

Report Overview

This tutorial walks you through creating a report for download and artifact browsing activity for a community in a given time period. The report will contain:

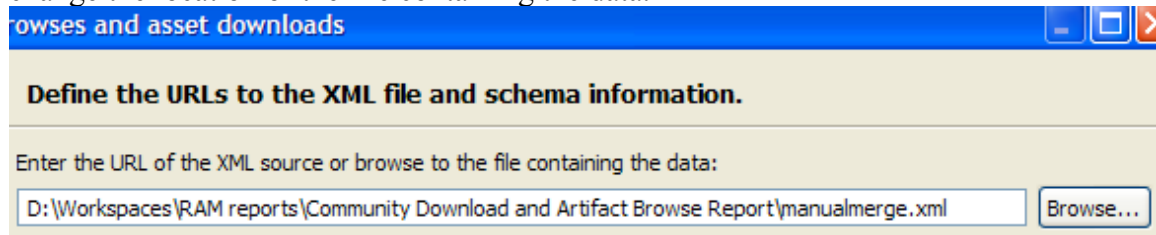
- Two line graphs
 - Downloads over time
 - Artifact browses over time
- Two summary tables
 - Unique and total download and artifact browse activity by asset. Here, unique means the number of unique users that downloaded the asset or browsed an artifact of the asset
 - Unique and total download and artifact browse activity by user. Here, unique means the number of unique assets the user downloaded or browsed artifacts of.
- Two detailed tables
 - Download and artifact browse activity by asset, showing which users performed the activities and how many times each.
 - Download and artifact browse activity by user, showing which assets the user performed the activity on and how many for each asset.

To quickly reuse the report design file associated with this tutorial, read the **Reusing the Report** and **Retrieving and Preparing the Data** sections below.

This report was created using BIRT 2.3.1 and Rational Asset Manager 7.1.1.

Reusing the Report

Before running the report, you must update the data sources to point to the included XML files. For each data source in the **Data Explorer** view, double-click the data source and change the location of the file containing the data.



You can also follow the instructions in the **Retrieving and Preparing the Data** section to use data from your own Rational Asset Repository and community.

Advanced users can use data for asset activities other than download and artifact browse activity by changing the static groups for activity types in each of the data cubes.

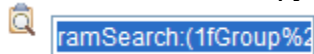
Retrieving and Preparing the Data

You use data URLs to retrieve data for reporting. Details for creating and using data URLs can be found in the Rational Asset Manager Information Center. Following are instructions for creating the data URLs used for this report.

Download activity for January 2009

For this report, we are interested in the activity for a single community. To retrieve this data, we join the **assetActivity** path with the **asset** path. When joining paths, only results from the right-most path are used for fetching data in the left path. In our case, only assets returned in the **asset** path will be used when fetching the data for the **assetActivity** path.

To create the **asset** path, we need to supply the search shortcut for a search that returns the assets in a given community. In the web user interface, go to the **Assets** tab and click the community filter for the community you want to report on. Click the **View search shortcut** icon and copy the search shortcut.



To create the **assetActivity** path, we use the type ID for asset downloads (610). To get only activity for January 2009, we need the `long` values for the timestamps January 1, 2009 00:00:00 and February 1, 2009 00:00:00.

The completed data URL is:

```
<web-services-url>/reporting/assetActivity:tid=610,fromTime=1230750000000,toTime=1233428400000|asset:shortcut=ramSearch(1fGroup%2Clorem_ ipsum)
```

Execute this URL in a browser and save the results into a file (**assetdownloads.xml**).

Artifact browse activity for January 2009

The data URL for artifact browses is the same as for downloads, except the type ID is 650.

The completed data URL is:

```
<web-services-url>/reporting/assetActivity:tid=650,fromTime=1230750000000,toTime=1233428400000|asset:shortcut=ramSearch(1fGroup%2Clorem_ ipsum)
```

Execute this URL in a browser and save the results into a file (**artifactbrowses.xml**).

Combining activity data into one file

Data URLs only allow users to specify one activity type ID (tid). A user can use BIRT to join the data, but it is easier to manually combine the data. This report uses all three data

sources, so do not overwrite the original XML files. Follow these instructions to manually combine the data into one file:

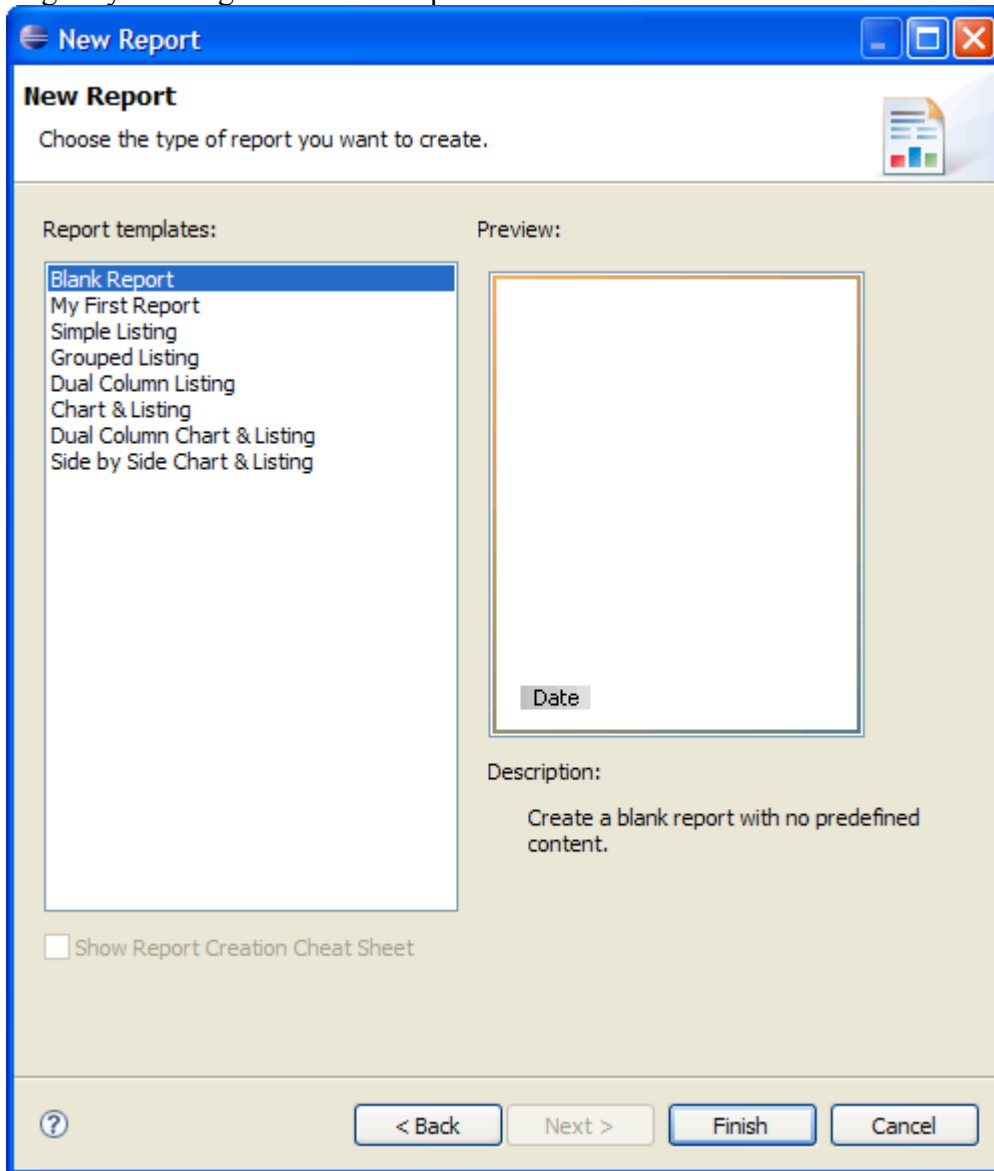
1. Copy and paste the larger file. These instructions assume this is the artifact browses file
2. Rename the duplicated file **manualmerge.xml**
3. With a text editor, open **manualmerge.xml** and the downloads file
4. In the downloads file, copy everything between `<data>` and `</data>`
5. Paste the contents of the clipboard at the end of the **manualmerge.xml** file, directly before `</data>`
6. Save and close the **manualmerge.xml** file

