The ClearTeam Explorer Integration with Beanbag Review Board

Code reviews are essential to an effective development process. Code reviews improve code quality and reduce the odds of introducing new defects. Review Board (https://www.reviewboard.org/) is an open-source tool that streamlines the peer-review process for source code.

The ClearTeam Explorer integration with Beanbag Review Board provides a direct interface for creating or updating review requests. This integration uses the Eclipse Review Board open-source plugin, which provides the wrapper layer that handles Review Board Server REST API communication. A review request can be submitted on a Unified Change Management (UCM) activity or files and folders for UCM and Base ClearCase. On Linux and Windows, four view types are supported: Dynamic, Snapshot, Web, and Automatic.

This Review Board integration is available in the following forms:

- **ClearTeam Explorer (Rich Client Platform):** ClearTeam Explorer (CTE) Java GUI installed as part of ClearCase Remote Client (CCRC) or part of ClearCase Local Client (CCLC).
- **ClearTeam Explorer for Eclipse IDE:** ClearTeam Explorer that can be installed from an Eclipse update site and integrated into an existing Eclipse installation supplied by the user.
- **ClearTeam Explorer Extension** - ClearTeam Explorer Extension that can be integrated with other Desktop tools such as **RAD.**

Note: The **ClearCase Remote Client (CCRC)** offering installs the client components necessary to support Automatic and Web views and includes both a GUI (CTE) and CLI (rcleartool).

Prerequisite

The Review Board currently supports only diff output formatting from GNU Diff. If you use the integration on Windows, you might have to install GNU Diff. Make sure to set the PATH environment variable to include the path of the GNU Diff executable file before you submit a review request. The GNU Diff default installation path is C:\Program Files (x86)\GnuWin32\bin.

ClearTeam Explorer for Eclipse IDE V4.24 or later

The ClearTeam Explorer for Eclipse IDE Beanbag Review Board integration uses Mylyn plugins of Eclipse. In Eclipse V4.24 and later, the Mylyn plugins are not installed by default. If you are installing ClearTeam Explorer Eclipse IDE from an update site on Eclipse 4.24 or later, you might have to install Mylyn plugins manually:

1. Click **Eclipse Help->Install New Software**.
2. Add the Mylyn updatesite URL: http://download.eclipse.org/mylyn/releases/3.21
3. Select the **Mylyn SDKs and Frameworks -> Mylyn Tasks Connector: Eclipse IDE** option and proceed with the installation.

Log in and add the Review Board repository

1. Install ClearCase.
2. Start ClearTeam Explorer and open the Task Repositories view:
   click **Window > Show View > Other > Mylyn > Task Repositories**.
3. Use either of the following methods to add Review Board repositories.

- Click the **Add Task Repository** button located on the toolbar for the view or
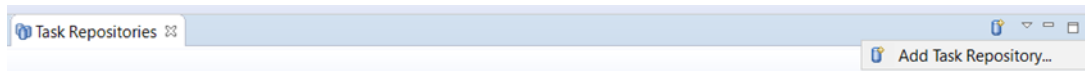

Figure 1: Task Repositories tab

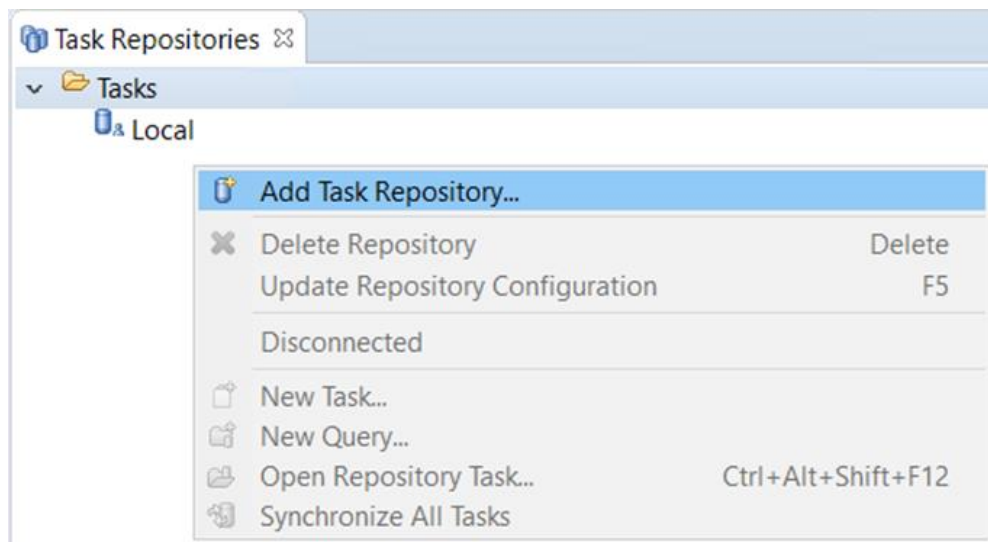- Right-click in the Task Repositories view and select the **Add Task Repository** option.

Figure 2: Context menu for the Task Repositories tab

4. Select **Reviewboard**, and then click **Next**.
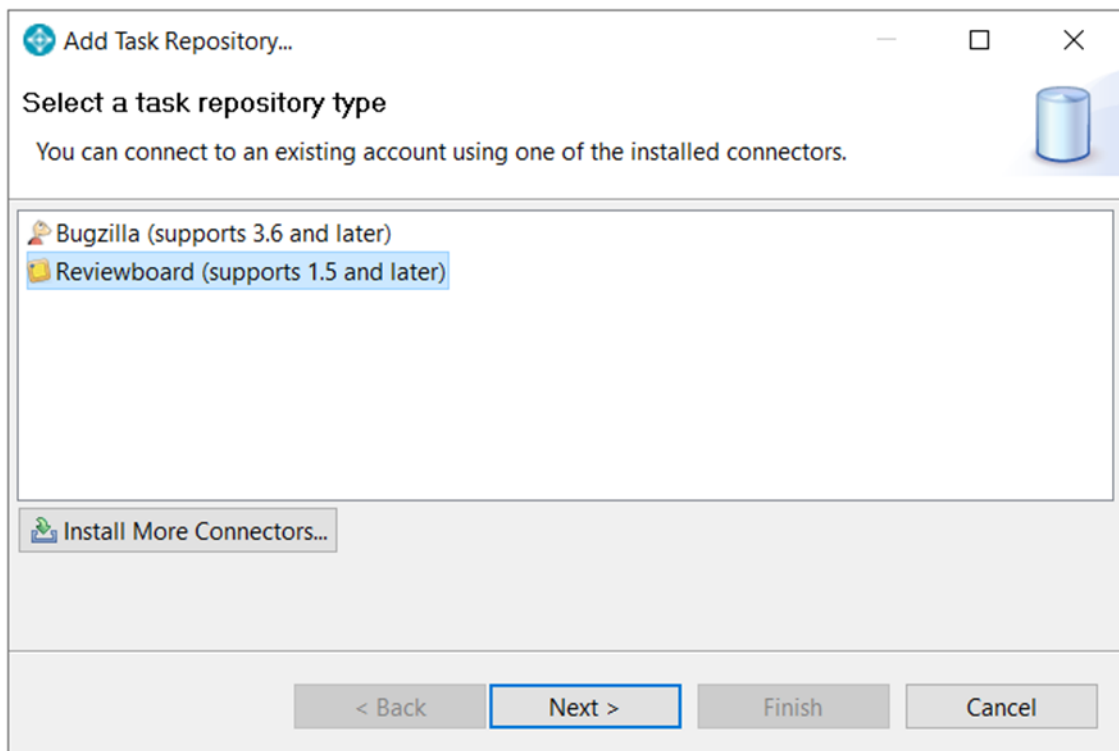
Figure 3: Add Task Repository

