



Do-It-Yourself Search Tools

Cameron Schrode, ILS Administrator, cschrode@akronlibrary.org

Cheryl Engel, Technical Services Director, cengel@akronlibrary.org

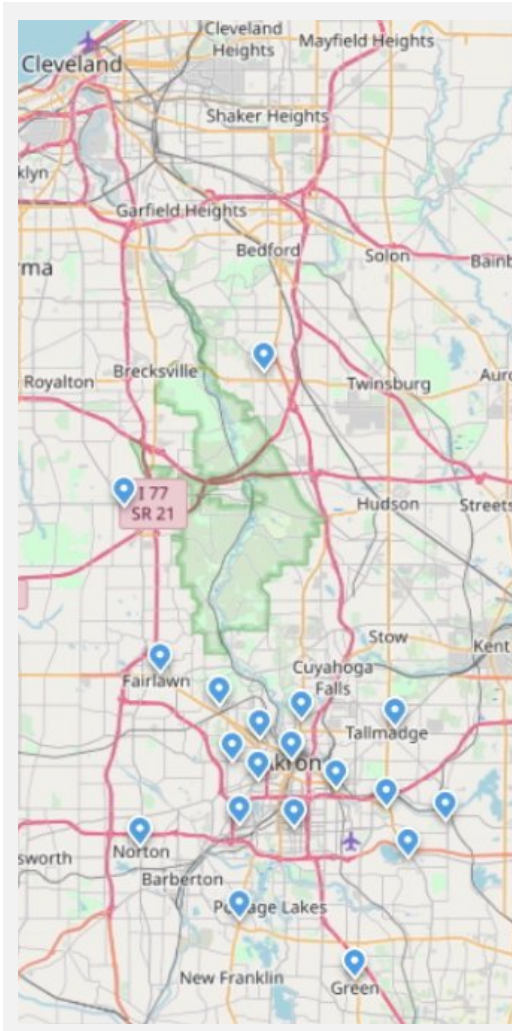
Practical Applications of  and 

Topics

- Akron-Summit County Public Library
 - Sierra Library with Encore
 - 18 Branches in Summit County plus Mobile Services Vans, Bookmobiles
 - 60% of Collection Arrives with Holds
- Theme: *Project Ideas, Implementations, Tips and Tricks*
- In Particular
 - Free and Open Source (FOSS) Business Intelligence, *Cameron Schrode*
 - Extract, Transform, Load (ETL) Applications: On Order with Holds, *Cheryl Engel*
 - *Local Alerts* eNewsletter Enrollment via REST API, *Cameron Schrode*

Introduction

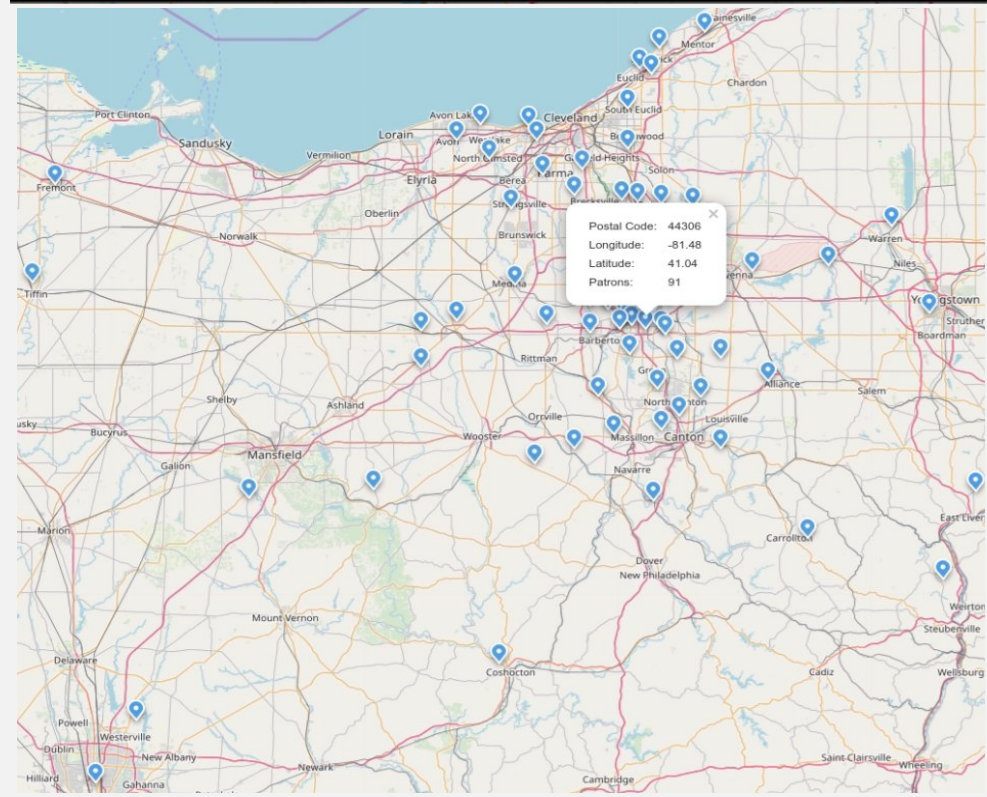
- Sierra DNA (SQL)
 - **Cannot** add or edit records in Sierra DNA with this mechanism
 - Useful for Decision Making and Reports
 - Today's Examples:
 - Business Intelligence Model: Community Engagement Statistics
 - Microservice Model: On Order with Holds Workflow



```

1 SELECT
2   address_longitude::numeric,
3   address_latitude::numeric,
4   SUBSTRING(address from 1 for (position('$' in address) - 1))
5 FROM
6   branch
7 WHERE
8   address_latitude IS NOT NULL

