THOUGHTSPOT

2.1 Release Notes
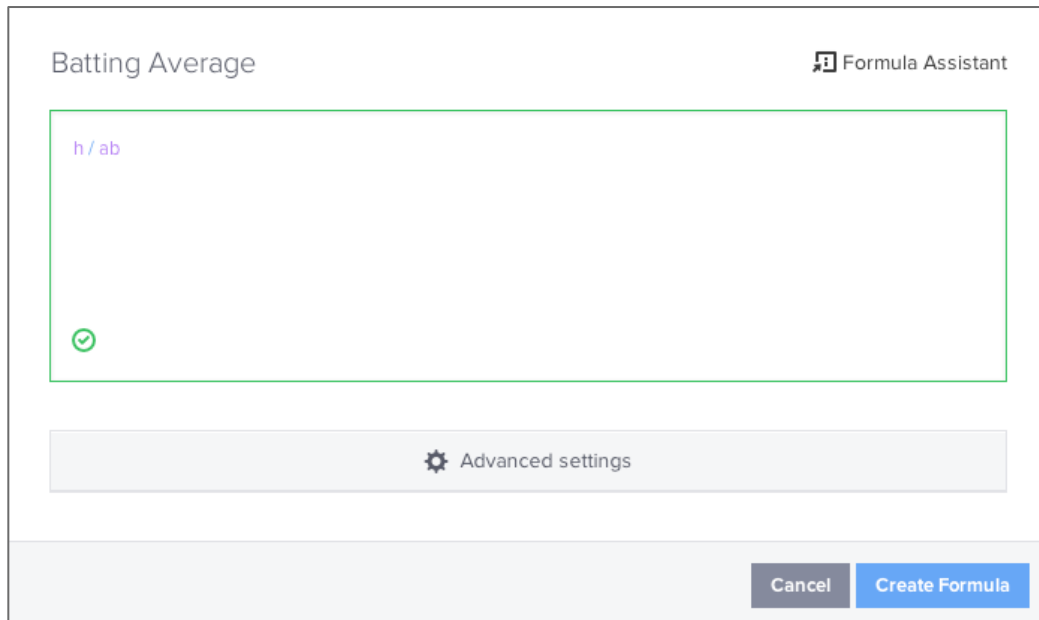
November 2014

Release date: November 2014

The ThoughtSpot 2.1 release includes features that focus on enterprise readiness, scale, and new functionality.

What's New in this Release?

1. **Create derived columns using formulas**
   You can now define formulas and use them to create derived columns in worksheets. You create formulas by combining standard functions and operators, column names, and constant values.

   To use the Formula Builder when creating a worksheet, click the **+** next to Formulas.

Figure 1: The Formula Builder

When you create a formula, it gets added to your worksheet as a column. You can see examples of how to build formulas within ThoughtSpot by clicking on Formula Assistant.
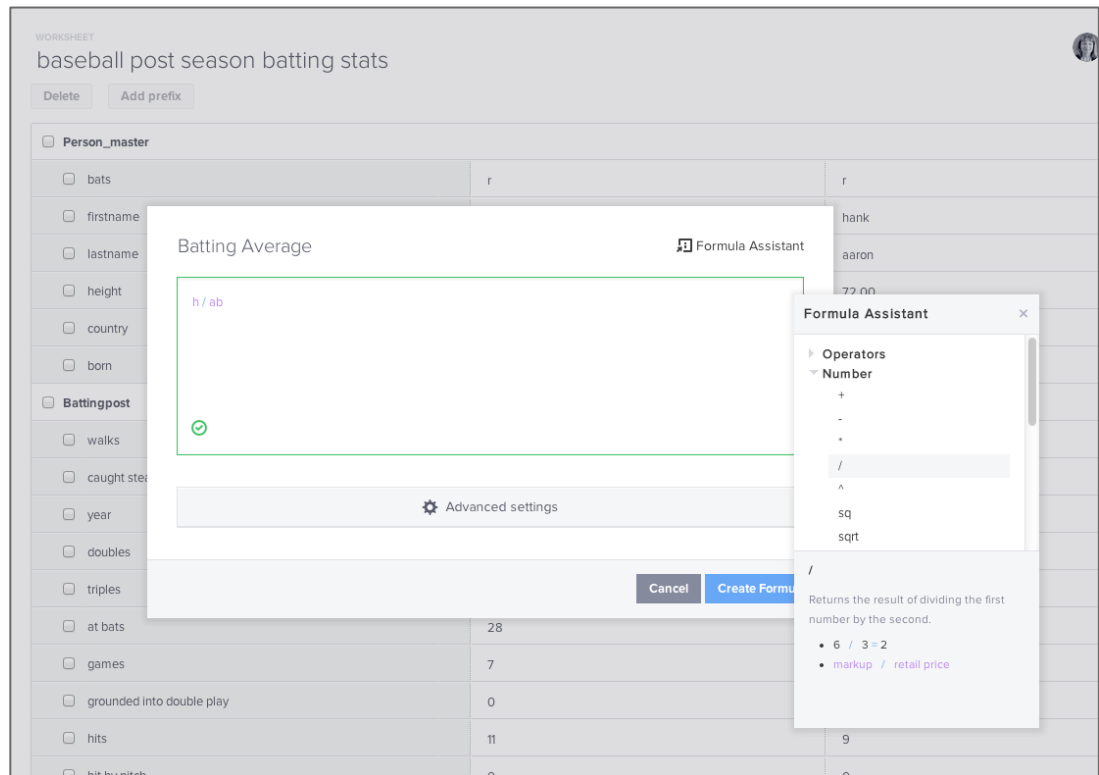
Figure 2: The Formula Assistant

