



DATA DAY OUT

Meet the Devs: Innovations Towards Data Ubiquity

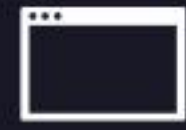
Ken Wong

Director, Product Management, Analytics

Tableau



Desktop



Browser



Mobile



Embedded

Collaboration

Analytics

Content Discovery

Governance

Data Prep

Data Access

Security & Compliance

Extensibility & APIs

Deployment



ON-PREMISES



CLOUD



HOSTED



WINDOWS



LINUX



MAC



MULTI-TENANT

2018.2

2018.3

2019.1

2019.2



2018.2

2018.3

2019.1

2019.2



2018.2

2018.3

2019.1

2019.2



Tableau 2019.2

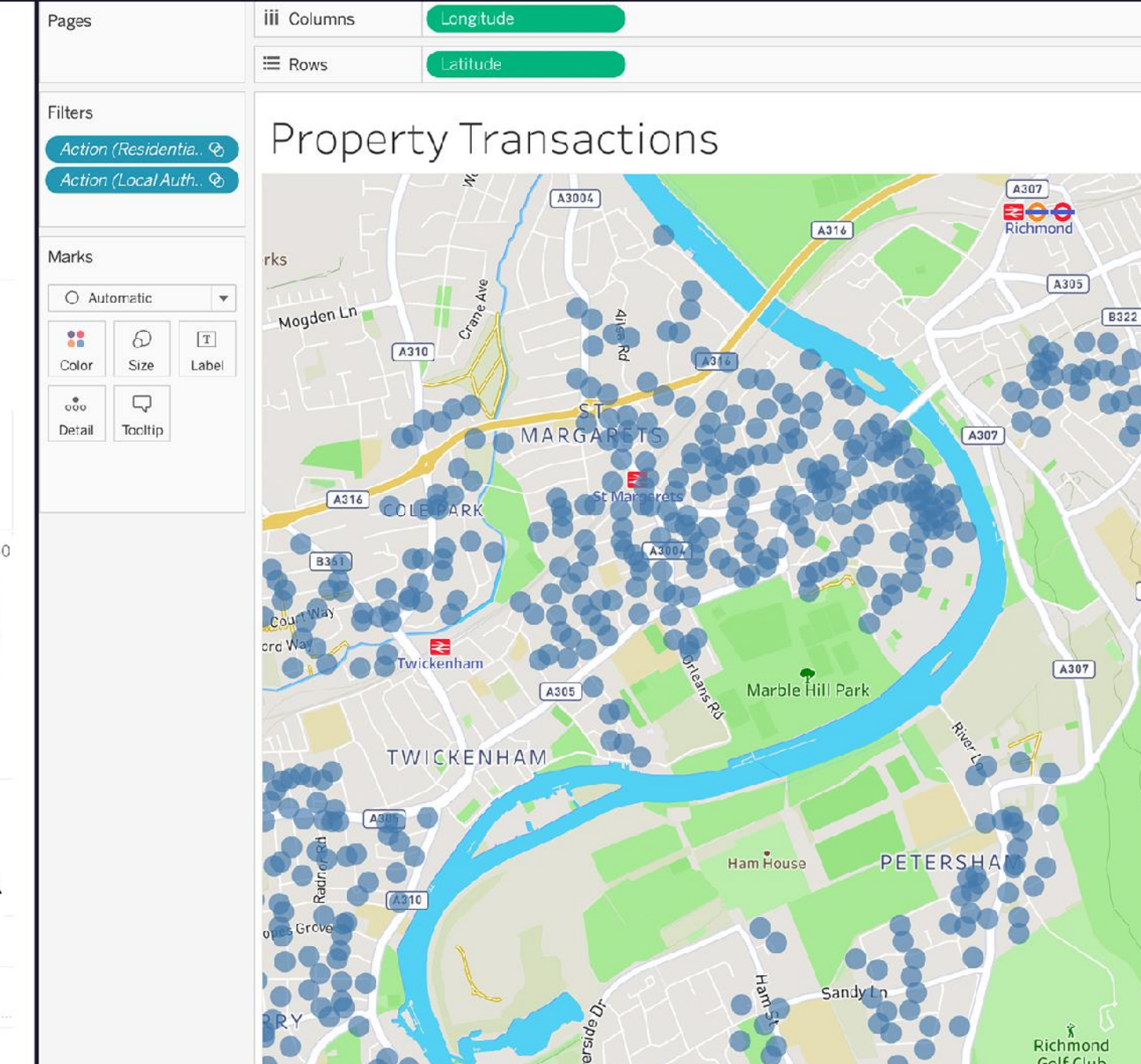
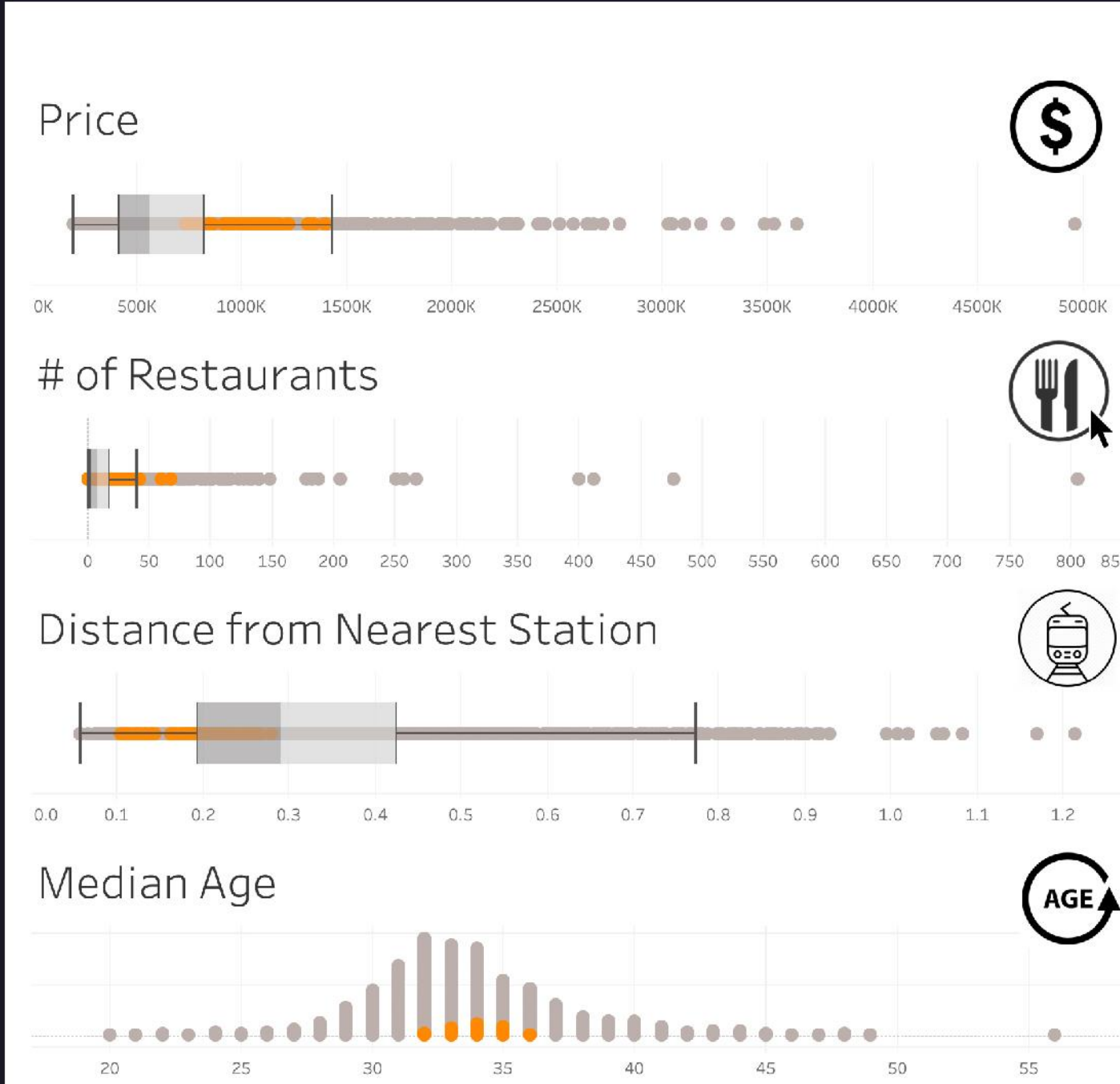
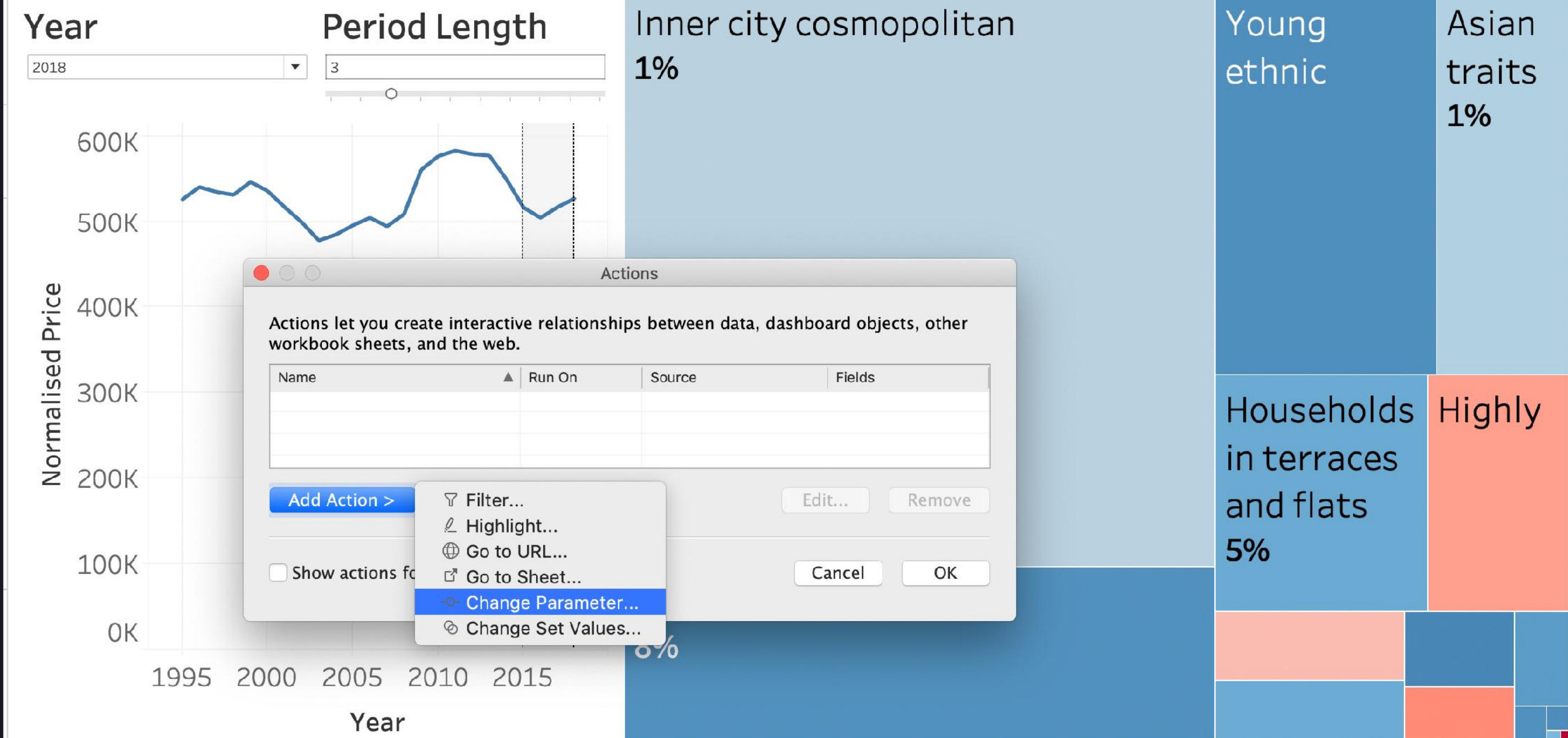
Vector maps

