any of the items are summary items, then: if the item is expanded and the children are visible, the children are simply made children of the item above it in the list, however if the item is not expanded and the children are hidden, then the children are all deleted. This behavior is similar to that found in project planning tools like Microsoft Project®. In addition, if all the children are deleted from a summary item, it changes back into a detail item.

4.1.3. Indent

Clicking on the <Indent> button indents all the requirements whose check-boxes have been selected. If any of the items are made children of a requirement that had no previous children, it will be changed from a detail item into a summary item.

4.1.4. Outdent

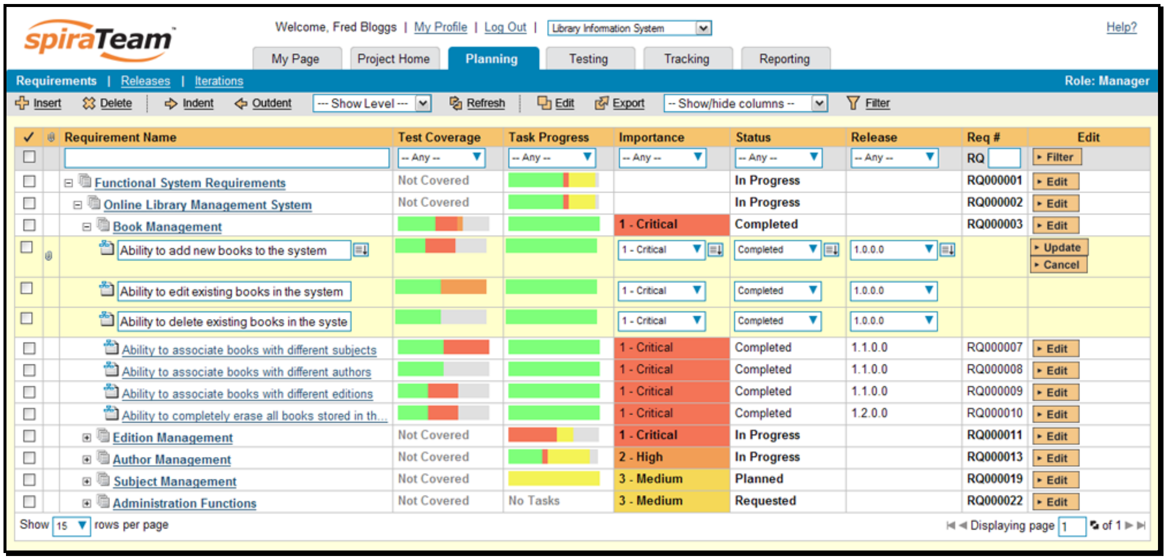
Clicking on the <Outdent> button de-indents all the requirements whose check-boxes have been selected. If any of the items were the only children of a summary requirement item, then that item will be changed back from a summary item to a detail item.

4.1.5. Refresh

Clicking on the <Refresh> button simply reloads the requirements list. This is useful as other people may be modifying the list of requirements at the same time as you, and after stepping away from the computer for a short-time, you should click this button to make sure you are viewing the most current requirements list for the project.

4.1.6. Edit

Each requirement in the list has an <Edit> button display in its right-most column. When you click this button or just *double-click* on any of the cells in the row, you change the item from "View" mode to "Edit" mode. The various columns are made editable, and <Update> <Cancel> buttons are displayed in the last column:



If you click <Edit> on more than one row, the <Update> and <Cancel> buttons are only displayed on the first row, and you can make changes to all the editable rows and then update the changes by clicking the one <Update> button. Also, if you want to make the same change to multiple rows (e.g. to change five requirements from “In Progress” status to “Completed”), you can click on the “fill” icon to the right of the editable item, which will propagate the new value to all editable items in the same column.

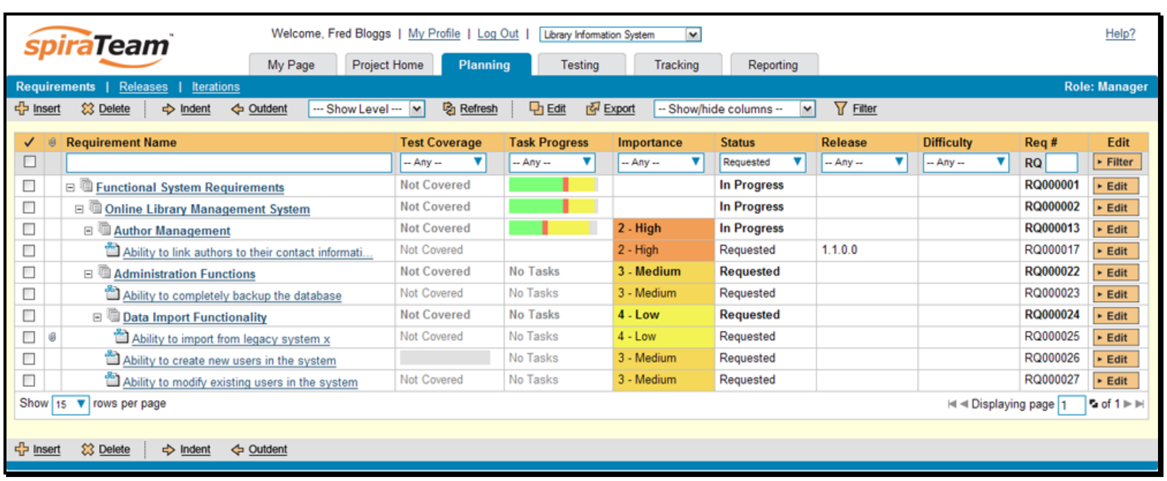
When you have made your updates, you can either click <Update> to commit the changes, or <Cancel> to revert back to the original information. Alternatively, pressing the <ENTER> key will commit the changes and pressing the <ESCAPE> key will cancel the changes.

4.1.7. Show Level

Choosing an indent level from the ‘Show Level’ drop down box allows you to quickly and easily view the entire requirements list at a specific indent level. For example you may want to see all requirements drilled-down to the *third* level of detail. To do this you would simply choose ‘Level 3’ from the list, and the requirements will be expanded / collapsed accordingly.

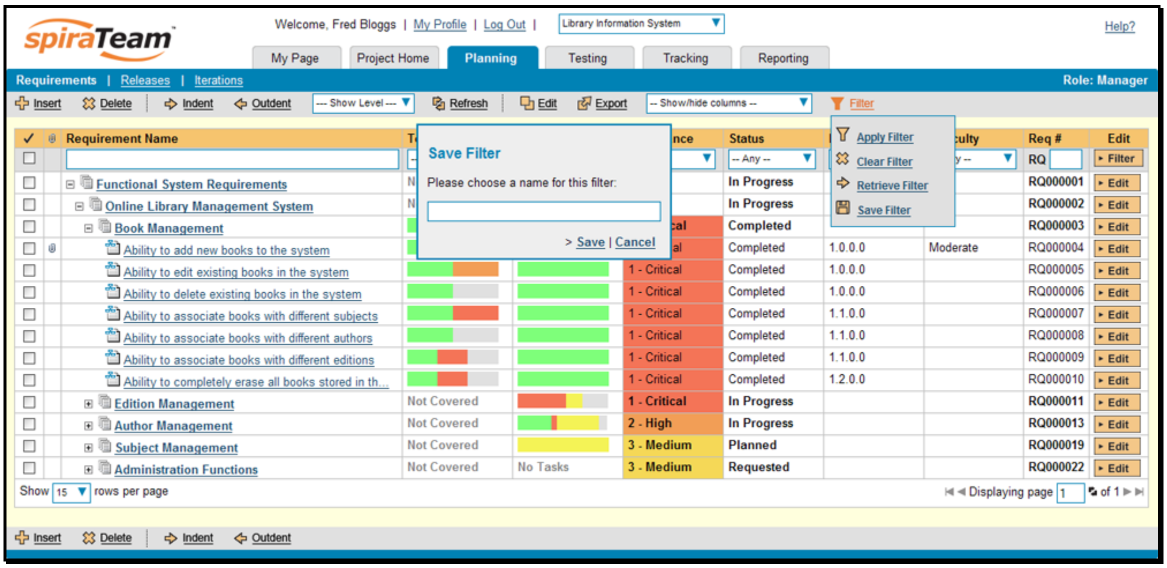
4.1.8. Filtering

You can easily filter the list of requirements as illustrated in the screen-shot below:



To filter the list by any of the displayed columns, you either choose an item from the appropriate drop-down list or enter a free-text phrase (depending on the type of field) then click <Filter> or press the <ENTER> key to apply the different filters. Note that the name field is searched using a "LIKE" comparison, so that searching for "database" would include any item with the word database in the name. The other freetext fields need to be exact matches (e.g. dates, requirement numbers). In the screen-shot above, we are filtering on Status = Requested.

In addition, if you have a set of filters that you plan on using on a regular basis, you can choose the option Filter > Save Filter to add the current filter to the list of saved filters that appear on your 'My Page'. The list of saved filters can also be retrieved by clicking Filter > Retrieve Filter:



4.1.9. Show / Hide Columns

This drop-down list allows you to change the fields that are displayed in the requirement list as columns for the current project. To show a column that is not already displayed, simply select that column from the list of "Show…" column names and to hide an existing column, simply select that column from the list of "Hide…" column names. This is stored on a per-project basis, so you can have different display settings for each project that you are a member of. The fields can be any of the built-in fields or any of the custom properties set up by the project owner.

4.1.10. Copying Requirements

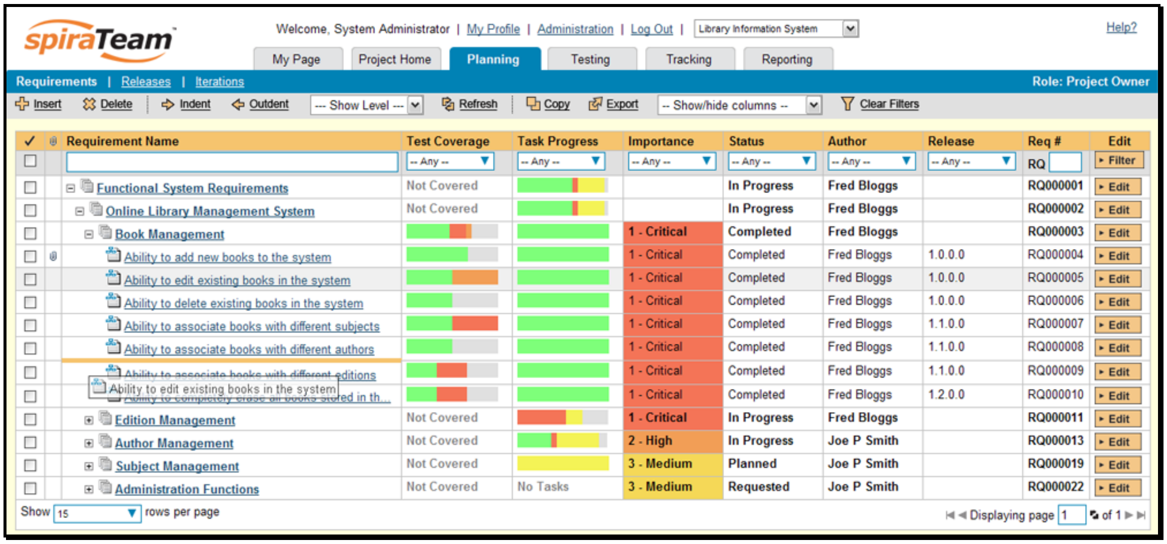
To copy a requirement or set of requirements, simply select the check-boxes of the requirements you want to copy and then select the Edit > Copy menu option. This will copy the current requirements selection to the clipboard. Then you should select the place where you want the requirements to be inserted and choose the Edit > Paste option.

The requirements will now be copied into the destination location you specified. The name of the copied requirements will be prefixed with "Copy of…" to distinguish them from the originals. Note that copied requirements will also include the test coverage information from the originals.

4.1.11. Moving Requirements

To move a requirement in the requirements hierarchy, there are two options:

1. Click on the icon the requirement you want to move and then drag the icon to the location you want it moved. The border between the destination requirements will change as the icon is dragged over it to illustrate where it will be inserted:

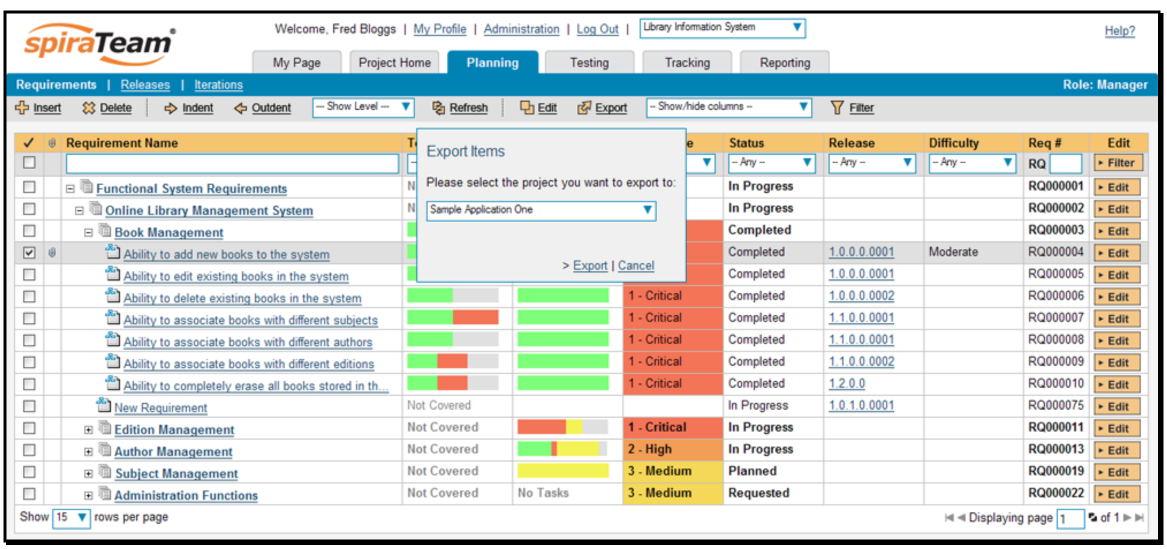


Once you have the requirement positioned at the correct place that you want it inserted, just release the mouse button and the requirement list will be refreshed, with the requirement moved to the desired location.

2. Alternatively you can simply select the check-boxes of the requirements you want to move and then select the Edit > Cut menu option. This will cut the current requirements selection to the clipboard. Then you should select the place where you want the requirements to be inserted and choose the Edit > Paste option. The requirements will now be moved into the destination location you specified.

4.1.12. Exporting Requirements

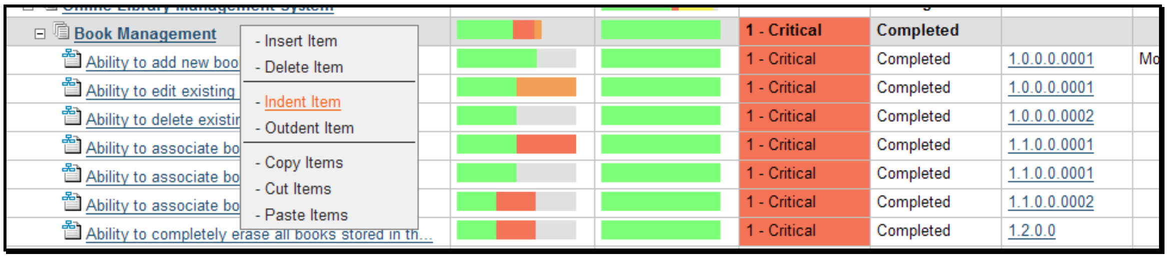
To export a requirement or set of requirements from the current project to another project in the system, all you need to do is select the check-boxes of the requirement(s) you want to export and then click the <Export> button. This will then bring up a list of possible destination projects:



Once you have chosen the destination project and clicked the <Export> button, the requirements will be exported from the current project to the destination project. Any file attachments will also be copied to the destination project along with the requirements.

4.1.13. Right-Click Context Menu

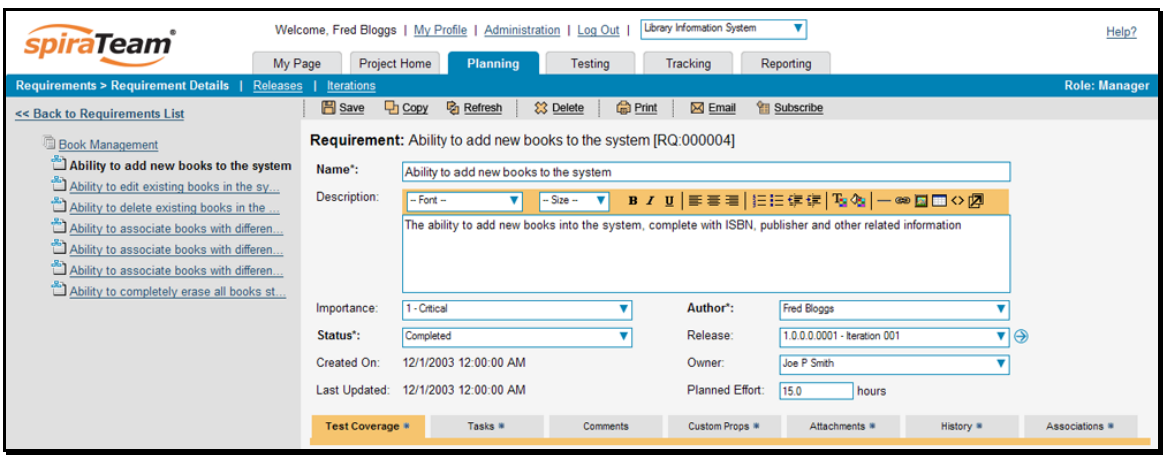
SpiraTeam® provides a shortcut – called the *context menu* - for accessing some of the most commonly used functions, so that you don't need to move your mouse up to the toolbar each time. To access the context menu, right-click on any of the rows in the requirements list and the following menu will be displayed:



You can now choose any of these options as an alternative to using the icons in the toolbar.

4.2. Requirement Details

When you click on a requirement item in the requirements list described in section 4.1, you are taken to the requirement details page illustrated below:

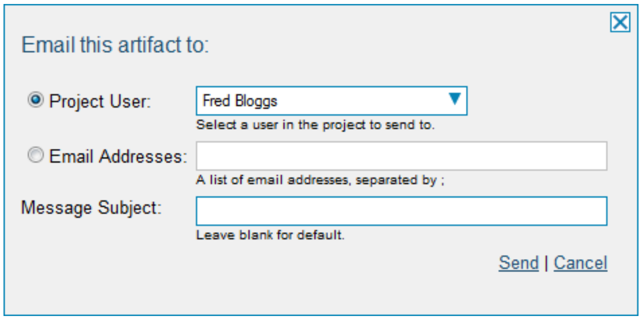


This page is made up of *three* areas; the left pane displays the requirements list navigation, the top of the right pane displays the details of the selected requirement, and the bottom of the right pane can display different information related to the requirement.

The navigation pane consists of a link that will take you back to the requirements list, as well as a list of the peer requirements to the one selected. This latter list is useful as a navigation shortcut; you can quickly view the coverage information of all the peer requirements by clicking on the navigation links without having to first return to the requirements list page.

The top part of the right pane allows you to view and/or edit the details of the particular requirement. You can edit the various fields (name, description, etc.) and once you are satisfied with them, simply click either the <Save>, <Save and Close> or <Save and New> button at the top of the page to commit the changes. In addition you can delete the current artifact by choosing <Delete>, make a copy of it by choosing <Copy>, discard any changes made by clicking <Refresh> or print it by clicking <Print>.

Using the <Email> button on the toolbar, you can send an email containing details of the requirement to an email address or another user on the system:

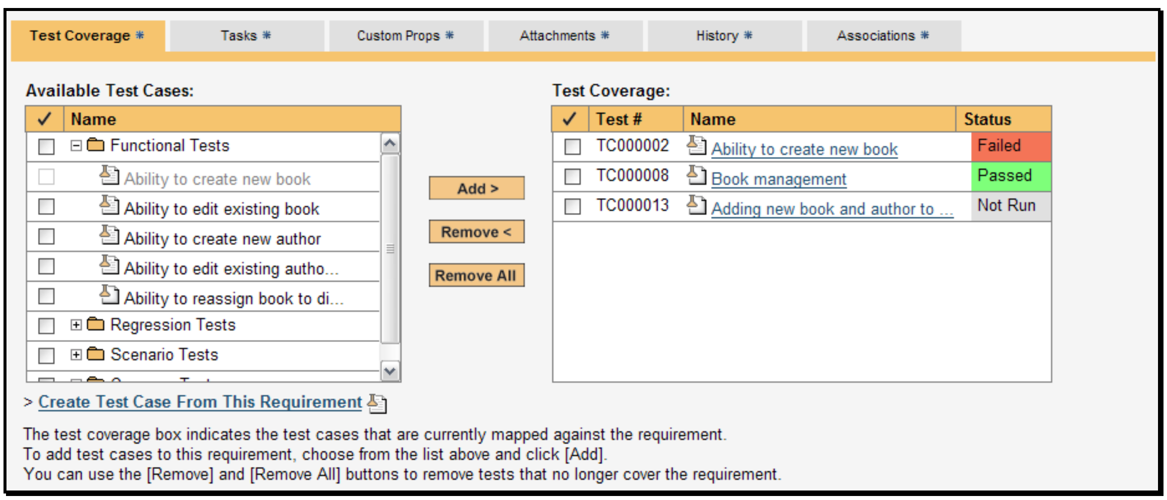


You can specify the subject line for the email, and either a list of email addresses, separated by semicolons, or an existing project user .The content of the email is specified in the System Administration – Notification Templates.

In addition, the bottom part of the right pane can be switched between six views: “Test Coverage”, “Tasks”, “Comments”, “Custom Properties”, “Attachments”, “History” and “Associations”, each of which will be described in more detail below.

4.2.1. Test Coverage

In this mode, the right pane contains the test coverage information for the requirement in question:



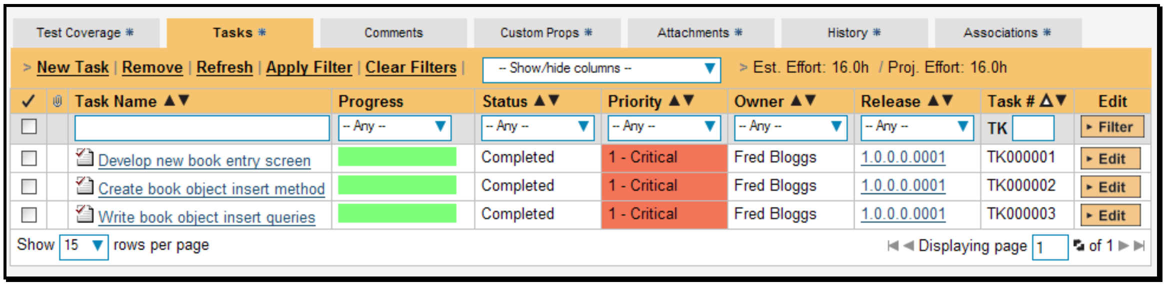
The pane consists of two lists of test cases, the one on the left being the hierarchical list of the test cases belonging to the project arranged in test folders. The right box (which will initially be empty) contains the list of test cases mapped to this requirement. The test cases in this box include columns for their ID, name and execution status. Hovering the mouse over the names of the test cases in either box will display a “tooltip” consisting of the test case name, place in the folder structure and a detailed description. Clicking on the hyperlinks in right-hand box will jump you to the test case details screen for the test case in question (see section 5.2.9).

To change the coverage for this requirement, you use the buttons (Add, Remove, Remove All) positioned between the two list-boxes. The <Add> button will move the selected test cases from the list of available on the left to the list of mapped on the right. Similarly the <Remove> and <Remove All> buttons will remove either the selected or all the test cases from the right list-box and add them back to the left list-box.

Finally, as a shortcut you can click the “Create Test Case from This Requirement” link to create a new test case in the list of covered test cases that will be automatically linked to this requirement. This is useful when you have created a new requirement and want to generate an initial covering test to be fleshed-out later.

4.2.2. Tasks

In this mode, the right pane displays the list of project tasks that need to be completed for the requirement to be satisfied:



Each of the tasks is displayed together with its name, description (by hovering the mouse over the name), progress, priority, start-date, current owner, estimated effort, projected effort and numeric task identifier. Clicking on the task name will bring up the Task Details page which is described in more detail in section 8.2. This allows you to edit the details of an existing task.

You can perform the following actions on a task from this screen:

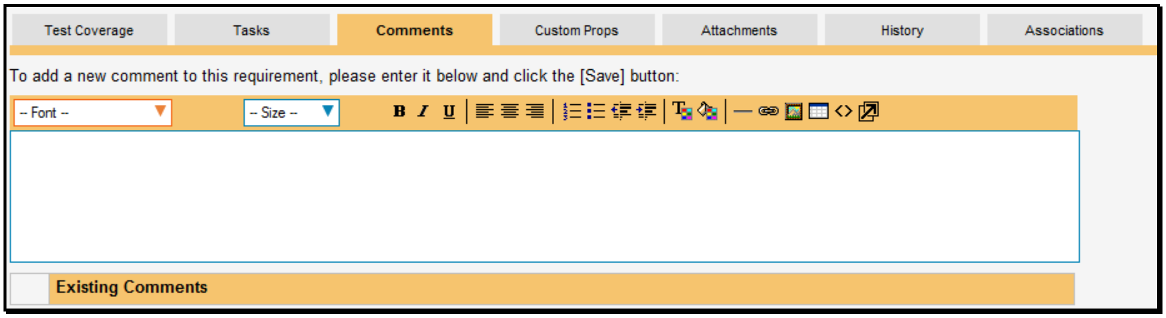
- **New Task** – inserts a new task in the task list with a default set of values. The task will be associated with the current requirement.
- **Remove** – removes the task from this requirement without actually deleting the task
- **Refresh** – updates the list of tasks from the server, useful if other people are adding tasks to this requirement at the same time.
- **Apply Filter** – Applies the entries in the filter boxes to the list of tasks
- **Clear Filters** – Clears the current filter, so that all tasks associated with the current requirement are shown.
- **Edit** – Clicking the [Edit] button to the right of the task allows you to edit the task inline directly on this screen. Only columns visible will be editable.
- **Show/Hide Columns** – Allows you to choose which Task columns are visible

The system has a series of shortcuts that simplify the editing of requirements and tasks:

- If you create a new task on the requirements page, the priority, release/iteration and owner are automatically copied from the parent requirement. You can change these suggested values before clicking [Update]
- When you assign a release/iteration to a requirement, its status automatically changes to “Planned”
- When at least one task assigned to the requirement changes from “Not Started” to “In Progress”, the parent requirement automatically switches from “Planned” to “In Progress”
- When all the tasks under the requirement are completed, the parent requirement will switch to the “Completed” status.
- If you manually move a requirement that has *no associated tasks* from “Planned” to “In Progress”, the system will automatically generate one task under the requirement and use the requirement’s planned effort field to generate the task’s estimated effort.

4.2.3. Comments

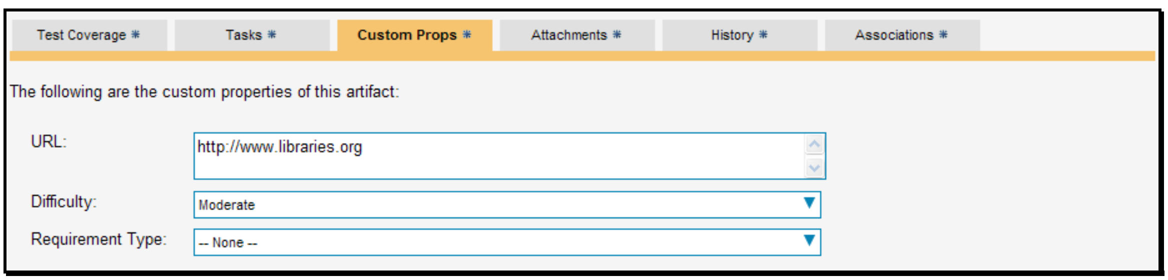
The Comments tab allows users to add and view discussions relating to the requirement:



Existing comments are displayed in order underneath the textbox in date order. To add a new comment, simply enter it into the textbox, and click the Save button.

4.2.4. Custom Properties

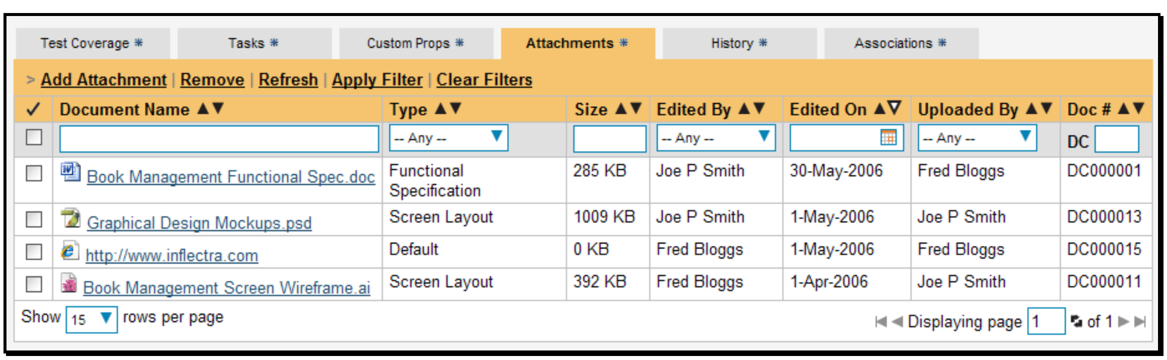
In this mode, the main pane displays any custom properties that the project owner has defined for requirements. To learn more about how to setup and configure custom properties for a project, please refer to the *SpiraTest Administration Guide*. Assuming that custom properties have been defined for your project, you will see a list of optional parameters that can be set on the requirement. These can be either freetext or drop-down-lists. In the example below, you can enter a URL, difficulty and/or Requirement Type.



Once you are satisfied with the values for the custom properties, simply click the main [Save] or [Save and New] to commit the changes.

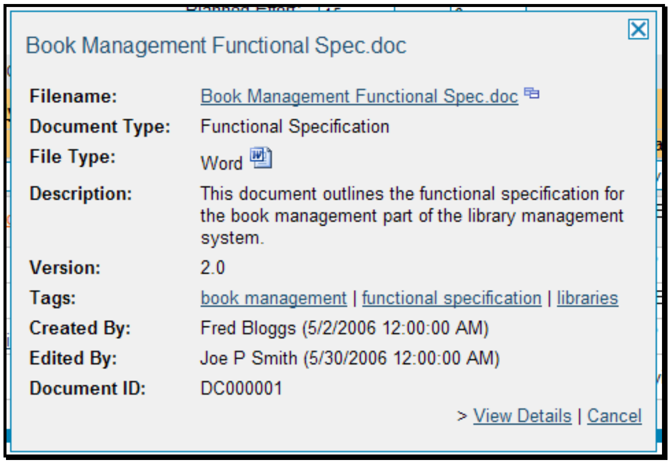
4.2.5. Attachments

In this mode, the main pane displays the list of documents, screenshots or web-links (URLs) that have been "attached" to the requirement. The documents can be in any format, though SpiraTeam® will only display the icon for certain known types.



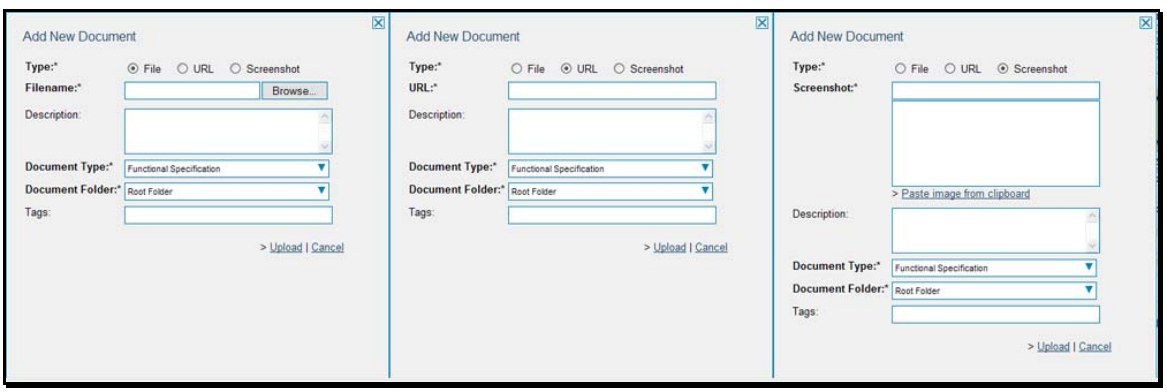
✓	Document Name	Type	Size	Edited By	Edited On	Uploaded By	Doc #
		-- Any --		-- Any --		-- Any --	DC
	Book Management Functional Spec.doc	Functional Specification	285 KB	Joe P Smith	30-May-2006	Fred Bloggs	DC000001
	Graphical Design Mockups.psd	Screen Layout	1009 KB	Joe P Smith	1-May-2006	Joe P Smith	DC000013
	http://www.inflectra.com	Default	0 KB	Fred Bloggs	1-May-2006	Fred Bloggs	DC000015
	Book Management Screen Wireframe.ai	Screen Layout	392 KB	Fred Bloggs	1-Apr-2006	Joe P Smith	DC000011

The attachment list includes the filename/URL that was originally uploaded together with the file-size (in KB), name of the person who attached it and the date uploaded. In addition, if you position the pointer over the filename and hold it there for a few seconds, a detailed description is displayed as a tooltip:



To actually view the document, simply click on the filename hyperlink and a new web browser window will open. Depending on the type of file, this window will either display the document / web-page or prompt you for a place to save it on your local computer. To remove an existing attachment from a requirement, simply click the <Remove> button and the attachment will be removed from the list. Using the standard filter/sort options you can also sort and filter the list of attachments to make it more manageable.

To attach a new document to the requirement, you need to first click the <Add Attachment> link to display the new attachment dialog box:



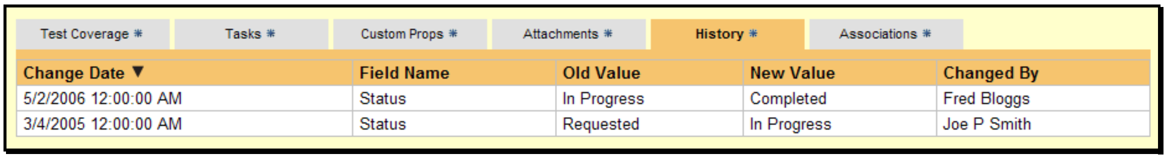
There are three different types of item that can be attached to a requirement:

- To upload a file, choose “File” as the type and then click the Browse button and select the file from your local computer, optionally enter a detailed description then click the <Upload> button. The document will be copied from your computer and attached to the artifact.
- To attach a web-link (URL) to the artifact, you need to choose “URL” as the type and then enter the fully qualified URL (e.g. http://mywebsite.com?Document=1), an optional description and then click the <Upload> button to attach the web-link.
- To attached a screenshot to the artifact, you need to choose “Screenshot” as the type and then copy the image to your computer’s clipboard (e.g. on Windows computers, the PRINT SCREEN button captures the current page and adds to the clipboard). Once the image is in the clipboard, click on the “Paste image from clipboard” hyperlink and the item will appear in the preview window. You can then fill in the other fields and click <Upload> to attach the image.

Note: If you are using a non-Windows® computer (e.g. Macintosh®) that doesn't put file extensions on filenames (e.g. .xls for an Excel sheet) automatically, then you will need to manually add the file extension to the filename *before uploading* if you want it to be displayed with the correct icon in the attachment list.

4.2.6. History

In this mode, the main pane displays the list of changes that have been performed on the requirement artifact since its creation. An example requirement change history is depicted below:



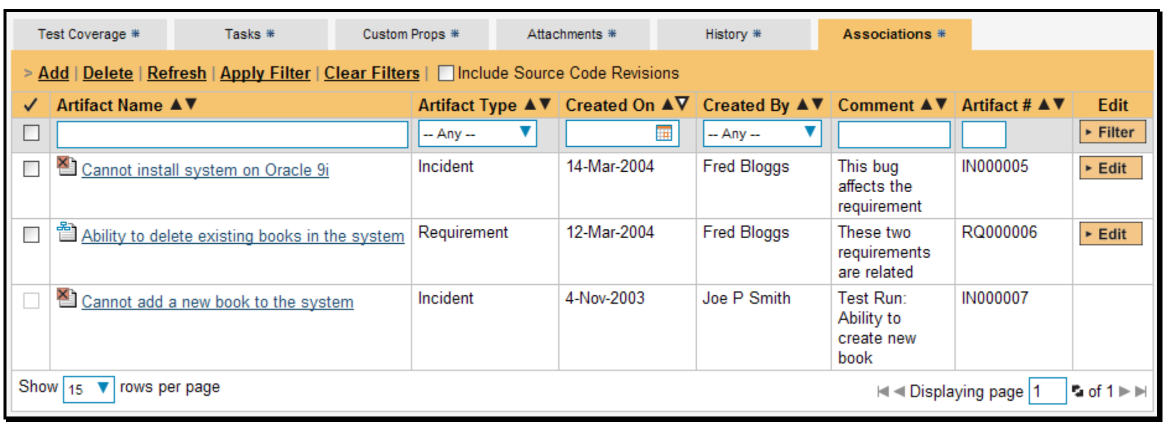
Test Coverage | Tasks | Custom Props | Attachments | History | Associations

Change Date ▼	Field Name	Old Value	New Value	Changed By
5/2/2006 12:00:00 AM	Status	In Progress	Completed	Fred Bloggs
3/4/2005 12:00:00 AM	Status	Requested	In Progress	Joe P Smith

The change history displays the date that each change was made, together with the fields that were changed, the old and new values and the person who made the change. This allows a complete audit trail to be maintained of all changes in the system.

4.2.7. Associations

In this mode, the main pane displays a list of any incidents or other requirements that are associated with this requirement:



Test Coverage | Tasks | Custom Props | Attachments | History | Associations

> Add | Delete | Refresh | Apply Filter | Clear Filters | Include Source Code Revisions

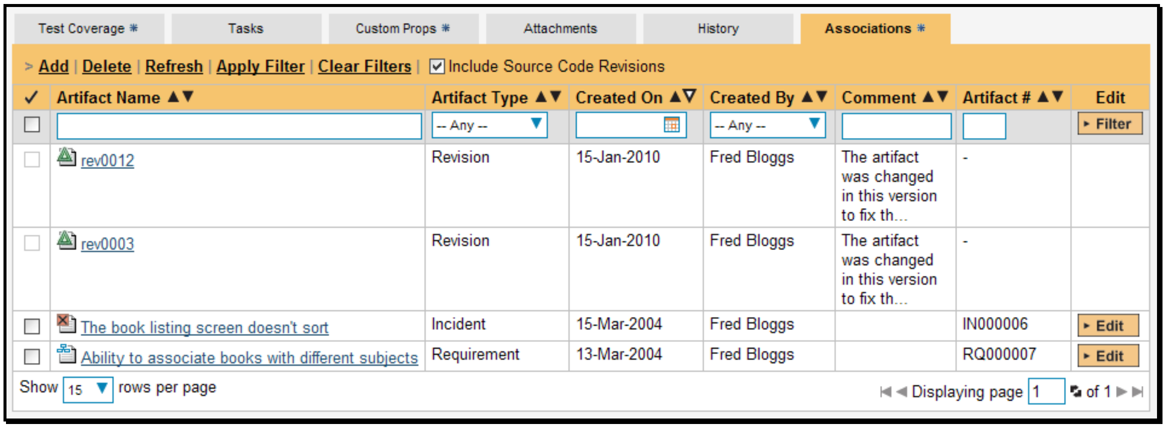
✓	Artifact Name ▲▼	Artifact Type ▲▼	Created On ▲▼	Created By ▲▼	Comment ▲▼	Artifact # ▲▼	Edit
		-- Any --		-- Any --			Filter
	Cannot install system on Oracle 9i	Incident	14-Mar-2004	Fred Bloggs	This bug affects the requirement	IN000005	Edit
	Ability to delete existing books in the system	Requirement	12-Mar-2004	Fred Bloggs	These two requirements are related	RQ000006	Edit
	Cannot add a new book to the system	Incident	4-Nov-2003	Joe P Smith	Test Run: Ability to create new book	IN000007	

Show 15 rows per page | Displaying page 1 of 1

The requirements in this list are ones that a user has decided are relevant to the current one and has created a direct link between them. In the case of incidents, the association can be either due to the creator of an incident directly linking the incident to the requirement, or it can be the result of a tester executing a test-run and creating an incident during the test run. In this latter case, the check-box to the left of the association will be unavailable as the link is not editable.

Each association is displayed with the type of artifact (requirement vs. incident), name of the artifact being linked-to, the name of the person who created the association, and a comment that describes why the association was made. In the case of an indirect association due to a test run, the comment will contain the name of the test run.

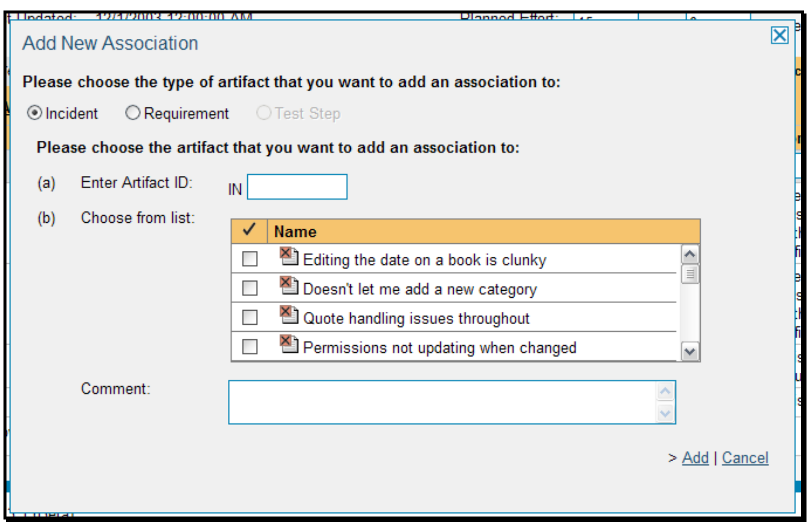
In addition, when using SpiraPlan or SpiraTeam, you can select the checkbox marked "Include Source Code Revisions" and the system will also scan the source code repository for any revisions that are linked to this artifact. Since that can take be slower than accessing SpiraTeam, it is provided as an option that you can enable and disable:



You can perform the following actions on an association from this screen:

- **Delete** – removes the selected association to the other artifact. This will only delete the association, not the linked artifact itself.
- **Refresh** – updates the list of associations from the server, useful if other people are adding associations to this requirement at the same time.
- **Apply Filter** – Applies the entries in the filter boxes to the list of associations
- **Clear Filters** – Clears the current filter, so that all associations for the current requirement are shown.
- **Edit** – Clicking the [Edit] button to the right of the associations allows you to edit the comment field inline directly on this screen.

To create a new association, simply click the <Add> hyperlink which will display the "Add New Association" popup dialog box:



Once you have selected the appropriate artifact type, you will then be able to choose the specific artifact you want to link to. In all cases, you can choose the item from a scrolling selection box, or you can either enter the ID of the artifact directly (if known). In either case you can also add a comment that explains the rationale for the association.

5. Test Case Management

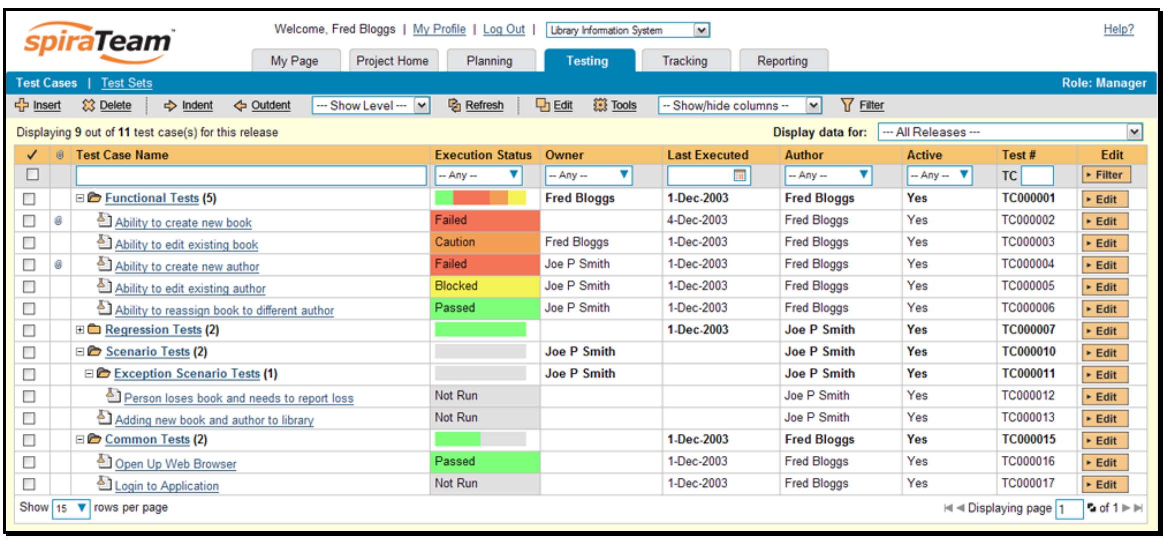
This section outlines how the use-case / test-case management features of SpiraTest® and SpiraTeam® can be used to develop the business use-cases for the system, which specify how the different pieces of functionality are expected to work in practice. In addition, these use/test-cases form the basis of the business specification of the system when associated with the underlying requirements matrix. Typically when starting a new project:

- The requirements matrix is entered first
- Then the list of use-cases is developed to outline the key scenarios that need to supported to implement the requirement
- Then the use-cases are fleshed out into full test-cases by adding the detailed test-steps with the expected result and suggested sample-data
- Finally the tests are grouped into test-sets so that they can be assigned to users in batches for execution and tracking.

However when migrating existing projects into SpiraTeam®, you may need to migrate the test-case list first, and then add the supporting requirements matrix afterwards.

5.1. Test Case List

When you click on the Testing > Test Cases link on the global navigation bar, you will initially be taken to the test case list screen illustrated below:



The test case list consists of a hierarchical arrangement of the various test folders and test cases that the system being developed needs to be able to demonstrate. The structure is very similar to the folder structure in Microsoft Windows® Explorer, and users will find this very familiar and intuitive to use. When you create a new project, this list will initially be empty, and you will have to use the <Insert> button to start adding test folders and test cases to the system.

The list consists of test folders shown with a folder icon and in **bold-type**, and test cases that are shown with a document icon and a hyperlink. You can nest test folders and test cases under an existing test folder, but you cannot nest anything under a test case. All of the items in the list have a name, together with the most recent execution status (passed, failed or not-run), and owner, author, execution date, active flag and test case number. Clicking on a test case's hyperlink will take you to the test case details page for the item in question (see section 5.2).

It is important to understand that only test cases are assigned a status themselves; the test folders instead display a test execution bar graph that illustrates the aggregate execution status of its child test-cases. Thus if the test folder contains two test cases, one of which passed, and one of which wasn't run, the graph will display 50% green and 50% gray.

To determine the exact aggregate test folder execution status information, position the mouse pointer over the bar-chart, and the number of tests in each of the execution statuses (passed, failed, not-run, blocked, caution) will be displayed as a "tooltip". Note that if you change the owner of a test folder, then all the child test cases will be assigned the same owner. This allows you to more easily associate entire folders to test cases to be executed by a specific user.

5.1.1. Insert

Hovering over the <Insert> button brings up a secondary menu that allows you to choose whether to insert a test case or a test folder (if you just click Insert it defaults to inserting a test case). In either case, it will insert the new test folder / test case *above* the currently selected item – i.e. the one whose check-box has been selected, at the same level in the hierarchy. If you want to insert a new test case below an existing test case, you need to select the item below it. If you insert a new test folder / test case without first selected an existing item from the list, the new test case will simply be inserted at the end of the list.

Once the new test folder / test case has been inserted, the item is switched to "Edit" mode so that you can rename the default name and choose an owner and/or author. Note that all new test cases are initially set with an execution status of "Not Run".

5.1.2. Indent / Outdent

Clicking on the <Indent> button indents all the test folders / test cases whose check-boxes have been selected. You cannot indent a test case or folder if it is *below* a test case, as test cases are not allowed to have child items. Clicking on the <Outdent> button de-indents all the test folders / test cases whose check-boxes have been selected.

5.1.3. Delete

Clicking on the <Delete> button deletes all the test cases and/or test folders whose check-boxes have been selected. If any of the items are test folders, then all the children are all deleted (whether test cases or folders). This behavior is similar to that in Microsoft Windows® Explorer.

5.1.4. Execute

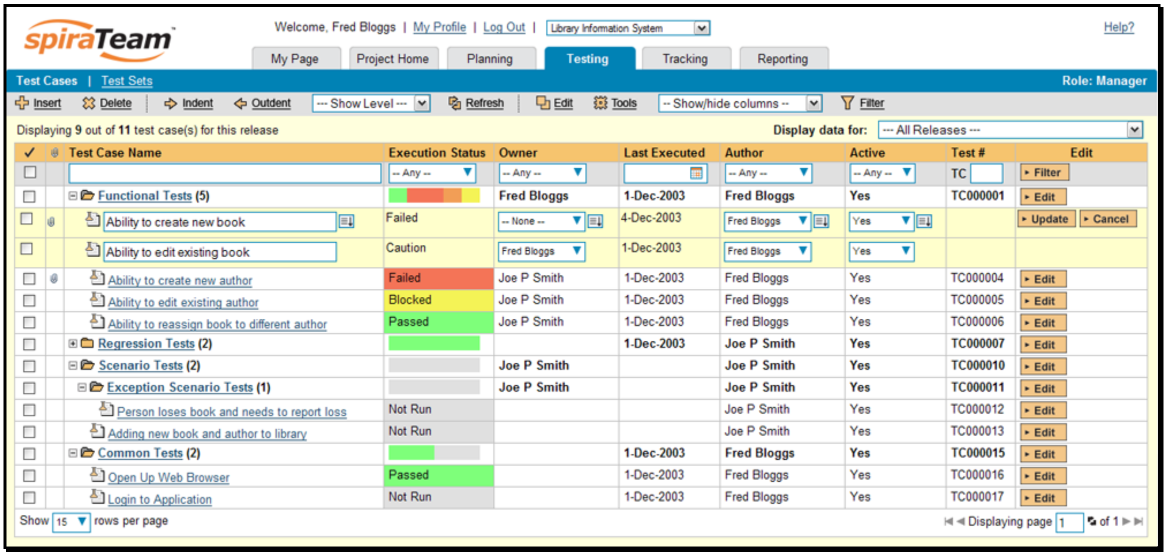
Clicking on the <Execute> button executes all the test cases selected, together with all the test cases contained with any selected test folders. The test execution functionality of SpiraTeam® is explained in more detail in section 5.3.

5.1.5. Refresh

Clicking on the <Refresh> button simply reloads the test case list. This is useful as other people may be modifying the list of test cases at the same time as you, or executing specific test cases, and after stepping away from the computer for a short-time, you should click this button to make sure you are viewing the most current test case list for the project.

5.1.6. Edit

Each test case in the list has an <Edit> button display in its right-most column. When you click this button or just *double-click* on any of the cells in the row, you change the item from "View" mode to "Edit" mode. The various columns are made editable, and <Update> <Cancel> buttons are displayed in the last column:



If you click <Edit> on more than one row, the <Update> and <Cancel> buttons are only displayed on the first row, and you can make changes to all the editable rows and then update the changes by clicking the one <Update> button. Also, if you want to make the same change to multiple rows (e.g. to change the owner of five test cases from “Fred Bloggs” to “Joe Smith”), you can click on the “fill” icon to the right of the editable item, which will propagate the new value to all editable items in the same column.

When you have made your updates, you can either click <Update> to commit the changes, or <Cancel> to revert back to the original information. Alternatively, pressing the <ENTER> key will commit the changes and pressing the <ESCAPE> key will cancel the changes.

5.1.7. Show Level

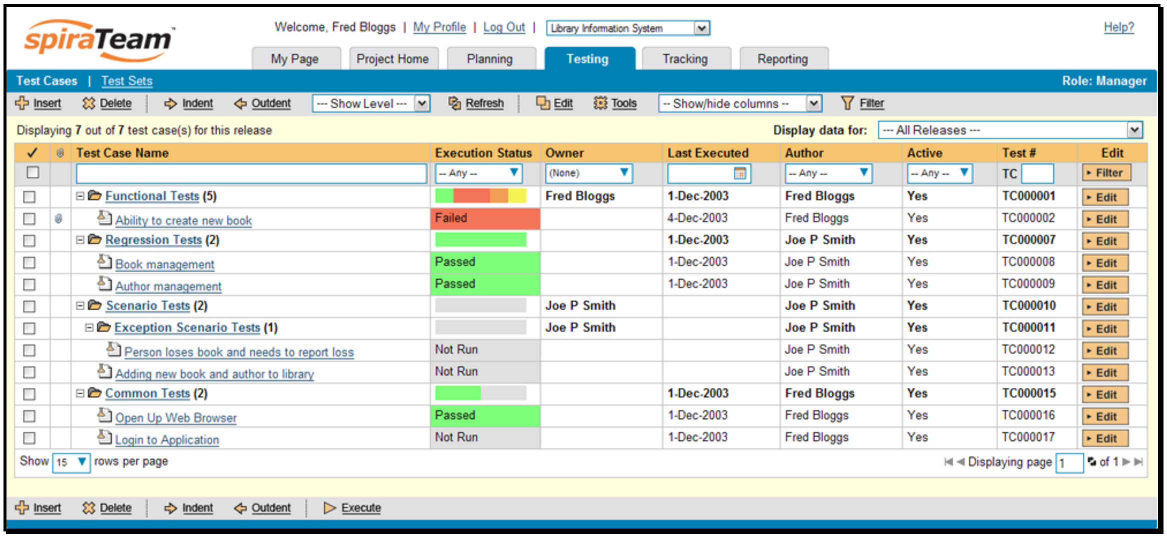
Choosing an indent level from the ‘Show Level’ drop down box allows you to quickly and easily view the entire test case list at a specific indent level. For example you may want to see all test cases drilled-down to the *third* level of detail. To do this you would simply choose ‘Level 3’ from the list, and the test cases will be expanded accordingly

5.1.8. Show / Hide Columns

This drop-down list allows you to change the fields that are displayed in the test case list as columns for the current project. To show a column that is not already displayed, simply select that column from the list of “Show…” column names and to hide an existing column, simply select that column from the list of “Hide…” column names. This is stored on a per-project basis, so you can have different display settings for each project that you are a member of. The fields can be any of the built-in fields or any of the custom properties set up by the project owner.