```



Screenshot from Metabase, Branch Locations (Left), Screenshot from Metabase, Cardholders Registered through Community Engagement (Right)

Practical Application #1: Business Intelligence

- **What is Business Intelligence?**

1. Capturing Metrics and Establishing Benchmarks
2. Measuring Incoming and Outgoing Transactions
3. Reporting Insights
4. Fosters Collaborative Environment
5. Centralized Knowledge Management

- **Alternatives**

- Tableau
- Power BI for Office 365
- pgAdmin

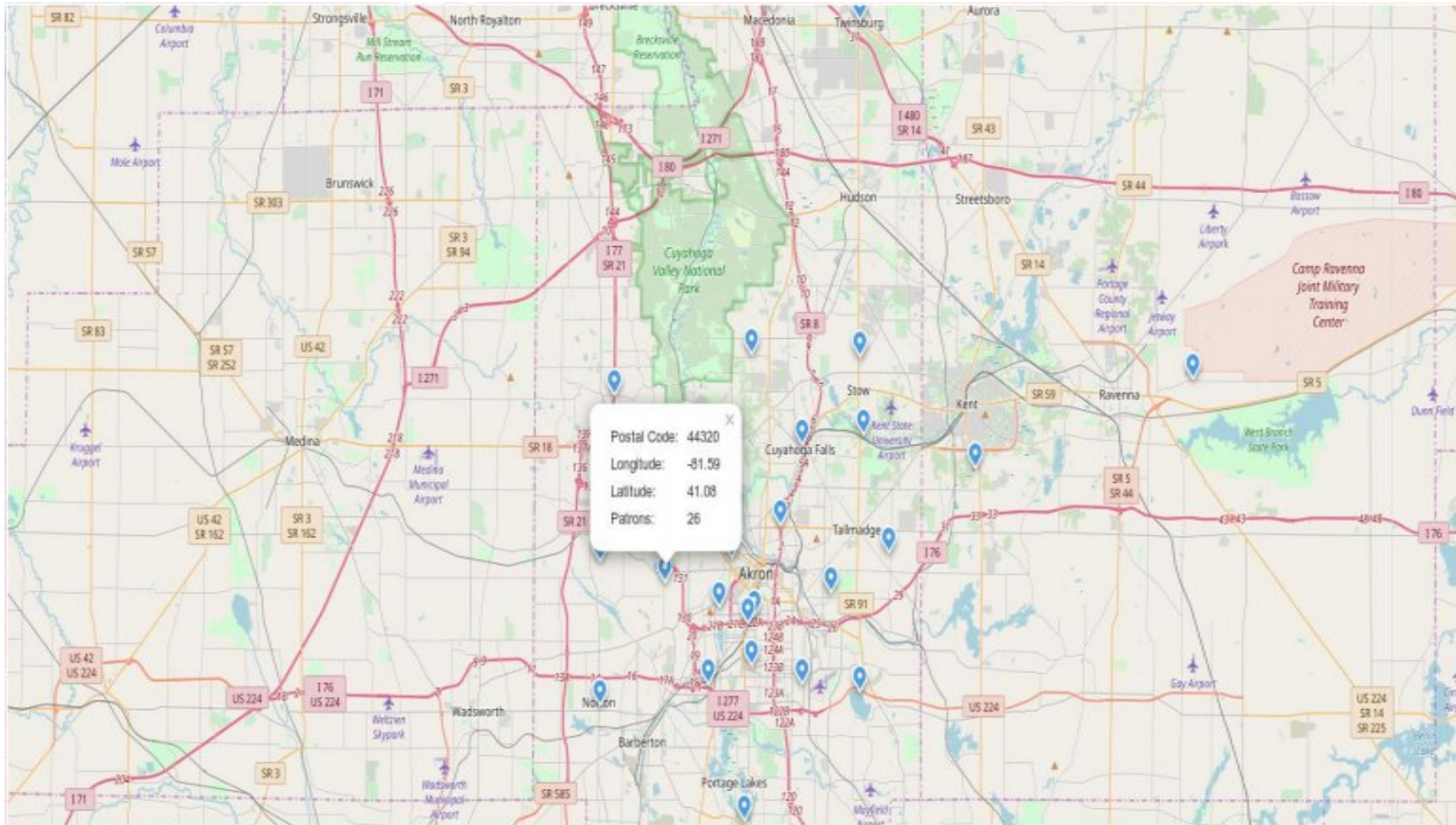
What is Metabase?

- **Dashboards**
 - Acquisitions / Cataloging
 - Branch Audience metrics
 - Cardholder metrics
 - Circulation metrics
 - Demographic metrics
 - Community Engagement metrics
 - Marketing Campaign Effects
- **Components**
 - Question => Answer
 - What is a Collection?
 - Information Architecture
 - Basically placing of Questions into categories called Collections
 - What is a Dashboard?
 - Visual Representation
 - What is a Pulse?
 - Reporting and Distribution of Information



Screenshot from Metabase, Order Processing by Number of Copies using Order Date, Paid Date, Received Date





Screenshot from Metabase, Interactive Map, Patrons Served by Community Engagement Activity, August 1st - August 20th, 2019

