

Hands-on Lab: Getting the Most out of Reporting on Collaborative Lifecycle Management Data

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Overview

The new light weight Jazz Reporting Service (JRS) introduced with CLM 5.0 provides practitioners with the ability to easily create their own reports in a powerful and easy to use interface (without requiring Cognos expertise). The JRS interface is designed to be intuitive without any technical knowledge of the underlying data warehousing technology. Users can create table based or graphical reports for single artifact types, specify the set of characteristics and filter on the artifact type that determines which data will be displayed.

You can also control the formatting of results with an interactive preview and which data of the artifact will be displayed. The resulting report can be run inside the JRS user interface and subsequently export to Excel®, if desired. Alternatively the report can be added to a dashboard as a widget alongside the existing reports provided by CLM or the out of the box reports from JRS.

To manage these new reports, there is an explorer view that shows the reports stored in the JRS. The reports can be organized by tags, visibility and / or filtered through a text search. This is also a launch page for editing or duplicating existing reports shared by other team members.

Jazz Reporting Service 5.0.2 Release Highlights:

The new CLM 5.0.2 release with the Jazz Reporting Service (JRS) continues to improve the simple and easy way to build practitioner defined reports. This latest release now supports the ability to include requirements artifacts in a report, graphical reports, and the option to build multi-artifact traceability reports that span single or multiple projects.

Overview:

- JRS reports can be easily created by anyone on the team
- Quickly create your own table and graphical report for requirement artifacts, work items, and test artifacts.
- Build multi-artifact traceability reports (across projects/teams)
- Reuse shared user reports as quick start templates
- Reference and use the generated SQL query (for advanced users)
- Report drill down to unlock important data and trends
- Export to Excel® for further analysis

Lab 1: Exploring the Jazz Reporting Service interface

In this lab, you will explore and discover the different aspects of the user interface of the Jazz Reporting Service (JRS). You will learn:

- the different parts of the UI, including basic actions used to create, run and modify reports
- how to run an existing out of the box report

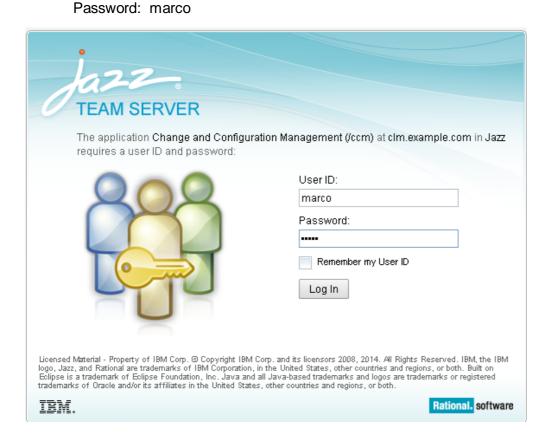
Attention: Make sure that the Jazz Team Server is started and is accessible via the Firefox browser. For more details, see Appendix A.

Login to the Change and Configuration Management application at

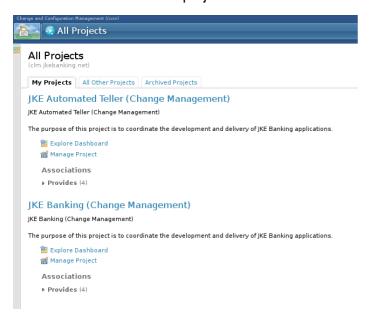
https://clm.jkebanking.net:9443/ccm/web

using the following access information:

User id: marco



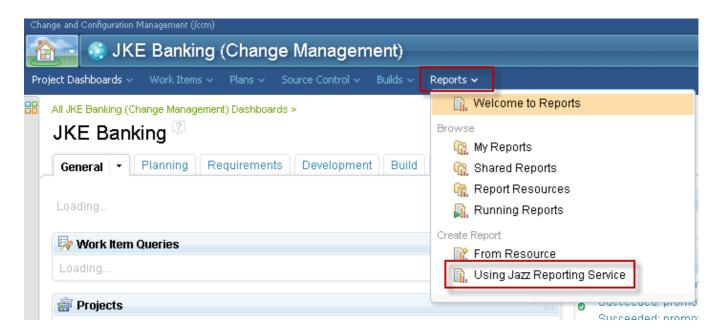
You should see two CCM project areas:



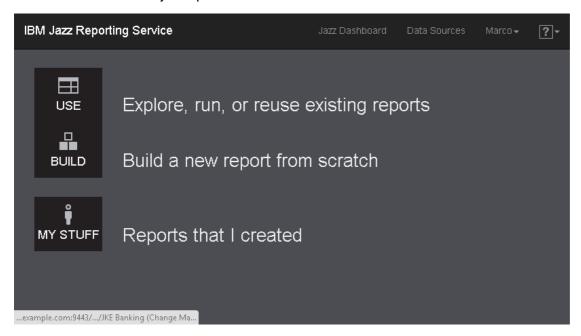
Note: The JRS is capable of reporting on artifacts across Jazz Team Servers and Project Areas.

Select the JKE Banking (Change Management) project area to navigate to the project dashboard. Select Reports -> Using Jazz Reporting Service

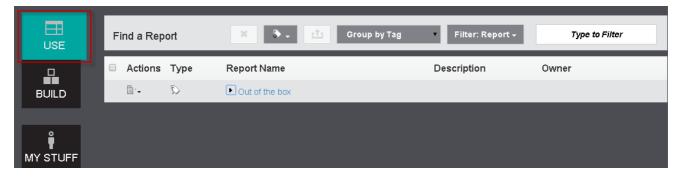
Note: You can open Jazz Reporting Service from the following locations: from the Home menu in the Jazz Reporting Service section, from the Reports Welcome page of the CLM application, or, from the Reports menu on a CLM application toolbar.



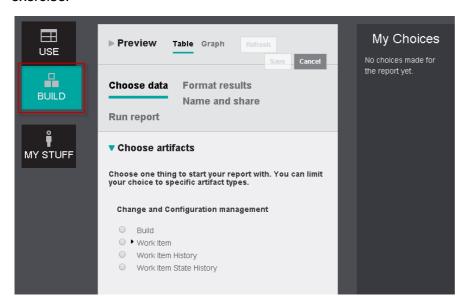
The JRS has three major capabilities shown in the screenshot below.



