



On-Demand Training: Data Security with User Filters Transcript

Welcome to this video on the Data Security aspect of Tableau Server and Tableau Online.

There are four main components of Tableau Server and Tableau Online security: authentication, authorization and permissions, data security, and network security. This video focuses on the third piece, data security.

Tableau Approach to Data Security

Data security ensures that the appropriate data is seen by the appropriate people. For example, a doctor seeing only her patients' data or a sales manager only seeing information about his territory.

There are a few ways data security can be implemented with Tableau Server or Tableau Online:

- This can be done solely in the database
- Solely in Tableau
- Or a hybrid approach, where user information in Tableau Server or Tableau Online corresponds with data elements in the database

This video will focus on the latter two approaches. For more information on how Tableau leverages existing data security implemented solely in the database, please refer to the online help.

Here we're connected to the Global Superstore dataset. We have managers who should only see an individual Market, rather than the entire world. These managers are also users in my local Tableau Server install. .

User Filters – Tableau Only

First, implementing data security solely in the Tableau Environment. This is done with user filters, which are defined in Tableau Desktop.

To implement this data security:

- On the menu bar, click on Server, then Create User Filter
- We will now see a list of available fields that we can base the user filter on
- Let's choose Market
- If we are not already signed in to Tableau Server or Online, we may be prompted to do so
- Here we see a list of the users on my Server
- Let's assign each user their appropriate Market
 - I'll only do a few- Anna to Africa, Chuck to APAC, and Deborah to LATAM
- I'll assign the administrator rights to view all.

Once the user filter has been defined, we can simply drag it to the Filters shelf.

In the lower right corner of Tableau Desktop is a user emulator. This allows us to see what the view will look like if a specific user signs in. I'm signed in as the admin, so I can now only see all Markets. Let's toggle between some of these users. As we can see, as each user is selected, the view is filtered to only show their relevant market.

If we publish to Tableau Server or Online, the same experience will carry through – when Chuck signs in, he'll only

see the APAC region.

The user filter can also be used across multiple worksheets, or embedded in the data source. Let's embed in the data source.

- We'll remove the user filter that's already on the filter shelf
- Right click on the data source
- Choose "edit data source filters", Add
- And select the filter we created
- The filter now applies for everything using this data source. And if we publish the connection to Data Server, the user filter will be leveraged across all connections. For more information on Data Server, please see the on demand video or online help.

User Filters – Hybrid

The example we just walked through is implemented solely in Tableau, meaning the approach does not leverage any data elements in our database. We'll now look at an example of a hybrid approach to data security in Tableau.

Here we're connected to Global Superstore again, but to both the Orders and People tables. The People table is an example of having data elements in the database that associate users to specific pieces of data, like managers to markets.

To create a user filter that leverages this data, we can use calculated fields:

- We'll right click, select Create Calculated Field. And we'll name this Manager Verification.
- We're going to leverage a "User" functions – these allow us to use a variety of variables based on the Tableau Server or Tableau Online user, like their username or a group they are a member of
- We'll create a simple formula that checks if the Tableau username matches the Manager field
 - `USERNAME() = [Manager]`

Once this calculated field is created, we can use it in a similar fashion to the user filter in the previous example. It can be dragged to the filter shelf, let's do that, or applied to multiple worksheets, or embedded as a data source filter.

The benefit of this calculated field approach is that no maintenance has to be done to the workbooks as new users or data is added to the system. As long as the users exist in Tableau Online or Tableau Server, and the data source contains their user names, this calculation will continue to function.

Conclusion

Thank you for watching this data security video.

We invite you to continue with the other On Demand Training videos to learn more about using Tableau.