



IGeLU 2019 - Singapore

Alma Analytics: Tips, Tricks and Best Practices

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BOSTON COLLEGE
LIBRARIES

About Boston College

- Private, Jesuit Catholic University
- Chestnut Hill, Massachusetts
- 9,400 Undergraduates
- 4,600 Graduate/Professional Students
- 900 Faculty
- 8 Libraries; 3.5 million volumes; 845,000 e-books, 44,000 serials (print and electronic), 800 e-databases
- ARL Library

BC's Relationship with Ex Libris

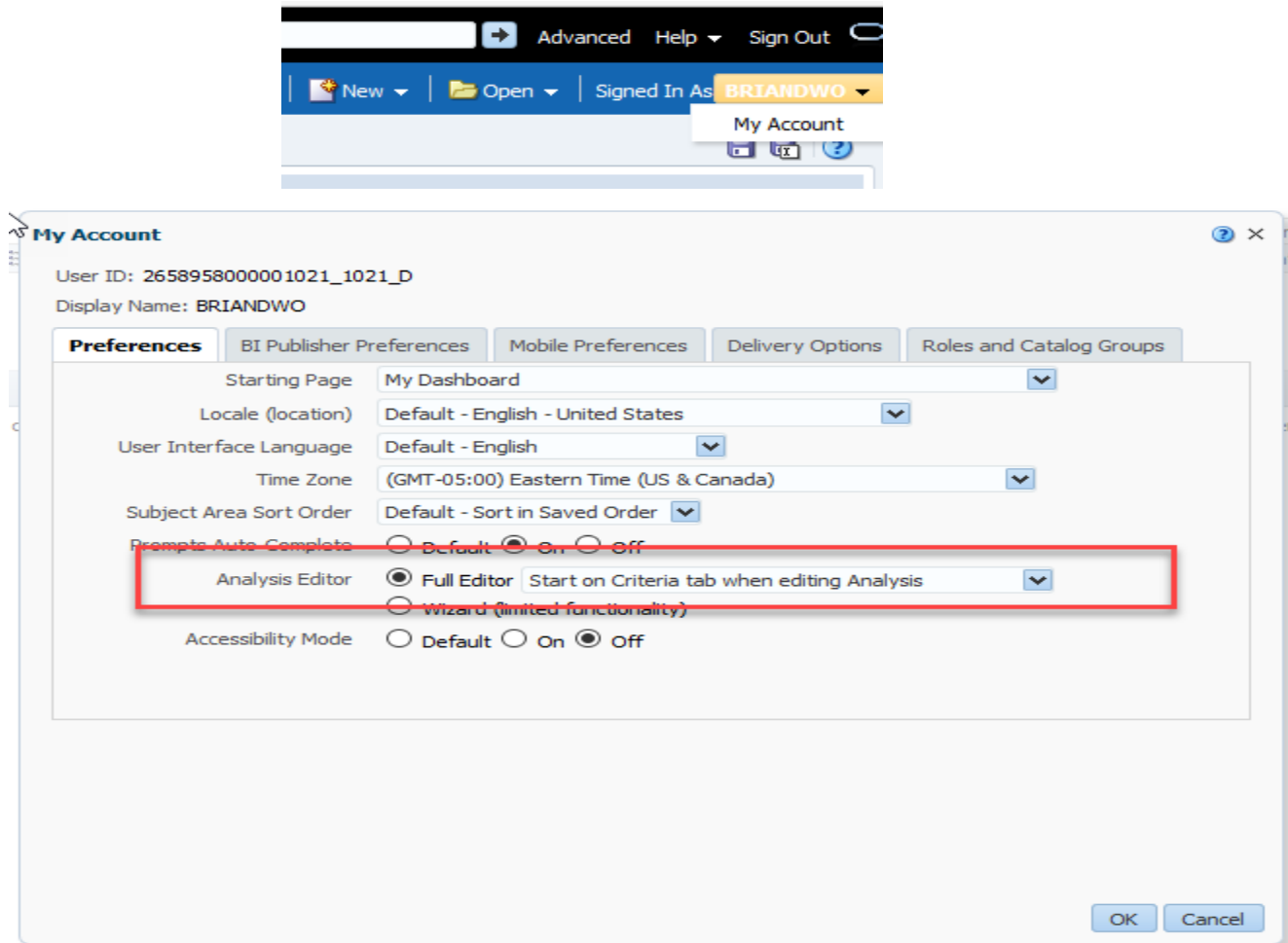
- Development partner with Ex Libris on Alma 2009-2012
- First institution to go live with Alma in July 2012
- Joint ELUNA and IGeLU Analytics Working Group chair

Alma Analytics

- Uses Oracle Business Intelligence Enterprise Edition 11g (OBIEE)
- Data is stored in the cloud so there is no SQL access to data
- Analytics data is 1 day older than Alma data
- Running Analytics will not affect Alma performance or alter data
- Analytics is based on a star schema – with a fact table at its center and the dimension tables surrounding it representing the star's points
- Because of the star schema design it is not possible to combine subject areas in a meaningful way