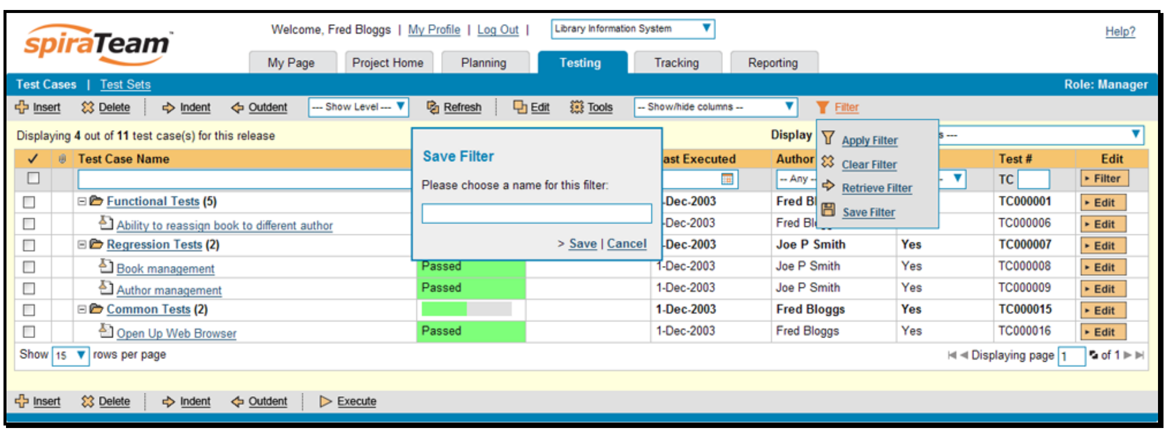
5.1.9. Filtering

You can easily filter the list of test cases as illustrated in the screen-shot below:



To filter the list by any of the displayed columns, you either choose an item from the appropriate drop-down list or enter a free-text phrase (depending on the type of field) then click <Filter> or press the <ENTER> key to apply the different filters. Note that the name field is searched using a "LIKE" comparison, so that searching for "database" would include any item with the word database in the name. The other freetext fields need to be exact matches (e.g. dates, test case numbers). In the screen-shot above, we are filtering on Owner = (None).

In addition, if you have a set of filters that you plan on using on a regular basis, you can choose the option Filter > Save Filter to add the current filter to the list of saved filters that appear on your 'My Page'. The list of saved filters can also be retrieved by clicking Filter > Retrieve Filter:



5.1.10. Copying Test Cases

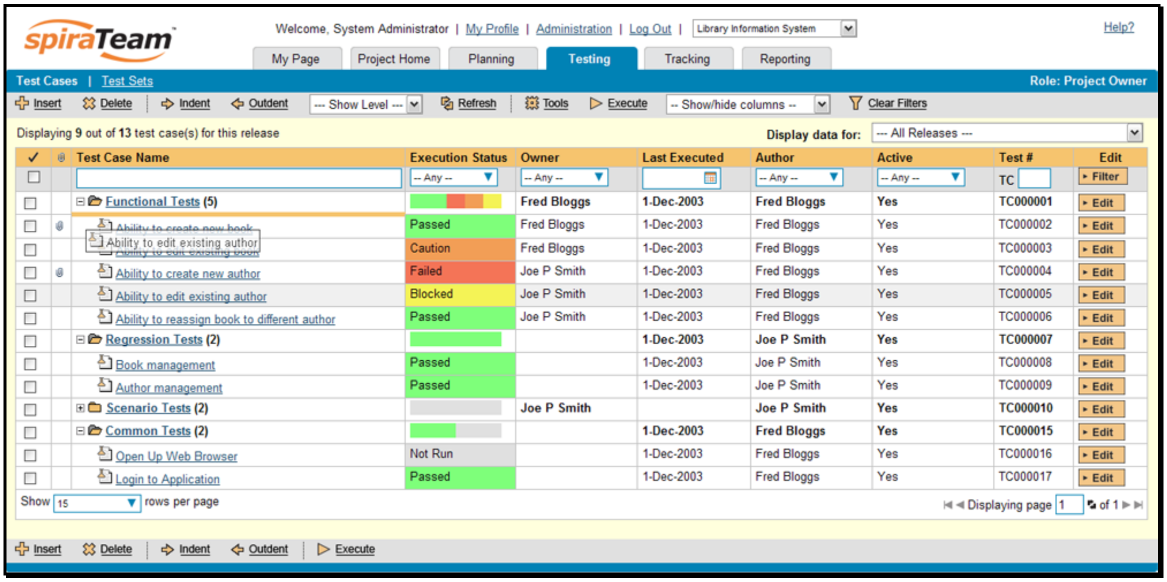
To copy one or more test cases, simply select the check-boxes of the test cases you want to copy and then select the Edit > Copy menu option. This will copy the current test case selection to the clipboard. Then you should select the place where you want the test cases to be inserted and choose the Edit > Paste option.

The test cases will now be copied into the destination location you specified. The name of the copied test cases will be prefixed with "Copy of…" to distinguish them from the originals.

5.1.11. Moving Test Cases

To move test cases in the hierarchy, there are two options:

1. Click on the icon the test case/folder you want to move and then drag the icon to the location you want it moved. The background of the destination location will change as the icon is dragged over it to illustrate where it will be inserted:

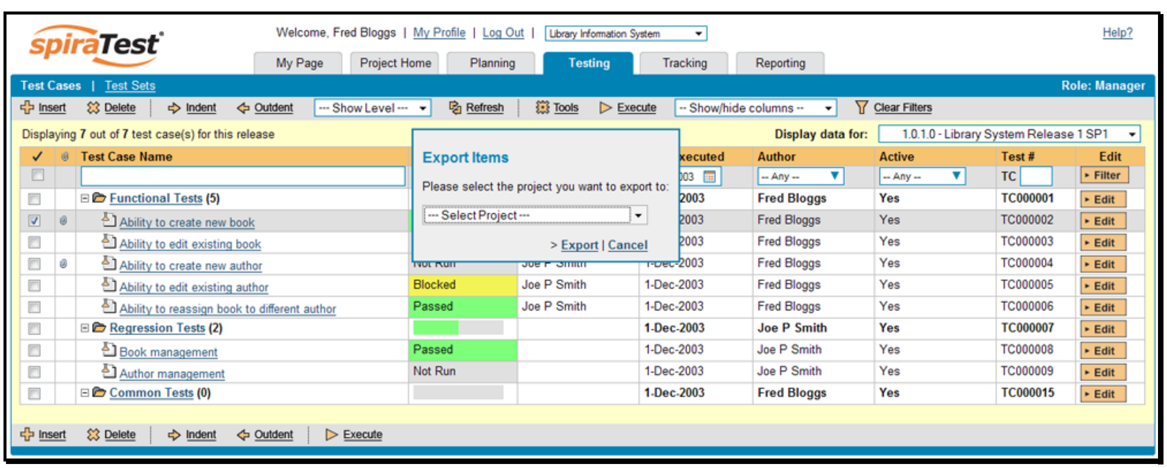


Once you have the test case/folder positioned at the correct place that you want it inserted, just release the mouse button and the test case list will be refreshed, with the item moved to the desired location.

2. Alternatively you can simply select the check-boxes of the test cases you want to move and then select the Edit > Cut menu option. This will cut the current test case selection to the clipboard. Then you should select the place where you want the test cases to be inserted and choose the Edit > Paste option. The test cases will now be moved into the destination location you specified.

5.1.12. Exporting Test Cases

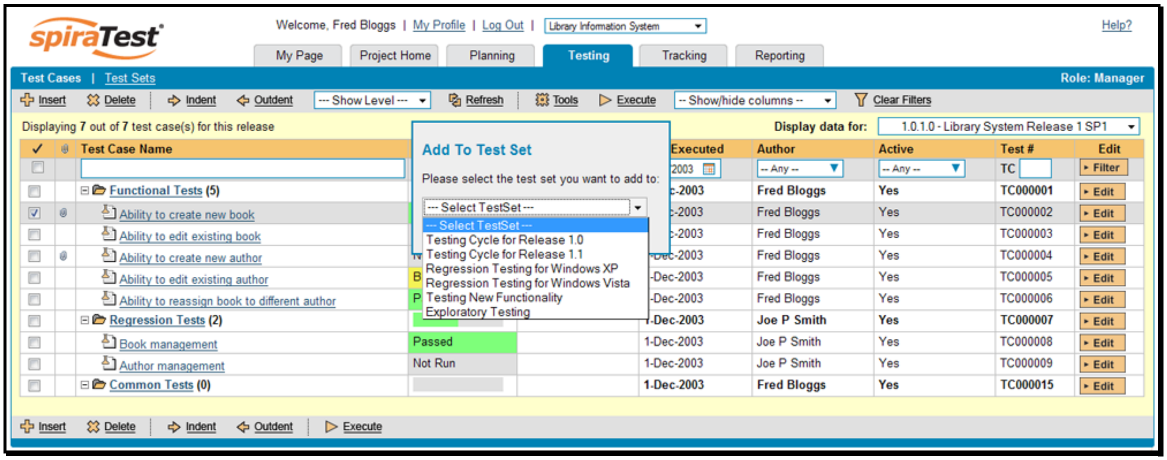
To export a test case or set of test cases from the current project to another project in the system, all you need to do is select the check-boxes of the test case(s) you want to export and then click Tools > Export Tests. This will then bring up a list of possible destination projects:



Once you have chosen the destination project and clicked the <Export> button, the test cases will be exported from the current project to the destination project. Any file attachments will also be copied to the destination project along with the test cases.

5.1.13. Adding Test Cases to a Release or Test Set

To quickly add a series of test cases to either a Release or Test Set, all you need to do is select the check-boxes of the appropriate test cases and then click Tools > Add to Release / Test Set. This will then bring up a dialog box displaying either a list of available releases, or a list of available test sets (depending on which option was chosen):

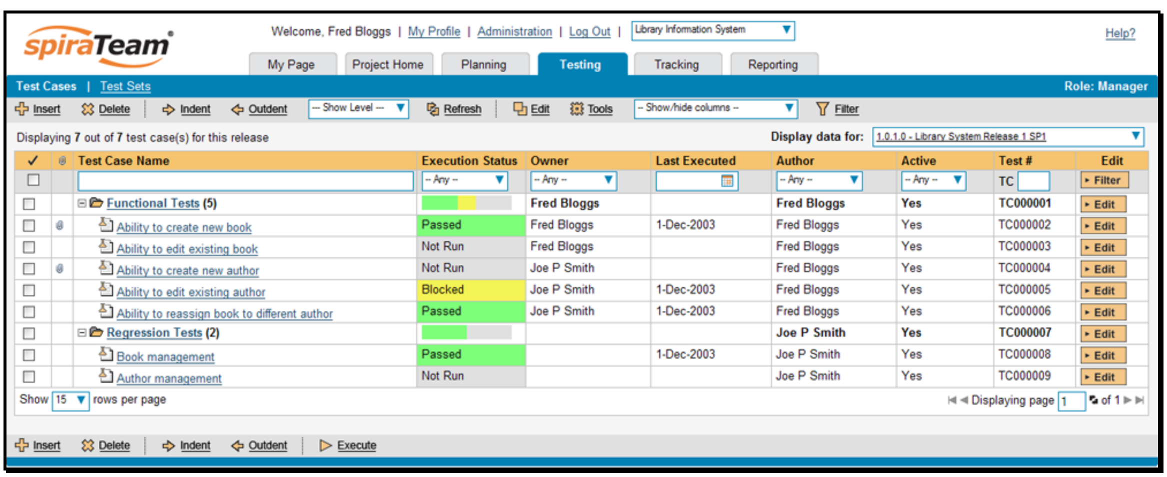


Once you have chosen the destination release / test set, clicking <Add> will add the selected test cases to the destination release / test set.

5.1.14. Viewing the Test Status for a Release

By default, when you view the list of test case cases, it will display an aggregate status for all releases of the project. I.e. the test list will include all the test cases in the system (regardless of which release they apply to) and the execution status will reflect the most recent test run – regardless of which release it was for.

To change the test case list to just display test cases and execution status for a particular release, simply change the release selected in the drop-down list located below the toolbar (on the right-hand side) from "Any" to a specific release:

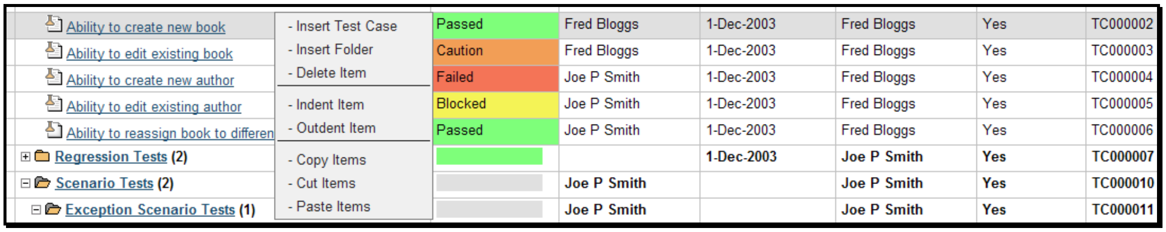


As illustrated in the example above, when the drop-down list is changed to select a specific release, the list of test cases is filtered to just those mapped to the release in question. In addition, the execution status for the test releases will only reflect test runs for that specific release (and any child iterations if applicable). As can be seen in our example, many test cases that have been run for other releases now show the "Not Run" status since they've not been run for this specific release.

As a shortcut, when you select a specific release for viewing, subsequent execution of any of the test cases via the Tools > Execute menu option will default the test run to the selected release.

5.1.15. Right-Click Context Menu

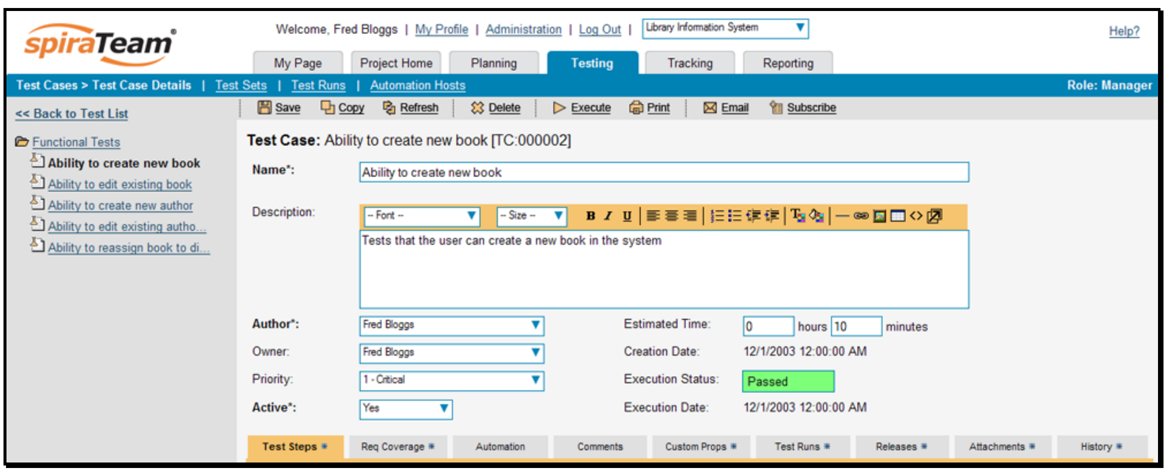
SpiraTeam® provides a shortcut – called the *context menu* - for accessing some of the most commonly used functions, so that you don't need to move your mouse up to the toolbar each time. To access the context menu, right-click on any of the rows in the test case list and the following menu will be displayed:



You can now choose any of these options as an alternative to using the icons in the toolbar.

5.2. Test Case Details

When you click on a test case item in the test case list described in section 5.1, you are taken to the test case details page illustrated below:

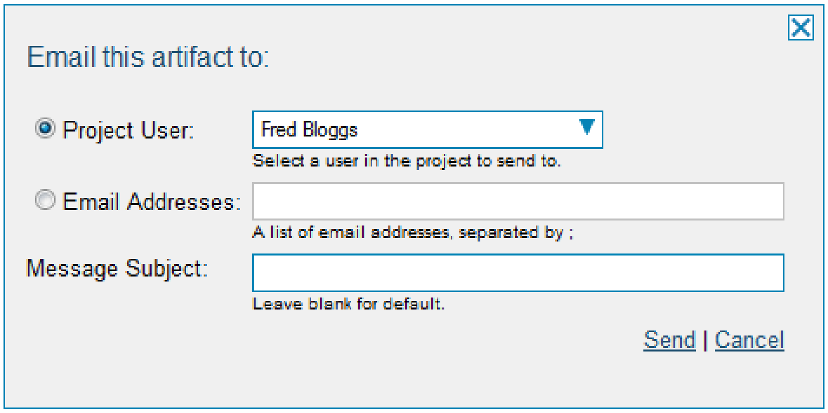


This page is made up of three areas; the left pane is the navigation window, the upper part of the right pane contains the test case detailed information itself, and the bottom part of the right pane contains related information about the test case.

The navigation pane consists of a link that will take you back to the test case list, as well as a list of the peer test case to the one selected. This latter list is useful as a navigation shortcut; you can quickly view the detailed information of all the peer test cases by clicking on the navigation links without having to first return to the test cases list page.

The top part of the right pane allows you to view and/or edit the details of the particular test case. You can edit the various fields (name, description, etc.) and once you are satisfied with them, simply click either the <Save> or <Save and New> button at the top of the page to commit the changes. In addition you can delete the current artifact by choosing <Delete>, discard any changes made by clicking <Refresh> or print it by clicking <Print>.

Using the <Email> button on the toolbar, you can send an email containing details of the test case to an email address or another user on the system:

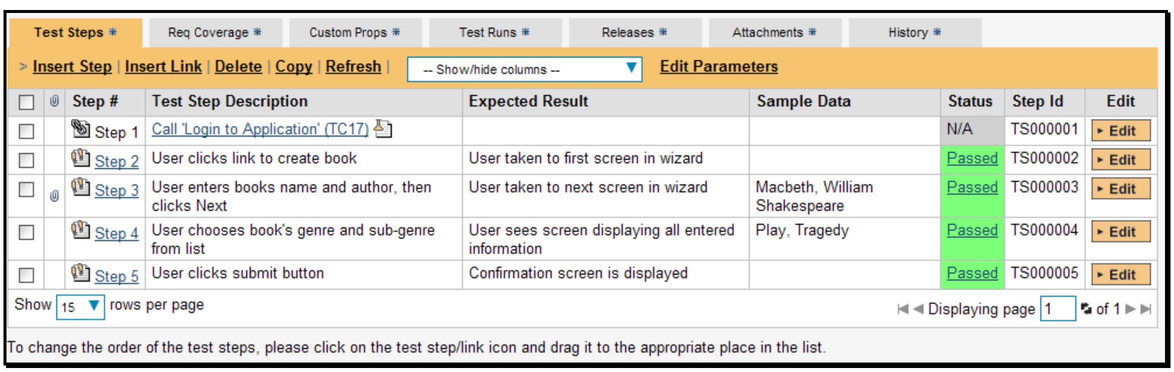


You can specify the subject line for the email, and either a list of email addresses, separated by semicolons, or an existing project user .The content of the email is specified in the System Administration – Notification Templates.

The lower part of the right pane can be switched between six different views by clicking the appropriate tab. Initially the pane will be in “Test Steps” mode, but it can be switched to “Requirements Coverage”, “Automation”, “Comments”, “Custom Properties”, “Test Runs”, “Releases”, “Attachments” and “History” modes if so desired. Each of the views is described separately below. In addition there is a shortcut link “Execute This Test” that allows you to execute this test (see section 5.3) without having to return to the Test Case list.

5.2.1. Test Steps

This view displays the name of the test case together with all the defined test steps that a tester would need to perform to verify that the functionality works as expected. The list of test steps displays the position number, the description, the expected result, some suggested sample data and the most recent execution status of the individual test step:

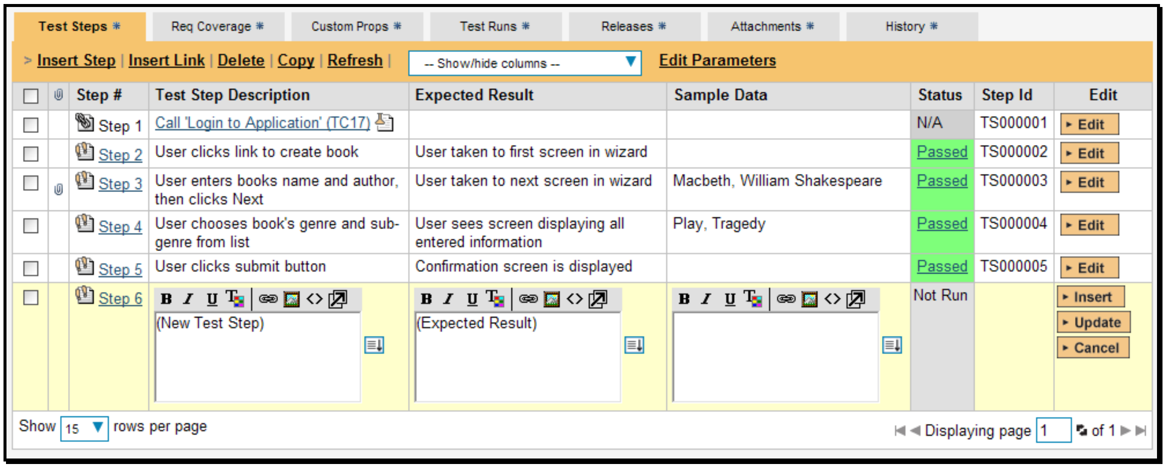


Note: Test steps that are marked with a hyperlink and test case icon (e.g. “Call Login to Application” in the screen shot above) are in fact *linked test cases.* Linked test cases are a useful way of reusing existing test steps from other test cases. For example if you want to have a set of steps be in more than one test case (e.g. a login step) then you would create a separate test case just containing these steps, then have all the other test cases just link to it. This avoids the need to have duplicate test steps throughout the project.

In addition, if you click on the step number hyperlink (e.g. Step 2) you will be taken to the test step details page which allows you to perform additional editing of a specific test step as well as attach documents, associate pre-existing incidents and view the change history.

5.2.1.1. Insert Step

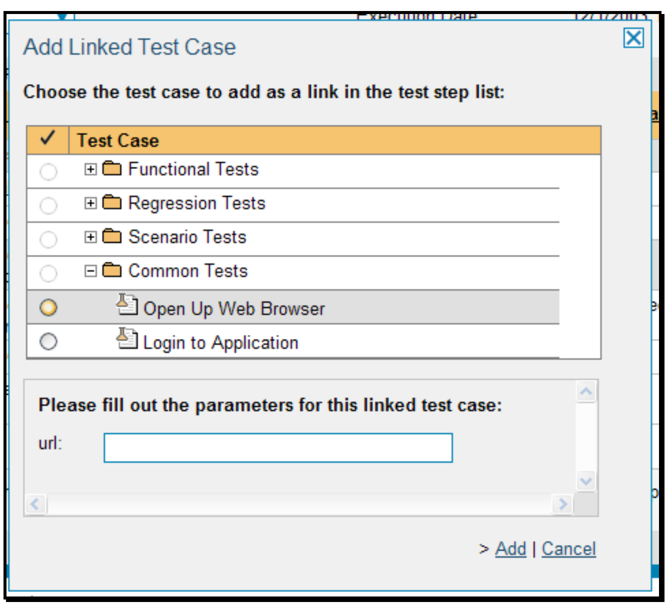
Clicking on the <Insert Step> button inserts a new test step *before* the currently selected (by means of the check-box) test step. Clicking the <Insert Step> button without selecting a test step will insert a new step at the end of the list. When a new step is inserted, the fields are displayed in “Edit” mode, so the description, expected result and sample data fields are editable, allowing you to enter the appropriate data:



Once you have entered the necessary information, you can click either <Insert> or <Update> to commit the changes. If you choose <Insert>, another new row will be inserted which is useful if you intend on entering lots of rows at once, whereas clicking <Update> will simply commit the current row only.

5.2.1.2. Insert Link

Clicking on the <Insert Link> button brings up the following dialog box that allows you to choose the test case to be inserted:



You need to then select the name of the test case you want to insert as a link. If the test case has declared parameters (see the section on Parameters below for more details) you will be given a list of parameters that needed to be filled out.

You need to fill out the values of the parameters for the linked test case and then click the <Add> button to complete the operation. The system will then insert the test case as a link just before the currently selected test step. If no existing test step was selected, the link will be added at the end of the test step list.

5.2.1.3. Delete

Clicking on the <Delete> button deletes the currently selected test steps, and reorders the test step position numbers to close any gaps in numbering.

5.2.1.4. Copy

Clicking on the <Copy> button makes a copy of the current test step or linked test case and inserts the copied version directly above the original one.

5.2.1.5. Refresh

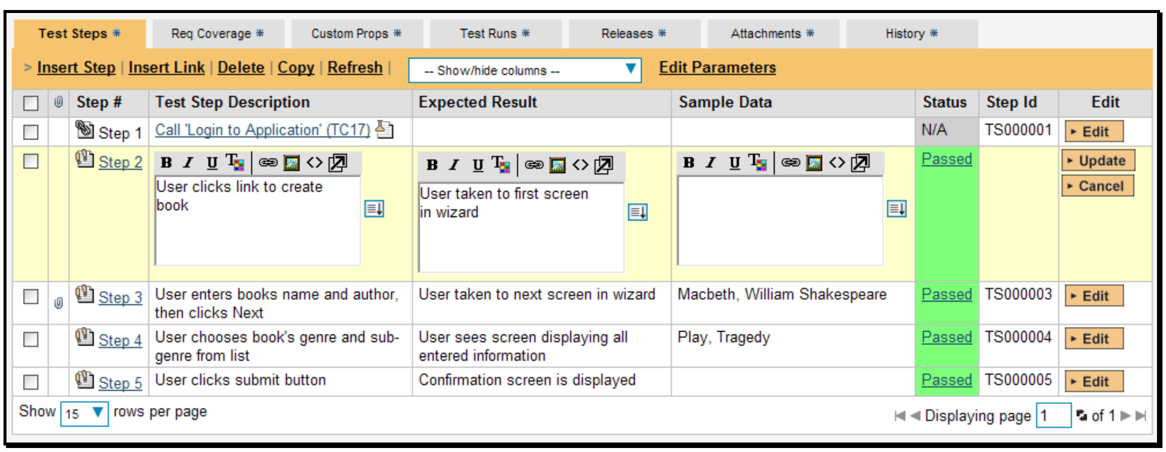
Clicking on the <Refresh> button simply reloads the list of test steps. This is useful if other people are making changes to the test list and you want to make sure that you have the most current version.

5.2.1.6. Show / Hide Columns

By default the test step list screen will display the Description, Expected Result and Sample Data fields. However the Expected Result and Sample Data fields are optional and can be hidden if necessary to make more space. If you have configured custom properties for test steps, you can use the Show/Hide features to display one or more of your custom properties instead. These fields will then be editable in this grid-view.

5.2.1.7. Editing Test Steps

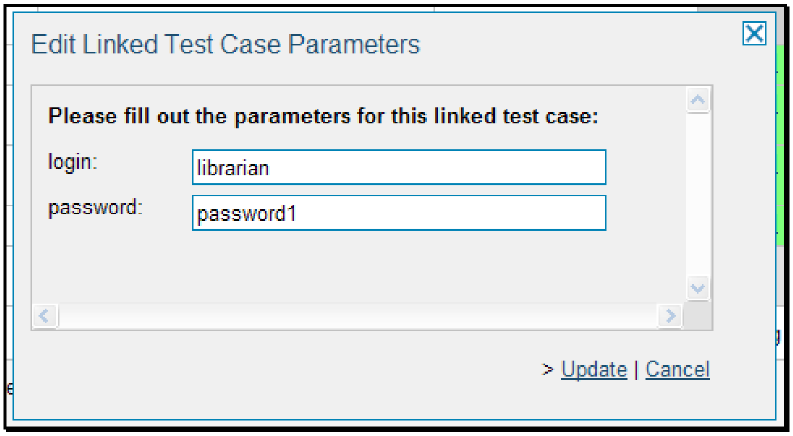
To modify an existing Test Step you simply need to click on the <Edit> button to the right of the step, or just *double-click* on the cells in the row. That will switch the selected row into Edit mode. The various columns are turned into editable text-boxes, and <Update> <Cancel> buttons are displayed in the last column:



If you click <Edit> on more than one row, the <Update> and <Cancel> buttons are only displayed on the first row, and you can make changes to all the editable rows and then update the changes by clicking the one <Update> button. Also, if you want to make the same change to multiple rows, you can click on the "fill" icon to the right of the editable item, which will propagate the new value to all editable items in the same column. When you have made your updates, you can either click <Update> to commit the changes, or <Cancel> to revert back to the original information.

5.2.1.7. Editing Test Steps

To modify an existing Test Link you simply need to click on the <Edit> button to the right of the step, or just click on the cells in the row. That will open up the special dialog box used for editing the parameter values associated with a specific linked test case:



This allows you to edit the parameters being passed from the current test step to the linked test case without having to recreate the test link from scratch. To commit the change click <Update> to close the dialog box, or click <Cancel> to revert back to the original information.

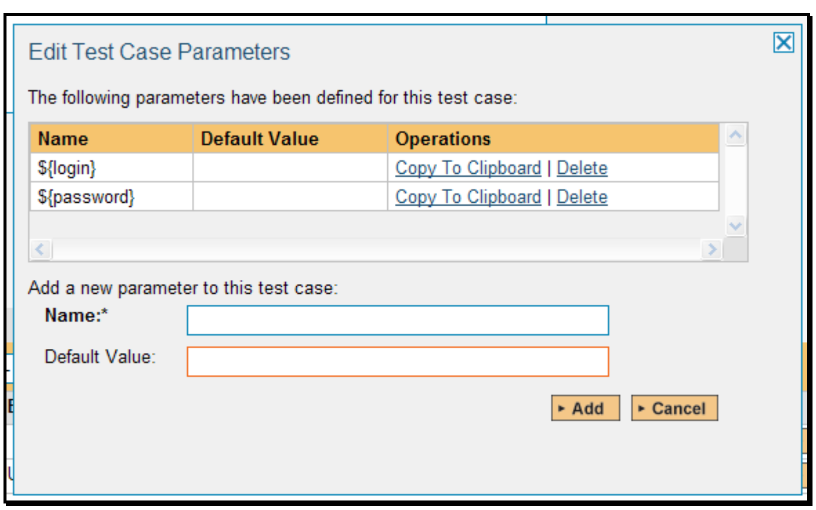
5.2.1.9. Moving Test Steps

To move test steps in the list, click on the icon the test step/link you want to move and then drag the icon to the location you want it moved. The border of the destination location will change as the icon is dragged over it to illustrate where it will be inserted.

5.2.1.10. Parameters

Test cases can have parameters associated with them. This enables one test case to be called several times by another test case (as a link) and have different parameters passed in each case, making the operation different. E.g. you could have a generic “login to application” test case that others call as an initial step, which could be provided with different login information depending on the calling test case.

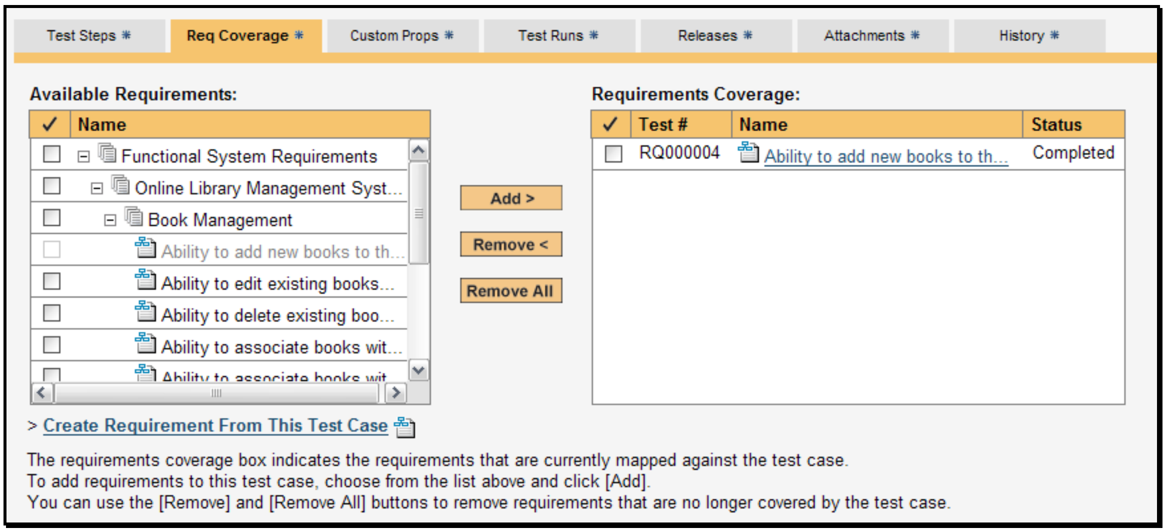
To view / change the parameters associated with the current test case, click on the <Parameters> icon in the toolbar and the list of current parameters will be displayed:



The list of existing parameters is displayed in a grid, followed by the option to add a new parameter and default value (used when the test case is run directly rather than being called by another test case). You can delete an existing parameter and also copy the parameter token to your computer's clipboard. The latter option is useful so that you can insert the parameter token (in the format *${parameter name}*) in the test step description, expected result or sample data fields and have it converted into the parameter value during test execution.

5.2.2. Requirements Coverage

This view displays the name of the test case together with the requirements coverage information for the test case in question:



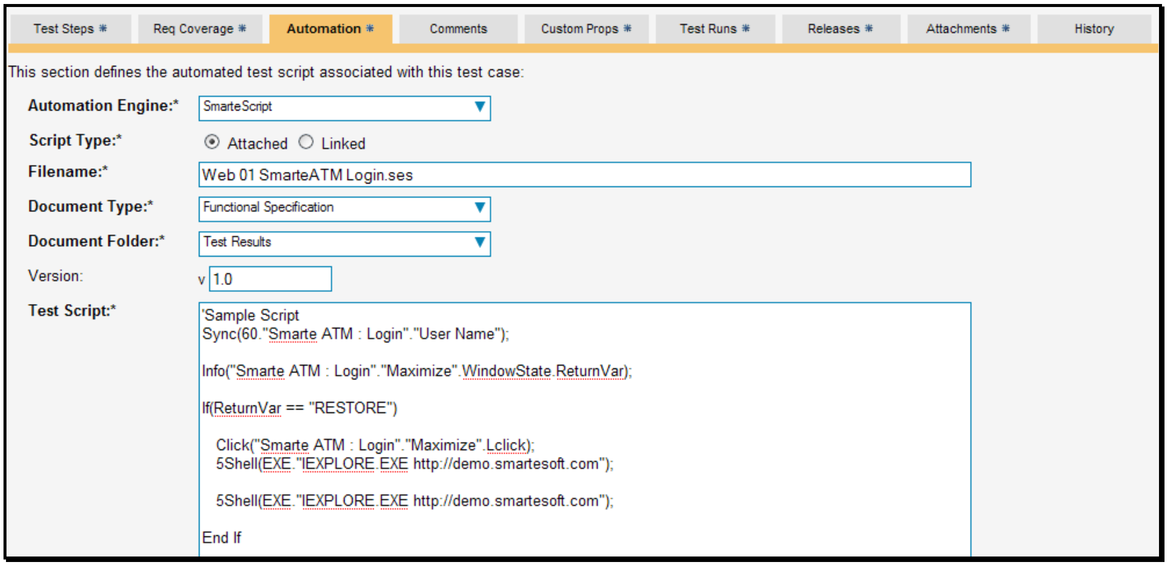
The pane consists of two lists of requirements, the one on the left being the complete hierarchical list of requirements in the project. The right box (which will initially be empty) contains the list of requirements mapped to this test case. The requirements in this box include columns for their ID, name and status. Hovering the mouse over the names of the requirements in either box will display a "tooltip" consisting of the requirement name, place in the hierarchical structure and a detailed description. Clicking on the hyperlinks in right-hand box will jump you to the requirement details screen for the requirement in question (see section 4.2).

To change the coverage for this test case, you use the buttons (Add, Remove, Remove All) positioned between the two list-boxes. The <Add> button will move the selected requirements from the list of available on the left to the list of mapped on the right. Similarly the <Remove> and <Remove All> buttons will remove either the selected or all the requirements from the right list-box and add them back to the left list-box.

Finally, as a shortcut you can click the "Create Requirement from This Test Case" link to create a new requirement in the list of covered requirements that will be automatically linked to this test case. This is useful when you have created a new test case and want to generate an initial placeholder requirement to be fleshed-out later.

5.2.3. Automation

The Automation tab displays any automated test scripts associated with the current test case. SpiraTeam® can either be used to physically store the test script as an attachment in the system (as long as the test script is stored in a plain Unicode text format) or simply store the location of the test script if stored on an external network drive or local folder:

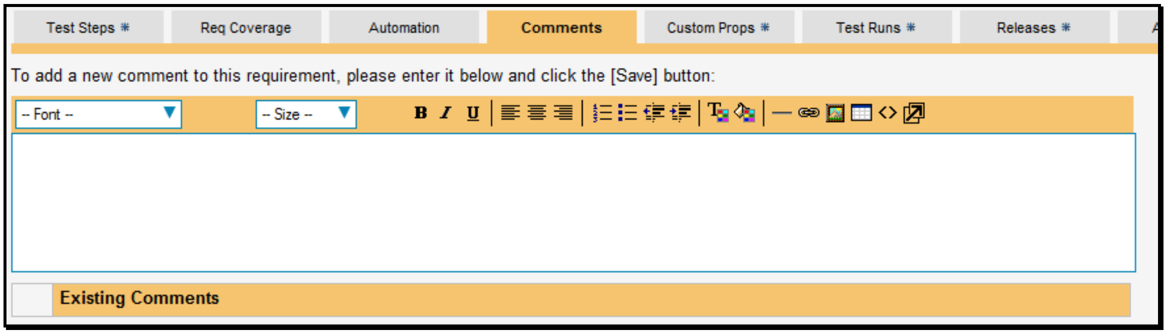


The automation screen includes the following fields that you should populate when using SpiraTeam® to store an automated test script:

- **Automation Engine** – this should be the name of the test automation engine that the test script should be executed with. This list is populated by a system administrator using the administration section of the application (as described in the *SpiraTeam Administration Guide*)
- **Script Type** – This should be set to either “attached” or “linked”. If you choose to attach the test script, the large text box at the bottom will be enabled, allowing you enter/edit the test script directly in SpiraTeam. If you choose linked, the test script is stored externally and SpiraTeam just stores a reference to it.
- **Filename** – If you are attaching the test script to the test case then this field just needs to contain the filename of the test script (no folders or path needed), whereas if you are choosing to link the test script, you need to follow the exact format that will be expected by the test automation engine. For details, please refer to the specific test automation engine in the *SpiraTest/Team Automated Test Integration Guide*.
- **Document Type** (SpiraTeam only) - This should be set to the document type that you want the test script associated with.
- **Document Folder** (SpiraTeam only) - This should be set to the document folder that you want the test script to be stored in.
- **Version** – This should contain the version number of the test script.
- **Test Script** – If you are attaching a test script, this should contain the actual program code for executing the test script. The language and syntax will be dependent on the test automation engine being used. If you are linking the test script, this section will be disabled.

5.2.4. Comments

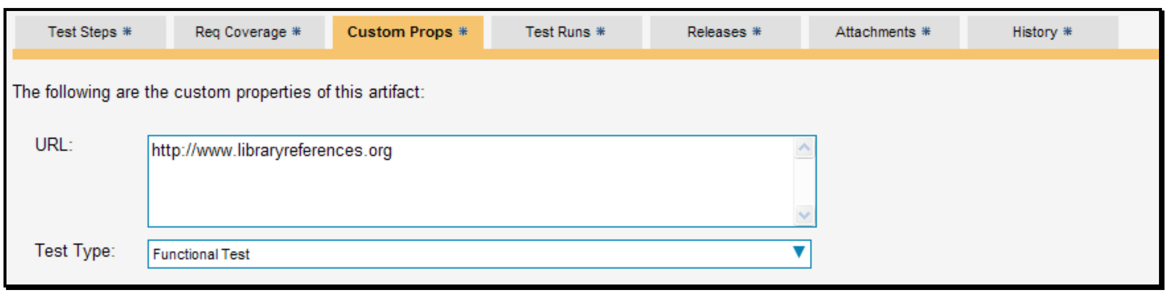
The Comments tab allows users to add and view discussions related to the Test Case:



Existing comments are displayed by date underneath the text box. To add a comment to the Test Case, enter your text into the textbox, then click the Save button to save.

5.2.5. Custom Properties

In this mode, the main pane displays any custom properties that the project owner has defined for test cases. To learn more about how to setup and configure custom properties for a project, please refer to the *SpiraTest Administration Guide*. Assuming that custom properties have been defined for your project, you will see a list of optional parameters that can be set on the test case. These can be either freetext or drop-down-lists. In the example below, you can enter a URL and/or Test Type.



Once you are satisfied with the values for the custom properties, simply click [Save] or [Save and New] to commit the changes.

5.2.6. Test Runs

This view displays the name of the test case together with a list of the previous execution runs that the test case has been put through. Each test run is listed together with the date of execution, the name of the test case, the name of the test set (if applicable), the name of the tester, the release/version of the system that the test was executed against, the overall execution status for the test case in that run and a link to the actual test run details (see section 5.6). In addition, you can choose to display any of the custom properties associated with the test run.

Test Run Name	Execution Date	Test Set	Release	Status	Est. Dur.	Act. Dur.	Web Browser	Operating System	Run #
Ability to create new book	4-Dec-2003		1.1.0.0.0003	Failed	0.0h	1.2h			TR000018
Ability to create new book	3-Dec-2003		1.1.0.0.0002	Passed	0.0h	1.2h			TR000015
Ability to create new book	2-Dec-2003		1.1.0.0.0001	Passed	0.0h	1.2h			TR000013
Ability to create new book	1-Dec-2003	Testing Cycle for Release 1.1	1.0.1.0	Passed	0.2h	1.5h	Mozilla / Firefox	Windows 2000	TR000002
Ability to create new book	1-Dec-2003		1.0.0.0	Failed	0.2h	1.2h	Opera	Windows 2003	TR000012
Ability to create new book	1-Dec-2003	Testing Cycle for Release 1.0	1.0.0.0	Failed	0.2h	1.3h	Internet Explorer	Windows XP	TR000001

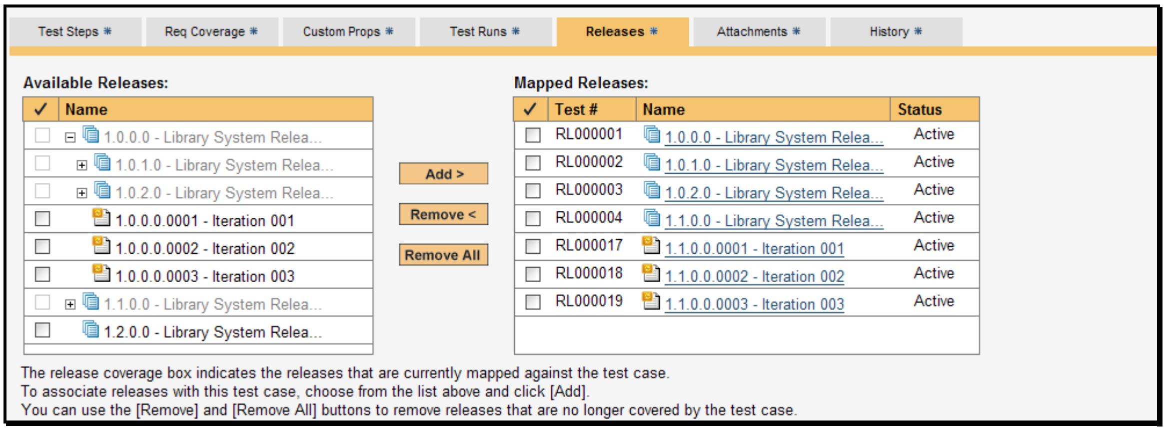
The "customize columns" drop-down list allows you to change the fields that are displayed in the test run list as columns. To show a column that is not already displayed, simply select that column from the list of

"Show…" column names and to hide an existing column, simply select that column from the list of "Hide…" column names. The displayed columns can be any standard field or custom property.

You can also filter the results by choosing items from the filter options displayed in the sub-header row of each field and clicking the "Apply Filter" link. In addition, you can quickly sort the list by clicking on one of the directional arrow icons displayed in the header row of the appropriate field.

5.2.7. Release Mapping

This view displays the name of the test case together with the release mapping information for the test case in question:

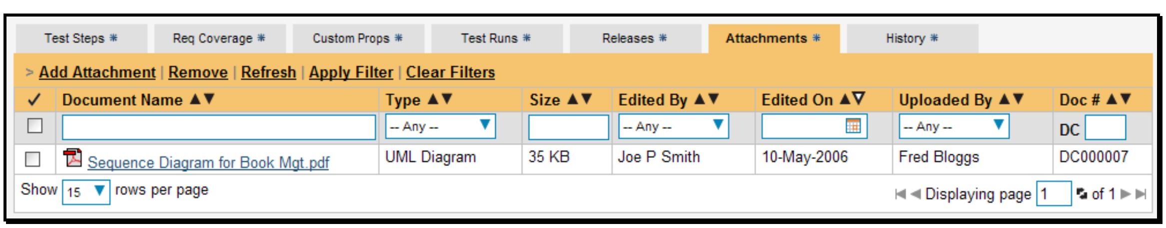


The pane consists of two lists of releases/iterations, the one on the left being the complete hierarchical list of releases and iterations in the project. The right box (which will initially be empty) contains the list of releases/iterations mapped to this test case. The releases in this box include columns for their ID, name and active status. Hovering the mouse over the names of the releases/iterations in either box will display a "tooltip" consisting of the release/iteration name, place in the hierarchical structure and a detailed description. Clicking on the hyperlinks in right-hand box will jump you to the details screen for the release/iteration in question (see section 7.2).

To change the release mapping for this test case, you use the buttons (Add, Remove, Remove All) positioned between the two list-boxes. The <Add> button will move the selected releases from the list of available on the left to the list of mapped on the right. Similarly the <Remove> and <Remove All> buttons will remove either the selected or all the releases from the right list-box and add them back to the left list-box.

5.2.8. Attachments

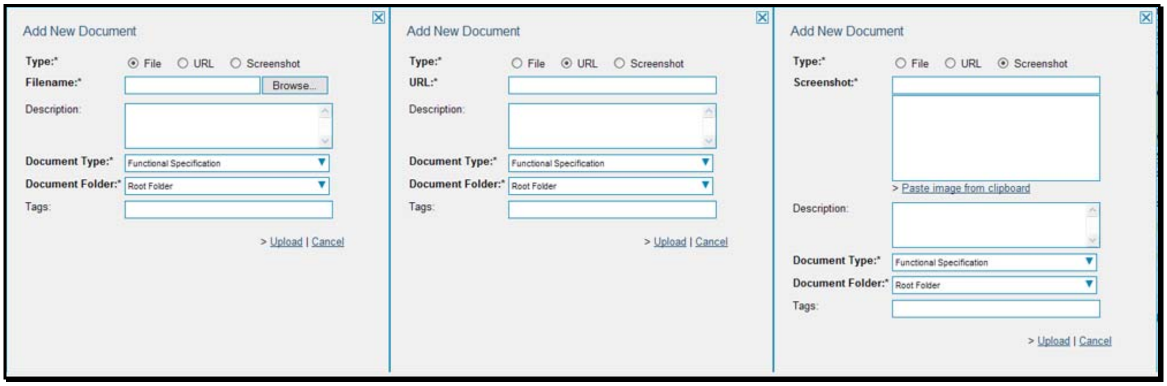
In this mode, the main pane displays the list of documents that have been "attached" to the test case. The documents can be in any format, though SpiraTeam® will only display the icon for certain known types.



The attachment list includes the filename that was originally uploaded together with the file-size (in KB), name of the person who attached it and the date uploaded. In addition, if you position the pointer over the filename and hold it there for a few seconds, a detailed description is displayed as a tooltip.

To actually view the document, simply click on the filename hyperlink and a new web browser window will open. Depending on the type of file, this window will either display the document or prompt you for a place to save it on your local computer. To delete an existing attachment from a test case, simply click the <Delete> button and the attachment will be removed from the list.

To attach a new document to the requirement, you need to first click the <Add Attachment> link to display the new attachment dialog box:



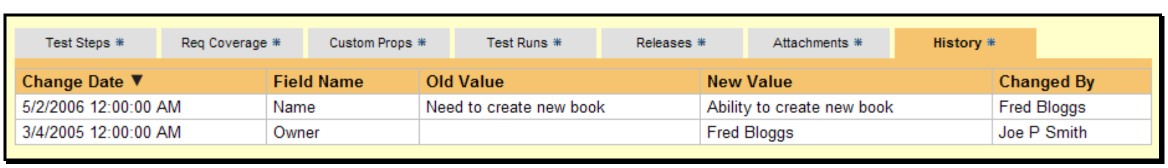
There are three different types of item that can be attached to a test case:

- To upload a file, choose "File" as the type and then click the Browse button and select the file from your local computer, optionally enter a detailed description then click the <Upload> button. The document will be copied from your computer and attached to the artifact.
- To attach a web-link (URL) to the artifact, you need to choose "URL" as the type and then enter the fully qualified URL (e.g. http://mywebsite.com?Document=1), an optional description and then click the <Upload> button to attach the web-link.
- To attached a screenshot to the artifact, you need to choose "Screenshot" as the type and then copy the image to your computer's clipboard (e.g. on Windows computers, the PRINT SCREEN button captures the current page and adds to the clipboard). Once the image is in the clipboard, click on the "Paste image from clipboard" hyperlink and the item will appear in the preview window. You can then fill in the other fields and click <Upload> to attach the image.

Note: If you are using a non-Windows® computer (e.g. Macintosh®) that doesn't put file extensions on filenames (e.g. .xls for an Excel sheet) automatically, then you will need to manually add the file extension to the filename *before uploading* if you want it to be displayed with the correct icon in the attachment list.

5.2.9. History

In this mode, the main pane displays the list of changes that have been performed on the test case artifact since its creation. An example test case change history is depicted below:

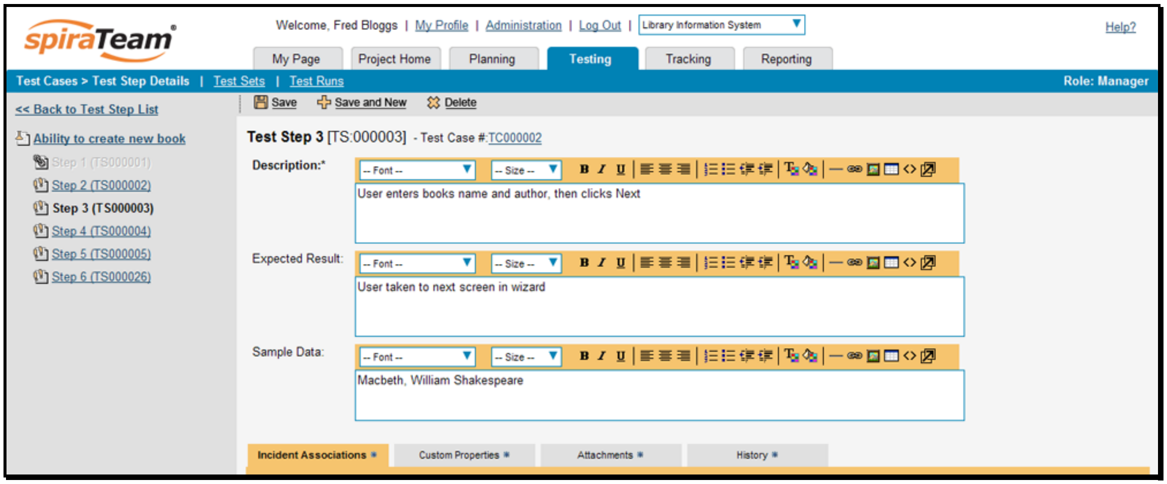


Change Date ▼	Field Name	Old Value	New Value	Changed By
5/2/2006 12:00:00 AM	Name	Need to create new book	Ability to create new book	Fred Bloggs
3/4/2005 12:00:00 AM	Owner		Fred Bloggs	Joe P Smith

The change history displays the date that each change was made, together with the fields that were changed, the old and new values and the person who made the change. This allows a complete audit trail to be maintained of all changes in the system.

5.3. Test Step Details

When you click on one of the hyperlinks next to a test step in the test step list (see above), you will be taken to the test step details screen illustrated below:



This page is made up of three areas; the left pane is the navigation window, the upper part of the right pane contains the test step detailed information itself, and the bottom part of the right pane contains related information about the test step.