Note: In 7.1.1.1, users are able to supply multiple activity type IDs by putting the type IDs in parentheses and comma separating them. For this report, this data URL returns both download and artifact browse activities:

```
<web-services-url>/reporting/assetActivity:tid=(610,650),fromTime=1230750000000,toTime=1233428400000|asset:shortcut=ramSearch(1fGroup%2Clorem_ ipsum)
```

Creating the Report

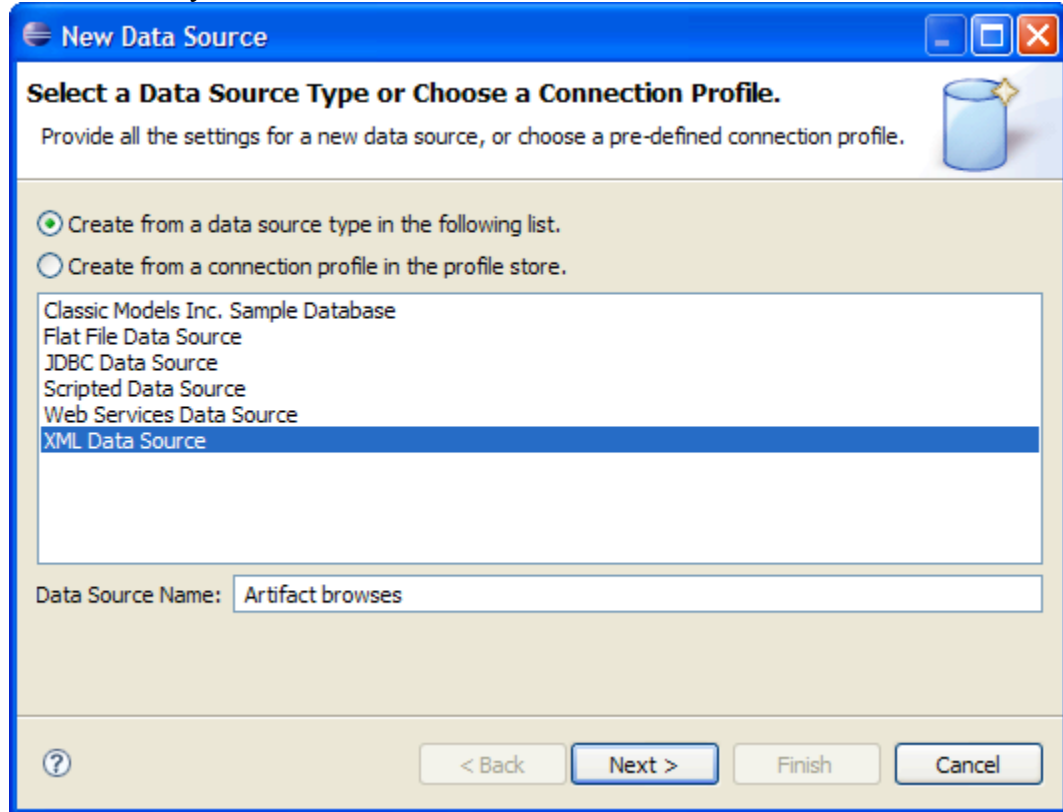
Begin by creating a new blank report.



Create Data Sources

1. In the **Data Explorer** view, right-click on **Data Sources** and select **New Data Source**.

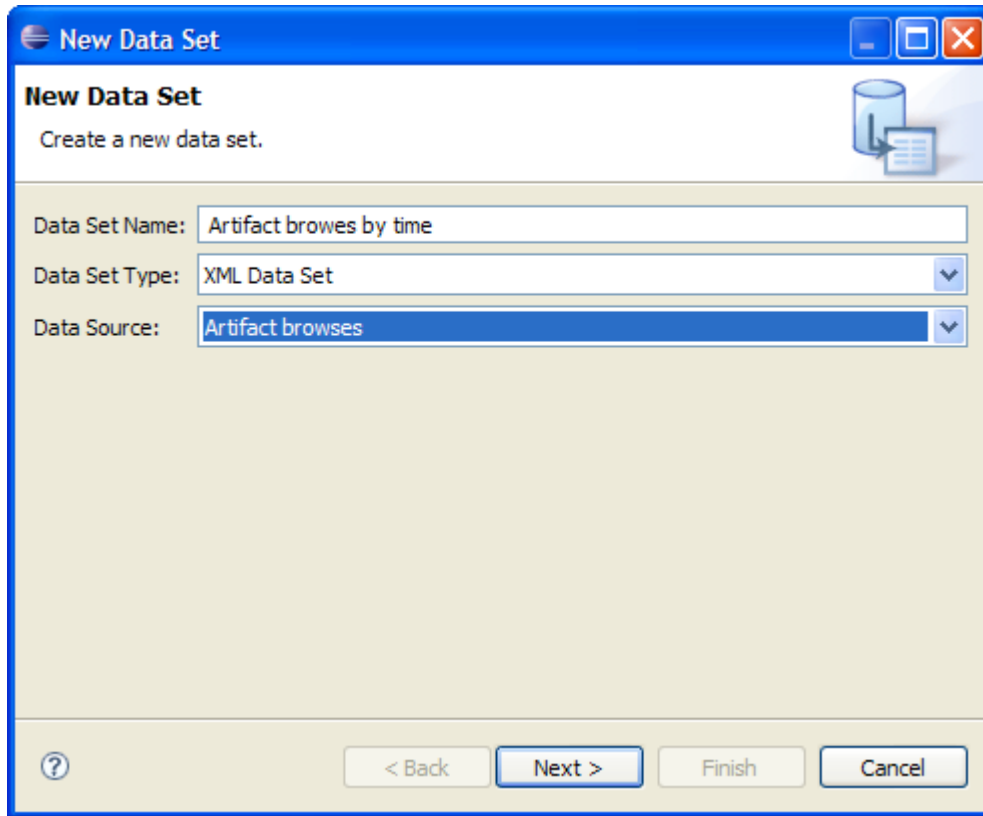
2. Select **XML Data Source** and provide a name. This data source is for the artifact browse activity.