Open-Source Business Intelligence

- Free and Open-Source Software (FOSS) Business Intelligence
- In this case, we'll be using Metabase (<https://metabase.com/>) which I personally recommend
- **Step One - Get Metabase from their website**
 - But first, what is Metabase?
 - It's a website that shows statistics, charts, graphs from SQL, Google Analytics, and others
 - It's also capable of reporting in Excel, CSV, JSON, which we'll be using later
- **Step Two - Make a better desktop shortcut**
 - Sierra runs off of Java Runtimes, Metabase runs off Java Runtimes
 - `C:\path\to\java.exe -jar "C:\path\to\Metabase.jar"`
 - By default it will store its information to a local H2 database for easy backup purposes
- **Step Three - Run Metabase**
 - Metabase will launch in a command window
 - You'll want to open your web browser and go to `http://localhost:3000/`
- **Step Four - What to do once you've run Metabase - Security / Firewall Portion for DB**

```
08-23 09:49:57 [1mINFO metabase.util[0m :: Loading Metabase...
08-23 09:50:01 [1mINFO util.encryption[0m :: DB details encryption is DISABLED for this Metabase instance. ?
08-23 09:50:13 [1mINFO metabase.core[0m :: Starting Metabase in STANDALONE mode
08-23 09:50:13 [1mINFO metabase.core[0m :: Launching Embedded Jetty Webserver with config:
{:port 3000}

08-23 09:50:13 [1mINFO metabase.core[0m :: Starting Metabase version v0.25.2 (35bce2d release-0.25.2) ...
08-23 09:50:13 [1mINFO metabase.core[0m :: System timezone is 'America/New_York' ...
08-23 09:50:13 [1mDEBUG metabase.driver[0m :: Registered driver [34m:bigquery[0m ?
08-23 09:50:13 [1mDEBUG metabase.driver[0m :: Registered driver [34m:crate[0m ?
08-23 09:50:13 [1mDEBUG metabase.driver[0m :: Registered driver [34m:druid[0m ?
08-23 09:50:13 [1mWARN metabase.driver[0m :: No -init-driver function found for 'metabase.driver.google'
08-23 09:50:13 [1mDEBUG metabase.driver[0m :: Registered driver [34m:googleanalytics[0m ?
08-23 09:50:13 [1mDEBUG metabase.driver[0m :: Registered driver [34m:h2[0m ?
08-23 09:50:14 [1mDEBUG metabase.driver[0m :: Registered driver [34m:mongo[0m ?
08-23 09:50:14 [1mDEBUG metabase.driver[0m :: Registered driver [34m:mysql[0m ?
08-23 09:50:14 [1mDEBUG metabase.driver[0m :: Registered driver [34m:postgres[0m ?
08-23 09:50:14 [1mDEBUG metabase.driver[0m :: Registered driver [34m:presto[0m ?
08-23 09:50:14 [1mDEBUG metabase.driver[0m :: Registered driver [34m:redshift[0m ?
08-23 09:50:14 [1mDEBUG metabase.driver[0m :: Registered driver [34m:sqlite[0m ?
08-23 09:50:14 [1mDEBUG metabase.driver[0m :: Registered driver [34m:sqlserver[0m ?
08-23 09:50:14 [1mINFO metabase.core[0m :: Setting up and migrating Metabase DB. Please sit tight, this may take a minute...
08-23 09:50:14 [1mINFO metabase.db[0m :: [36mVerifying h2 Database Connection ...[0m
08-23 09:50:14 [1mINFO metabase.db[0m :: Verify Database Connection ... ?
08-23 09:50:14 [1mINFO metabase.db[0m :: Running Database Migrations...
08-23 09:50:14 [1mINFO metabase.db[0m :: Setting up Liquibase...
08-23 09:50:14 [1mINFO metabase.db[0m :: Liquibase is ready.
08-23 09:50:14 [1mINFO metabase.db[0m :: Checking if Database has unrun migrations...
```

Screenshot from Metabase, Console Window, Service Startup Process

Sierra DNA User Creation

- **Step Five - Create 'Service Account' for Metabase**
 - Start with Admin App
 - Sierra DNA requires its Application assigned to a Sierra User in the Admin App
 - Double-Check to make sure you've accepted Sierra DNA's Terms of Use and have added the Application!

[Basic Info](#) **Applications** [Permissions](#) [Workflows](#) [Options](#) [Settings](#) [Preferences](#)

Assigned applications (1) [remove all](#)

Sierra SQL Access

Available applications (2) [add all](#)

Admin App

Sierra Application

[Delete user](#) [SAVE](#) [Discard changes](#)

Screenshot from Sierra Admin User Creation



Metabase User Creation

- **Step Six - Set up your first Data Model in Metabase Admin**
- **Fill out the necessary info**
 - Database Type
 - Database Host
 - Sierra User Created for this purpose
 - Database Name
 - JDBC: sslmode=require
 - In-Depth Analysis uses more CPU resources but enables optional features
- **Step Seven - What to do once you make sure everything works**
 - If not, check Sierra Application for the Database User and Firewall

Database type:
PostgreSQL

Name:
Sierra DNA

Host:

Port:
1032

Database name:
iii

Database username:

Database password:

Additional JDBC connection string options:
sslmode=require

Enable in-depth database analysis

Screenshot from Metabase



Basic Reporting Ability

- **Goal**

- Collect metrics and establish benchmarks
 - Method: Count number of unique patrons served, fine waivers, amount waived, outreach-inspired registrations
- Measure input / output of transactions
 - Method: Geographically, over time, by branch
- Reporting

- **Process**

- First step, create a patron template in Sierra's Record Templates menu with a Note field for what you'd like to track
 - In this case, it was necessary to make one patron template per staff account
- Second step, ensure the right Sierra accounts are using the template with the note
 - Templates are set by account
- Third step, keep a spreadsheet or other recordkeeping of different Notes and what they mean
- Fourth step, if possible - e.g. with fine info - you can filter by Sierra user which took payment, or use home library
- Fifth Step, create Questions querying that info and make a Dashboard to splice them together

Creating Your First 'Question'

- Setting Up Your First Report, Counting People Registered as a Result of Community Engagement