5. Enter your Review Board web URL (for example https://reviewboardserver), user name, and password, and click **Validate Settings**
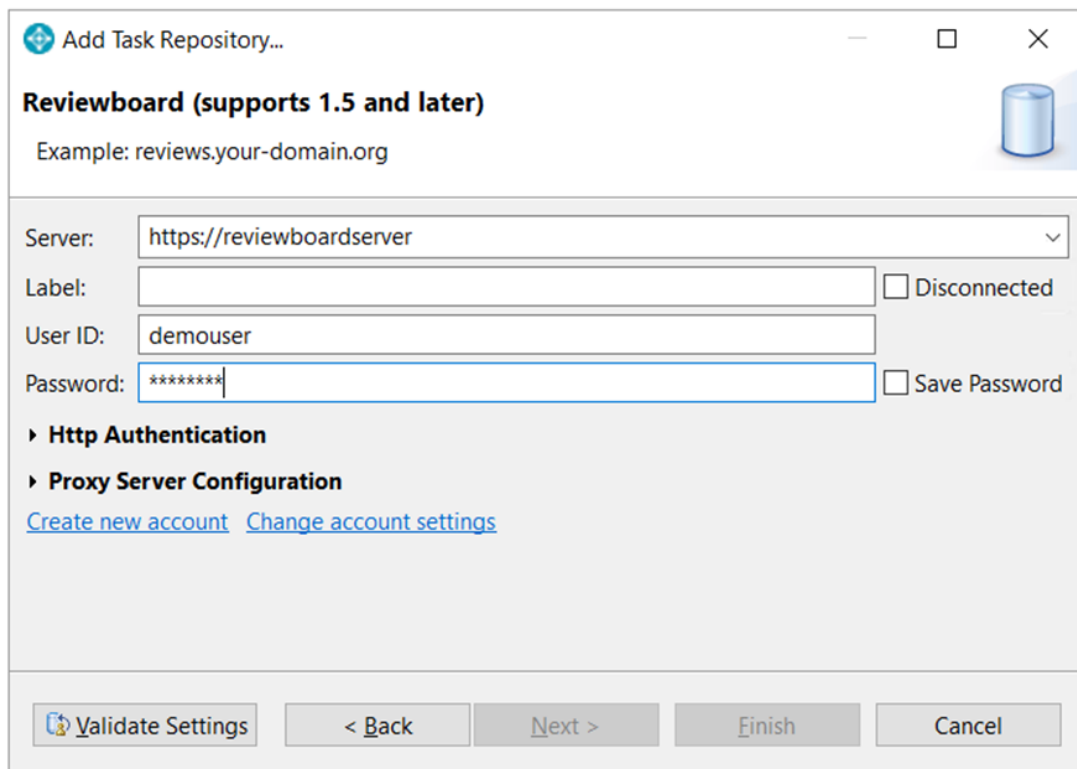
Figure 4: Review Board Validation

6. After validation, click **Finish** to complete the authentication.

Note: You can add multiple Review Board repositories.

You can submit a review request on a UCM activity or files and folders (for UCM and Base ClearCase).

UCM activity

New review request

You can submit new review requests on a UCM activity. To raise a new review request, right-click a UCM Activity and select **Review Board > Create Review Request** from the available menu.
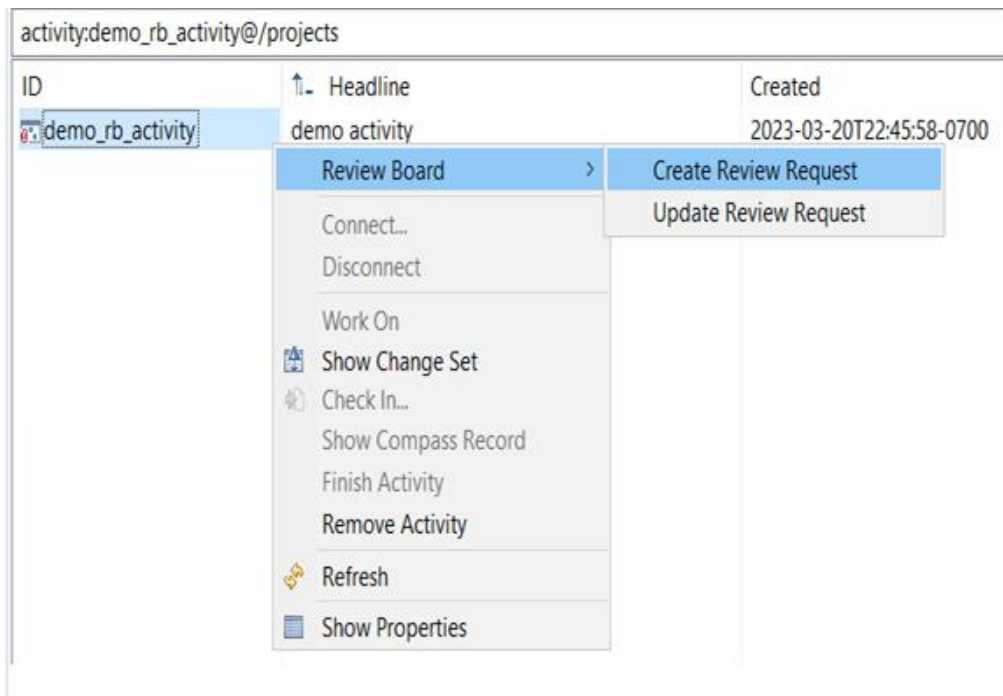
Figure 5: Create Review Request

