Coming Soon in Tableau 8.0 Server

Tableau version 8.0 is a major new release that includes new capabilities sure to delight all customers. This new version continues to extend Tableau's ease of use, flexibility, analytic power, and robust deployment. The improvements include new web and mobile authoring capabilities, subscriptions, navigation improvements, integration APIs, and of course performance improvements.

Web and Mobile experience

Empowering the individual using Tableau Server to answer more questions and freely explore their data are two important themes of 8.0.

Web and mobile authoring: People accessing content on Tableau Server in a browser or on a tablet can now edit and even author new visualizations without the Desktop application. Change dimensions and measures, change mark types, add filters, and use Show Me all directly in a web browser. Changes and new creations can be saved back to the server as a new workbook or if individual permissions allow, save the changes to the original workbook.
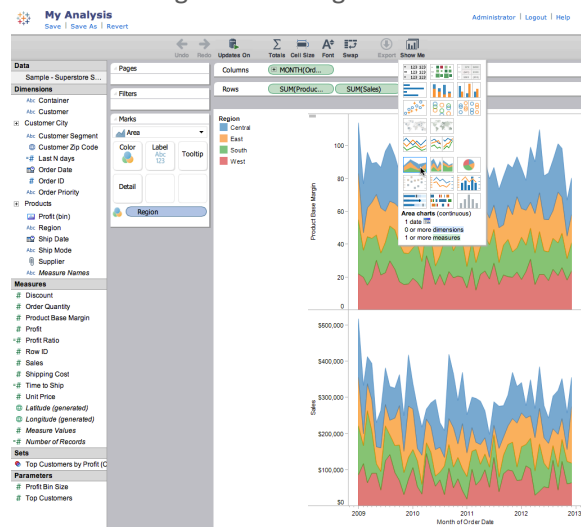
The interface to create and modify content on the Server includes the familiar data window, marks card, and row & column shelves to facilitate easy adoption across your organization. Web and mobile authoring is available from an existing worksheet or create a new workbook from a published Tableau Server data source.
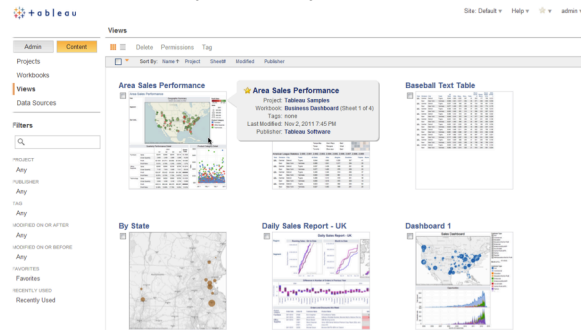
For tablet devices, the browser interface or the native iPad and Android tablet applications include full touch support for drag-and-drop authoring.

Self-service subscriptions: Subscribing to a workbook or worksheet will automatically deliver the dashboard or view to your email inbox. Subscriptions make it easy to always see the latest information without having to go to Tableau Server to see updates. Individuals can subscribe to the content they are most interested in and have an PNG image of the report delivered to their inbox with a link to jump directly to the interactive version.

Subscription delivery times are based on schedules defined by an administrator on the server. That way administrators can manage the workload on the server by balancing the interactive workload with the background processing of the subscriptions.
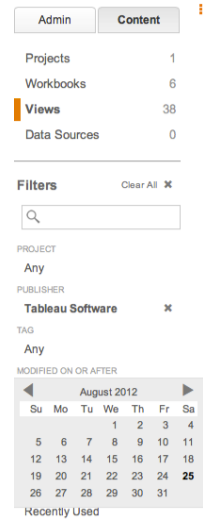
Improved list and thumbnail view: The list and thumbnail views have been redesigned to show more information on the screen and to help you get to your content quickly. In list view, the columns of information can be resized to see long workbook names. In thumbnail view the grid of thumbnails dynamically resizes to show multiple columns of images on the screen in a more efficient display. Hover over a thumbnail to see more details about the view.

Favorites, Recently Used, and Search results all now use the improved layouts as well.
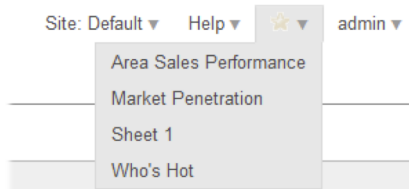

Sites, favorites, help and user settings are now available on the header to be easily accessible by users.

Redesigned sidebar navigation: The navigation links in the sidebar on the left of the page now makes it easier to find the content that you are looking for. A key part of the new sidebar is the search-centered navigation that makes it easy and efficient to filter down to just the content you are looking for. Search by typing terms into the search box or by using the filter options to narrow the content based on dates, projects, publishers, or tags.

The Content and Administrative functions are now separated onto distinct tabs in the sidebar for users that have the Administrator rights. Separate tabs help to focus the available options to be relevant to the task at hand.

Integrate with the business

An important scenario is using Tableau Server as a destination to find and browse for content. However, there are many other situations where embedding Tableau content into other web applications is more appropriate. Including Tableau content in these other applications and workflows is dramatically more powerful in Tableau 8.0 with the introduction of several new APIs and automation methods.

JavaScript API: Developers creating web applications can richly integrate fully interactive Tableau content into their applications via the new JavaScript API. The API provides an object-oriented mechanism to program operations within a Tableau Server view, including listening to events generated by the Tableau view to allow additional interaction in the developer's own code.

The API provides JavaScript programmers a tremendous range of interactivity in the Tableau view. For example, you can use the JavaScript API to set and create filters, select and highlight elements in the view, and process the view to retrieve updated data.