These operators and functions are included in this release:

Operators:
- and
- or
- not

Number Functions:
- +, -, *, /, ^

- sq (square)
- sqrt (square root)
- cube
- cbrt (cube root)
- abs (absolute)
- ln (natural logarithm)
- log10 (logarithm with base 10)
- log2 (binary logarithm)
- exp (natural exponential function)
- exp2
- mod (modulus)
- pow (power)
- ceil (ceiling)
- floor
- sign
- sum
- average
- variance
- stddev (standard deviation)

Date functions:
- year
- month
- day

Text Functions:
- contains
- strlen (string length)

Mixed Functions:
- =, >, <, >=, <=, !=
- least
- greatest
- count
- unique count

- min
- max

2. **Use stickers for organization and filtering**

   Administrators can create stickers to help with organizing objects in
   ThoughtSpot by topic. The stickers are visible to all users and consist of
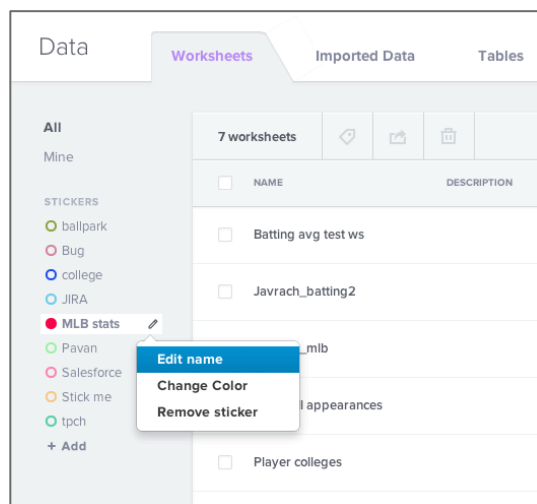   a label and an optional color.

Figure 3: Creating a sticker

A user with edit privileges on a data source, answer or pinboard can tag
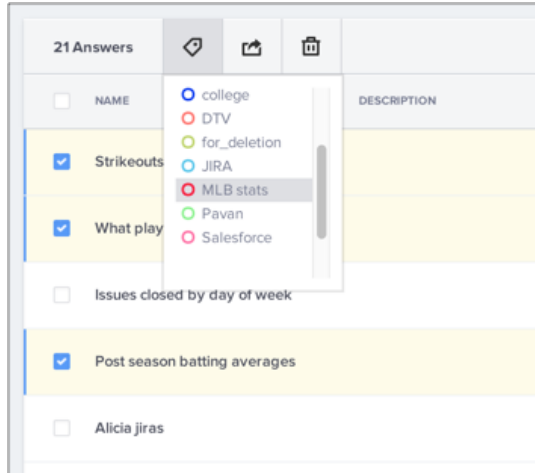it using the stickers.