Select Review Board Server dialog box

This dialog lists all the added Review Board repositories by user. You can select one. Select one on which you want to submit the review request and click **OK**.
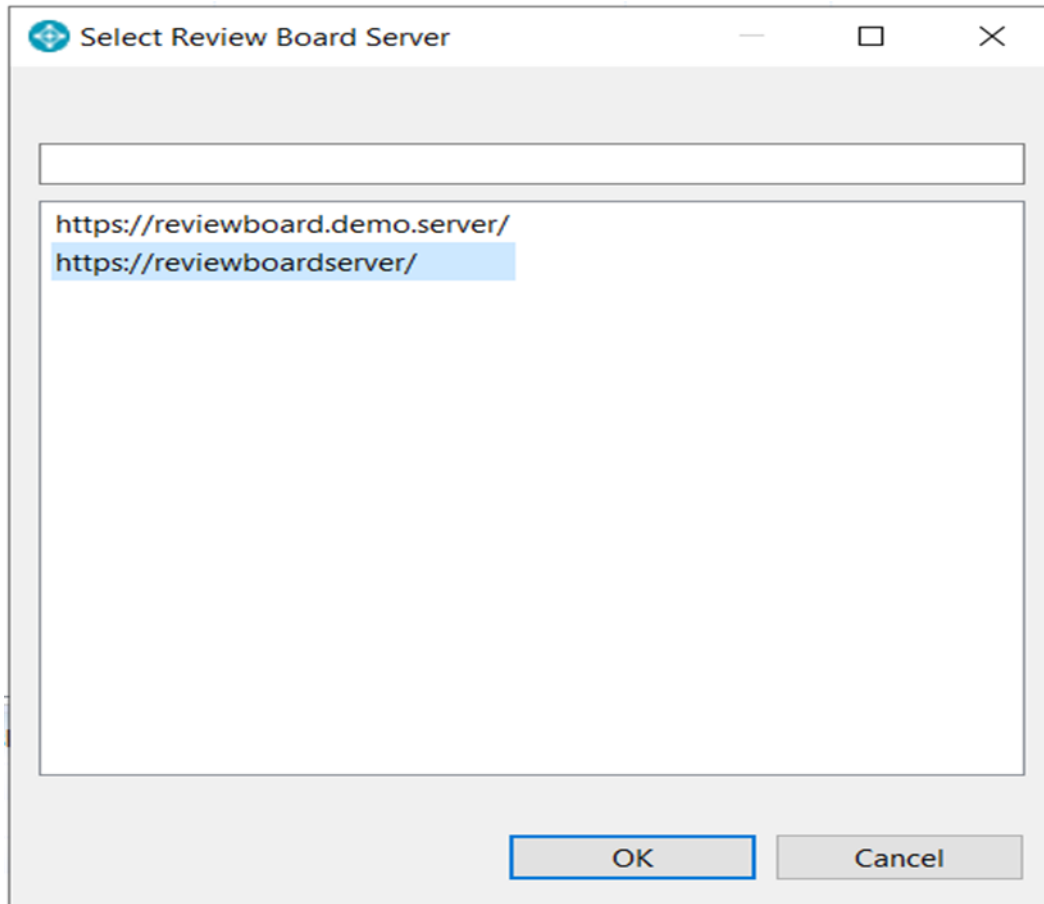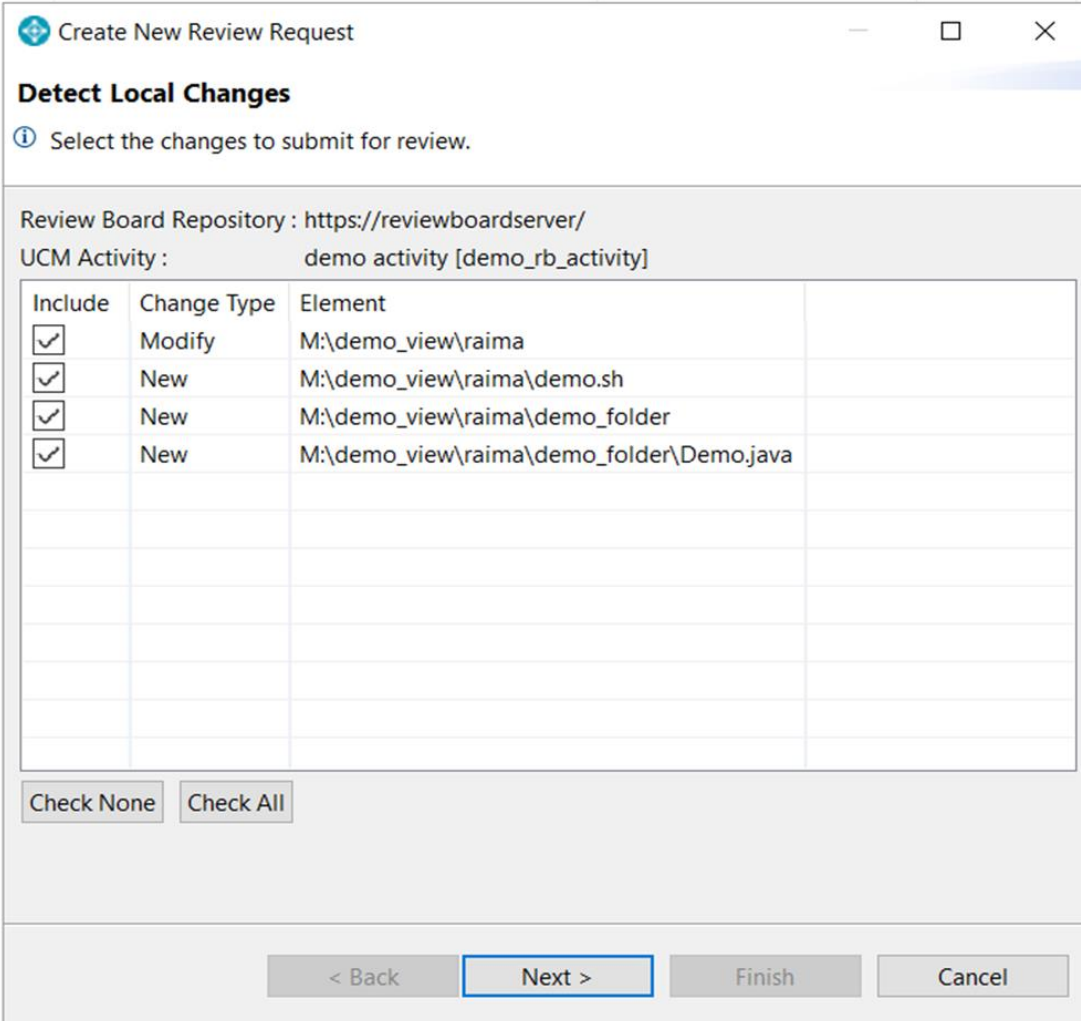
Figure 6: Select Review Board Server

Detect Local Changes page

The Detect Local Changes page contains the list of elements and their change types.

Figure 7: Detect Local Changes

Review Board Repository

This entry shows the Review Board server address as the user configured it.

UCM Activity

This entry displays the activity headline for which the Review Request is being raised. It is displayed only if the request is being raised for a UCM activity.

Change-Set table

This table displays the change set of the activity. The full file and folder path and type of change (that is, modify or add) are shown. Only checked-in changes are taken into consideration for Review Requests.

Include

Use this checkbox column to select or deselect versions to be included or excluded for the Review Request. At least one version must be selected to proceed with creating the Review Request.

Check None/Check All

These buttons are used to deselect or select all files and folders.
Select the files to be submitted for a review request and click **Next**.

Publish Review Request page

Complete the **Publish Review Request** page with the details required for publishing. Note that the fields with an asterisk (*) are required.

Figure 8: Publish Review Request

Summary*

Enter a review summary.

Bugs Closed

Enter a defect or bug number, if applicable.

Branch

Enter the branch on which development was done for the Review Request.

Description*

Enter the relevant details to the Review Request for the reviewer in this multiline field.

Testing Done

Enter the details of the testing done before the Review Request was raised.

Reviewers*

Enter either the names of the reviewers or the review group that is conducting the review.

Review People

Enter the Review Board user name IDs of the people who are conducting the review.

Review Group

Enter the name of the review group that is conducting the review. Note that group names are managed by Review Board itself.

After you have provided all the Review Request details, click **Finish** to submit the review request.

Update review request

You can update review requests on a UCM activity. To update a review request, right-click a UCM activity and select **Review Board > Update Review Request** from the menu.

Note: Include all previously submitted elements with newly updated elements to see full and proper diffs.

activity:demo_rb_activity@/projects

ID	⇑_ Headline	Created
demo_rb_activity	demo activity	2023-03-20T22:45:58-0700

Review Board   >   Create Review Request

Connect...   Update Review Request

Disconnect

Work On

Show Change Set

Check In...

Show Compass Record

Finish Activity

Remove Activity

Refresh

Show Properties
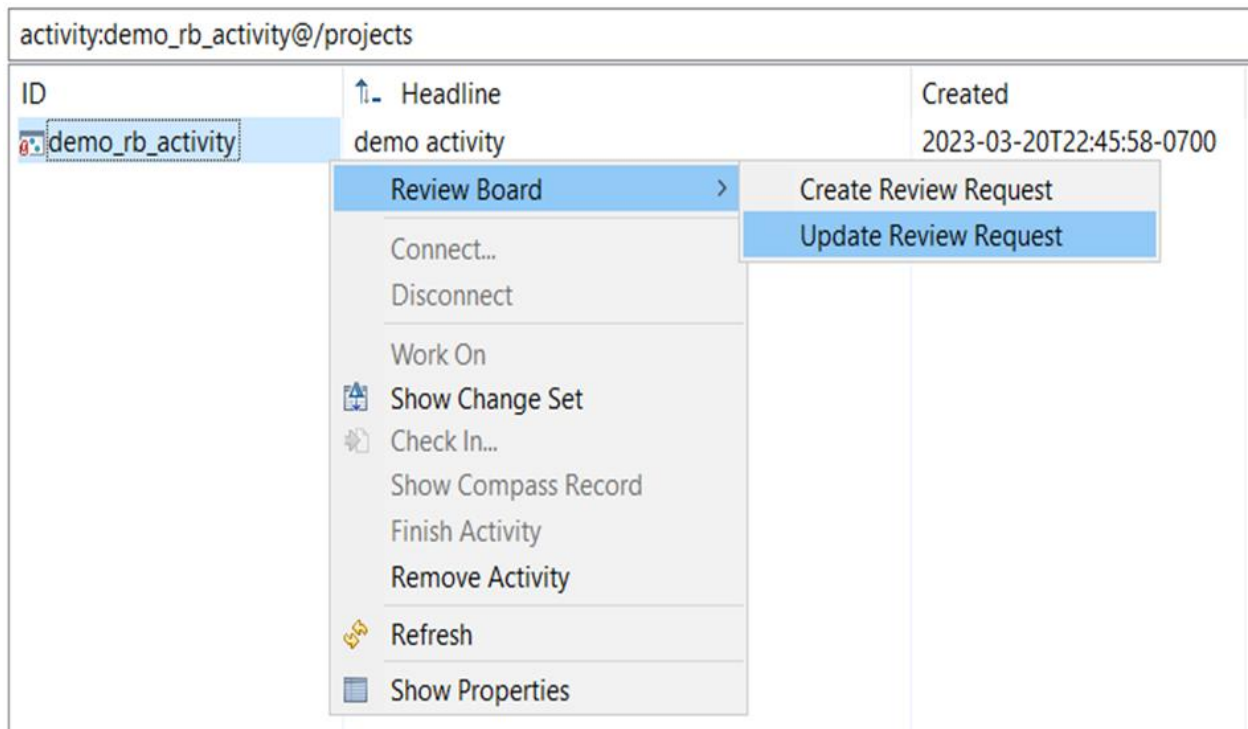
Figure 9: Update Review Request

