



ASR Analytics, LLC

Prepared by: Heather Hutchings

E-mail: heather.hutchings@asranalytics.com

Web: <http://www.asranalytics.com/>

CONTRA COSTA COMMUNITY COLLEGE DISTRICT: TABLEAU VIEWER TRAINING

Analytics and Visualization Support

Version: 1.0

Last updated: August 6, 2020

DOCUMENT CHANGE HISTORY

Document Version	Date	Description of Change	Affected Sections
1.0	June 25, 2020	Baseline – beginning of all content	All
2.0	August 6, 2020	Adjusted for Viewer Training	All

CONTENTS

Document Change History	ii
Contents.....	1
Introduction.....	2
Understanding the Tableau System	2
Introduction to Tableau Server.....	2
System Architecture	2
Data Sources and Data Flow	3
Tableau Security	4
Navigating the Tableau Server Site	7
Logging in to Tableau Server	7
Navigating Content from the Home Page	9
Exploring Projects, Workbooks, and Views	10
Searching for Content	12
Using Help	14
Navigating Views	17
Toolbars	17
Content with Multiple Tabs	18
Sharing Content.....	18
Downloading Content.....	19
Exploring Data with Charts and Tables.....	21
Filtering	21
Sorting	23
Tooltips	24
Viewing Data	25
Legends.....	26
Panning and Zooming	26
Parameters	28
Additional References	33
Tableau Documentation	33
Glossary	33

INTRODUCTION

This document provides an overview of site navigation and interactive reporting activities in the Tableau Server reporting tool that is part of the Contra Costa Community College District (4CD) Business Intelligence (BI) implementation. The material is designed to accompany structured training and as a reference when working independently. The goal of this guide is to provide users with the basic skills to understand and navigate the Tableau site and interact with developed content to answer business questions. This document does not cover report development or modifications to the data sources.

UNDERSTANDING THE TABLEAU SYSTEM

Introduction to Tableau Server

Tableau Server is a web application used to give enterprise access to Tableau workbooks and data sources. Tableau Server provides the ability for users to view, interact, and edit Tableau workbooks and data sources without the need to download and install the Tableau Desktop or Tableau Viewer application. Furthermore, it provides this in a safe, secure, and scalable solution that fosters data governance and collaboration between enterprise users. Tableau Server can be installed on-premise at an institution (this is the version 4CD has), hosted on a cloud provider like Amazon Web Services, or it is also available as a software-as-a-service (SAAS) application at tableauonline.com.

System Architecture

Tableau Server can be installed on a single server or across multiple servers (nodes). Tableau is essentially a collection of services that provide the functionality necessary to deliver data visualizations to end users whether they are using Tableau Desktop, Tableau Mobile, or a web browser. The server provides connectivity to back-end data resources in real-time or as scheduled extracts, integration to enterprise authentication services (Active Directory, SAML, etc.), user/group permissions to resources (projects, workbooks, data sources), and collaboration.

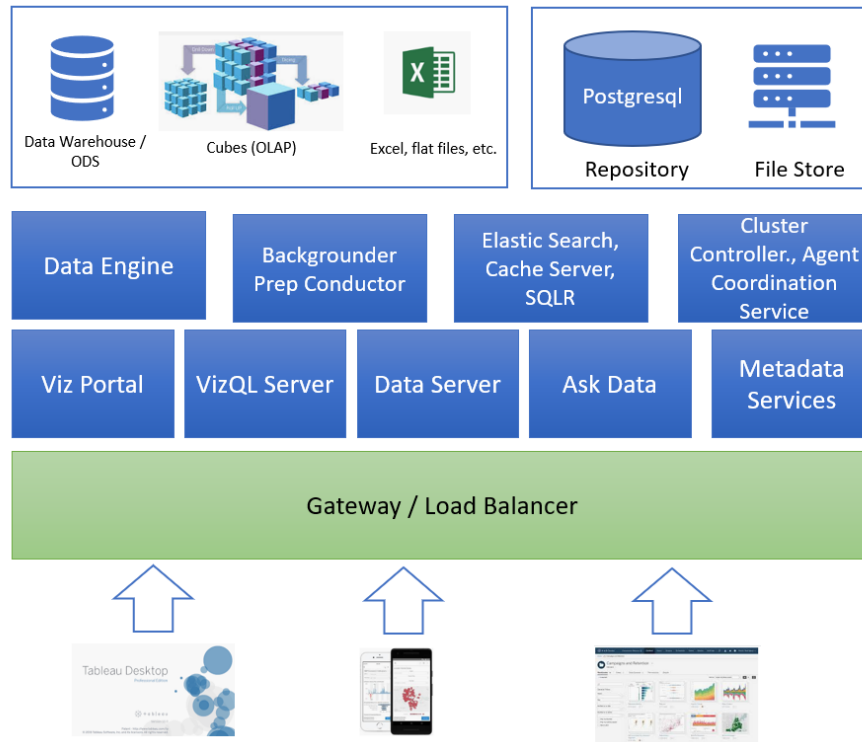


Figure 1: Tableau Server Architecture

Data Sources and Data Flow

Tableau Server accesses data from your data sources in two ways: live connection or Tableau Data Extract (TDE). Depending on how the creator of the workbook sets up the data connection, the data from your data source will flow in “real time” from the database every time you refresh the workbook or the data will be extracted from the data source on a scheduled or manual basis. Generally, for most analytical purposes, TDE is the preferred method. The extract can be scheduled after hours to reduce load on the Tableau server as well as reducing the load on enterprise databases.

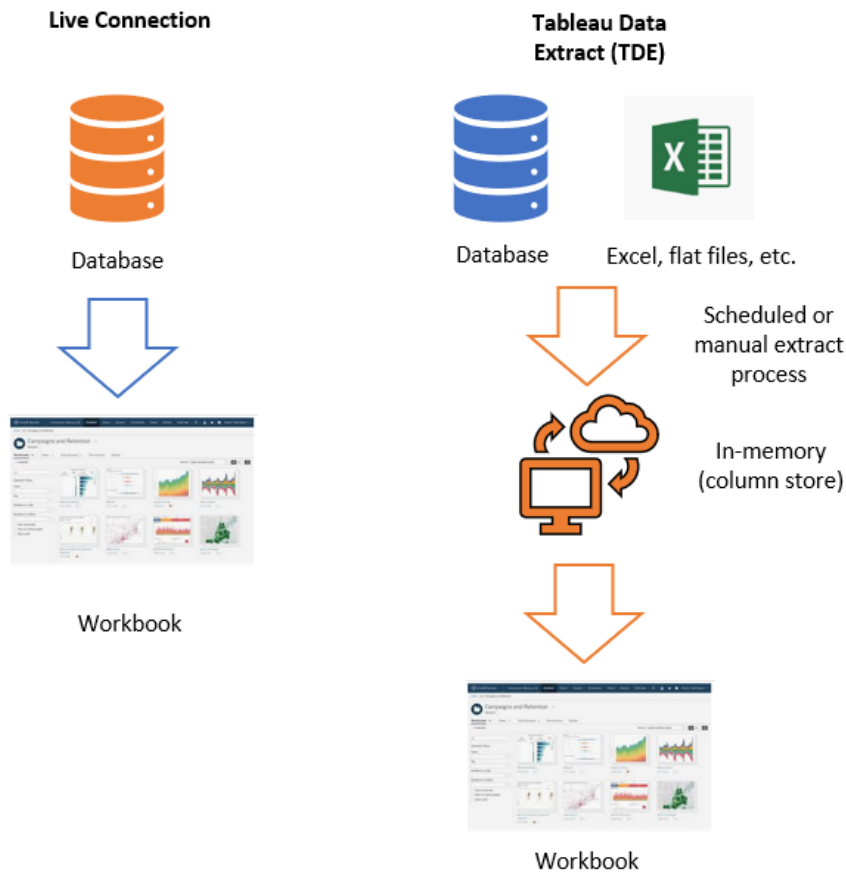


Tableau Security






On Tableau Server (and most applications), security is managed in two ways: authentication and authorization. Authentication guarantees you are who you say you are by requiring a login name and password. At 4CD this is managed by your Active Directory credentials, i.e. your Windows username and password. Once you have authenticated on the system your Group determines what you will be authorized to do on the system, e.g. what projects, workbooks, and data sources you can view as well as how you can interact with them. On Tableau1, there are currently the following groups with different capabilities. The workbook permissions assigned to the groups are summarized below.