Spatial calculations

Parameter actions

Show/hide containers

Auto-layout mobile





For Everyone



For Everyone



At Scale



For Everyone



At Scale



Trusted Data



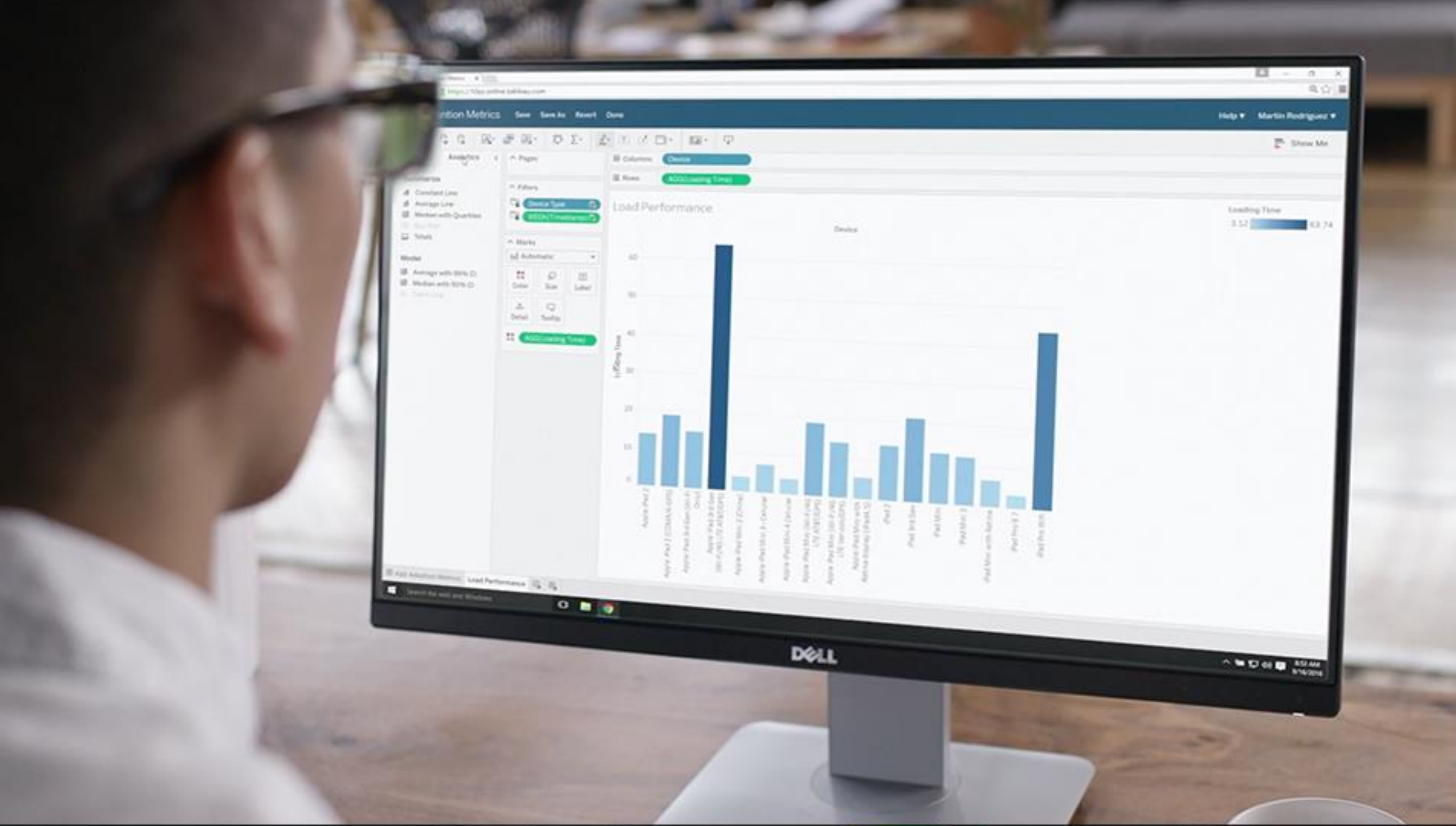
For Everyone



At Scale



Trusted Data



hist_datasources historical_events

Join

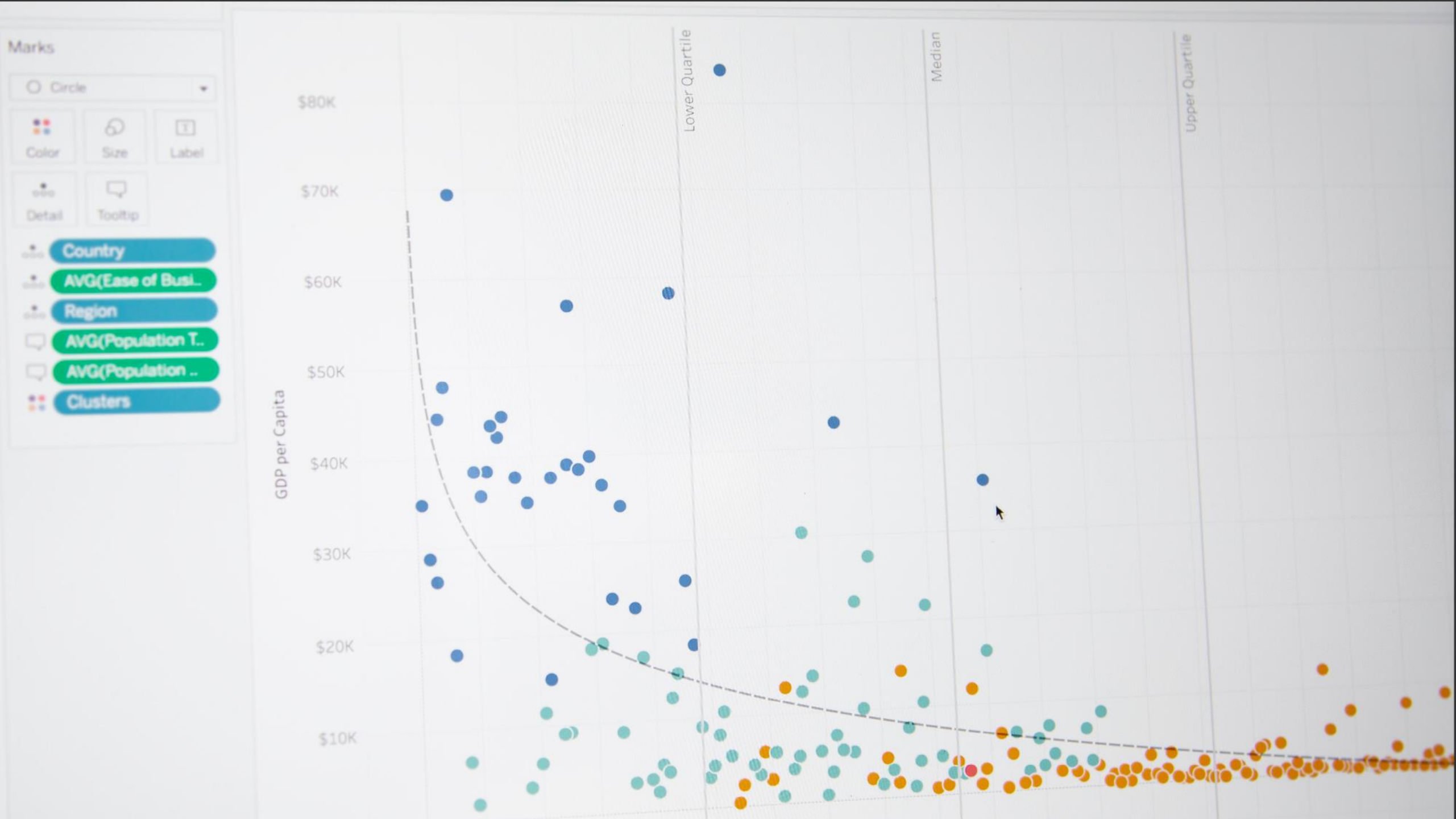
Inner Left Right Full Outer

Data Source historical_events

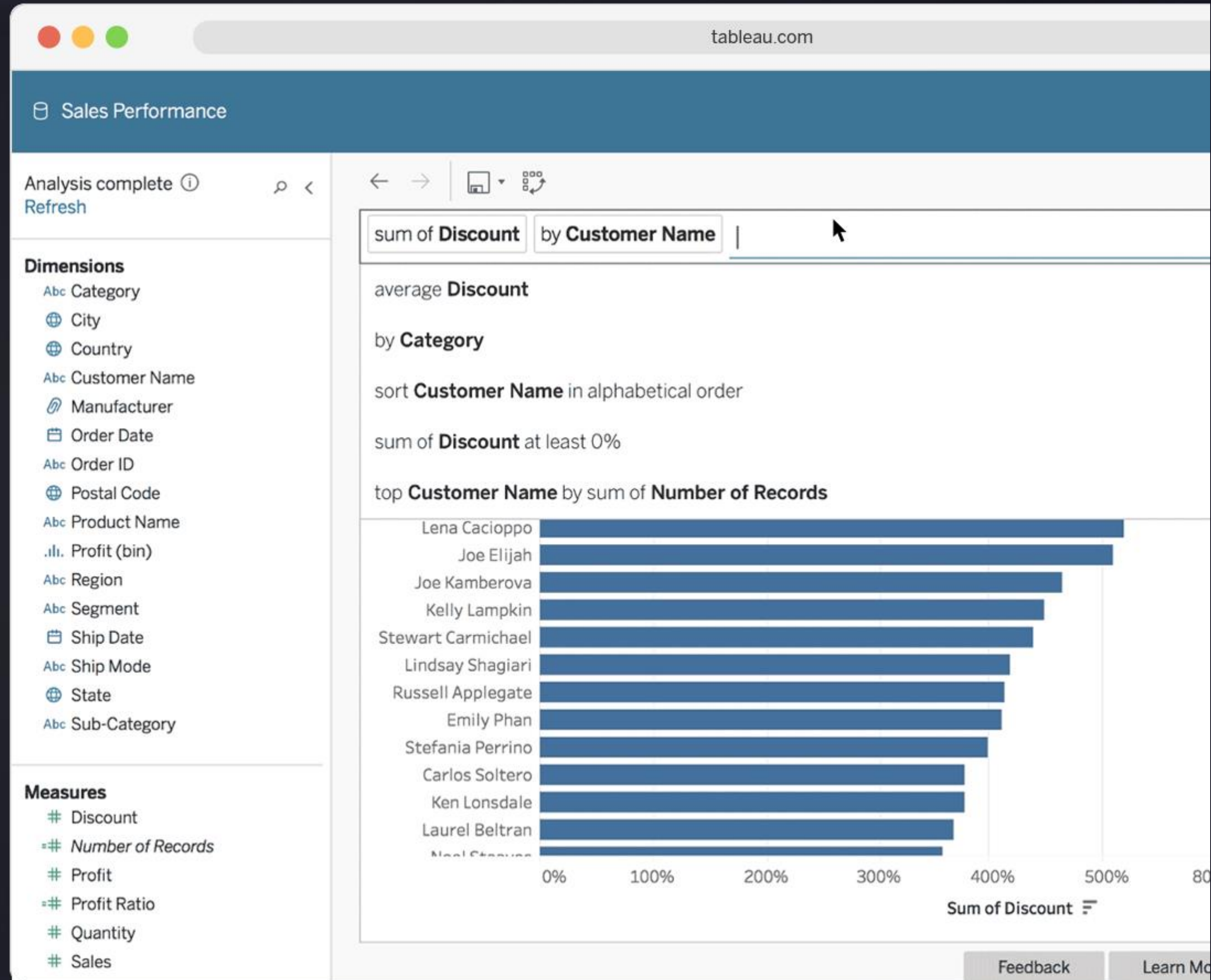
Id = Hist Datasource Id

Add new join clause

Sort	hist_datasources	hist_datasources	hist_datasources	hist_datasources	hist_datasources
	Id	Datasource Id	Name	Repository Url	Revision