The API exposes navigation between the tabs in a workbook, selection of different saved views of the workbook, and creation of custom toolbars so you can integrate your own functions into the toolbar. All of the JavaScript API functions operate directly on the view itself as if the function had been clicked directly, which means no full page or view reloads – just elegant interactions and updates.

Additionally, the API supports listener events so interactions users perform with their mouse directly to the Tableau view can trigger the listener so your custom code can be alerted. For example, JavaScript you write can listen for when the user changes a filter in the Tableau view so another part of the page can then take action based on the changed filter.

Server API: A new REST API is available to programmatically create sites, add and remove users to sites and enable and suspend a site.

API to create Tableau Data Extracts: Tableau provides direct support to a large number of data sources. However, there are times when you may want to pre-process or access and assemble data from other applications before working with it in Tableau. An API is available with Tableau 8 to enable developers to write their own programs that access and process the data and then use the Tableau API to directly create a Tableau Data Extract (TDE). Tableau can then connect to this extract file natively. The TDE file can be used in Tableau Desktop or published to Tableau Server using the same API. Once the TDE has been published to Tableau Server, it is available for an individual to use with the new web authoring capability to create brand new workbooks to explore the data. The API works with C/C++, Java and Python and can be used from Windows or Linux.

Automated Data Upload: Desktop users can refresh data in a Tableau Server data source. They can refresh the extract, incrementally update it or append data from a file on their local machine and then push the changes to the server. This type of refresh is useful for users that need local desktop credentials to connect to the underlying data source. Users can use any task scheduling software such as Windows Task Scheduler to automate these refresh operations on a schedule.

Performance and Scalability

In addition to the improvements around Fast Graphics and Calculations in Tableau Desktop, Tableau Server has a number of performance and scalability improvements.

Local rendering: When accessing Tableau Server from modern browsers or tablet devices, drawing and processing many of the interactions are now performed directly on the client device, which increases the overall performance of the view. Rather than fully assembling the view by creating the final images on the server side and then transmitting image tiles to the browser, Tableau 8.0 sends the drawing instructions to the local client device to have the browser or tablet handle the final drawing. Generally, on modern devices, the drawing performance of the local device will provide a much faster experience.

Additionally less traffic and round-trip requests from the client to the server improves overall responsiveness, which is especially noticeable on slower networks.

This local rendering is supported with Internet Explorer 9, Firefox, Chrome, and Safari. Older browsers will continue to use Tableau Server to create and assemble the image tiles on the server side.

Parallelized dashboards: Dashboards now compute each view on the screen in parallel, which improves the overall performance of displaying the dashboard. For example, a dashboard that has five sheets with charts that each take three seconds to query and display would take fifteen seconds in prior versions as each view was computed one after another. In Tableau 8.0 the five sheets are computed in parallel, thus completing in 3 seconds. Of course other factors such as database contention on queries or overall resource contention on the machine may impact performance.

Data Engine & Extracts: Creating and working with extracts have a number of performance improvements. Extracts created by Tableau 8.0 will often be significantly smaller, especially when the data includes text values. The compression techniques for text data are substantially improved. One example is a 4.1GB extract file created in Tableau 7.0 only consumes 2.4GB in Tableau 8.0—a 40% savings.

Improvements on the time to create extracts by scheduling them (full or incremental refreshes) and query performance of using extracts are both improved in Tableau 8.0.

Distributed Data Engine: The Data Engine can be distributed across 2 nodes to scale data connectivity and queries.

Export to PDF enhancements: PDF files generated by Tableau are up to 90% smaller and are now searchable. You can also select and copy content from the generated PDF.

Performance recorder: Understanding performance of workbooks and views on Tableau Server can be challenging. With Tableau Server 8.0, administrators can profile the performance of a workbook by collecting performance metrics and analyzing results. This is helpful to understand areas of optimizations and tuning your environment.

Easier Administration

Administrators have more insight into the activity of the server and it is easier to manage the application overall.

Usage analytics and auditing: Tableau Server 8.0 provides more reporting and auditing on the server usage over time. These reports help administrators answer determine:

- What views have not been accessed this past month/quarter/year
- How many times (and when) a user logged in. yesterday/last week/last month
- Historical workbook usage.
- Who changed or deleted a workbook.
- Who has tried to access a workbook/view but failed due to insufficient permissions.
- Which workbooks, views, data sources are slow.
- Which extracts have failed.

The server can be configured to keep this new usage data across upgrades.

Data Server improvements: The Data Server provides a centralized and flexible store for Extracts and data connections. Tableau Server 8.0 now supports user filters on the Data Server objects itself rather than always requiring the filter be part of each workbook. This change makes the Data Server more flexible by defining the security directly in the data connection, which is then inherited by any workbook that accesses it.

The performance of the Data Server has been improved through a number of query optimizations and caching improvements in the Server.

Activate Tableau using a local license server: Some Enterprise environments do not support external network access making it challenging to activate Tableau licenses. With Tableau Server 8.0, organizations can authenticate using a built-in license server or using another Flexera license server. A local license server simplifies deployment and management of Tableau licenses.

Other Improvements: A number of improvements have been made to the overall supportability of Tableau Server making it easier for administrators to manage the environment. These include:

- More robust environment checks during install to ensure the machine and accounts are in a good state to complete the install.
- Partial process restarts
- Improved logging.
- JMX-based monitoring for backgrounder errors and error counts per process.
- Automatic licensing repair in case of corruption.