Group	Notes
Tableau Research_Publishers	Users can create, modify, and publish workbooks and data sources in all folders
Tableau Research_Power_Users	Users with Explorer interactive capability
Tableau_Research_Viewers	Users with Viewer interactive capability
Tableau_Research_DSPS_Privacy_User Tableau_Research_FA_Privacy_User	Users will be added to these as an additional group to give them access to analyses that might have sensitive info: DSPS, FERPA, HIPPA, etc

Workbook Permissions

Interactions	Viewer	Power_User	Publisher
View Vizizes	X	X	X
Use Filters	X	X	X
View Comments	X	X	X
Add Comments		X	X
Download Image/PDF	X	X	X
Download Summary Data	X	X	X
Share Customized Views		X	X
Download Full Data			X
Web Edit Vizizes			

Workbook Icons

-  **View** allows a user to see the workbook or view. If a user hasn't been granted the view capability, the workbook won't be visible to them.
-  **Filter** allows a user to interact with filters in the view, including keep only and exclude filters. Users lacking this capability won't see filter controls in the view.
-  **View Comments** allows a user to view the comments associated with the views in a workbook.
-  **Download Image/PDF** allows a user to download each view as a PNG, PDF, or PowerPoint.
-  **Download Summary Data** allows a user to view the aggregated data in a view, or in the marks they've selected, and download that data (as a CSV).

This Page Intentionally Left Blank for Notes

NAVIGATING THE TABLEAU SERVER SITE

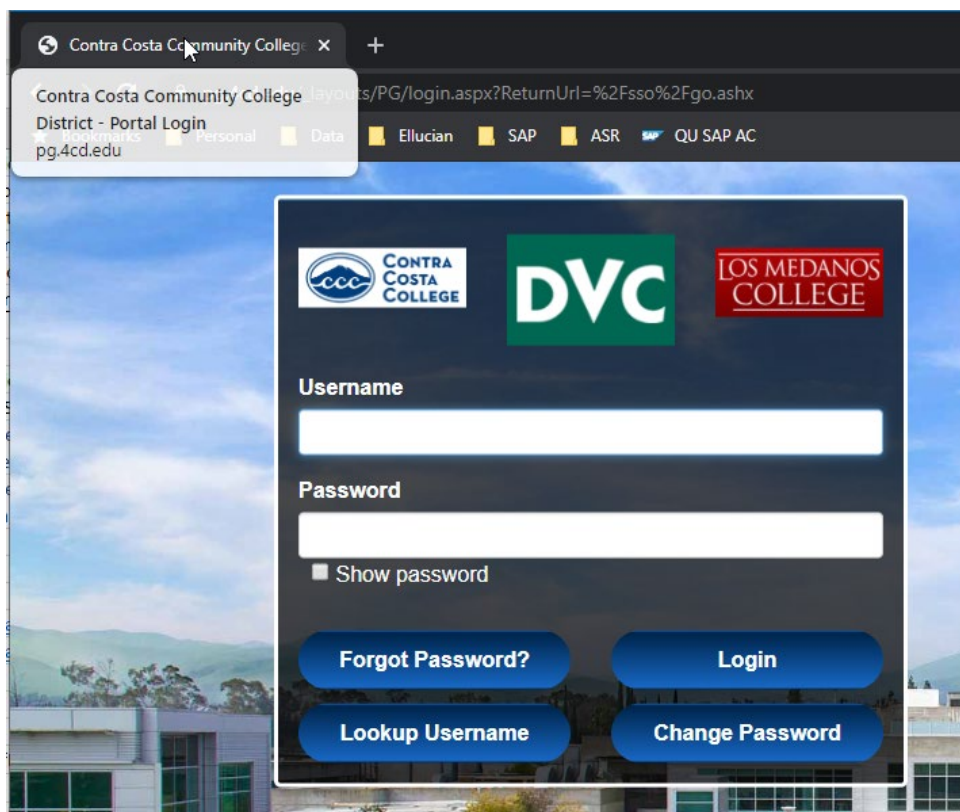
Your Tableau Server site contains shared content that you can use to explore your data and answer your business questions. In this section, you will learn how to access and navigate the 4CD Tableau Server site.

Logging in to Tableau Server

You will access content on your Tableau Server site using a web browser. Tableau Server currently supports Google Chrome, Microsoft Edge and Internet Explorer 11, Mozilla Firefox, and Apple Safari. 4CD's Tableau Server site is only accessible from within the 4CD network.

From off campus, you must establish a VPN connection to the 4CD network prior to accessing Tableau Server.

You can access the 4CD Tableau Server site via the Insite page by clicking on the tile named "District reports" or by entering the URL <https://tableau1.4cd.edu/> into your web browser. You will be directed to the Contra Costa Community College District – Portal Login page. Enter your 4CD Username and Password and click "Login" to access the 4CD Tableau Server site in using Single Sign On.



The Tableau Landing page provides a quick access to content relevant to your role. There will be links to the Tableau Landing pages accessible from the district portal. In this guide, we will use a sample the Training landing page to illustrate features of the landing pages.



District Insights Portal



1

Recently selected reports



ExecLandingPage	4cd_landing_pages	7/2/2020 10:21:19 AM	→
Section Offerings Dashboard	ASR Training Dashboard	6/25/2020 4:03:50 PM	→
Section Enrollment Dashboard	ASR Training Dashboard	6/25/2020 3:29:57 PM	→
Tracking Drop Reasons	COVID-19 Drop Overview	6/25/2020 10:52:00 AM	→
Demographics	COVID-19 Drop Overview	6/25/2020 10:12:33 AM	→

3

What can we help you find today?

Click on an icon to view a dashboard



Training Dashboard
 This is a dashboard used for training.

2



Dashboard Two
 Coming Soon!




Dashboard Three
 Coming Soon!

4

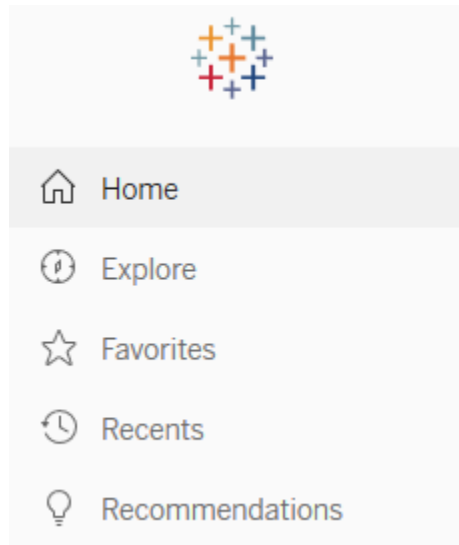
Click here to explore other content on 4CD's Tableau server



#	Features of the Landing Page	Description
1	Recently Selected Reports	The top of the page shows recently accessed views. Clicking on a row in the table, opens the view in a new tab. This provides quick access to your frequently used items.
2	Dashboards	The bottom of the page shows dashboards selected for your role. To access a dashboard, you click the icon next to its name. <div>  <div> Training Dashboard This is a dashboard used for training. </div> </div>
3	Searching for Content	You can find a content in the Tableau Server using the search box. The drop-down button gives you the option of limiting your search to "workbooks", "projects", or "views". (For more information, see <i>the Exploring Projects, Workbooks, and Views</i> section)
4	Link to Tableau Server	Clicking this link will direct you to the Tableau Server home page.

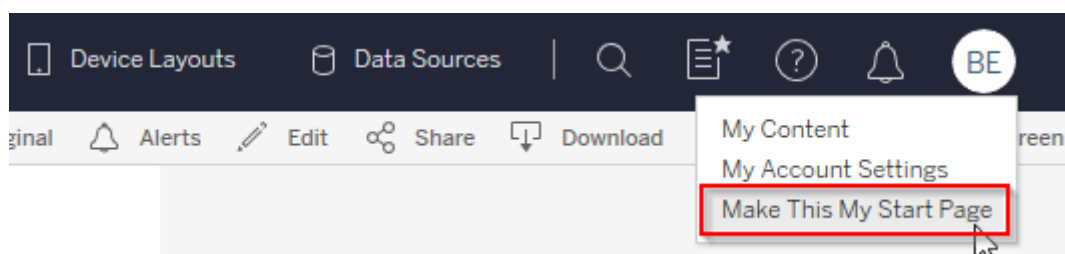
Navigating Content from the Home Page

When you first log in to your Tableau server environment, it will open on the default starting page, known as the Home Page. The left-side navigation bar provides five ways to quickly explore and access content (projects, workbooks, views, and data sources):



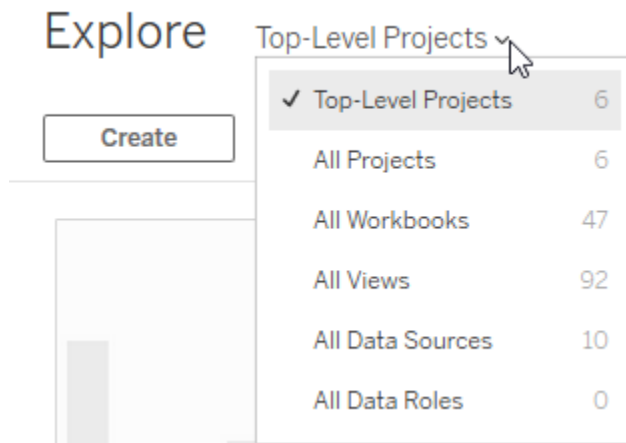
Option	Description
Home	Returns to your home page (either the system default or a page you've selected)
Explore	Provides file-structure access to top-level folders and all types of content
Favorites	Provides access to content you've marked as those you'll frequently use
Recents	Provides access to content you've recently viewed
Recommendations	Provides access to recommended content, based on the most frequently used content by your organization

If there is another page or a particular piece of content that is most important to you, you can make that page or content your start page. With the page or content open, click on your user profile avatar (initials or picture) in the upper right-hand corner, then choose "Make This My Start Page."