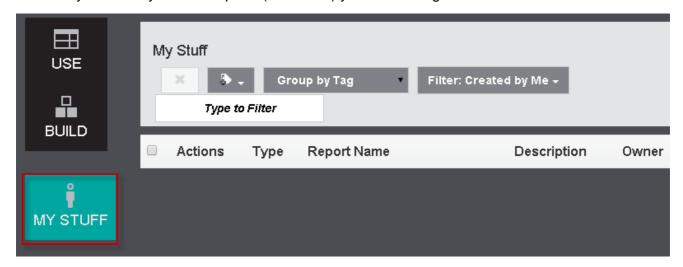
To see the out of the box reports and previously shared reports, click **Use**. Jazz Reporting Service has a collection of ready-to-use reports for agile tracking and planning, including reports where you can drill down into the most recent data to figure out any actions that need to be taken to address any problems.



To start creating a new report, click **Build**. You will learn how to build and share your own report in a later exercise.

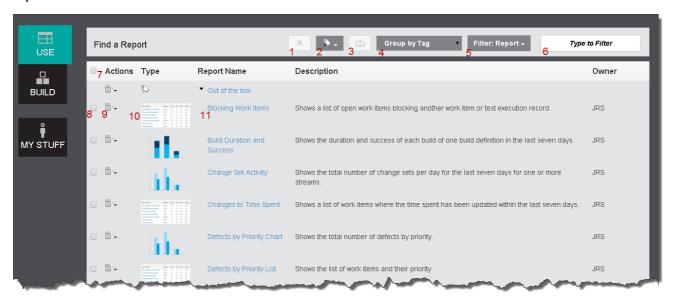


To see the reports that you previously created and saved, click **My Stuff**. This section is currently empty but once you create your own reports (see Lab 2) you can manage them here.



Use - Explore, run, or reuse existing reports

Click **Use** to show the out of the box reports page, and click the Out of the box twisty to show the available reports.



Use - Explore

In the above screenshot, note the following elements and actions:

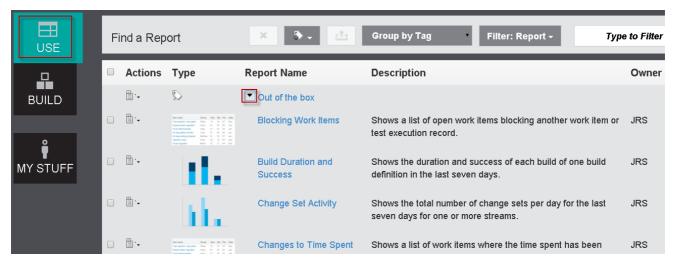
- 1. Delete: Delete selected reports. Enabled when one or more reports are selected.
- 2. Add Tag: Create new tags and add existing tags to selected reports.

- 3. **Export**: Export selected reports to Microsoft Excel® for offline analysis and viewing. Excel® export maintains report layout and format.
- 4. **Group**: Display all reports, display reports grouped by Tag or display reports grouped by Visibility (Public or Private)
- 5. **Filter**: Filter displayed reports by Tag or Visibility (Public, Private, Created by Me)
- 6. Text Filter: Filter reports by text contained in Report Name or Description
- 7. Select All or No Reports
- 8. Select Individual Report
- 9. Report Actions: View (public and private reports); Edit, Duplicate (your own reports and public reports that are not out of the box); Delete (your own reports); Delete (any report if logged in as user with JazzAdmin permissions); Remove tags you created from a specific report (If the report is the last report to use that tag, the tag will be deleted as well)
- 10. Report type: Shows whether the report output is a graph or table
- 11. Report URL: Clinking the URL will run the report

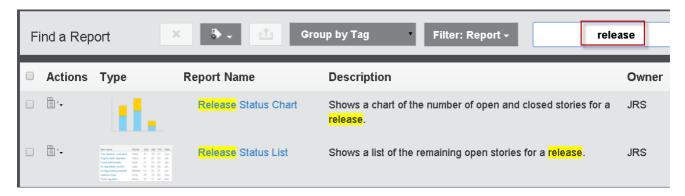
Use - Run an existing out of the box report

In this exercise you will learn how to run an existing report, providing values for parameters if required.

Navigate back to the JRS main page (https://clm.example.com:12443/rs/reports#start) click **Use** and click the twisty to show all Out of the box reports.



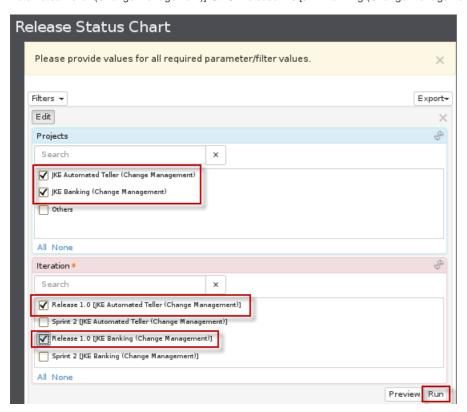
You would like to monitor the status of various iterations by looking at the Open and Closed Stories for those iterations. Rather than scrolling to find a report that might provide this information, place the cursor in the **Text Filter** and begin typing "release". As you type the list of reports is filtered to show only those that contain the word as typed, eventually showing two reports, one that shows the Release Status as a Chart comparing open to closed stories and the other that shows the Release Status as a List (Table) of Open stories.



Run the **Release Status Chart** report by clicking its name. You will be presented with choices for two filters: the first for Project and the second for Iteration.

Hint: The values displayed for Iteration are dynamically populated based on the value or values selected for the Project filter.

Select the JKE Automated Teller (Change Management) and JKE Banking (Change Management) Projects, then the Release 1.0 [JKE Automated Teller (Change Management)] and Release 1.0 [JKE Banking (Change Management)] Iterations and click Run.