Change your Default View

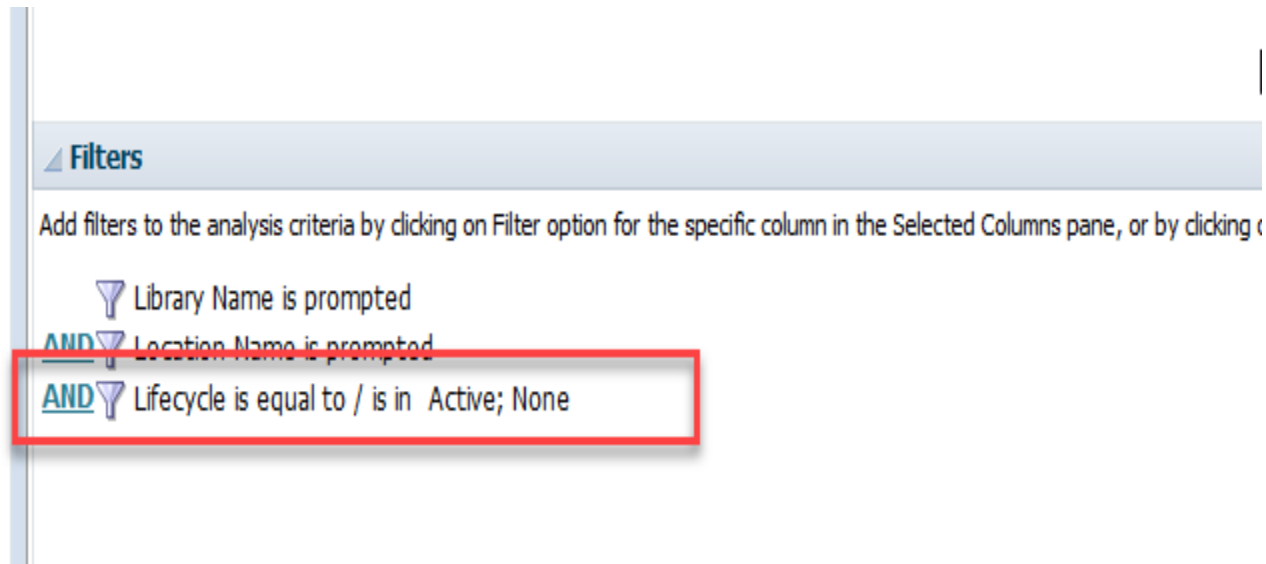
Change your default view from Results to Criteria tab:



The image shows a screenshot of a web application interface. At the top, there is a navigation bar with a search box, a 'New' button, an 'Open' button, and a 'Signed In As' dropdown menu showing the user 'BRIANDWO'. Below this, there is a 'My Account' dialog box. The dialog box has a title bar with a question mark and a close button. It displays the user's ID and display name. There are several tabs: 'Preferences', 'BI Publisher Preferences', 'Mobile Preferences', 'Delivery Options', and 'Roles and Catalog Groups'. The 'Preferences' tab is active. It contains several settings, including 'Starting Page', 'Locale (location)', 'User Interface Language', 'Time Zone', 'Subject Area Sort Order', 'Prompts Auto Complete', 'Analysis Editor', and 'Accessibility Mode'. The 'Analysis Editor' setting is highlighted with a red box. It has three radio buttons: 'Full Editor' (selected), 'Wizard (limited functionality)', and 'Default'. To the right of the 'Full Editor' radio button is a dropdown menu with the text 'Start on Criteria tab when editing Analysis'.

Set the Lifecycle Filter

- Set Lifecycle Filter so you're not getting deleted material factored into your results
- Affects Bibliographic Details, Physical Item Details, E-Inventory