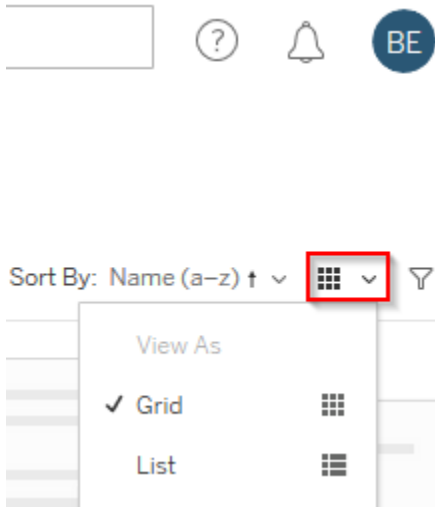
Exploring Projects, Workbooks, and Views

The Explore tab on the Home Page provides file-structure access to top-level folders and all types of content: Projects, workbooks, and views. You can also view the data sources to which you have access.



Exploring Elements	Description
Projects	<i>Projects</i> are like folders on your computer. They are used to organize and manage permissions on the project and the content it contains, such as workbooks and views.
Workbooks	<i>Workbooks</i> may contain one or more tabs, analogous to an Excel document.
Views	<i>Views</i> can be any one of three types of visualized data created in Tableau: a worksheet, a dashboard (two worksheets arranged together), or a story (a sequence of worksheets and dashboards).

Content can be viewed on the Explore page either in grid mode (icons and images of content) or list mode (content names only). Select the drop-down arrow to the left of the filter icon on the right-hand side of your screen, below your user profile avatar, to toggle between grid mode and list mode.



When exploring content, Tableau creates a string of breadcrumbs across the top of the screen. This allows you to easily navigate back to a previous page.

[Explore](#) / [Research_Public](#) / Headcount - All Dates



Headcount - All Dates

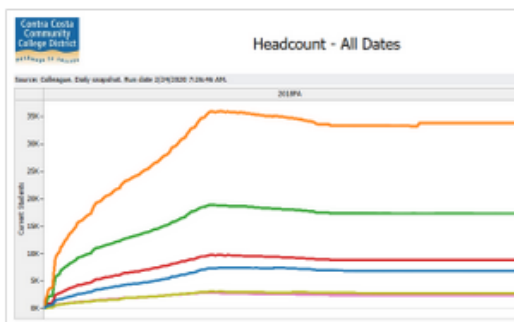
Owner  Modified Mar 25, 2020, 10:01 AM Extract Mar 25, 2020, 10:01 AM

Daily snapshot of headcount (current students), current seats, current units, and web enrollment.

Edit Workbook

Views 1 Data Sources 1 Extract Refreshes 1 Subscriptions 0

Select All



Headcount - All Dates



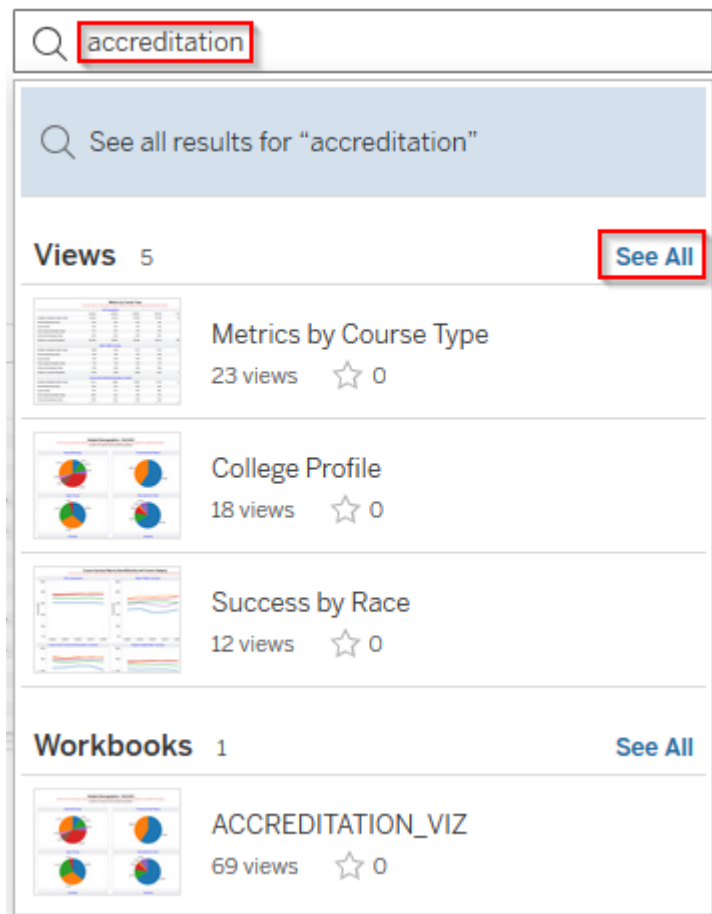
Searching for Content

The quick search bar at the top of the Home Page searches all content across your site. You can search for item names, metadata, owners, tags, captions, comments, and other attributes.

Quick search looks for your search criteria in titles, tags, desc, field names, and other text within the content.



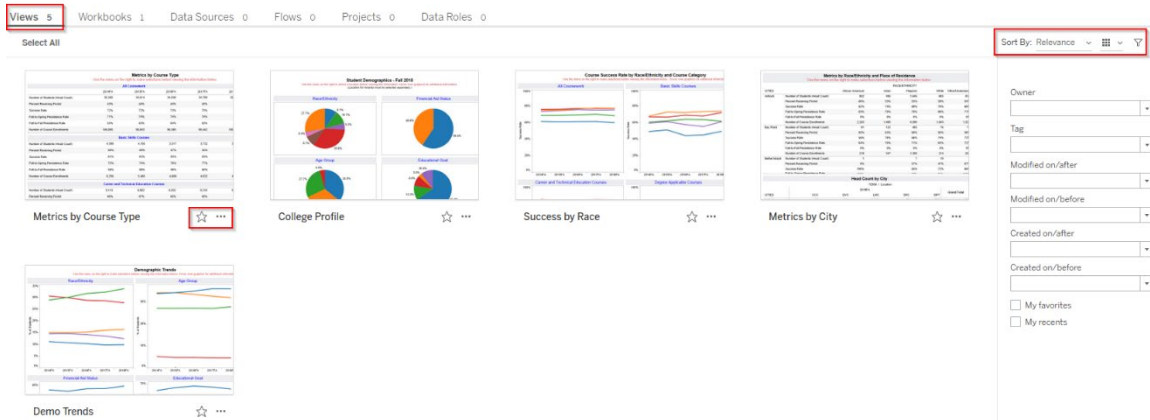
For example, a search for “accreditation” returns the following results:



Note that there are five views that meet this criterion, but only three are displayed. To see additional matching results, click “See All”. This will take you to the more detailed Explore page filtered by your search results, where you can sort or filter by additional criteria, or explore by content type using the tabs.

Search Results

Showing 6 results for "accreditation"



Below the quick search bar, you will find a funnel icon. Selecting this icon opens more detailed filtered search options. Note that a filtered search applies only to the items on the page you're currently viewing (such as views and project pages); it does not search across the entire site.

