



CÁTEDRA IBM-RATIONAL



# Rational Team Concert

Quick Start Tutorial

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## **1. Introduction**

IBM Rational Team Concert integrates task tracking, source control, and agile planning with continuous builds and a configurable process to adapt to the way you work. This tutorial is based on version 3.0.1.1 of RTC using the scrum template and the Eclipse client.

The objective of this tutorial is to explain the basic features and helps getting started with Rational Team Concert. More information can be found in the online library of Jazz.net:  
<https://jazz.net/library>

If you have comments or questions regarding this document, Jazz or Rational Requirements Team Concert, please contact **catedra.ibm.fiupm@gmail.com**

## 2. Terminology

Change set: a repository object that collects a related group of file, folder, and symbolic link modifications within a component.

Iteration: Projects are organized into a series of development periods called iterations. Each timeline contains a hierarchy of iterations, which can define start and end dates.

Process: the collection of roles, practices, rules, and guidelines that are used to organize and control the flow of work. The project process is defined in a project area and can be further customized in a team area.

Project area: A system representation of a software project. The project area defines the project deliverables, team structure, process, and schedule.

Report: A set of data deliberately laid out to communicate business information.

Roles: Roles identify the functions of team members. Permissions for specific operations can be assigned to roles at the project level or within a team area.

Sandbox: An area on a file system where a developer can modify and test source code in isolation, before returning it to the source control component and sharing it with other developers.

Snapshot: A record of the data in the data warehouse that is used for reporting.

Tag: An identifier that groups related artifact.

Team area: The structure of the project teams is defined by a hierarchy of team areas. Use team areas to manage team membership, roles assignments, and team artifacts.

Timeline: represents an area of activity within a project that typically has its own schedule, deliverables, teams, and process.

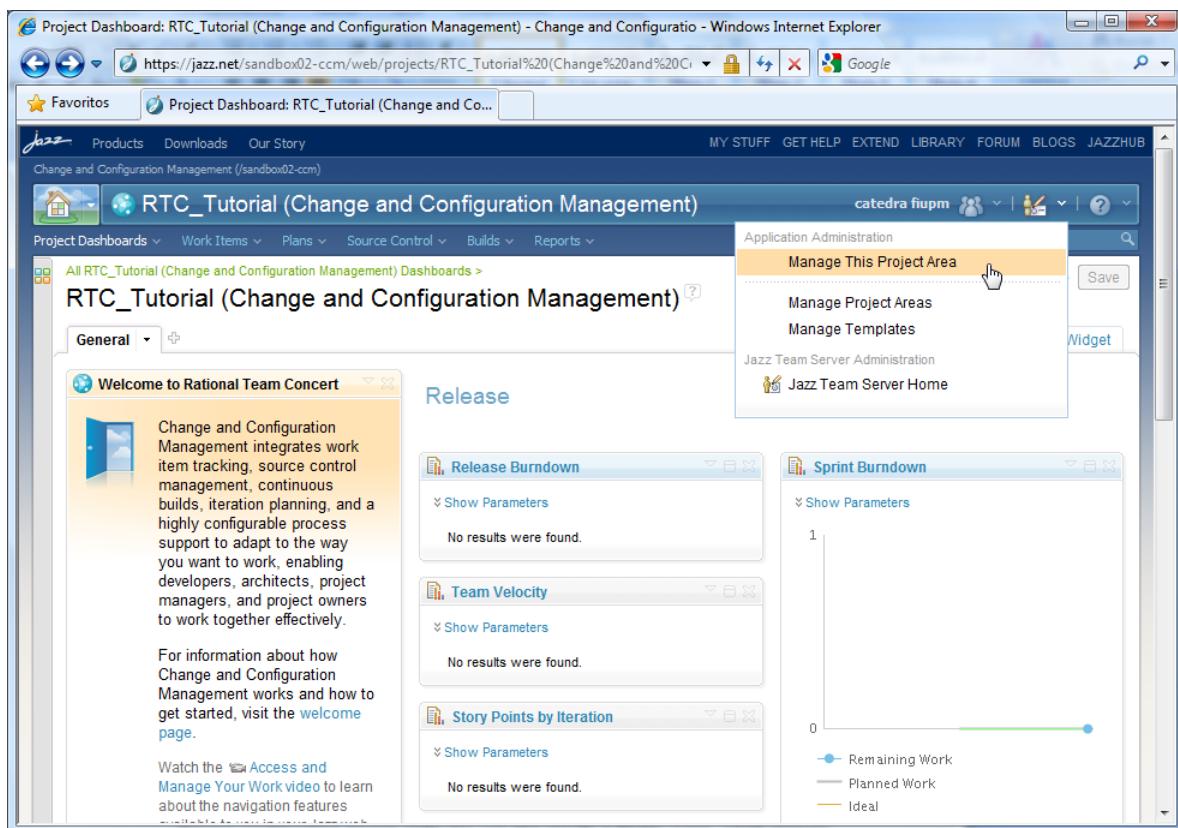
Work item category: Work item categories group work items by the various components or functional areas of your project. Each category is associated with a team area whose members are responsible for developing that component.

### 3. Project Area Preparation

Before the start of a project it is advisable to configure the team and the process. Although these tasks can also be performed in the Eclipse client, this section uses the web client.

All of the following tasks require the user to go to the **Application Administration** page, which can be done as follows:

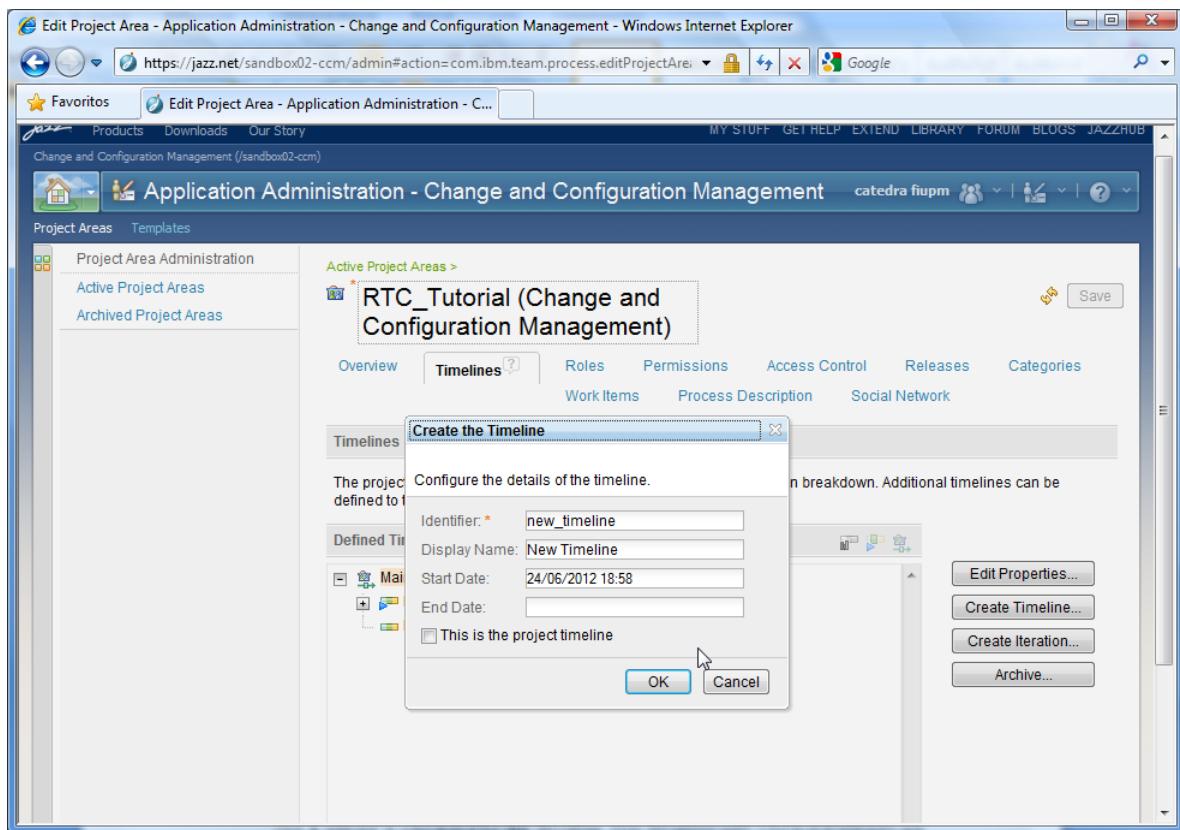
1. Click on the Administration icon  and then click **Manage This Project Area**



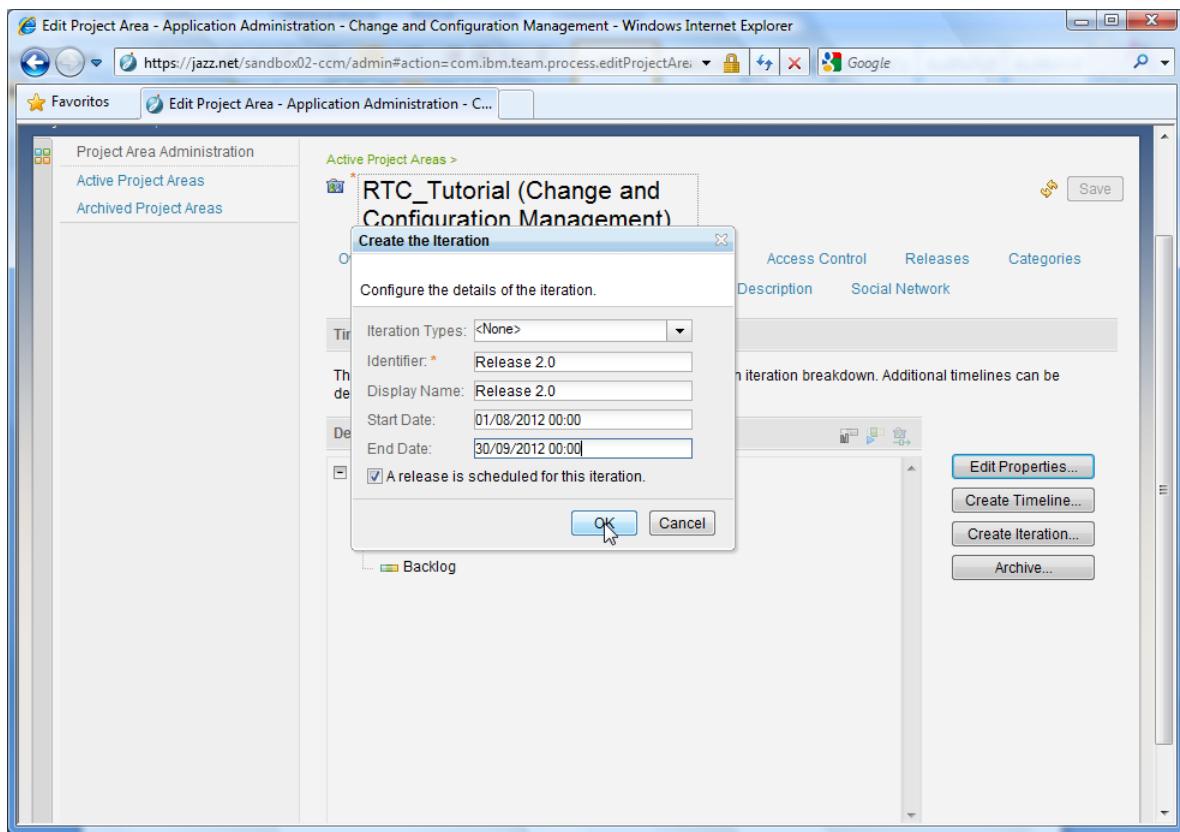
#### 3.1 Defining Timelines and Iterations

When a project area is created it normally has a default timeline, but you can create additional timelines as well as a hierarchy of iterations for each of them.

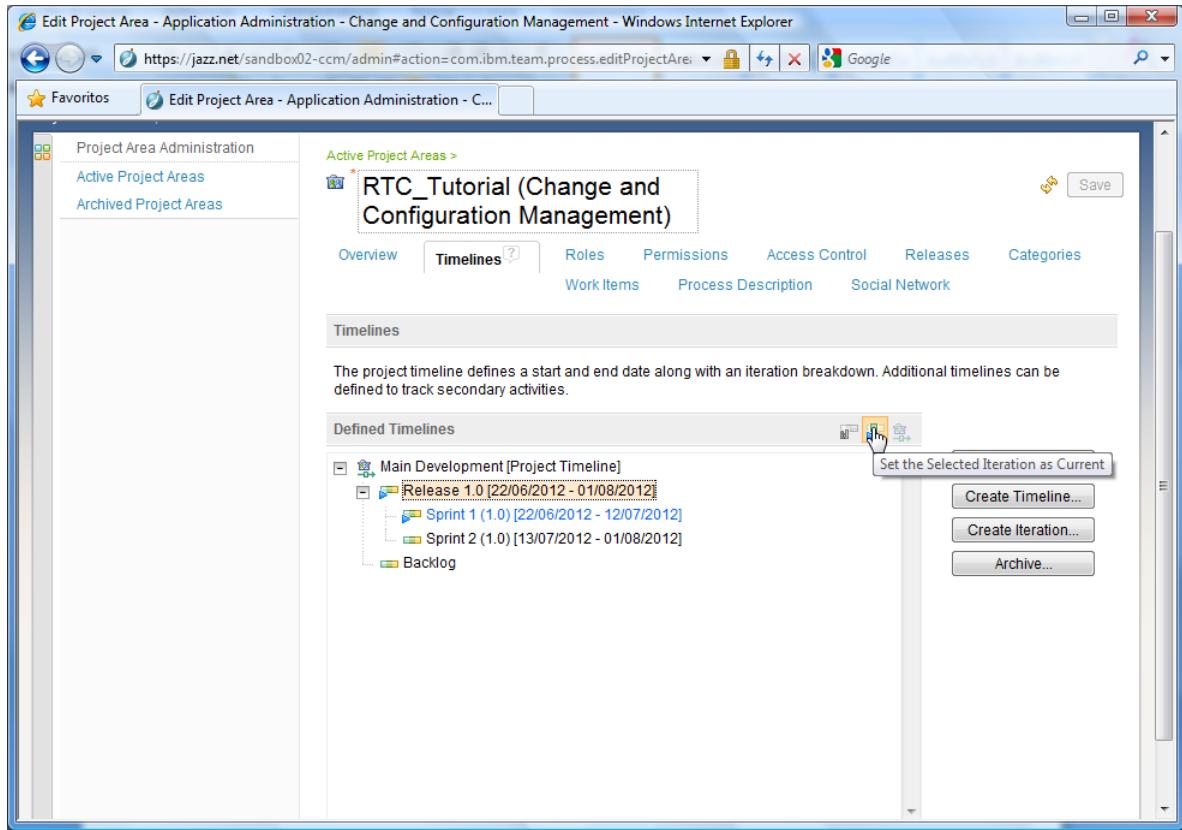
1. On the Application Administration page of the web client, click the **Timelines** tab.
2. To create a timeline, click **Create Timeline**. Specify an identifier, which appears in the Process Configuration Source code. You can also specify a display name, which appears wherever the timeline appears in the user interface. If you do not specify a display name, the identifier is used in the user interface. You can enter start and end dates for the timeline, and designate the timeline as the project timeline. Click **OK**. You cannot nest timelines.