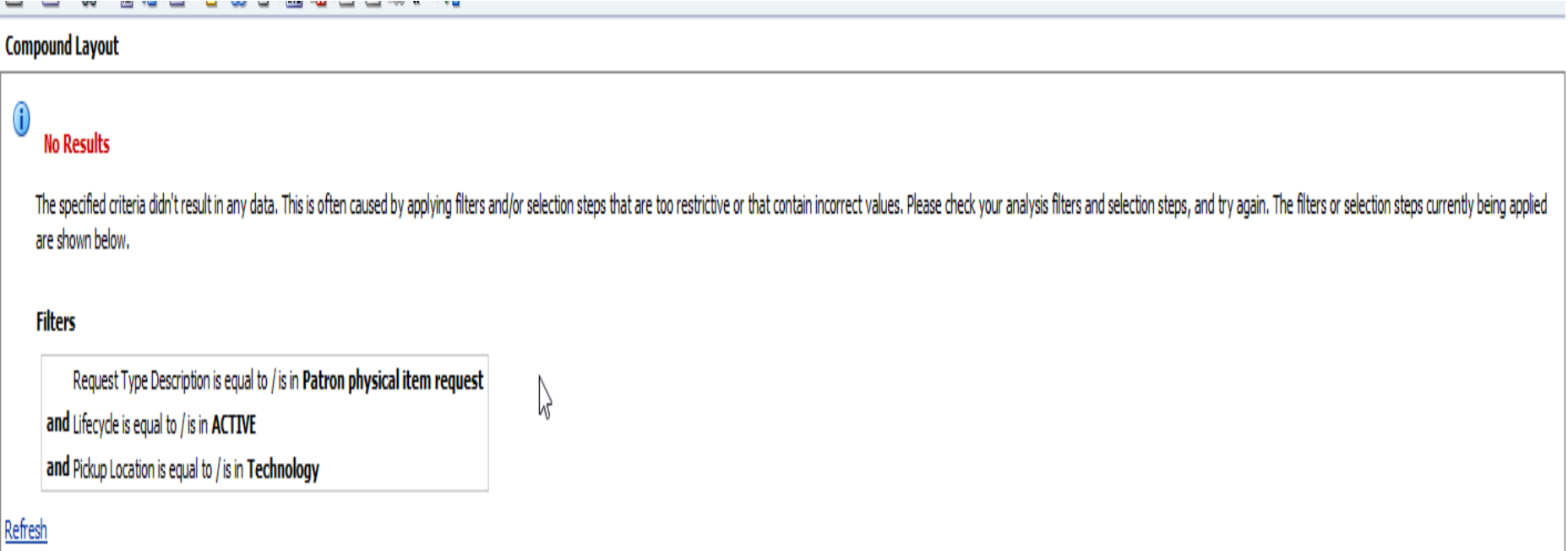


Customize Your 'No Results' Message

Canned 'No Results' message:

No Results. The specified criteria did not result in any data...

When users get this they think the report is broken



Compound Layout

No Results

The specified criteria didn't result in any data. This is often caused by applying filters and/or selection steps that are too restrictive or that contain incorrect values. Please check your analysis filters and selection steps, and try again. The filters or selection steps currently being applied are shown below.

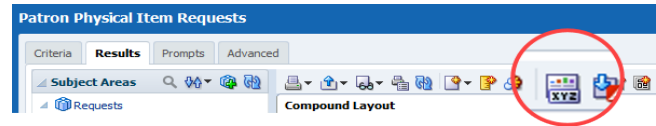
Filters

Request Type Description is equal to / is in **Patron physical item request**
and Lifecycle is equal to / is in **ACTIVE**
and Pickup Location is equal to / is in **Technology**

[Refresh](#)

Customize Your 'No Results' Message

Locate xyz button



Under Analysis Properties change No Results Settings to 'Display Custom Message'

Compound Layout

No Results Returned

There are currently no physical item requests for this pick-up location.

[Refresh](#)

Analysis Properties

Results Display

Interactions

Data

No Results Settings

Header

Message

There are currently no physical item requests for this pick-up location.

View for Text Delivery

Use the **TIMESTAMPADD** Filter on any Date

On any date field: Convert this filter to SQL

New Filter

Column: Loan Date

Operator: is equal to / is in

Value: [Empty]

Protect Filter

Convert this filter to SQL

OK Cancel

Advanced SQL Filter

This page allows you to enter a custom where clause using SQL syntax. (e.g. Sales Facts.Dollars < 100) After entering the SQL, press **OK**.

`"Loan Date"."Loan Date" >=TIMESTAMPADD(SQL_TSI_WEEK, -1, CURRENT_DATE)`

OK Cancel

Use the **TIMESTAMPADD** Filter on any Date

TIMESTAMPADD examples for days, weeks, years, months:

- If we want all transactions in the last **14 days**:

```
"Transaction Date"."Transaction Date" >= TIMESTAMPADD(SQL_TSI_DAY, -14, CURRENT_DATE)
```

- If we want all transactions in the last **2 years**:

```
"Transaction Date"."Transaction Date" >= TIMESTAMPADD(SQL_TSI_YEAR, -2, CURRENT_DATE)
```

- If we want all transactions in the last **3 months**:

```
"Transaction Date"."Transaction Date" >= TIMESTAMPADD(SQL_TSI_MONTH, -3, CURRENT_DATE)
```

- If we want all transactions in the last **1 week**:

```
"Transaction Date"."Transaction Date" >= TIMESTAMPADD(SQL_TSI_WEEK, -1, CURRENT_DATE)
```

Deliver Analytics Reports to a Server

With the July 2019 release of Alma you can now configure scheduled analytics reports to be placed on a server Alma has FTP access to.