Sort By: Name (a-z) ↑ ▾ ▢ ▾ ▢

Project

Owner

Tag

Modified on/after

Modified on/before

Created on/after

Created on/before

☐ My favorites

☐ My recents

☐ Has an alert

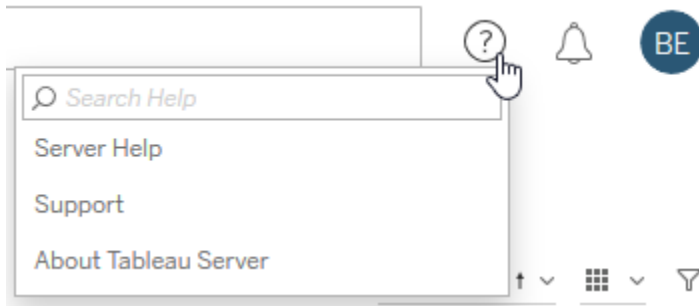
Live or extract

All ▾

☐ Include .tde and .hyper files

Using Help

The Help icon is always located at the top right of your screen near your profile icon. Clicking on any of the options within the Help feature will take you to a new browser window. To search for a specific topic, enter the text in the search box and press the Enter key. This will open a new tab and navigate to the Support page of Tableau's website. Note that depending on your browser settings, you may need to allow pop-up windows from your Tableau site to allow the Support page to open.



This Page Intentionally Left Blank for Notes






NAVIGATING VIEWS

Tableau views are visual representations of your data contained within worksheets and dashboards. You can access Tableau views from a project workbook, by navigating to “All Views” in the Explorer menu, or through the site search feature.







Toolbars

When navigating content, you will see two sets of toolbars at the top of the page: one on each side. Below is an overview of both toolbars. Certain functions are called out specifically in this section and with more detail.

The left-side toolbar includes the following functions:

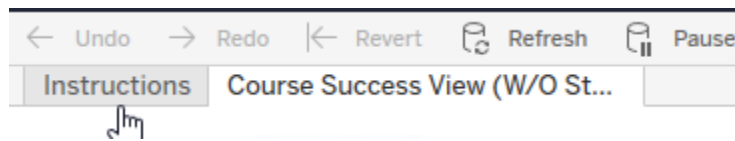
Function	Description
 Undo	Undoes the last action taken in the content
 Redo	Redoes the last action taken in the content
 Revert	Similar to undo, but undoes all actions taken in the content (e.g. resets all filters)
 Refresh	Connects to the server to refresh data
 Pause/Resume	Allows you to make multiple changes to filters without waiting for the view to refresh every time; click Resume to repaint the view once all desired filtering is in place.

The right-side toolbar includes the following functions:

Function	Description
 View: Original	Create a custom view with specific filters
 Alerts	Create an email alert when the data in the view meets certain conditions
 Share	Share a view through via email or a link
 Download	Download the view in a variety of formats: image, data, crosstab, PDF, PowerPoint, Tableau Workbook
 Comments	View comments on a view
 Full Screen	Makes the view full screen on your device; press ESC to exit full screen mode

Content with Multiple Tabs

Some content may contain more than one view which are published on separate tabs. In this case, you will navigate between the views by clicking on the tabs at the top of your screen.



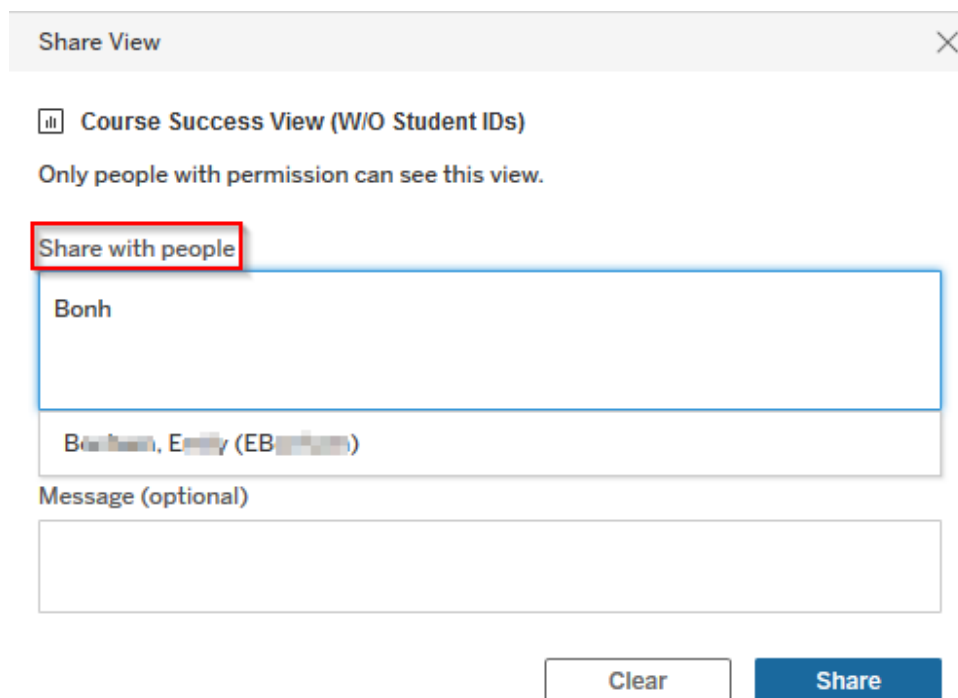
Sharing Content

To share content, select the Share icon from the right-side toolbar.



The Share View dialog box will open. There are two ways to share content: Via email, or via a link that can be copied and pasted into another application.

To share the content via email, enter the name(s) or username(s) of the user(s) with whom you wish to share the content, and click to select.



Once you have entered all the names, enter an optional message and click Share. This will generate an email to the selected users.

Share View

Course Success View (W/O Student IDs)

Only people with permission can see this view.

Share with people

B. E. ×

H. H. ×

Message (optional)

Hello,
I would like to share this content with you.

Clear

Share

Alternately, you may choose to share the content using a link. Within the Share View dialog, copy the auto-generated link to share via email or another communication method.

Share View

Course Success View (W/O Student IDs)

Only people with permission can see this view.

Share with people

Enter a username.

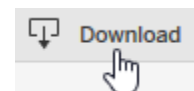
Share using a link

<https://tableau1.4cd.edu/views/CourseSuccessViewWOSTude> [Copy Link](#)

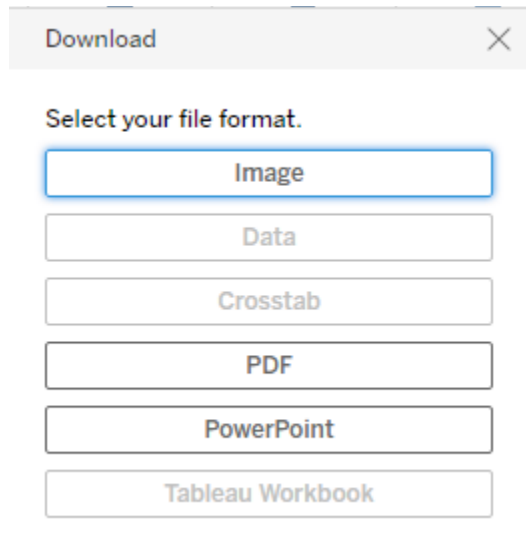
[Copy Embed Code](#)

Downloading Content

To download content, click the Download icon on the right-side toolbar.



The Download dialog box will open. While all Tableau download options are listed, some may be grayed out and unavailable depending on your permissions.