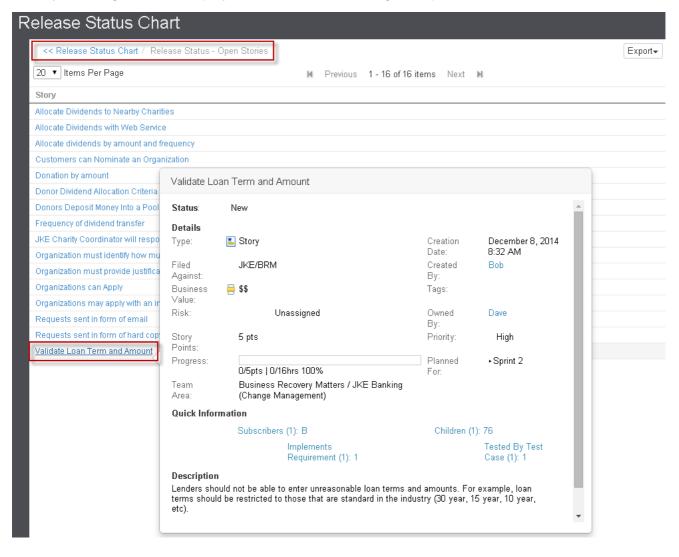


A bar chart showing the Open vs Closed stories for each release is displayed. Hovering over the different sections of the bars will display the count of stories contributing to that section. The data for the chart can also be exported for further manipulation as a spreadsheet.

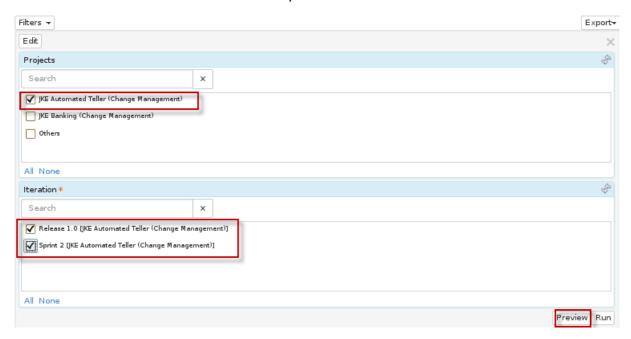
Note: When exporting the query to Excel®, you can choose to create a new spreadsheet with live (updateable) or static data or add the query to an existing spreadsheet.



Now that you can see that there are 16 Open stories for the JKE Banking Release 1.0 iteration, you can drill down to see that list of Open stories. Click the top section of the JKE Banking stacked bar and a new report showing the list of Open Stories will be displayed. You can drill further into the details of each line item by hovering over it to display the rich hover or clicking it to open the item.



Click the Release Status Chart breadcrumb to return to the Release Status Chart page. You can also run simple "what-if" scenarios using the Preview feature. Click **Filters**, then **Edit** and select only the JKE Automated Teller (Change Management) project and both the Release 1.0 [JKE Automated Teller (Change Management)] and Sprint 2 [JKE Automated Teller (Change Management)] iterations and click **Preview** to display the resulting chart below the filters. Experiment with the filters to see what different values produce.



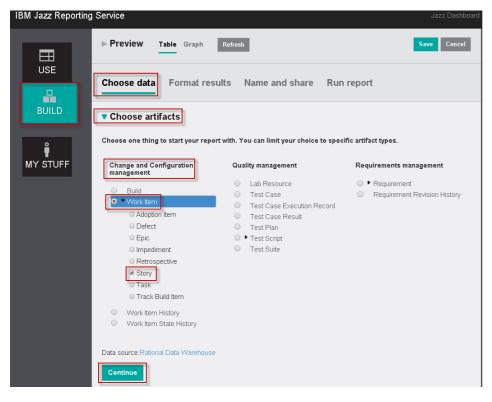
Lab 2: Creating a simple cross-project report

In this lab you will create a simple list (table) report that shows Story work items with various Priorities and States, grouped in Descending order of Story Points across Project Areas you have access to. In this lab you will learn how to:

- Select the artifact type(s) to report on
- Select the project areas to report on
- · Set conditions and grouping criteria
- Format the results of a report
- Preview the report
- · Create and add a tag to the report to be able to find it easily
- Publish the report as a Public report for use by other team members
- View the report in a dashboard widget

Navigate to the JRS main page (https://clm.example.com:12443/rs/reports#start) and click **Build**. You are first required to choose the initial artifact to report on. For this report we want to report on Stories which are a type of Work Item in the Change and Configuration Management CLM application.

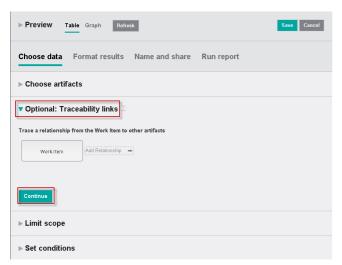
In the **Choose Data** tab, expand the **Choose artifacts** section. Under the Change and Configuration Management heading, expand **Work Items** and select **Story**. Then click **Continue**.



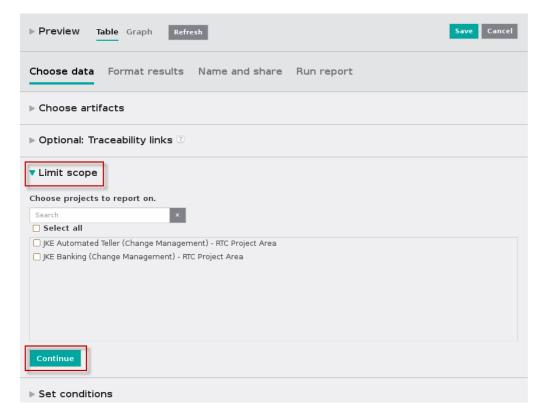
Hint: As you build your report, you can see your choices in the My Choices pane on the right side and at any time, you can adjust your choices by clicking a pencil icon in this pane.



You have the option to add traceability links which you will do in a later lab. Click **Continue** in the **Optional: Traceability links** section.