Under Analytics -> Analytics Objects -> Analytics Objects List

A person or automated job can pick-up the report results from the server and process them from there

Deliver Analytics Reports to a Server

< Alma Analytics Object

Type SCH_REPORT

General Information

Title *	Electronic Usage Reports	Name *	e-Journal Usage
Analytic Folder *	Boston College/Reports/Datawarehouse		
Type *	Scheduled Report		
Description	FTP results of e-journal usage report to server = bonnet		
Format *	Excel		
Status *	<input checked="" type="radio"/> Active <input type="radio"/> Inactive		
Schedule *	Every day at 07:00 AM		<button>Email Notifications</button>
FTP	<input checked="" type="checkbox"/>		
FTP configuration *	FTP_BONNET		
Sub-directory	alma/export/dwh/usage		

Roles

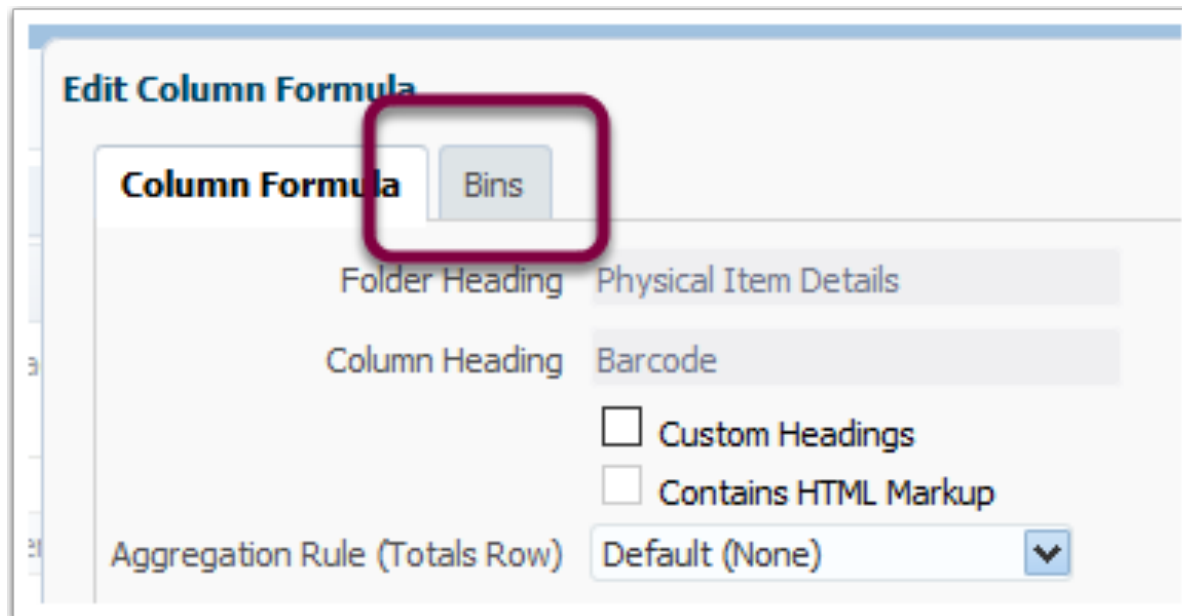
▲ Role	▲ Description
1 Selector	Manages all aspects of the selection process

Case/Bins vs Filter

- CASE functions (or using Bins) are slow on large reports, but they do not need to match a specific dimension
- Bins are best used to gather data together
- FILTER functions (or simply applying filters) run more quickly, but only capture the dimensions filtered
- Filters are best used to pull data out

Case/Bins

- CASE is used to group dimensions which match certain criteria.
- Bins are an Analytics shortcut for writing a case statement.
 - Go to Edit Formula and Select Bins at the top of the window



Bins

Edit Column Formula

Column Formula **Bins**

1.	Loan Time is between 00:00:00 and 08:59:00		Before opening	
2.	Loan Time is between 09:00:00 and 09:59		9 AM	
3.	Loan Time is between 10:00 and 10:59		10 AM	
4.	Loan Time is between 11:00 and 11:59		11 AM	
5.	Loan Time is between 12:00 and 13:59		Lunch and 1 PM	
			After 2 PM to	

- Can see the bins
- Name the bins
- Change the display order
- Combine “everything else”