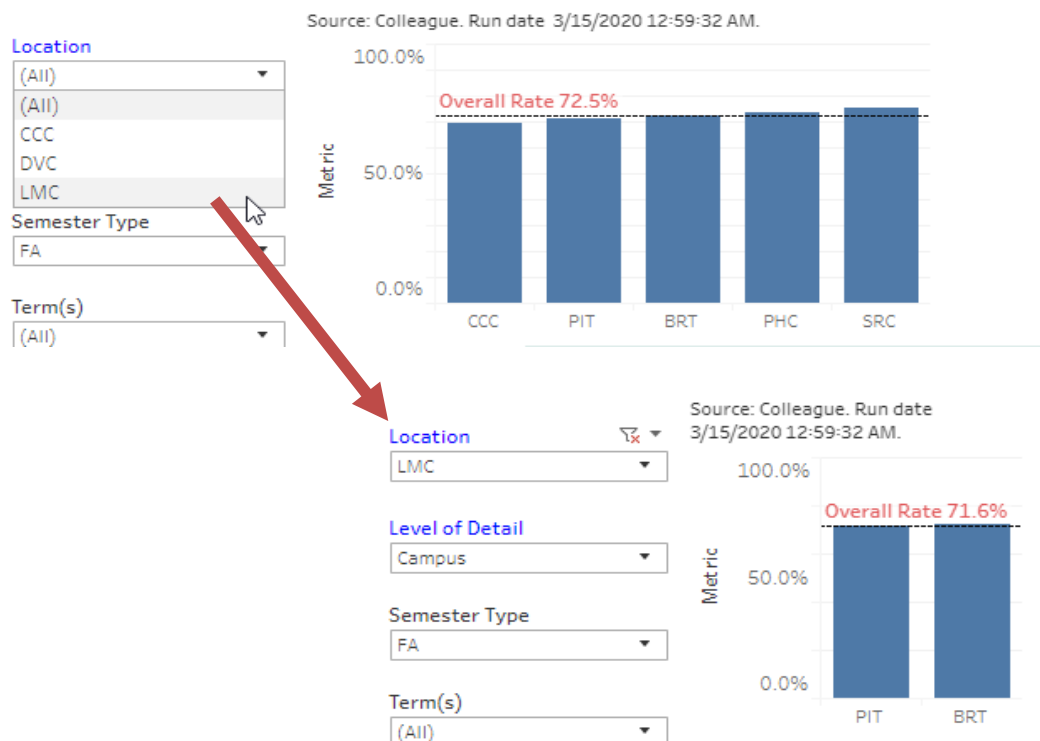
Option	Description
Image	Downloads an image of the view in .png format
Data	Opens a new tab in the browser window and displays the view's data in summary and detail; downloadable .csv file
Crosstab	Downloads the view, or a selected sheet from a dashboard, as a .csv file
PDF	Downloads a PDF of the view, or user-specified sheets from a dashboard or workbook
PowerPoint	Downloads user-specified sheets as static images in a new PowerPoint document

EXPLORING DATA WITH CHARTS AND TABLES

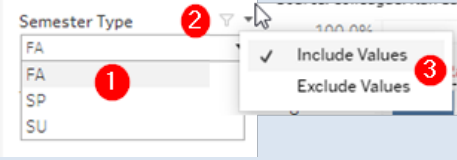
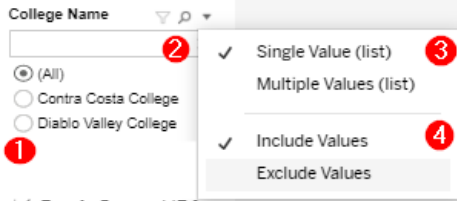
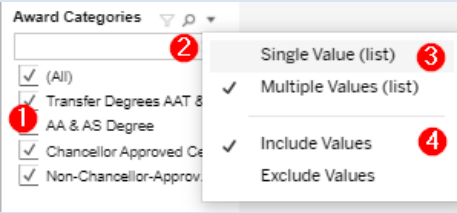

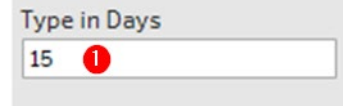
Tableau views provide interactive access to your data. When you interact with Tableau views, you can analyze and explore information without impacting the data source or modifying the original view accessed by other users. In this section, you will learn how to interact with elements of a view to configure your view to answer your business questions.

Filtering

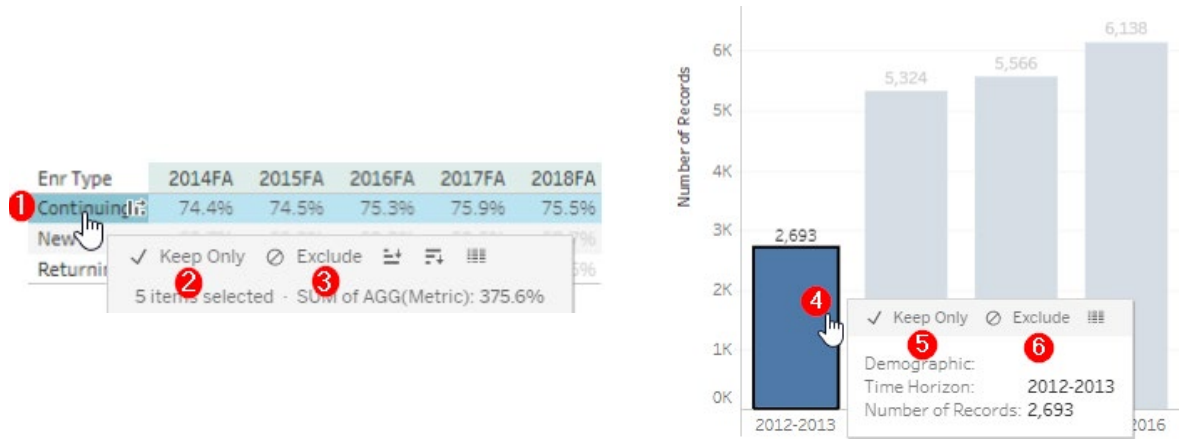
Filters are controls that limit the data shown in a view. You can use filters to focus the view on the data related to your business questions. In the example below, selecting the “LMC” Location from the drop-down filter limits the data displayed in the bar chart to the “PIT” and “BRT” campuses.



Filter controls allow you to select values to include or exclude in a view. The types of filter controls vary by the data type. Filter controls are created by the view author.

Filter Controls	Filter Type	Data Type	Description
	Drop-down List	Categorical	Select a single value from a list (1). Click the filter arrow (2) to change the behavior to include or exclude the selected value (3).
	Single-select List	Categorical	Click the radio button to select a single value or all values from a list (1). Click the filter arrow to change filter from single value to multiple values (3) or to include or exclude the selected value (4).
	Multi-select List	Categorical	Click a check box to select a single value or multiple values from a list (1). Click the filter arrow to change filter from single value to multiple values (3) or to include or exclude the selected value (4).
	Slider	Numeric	Slide handles (1) or click the arrow buttons (2) to select a value. Sliders with multiple handles allow you to select a range.
	Text box	Categorical or Numeric	Type a value in the text box to include it in your filter.

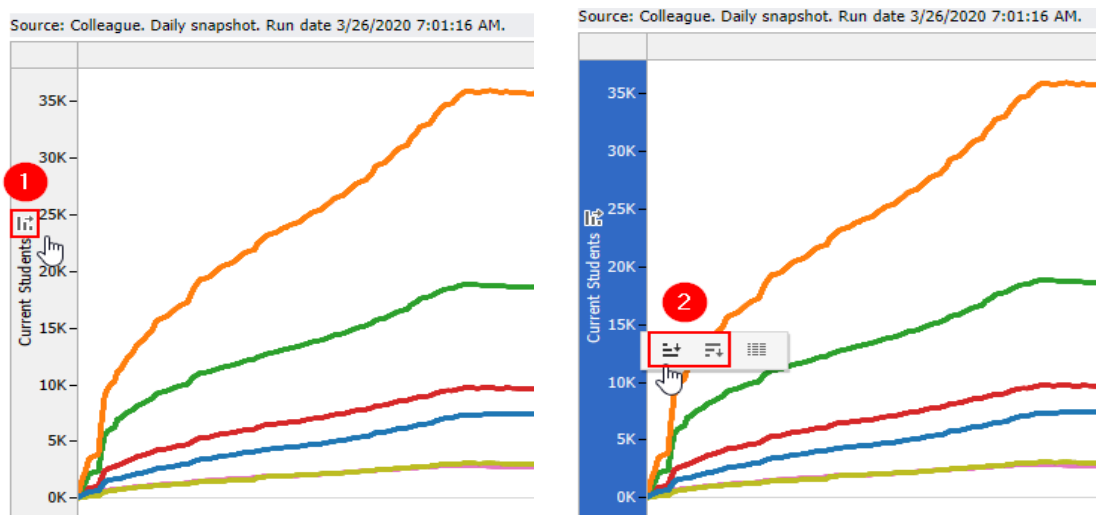
In addition to filtering using controls, you can also filter by clicking on different elements of a view. Marks are visual representations of data in a Tableau view. You can click on a mark or table header to select data to include or exclude from a view.



In a table, click on the header or data cell (1) and choose the filter option to “Keep Only” (2) or “Exclude” (3) the selected category or data point from a view. In a chart, click on a data mark or categorical axis label (4) and choose the filter option to “Keep Only” (5) or “Exclude” (6) the selected category or data point from a view.

Sorting

Tableau Web Views support multiple sorting options. In a chart, you can sort by clicking on the axis header or category label. When sorting, the first click sorts in ascending order, a second click sorts in descending order, and a third click clears the sort.