Ask Data



Ask Data

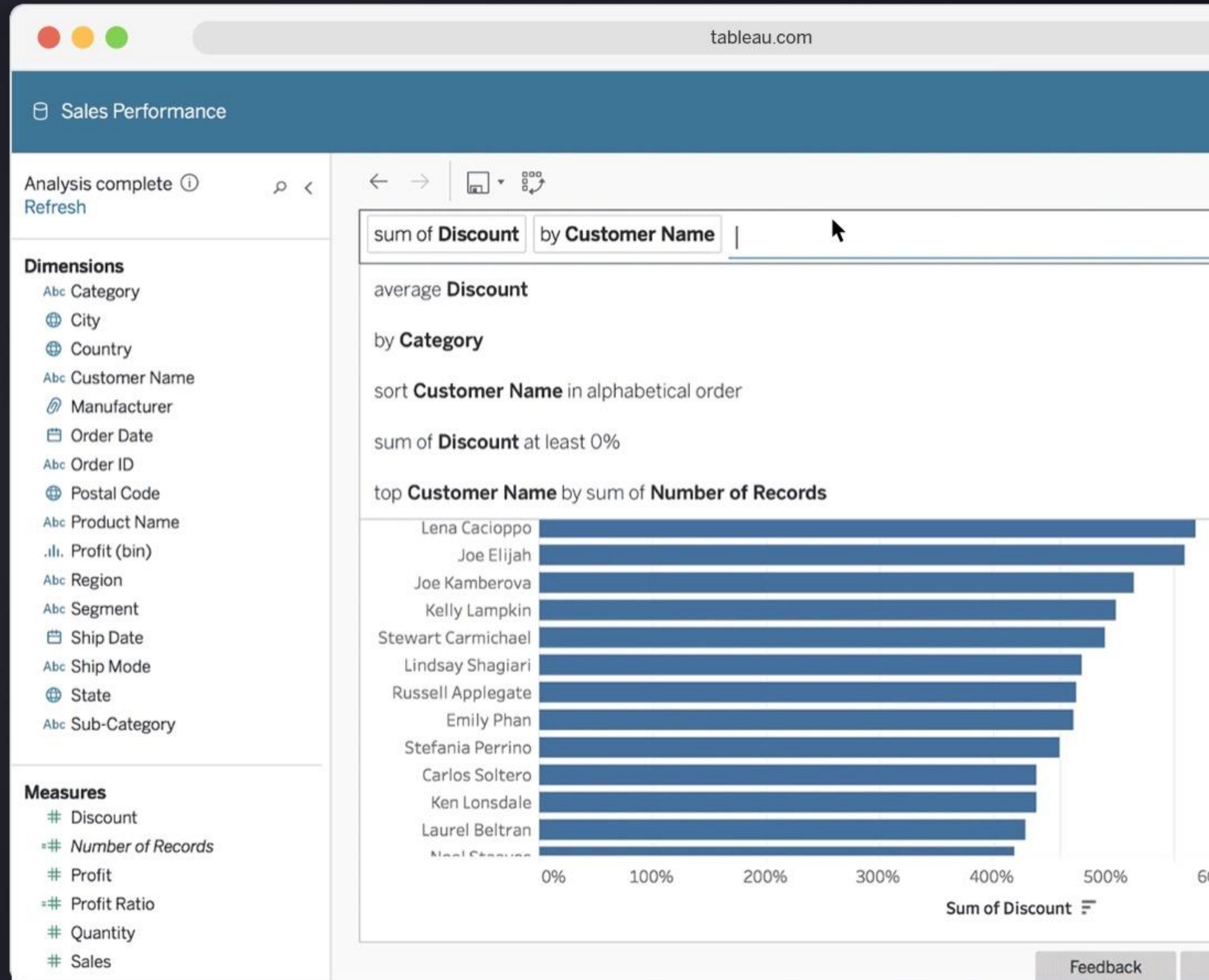
Create calculations

Ask more powerful questions

Get insights with usage analytics

Ask questions directly on a viz

Embed Ask Data into your portals



Go from what....



... to why



Tamara Chand ⓘ

SUM(Sales) SUM(Profit)

\$8,981 SUM(Profit) is higher than expected. Possible explanations:

A Single Extreme Value

A single record with a value of \$8,400 is increasing SUM(Profit).

This mark contains 12 records. One record with a value of \$8,400 is increasing SUM(Profit). If this extreme value is excluded, SUM(Profit) changes from \$8,981 to \$581.