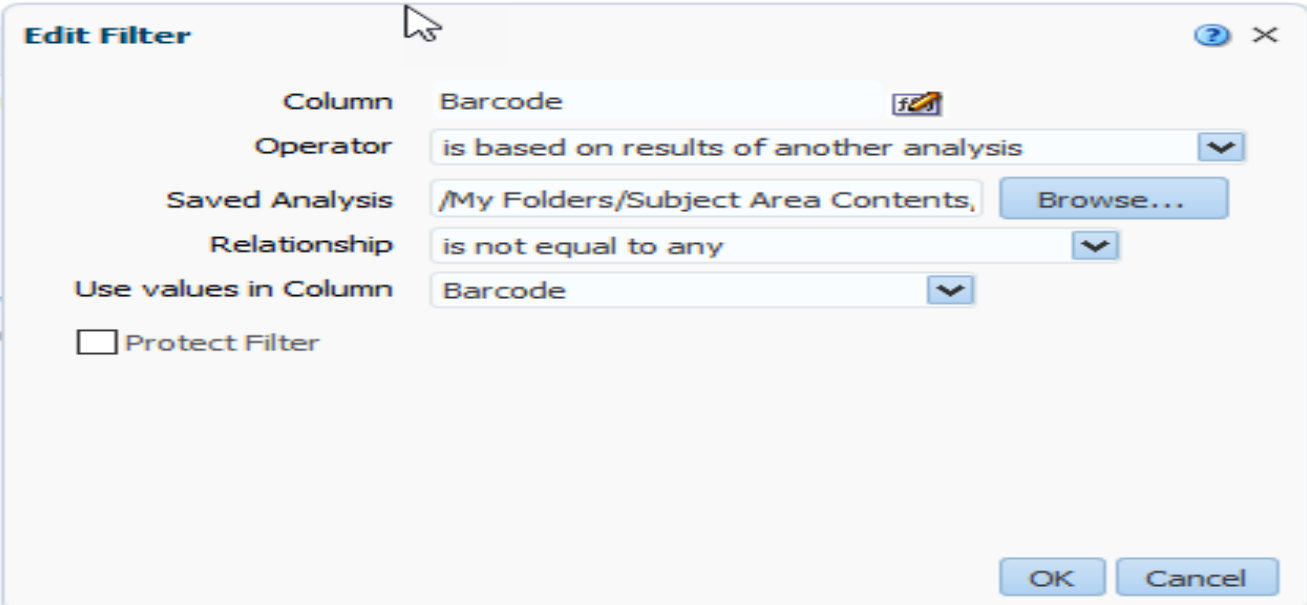
Filters

The screenshot displays the 'Active Patron Physical Item Requests' interface. It features a navigation pane on the left with a tree view of 'Subject Areas' including 'Requests', 'Request Measures', 'Request Process Measures', 'Request Details', 'Booking Request Details', 'Move Request Details', 'Digitization Request Details', 'Requester', 'Request Type', 'Request Status', 'Material Type', 'Request Date', 'Request Completion Date', 'Owning Library', 'Date Needed By', 'Bibliographic Details', 'Physical Item Details', 'Request For Course', and 'Institution'. The main area is divided into three sections: 'Criteria' (with sub-tabs for Results, Prompts, and Advanced), 'Selected Columns', and 'Filters'. The 'Selected Columns' section shows a table with columns for 'Bibliographic Details' (containing '2 Title' and 'Author'), 'Physical Item details' (containing 'Accession Number'), and 'Physical Item Details' (containing 'Barcode' and 'Material type'). The 'Filters' section contains three active filter rules: 'Active Request Flag is equal to / is in Yes', 'AND Lifecycle is equal to / is in ACTIVE', and 'AND Request Type Code is equal to / is in PATRON_PHYSICAL'.

- Filters limit the data returned in the results

Filter by Results of Another Report

- Same field in both reports (in this example field = Barcode)
- Operator: Based on results of another analysis
- Relationship: is equal, is not equal, LT, GT



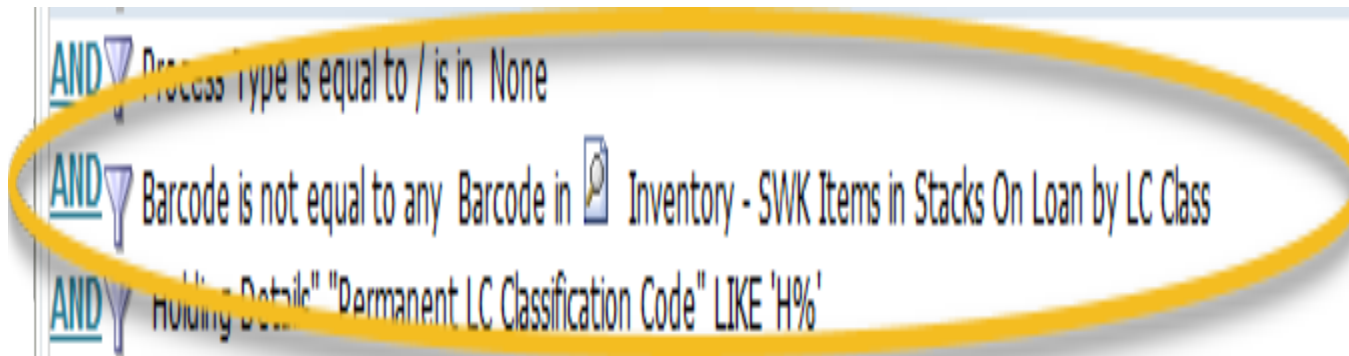
The screenshot shows a dialog box titled "Edit Filter" with the following configuration:

Column	Barcode
Operator	is based on results of another analysis
Saved Analysis	/My Folders/Subject Area Contents, Browse...
Relationship	is not equal to any
Use values in Column	Barcode
<input type="checkbox"/> Protect Filter	