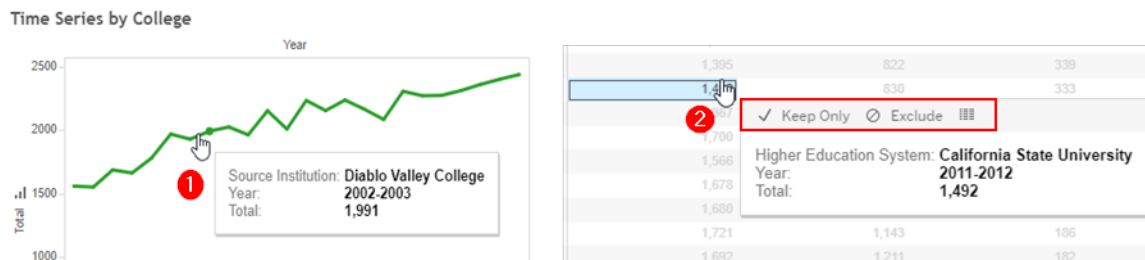


		5/1/18	5/2/18	5/3/18	5/4/18	5/5/18
District	Headcount Max	68	<input checked="" type="checkbox"/> Keep Only <input type="checkbox"/> Exclude <input type="button" value="Sort"/> <input type="button" value="Clear"/>			
	Current Seats	1,98	30 items selected · SUM of Measure Values			
	Current Students	68	5/1/18			
	Current Units	6,65				
	Web Enrollment	67				
CCC	Headcount Max	119	321	416	573	61
	Current Seats	283	856	1,087	1,446	1,54
	Current Students	119	318	412	565	60
	Current Units	952	2,949	3,714	4,942	5,28
	Web Enrollment	119	318	410	566	60

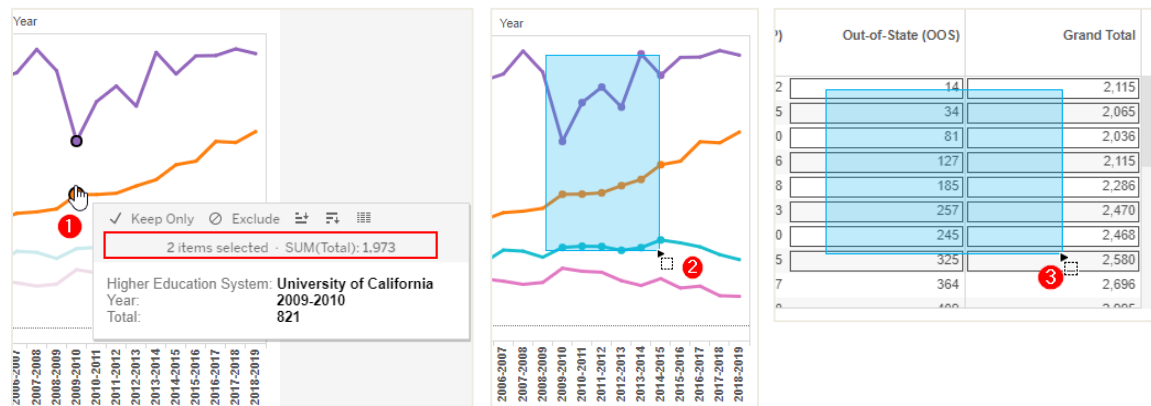
#	Sort Type	Description
1	Chart single-click sort	Activate by hovering over axis title. Click icon to change the sort direction or clear the sort based on the measure values. Categorical data is sorted alphabetically.
2	Chart sort menu	Activate by clicking on the axis. Click the ascending or descending icon to select the sort direction for the measures. Categorical data is sorted alphabetically.
3	Table single-click sort	Activate by hovering over a row or column header. Click icon to change the sort direction or clear the sort based on the measure values. Categorical data is sorted alphabetically.
4	Table sort menu	Activate by clicking on the axis. Click the ascending or descending icon to select the sort direction for the measures in that row or column. Categorical data is sorted alphabetically.

Tooltips

Tooltips include text or embedded visualizations that provide information about a datapoint.



Hovering over a mark in a visualization activates a tooltip (1). Clicking on a mark or hovering for multiple seconds enables tooltip commands for filtering or viewing data (2).

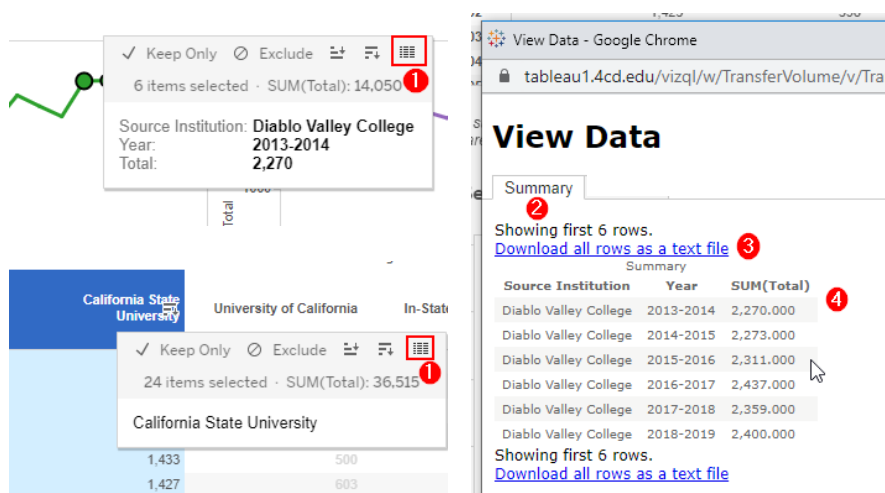


Selecting multiple marks in a view adds summary information to the tooltip (1). You can select multiple marks by holding down the CTRL key while clicking on the marks. Clicking and dragging over a visualization activates the default selection tool to select multiple marks in a chart (2) or table (3). You can also select a group of marks to inspect by clicking on a categorical axis label, or a table header.

Report authors can create filter actions to make a chart act as a filter for other views in a dashboard. For example, clicking a state on a map could filter the other tables and charts to only show data from that state.

Viewing Data

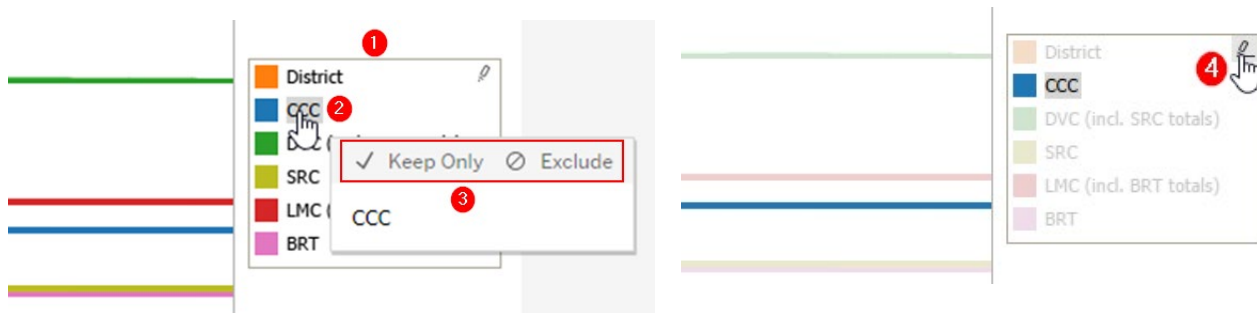
When you select marks on a view, you may see the View Data option in the tooltip commands. Clicking on View Data opens a new window displaying the underlying data from the data source.



#	View Data Element	Description
1	View data button	Click on the view data button from a tooltip in a chart or table to inspect selected data in a new window.
2	Summary tab	The summary tab of the View Data window shows the summarized rows of data for the selected data points.
3	Download link	Click to download rows.
4	Summary table	Summarized data for selected rows.

Legends

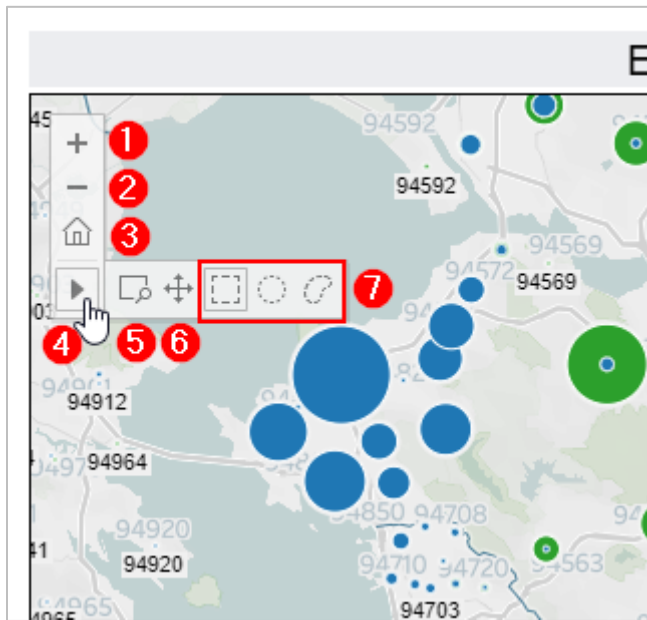
Chart legends show how the data categories or ranges of numeric values map to colors in a chart. You can select categories in a legend to interact with the data.