Average Value of Records

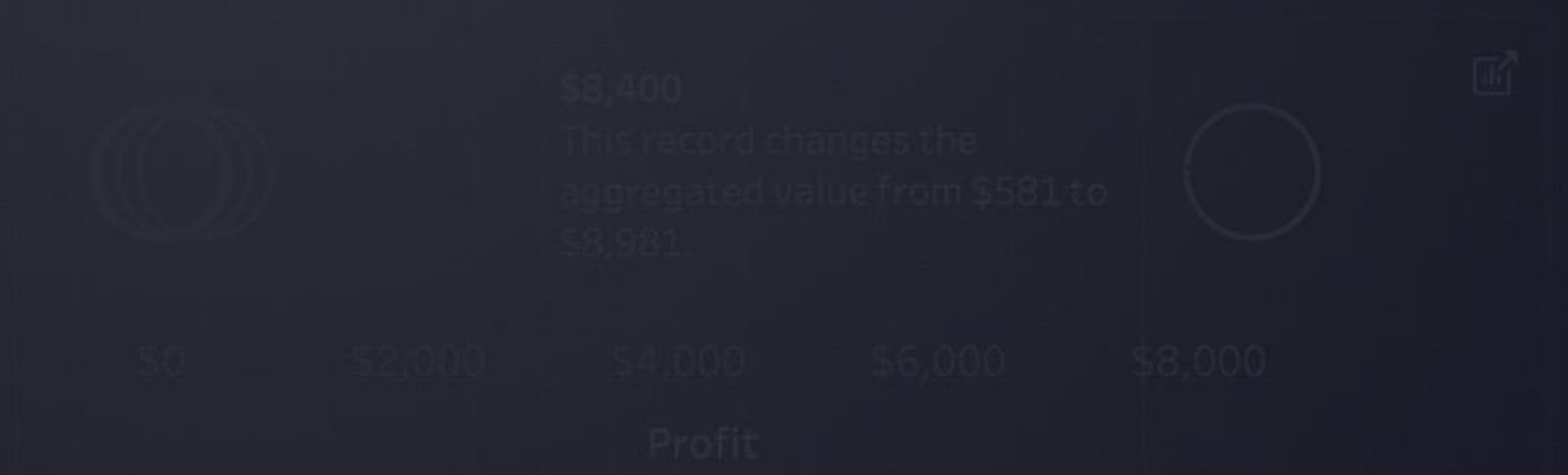
This mark has a higher than expected average Profit.

Explain Data

View Full Data ☰

Profit	Category	City	Country	Customer Name	Days to
\$8,400	Technology	Lafayette	United States	Tamara Chand	7

Distribution of Row Values Within SUM(Profit)

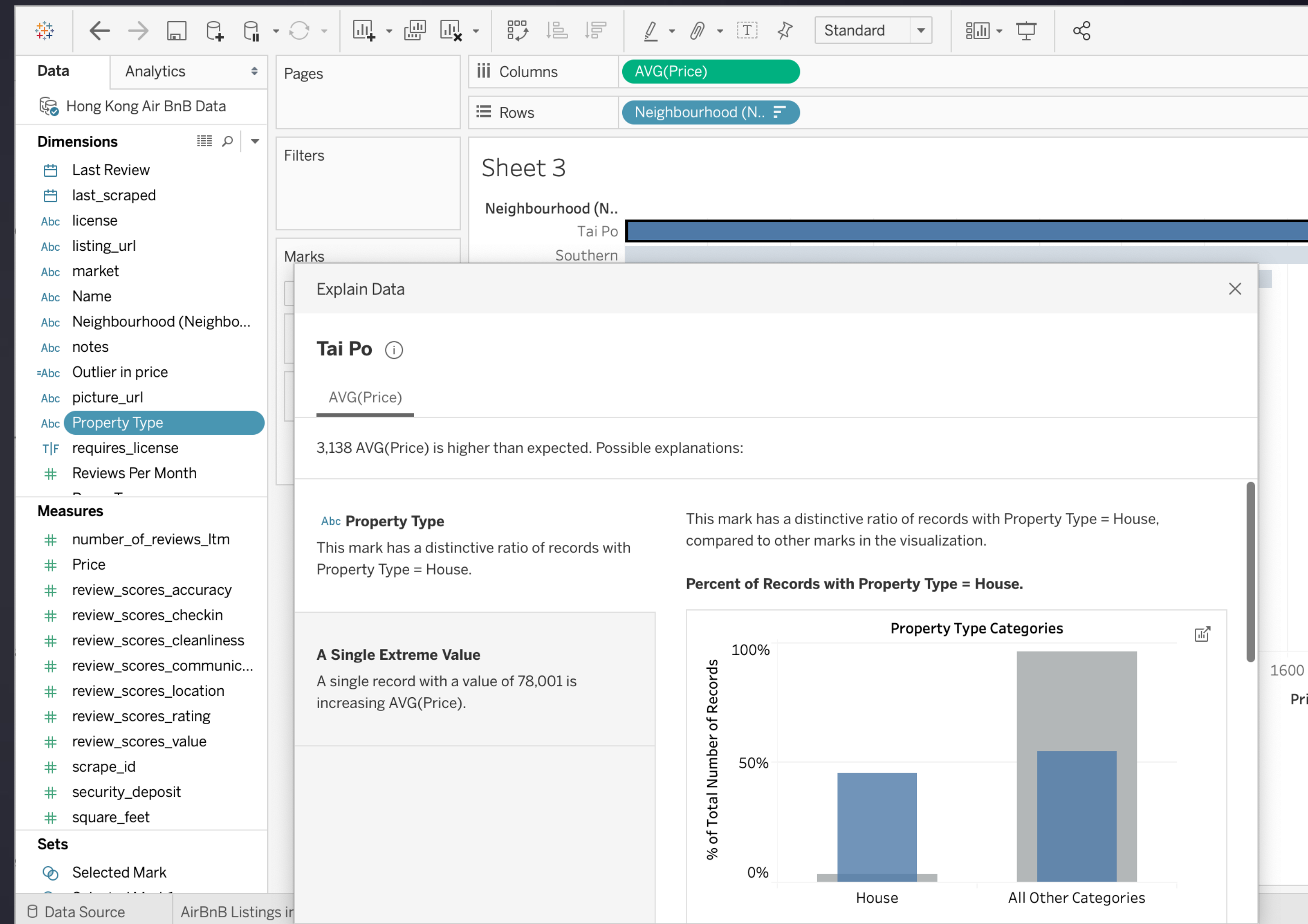


Explain Data

Faster Discovery

Better Insights

Seamless Exploration





For Everyone



At Scale



Trusted Data



For Everyone



At Scale



Trusted Data

D ♥ T A



Schroders

Honeywell



JPMORGAN CHASE & CO.