3. To create an iteration, select the timeline or iteration within which to create the iteration, then click **Create Iteration**. Specify an identifier and, optionally, a display name. Optionally, enter start and end dates for the iteration. To enable the iteration for an iteration plan, click **A release is scheduled for this iteration**. Only iterations with scheduled releases are eligible for iteration plans. Click **OK**.



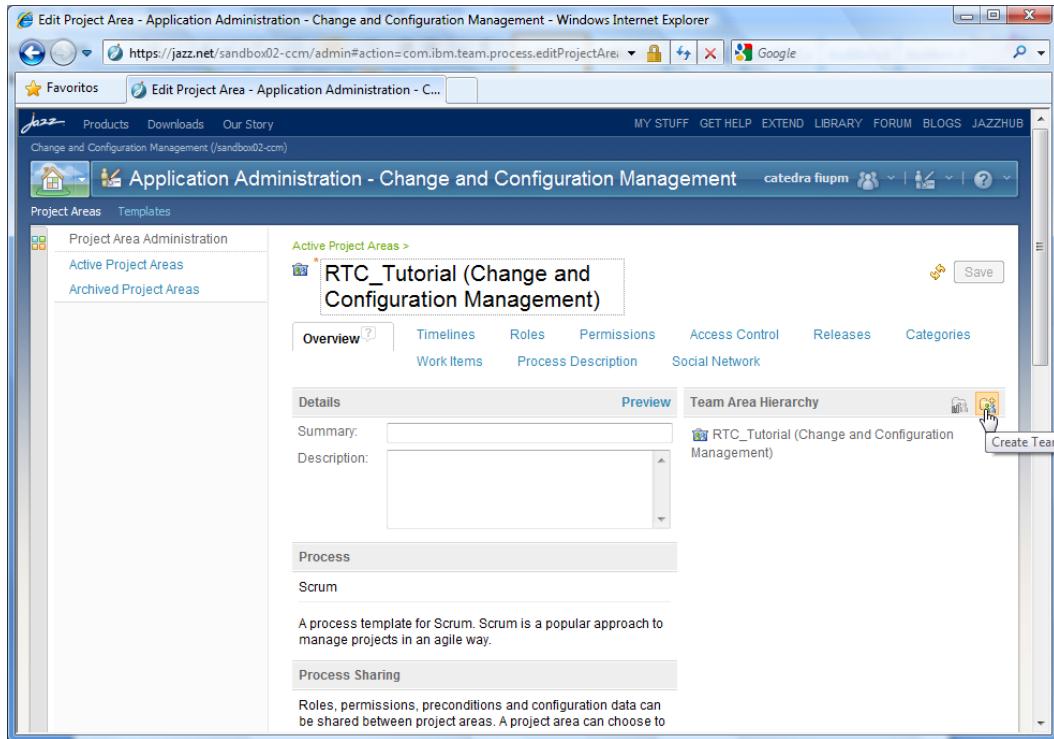
4. To set an iteration as the current iteration, select it and click the **Set the Selected Iteration as Current** icon.



## 3.2 Creating Team Areas

Team areas can be created to assign users in particular roles for work on a timeline or a particular set of deliverables. You can create a team area within an existing project area or another team area to establish a team hierarchy.

1. On the Application Administration page of the web client, click the **Overview** tab.
2. In the Team Area Hierarchy pane, click **Create Team**.

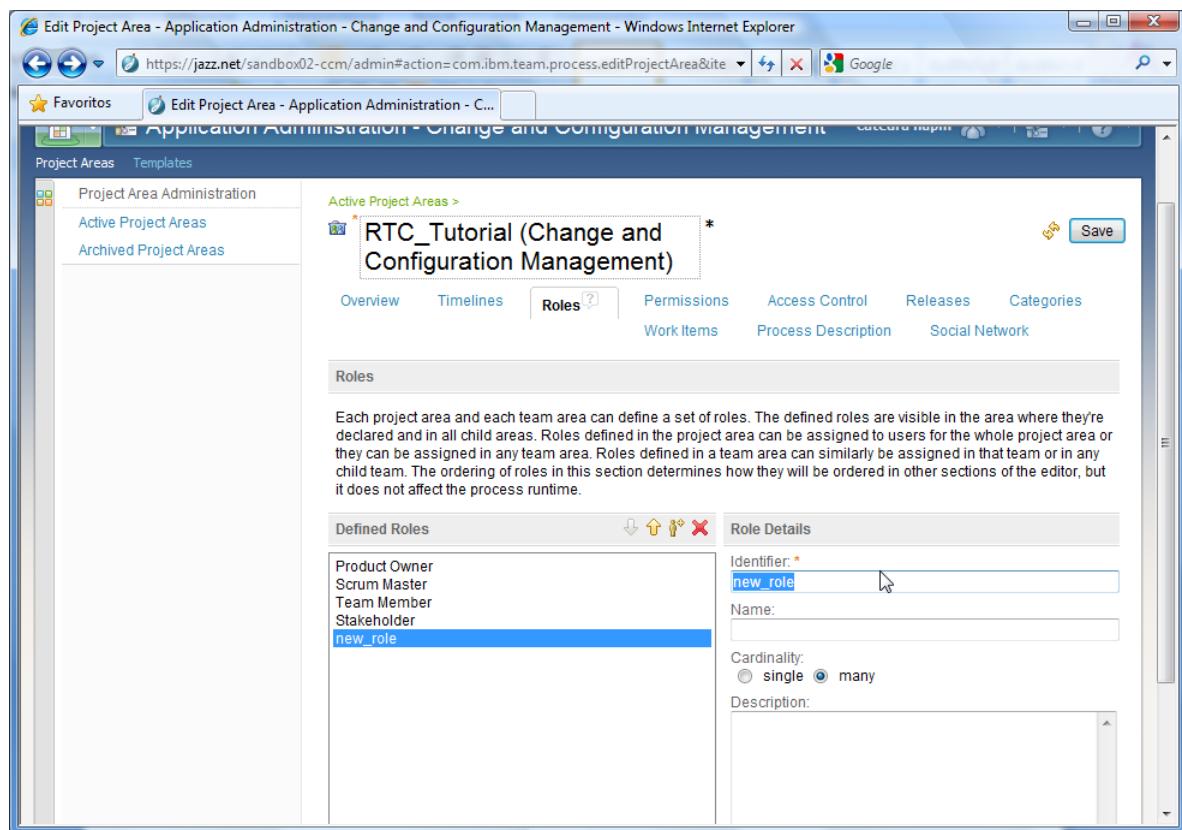


3. In the **Team Area Name** field, enter a team name.
4. Optional: To change the team area timeline, in the **Timeline** field, select a timeline from the list.
5. Optional: To add a user to the team:
  - a. In the Members or Administrators pane, click **Add**.
  - b. In the Contributor Selection window, enter the name of a user to search for, or click **Show All**. Remember to use the name or last name of the user instead of the user id.
  - c. In the Matching users pane, select a user.
  - d. Click **Add**.
6. Add an optional summary and description for the team and click **Save**.

### 3.3 Defining Roles

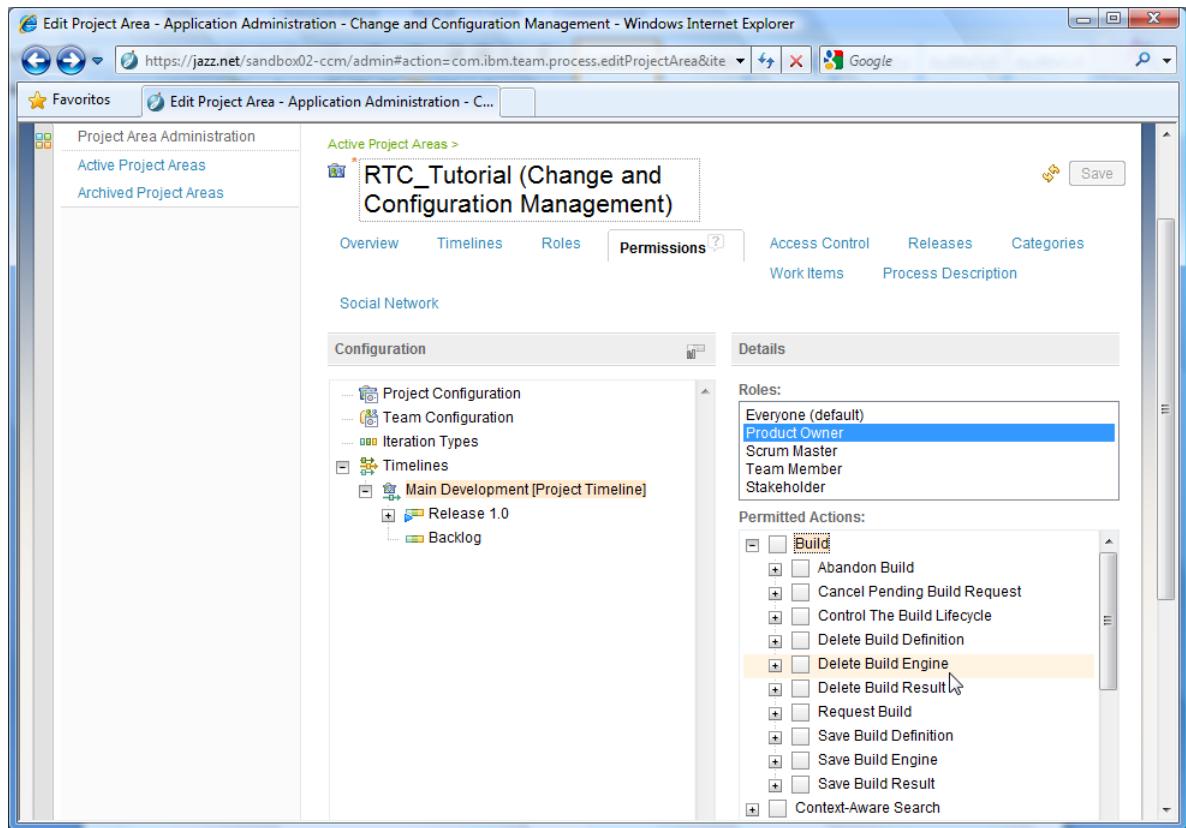
As part of the process definition, RTC allows to define new roles.

1. On the Application Administration page of the web client, click the **Roles** tab.
2. Do one of the following:
  - To add a role, click the **Add Role** icon. Enter an identifier for the role. This ID is used in the process configuration code, and in the **Role Details** lists when you add members to a team. Optionally, enter a name for the role. To indicate that the role is intended to be assigned to only one team member, set the **Cardinality** attribute to **single**. To indicate that the role is intended to be assigned to multiple team members, set the **Cardinality** attribute to **many**. Optionally, enter a description of the role in the Description field.
  - To remove a role, select it and click the **Remove Role** icon.



3. Click **Save** to save the changes to your project area.
4. To modify Permissions of a role, click the **Permissions** tab.
5. In the Configuration pane, select the timeline or iteration.

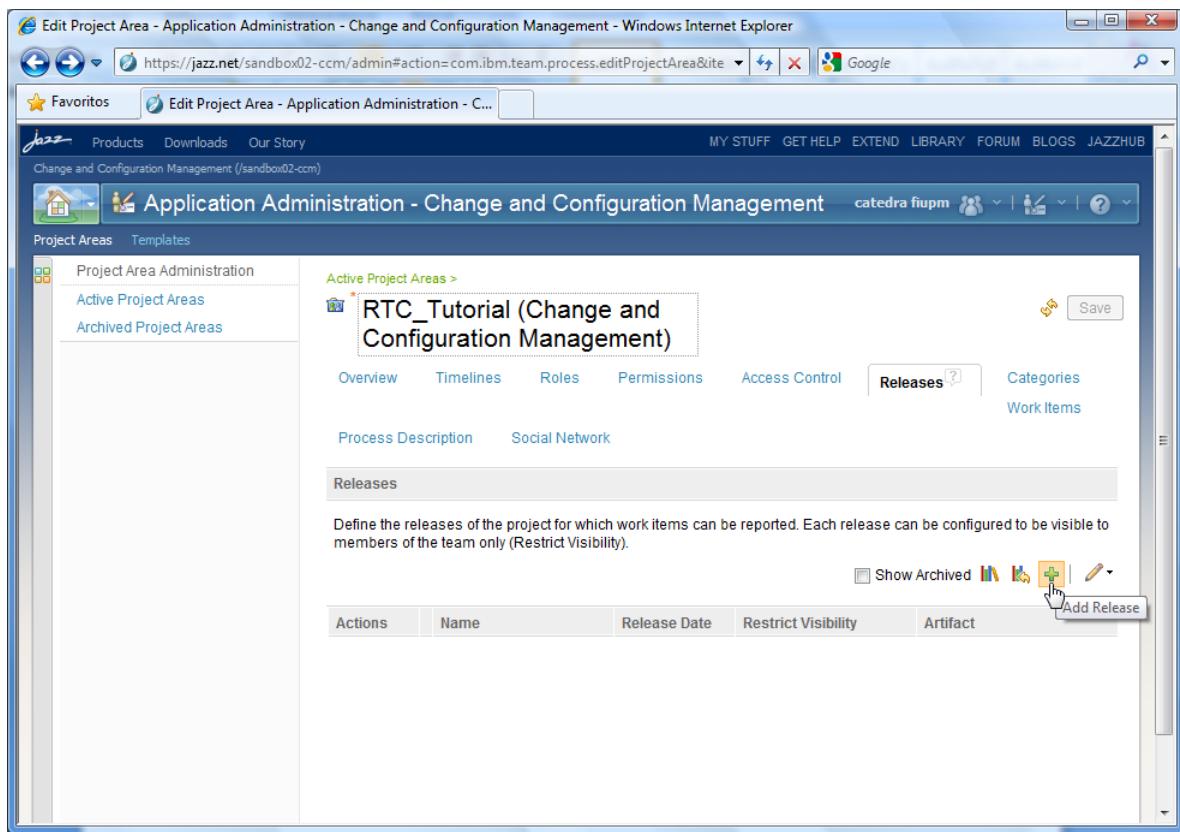
6. In the Details pane, select the roles and the permitted actions for each of them.
7. Click **Save** to save the changes to your project area.