#	Legend Element	Description
1	Legend	Maps categorical data or numerical ranges to colors in a chart.
2	Selection	Click on a category or use CTRL + click to select multiple categories.
3	Commands	Use commands to filter data from the selected categories in the chart.
4	Highlight	Click the highlight button to highlight the selected categories and dim the unselected categories in the chart.

Panning and Zooming

Maps and charts with a continuous axis have pan and zoom tools to let users focus on subsets of a chart. Activate the pan and zoom toolbar by hovering over the top left side of the chart.



#	Pan and Zoom Element	Description
1	Zoom In	Click the + button to zoom in on the center of the chart. You can also double-click the chart to zoom in on the point where you click.
2	Zoom Out	Click the - button to zoom out on the chart. You can also hold down Shift and double-click to zoom out.
3	Zoom Home	Click the home button to reset the chart to the original pan and zoom
4	Additional Actions	Hover over the triangle to bring up additional actions
5	Zoom Area	Click the Zoom Area button then drag the mouse to define a zoom area on the chart. You can also activate the zoom area tool by holding down Ctrl + Shift.
6	Pan	Select the Pan tool and click and drag the mouse on the chart to pan. You can also hold down Shift while dragging the mouse to Pan.
7	Mark Selection Tools	Additional mark selection tools for map areas.

Parameters

We have seen how filters let report viewers focus their analysis on a subset of the data available in a view. In this section, we will learn how to use parameter controls to select what fields are displayed in a view and effect how the selected data is displayed.

Parameter controls in Tableau increase the flexibility of a report by allowing report viewers to choose which fields to display in a view. Parameter cards function like view filters, letting users select available fields from a list.

Source: Colleague. Daily snapshot. Last updated 3/23/2020 7:08:57 AM.

Level 1	Level 2	Level 3	Current Enrollm..	Enrollment Cap..	Ftes
Level 1	All		725,151	1,157,720	109,163.7
Level 2	All		725,151	1,157,720	109,163.7
Level 3	All				
Grand Total			725,151	1,157,720	109,163.7

Filters:

- Location: (All)
- Attendance Type: All, Academic Year, Attendance Type, Basic Skills, Campus, College, Course Subject

Measures:

- ☒ (All)
- ☒ Census Enrollment
- ☒ Census Fill Rate
- ☒ Current Enrollme...
- ☒ Current Fill Rate
- ☒ Enrollment Capa...
- ☒ Ftes
- ☒ Ftes/Ftef
- ☒ Number Retained
- ☒ Number Successful
- ☒ Retention Rate
- ☒ Sec. Count

#	Parameter Element	Description
1	Dimension Parameters	Select a dimension to display in the corresponding table row.
2	Measure Parameters	Select multiple measures to display in the corresponding table columns.

On the view shown below, the **Level of Detail** control allows viewers to choose whether to analyze section enrollment at the College, Division, Department, Subject or Course level. Selecting a value from the **Level of Detail** control impacts the display of all visualizations on the view. In the screenshots below, we can see how changing the **Level of Detail** selection from "Depts Desc" to "Course Name" impacts the data shown in the view.

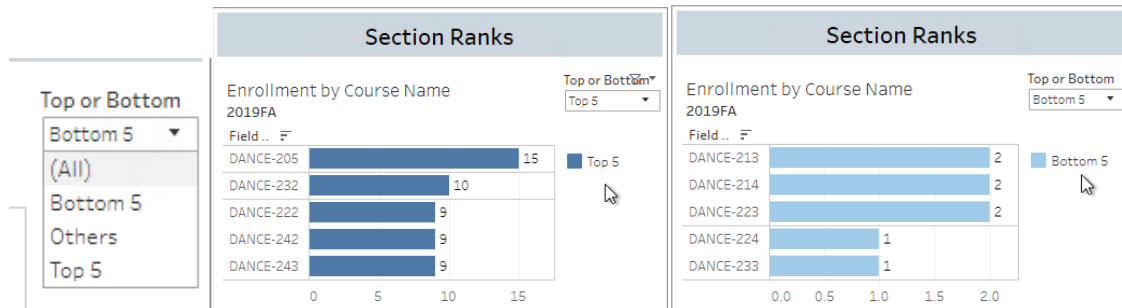
DVC Art & Photography	100% Online	X	4	6	246	270	91%
	Face to Face	EVE	2	2	25	50	50%
		X	2	12	13	0	
		DAY	9	12	365	465	78%
	Hybrid (.50 or less)	EVE	9	9	119	258	46%
		DAY	24	44	747	1,232	61%
	Total		37	85	1,515	2,275	67%
DVC Biological Sciences Dept	Face to Face	EVE	11	13	347	378	92%
		X	2	11	16	0	
		DAY	21	58	1,797	1,826	98%
	Hybrid (.50 or less)	EVE	2	2	50	73	68%
	Total		25	84	2,210	2,277	97%

Level of Detail: Depts Desc

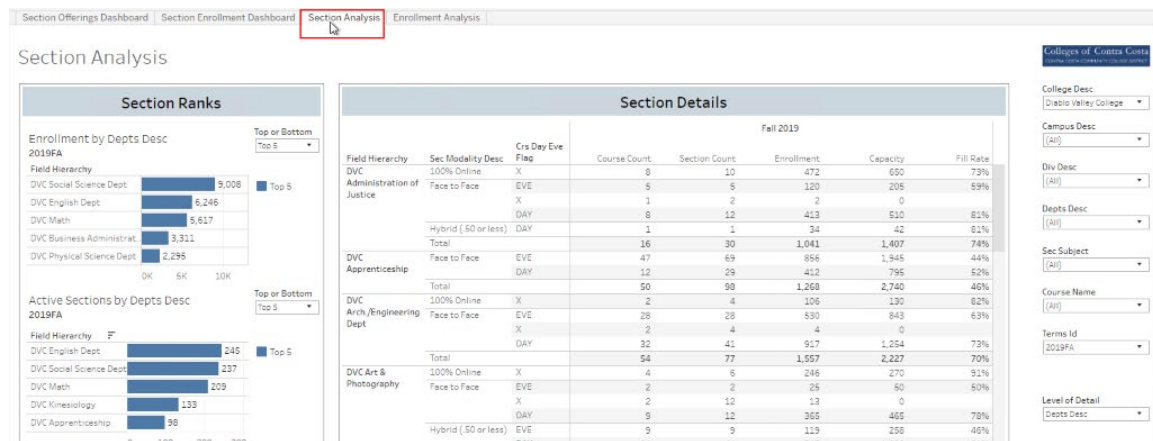
ADJUS-130	100% Online	X	1	1	50	65	77%
	Face to Face	DAY	1	1	36	45	80%
	Total		1	2	86	110	78%
ADJUS-139	100% Online	X	1	1	51	65	78%
	Total		1	1	51	65	78%
ADJUS-203	Face to Face	DAY	1	1	29	30	97%
	Total		1	1	29	30	97%

Level of Detail: Course Name

Parameter controls can also allow viewers to choose how the data is displayed in a view. On the view shown below, the **Top or Bottom** parameter controls enable users to choose whether the “Top 5”, “Bottom 5”, or “Others” values are displayed in the **Section Ranks** charts.



In the following example, we will use the filters and parameter controls in the **Section Analysis** view to identify courses with low fill rates and plan actions that we can take to increase enrollment in the upcoming term.



We will focus on courses offered at Diablo Valley College in Fall 2019. We use the **College Desc** filter to select “Diablo Valley College” and the **Terms Id** filter to select “2019FA”. We use the **Level of Detail** control to display the “Course Name” in the table and charts in the view.