Select Review Board Server   —   ☐   ✕

https://reviewboard.demo.server/
https://reviewboardserver/

OK   Cancel
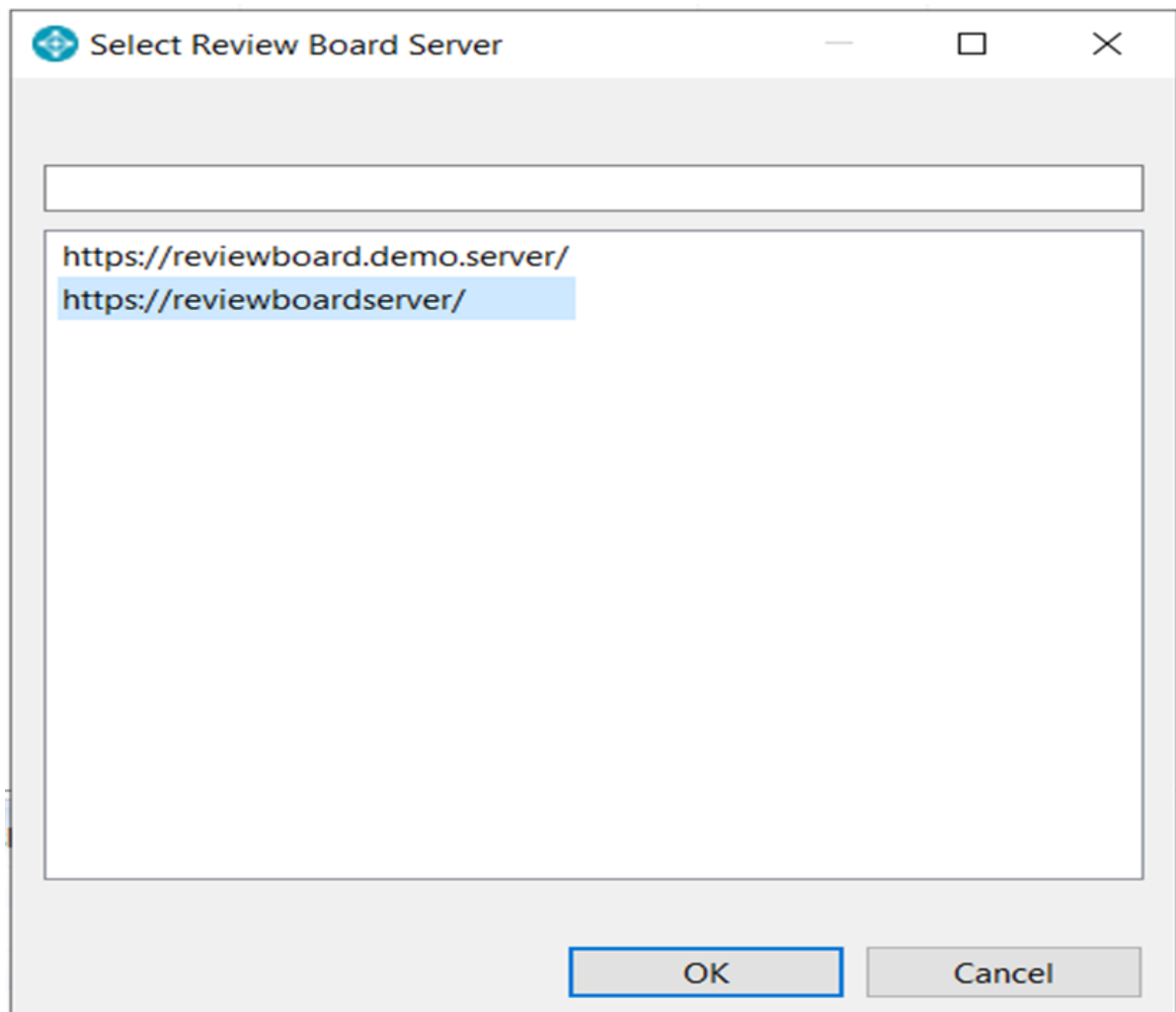
Figure 10: Select Review Board Server

Detect Local Changes Page

Select a review request from the menu or enter the review request ID in the text field.

To select a review Request from the drop-down menu:

Figure 11: Detect Local Changes

To enter a review request ID in the text field:

Figure 12: Detect Local Changes

Note: In the update review request flow, excluding the Detect Local Changes page, all windows are identical to the create review request flow.

Select review request

This control opens a menu on the Detect Local Changes page. The menu includes all review requests that you have submitted. You must select a review request to update. Alternatively, you can enter a valid review request ID in the text field and click **ValidateReviewRequest**.

After the review request ID is validated, click **Next** to navigate to the Publish Review Request page, where you can complete or update the review request details.

Refer to Figure 8 to see the Publish Review Request page.

After the fields are modified on the Publish Review Request page, click **Finish** to update or submit the review request.

File and folder

New review request

You can submit new review requests for files and folders. To raise a new review request, right-click a file or folder and select **Review Board > Create Review Request** from the menu. For both UCM and Base ClearCase, you can select multiple files and folders and create the review request.
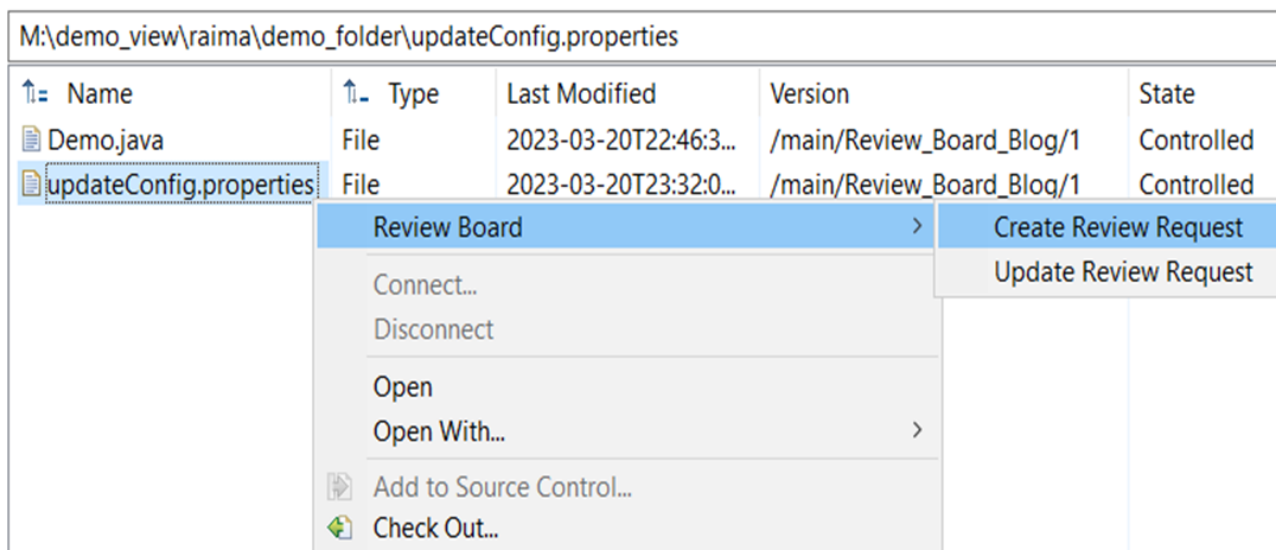