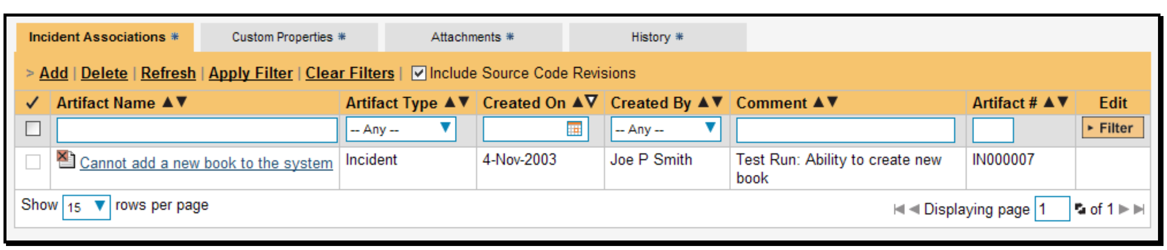
The navigation pane consists of a link that will take you back to the test step list, as well as a list of the peer test steps to the one selected. This latter list is useful as a navigation shortcut; you can quickly view the detailed information of all the peer test steps by clicking on the navigation links without having to first return to the test step list page.

The top part of the right pane allows you to view and/or edit the details of the particular test step. You can edit the various fields (description, expected result and sample data) and once you are satisfied with them, simply click the <Save> button just below the fields to commit the changes. If you want to add a new test step to the test case, you should click <Save and New> instead.

The lower part of the right pane can be switched between four different views by clicking the appropriate tab. Initially the pane will be in “Incident Associations” mode, but it can be switched to “Custom Properties”, “Attachments” and “History” modes if so desired. Each of the views is described separately below.

5.3.1. Incident Associations

In this mode, the main pane displays a list of any incidents that are associated with this test step. They can either be linked indirectly due to being logged during a test run, or directly linked after the fact:

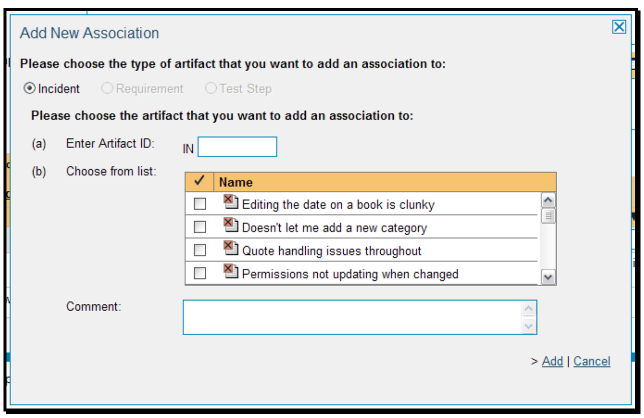


Each incident is displayed with its name, the name of the person who executed the test run or made the direct association, and a comment that describes why the association was made. In the case of a test run, the comment will simply contain the name of the test run.

You can perform the following actions on an incident association from this screen:

- **Delete** – removes the selected incident association. This will only delete the association, not the incident itself.
- **Refresh** – updates the list of associated incidents from the server, useful if other people are linking incidents to this test step at the same time.
- **Apply Filter** – Applies the entries in the filter boxes to the list of associations
- **Clear Filters** – Clears the current filter, so that all associations for the current test step are shown.
- **Edit** – Clicking the [Edit] button to the right of the associations allows you to edit the comment field inline directly on this screen.

To create a new association between this test step and an existing incident, simply click the <Add> hyperlink which will display the "Add New Association" popup dialog box:

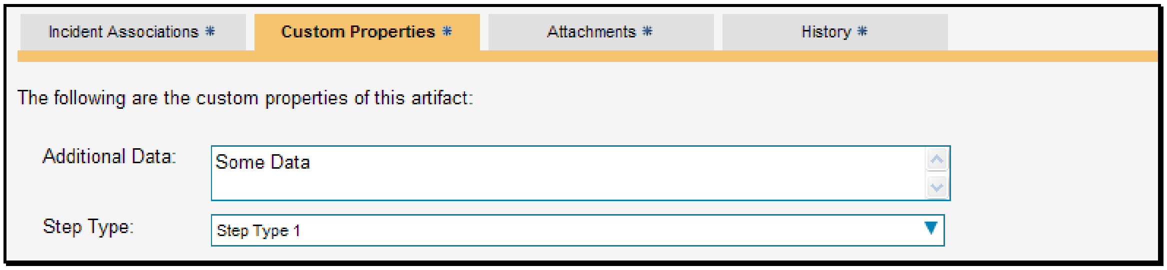


You need to choose the specific incident you want to link to, either by choosing the item from a scrolling selection box, or entering the ID of the incident directly (if known). In either case you can also add a comment that explains the rationale for the association.

Finally, to delete an existing incident association (except for those due to test runs) select the check-box next to its name and click the <Delete> hyperlink. This will only delete the association, not the linked incident itself.

5.3.2. Custom Properties

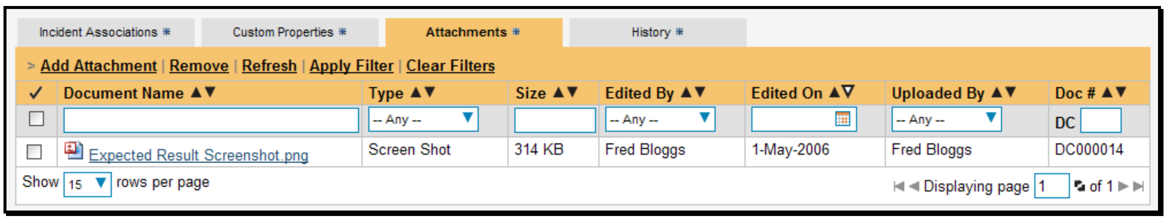
In this mode, the main pane displays any custom properties that the project owner has defined for test steps. To learn more about how to setup and configure custom properties for a project, please refer to the *SpiraTest Administration Guide*. Assuming that custom properties have been defined for your project, you will see a list of optional parameters that can be set on the test step. These can be either freetext or drop-down-lists.



Once you are satisfied with the values for the custom properties, simply click [Save] or [Save and New] to commit the changes.

5.3.3. Attachments

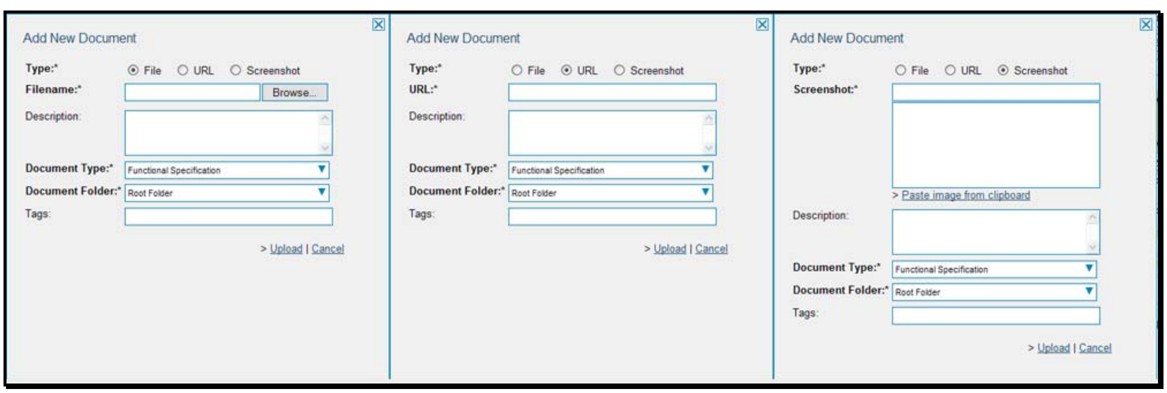
In this mode, the lower section of the screen displays the list of documents that have been “attached” to the test step. The documents can be in any format, though SpiraTeam® will only display the icon for certain known types.



The attachment list includes the filename that was originally uploaded together with the file-size (in KB), name of the person who attached it and the date uploaded. In addition, if you position the pointer over the filename and hold it there for a few seconds, a detailed description is displayed as a tooltip.

To actually view the document, simply click on the filename hyperlink and a new web browser window will open. Depending on the type of file, this window will either display the document or prompt you for a place to save it on your local computer. To remove an existing attachment from a test step, simply click the <Remove> button and the attachment will be removed from the list.

To attach a new document to the requirement, you need to first click the <Add Attachment> link to display the new attachment dialog box:



There are three different types of item that can be attached to a test step:

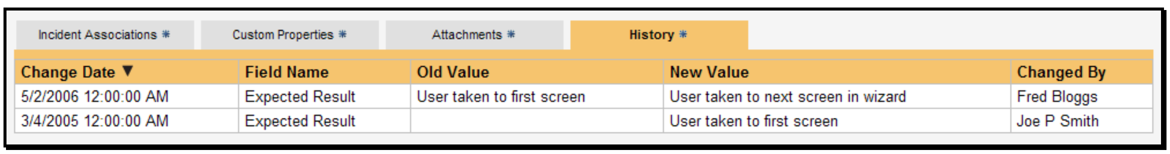
- To upload a file, choose “File” as the type and then click the Browse button and select the file from your local computer, optionally enter a detailed description then click the <Upload> button. The document will be copied from your computer and attached to the artifact.

- To attach a web-link (URL) to the artifact, you need to choose “URL” as the type and then enter the fully qualified URL (e.g. http://mywebsite.com?Document=1), an optional description and then click the <Upload> button to attach the web-link.
- To attached a screenshot to the artifact, you need to choose “Screenshot” as the type and then copy the image to your computer’s clipboard (e.g. on Windows computers, the PRINT SCREEN button captures the current page and adds to the clipboard). Once the image is in the clipboard, click on the “Paste image from clipboard” hyperlink and the item will appear in the preview window. You can then fill in the other fields and click <Upload> to attach the image.

Note: If you are using a non-Windows® computer (e.g. Macintosh®) that doesn’t put file extensions on filenames (e.g. .xls for an Excel sheet) automatically, then you will need to manually add the file extension to the filename before uploading if you want it to be displayed with the correct icon in the attachment list.

5.3.4. History

In this mode, the main pane displays the list of changes that have been performed on the test step artifact since its creation. An example test step change history is depicted below:



Change Date ▼	Field Name	Old Value	New Value	Changed By
5/2/2006 12:00:00 AM	Expected Result	User taken to first screen	User taken to next screen in wizard	Fred Bloggs
3/4/2005 12:00:00 AM	Expected Result		User taken to first screen	Joe P Smith

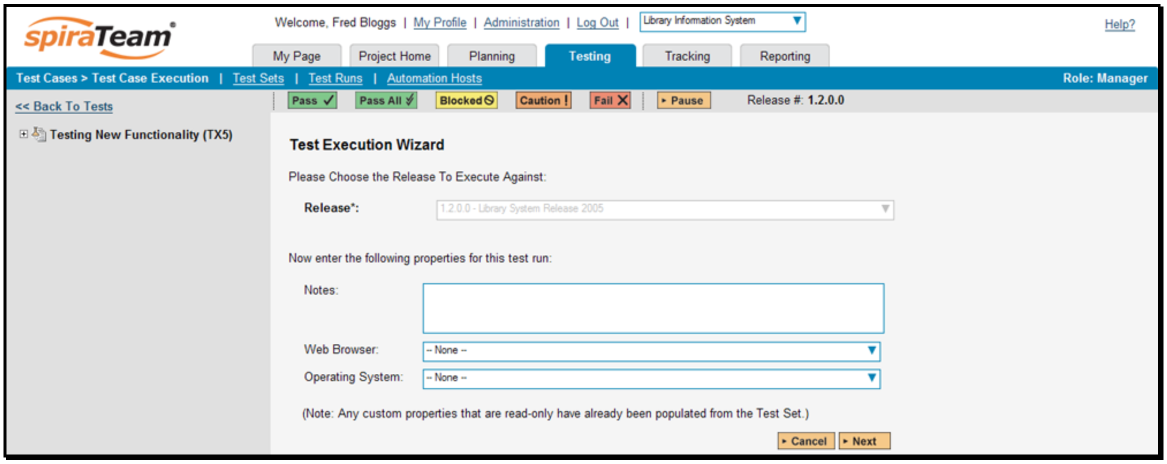
The change history displays the date that each change was made, together with the fields that were changed, the old and new values and the person who made the change. This allows a complete audit trail to be maintained of all changes in the system.

5.4. Execute Test Case(s)

This section describes how a tester can follow the steps defined for a series of test cases and record what actually happened in the process. In addition, recorded failures of test cases can be used to automatically generate new incidents that will be added to the incident tracking module (see section 6).

You start test case execution in SpiraTeam by either selecting test cases or test sets on their respective page(s) and clicking the <Execute> button, or by clicking the “Execute” link on the test cases / test sets listed on your personalized home page under “My Test Cases” or “My Test Sets”. If you execute a test set then the values of the selected release and custom list properties for the test run are automatically populated from the test set, whereas if you directly execute a test case itself, those values can be chosen by the tester.

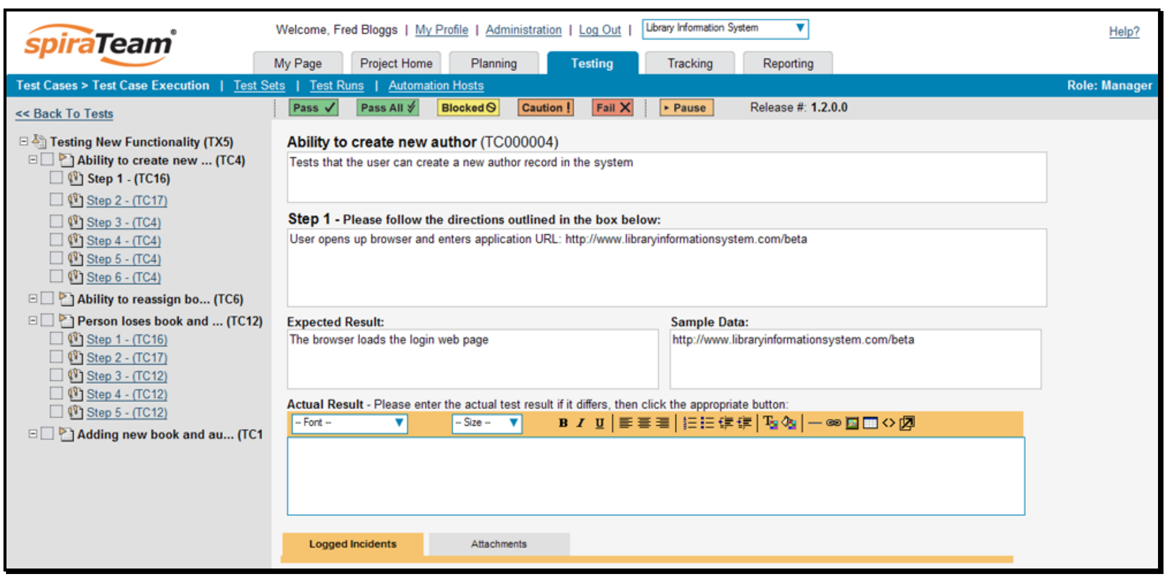
Regardless of the route taken to launch the test execution module, the first screen that will be displayed will look like the following:



Before actually executing the test scripts, you need to select the release of the system that you will be testing against and any test run custom properties that have been defined by the project owner. This ensures that the resulting test runs and incidents are associated with the correct release of the system, and that the test runs are mapped to the appropriate custom properties (e.g. operating system, platform, browser, etc.).

If you have not configured any releases for the project, then the release drop-down list will be disabled and the test runs/incidents will not be associated with any particular release. If the test run was launched from a test set, the release and any list custom properties will be pre-populated from the test set itself and will not be changeable on this screen (unless they weren't set by the test set).

Once you have chosen the appropriate release name and/or custom properties, click the <Next> button to begin executing test steps:



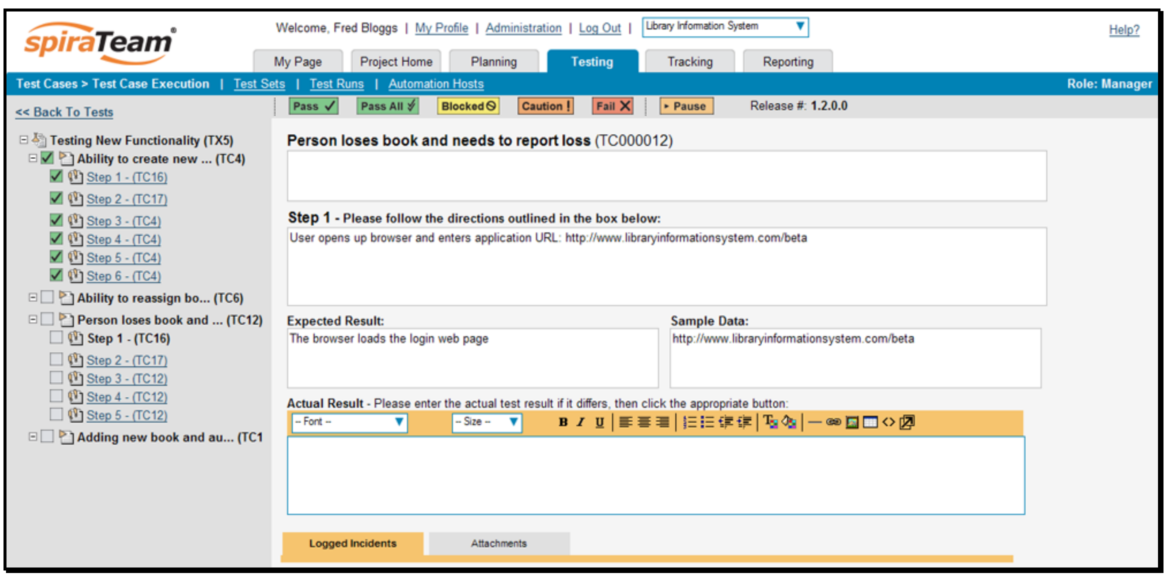
The screen is divided up into four main elements:

- The left-hand navigation pane contains the list of test cases and test steps for the currently executing test case. You can click on the various links to move between the test cases and/or test steps. In addition, each test case and test step has a colored square next to the name that indicates its status (green = "Passed", yellow = "Blocked", orange = "Caution", red = "Failed", gray = "Not Run") in the current test run. If any of the steps are marked as "Failed", "Blocked", or

"Caution" then the overall test case is marked with that status; if *all* the test steps passed, then the overall test case is marked as "Passed"; any other case results in the test case being marked as "Not Run".

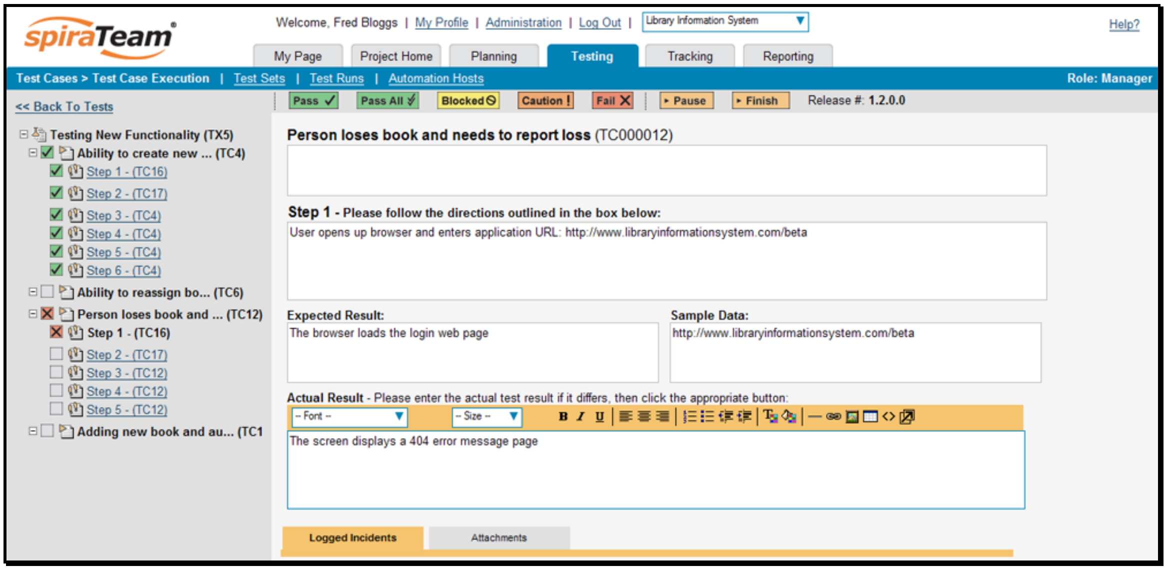
- The main pane displays the details of the test case together with the current test step. As the tester you would read the name and description of the test case, then read the description of the test step, carry out the instructions on the system you are testing, and then compare the results with those listed as expected. As described below, depending on how the actual system responds, you will use the buttons on the page to record what actually happened.
- Below the main pane there are two optional sections. The first one allows you to log an incident in the system associated with the test step. For failures this will typically be used to log a bug relating to the failure. However even if you pass a step you can still log an incident, which may be useful for logging non-critical cosmetic items that are not serious enough for a failure to be recorded. This tab also displays any pre-existing incidents that were associated with the test step being viewed.
- The second tab displays a list of attachments that are related to the current test case and/or test step. This list initially contains any documents that have been attached to either the test case in general or the test step in particular. However as you perform the testing, you can attach additional documents to this list that are relevant to the test results (e.g. screenshots of an error page); these attached documents will be associated with both the test run itself and any incidents that are created.

If the expected results are indeed observed, then you simply need to click the <Pass> button to mark the test step as passed, and advance to the next test step, or if all the steps have passed, you can click <Pass All> to pass all the steps at once. This is illustrated in the screen shot below:



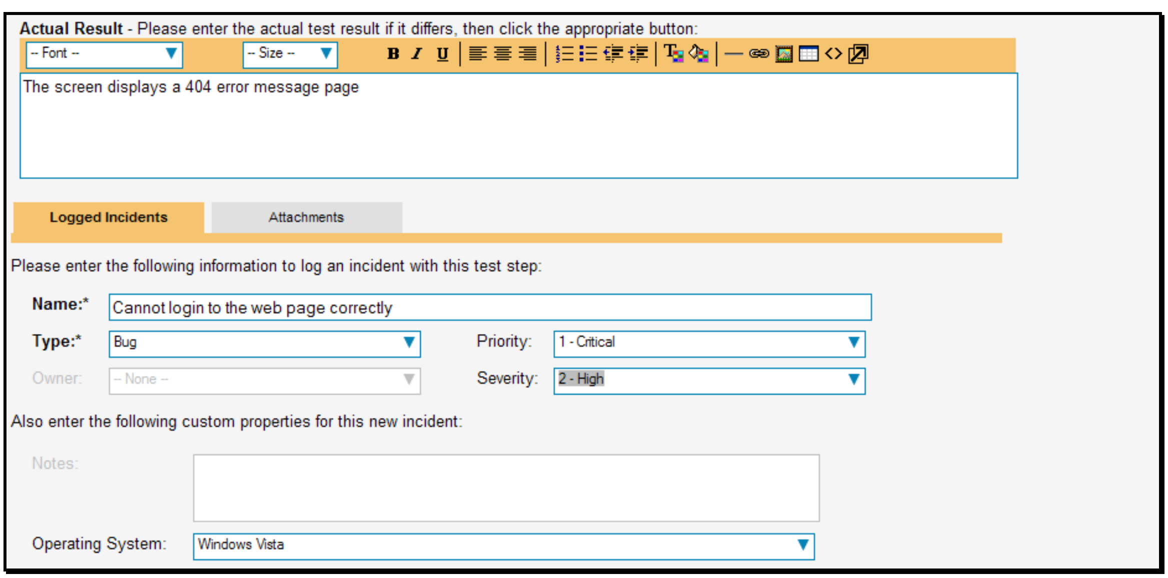
This will change the icon in the left-hand navigation bar into a green square with a check mark in it. Once all the test steps have passed, you will now have the option of moving to the next test step by clicking the <Next Test> button; if it is the last test case being executed, the <Finish> button will be displayed instead.

If the actual results differ from those expected, you need to enter a description of the result observed and click the <Fail>, <Blocked> or <Caution> button; this is illustrated in the screen-shot below:



Unlike the <Pass> button, if you don’t enter a description of the actual result, the system will display an error message and re-prompt you again for input. In the case of a failure, both the individual test step and the overall test case will be marked with a red square containing a cross. Similarly, in the case of a blocked test case, they will be marked with a yellow square, and in the case of a caution, they will be marked with an orange square. You will now have the option of moving to the next test step by clicking the <Next Test> button; if it is the last test case being executed, the <Finish> button will be displayed instead.

In addition to logging the failure, you can optionally choose to have the failure automatically result in the creation of a new incident. This is achieved by clicking on the Incident tab and entering a name, type, priority, severity (and any custom properties) for the new incident *before* clicking the <Fail/Caution/Blocked> button:



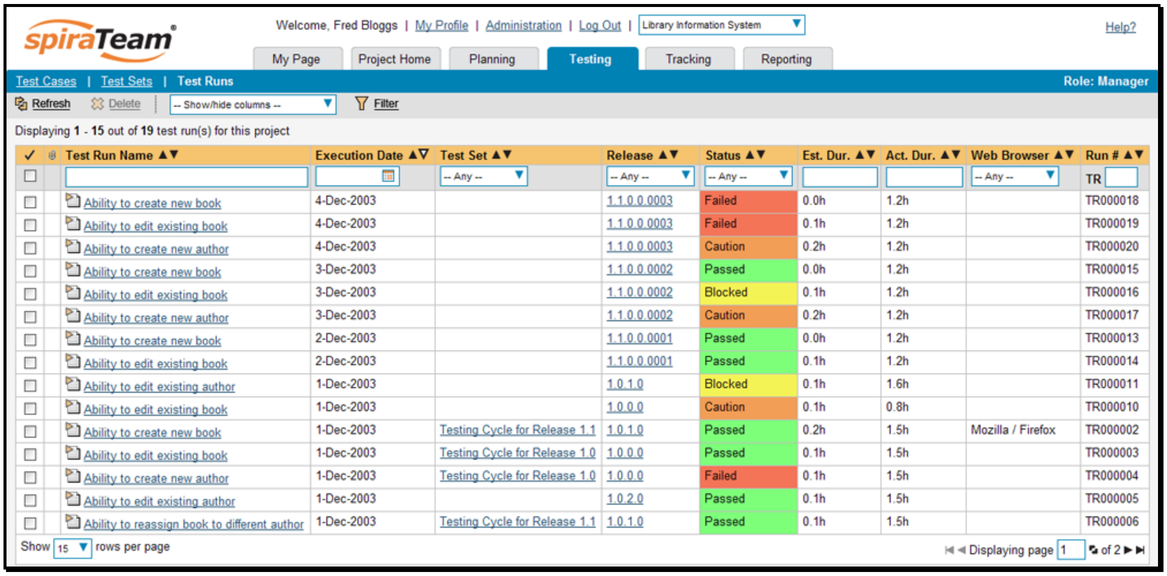
The other information needed for the new incident is automatically populated from the test step details. The newly created incident will also be linked to the test step, allowing traceability from within the incidents module. The functionality for managing incidents is described in more detail in section 6.

If you need to attach documents to the test run (e.g. screenshots of the error message), you just need to select the Attachments tab and then choose the option to upload the necessary documents, attach the appropriate URLs, or paste in the appropriate screen capture.

Note that the entire test run is saved once you first start execution, so you can always step away from your computer and then resume testing at a later date by locating the test run on your 'My Page' under 'My Pending Test Runs' and choosing to resume testing.

5.5. Test Run List

When you click on the Testing > Test Runs global navigation link, you will initially be taken to the test run list screen illustrated below:



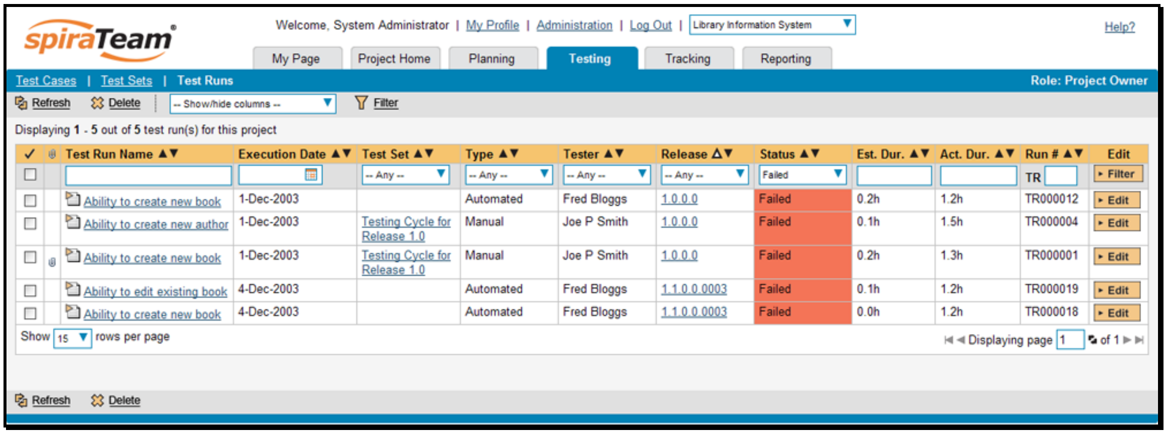
Test Run Name	Execution Date	Test Set	Release	Status	Est. Dur.	Act. Dur.	Web Browser	Run #
Ability to create new book	4-Dec-2003		1.1.0.0.0003	Failed	0.0h	1.2h		TR000018
Ability to edit existing book	4-Dec-2003		1.1.0.0.0003	Failed	0.1h	1.2h		TR000019
Ability to create new author	4-Dec-2003		1.1.0.0.0003	Caution	0.2h	1.2h		TR000020
Ability to create new book	3-Dec-2003		1.1.0.0.0002	Passed	0.0h	1.2h		TR000015
Ability to edit existing book	3-Dec-2003		1.1.0.0.0002	Blocked	0.1h	1.2h		TR000016
Ability to create new author	3-Dec-2003		1.1.0.0.0002	Caution	0.2h	1.2h		TR000017
Ability to create new book	2-Dec-2003		1.1.0.0.0001	Passed	0.0h	1.2h		TR000013
Ability to edit existing book	2-Dec-2003		1.1.0.0.0001	Passed	0.1h	1.2h		TR000014
Ability to edit existing author	1-Dec-2003		1.0.1.0	Blocked	0.1h	1.6h		TR000011
Ability to edit existing book	1-Dec-2003		1.0.0.0	Caution	0.1h	0.8h		TR000010
Ability to create new book	1-Dec-2003	Testing Cycle for Release 1.1	1.0.1.0	Passed	0.2h	1.5h	Mozilla / Firefox	TR000002
Ability to edit existing book	1-Dec-2003	Testing Cycle for Release 1.0	1.0.0.0	Passed	0.1h	1.5h		TR000003
Ability to create new author	1-Dec-2003	Testing Cycle for Release 1.0	1.0.0.0	Failed	0.1h	1.5h		TR000004
Ability to edit existing author	1-Dec-2003		1.0.2.0	Passed	0.1h	1.5h		TR000005
Ability to reassign book to different author	1-Dec-2003	Testing Cycle for Release 1.1	1.0.1.0	Passed	0.1h	1.5h		TR000006

The test run list screen displays all the individual test executions performed in the current project, in a filterable, sortable grid. The grid displays the test run number together with fields such as execution status, name, assigned tester, execution date, test set, specified release, etc. The choice of columns displayed is configurable per-user, per-project, giving extensive flexibility when it comes to viewing and searching test runs.

In addition, you can view a more detailed description of the test run by positioning the mouse pointer over the test run name hyperlink and waiting for the popup "tooltip" to appear. If you click on the test run hyperlink, you will be taken to the test run details page described in the next section. Clicking on any of the pagination links at the bottom of the page will advance you to the next set of test runs in the list according to the applied filter and sort-order. There is also a drop-down-list at the bottom of the page which allows you to specify how many rows should be displayed in each page, helping accommodate different user preferences.

5.5.1. Sorting and Filtering

You can easily filter and sort the list of test runs as illustrated in the screen-shot below:



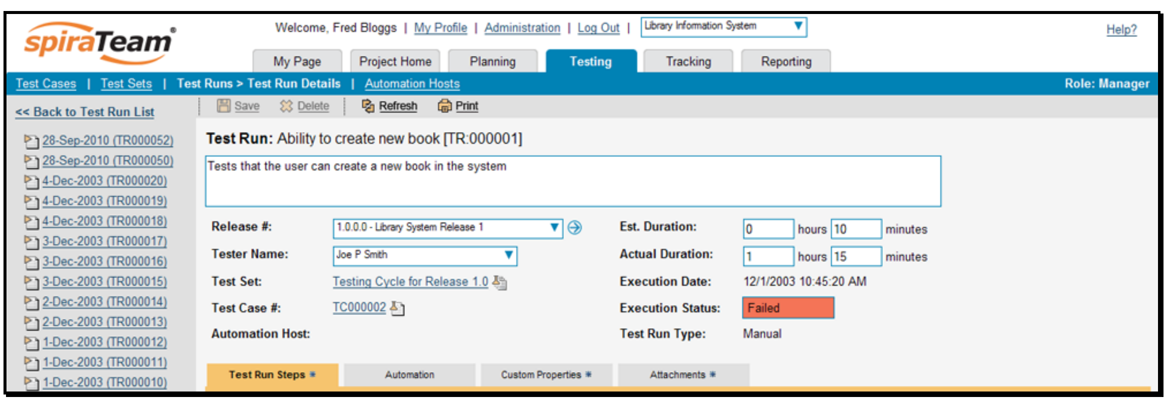
To filter the list by any of the visible fields, you simply choose an item from the appropriate drop-down list, and for the other fields, you enter a free-text phrase then click <Filter> or press the <ENTER> key to apply the different filters. Note that the name field is searched using a "LIKE" comparison, so that searching for "database" would include any item with the word database in the name.

To change the column that is sorted, or to change the direction of the current sort, simply click on the up/down arrow icon in the appropriate column. The currently sorted column is indicated by the larger, white arrow with the back-border. In the screen-shot above, we have filtered on test runs that have failed, sorted in order of increasing release version number.

Clicking on Filter > Clear Filter removes any set filters and expands the test run list to display all test runs for the current project, and clicking on Filter > Save Filter allows you to save the filter to your 'My Page' for use in the future. The list of saved filters can also be retrieved by clicking Filter > Retrieve Filter.

5.6. Test Run Details

When you click on any of the individual test runs in the test run list, you are taken to the Test Run details page (not to be confused with the Test Case details page!) shown below:



This page consists of three panes:

- The left hand navigation pane displays a list of the last fifteen (15) runs
- The main pane displays the details of the test run itself (name, description, release, test set, estimated and actual duration, tester name, test run type, automation host, etc.)

➤ The tab-control displays the list of test run steps (populated if a manual run executed by a user), the automated test results (populated by an test automation engine such as NUnit, JUnit, QuickTest Pro, etc.), any custom properties set for the run, and a list of any documents/URLs/screenshots that were attached to the test results.

5.6.1. Editing a Test Run

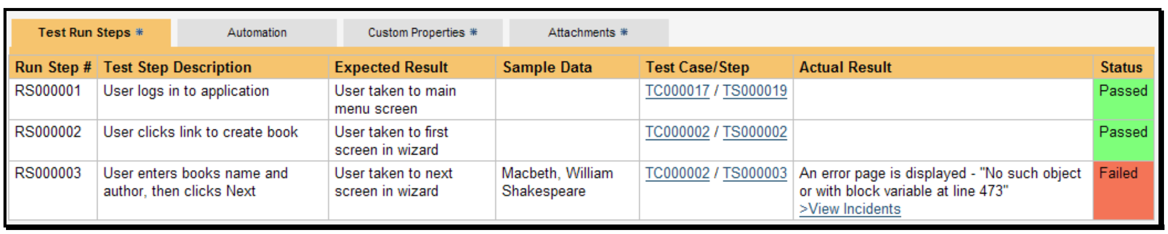
When reviewing the test run, you may find that you need to change the results of the test run (e.g. the user selected the wrong release or custom property value). Many of the fields are editable at a later date, and to make changes, just modify the appropriate fields and click [Save].

5.6.2. Deleting the Test Run

If you need to delete a test run that was erroneously captured, all you need to do is click on the link to access the invalid test run and then click the <Delete> button to remove it from the system. This will then force the system to update the status of the test case itself from the other logged test runs.

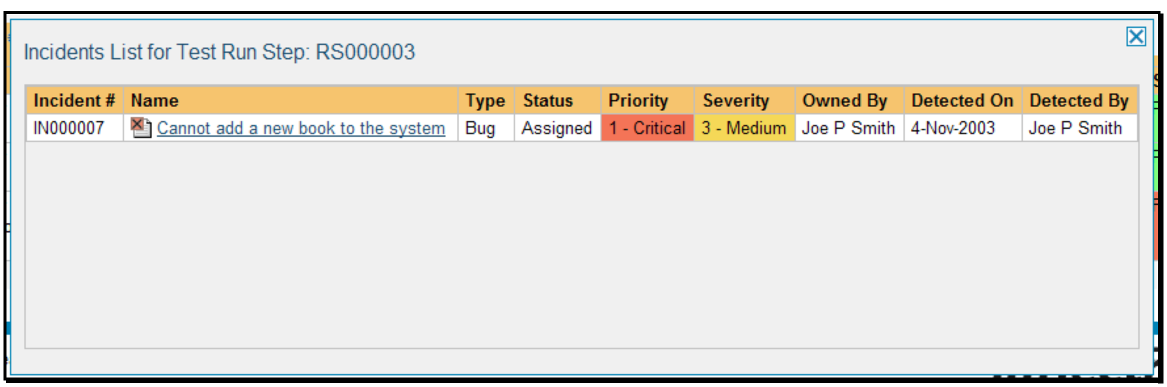
5.6.3. Test Run Steps

In the case of a manual test run, this tab displays all the steps of the test case *as they appeared during the test run in question.* This means that if the test steps were changed after running the test, the list here will reflect the original information.



Run Step #	Test Step Description	Expected Result	Sample Data	Test Case/Step	Actual Result	Status
RS000001	User logs in to application	User taken to main menu screen		TC000017 / TS000019		Passed
RS000002	User clicks link to create book	User taken to first screen in wizard		TC000002 / TS000002		Passed
RS000003	User enters books name and author, then clicks Next	User taken to next screen in wizard	Macbeth, William Shakespeare	TC000002 / TS000003	An error page is displayed - "No such object or with block variable at line 473" >View Incidents	Failed

Each test run step is displayed along with the description, expected result, suggested sample data, a link back to the current version of the test step in question, the actual result and the execution status for this step *in this particular test run*. Where an actual result was recorded, you will have an additional hyperlink “View Incidents” displayed. This allows you to view any incidents that are associated with this particular test run step:

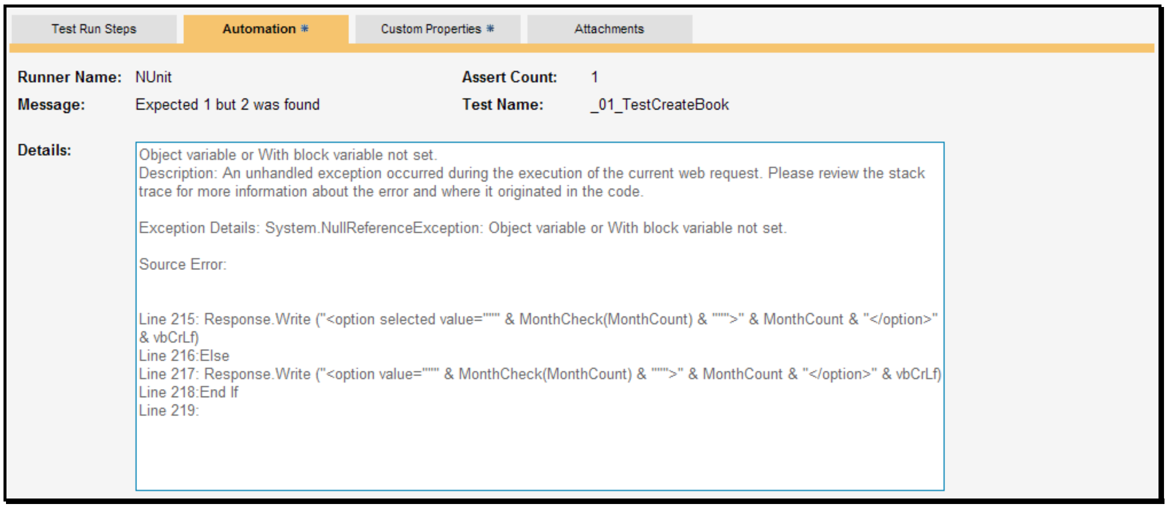


Incident #	Name	Type	Status	Priority	Severity	Owned By	Detected On	Detected By
IN000007	Cannot add a new book to the system	Bug	Assigned	1 - Critical	3 - Medium	Joe P Smith	4-Nov-2003	Joe P Smith

Clicking on the link will open up a popup dialog box that displays a list of all the incidents associated with the selected test run step. Each of the incidents listed will reflect the most up-to-date information regarding that incident, including its type, status, priority, name, assigned owner, detection date and who first detected it. Clicking on the incident number hyperlink will take you to the details page for that incident, which is described in section 6.2.

5.6.4. Automation

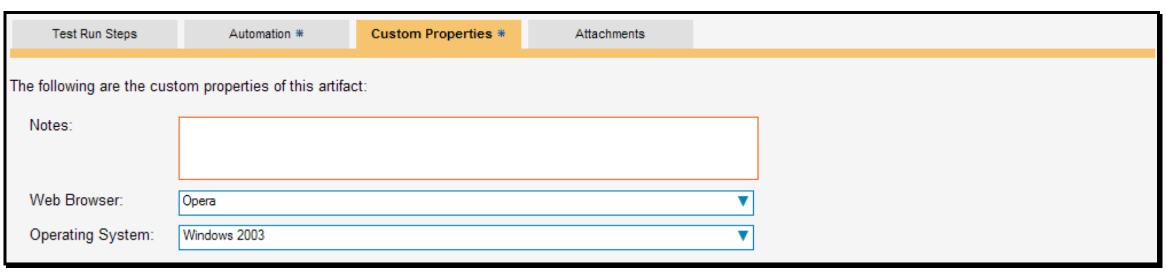
In the case of an automated test run, this tab will display the details of the test run as reported from the test runner application. These details will vary depending on the type of automated tool being used, but typically they include the name of the automated test runner, the number of assertions raised, the name of the corresponding test case in the tool, the status of the test run and a detailed error message, and stack-trace in the case of a failure. An example test run as reported from the NUnit automated test runner is illustrated below:



Details on how to use SpiraTeam® in conjunction with an automated testing tool are provided in the *SpiraTeam® Automated Testing Integration Guide,* which can be downloaded from the Inflectra® website.

5.6.5. Custom Properties

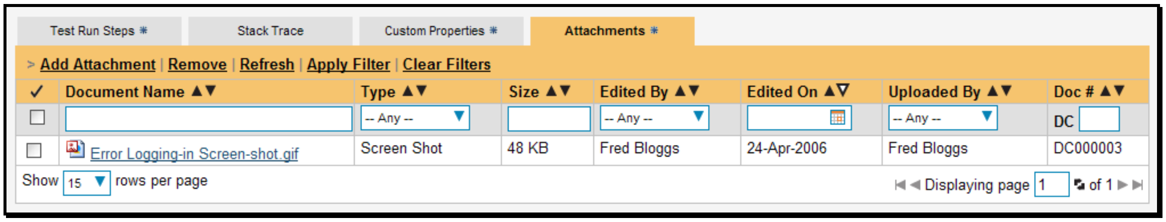
In this mode, the tab displays any custom properties that the project owner has defined for test runs. To learn more about how to setup and configure custom properties for a project, please refer to the *SpiraTest Administration Guide*. Assuming that custom properties have been defined for your project, you will see a list of optional parameters that have been set during the test run:



For test runs, custom properties are most commonly used to capture and record the system configuration that the test was performed on – for example the operating system, hardware platform, and web-browser.

5.6.6. Attachments

In this mode, the lower section of the screen displays the list of documents that have been "attached" to the test run. The documents can be in any format, though SpiraTeam® will only display the icon for certain known types.



The attachment list includes the filename that was originally uploaded together with the file-size (in KB), name of the person who attached it and the date uploaded. In addition, if you position the pointer over the filename and hold it there for a few seconds, a detailed description is displayed as a tooltip.

To actually view the document, simply click on the filename hyperlink and a new web browser window will open. Depending on the type of file, this window will either display the document or prompt you for a place to save it on your local computer. To remove an existing attachment from a test run, simply click the <Remove> button and the attachment will be removed from the list.

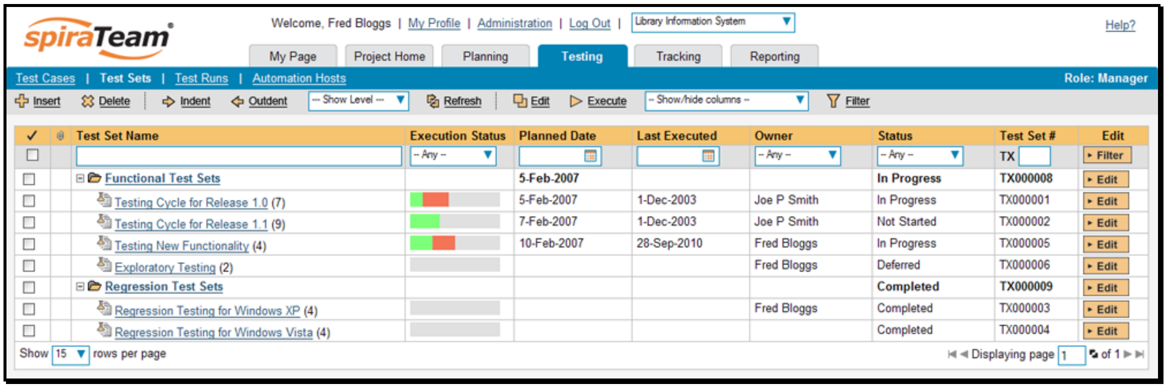
To attach a new document or web link to the test run, you need to click on the “Add Attachment” hyperlink to open the “Add Attachment” dialog box. There are three different types of item that can be attached to a test run:

- To upload a file, choose “File” as the type and then click the Browse button and select the file from your local computer, optionally enter a detailed description then click the <Upload> button. The document will be copied from your computer and attached to the artifact.
- To attach a web-link (URL) to the artifact, you need to choose “URL” as the type and then enter the fully qualified URL (e.g. http://mywebsite.com?Document=1), an optional description and then click the <Upload> button to attach the web-link.
- To attached a screenshot to the artifact, you need to choose “Screenshot” as the type and then copy the image to your computer’s clipboard (e.g. on Windows computers, the PRINT SCREEN button captures the current page and adds to the clipboard). Once the image is in the clipboard, click on the “Paste image from clipboard” hyperlink and the item will appear in the preview window. You can then fill in the other fields and click <Upload> to attach the image.

Note: If you are using a non-Windows® computer (e.g. Macintosh®) that doesn’t put file extensions on filenames (e.g. .xls for an Excel sheet) automatically, then you will need to manually add the file extension to the filename before uploading if you want it to be displayed with the correct icon in the attachment list.

5.7. Test Set List

As well as being able to organize test cases into folders, you can also create separate groupings of test cases called test sets which can then be assigned to testers as a package. To view the list of test sets for a project, click on Testing > Test Sets in the global navigation:



The test set list consists of hierarchical list of all the test sets in the current project organized into folders. When you create a new project, this list will initially be empty, and you will have to use the <Insert> button to start adding test sets to the system.

Each test set is listed along with the number of test cases contained (in parenthesis), the aggregate execution status of the contained test cases (using a graphical bar-chart), the date that the test set has been scheduled to be executed (planned date), the date that it was last executed, the person currently assigned to execute the test set, the status and the test set id. Clicking on a test set's hyperlink will take you to the test set details page for the item in question.

5.7.1. Insert

Clicking on the <Insert> button inserts a new test set *before* the currently selected (by means of the check-box) test set. Clicking the <Insert> button without selecting a test set will insert a new test set at the end of the list.

5.7.2. Indent / Outdent

Clicking on the <Indent> button indents all the test folders / test sets whose check-boxes have been selected. You cannot indent a test set or folder if it is *below* a test set, as test sets are not allowed to have child items. Clicking on the <Outdent> button de-indents all the test folders / test sets whose check-boxes have been selected.

5.7.3. Delete

Clicking on the <Delete> button deletes the currently selected test sets. It will delete the association between the test set and its contained test cases, but it will not delete the test cases themselves.

5.7.4. Execute

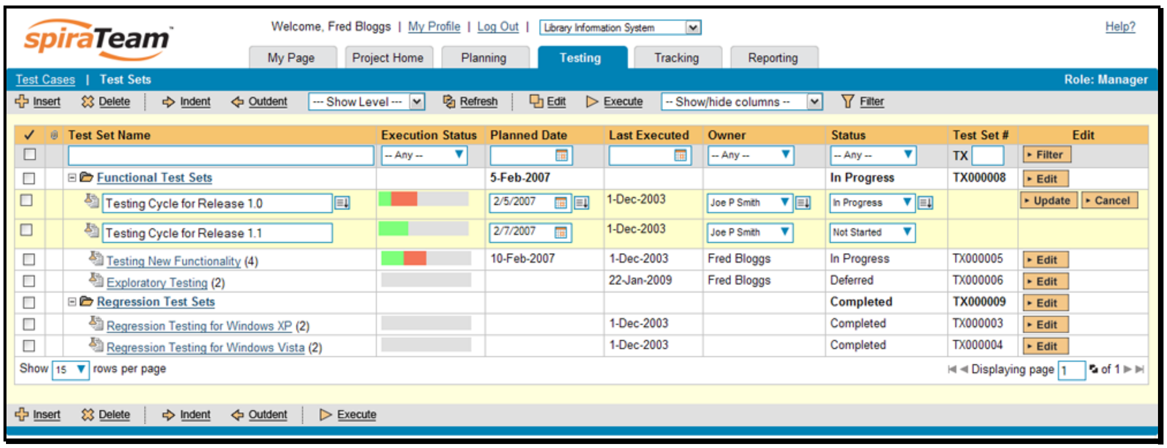
Clicking on the <Execute> button executes all the test sets selected. The test execution functionality of SpiraTeam® is explained in more detail in section 5.3.

5.7.5. Refresh

Clicking on the <Refresh> button simply reloads the list of test sets. This is useful if other people are making changes to the test set list and you want to make sure that you have the most current version.

5.7.6. Edit

Each test set in the list has an <Edit> button display in its right-most column. When you click this button or just *double-click* on any of the cells in the row, you change the item from "View" mode to "Edit" mode. The various columns are made editable, and <Update> <Cancel> buttons are displayed in the last column:



If you click <Edit> on more than one row, the <Update> and <Cancel> buttons are only displayed on the first row, and you can make changes to all the editable rows and then update the changes by clicking the one <Update> button. Also, if you want to make the same change to multiple rows (e.g. to change the owner of five test sets from "Fred Bloggs" to "Joe Smith"), you can click on the "fill" icon to the right of the editable item, which will propagate the new value to all editable items in the same column.

When you have made your updates, you can either click <Update> to commit the changes, or <Cancel> to revert back to the original information. Alternatively, pressing the <ENTER> key will commit the changes and pressing the <ESCAPE> key will cancel the changes.

5.7.7. Show Level

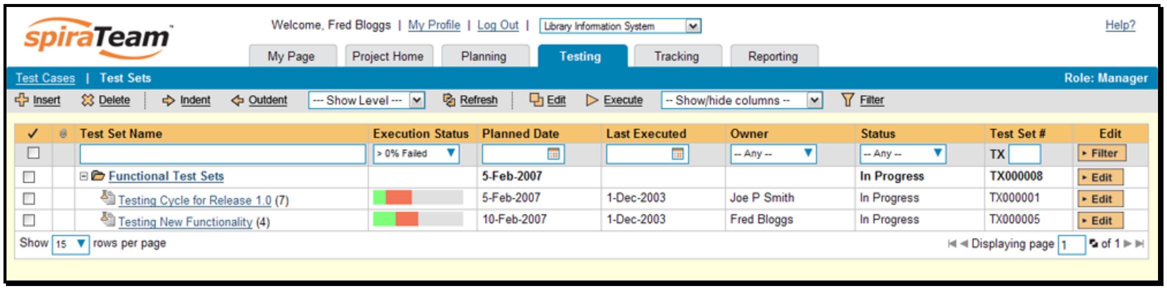
Choosing an indent level from the 'Show Level' drop down box allows you to quickly and easily view the entire test set list at a specific indent level. For example you may want to see all test set drilled-down to the *third* level of detail. To do this you would simply choose 'Level 3' from the list, and the test sets will be expanded accordingly

5.7.8. Show / Hide Columns

This drop-down list allows you to change the fields that are displayed in the test set list as columns for the current project. To show a column that is not already displayed, simply select that column from the list of "Show…" column names and to hide an existing column, simply select that column from the list of "Hide…" column names. This is stored on a per-project basis, so you can have different display settings for each project that you are a member of. The fields can be any of the built-in fields or any of the custom properties set up by the project owner.

5.7.9. Filtering

You can easily filter the list of test sets as illustrated in the screen-shot below:



To filter the list by any of the displayed columns, you either choose an item from the appropriate drop-down list or enter a free-text phrase (depending on the type of field) then click <Filter> or press the <ENTER> key to apply the different filters. Note that the name field is searched using a "LIKE" comparison, so that searching for "database" would include any item with the word database in the name. The other freetext fields need to be exact matches (e.g. dates, test set numbers). In the screen-shot above, we are filtering on test sets that contain at least one failed test case.

In addition, if you have a set of filters that you plan on using on a regular basis, you can choose the option Filter > Save Filter to add the current filter to the list of saved filters that appear on your 'My Page'. The list of saved filters can also be retrieved by clicking Filter > Retrieve Filter.

5.7.10. Copying Test Sets

To copy one or more test sets, simply select the check-boxes of the test sets you want to copy and then select the Edit > Copy menu option. This will copy the current test set selection to the clipboard. Then you should select the place where you want the test sets to be inserted and choose the Edit > Paste option.

The test sets will now be copied into the destination location you specified. The name of the copied test sets will be prefixed with "Copy of…" to distinguish them from the originals.