Figure 4: Tagging answers with a sticker

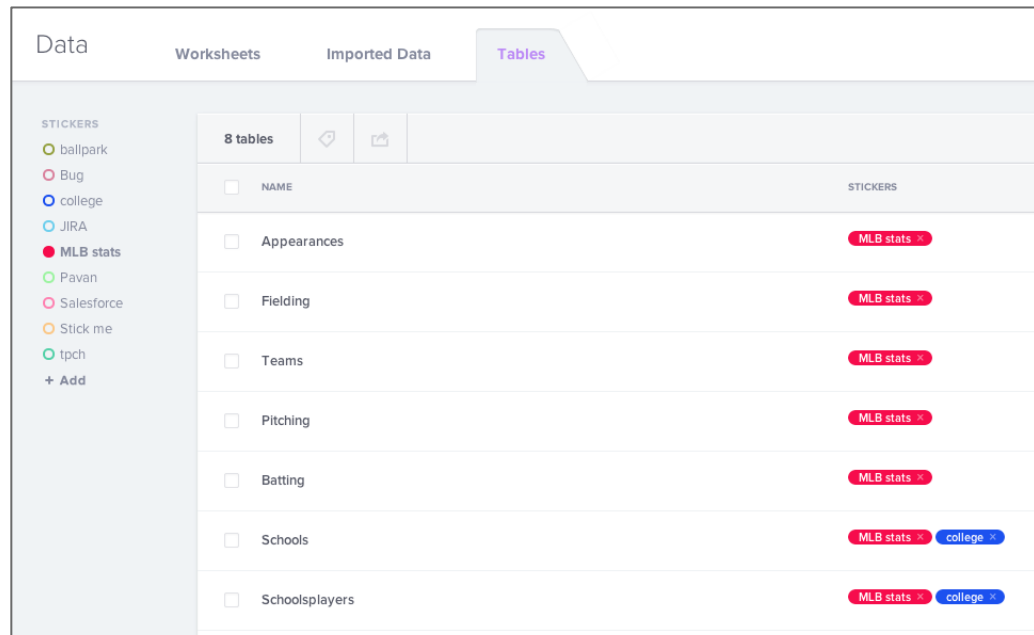Anyone can filter by sticker, to view only relevant data.

Figure 5: Filtering by sticker

3. LDAP support

ThoughtSpot now supports LDAP for authentication. LDAP integration simplifies administration and enables enforcement of corporate security policies. ThoughtSpot can be configured to authenticate users against an LDAP server by checking the username and password against LDAP.
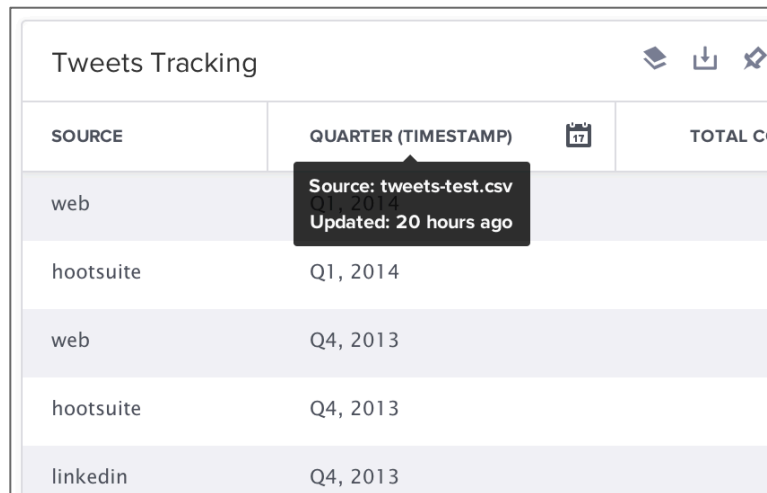
There is a new tscli command, **tscli ldap configure**, for setting up the LDAP integration. Details on setting up LDAP are in the *ThoughtSpot Administrator Guide*.

4. **SSL certificate management**
    The SSL certificate for ThoughtSpot can now be managed using tscli. There is a new tscli command, **tscli ssl add-cert**, for setting up the SSL certificate key pair. Details on setting up SSL are in the *ThoughtSpot Administrator Guide*.

5. **View last data refresh time**
    You can now see the last time at which the data was refreshed by hovering over a column or column name in an answer.

Figure 6: Data refresh tooltip

If you are upgrading to this release, note that any data that was loaded before upgrading will not include this information. Subsequent refreshes of the data will enable it.

6. **New date bucketing keywords**
   This release introduces new search keywords for date grouping by **day of week**, by **week**, or by **month**.