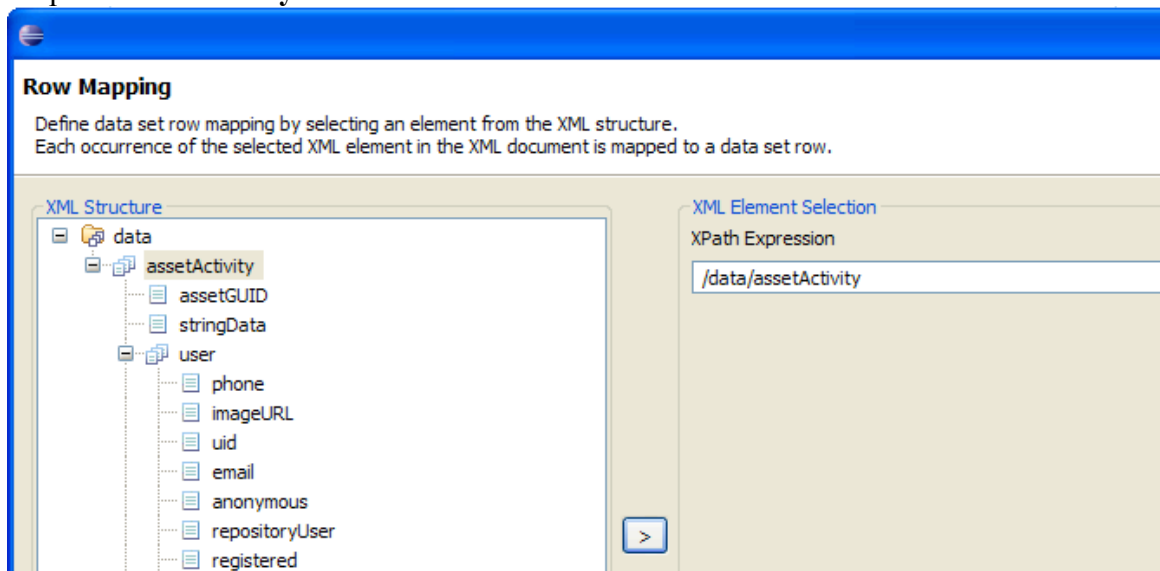
3. Click the **Browse** button and select the **artifactbrowses.xml** file.
4. Click **Finish**.
5. Repeat **Steps 1-4** for the **assetdownloads.xml** file and the **manualmerge.xml** file.

Create Data Sets

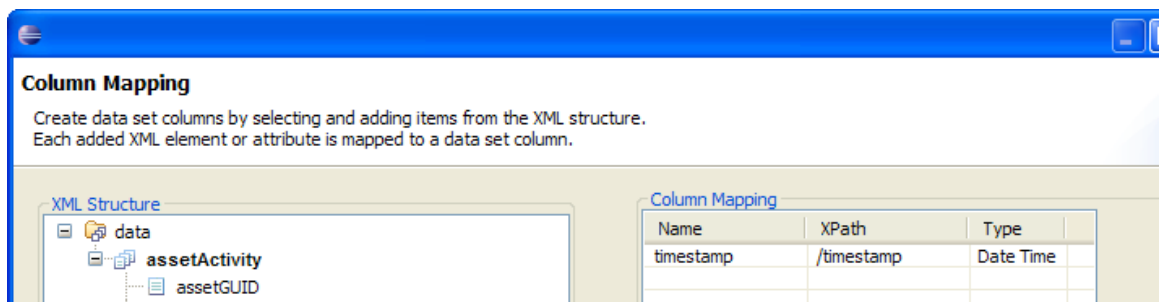
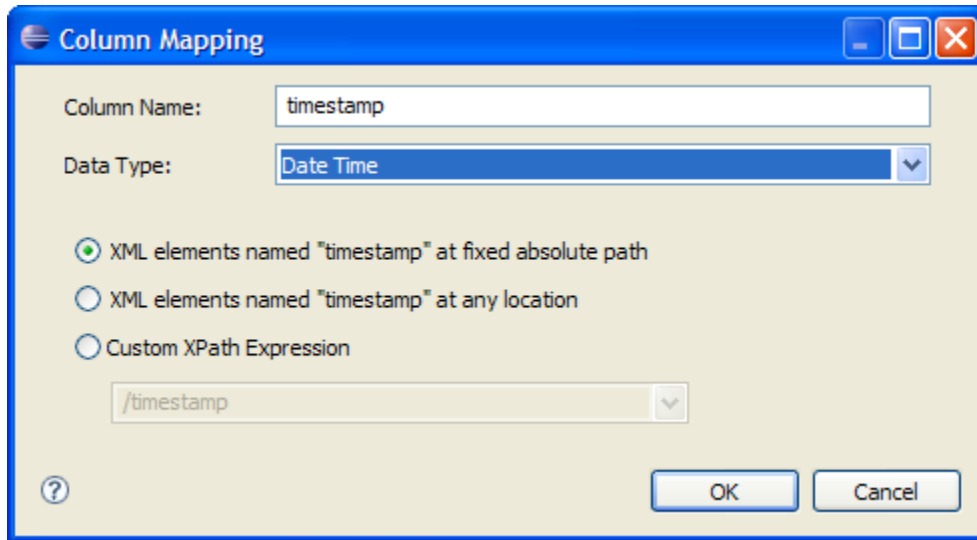
6. In the **Data Explorer** view, right-click on **Data Sets** and select **New Data Set**.
7. Name the data set. This data set is for the graph of artifact browses over time line chart.



