Alma Analytics: Tips, Tricks and Best Practices

Margaret Briand Wolfe
Systems Librarian
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:
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
Customize Your ‘No Results’ Message

Locate xyz button
Under Analysis Properties change No Results Settings to ‘Display Custom Message’
Use the `TIMESTAMPADD` Filter on any Date

On any date field: Convert this filter to SQL

```
"Loan Date"."Loan Date" >= TIMESTAMPADD(SQL_TSI_WEEK, -1, CURRENT_DATE)
```
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)
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
- Analytic Folder: Boston College/Reports/Datawarehouse
- Type: Scheduled Report
- Description: FTP results of e-journal usage report to server = bonnet
- Format: Excel
- Status: Active
- Schedule: Every day at 07:00 AM
- FTP
- FTP configuration: FTP_BONNET
- Sub-directory: alma/export/dwh/usage

Roles

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Selector</td>
<td>Manages all aspects of the selection process</td>
</tr>
</tbody>
</table>
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

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

### Edit Column Formula

<table>
<thead>
<tr>
<th>Column Formula</th>
<th>Bins</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Loan Time is between 00:00:00 and 08:59:00</td>
<td>Before opening</td>
</tr>
<tr>
<td>2. Loan Time is between 09:00:00 and 09:59</td>
<td>9 AM</td>
</tr>
<tr>
<td>3. Loan Time is between 10:00 and 10:59</td>
<td>10 AM</td>
</tr>
<tr>
<td>4. Loan Time is between 11:00 and 11:59</td>
<td>11 AM</td>
</tr>
<tr>
<td>5. Loan Time is between 12:00 and 13:59</td>
<td>Lunch and 1 PM</td>
</tr>
</tbody>
</table>

After 2 PM to
Filters

- Filters limit the data returned in the results.

**Active Patron Physical Item Requests**

- **Criteria**
  - Requests
  - Subject Areas
  - Selected Columns
  - Filters

**Selected Columns**

- Double click on column names in the Subject Areas pane to add them to the analysis. Once added:
  - Bibliographic Details
  - Physical Item Details
  - Physical Item Details
  - 2 Title
  - Author
  - Accession Number
  - Barcode
  - Material type

**Filters**

- Add filters to the analysis criteria by clicking on Filter option for the specific column in the Selected Columns.
  - Active Request Flag is equal to /is in Yes
  - Lifecycle is equal to /is in ACTIVE
  - Request Type Code is equal to /is in PATRON_PHYSICAL
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
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,"OCOLC"'),(UPPER("Bibliographic Details"."Network Number"))) IS NOT NULL
THEN EVALUATE('regexp_substr(%1,"OCOLC+[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"'), '.','" )
• 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"')
Convert your report to a chart or graph:
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
IGeLU 2019 - Singapore

Questions / Discussion?

Contact me:

Margaret Briand Wolfe
briandwo@bc.edu