5.7.11. Moving Test Sets

To move test sets in the hierarchy, there are two options:

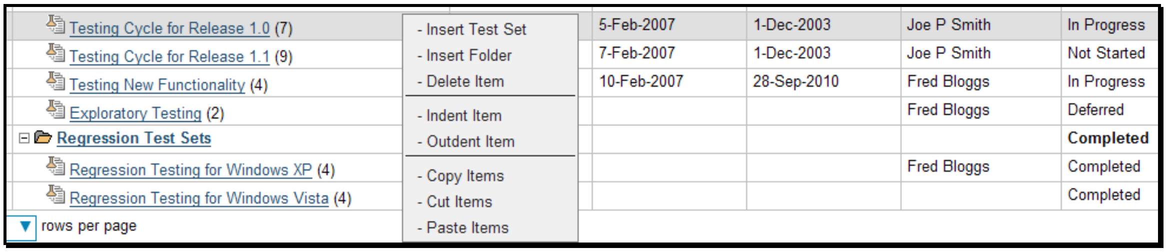
1. Click on the icon the test set/folder you want to move and then drag the icon to the location you want it moved. The background of the destination location will change as the icon is dragged over it to illustrate where it will be inserted.

   Once you have the test set/folder positioned at the correct place that you want it inserted, just release the mouse button and the test set list will be refreshed, with the item moved to the desired location.

2. Alternatively you can simply select the check-boxes of the test sets you want to move and then select the Edit > Cut menu option. This will cut the current test set selection to the clipboard. Then you should select the place where you want the test sets to be inserted and choose the Edit > Paste option. The test sets will now be moved into the destination location you specified.

5.7.12. Right-Click Context Menu

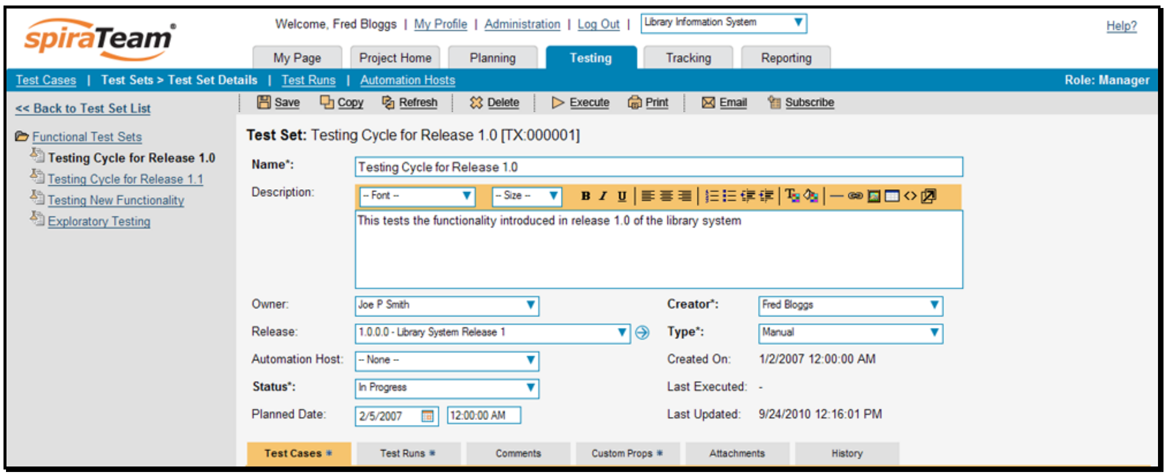
SpiraTeam® provides a shortcut – called the *context menu* - for accessing some of the most commonly used functions, so that you don't need to move your mouse up to the toolbar each time. To access the context menu, right-click on any of the rows in the test set list and the following menu will be displayed:



You can now choose any of these options as an alternative to using the icons in the toolbar.

5.8. Test Set Details

When you click on a test set item in the test set list described in the previous section, you are taken to the test set details page illustrated below:



This page is made up of three areas; the left pane is the navigation window, the upper part of the right pane contains the test set detailed information itself, and the bottom part of the right pane contains related information about the test set.

The navigation pane consists of a link that will take you back to the test set list, as well as a list of the peer test sets to the one selected. This latter list is useful as a navigation shortcut; you can quickly view the detailed information of all the peer test sets by clicking on the navigation links without having to first return to the test sets list page.

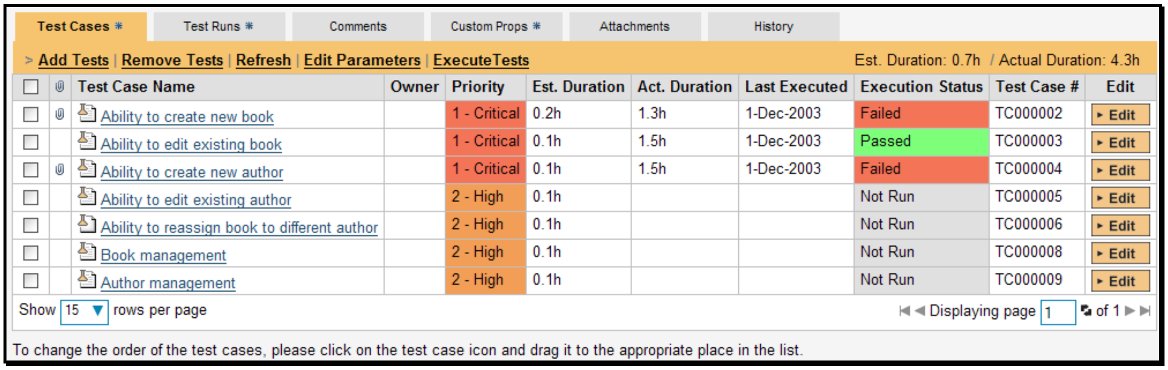
The top part of the right pane allows you to view and/or edit the details of the particular test set. You can edit the various fields (name, description, etc.) and once you are satisfied with them, simply click either the <Save> or <Save and New> button at the top of the page to commit the changes. In addition you can delete the current artifact by choosing <Delete>, discard any changes made by clicking <Refresh> or print it by clicking <Print>.

Test Sets can be specified as being either for "Manual" or "Automated" test runs. If you choose Manual, then the test set can be executed by a tester from their "My Page." However if you choose "Automated", the test set will be executed by the automation host you specified. In this case, the *planned date and time* will be used by the automated test engine to know when to execute the automated test scripts. For manual test sets, only the date component is used.

The lower part of the right pane can be switched between different views by clicking the appropriate tab. Initially the pane will be in "Test Cases" mode, but it can be switched to "Test Runs", "Comments", "Custom Properties", "Attachments" and "History" modes if so desired. Each of the views is described separately below. In addition there is a shortcut link "Execute This Test Set" that allows you to execute all the tests in the set against the release specified in the test set.

5.8.1. Test Cases

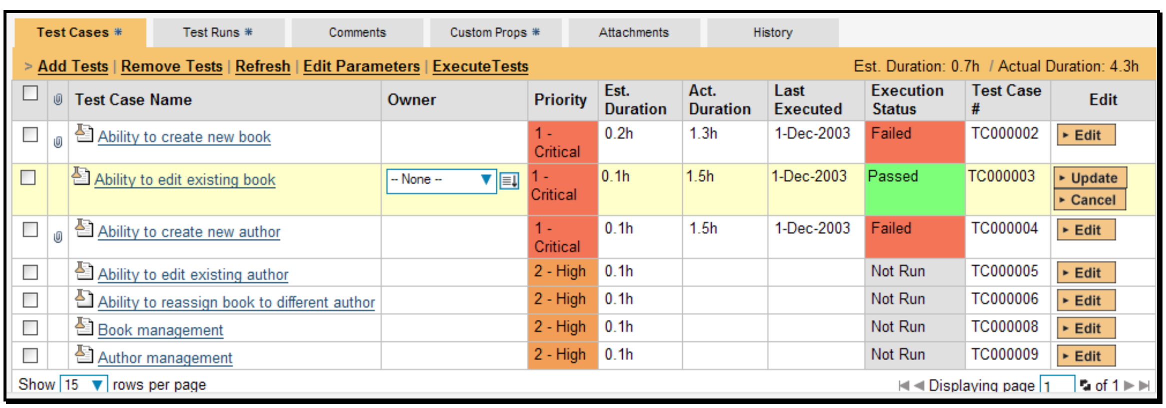
In this mode, the main pane displays the list of test cases contained within the test set. You can add, remove, reposition and remove test cases from the list. The execution status displayed next to each test case is the most recent execution status of the test case *when run in the context of the current test set*.



Test Case Name	Owner	Priority	Est. Duration	Act. Duration	Last Executed	Execution Status	Test Case #	Edit
Ability to create new book		1 - Critical	0.2h	1.3h	1-Dec-2003	Failed	TC000002	Edit
Ability to edit existing book		1 - Critical	0.1h	1.5h	1-Dec-2003	Passed	TC000003	Edit
Ability to create new author		1 - Critical	0.1h	1.5h	1-Dec-2003	Failed	TC000004	Edit
Ability to edit existing author		2 - High	0.1h			Not Run	TC000005	Edit
Ability to reassign book to different author		2 - High	0.1h			Not Run	TC000006	Edit
Book management		2 - High	0.1h			Not Run	TC000008	Edit
Author management		2 - High	0.1h			Not Run	TC000009	Edit

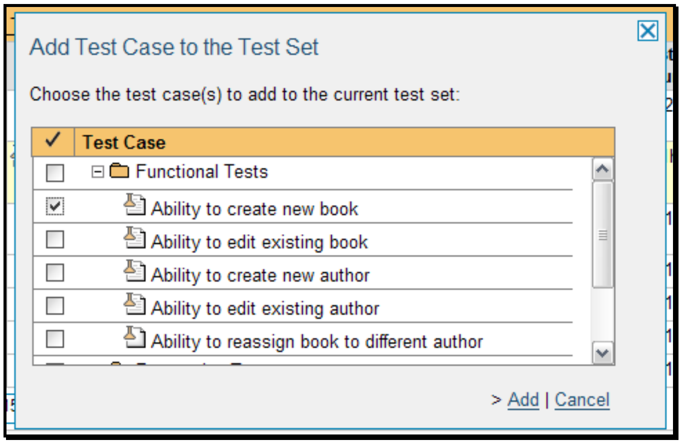
To move the test cases, you simply need to click the test case icon and drag it to the appropriate position in the list. Whilst you are dragging the icon, the border in the list will change color to indicate where it will be moved to.

To modify an existing Test Case you simply need to click on the <Edit> button in the right-most column, or just *double-click* on the cells in the row. That will switch the selected row into Edit mode. The owner field can then be set at the test case level. This is useful in situations where you want the different test cases in the set to be executed by different testers (e.g. in integrated, scenario tests)



Test Case Name	Owner	Priority	Est. Duration	Act. Duration	Last Executed	Execution Status	Test Case #	Edit
Ability to create new book		1 - Critical	0.2h	1.3h	1-Dec-2003	Failed	TC000002	Edit
Ability to edit existing book	-- None --	1 - Critical	0.1h	1.5h	1-Dec-2003	Passed	TC000003	Update Cancel
Ability to create new author		1 - Critical	0.1h	1.5h	1-Dec-2003	Failed	TC000004	Edit
Ability to edit existing author		2 - High	0.1h			Not Run	TC000005	Edit
Ability to reassign book to different author		2 - High	0.1h			Not Run	TC000006	Edit
Book management		2 - High	0.1h			Not Run	TC000008	Edit
Author management		2 - High	0.1h			Not Run	TC000009	Edit

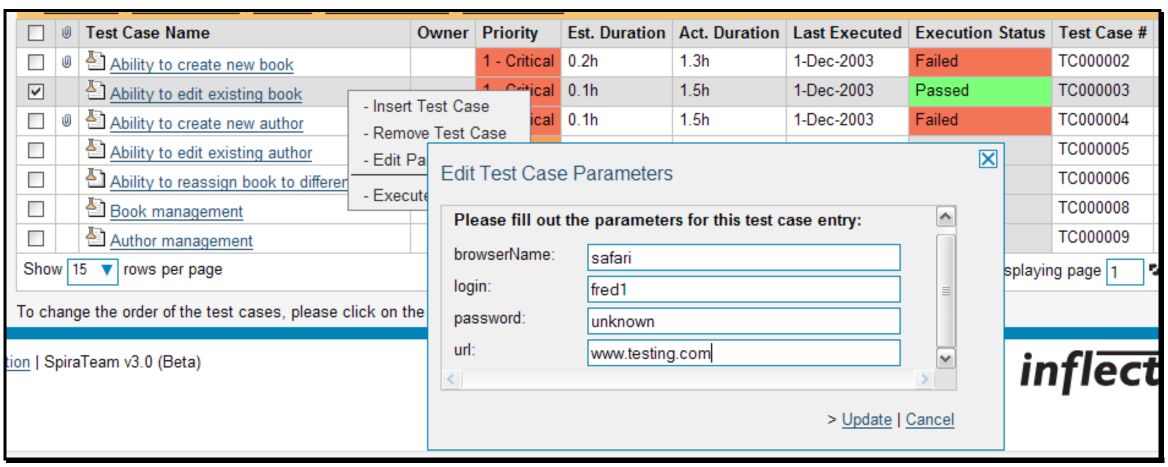
To add a new test case to the Test Set, you need to click on the "Add Test Cases" hyperlink to display the popup dialog box:



You can then select the checkboxes of the individual test cases or whole folders of test cases that you want to add to the test set. Once you have selected the desired items, click the <Add> button to actually add them to the test set.

Test cases in SpiraTeam can have parameters defined which are available to specify the text that should be used to replace certain tokens in the test case. In addition these parameters may be used by certain test automation engines. In addition to being able to specify the parameter values when linking the test cases as test steps of a parent test case, you can also specify the parameter values from the Test Set.

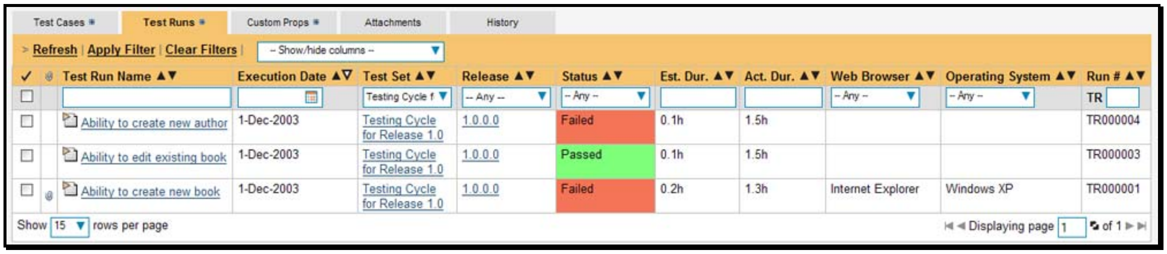
To view/edit the parameter values being set by the test case, you should either select the checkbox of a test set and click “Edit Parameters” at the top of the section, or right-click on the test case and choose “Edit Parameters”:



You can then specify the values of the parameters that the test set will pass to the test case. Once you have entered / modified the values, click [Update] to commit the changes.

5.8.2. Test Runs

This view displays the list of all the test runs executed against the test set. Each test run is listed together with the date of execution, the name of the test case, the name of the tester, the release/version of the system that the test was executed against, the overall execution status for the test case in that run and a link to the actual test run details (see section 5.6). In addition, you can choose to display any of the custom properties associated with the test run.

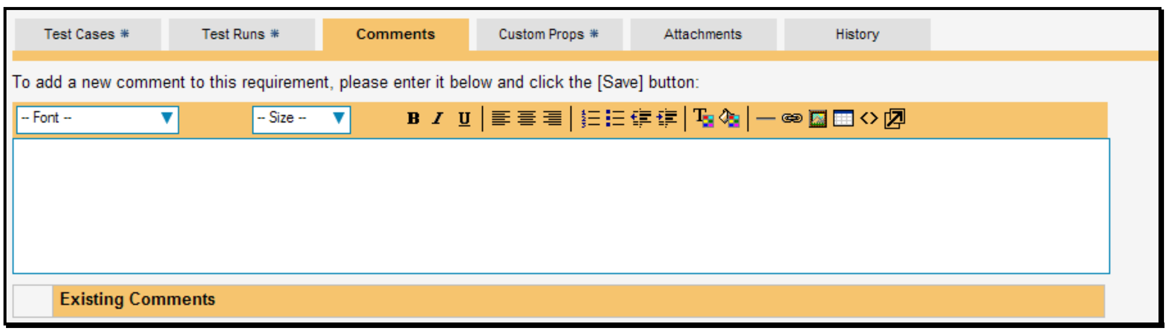


The “customize columns” drop-down list allows you to change the fields that are displayed in the test run list as columns. To show a column that is not already displayed, simply select that column from the list of “Show…” column names and to hide an existing column, simply select that column from the list of “Hide…” column names. The displayed columns can be any standard field or custom property.

You can also filter the results by choosing items from the filter options displayed in the sub-header row of each field and clicking the “Apply Filter” link. In addition, you can quickly sort the list by clicking on one of the directional arrow icons displayed in the header row of the appropriate field.

5.8.3. Comments

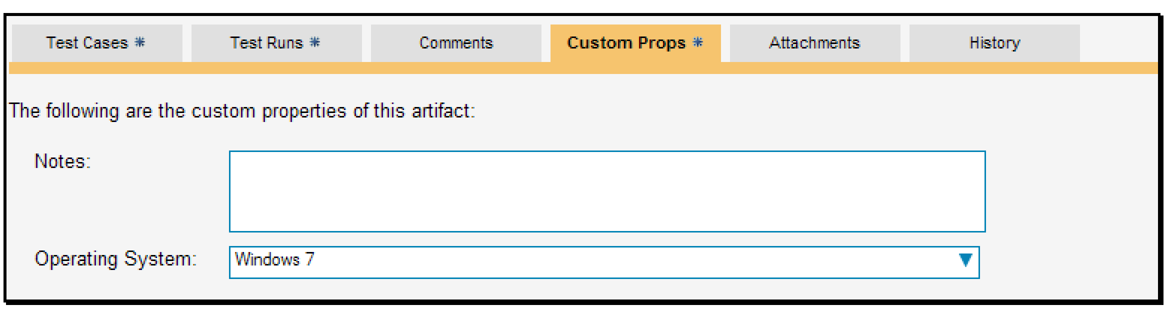
The Comments tab allows users to add and view discussions relating to the test set:



Existing comments are displayed in order underneath the textbox in date order. To add a new comment, simply enter it into the textbox, and click the Save button.

5.8.4. Custom Properties

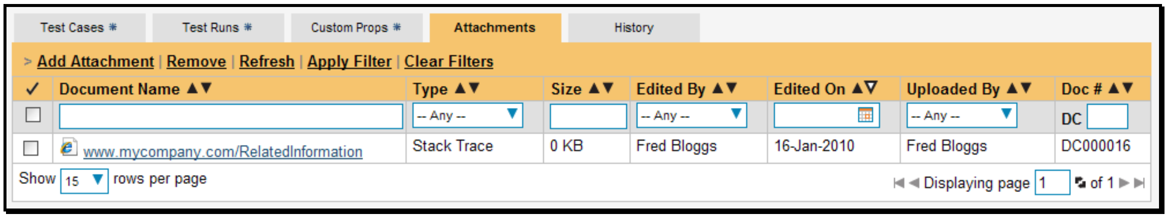
In this mode, the main pane displays any custom properties that the project owner has defined for test sets. To learn more about how to setup and configure custom properties for a project, please refer to the *SpiraTest Administration Guide*.



Assuming that custom properties have been defined for your project, you will see a list of optional parameters that can be set on the test set. These can be either freetext or drop-down-lists. If you want any of the custom list properties to prepopulate the corresponding value of the test run (e.g. you want all test runs to be marked with Operating System = Windows XP) make sure that both the test set and the test run are configured to use the same custom list.

5.8.5. Attachments

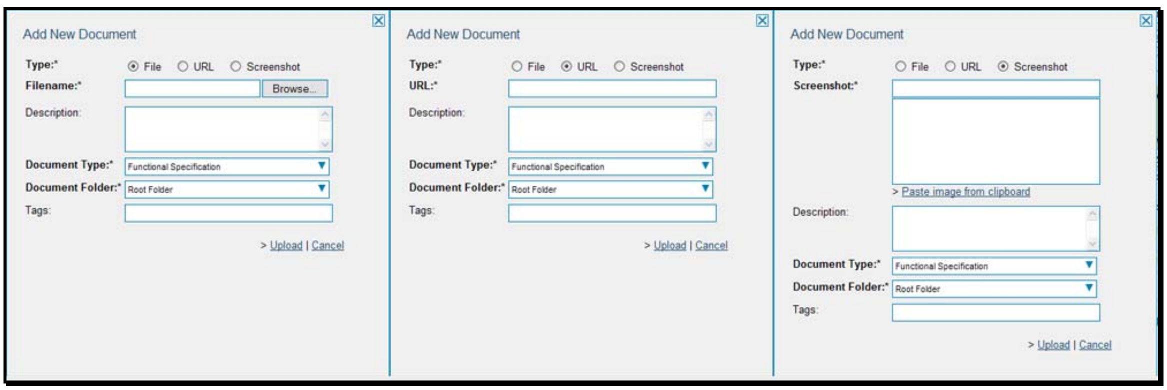
In this mode, the main pane displays the list of documents that have been "attached" to the test set. The documents can be in any format, though SpiraTeam® will only display the icon for certain known types.



The attachment list includes the filename that was originally uploaded together with the file-size (in KB), name of the person who attached it and the date uploaded. In addition, if you position the pointer over the filename and hold it there for a few seconds, a detailed description is displayed as a tooltip.

To actually view the document, simply click on the filename hyperlink and a new web browser window will open. Depending on the type of file, this window will either display the document or prompt you for a place to save it on your local computer. To remove an existing attachment from a test set, simply click the <Remove> button and the attachment will be removed from the list.

To attach a new document or web link to the test set, you need to click on the "Add Attachment" hyperlink to open the "Add Attachment" dialog box.



There are three different types of item that can be attached to a test set:

- To upload a file, choose "File" as the type and then click the Browse button and select the file from your local computer, optionally enter a detailed description then click the <Upload> button. The document will be copied from your computer and attached to the artifact.
- To attach a web-link (URL) to the artifact, you need to choose "URL" as the type and then enter the fully qualified URL (e.g. http://mywebsite.com?Document=1), an optional description and then click the <Upload> button to attach the web-link.
- To attached a screenshot to the artifact, you need to choose "Screenshot" as the type and then copy the image to your computer's clipboard (e.g. on Windows computers, the PRINT SCREEN button captures the current page and adds to the clipboard). Once the image is in the clipboard, click on the "Paste image from clipboard" hyperlink and the item will appear in the preview window. You can then fill in the other fields and click <Upload> to attach the image.

Note: If you are using a non-Windows® computer (e.g. Macintosh®) that doesn't put file extensions on filenames (e.g. .xls for an Excel sheet) automatically, then you will need to manually add the file extension to the filename before uploading if you want it to be displayed with the correct icon in the attachment list.

5.8.6. History

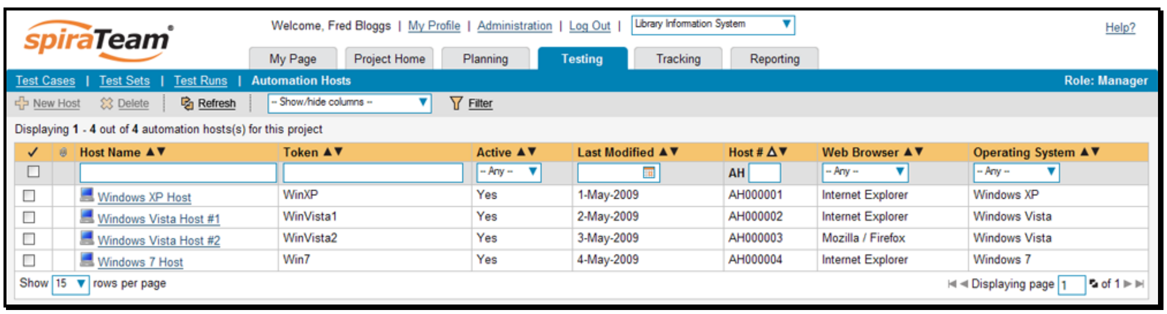
In this mode, the main pane displays the list of changes that have been performed on the test set artifact since its creation. The change history displays the date that each change was made, together with the fields that were changed, the old and new values and the person who made the change. This allows a complete audit trail to be maintained of all changes in the system.

5.9. Automation Host List

This section outlines how to use the Automation Host Management features of SpiraTeam® to manage the different host systems that will be running automated tests in your environment. Typically when scheduling automated tests you will want to execute the same tests on multiple computers running different environments.

SpiraTeam allows you to build a master list of automation hosts in each project, which can be used to schedule test sets containing automated test cases against. Please refer to the Test Set section of this manual for more information on managing and scheduling test sets.

When you click on the Testing > Automation Hosts global navigation link, you will initially be taken to the automation host list screen illustrated below:



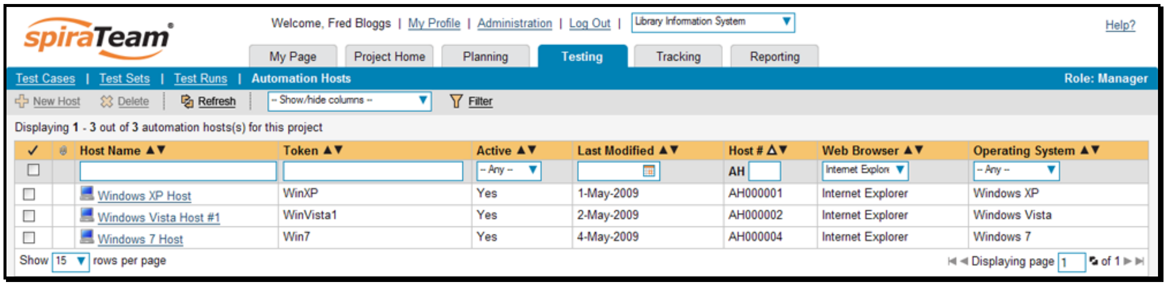
The automation host list screen displays all the automation hosts entered for the current project, in a filterable, sortable grid. The grid displays the automation host ID together with fields such as name, description, last modified, token, and any custom properties. The choice of columns displayed is configurable per-user, per-project, giving extensive flexibility when it comes to viewing and searching automation hosts.

In addition, you can view a more detailed description of the automation host by positioning the mouse pointer over the host name hyperlink and waiting for the popup “tooltip” to appear. If you click on the host name hyperlink, you will be taken to the automation host details page described in section 5.9.2. Clicking on any of the pagination links at the bottom of the page will advance you to the next set of hosts in the list according to the applied filter and sort-order. There is also a drop-down-list at the bottom of the page which allows you to specify how many rows should be displayed in each page, helping accommodate different user preferences.

One special column that is unique to automation hosts is the “Token” field. This needs to contain a short textual identifier that uniquely identifies each automation host in the project. This will be used by each host computer to identify itself to SpiraTeam.

5.9.1. Sorting and Filtering

You can easily filter and sort the list of automation hosts as illustrated in the screen-shot below:



To filter the list by one of the displayed fields, you simply choose an item from the appropriate drop-down list or enter a free-text phrase then click <Filter> or press the <ENTER> key to apply the different filters. Note that the name field is searched using a “LIKE” comparison, so that searching for “database” would include any item with the word database in the name. The other freetext fields need to be exact matches (e.g. dates, incident numbers).

To change the column that is sorted, or to change the direction of the current sort, simply click on the up/down arrow icon in the appropriate column. The currently sorted column is indicated by the larger, white arrow with the back-border.

Clicking on Filter > Clear Filter removes any set filters and expands the host list to display all automation hosts in the current project, and clicking on Filter > Save Filter allows you to save the filter to your ‘My Page’ for use in the future. The list of saved filters can also be retrieved by clicking Filter > Retrieve Filter.

5.9.2. New Host

Clicking on the <New Host> button adds a new automation host to the list with a default name and token.

5.9.3. Delete

Clicking on the <Delete> button deletes the automation hosts whose check-boxes have been selected in the host list.

5.9.4. Refresh

Clicking on the <Refresh> button simply reloads the list of automation hosts; this is useful when new hosts are being added by other users, and you want to make sure you have the most up-to-date list displayed.

5.9.5. Show / Hide Columns

This drop-down list allows you to change the fields that are displayed in the host list as columns for the current project. To show a column that is not already displayed, simply select that column from the list of “Show…” column names and to hide an existing column, simply select that column from the list of “Hide…” column names. This is stored on a per-project basis, so you can have different display settings for each project that you are a member of. The fields can be any of the built-in fields or any of the custom properties set up by the project owner.

5.9.6. Edit

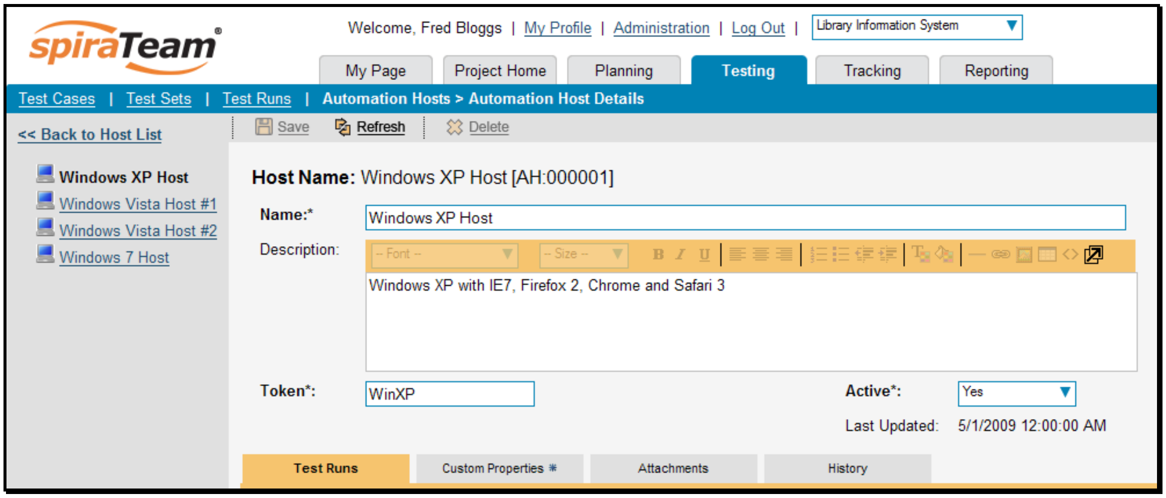
Each automation host in the list has an <Edit> button display in its right-most column. When you click this button or just *double-click* on any of the cells in the row, you change the item from “View” mode to “Edit” mode. The various columns are made editable, and <Update> <Cancel> buttons are displayed in the last column

If you click <Edit> on more than one row, the <Update> and <Cancel> buttons are only displayed on the first row, and you can make changes to all the editable rows and then update the changes by clicking the one <Update> button. Also, if you want to make the same change to multiple rows (e.g. to change five automation hosts from Active = No to Active = Yes), you can click on the “fill” icon to the right of the editable item, which will propagate the new value to all editable items in the same column.

When you have made your updates, you can either click <Update> to commit the changes, or <Cancel> to revert back to the original information. Alternatively, pressing the <ENTER> key will commit the changes and pressing the <ESCAPE> key will cancel the changes.

5.10. Automation Host Details

When you click on an automation host entry in the host list, you are taken to the automation host details page illustrated below:



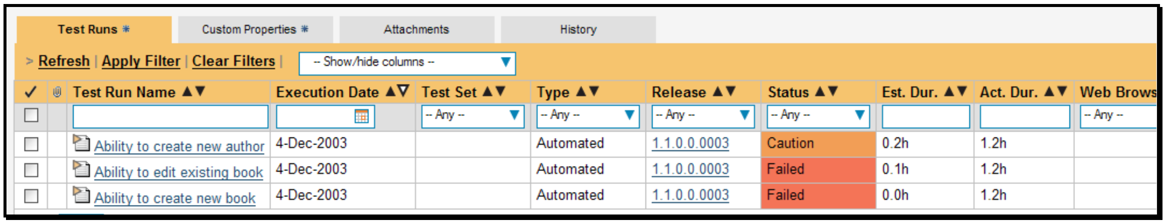
This page is made up of three areas; the left pane is the navigation window, the upper part of the right pane contains the automation host detailed information itself, and the bottom part of the right pane displays different information associated with the automation host.

The navigation pane consists of a link that will take you back to the host list, as well as a list of the other automation hosts in the project that match the currently selected sort and filter option. If the number of hosts exceeds fifteen, only the first fifteen entries will be shown.

The top part of the right pane allows you to view and/or edit the details of the particular automation host. You can edit the various fields (name, description, token, etc.) and once you are satisfied with them, simply click either the <Save> or <Save and New> button at the top of the page to commit the changes. In addition you can delete the current artifact by choosing <Delete>, or discard any changes made by clicking <Refresh>.

5.10.1. Test Runs

This view displays the list of all the test runs executed against the automation host. Each test run is listed together with the date of execution, the name of the test case, the name of the tester, the release/version of the system that the test was executed against, the name of the test set (if applicable), the overall execution status for the test case in that run and a link to the actual test run details (see section 5.6). In addition, you can choose to display any of the custom properties associated with the test run.

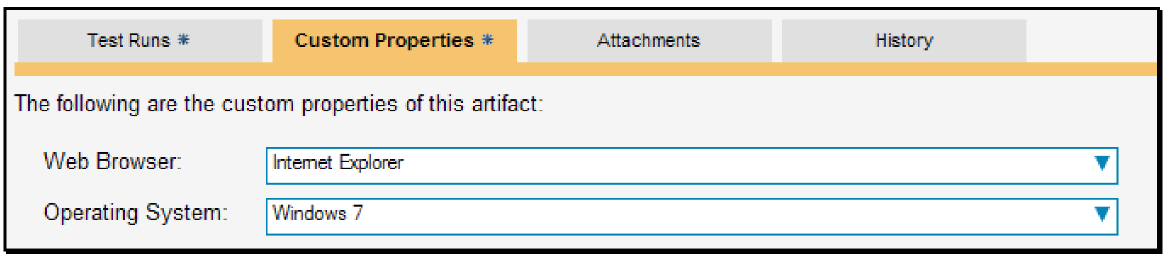


The “customize columns” drop-down list allows you to change the fields that are displayed in the test run list as columns. To show a column that is not already displayed, simply select that column from the list of “Show…” column names and to hide an existing column, simply select that column from the list of “Hide…” column names. The displayed columns can be any standard field or custom property.

You can also filter the results by choosing items from the filter options displayed in the sub-header row of each field and clicking the “Apply Filter” link. In addition, you can quickly sort the list by clicking on one of the directional arrow icons displayed in the header row of the appropriate field.

5.10.2. Custom Properties

In this mode, the main pane displays any custom properties that the project owner has defined for automation hosts. To learn more about how to setup and configure custom properties for a project, please refer to the *SpiraTest Administration Guide*. Assuming that custom properties have been defined for your project, you will see a list of optional parameters that can be set on the host. These can be either freetext or drop-down-lists.



Once you are satisfied with the values for the custom properties, simply click [Save] or [Save and New] to commit the changes.

5.10.3. Attachments

In this mode, the main pane displays the list of documents, screenshots or web-links (URLs) that have been “attached” to the automation host. The documents can be in any format, though SpiraTeam® will only display the icon for certain known types.

To attach a new document to the automation host, you need to first click the <Add Attachment> link to display the new attachment dialog box. There are three different types of item that can be attached to an automation host:

- To upload a file, choose “File” as the type and then click the Browse button and select the file from your local computer, optionally enter a detailed description then click the <Upload> button. The document will be copied from your computer and attached to the artifact.
- To attach a web-link (URL) to the artifact, you need to choose “URL” as the type and then enter the fully qualified URL (e.g. http://mywebsite.com?Document=1), an optional description and then click the <Upload> button to attach the web-link.
- To attached a screenshot to the artifact, you need to choose “Screenshot” as the type and then copy the image to your computer’s clipboard (e.g. on Windows computers, the PRINT SCREEN button captures the current page and adds to the clipboard). Once the image is in the clipboard,

click on the “Paste image from clipboard” hyperlink and the item will appear in the preview window. You can then fill in the other fields and click <Upload> to attach the image.

Note: If you are using a non-Windows® computer (e.g. Macintosh®) that doesn’t put file extensions on filenames (e.g. .xls for an Excel sheet) automatically, then you will need to manually add the file extension to the filename *before uploading* if you want it to be displayed with the correct icon in the attachment list.

5.10.4. History

In this mode, the main pane displays the list of changes that have been performed on the automation host artifact since its creation. The change history displays the date that each change was made, together with the fields that were changed, the old and new values and the person who made the change. This allows a complete audit trail to be maintained of all changes in the system.

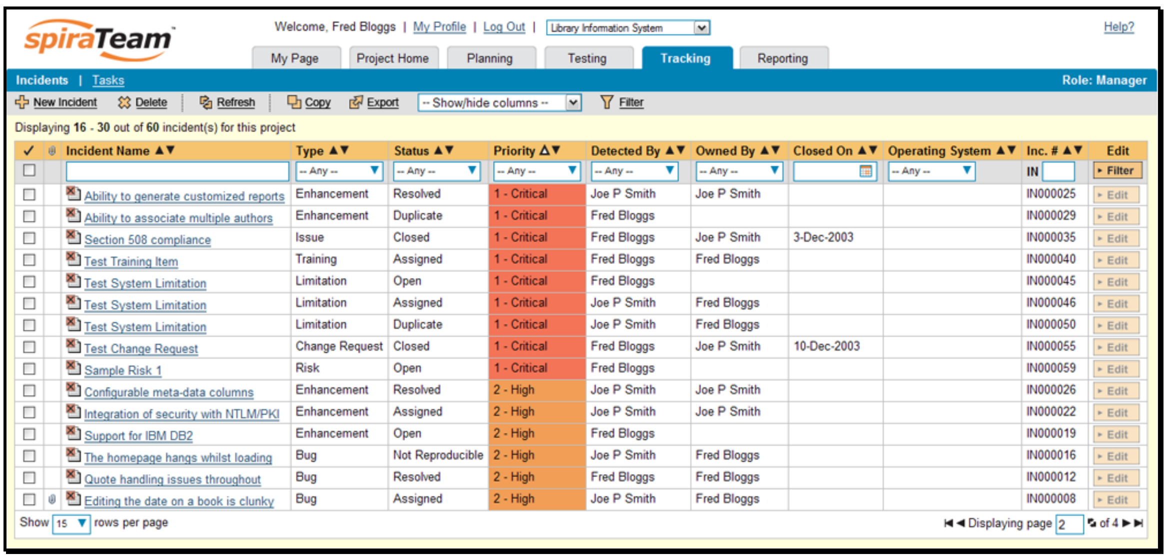
6. Incident Tracking

This section outlines how the incident/defect tracking features of SpiraTeam® can be used to manage key project artifacts during the software development lifecycle. In addition to managing the defects raised during the execution of test cases in the test management module, the Incident Tracker is also a powerful risk/issue/bug tracking system in its own right. When coupled with the project dashboard (see section 3.4) it is a powerful tool for representing all the key risks and issues associated with a project in a single, graphical format.

Unlike a standalone bug/issue tracking tool however, you can trace the incidents/defects back to the test case and the underlying requirement that generated them, giving the project manager unprecedented power in analyzing the "in-process" quality of a system during its lifecycle. This power is clearly illustrated in the "Requirement Incident Count" pane in the Project Home dashboard (see section 3.4.4).

6.1. Incident List

When you click on the Tracking > Incidents global navigation link, you will initially be taken to the incidents list screen illustrated below:



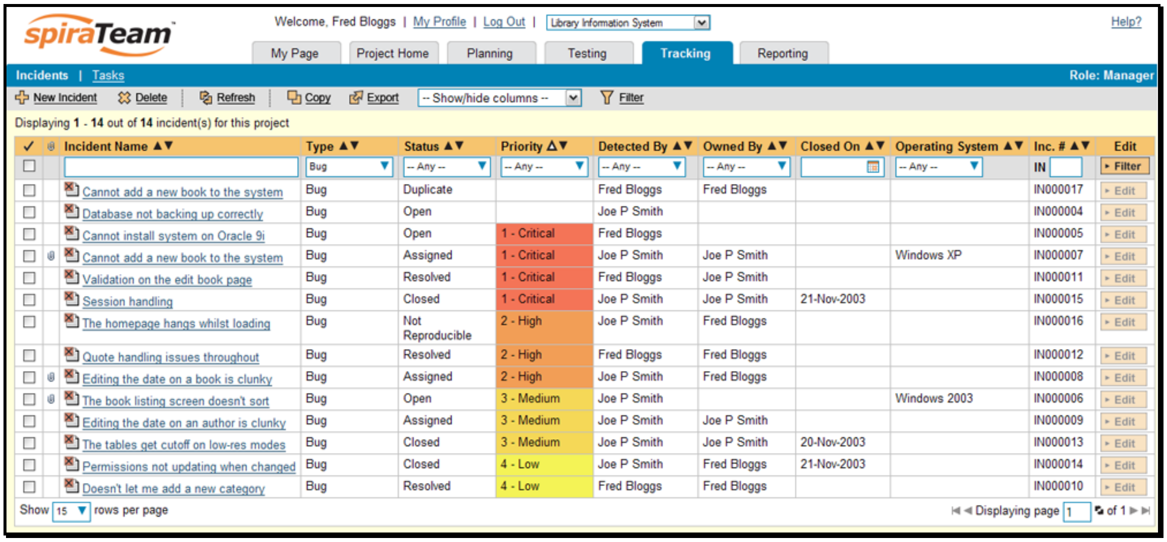
Incident Name	Type	Status	Priority	Detected By	Owned By	Closed On	Operating System	Inc. #	Edit
Ability to generate customized reports	Enhancement	Resolved	1 - Critical	Joe P Smith	Joe P Smith			IN000025	Edit
Ability to associate multiple authors	Enhancement	Duplicate	1 - Critical	Fred Bloggs				IN000029	Edit
Section 508 compliance	Issue	Closed	1 - Critical	Fred Bloggs	Joe P Smith	3-Dec-2003		IN000035	Edit
Test Training Item	Training	Assigned	1 - Critical	Fred Bloggs	Fred Bloggs			IN000040	Edit
Test System Limitation	Limitation	Open	1 - Critical	Fred Bloggs				IN000045	Edit
Test System Limitation	Limitation	Assigned	1 - Critical	Joe P Smith	Fred Bloggs			IN000046	Edit
Test System Limitation	Limitation	Duplicate	1 - Critical	Joe P Smith	Fred Bloggs			IN000050	Edit
Test Change Request	Change Request	Closed	1 - Critical	Fred Bloggs	Joe P Smith	10-Dec-2003		IN000055	Edit
Sample Risk 1	Risk	Open	1 - Critical	Fred Bloggs				IN000059	Edit
Configurable meta-data columns	Enhancement	Resolved	2 - High	Joe P Smith	Joe P Smith			IN000026	Edit
Integration of security with NTLM/PKI	Enhancement	Assigned	2 - High	Joe P Smith	Joe P Smith			IN000022	Edit
Support for IBM DB2	Enhancement	Open	2 - High	Fred Bloggs				IN000019	Edit
The homepage hangs whilst loading	Bug	Not Reproducible	2 - High	Joe P Smith	Fred Bloggs			IN000016	Edit
Quote handling issues throughout	Bug	Resolved	2 - High	Fred Bloggs	Fred Bloggs			IN000012	Edit
Editing the date on a book is clunky	Bug	Assigned	2 - High	Joe P Smith	Fred Bloggs			IN000008	Edit

The incident list screen displays all the incidents entered for the current project, in a filterable, sortable grid. The grid displays the incident number together with fields such as incident type (bug, issue, risk, etc.), status (new, open, etc.), priority, name, assigned owner, detection date, detector, closed date, etc. The choice of columns displayed is configurable per-user, per-project, giving extensive flexibility when it comes to viewing and searching incidents.

In addition, you can view a more detailed description of the incident (along with a resolution if any) by positioning the mouse pointer over the incident name hyperlink and waiting for the popup "tooltip" to appear. If you click on the incident name hyperlink, you will be taken to the incident details page described in section 6.2. Clicking on any of the pagination links at the bottom of the page will advance you to the next set of incidents in the list according to the applied filter and sort-order. There is also a drop-down-list at the bottom of the page which allows you to specify how many rows should be displayed in each page, helping accommodate different user preferences.

6.1.1. Sorting and Filtering

You can easily filter and sort the list of incidents as illustrated in the screen-shot below:



To filter the list by incident type, status, priority, owner or detector name, you simply choose an item from the appropriate drop-down list, and for the other fields, you enter a free-text phrase then click <Filter> or press the <ENTER> key to apply the different filters. Note that the name field is searched using a "LIKE" comparison, so that searching for "database" would include any item with the word database in the name. The other freetext fields need to be exact matches (e.g. dates, incident numbers). There are also several aggregate filters that are used to filter on multiple values at once (e.g. filtering status on (All Open) will return any incident that is in one of the open statuses – new, open, assigned, reopen).

To change the column that is sorted, or to change the direction of the current sort, simply click on the up/down arrow icon in the appropriate column. The currently sorted column is indicated by the larger, white arrow with the back-border. In the screen-shot above, we are filtering on type=bug and sorting by decreasing priority.

Clicking on Filter > Clear Filter removes any set filters and expands the incident list to display all incidents for the current project, and clicking on Filter > Save Filter allows you to save the filter to your 'My Page' for use in the future. The list of saved filters can also be retrieved by clicking Filter > Retrieve Filter.

6.1.2. New Incident

Clicking on the <New Incident> button takes you to the new incident screen. This is essentially the same screen as the incident details screen shown in section 6.2 except that the <Update> button is replaced by an <Insert> button, and depending on how the workflow has been configured for your project, certain fields may be disabled. For more details on setting and up configuring workflow for your project, please refer to the *SpiraTest Administration Guide*.

6.1.3. Delete

Clicking on the <Delete> button deletes the incidents whose check-boxes have been selected in the incident list.

6.1.4. Refresh

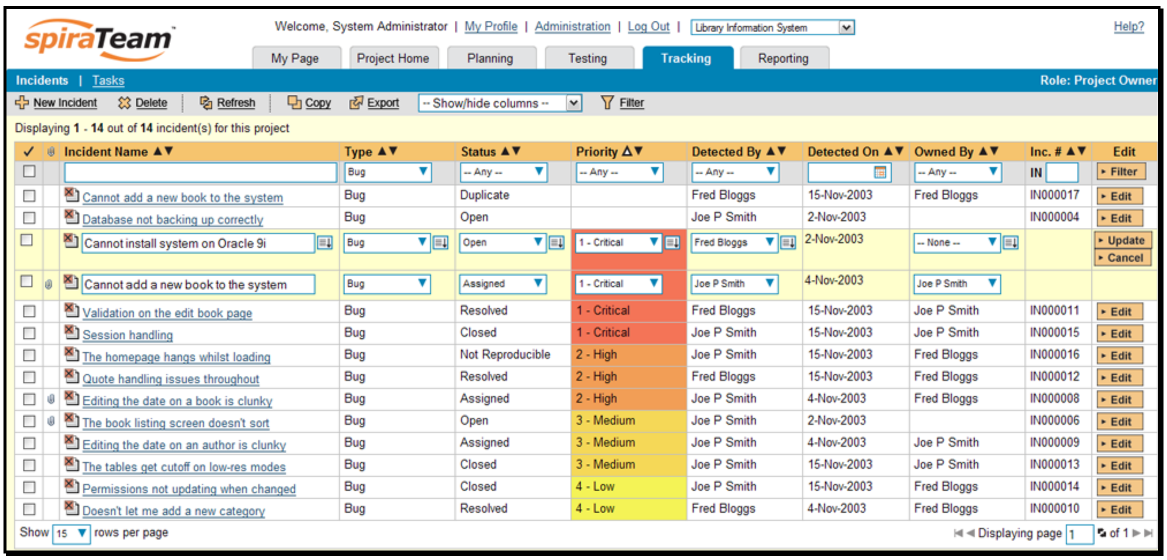
Clicking on the <Refresh> button simply reloads the list of incidents; this is useful when new incidents are being added by other users, and you want to make sure you have the most up-to-date list displayed.

6.1.5. Show / Hide Columns

This drop-down list allows you to change the fields that are displayed in the incident list as columns for the current project. To show a column that is not already displayed, simply select that column from the list of "Show…" column names and to hide an existing column, simply select that column from the list of "Hide…" column names. This is stored on a per-project basis, so you can have different display settings for each project that you are a member of. The fields can be any of the built-in fields or any of the custom properties set up by the project owner.

6.1.6. Edit

Each incident in the list has an <Edit> button display in its right-most column. When you click this button or just *double-click* on any of the cells in the row, you change the item from "View" mode to "Edit" mode. The various columns are made editable, and <Update> <Cancel> buttons are displayed in the last column:



If you click <Edit> on more than one row, the <Update> and <Cancel> buttons are only displayed on the first row, and you can make changes to all the editable rows and then update the changes by clicking the one <Update> button. Also, if you want to make the same change to multiple rows (e.g. to change five incidents from "Resolved" status to "Closed"), you can click on the "fill" icon to the right of the editable item, which will propagate the new value to all editable items in the same column.

When you have made your updates, you can either click <Update> to commit the changes, or <Cancel> to revert back to the original information. Alternatively, pressing the <ENTER> key will commit the changes and pressing the <ESCAPE> key will cancel the changes.

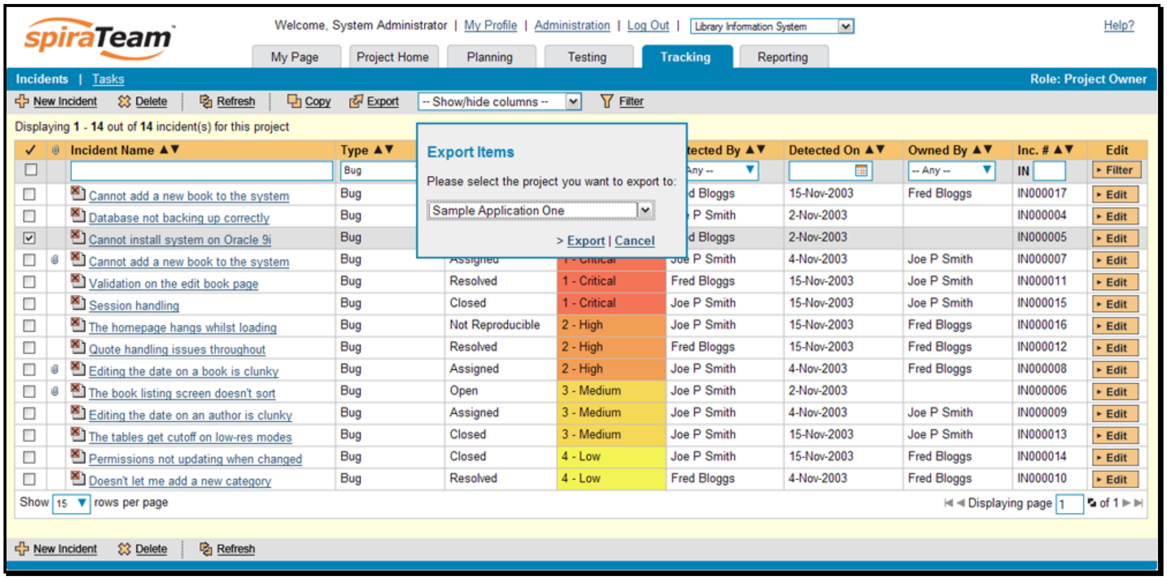
Note that in the case of incidents, you need to have Project Owner permissions for the project to make bulk changes using the <Edit> button as such changes can override the workflow business rules established.

6.1.7. Copying Incidents

To copy an incident or set of incidents, simply select the check-boxes of the incidents you want to copy and then click <Copy>. This will make a copy of the current incident with its name prefixed 'Copy of ….' to distinguish itself from the original. Any file attachments will also be copied along with the incident itself.

6.1.8. Exporting Incidents

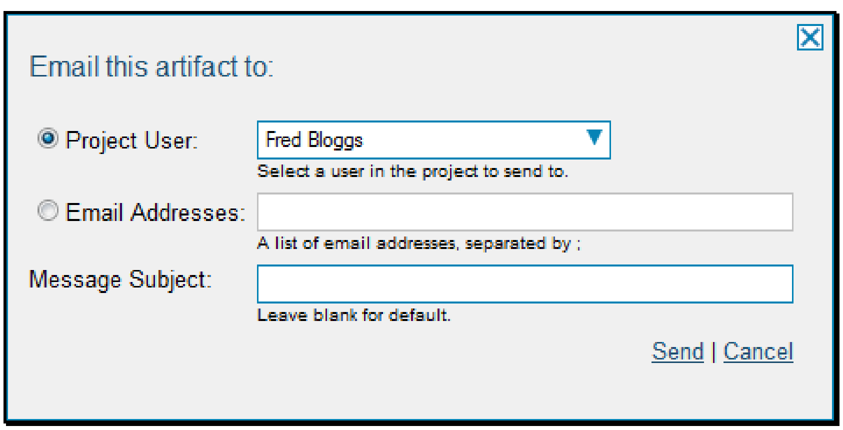
To export an incident or set of incidents from the current project to another project in the system, all you need to do is select the check-boxes of the incident(s) you want to export and then click the <Export> button. This will then bring up a list of possible destination projects:



Once you have chosen the destination project and clicked the <Export> button, the incidents will be exported from the current project to the destination project. Any file attachments will also be copied to the destination project along with the incidents.