Security

Scalability

Efficiency

OpenID authentication

JavaScript API

Data Extract API

Project controlled permissions

Smart Card support

Parallel queries

Query Fusion

Administrative Views

High Availability

Multi-tenant

2016

Unattended install of Server

Conditional subscriptions

Site SAML

Desktop License Reporting

Disk Performance Monitor

Extract Failure Notification

Revision History

Document API

Mobile Device Management

Fast repository failover

Low disk-space monitor

Oracle VPD Support

OpenID authentication

2017

508 Compliance

SSO Support for SAP BW

Guest Access per Site

LogShark

Data Driven Alerting

Unattended install of Server

Conditional subscriptions

Site SAML

Desktop License Reporting

Disk Performance Monitor

Extract Failure Notification

Revision History

Document API

Mobile Device Management

Fast repository failover

2018

Encryption at Rest

Tableau Prep Conductor

Tableau Online Admin Insights

Redesigned mobile app

Export to PowerPoint

Google Ads Connector

OAuth Enabled for Snowflake connector

Azure SQL Data Warehouse Connector

Secure TabPy connections

Secure RServe Connections

Okta Integration improvements

Connect to DropBox, OneDrive, Google Drive

New data driven alerts view

Site start page

508 Compliance

SSO Support for SAP BW

2019

AWS Server Performance

Environment Servers Insights Status

6/4/19 5:25-6:25 pm All Servers

Processor



Memory

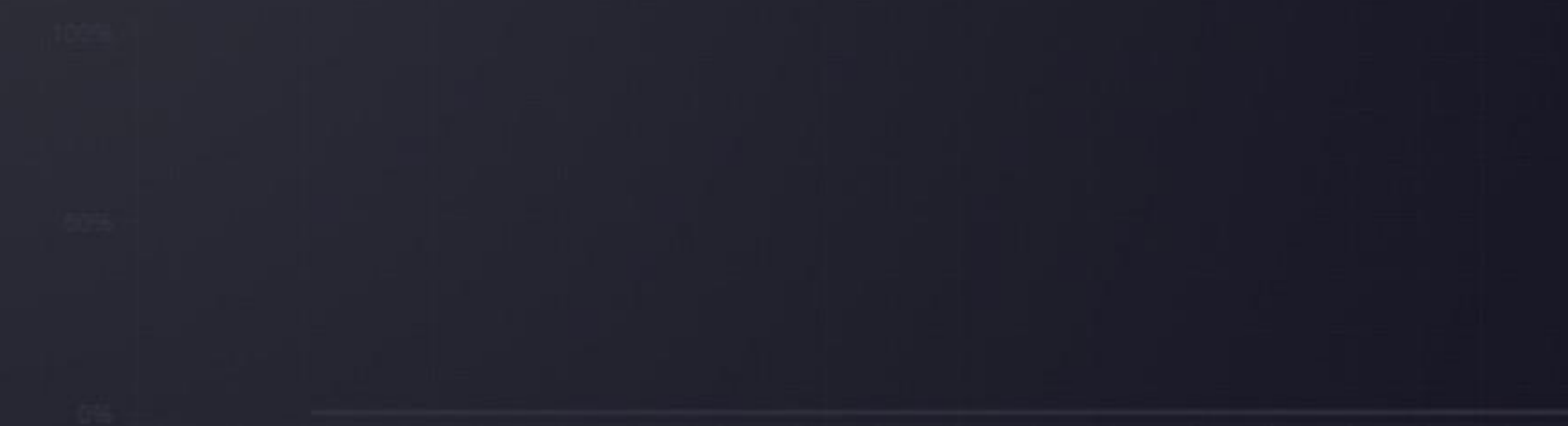


Project McKinley

Disk Queue

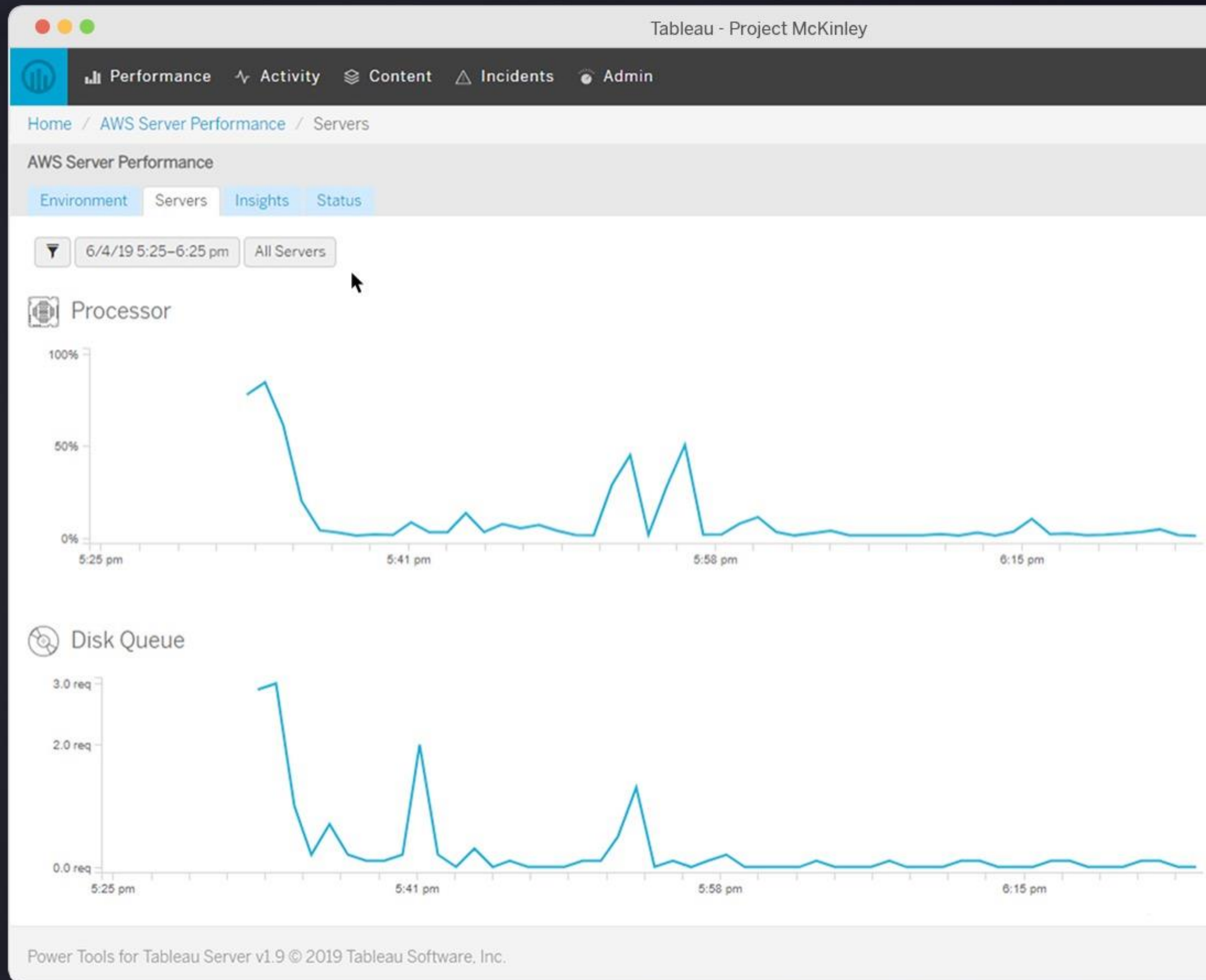


Network



Project McKinley

Improved scalability



Project McKinley

Improved scalability

Increased operational efficiency

The screenshot shows the Tableau Deployment interface for 'Project McKinley'. The window title is 'Tableau - Project McKinley'. The main header is 'Deployment'. The left sidebar contains a navigation menu with sections: 'Select Plan', 'Planning' (with sub-items: Servers, Source Projects, Workbooks, Selection, Mapping, Transformations, Data Source Transformations, Publish Options), 'Published Data Sources' (with sub-items: Selection, Mapping, Transformations, Publish Options), 'Scripts', 'Plan Options', and 'Deployment' (with sub-item: Run Deployment). The 'Servers' sub-item is highlighted.

The main content area is titled 'Tableau Servers' and shows a deployment configuration step. At the top, it indicates the deployment is moving from `http://tmikoleit@tmikoleit1:8000/#` to `http://tmikoleit@ec2amaz-mhtfiua:80/#`. A 'Need help? Ask a question.' button is in the top right.

The configuration is split into two columns: 'Source' and 'Destination'. Both columns have a dropdown menu set to 'Import from Saved Connection'. Below each dropdown are fields for 'Server URL', 'Username', 'Password', and 'Site'. The 'Source' fields contain: 'http://tmikoleit1:8000', 'tmikoleit', a masked password, and 'Default'. The 'Destination' fields contain: 'http://ec2amaz-mhtfiua', 'tmikoleit', a masked password, and 'Default'. Each 'Password' field has a 'Save password' checkbox checked. A 'Change Site' button is located below the 'Site' field in both columns.

At the bottom left of the main area, there is a link: 'Add or edit saved connections'. At the bottom right, there are 'Back' and 'Next' navigation buttons.

Power Tools for Tableau Server v1.9 © 2019 Tableau Software, Inc.

Project McKinley

Improved scalability

Increased operational efficiency

Enhanced security

The screenshot shows the Tableau Project McKinley settings interface. The left sidebar contains navigation options: Home, Explore, Favorites, Recents, External Content, Users, Groups, Schedules, Jobs, Tasks, Site Status, and Settings (highlighted). The main content area is titled 'Tableau - Project McKinley' and has a search bar. The 'General' tab is selected, showing settings for 'Extract Encryption at Rest', 'Derived Permissions', 'Offline Favorites for Tableau Mobile', and 'Flow Run and Extract Job Failure Notifications'. A 'Revert' button is visible in the top right.

Tableau - Project McKinley

Search

General Extensions

Revert

Extract Encryption at Rest

You can specify whether extracts stored on this site are encrypted.

- Disable: Do not allow encrypted extracts on this site.
- Enable: Allow users to optionally encrypt extracts on this site.
- Enforce: All extracts published and stored on this site are encrypted.

Encryption is in progress...

57/129 Encrypted
72/129 Unencrypted

Derived Permissions

Through Tableau's APIs, authenticated users can query for relationships and schemas of objects on or referred to by workbooks and the tables they reference. By default, only administrators have permissions to query for tables and databases.

Enable derived permissions if you would like more users to be able to query for tables and databases. Derived permissions allow any authenticated user to query for tables and databases that they already had permissions to see in some Tableau workbook or data source. Please see the documentation for more details.

Enable derived permissions

Offline Favorites for Tableau Mobile

Let users access favorite workbooks and views, even if they're disconnected from the server.

Enable offline favorites

Flow Run and Extract Job Failure Notifications

Enable email notifications to inform content owners when flow or extract jobs fail. Content owners will receive