DATABASE

Sierra ▾

HIDE EDITOR

```

1 SELECT
2   COUNT(distinct varfield_view.record_id) as new_patrons,
3   creation_date_gmt::date,
4   location_name.name
5 FROM
6   varfield_view
7 LEFT JOIN
8   patron_view ON patron_view.id = varfield_view.record_id
9 LEFT JOIN
10  record_metadata ON record_metadata.id = varfield_view.record_id
11 LEFT JOIN
12  location ON location.code = home_library_code
13 LEFT JOIN
14  location_name ON location_name.location_id = location.id
15 WHERE
16  varfield_view.record_type_code = 'p'
17 AND
18  varfield_type_code = 'x'
19 AND
20  field_content = 'DO NOT ERASE: Registered through Tablesit'
21 GROUP BY
22  record_metadata.creation_date_gmt::date,
23  location_name.name
24 ORDER BY creation_date_gmt DESC
    
```

VISUALIZATION

Table ▾

Refresh

Showing 32 rows

New Patrons	Creation Date Gmt	Name
2	Tuesday, August 20, 2019 12:00 AM	Maple Valley Branch
13	Saturday, August 17, 2019 12:00 AM	Tallmadge Branch
9	Wednesday, August 14, 2019 12:00 AM	Main - Circulation
1	Monday, August 12, 2019 12:00 AM	Main - Circulation
9	Friday, August 9, 2019 12:00 AM	Main - Circulation
5	Thursday, August 8, 2019 12:00 AM	Main - Circulation

Registrations Occurring through Community Engagement by Home Library Code



Creating Your Second 'Question'

- Setting Up Your First Map Query, Counting Patrons with a Specific Note Field by Postal Code

```

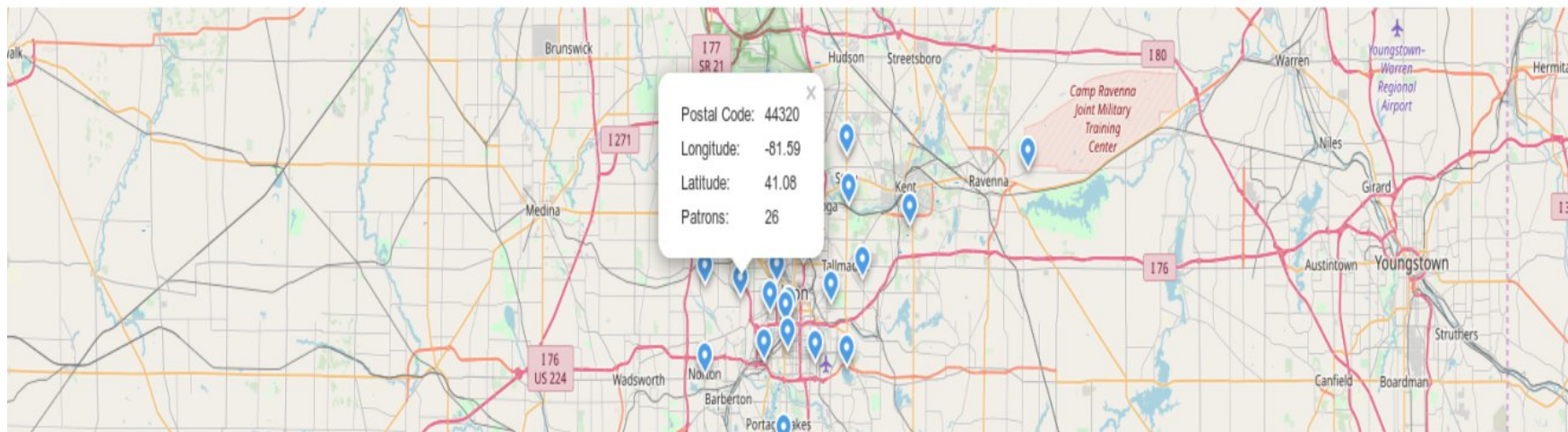
1 SELECT
2   patron_record_address.postal_code,
3   zip_code_info.longitude::numeric,
4   zip_code_info.latitude::numeric,
5   COUNT(distinct varfield_view.id) as patrons
6 FROM varfield_view
7 JOIN
8   record_metadata ON record_metadata.id = varfield_view.record_id
9 JOIN
10  patron_record_address ON patron_record_address.patron_record_id = record_metadata.id
11 JOIN
12  patron_view ON patron_view.record_num = record_metadata.record_num
13 JOIN
14  zip_code_info ON zip_code_info.zip_code = SUBSTRING(patron_record_address.postal_code from 1 for 5)
15 WHERE
16  patron_record_address.postal_code IS NOT NULL
17 AND
18  sierra_view.patron_record_address.postal_code NOT IN ('00000', '11111')
19 AND
20  varfield_view.record_type_code = 'p' AND varfield_view.varfield_type_code = 'x' AND varfield_view.field_content = 'DO NOT ERASE: Registered through Tablesit'
21 GROUP BY
22  patron_record_address.postal_code, zip_code_info.longitude, zip_code_info.latitude

```

VISUALIZATION

Map

Refresh



Registrations Occurring through Community Engagement by Cardholder Postal Code

Further Reading / Example of Google Analytics Integration

- Windows Integration with LDAP
 - Active Directory Groups help permission / access control for security and privacy tightening
 - Public Questions are not subject to that - keep this in mind!
 - New users, once they first log in, can be assigned to their Permission Group in Metabase by OU
 - (OU = Organizational Unit in Active Directory lingo)
- 'Pulses' are used as Email Reports
- Recommended to move away from H2 for security reasons if used on production server
 - <http://metabase.com/docs/latest>
- Personal preference to save valuable seconds of your life
 - ALTER ROLE sierra_sql_user IN DATABASE iii SET search_path = sierra_view,public;
 - This allows you to leave off sierra_view in your queries to make them cleaner (as shown)
 - As always, read about it first if you aren't sure:
 - <https://www.postgresql.org/docs/current/ddl-schemas.html#DDL-SCHEMAS-PATH>
- Google Analytics Integration with Encore for Holds Placed and Feedback for INN-Reach
 - <https://bit.ly/2020-ascpl-google-javascript>