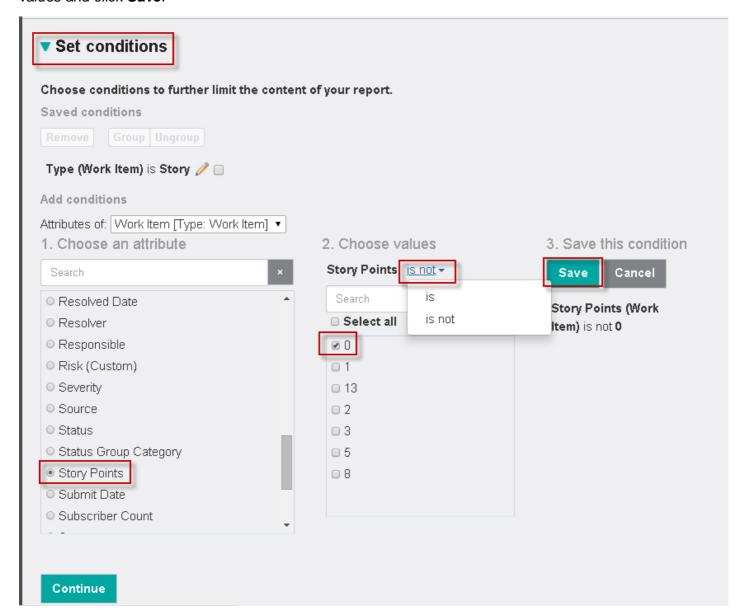
The **Limit scope** section allows you to choose which Project Area(s) to limit the report to. For this report, we wish to report across both the project areas Marco has access to so do not select any of the Project Areas and click **Continue**.



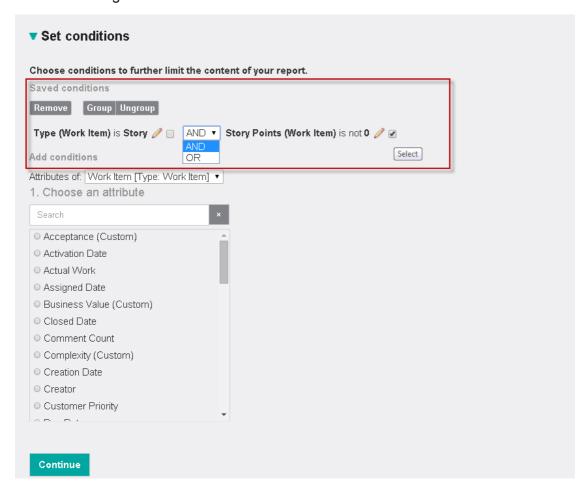
You now need to filter the data such that you only see Stories that have a Story Point value greater than zero.

In the **Set conditions** section scroll down (or type Story in the Search box) in the Choose attribute list, select **Story Points**.

In the Choose values section that is displayed, select "is not", select "0" in the list of available Story Point values and click **Save**.

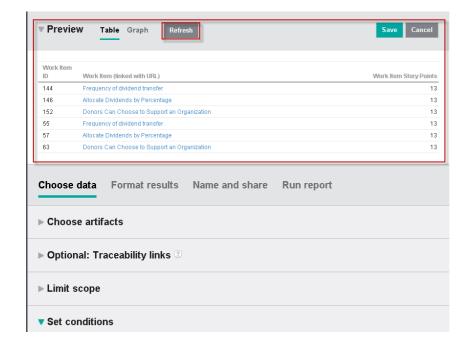


You can edit saved conditions or add further conditions if you wish including complex grouped AND/OR conditions using the controls available in this section.

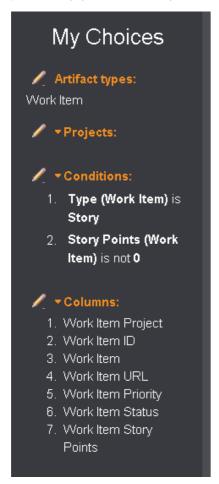


As you build the report, you can use the **Preview** capability at the top of the page to see what the report will look like with a subset of the data. You can also visualize the data in a graphical format which you will explore later.

Click Refresh in the Preview section.



Note also that your progress so far is updated in the My Choices pane on the right and as mentioned previously you can at any time adjust your choices by clicking a pencil icon in this pane.



Format results

So far you have chosen the CLM artifact type to report on (Story work item type) and added a condition to limit the data (Story Points > 0). Next you will format the results by adding some columns (Project, Priority, State) and sort order (first by Project Area and then in Descending order of Story Points).

Click **Continue** at the bottom of the **Set Conditions** section.

In the **Columns** section of the **Format Results** tab, scroll or use the **Search** box to find and add the following attributes as columns to the report:

- Project
- Priority
- Status

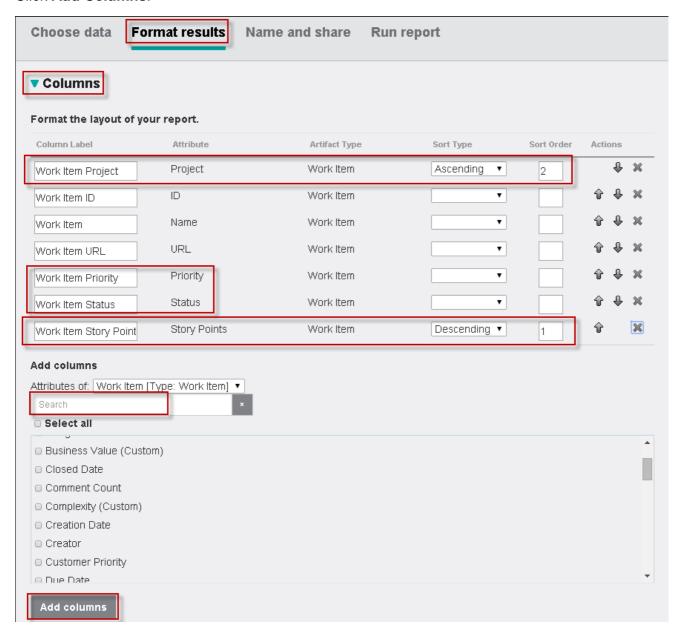
Hint: Now is a good time to use the Preview capability to make sure the report looks the way you want it to.

Then use the arrows in the **Actions** column to rearrange the order of the columns.

Next set the Sort Type for the Work Item Story Points Column to Descending and the Sort Order to 1.