AWS Server Performance

Environment Servers Insights Status

6/4/19 5:25-6:25 pm All Servers

Processor



Memory

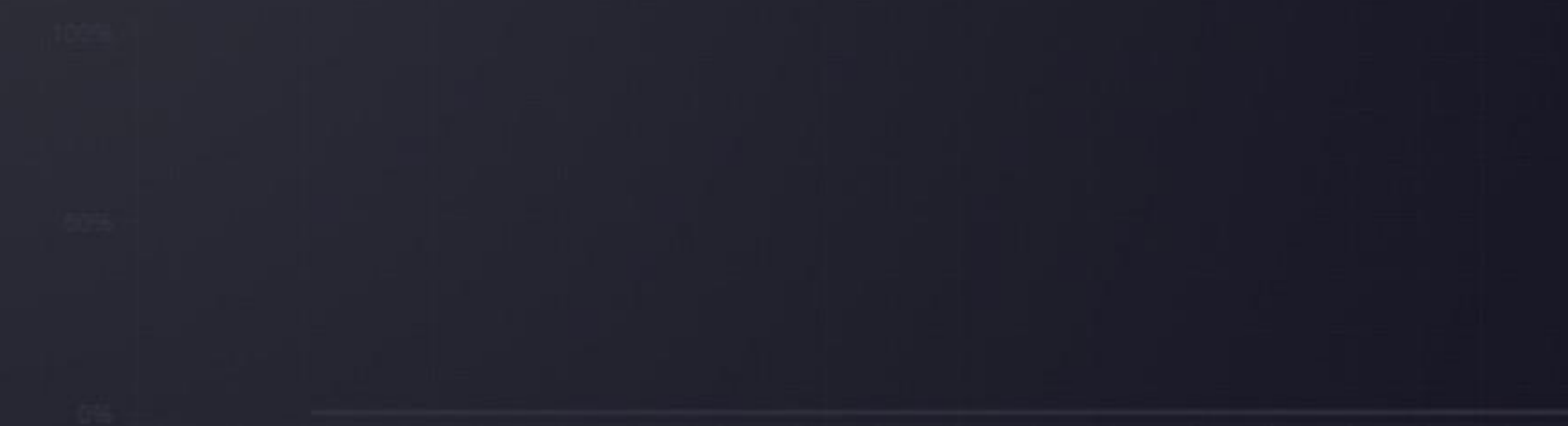


Project McKinley

Disk Queue



Network





For Everyone



At Scale



Trusted Data



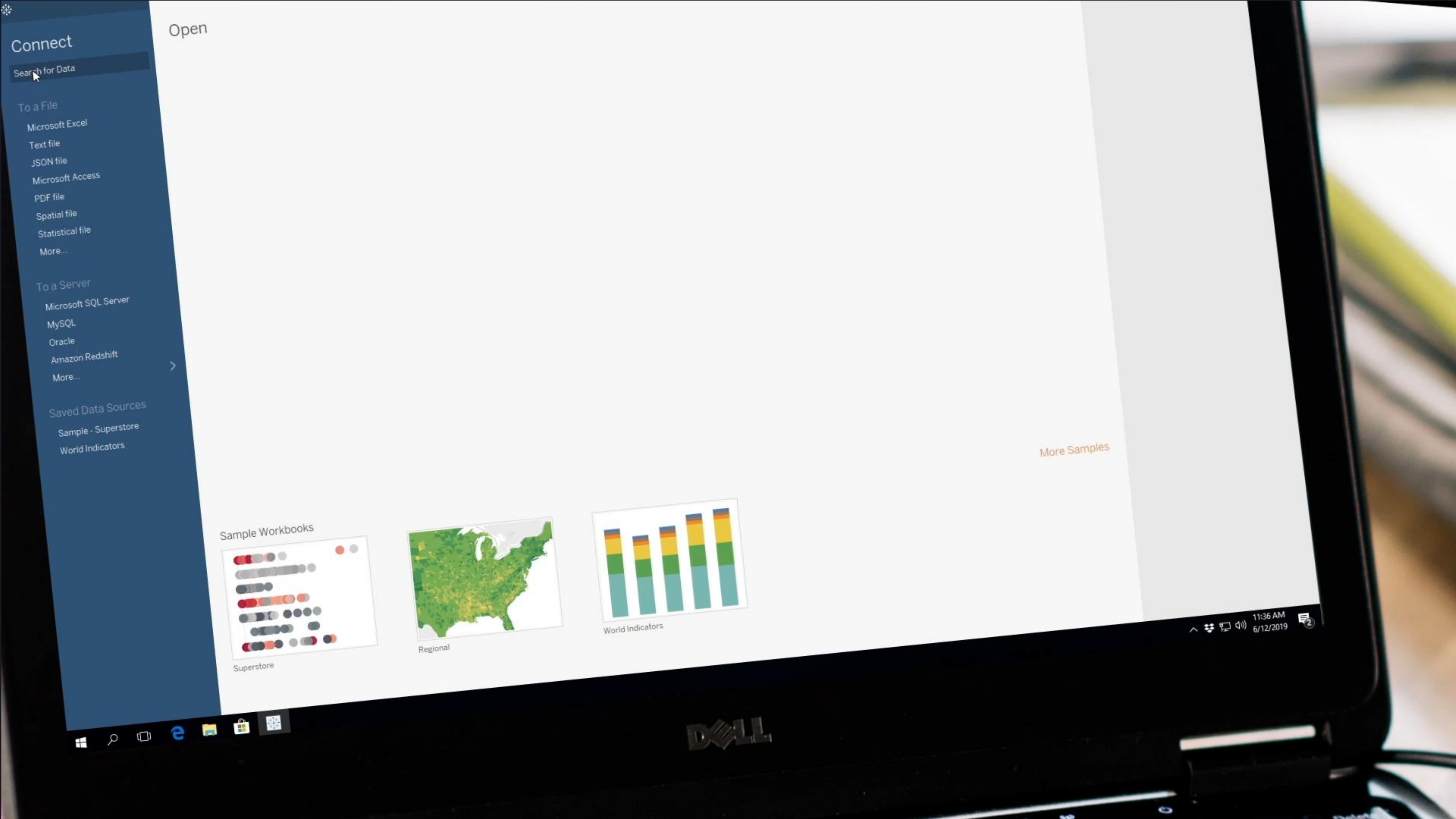
For Everyone



At Scale



Trusted Data



Open

Connect

Search for Data

To a File

- Microsoft Excel
- Text file
- JSON file
- Microsoft Access
- PDF file
- Spatial file
- Statistical file
- More...

To a Server

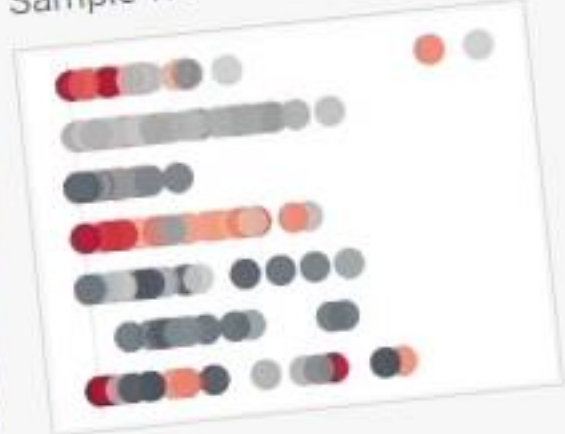
- Microsoft SQL Server
- MySQL
- Oracle
- Amazon Redshift
- More...

Saved Data Sources

- Sample - Superstore
- World Indicators

[More Samples](#)

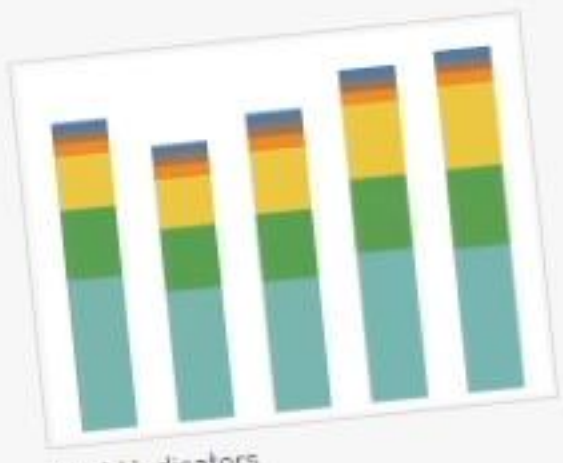
Sample Workbooks



Superstore



Regional



World Indicators



11:36 AM
6/12/2019





22 Fields 228 Rows Filter Values... Create Calculated Field...

Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Customer Name	Segment
1	CA-2018-100412	01/01/2018, 1...	01/01/2018, 1...	First Class	AA-10480	Aaron Smaying	Consumer
2	CA-2018-100426	05/01/2018, 1...	05/01/2018, 1...	Same Day	AB-10105	Adam MPerennials	Contractor
3	CA-2018-100622	09/01/2018, 1...	09/01/2018, 1...	Second Class	AB-10165	Adam Shillingsburg	Corporate
4	CA-2018-100902	01/01/2019, 1...	01/01/2019, 1...	Standard Class	AC-10450	Adrian MPerennials	Consumer
5	CA-2018-101042				AF-10870	Adrian Hane	Contractor
6	CA-2018-101210				AG-10330	Alan Barnes	Corporate
7	CA-2018-101273				AG-10675	Alan Hwang	Consumer
8	CA-2018-101483				AG-10900	Alex Grayson	Contractor
9	CA-2018-102204				AH-10075	Amy Cox	Corporate
10	CA-2018-102309				AH-10120	Amy Hunt	Consumer
11	CA-2018-102554				AH-10210	Andrew Allen	Contractor
12	CA-2018-102610				AH-10465	Angele Hood	Corporate

Sales	Quantity	Profit	Discount	Region	State	Row ID	Order ID	Order Date	Ship Date	Ship Mode	Customer ID	Customer Name	Segment
15.552	3	5.4432	0.2	South	North Carolina	13	CA-2018-114412	04/15/2018, 12:00:00 AM	04/20/2018, 12:00:00 AM	Standard Class	AA-10480	Andrew Allen	Consumer
95.616	2	9.5616	0.2	South	Florida	44	CA-2018-139619	09/19/2018, 12:00:00 AM	09/23/2018, 12:00:00 AM	Standard Class	ES-14080	Erin Smith	Corporate
801.96	2	33.2156	0	South	South Carolina	86	CA-2018-140088	01/28/2018, 12:00:00 AM	05/30/2018, 12:00:00 AM	Second Class	PO-18865	Patrick O'Donnell	Consumer
74.112	8	17.6016	0.2	South	North Carolina	107	CA-2018-119004	11/23/2018, 12:00:00 AM	11/28/2018, 12:00:00 AM	Standard Class	JM-15250	Janet MPerennials	Consumer
27.992	1	2.0994	0.2	South	North Carolina	108	CA-2018-119004	11/23/2018, 12:00:00 AM	11/28/2018, 12:00:00 AM	Standard Class	JM-15250	Janet MPerennials	Consumer
8.304	1	1.0738			North Carolina		CA-2018-119004	11/23/2018, 12:00:00 AM	11/28/2018, 12:00:00 AM	Standard Class	JM-15250	Janet MPerennials	Consumer