Popular Titles - Last 30 Days



Encore Catalog ▾

```
1. {  
2   "ids": "ga:      ",  
3   "start-date": "30daysAgo",  
4   "end-date": "yesterday",  
5   "metrics": "ga:uniqueEvents",  
6   "dimensions": "ga:eventLabel",  
7   "sort": "-ga:uniqueEvents",  
8   "filters": "ga:eventCategory==Engagement;ga:eventAction==Placed Hold",  
9   "include-empty-rows": true,  
10  "max-results": 15|  
11 }
```

Screenshot from Metabase



#IUG2020



Creating Your First SQL Filter

- Setting Up Your Second Query, On Order with Holds using Bib Record Numbers

- **Step Two - Save**

You'll probably be stopped when saving the filter, that's OK

- **Step Three - Add Your First Filter**

- Fill out the form for the filter, making its type "Text".

- What is a filter?

- Filters are variables that look like this:

`{{ space_seperated_records }}`

- Metabase sanitizes user input and places text in quotes there

- **Remember, we want to use Text in this case**

- **Fill out the rest as needed, 'Default' is useful to make the query robust so I would recommend**

```

1 SELECT
2   bib_record as "RECORD #(BIBLIO)",
3   subview.title as "TITLE",
4   array_to_string(array_agg(DISTINCT subview.order_record), ' | ') as "RECORD #(ORDER)",
5   subview.holds as "HOLDS",
6   array_to_string(array_agg(DISTINCT subview.fund_code), ' | ') as "FUND",
7   subview.bib_cataloging_date as "BIB CATALOG DATE", array_to_string(array_agg(subview.order_received_date), ' | ') as "ORDER RECEIVED DATE",
8   subview.isbn as "STANDARD #"
9 FROM (
10  SELECT 'b' || bib_view.record_num || 'a' as bib_record, 'o' || order_view.record_num || 'a' as order_record,
11         bib_view.title,
12         COUNT(distinct hold.id) as holds,
13         string_agg(distinct fund_master.code, ' | ') as fund_code,
14         bib_view.cataloging_date_gmt as bib_cataloging_date,
15         order_view.received_date_gmt::date as order_received_date,
16         string_agg(distinct phrase_entry.index_entry, ' | ') as "isbn"
17 FROM bib_view
18     JOIN bib_record_order_record_link ON bib_record_order_record_link.bib_record_id = bib_view.id
19     JOIN order_view ON order_view.id = bib_record_order_record_link.order_record_id
20     LEFT JOIN order_record_cmf ON order_record_cmf.order_record_id = bib_record_order_record_link.order_record_id
21     LEFT JOIN fund_master ON fund_master.code_num = CAST(order_record_cmf.fund_code as numeric)
22     LEFT JOIN hold ON hold.record_id = bib_record_order_record_link.bib_record_id
23     LEFT JOIN phrase_entry ON phrase_entry.record_id = bib_record_order_record_link.bib_record_id AND phrase_entry.index_tag='i' AND phrase_entry.varfield_type_code='i' AND phrase_entry.phrase_rule_subfield_list = 'a'
24 WHERE bib_view.record_num::varchar = ANY(string_to_array(replace(replace('{{ space_separated_records }}, 'b', ''), '.', ''), ' '))
25 GROUP BY bib_view.record_num, bib_view.title, bib_view.cataloging_date_gmt, order_view.received_date_gmt, order_view.record_num
26 ORDER BY holds DESC
27 ) as subview
28 GROUP BY bib_record, title, bib_cataloging_date, order_received_date, isbn, holds
29 ORDER BY holds DESC

```

VISUALIZATION

Table ▾ ⚙

Get Answer

Showing 1

Record #(biblio)	Title	Record #(order)	Holds	Fund	Bib Catalog Date	Order Received Date	Standard #
b2000020a	Dark sacred night : a Ballard and Bosch novel	o1327014a o1327714a	0	ba bh	Thursday, October 25, 2018 12:00 AM	2018-10-24 2018-10-24	0316484806 9780316484800

Screenshot from Metabase



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Preparing Permalinks

- Setting Up Your Second Query, On Order with Holds using Bib Record Numbers
- **Step Four - Share the Question and select the XLSX option!**
Double-Check that the link you copied ends with .xlsx and if not, add it
Note: You'll need the ID from it for a later step

A Day in the Life of Our Tech Services

- **15,000 Items a month:** receiving, invoicing, cataloging, processing
- **500 - 700 Titles a week:** ordering
- **3,000 - 5,000 Items each day:** managing, prioritizing workflows
 - 1,800 - 3,000 items arrive with holds on them



 #IUG2020



Date	Inventory	OUT #	Big release staging
11/4/2019	7,269	1,454	
11/5/2019	6,872	726	
11/6/2019	7,156	977	
11/7/2019	6,763	774	
11/8/2019	6,273	596	4,527



Why 'On Order with Holds'?

- **Difficult to sort incoming items by demand**
- **Public Service Staff wanted to know what was going to arrive each week**
- **Need to anticipate what was coming to plan workflows**
- **Need to know which orders, if any, were backordered too long**
- **Need materials to highlight for our Featured Lists for those placing holds online**
- **Difficult to search by hold numbers and sort by hold numbers using Create Lists**

How It Works (1, 2, 3)

- **Process Outline**

- 1.) Create a List of desired bibliographic records
- 2.) Export the records into a file (comma-delimited)
- 3.) Upload the file through the Browse File... button
- 4.) Optimize the results and create happy customers!