### 3.4 Defining Releases

Releases are the products of a team's work. The releases that you identify appear in the list associated with the **Found In** field on a work item.

1. On the Application Administration page of the web client, click the **Releases** tab.
2. Click the **Add release** button. Enter a name and brief description for the release. Optionally, select a creation date for the release. To limit visibility of the release to members of this project area team, click the **Hide Release Visibility from All but Members of the Team** checkbox. Click **OK**. The release appears in the **Releases** table. You can change the initial visibility setting of a release by clicking the checkbox in the **Restrict Visibility** column.



3. To adjust the order in which releases appear in the **Found In** field list, select a release in the table, open the **Actions** drop-down menu and click **Move Up** or **Move Down**.
4. When you finish defining releases, click **Save** to save your changes.

### 3.5 Defining Categories

Categories identify the various components or functional areas of your project. Each category is associated with a team area whose members are responsible for developing that component. The categories that you define appear as the choices available in the **Filed Against** field in the Work Item Editor.

1. On the Application Administration page of the web client, click the **Categories** tab.
2. To create a category and add it to the project area:
  - a. In the toolbar, click the **Action Menu** button to open the menu, then click **Add Category**.

Optionally, to nest a new category within an existing category, highlight the existing category, then click the checkbox in the **Actions** column of that category's row. Click the **Action menu** button in the same cell.

- b. Enter a name for the category and click **OK**.

Actions	Categories	Associated Project/Team	Restrict Category Visibility	Restrict W
▼ Unassigned <Root Category>	RTC_Tutorial (Change and Configuration Management) [Project Area]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	RTC_Tutorial (Change and Configuration Management) [Project Area] [Inherited]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

The new category appears in the table of categories and associated team areas. By default the new category is associated with the team area that is associated with the top-level category.

3. To associate a category with a team area:

- a. Optional: Select a timeline. The default timeline is **<any>**, meaning that the association applies to all timelines. If your process includes multiple timelines, you can specify a different association for each timeline. When a user creates a work item, it is assigned to a team area based on its category and the timeline of its **Planned For** iteration.

- b. Select the category.
- c. Click the corresponding cell in the **Associated Project/Team Area** column.
- d. Select the team area to associate it with, then click **Associate**.

If you specified different associations based on different timelines, then in the table of categories and associated team areas, the associations change when you select different timelines in the **Timeline** menu. The process defined for the associated team area is the process that users follow for processing the work item.

4. To remove an old category from the table, select it, then click the **Archive All Selected** button. To view archived categories, click **Show Archived**. Archived categories appear greyed out. To restore an archived category, select it and click the **Unarchive Selected** button.
5. You can move a category from one spot in the hierarchy to another by dragging and dropping it using the move control in the Actions column. A horizontal line indicates that it will be moved to between the category above and the category below the line when you drop it. A highlighted category indicates that it will be nested within the highlighted category when you drop it.
6. Click **Save** to save your work item category changes.

### 3.6 Defining Work item types

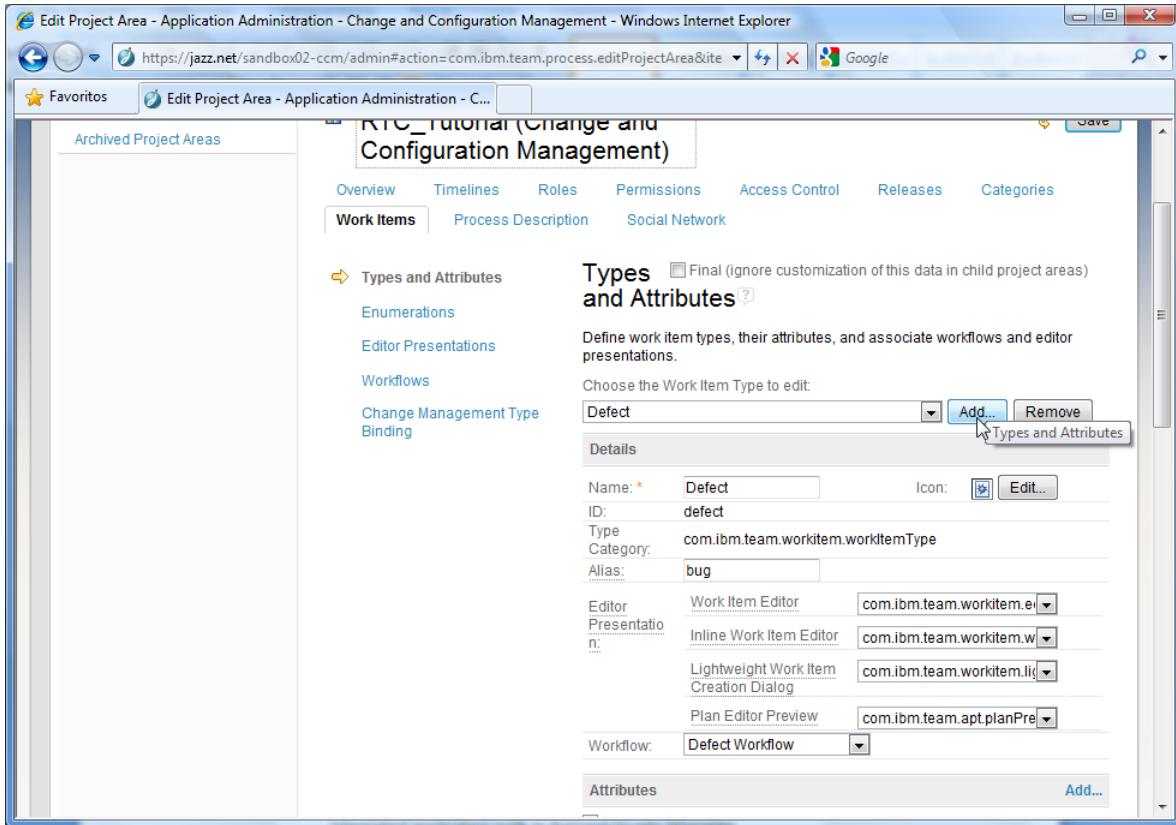
In the scrum template, the following work item types are available:

- Adoption Item: Tracks when changes by one team must be adopted by another team
- Defect: Identifies a bug
- Retrospective: Records what went well and what did not go well in the recently completed iteration
- Story: Describes part of a use case
- Task: Describes a specific piece of work
- Impediment: Tracks things that get in the way of progress
- Epic: Used when a story is too big to complete in a single iteration (sometimes called a "sprint") or when there are too many unknowns to estimate the amount of work. An Epic can be broken down into several stories.
- Track build item: Typically created from a build result to track the fixes that are needed for a failed build

Each work item type has a state transition model that defines the states a work item can be in and the actions to move the work item throughout states. A typical state transition model provides a path from a submitted or opened state to a resolved or closed state. In states between

those start and end points, team members can indicate their progress in addressing the issues described in the work item.

1. On the Application Administration page of the web client, click the **Categories** tab.
2. In the **Choose the Work Item Type to edit** section, click **Add**.



3. In the Add type window:
  - a. Enter an **ID** for the new type. By default, the **Name** field is populated with the same value that you enter into the **ID** field. You can edit the **Name** field value.
4. Click **Edit** in the icon field and select an icon. The process templates include a set of icons that you can use. If you want an icon that is not in the list, you click **Browse** and navigate to a graphics file to use as the icon for the new work item type. When you are done, click **OK**.

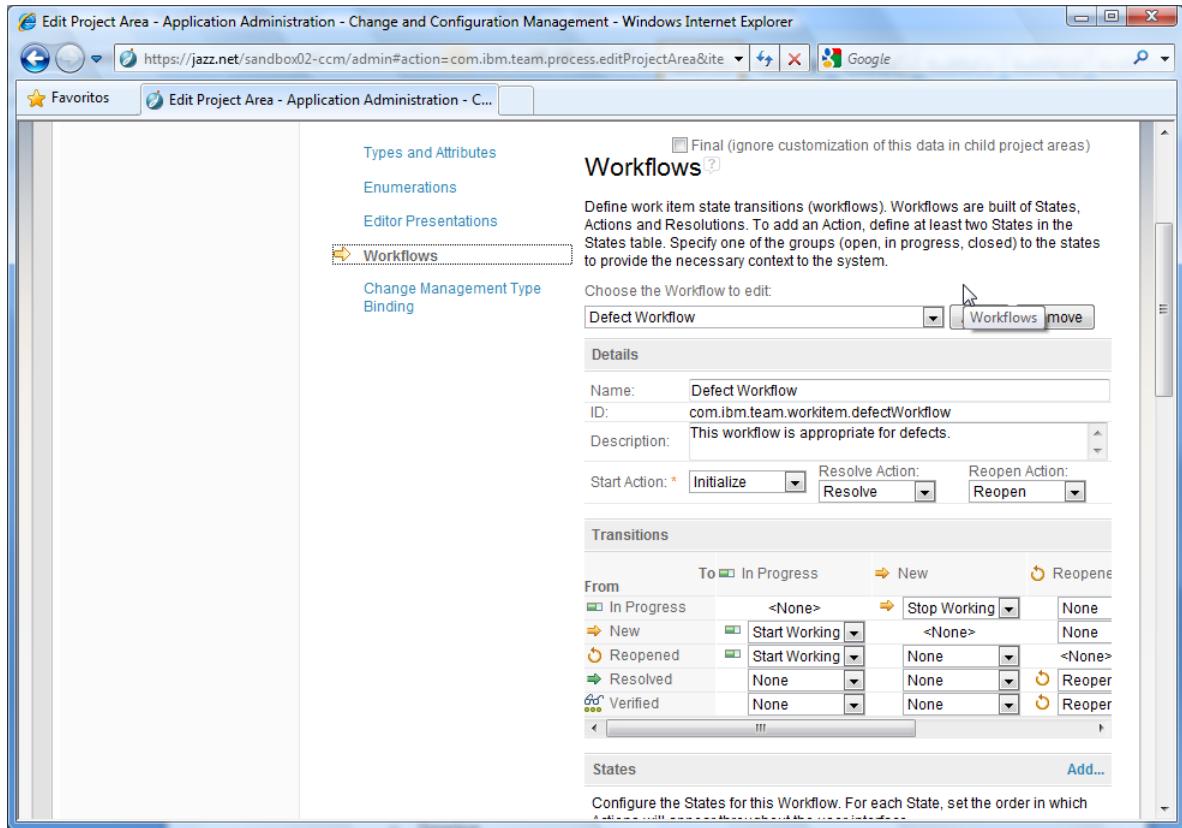
5. You can add attributes in the **Attributes** pane.

The screenshot shows the 'Edit Project Area' interface in Application Administration. At the top, there are dropdown menus for 'Editor Presentation' (Work Item Editor, Inline Work Item Editor, Lightweight Work Item Creation Dialog, Plan Editor Preview) and 'Workflow' (Defect Workflow). Below these, a section titled 'Attributes' contains a table with the following data:

Name	Type	ID	Actions
Archived	Boolean	archived	N/A
Comments	Comments	internalComments	N/A
Corrected Estimate	Duration	correctedEstimate	N/A
Created By	Contributor	creator	N/A
Creation Date	Timestamp	creationDate	N/A
Description	Large HTML	description	N/A
Due Date	Timestamp	dueDate	N/A
Estimate	Duration	duration	N/A
Filed Against	Category	category	N/A
Found In	Deliverable	foundIn	N/A
Id	Integer	id	N/A
Modified By	Contributor	modifiedBy	N/A
Modified Date	Timestamp	modified	N/A
Owner By	Contributor	owner	N/A

An 'Add...' button is located at the top right of the attributes table.

6. State transitions of each work item type are represented as Workflows. To define the workflow for a work item type, click the **Workflows** section.