Buttons: OK, Cancel

Filter by Results of Another Report

- For example, shelf list report that doesn't show any items currently on loan



Using CASE to extract OCLC Numbers with SQL

```
CASE WHEN UPPER("Bibliographic Details"."Network Number") LIKE '%OCOLC%'
THEN REPLACE(LEFT(SUBSTRING("Bibliographic Details"."Network Number" FROM
LOCATE('(OCOLC',UPPER("Bibliographic Details"."Network Number"))),
LOCATE(' ', SUBSTRING(CONCAT("Bibliographic Details"."Network Number"; ' ') FROM
LOCATE('(OCOLC',UPPER("Bibliographic Details"."Network Number"))))),';','')
```

```
WHEN UPPER("Bibliographic Details"."Network Number") LIKE '%OCM%'
THEN REPLACE(LEFT(SUBSTRING("Bibliographic Details"."Network Number" FROM
LOCATE('OCM',UPPER("Bibliographic Details"."Network Number"))),
LOCATE(' ', SUBSTRING(CONCAT("Bibliographic Details"."Network Number"; ' ') FROM
LOCATE('OCM',UPPER("Bibliographic Details"."Network Number"))))),';','')
```

```
WHEN UPPER("Bibliographic Details"."Network Number") LIKE '%OCN%'
THEN REPLACE(LEFT(SUBSTRING("Bibliographic Details"."Network Number" FROM
LOCATE('OCN',UPPER("Bibliographic Details"."Network Number"))),
LOCATE(' ', SUBSTRING(CONCAT("Bibliographic Details"."Network Number"; ' ') FROM
LOCATE('OCN',UPPER("Bibliographic Details"."Network Number"))))),';','')
```

```
WHEN UPPER("Bibliographic Details"."Network Number") LIKE '%ON%'
THEN REPLACE(LEFT(SUBSTRING("Bibliographic Details"."Network Number" FROM
LOCATE('ON',UPPER("Bibliographic Details"."Network Number"))),
LOCATE(' ', SUBSTRING(CONCAT("Bibliographic Details"."Network Number"; ' ') FROM
LOCATE('ON',UPPER("Bibliographic Details"."Network Number"))))),';','')
```

```
ELSE 'No OCLC Number Available' END
```

Using CASE to extract OCLC Numbers with Regular Expressions

```
CASE WHEN EVALUATE('regexp_substr(%1,"OCLC")',(UPPER("Bibliographic Details"."Network Number"))) IS NOT NULL  
THEN EVALUATE('regexp_substr(%1,"OCLC+[0-9()]+")',(UPPER("Bibliographic Details"."Network Number")))
```

```
WHEN EVALUATE('regexp_substr(%1,"OCN")',(UPPER("Bibliographic Details"."Network Number"))) IS NOT NULL  
THEN EVALUATE('regexp_substr(%1,"OCN+[0-9]+")',(UPPER("Bibliographic Details"."Network Number")))
```

```
WHEN EVALUATE('regexp_substr(%1,"OCM")',(UPPER("Bibliographic Details"."Network Number"))) IS NOT NULL  
THEN EVALUATE('regexp_substr(%1,"OCM+[0-9]+")',(UPPER("Bibliographic Details"."Network Number")))
```

```
WHEN EVALUATE('regexp_substr(%1,"ON")',(UPPER("Bibliographic Details"."Network Number"))) IS NOT NULL  
THEN EVALUATE('regexp_substr(%1,"ON+[0-9]+")',(UPPER("Bibliographic Details"."Network Number")))
```

```
ELSE 'No OCLC Number Available' END
```

Other uses for Regular Expressions

- Formula to Extract Subject Letter:
 - Evaluate('regexp_substr(%1,"[A-z]+")',"Holding Details"."Permanent Call Number")
- Formula to Extract Subject Number:
 - Evaluate('regexp_substr(%1,"[0-9]+")',Evaluate('regexp_substr(%1,"[A-z]+[0-9]+")',"Holding Details"."Permanent Call Number"))
- Formula to Extract Subject Date:
 - Evaluate('regexp_substr(%1,"([A-z])([0-9]+)\ ([0-9]+)")',"Holding Details"."Permanent Call Number")
- Formula to Split Call Numbers Based on a Period Followed by a Letter:
 - Split 1: REPLACE(Evaluate('regexp_substr(%1,"[^\.]+[^\A-z]+",1,1)',"Holding Details"."Permanent Call Number"),' .','')
 - Split 2: REPLACE(Evaluate('regexp_substr(%1,"[^\.]+[^\A-z]+",1,2)',"Holding Details"."Permanent Call Number"),' .','')



Regular Expressions practical application

- Goal: Create a report of incorrect/unfindable barcodes.
 - Usable if barcodes are 11 or 12 numbers only
- Exclude barcodes that have only 11 numbers
 - Evaluate('regexp_substr(%1,"^([0-9]{11})\$")',"Physical Item Details"."Barcode") IS NULL
- Exclude barcodes that have only 12 numbers
 - Evaluate('regexp_substr(%1,"^([0-9]{12})\$")',"Physical Item Details"."Barcode") IS NULL
- Extract barcodes that have non-number characters
 - Evaluate('REGEXP_INSTR(%1, "^([0-9]+\$")',"Physical Item Details"."Barcode")





