PRODUCT TRAINING

May 15 - 17, 2018 | Grow Headquarters

GROW.COM
Certified Partner Training 2018

DAY ONE

- Metric Builder Overview
- Chart Settings
- Data Transforms
- Data Blends

DAY TWO

- Data Sources
- Working with APIs
- Data Bar

DAY THREE

- Additional Features
- SQLite
- Data Bar/Exam

Certified Partner Assessment

Partner Resource Page > Assessment Instructions & Assessment Metric List

METRIC BUILDER & TRANSFORMS

DAY ONE

ETL

(Extract, Transform, and Load)

ETVis

(Extract, Transform, and Visualize)

Metric Builder

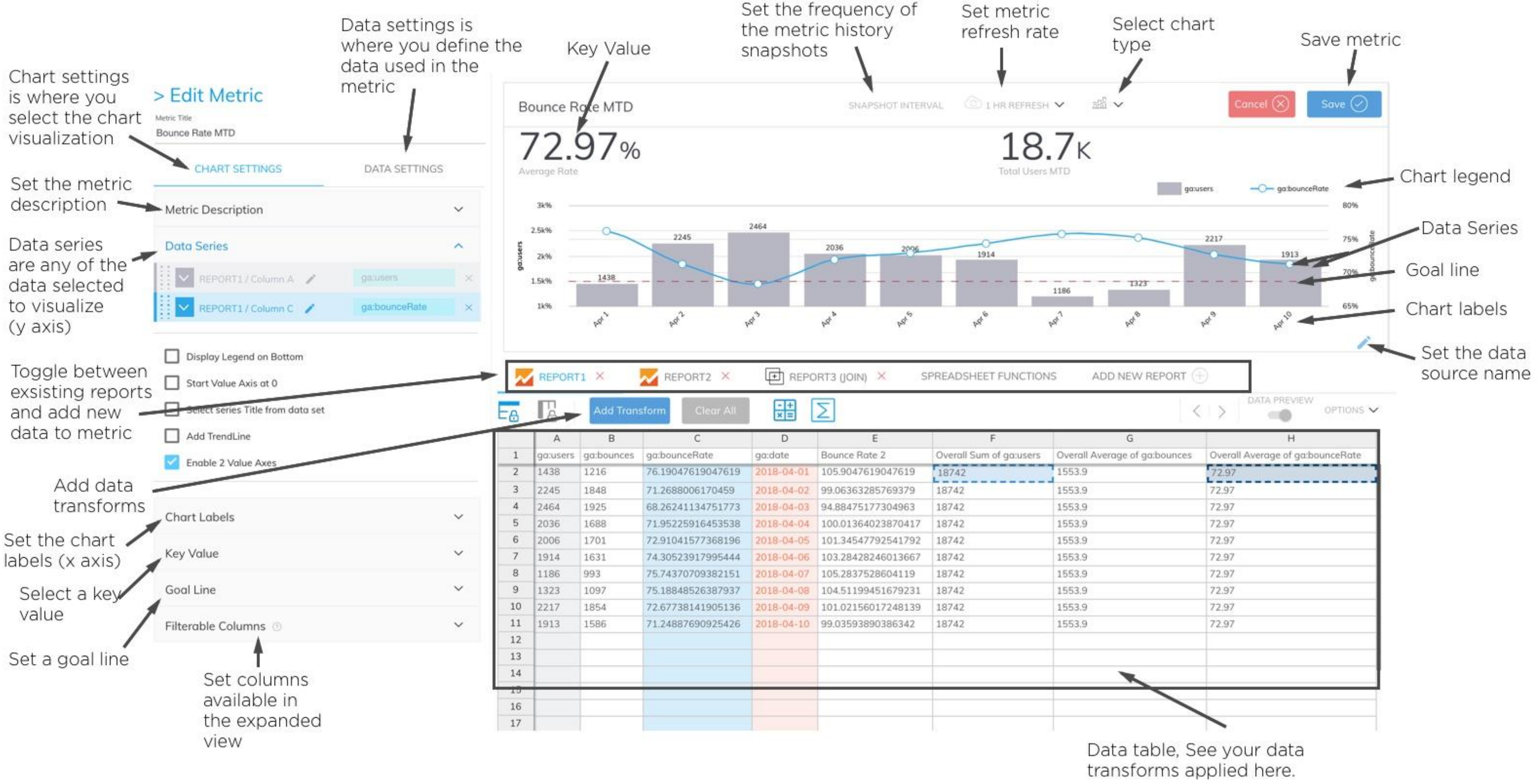
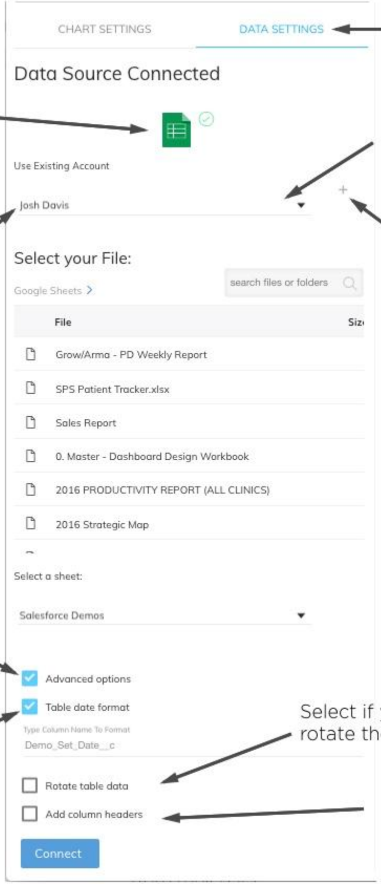


Chart & Data Settings



Data Settings is where you set the parameters for the data you bring into the metric

Data options depending on the data source. In this case, Google Sheets a file sharing platorm

Click here to switch to a different connected account

Displays the name of the data source account

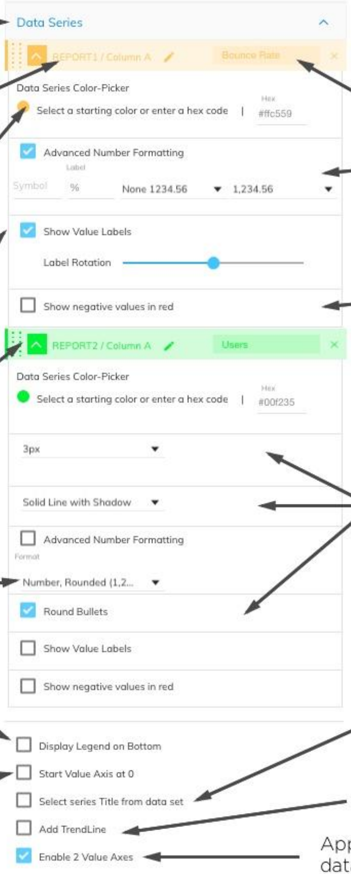
Click here if you need to add a new account to this data source

Clicking here will show you advanced options available for all data sources

Use if a date in the file needs to be reformatted

Select if you need to rotate the data table

If your data table has duplicate or blank headers this will replace all of them



Data series is the data selected in the visualization.

Data selected from Report1, Column A

Data series name, shown in the metric legend

Click here to change the color from a color palette or apply a unique hex code

If you need a different currency number or formatting, select advanced formatting

Will show the data series values on the visualization. Labels can be rotated if desired.

If your data series has negative values, you can show them in red.

This data series has different formatting options because its a line.

Change the weight of the line or apply different line styles

Default formtting options for the data series

Display the chart legend below the chart

If your data changes or shifts, then select the data series titles to come from data using this option.

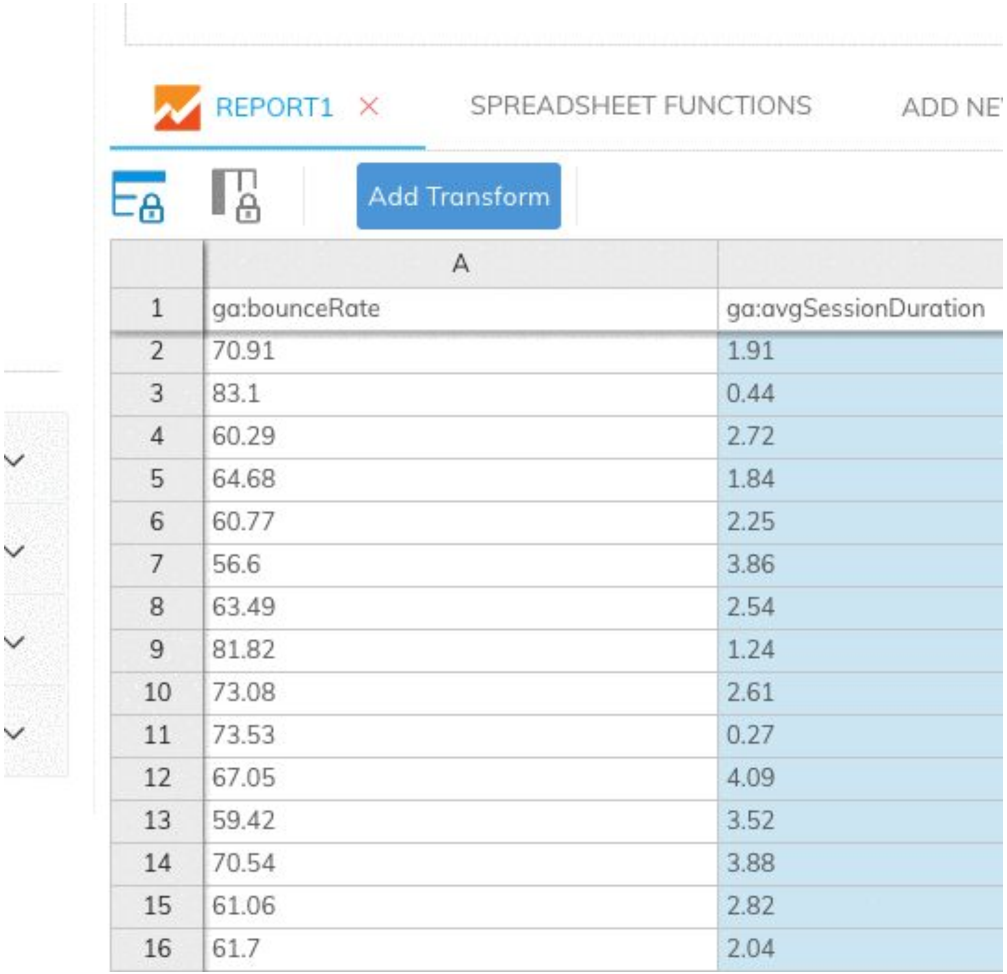
The chart axis is "best fit" so select this if you prefer axis to start at zero.

Apply a trendline to the visual.

Apply a dual axis if your data series don't have a similar scale

Data Transforms

- Built for customers who don't know (or don't want to learn) SQL
- Can be used in any order



	A	
1	ga:bounceRate	ga:avgSessionDuration
2	70.91	1.91
3	83.1	0.44
4	60.29	2.72
5	64.68	1.84
6	60.77	2.25
7	56.6	3.86
8	63.49	2.54
9	81.82	1.24
10	73.08	2.61
11	73.53	0.27
12	67.05	4.09
13	59.42	3.52
14	70.54	3.88
15	61.06	2.82
16	61.7	2.04

Order of Operations

Data Readiness Transforms:

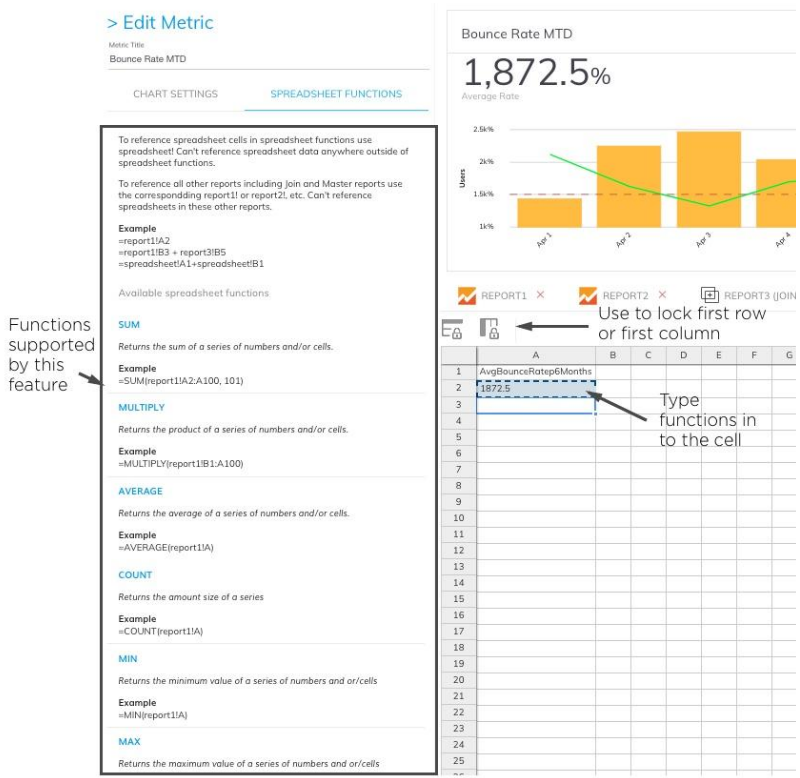
- Remove Columns
- Filter Data
- Calculated Columns
- Tagging
- Time Shifting
- SQL

Visual Prep Transforms:

- Grouping
- Pivots
- Sorting
- Comparisons
- Sum, Count, Ave, Min, Max

*These are general guidelines

Spreadsheet Functions

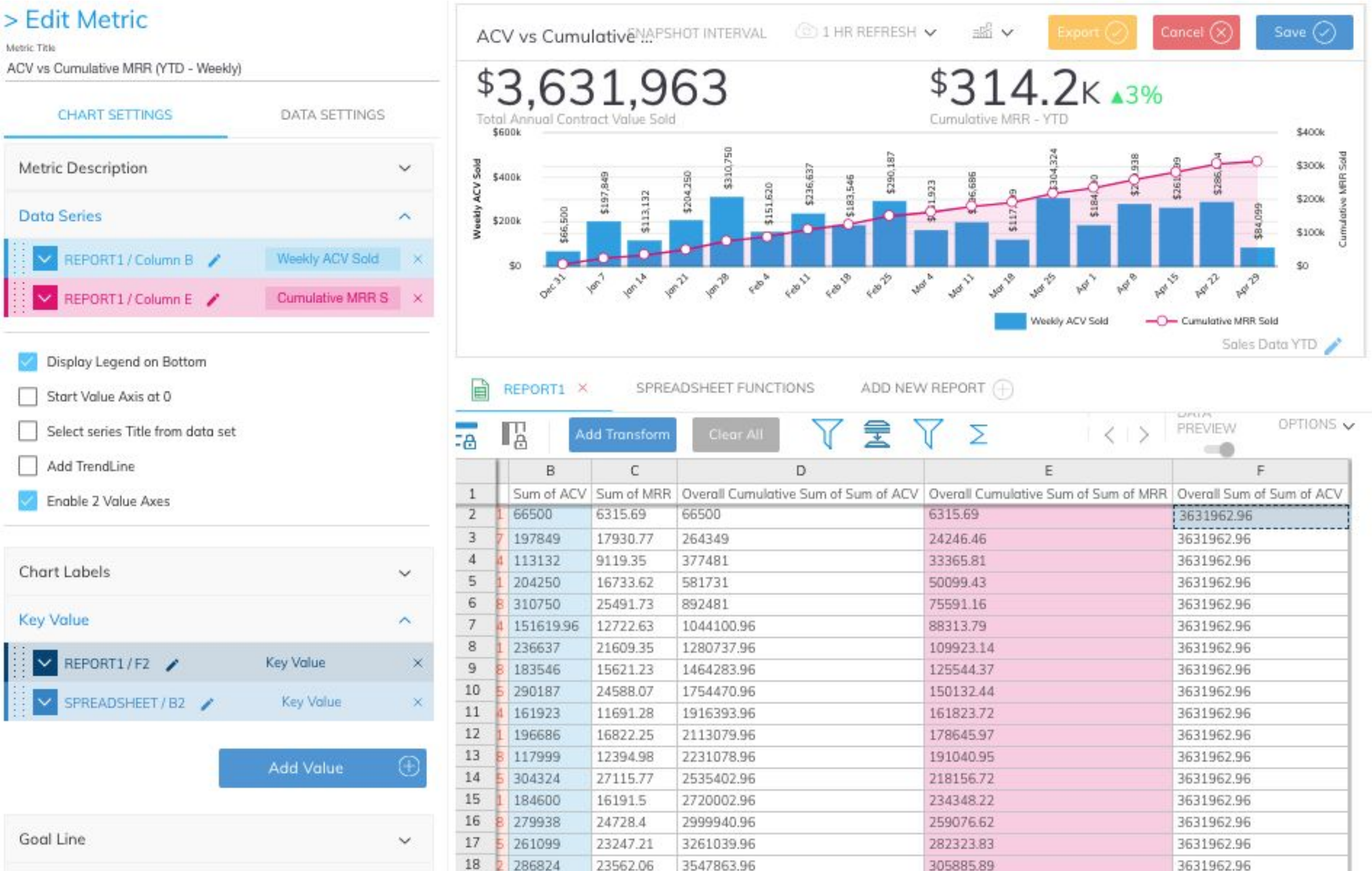


- The tool is useful, but shouldn't be overused.
- Most commonly used to calculate a key value or comparison value to use in the metric
- Spreadsheet function is not dynamic and formulas won't apply if a column of data adds more rows
- Not as robust as excel, only available functions found in the list
- Encourage users to use the Data Transform tools as much as possible. Those tools are more powerful and dynamic.