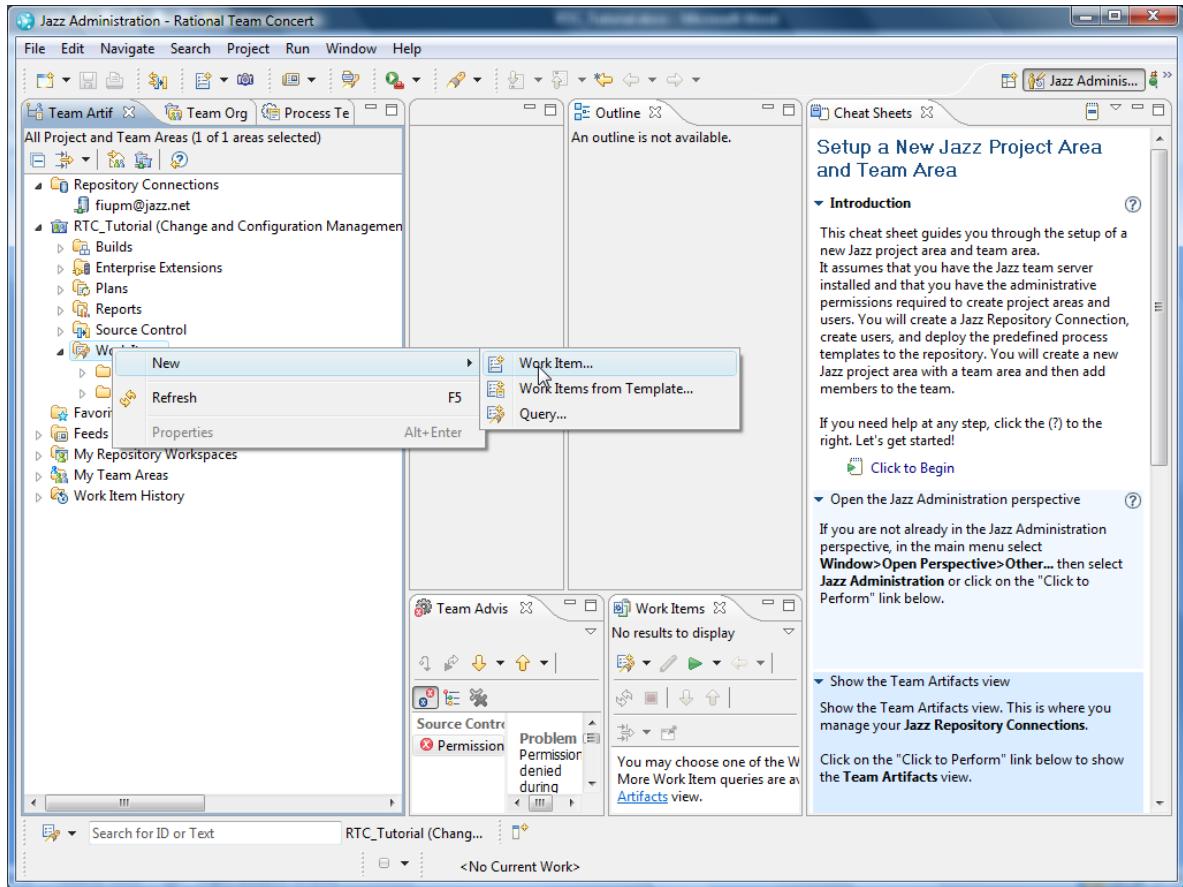
## 4 Configuration and Change Management

All the activities in this section are performed using the Eclipse client.

### 4.1 Creating Work Items

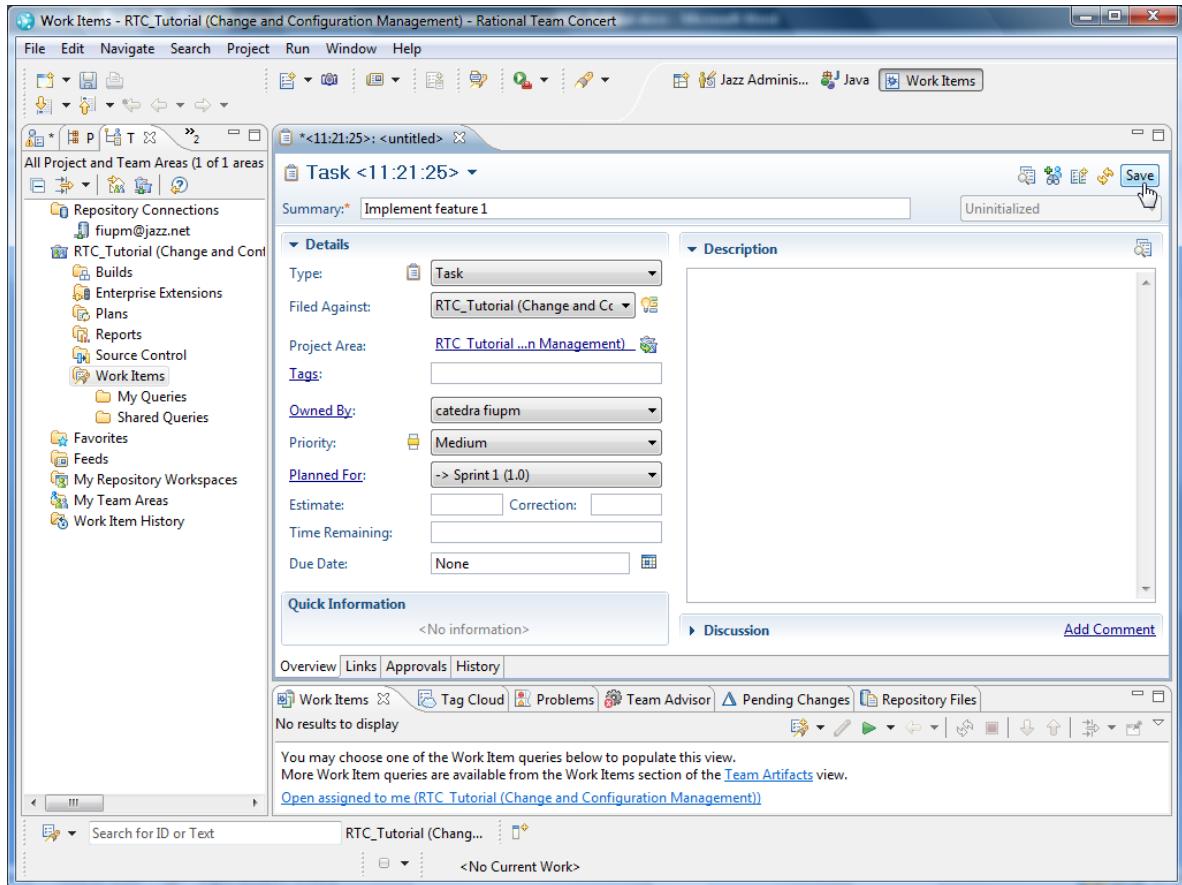
Create a work item to submit a defect, task, or other type of work request that the project uses.

1. In the **Team Artifacts** view, expand the project area node, right-click **Work Items**, and select **New > Work Item**. In the Create New Work item wizard, select the work item type, such as Defect, Enhancement, or Task. Click **Finish**.

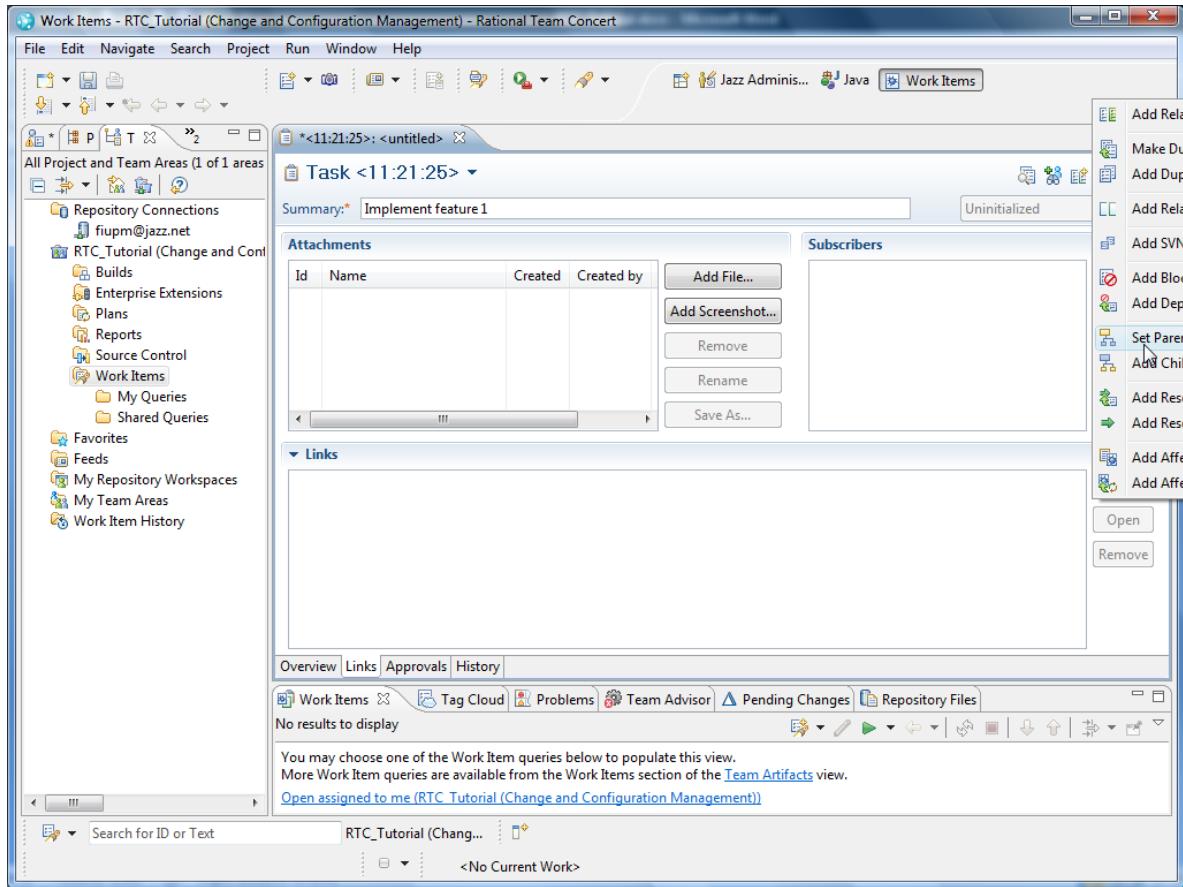


2. Enter or select values for the following fields on the **Overview** tab:

- **Summary:** A brief headline that identifies the work item.
- **Type:** The type of work item. Commonly available types are Defect, Task, and Story. You can customize the project to include additional types.
- **Filed Against:** A category that identifies the functional area that the work item belongs to. For example, your project might have GUI, Build, and Documentation categories. Each category is associated with a team area; that team is responsible for responding to the work item. If you are unsure of the category, you can click the Guess Category button. The Guess Category button attempts to guess the correct category by using the text in the Summary and Description fields to search for similar work items.
- **Severity:** An indication of the impact of the work item, such as Minor, Normal, Major, or Critical.
- **Found In:** The release that the work item refers to.
- **Description:** A detailed description of the work item. For example, the description for a defect might include a list of steps to follow to reproduce the defect. Any descriptions that are longer than 32KB are truncated, and the entire description is added as an attachment.