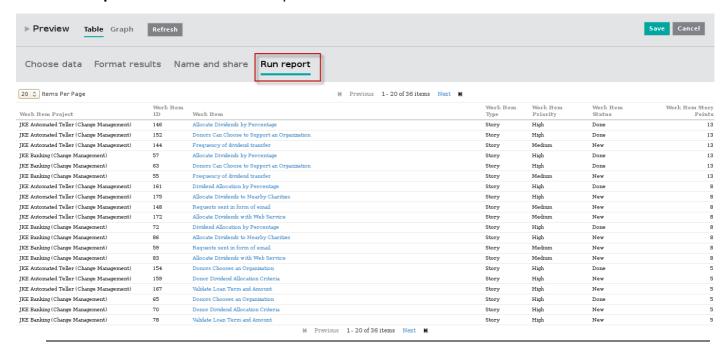
Finally set the **Sort Type** for the Work Item Project column to Ascending and the **Sort Order** to 2.

Click Add Columns.



Before saving, tagging and sharing the report you need to make sure that it is presenting the right data in the format you expect it to.

Click **Run Report** to see what the final report will look like.



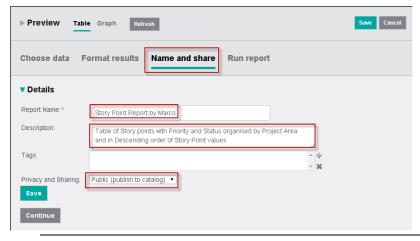
Note: You can switch back to any of the "Choose data" or "Format results" sections to make changes as you see fit, either by clicking on the tabs or the pencil icon in the My Choices pane.

Name, Tag and Share the Report

Now you will name, tag and make the report available to the rest of the team.

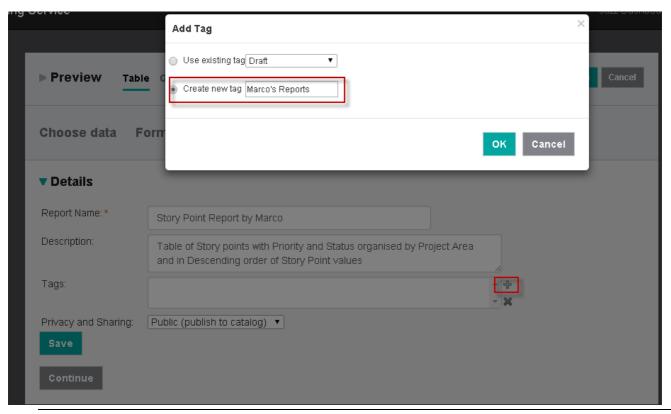
Click the "Name and share" tab, enter a name, Story Point Report by Marco, and description for the report, "Table of Story points with priority and Status organized by Project Area and in Descending order of Story Point values".

Change the "Privacy and sharing" setting to "Public (publish to catalog).



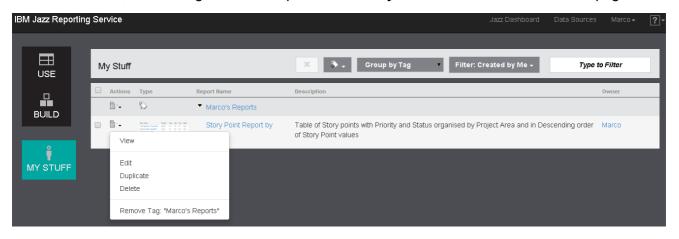
Note: You can control who can see your report. Publish it only when you are ready to share it. When you make it public, team members can add it as a widget on their Jazz dashboards or see it on the **Use** page.

Next click the Add tag icon, select Create new tag, type "Marco's Reports" for the tag name and click **OK**. Then click **Save**.

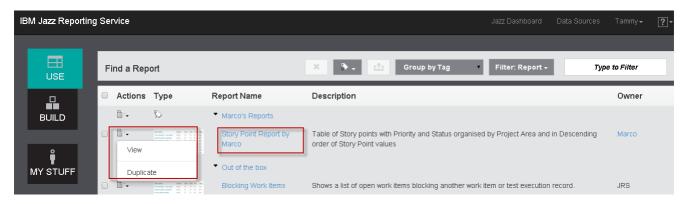


Important: Tag your reports so that they are easy to find, and grouped in a way that is useful to you. Each tag in the Jazz Reporting Service is a category in the Jazz Reporting service widget catalog.

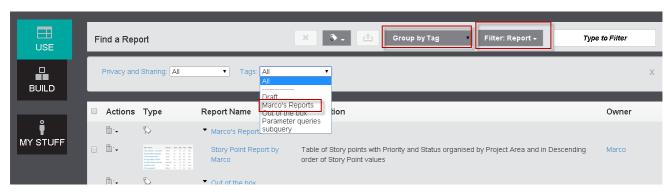
You can now run, and manage this new report from the My Stuff section of the JRS main page.



Your team members can also view and use your report (using the **Duplicate** action) as the basis for their own reports from the **Use** page.



You can also use the "Marco's Reports" tag to group and filter.



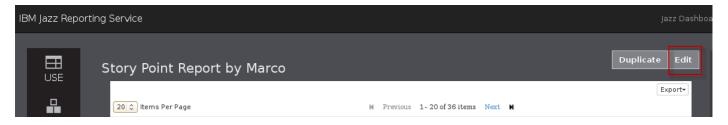
Preview as a graph

Let's explore how to preview the report you just created as a graph instead of a table.

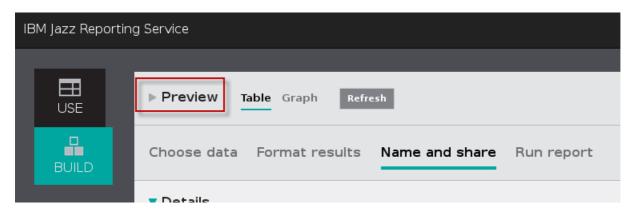
Click My Stuff

Click the Story Point Report by Marco report.

Click Edit



Click Preview



Click **Graph** to explore what options are available for displaying the contents of this report graphically.