Practical: Data Transforms - Metric #1

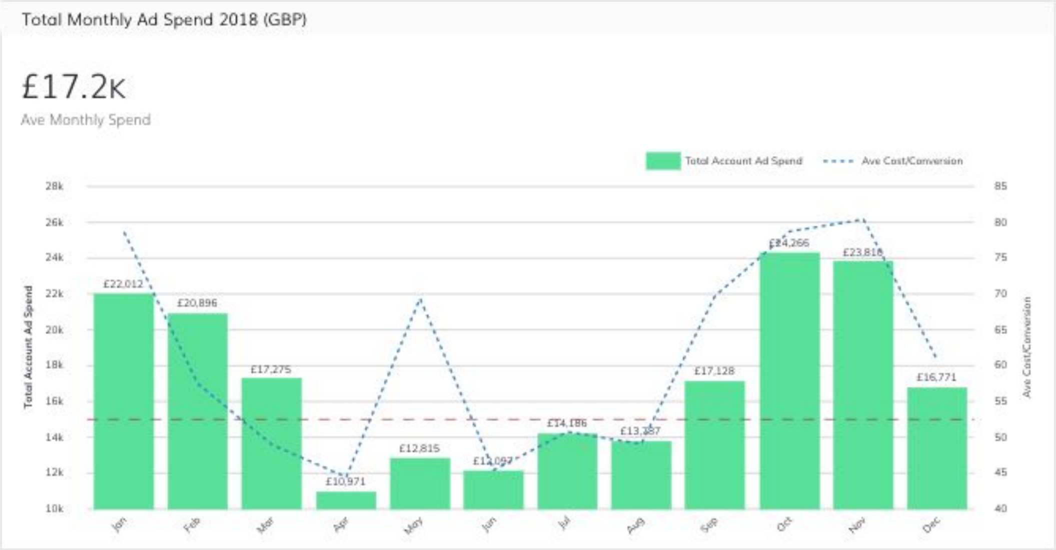
- Report: Sales Data (Salesforce)
- Data from website leads only
- Weekly ACV
- Cumulative MRR
- Key Value (spreadsheet functions)
- Match visuals and formatting

Metric #1 - Hint



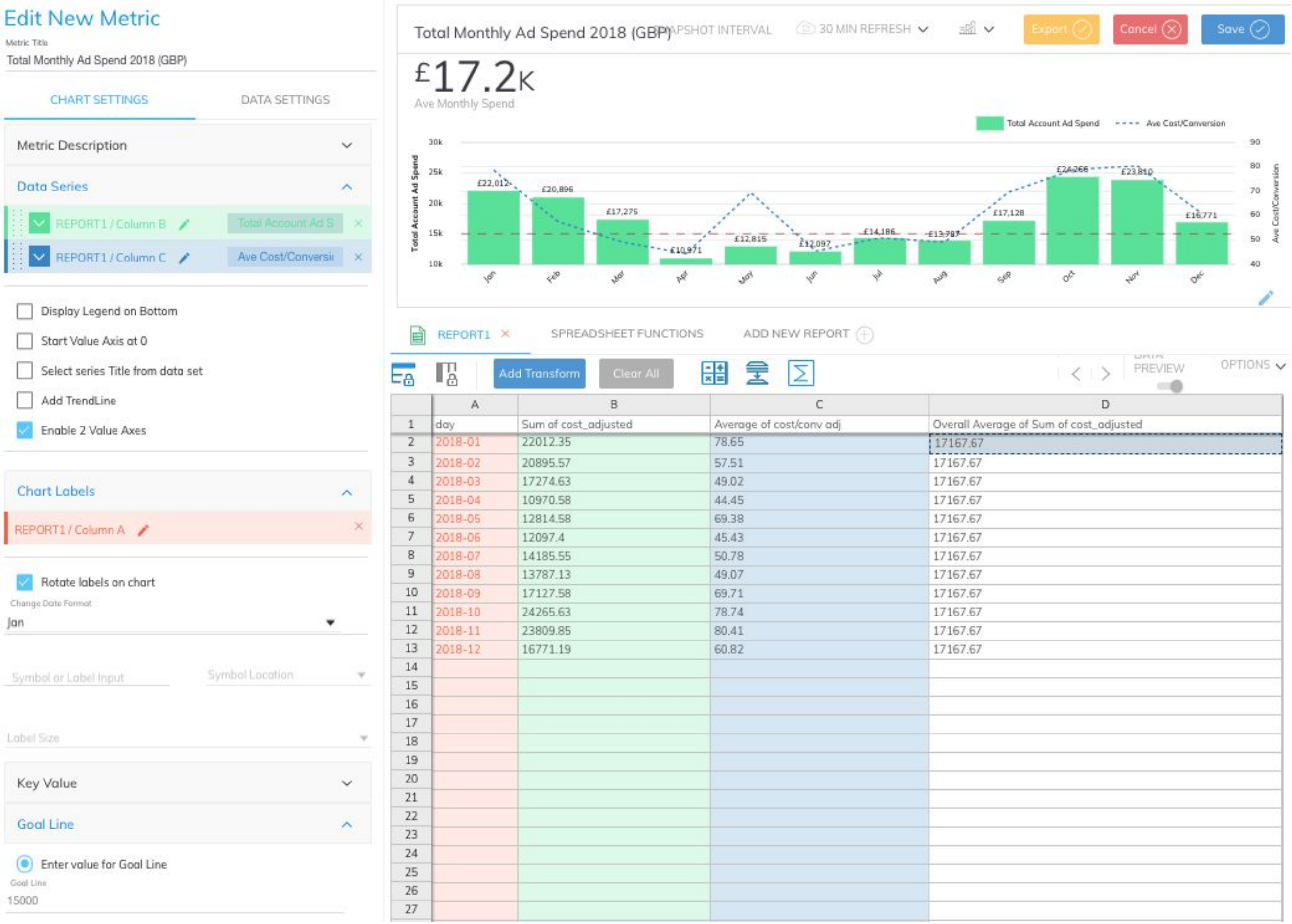
	B	C	D	E	F
1	Sum of ACV	Sum of MRR	Overall Cumulative Sum of Sum of ACV	Overall Cumulative Sum of Sum of MRR	Overall Sum of Sum of ACV
2	66500	6315.69	66500	6315.69	3631962.96
3	197849	17930.77	264349	24246.46	3631962.96
4	113132	9119.35	377481	33365.81	3631962.96
5	204250	16733.62	581731	50099.43	3631962.96
6	310750	25491.73	892481	75591.16	3631962.96
7	151619.96	12722.63	1044100.96	88313.79	3631962.96
8	236637	21609.35	1280737.96	109923.14	3631962.96
9	183546	15621.23	1464283.96	125544.37	3631962.96
10	290187	24588.07	1754470.96	150132.44	3631962.96
11	161923	11691.28	1916393.96	161823.72	3631962.96
12	196686	16822.25	2113079.96	178645.97	3631962.96
13	117999	12394.98	2231078.96	191040.95	3631962.96
14	304324	27115.77	2535402.96	218156.72	3631962.96
15	184600	16191.5	2720002.96	234348.22	3631962.96
16	279938	24728.4	2999940.96	259076.62	3631962.96
17	261099	23247.21	3261039.96	282323.83	3631962.96
18	286824	23562.06	3547863.96	305885.89	3631962.96

Practical: Data Transforms - Metric #2



- Report: Account Ad Performance (Adwords)
- Spend vs Cost/Conversion
- Goal Line
- Currency in GBP (£)
- Monthly Snapshot (London)
- 30 min data refresh

Metric #2 - Hint



	A	B	C	D
1	day	Sum of cost_adjusted	Average of cost/conv adj	Overall Average of Sum of cost_adjusted
2	2018-01	22012.35	78.65	17167.67
3	2018-02	20895.57	57.51	17167.67
4	2018-03	17274.63	49.02	17167.67
5	2018-04	10970.58	44.45	17167.67
6	2018-05	12814.58	69.38	17167.67
7	2018-06	12097.4	45.43	17167.67
8	2018-07	14185.55	50.78	17167.67
9	2018-08	13787.13	49.07	17167.67
10	2018-09	17127.58	69.71	17167.67
11	2018-10	24265.63	78.74	17167.67
12	2018-11	23809.85	80.41	17167.67
13	2018-12	16771.19	60.82	17167.67
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				

Practical: Data Transforms - Metric #3

- Report: Sales Data (Salesforce)
- MRR Sales by Sales Team
- Tagging - Create three teams
- Pivot
- Select data series titles from data
- Show value labels

Metric #3 - Hint

Edit New Metric

Metric Title
MRR Sold by Sales Team - YTD

CHART SETTINGS | DATA SETTINGS

Metric Description

Data Series

- REPORT1 / Column B — Sales Team 3
- REPORT1 / Column C — Sales Team 1
- REPORT1 / Column D — Sales Team 2

Add Data

- [x] Show Legend When Metric is Expanded
- [ ] Display Legend on Bottom
- [ ] Start Value Axis at 0
- [x] Select series Title from data set

Title selection:
REPORT1 / B1 to D1

Clear title selection

- [ ] Add TrendLine
- [x] Display Totals

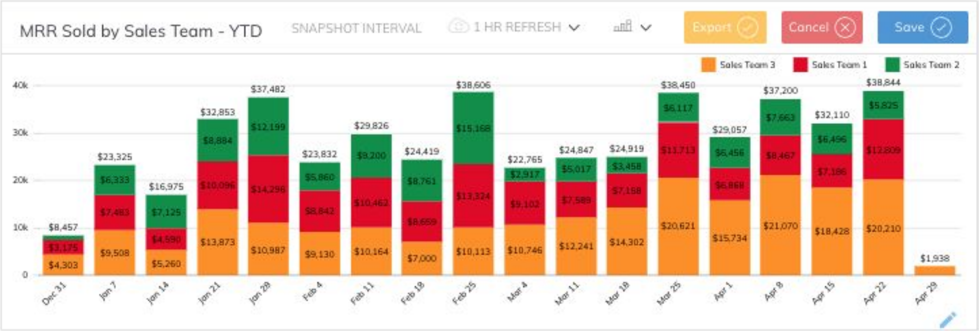
Format
Currency, Rounded ($1,235)

Chart Labels

- REPORT1 / Column A

- [x] Rotate labels on chart

Change Date Format
Jan 1



REPORT1 | SPREADSHEET FUNCTIONS | ADD NEW REPORT

Add Transform | Clear All | DATA PREVIEW | OPTIONS

	A	B	C	D
1	CloseDate	Sales Team 3	Sales Team 1	Sales Team 2
2	2017-12-31	4303.18	3175.01	979.1700000000001
3	2018-01-07	9508.03	7483.35	6333.35
4	2018-01-14	5260.280000000001	4590.18	7125.02
5	2018-01-21	13873.4	10095.810000000001	8884.070000000002
6	2018-01-28	10987.1	14295.900000000001	12199.27
7	2018-02-04	9130.45	8841.69	5860.1
8	2018-02-11	10164.480000000001	10461.53	9200.04
9	2018-02-18	7000.040000000001	8658.69	8760.54
10	2018-02-25	10113.45	13324.03	15168.44
11	2018-03-04	10745.77	9102.34	2916.6800000000003
12	2018-03-11	12241.3	7589.290000000001	5016.6900000000005
13	2018-03-18	14302.230000000001	7158.370000000001	3458.3500000000004
14	2018-03-25	20620.689999999995	11712.570000000002	6116.68
15	2018-04-01	15733.570000000002	6867.64	6455.89
16	2018-04-08	21070.479999999996	8466.7	7662.52
17	2018-04-15	18428.449999999997	7185.870000000001	6495.860000000001
18	2018-04-22	20210.069999999992	12808.59	5825.030000000001
19	2018-04-29	1937.5100000000002		
20				
21				
22				
23				
24				
25				

Data Blends: Things to Note

Both data sets need a common value to join on: Dates (common), Unique ID

Left Joins: Bring data from the second report to "join" onto the first report (reports ordered L to R)

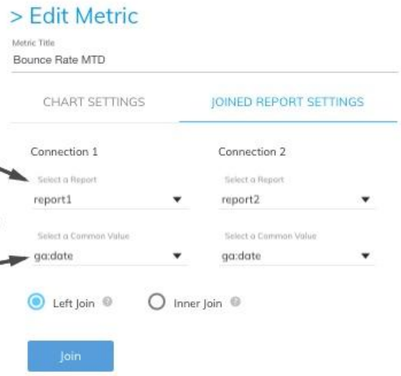
Inner Join: Data only found in both reports (will lose any data where the common value is not found in both reports) Ex: Venn Diagram

Clean up datasets prior to joining. Ex: Apply grouping transform, filter out unnecessary data, remove irrelevant columns.

Data Blends: Joined Report

Select the reports to join

Specify the common value



If the two reports have column headers with the same name, then Grow will specify report1 or report2 in the joined report

	A	B	C	D	E	F	G	H
1	ga:users	report1: ga:bounces	ga:bounceRate	ga:date	Bounce Rate 2	Overall Sum of ga:users	Overall Average of ga:bounces	report2: ga:bounce
2	[illegible]	1216	76.19047619047619	2018-04-01	105.9047619047619	18725	1552.4	1216
3	2245	1848	71.2688006170459	2018-04-02	99.06363285769379	18725	1552.4	1848
4	2464	1925	68.26241134751773	2018-04-03	94.88475177304963	18725	1552.4	1925
5	2036	1688	71.95225916453538	2018-04-04	100.01364023870417	18725	1552.4	1688
6	2006	1701	72.91041577368196	2018-04-05	101.34547792541792	18725	1552.4	1701
7	1914	1631	74.30523917995444	2018-04-06	103.28428246013667	18725	1552.4	1631
8	1186	993	75.74370709382151	2018-04-07	105.2837528604119	18725	1552.4	993
9	1323	1097	75.18848526387937	2018-04-08	104.51199451679231	18725	1552.4	1097
10	2217	1854	72.67738141905136	2018-04-09	101.02156017248139	18725	1552.4	1854
11	1896	1571	71.15036231884058	2018-04-10	98.89900362318839	18725	1552.4	1577
12								
13								
14								
15								
16								

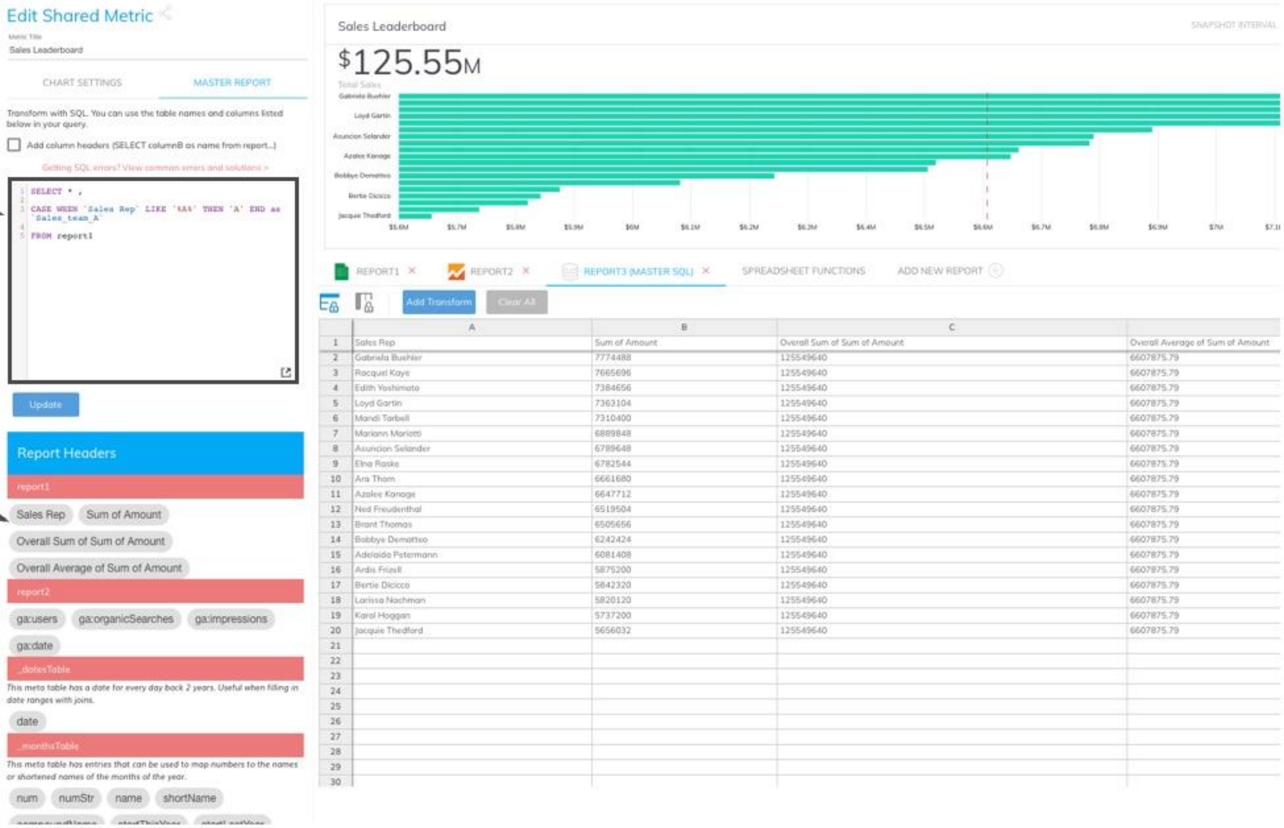
Common value between the two reports

Data Blends: Master Report

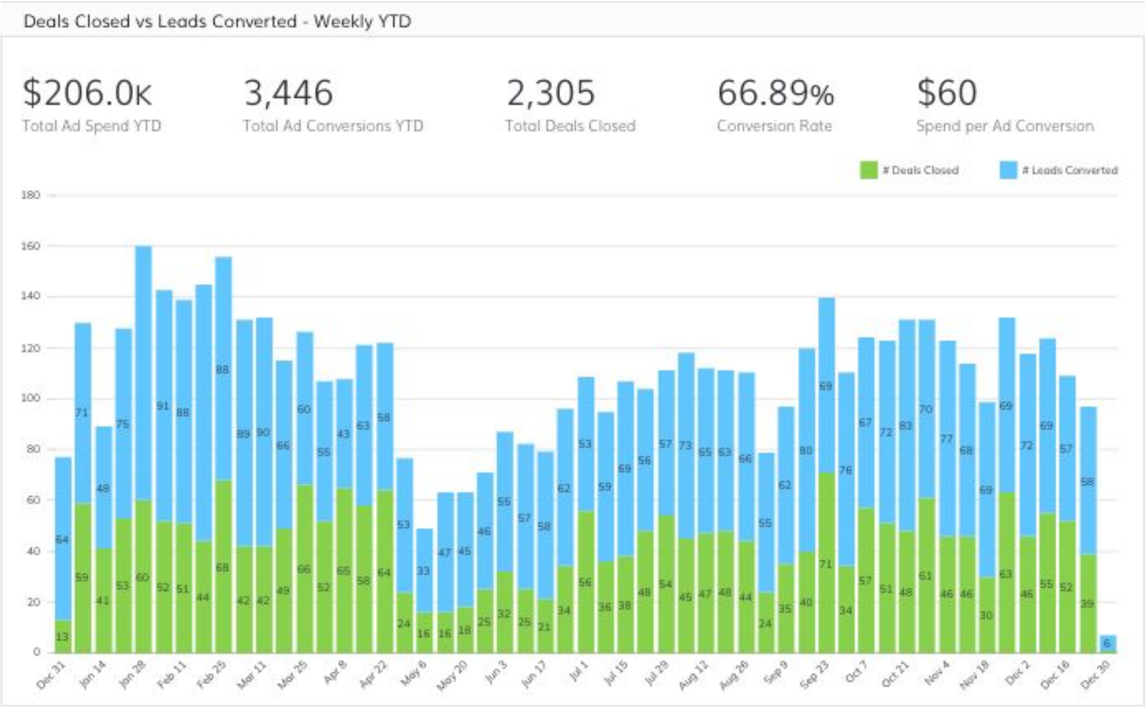
Query box to write the advanced join using SQLite

Report and column headers to reference in your query

Additional tables to reference as needed

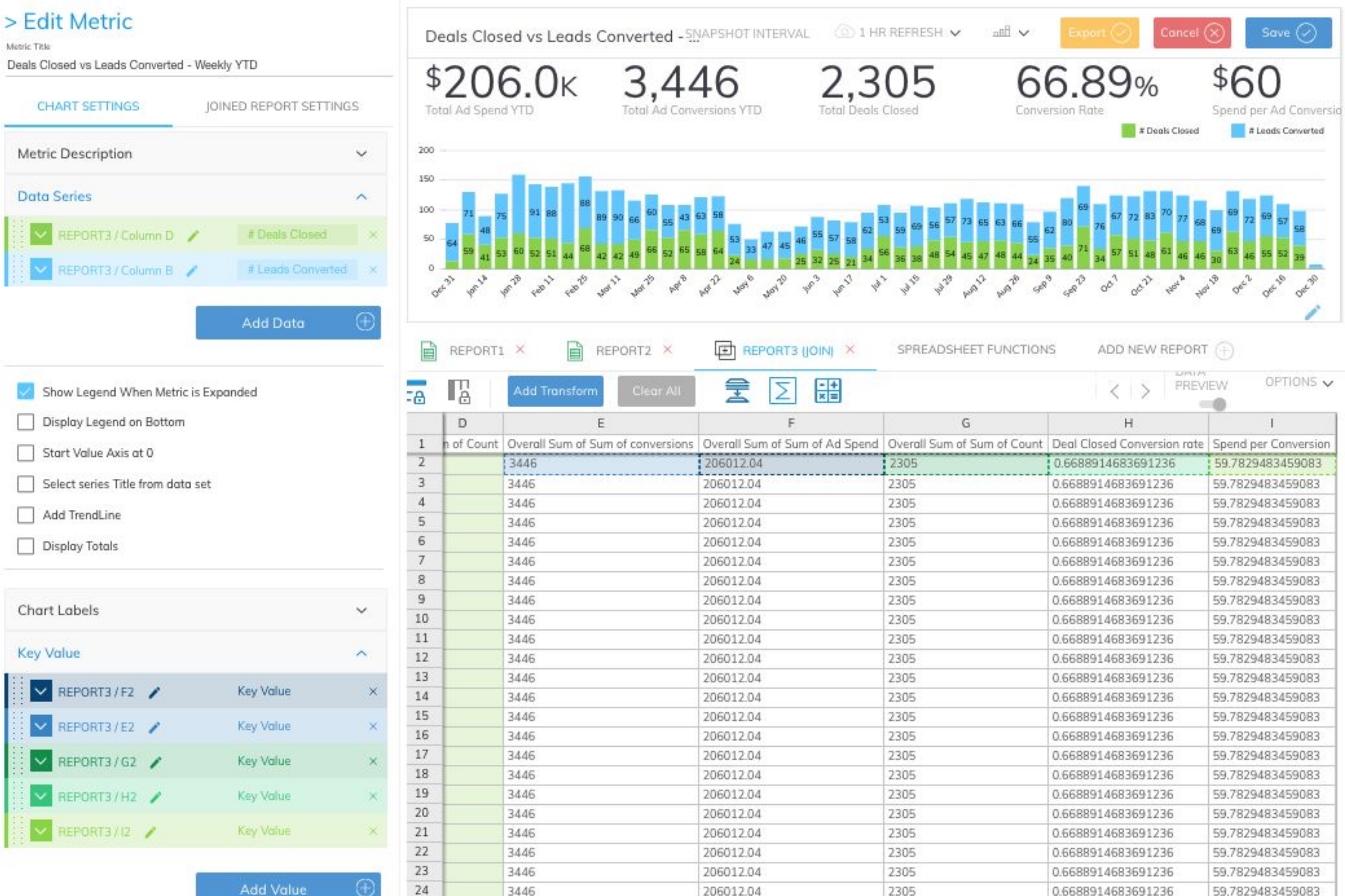


Practical: Data Blends - Metric #4



- Report: Sales Data (Salesforce), Account Ad Performance (Adwords)
- Joined Report
- Deals Closed/Leads Converted
- Ad Spend Data:
    - Remove irrelevant columns
    - Rename cost adj to "Ad Spend"
- Hint: Group sales data prior to join
- Calculated Columns for key value calculations