Cluster Metrics

Apps Submitted

User Metrics for dr.who

Apps Submitted

Show 20 entries

ID

application

application

application

application

application

application

application

Account

application

application

application

application

application

application

application

application

application

application

Country	Date	Region	Section	Source	Chosen Measure	Filter	Comm	Pages View	Time on Page	Total	Unit	Visitors
India	11/15/2014	Asia	Examples	Facebook	264	60	1,169.47	1,184.00	1,167.50	1,182.35	60	2.6
Singapore	11/15/2014	Asia	Examples	Facebook	490	200	1,737.74	1,769.99	1,737.40	1,765.44	200	2
India	11/15/2014	Asia	Examples	Org. Page	162	60	619.52	629.41	619.23	625.20	60	3.1
United Kingdom	11/15/2014	Europe	Examples	Facebook	548	590	1,046.40	1,049.70	1,044.90	1,046.72	40	1.8
United Kingdom	11/15/2014	Europe	Examples	LinkedIn	108	140	453.22	458.86	452.77	455.55	80	2
United Kingdom	11/15/2014	Europe	Examples	LinkedIn	180	100	289.03	296.17	286.40	294.25	40	1.1
United Kingdom	11/15/2014	Europe	Examples	LinkedIn	153	100	335.96	342.02	333.82	335.14	80	2.8
Slovakia	11/15/2014	Europe	Examples	LinkedIn	220	100	711.37	719.69	709.33	718.38	100	2.7
United Kingdom	11/15/2014	Europe	Examples	LinkedIn	178	100	1,186.10	1,190.10	1,184.38	1,189.00	40	1.8
United Kingdom	11/15/2014	Europe	Examples	LinkedIn	178	100	1,754.37	1,764.99	1,754.37	1,758.40	40	1.1
United States	11/15/2014	North America	Examples	LinkedIn	622	60	622.60	623.17	614.15	618.84	10	4.2
United States	11/15/2014	North America	Examples	LinkedIn	1,048	140	1,048.14	1,054.95	1,044.77	1,051.60	10	3.8
United States	11/15/2014	North America	Examples	LinkedIn	455	100	455.11	456.63	449.40	451.12	10	3.3
United States	11/15/2014	North America	Examples	LinkedIn	294	80	294.82	297.26	293.05	295.00	10	3.5
United States	11/15/2014	North America	Examples	LinkedIn	338	100	338.03	339.78	333.00	334.45	16	7
United States	11/15/2014	North America	Examples	LinkedIn	718	100	718.38	719.06	709.12	709.50	10	3.4
United States	11/15/2014	North America	Examples	LinkedIn	1,182	100	1,182.26	1,187.29	1,175.61	1,179.91	10	1.8
United States	11/15/2014	North America	Examples	LinkedIn	1,757	80	1,757.88	1,761.82	1,748.87	1,754.24	10	6.2
United States	11/15/2014	North America	Examples	LinkedIn	615	100	615.93	620.34	609.11	612.42	40	1.7
United States	11/15/2014	North America	Examples	LinkedIn	1,049	100	1,049.37	1,058.37	1,048.05	1,057.39	10	1.2
United States	11/15/2014	North America	Examples	LinkedIn	451	100	451.69	452.16	445.73	447.70	10	5.2
United States	11/15/2014	North America	Examples	LinkedIn	295	100	295.42	298.59	294.39	296.00	10	2.8
United States	11/15/2014	North America	Examples	LinkedIn	333	100	333.25	341.50	332.31	341.40	10	2.0



Data Source

Opportunity

Id

=

Portal_Account_Id...

Add new join clause



Search

Catalog Databases

Default

Select All

- Home
- Explore
- Favorites
- Recents
- Catalog
- Users
- Groups
- Schedules
- Jobs
- Tasks
- Site Status
- Settings

Type	Name	Server & Path	Connection Type
File	Branch Ownership 2017	google-sheets	google-sheets
Database	edh5sst.dev.tsi.lan:21050	edh5sst.dev.tsi.lan:21050 (edh5sst.dev.tsi.lan)	hadoophive
Database	comics	comics (localhost.tsi.lan)	mysql
File	C:\Users\Desktop\Teched\List of Drivers\2017	C:\Users\Desktop\Teched\List of Drivers\2017	pdf
Database	dev	dev (localhost.tsi.lan)	astermcluster
Database	dev	dev (localhost.tsi.lan)	vertica
Database	dev	dev (localhost.tsi.lan)	paracel
Database	ec2-54-150-75-126.compute-1.amazonaws.com:10000	ec2-54-150-75-126.compute-1.amazonaws.com:10000	awshadoophive
Database	exasol42.test.tsi.lan:8553	exasol42.test.tsi.lan:8553 (exasol42.test.tsi.lan)	exasolution
Database	Prisk_Data	Prisk_Data (gotkxosol.test.tsi.lan)	googlecloudsql
File	Global Indicators.tde	~/My Tableau Prep Repository/Datasources/Global Indicators.tde	dataengine
Database	googleapis.com/bigquery	googleapis.com/bigquery (googleapis.com/bigquery)	bigquery
Database	hadoophorton20-unpw.test.tsi.lan:15000	hadoophorton20-unpw.test.tsi.lan:15000	hortonworkshadoophive
Database	hadoopm540.test.tsi.lan:15000	hadoopm540.test.tsi.lan:15000 (hadoopm540.test.tsi.lan)	maprhadoophive
Database	hana.test.tsi.lan:30015	hana.test.tsi.lan:30015 (hana.test.tsi.lan)	saphana

Tableau Catalog

Tableau Catalog

Visibility

The screenshot shows the Tableau Catalog interface. The left sidebar contains navigation options: Home, Explore, Favorites, Recents, Catalog (selected), Users, Groups, Schedules, Jobs, Tasks, Site Status, and Settings. The main area displays a table of data sources under the 'Catalog' header, with a 'Databases' dropdown menu. A 'Select All' button is visible above the table. The table has columns for 'Type', 'Name', and 'Server / Path'. Each row includes a checkbox for selection and a blue information icon.

	Type	Name	Server / Path
<input type="checkbox"/>	File	Branch Ownership 2017	google sheets
<input type="checkbox"/>	Database	cdh5ssl.dev.tsi.lan:21050	cdh5ssl.dev.tsi.lan:21050 (cdh5ssl.dev.tsi.lan)
<input type="checkbox"/>	Database	comics	comics (localhost.tsi.lan)
<input type="checkbox"/>	File	C:/Users/Desktop/Techie-List-of-ProblemsV2.pdf	C:/Users/jschneiderei/Desktop/
<input type="checkbox"/>	Database	db	db (ncluster.test.tsi.lan)
<input type="checkbox"/>	Database	db	db (vertica.test.tsi.lan)
<input type="checkbox"/>	Database	dev	dev (paraccel.test.tsi.lan)
<input type="checkbox"/>	Database	ec2-54-160-75-126.compute-1.amazonaws.com	ec2-54-160-75-126.compute-1.amazonaws.com:10000
<input type="checkbox"/>	Database	exasol42.test.tsi.lan:8563	exasol42.test.tsi.lan:8563 (exasol42.test.tsi.lan)
<input type="checkbox"/>	Database	Frisk_Data	Frisk_Data (gcloudsql.test.tsi.lan)
<input type="checkbox"/>	File	Global Indicators.tde	~/My Tableau Prep Repository/Datasources/Global Indicators.tde
<input type="checkbox"/>	Database	googleapis.com/bigquery	googleapis.com/bigquery (googleapis.com/bigquery)
<input type="checkbox"/>	Database	hadoop Horton20-unpw.test.tsi.lan:15000	hadoop Horton20-unpw.test.tsi.lan:15000
<input type="checkbox"/>	Database	hadoopm540.test.tsi.lan:15000	hadoopm540.test.tsi.lan:15000 (hadoopm540.test.tsi.lan)
<input type="checkbox"/>	Database	hana.test.tsi.lan:30015	hana.test.tsi.lan:30015 (hana.test.tsi.lan)