College Desc

- ☐ (All)
- ☐ Contra Costa College
- ☒ Diablo Valley College
- ☐ Los Medanos College

Terms Id

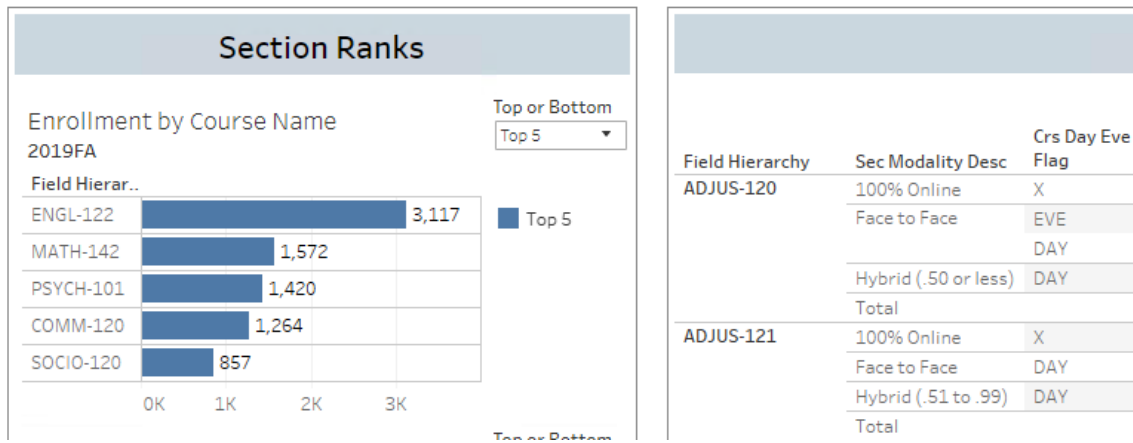
- ☐ (All)
- ☐ 2017FA
- ☐ 2018FA
- ☒ 2019FA
- ☐ 2020FA

Level of Detail

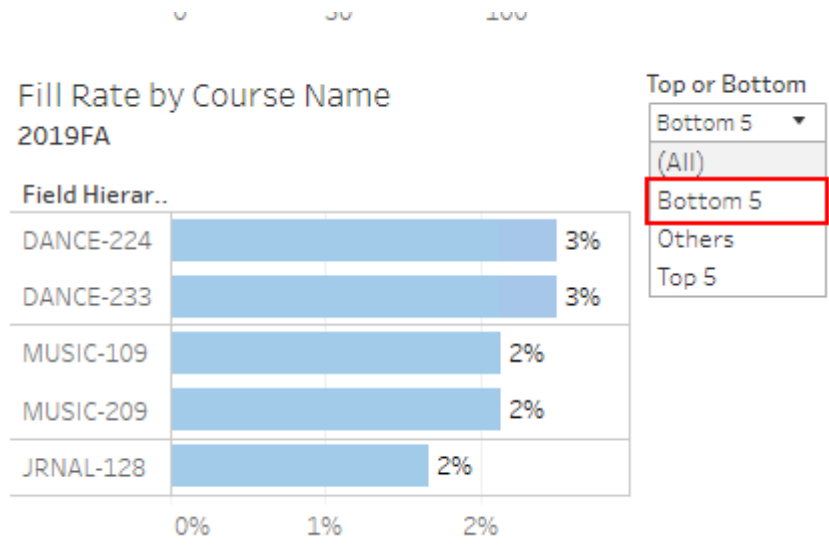
- ☐ College Desc
- ☐ Div Desc
- ☐ Depts Desc
- ☐ Sec Subject
- ☒ Course Name

The resulting view should resemble the screenshot below with course names displayed under the **Field Hierarchy** header in the charts and table.

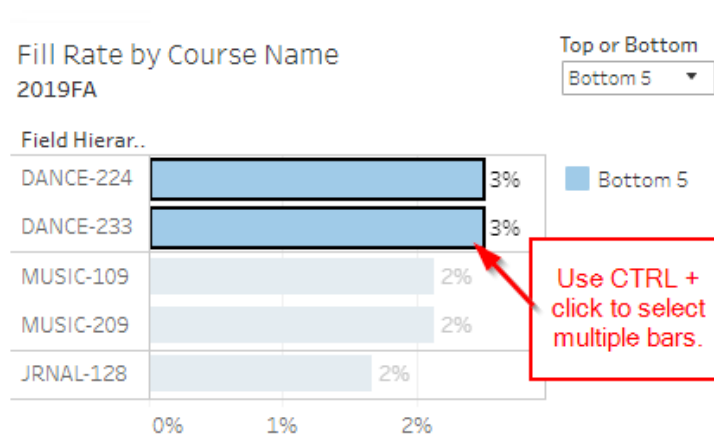
Section Analysis



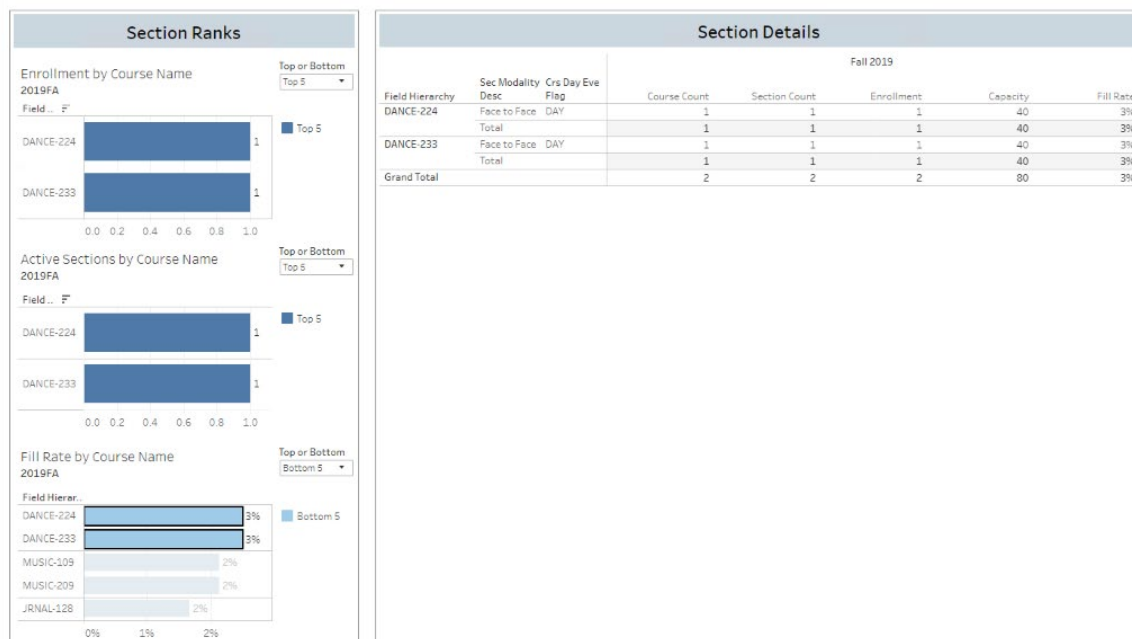
We can use the **Fill Rate by Course Name** chart to identify courses with low fill rates at DVC in Fall 2019. We select “Bottom 5” from the **Top or Bottom** parameter control on the **Fill Rate by Course Name** chart to identify these courses.



We see that multiple “DANCE” courses appear on our list. To focus these courses, we hold down the CTRL key and click on the bar for each of these courses in the **Fill Rate by Course Name** chart.



This action filters the other charts and the table in the **Section Analysis** view to show information about the selected courses. The view should resemble the screenshot below.



We can use this focused information to target efforts to increase enrollment in the identified courses with unfilled capacity for the upcoming semester.

This Page Intentionally Left Blank for Notes

ADDITIONAL REFERENCES

Tableau Documentation

Tableau Server Support Site –

<https://www.tableau.com/support/server>

Navigating your Tableau Site –

<https://help.tableau.com/current/pro/desktop/en-us/navigating.htm>

Role-based Getting Started Guide –

<https://www.tableau.com/learn/get-started>

Using Tableau on the Web –

https://help.tableau.com/current/pro/desktop/en-us/web_author_home.htm

Glossary

Term	Definition
Dashboard	A collection of views from multiple worksheet shown in a single location where you can view a variety of data simultaneously.
Data source	The underlying data that Tableau Reader is connected to. You can't change the data source in Tableau Reader.
Filter	A control on a view that limits the data shown in a view. For example, a filter on Region that only includes the West.
Marks	A visual representation of one or more rows in a data source. Mark types can be bar, line, square, and so on.
Story	A collection of sheets, arranged in a sequence, to convey information.
View	The visual representation of your data in a worksheet or dashboard.
Workbook	A collection of one or more worksheets and dashboards.
Worksheet	A single view of data. Each worksheet can be connected to a single data source.

Source: Tableau Reader Help. "Useful Tableau Terms"

<https://help.tableau.com/current/reader/desktop/en-us/terms.htm>