Metric #4 - Hint



	D	E	F	G	H	I
1	n of Count	Overall Sum of Sum of conversions	Overall Sum of Sum of Ad Spend	Overall Sum of Sum of Count	Deal Closed Conversion rate	Spend per Conversion
2		3446	206012.04	2305	0.6688914683691236	59.7829483459083
3		3446	206012.04	2305	0.6688914683691236	59.7829483459083
4		3446	206012.04	2305	0.6688914683691236	59.7829483459083
5		3446	206012.04	2305	0.6688914683691236	59.7829483459083
6		3446	206012.04	2305	0.6688914683691236	59.7829483459083
7		3446	206012.04	2305	0.6688914683691236	59.7829483459083
8		3446	206012.04	2305	0.6688914683691236	59.7829483459083
9		3446	206012.04	2305	0.6688914683691236	59.7829483459083
10		3446	206012.04	2305	0.6688914683691236	59.7829483459083
11		3446	206012.04	2305	0.6688914683691236	59.7829483459083
12		3446	206012.04	2305	0.6688914683691236	59.7829483459083
13		3446	206012.04	2305	0.6688914683691236	59.7829483459083
14		3446	206012.04	2305	0.6688914683691236	59.7829483459083
15		3446	206012.04	2305	0.6688914683691236	59.7829483459083
16		3446	206012.04	2305	0.6688914683691236	59.7829483459083
17		3446	206012.04	2305	0.6688914683691236	59.7829483459083
18		3446	206012.04	2305	0.6688914683691236	59.7829483459083
19		3446	206012.04	2305	0.6688914683691236	59.7829483459083
20		3446	206012.04	2305	0.6688914683691236	59.7829483459083
21		3446	206012.04	2305	0.6688914683691236	59.7829483459083
22		3446	206012.04	2305	0.6688914683691236	59.7829483459083
23		3446	206012.04	2305	0.6688914683691236	59.7829483459083
24		3446	206012.04	2305	0.6688914683691236	59.7829483459083

DATA INTEGRATIONS

DAY TWO

Data Connections

- Data is complex. Especially in SMB. Sometimes data doesn't exist, isn't clean or consistent.
- Working with APIs we're at the mercy of their rate limits, structure, and public data
- Grow has around 150 native integrations to external platforms
  - Grow website integration page https://www.grow.com/integrations/
  - Most Popular Integration Info https://www.grow.com/integrations/hubspot-marketing-reporting-tool/
  - Help Center Overview docs in the help center. http://help.grow.com/connecting-your-data-crm/hubspot/hubspot-overview

File Sharing Platforms

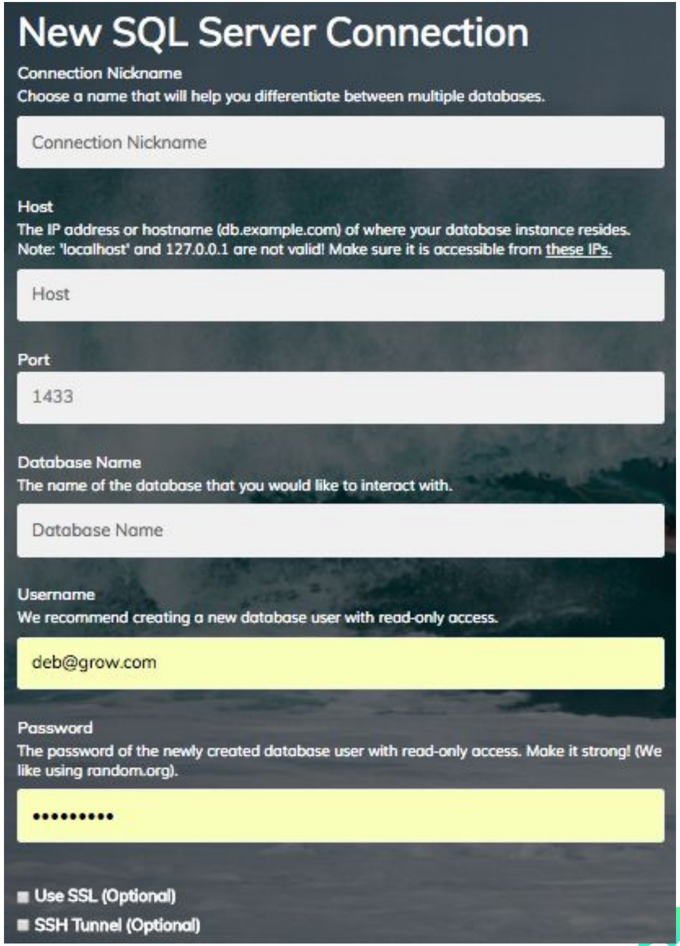
- Used when customers rely on manual or automated exports from a data source we don't connect to
- Used for internal files not stored in a tool or platform
- Native Connections
  - Amazon S3
  - Box
  - Dropbox
  - Egnyte
  - FTP/SFTP File Access
  - Google Sheets
  - OneDrive
  - OneDrive Business

File Sharing Platforms - Pro Tips

- **One sheet per dataset:** For Excel-based files, you can only select one sheet at a time in Grow. If you have an Excel doc with multiple sheets, you will need to pull in three reports into the metric, one for each sheet.
- **Unique column headers:** If there isn't a unique column header in your data set, the data won't be recognized in Grow. Ideally this is corrected on the original file, but if that isn't possible use Grow to replace the column headers as ColumnA, ColumnB, ColumnC, etc.
- **Correct data formatting:** Generally a tabular format, column headers in the first row, now empty rows or columns, dates in a YYYY-MM-DD format, and currencies as just number values without any symbols
- **File size limits:** Files must be smaller than 15 MB. We can make exceptions for files up to 50 MB. If your customer requires this on their account, , chat in to make the request.
- **File type and format:** Grow supports XLS, XLSX, XLSM, and CSV file types..
- **Syncing Files:** The files you want to use in Grow metrics must be in synced folders (customer side). If they aren't, metrics won't automatically reflect changes in the data set.

Databases

- Clients should provide someone who knows the database schema and can query the data
- To connect will need to create a “Read Only” user on their database with admin level access and white list Grow’s IP addresses.
- The following is the list of databases that connect with Grow:
  - Amazon Redshift
  - HP Vertica
  - MongoDB
  - MySQL
  - NuoDB
  - Oracle
  - PostgreSQL
  - SQL Server



APIs - What to Know

- Not all APIs are created equal.
  - Some have built in business logic, some don't.
  - Some contain useful, relevant data, others may be missing important endpoints.
- Platform specific analytics dashboard data may not match export/API data.
- APIs have different versions, each version may require a unique built out as endpoints and naming conventions change.
- To research an API, Google "[Platform name] API documentation"

Working with APIs - Missing Data

1. Check any related help articles, or do a deep dive into the client's data in Grow. It's possible that the data they're seeking is hidden in the API somewhere, as a different column header or report.
2. Google the Platform's API documentation to see if that data field is available in the API. Occasionally, Grow is using an API version that doesn't include that data.
3. If API documentation shows the data to be publicly available, report the issue to Grow. We'll vet out the possibility of adding the data to the existing integration.
4. If the data does not appear to be accessible from the API, you can ask Grow to take a second look. (Make sure to set the right expectation with the customer so they understand it may not be possible to access.)
5. If Grow has confirmed that you cannot access that data point, then the customer will have to rely on accessing data through a file sharing platform and exports.

Working with APIs - Rate Limits

What is an API rate limit? A limit on how many calls can be made per second (or minute, or other short time period), to access data.

Metric Refresh Rate: Make sure the metric refresh rate is compatible with the data source rate limits. Generally defaults to 1 hr.

Account Level/Platform Package: Some platforms increase rate limits based on your account level with them.

API Documentation: Check our help articles for known rate limit issues. You can also visit that particular API's documentation to read through their rate limits.

MARKETING TOOLS

Google Analytics

Select the account you want to pull data.

Add second GA instance

Select which sites to pull data from. Depending on the metric you may bring in data accross multiple sites.

We recommend using the newer GA Version, Verson 4.

Select the metrics to view. Can select up to 10 different metrics.

Date Picker with various options as well as a custom date range

Select your dimensions. The GA API doesn't allow some dimensions to work together.

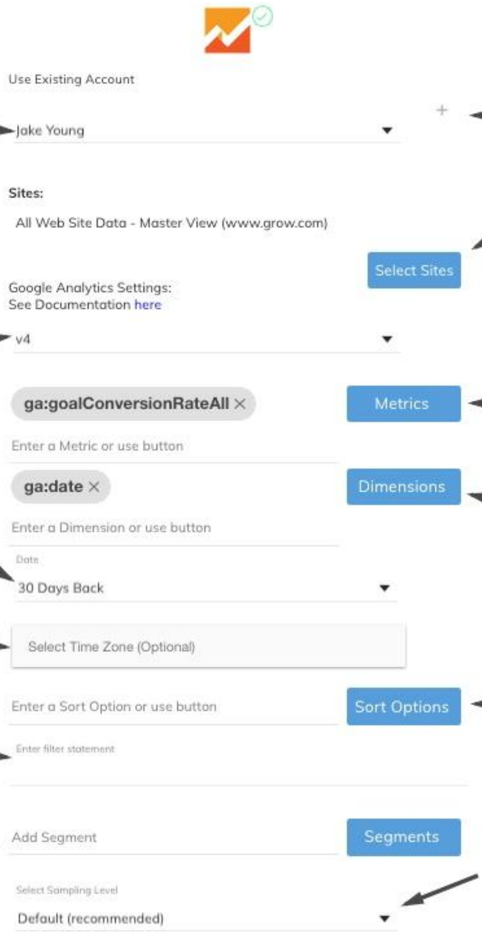
Select the timezone the account is in. This will help to align data.

Apply a sort to the data before you pull it into Grow (optional).

Apply a filter to the data prior to pulling it into Grow (optional).

View data only for a selected segment (optional).

Apply the level of data sampling. More sampling is faster. Less sampling is slower. GA recomends the default range.



GA Overview

Data Source UI

- Top down order of operations
- Many fields are optional
- Required fields have an asterisk (*) or are accounts, endpoints and date range

GA - Things to Know

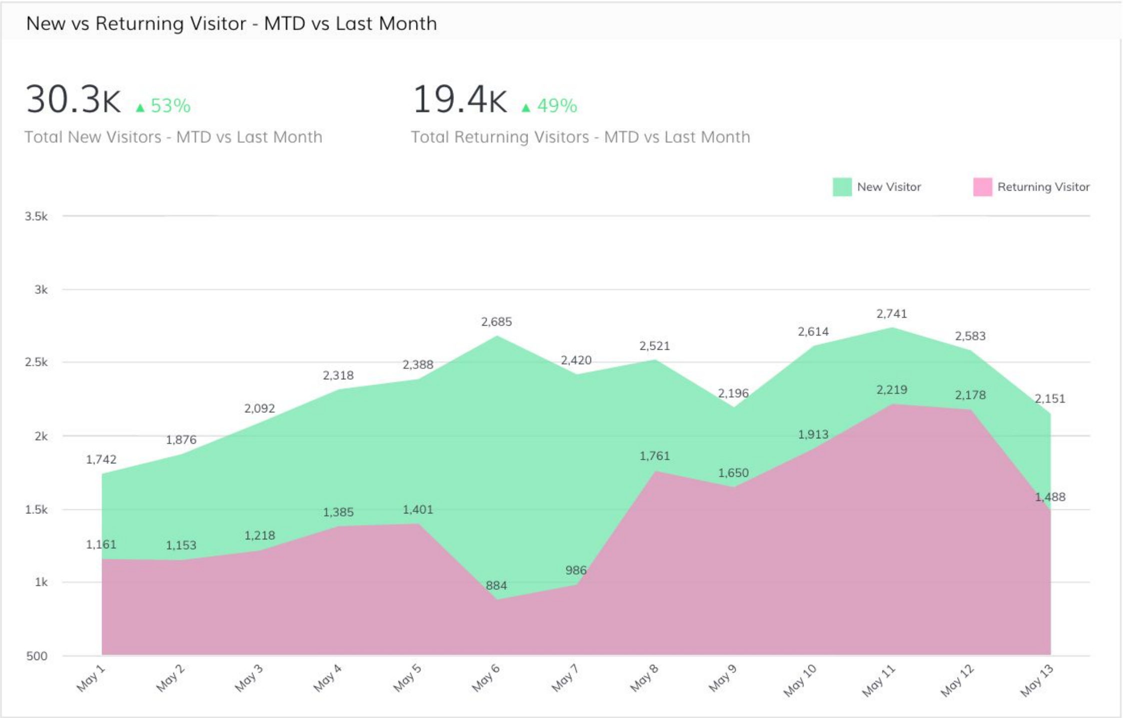
Metric and Dimension Limits: 8 metrics at a time. 3 dimensions at a time.

Dimension and Metric Compatibility: Some metrics and dimensions won't work together and will display an error in Grow when used jointly.

Data Sampling: To speed up data results, GA will select a sample data set of your data and then provide insight based on that sampled group. GA will tell you when they're sampling by saying "This report is based on 247,101 sessions (94.41% of sessions)." In Grow, you can specify the level of sampling. More sampling is faster, less sampling is slower. Grow will default to GA's recommended amount of sampling.

Custom metrics and dimensions: Occasionally, GA has metrics or dimensions with xx in them. For example: "ga:goalXXconversion". In this case, you replace the xx with the number of goal you have in your GA account. For Goal 6, the metric would read "ga:goal6conversion".

Practical: Google Analytics Metric



- Report: Marketing Site Analytics (GA)
- Compare total daily sessions by visitor type
- Key values compared to last month, same day

Date Interpolator

- For APIs with a date selection option
- Select the Custom Date Range

Template:

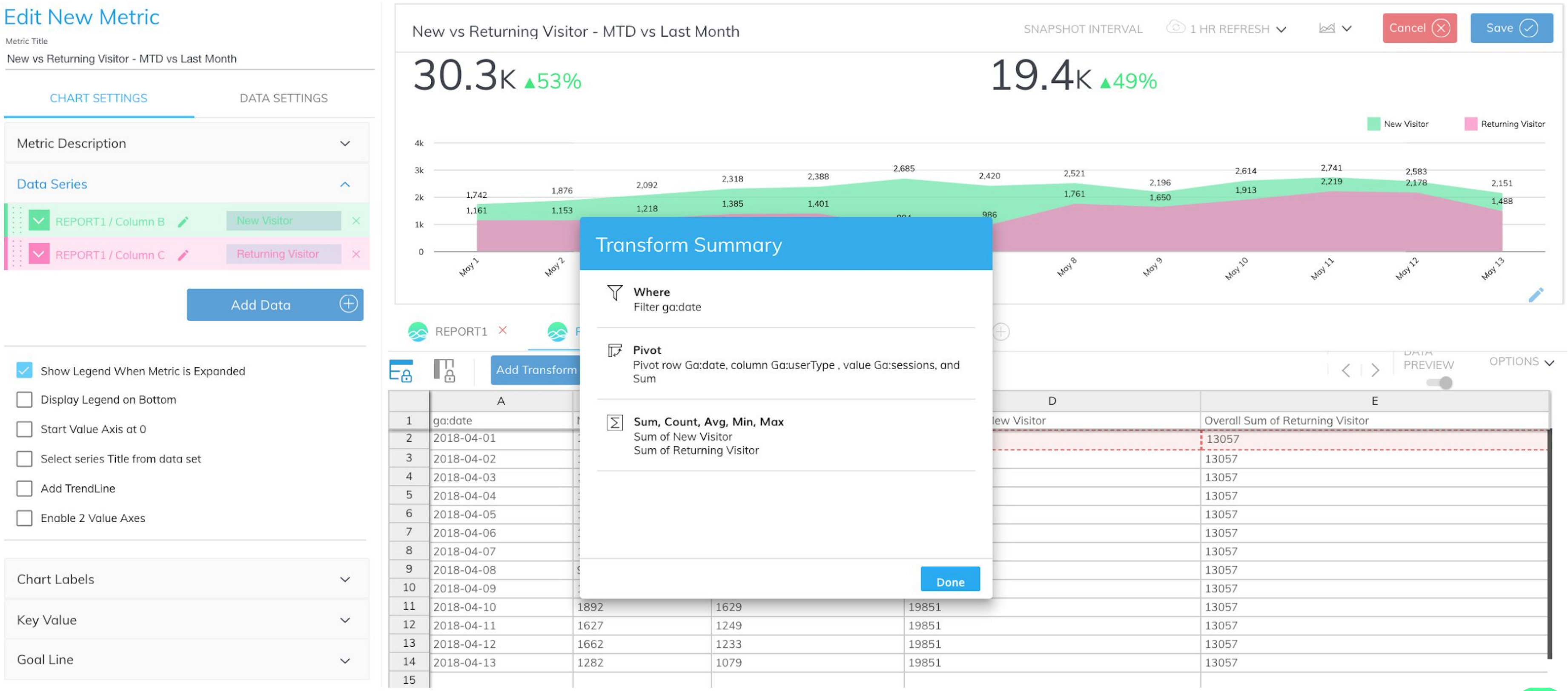
{{date('start of week','YYYY-MM-DD')}}

Example:

Start of last month: {{date('-1months','start of month','YYYY-MM-DD')}}
End of last month: {{date('start of month','-1days','YYYY-MM-DD')}}

[Date Interpolator Overview]

GA Metric - Hint

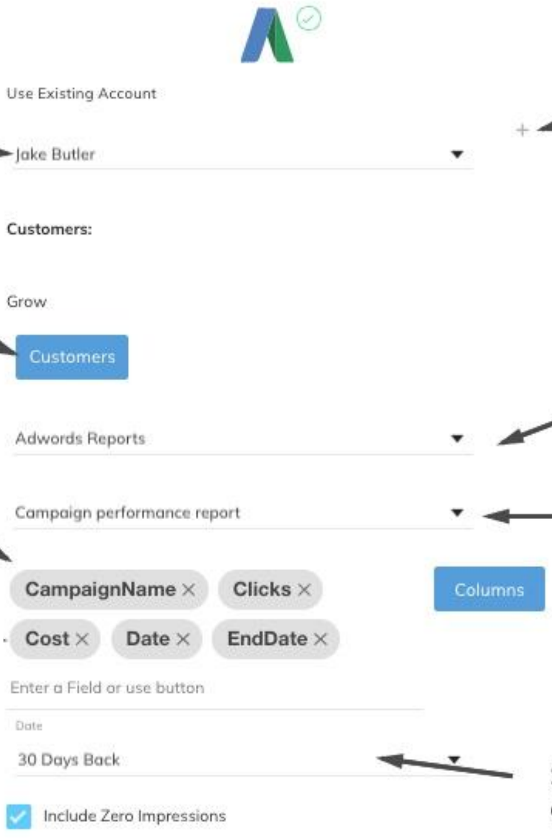


Google Adwords

Select the account authorization to use

Add second AdWords instance

Select the customer(s) or accounts you want to use



Select if you want to use AWQL or the AdWords reports

Date Picker with various options as well as a custom date range

Select which report/ endpoint to use

Select which columns you want to view from the report you've selected

Select the amount of data to pull in

Include dates where there is no recorded data

[AdWords Overview](#)

Google Adwords

Reports or AWQL: The Adwords API allows you to use their report endpoints to select relevant columns of data or use AWQL to pull specific data.