8. Click **Next** twice.
9. Map the **assetActivity** to the row.



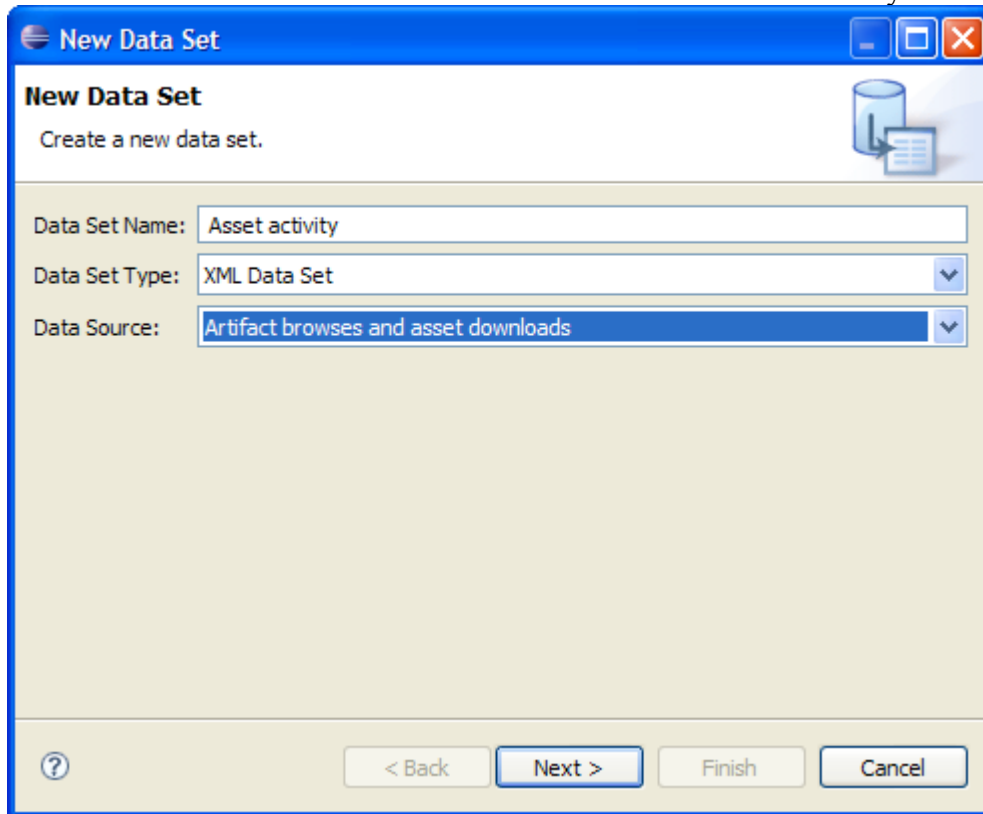
10. Map the **timestamp** node to a column, making sure to select **Data Time** as the data type.



11. Click **Finish**.

12. Create a data set for asset downloads by time using **Steps 6-11**.

13. Launch the **New Data Set** wizard to create a data set for asset activity.



14. Map the **assetActivity** node to a row, as you did in **Step 9**.
15. On the column mappings step, map the `assetGUID`, `uid`, `user name`, `assetVersion`, `assetName`, and `typeId` elements to columns. You can rename the columns once they are mapped.

Name	XPath
Asset ID	/assetGUID
User ID	/user/uid
User	/user/name
Asset Version	/assetVersion
Asset	/assetName
Activity type	/typeId

Create Charts

16. Drag a Chart into the editor.
17. Select a Line chart.
18. Select the **timestamp** as the **Category (X) Series**.

19. Select the row number as the **Value (Y) Series**.

Edit Chart

Select the data to display in the chart and bind it to the series.

Select Chart Type | Select Data | Format Chart

Chart Preview

Value (Y) Series: Series 1
row.__rownum

Optional Y Series Grouping:

Category (X) Series: row["timestamp"]

Select Data

Inherit Data from Container
 Use Data from Asset downloads by time

Data Preview

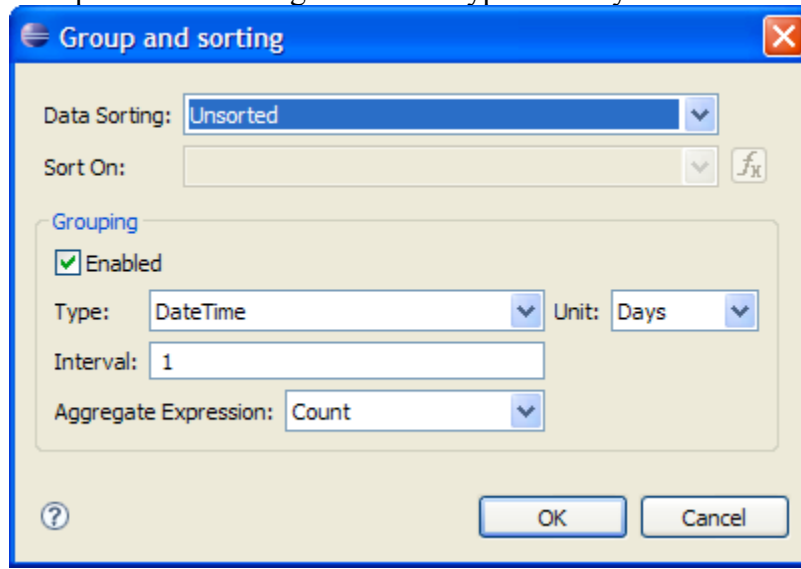
Use the right-click menu or drag the column into series fields.

timestamp
Jan 30, 2009 9:32 PM
Jan 30, 2009 3:12 PM
Jan 30, 2009 10:27 AM
Jan 30, 2009 9:02 AM
Jan 30, 2009 2:02 AM

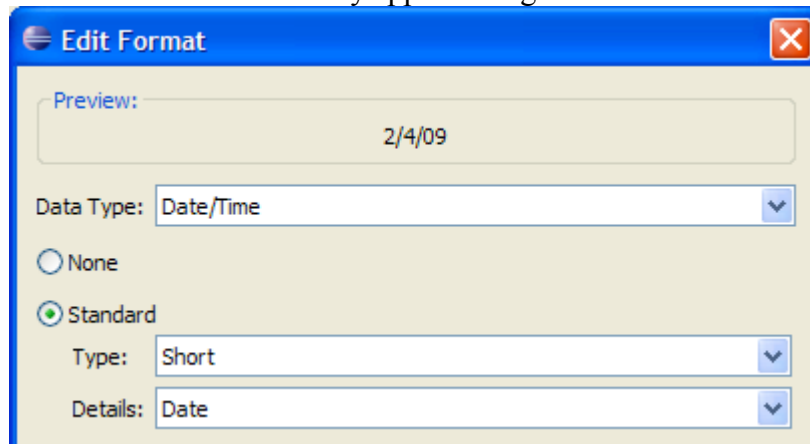
Filters...
Parameters...
Data Binding...