6.1.9. Emailing the Incident

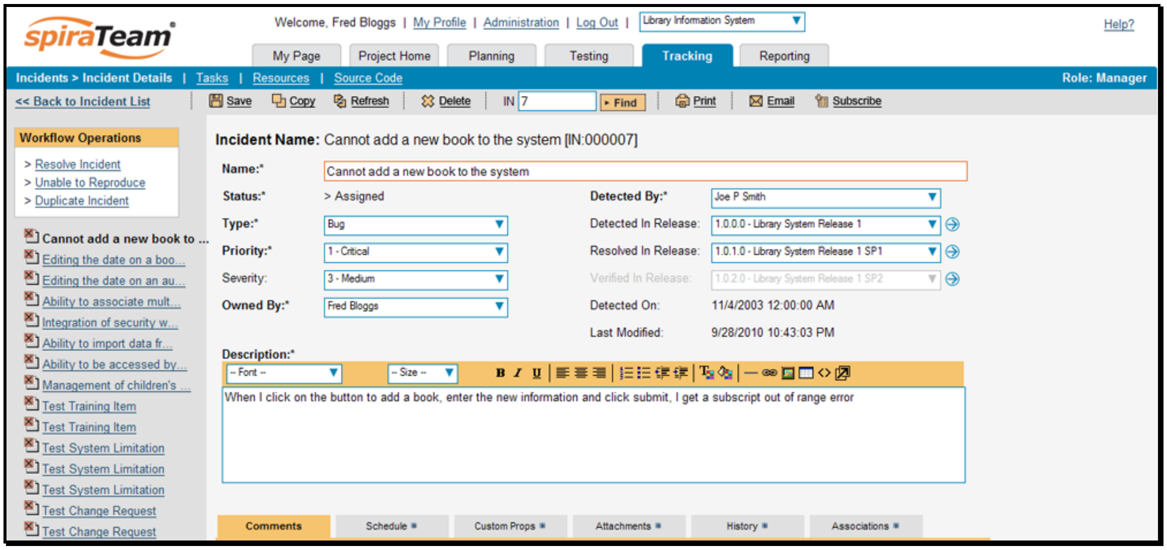
Using the <Email> button on the toolbar, you can send an email containing details of the incident to an email address or another user on the system:



You can specify the subject line for the email, and either a list of email addresses, separated by semicolons, or an existing project user .The content of the email is specified in the System Administration – Notification Templates.

6.2. Incident Details

When you click on an incident item in the incident list, or click the <New Incident> button (as described in section 6.1), you are taken to the incident details page illustrated below:



This page is made up of three areas; the left pane is the navigation window where you can quickly jump to other incidents as well as execute workflow transitions (see below), the upper part of the right pane contains the incident detailed information itself, and the bottom part of the right pane displays different information associated with the incident.

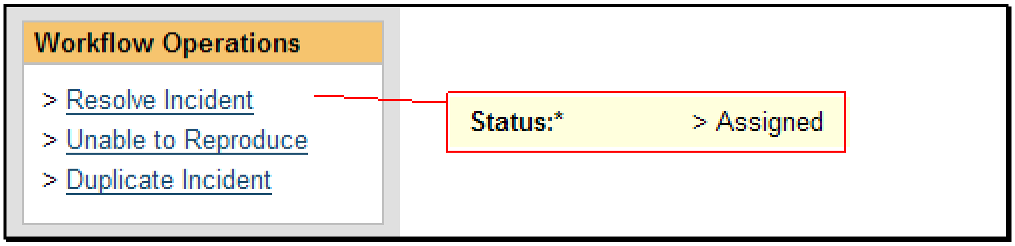
The left-hand navigation pane consists of a link that will take you back to the incident list, as well as a list of the other related incidents that match the currently selected sort and filter option on the incident list page. If the number of incidents exceeds fifteen, only the first fifteen entries will be shown. Above this navigation list is a highlighted box that displays the list of any workflow transitions that the current user can execute on the incident. This is described in more detail below.

In addition to the left hand navigation, you can enter a specific incident number in the text-box in the toolbar and click the <Find> button. In the same toolbar, there is also a shortcut for creating a new incident without having to first return to the incident list page. In addition, the lower section of the incident details page can be switched been four different views: “Comments”, “Schedule”, “Custom Properties”, “Attachments”, “History”, and “Associations”. These are described later.

6.2.1. Editing an Existing Incident

If you are editing an existing incident, the fields that are available and the fields that are required will depend on your stage in the incident workflow. For example an open incident might not require a “Resolved Version” whereas a resolved incident could well do. The types of change allowed and the email notifications that are sent will depend on how your project administrator has setup the system for you. Administrators should refer to the *SpiraTeam Administration Guide* for details on configuring the incident workflows to meet their needs.

Depending on the user’s role and whether they are listed as the owner or detector of the incident or not, displayed in the left hand side of the page, above the navigation list is a set of allowed workflow operations:



These workflow transitions allow the user to move the incident from one status to another. For example when the incident is in the Assigned status, you will be given the options to:

- **Resolve the Incident** – changes status to "Resolved"
- **Unable to Reproduce** – changes the status to "Not Reproducible"
- **Duplicate Incident -** changes the status to "Duplicate"

After changing the status of the incident by clicking on the workflow link, you can then fill in the additional fields that are now enabled and/or required. Once you've made the changes to the appropriate incident fields, you can either click <Save>, <Save and Close>, or <Save and New> to commit the changes or <Refresh> to discard the changes and reload the incident from the database. In addition you can print the current incident by clicking <Print>, which will display a printable version of the page in a separate window.

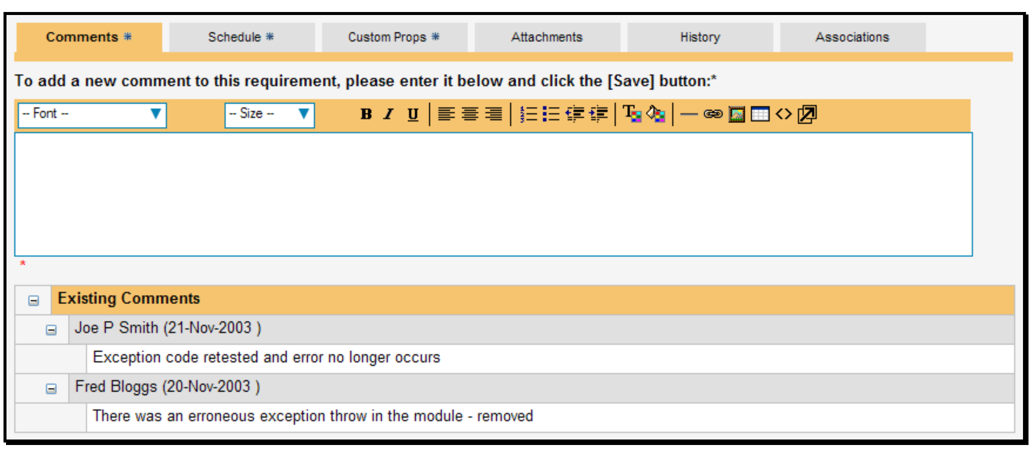
6.2.2. Inserting a New Incident

If you are creating a new incident, the fields that are available and the fields that are required will depend on how your project has been for configured. For example, some projects may require that all incidents be started with Status=New and Type=Incident, others may allow you to specify the incident type. The types of change allowed will depend on how your project administrator has setup the system for you. Administrators should refer to the *SpiraTeam Administration Guide* for details on configuring the incident workflows to meet their needs.

Once you've filled out the appropriate incident fields, you can either click <Save>, <Save and Close> or <Save and New> to commit the new item or click on the "Back to Incident List" to discard the insertion and return back to the incident list.

6.2.3. Comments

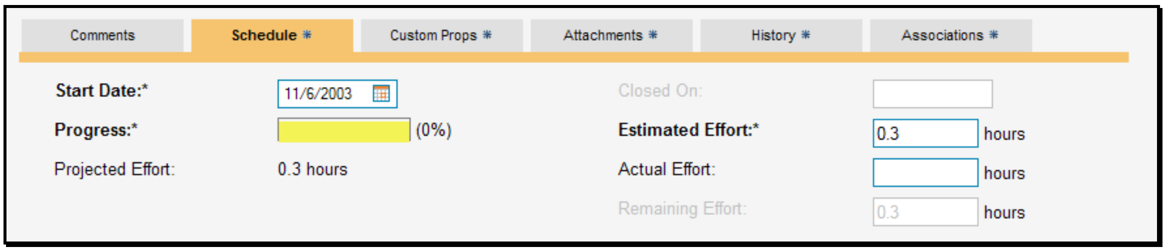
In this mode, the lower section of the screen displays a threaded list of resolutions that have been logged against this incident:



You can expand or collapse the list of existing resolutions by clicking the appropriate expand or collapse icon. To add a new resolution to an incident, all you need to do is enter the new resolution / comment in the text box above the list and then click <Save>. Your resolution will now be added to the existing items in the list.

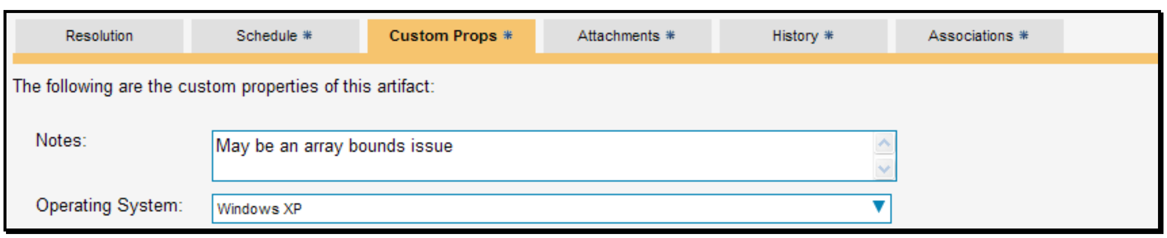
6.2.4. Schedule

In this mode, the main pane displays the general schedule and completion status of the specific incident. You can enter/edit the start-date, closed-date (i.e. the due-date), estimate, actual and remaining effort. From these values, the system will display the calculated percent completion, progress indicator and projected final effort.



6.2.5. Custom Properties

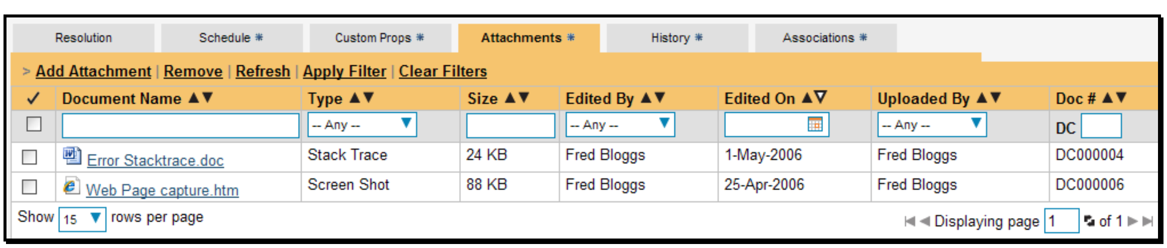
In this mode, the main pane displays any custom properties that the project owner has defined for incidents. To learn more about how to setup and configure custom properties for a project, please refer to the *SpiraTest Administration Guide*. Assuming that custom properties have been defined for your project, you will see a list of optional parameters that can be set on the incident. These can be either freetext or drop-down-lists. In the example below, you can enter Notes, and/or the Operating System that the incident was observed on.



Once you are satisfied with the values for the custom properties, simply click [Save], [Save and New] or [Save and Close] to commit the changes.

6.2.6. Attachments

In this mode, the lower section of the screen displays the list of documents, screenshots or web links (URLs) that have been "attached" to the incident. The documents can be in any format, though SpiraTeam® will only display the icon for certain known types.



The attachment list includes the filename that was originally uploaded together with the file-size (in KB), name of the person who attached it and the date uploaded. In addition, if you position the pointer over the filename and hold it there for a few seconds, a detailed description is displayed as a tooltip.

To actually view the document, simply click on the filename hyperlink and a new web browser window will open. Depending on the type of file, this window will either display the document or prompt you for a place to save it on your local computer. To remove an existing attachment from an incident, simply click the <Remove> button and the attachment will be removed from the list.

To attach a new document or web link to the incident, you need to click on the "Add Attachment" hyperlink to open the "Add Attachment" dialog box. There are three different types of item that can be attached to an incident:

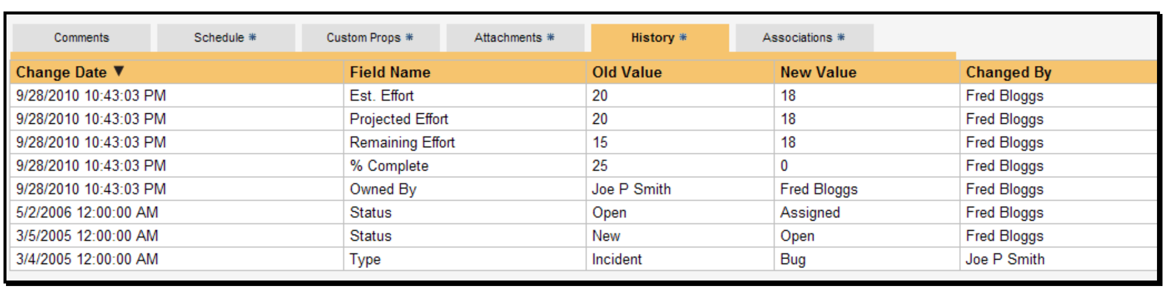
- To upload a file, choose "File" as the type and then click the Browse button and select the file from your local computer, optionally enter a detailed description then click the <Upload> button. The document will be copied from your computer and attached to the artifact.
- To attach a web-link (URL) to the artifact, you need to choose "URL" as the type and then enter the fully qualified URL (e.g. http://mywebsite.com?Document=1), an optional description and then click the <Upload> button to attach the web-link.
- To attached a screenshot to the artifact, you need to choose "Screenshot" as the type and then copy the image to your computer's clipboard (e.g. on Windows computers, the PRINT SCREEN button captures the current page and adds to the clipboard). Once the image is in the clipboard, click on the "Paste image from clipboard" hyperlink and the item will appear in the preview window. You can then fill in the other fields and click <Upload> to attach the image.

Note: If you are using a non-Windows® computer (e.g. Macintosh®) that doesn't put file extensions on filenames (e.g. .xls for an Excel sheet) automatically, then you will need to manually add the file extension to the filename *before uploading* if you want it to be displayed with the correct icon in the attachment list.

Note: If you are using a non-Windows® computer (e.g. Macintosh®) that doesn't put file extensions on filenames (e.g. .xls for an Excel sheet) automatically, then you will need to manually add the file extension to the filename before uploading if you want it to be displayed with the correct icon in the attachment list.

6.2.7. History

In this mode, the main pane displays the list of changes that have been performed on the incident artifact since its creation. An example incident change history is depicted below:

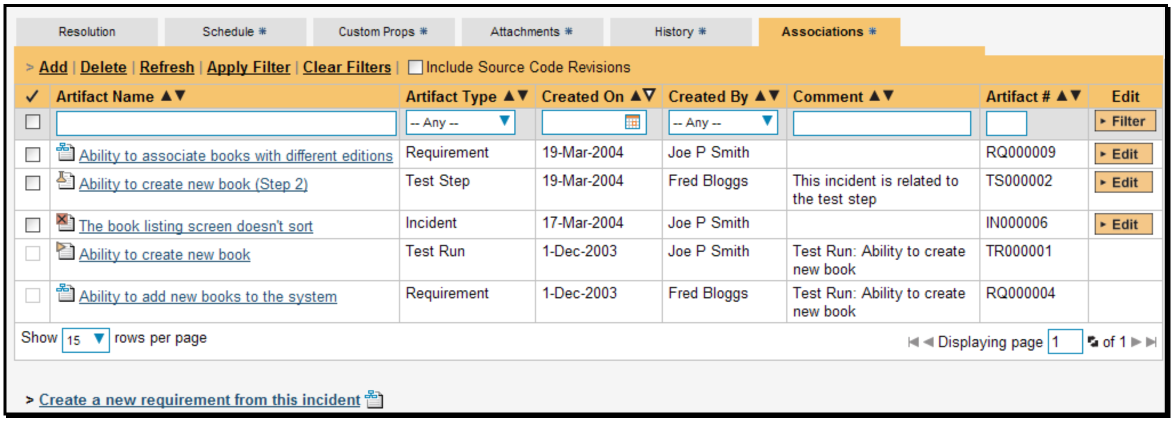


Change Date ▼	Field Name	Old Value	New Value	Changed By
9/28/2010 10:43:03 PM	Est. Effort	20	18	Fred Bloggs
9/28/2010 10:43:03 PM	Projected Effort	20	18	Fred Bloggs
9/28/2010 10:43:03 PM	Remaining Effort	15	18	Fred Bloggs
9/28/2010 10:43:03 PM	% Complete	25	0	Fred Bloggs
9/28/2010 10:43:03 PM	Owned By	Joe P Smith	Fred Bloggs	Fred Bloggs
5/2/2006 12:00:00 AM	Status	Open	Assigned	Fred Bloggs
3/5/2005 12:00:00 AM	Status	New	Open	Fred Bloggs
3/4/2005 12:00:00 AM	Type	Incident	Bug	Joe P Smith

The change history displays the date that each change was made, together with the fields that were changed, the old and new values and the person who made the change. This allows a complete audit trail to be maintained of all changes in the system.

6.2.8. Associations

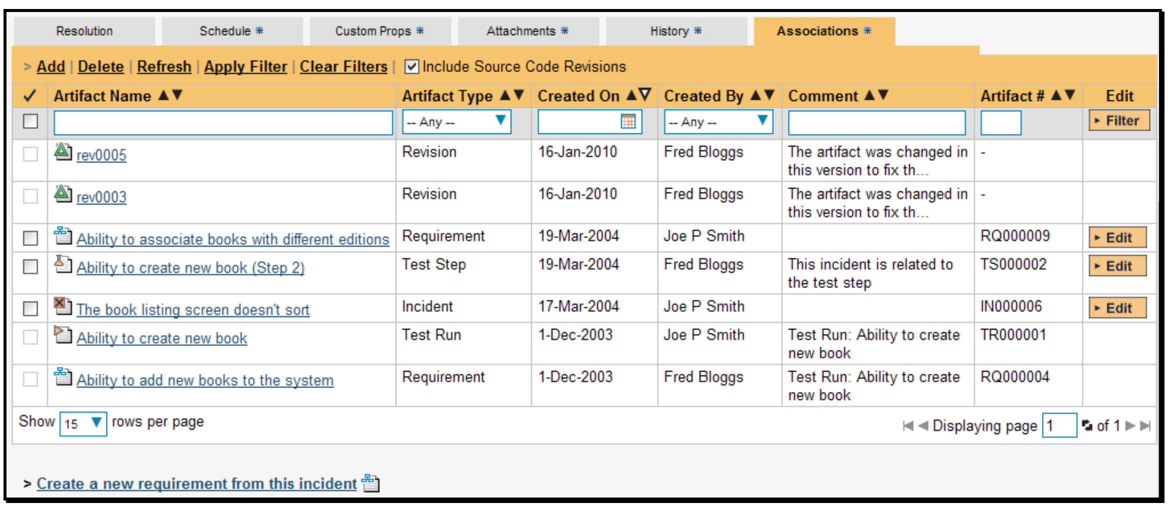
In this mode, the main pane displays a list of any requirements, test runs, test steps or other incidents that are associated with this incident:



The incidents in this list are ones that a user has decided are relevant to the current one and has created a direct link between them. In the case of requirements and test cases, the association can be either due to the creator of an incident directly linking the incident to the requirement or test step, or it can be the result of a tester executing a test-run and creating an incident during the test run. In this latter case, the check-box to the left of the association will be unavailable as the link is not editable.

Each association is displayed with the type of artifact (requirement, test step, test run, incident), the name of the artifact being linked-to, the name of the person who created the association, and a comment that describes why the association was made. In the case of an indirect association due to a test run, the comment will contain the name of the test run.

In addition, when using SpiraPlan or SpiraTeam, you can select the checkbox marked “Include Source Code Revisions” and the system will also scan the source code repository for any revisions that are linked to this artifact. Since that can take be slower than accessing SpiraTeam, it is provided as an option that you can enable and disable:

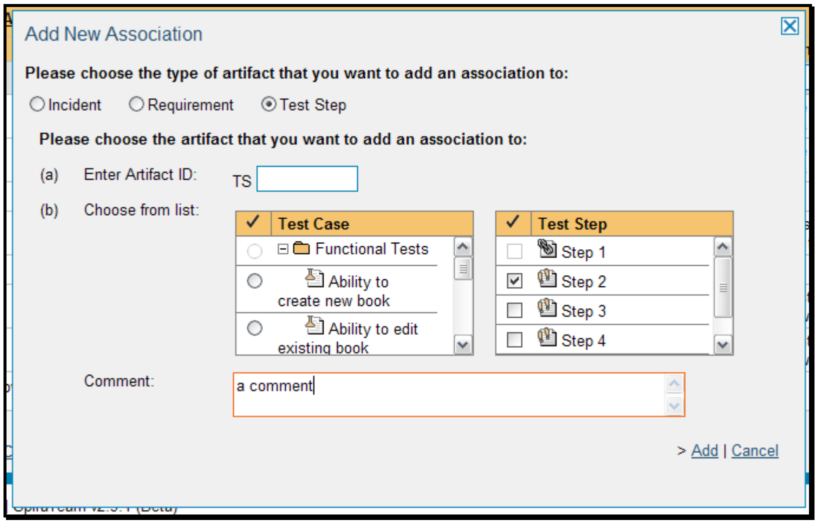


You can perform the following actions on an association from this screen:

- **Delete** – removes the selected association to the other artifact. This will only delete the association, not the linked artifact itself.
- **Refresh** – updates the list of associations from the server, useful if other people are adding associations to this incident at the same time.
- **Apply Filter** – Applies the entries in the filter boxes to the list of associations

- **Clear Filters** – Clears the current filter, so that all associations for the current incident are shown.
- **Edit** – Clicking the [Edit] button to the right of the associations allows you to edit the comment field inline directly on this screen.

To create a new association, simply click the <Add> hyperlink which will display the “Add New Association” popup dialog box:



Once you have selected the appropriate artifact type, you will then be able to choose the specific artifact you want to link to. In all cases, you can choose the item from a scrolling selection box, or you can either enter the ID of the artifact directly (if known). In either case you can also add a comment that explains the rationale for the association. If you’re adding an association to a test step, then there are actually *two* selection boxes, one to choose the overall test case and the other to choose the specific test step.

6.2.9. Creating a Requirement from an Incident

Sometimes you may have a situation where an enhancement has been logged in the incident tracker and now that it has been approved, it needs to be converted into a formal requirement so that test cases and tasks can be generated from it. To aid this process, there is a shortcut link on the Associations tab that allows you to create a new requirement from the current incident and have it be automatically added to the requirements list. When that is performed an association is automatically added that links this new requirement to the original incident.

7. Release Management

This section outlines how to use the Release Management features of SpiraTeam® to manage different versions of the system being tested in a particular project. This is an optional feature of the system, and you can manage the testing for a project successfully without tracking individual releases. Typically when you develop a system, it is important to ensure that features introduced in successive versions do not impair existing functionality - this is known as *regression testing*.

In such situations, you will want to be able to execute the same set of test scripts against multiple versions of the system and be able to track failures by version. A feature that works correctly in version 1.0 may fail in version 1.1, and the maintenance team may be testing the existing lifecycle of v1.0 in parallel with the development team testing v1.1. Therefore by developing a master set of releases/versions in the Release Management module, you can have the different testing teams correctly assign their testing actions to the appropriate version.

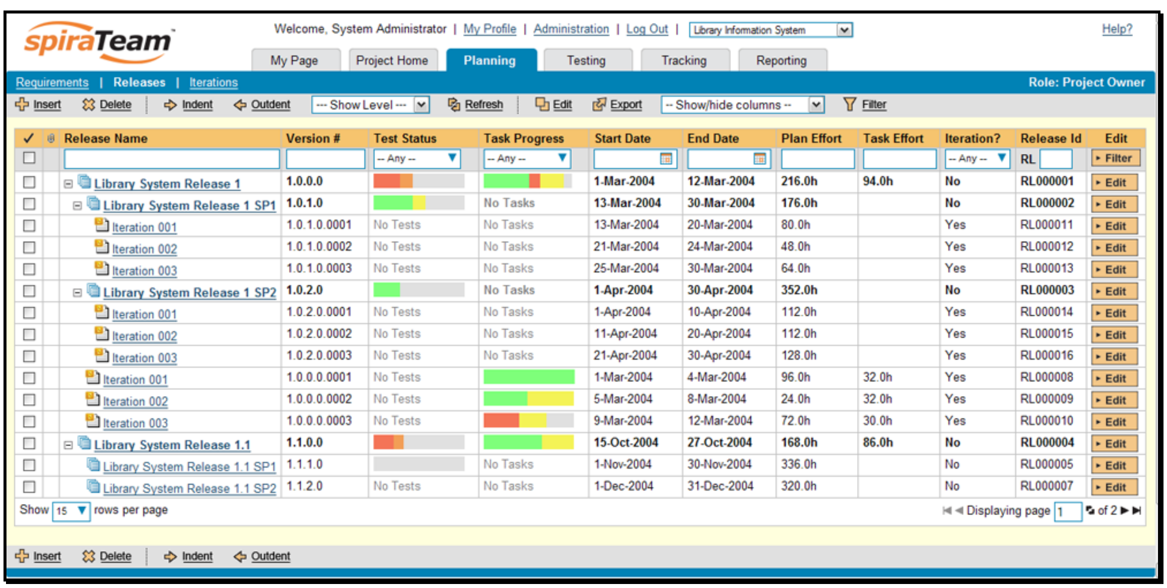
There are two types of release artifact in SpiraTeam® - major project releases that are displayed with the blue release icon and represent major versions of the system, and release Iterations (aka builds) that are displayed with a yellow icon and represent intermediate builds/iterations of the system. *Note: Iterations can be contained within a Release, but not the other way round.*

The main differences between releases and iterations are as follows:

- Releases are independent versions of the system being tested and as such, you can map a requirement directly to a release, indicating the release of the system that the requirement will be fulfilled in.
- When you report on a release (e.g. on the project home or in one of the reports) any child iterations are automatically taken into account, and test runs and incidents that are related to the child iterations will get included in the release reports. Child releases on the other hand are not aggregated up into the parent release.

7.1. Release List

When you click on the Planning > Releases global navigation link, you will initially be taken to the release list screen illustrated below:



The release list will contain all the releases and iterations associated with current project. When you create a new project, this list will initially be empty, and you will have to use the <Insert> button to start adding releases and iterations to the project. The hierarchical organization of releases in the list is configurable, so you can organize the various releases in the way that makes most sense for a particular project. Typically you have the major releases as the top-level items, with sub-releases, builds and iterations as the lower-level items.

All of the releases in the list have a release-name, together with the assigned version number for that release, the start-date and end-date for the release, the number of estimated project personnel working on that release, the planned effort for the release, the total effort currently scheduled (as tasks), the available effort for new tasking, the release id, and a set of custom properties defined by the project owner.

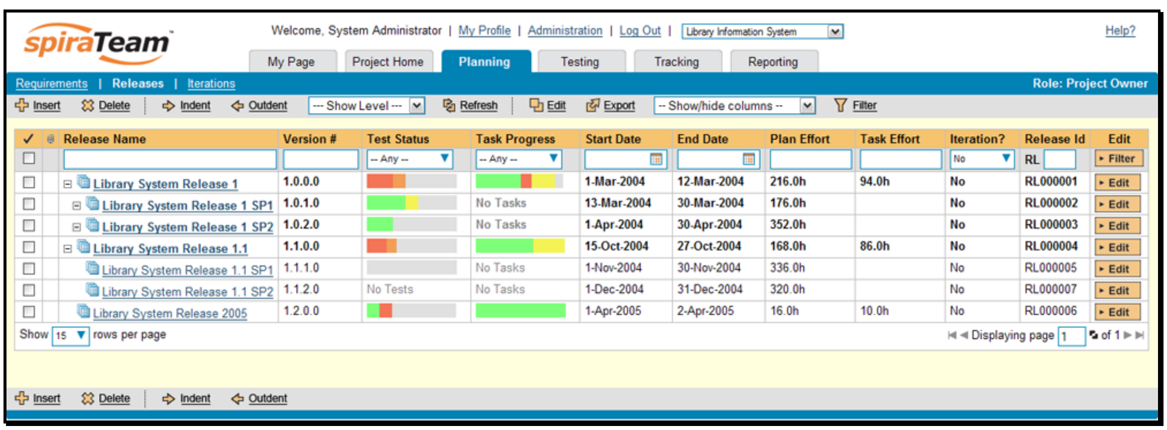
For those releases that have test cases mapped against them, the execution status of the various test cases associated with the release is displayed in aggregate for each item as a graphical bar diagram. If you position the mouse over the execution status indicator you will see the detailed execution information displayed as a tooltip.

For those releases that have at least one requirement task associated with them, they will display a block graph that illustrates the relative numbers of task that are on-schedule (green), late-starting (yellow), late-finishing (red) or just not-started (grey). These values are weighted by the effort of the task, so that larger, more complex tasks will be change the graph more than the smaller tasks. To determine the exact task progress information, position the mouse pointer over the bar-chart and the number of associated tasks, along with the details of how many are in each status will be displayed as a “tooltip”.

Clicking on a release’s hyperlink will take you to the release details page for the item in question (see section 7.2).

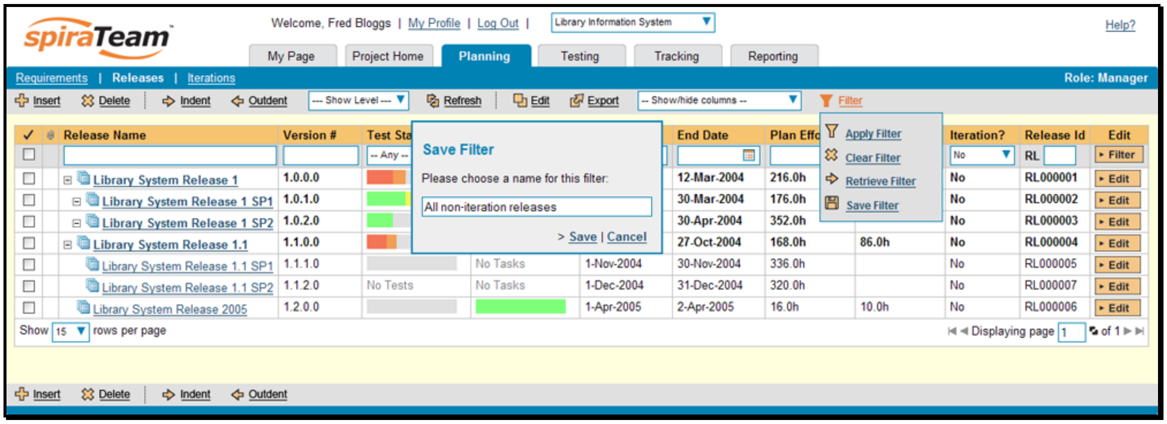
7.1.1. Filtering

You can easily filter the list of releases as illustrated in the screen-shot below:



To filter the list by any of the displayed columns, you either choose an item from the appropriate drop-down list or enter a free-text phrase (depending on the type of field) then click <Filter> or press the <ENTER> key to apply the different filters. Note that the name field is searched using a “LIKE” comparison, so that searching for “database” would include any item with the word database in the name. The other freetext fields need to be exact matches (e.g. dates, release numbers). In the screen-shot above, we are filtering on Iteration = No. Clicking on <Clear Filters> clears all the set filters and displays all the releases for the project.

In addition, if you have a set of filters that you plan on using on a regular basis, you can choose the option Filter > Save Filter to add the current filter to the list of saved filters that appear on your ‘My Page’. The list of saved filters can also be retrieved by clicking Filter > Retrieve Filter:



7.1.2. Insert

Hovering over the <Insert> button brings up a secondary menu that allows you to choose whether to insert a release or iteration (if you just click Insert it defaults to inserting a release). In either case, it will insert the new release / iteration *above* the currently selected item – i.e. the one whose check-box has been selected, at the same level in the hierarchy. If you want to insert a release/iteration below a summary item, you need to insert it first, then indent it with the <Indent> button. If you insert a release without first selecting an existing release from the list, the new release will simply be inserted at the end of the list.

Once the new release has been inserted, the item is switched to “Edit” mode so that you can change the default name, active flag, version number and creator.

7.1.3. Delete

Clicking on the <Delete> button deletes all the releases whose check-boxes have been selected. If any of the items are summary items, then if the item is expanded and the children are visible, the children are simply made children of the item above it in the list, however if the item is not expanded and the children are hidden, then the children are all deleted. This behavior is similar to that found in project planning tools like Microsoft Project®.

In addition, if all the children are deleted from a summary item, it changes back into a detail item. Any test runs or incidents that were associated with a deleted release are ***not*** themselves deleted, but the relationship between them is lost.

7.1.4. Indent

Clicking on the <Indent> button indents all the releases whose check-boxes have been selected. If any of the items are made children of a release that had no previous children, it will be changed from a detail item into a summary item. Note: you cannot indent a release or iteration if it is *below* an iteration, as iterations are not allowed to have child items

7.1.5. Outdent

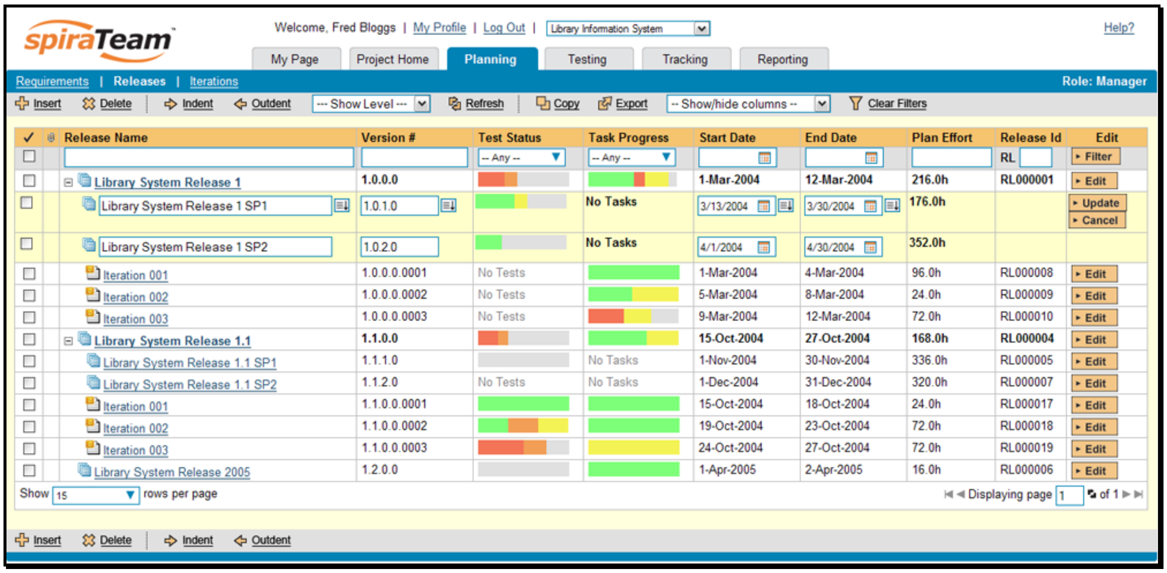
Clicking on the <Outdent> button de-indents all the releases whose check-boxes have been selected. If any of the items were the only children of a summary release item, then that item will be changed back from a summary item to a detail item.

7.1.6. Refresh

Clicking on the <Refresh> button simply reloads the release list. This is useful as other people may be modifying the list of releases at the same time as you, and after stepping away from the computer for a short-time, you should click this button to make sure you are viewing the most current release list for the project.

7.1.7. Edit

Each release/iteration in the list has an <Edit> button display in its right-most column. When you click this button or click on any of the cells in the row, you change the item from “View” mode to “Edit” mode. The various columns are made editable, and <Update> <Cancel> buttons are displayed in the last column:



If you click <Edit> on more than one row, the <Update> and <Cancel> buttons are only displayed on the first row, and you can make changes to all the editable rows and then update the changes by clicking the one <Update> button. Also, if you want to make the same change to multiple rows (e.g. to change five releases from “active” to “inactive”), you can click on the “fill” icon to the right of the editable item, which will propagate the new value to all editable items in the same column.

When you have made your updates, you can either click <Update> to commit the changes, or <Cancel> to revert back to the original information. Alternatively, pressing the <ENTER> key will commit the changes and pressing the <ESCAPE> key will cancel the changes.

7.1.8. Show Level

Choosing an indent level from the ‘Show Level’ drop down box allows you to quickly and easily view the entire release list at a specific indent level. For example you may want to see all releases drilled-down to the *third* level of detail. To do this you would simply choose ‘Level 3’ from the list, and the releases will be expanded / collapsed accordingly.

7.1.9. Show / Hide Columns

This drop-down list allows you to change the fields that are displayed in the release list as columns for the current project. To show a column that is not already displayed, simply select that column from the list of “Show…” column names and to hide an existing column, simply select that column from the list of “Hide…” column names. This is stored on a per-project basis, so you can have different display settings for each project that you are a member of. The fields can be any of the built-in fields or any of the custom properties set up by the project owner.

7.1.10. Copying Releases/Iterations

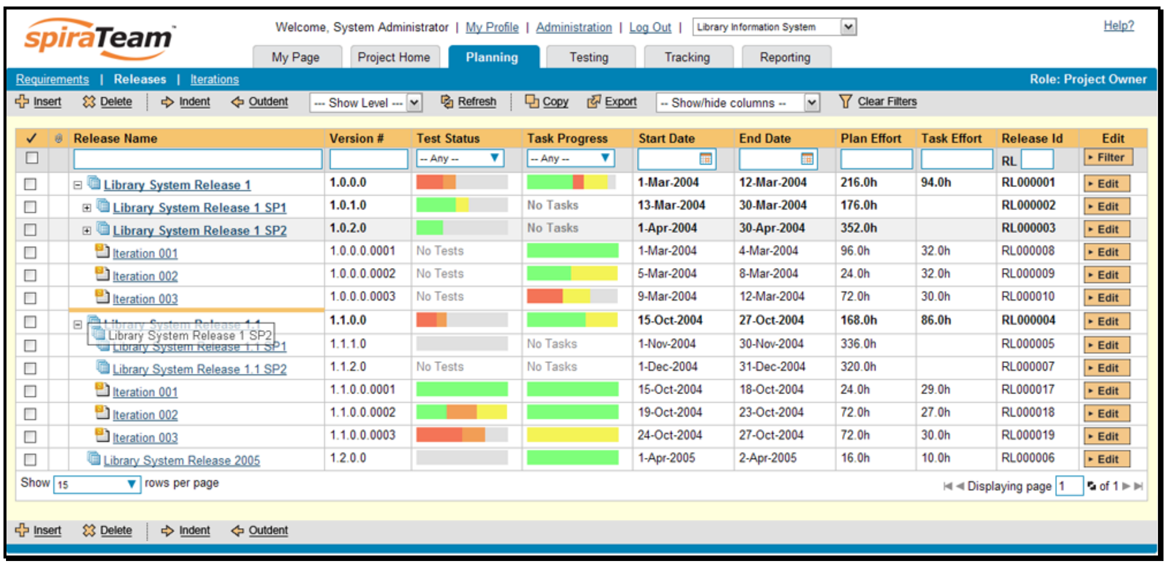
To copy a release/iteration or set of releases/iterations, simply select the check-boxes of the release/iteration you want to copy and then select the Edit > Copy menu option. This will copy the current release/iteration selection to the clipboard. Then you should select the place where you want the releases/iterations to be inserted and choose the Edit > Paste option.

The releases/iterations will now be copied into the destination location you specified. The name of the copied releases/iterations will be prefixed with "Copy of…" to distinguish them from the originals. Note that copied releases/iterations will also include the test mapping information from the originals.

7.1.11. Moving Releases/Iterations

To move a release/iteration in the hierarchy, there are two options:

1. Click on the icon the release/iteration you want to move and then drag the icon to the location you want it moved. The border between the destination releases/iterations will change as the icon is dragged over it to illustrate where it will be inserted:

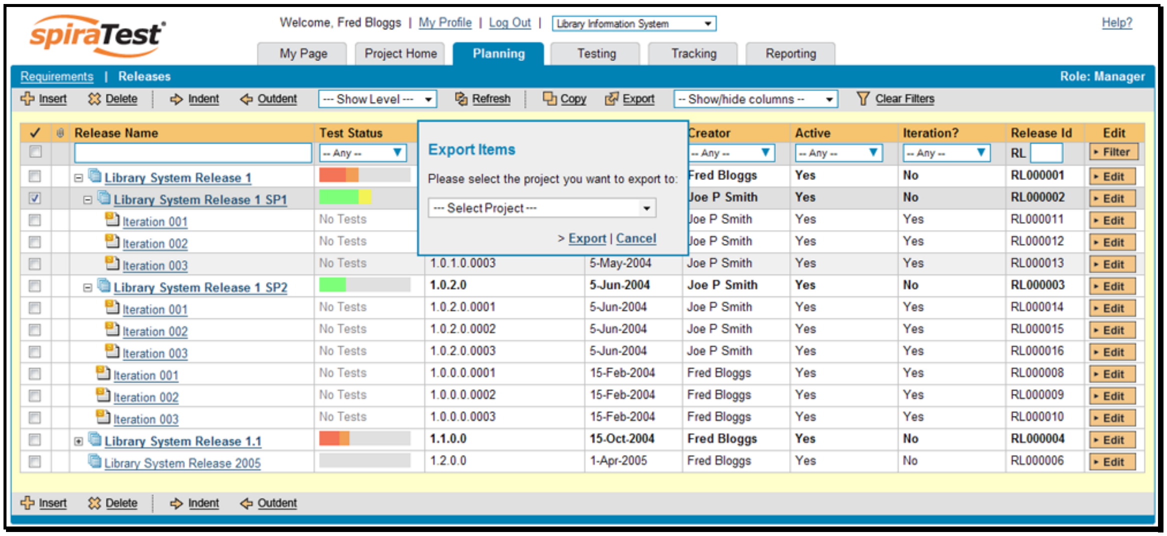


Once you have the release/iteration positioned at the correct place that you want it inserted, just release the mouse button and the release list will be refreshed, with the release/iteration moved to the desired location.

2. Alternatively you can simply select the check-boxes of the release/iteration you want to move and then select the Edit > Cut menu option. This will cut the current release/iteration selection to the clipboard. Then you should select the place where you want the release/iteration to be inserted and choose the Edit > Paste option. The release/iteration will now be moved into the destination location you specified.

7.1.12. Exporting Releases/Iterations

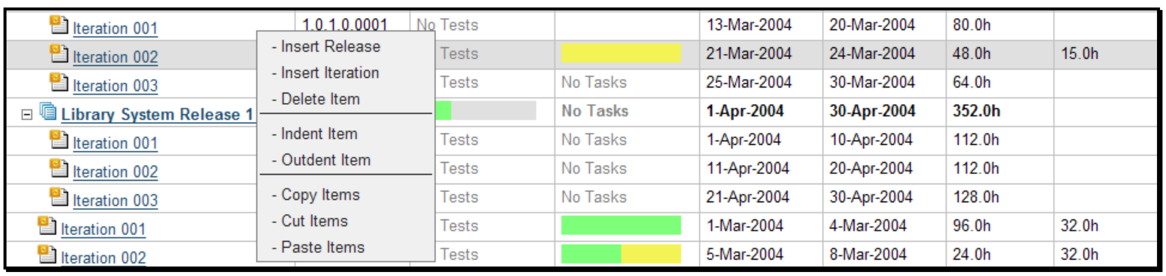
To export releases/iterations from the current project to another project in the system, all you need to do is select the check-boxes of the releases/iterations you want to export and then click the <Export> button. This will then bring up a list of possible destination projects:



Once you have chosen the destination project and clicked the <Export> button, the releases/iterations will be exported from the current project to the destination project. Any file attachments will also be copied to the destination project along with the release/iteration.

7.1.13. Right-Click Context Menu

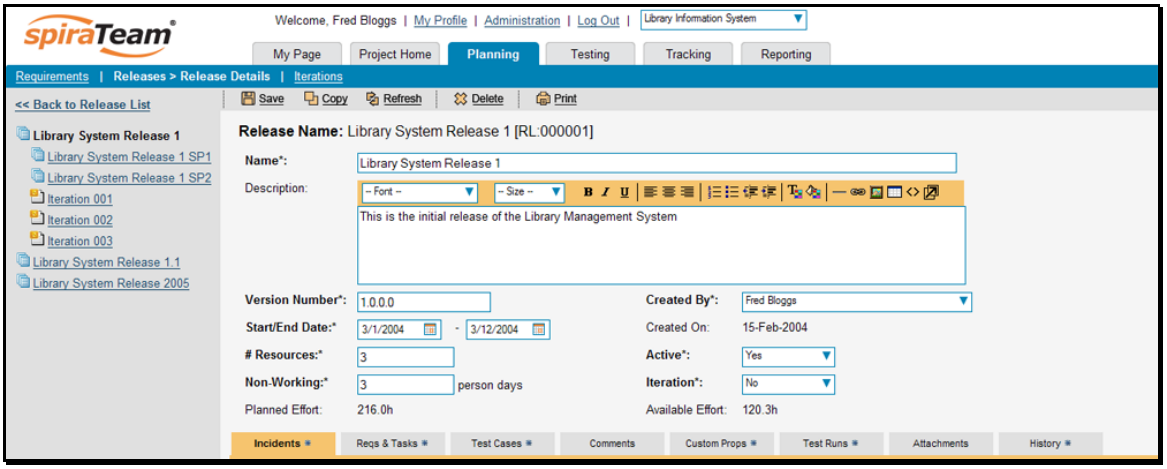
SpiraTeam® provides a shortcut – called the *context menu* - for accessing some of the most commonly used functions, so that you don't need to move your mouse up to the toolbar each time. To access the context menu, right-click on any of the rows in the release list and the following menu will be displayed:



You can now choose any of these options as an alternative to using the icons in the toolbar

7.2. Release Details

When you click on release item in the release list described in section 7.1, you are taken to the release details page illustrated below:



This page is made up of three areas; the left pane is the navigation window, the upper part of the right pane contains the release detailed information itself, and the bottom part of the right pane displays different information associated with the release.

The navigation pane consists of a link that will take you back to the release list, as well as a list of the other releases in the current project. This latter list is useful as a navigation shortcut; you can quickly view the test run information of all the other releases by clicking on the navigation links without having to first return to the release list page.

The top part of the right pane allows you to view and/or edit the details of the particular release. You can edit the various fields (name, description, etc.) and once you are satisfied with them, simply click either the <Save> or <Save and New> button at the top of the page to commit the changes. In addition you can delete the current artifact by choosing <Delete>, discard any changes made by clicking <Refresh> or print it by clicking <Print>.

When you make changes to the release/iteration's start-date, end-date, number of project personnel resources, or number of non-working *person* days, the system will automatically calculate how many hours of effort (planned effort) are available in the release/iteration for assigning tasks. As you begin assigning tasks – either through the Tasks tab or the Iteration Planning screen – the total estimated effort of the tasks is subtracted from this planned effort to give the "available effort".

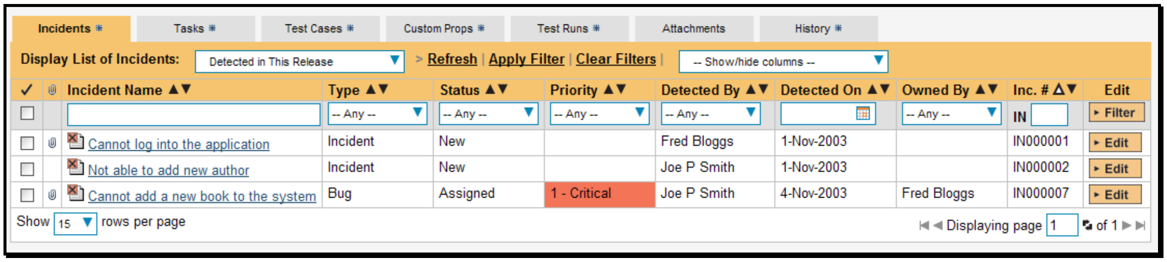
The lower part of the right pane can be in one of eight possible modes that can be selected: "Incidents", "Reqs & Tasks", "Test Cases", "Comments", "Custom Properties", "Test Runs", "Attachments", and "History". Each of the different views is described separately below.

7.2.1. Incidents

This is the default view for the release details page. It displays the incidents associated with the selected release. The incident list can be one of three modes:

- Detected in this Release – this will display a list of all the incidents that were detected during the testing of the selected release. This is useful in determining if there are open incidents associated with a release that need to be dealt with.
- Resolved in this Release – This will display a list of all the incidents that have been reportedly resolved in this release. This is useful for double-checking that all the resolved incidents for a release have indeed been fixed.
- Verified in this Release – This will display a list of the incidents that have been verified as being fixed in this release. This is useful for generating release notes for a specific release indicating what changes and enhancements have been made in the release.

Regardless of the mode, each incident is listed together with the type, status, priority, name, owner, detector, detection date and a link to the actual incident details (see section 6.2):



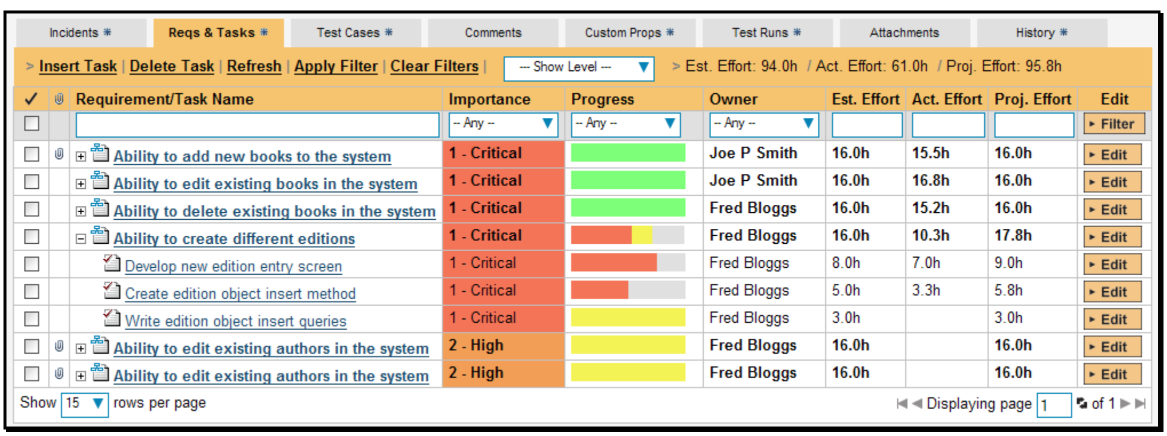
To change between the three modes outlined above, simply select the desired mode from the drop-down list contained within the header of the incident list table.

You can perform the following actions:

- **Refresh** – updates the list of incidents from the server, useful if other people are adding incidents to this release at the same time.
- **Apply Filter** – Applies the entries in the filter boxes to the list of incidents
- **Clear Filters** – Clears the current filter, so that all incidents associated with the current release are shown.
- **Edit** – Clicking the [Edit] button to the right of the incident allows you to edit the incident inline directly on this screen. This functionality is limited to project owners.
- **Show/Hide Columns** – Allows you to choose which incident columns are visible

7.2.2. Reqs & Tasks

In this mode, the lower part of the right pane displays the list of requirements and their associated child tasks that need to be completed for the release/iteration to be completed:



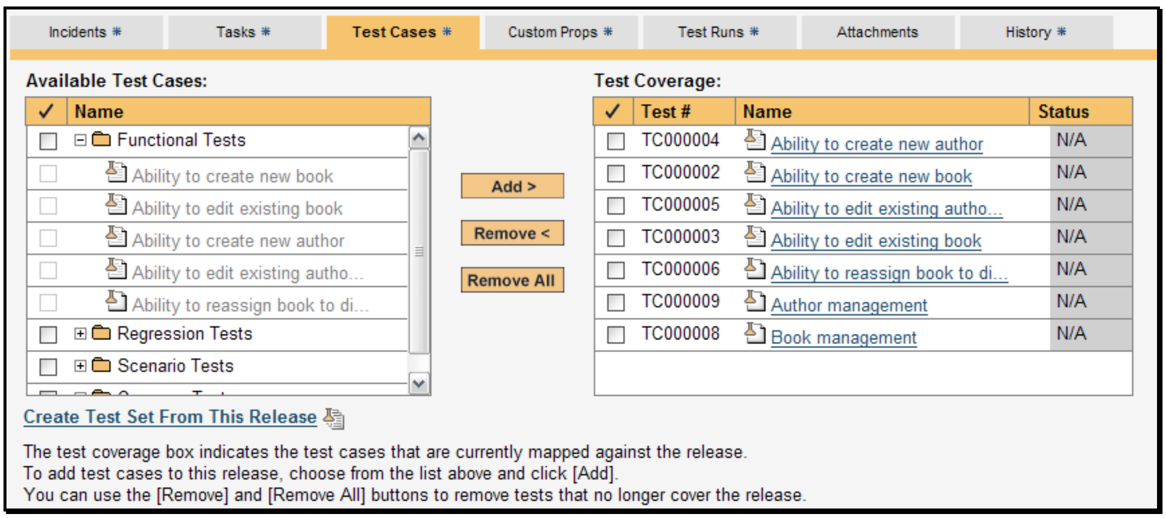
Each of the requirements and associated tasks is displayed together with its name, description (by hovering the mouse over the name), priority, progress indicator, current owner, estimated effort, actual effort, projected effort and numeric task identifier. Clicking on the task name will bring up the Task Details page which is described in more detail in section 8.2. This allows you to edit the details of an existing task.

You can perform the following actions on a task from this screen:

- **New Task** – inserts a new task in the task list under the specified requirement, with a default set of values. The task will be associated with the specified requirement and current release/iteration.
- **Delete Task** – deletes the task from the project.
- **Refresh** – updates the list of requirements and tasks from the server, useful if other people are adding requirements and/or tasks to this release/iteration at the same time.
- **Apply Filter** – Applies the entries in the filter boxes to the list of requirements and all their associated tasks (*it does not filter the tasks themselves*).
- **Clear Filters** – Clears the current filter, so that all requirements associated with the current release/iteration are shown.
- **Edit** – Clicking the [Edit] button to the right of the requirement or task allows you to edit the item inline directly on this screen. Only columns visible will be editable.
- **Show Level** – Allows you to quickly expand/collapse all the requirements in the list.