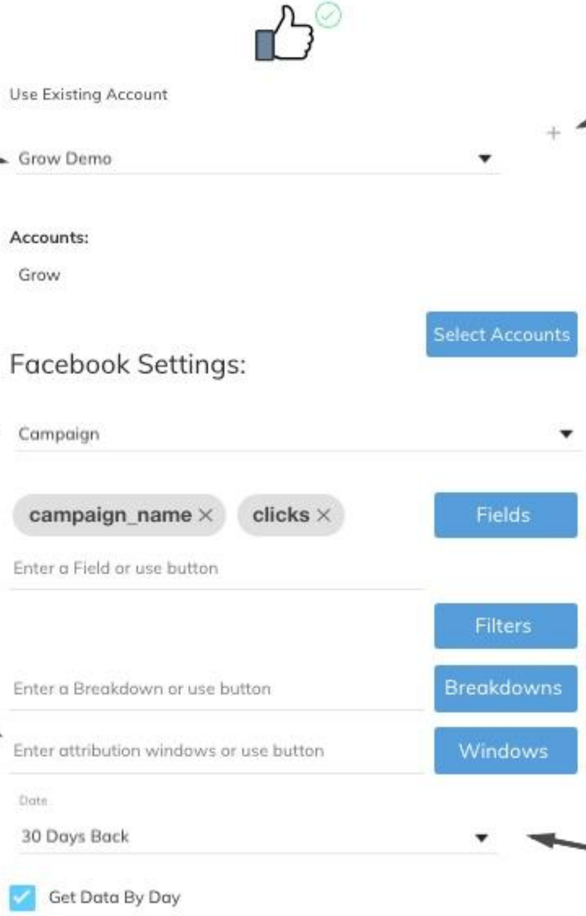
Using AWQL: The AdWords API is robust, but very particular with what data works together. If using AWQL, make sure to follow their syntax exactly to get the query to work.

Cost or money data: In Adwords, this is set up as "micros" or one million is equivalent to one unit. For any cost data, you'll need to use Grow's transform tools to divide by 1000000 to get the amount in the local currency. I.e. 23443303/1000000 = 23.443303

"Error: Invalid field selected": Adwords is very particular with what columns and segments work together. If you see this error, it means that the data you're selecting is not compatible. Refer to their documentation to verify which columns work together.

"Include Zero Impressions": Some reports will return days where there are no clicks, spend, etc. If you select "Include Zero Impressions" then the dataset will include any date even if there are zero impressions, clicks, spend, etc.

Facebook Ads



Select the account authorization to use

Add second Facebook Ads Instance

Select which account(s) you want to use

Select which report level you want to use: Account, Campaign, Ad Set, Ad

Select which fields to access from the selected report level (similar to a metric)

Apply a filter on a given field

Apply a given attribution window

Apply a breakdown (similar to dimensions)

Breakdown the data by day instead of aggregated

Select the date range

[Facebook Ads Overview]

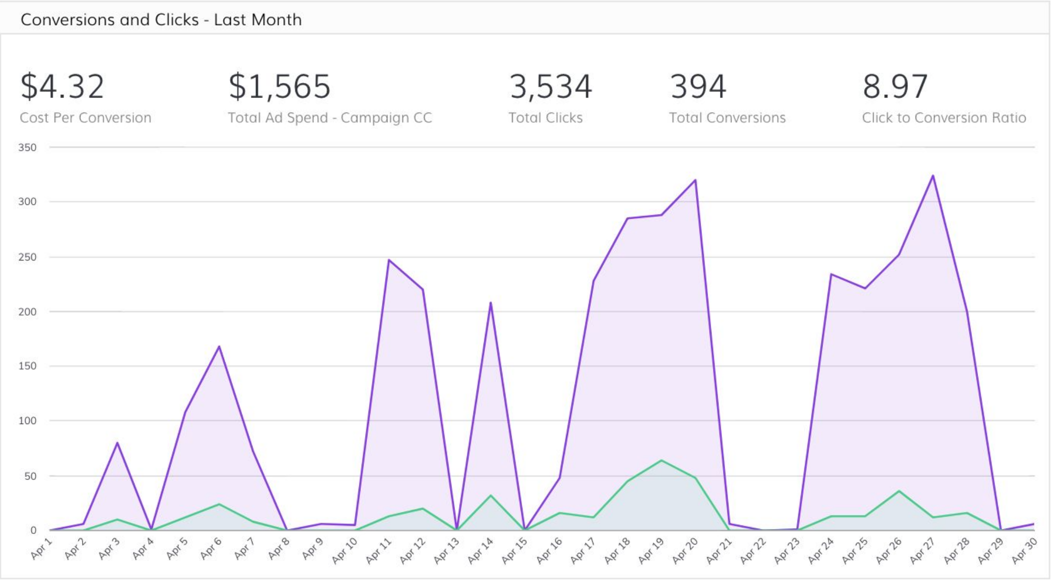
Facebook Ads - Things to Know

Reporting Levels Hierarchy: Facebook ads allows you to pull in data at different reporting levels, these are Account, Campaign, Ad Set, and Ad. Some fields will not appear at certain levels.

Possible Field Conflicts: Only fields with a red asterisk are required when you set your Facebook Ads data parameters. There are many optional fields and some of them are incompatible with others.

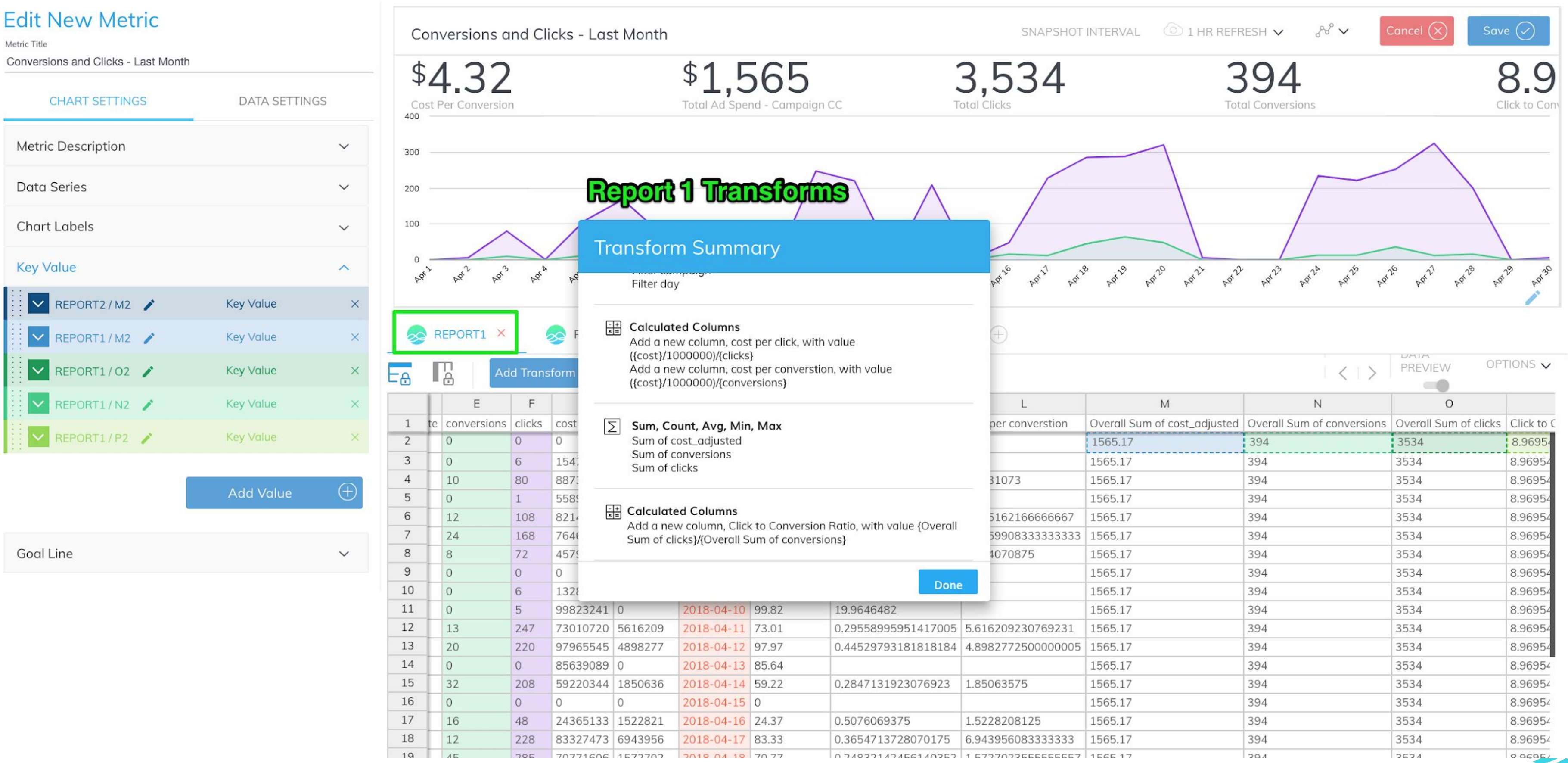
Aggregated Data vs Data by Day: If you don't specify to get the data by day, you will get the aggregated data for the time frame selected. Select "get data by day" to break down the data into individual days instead of aggregated.

Practical: Google Adwords Metric

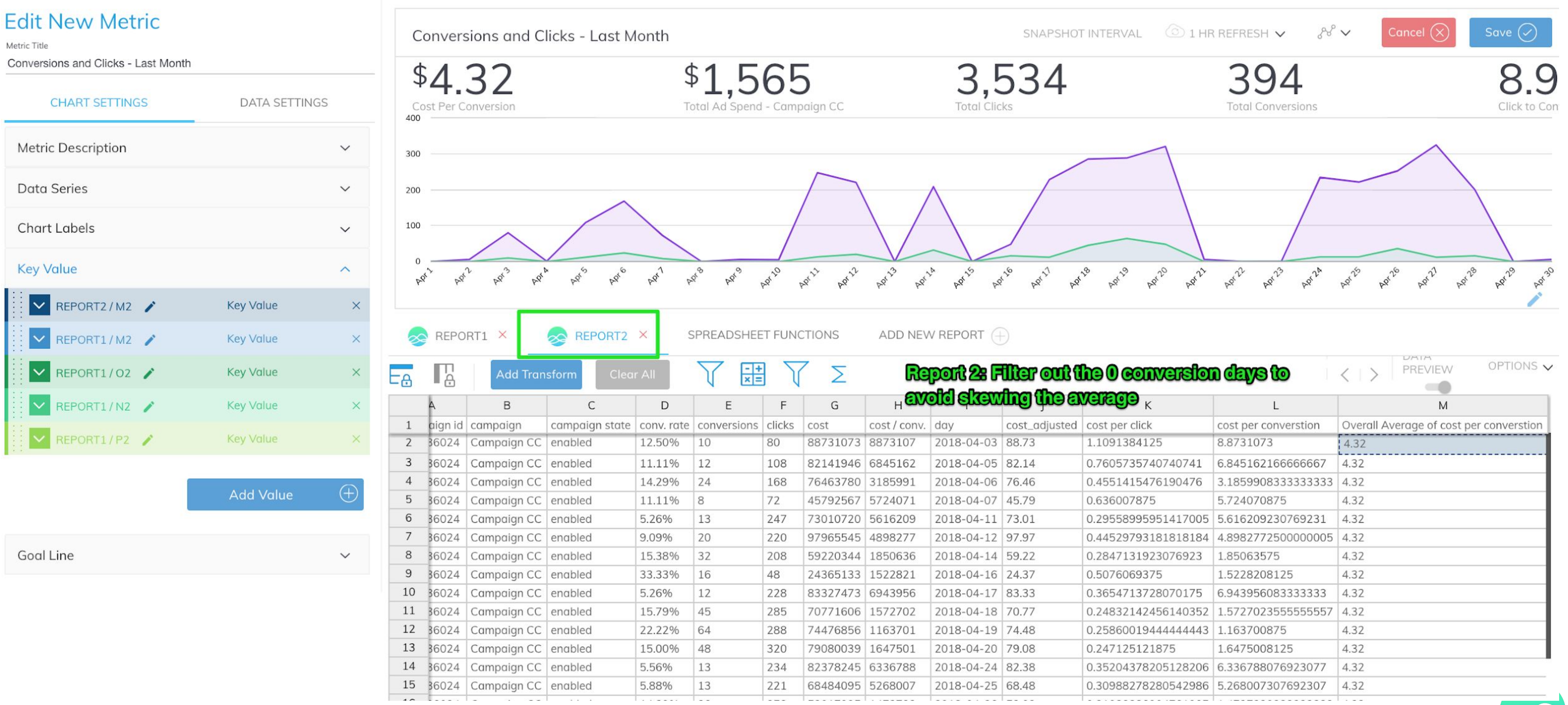


- Report: Campaign Ad Performance (Adwords)
- Only data from Campaign CC
- Calculate actual cost/conv.
- Hex value for “blueviolet”
- Hint: Remove any 0s to ensure your Cost/Conv average isn’t skiewed

Adwords Metric - Hint 1/2



Adwords Metric - Hint 2/2



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	aign id	campaign	campaign state	conv. rate	conversions	clicks	cost	cost / conv.	day	cost_adjusted	cost per click	cost per converstion	Overall Average of cost per converstion
2	36024	Campaign CC	enabled	12.50%	10	80	88731073	8873107	2018-04-03	88.73	1.1091384125	8.8731073	4.32
3	36024	Campaign CC	enabled	11.11%	12	108	82141946	6845162	2018-04-05	82.14	0.7605735740740741	6.845162166666667	4.32
4	36024	Campaign CC	enabled	14.29%	24	168	76463780	3185991	2018-04-06	76.46	0.4551415476190476	3.1859908333333333	4.32
5	36024	Campaign CC	enabled	11.11%	8	72	45792567	5724071	2018-04-07	45.79	0.636007875	5.724070875	4.32
6	36024	Campaign CC	enabled	5.26%	13	247	73010720	5616209	2018-04-11	73.01	0.29558995951417005	5.616209230769231	4.32
7	36024	Campaign CC	enabled	9.09%	20	220	97965545	4898277	2018-04-12	97.97	0.44529793181818184	4.8982772500000005	4.32
8	36024	Campaign CC	enabled	15.38%	32	208	59220344	1850636	2018-04-14	59.22	0.2847131923076923	1.85063575	4.32
9	36024	Campaign CC	enabled	33.33%	16	48	24365133	1522821	2018-04-16	24.37	0.5076069375	1.5228208125	4.32
10	36024	Campaign CC	enabled	5.26%	12	228	83327473	6943956	2018-04-17	83.33	0.3654713728070175	6.943956083333333	4.32
11	36024	Campaign CC	enabled	15.79%	45	285	70771606	1572702	2018-04-18	70.77	0.24832142456140352	1.5727023555555557	4.32
12	36024	Campaign CC	enabled	22.22%	64	288	74476856	1163701	2018-04-19	74.48	0.25860019444444443	1.163700875	4.32
13	36024	Campaign CC	enabled	15.00%	48	320	79080039	1647501	2018-04-20	79.08	0.247125121875	1.6475008125	4.32
14	36024	Campaign CC	enabled	5.56%	13	234	82378245	6336788	2018-04-24	82.38	0.35204378205128206	6.336788076923077	4.32
15	36024	Campaign CC	enabled	5.88%	13	221	68484095	5268007	2018-04-25	68.48	0.30988278280542986	5.268007307692307	4.32

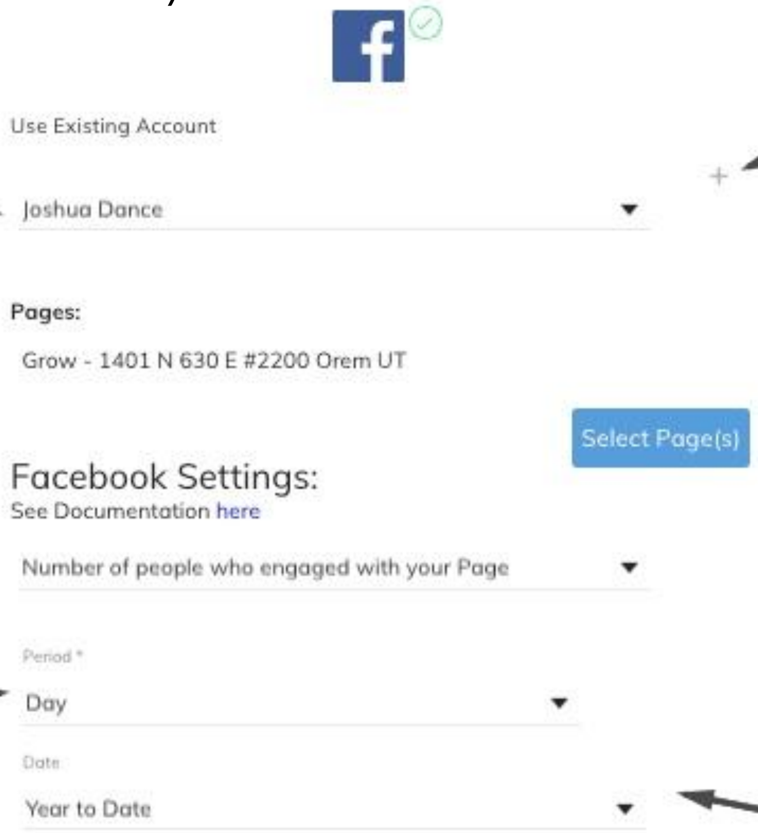
SOCIAL PLATFORMS

Facebook (Organic)

Select the account authorization to use

Select which report to use

Select the period you want to view the data by: day, month, etc



Add second Facebok instance

Select which page(s) you want to use

Select the date range

[Facebook Overview](#)

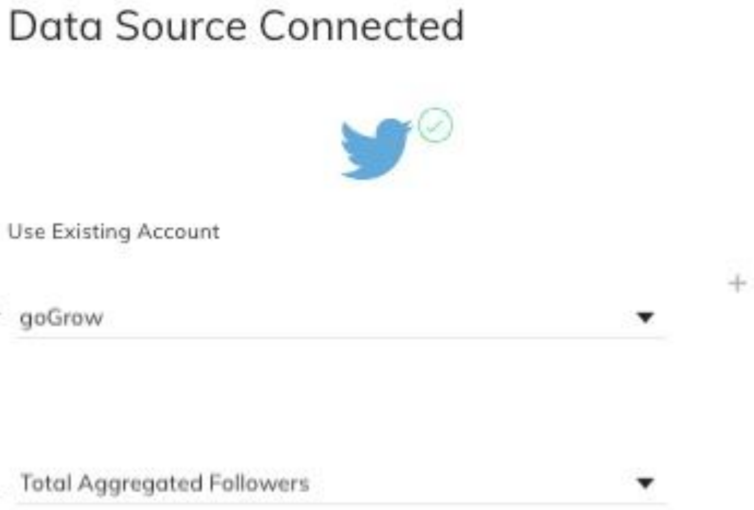
Facebook (Organic) - Things to Know

API Version 1 and Version 2: Generally the Facebook v2 integration is a more robust integration than V1. They both access the same API, but Grow's Facebook v2 allows you to pull specific data points from the Metric Categories instead of full reports with prescriptive data.

Current day: Some Facebook reports don't display to the current day. This is a limitation of the API.

- Demographics about People who like your Page
- Number of People Talking About by City
- Number of People Talking About by Country
- Total People who liked by City
- Total People who liked by Country
- Page Views
- Page Views from users logged into Facebook
- Page Like Sources

Twitter



Add secondary Twitter instance

Select the account authorization to use

Select which report to use

[Twitter Overview](#)

Twitter - Pro Tips

Historical data: Twitter's API does not allow access to historical data. Grow starts tracking data once the Twitter account is connected to Grow. If the Twitter connection is ever deleted from an account, you will lose that any data built up in Grow.

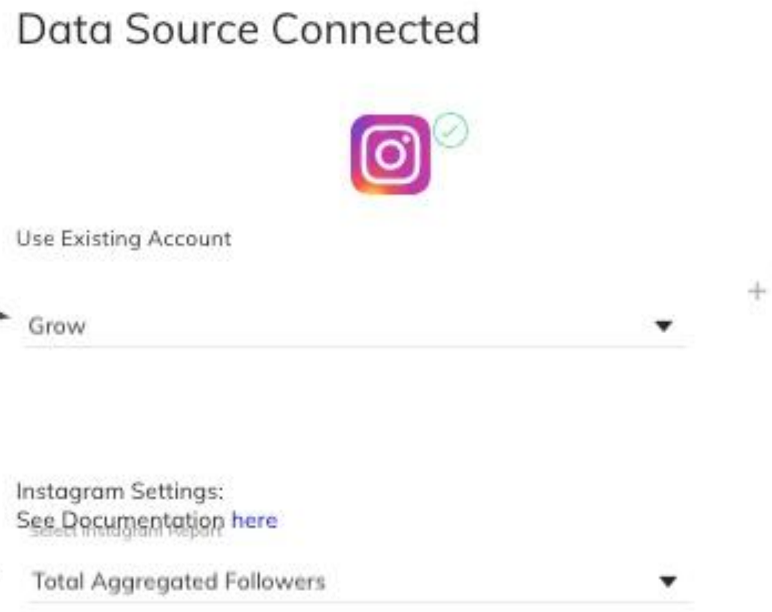
Last 200 records: Twitter's API only returns the last 200 records for any of their endpoints; for example, the last 200 tweets, last 200 followers, last 200 mentions, etc.