3. On the **Links** tab, add attachments, screen captures, and subscribers, and specify related work items.

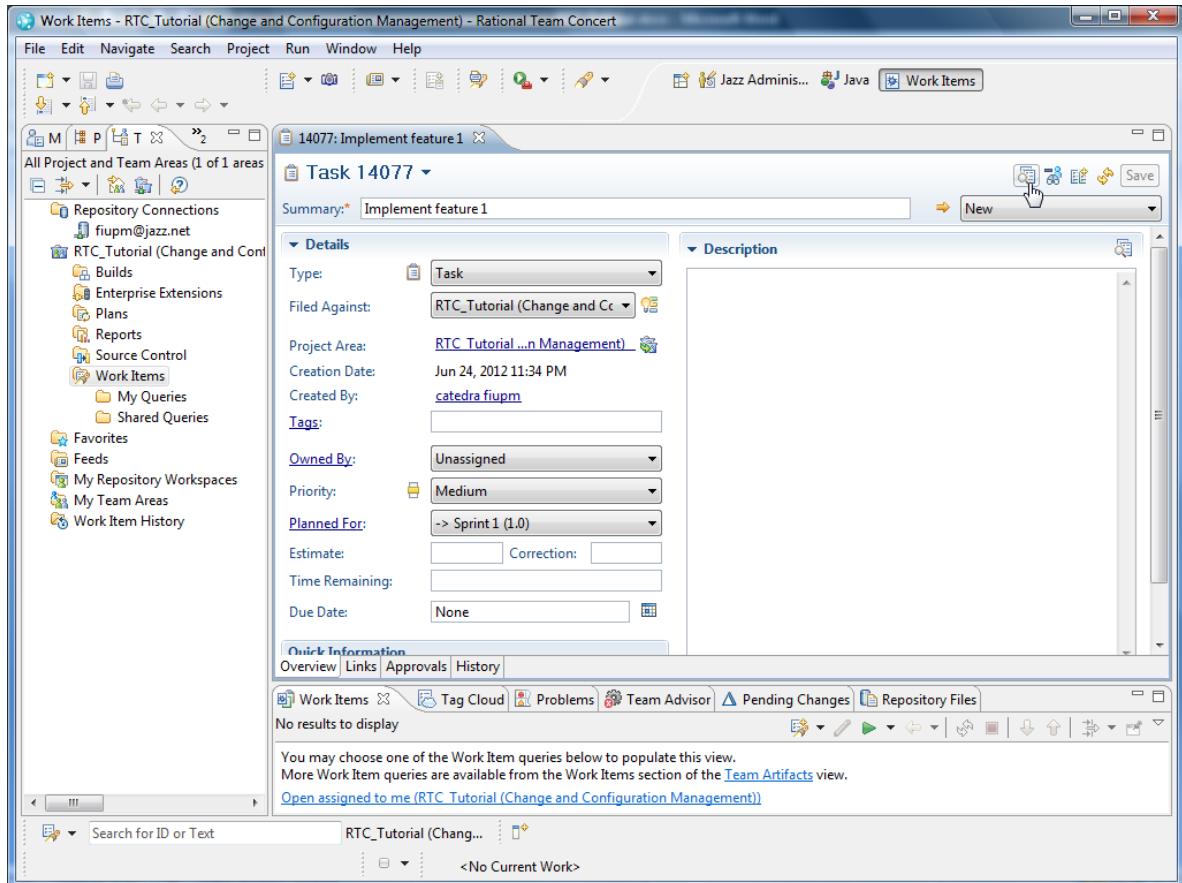


4. Click **Save** to save the work item.

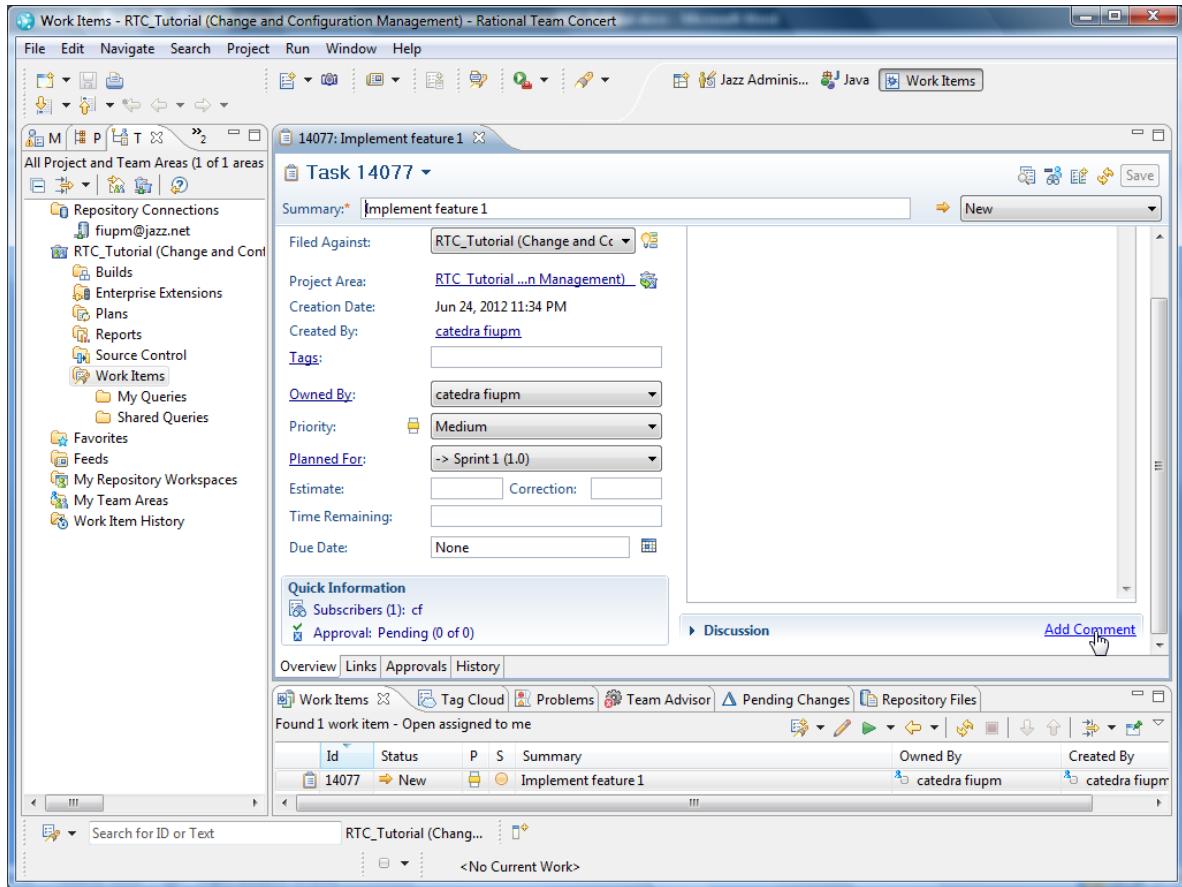
## 4.2 Assigning Work Items

Assign a work item to a specific user.

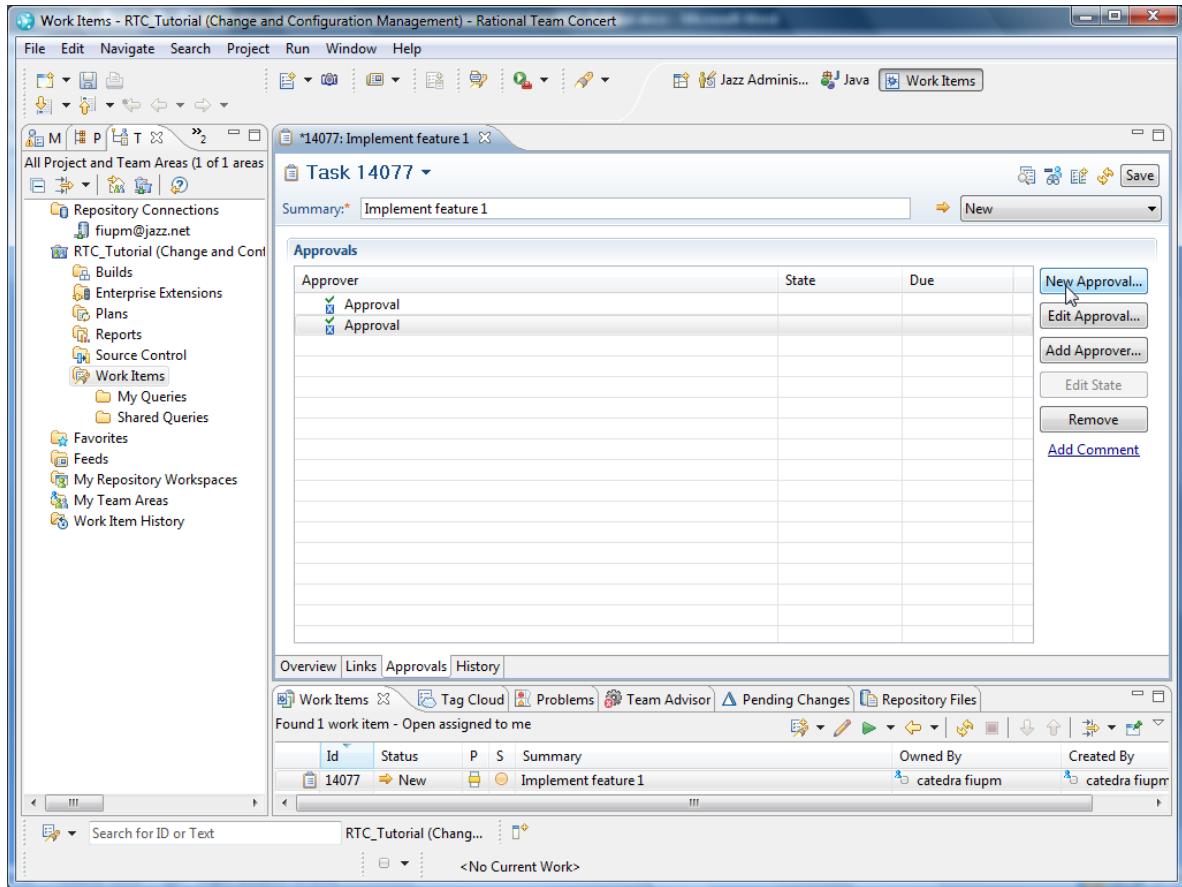
1. Click the **Find Potential Duplicates** icon to see if another work item has been submitted about the same issue. If a duplicate work item exists, set the state of one of the work items to Resolved and set its Resolution to Duplicate. Then, click the **Links** tab in one of the work items, and click **Add > Add Related** to find and link to the other work item.



2. The **Owned By** list contains all members of the team area that is associated with the work item category. Select an owner from that list or click **More** at the bottom of the list to search for a member of another team.
3. Set the value in the **Planned For** field to a planned iteration for resolving the work item, and enter a value in the **Due Date** field.
4. To add a comment, in the Discussion section, click **Add Comment**, and enter your text.



5. An approval is a request for other users to review, approve, or verify the work that is done to resolve the work item. To add an approval:
  - a. Click the **Approvals** tab.
  - b. Click **New: Approval**, select the type of approval, and specify the due date.
  - c. Specify the user or users who are responsible to approve the resolution by clicking **Add Approver**. You might want to create different approval types for different users. For example, you might want to have a lead developer review the owner's proposed resolution, and a test engineer validate the delivered fix.

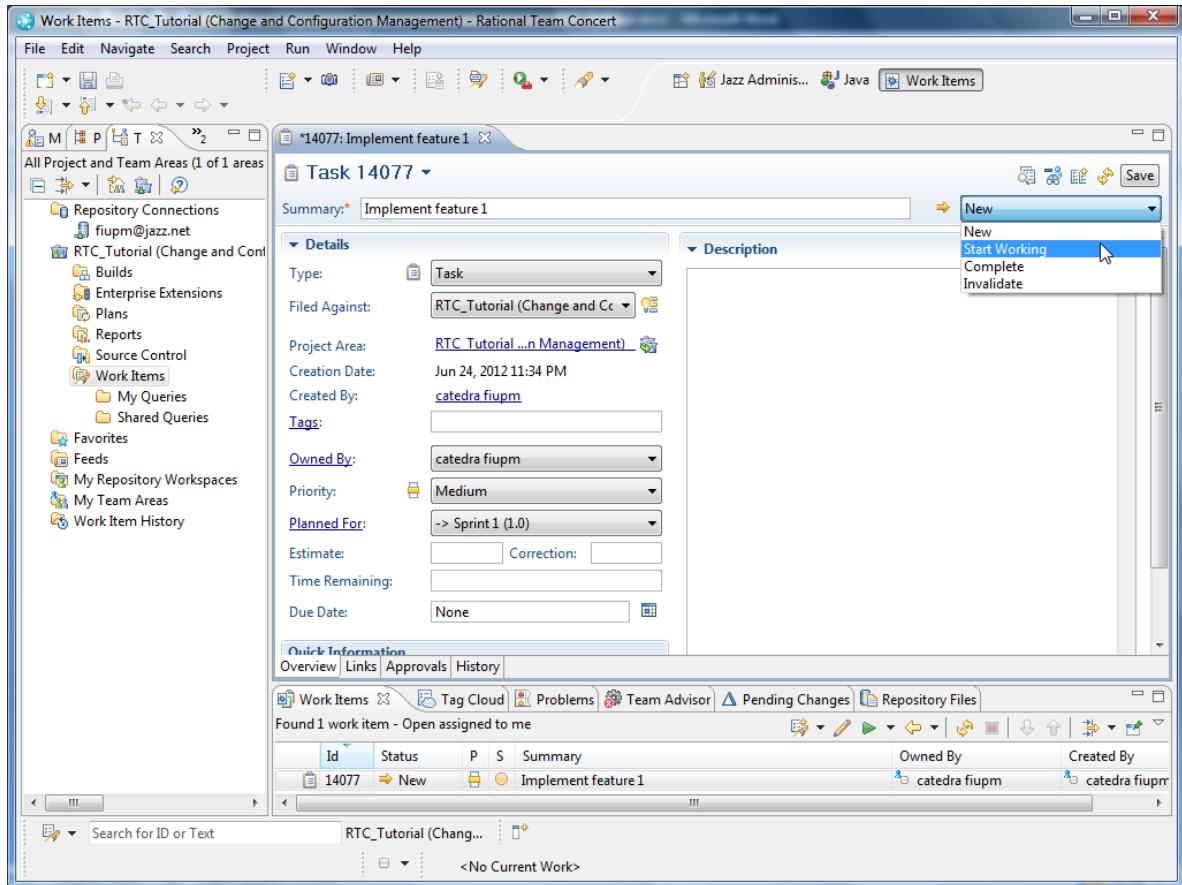


6. Click **Save** to save your changes.

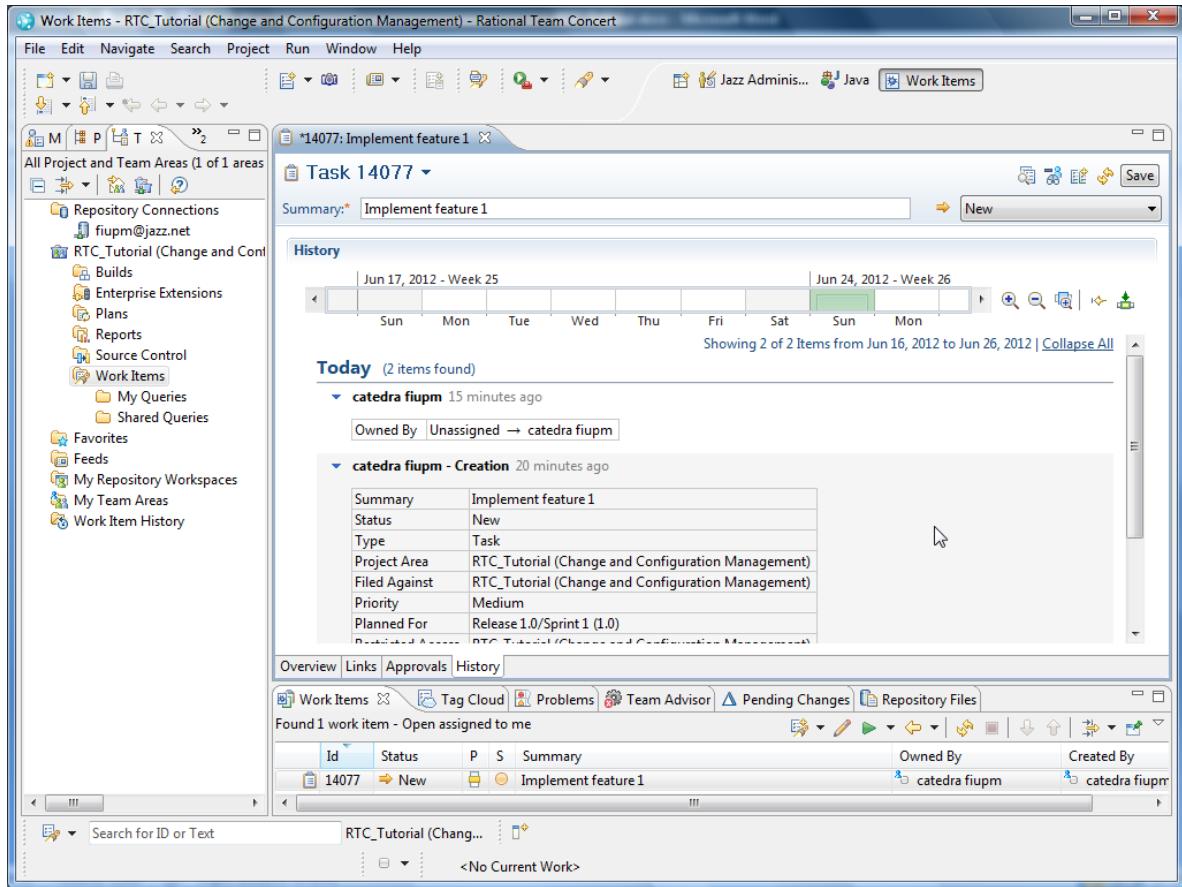
### 4.3 Updating Work Items

As you address the issues that are raised in a work item, periodically update the work item to describe its state and your work.