7.2.3. Test Case Mapping

This mode displays the test case mapping information for the release in question:



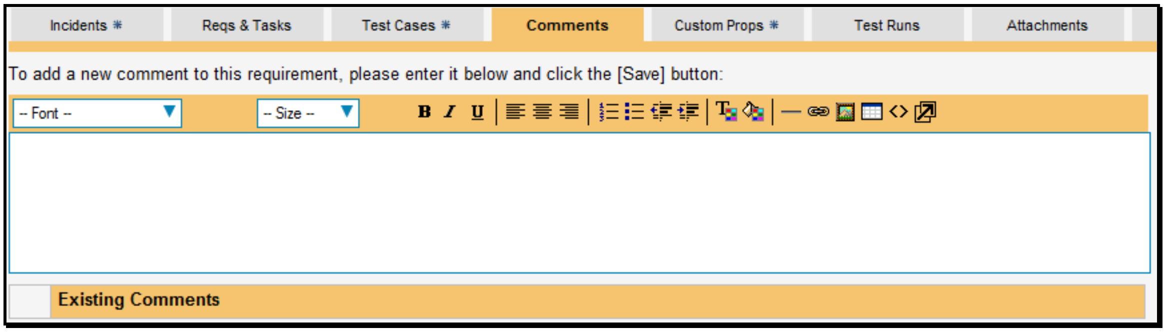
The pane consists of two lists of test cases, the one on the left being the hierarchical list of the test cases belonging to the project arranged in test folders. The right box (which will initially be empty) contains the list of test cases mapped to this release/iteration. The test cases in this box include columns for their ID and name. Hovering the mouse over the names of the test cases in either box will display a "tooltip" consisting of the test case name, place in the folder structure and a detailed description. Clicking on the hyperlinks in right-hand box will jump you to the test case details screen for the test case in question (see section 5.2.9).

To change the test case mapping for this release, you use the buttons (Add, Remove, Remove All) positioned between the two list-boxes. The <Add> button will move the selected test cases from the list of available on the left to the list of mapped on the right. Similarly the <Remove> and <Remove All> buttons will remove either the selected or all the test cases from the right list-box and add them back to the left list-box.

Finally, as a shortcut you can click the "Create Test Set from This Release" link to create a new test set from this release, that will include all of the test sets associated with this release. This is useful in regression testing when you have created a new release and want to be able to quickly assign a tester to ensure that all the functionality in the release works as expected.

7.2.4. Comments

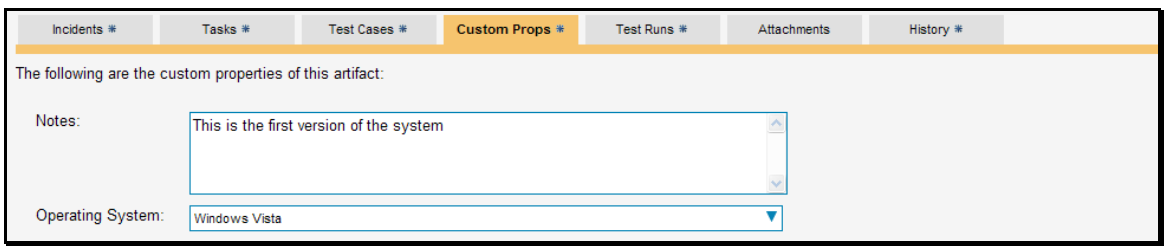
The Comments tab shows the current discussion thread made on this release:



All existing comments are listed in order by entered date. To create a new comment, enter the text into the text box, and then click the Save button.

7.2.5. Custom Properties

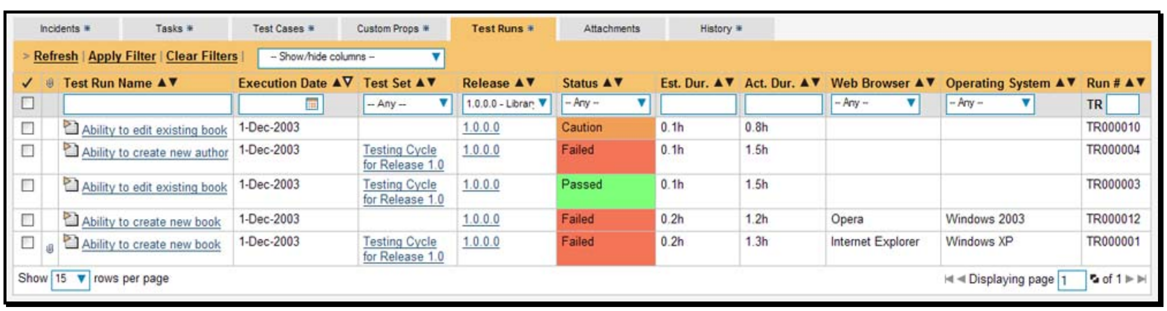
In this mode, the main pane displays any custom properties that the project owner has defined for releases. To learn more about how to setup and configure custom properties for a project, please refer to the *SpiraTest Administration Guide*. Assuming that custom properties have been defined for your project, you will see a list of optional parameters that can be set on the release. These can be either freetext or drop-down-lists. In the example below, you can enter Notes and/or the Operating System that the release is intended for.



Once you are satisfied with the values for the custom properties, simply click [Save] or [Save and New] to commit the changes.

7.2.6. Test Runs

This view displays the list of all the test runs executed against the release. Each test run is listed together with the date of execution, the name of the test case, the name of the tester, the release/version of the system that the test was executed against, the name of the test set (if applicable), the overall execution status for the test case in that run and a link to the actual test run details (see section 5.6). In addition, you can choose to display any of the custom properties associated with the test run.

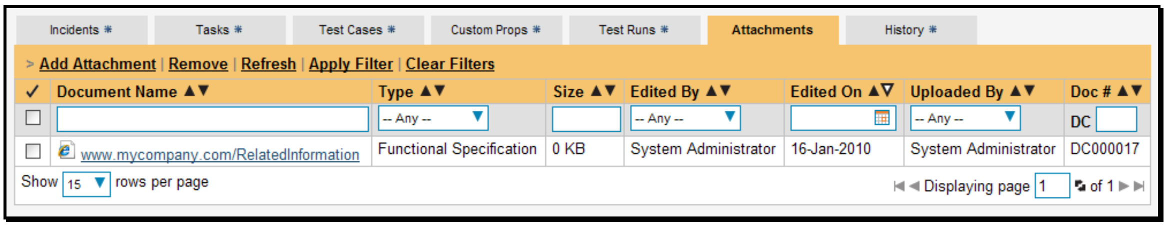


The “customize columns” drop-down list allows you to change the fields that are displayed in the test run list as columns. To show a column that is not already displayed, simply select that column from the list of “Show…” column names and to hide an existing column, simply select that column from the list of “Hide…” column names. The displayed columns can be any standard field or custom property.

You can also filter the results by choosing items from the filter options displayed in the sub-header row of each field and clicking the “Apply Filter” link. In addition, you can quickly sort the list by clicking on one of the directional arrow icons displayed in the header row of the appropriate field.

7.2.7. Attachments

In this mode, the lower section of the screen displays the list of documents that have been “attached” to the release. The documents can be in any format, though SpiraTeam® will only display the icon for certain known types.



The attachment list includes the filename that was originally uploaded together with the file-size (in KB), name of the person who attached it and the date uploaded. In addition, if you position the pointer over the filename and hold it there for a few seconds, a detailed description is displayed as a tooltip.

To actually view the document, simply click on the filename hyperlink and a new web browser window will open. Depending on the type of file, this window will either display the document or prompt you for a place to save it on your local computer. To remove an existing attachment from a release/iteration, simply click the <Remove> button and the attachment will be removed from the list.

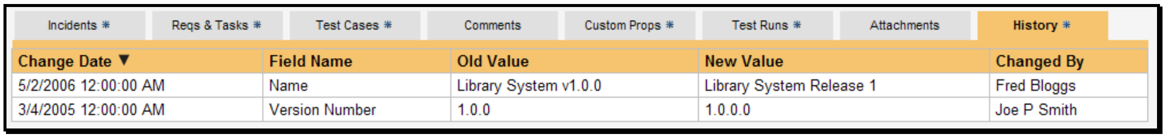
To attach a new document or web link to the release/iteration, you need to click on the “Add Attachment” hyperlink to open the “Add Attachment” dialog box. There are three different types of item that can be attached to a release or iteration:

- To upload a file, choose “File” as the type and then click the Browse button and select the file from your local computer, optionally enter a detailed description then click the <Upload> button. The document will be copied from your computer and attached to the artifact.
- To attach a web-link (URL) to the artifact, you need to choose “URL” as the type and then enter the fully qualified URL (e.g. http://mywebsite.com?Document=1), an optional description and then click the <Upload> button to attach the web-link.
- To attached a screenshot to the artifact, you need to choose “Screenshot” as the type and then copy the image to your computer’s clipboard (e.g. on Windows computers, the PRINT SCREEN button captures the current page and adds to the clipboard). Once the image is in the clipboard, click on the “Paste image from clipboard” hyperlink and the item will appear in the preview window. You can then fill in the other fields and click <Upload> to attach the image.

Note: If you are using a non-Windows® computer (e.g. Macintosh®) that doesn’t put file extensions on filenames (e.g. .xls for an Excel sheet) automatically, then you will need to manually add the file extension to the filename before uploading if you want it to be displayed with the correct icon in the attachment list.

7.2.8. View History

In this mode, the main pane displays the list of changes that have been performed on the release artifact since its creation. An example release change history is depicted below:

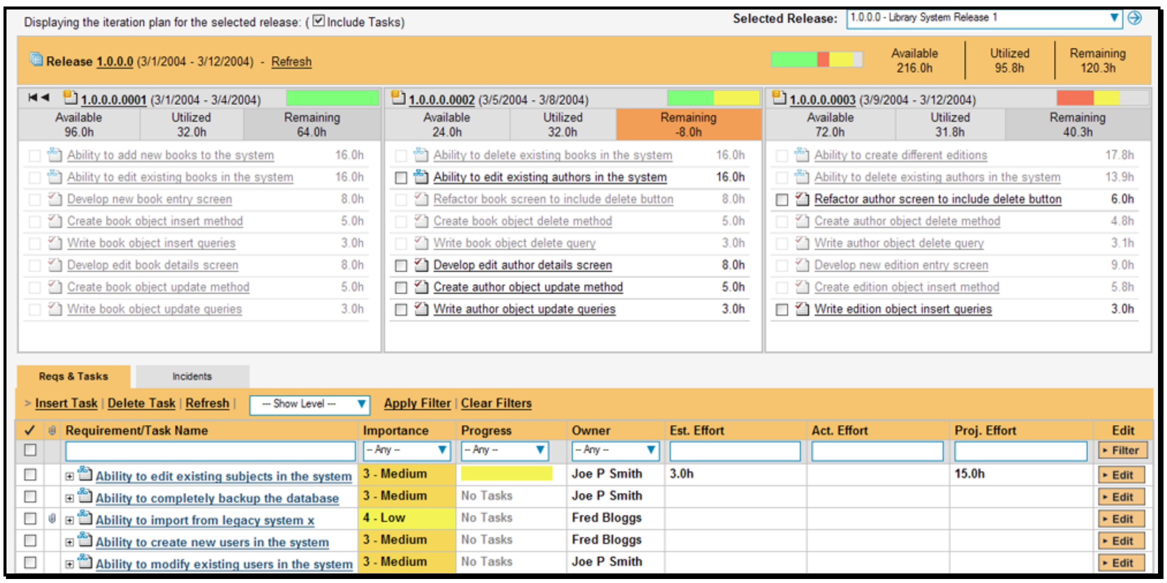


Change Date ▼	Field Name	Old Value	New Value	Changed By
5/2/2006 12:00:00 AM	Name	Library System v1.0.0	Library System Release 1	Fred Bloggs
3/4/2005 12:00:00 AM	Version Number	1.0.0	1.0.0.0	Joe P Smith

The change history displays the date that each change was made, together with the fields that were changed, the old and new values and the person who made the change. This allows a complete audit trail to be maintained of all changes in the system.

7.3. Iteration Planning

As well as being able to assign requirements, tasks and incidents to releases and iterations individually through the Release/Iteration details page (see above), you can also do this on the Iteration Planning screen. When you are first planning the iteration, and need to batch assign requirements, tasks and incidents from the backlog of unscheduled items to the iterations, it is usually more convenient to use the Iteration Planning screen. To access this screen, go to Planning > Iterations, choose the current release and the following screen will be displayed:



This screen is divided into two sections:

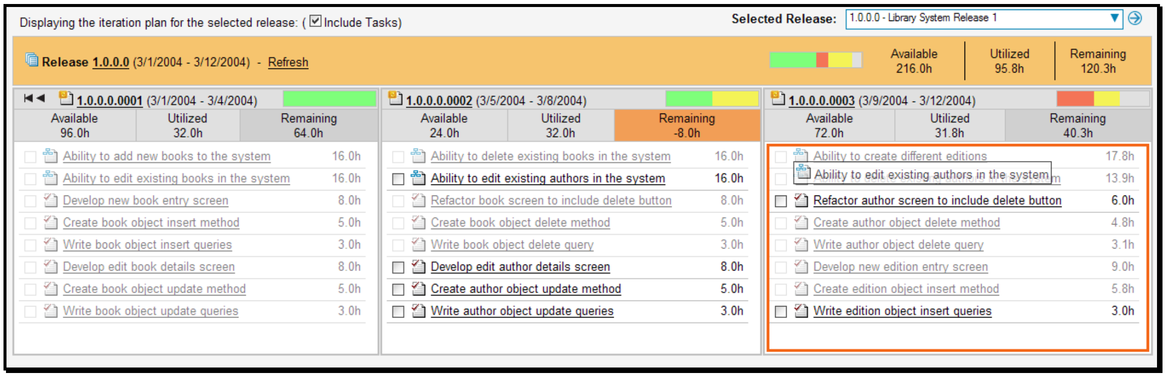
- The top part of the screen displays the iterations contained within the current release (up-to three per page) together with the list of requirements, tasks and incidents currently assigned to the iteration. Also any of these item directly associated with the release itself are displayed in the first panel.
- The bottom part of the screen displays the list of *accepted, unplanned (not started) requirements and tasks* and *unplanned, open incidents* that need to be scheduled for a specific iteration. This is essentially the backlog of requirements and their associated tasks, together with any outstanding incidents that need to be scheduled. The requirements and tasks are shown in one tab and the incidents are shown in the other

To navigate around the release, you use the small black arrow buttons located at the top of the iteration panels. These allow you to quickly move to the previous/next iteration in the currently selected release.

To change the release itself, you use the drop-down-list at the top-right of the page to change to a different release.

7.3.1. Scheduling Requirements / Tasks / Incidents to Iterations

To assign a new requirement, task, or incident to the iteration schedule, you either position the mouse pointer over a single item's icon, dragging it to the desired iteration or you select several checkboxes in the requirements / tasks / incident list and then drag all the selected items in one go. Once the requirement / task / incident(s) have been added to the iteration, the utilized effort for the iteration will increase, and the available effort will decrease by the same amount.



If you schedule a requirement for a specific iteration, all the child tasks that have not yet been started, will follow the parent requirement in being associated with the iteration.

Note: The system will allow you to assign more tasks/incidents to an iteration than is possible to complete, however this will result in a negative value for 'available effort'. If this happens, the "Available Effort" value will be displayed in red, and you need to rebalance the items, extend the iteration length or add project personnel resources to the iteration.

7.3.2. Rescheduling Requirements / Tasks / Incidents

To move planned items from one iteration to another, you either position the mouse pointer over a single item's icon, dragging it to the desired new iteration or you select several checkboxes in the existing iteration and then drag all the selected items to the destination iteration in one go. To remove a requirement / task / incident from an iteration, you should just drag and drop it from the iteration panel back to the requirement / task / incident task list at the bottom of the page. This will return the item to the list of unplanned items at the bottom of the page.

If you reschedule a requirement to a new iteration, all the child tasks that have not yet been started, will follow the parent requirement in being associated with the new iteration. The tasks that have already started, will remain associated to the old iteration.

Note: Once a task has changed status from 'not-started' to any of the other statuses, its checkbox will be disabled and you will need to return it to the 'not started' status before attempting to reassign it. This is a safety feature that prevents you from accidentally rescheduling a task that is currently being worked on.

7.3.3. Task Assignment Rules

When you move a task from one iteration to another or assign a new task to the iteration, the system makes the following changes to the task automatically:

- The release/iteration that the task is assigned-to is updated

- The start-date and end-date of the task is changed to match that of the iteration if the dates lie outside the bounds of the iteration. This means that the task may change from being on-schedule to late-starting depending on whether the iteration is already in progress

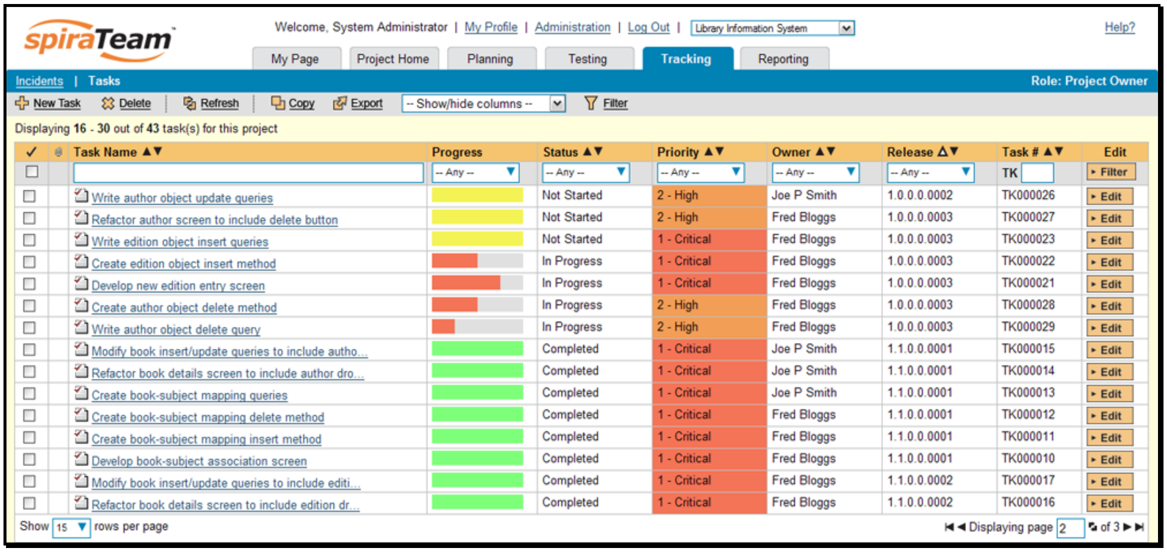
7.3.4. Editing the Requirement / Task / Incident List

As well as being able to schedule the requirements, incidents and tasks with the various iterations in the upper portion of the screen, the incident and requirement / task lists displayed on the bottom half of the screen include the same editing functions found in the Requirements, Task, and Incident List pages.

8. Task Tracking

8.1. Task List

When you click on the Tracking > Tasks global navigation link, you will initially be taken to the tasks list screen illustrated below:



The task list screen displays all the tasks entered for the current project, in a filterable, sortable grid. The grid displays the task number together with fields such as priority, name, assigned owner, start date, end date, scheduled release, etc. The choice of columns displayed is configurable per-user, per-project, giving extensive flexibility when it comes to viewing and searching tasks.

In addition, you can view a more detailed description of the task by positioning the mouse pointer over the task name hyperlink and waiting for the popup "tooltip" to appear. If you click on the task name hyperlink, you will be taken to the task details page described in section 8.2. Clicking on any of the pagination links at the bottom of the page will advance you to the next set of tasks in the list according to the applied filter and sort-order. There is also a drop-down-list at the bottom of the page which allows you to specify how many rows should be displayed in each page, helping accommodate different user preferences.

One special column that is unique to tasks is the 'progress indicator'. This illustrates graphically both the percentage completion of the task and also if the task is either starting late or finishing late. The following table illustrates the different type of status that can be conveyed by the indicator:

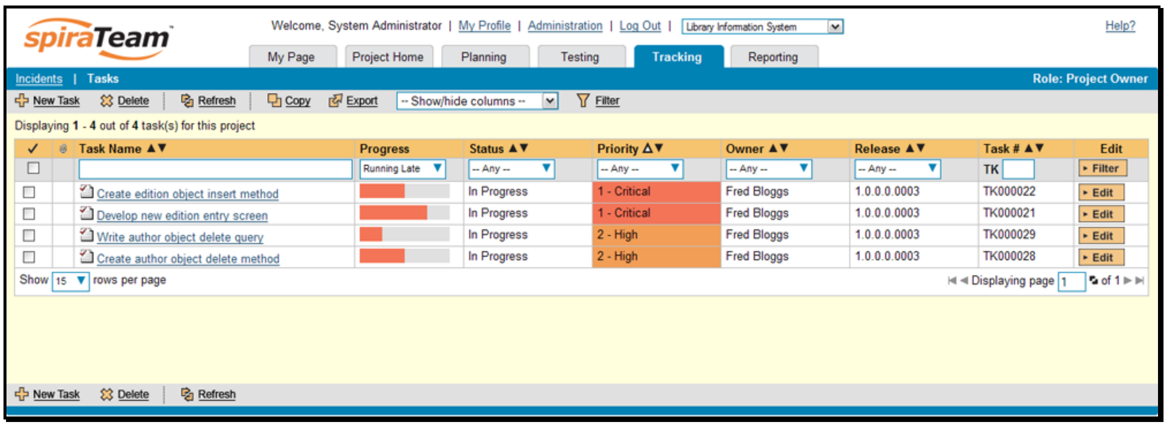
Indicator Display	Progress Description
	Task has not yet started, but the scheduled start date is still in the future.
	Task has not yet started, and the start date has elapsed. This is considered a 'Late Starting Task'
	Task has started, and is approximately 25% complete. The scheduled end date is still in the future.
	Task has started, and is approximately 25% complete. However the scheduled end date has elapsed already. This is a considered a 'Late Finishing Task'.

	Task has been 100% completed.

Essentially, the gray section of the bar indicates the % of the task yet to be completed, and the green/red section of the bar indicates the % of the task that has already been completed. If the bar changes from green to red it means that the end date has been reached and the task is not yet complete, and if the background changes from gray to yellow it means that the task has not yet started, but the scheduled start date has passed.

8.1.1. Sorting and Filtering

You can easily filter and sort the list of tasks as illustrated in the screen-shot below:



To filter the list by progress, status, priority, owner or release, you simply choose an item from the appropriate drop-down list, and for the other fields, you enter a free-text phrase then click <Filter> or press the <ENTER> key to apply the different filters. Note that the name field is searched using a “LIKE” comparison, so that searching for “database” would include any item with the word database in the name. The other freetext fields need to be exact matches (e.g. dates, task numbers).

To change the column that is sorted, or to change the direction of the current sort, simply click on the up/down arrow icon in the appropriate column. The currently sorted column is indicated by the larger, white arrow with the back-border. In the screen-shot above, we have filtered on tasks that are finishing late, sorted in order of decreasing priority.

Clicking on Filter > Clear Filter removes any set filters and expands the task list to display all tasks for the current project, and clicking on Filter > Save Filter allows you to save the filter to your ‘My Page’ for use in the future. The list of saved filters can also be retrieved by clicking Filter > Retrieve Filter.

8.1.2. New Task

Clicking on the <New Task> button creates a new task in the grid with an initial set of information. You can click on the name of the task to edit its information.

8.1.3. Delete

Clicking on the <Delete> button deletes the tasks whose check-boxes have been selected in the task list.

8.1.4. Refresh

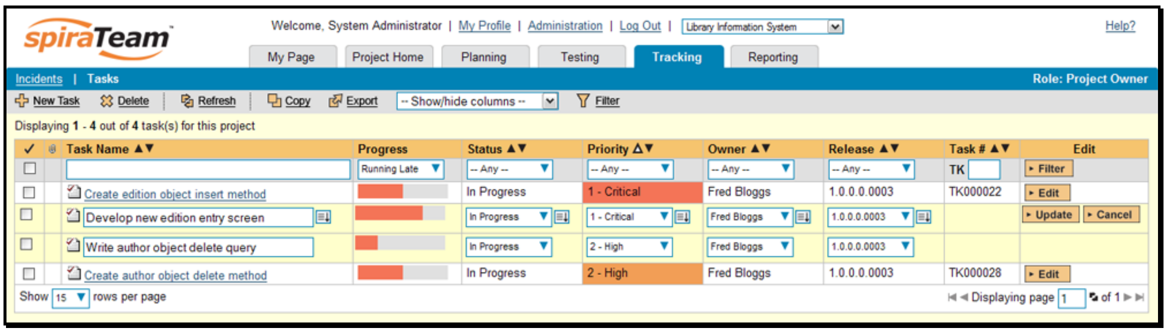
Clicking on the <Refresh> button simply reloads the list of tasks; this is useful when new tasks are being added by other users, and you want to make sure you have the most up-to-date list displayed.

8.1.5. Show / Hide Columns

This drop-down list allows you to change the fields that are displayed in the task list as columns for the current project. To show a column that is not already displayed, simply select that column from the list of “Show…” column names and to hide an existing column, simply select that column from the list of “Hide…” column names. This is stored on a per-project basis, so you can have different display settings for each project that you are a member of. The fields can be any of the built-in fields or any of the custom properties set up by the project owner.

8.1.6. Edit

Each task in the list has an <Edit> button display in its right-most column. When you click this button or just click on any of the cells in the row, you change the item from “View” mode to “Edit” mode. The various columns are made editable, and <Update> <Cancel> buttons are displayed in the last column:



If you click <Edit> on more than one row, the <Update> and <Cancel> buttons are only displayed on the first row, and you can make changes to all the editable rows and then update the changes by clicking the one <Update> button. Also, if you want to make the same change to multiple rows (e.g. to change five tasks from “Not Started” status to “In Progress”), you can click on the “fill” icon to the right of the editable item, which will propagate the new value to all editable items in the same column.

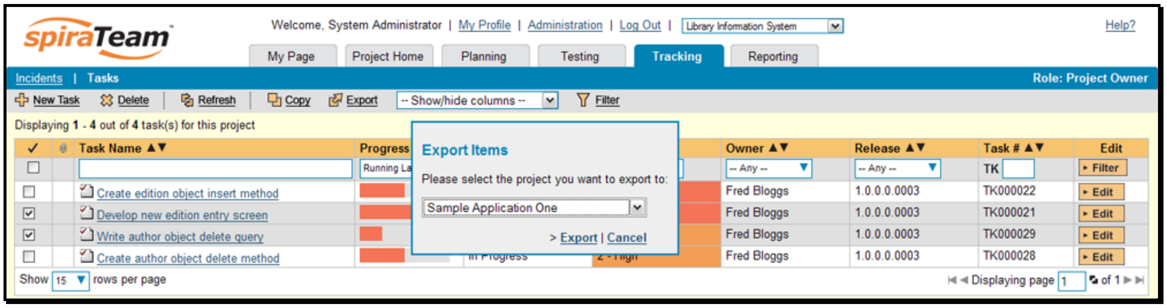
When you have made your updates, you can either click <Update> to commit the changes, or <Cancel> to revert back to the original information. Alternatively, pressing the <ENTER> key will commit the changes and pressing the <ESCAPE> key will cancel the changes.

8.1.7. Copying Tasks

To copy a task or set of tasks, simply select the check-boxes of the tasks you want to copy and then click <Copy>. This will make a copy of the current task with its name prefixed ‘Copy of ….’ to distinguish itself from the original. Any file attachments will also be copied along with the task itself.

8.1.8. Exporting Tasks

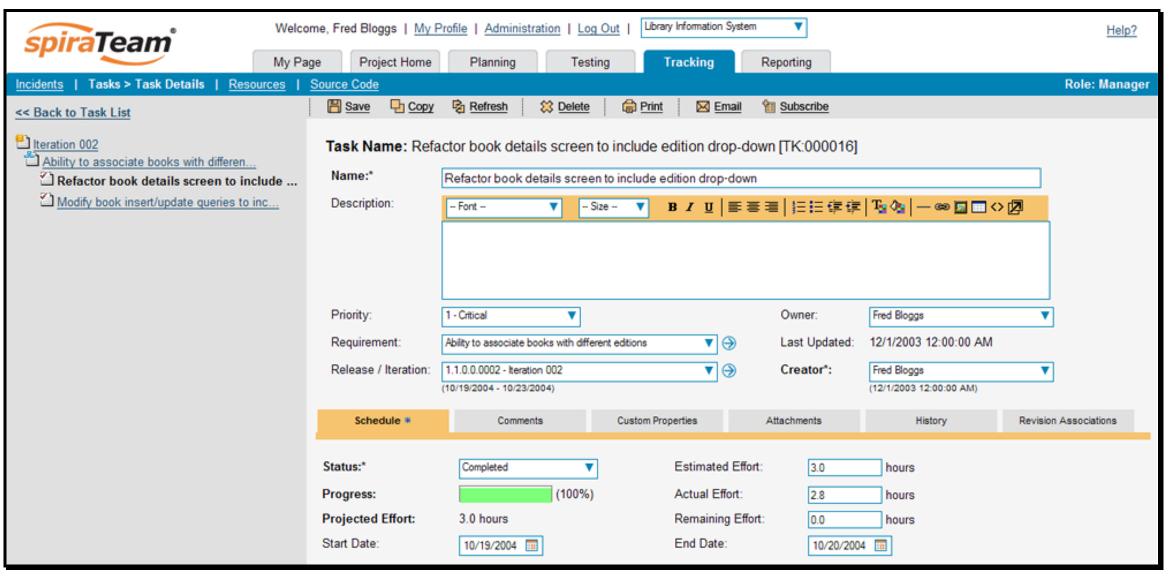
To export a task or set of tasks from the current project to another project in the system, all you need to do is select the check-boxes of the task(s) you want to export and then click the <Export> button. This will then bring up a list of possible destination projects:



Once you have chosen the destination project and clicked the <Export> button, the tasks will be exported from the current project to the destination project. Any file attachments will also be copied to the destination project along with the tasks.

8.2. Task Details

When you click on a task item in the lists displayed on either the main task list page or on the requirement / release details pages, you are taken to the task details page illustrated below:



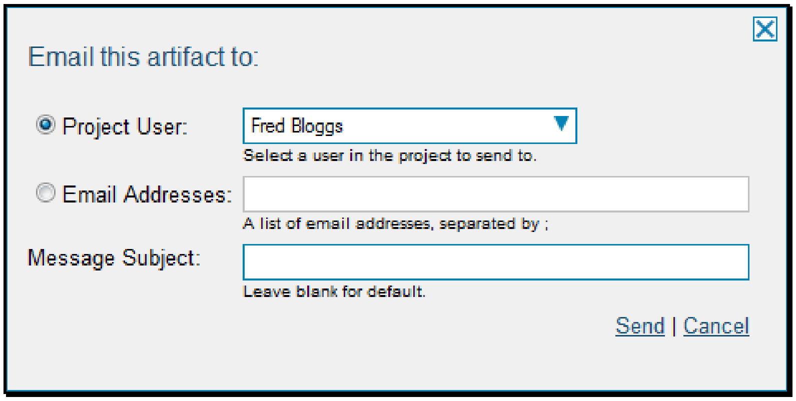
This page is made up of three areas; the left pane is the navigation window, the upper part of the right pane contains the task detailed information itself, and the bottom part of the right pane displays different information associated with the task.

The navigation pane consists of a link that will take you back to the task list, as well as a list of the other related tasks, nested under their parent requirement, which is itself nested under the release/iteration that it is scheduled for:

- Release / Iteration
  - Requirement # 1
    - Task # 1.1
    - Task # 1.2

The top part of the right pane allows you to view and/or edit the details of the particular task. You can edit the various fields (name, description, etc.) and once you are satisfied with them, simply click either the <Save> or <Save and New> button at the top of the page to commit the changes. In addition you can delete the current artifact by choosing <Delete>, discard any changes made by clicking <Refresh> or print it by clicking <Print>.

Using the <Email> button on the toolbar, you can send an email containing details of the task to an email address or another user on the system:

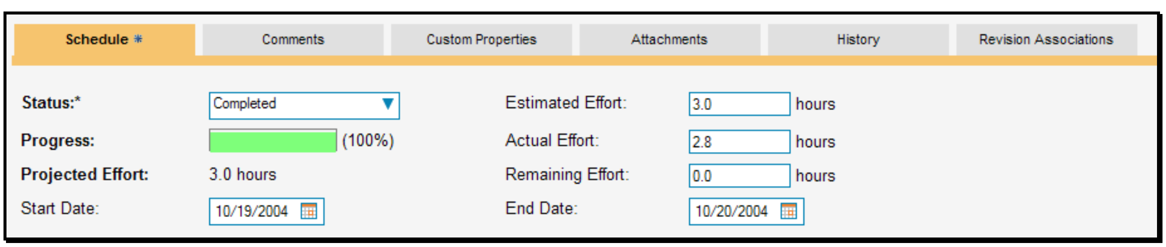


You can specify the subject line for the email, and either a list of email addresses, separated by semicolons, or an existing project user .The content of the email is specified in the System Administration – Notification Templates.

The lower part of the right pane can be in one of five possible modes that can be selected: “Schedule”, “Custom Properties”, “Attachments”, “History” and “Revision Associations”. Each of the different views is described separately below.

8.2.1. Schedule

In this mode, the main pane displays the general schedule and completion status of the specific task. You can enter/edit the start-date, end-date (i.e. the due-date), estimated, actual and remaining effort. From this the system will calculate the progress, percentage complete and projected final effort.



The different effort values mean the following:

- **Estimated Effort** – This is the original estimate for how long the task would take to complete.
- **Actual Effort** – This is the current amount of effort that has been expended in completing the task. This does not indicate the completion progress
- **Remaining Effort** – This is the estimate for how it will take from the current state to complete the task. The % complete is calculated from this value in conjunction with the estimated effort:

  % Complete = 100% - (Remaining Effort / Estimated Effort)

- **Projected Effort** – This is value that the system is projecting it will take to complete the task. This is calculated from the Actual Effort and Remaining Effort:

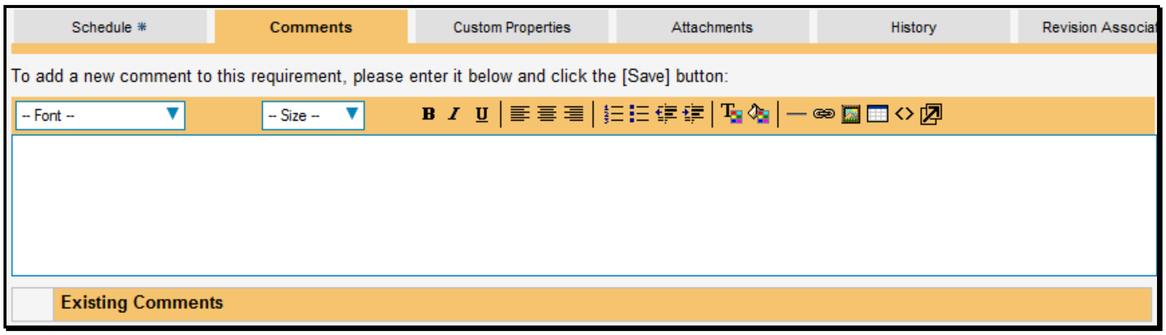
Projected Effort = (Actual Effort + Remaining Effort)

If the actual effort is not specified, the projected effort will be the same as the estimated effort.

Note that if this task is currently assigned to a release or iteration, the start-date and end-date of the task must lie within the date-range of the parent release/iteration. If your task looks like it will not be completed in the available timeframe, you will need to contact the project manager to get them to either extend the date-range of the task, or consider moving the task to the next iteration.

8.2.2. Comments

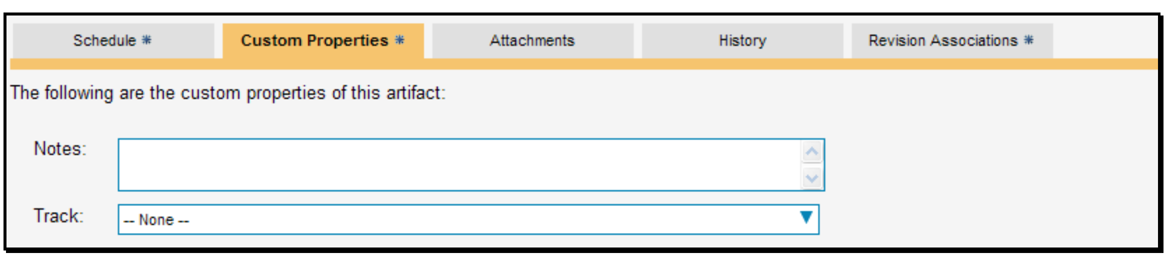
The comments tab will display the comments associated with the task:



All existing comments are displayed in date entered underneath the textbox. To enter a new comment, enter the text into the textbox, and then click the Save button.

8.2.3. Custom Properties

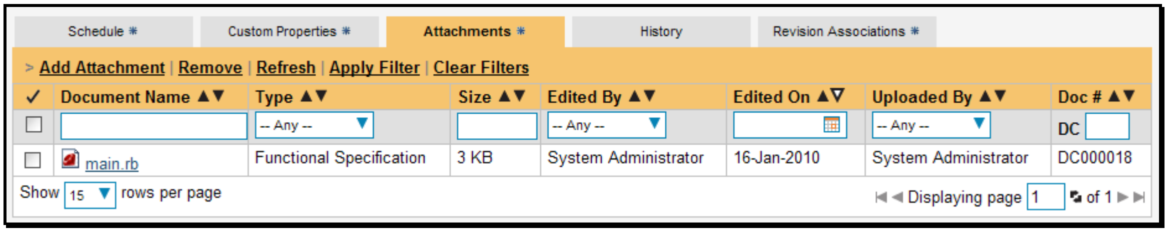
In this mode, the main pane displays any custom properties that the project owner has defined for tasks. To learn more about how to setup and configure custom properties for a project, please refer to the *SpiraTest Administration Guide*. Assuming that custom properties have been defined for your project, you will see a list of optional parameters that can be set on the task. These can be either freetext or drop-down-lists. In the example below, you can enter Notes and/or the project track that the task is associated with.



Once you are satisfied with the values for the custom properties, simply click [Save] or [Save and New] to commit the changes.

8.2.4. Attachments

In this mode, the lower section of the screen displays the list of documents that have been "attached" to the task. The documents can be in any format, though SpiraTeam® will only display the icon for certain known types.



Schedule | Custom Properties | Attachments | History | Revision Associations

> Add Attachment | Remove | Refresh | Apply Filter | Clear Filters

✓	Document Name	Type	Size	Edited By	Edited On	Uploaded By	Doc #
☐		-- Any --		-- Any --		-- Any --	DC
☐	main.rb	Functional Specification	3 KB	System Administrator	16-Jan-2010	System Administrator	DC000018

Show 15 rows per page | Displaying page 1 of 1

The attachment list includes the filename that was originally uploaded together with the file-size (in KB), name of the person who attached it and the date uploaded. In addition, if you position the pointer over the filename and hold it there for a few seconds, a detailed description is displayed as a tooltip.

To actually view the document, simply click on the filename hyperlink and a new web browser window will open. Depending on the type of file, this window will either display the document or prompt you for a place to save it on your local computer. To remove an existing attachment from a task, simply click the <Remove> button and the attachment will be removed from the list.

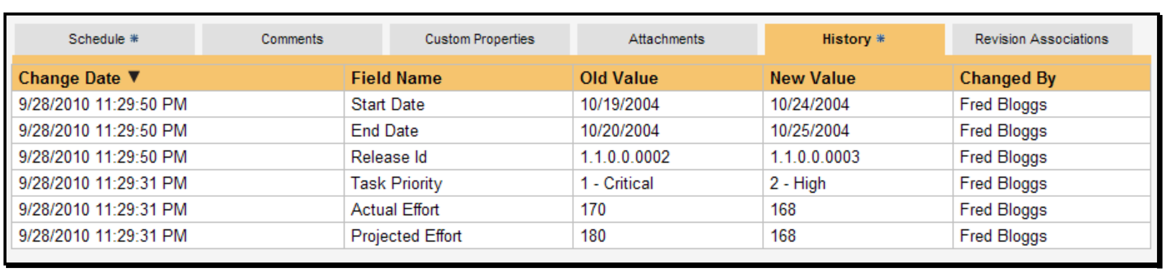
To attach a new document or web link to the task, you need to click on the “Add Attachment” hyperlink to open the “Add Attachment” dialog box. There are three different types of item that can be attached to a task:

- To upload a file, choose “File” as the type and then click the Browse button and select the file from your local computer, optionally enter a detailed description then click the <Upload> button. The document will be copied from your computer and attached to the artifact.
- To attach a web-link (URL) to the artifact, you need to choose “URL” as the type and then enter the fully qualified URL (e.g. http://mywebsite.com?Document=1), an optional description and then click the <Upload> button to attach the web-link.
- To attached a screenshot to the artifact, you need to choose “Screenshot” as the type and then copy the image to your computer’s clipboard (e.g. on Windows computers, the PRINT SCREEN button captures the current page and adds to the clipboard). Once the image is in the clipboard, click on the “Paste image from clipboard” hyperlink and the item will appear in the preview window. You can then fill in the other fields and click <Upload> to attach the image.

Note: If you are using a non-Windows® computer (e.g. Macintosh®) that doesn’t put file extensions on filenames (e.g. .xls for an Excel sheet) automatically, then you will need to manually add the file extension to the filename before uploading if you want it to be displayed with the correct icon in the attachment list.

8.2.5. View History

In this mode, the main pane displays the list of changes that have been performed on the task artifact since its creation. An example task change history is depicted below:



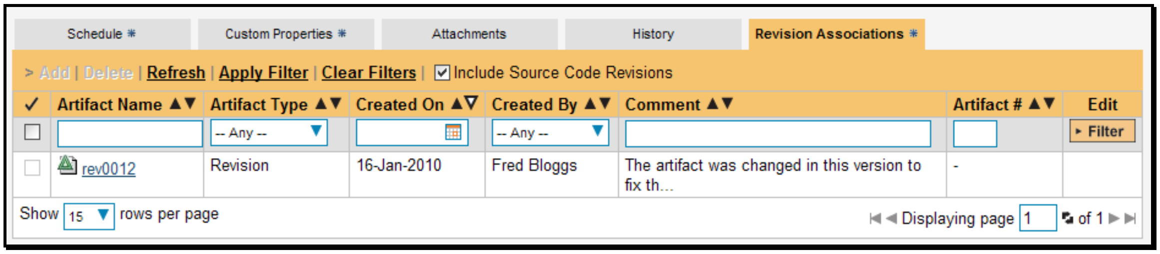
Schedule | Comments | Custom Properties | Attachments | History | Revision Associations

Change Date	Field Name	Old Value	New Value	Changed By
9/28/2010 11:29:50 PM	Start Date	10/19/2004	10/24/2004	Fred Bloggs
9/28/2010 11:29:50 PM	End Date	10/20/2004	10/25/2004	Fred Bloggs
9/28/2010 11:29:50 PM	Release Id	1.1.0.0.0002	1.1.0.0.0003	Fred Bloggs
9/28/2010 11:29:31 PM	Task Priority	1 - Critical	2 - High	Fred Bloggs
9/28/2010 11:29:31 PM	Actual Effort	170	168	Fred Bloggs
9/28/2010 11:29:31 PM	Projected Effort	180	168	Fred Bloggs

The change history displays the date that each change was made, together with the fields that were changed, the old and new values and the person who made the change. This allows a complete audit trail to be maintained of all changes in the system.

8.2.6. Revision Associations

In this mode, the main pane displays a list of any source code revisions that are associated with this task:



This feature allows you to display the list of any changes in the source code repository that were the result of implementing the functionality described in the task. Clicking on the revision name takes you to the revision details page which is described in more detail in the “Source Code” section of this guide.

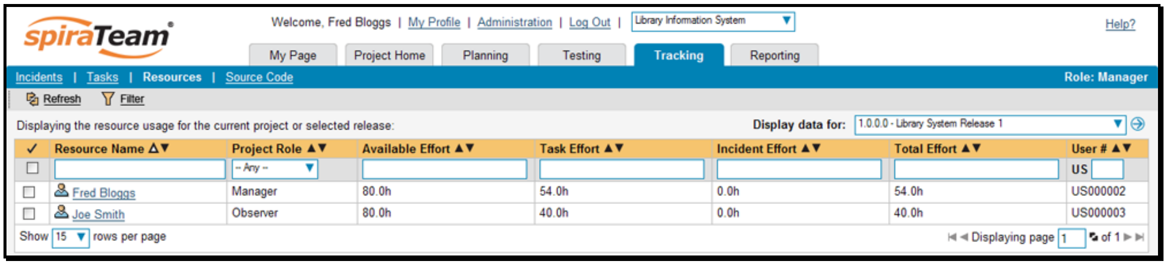
You can perform the following actions:

- **Refresh** – updates the list of revisions from the server, useful if other people are adding revisions connected to this task at the same time.
- **Apply Filter** – Applies the entries in the filter boxes to the list of revisions.
- **Clear Filters** – Clears the current filter, so that all revisions for the current task are shown.

9. Resource Tracking

This section outlines how you can use the Resource Tracking features of SpiraPlan® and SpiraTeam® to view the total workload for each of the project personnel resources assigned to a specific project. This allows you to verify that the work is evenly distributed amongst the project members and that no individual resource is overloaded.

When you click on the Tracking > Resources link on the global navigation bar, you will initially be taken to the project resources list screen illustrated below:



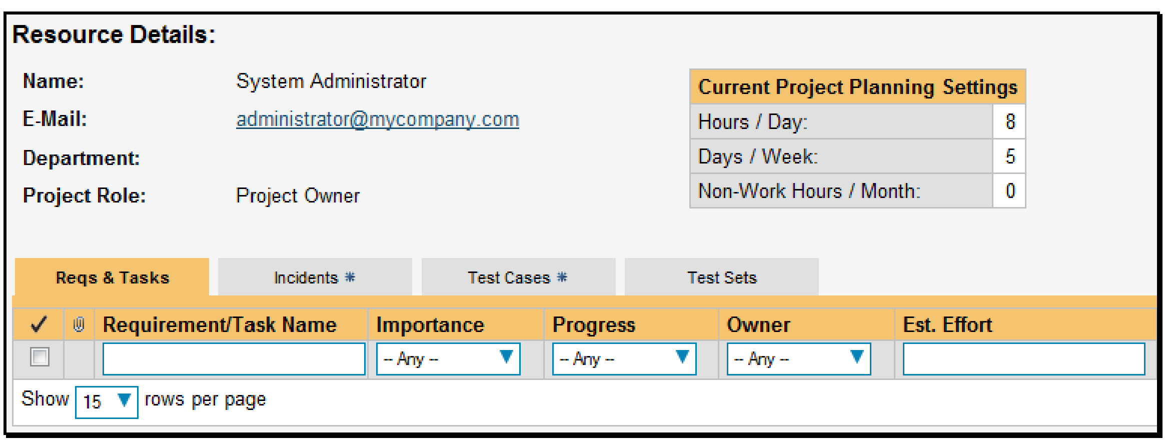
This screen lists all the personnel (project resources) that belong to the current project together with the total value of the projected effort of all the work assigned to them and the available effort based on the length of the current release/iteration. The effort is shown for tasks and incidents as well as a total of the two together. You can display the workload for the project as a whole, for a specific release (including all child iterations) or for a specific iteration.

If any project resources have been assigned more work that they have time to complete during the length of the release/iteration, the background color of the effort value will be colored in red, indicating that you need to offload some of the work to other project resources.

Clicking on a resource name will take you to the Resource Details page.

9.1 Resource Details

The resource details page will show you what a resource has been assigned, and time values for the items. A small table on the left will show current configured values for the project for # of hours per workday, # of days per week, and how many non-work hours per month there are.



Tabs along the bottom will show assigned requirements and tasks, incidents, test cases and test sets. The views for each item are a subset of available columns, to show progress and completion information for all items listed. Clicking on an artifact's name will take you to the artifact details page:

9.1.1. Reqs & Tasks

This tab displays the list of requirements and child tasks that are assigned to the current resource:

Reqs & Tasks | Incidents | Test Cases | Test Sets

✓		Requirement/Task Name	Importance	Progress	Owner	Est. Effort	Act. Effort	Proj. Effort	Edit
			-- Any --	-- Any --	-- Any --				Filter
		Ability to delete existing books in the system	1 - Critical		Fred Bloggs	16.0h	15.2h	16.0h	Edit
		Ability to completely erase all books stored in th...	1 - Critical		Fred Bloggs	10.0h	9.5h	9.5h	Edit
		Ability to create different editions	1 - Critical		Fred Bloggs	16.0h	10.3h	17.8h	Edit
		Develop new edition entry screen	1 - Critical		Fred Bloggs	8.0h	7.0h	9.0h	Edit
		Create edition object insert method	1 - Critical		Fred Bloggs	5.0h	3.3h	5.8h	Edit
		Write edition object insert queries	1 - Critical		Fred Bloggs	3.0h		3.0h	Edit

9.1.2. Incidents

This tab displays the list of incidents that are assigned to the current resource:

Reqs & Tasks | Incidents | Test Cases | Test Sets

ID / Name		Date Opened	Status	Priority	Severity	% Complete	Est. Effort (hrs)	Projected Effort (hrs)
Cannot add a new book to the system	[IN:000007]	4-Nov-2003	Assigned	1 - Critical	3 - Medium	0%	0.3	0.3
Ability to associate multiple authors	[IN:000021]	17-Nov-2003	Assigned	1 - Critical	1 - Critical	25%	0.3	0.4
Test System Limitation	[IN:000046]	4-Dec-2003	Assigned	1 - Critical		75%	0.7	0.8
Test Training Item	[IN:000040]	3-Dec-2003	Assigned	1 - Critical	2 - High	25%	0.5	0.5
Editing the date on a book is clunky	[IN:000008]	4-Nov-2003	Assigned	2 - High	4 - Low	50%	0.4	0.4
Test Training Item	[IN:000041]	3-Dec-2003	Assigned	2 - High		50%	0.7	0.7
Test Change Request	[IN:000053]	7-Dec-2003	Assigned	3 - Medium		25%	0.5	0.5
Ability to import data from excel	[IN:000023]	25-Nov-2003	Assigned	3 - Medium	2 - High	75%	0.5	0.5
Test System Limitation	[IN:000048]	4-Dec-2003	Assigned	3 - Medium	3 - Medium	90%	1.3	1.5
Sample Risk 3	[IN:000061]	10-Dec-2003	Assigned	4 - Low	4 - Low	90%	0.7	0.9

9.1.3. Test Cases

This tab displays the list of test cases that are assigned to the current resource:

Reqs & Tasks | Incidents | Test Cases | Test Sets

ID / Name		Last Executed	Last Execution Status	Priority	Estimated Duration
Ability to create new book	[TC:000002]	1-Dec-2003	Passed	1 - Critical	0.2h
Ability to edit existing book	[TC:000003]	1-Dec-2003	Caution	1 - Critical	0.1h

9.1.4. Test Sets

This tab displays the list of test sets that are assigned to the current resource:

Reqs & Tasks | Incidents | Test Cases | Test Sets

ID / Name		Status	Planned Date	Execution Status	Last Executed	Est. Duration	Act. Duration
Testing New Functionality	[TX:000005]	In Progress	10-Feb-2007		28-Sep-2010	0.3h	0.8h
Exploratory Testing	[TX:000006]	Deferred				0.0h	0.0h
Regression Testing for Windows XP	[TX:000003]	Completed				0.3h	0.0h

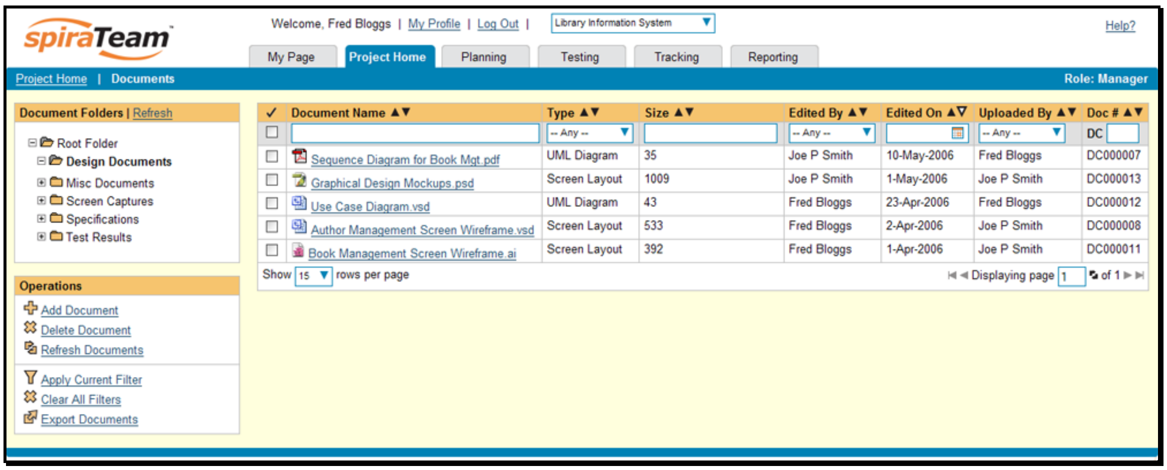
10. Document Management

This section outlines the document management features of SpiraPlan® and SpiraTeam® that can be used to upload, manage and share documents between the different members of the project. This module includes support for uploading files and URLs, versioning of documents, the ability to organize into folders and categorize and search using meta-tags.

In addition the document management features are fully integrated into the rest of the system, so that documents attached to other artifacts (e.g. requirements, test cases, etc.) are automatically connected to the project documentation repository.