< Back | Next > | Finish | Cancel | Apply

20. Group the X axis using **DateTime** type and Days Unit.



21. On the **Format Chart** tab, select the **X-Axis** and click the format button (🔧). Format the date so that they appear using the short date format.

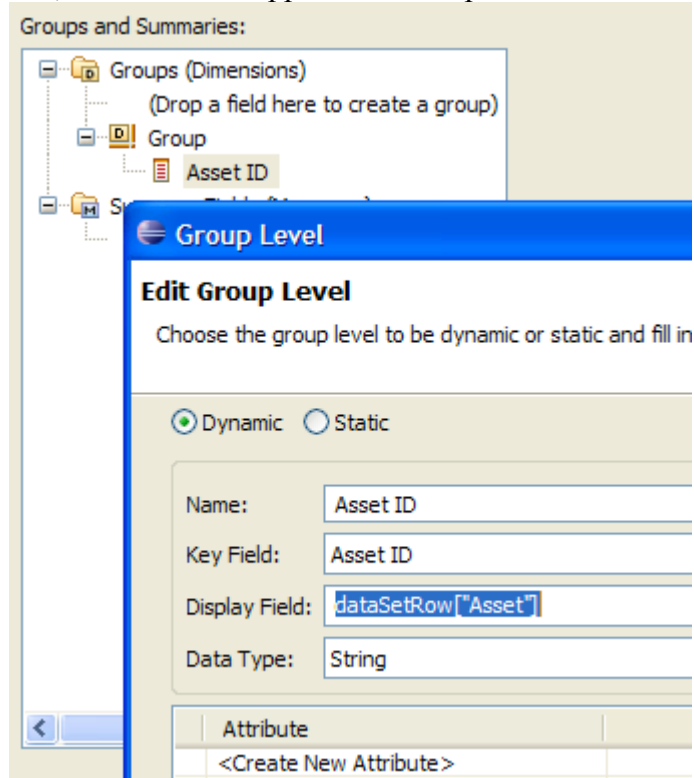


22. Continue to format the chart to your specifications.
23. Copy and paste the chart into the editor, so that there are two charts. Double-click on the second chart and change the **Use Data from** select menu to use the **Artifact browses by time** data set.
24. Click **Finish**.
25. You can preview the report to verify it appears correctly; however, note that only 500 records are used in Preview mode.

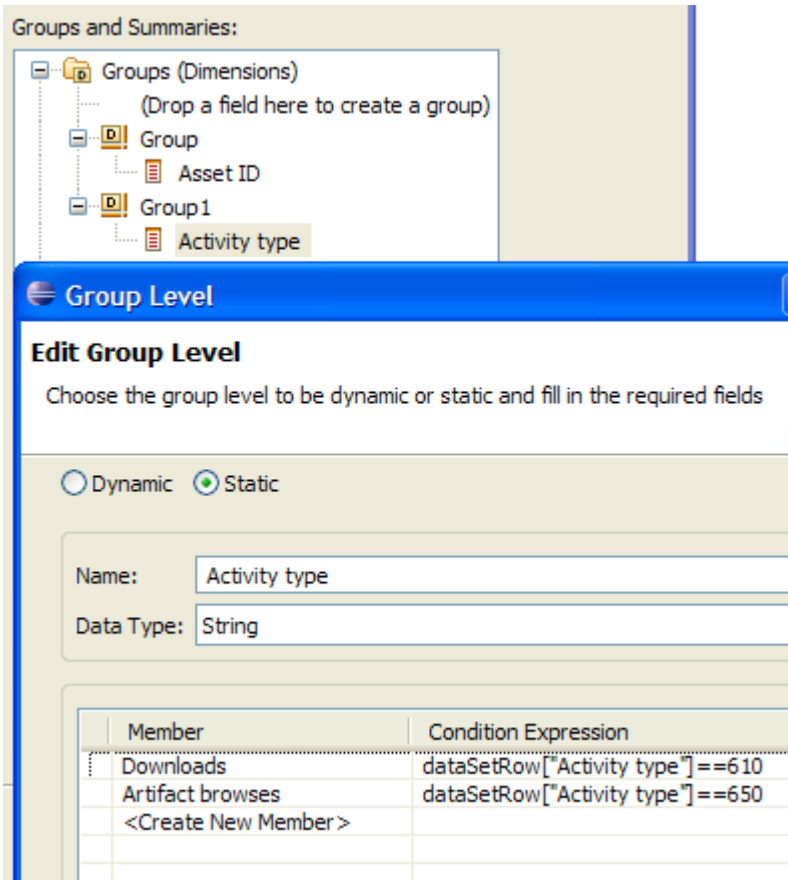
Create Data Cubes for Summary Tables

26. In the **Data Explorer** view, right-click on **Data Cubes** and select **New Data Cube**.
27. Select the **Asset activity** dataset as the **Primary dataset**.
28. Drag the **Asset ID** field to the **Groups** tree.

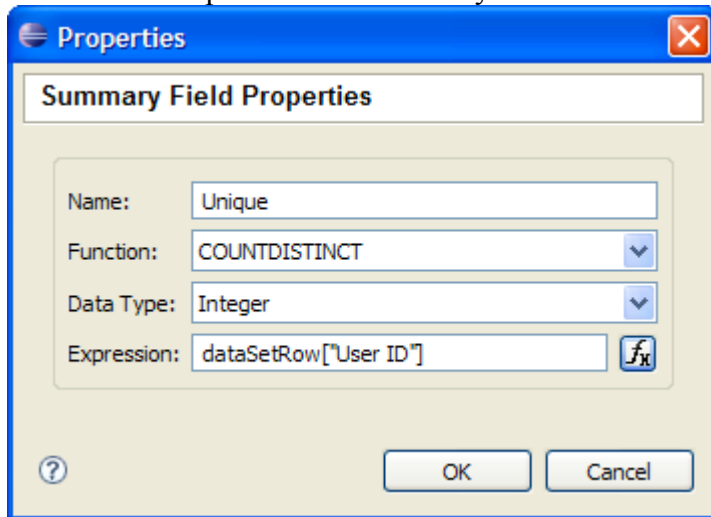
29. Click **Edit** and change the **Display Field** to be the asset name. If you did not do this, the asset's ID appears in the report instead of the name of the asset.