Tableau Catalog

Visibility

Trust

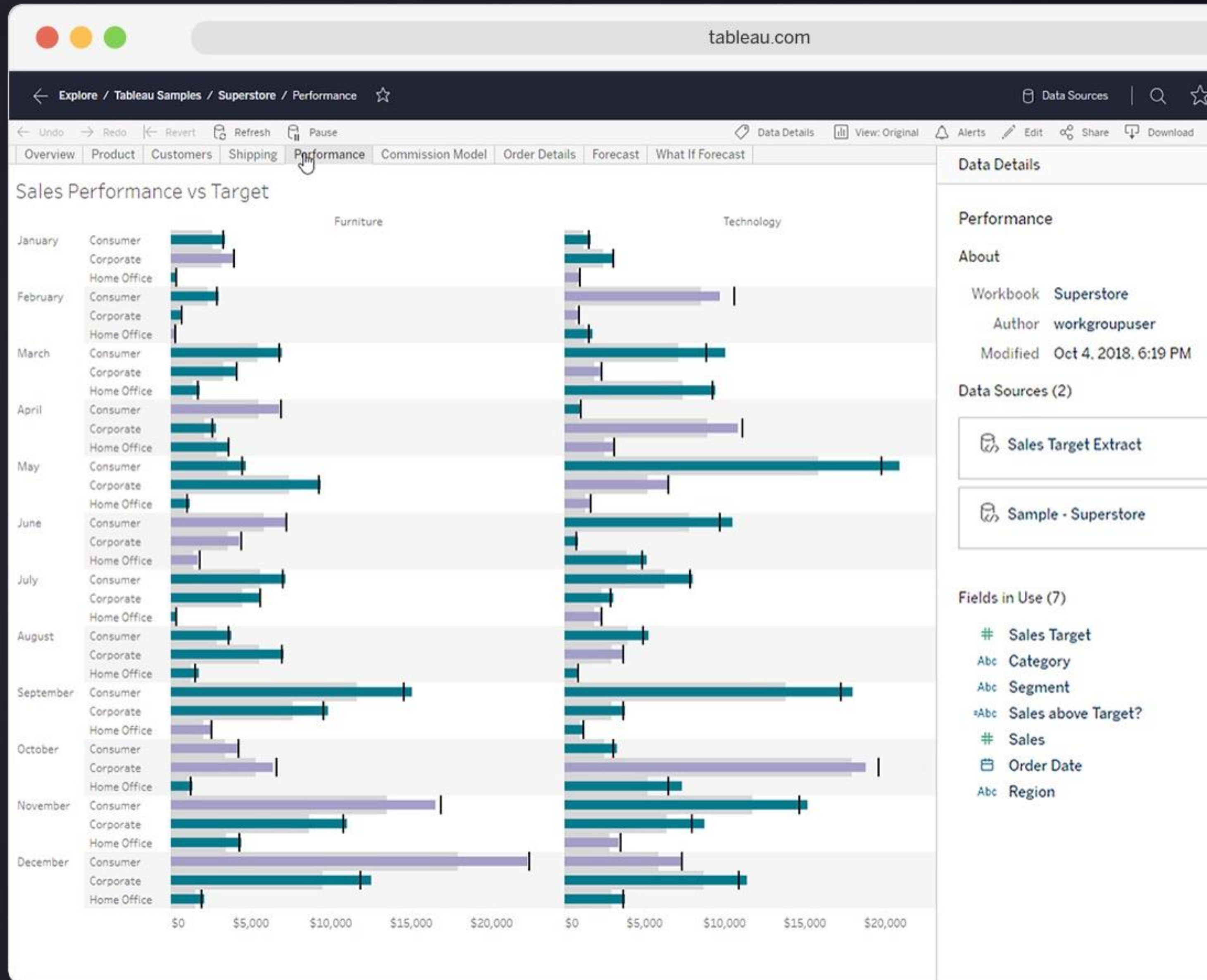
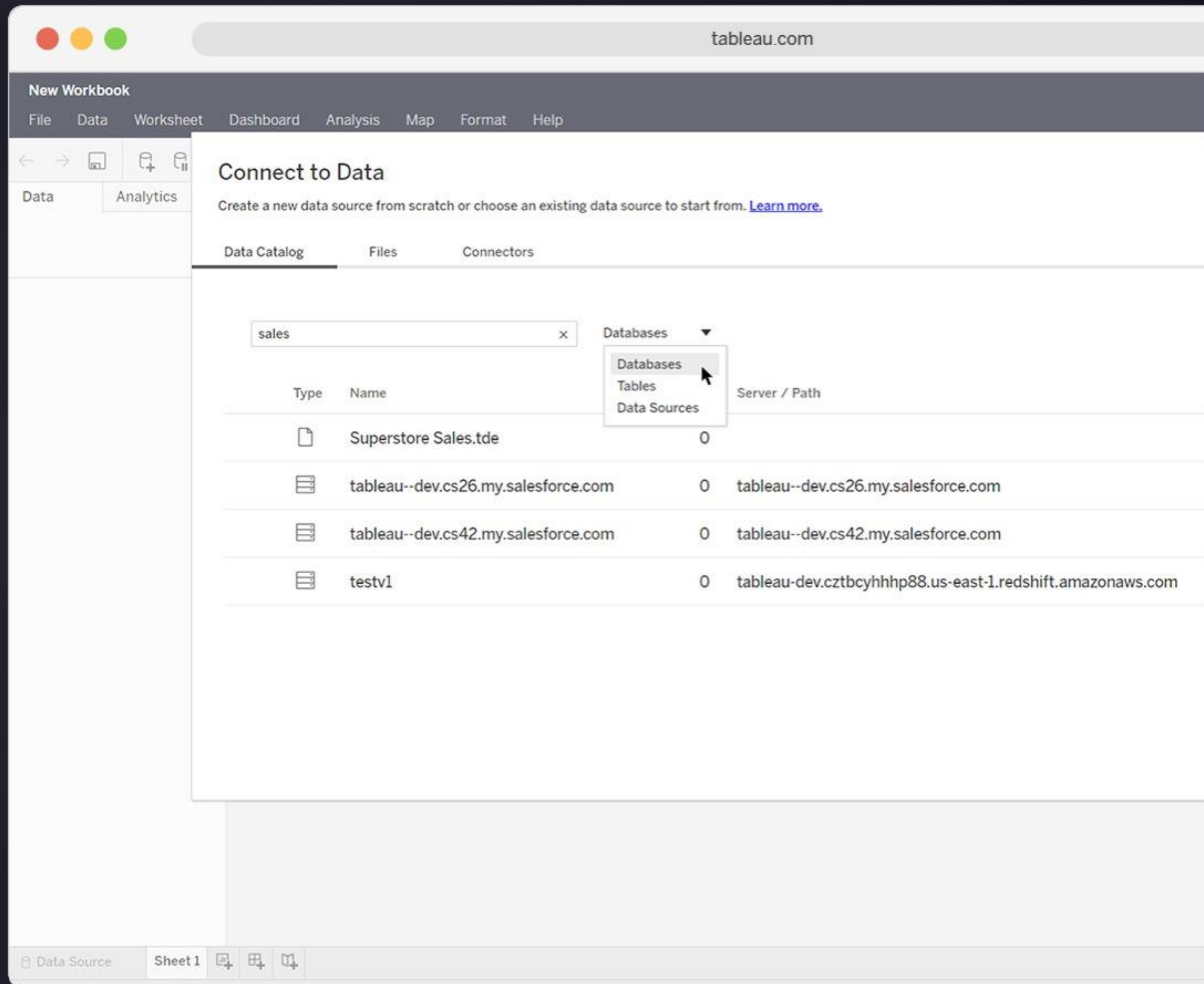


Tableau Catalog

Visibility

Trust

Discovery



Catalog

Databases

Select All

Type	Name	Server & Path	Connection Type
File	Branch Ownership 2017	google-sheets	google-sheets
Table	edh5ast.dev.tsi.lan:21050	edh5ast.dev.tsi.lan:21050 (edh5ast.dev.tsi.lan)	hadoophive
Table	comics	comics (localhost.tsi.lan)	mysql
File	C:\Users\Desktop\Teches\List of Drivers\2017	C:\Users\Desktop\Teches\List of Drivers\2017	pdf
Table	dev	dev (localhost.tsi.lan)	astercluster
Table	dev	dev (localhost.tsi.lan)	vertica
Table	dev	dev (localhost.tsi.lan)	paracel
Table	ec2-54-150-75-126.compute-1.amazonaws.com:10000	ec2-54-150-75-126.compute-1.amazonaws.com:10000	awshadoophive
Table	Prisk_Data	Prisk_Data (gcrivosel.test.tsi.lan)	googlecloudsql
Table	Global Indicators.tde	~/My Tableau Prep Repository/Datasources/Global Indicators.tde	dataengine
Table	googleapis.com/bigquery	googleapis.com/bigquery (googleapis.com/bigquery)	bigquery
Table	hadoophorton20-unpw.test.tsi.lan:15000	hadoophorton20-unpw.test.tsi.lan:15000	hortonworkshadoophive
Table	hadoopm540.test.tsi.lan:15000	hadoopm540.test.tsi.lan:15000 (hadoopm540.test.tsi.lan)	maprhadoophive
Table	hana.test.tsi.lan:30015	hana.test.tsi.lan:30015 (hana.test.tsi.lan)	saphana

Tableau Catalog



collibra®



Alation



Informatica™



Search

Catalog Databases

Default

Select All

- Home
- Explore
- Favorites
- Recents
- Catalog
- Users
- Groups
- Schedules
- Jobs
- Tasks
- Site Status
- Settings

Type	Name	Server & Path	Connection Type
File	Branch Ownership 2017	google-sheets	google-sheets
Database	edh5sst.dev.tsi.lan:21050	edh5sst.dev.tsi.lan:21050 (edh5sst.dev.tsi.lan)	hadoophive
Database	comics	comics (localhost.tsi.lan)	mysql
File	C:\Users\Tchenderet\Desktop\Teched List of Databases 2017	C:\Users\Tchenderet\Desktop\	pdf
Database	dev	dev (localhost.tsi.lan)	astermcluster
Database	dev	dev (localhost.tsi.lan)	vertica
Database	dev	dev (localhost.tsi.lan)	paracel
Database	ec2-54-150-75-126.compute-1.amazonaws.com:10000	ec2-54-150-75-126.compute-1.amazonaws.com:10000	awshadoophive
Database	exasol42.test.tsi.lan:8553	exasol42.test.tsi.lan:8553 (exasol42.test.tsi.lan)	exasolution
Database	Prisk_Data	Prisk_Data (gotkxosol.test.tsi.lan)	googlecloudsql
File	Global Indicators.tde	~/My Tableau Prep Repository/Datasources/Global Indicators.tde	dataengine
Database	googleapis.com/bigquery	googleapis.com/bigquery (googleapis.com/bigquery)	bigquery
Database	hadoophorton20-unpw.test.tsi.lan:15000	hadoophorton20-unpw.test.tsi.lan:15000	hortonworkshadoophive
Database	hadoopm540.test.tsi.lan:15000	hadoopm540.test.tsi.lan:15000 (hadoopm540.test.tsi.lan)	maprhadoophive
Database	hana.test.tsi.lan:30015	hana.test.tsi.lan:30015 (hana.test.tsi.lan)	saphana

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At Scale

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Tableau 2019.3 – Coming soon!



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