Outcome #1

- Ability to know what releases next week, whether it is here and where it is in the workflow

Outcome #2

- Ability to send out a public service announcement to the public service staff so that they know what releases Tuesday and what to tell customers when they ask about them

Outcome #3

- Ability to alert our Shipping staff, who open boxes and physically put our items on trucks, what they can expect and what they should expedite to Technical Services

Outcome #4

- **Ability to know what hasn't come and plan or troubleshoot accordingly in certain situations:**
 - Publication date change?
 - Vendor backorder?
 - Have vendor expedite processing based on our customer demand?
 - Is there a way to get the product? Do we need to cancel, restore the funds, and get it out of the system?

Outcome #5

- Ability to use the holds and receipt information in selecting titles to put on display, promoting our collection





Boolean Search

Review File Name: 20190924

Store Record Type: BIBLIOGRAPHIC b

Range Start b10000008 Stop b*

- Classic
- Enhanced
- JSON

Classic

Term	Operator	Type	Field	Condition	Value A	Value B
1		b	Publication Info.	matches	20190922	
2	OR	BIBLIOGRAPHIC	Publication Info.	matches	20190923	
3	OR	BIBLIOGRAPHIC	Publication Info.	matches	20190924	
4	OR	BIBLIOGRAPHIC	Publication Info.	matches	20190925	
5	OR	BIBLIOGRAPHIC	Publication Info.	matches	20190926	
6	OR	BIBLIOGRAPHIC	Publication Info.	matches	20190927	
7	OR	BIBLIOGRAPHIC	Publication Info.	matches	20190928	
8	OR	ORDER	Recv Date	between	09-16-2019	09-19-2019

BIBLIOGRAPHIC Publication Info. matches "20190922" OR BIBLIOGRAPHIC Publication Info. matches "20190923" OR BIBLIOGRAPHIC Publication Info. matches "20190924" OR BIBLIOGRAPHIC Publication Info. matches "20190925" OR BIBLIOGRAPHIC Publication Info. matches "20190926" OR BIBLIOGRAPHIC Publication Info. matches "20190927" OR BIBLIOGRAPHIC Publication Info. matches "20190928" OR (ORDER Recv Date between "09-16-2019"and "09-19-2019" AND BIBLIOGRAPHIC Hold exist)

- Group
- Ungroup
- Insert Line
- Append Line
- Delete
- Clear All



Dashboard **NEW** Home / On Order with Holds

THEME

- Colors
- Typography

COMPONENTS

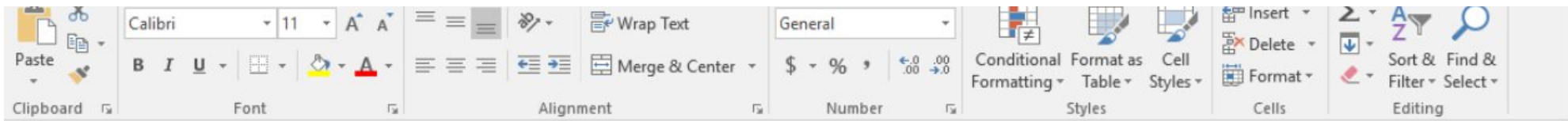
- Notable Covers
- Institutional Overdues
- On Order with Holds

On Order with Holds Workflow

Choose File N

Download Excel Sheet





	A	B	C	D	E	F	G	H	I	J	K	L
1	RECORD #(BIBLI	TITLE	RECORD #(ORDER	HOLDS	FUND	BIB CATALOG DATE	ORDER RECEIVED D	STANDARD #				
2	b2035028a	Yesterday [DVD]	o1355242a	310	va	2019-09-16T00:00:00.	2019-09-16	0191329104590	191329104590			
3	b2035028a	Yesterday [DVD]	o1362052a	310	vh	2019-09-16T00:00:00.		0191329104590	191329104590			
4	b2035029a	Yesterday [Blu-ray]	o1355243a	223	va vt	2019-09-16T00:00:00.	2019-09-16	0191329104606	191329104606			
5	b2033492a	Shaft [DVD]	o1353943a	187	va	2019-09-16T00:00:00.	2019-09-16	0883929668748	883929668748			
6	b2033493a	Shaft [Blu-ray]	o1353944a	139	va	2019-09-16T00:00:00.	2019-09-16	0883929668731	883929668731			
7	b2034504a	Child's play [Blu-ray]	o1355048a	82	va	2019-09-16T00:00:00.	2019-09-16	0883904364368	883904364368			
8	b2034623a	Lethal Agent	o1355056a	81	ba		2019-09-16	1501190628	9781501190629			
9	b2034623a	Lethal Agent	o1358771a	81	bh		2019-09-17	1501190628	9781501190629			
10	b2034503a	Child's Play [DVD]	o1355029a	73	va	2019-09-16T00:00:00.	2019-09-16	0883904364344	883904364344			
11	b2040885a	Inside man [DVD] : most wanted	o1360331a	72	va	2019-09-16T00:00:00.	2019-09-16	0191329094662	191329094662			
12	b2040878a	Burn [DVD]	o1360322a	52	va	2019-09-18T00:00:00.	2019-09-18	0191329115565	191329115565			
13	b2034618a	The Dutch House	o1355051a	48	ba		2019-09-16	0062963678	9780062963673			
14	b2041541a	Fast color [DVD]	o1360913a	41	va	2019-09-16T00:00:00.	2019-09-16	0031398302568	031398302568	6317823693	978	
15	b2037304a	Landing Lake [DVD]	o1357362a	37	va	2019-09-18T00:00:00.	2019-09-18	0680611950149	680611950149			
16	b2034071a	Pavarotti [DVD].	o1354579a	35	va	2019-06-20T00:00:00.						
17	b2034072a	Pavarotti [Blu-ray]	o1354580a	35	va	2019-09-16T00:00:00.	2019-09-16	012462125				
18	b2041553a	The command [DVD]	o1360928a	35	va	2019-09-16T00:00:00.	2019-09-16	0031398305521	031398305521			
19	b2040876a	Awake [DVD]	o1360320a	34	va	2019-09-16T00:00:00.	2019-09-16	0767685161937	767685161937			
20	b2040897a	Above the shadows [DVD]	o1360345a	33	va	2019-09-16T00:00:00.	2019-09-16	0812034035947	812034035947			
21	b2035545a	Ask again, yes [large print] : a nov	o1355625a	30	ba	2019-09-11T00:00:00.	2019-09-11	1432867180	9781432867188			
22	b2035545a	Ask again, yes [large print] : a nov	o1362929a o136	30	ba	2019-09-11T00:00:00.	2019-09-17 2019-C	1432867180	9781432867188			
23	b2035545a	Ask again, yes [large print] : a nov	o1361838a	30	ba	2019-09-11T00:00:00.		1432867180	9781432867188			
24	b2035567a	The bitterroots [large print] : a Cas	o1355651a	30	ba	2019-09-17T00:00:00.	2019-09-16	1432868756	9781432868758			
25	b2035567a	The bitterroots [large print] : a Cas	o1362931a o136	30	ba	2019-09-17T00:00:00.	2019-09-17 2019-C	1432868756	9781432868758			
26	b2042416a	Wild Rose [DVD]	o1362038a	29	va	2019-09-16T00:00:00.	2019-09-16	0191329097021	191329097021			
27	b2035555a	The Dutch House [Large Print]	o1355638a	23	ba			0062966464	9780062966469			
28	b2039221a	American Horror Story: Apocalyps	o1358962a	23	va			0024543625544	024543625544			
29	b2034620a	Sins of the Fathers: A J.P. Beaumo	o1355053a	22	ba			0062853430	9780062853431			