   For example, this search:
   issues closed by day of week last 6 months

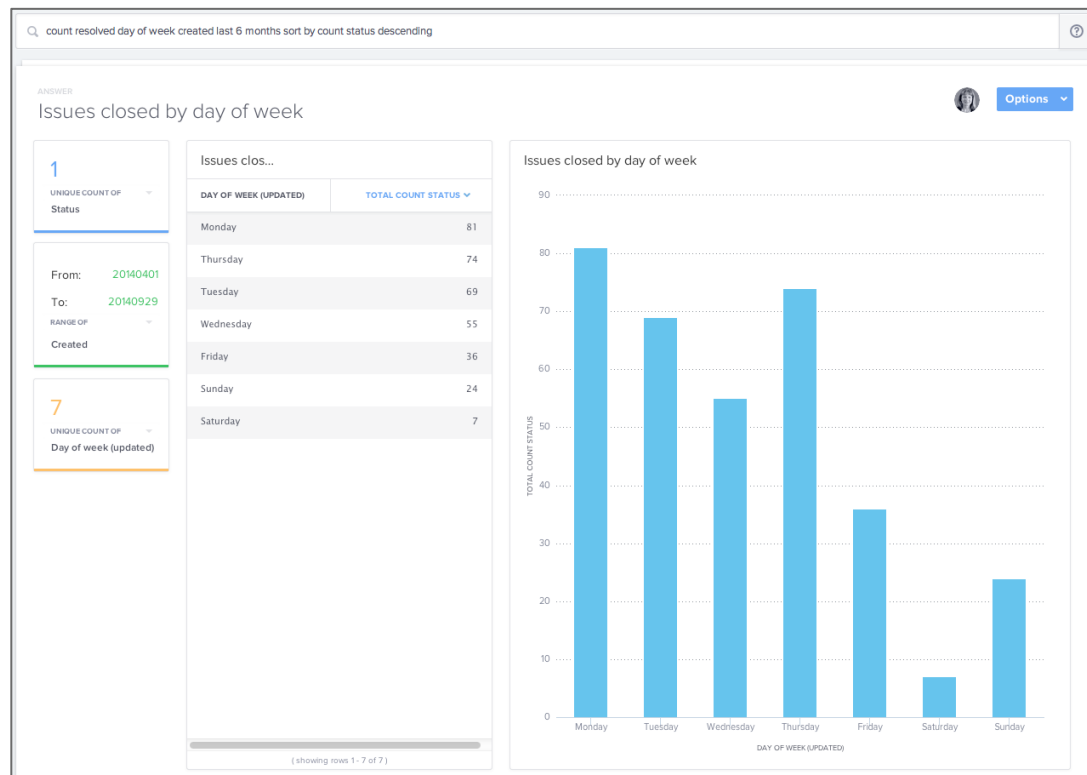   Shows these results, bucketed by day of the week:

Figure 7: Day of week search results

7. **Easily configure date bucketing and filters**

You can now view and change the granularity of dates shown by clicking the date icon in the column header. You can also filter by beginning and end date.
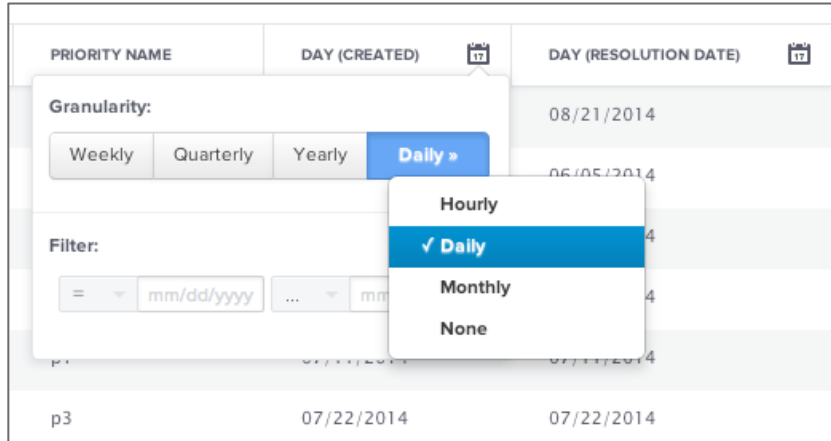

Figure 8: Configure date bucketing and filters

8. **Filtering from column headers**
   Filters are now available for each column, by clicking on the filter icon in its header.

Figure 9: Filter icon in column header

9. **Exclude and include filters on row values**

You can now include or exclude row values by clicking on a value and choosing from the popup menu to include only that value, or to exclude it from the results.

Figure 10: Include and exclude filters on a row value

10. **Data compression**
    When you load data, it is now compressed for you automatically to save disk space. When upgrading to this release, existing data is not compressed.

11. **Shellshock patch**
    This release includes the Shellshock patch. Because of this, we recommend that you upgrade to it at your earliest convenience.

Performance Improvements

1. **Distributed dimension tables**
   In the past, ThoughtSpot could not join two distributed tables. Now we can join distributed tables, as long as these conditions are met:
   a. The tables are related by a primary key and foreign key.
   b. The tables are partitioned on the same primary key/foreign key.
   c. The tables have the same number of regions (or shards).

   This change allows us to support joins to very large dimension tables. For more information, see the *ThoughtSpot Administrator Guide*.

2. **Unique count queries**
   Performance has been optimized for unique count queries on a column that is also the distribution key.

3. **Data loading performance optimizations**
   Most data loads (through tsload, the ThoughtSpot Loader) are now faster, because they happen in parallel on all nodes.

4. **Database query planner optimizations**
   Performance will be improved for some types of queries, because of planner optimizations in this release.

Changes in this Release

Administrator login name has changed
The default administrator login for the ThoughtSpot web user interface has changed from "admin" to "tsadmin". The default password remains the same. This change applies to all new installations and upgrades of existing installations. This change was made to support the LDAP integration.

Supported Upgrade Paths

If you are running a release that begins with one of the following ThoughtSpot version numbers, you can upgrade to this release directly:

- 2.0.5
- 2.0.6