Figure 13: Create Review Request (File)
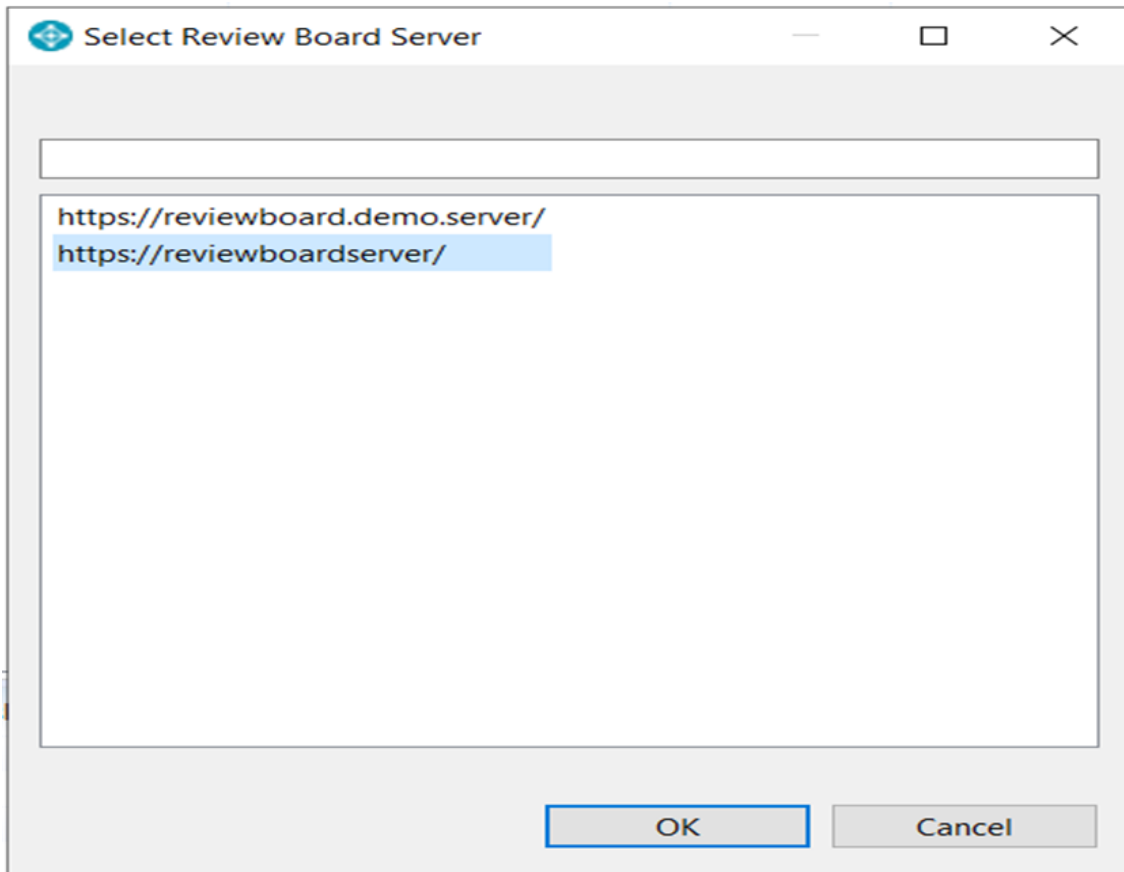
Figure 14: Select Review Board Server

Select Resources page

This page opens when a new request is raised for a file or folder. Use it to add files and folders to the review request and their respective versions for comparison.

Figure 15: Select Resources Page

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You can manually enter the values for **Element Path**, **Base Version Selector**, and **Current Version Selector**. After you click **Add/Modify**, the element is included in the review request and is entered in the Element table.

Element Path

The full path of the file or folder to be added.

Base Version Selector

The base version of an element to use in a comparison.

Current Version Selector

The current version of an element or the version for which you want to create a review.

Browse

You can browse and select multiple files or folders from the ClearCase Resource Browser dialog box within the current view context. That way, the user can select interactively and avoid having to remember the versions of elements.
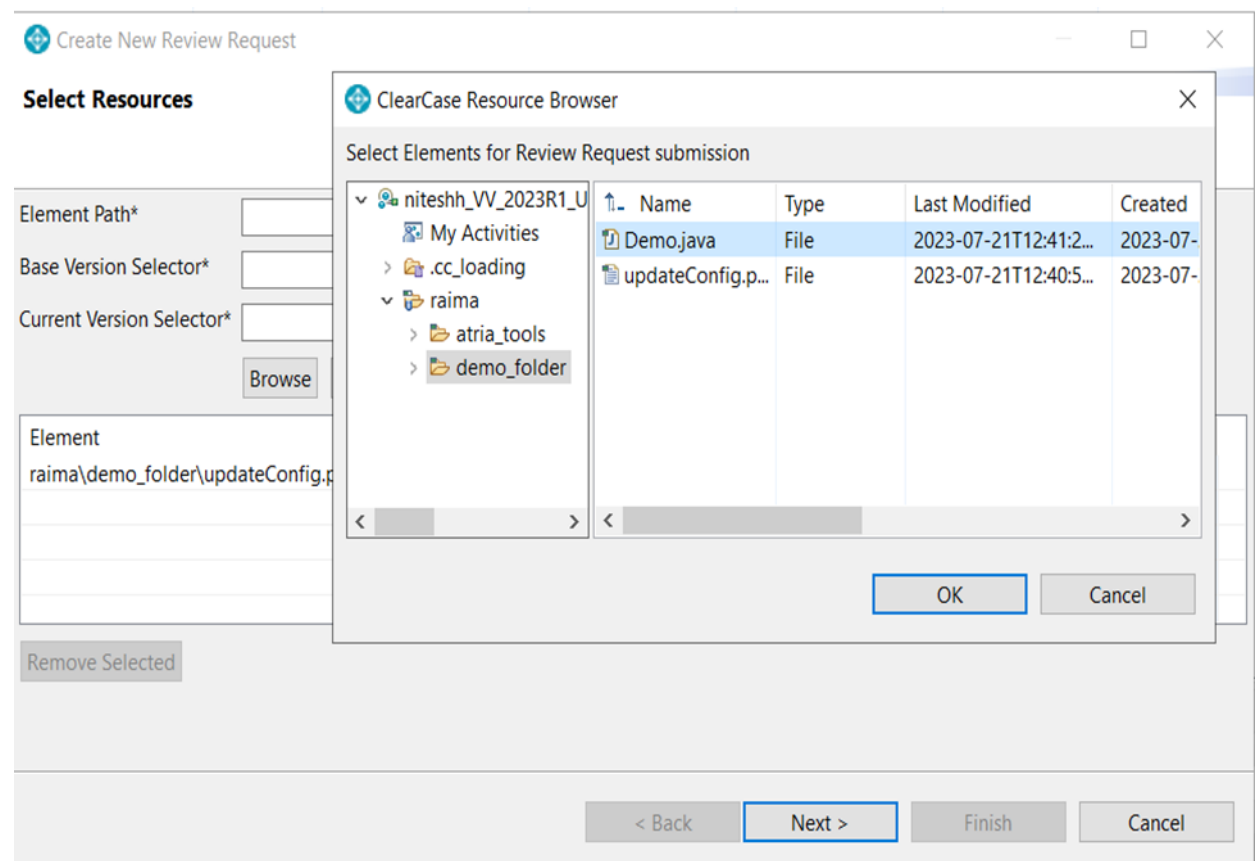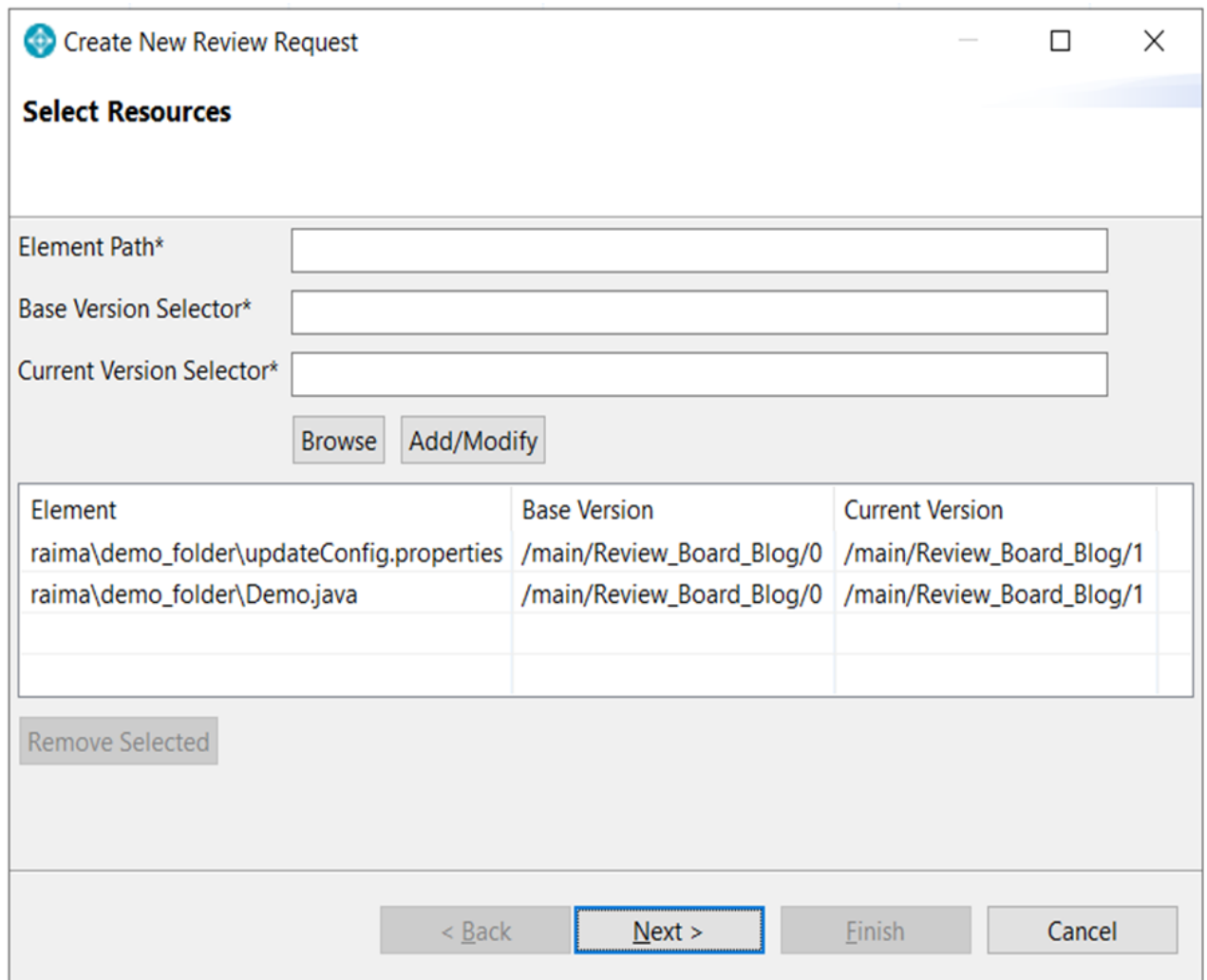
Figure 16: ClearCase Resource Browser