1. Open the work item. From the **State** list, select **Start Working**.



2. Use the work item to collaborate with team members:
  - To enter a question or comment, in the Discussion section, click the **Add Comment** link and type your text. All subscribers of the work item receive notification of your comment when you save the work item. When you add a comment, you are added as a subscriber.
  - To send an email to the submitter of the work item, next to Created By, right-click the submitter's name and select **Send Mail**.
  - If you change the owner to a different user, add a comment that explains why you reassigned the work item.
3. Click **Save** to save your changes.
4. You can view the history of a work item in the **History** tab.



5. When you have completed the work for a work item, resolve it:
  - a) Open the work item.
  - b) From the **State** list, select **Resolve**.
  - c) In the adjacent **Resolution** list, select an entry that describes why you resolved the work item, such as **Fixed**, **Works For Me**, or **Duplicate**.
  - d) In the **Discussion** section, type a comment that further explains your actions.
  - e) Optional: If you resolve a work item as a duplicate, specify the other work item in the **Links** section on the **Links** tab.
  - f) Click **Save** to save your changes.

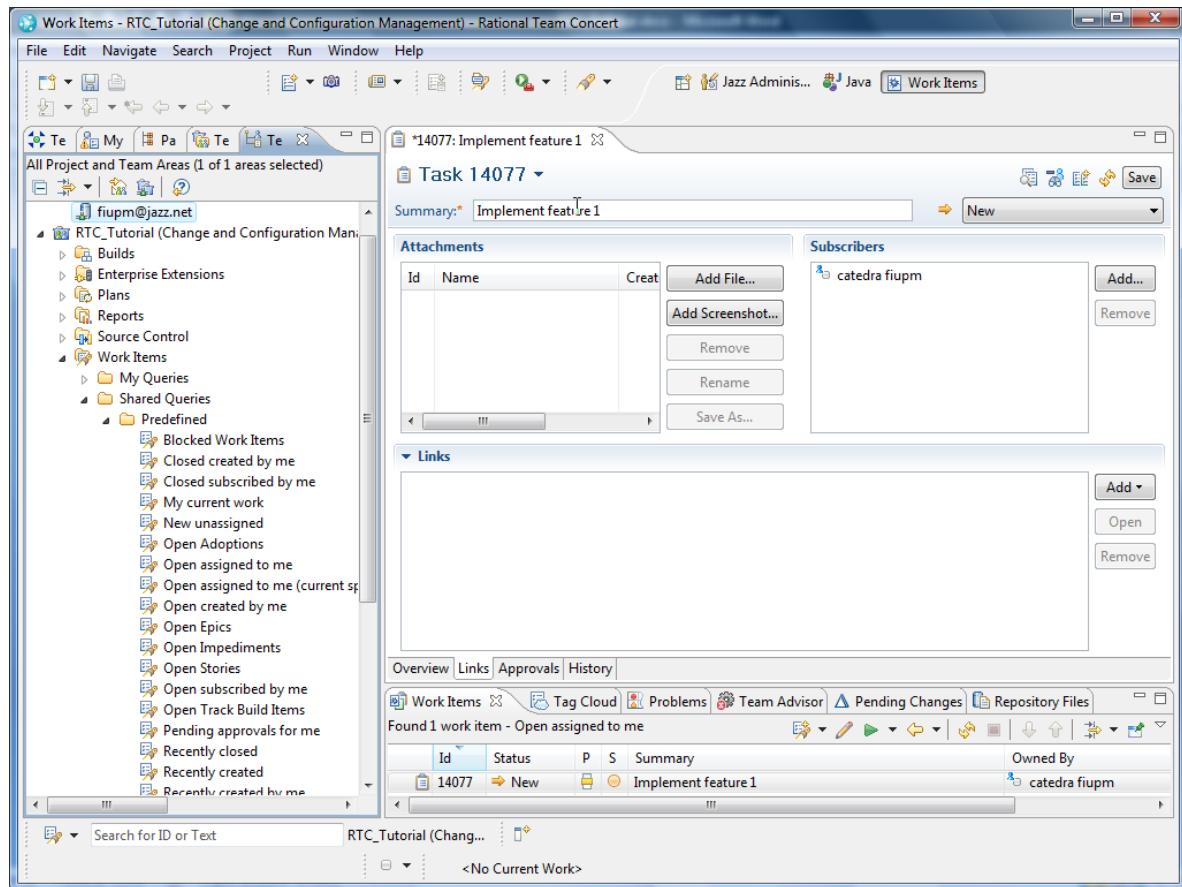
## 4.4 Queries

The primary method for finding work items is to run queries against the repository. Queries retrieve work items whose attributes contain values that match the values specified in the query. For example, you might run a query that retrieves all work items whose status attribute is in an unresolved state.

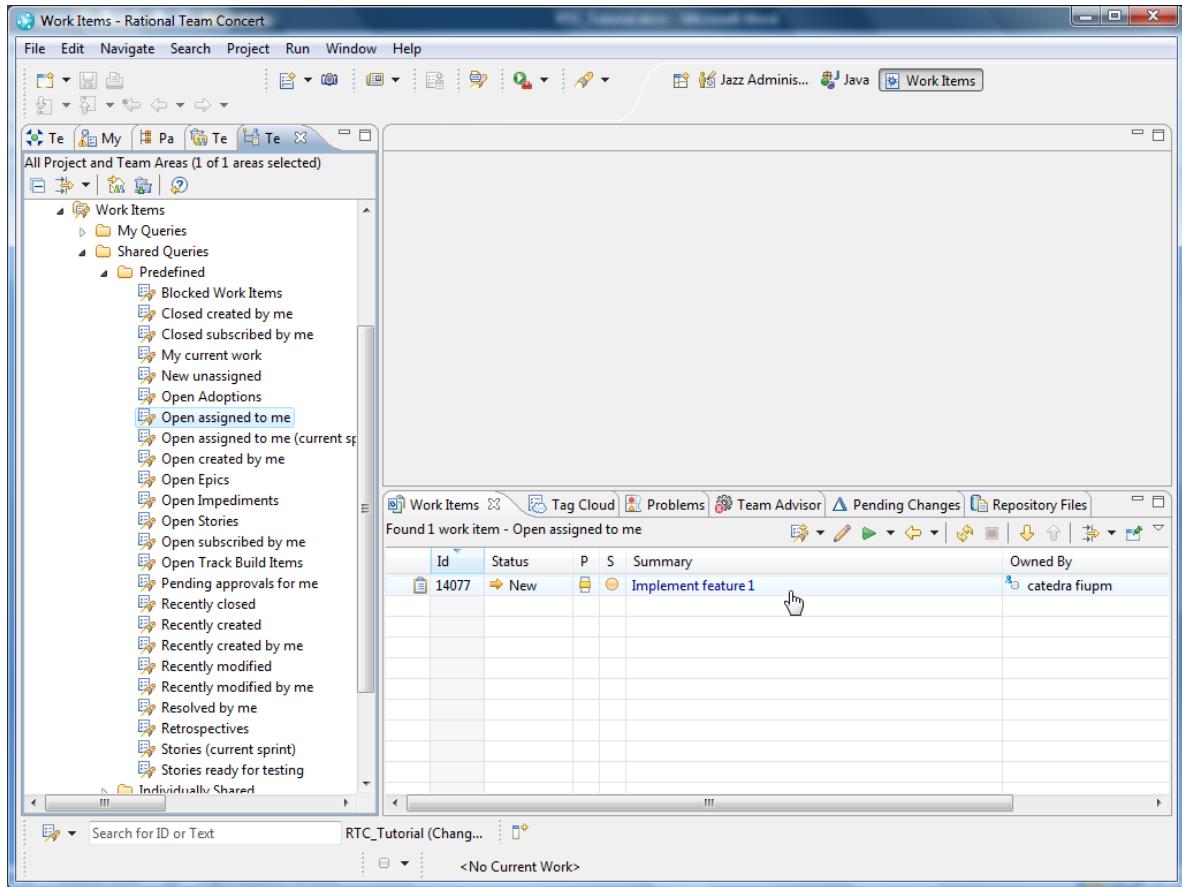
Jazz provides a set of predefined queries, and you can create additional queries. You can also retrieve a specific work item by entering its ID, and you can search for an item by entering a text string. You can also find work items from the plan.

#### 4.4.1 Using predefined queries

1. Within the Team Artifacts view of the Work Items perspective, expand the project area. Click **Work Items >Shared Queries > Predefined**.



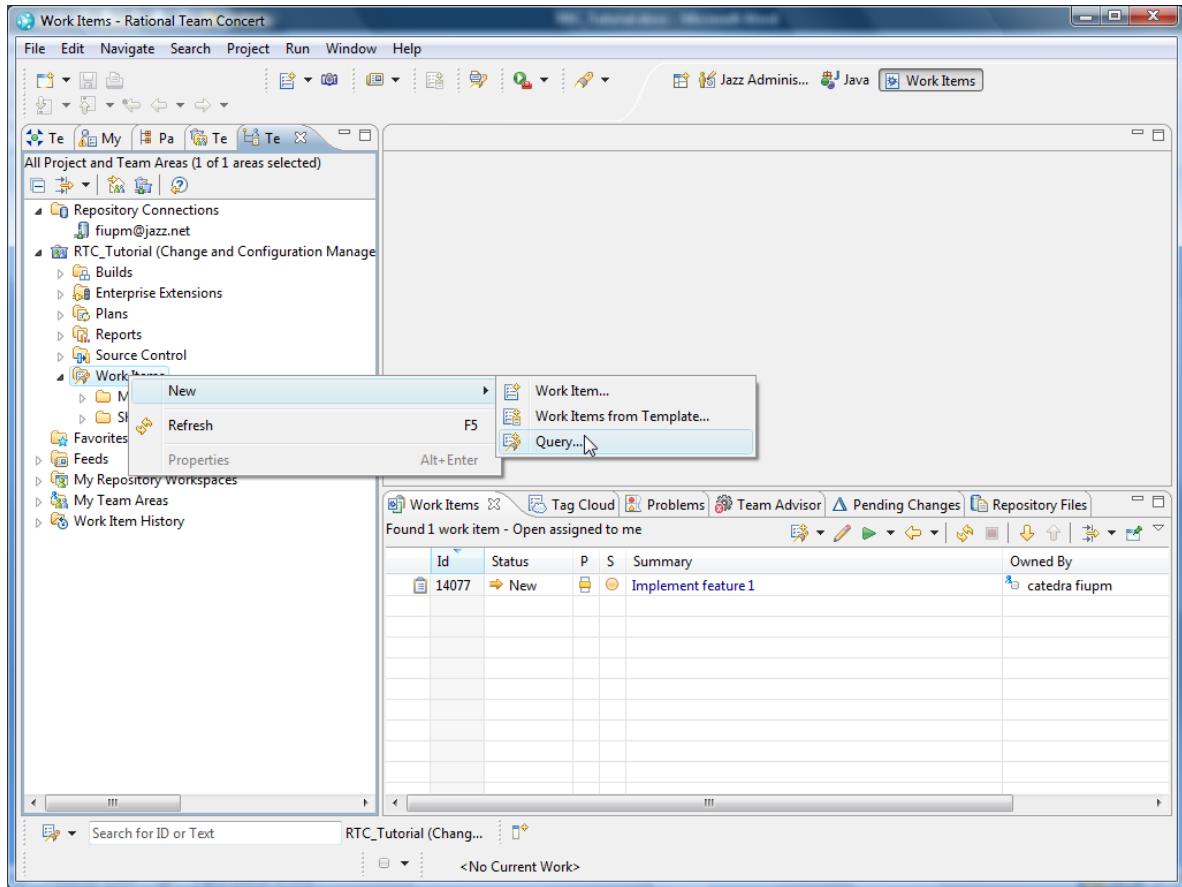
2. Double-click a query to run it. The results are displayed in the Work Items view.