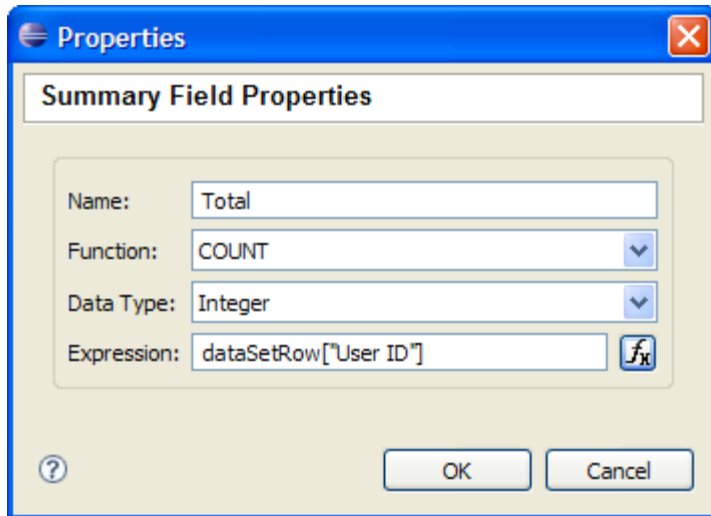
30. Drag the **Activity type** field to the **Groups** tree.
31. Click **Edit** and change it to a **Static** group level. Add **Members** for the download and artifact browse activity types.



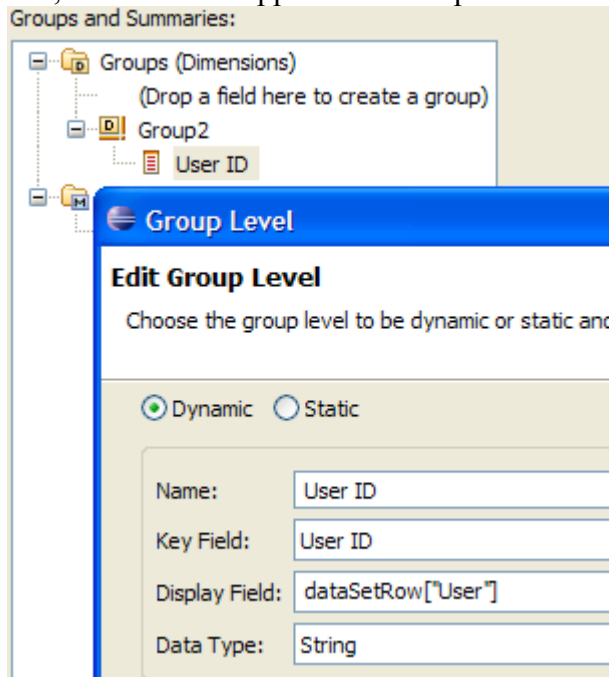
32. Add the following **Summary Field**. The summary field will count the distinct users that have performed the activity.



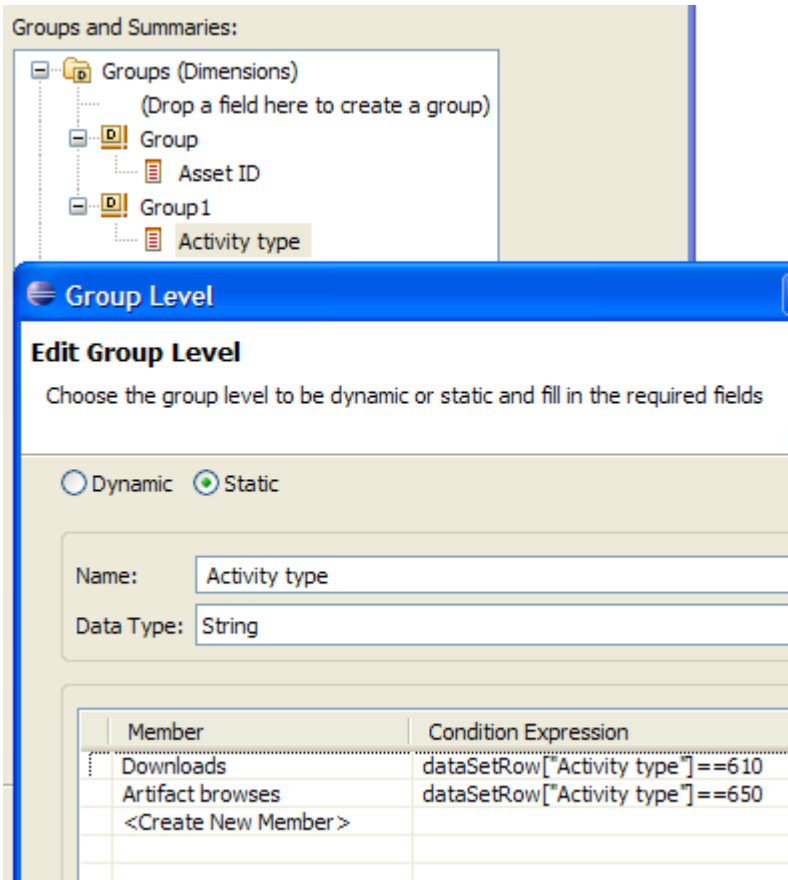
33. Add the following **Summary Field**. The summary field counts the total activities.



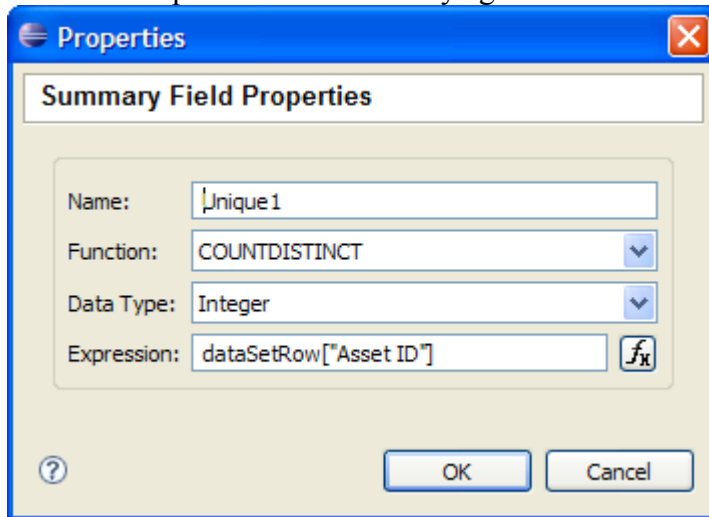
34. Click **OK** to complete the creation of the data cube.
35. In the **Data Explorer** view, right click on **Data Cubes** and select **New Data Cube**.
36. Select the **Asset activity** dataset as the **Primary dataset**.
37. Drag the **User ID** field to the **Groups** tree.
38. Click **Edit** and change the **Display Field** to be the user name. If you did not do this, the user's ID appears in the report instead of the user's name.