Select files or folders and click **OK**.

Figure 17: Select Resources

Add/Modify

Use **Add/Modify** to add or modify the element details in the table. After you select an element from the table, the respective element details populate text fields. Modify the base or current version fields and click **Add/Modify** to update the element in the table.

Element table

The Element table contains the details of the elements to be included in the review request.

Figure 18: Element Table

Remove Selected

Use the **Remove Selected** button to remove the selected row from the Element table. You can select multiple elements from the table to be removed simultaneously.

Detect Local Changes page

This page contains the list of elements and their change type.

Figure 19: Detect Local Changes

Click **Next** to navigate to the Publish Review Request page, where you can provide or update the review request details. Refer to Figure 8 to see the Publish Review Request page.

After you provide the review request details, click **Finish** to submit the review request.

Update Review Request

A review request can be updated for files and folders. To update a review request, right-click the file or folder and select **Review Board > Update Review Request** from the menu. You can select multiple files or folders and update the request.

Note: In addition to new files and directories, include all previously submitted files and directories to generate full and proper diffs.
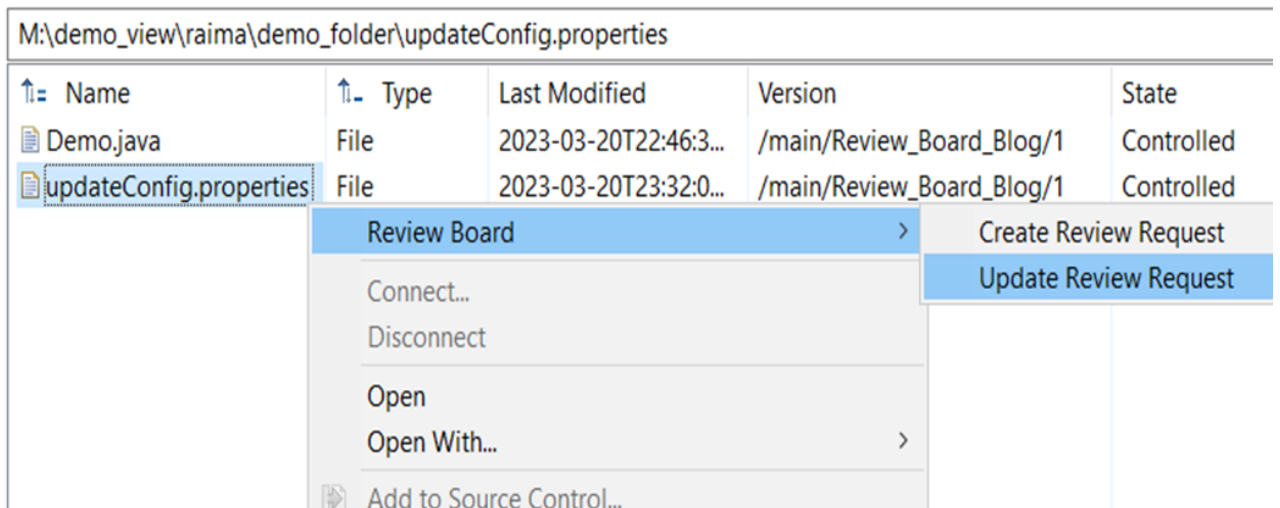
Figure 20: Update Review Request (Files/Folders)

Note: In the Update Review Request flow, excluding the Detect Local Changes page, all windows are identical to those in the Create Review Request flow.
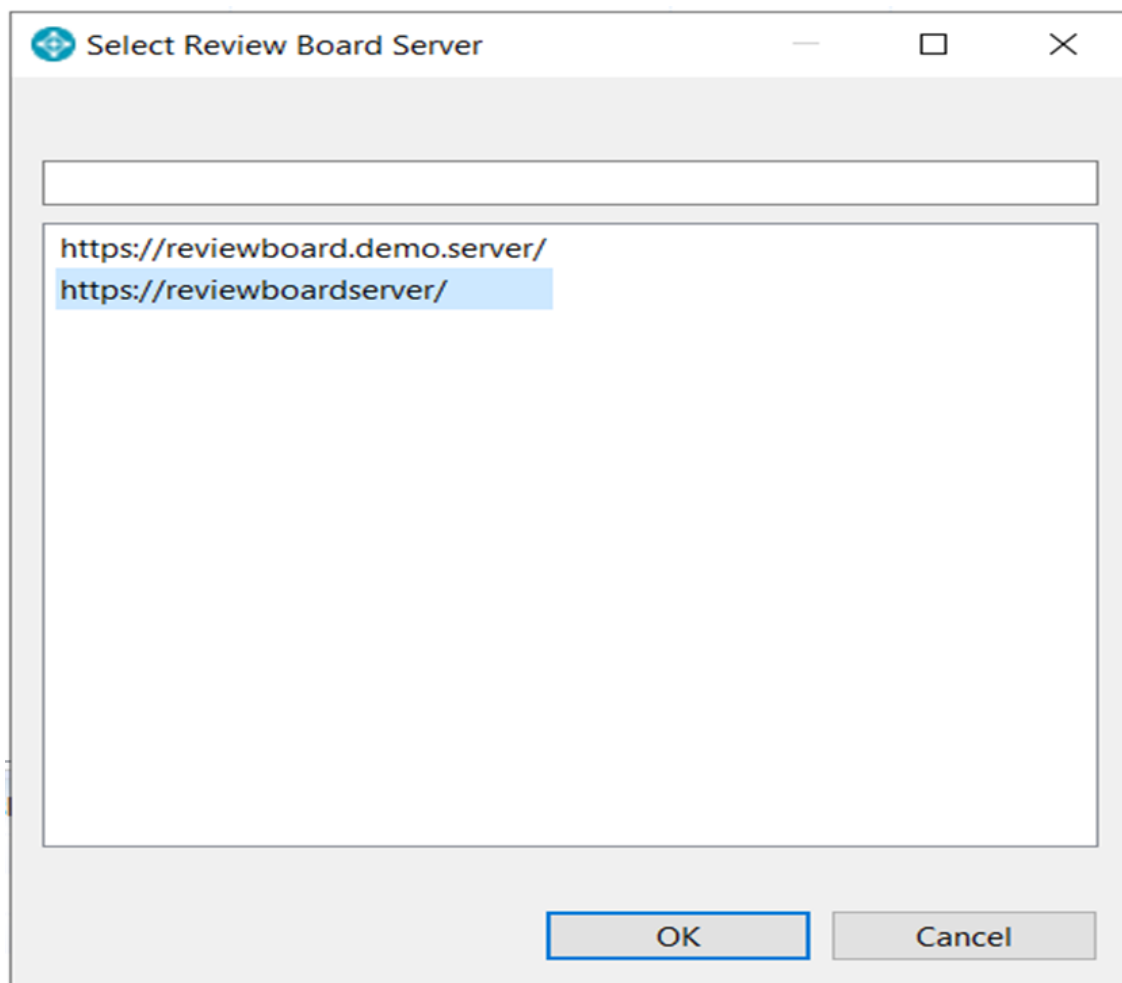