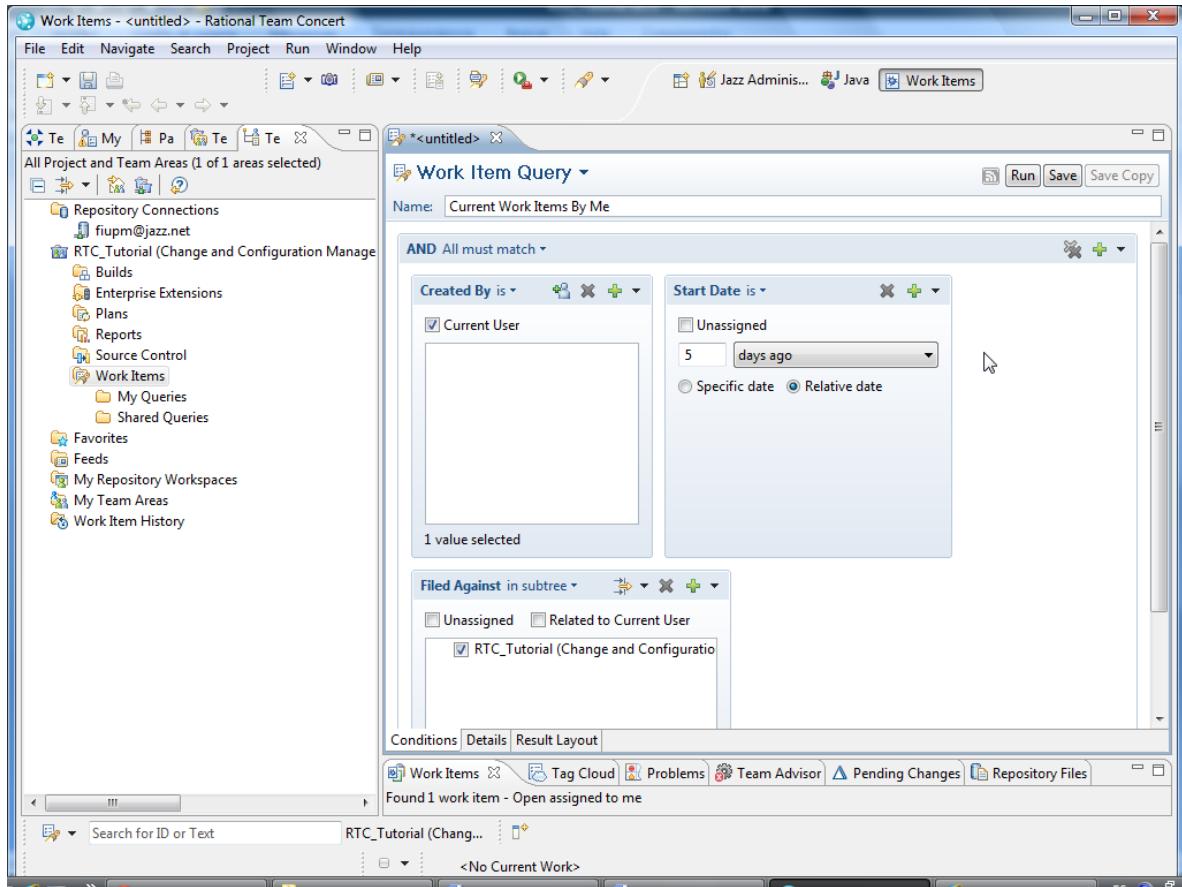
3. To see the details of a work item, double-click it in the Work Items view. The work item opens in the work items editor.

#### 4.4.2 Creating New Queries

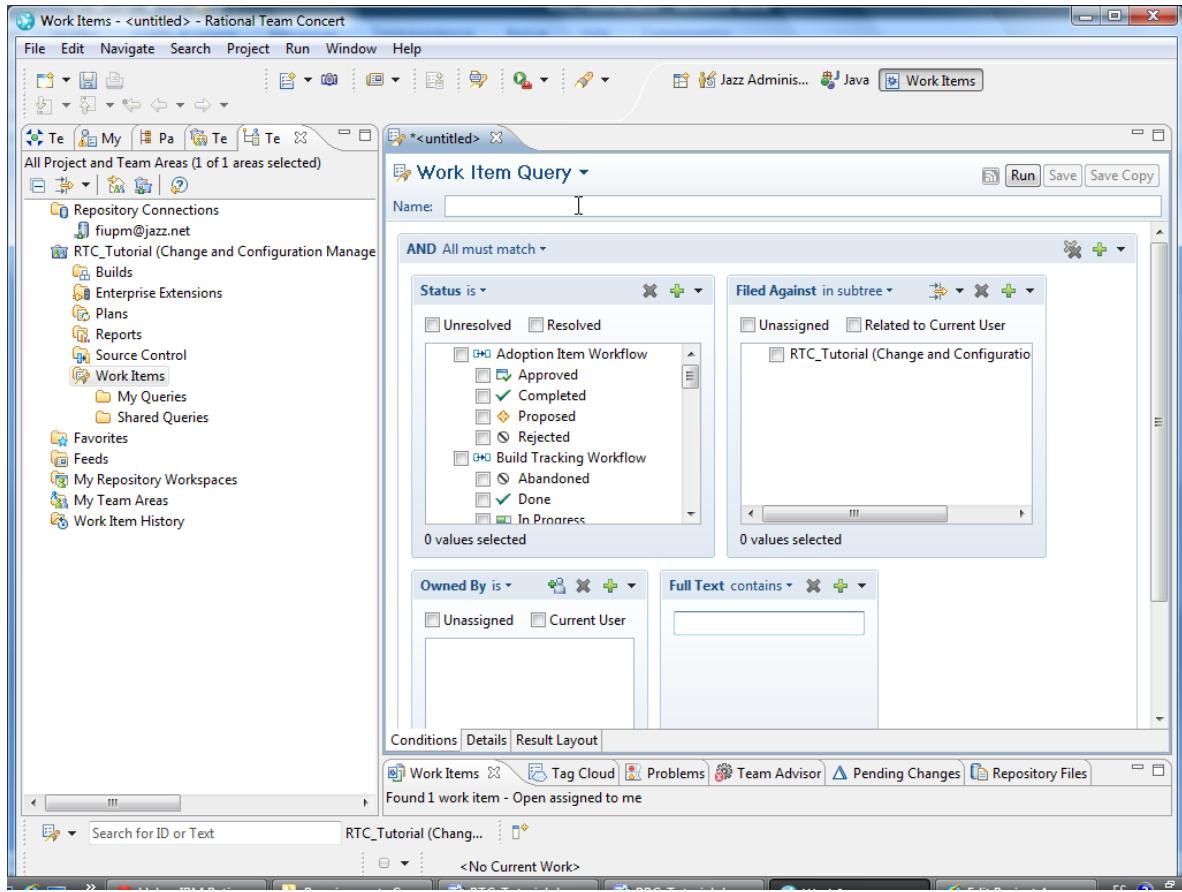
1. In the Team Artifacts view of the Work Items perspective, expand the project area. Right-click **Work Items** and select **New > Query**.



2. In the query editor, enter a name for the query in the **Name** field. Depending on the type of query you want to create, click one of the following links:
  - **Start from scratch:** This query is based on a unique set of conditions. To create this type of query, after you click **Start from scratch**, follow these steps:
    - a. Click the **Add Conditions** icon.
    - b. In the Add Conditions window, select the attributes to use as query conditions, and click **OK**.
    - c. For each attribute, specify the value or condition that must be met. For example, for the Due Date attribute you can use a specific date or a relative date, such as 15 days from now.
    - d. If you want to nest conditions and groups of conditions, clicking the arrow icon next to the **Add Condition** icon and select the type of condition to add. For each group, click **All must match** and select **AND** or **OR**. Use **AND** when all of the conditions you specify must be met for the query to return a work item. Use **OR** when any one of the conditions must be met.



- o **Simple Query:** This query uses the Status, Category, Owner, and optional text conditions. To create this type of query, after you click **Simple Query**, follow these steps:
  - a. Select one or more values for the Status, Category, and Owner attributes.
  - b. Optionally, enter a text string. The query searches fields of the work items for matching occurrences of the text string. Queries for string-based fields, such as Summary and Description, are not case-sensitive. Add and remove conditions as necessary.



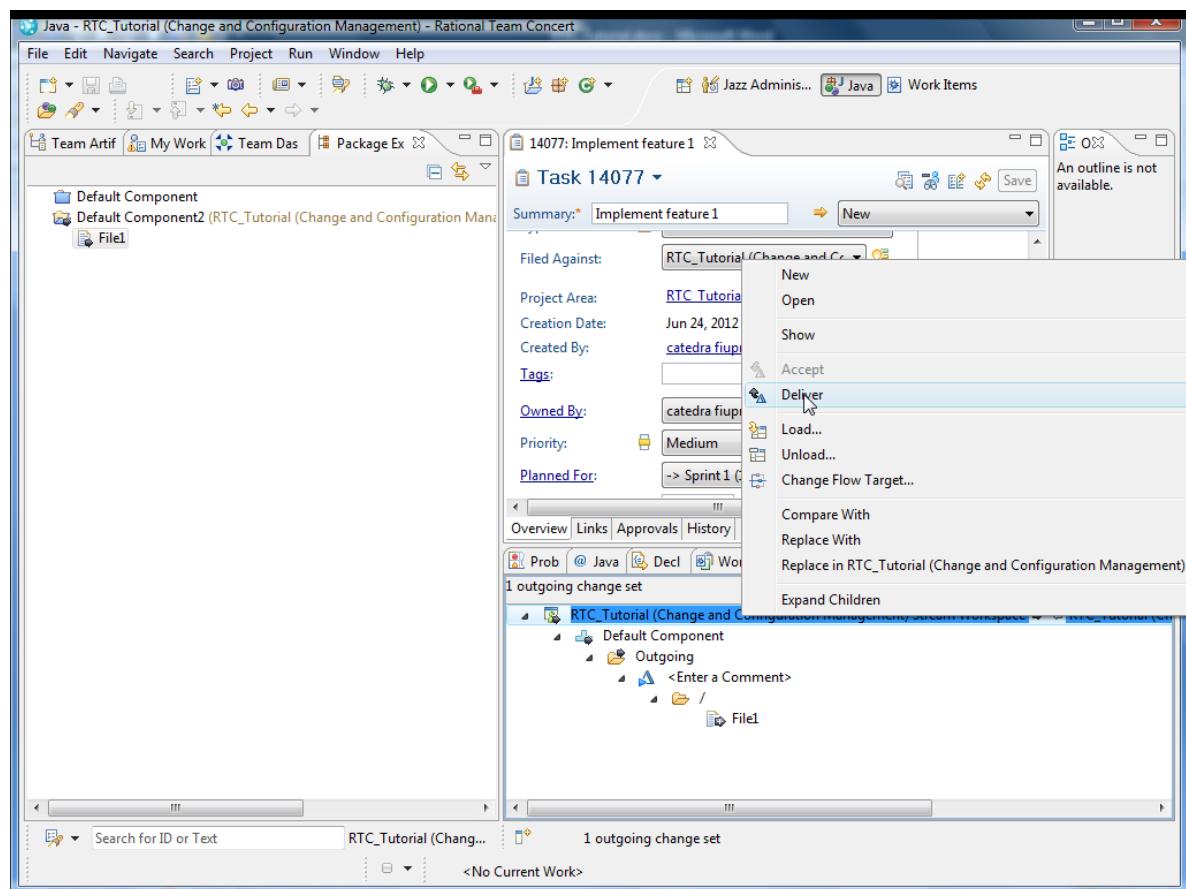
- **Full Text Query:** This query searches all fields of work items for a text string. To create this type of query, after you click **Full Text Query**, follow these steps:
    - a. Enter the text string.
    - b. Add and remove conditions as necessary. Queries for string-based fields, such as Summary and Description, are not case-sensitive.
3. Click the **Details** tab. Enter a description of the query so that other users can understand what work items the query returns without reading the **Conditions** tab.
  4. By default, new queries are private. To share a query with members of a team, click **Add Team Area** and select a team. To share a query with a specific user, click **Add User** and select the user.
  5. Click the **Result Layout** tab. In the Result Columns section, double-click each attribute that you want to display as a column heading in the query results grid. Scroll to the Sorting area. Double-click the attribute to use for sorting the work items in the query results grid. In the Selected sort columns table, you can set the sort direction to Ascending or Descending. The first attribute that you select is the primary sorting attribute. You can specify additional sorting attributes.
  6. Click **Save** to save the query.

7. To run the query, click the **Run** icon.
8. To create a feed for this query, click the **Create RSS Subscription for this Query** icon. When any work items that are selected by this query change, you will receive notifications in the Team Dashboard view.

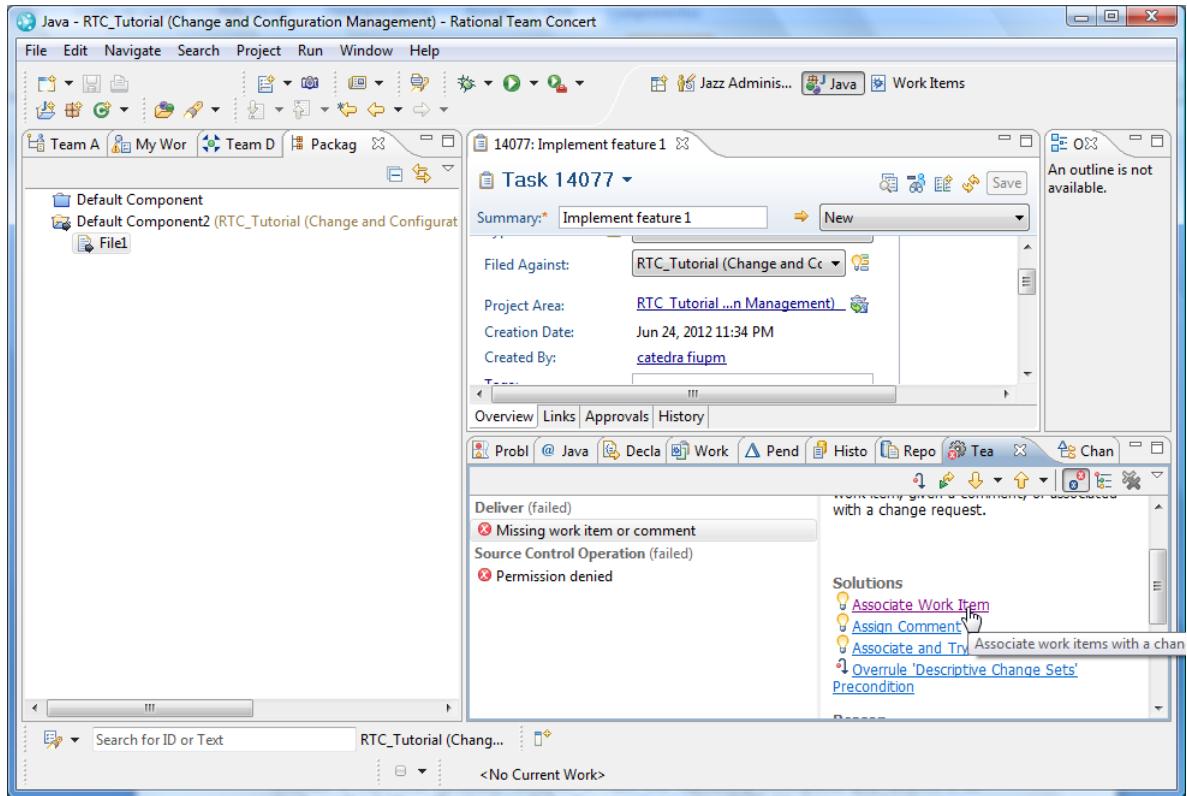
## 4.5 Check-out and Check-in

RTC does not require a check-out operation before you can modify files or folders. All files in a sandbox are normally writable. Modified files remain private to your repository workspace until you deliver them.