3rd party services: These services offer to return historical data; however, Grow hasn't tested any of them and therefore doesn't endorse any specifically. Clients are free to attempt this type of solution.

Instagram/Instagram Business

Select the account authorization to use

Select which report to use



Add secondary Instagram instance

[Instagram Overview]
[Instagram Business Overview]

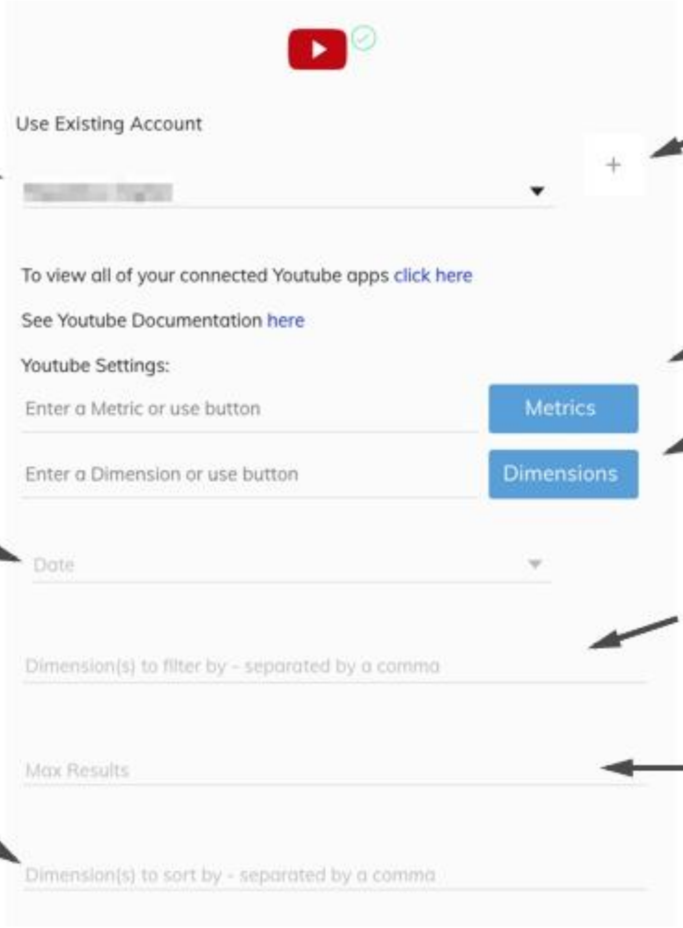
Instagram/Insta Business - Things to Note

- **Historical Data:** Instagram's API does not allow access to historical data. Grow starts tracking data once the Instagram account is connected to Grow. If the connection is ever deleted from an account, you will lose that any data built up in Grow.
- **500 Items API Limit:** Instagram only returns the 500 most recent individual items in itemized reports. When pulling followers, liked posts, or user posts, Instagram only returns up to the most recent 500.
- **Disabled Endpoints:** Following the Cambridge Analytica scandal, Instagram has disabled some of their API endpoints. When you attempt to use *liked posts*, *following*, and *followers* you will get an error message, saying "This endpoint has been retired."

YouTube

Select the account authorization to use

Add second YouTube instance



Select a metric(s)

Select a dimension

Select the date range

Apply a dimension filter

Enter a Max Result I.e. 200, 1000, 5000

Apply a dimension to sort by

[YouTube Overview]

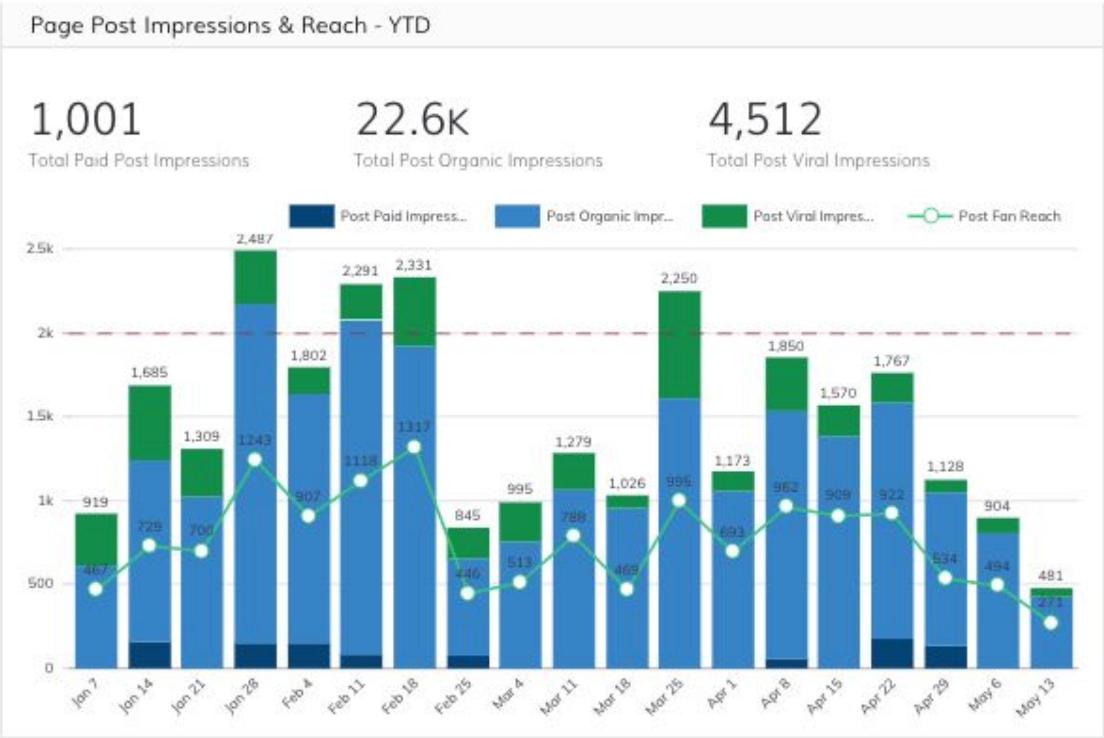
YouTube - Things to Note

Dimension and metric compatibility. Some metrics and dimensions won't work together and will display an error in Grow when used jointly. Reference this YouTube documentation for any reporting questions.

Required Fields: YouTube usually requires an entry into "Max Results" and a dimension to sort by.

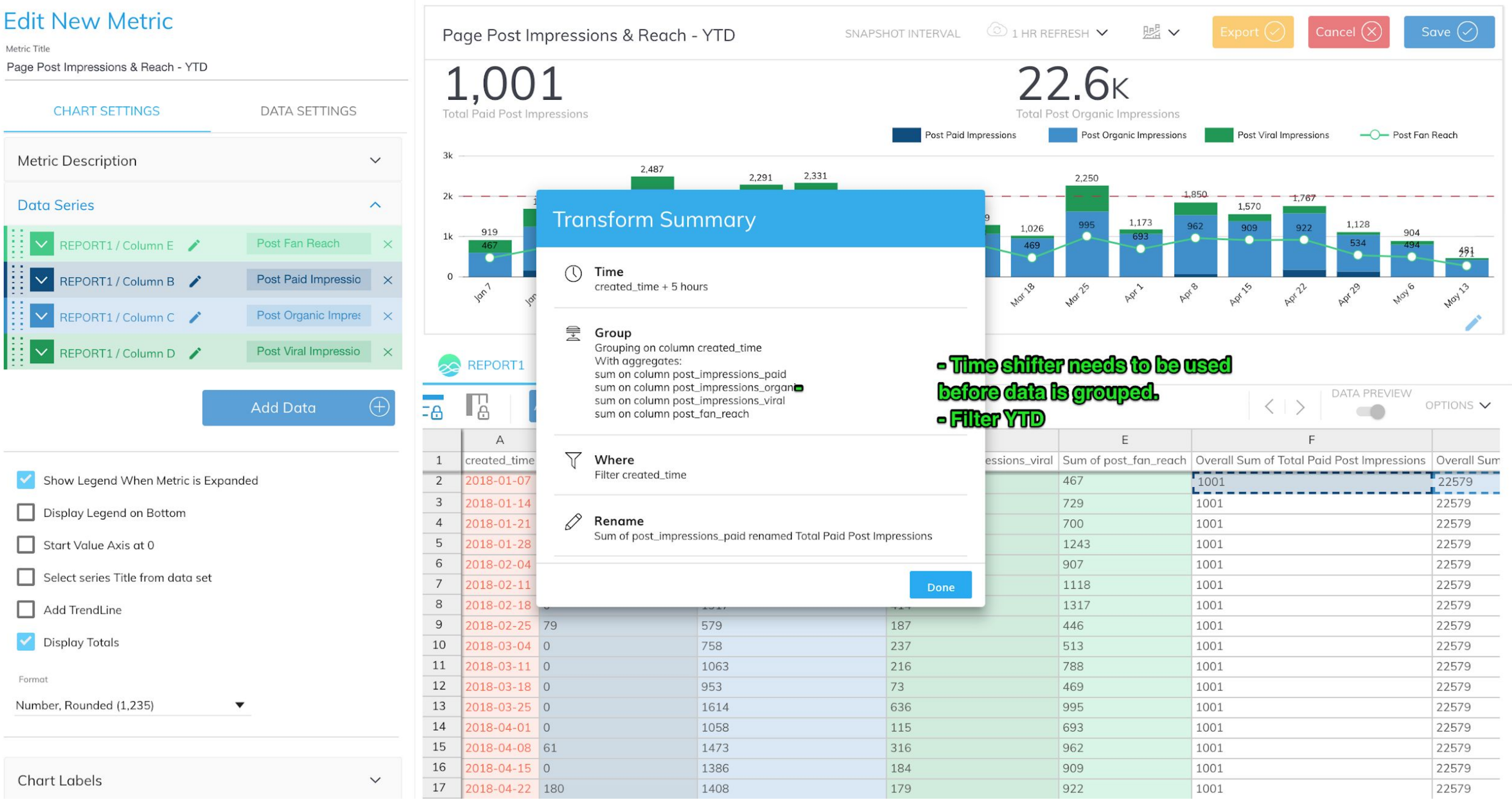
YouTube Reporting: YouTube has two different APIs. Grow connects to YouTube Analytics, not YouTube Reporting. Refer to this article for additional documentation.

Practical: Facebook Metric



- Report: Marketing Post Analytics (FB v2)
- Column & Line Chart (fan reach as the line)
- YTD data
- Goal Line: 2,500
- Use the time shifter tool to shift the data by +5 hours
- Use the Rename Column tool to rename a header

Facebook Metric - Hint



- Time shifter needs to be used before data is grouped.
- Filter YTD

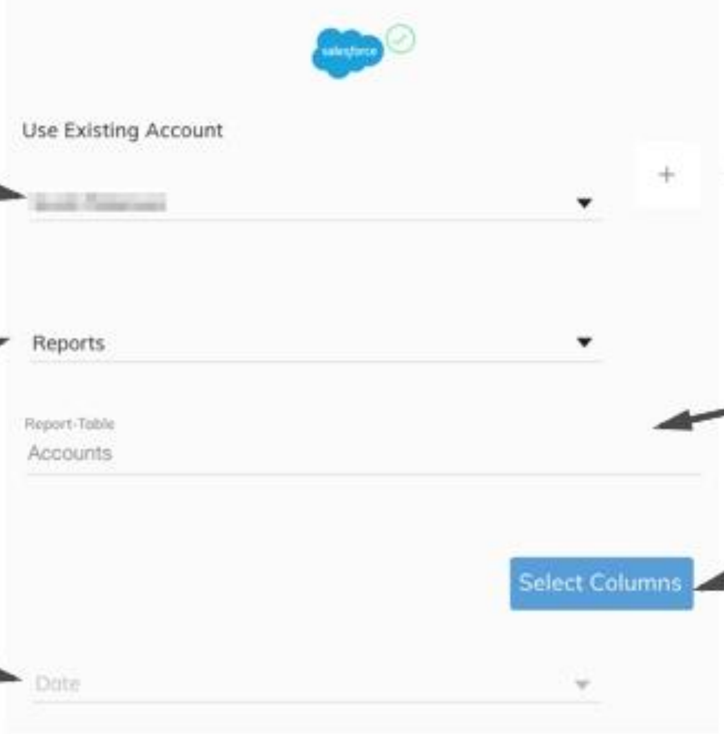
CRMS

Salesforce (SFDC) - Account Reports

Select the account authorization to use

Select which Standard Salesforce Report (object) to use

Select the date range



Add secondary Salesforce instance

Type to search the report by name or scroll the available list.

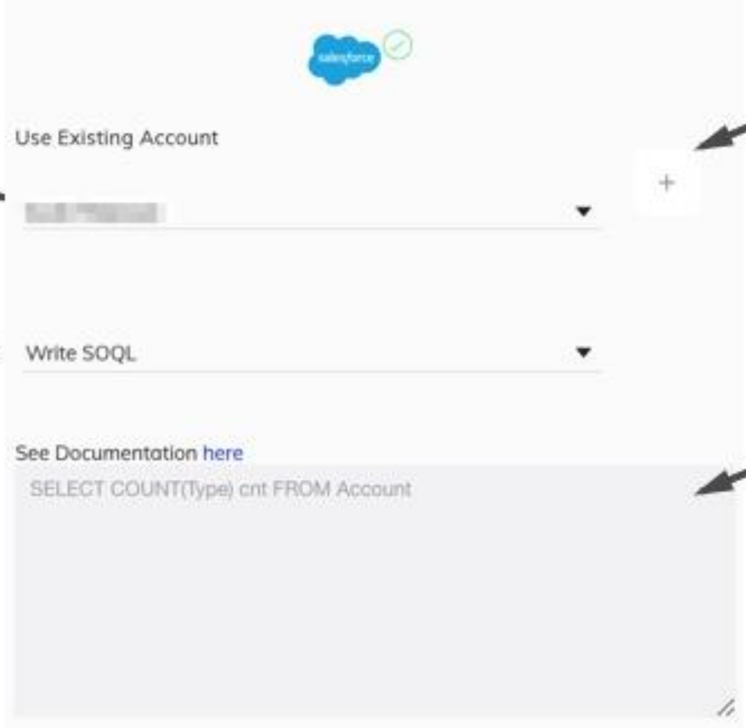
Select any relevant columns found in salesforce object

[Salesforce Overview]

Salesforce (SFDC) - SOQL

Select the account authorization to use

Select to use SOQL to query data



Add secondary Salesforce instance

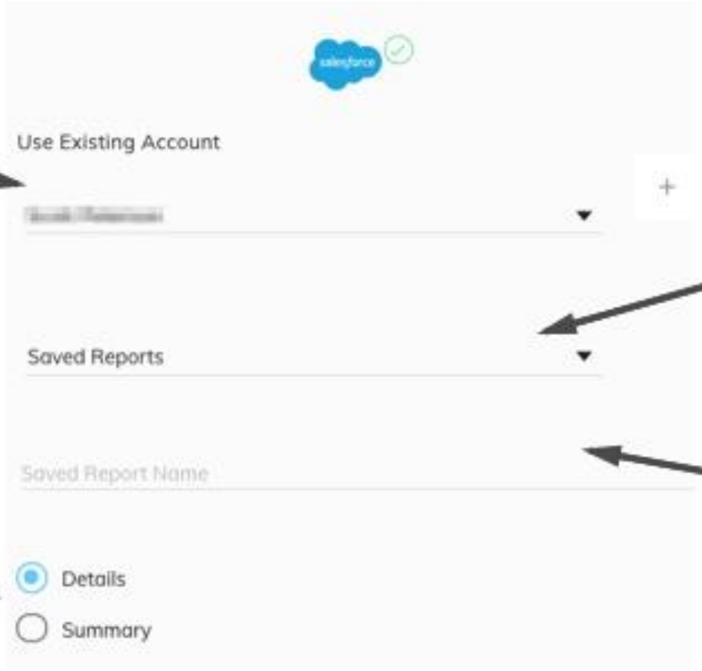
Type in SOQL query

Salesforce Overview

Salesforce (SFDC) - Saved Reports

Select the account authorization to use

View the report in detail or summary information. Defaults to details.



Add secondary Salesforce instance

Select to use data from a report already saved in account

Type to search for the saved report by name or scroll available the list.

[Salesforce Overview]

Salesforce (SFDC) - Things to Note

Using Saved Reports: Using saved reports can be really useful if a customer doesn't have a Salesforce admin but are able to use the report builder to get exactly the necessary data. Note that if that report is changed the metrics referencing that report in Grow may break depending on if data was removed or added to that saved report.

Saved reports must be public: If you find that a saved report isn't showing up in Grow, its likely that it is not in the Unified Public Folder. It must be public to be accessible via the API.

Salesforce Lightning: If customers use Salesforce Lightning, there is a 2000 row limit on saved reports. Users can use SOQL to write a query and pull data greater than 2000 rows.

Salesforce (SFDC) - Things to Note

Salesforce Enterprise Edition: A customer must have the Enterprise tier in Salesforce to be able to connect their API to Grow.

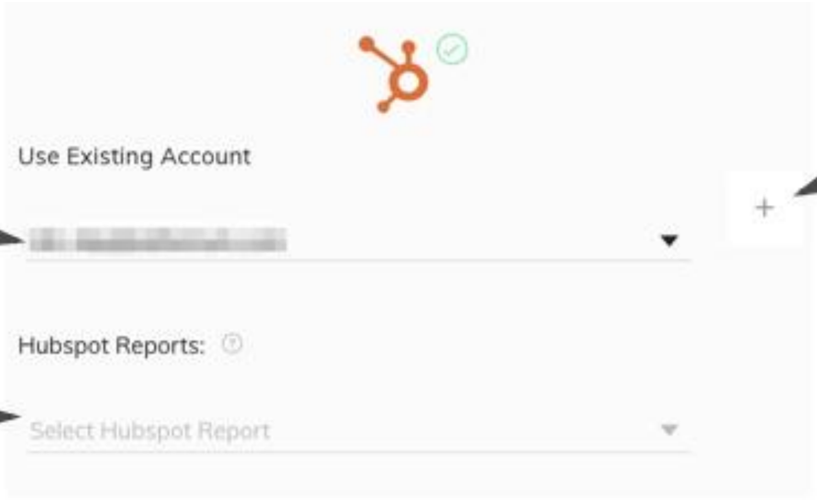
Standard Reports: Reports are objects or tables set up in your Salesforce account. The tidier your Salesforce data and structure is, the better the data will be from these reports. The data is pulled through as raw data, stripping currencies of any local formatting. This is helpful when saved reports have a data format that is difficult to use in Grow.

Using SOQL: If a customer has a Salesforce admin who understands their account schema, this will be valuable to them. Use www.dataloader.io. This platform helps those not familiar with SOQL to build a query using their own custom fields and account information.

Hubspot

Select the account authorization to use

Select which report to use



Add secondary Hubspot instance

[Hubspot Overview]

Hubspot - Things to Note

ID numbers for custom fields: When a customer creates custom fields in their account, the data comes in as IDs. There is no existing endpoint in Hubspot that allows us to indicate what these IDs represent. However, by comparing the data in Grow to the customer account, you can start to identify the custom field ID. We recommend using a spreadsheet to track the IDs and their labels. You can bring this data into Grow and join the IDs to the Hubspot data and then apply needed data transforms.

Contacts properties: Every lead in Hubspot is marked as a contact, not a lead. If you want to pull in properties for Hubspot contacts, use the "Get All Contacts" endpoint which will let you select the fields (properties) you want to pull in.

Revenue in Cents: Similar to AdWords, some revenue data comes through as the smallest unit for the currency (i.e. cents instead of dollars). Use the calculated column to divide the revenue column by 100 to convert to dollars (or GBP, AUD, CAD, etc.).

Hubspot - Things to Note

Combined CRM and Marketing API: Hubspot combines its CRM and marketing automation services into one platform. If you want access to endpoints from both the CRM and marketing, you'll need to have both types of accounts in Hubspot. Currently, the marketing endpoints don't have as much business logic built in as the CRM. In our partnership with Hubspot, we're working together to improve those API data endpoints.