Visualize Your Reports

Convert your report to a chart or graph:

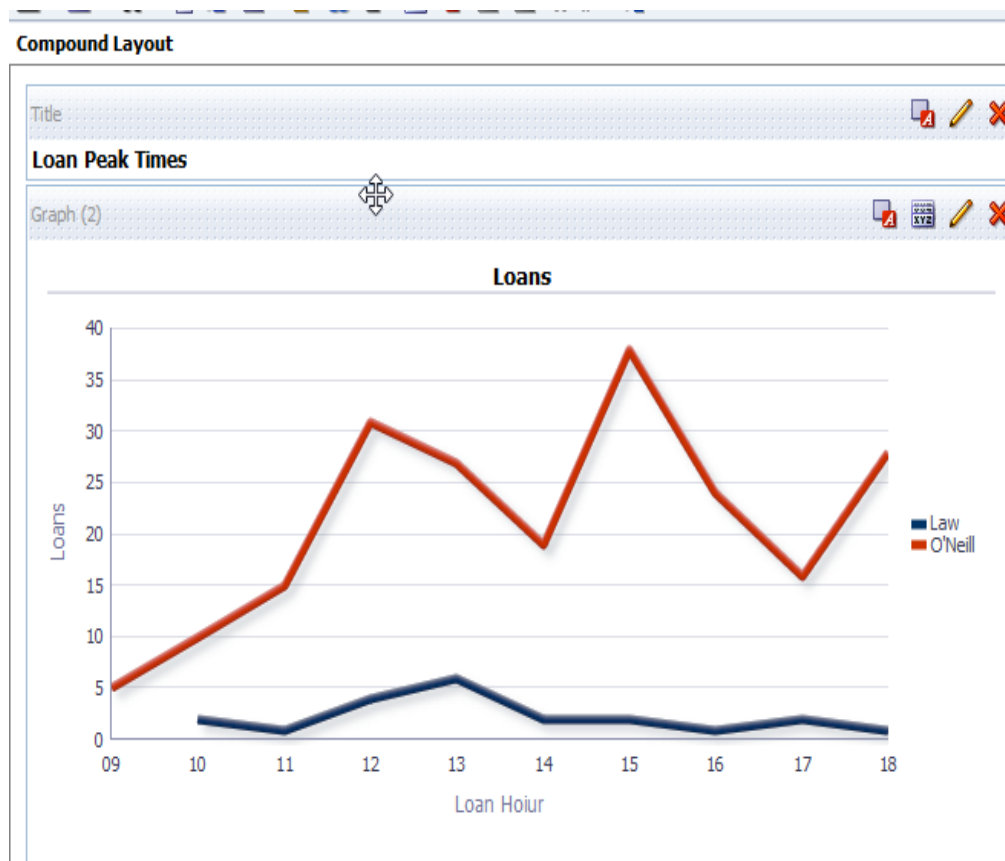
Compound Layout

Title  

Loan Peak Times (table)