Figure 21: Select Review Board Server

Select Resource page

Figure 22: Select Resource

Click **Next** to navigate to the Detect Local Changes page. Refer to *Figure 10* and Figure *11* to see the Detect Local Changes page with the respective Update Request flow.

After the review Request ID is validated in the Detect Local Changes page, click **Next** to navigate to the Publish Review Request page, where you can provide or update the review request details. You can skip this step if you do not want to modify details, and instead click **Finish** to update or submit the review request. Refer to Figure *88* to see the Publish Review Request page.

Review submitted review requests

To view submitted review requests:

1. Open the Task List view by clicking **Window > Show View > Other > Mylyn > Task List**.

2. Right-click in the view and select **New > Query**.
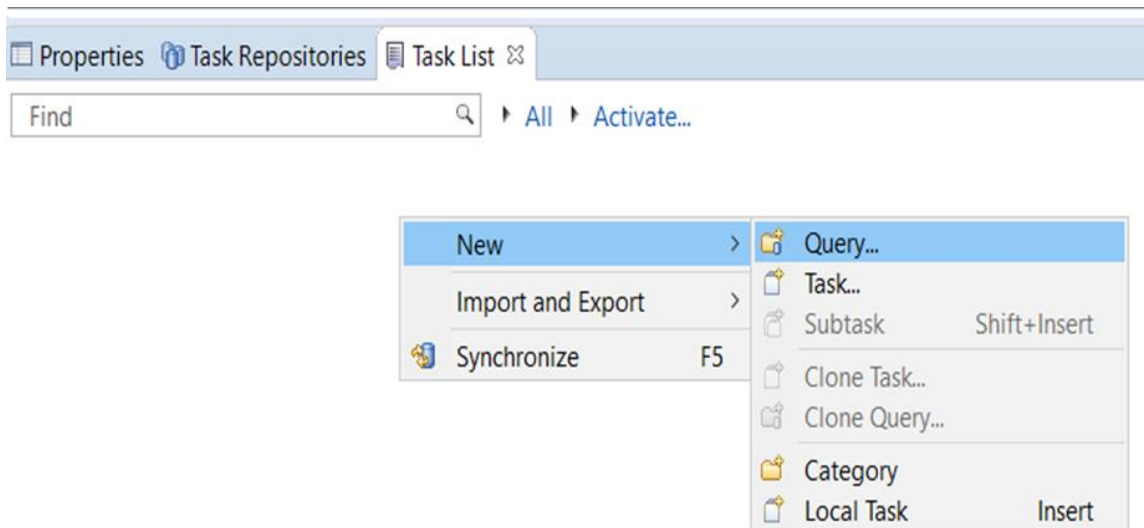
Figure 23: Task List View

3. Select the Review Board repository you are already logged in to.
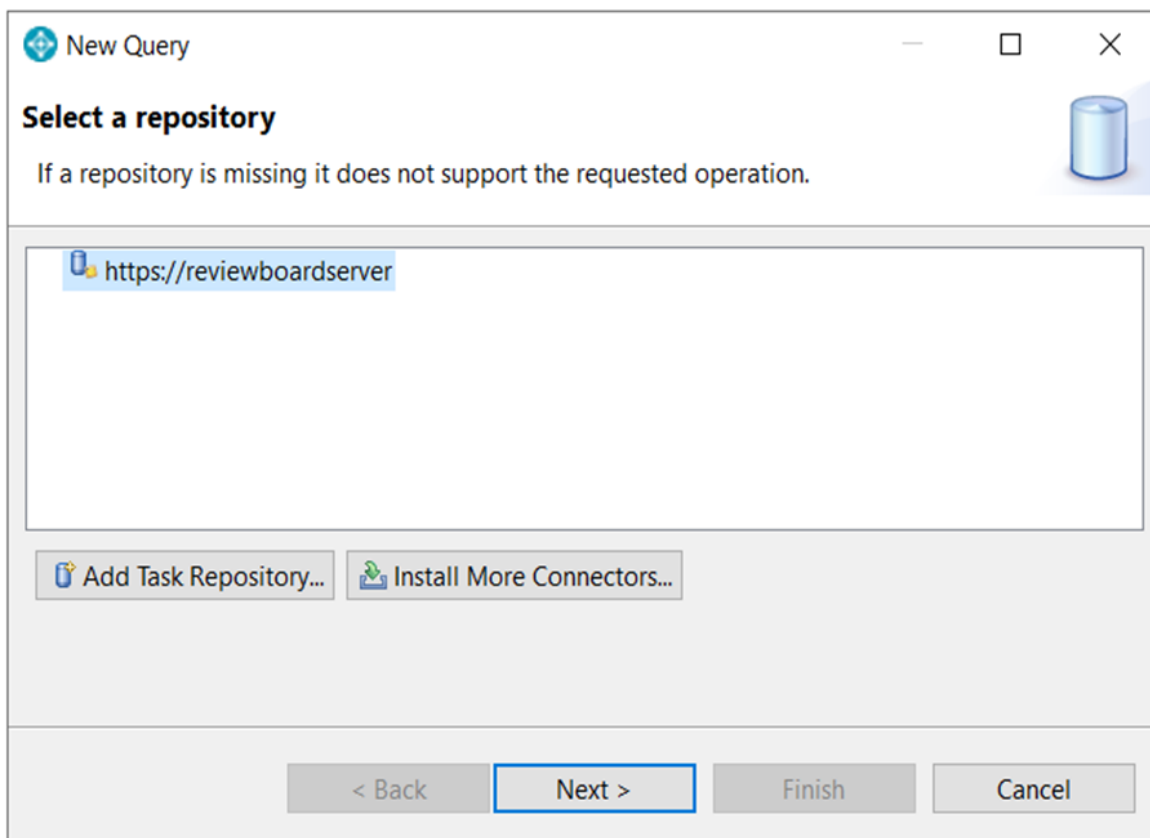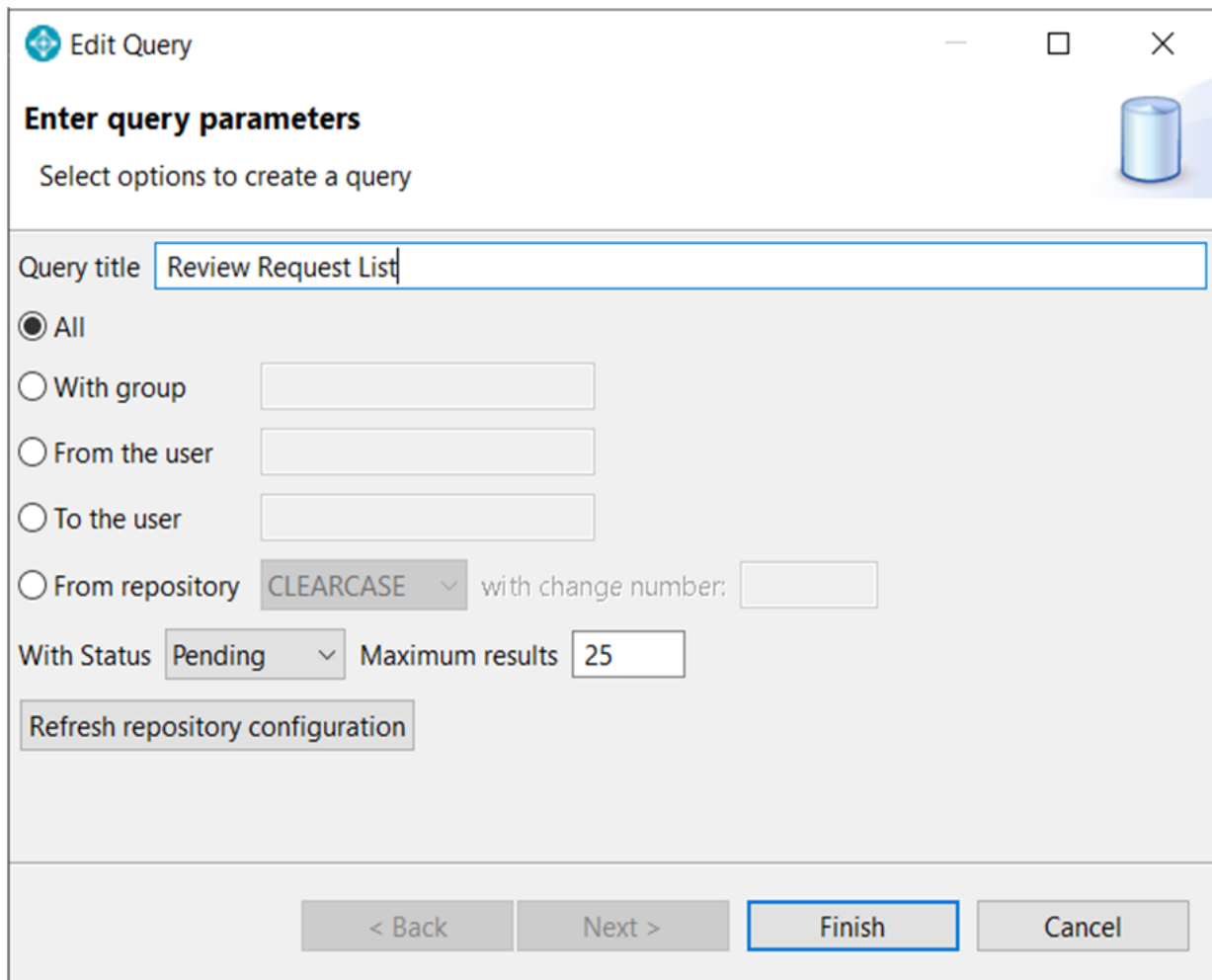