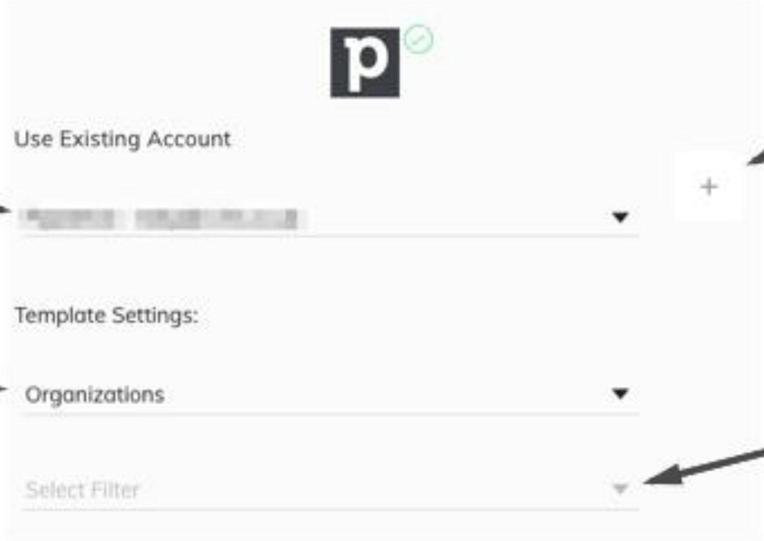
Endpoints requiring admin-level permissions: Some reports will require that the user connected to Grow is an admin. Most commonly, this includes marketing endpoints such as campaigns, workflows, and email events.

Strict rate limits: Due to Hubspot's rate limits, pulling a lot of Hubspot data into Grow can be slow. Refer to our section on rate limits for more information.

Pipedrive

Select the account authorization to use

Select which report to use



Add secondary Pipedrive instance

Select secondary report filter

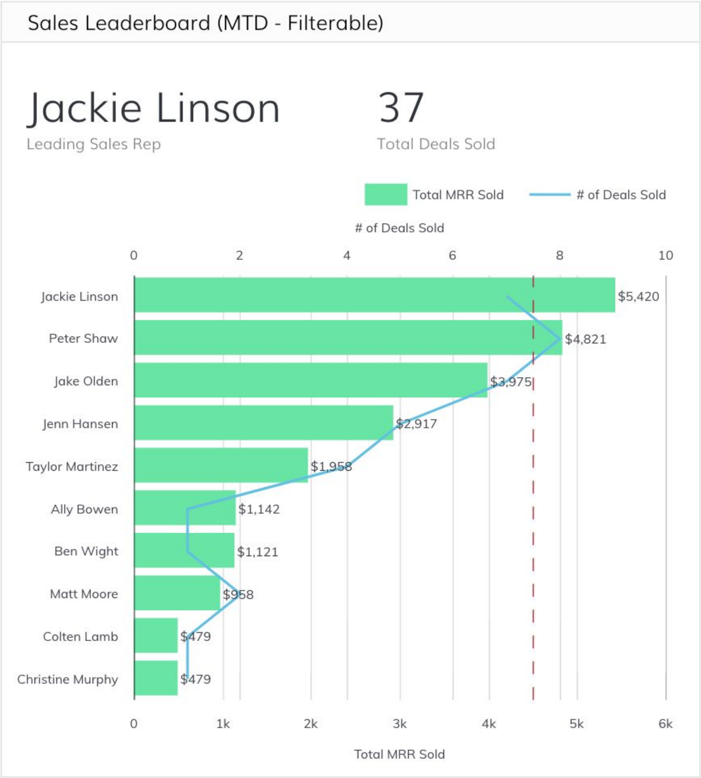
[Pipedrive Overview]

Pipedrive - Things to Note

Time in Stage: In the Deals Report, there is an option to include the 'Time in Stage'. This calculates the precise time spent in each stage for each opportunity. Since this does multiple calculations on each row, selecting this option slows down the report very significantly.

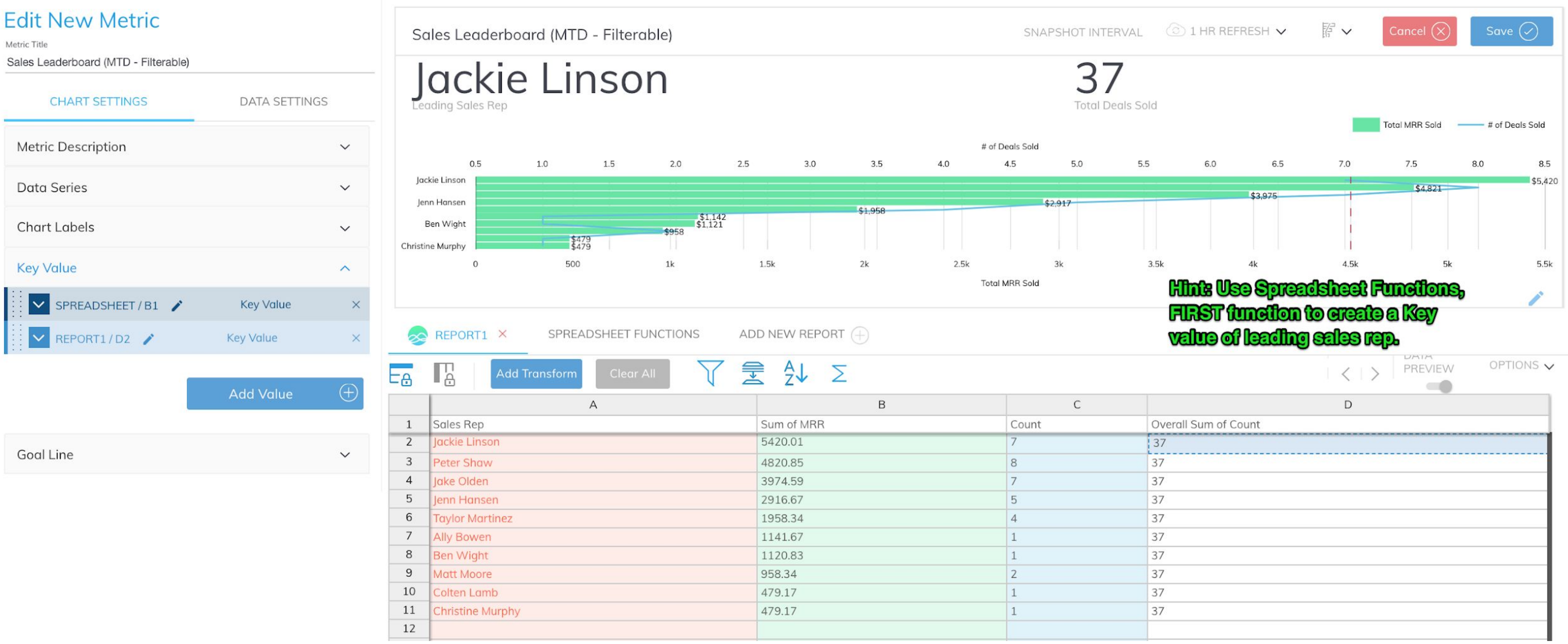
Notes in the Activity Report: The activities report includes a column that has the notes associated with each activity. These notes come from the API as HTML which can make them more challenging to work with than plain text. You will need to be creative with SQLite to be able to work with this data output.

Practical: Salesforce Metric



- Report: Sales Data (Salesforce)
- MTD Sales
- Text Key Value
- Goal: $4500
- Match visuals and formatting

Salesforce/CRM Metric - Hint



	A	B	C	D
1	Sales Rep	Sum of MRR	Count	Overall Sum of Count
2	Jackie Linson	5420.01	7	37
3	Peter Shaw	4820.85	8	37
4	Jake Olden	3974.59	7	37
5	Jenn Hansen	2916.67	5	37
6	Taylor Martinez	1958.34	4	37
7	Ally Bowen	1141.67	1	37
8	Ben Wight	1120.83	1	37
9	Matt Moore	958.34	2	37
10	Colten Lamb	479.17	1	37
11	Christine Murphy	479.17	1	37
12				

Hint: Use Spreadsheet Functions, FIRST function to create a Key value of leading sales rep.

FINANCIAL PLATFORMS

Quickbooks Online

Select the Account you want to use

Add second QBO instance

Select which report to use. This will change the remaining options in the UI. The options for the P&L are similar to other QBO reports.

Select the date range

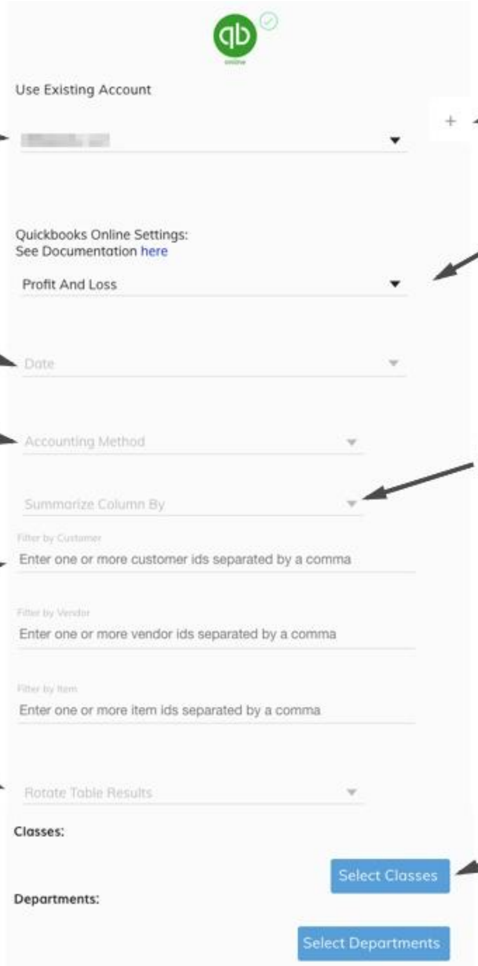
Select the accounting method (cash or accrual.) Method defaults to cash.

Summarize data by total, month, day etc.

Once you identify the ID, you can filter the report by that customer, vendor, etc.

Rotate the report table. Useful depending on the visualization needed.

Select a class or department to filter to view.



[QBO Overview]

Quickbooks Online - Things to Note

Quickbooks Desktop: Quickbooks Desktop is an on premise solution. Clients must be pre-approved in the sales process to use our QBD connector as it requires some manual setup.

Filtering a QBO Report: Several of the QBO reports (P&L, Balance Sheet, Accounts Receivable, etc.) allow you to filter based on a customer, vendor, or item ID. View this help article on how to isolate the relevant IDs in your QBO account.

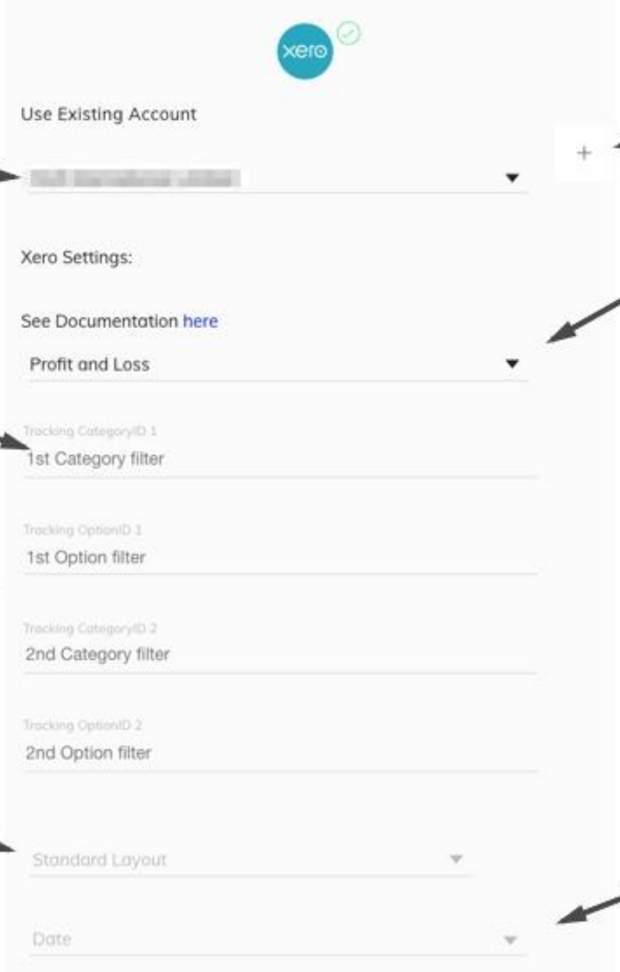
Rotating Table Data: Most QBO reports come in a format where columns are dates or months and the rows are categories or accounts. To be more chart friendly this is typically rotated so that rows are the dates or months. In the UI image above, you can see the option to "rotate table results".

Additional Cleanup: Many QBO reports are built for human eyes, not a BI tool. Because of this they normally include totals, blank rows, or other descriptive type additions. These can normally be removed by using the filter transform.

Xero

Select the Account you want to use

Add second Xero instance



Select which report to use. This will change the remaining options in the UI. The options for the P&L are similar to other reports.

Apply a Tracking Category filter (optional)

Apply a Tracking Option filter (optional)

Defaults to standard layout

Select a date range

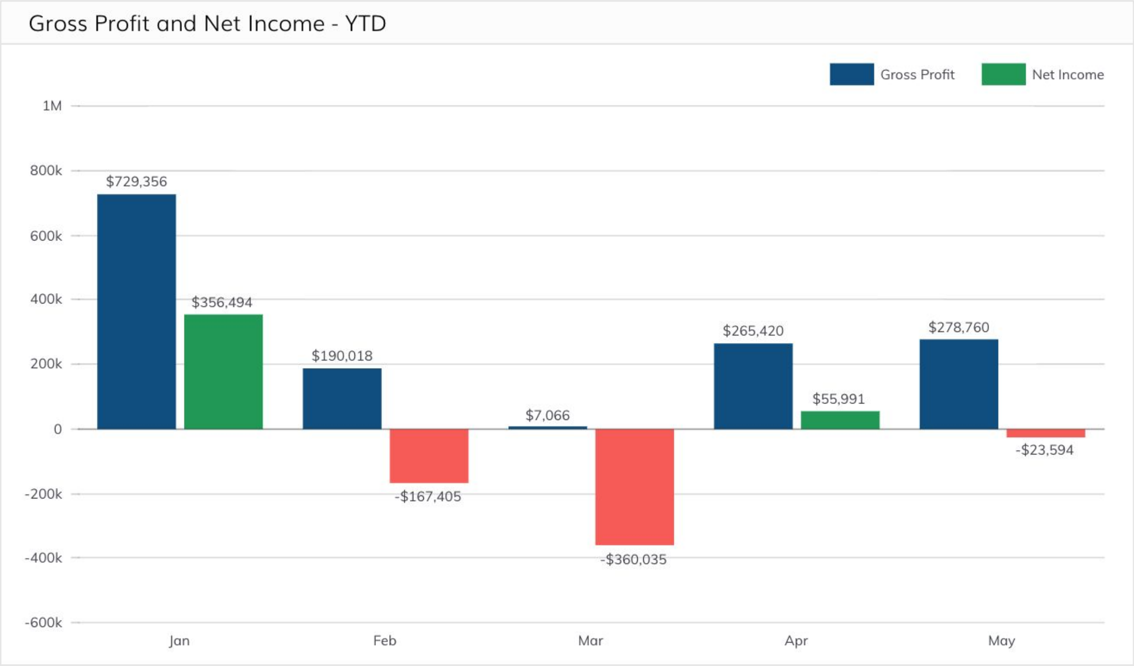
[Xero Overview]

Xero - Things to Note

Profit and Loss: The P&L Report is limited to the last two years of monthly data. Reports from Xero are not more granular than monthly reporting.

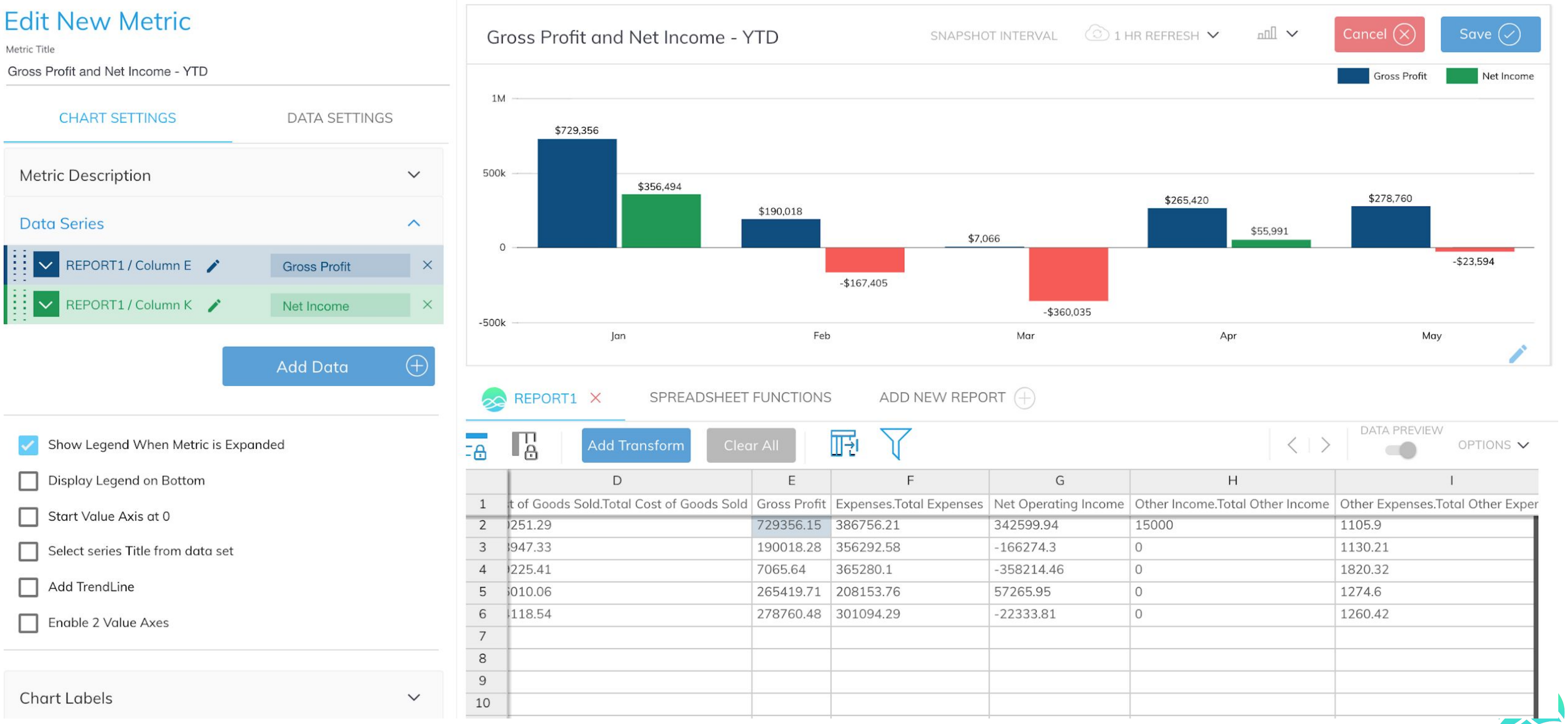
Tracking Categories IDs: To find the needed tracking category ID to filter by, you can pull the data into Grow as a second report and copy and paste the ID into these fields.