Questions?





 #IUG2020



Step 2: Transform via Microservice

- **Download the Microservice**
 - <http://bit.ly/2020-ascpl-microapplication>
 - Once downloaded, copy the config.php.EXAMPLE to config.php and edit its values
 - Use the config.php info to login

Step 2: Transform via Microservice

- Using XAMPP, Docker, or similar software, serve the PHP application
- You should see a web URL pop-up once you run it or a button to open the PHP application
- Navigate there and change / use the default login to the Transform app

Step 2 (Alternative): Implement a similar script

```

46 public function loadFile($file_path)
47 {
48     $scsv = Reader::createFromPath($file_path, 'r');
49     if ($this->usingColumnHeaders($file_path)) {
50         $scsv->setHeaderOffset(0);
51     }
52
53     $offset = 0;
54     if ($scsv->getHeader()) {
55         $offset = array_search('RECORD #(BIBLIO)', $scsv->getHeader());
56     }
57
58     return (object)[
59         'offset' => $offset,
60         'file' => $scsv
61     ];
62
63 public function parseRecordNumber($record_num)
64 {
65     $record_num = str_replace('-', '', $record_num);
66     $length = strlen($record_num);
67
68     // Remove check-digit
69     return substr($record_num, 0, $length - 1);
70 }
71
72 public function parseEveryRecordNumber($loaded_file)
73 {
74     $records = $loaded_file->file->getRecords();
75     $output = array();
76     foreach ($records as $index => $record) {
77         if (isset($record[$loaded_file->offset])) {
78             $next_record_num = $record[$loaded_file->offset];
79         }
80         if (isset($record['RECORD #(BIBLIO)'])) {
81             $next_record_num = $record['RECORD #(BIBLIO)'];
82         }
83         $output[] = $this->parseRecordNumber($next_record_num);
84     }
85
86     return implode(' ', array_values(array_unique(array_filter($output))));
87 }
88
89 public function generateExcelReport($record_list)
90 {
91     $link = 'http://[REDACTED]/public/question/e3db347b-830d-49d8-87be-c7b2844717aa.xlsx?parameters=[{"type":"category","target":["variable","template-tag","space_separated_records"],"value":""};
92     $link .= $record_list;
93     $link .= '"]';
94     return $link;
95 }

```



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Step 3: Load

- **We'll need to load the other configuration variables too!**
- Such as ON_ORDER_WITH_HOLDS_URL which should be set to the public question XLSX link
- Once you have that set, we can finally use the 'Browse File...' widget
- **Browse to C:\path\to\the\Extract.csv you've retrieved from Create Lists ...and finally Click Download Excel Sheet for the data you wanted**

On Order with Holds Workflow

Browse... No fil...ected.

Download Excel Sheet

File Upload

Recent Home Desktop Documents Downloads Music Pictures Videos

cameron Reports SierraDNA Advanced

Name	Size	Modified
order-records.csv	530 bytes	2 Aug

ONLYOFFICE order-record... x

order-records.csv

File Home Insert Layout Collaboration Protection Plugins

Calibri 11

B / U + A₂ A

Record Number

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
1	Record Number													
2	b20275389													
3	b20360423													
4	b20359457													
5	b20359950													
6	b20319186													
7	b20319228													
8	b20352104													
9	b20305072													
10	b20362675													
11	b20362572													
12	b20321132													
13	b2029783x													
14	b20308929													
15	b20359469													
16	b20362961													
17	b20354873													
18	b20362717													
19	b20222853													



Result

- **Browse to C:\path\to\the\Extract.csv you've retrieved from Create Lists ...and finally Click Download Excel Sheet for the data you wanted**