10.1. Document List

When you click on the Project Home > Documents link on the global navigation bar, you will initially be taken to the project documents list screen illustrated below:

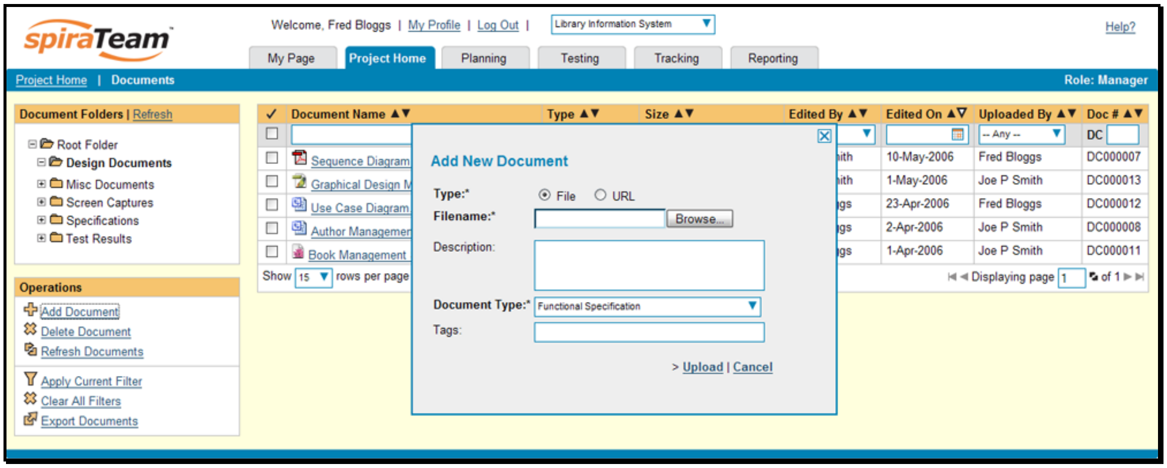


This screen consists of three main sections:

- The top left-hand pane displays a hierarchical list of the various folders that have been setup for the current project. Clicking on the [+] expand icon will expand the child folders and clicking on the name of the folder will display the list of documents in the folder in the main pane to the right.
- The main right-hand pane displays a list of all the documents contained within the currently selected folder. This list can be filtered and sorted, and you can choose how many rows of documents to display on the page at one time.
- The bottom left-hand pane contains all the "Operations" that can be performed on the document list. You can use the various icons to add documents to the current folder, delete existing documents from the project, refresh the list of documents, export documents to another project and options to apply the selected filter.

10.1.1. Add New Document

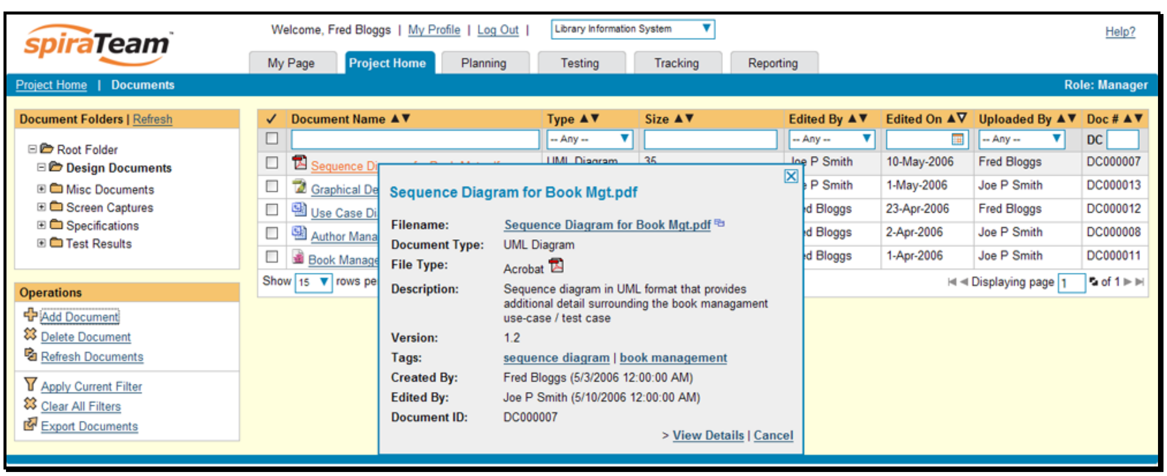
To add a new document to the project, you just need to click on the <Add Document> icon in the Operations list, and the 'Add New Document' dialog box will be displayed:



From here, you need to either browse to the file being uploaded or enter in its URL, and then enter the description (optional), choose the type of document from the list provided and supply any meta-tags that you want to search on (separated by commas). Then click <Upload> to complete the operation or <Cancel> to abort.

10.1.2. View Document Information

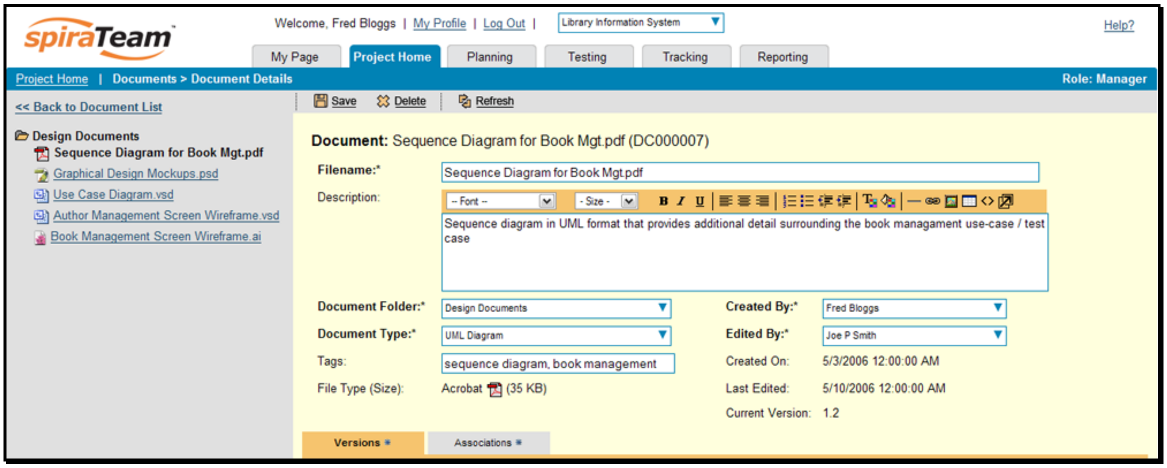
When you hover the mouse pointer over any of the documents displayed in the document list, an information panel will be displayed that contains the name, description, version, document type and meta-tags of the document:



You can click on the document URL to actually open the document itself in a new window, click on the meta-tag links to find related documents that contain the same meta-tag, or click on "View Details" to see more information regarding the document, including an ability to edit its meta-information and see the different versions of the document.

10.2. Document Details

When you click on an item in the document list described above, you are taken to the document details page illustrated below:



This page is made up of three areas; the left pane is for navigation, the upper part of the main pane contains the details of the document, and the bottom part of the right pane contains the list of document versions and the list of artifacts that the document is associated with.

The navigation pane consists of a link that will take you back to the project document list, as well as a list of other documents in the current folder. This latter list is useful as a navigation shortcut; you can quickly view the detailed information of all the peer documents by clicking on the navigation links without having to first return to the main document list page.

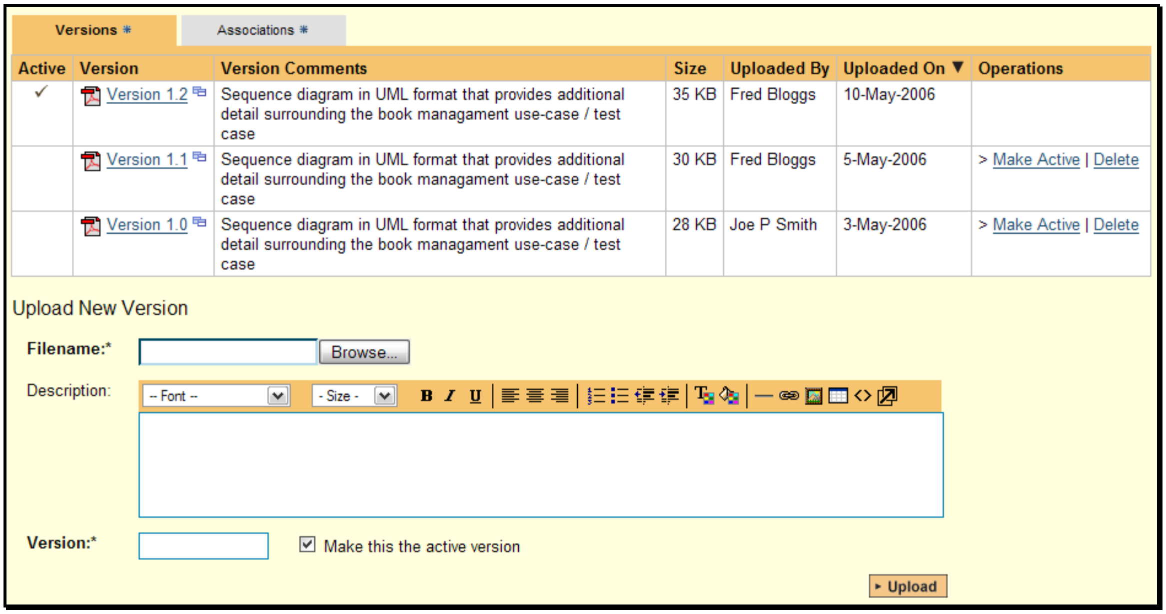
The top part of the main pane allows you to view and/or edit the details of the particular document. You can edit the various fields (name, description, etc.) and once you are satisfied with them, simply click the <Save> button at the top of the page to commit the changes. In addition you can delete the current document by choosing <Delete>, or discard any changes made by clicking <Refresh>.

The lower part of the main pane can be switched between two different views by clicking the appropriate tab. Initially the pane will be in “Versions” mode, but it can be switched to “Association” as well. The functionality in each of these two views is described below:

10.2.1. Edit Document Versions

This view displays the list of different versions that exist for the current document. When you initially create a new document there will be only a single version (e.g. v1.0), however as revisions are made to the document, rather than having to create a whole new document, you can just upload the new revision as a new version (e.g. v1.1) and it will be added to the list of versions.

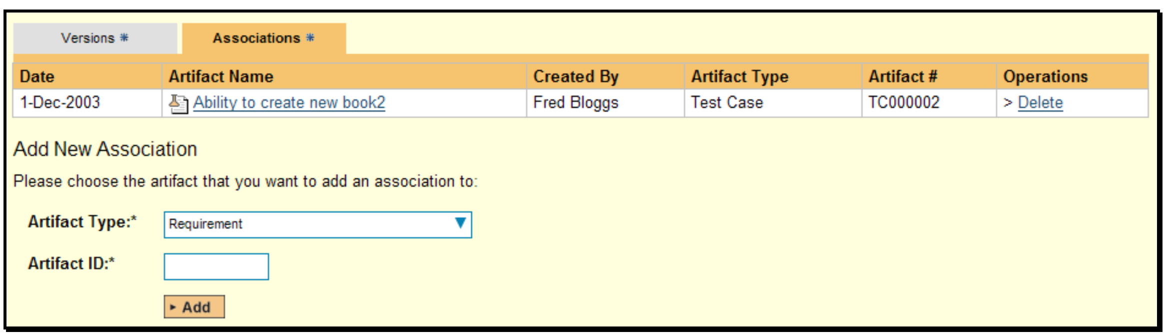
Each version in the list is displayed with its name, a description of what changed in the version, the version number assigned to the revision, the file-size, who uploaded the new version and a link to actually open the new version:



On this page, you have the option to delete an existing version, make a different version the active one (the one that users see when they view the document list and click on the link) and upload a new revision. If you upload a new version, you need to provide a description of the changes made, a new version number and whether the new version should be made the active one. *Note: If the original document was a file (instead of a URL) then all revisions will need to be files, similarly if the original document was a URL, all revisions will need to be URLs.*

10.2.2. Edit Document Associations

This view displays a list of the artifacts in the current project that are associated with the current document. If you originally uploaded the document as an attachment to a requirement, test case, etc. then an initial association will be already listed, otherwise it will be empty.

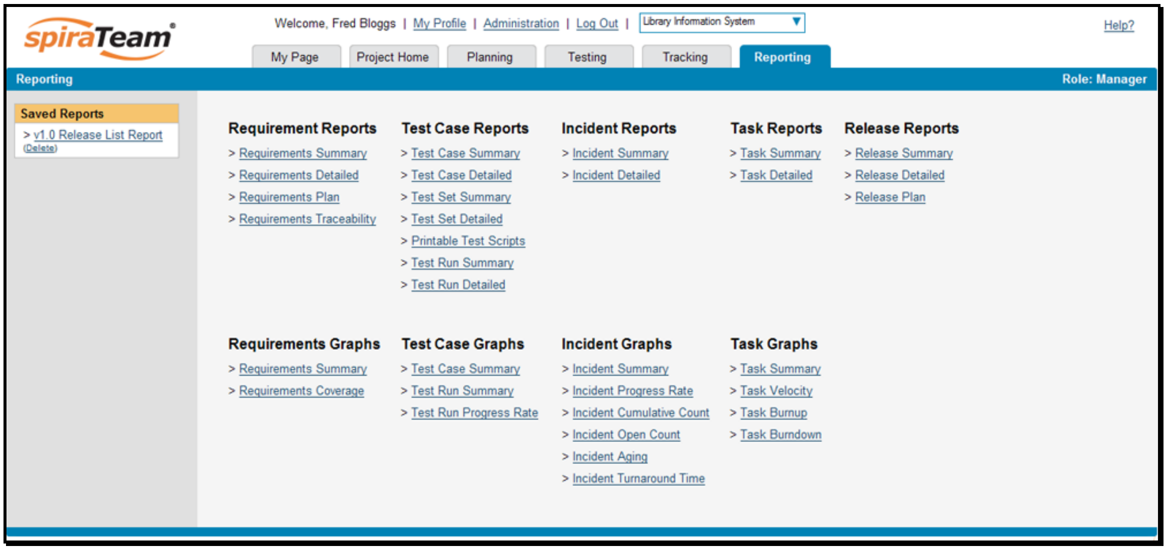


From this screen you can either delete an existing artifact association or add a new association from the current document to an pre-existing artifact in the system. To add the association, you just need to select the type of artifact being associated (requirement, test case, incident, etc.) and the numeric ID of the artifact.

For example to add an association to Requirement RQ00005 you would choose Artifact Type = Requirement and Artifact ID = 5.

11. Reports Center

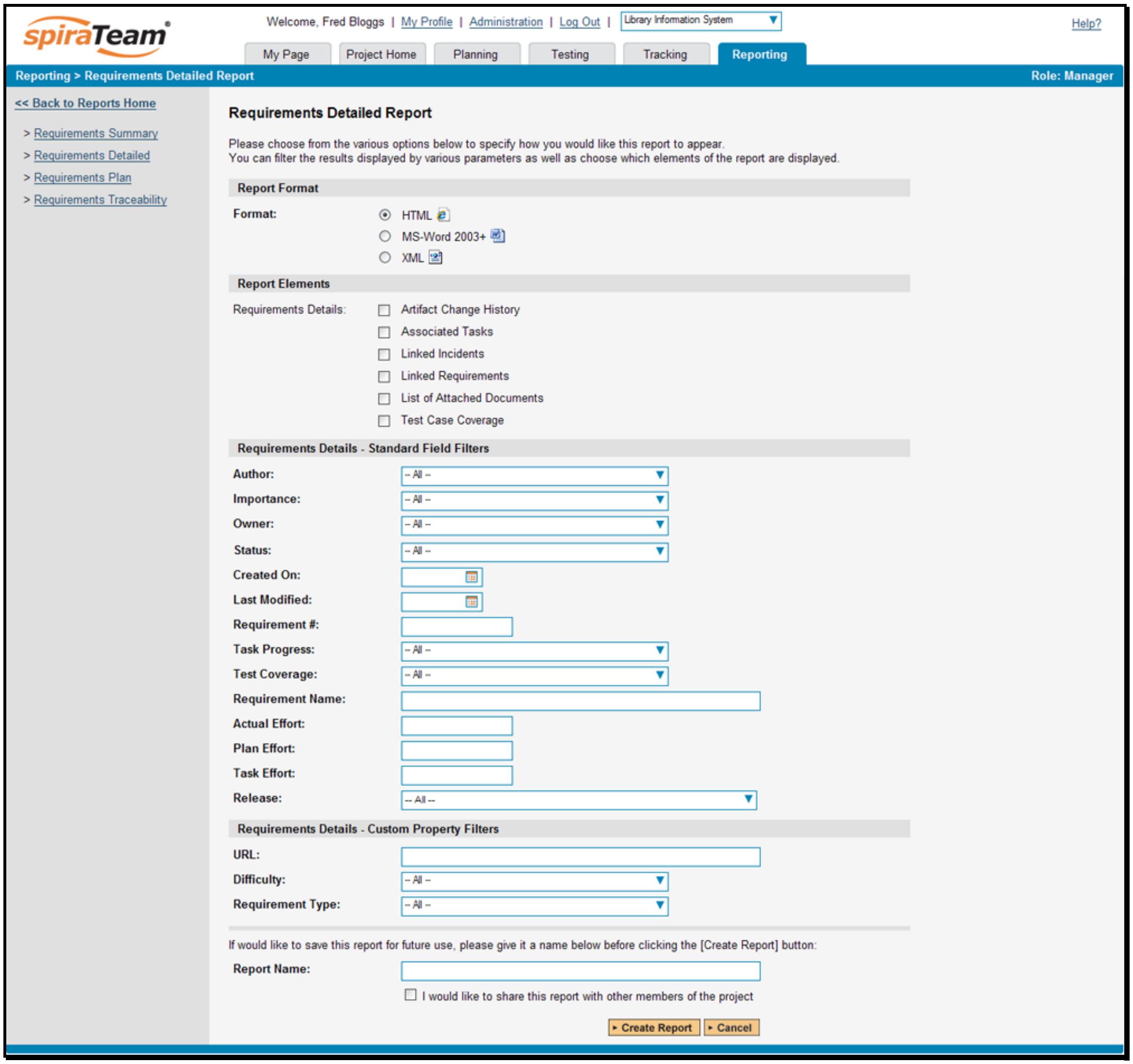
This section describes the reporting features of SpiraTeam®, including an overview of each of the report types that are available. When you click on the “Reports” tab on the global navigation bar, you will initially be taken to the reports home page illustrated below:



This page consists of two main areas:

- The left hand pane displays a list of any reports that have either been saved by the currently logged in user, or those reports created by other members of the project, that have been marked (by that user) as ‘shareable’.
- The right-hand main pane displays a list of the reports and graphs available in the system, categorized by the artifact they primarily relate to (requirements, test cases, incidents and releases). Clicking on any of the report hyperlinks will take you to the configuration page for the report in question.

The configuration page for each report differs slightly, but the general format is illustrated below:



You can configure the reports in the following ways:

- **Report Format** – This allows you to specify the display format of the report. Depending on the specific report, they can be displayed as a web-page (HTML), downloaded as a Microsoft Word document, downloaded as a Microsoft Excel spreadsheet or downloaded as a Microsoft Project file. In addition there is a raw-XML format that allows you to export the underlying report data into any external reporting system that supports XML import.
- **Report Elements** – This allows you to determine which types of information to include in the report. This varies by report type, but includes the dependent items related to the artifact being reported on (attachments, test steps, coverage, history, etc.)
- **Standard Field Filters** – This allows you to constrain the range of data being reported on, based on the various fields associated with the artifact in question. These filters are typically selections from multi-valued-dropdown lists and date-ranges.
- **Custom Property Filters** – This allows you to constrain the range of data being reported on, based on the custom fields associated with the artifact by your project administrator. These filters can be either freetext or drop-down lists.

- **Sort Options -** This option is only available for the non hierarchical-data reports (i.e. for test runs, incidents and tasks only) and allows you to specify the sort order of the results returned in the report. For the hierarchical-data based reports the sort order is always the order of the hierarchy.
- **Report Name** – If you would like to save the report configuration so that you can quickly re-run it at a later date, you just need to enter a name for the report and indicate (by selecting the checkbox or not) whether you want this report to be private or shared by all members of the project.

Once you have selected the format, elements and filters, clicking the <Create Report> button launches the report in a new window. Each of the reports is now briefly described below:

11.1. Requirements Reports

11.1.1. Requirements Summary Report

This report displays all of the requirements defined for the current project in the order they appear in the requirements list. The requirement's details and coverage status are displayed in a summary list form:

> Print Report

Requirements Summary Report

This report displays all of the requirements defined for the current project in the order they appear in the requirements list. The requirement's details and coverage status are displayed in a summary list form.

Project 1: Library Information System

Sample application that allows users to manage books, authors and lending records for a typical branch library

Req #	Name	Description	Priority	Status	Author	Owner	Creation Date	Test Coverage	Task Progress	Last Modified	Release #	Planned Effort	Task Effort	Actual Effort	URL
1	**Functional System Requirements**			In Progress	Fred Bloggs		01-Dec-2003	0 Covering, 0 Failed, 0 Passed, 0 Blocked, 0 Caution	42 Tasks; 60% On Schedule, 6% Running Late, 4% Starting Late, 29% Not Started	01-Dec-2003		145 hours 0 mins	190 hours 0 mins	188 hours 40 mins	
2	**Online Library Management System**			In Progress	Fred Bloggs		01-Dec-2003	0 Covering, 0 Failed, 0 Passed, 0 Blocked, 0 Caution	42 Tasks; 60% On Schedule, 6% Running Late, 4% Starting Late, 29% Not Started	01-Dec-2003		145 hours 0 mins	190 hours 0 mins	188 hours 40 mins	

11.1.2. Requirements Detailed Report

This printable report displays all of the requirements defined for the current project in the order they appear in the requirements list. For each individual requirement, the name, priority, author, status and coverage status are displayed, along with tables containing the list of covering test cases, linked incidents/requirements, associated tasks, attached documents, and the change history:

Req #4 - Ability to add new books to the system

The ability to add new books into the system, complete with ISBN, publisher and other related information

Priority:	1 - Critical	**Status:**	Completed
Author:	Fred Bloggs	**Creation Date:**	01-Dec-2003
Coverage:	3 Covering, 1 Failed, 1 Passed 0 Blocked 0 Caution	**Last Modified:**	01-Dec-2003
Owner:	Joe P Smith	**Planned Effort:**	15 hours 0 mins
Release #:	1.0.0.0	**Task Est. Effort:**	16 hours 0 mins
		Task Actual Effort:	15 hours 30 mins
URL:	http://www.libraries.org		
Difficulty:	Moderate		
Requirement Type:			

Test Coverage:

Test #	Name	Status	Est. Duration	Last Execution Date
TC2	Ability to create new book	Failed	0 hours 10 mins	04-Dec-2003
TC8	Book management	Passed	0 hours 4 mins	01-Dec-2003
TC13	Adding new book and author to library	Not Run	-	--

Linked Requirements

Name	Created By	Comment	Date	Req Id
Ability to delete existing books in the system	Fred Bloggs	These two requirements are related	12-Mar-2004	RQ6

Associated Incidents

Name	Created By	Comment	Date	Inc Id
Cannot install system on Oracle 9i	Fred Bloggs	This bug affects the requirement	14-Mar-2004	IN5
Cannot add a new book to the system	Joe P Smith	Test Run: Ability to create new book	04-Nov-2003	IN7

Associated Tasks:

11.1.3. Requirements Plan

This report displays a complete work breakdown structure of the project from a requirements perspective, including all requirements and tasks organized by schedule:

Requirements Plan Report

This report displays a complete work breakdown structure of the project, including all requirements and tasks organized by schedule.

Project 1: Library Information System

Sample application that allows users to manage books, authors and lending records for a typical branch library

ID #	Name	Type	Status	Priority	Owner	Start Date	End Date	Release #	% Complete	Plan Effort	Est. Effort	Actual Effort
1	**Functional System Requirements**	**Requirement**	**In Progress**							**145 hours 0 mins**	**190 hours 0 mins**	**188 hours 40 mins**
2	**Online Library Management System**	**Requirement**	**In Progress**							**145 hours 0 mins**	**190 hours 0 mins**	**188 hours 40 mins**
3	**Book Management**	**Requirement**	**Completed**	**1 - Critical**						**90 hours 0 mins**	**96 hours 0 mins**	**95 hours 0 mins**
4	Ability to add new books to the system	Requirement	Completed	1 - Critical	Joe P Smith			1.0.0.0		15 hours 0 mins	16 hours 0 mins	15 hours 30 mins
1	Develop new book entry screen	Task	Completed	1 - Critical	Fred Bloggs	01-Mar-2004	02-Mar-2004	1.0.0.0.0001	100 %		8 hours 0 mins	7 hours 20 mins
2	Create book object insert method	Task	Completed	1 - Critical	Fred Bloggs	01-Mar-2004	02-Mar-2004	1.0.0.0.0001	100 %		5 hours 0 mins	5 hours 20 mins
3	Write book object insert queries	Task	Completed	1 - Critical	Fred Bloggs	01-Mar-2004	02-Mar-2004	1.0.0.0.0001	100 %		3 hours 0 mins	2 hours 50 mins
5	Ability to edit existing books in the system	Requirement	Completed	1 - Critical	Joe P Smith			1.0.0.0		15 hours 0 mins	16 hours 0 mins	16 hours 50 mins
4	Develop edit book details screen	Task	Completed	1 - Critical	Fred Bloggs	03-Mar-2004	04-Mar-2004	1.0.0.0.0001	100 %		8 hours 0 mins	7 hours 20 mins
5	Create book object update method	Task	Completed	1 - Critical	Joe P Smith	03-Mar-2004	04-Mar-2004	1.0.0.0.0001	100 %		5 hours 0 mins	6 hours 0 mins
6	Write book object update queries	Task	Completed	1 - Critical	Joe P Smith	03-Mar-2004	04-Mar-2004	1.0.0.0.0001	100 %		3 hours 0 mins	3 hours 30 mins
6	Ability to delete existing books in the system	Requirement	Completed	1 - Critical	Fred Bloggs			1.0.0.0		14 hours 0 mins	16 hours 0 mins	15 hours 10 mins

11.1.4. Requirements Traceability Matrix

This report displays a matrix of the requirements in the system with their list of covering test cases and associated, mapped requirements:

Project 1: Library Information System

Sample application that allows users to manage books, authors and lending records for a typical branch library

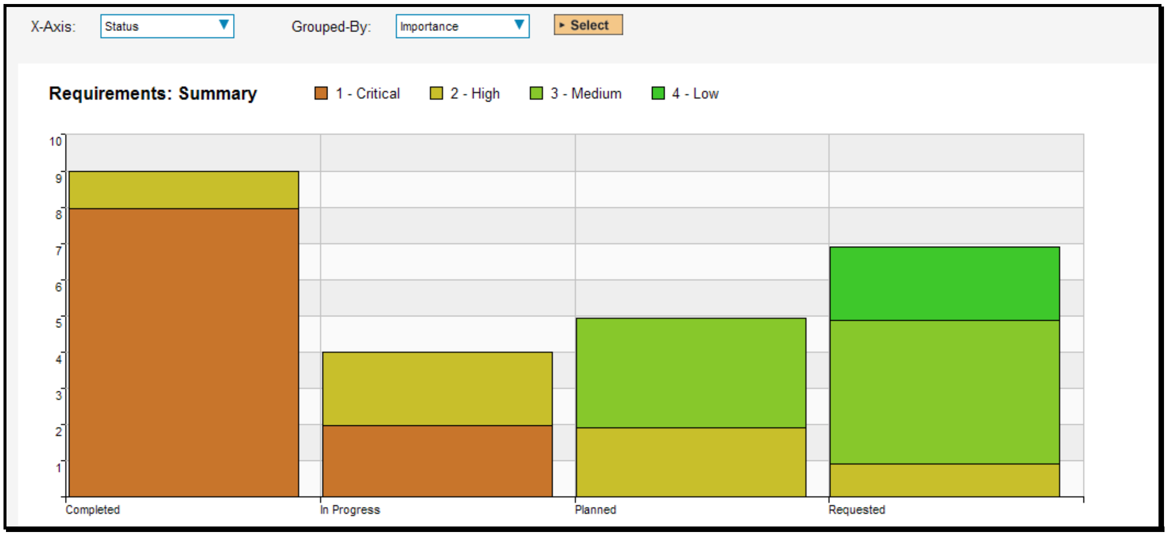
Requirements Forward Traceability

This section displays a list of all the requirements with the associated test cases/requirements.

Req #	Name	Importance	Status	Release #	Test Traceability	Requirements Traceability
RQ1	**Functional System Requirements**		In Progress			
RQ2	**Online Library Management System**		In Progress			
RQ3	**Book Management**	1 - Critical	Completed			
RQ4	Ability to add new books to the system	1 - Critical	Completed	1.0.0.0	TC2, TC8, TC13	RQ6
RQ5	Ability to edit existing books in the system	1 - Critical	Completed	1.0.0.0	TC3, TC8	RQ7
RQ6	Ability to delete existing books in the system	1 - Critical	Completed	1.0.0.0	TC8, TC12	RQ4
RQ7	Ability to associate books with different subjects	1 - Critical	Completed	1.1.0.0	TC4, TC8	RQ5
RQ8	Ability to associate books with different authors	1 - Critical	Completed	1.1.0.0	TC6, TC13	
RQ9	Ability to associate books with different editions	1 - Critical	Completed	1.1.0.0	TC4, TC8, TC12	
RQ10	Ability to completely erase all books stored in the system with one click	1 - Critical	Completed	1.2.0.0	TC4, TC8, TC12	
RQ11	**Edition Management**	1 - Critical	In Progress			
RQ12	Ability to create different editions	1 - Critical	In Progress	1.0.0.0		

11.1.5. Requirements Summary Graph

The requirements summary graph shows how many requirements are currently in a project. The number of requirements is displayed according to the criteria that you specify. You can specify the type of data displayed along the x-axis, and the requirement information which is used to group the data. When you first open the graph you will be asked to pick the field that you would like to display on the x-axis and the field that you would like to group the data by. Once you have chosen the appropriate fields and clicked the <Select> button the graph will be displayed:



In this version of the report, the x-axis represents the requirements' status, and the individual bars are grouped by requirement importance. Each data-value can be viewed by positioning the mouse pointer over the bar, and a "tooltip" will pop-up listing the actual data value.

Clicking on the "Display Data Grid" link will display the underlying data that is being used to generate the graph:

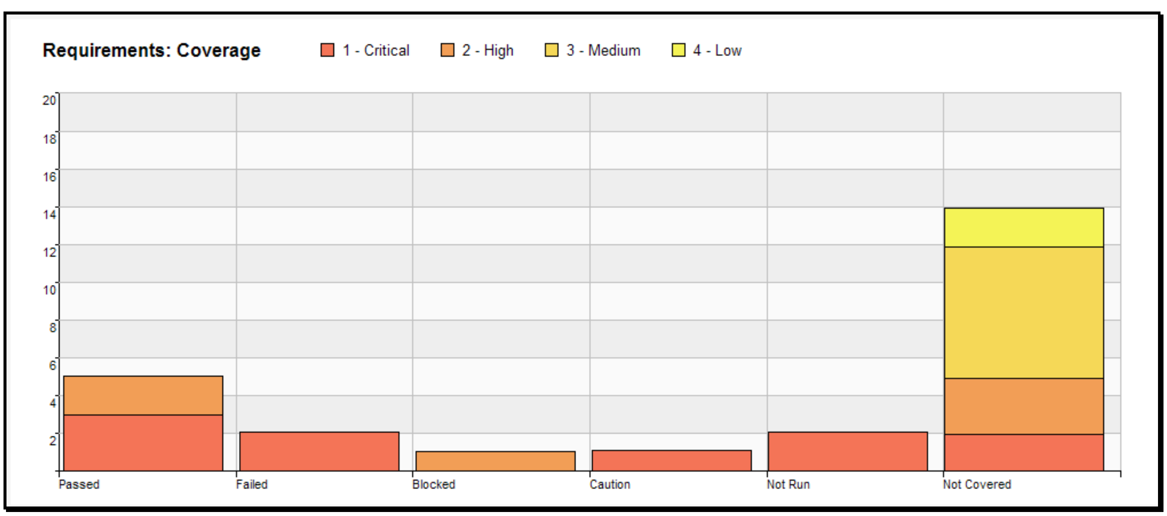
> Hide Data Grid

Status	Importance			
	1 - Critical	2 - High	3 - Medium	4 - Low
Completed	8	1	0	0
In Progress	2	2	0	0
Planned	0	2	3	0
Requested	0	1	4	2

This feature is available on all the various graphs in the system.

11.1.6. Requirements Coverage Graph

The requirements coverage graph shows how many requirements are currently in a project, according to their test coverage status.



The x-axis of the report represents the various test execution statuses that a requirement can have as its coverage status (plus the Not-Covered status), and the individual bars are grouped by the requirements importance. Each data-value can be viewed by positioning the mouse pointer over the bar, and a “tooltip” will pop-up listing the actual data value. Clicking on the “Display Data Grid” link will display the underlying data that is being used to generate the graph.

11.2. Test Case Reports

11.2.1. Test Case Summary Report

This report displays all of the test cases defined for the current project in the order they appear in the test case list. The test case's details and execution status are displayed in a summary grid form with the test steps optionally displayed:

Project 1: Library Information System

Sample application that allows users to manage books, authors and lending records for a typical branch library

Test #	Name	Description	Priority	Test Step	Test Step Description	Test Step Expected Result	Test Step Sample Data	Status	Author	Owner	Est. Duration	Created On	Last Modified
1	**Functional Tests**							N/A	Fred Bloggs	Fred Bloggs		01-Dec-2003	13-Oct-2009 15:07:47
2	Ability to create new book	Tests that the user can create a new book in the system	1 - Critical					Failed	Fred Bloggs	Fred Bloggs	10	01-Dec-2003	13-Oct-2009 15:07:47
				1	Call Login to Application			Not Run					
				2	User clicks link to create book	User taken to first screen in wizard		Not Run					
				3	User enters books name and author, then clicks Next	User taken to next screen in wizard	Macbeth, William Shakespeare	Not Run					
				4	User chooses book's genre and sub-genre from list	User sees screen displaying all entered information	Play, Tragedy	Not Run					
				5	User clicks submit button	Confirmation screen is displayed		Not Run					

11.2.2. Test Case Detailed Report

This report displays all of the test cases defined for the current project in the order they appear in the test case list. The test case's details and execution status are displayed, along with sub-tables containing the list of test steps, test runs, attached documents, the change history, and a list of any associated open incidents:

Test #2 - Ability to create new book

Tests that the user can create a new book in the system

Status:	Failed	**Priority:**	1 - Critical
Author:	Fred Bloggs	**Creation Date:**	01-Dec-2003
Owner:	Fred Bloggs	**Last Execution:**	04-Dec-2003
URL:	http://www.libraryreferences.org		
Test Type:	Functional Test		

Step	Description	Expected Result	Sample Data	Last Status
1	Call Login to Application			Not Run
2	User clicks link to create book	User taken to first screen in wizard		Not Run
3	User enters books name and author, then clicks Next	User taken to next screen in wizard	Macbeth, William Shakespeare	Not Run
4	User chooses book's genre and sub-genre from list	User sees screen displaying all entered information	Play, Tragedy	Not Run
5	User clicks submit button	Confirmation screen is displayed		Not Run

Test Runs:

Run #	Tester	Test Set	Release	Version	Status	Est. Duration	Actual Duration	Execution Date
TR18	Fred Bloggs		Iteration 003	1.1.0.0.0003	Failed	2 mins	70 mins	04-Dec-2003
TR15	Joe P Smith		Iteration 002	1.1.0.0.0002	Passed	2 mins	70 mins	03-Dec-2003
TR13	Fred Bloggs		Iteration 001	1.1.0.0.0001	Passed	2 mins	70 mins	02-Dec-2003
TR12	Fred Bloggs		Library System Release 1	1.0.0.0	Failed	10 mins	70 mins	01-Dec-2003
TR2	Fred Bloggs	Testing Cycle for Release 1.1	Library System Release 1 SP1	1.0.1.0	Passed	10 mins	90 mins	01-Dec-2003
TR1	Joe P Smith	Testing Cycle for Release 1.0	Library System Release 1	1.0.0.0	Failed	10 mins	75 mins	01-Dec-2003

Requirements Coverage:

Req #	Name	Status	Priority
RQ4	Ability to add new books to the system	Completed	1 - Critical

Open Incidents:

11.2.3. Test Set Summary Report

This report displays all of the test sets defined for the current project in the order they appear in the test set list. The test set's details and execution status are displayed in a summary list form:

Test Set Summary Report

This report displays all of the test sets defined for the current project in the order they appear in the test set list. The test set's details and execution status are displayed in a summary list form.

Project 1: Library Information System

Sample application that allows users to manage books, authors and lending records for a typical branch library

Test Set #	Name	Description	Status	Release	Creator	Owner	Created On	Planned Date	Last Modified	Last Executed	# Passed	# Failed	# Caution	# Blocked	# Not Run	Notes
TX8	**Functional Test Sets**		In Progress		Fred Bloggs		02-Jan-2007	05-Feb-2007	13-Oct-2009	--	0	0	0	0	0	
TX1	Testing Cycle for Release 1.0	This tests the functionality introduced in release 1.0 of the library system	In Progress	1.0.0.0	Fred Bloggs	Joe P Smith	02-Jan-2007	05-Feb-2007	13-Oct-2009	01-Dec-2003	1	2	0	0	4	
TX2	Testing Cycle for Release 1.1	This tests the functionality introduced in release 2.0 of the library system	Not Started	1.1.0.0	Fred Bloggs	Joe P Smith	03-Jan-2007	07-Feb-2007	13-Oct-2009	01-Dec-2003	3	0	0	0	6	

11.2.4. Test Set Detailed Report

This report displays all of the test sets defined for the current project in the order they appear in the test set list. The test set's details and execution status are displayed, along with sub-tables containing the list of test cases, test runs, attached documents, and the change history:

Test Set #1 - Testing Cycle for Release 1.0

This tests the functionality introduced in release 1.0 of the library system

Owner:	Joe P Smith	**Creator:**	Fred Bloggs
Release:	1.0.0.0	**Creation Date:**	02-Jan-2007
Status:	In Progress	**Last Execution:**	01-Dec-2003
Planned Date:	05-Feb-2007	**Last Updated:**	13-Oct-2009
Notes:			
Operating System:			

Test Cases:

Test #	Name	Priority	Est. Duration	Status	Last Execution Date
TC2	Ability to create new book	1 - Critical	10 mins	Failed	01-Dec-2003
TC3	Ability to edit existing book	1 - Critical	5 mins	Passed	01-Dec-2003
TC4	Ability to create new author	1 - Critical	8 mins	Failed	01-Dec-2003
TC5	Ability to edit existing author	2 - High	5 mins	Not Run	--
TC6	Ability to reassign book to different author	2 - High	8 mins	Not Run	--
TC8	Book management	2 - High	4 mins	Not Run	--
TC9	Author management	2 - High	4 mins	Not Run	--

Test Runs:

Run #	Tester	Release	Version	Status	Est. Duration	Actual Duration	Execution Date
TR4	Joe P Smith	Library System Release 1	1.0.0.0	Failed	8 mins	90 mins	01-Dec-2003
TR3	Fred Bloggs	Library System Release 1	1.0.0.0	Passed	5 mins	90 mins	01-Dec-2003
TR1	Joe P Smith	Library System Release 1	1.0.0.0	Failed	10 mins	75 mins	01-Dec-2003

11.2.5. Printable Test Scripts

This printable report is useful when you want to be able to conduct the testing activities offline on paper, or when testers need paper copies of the test script in addition to using the online test execution wizard.

In either case, this report simply displays all of the test cases defined for the current project in the order they appear in the test case list together with their detailed test steps and a list of any attached documents.

Project 1: Library Information System

Sample application that allows users to manage books, authors and lending records for a typical branch library

Test #2 - Ability to create new book

Tests that the user can create a new book in the system

Test Steps:

Step	Description	Expected Result	Sample Data	Status	Actual Result
1	User opens up browser and enters application URL: http://www.libraryinformationsystem.com/beta	The browser loads the login web page	http://www.libraryinformationsystem.com/beta	☐Passed ☐Failed ☐Blocked ☐Caution	
2	User logs in to application	User taken to main menu screen	Login=librarian, Password=password1	☐Passed ☐Failed ☐Blocked ☐Caution	
2	User clicks link to create book	User taken to first screen in wizard		☐Passed ☐Failed ☐Blocked ☐Caution	
3	User enters books name and author, then clicks Next	User taken to next screen in wizard	Macbeth, William Shakespeare	☐Passed ☐Failed ☐Blocked ☐Caution	
4	User chooses book's genre and sub-genre from list	User sees screen displaying all entered information	Play, Tragedy	☐Passed ☐Failed ☐Blocked ☐Caution	
5	User clicks submit button	Confirmation screen is displayed		☐Passed ☐Failed ☐Blocked ☐Caution	

File Attachments:

Filename	Description	Author	Date Uploaded
Sequence Diagram for Book Mgt.pdf	Sequence diagram in UML format that provides additional detail surrounding the book managament use-case / test case	Fred Bloggs	03-May-2006

11.2.6. Test Run Summary Report

This report displays all of the test runs defined for the current project. The test run's details and execution status are displayed in a summary grid form:

Test Run Summary Report

This report displays all of the test runs defined for the current project in date order (most recent first). The test run's details and execution status are displayed in a summary list form.

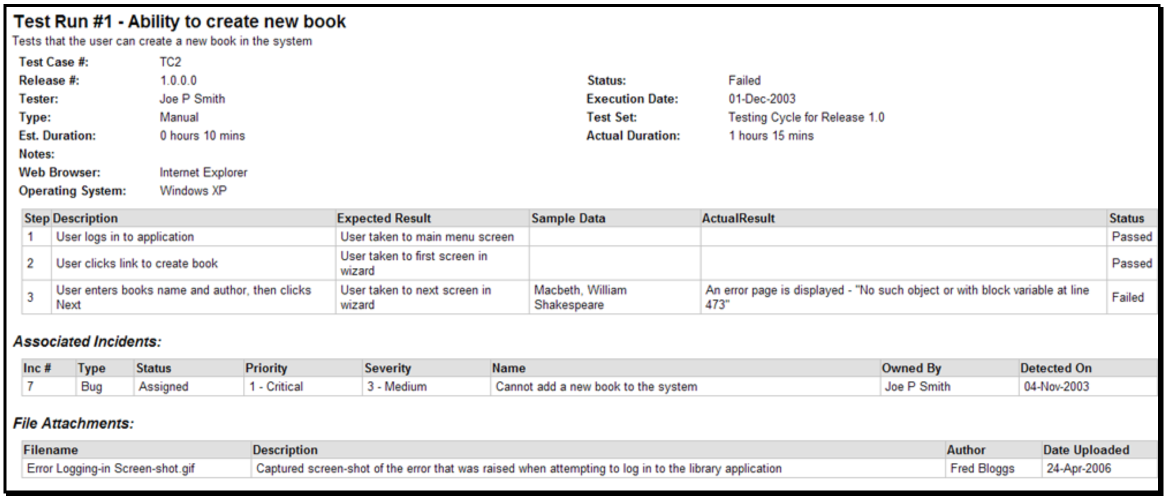
Project 1: Library Information System

Sample application that allows users to manage books, authors and lending records for a typical branch library

Test Run #	Name	Test Case #	Release	Test Set	Type	Tester	Est. Duration	Actual Duration	Start Date	End Date	Status	Runner	Message	Notes	Web Browser	Operating Syste
TR10	Ability to edit existing book	TC3	1.0.0.0		Manual	Fred Bloggs	0 hours 5 mins	0 hours 50 mins	01-Dec-2003	01-Dec-2003	Caution					
TR12	Ability to create new book	TC2	1.0.0.0		Automated	Fred Bloggs	0 hours 10 mins	1 hours 10 mins	01-Dec-2003	01-Dec-2003	Failed	NUnit	Expected 1 but 2 was found		Opera	Windows 2003
TR13	Ability to create new book	TC2	1.1.0.0.0001		Automated	Fred Bloggs	0 hours 2 mins	1 hours 10 mins	02-Dec-2003	02-Dec-2003	Passed	JUnit	Expected 1 but 2 was found			
TR14	Ability to edit existing book	TC3	1.1.0.0.0001		Automated	Fred Bloggs	0 hours 5 mins	1 hours 10 mins	02-Dec-2003	02-Dec-2003	Passed	JUnit	Expected 1 but 2 was found			

11.2.7. Test Run Detailed Report

This report displays all of the test runs defined for the current project in date order (most recent first). The test run's details and execution status are displayed, along with sub-tables containing the list of test run steps, and a list of any associated open incidents:



Test Run #1 - Ability to create new book

Tests that the user can create a new book in the system

Test Case #:	TC2		
Release #:	1.0.0.0	**Status:**	Failed
Tester:	Joe P Smith	**Execution Date:**	01-Dec-2003
Type:	Manual	**Test Set:**	Testing Cycle for Release 1.0
Est. Duration:	0 hours 10 mins	**Actual Duration:**	1 hours 15 mins
Notes:			
Web Browser:	Internet Explorer		
Operating System:	Windows XP		

Step	Description	Expected Result	Sample Data	ActualResult	Status
1	User logs in to application	User taken to main menu screen			Passed
2	User clicks link to create book	User taken to first screen in wizard			Passed
3	User enters books name and author, then clicks Next	User taken to next screen in wizard	Macbeth, William Shakespeare	An error page is displayed - "No such object or with block variable at line 473"	Failed

Associated Incidents:

Inc #	Type	Status	Priority	Severity	Name	Owned By	Detected On
7	Bug	Assigned	1 - Critical	3 - Medium	Cannot add a new book to the system	Joe P Smith	04-Nov-2003

File Attachments:

Filename	Description	Author	Date Uploaded
Error Logging-in Screen-shot.gif	Captured screen-shot of the error that was raised when attempting to log in to the library application	Fred Bloggs	24-Apr-2006

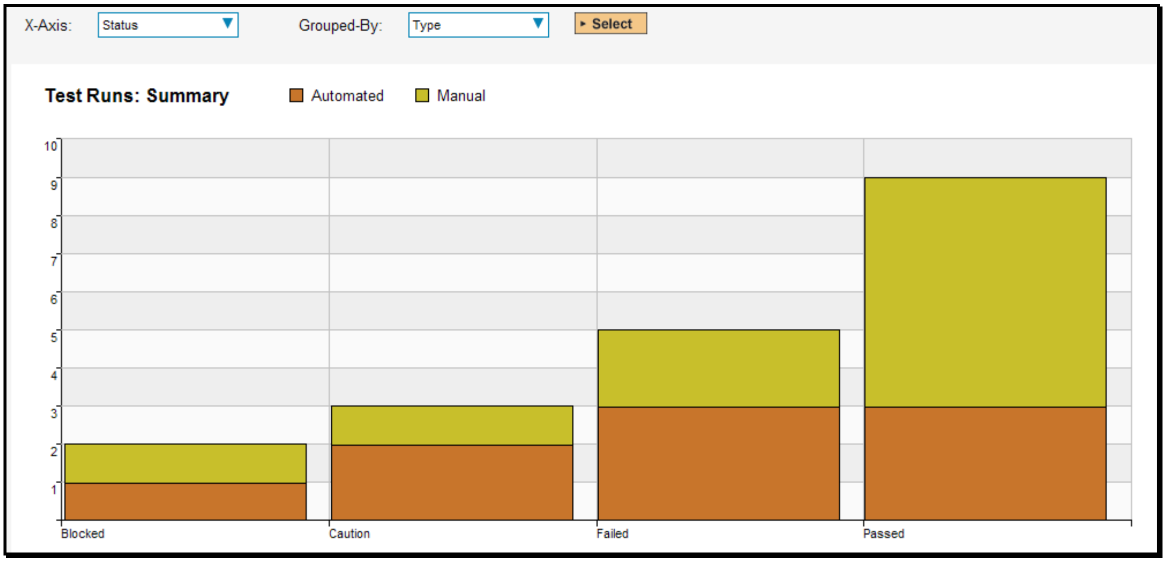
11.2.8. Test Case Summary Graph

The test case summary graph shows how many test cases are currently in a project. The number of test cases is displayed according to the criteria that you specify. You can specify the type of data displayed along the x-axis, and the test case information which is used to group the data. When you first open the graph you will be asked to pick the field that you would like to display on the x-axis and the field that you would like to group the data by. Once you have chosen the appropriate fields and clicked the <Select> button the graph will be displayed:

In this version of the report, the x-axis represents the test case execution status, and the individual bars are grouped by test case priority. Each data-value can be viewed by positioning the mouse pointer over the bar, and a “tooltip” will pop-up listing the actual data value. Clicking on the “Display Data Grid” link will display the underlying data that is being used to generate the graph.

11.2.9. Test Run Summary Graph

The test run summary graph shows how many test runs are currently in a project. The number of test runs is displayed according to the criteria that you specify. You can specify the type of data displayed along the x-axis, and the test run information which is used to group the data. When you first open the graph you will be asked to pick the field that you would like to display on the x-axis and the field that you would like to group the data by. Once you have chosen the appropriate fields and clicked the <Select> button the graph will be displayed:

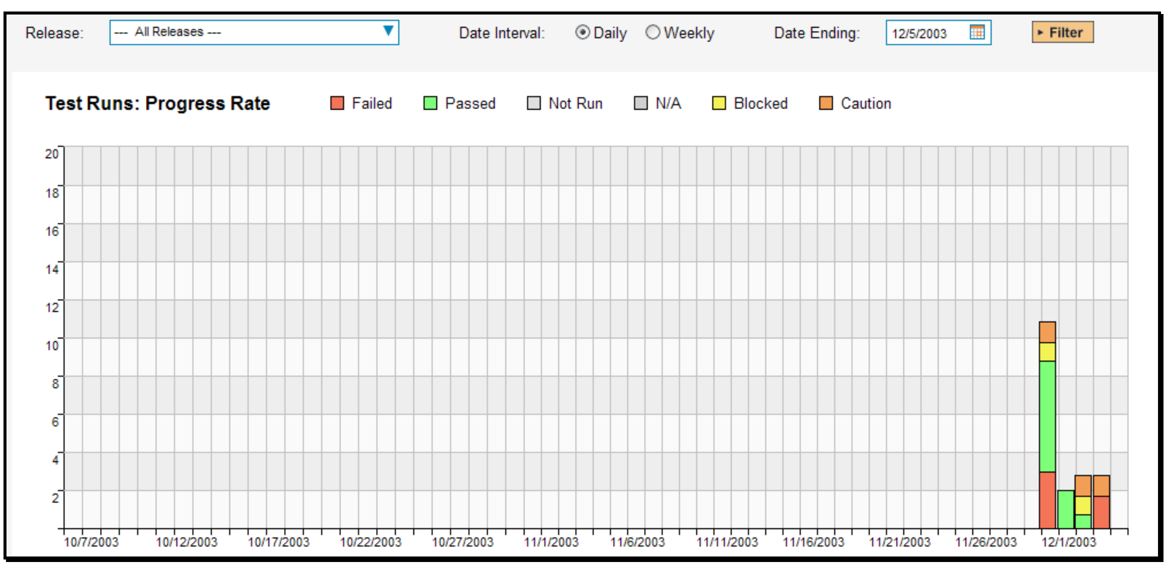


In this version of the report, the x-axis represents the test run execution status, and the individual bars are grouped by test run type. Each data-value can be viewed by positioning the mouse pointer over the bar, and a "tooltip" will pop-up listing the actual data value. Clicking on the "Display Data Grid" link will display the underlying data that is being used to generate the graph.

11.2.10. Test Run Progress Rate Graph

The test run progress rate graph shows how many tests have been executed during a period of time, and what execution status was recorded. The report can either be displayed for 60 days of data daily or for 12 months of data weekly, ending on a specified date.

The screen-shot below illustrates the progress rate report loaded with the past 60 days of test run data depicted on a daily basis:



In this version of the report, the y-axis represents the number of test runs executed in each 24 hour period, and the x-axis represents a specific day in the time-span. Each data-bar can be viewed by positioning the mouse pointer over the point, and a "tooltip" will pop-up listing the actual data value. You can filter the report by the release that the test run was executed against, and also change the ending date of the date range. By clicking on the weekly radio button, you can display the past 12 months of test run data organized on a weekly basis. Clicking on the "Display Data Grid" link will display the underlying data that is being used to generate the graph.

11.3. Incident Reports

11.3.1. Incident Summary Report

This report displays all of the incidents tracked for the current project. The incident's details are displayed in a summary list form:

Incident Summary Report

This report displays all of the incidents tracked for the current project. The incident's details are displayed in a summary list form.