Practical: Quickbooks Online

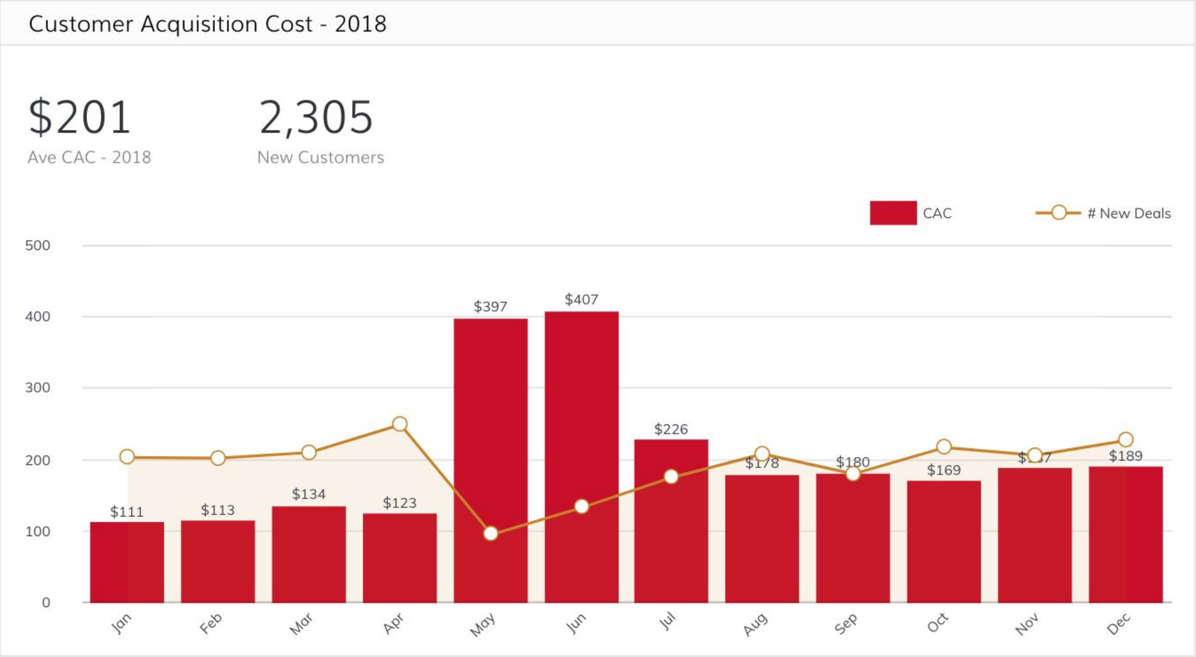


- Report: Financial P&L QBO
- Remove Columns: Keep only relevant totals (Total Income, Total COGs, Total Gross Profit, Total Net Income, etc.)
- Data Series: Negative Values Red

Quickbooks Online Metric - Hint



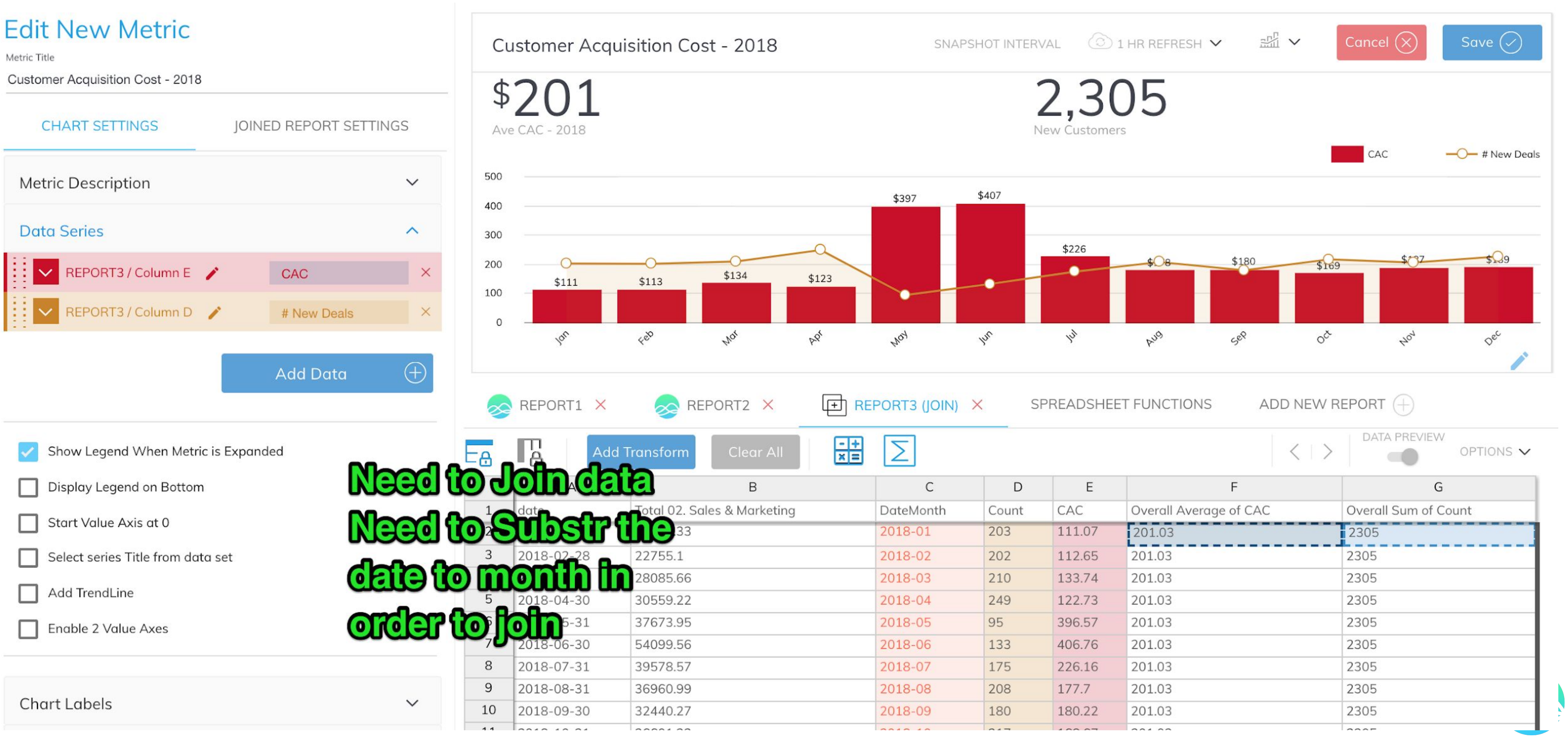
Practical: Xero/CAC



- Report: Financial P&L Xero, Sales Data
- Calculated CAC
- Apply filters to the P&L to isolate relevant data

$$\text{CAC} = \frac{\text{Total Cost of Sales \& Marketing}}{\text{Number of Customers Acquired}}$$

Xero/CAC - Hint



Need to Join data
Need to Substr the date to month in order to join

ECOMMERCE PLATFORMS

Matching Data

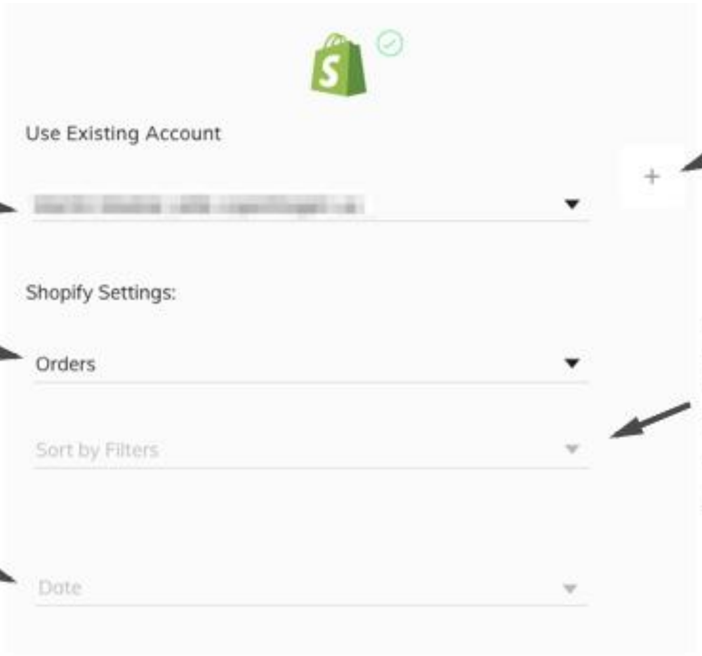
- In some ecommerce platforms, internal analytics dashboard may not match what is found in Grow.
- Its common for providers to developed their own logic and definition for certain metrics displayed in their internal dashboard.
- The internal dashboard data may not match, but the exported platform data and Grow data is often the same.
- We work hard to identify the discrepancy!

Shopify/Shopify+

Select the account authorization to use

Select which report to use

Select the date range



Add a second Shopify instance

Filter by Created At or Updated At (for the Orders, Items sold, and Abandonded Checkout Reports)

Shopify Overview
Shopify Plus Overview

Shopify/Shopify+

Salesforce Enterprise Edition: A customer must have the Enterprise tier in Salesforce to be able to connect their API to Grow.

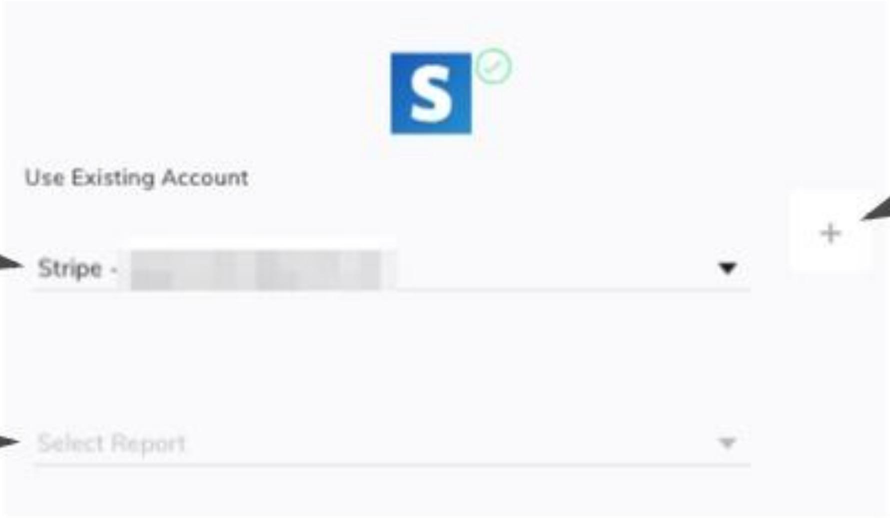
Standard Reports: Reports are objects or tables set up in your Salesforce account. The tidier your Salesforce data and structure is, the better the data will be from these reports. The data is pulled through as raw data, stripping currencies of any local formatting. This is helpful when saved reports have a data format that is difficult to use in Grow.

Using SOQL: If a customer has a Salesforce admin who understands their account schema, this will be valuable to them. Use www.dataloader.io. This platform helps those not familiar with SOQL to build a query using their own custom fields and account information.

Stripe

Select the account authorization to use

Select which report to use



Add secondary Stripe instance

[Stripe Overview]

Stripe - Things to Note

Currencies: Stripe supports a large number currencies, including zero-decimal currencies. Stripe will always provide the amount in the smallest common currency unit (i.e. for USD or EUR, 100 cents instead of $1.00). However, for zero-decimal currencies (i.e. JPY, Japanese Yen), the smallest currency is the regular denomination (¥1 for 1 Yen).

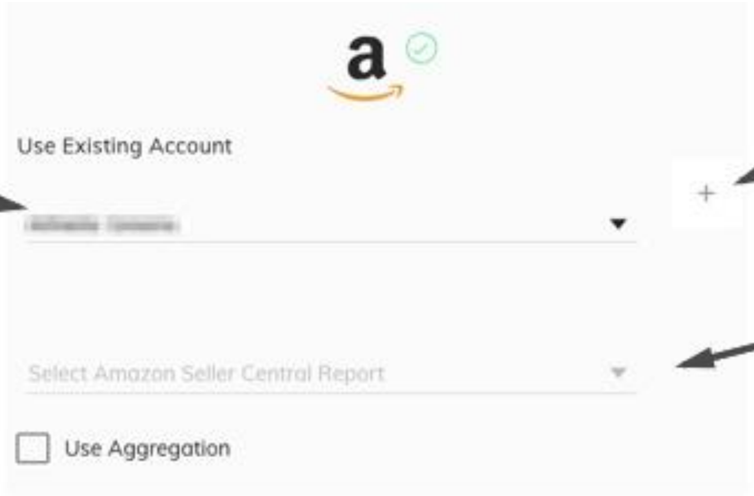
Showing Currencies in Larger Units: To show currency values in larger units, you will need to divide your data by 100 (for USD, GBP, etc). This can be done using the calculated column transformation.

Calculating Client Churn or Cancelled Subscriptions: When a customer cancels or changes their current subscription in Stripe, a new line is created for the new subscription type. For example, if Customer A wanted to be downgraded from a Gold Subscription to a Silver Subscription, Stripe's API deletes the record of the Gold Sub and generates a new line for the Silver. It is therefore difficult to calculate churn or downgrades in subscriptions. If your client is requesting this, we'll connect you to one of our ecommerce specialists for training.

Amazon Seller Central

Select the account authorization to use

Add secondary Amazon Seller Central instance



Select which report to use

Select to aggregate the data

[Amazon Seller Central Overview]

Amazon Seller Central - Things to Note

30 Days of Data: ASC only returns 30 days of data at a time in their orders endpoint. We can work around this by building a dataset in Grow of their data.

Throttling Limits: After an API request hits a certain amount of data, the request will be limited or throttled. This means the data load time will slow down significantly. The only solution is to limit the amount of data requested. You can read more here.

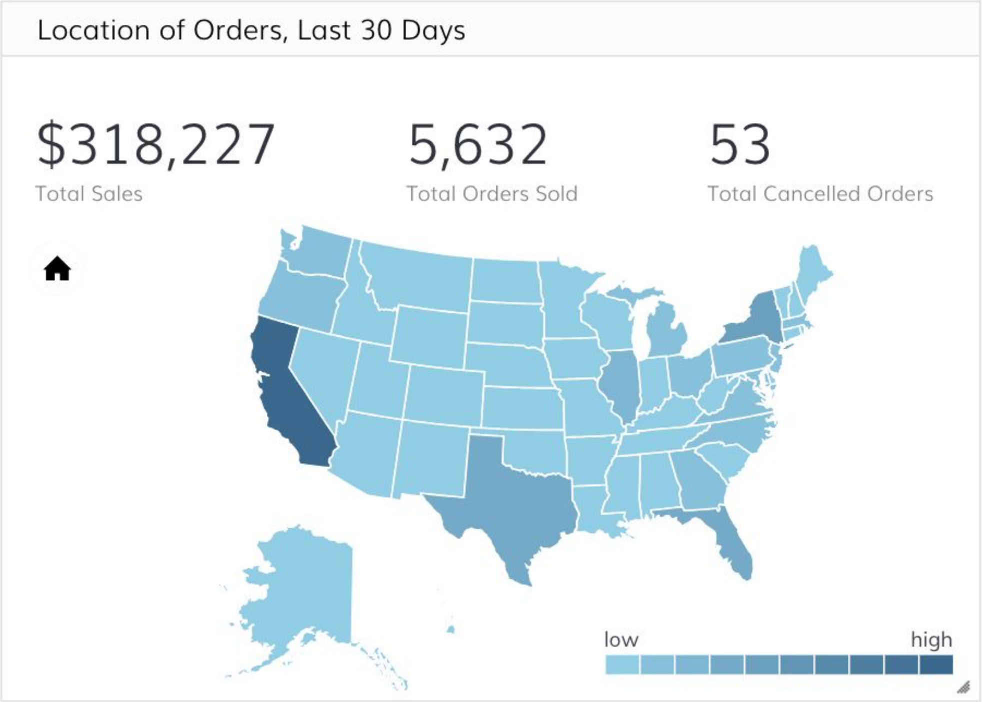
Request Report: In the report list, there is an option to select "request report," which will show you additional reports available on the ASC API.

Use Aggregation: When pulling in data you have the option to "use aggregation." This means that the data is ordered by the date and time that it was updated. It affects the Orders by Order Date Report.

Matching Sales Numbers: As with Shopify and Shopify+, there are data matching discrepancies between the API data and what a customer will see in the sales dashboard within ASC. See this forum discussion on their site for more info. We have found that the exports from ASC match exactly to the API data. This means that the client can define their metrics as they prefer and not rely on the unknown definitions provided by ASC.

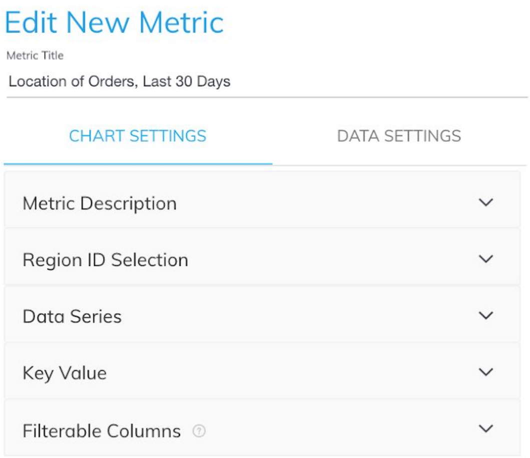
Tips on Matching Sales Number: Be sure to use the Orders by Last Order Update Report, then use the custom date interpolator to adjust for the customer's time zone.

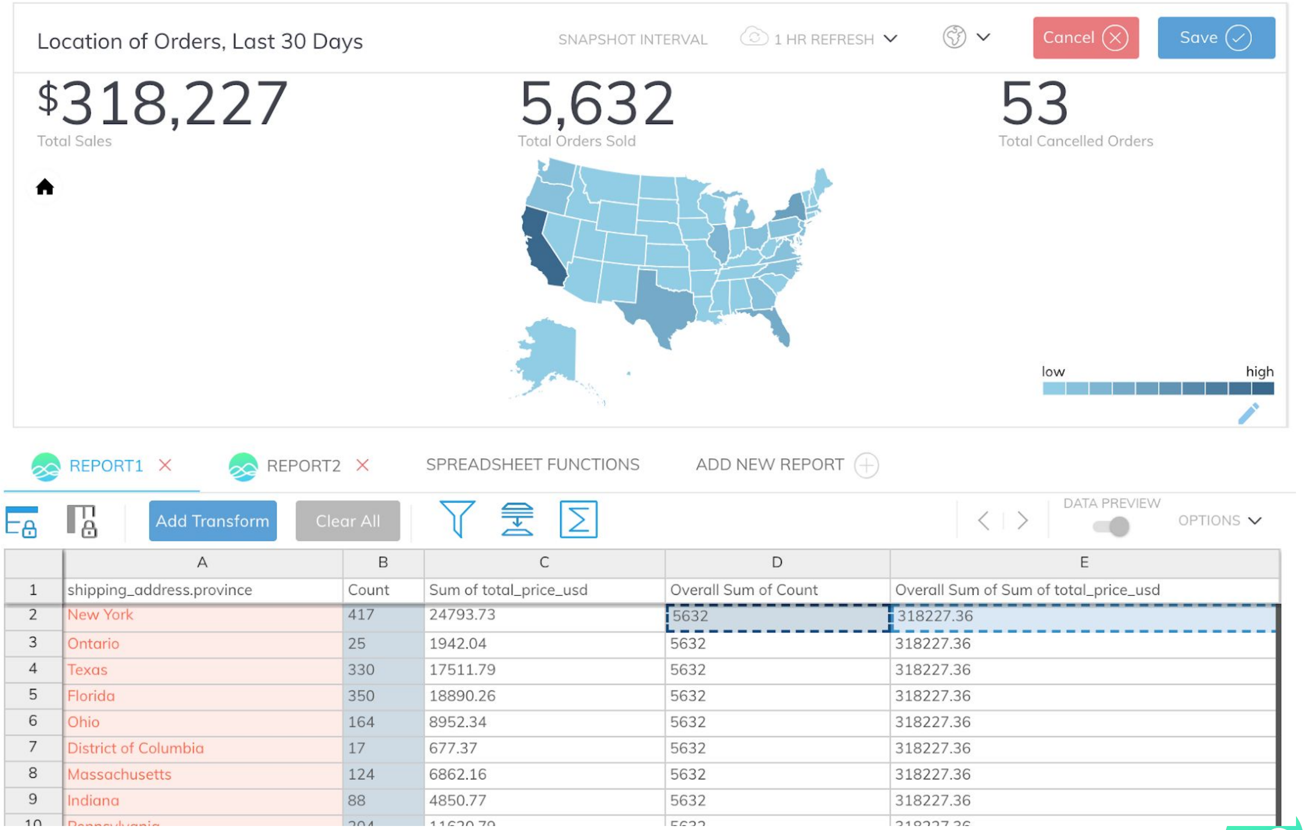
Practical: Shopify Metric #1



- Report: Ecommerce Data (Shopify)
- US Map
- Key value showing total cancelled orders

Shopify Metric #1 - Hint





- Second Report to count the total cancelled orders
- Make sure to filter out the cancelled orders from the sales report

Stored Data Sets

Enable for the account: Chat in on our site or ask your PSM to enable it for your customer.

User Permissions: Any user who should be able to build and manage data sets need to have that permission enabled for their user.

Share Data Connection: If you have users who don't need to create new datasets, but just to build from them, you just need to ensure that the data source connection is shared with them. This can be done under Settings > Data Sources > Share Connection (Icon)

Building a Stored Data Set: Once the permissions have been granted, you can build a new data set when you're in the metric builder. Here are detailed instructions.

Creating New Metric: To create a new metric from a saved data source, you just need to Add New Metric > Stored Datasets > Custom Metric > Select Dataset > Connect and then build from that data as you would a regular metric.