Figure 24: Select Repository

4. Select values for the **Query title** and filters such as **All**, **With group**, **From the user**, **To the user**, **With status**, and **Maximum results** (requests).

Figure 25: Edit Query

5. Click **Finish** to see the result.
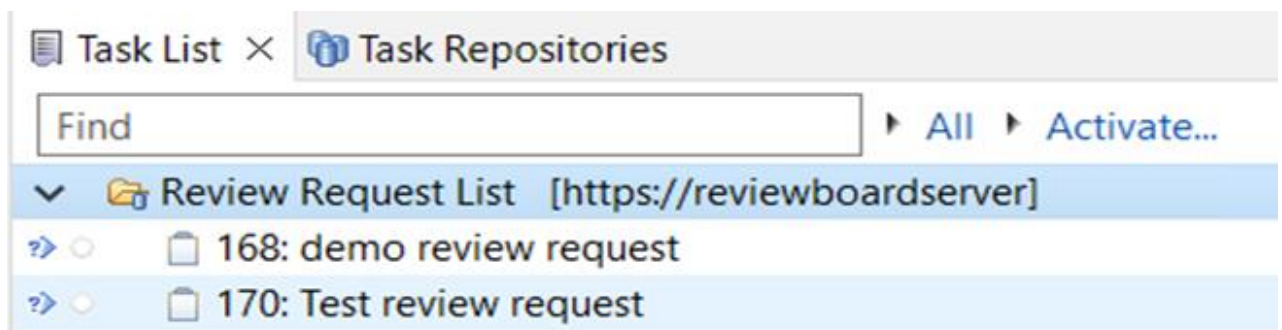
Figure 26: Review Board Request List

6. Double-click the review request to open and review it.

Figure 27: Review Request View

7. Click the **Open with Web Browser** icon to open the review request in a web browser or load the following URL directly in the browser.

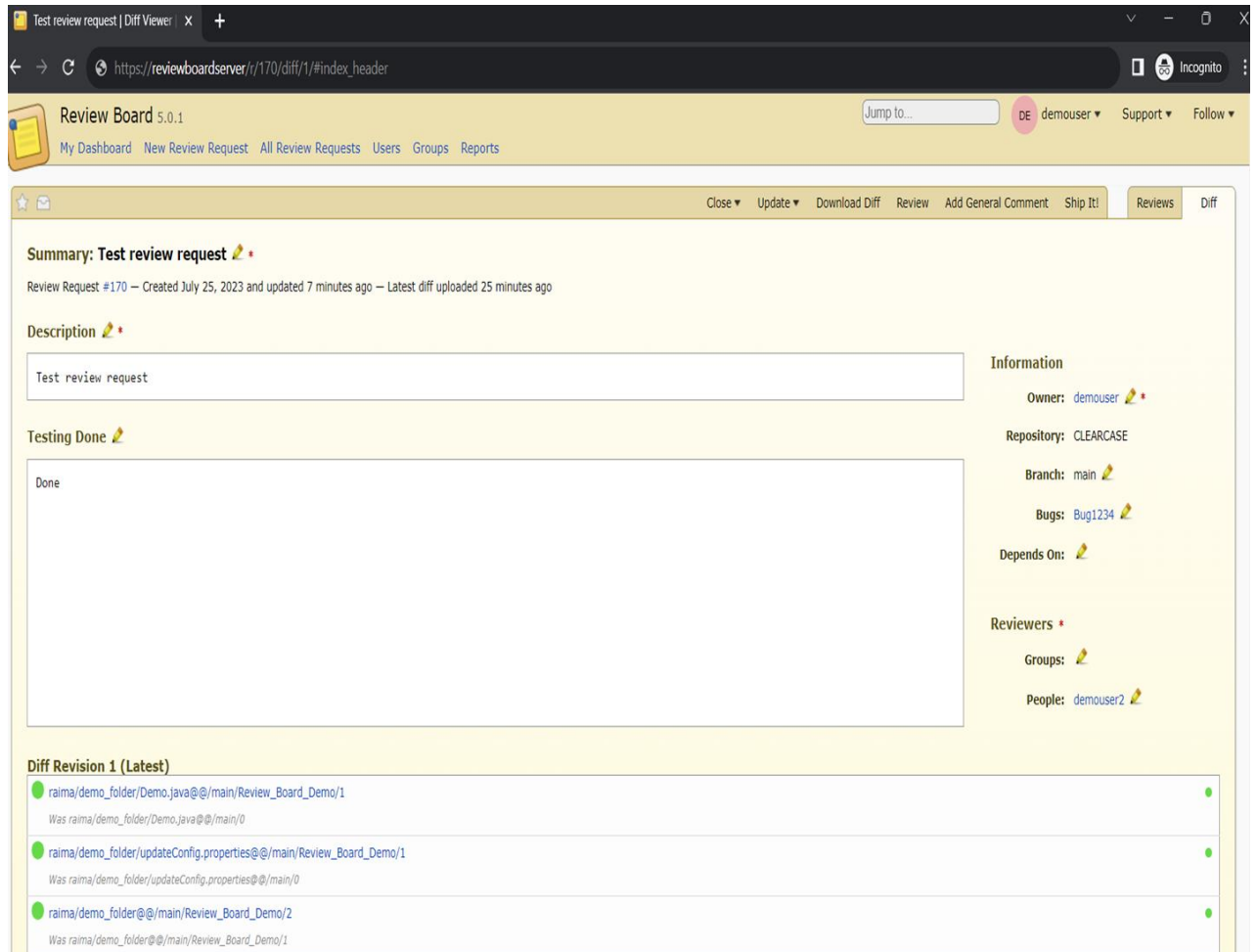   https://reviewboardserver/r/170/diff/

Figure 28: Diff Viewer

8. Reviewers can view changes and provide comments. If there are no comments, then the reviewer can provide approval by clicking **Ship It!**.

9. The submitter or developer can close the review by clicking **Close**.