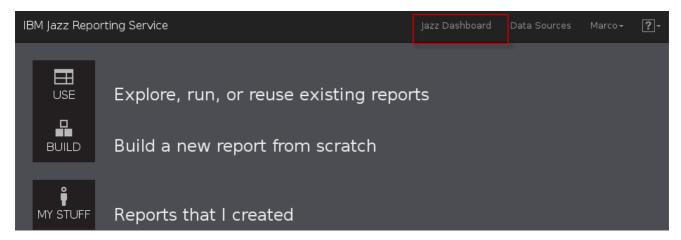


The report results can be grouped based on any of the columns in the report, optionally sorted, and the orientation can be set. You can also find the graph type that best communicates your data: bar, stacked bar, grouped bar, and pie chart. Explore the graph options to see what fits your reporting needs.

Adding a report as a widget on a dashboard

Next, let's add this report as a widget on a dashboard. Reports you build and publish and out of the box reports get added to the JRS catalog. This catalog provides widgets that can be added to a dashboard.

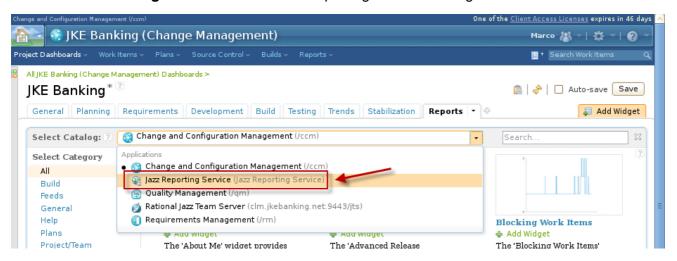
From the JRS toolbar, select Jazz Dashboard.



This takes you to Marco's personal dashboard. Use the Home button to select the JKE Banking project dashboard. You want to add a widget to a new dashboard called 'Reports'. Add a **Reports** tab to the JKE Banking project dashboard and set the layout to 1 Column. This layout makes these larget widgets readable without scrolling. Click **Save.**



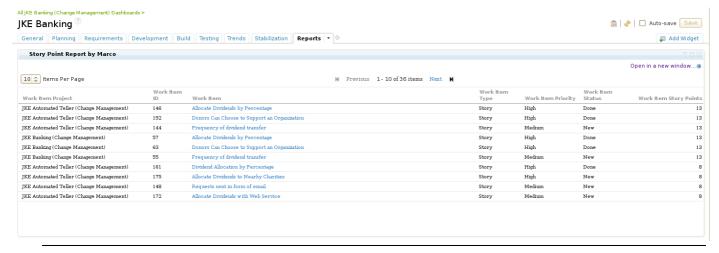
Then select Add Widget and select the Jazz Reporting Service catalog.



Notice that the previously created tag, 'Marco's Reports', behaves as a category within the JRS catalog.



Select 'Marco's Reports' to find the report we created earlier. Click **Add Widget** and **Save.** This adds the report '**Story point Report by Marco**' to the Reports dashboard. If you see a login prompt, click Log in to run the report.



Note: The widget can be expanded using the control on the right side. It can also be maximized. The gadget height can also be manually set using the Settings menu option. By default, it is set to zero which sets a default gadget height.

Lab 3: Creating a traceability report

You will now use the JRS UI to create a multi-artifact traceability report where you can define the relationships you want to see between artifacts. Traceability reports allow you to get an assessment of progress across the entire lifecycle. For example, you can build a test coverage report that shows the test cases for requirements as well as the defects associated with those test cases. Visibility across the lifecycle disciplines allows you to be better prepared to respond to changes quickly, to keep projects on track, drill down to unlock key data and stay ahead of problems.

Creating requirements lifecycle coverage report

In this lab, you will work as Tammy, a test manager responsible for making sure that all of the necessary requirements are being implemented, validated, and that testing is running smoothly and on schedule. You need to create a report to verify that the test coverage on your project is sufficient. You create a report that shows requirements and their related test cases, and in turn the work items related to the test cases. This helps you to verify the coverage and identify gaps in the testing.

You will learn:

- Create a report that shows requirements and their related test cases, and the work items related to the test cases
- Create conditions that refine what test artifacts to return
- Create relationships between requirements and testcases

Logout of the JRS application.

Login to the JRS application at

https://clm.jkebanking.net:9443/rs

using the following credentials:

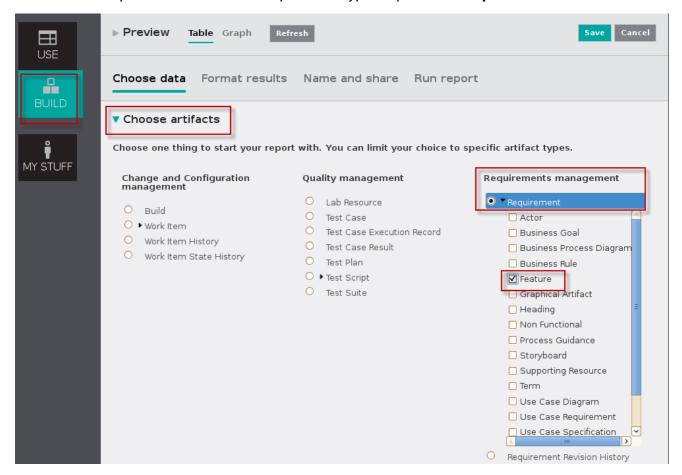
User ID: tammy

Password: tammy

From the JRS home page, select **Build**.

Important: Key questions to ask when building reports: What type of artifacts do you want to collect data about? What projects contain the data you want? What data do you care about?

Let's start the report with the **Feature** requirement type. Expand the **Requirement** twistie.



Click Continue or select the Optional: Traceability links section to open it.

Note: Relationship links include all the relationship types available for that artifact. For example, to show that a requirement is validated by a test case, select the Related Test Case relationship. In the Set Conditions section, you can create a condition for the specific relationship. The Jazz Reporting Service can show 1-to-1 and 1-to-many traceability relationships.

Important: Required returns only results for which a relationship exists between artifacts. If selected, only the requirements that have related test cases are shown. Required does not help you identify gaps in your test coverage. Optional returns all results regardless of the existence of a relationship.