	A	B	C	D	E	F	G	H
1	RECORD #(BIBLIO)	TITLE	RECORD #(ORDER)	HOLDS	FUND	BIB CATALOG DATE	ORDER RECEIVED	STANDARD #
2	b2036100a	Labyrinth [sound recording]	o1356190a	11	sa	2019-08-05T00:00:00	2019-08-05	1543664628 9781543664621
3	b2034345a	Three women [sound recording]	o1354746a	7	sa	2019-08-15T00:00:00	2019-08-13	1508296200 9781508296201
4	b2035487a	Gravity Is the Thing	o1355567a	3	sa			198265984x 9781982659844
5	b2028542a	Lithium: A Doctor, a Drug, and a Breakthrough	o1349497a	2	ba		2019-08-14	1631491997 9781631491993
6	b2036091a	The Need	o1356181a	2	sa			1508279799 9781508279792
7	b2036296a	Ghosts of the Shadow Market	o1356503a	2	st			1508278695 9781508278696
8	b2028770a	Type Revivals	o1349741a	1	ba			1567926479 9781567926477
9	b2036087a	Old Whigs : Burke, Lincoln, and the politics of prudence	o1356176a	1	ba	2019-08-13T00:00:00	2019-08-12	1641770503 9781641770507
10	b2036257a	Disney descendants. Evie's wicked runway. Book 1	o1356418a	1	bj	2019-08-13T00:00:00	2019-08-08	1427859906paperback 9781
11	b2036294a	The Merciful Crow	o1356501a	1	st			1250211905 9781250211903



Introduction

- Sierra API (Programming language of your choice)
 - Primarily used for Fetching Information, Updating Information, and Adding Records
 - Useful for Scheduled Tasks, as an alternative to Rapid Update, or whenever complex I/O necessary
 - Today's Examples:
 - Local Alerts via Automatic eNewsletter Subscriptions for New Cardholders

Local Alerts with MailChimp and Sierra REST API

- **Context:**

- We have branches all over the county and each has unique events, collections that set them apart
 - Natural result of a partial Floating Collection

- **Need:**

- Our new patrons must be enrolled into the eNewsletter "Interest" of their home library

- **What we need:**

- In this case, we're creating the middleman between two applications
 - One is the MailChimp API and the other is the Sierra API

- **Also provided:**

- Error Checking which is done during the hand-off

- Local Events with almost no effort workflow once initial setup is done

Obtaining API Keys

- **Step One**, you'll need to obtain a MailChimp API key
 - <https://us1.admin.mailchimp.com/account/api/>
 - Copy a key already created or click the Create A Key button
- **Step Two**, you'll need a Sierra API Key
 - Log into Sierra Admin and navigate to Sierra API Keys
 - Create a key with Patron-Specific Authentication disabled
 - Assign at least Patrons Read and Patrons Write
 - If you wish to use this key for other applications, you may wish to add any that you'd be interested in too
 - Sierra API Key should be emailed to you
 - If not, you may need to check with Innovative
- **Step Three**, with the keys on-hand, we can fill out more of the config file

Setting up MailChimp and Configuration

- **Step Three**, we'll want a new MailChimp Interest Category named Branches
 - Add a new Interest to the Branches category, one for each of our branches and one for General Information
- **Step Four**, we'll need the IDs of each Interest
 - **There's a commented PHP script named Get-Interest-ID.php which helps with this**
 - Using the API key, it first looks for the Mailing List
 - Once you have the Mailing List ID, you'll fill in the second step of the script to get the Interest Category ID
 - Once you have both of those, you'll fill in the third step of the script to get the Interest IDs we're looking for
- **Step Five**, fill in the mailchimp-config.php with the following format for each home library code
 - "branch_code" => "interest_id",
- **Step Six**, to handle General Interest
 - Make an extra row: asterisk (*) and the Interest ID of the General Information list
 - Such as: "*" => "interest_id",

Running Local Alerts

- **Step Seven**

- We'll need the PHP and Metabase question to go with it: <https://bit.ly/2020-ascpl-localized-alerts-php>
 - <https://bit.ly/2020-ascpl-localized-alerts-sql>

- **Step Eight**

- Share the question and copy the **JSON** link (if it doesn't have .json at the end, add it)

- **Step Nine**

- Paste the JSON link into the config.php file in the proper config section

- **Step Ten**

- Optionally, there are some additional options such as sending the audit log by email and PGP protecting it
 - These can require additional setup, such as installing gnupg and php-gnupg
 - By default, it stores the audit log as an unencrypted HTML file in the directory where you run the PHP file

- **Step Eleven**

- With those final preparations done, you can finally give it a try in the command prompt by using
 - `C:\path\to\php.exe "C:\path\to\index.php"`

- Additionally it seeks out typos in hostnames and can be extended to flag / filter temp emails

- 'Keep' is the recommended option until you get a feel for when to use suggested fixes

How Sierra API Helps

- Add domain to "known good" list if MX record exists, do not prompt for change
- **If no MX record detected:**
 - Auto-correct mistakes that hamper analysis (e.g. comma to period and 2 to @)
 - Run similarity checks against "known good" list
 - Auto-correct to an exact match, if the host is already in "known good"
- **If similarity check doesn't match any host exactly:**
 - Return top two matches and their similarity score, along with "other" to enter your best guess at the hostname & "keep" to skip record
- **If email was (auto-)corrected:**
 - Add user ID and corrected email address to "changed patrons" list
 - Add "before" and "after" hostname to the misspelling list, which is saved and used to silently correct that typo in the future
- **Finally:**
 - Cycle through "changed patrons" list
 - PUT patron/[id] - no brackets - with the 'emails' field populated by list (array) of corrected email address(es)**
 - (optionally Archive Statistics &) Clear "changed patrons" list once all patrons are finished

Thank You!

Questions?