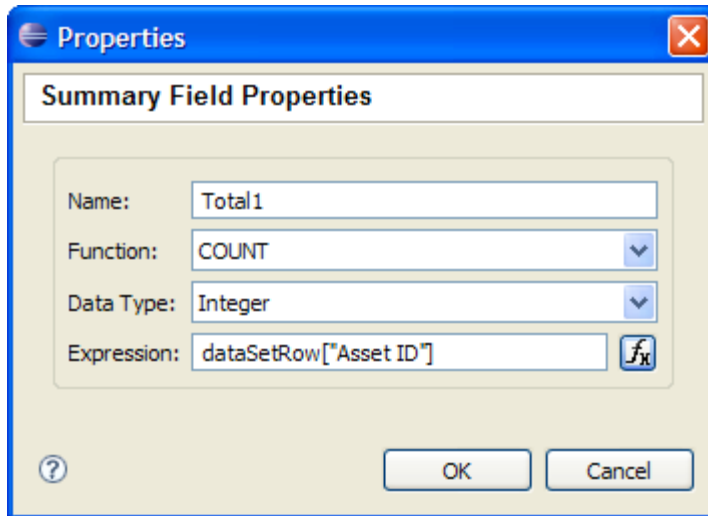
39. Drag the **Activity type** field to the **Groups** tree.
40. Click **Edit** and change it to a **Static** group level. Add **Members** for the download and artifact browse activity types.



41. Add the following **Summary Field**. The summary field counts the distinct assets that the user performed the activity against.



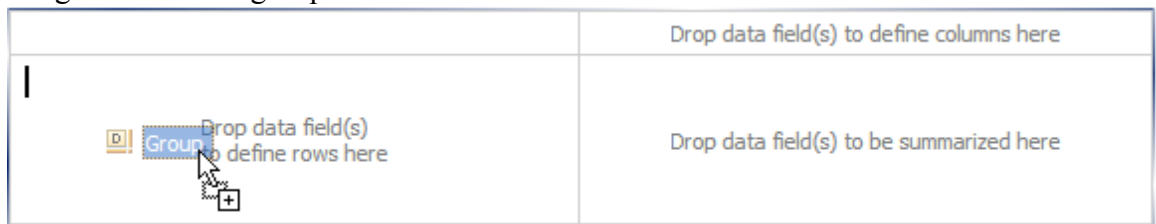
42. Add the following **Summary Field**. The summary field counts the total activities the user performed.



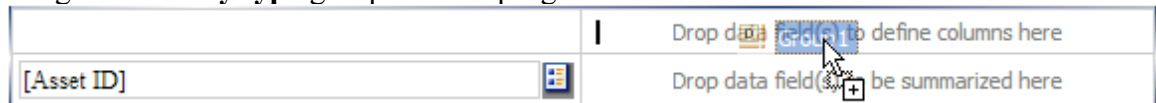
43. Click **OK** to complete the creation of the data cube.

Create Summary Tables

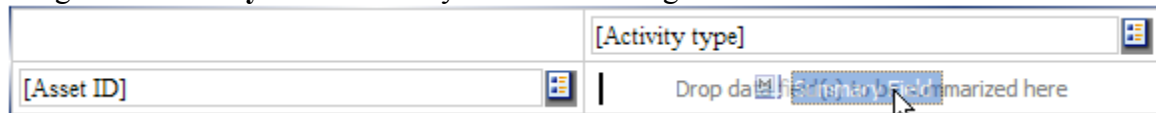
44. Drag a **Cross Tab** table to the editor.
45. Drag the **Asset ID** group to the left column of the table.



46. Drag the **Activity type** group to the top right cell.



47. Drag the **Summary field** summary to the bottom right cell.

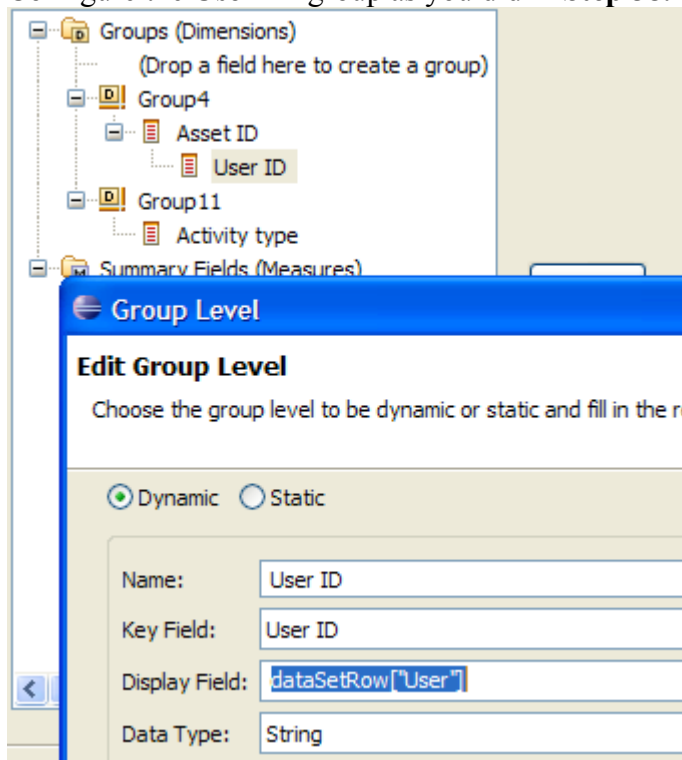


48. Repeat **Steps 44 – 47** to create a cross tab table for the activity by user data cube.
49. You can preview the report; however, note that only 500 records will be used.