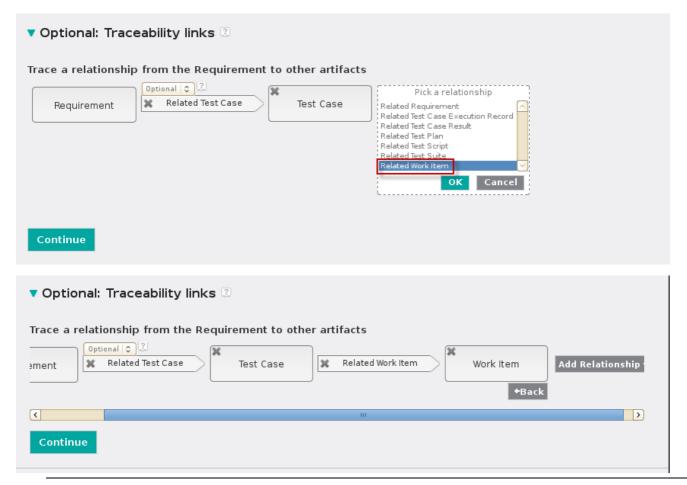
Click Add Relationship, select Related test case and click OK.



Your report needs to include all requirements, whether or not they have test cases. Select **Optional** to help identify gaps in your test coverage.

Note: You may want to run this report with **Required** and then **Optional** set to explore the differences in the results.

Next, select **Related Workitem** so that you can see the story work items that are associated with those test cases.



Note: You can change the labels of the artifacts when defining the relationships for the report. Double click on the **Work Item** label to change it to **Story**, if desired.

You can remove relationships and artifacts by clicking the 'X' on an item; this removes the selected item and all others to the right; or, click **Back** to remove the most recent item/relationship pair in the list.

Click **Continue** to select the scope of this report. This list comes from the data source, and is filtered by the projects you have access to.

Note: You can see public project areas and projects you belong to. However, if you have different permissions for accessing the data than your colleagues, the same report will produce different results.

Select the **JKE Banking (Change Management), (Quality Management), and (Requirements Management)** projects. You can type in the Search filter to narrow down the list if you have access to many projects in the repository.



At this point it is a good time to Preview your report. Select **Preview** and expand the section to see what the report looks like.



Note: Previewing your report is typically most efficient after you select the artifacts to report on, build traceability links, and select the projects to report on.

Important: Notice in the above preview the 1-to-many relationship between the requirements and the test cases. They are displayed all in the same row.

If you make changes and want to preview again, click **Refresh** to generate a new preview display. This section can always be collapsed when you don't need to see a preview of the report.

Set Conditions for the report

In this section, you will add conditions that further refine the results of your report.

Scroll down and click **Set Conditions** to expand this section.

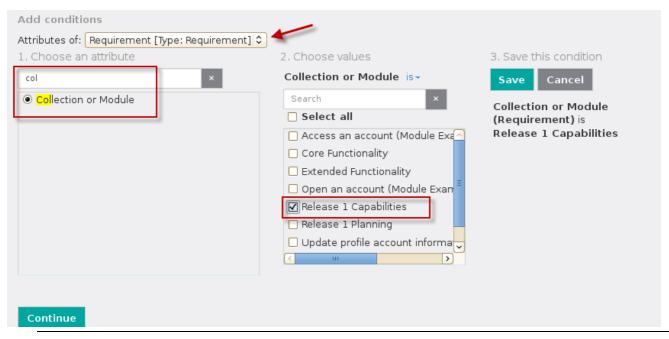
Important: When you add a condition, make sure the correct artifact is selected from the "Attributes of" menu. This list comes from your selections in the Artifact type and Traceability Links sections of the Report Builder.

Start by specifying conditions for the requirements you want added to the report. For this report, you only want to see requirements from a specific collection or module that your project has named "Release 1 Capabilities". You can search for an attribute name, or scroll the list to find it.

Type 'col' in the attribute search filter or scroll to find the 'Collection or Module' attribute.

Select it and then select the 'Release 1 Capabilities' collection.

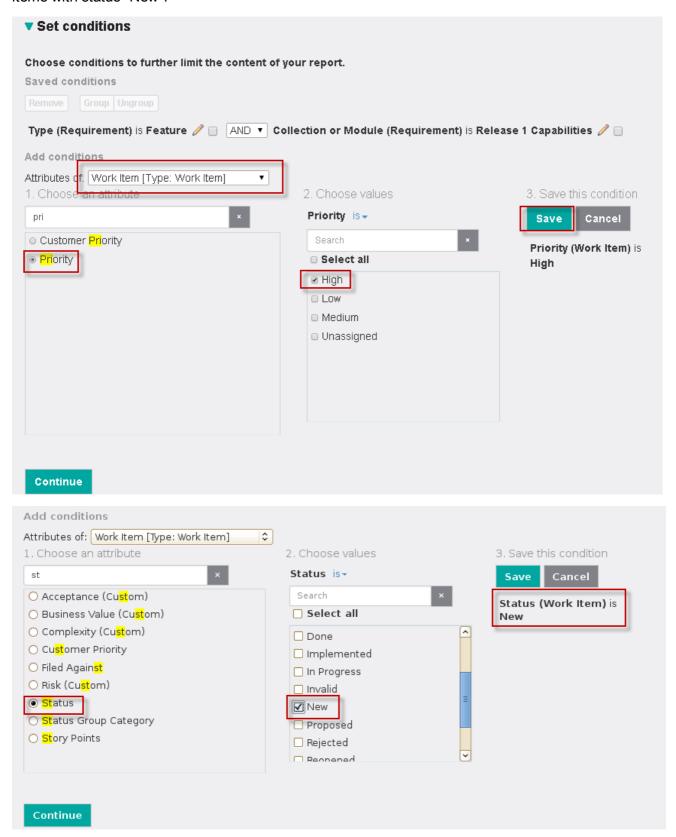
Click Save.



Note: Notice that after you create and save each condition, it is added to the "saved conditions" list at the top of the section, and to **My Choices** on the right. To modify a specific condition, click the pencil beside it.