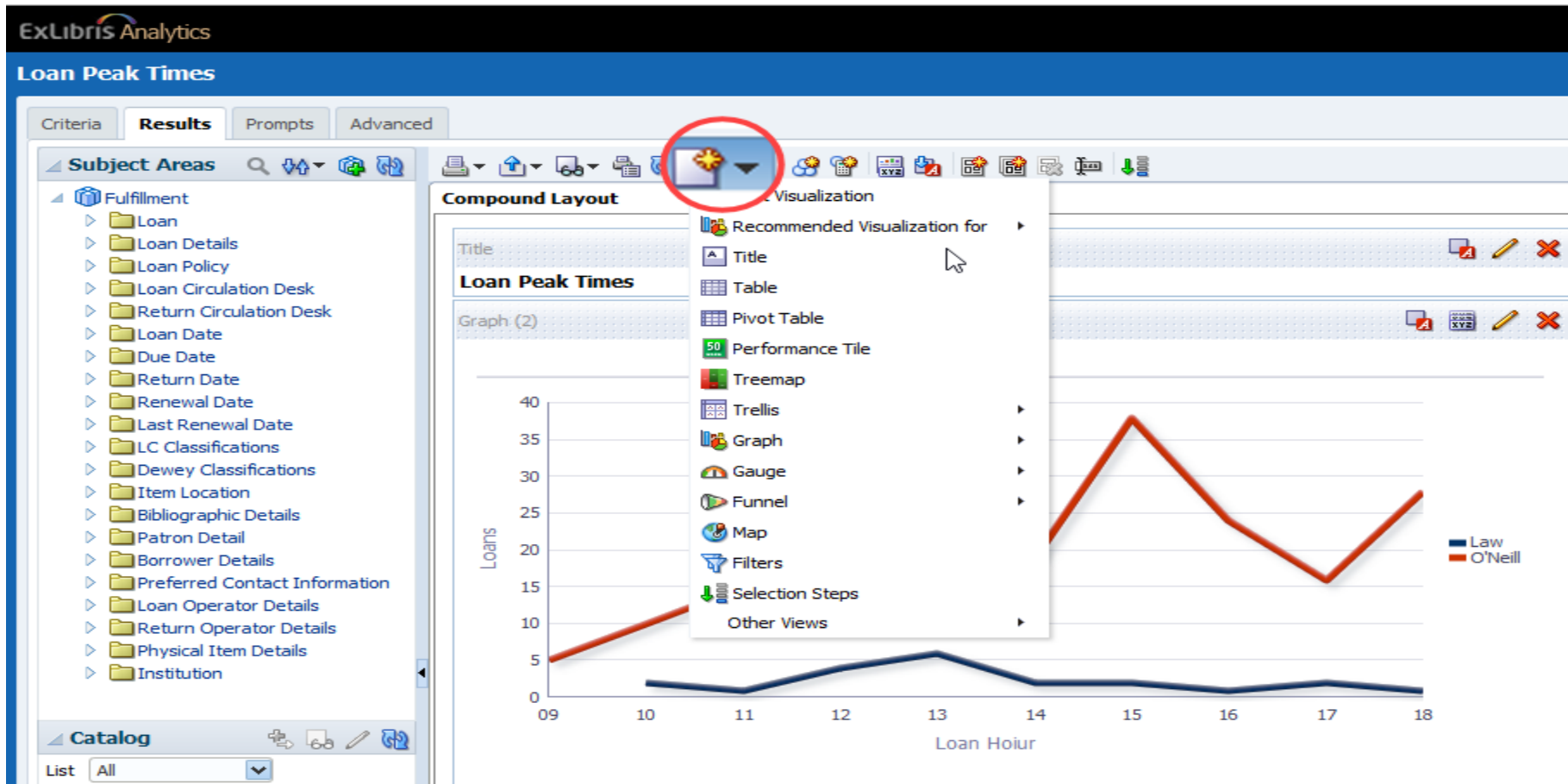
Table (2)    

Loan Date	Library Name	Loan Hoieur	Loans
1/21/2018	Law	10	2
1/21/2018	Law	11	1
1/21/2018	Law	12	4
1/21/2018	Law	13	6
1/21/2018	Law	14	2
1/21/2018	Law	15	2
1/21/2018	Law	16	1
1/21/2018	Law	17	2
1/21/2018	Law	18	1
1/21/2018	O'Neill	09	5
1/21/2018	O'Neill	10	10
1/21/2018	O'Neill	11	15
1/21/2018	O'Neill	12	31
1/21/2018	O'Neill	13	27
1/21/2018	O'Neill	14	19
1/21/2018	O'Neill	15	38
1/21/2018	O'Neill	16	24
1/21/2018	O'Neill	17	16
1/21/2018	O'Neill	18	28



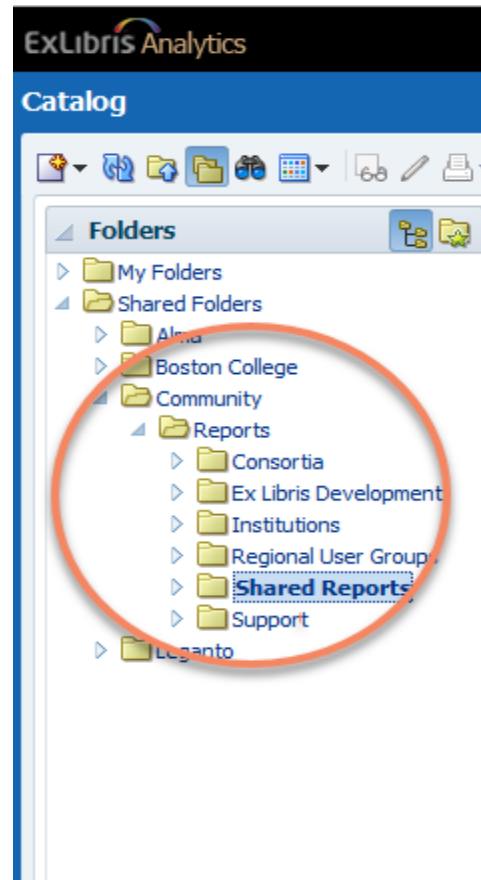
Visualize Your Reports

On 'Results' tab, select 'New View'
Unsure? Select 'Best Visualization'



Use the Community Reports

- Wealth of Community Knowledge
- Copy and Paste report to your 'My Folders' area then edit!



Use Ex Libris Documentation

Lots of help available online from Ex Libris:

https://knowledge.exlibrisgroup.com/Alma/Training/Extended_Training/Presentations_and_Documents_-_Analytics



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Questions / Discussion?

Contact me:

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