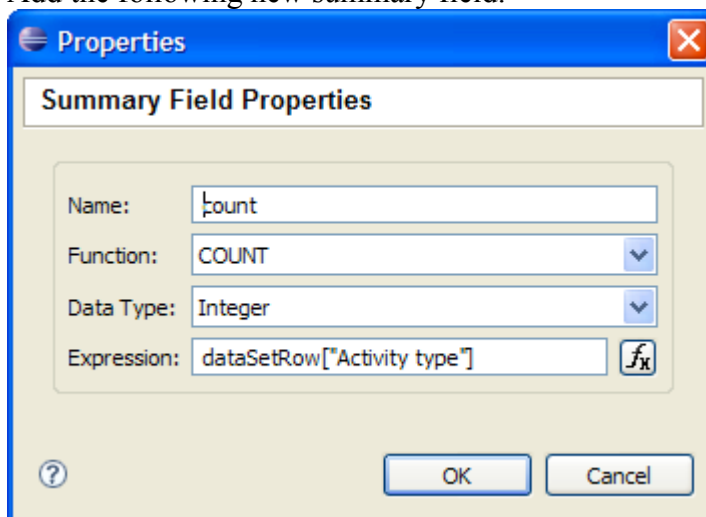
Create Data Cubes for Detailed Tables

50. In the **Data Explorer** view, copy and paste the **Summary activity by asset** data cube.

51. Double click on the duplicated data cube.
52. Rename the data cube to **Detailed activity by asset**.
53. Drag **User ID** to be a child of **Asset ID**.
54. Configure the **User ID** group as you did in **Step 38**.

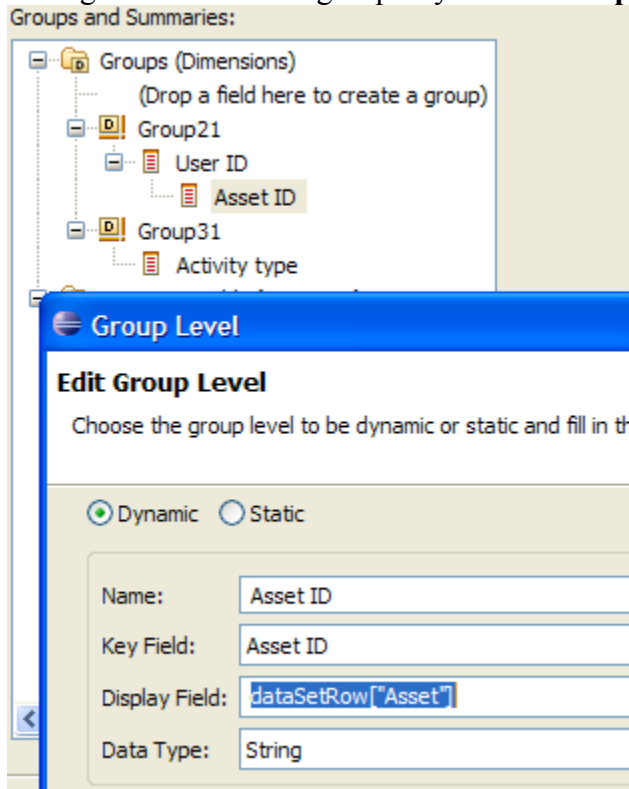


55. Delete the current summary fields.
56. Add the following new summary field.

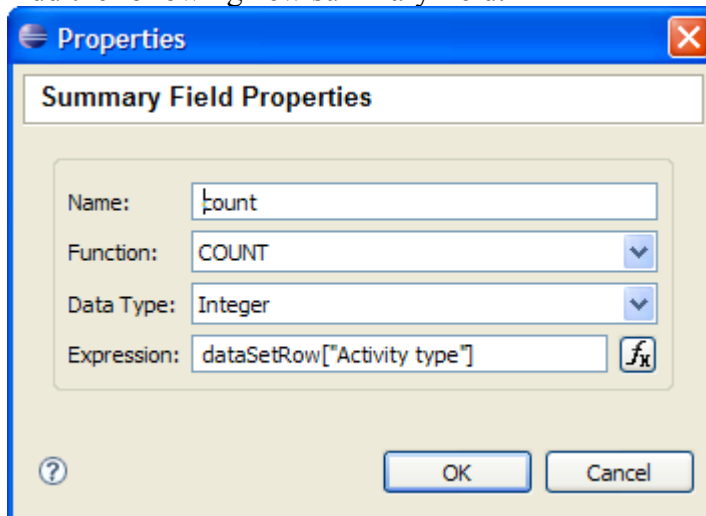


57. Click **OK** to apply the changes to the data cube.
58. In the **Data Explorer** view, copy and paste the **Summary of activity by user** data cube.
59. Double-click on the duplicated data cube.

60. Rename the data cube to **Detailed activity by user**.
61. Drag the **Asset ID** to be a child of **User ID**.
62. Configure the **Asset ID** group as you did in **Step 29**.



63. Delete the current summary fields.
64. Add the following new summary field.

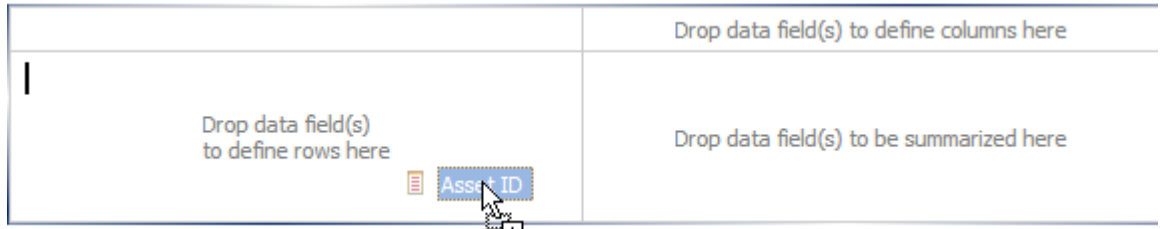


65. Click **OK** to apply the changes to the data cube.

Create Detailed Tables

66. Drag a **Cross Tab** table to the editor.

67. From the **Detailed activity by asset** data cube, drag the **Asset ID** group into the left column of the table.



68. Show the **User ID** group level.



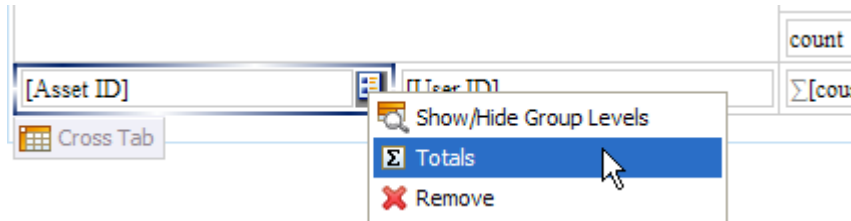
69. Drag the **Activity type** group into the top right cell of the table.



70. Drag the summary field into the bottom right cell of the table.



71. Enable **Sub Totals** for the **Row Area**.



72. Repeat **Steps 66 – 71** to create a cross tab table for the activity by user data cube.

73. You can preview the report; however, note that only 500 records will be used.