Hint: Optional: You can choose to preview your report by clicking on the Preview section at the top and clicking **Refresh** to see how the report content has changed.

Next, select Work Item [Type: Work Item] for the artifact type and a condition to filter **High** Priority Work items with status "New".



You now have 4 conditions set up. You can further refine your results by choosing to group or ungroup conditions. Grouping attributes can help when you add 3 or more conditions.

Note: You can only group conditions that are next to each other in the Saved conditions list.

Explore how grouping the two new conditions changes the results preview. Group by selecting the checkbox next to each condition and click **Group**.



Notice the parentheses that are added after you click **Group.** Refresh the results in the preview pane. Next, change the operator to **OR.** Refresh the results and notice any changes.

Remove the two conditions by selecting the grouping and clicking Remove.



Note: The priority and status columns are still part of the report in the preview pane and in the Add Columns section.

Format the report

Now that it looks like the report contains the information you want (requirements from the collection, the test cases coverage, if any, and any related stories), you will want to make the report look like you want by including specific columns and rewording any column headings.

Click the Format Results under the Preview section.

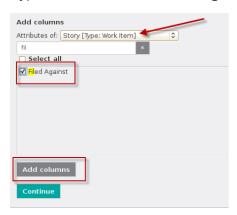
Note: There will be some default columns based on the artifacts and types you are reporting on.

Important: Name and URL fields are combined automatically to create artifact links. Do NOT remove either of these columns if you want links in the final report.

You may want different columns depending on how you will use the report and who will be the audience for the report.

Add a column to show the team the stories are filed against. Select the Work Item :Work item artifact type from the **Attributes** menu, select **Filed Against** and click **Add columns**.

Type "filed" and select 'Filed Against'. Click Add Columns

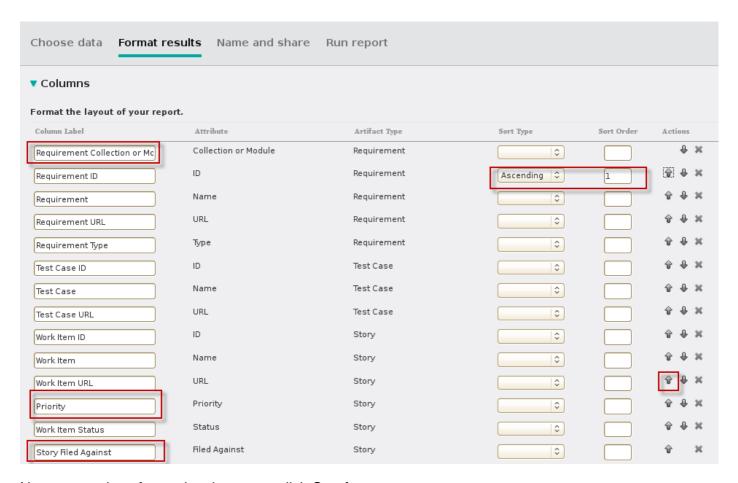


Columns can be renamed or removed. For example, change 'story priority' to 'Priority'.

Columns can also be rearranged. Use the arrows in the Actions column to move the Collection/Module column to the top of the list. The rest should remain as-is.

Artifacts in the report can also be sorted by order and type. Sort requirements by ID.

Note: The sort order field is filled automatically as you specify how to sort columns.



Now we are done formatting the report, click **Continue**.

Name and share the report with your colleagues. Name the report: Release 1 Capabilities: Test Coverage and prioritized work items.

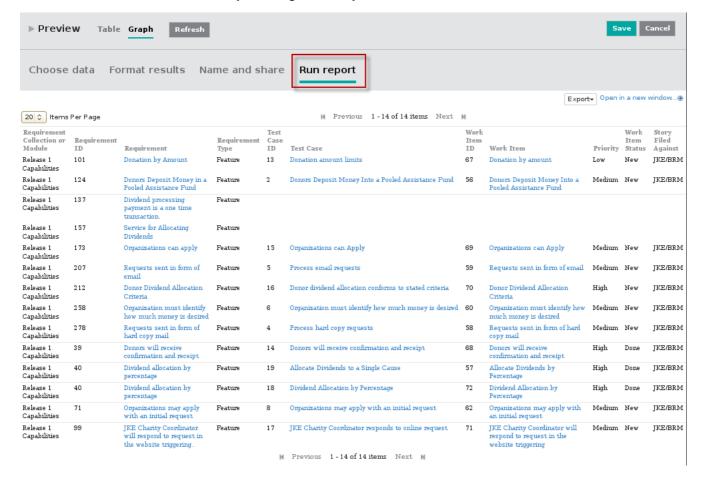
Add a description to help colleagues understand what's in your report. Add this description: *Test coverage report for Release 1 capabilities: shows requirements and their associated test cases, and identifies gaps in test coverage (requirements without test cases), and associated stories.*

As seen earlier in this workshop, making the report public adds this report to the JRS widget catalog.



In addition to publishing the report to the catalog by making its visibility public, you can also add tags to make the report easy to find or to group it with other related reports. Remember that tags are used as categories in the JRS widget catalog.

Click Save and view the results by clicking Run Report.



Appendix A - Troubleshooting

How do I verify that the Jazz Team Server is running?

Open a Firefox browser. Select **'CCM'** bookmark in **'CLM'** bookmark folder on the bookmark toolbar. Verify that a login prompt is displayed. If no login prompt is displayed, you may need to start the Jazz Team Server (JTS) using the desktop icon, "JTS-Startup", as well as the Data Collection Component which also has a desktop icon, "DCC - Startup".

How do I know the JTS and DCC processes are running?

Open the GNOME terminal and type: ps aux | grep java. You should see two processes running: /opt/IBM/JazzTeamServer/server/jre/bin/java and /opt/IBM/RRDI/dcc/JazzTeamServer/server/jre/bin/java

How do I know if DB2 has started?

Open the GNOME terminal. Type 'su db2inst1'. Type 'db2start'. You should see either a message that DB2 has started or it has been started.

What is wrong if I see no projects when I login to a CLM application?

It is possible that DB2 is not running. Use the instructions under 'How do I know if DB2 has started' to start DB2.