Practical: Shopify Metric #2

Cancellation Summary, Last 30 Days

45
Fraud Cancellations

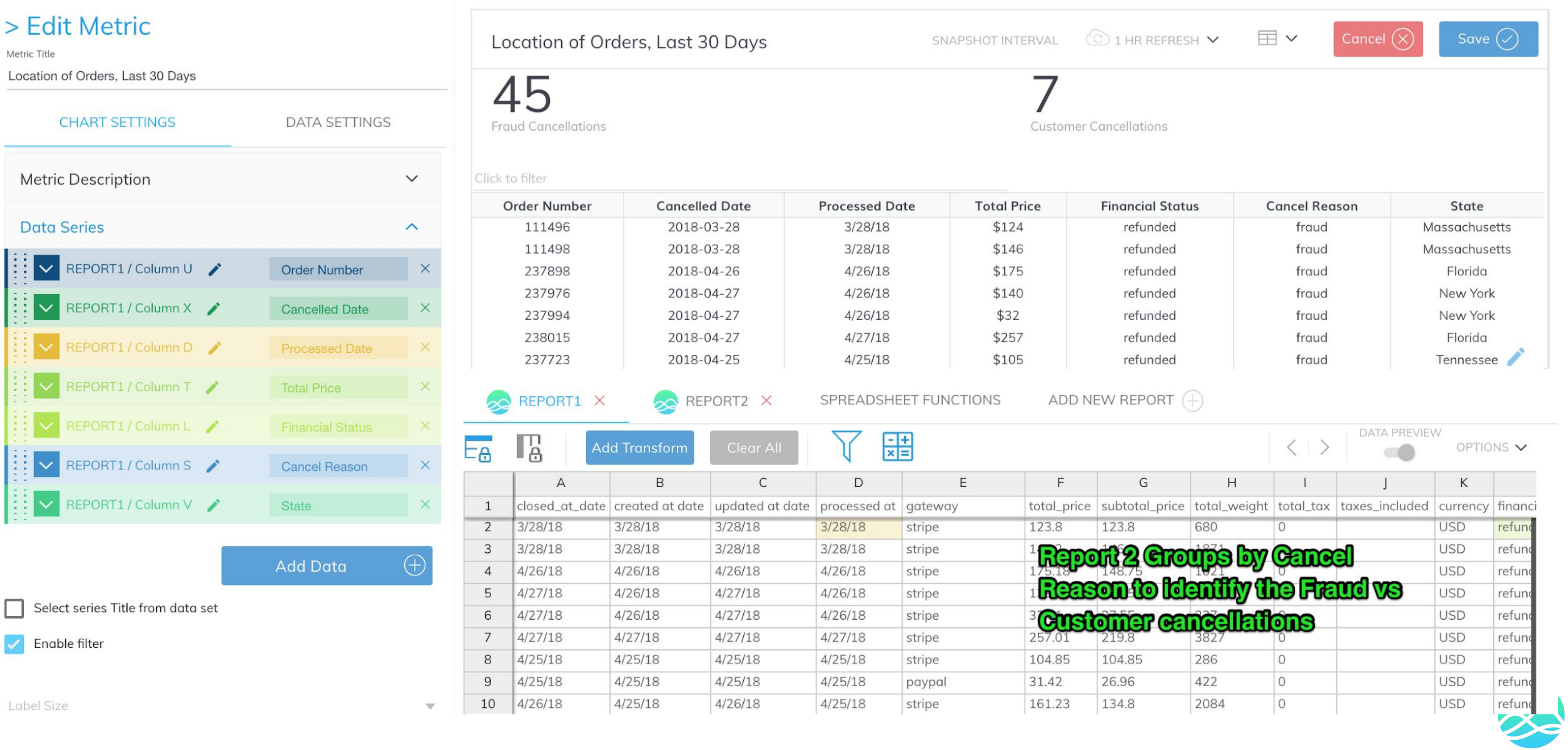
7
Customer Cancellations

Filter Results...

Order Number	Cancelled Date	Processed Date	Total Price	Financial Status	Cancel Reason	State
111496	2018-03-28	3/28/18	$124	refunded	fraud	Massachusetts
111498	2018-03-28	3/28/18	$146	refunded	fraud	Massachusetts
237898	2018-04-26	4/26/18	$175	refunded	fraud	Florida
237976	2018-04-27	4/26/18	$140	refunded	fraud	New York
237994	2018-04-27	4/26/18	$32	refunded	fraud	New York
238015	2018-04-27	4/27/18	$257	refunded	fraud	Florida
237723	2018-04-25	4/25/18	$105	refunded	fraud	Tennessee
237737	2018-04-25	4/25/18	$31	refunded	fraud	Maryland
237772	2018-04-26	4/25/18	$161	refunded	fraud	Maryland
237818	2018-04-26	4/25/18	$125	refunded	fraud	New York
237134	2018-04-24	4/21/18	$10	refunded	customer	California
236987	2018-04-20	4/20/18	$135	refunded	fraud	Arizona
236990	2018-04-20	4/20/18	$126	refunded	fraud	Arizona
236993	2018-04-20	4/20/18	$98	refunded	fraud	Arizona

- Report: Ecommerce Data (Shopify)
- Table Chart
- Cancellation Summary
- Include table filter

Shopify Metric #2 - Hint



ADDITIONAL FEATURES

DAY THREE

Dashboard


Grow Dashboard
Metric
Click to enter explore mode
Metric Action Menu
Click to add new metric
Manage dashboard users
Full screen mode
Sharing options
Dashboard Action Menu
Dashboard Manager
GROW
Steph Johnson
Dashboards
Add Dashboard
Search...
Favorite Dashboards
Customer Acquisition
Marketing
Filter & Drill
bacon.com
SaaS Company Overview
Google Analytics
MINDBODY
MailChimp
Teamwork
Appfigures
Harvest
Lahaina Fitness Club
Lahaina Fitness - Marketi...
eCommerce
Xero
Shopify
drchrono
Unbounce
Client Report
Social
HubSpot
Asana
Facebook Ads
eCommerce Essential Me...
Executive Dashboard
Customer Acquisition
Inbound Leads & Site Traffic
624
Demos Set & Demos Held
74%
Edit Metric
Copy Metric
Move Metric
Share Metric
Export Metric
Delete Metric
MTD MRR Sales Leaderboard & Quota
88.7K
+ Add Metric
Dynamic Dashboard Filters
Dashboard Settings
Generate PDF
Add Textbar Separator
Add Note
Auto Organize Metrics
Refresh
Help
Delete
Deals by Source
Implemented Customers By Week
Customers by Country
1,026

Expanded View

Explore Filters

Metric Info

History/Snapshots

Click on legend to hide data series

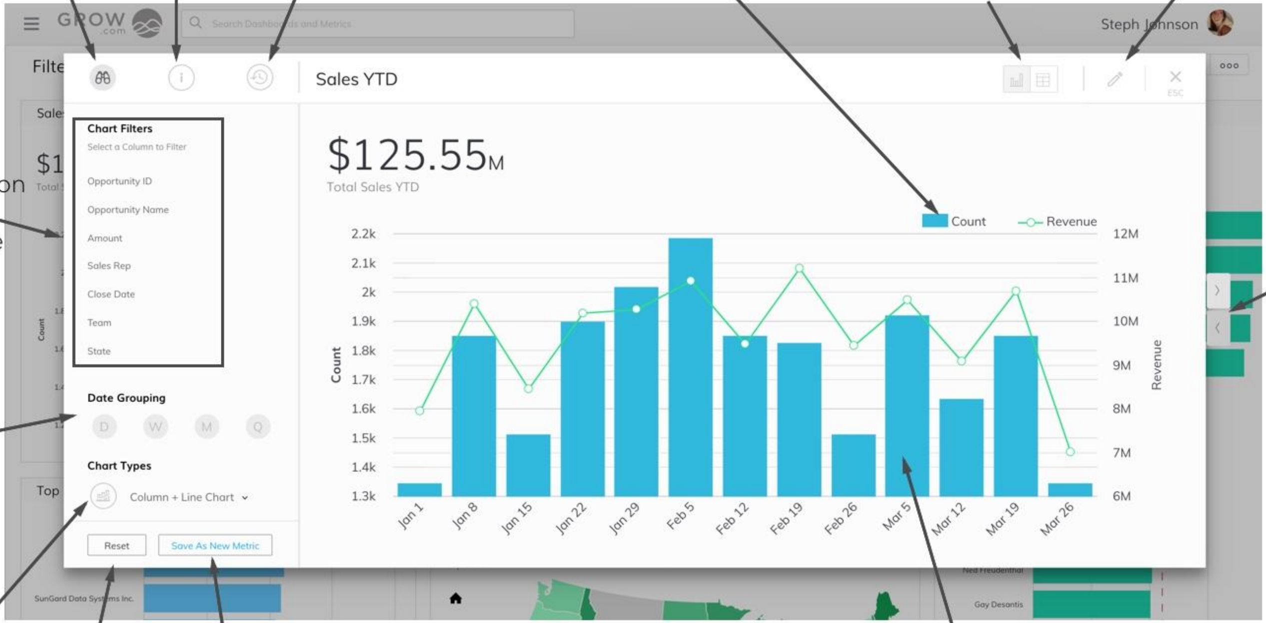
Toggle between chart view and tabular view

Click to enter edit mode

Set filters on available data in the metric

Toggle between various date grouping

Toggle data between various chart types



Click to toggle between metrics on dashboard

Remove filters

Save metric with applied filters as a new metric

Click and drag to zoom into period of a metric

Filter & Drill - Things to Note

- Set up filterable columns in the metric builder
  - API → SQL transforms→ Filter button in Edit Metric → What is left is filterable.
- If working with multiple data sets in a metric, you have to join the data together to set the filterable columns
- You can't drill into the data behind a pivot. This is due to working with two dimensions and an aggregated value between them.
- Filters are at the metric not dashboard level. As you toggle between metrics you have to reapply any filters you wish to see.
- Drill down shows one data layer below the visualization and displays the raw data found in any column selected as a filterable column.

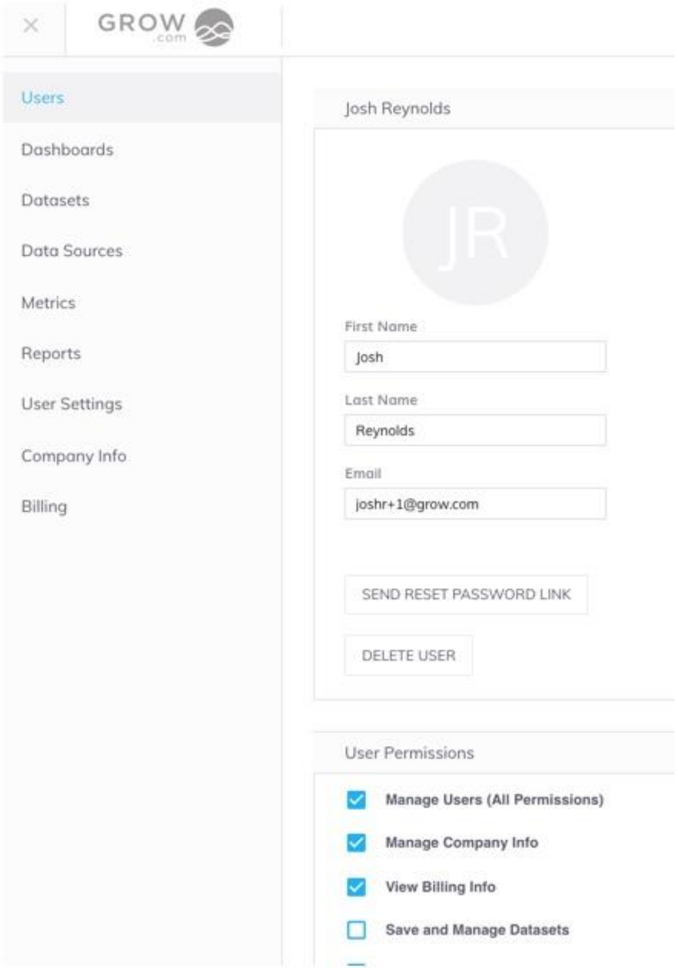
TV Mode

Toggle between black/white background

Click the play button to set the dashboard rotation.

Account Settings

- Users
- Dashboards
- Datasets
- Data Sources
- Metrics
- Reports
- User Settings
- Company Info
- Billing



Branded Accounts

We'll rely on you to collect the following assets and email to your PSM for set up.

- **Logo:** Used in the Grow app, in the header above each dashboard. The file must be at least 250 pixels in height and a a .jpg or .png file.
- **Background Image:** This image is used as the background of the customized login page. The image must be at least 1600 x 900 pixels and either a .jpg or .png file.
- **Domain:** This can be a sub domain or a unique domain. The A Record for that domain or subdomain must be pointed to 52.0.63.147 before the set up can be finalized.
  Sub: analytics.yourdomain.com
  Full: yourdomain.com
- **Login Text (Sign in to "_________"):** This is generally the company name. For page naming convention we cannot change the "Sign in to" text.
- **Favicon (Optional):** Can be .ico, .png, or a .jpg file type.

Out of Partner Scope - Templatizing Dashboards

If a client is planning to templatize a dashboard, this setup must be done by a Grow CS rep. This customer requirement is discussed and vetted in the sales process. Things to consider:

- In order to templatize a dashboard, each metric must have a unique identifier that will change between each dashboard version. This is usually an data source account ID.
- Once a template is created, it cannot be edited. If a client request changes to any data or visualization on metric, they will need to make those changes one at a time, or Grow will have to recreate the template and then go through the process again of deleting and replacing the dashboards.
- Ideally the initial dashboard would be as close to complete as possible.

Out of Partner Scope - Custom REST Connections

Using a Custom REST connection to access data is out of scope from the Grow Customer Success team. If a partner wants to pursue this route, here are some expectations to set:

- You'll need a developer or some very technical individual to set it up. A nontechnical person will most likely not be able to understand nuanced API documentation.
- It takes time and testing to verify the connection.
- The Grow Custom REST connector only supports APIs requiring a basic or OAuth protocol
- The connector doesn't support any pagination set up by the API. It can only pull in one page of results.

Our chat support can answer some basic troubleshooting questions.

SQLITE

DAY THREE

SQLite: https://www.udemy.com/sql-for-newbs/

SELECT

FROM

WHERE

GROUP BY

ORDER BY

SELECT

FROM

[LEFT] JOIN

WHERE

GROUP BY

HAVING

ORDER BY

LIMIT

SQLite Date Filtering

DATE()

JULIANDAY()

STRFTIME()

https://www.sqlite.org/lang_datefunc.html

SQLite: DATE()

WHERE `dateColumn` [operator] **DATE(**‘modifier 1’, ‘modifier 2’, etc…**)**

- >
- <
- >=
- <=
- <>, !=
- IN()
- BETWEEN

- +/- days
- +/- hours
- +/- minutes
- +/- seconds
- +/- months
- +/- years
- now
- start of month
- start of year
- start of day
- weekday N

SQLite: JULIANDAY()

Julian Day is the days passed since Noon, Greenwhich, -4714-11-24

Example:

JULIANDAY(‘now’**) - JULIANDAY(**\`enrollmentDate\`**)**

(2,299,159) **-** **(2,299,113)** **=** **46**

SQLite: STRFTIME()

STRFTIME('operator', `dateColumn`)

%d	day of month: 00
%f	fractional seconds: SS.SSS
%H	hour: 00-24
%j	day of year: 001-366
%J	Julian day number
%m	month: 01-12
%M	minute: 00-59
%s	seconds since 1970-01-01
%S	seconds: 00-59
%w	day of week 0-6 with Sunday==0
%W	week of year: 00-53
%Y	year: 0000-9999

SQLite CASE statement (first type)

SELECT

CASE `columnName` **WHEN** ‘X’ **THEN** ‘Y’ [**ELSE** ‘Z’] **END**

FROM report1

http://www.sqlitetutorial.net/sqlite-case/

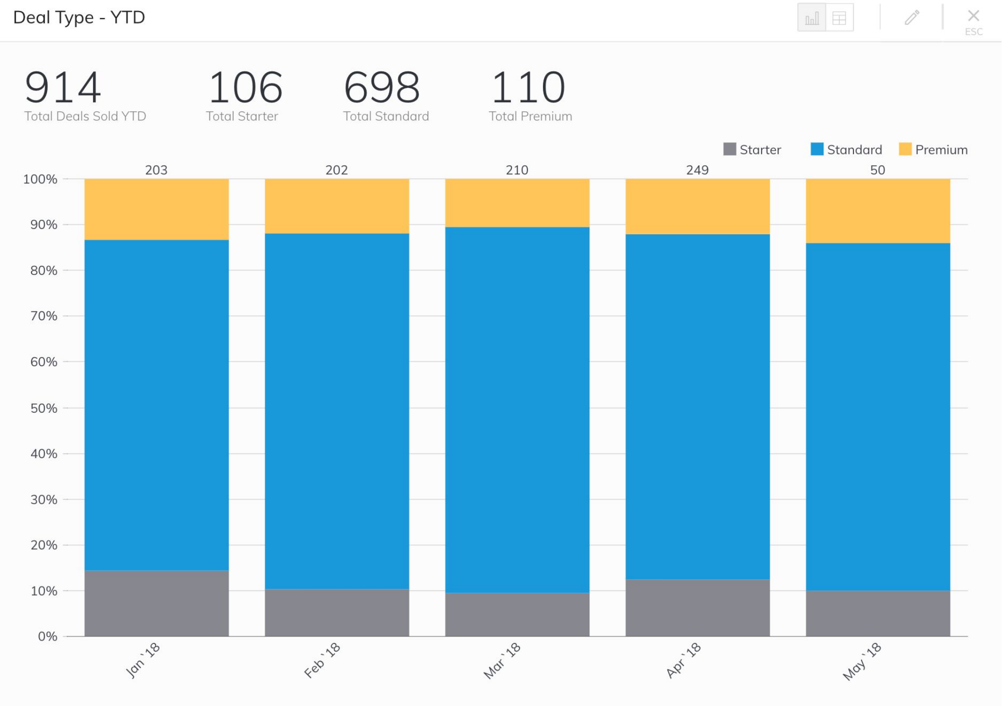
SQLite CASE statement (second type)

SELECT

CASE WHEN ‘X’ **THEN** ‘Y’ [**ELSE** ‘Z’] **END** AS ‘newColumn’,

FROM report1

Practical: SQLite Metric



- Report: Sales Data (Salesforce)
- SQL: Create new categories based on ACV.
  - Starter: < 4,500
  - Standard: Between 4,500 and 9,999
  - Professional: >= 10,000
  - Filter by current year on the close date

SQLite Metric - Hint 1/2

> Edit Metric

Metric Title

Deal Type - YTD

CHART SETTINGS | DATA SETTINGS

- Metric Description
- Data Series
- Chart Labels
- Key Value
- Filterable Columns

Deal Type - YTD

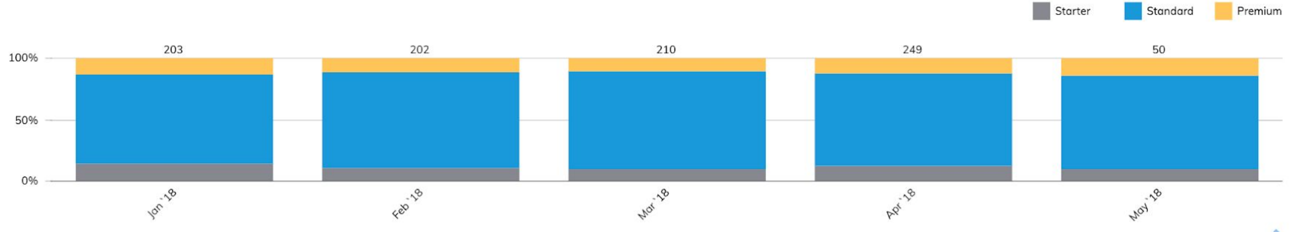
SNAPSHOT INTERVAL | 1 HR REFRESH | Export | Cancel | Save

914 Total Deals Sold YTD

106 Total Starter

698 Total Standard

110 Total Premium



REPORT1 | SPREADSHEET FUNCTIONS | ADD NEW REPORT

Add Transform | Clear All | DATA PREVIEW | OPTIONS

	A	B	C	D	E	F	G	H	I
1	Month	Starter	Standard	Premium	Total Deals Sold	Overall Sum of Total Deals Sold	Overall Sum of Starter	Overall Sum of Standard	Overall Sum of Premium
2	2018-01	29	147	27	203	914	106	698	110
3	2018-02	21	157	24	202	914	106	698	110
4	2018-03	20	168	22	210	914	106	698	110
5	2018-04	31	188	30	249	914	106	698	110
6	2018-05	5	38	7	50	914	106	698	110
7									
8									
9									

SQLite Metric - Hint 2/2

```
SELECT
	SUBSTR(`CloseDate`,1,7) AS Month,

	COUNT(CASE WHEN (`ACV`*1.00) <= 4500 THEN `ACV` END) AS 'Starter',

	COUNT(CASE WHEN (`ACV`*1.00) BETWEEN 4500 AND 10000 THEN `ACV` END) AS 'Standard',

	COUNT(CASE WHEN (`ACV`*1.00) >= 10000 THEN `ACV` END) AS 'Premium'

FROM report

WHERE `CloseDate` BETWEEN DATE('now','start of year') AND DATE('now')
GROUP BY 1
ORDER BY 1
;
```