Project 1: Library Information System

Sample application that allows users to manage books, authors and lending records for a typical branch library

Inc #	Name	Description	Resolution	Type	Status	Priority	Severity	Detected By	Owned By	Detected On	Last Modified	Closed On	Detected Release	Resolved Release
1	Cannot log into the application	When trying to log into the application with a valid username and password, the system throws a fatal exception		Incident	New			Fred Bloggs		01-Nov-2003	01-Dec-2003	--	1.0.0.0	1.0.1.0
2	Not able to add new author	When I try and click on the button to add a new author the system simply displays the main screen and does nothing		Incident	New			Joe P Smith		01-Nov-2003	01-Dec-2003	--	1.0.0.0	1.0.1.0
3	Clicking on link throws fatal error	When I click on the logout link, instead of logging out, I get an ASP session not valid error		Incident	New			Fred Bloggs		01-Nov-2003	01-Dec-2003	--	1.0.1.0	1.0.2.0

11.3.2. Incident Detailed Report

This printable report displays all of the incidents tracked for the current project sorted by incident number. For each individual incident, the name, type, priority, status, opener, owner and close date are displayed, along with tables containing the detailed description and resolutions as well as a tabular list of attached documents, linked requirements/incidents and the change history:

Project 1: Library Information System

Sample application that allows users to manage books, authors and lending records for a typical branch library

Inc #1 - Cannot log into the application

When trying to log into the application with a valid username and password, the system throws a fatal exception

Type:	Incident	**Priority:**	
Status:	New	**Severity:**	
Opened By:	Fred Bloggs	**Opened On:**	01-Nov-2003
Assigned To:		**Last Modified:**	01-Dec-2003
Detected In Release:	1.0.0.0	**Closed On:**	--
Resolved In Release:	1.0.1.0	**Verified In Release:**	1.0.1.0
Notes:			
Operating System:			

Associations:

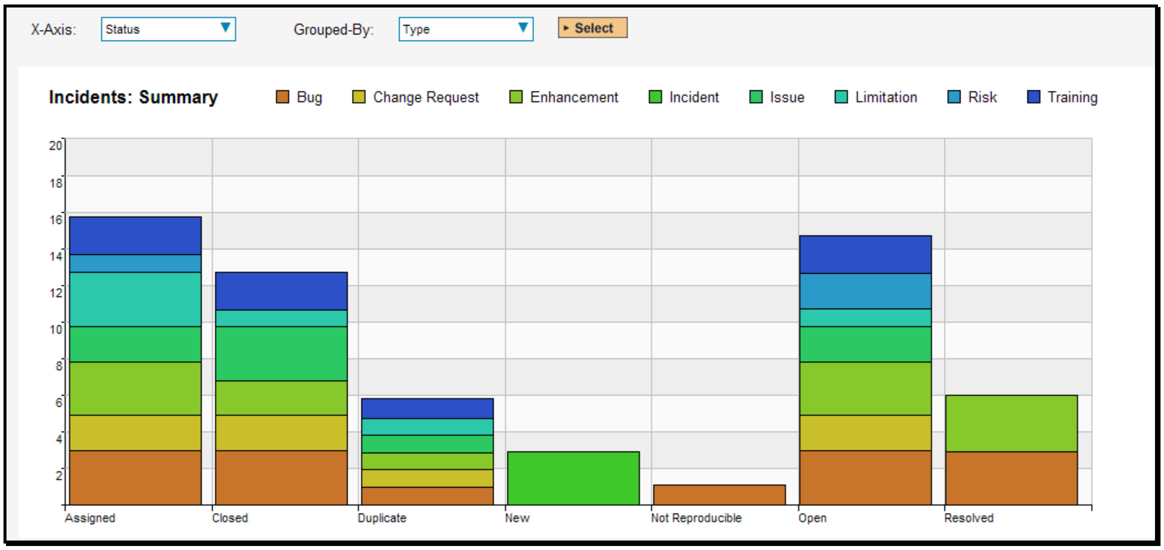
Artifact Type	Name	Created By	Comment	Date	Artifact Id
Test Run	Sample Test	Fred Bloggs	Test Run: Sample Test	01-Nov-2006	TR 9
Incident	The book listing screen doesn't sort	Joe P Smith	This incident and bug are related	16-Mar-2004	IN 6
Requirement	Ability to create new users in the system	Joe P Smith	Test Run: Sample Test	01-Dec-2003	RQ 26

File Attachments:

Filename	Description	Author	Date Uploaded
Bug Stack Trace.txt		Joe P Smith	04-May-2006
Error Logging-in Screen-shot.gif	Captured screen-shot of the error that was raised when attempting to log in to the library application	Fred Bloggs	24-Apr-2006

11.3.3. Incident Summary Graph

The incident summary graph shows how many incidents are currently in a project. The number of incidents is displayed according to the criteria that you specify. You can specify the type of data displayed along the x-axis, and the incident information which is used to group the data. When you first open the graph you will be asked to pick the field that you would like to display on the x-axis and the field that you would like to group the data by. Once you have chosen the appropriate fields and clicked the <Select> button the graph will be displayed:

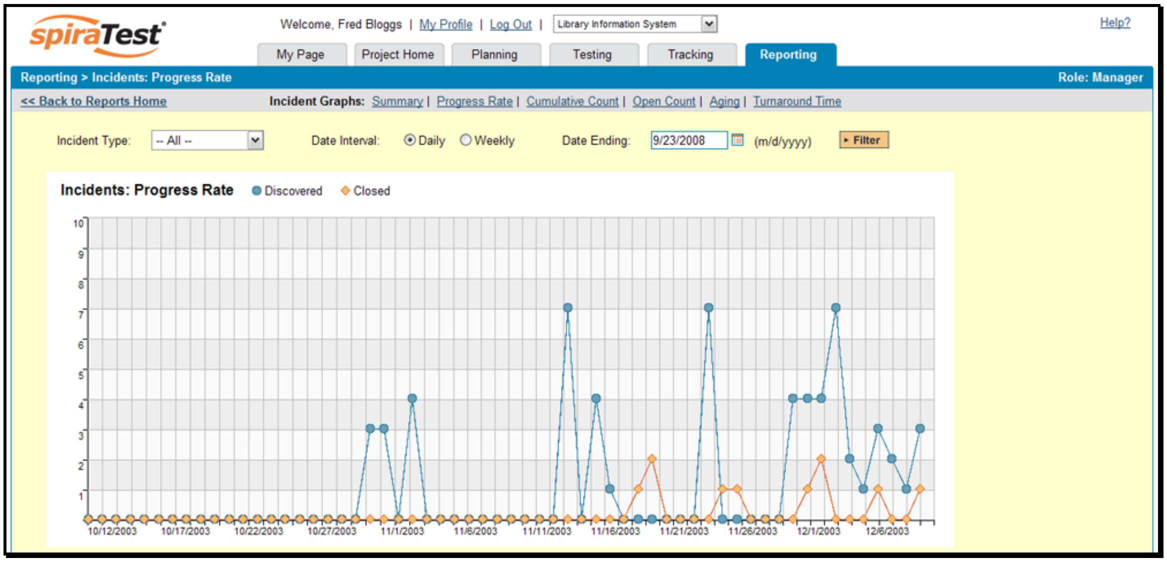


In this version of the report, the x-axis represents the incidents' status, and the individual bars are grouped by the type of incident. Each data-value can be viewed by positioning the mouse pointer over the bar, and a "tooltip" will pop-up listing the actual data value. Clicking on the "Display Data Grid" link will display the underlying data that is being used to generate the graph.

11.3.4. Incident Progress Rate Graph

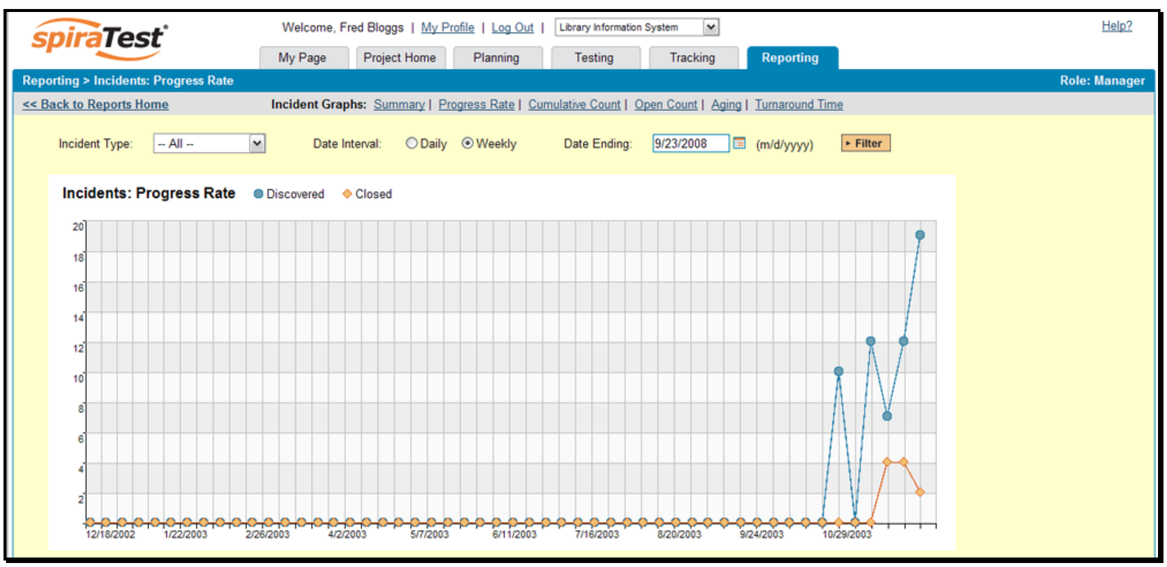
The incident progress rate chart displays the total number of incidents created and closed over a particular date-range. The report can either be displayed for 60 days of data daily or for 12 months of data weekly, ending on a specified date.

The screen-shot below illustrates the progress rate report loaded with the past 60 days of incident discovery/closure data depicted on a daily basis:



In this version of the report, the y-axis represents the number of incidents (either created or closed in a 24 hour period), and the x-axis represents a specific day in the time-span. Each data-point can be viewed by positioning the mouse pointer over the point, and a "tooltip" will pop-up listing the actual data value. You can filter the report by the type of incident, and also change the ending date of the date range (e.g. displaying only the bugs for the date range).

Similarly, by clicking on the weekly radio button, you can display the past 12 months of incident discovery data organized on a weekly basis:



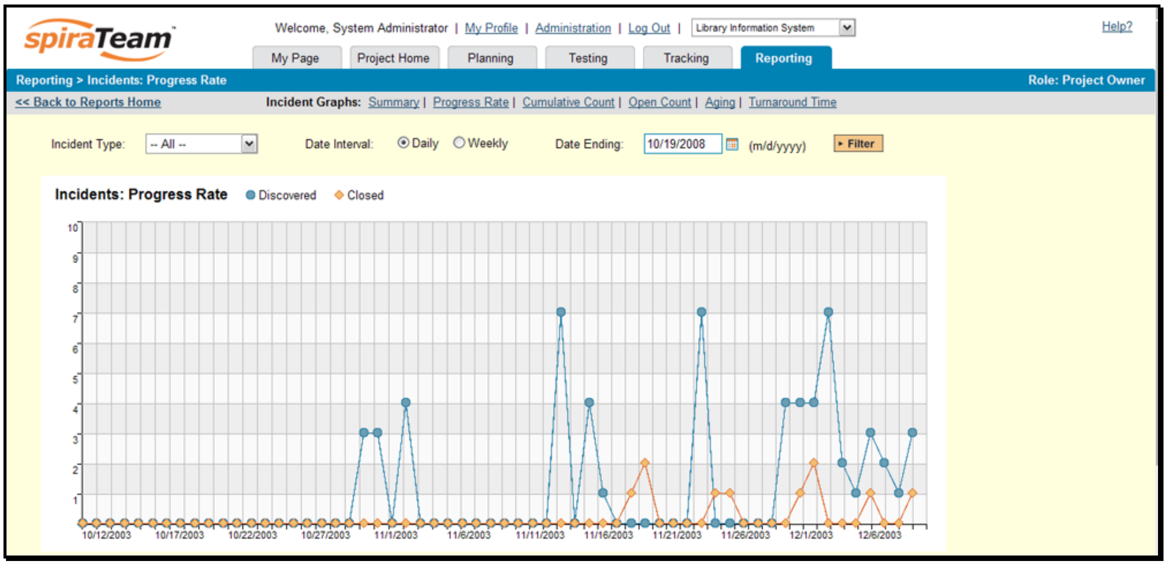
In this version of the report, the y-axis represents the number of incidents (either created or closed in a 7-day period), and the x-axis represents a specific week in the time-span. Each data-point can be viewed by positioning the mouse pointer over the point, and a "tooltip" will pop-up listing the actual data value. Again you can filter this report by the type of incident and also specify the ending date of the date-range. Clicking on the "Display Data Grid" link will display the underlying data that is being used to generate the graph.

Clicking the "Back to Project Home" hyperlink will take you back to the Project Home dashboard. In addition, the toolbar displays a list of shortcuts to other incident reports that can be displayed.

11.3.5. Cumulative Incident Count Graph

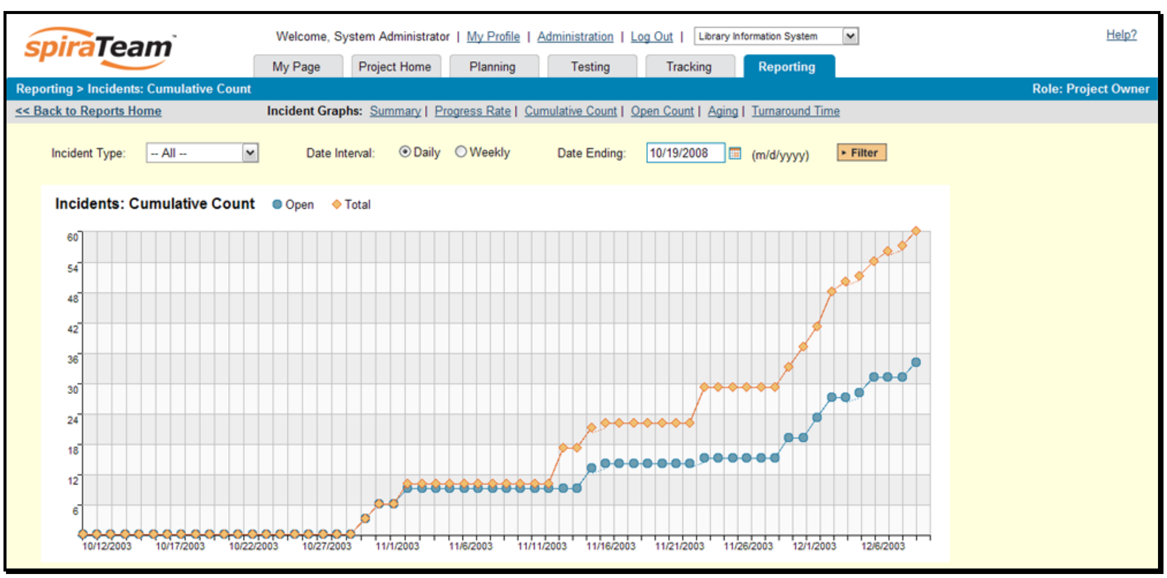
The cumulative incident count chart displays the cumulative total number of incidents logged in the system for the current project over a particular date-range. The report can either be displayed for a 60 day interval on a daily basis or for a 12 month interval of a weekly basis. The report displays two data series, one illustrating the total count of all incidents, the other the total count of all *open incidents* (i.e. with status not set to fixed or closed).

The screen-shot below illustrates the cumulative count report loaded with the past 60 days of cumulative incident count data depicted on a daily basis:



In this version of the report, the y-axis represents the number of incidents, and the x-axis represents a specific day in the time-span. Each data-point can be viewed by positioning the mouse pointer over the point, and a "tooltip" will pop-up listing the actual data value. You can also filter the type of incident being reported, as well as change the end date for the date interval.

Similarly, by clicking on the weekly radio button, you can display the past 12 months of cumulative incident count data organized on a weekly basis:

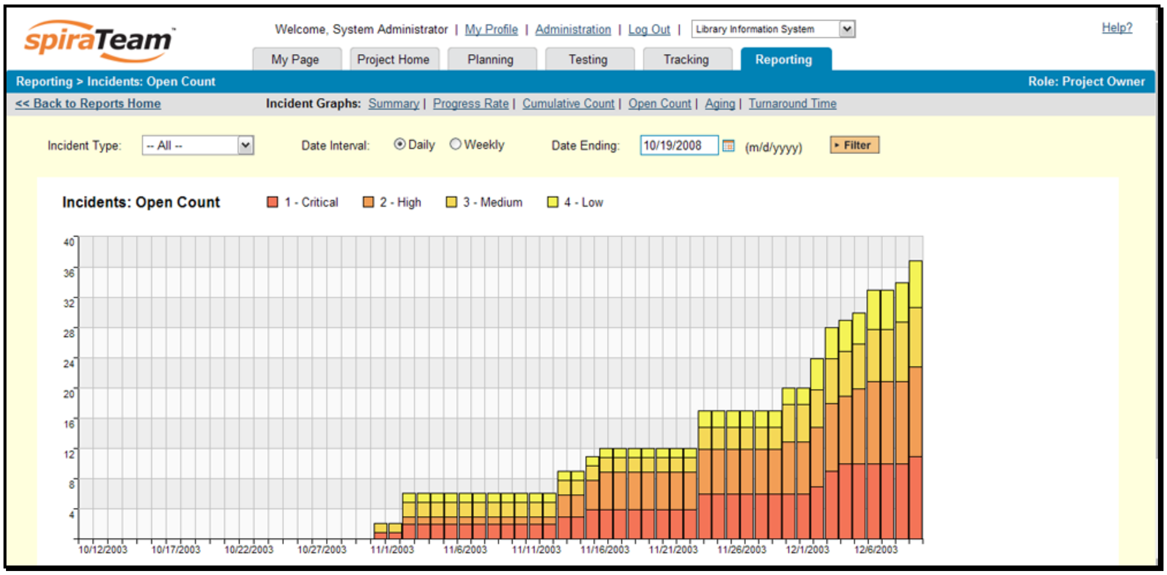


In this version of the report, the y-axis represents the number of incidents logged in a 7-day period, and the x-axis represents a specific week in the time-span. Each data-point can be viewed by positioning the mouse pointer over the point, and a "tooltip" will pop-up listing the actual data value. Again, you can also filter the type of incident being reported, as well as change the end date for the date interval. Clicking on the "Display Data Grid" link will display the underlying data that is being used to generate the graph.

Clicking the "Back to Project Home" hyperlink will take you back to the Project Home dashboard.

11.3.6. Open Incident Count Graph

The open incident count chart displays the total number of open incidents in the system for the current project over a particular date-range categorized by incident priority. The report can either be displayed for a 60 day interval on a daily basis or for a 12 month interval of a weekly basis. The screen-shot below illustrates the discovery report loaded with the past 60 days of cumulative incident count data depicted on a daily basis:

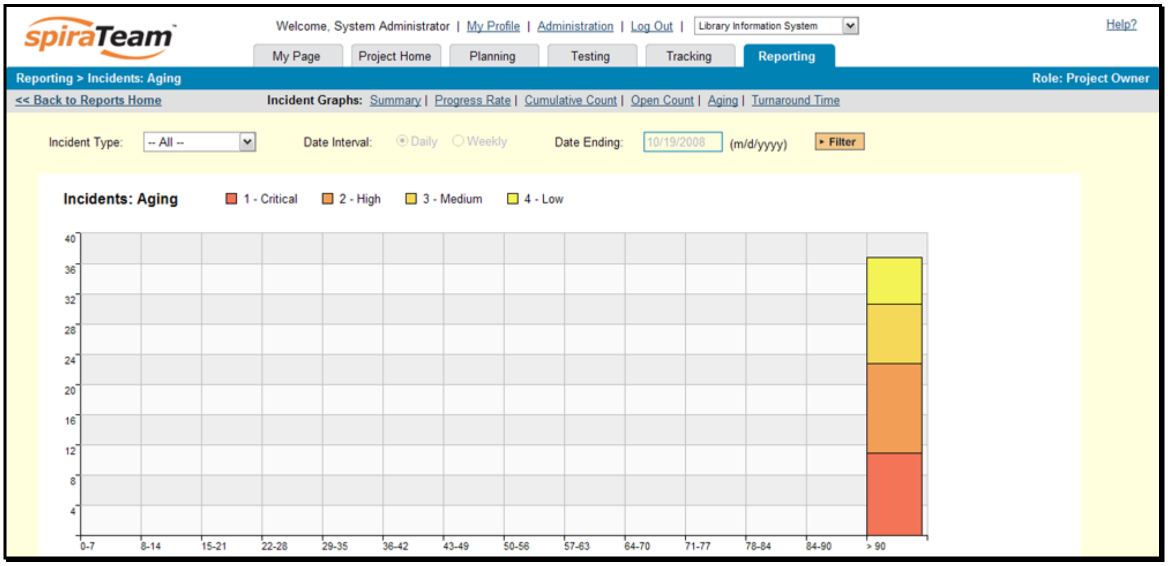


In this version of the report, the y-axis represents the number of incidents, and the x-axis represents a specific day in the time-span. The exact count of each bar in the stacked histogram can be viewed by positioning the mouse pointer over the bar, and a "tooltip" will pop-up listing the actual data value. You can also filter the type of incident being reported, as well as change the end date for the date interval. Clicking on the "Display Data Grid" link will display the underlying data that is being used to generate the graph.

Similarly, by clicking on the weekly radio button, you can display the past 12 months of open incident counts organized on a weekly basis (categorized by priority).

11.3.7. Incident Aging Graph

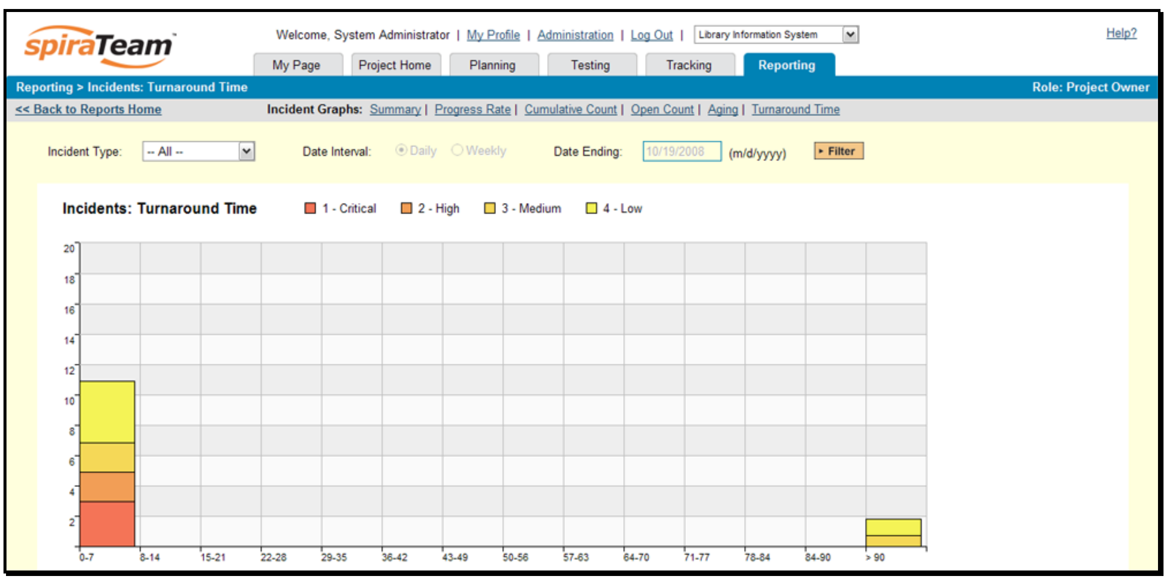
The incident aging chart displays the number of days incidents have been left open in the system. The chart is organized as a stacked histogram, with the count of incidents on the y-axis and different age intervals on the x-axis. Each bar-chart color represents a different incident priority, giving a project manager a snapshot view of the age of open project incidents by priority.



This report can be filtered by the type of incident, so for example you can see the aging of just bugs, or just issues for the project in question. Clicking on the "Display Data Grid" link will display the underlying data that is being used to generate the graph.

11.3.8. Incident Turnaround Time Graph

The incident turnaround time chart displays the number of days incidents have taken to be closed (from the time they were first raised) in the system. The chart is organized as a stacked histogram, with the count of incidents on the y-axis and different turnaround time intervals on the x-axis. Each bar-chart color represents a different incident priority, giving a project manager a snapshot view of the turnaround time of project incidents by priority.



This report can be filtered by the type of incident, so for example you can see the turnaround time of just bugs, or just issues for the project in question. Clicking on the "Display Data Grid" link will display the underlying data that is being used to generate the graph.

11.4. Task Reports

11.4.1. Task Summary Report

This report displays all of the tasks tracked for the current project. The task's details are displayed in a summary list form:

Project 1: Library Information System

Sample application that allows users to manage books, authors and lending records for a typical branch library

Task #	Name	Description	Status	Priority	Owned By	Created On	Last Modified	Release #	Requirement #	Start Date	End Date	% Complete	Est. Effort	Actual Effort
23	Write edition object insert queries		Not Started	1 - Critical	Fred Bloggs	01-Dec-2003	01-Dec-2003	1.0.0.0.0003	RQ12	11-Mar-2004	12-Mar-2004	0%	3 hours 0 mins	-
24	Develop edit author details screen		Not Started	2 - High	Joe P Smith	01-Dec-2003	01-Dec-2003	1.0.0.0.0002	RQ15	07-Mar-2004	08-Mar-2004	0%	8 hours 0 mins	-
25	Create author object update method		Not Started	2 - High	Joe P Smith	01-Dec-2003	01-Dec-2003	1.0.0.0.0002	RQ15	07-Mar-2004	08-Mar-2004	0%	5 hours 0 mins	-
26	Write author object update queries		Not Started	2 - High	Joe P Smith	01-Dec-2003	01-Dec-2003	1.0.0.0.0002	RQ15	07-Mar-2004	08-Mar-2004	0%	3 hours 0 mins	-
27	Refactor author screen to include delete button		Not Started	2 - High	Fred Bloggs	01-Dec-2003	01-Dec-2003	1.0.0.0.0003	RQ16	09-Mar-2004	10-Mar-2004	0%	6 hours 0 mins	-

11.4.2. Task Detailed Report

This report displays all of the tasks tracked for the current project. The task's details are displayed, along with a tabular list of attached documents and the change history:

Task Detailed Report

This report displays all of the tasks tracked for the current project. The task's details are displayed, along with a tabular list of attached documents and the change history.

Project 1: Library Information System

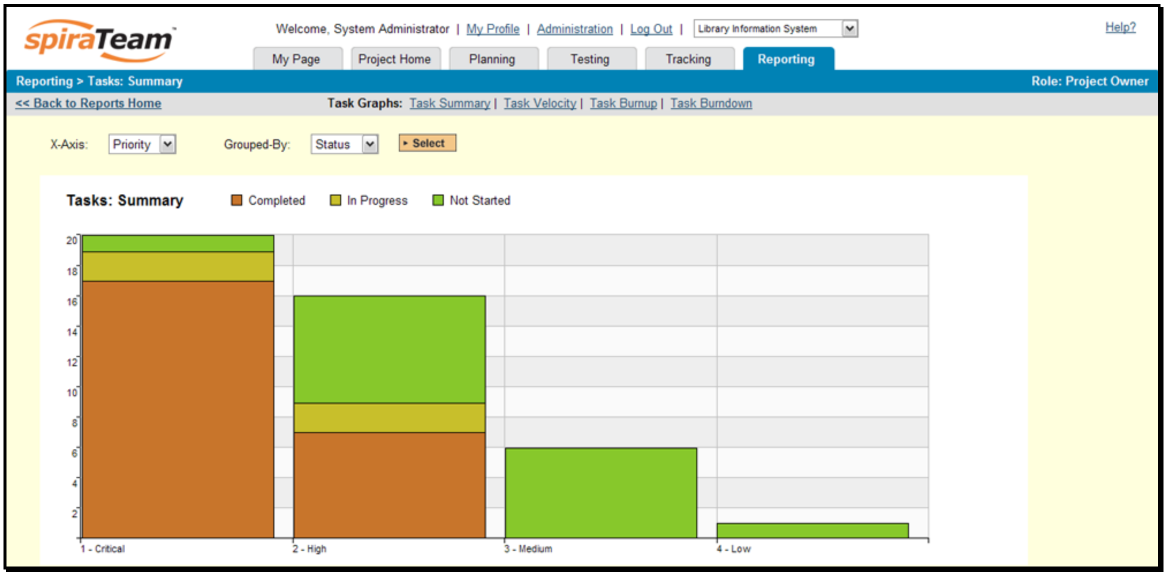
Sample application that allows users to manage books, authors and lending records for a typical branch library

Task #23 - Write edition object insert queries

Requirement ID:	RQ 12	**Status:**	Not Started
Release #:	1.0.0.0.0003	**Priority:**	1 - Critical
Assigned To:	Fred Bloggs	**Created On:**	01-Dec-2003
Start Date:	11-Mar-2004	**Last Modified:**	01-Dec-2003
End Date:	12-Mar-2004	**Estimated Effort:**	3 hours 0 mins
% Complete:	0%	**Actual Effort:**	-

11.4.3. Task Summary Chart

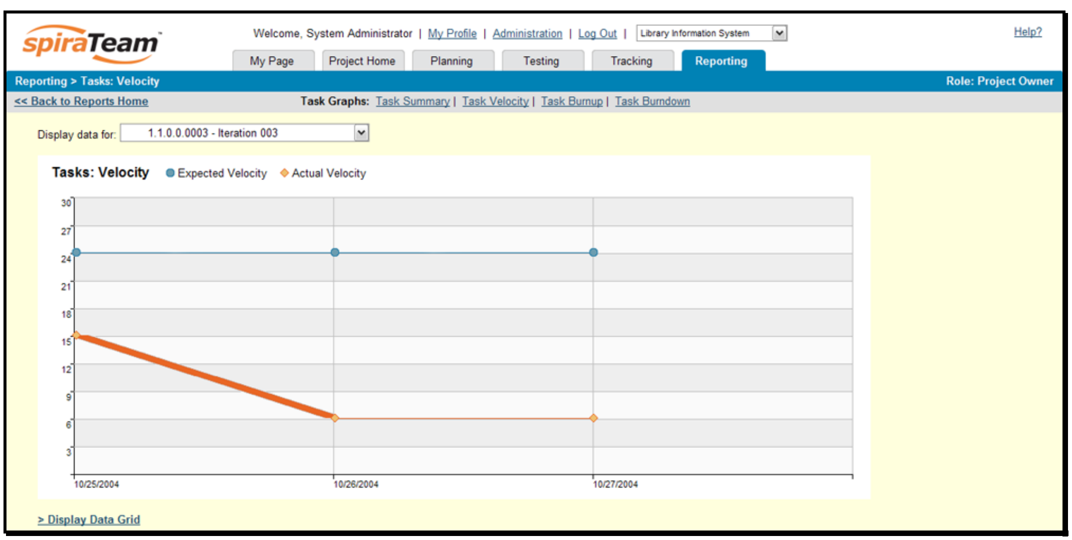
The task summary graph shows how many tasks are currently in a project. The number of tasks is displayed according to the criteria that you specify. You can specify the type of data displayed along the x-axis, and the task information which is used to group the data. When you first open the graph you will be asked to pick the field that you would like to display on the x-axis and the field that you would like to group the data by. Once you have chosen the appropriate fields and clicked the <Select> button the graph will be displayed:



In this version of the report, the x-axis represents the tasks' priority, and the individual bars are grouped by the status of task. Each data-value can be viewed by positioning the mouse pointer over the bar, and a "tooltip" will pop-up listing the actual data value. Clicking on the "Display Data Grid" link will display the underlying data that is being used to generate the graph.

11.4.4. Task Velocity Chart

The Task Velocity graph shows the total estimated and actual effort delivered in each project release and/or iteration:



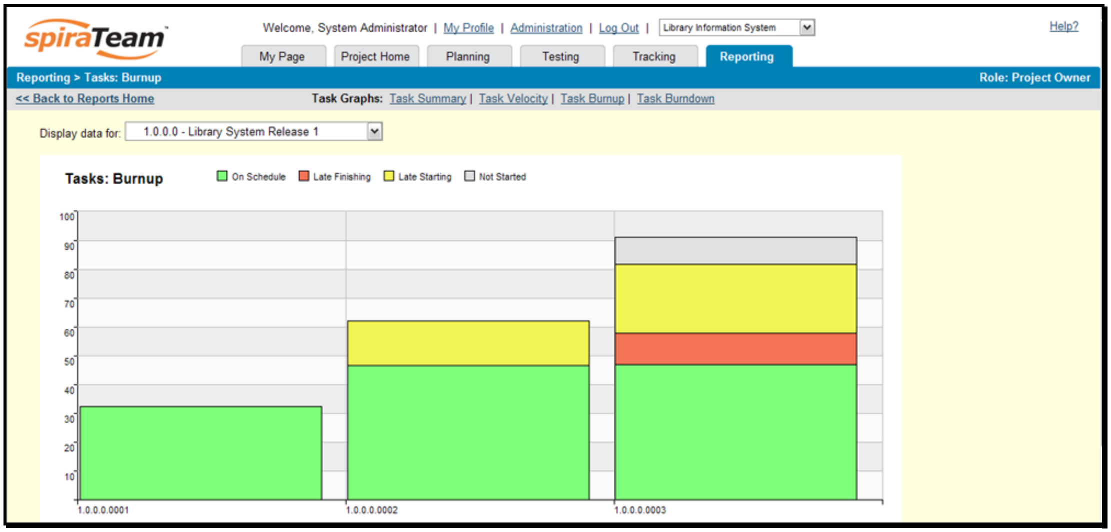
The y-axis of the graph displays the total estimated and actual effort delivered, and the x-axis can be configured to display three different levels of granularity:

- **All Releases** – This shows the total estimated and actual effort for each of the releases in the project
- **Specific Release** – This shows the total estimated and actual effort for each of the iterations in the selected release

- **Specific Iteration** – This shows the total estimated actual effort for each working day in the date-range covered by the selected iteration.

11.4.5. Task Burnup Chart

The Task Burnup graph shows the cumulative increase in work for each release/iteration in the project with the percentage of tasks that are on-schedule, late starting and late finishing indicated:

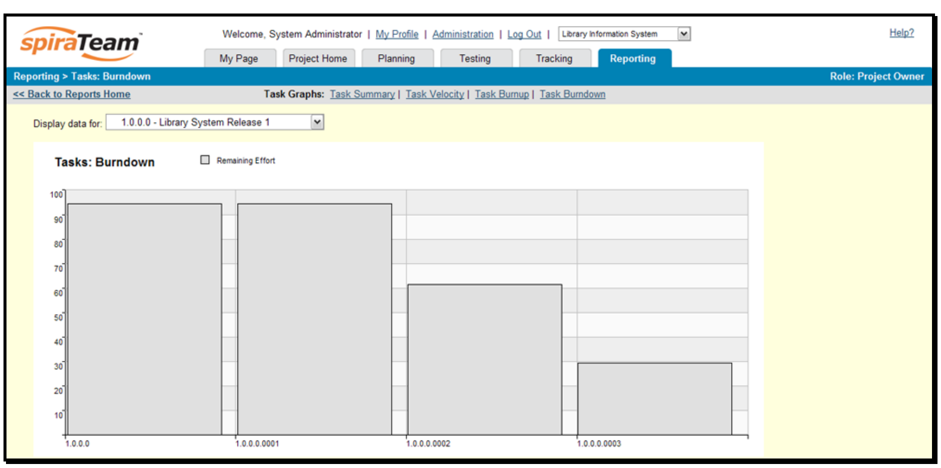


The y-axis of the graph displays the cumulative increase in work for the project, broken down by progress (on-schedule, late-finishing, later-starting or not-started), and the x-axis can be configured to display three different levels of granularity:

- **All Releases** – This shows the increase in work for each of the releases in the project
- **Specific Release** – This shows the increase in work for each of the iterations in the selected release
- **Specific Iteration** – This shows the increase in work for each working day in the date-range covered by the selected iteration.

11.4.6. Task Burndown Chart

The Task Burndown graph shows the remaining work that needs to be done for each release/iteration in the project:



The y-axis of the graph displays the total remaining work that needs to be done, and the x-axis can be configured to display three different levels of granularity:

- **All Releases** – This shows the total remaining work that needs to be done for each of the releases in the project
- **Specific Release** – This shows the total remaining work that needs to be done for each of the iterations in the selected release
- **Specific Iteration** – This shows the total remaining work that needs to be done for each working day in the date-range covered by the selected iteration.

11.5. Release Reports

11.5.1. Release Summary Report

This report displays all of the releases and iterations defined for the current project in the order they appear in the release/iteration hierarchy. The release's details are displayed in a summary list form:

Release Summary Report

This report displays all of the releases and iterations defined for the current project in the order they appear in the release/iteration hierarchy. The release's details are displayed in a summary list form.

Project 1: Library Information System

Sample application that allows users to manage books, authors and lending records for a typical branch library

General										Testing Information						
Rel #	Name	Version Number	Description	Creator	Creation Date	Iteration	Active	Start Date	End Date	# Failed	# Passed	# Blocked	# Caution	# Not Run	Task Progress	Planned Effort
1	**Library System Release 1**	1.0.0.0	This is the initial release of the Library Management System	Fred Bloggs	15-Feb-2004	N	Y	01-Mar-2004	12-Mar-2004	2	0	0	1	4	18 Tasks; 50% On Schedule, 12% Running Late, 9% Starting Late, 26% Not Started	216 hours 0 mins
2	**Library System Release 1 SP1**	1.0.1.0	This service pack fixes identified bugs and a small security vulnerability	Joe P Smith	05-May-2004	N	Y	13-Mar-2004	30-Mar-2004	0	3	1	0	3	0 Tasks; 0% On Schedule, 0% Running Late, 0% Starting Late, 0% Not Started	176 hours 0 mins

11.5.2. Release Detailed Report

This report displays all of the releases and iterations defined for the current project in the order they appear in the release/iteration hierarchy. The release's details are displayed, along with sub-tables containing the list of requirements added, mapped test cases, test runs executed, incidents resolved, attached documents, scheduled tasks and the change history:

1.1.0.0 - Library System Release 1.1

This version adds additional reporting functionality to the 1.0 version

Version #:	1.1.0.0	**Active:**	Y
Creator:	Fred Bloggs	**Creation Date:**	15-Oct-2004
Start Date:	15-Oct-2004	**Planned Effort:**	168 hours 0 mins
End Date:	27-Oct-2004	**Available Effort:**	82 hours 0 mins
# Resources:	3	**Task Est. Effort:**	86 hours 0 mins
Non-Working Days:	6	**Actual Effort:**	85 hours 40 mins
Notes:			
Operating System:			

Requirements Added:

Req #	Name	Status	Priority
RQ1	**Functional System Requirements**	In Progress	
RQ2	**Online Library Management System**	In Progress	
RQ3	**Book Management**	Completed	1 - Critical
RQ7	Ability to associate books with different subjects	Completed	1 - Critical
RQ8	Ability to associate books with different authors	Completed	1 - Critical
RQ9	Ability to associate books with different editions	Completed	1 - Critical
RQ13	**Author Management**	In Progress	2 - High
RQ17	Ability to link authors to their contact information	Requested	2 - High

Mapped Test Cases:

Test #	Name	Status	Last Execution Date
TC4	Ability to create new author	Failed	01-Dec-2003
TC2	Ability to create new book	Failed	04-Dec-2003
TC5	Ability to edit existing author	Blocked	01-Dec-2003

11.5.3. Release Plan Report

This report displays a complete work breakdown structure of the project from a release perspective, including all releases, iterations, requirements, tasks and incidents organized by schedule:

Project 1: Library Information System

Sample application that allows users to manage books, authors and lending records for a typical branch library

ID #	Name	Type	Status	Priority	Owner	Start Date	End Date	% Complete	Plan Effort	Est. Effort	Actual Effort
RL1	**1.0.0.0 - Library System Release 1**	**Release**				**01-Mar-2004**	**12-Mar-2004**		**216 hours 0 mins**	**94 hours 0 mins**	**93 hours 30 mins**
RQ4	Ability to add new books to the system	Requirement	Completed	1 - Critical	Joe P Smith				15 hours 0 mins	16 hours 0 mins	15 hours 30 mins
RQ5	Ability to edit existing books in the system	Requirement	Completed	1 - Critical	Joe P Smith				15 hours 0 mins	16 hours 0 mins	16 hours 50 mins
RQ6	Ability to delete existing books in the system	Requirement	Completed	1 - Critical	Fred Bloggs				14 hours 0 mins	16 hours 0 mins	15 hours 10 mins
RQ12	Ability to create different editions	Requirement	In Progress	1 - Critical	Fred Bloggs				-	16 hours 0 mins	16 hours 0 mins
RQ15	Ability to edit existing authors in the system	Requirement	Planned	2 - High	Fred Bloggs				15 hours 0 mins	16 hours 0 mins	16 hours 0 mins
RQ16	Ability to delete existing authors in the system	Requirement	In Progress	2 - High	Fred Bloggs				10 hours 0 mins	14 hours 0 mins	14 hours 0 mins
RL2	**1.0.1.0 - Library System Release 1 SP1**	**Release**				**13-Mar-2004**	**30-Mar-2004**		**176 hours 0 mins**	-	-
IN1	*Cannot log into the application*	*Incident*	*New*			--	--	*0 %*		-	-
IN2	*Not able to add new author*	*Incident*	*New*			--	--	*0 %*		-	-
IN7	*Cannot add a new book to the system*	*Bug*	*Assigned*	*1 - Critical*	*Joe P Smith*	*06-Nov-2003*	--	*25 %*		*0 hours 20 mins*	-
RL11	1.0.1.0.0001 - Iteration 001	Iteration				13-Mar-2004	20-Mar-2004		80 hours 0 mins	-	-
RL12	1.0.1.0.0002 - Iteration 002	Iteration				21-Mar-2004	24-Mar-2004		48 hours 0 mins	-	-
RL13	1.0.1.0.0003 - Iteration 003	Iteration				25-Mar-2004	30-Mar-2004		64 hours 0 mins	-	-
RL3	**1.0.2.0 - Library System Release 1 SP2**	**Release**				**01-Apr-**	**30-Apr-**		**352 hours 0**	-	-

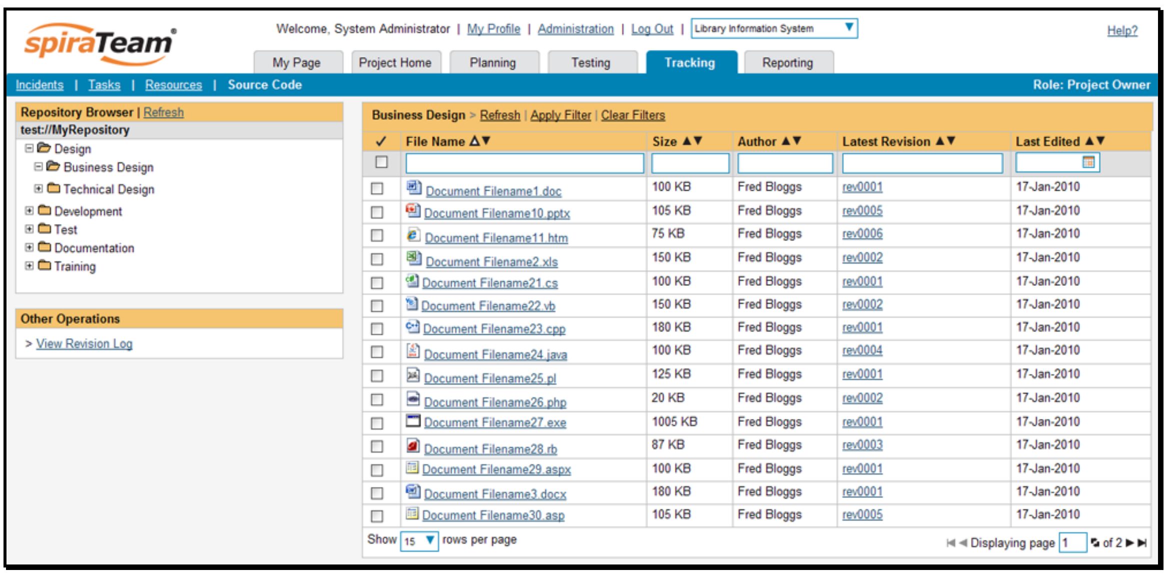
12. Source Code

This section outlines the source code integration features of SpiraPlan® and SpiraTeam® that can be used to browse the source code repository associated with a particular project and link artifacts in SpiraTeam to revisions / commits made in the source code repository. This functionality allows project members to quickly view files in the repository through a convenient web interface and also to see the end-to-end traceability from requirements, tasks and incidents to the code changes that addressed the requirement, fulfilled the task or resolved the incident

The software can be integrated with a variety of different version control / Software Configuration Management (SCM) systems by means of different plug-ins. This section will outline the general features irrespective of the type of version control provider being used. For details on using a specific provider (e.g. Subversion) please refer to the separate *SpiraPlan/Team Version Control Integration Guide*. This section also assumes that an administrator has already configured the project to be integrated with the version control provider. The steps for using the administrative interface are described in the separate *SpiraTeam Administration Guide*.

12.1. Source Code File List

When you click on the Tracking > Source Code link on the global navigation bar, you will initially be taken to the source code repository file list screen illustrated below:

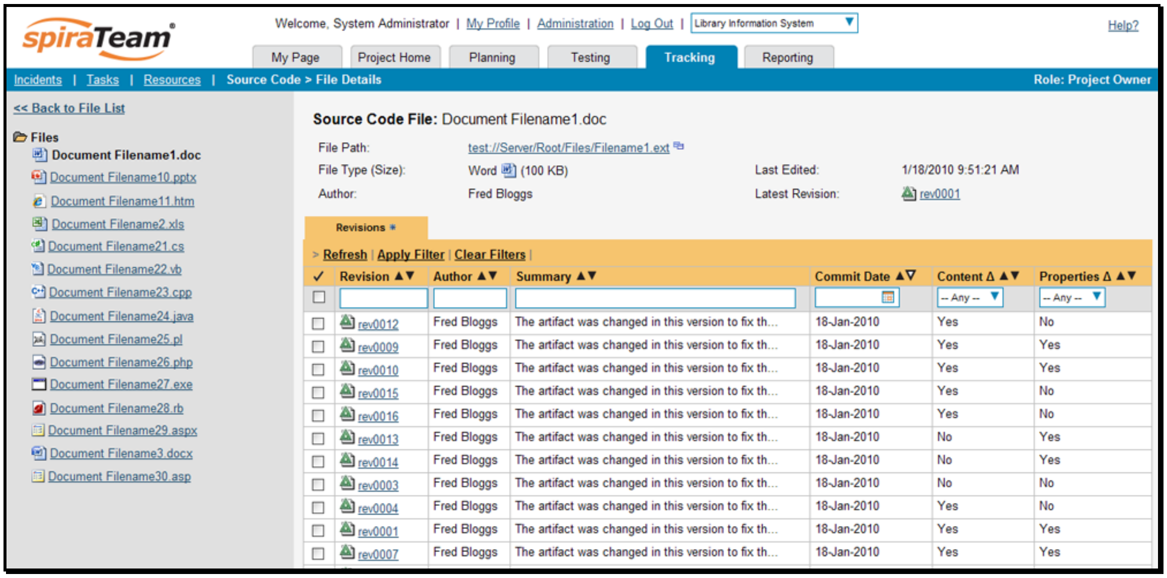


This screen consists of three main sections:

- The top left-hand pane displays a hierarchical list of the various folders that exist in the source code repository. Clicking on the [+] expand icon will expand the child folders and clicking on the name of the folder will display the list of files in the folder in the main pane to the right.
- The main right-hand pane displays a list of all the files contained within the currently selected folder. This list can be filtered and sorted, and you can choose how many rows of documents to display on the page at one time.
- The bottom left-hand pane contains the option to view the overall revision log for the project, clicking on that will display the revision log page (see section 12.3 for details).

12.2. Source Code File Details

When you click on a file in the source code file list described above, you are taken to the file details page illustrated below:



This page is made up of three areas; the left pane is for navigation, the upper part of the main pane contains the details of the file, and the bottom part of the right pane contains the list of file revisions stored in the version control system.

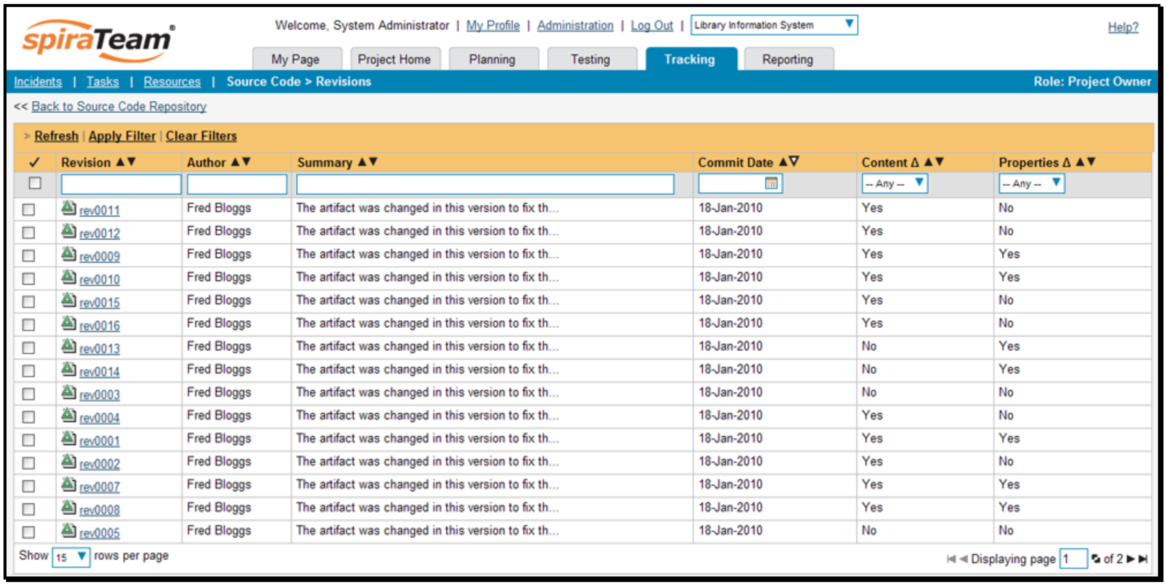
The navigation pane consists of a link that will take you back to the source code file list, as well as a list of other files in the current folder. This latter list is useful as a navigation shortcut; you can quickly view the detailed information of all the peer files by clicking on the navigation links without having to first return to the main file list page.

The top part of the main pane allows you to view the details of the particular file in the version control system. Clicking on the “File Path” hyperlink will actually open the file in a separate window, and depending on the type of file, it may display in the page or prompt you to download it to your local computer. The “Latest Revision” hyperlink allows you to view details of the latest revision (see section 12.4 below).

The lower part of the main pane displays the list of different revisions that exist for the current file. Each revision in the list is displayed with its name, a description of what changed in the revision, the name of the person who committed the revision, and whether the revision was a change of the actual content, or just a change of the properties of the content. Clicking on the hyperlink for the revision name will take you to the Revision Details page for that revision (see section 12.4 below).

12.3. Source Code Revision List

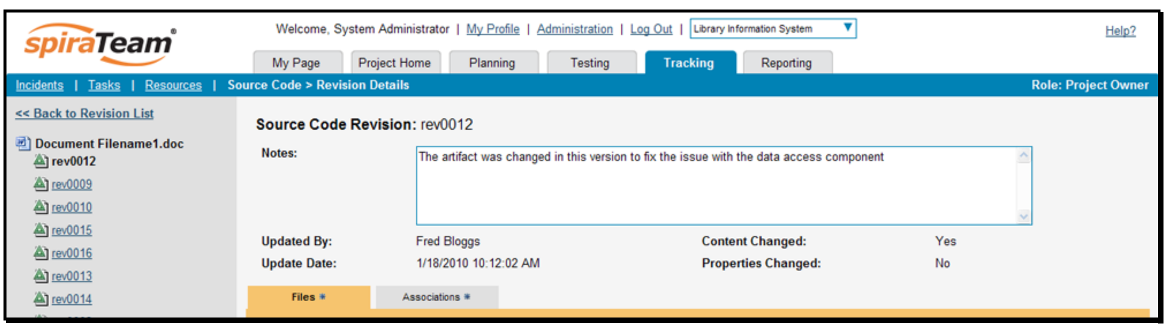
If you click on the “View Revision Log” hyperlink on the main Source Code page, it will take you to the Revision List page that displays all the revisions made to the project in a sortable, filterable list:



Each revision in the list is displayed with its name, a description of what changed in the revision, the name of the person who committed the revision, and whether the revision was a change of the actual content, or just a change of the properties of the content. Clicking on the hyperlink for the revision name will take you to the Revision Details page for that revision (see section 12.4 below).

12.4. Source Code Revision Details

When you click on a revision hyperlink in either the project revision log or the file revisions tab described above, you are taken to the revision details page illustrated below:



This page is made up of three areas; the left pane is for navigation, the upper part of the main pane contains the details of the revision, and the bottom part of the right pane contains the list of files that were changed in this revision and the list of artifacts that the revision is associated with.

The navigation pane consists of a link that will take you back to the source code revision list, as well as a list of other revisions associated with the current file. This latter list is useful as a navigation shortcut; you can quickly view the detailed information of all the peer revisions by clicking on the navigation links without having to first return to the main revision list page.

The top part of the main pane allows you to view the details of this revision in the version control system, including the description of what was changed, the date that the change was made, and the name of the person who made the change.

The lower part of the main pane can be switched between two different views by clicking the appropriate tab. Initially the pane will be in “Files” mode, but it can be switched to “Associations” as well. The functionality in each of these two views is described below:

12.4.1. Revision Files

This view displays the list of files that were changed in the current revision:

Files | Associations

> Refresh | Apply Filter | Clear Filters |

✓	File Name	Size	Author	Latest Revision	Action	Last Edited
☐						
☐	Document Filename1.doc	100 KB	Fred Bloggs	rev0001	Added	18-Jan-2010
☐	Document Filename10.pptx	105 KB	Fred Bloggs	rev0005	Deleted	18-Jan-2010
☐	Document Filename11.htm	75 KB	Fred Bloggs	rev0006	Replaced	18-Jan-2010
☐	Document Filename2.xls	150 KB	Fred Bloggs	rev0002	Added	18-Jan-2010
☐	Document Filename21.cs	100 KB	Fred Bloggs	rev0001	Undefined	18-Jan-2010

Each file in the list is displayed with its name, the file-size, who made changes to the file, what action was performed on the file (added, deleted, replaced, updated, etc.) and the most revision that exists for that file. Clicking on the filename will take you to the appropriate file details page (see section 12.2), and clicking on the revision hyperlink will take you the appropriate revision.

12.4.2. Revision Associations

This view displays a list of the SpiraTeam artifacts in the current project that are associated with the current revision. This allows you to see which requirements, incidents or tasks were affected by this specific change to the source code:

Files | Associations

Date	Artifact Name	Created By	Comment	Artifact Type	Artifact #
18-Jan-2010	Ability to edit existing books in the system	Fred Bloggs	This requirement was implemented in this revision	Requirement	RQ000005
18-Jan-2010	Develop new book entry screen	n/a	This task was completed in this revision	Task	TK000001

Clicking on the hyperlink for the artifact will take you to the appropriate artifact page inside the project (assuming your user has permissions to access that information). Note that these associations cannot be modified in SpiraTeam as they are creating directly inside the version control system. If you want to change/add associations, please refer to the appropriate section of the *SpiraPlan/Team Version Control Integration Guide*.

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