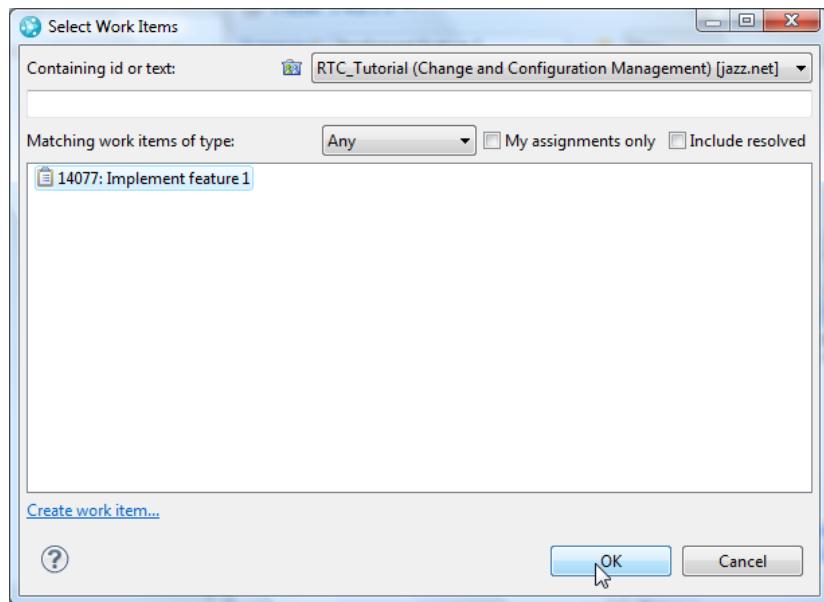
1. To check-in the changes, go to the **Pending Changes** view.
2. Verify the changes and when you are ready right-click the item and select **Deliver**.



3. Because change set cannot be checked-in without being associated with a work item. An error will appear in the **Team Advisor** view.



4. Click **Associate Work Item** and select the work item to be associated to the change set.



5. Perform steps 1-2 again.

## 4.6 Accepting Incoming Changes

A change set is classified as incoming when it is present in a workspace flow target but not in the workspace itself.

In the Pending Changes view, incoming change sets are visible in the **Incoming** folder for the component. You can accept an incoming change set to add it to your repository workspace and load it into your sandbox.

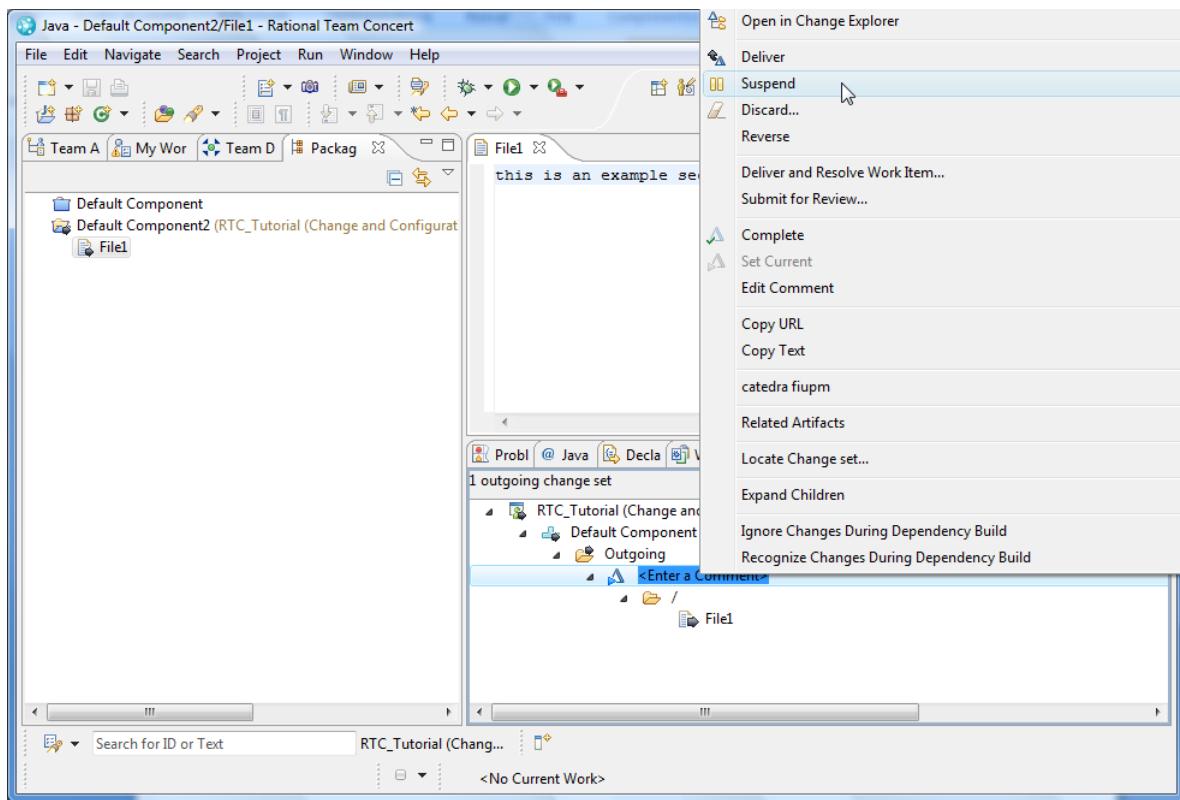
If an accepted change is causing problems in your workspace, you can discard it. This action unloads it from the sandbox, removes it from the repository workspace, and returns it to the **Incoming** folder, effectively undoing the accept operation that added it to your workspace.

1. To accept incoming changes, go to the **Pending Changes** view.
2. In the **Incoming** folder, verify the changes and when you are ready right-click the item and select **Accept**.

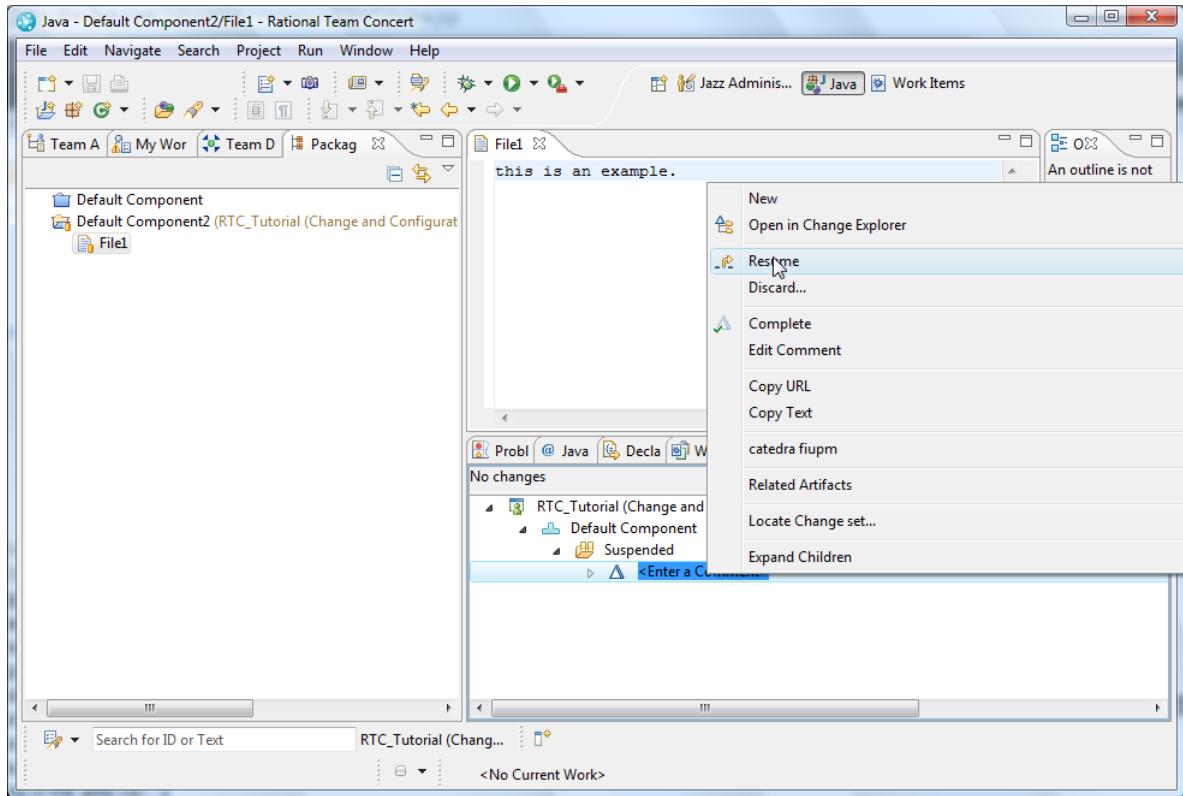
## 4.7 Suspending change sets

Suspending a change set removes it from the repository workspace and unloads it from the sandbox but preserves it in the repository so that it can be restored when you want to resume work on it.

1. In the Pending Changes view, navigate to the change set that you want to suspend.
2. Right-click the change set and click **Suspend**.



3. The change set moves to the component's **Suspended** folder. New changes accumulate in a new change set, or in an existing one that you designate as current.
4. To continue working on a suspended change set, go to the **Suspended** folder.
5. Right-click on the suspended change set and select **Resume**.



## 4.8 Finding and resolving conflicts

When Rational Team Concert source control detects that the same file exists in an outgoing change set and an incoming change set, it recognizes that a potential conflict exists and places orange icon overlays beside the **Outgoing** and **Incoming** folders that include the conflict. A conflict is classified as a potential conflict until you accept the change set that contains it. You cannot deliver a change set that includes a potential conflict. If you accept a change set that includes a potential conflict, the potential conflict is realized, and must be resolved in your workspace.

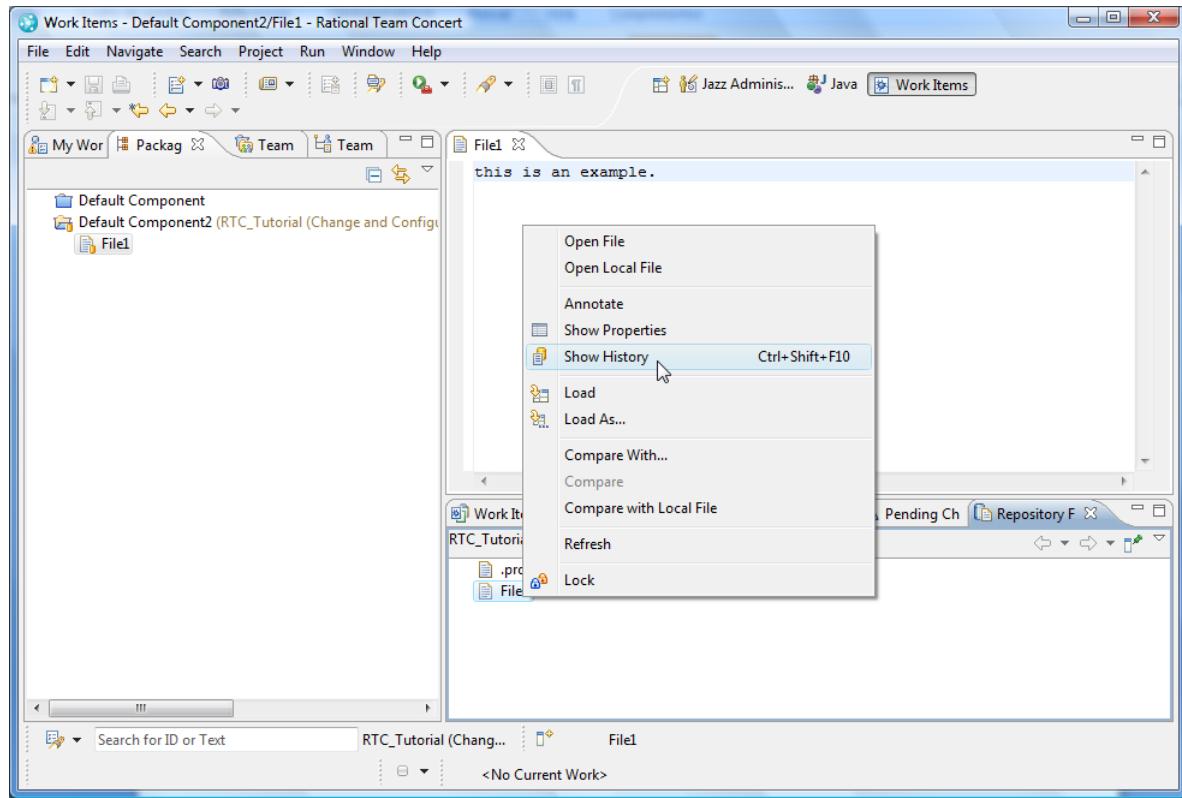
1. In the **Pending Changes** view, navigate to the change set in the component's **Incoming** folder. When you select a file in the **Incoming** change set, the conflicting file in the **Outgoing** change set is highlighted.
2. To review the potential conflicts, right-click each file that has the potential conflict icon () beside it and click **Open in Compare Editor**.
3. After you review the differences, take one of the following actions:
  - To accept the incoming change set that contains the potential conflict, right-click it and click **Accept**. The overlays are replaced with overlays, non-conflicting files in the change set are accepted into your workspace, and the potential conflicts become actual conflicts, which you must resolve.
  - To suspend the outgoing change set, right-click it and click **Suspend**.

- To permanently remove the change that is causing the conflict, right-click the file in the outgoing change set and click **Undo**.
- To discard the entire outgoing change set, right-click it and click **Discard**.

## 4.9 Viewing History of Files

The History view of a file lists all the change sets, one per line, that include the file. You can open any of these change sets in the Change Explorer view to see more detail about individual items in the change set.

1. In the **Repository Files** view, right click the file and select **Show History**.



2. Double click the selected work item to view the details.

